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HUNTERIAN LECTURES

ON THE

EXPERIENCE OF ST. GEORGE'S HOSPITAL IN LAPAROTOMY:

EXCLUSIVE OF GYNÆCOLOGICAL OPERATIONS, FROM 1888 TO 1894 INCLUSIVE.

Delivered at St. George's Hospital Medical School

BY T. HOLMES, F.R.C.S.,

Consulting Surgeon and Treasurer to the Hospital.

LECTURE I.—LAPAROTOMY FOR INJURY; EXPLORATORY FOR ABSCESS AND FOR PERITONITIS.

THE object of these three lectures is to exhibit the entire experience of a metropolitan hospital, during seven years, of abdominal section, performed on ordinary surgical indications, omitting the operations of gynæcology[1] for reasons of convenience, and omitting such operations as enterostomy, gastrostomy, and inguinal colotomy, in which, though the peritoneal cavity is opened, the operation itself is of inferior relative importance, and is to be regarded rather as a step in the palliative treatment of a necessarily fatal disease.

The operations which are recorded are 110 in number, and of these 68 died and 42 recovered. It is not asserted that the list is entire. Some successful cases may have escaped record under the scheme of registration now in use, since these cases are sometimes transferred from physician to surgeon, and sometimes not. And some of the surgeons of the hospital have more or less distinct recollection of successful cases which I have been unable to find. But all deaths are registered in the *post mortem* books: and as I have carefully searched those books for the seven years in question, I have no doubt all the fatal cases have been enumerated.

I was anxious to produce an unselected and continuous series of hospital cases of this kind, which I believe has not hitherto been done, for these reasons. We are inundated in the medical papers with successful cases of laparotomy for various conditions, and from this state of things two opposite conclusions seem to be drawn. Some seem to think that you have nothing to do but lay open the abdomen, and all difficulties will vanish—the patient will get well, and "live happy ever after," like the end of an old 3 vol. novel. Others of a less credulous or enthusiastic turn reflect that published cases have been published because they were successful, and if they had not succeeded would never have been heard of; that even when distinguished surgeons give their whole experience, that experience represents the practice of a specialist who is called in precisely because the case is a promising one, and who would neither desire nor be allowed to operate unless the case were promising. The unselected and complete experience of a hospital into which a man is sent, not because his case is promising, but too often because it is hopeless, would, as these critics think, tell a very different story. And no doubt they are to a great extent right. No continuous series of hospital cases can be expected to give such good results as the experience of private practice, for the very reason so often pointed out, that the private practitioner is obliged to reject the worst cases, while the hospital surgeon, if he does his duty, must take even the faintest chance of saving life; nay, sometimes, as in railway injuries, has to operate without any chance of saving life, but merely in the hope of procuring for his patient an easier death. Such a series then cannot be expected to show any high proportion of cures. The indications for laparotomy vary, as you will see by the sequel, from cases in which the whole of a pretty long series will prove uniformly successful, to others in which all of a similar series are uniformly fatal, and the cases are often sent into hospital after all rational prospect of cure is over. But one thing we may say, that nearly every case so operated on would, in times so recent as my own election on the staff of this hospital, have proved fatal; so that we are entitled to rank every success as a gain, while the failures are indeed to be deplored; or, what is much better than deploring, are to be used in order to see how to prevent them in future. Still they are no loss. Failure is only what was inevitable in every condition of surgery known to us hitherto.

It will be seen as we go on that the event of the case was decided almost always by the nature of the disease and the state of the patient; and that the operation of laying open the peritoneal cavity freely enough for adequate surgical exploration and manipulation, formidable as it looks and doubtless is, may be undertaken with tolerable confidence, that is, will not at any rate prejudice the patient's chances, provided he is fairly strong—that in our long list of cases few if any have died earlier than they would have done had laparotomy not been performed; while, on the other hand, there are many cases in this list which did prove fatal, but which would in all probability have recovered had the operation been done earlier. And I will add that I have found many cases in our *post-mortem* books where no operation was performed, in which any surgeon would say that the patient would have had a far better chance if it had been. And that this has been the view of my colleagues I cannot doubt when I see how much more frequent laparotomy has become in the later than the earlier of these seven years, the number rising from 7 in the year 1888 to 26 in the year 1894, a figure which will, I believe, be largely exceeded this year.

The cases are distributed as follows:—

	Cases.	Recovered.	Died.	
Injury	3	0	3	
Exploratory	3	3	0	
Abscess	11	10	1	
Peritonitis	6	1	5	
Tuberculous peritonitis	7	7	0	
Peritonitis from twisted ovarian pedicle	1	1	0	After ovariotomy.
Perforation of appendix, etc.	19	9	10	
Removal of appendix	3	2	1	
Hydatids	4	4	0	
Pancreatic cyst	1	1	0	
Hydronephrosis	1	1	0	
Uterine	2	1	1	Exploratory operations for tumours which turned out to be uterine. One recovered after hysterectomy.
Other tumours	5	1	4	
Gastric ulcer and duodenal ulcer	14	4	10	
Cholecystotomy	3	3	0	
Gastrojejunostomy	4	3	1	
Intussusception	5	0	5	
Kink and volvulus	4	1	3	
Strangulation by bands	11	4	7	
Stricture of bowel	2	0	2	
Internal hernia	4	1	3	
Gangrene of cæcum	1	0	1	
Total	110	42	67	

[1] Three gynæcological operations are recorded in the sequel, which were commenced as exploratory laparotomies.

I shall speak first of laparotomy on account of traumatic injury. One of the most striking of the many advances which surgery has made in my day is in the successful operative treatment of traumatic injuries of the abdomen, which when I was young were universally regarded as necessarily fatal and which therefore received no efficient treatment, and uniformly ended in death. Rupture of the bladder into the peritoneal cavity and rupture of the intestine from contusion of the abdominal wall are good examples of such lesions.

If I am not mistaken, Mr. Croft had the distinction of having been the first surgeon to demonstrate (as Mr. Battle puts it) that traumatic rupture of the intestine without external wound could be cured by surgery. He published in the *Clinical Transactions*, vol. xxiii, a most striking and instructive paper on this subject founded on two cases in his own practice, in the former of which (ann. 1887) he had established an artificial anus by stitching the ruptured portion of the bowel to the abdominal wall. This operation was in itself quite successful, but the patient succumbed after the subsequent operation for closing the artificial anus. Mr. Croft in his second operation (ann. 1889) resected the lacerated portion of the intestine with its mesentery and a portion of the injured omentum, and the boy perfectly recovered, though at the time of the operation (fifteen hours and a-half after the accident) peritonitis was unmistakably present, and there was a large quantity of fæcal fluid in the peritoneum.

A very good example of the feasibility and success of such an operation is recorded by a surgeon bearing the honoured name of Nélaton in vol. xviii (1892), p. 600, of the *Bulletin de la Soc. de Chir. de Paris*. The man had been kicked by a horse about sixteen hours before the performance of the operation, and peritonitis had already commenced, yet he recovered completely.

There is also a very interesting paper in the *Bull. de la Soc. de Chir.*, 1888, p. 217, in which a successful case under M. Mesnard's care is related, and reference is made (as in Mr Battle's paper) to seven successful cases. Two of them were operated on by the same surgeon (Jahoda, of Vienna), and in one of them the operation was performed as late as twenty-five hours after the accident, when peritonitis had been fully developed. Of course the sooner the diagnosis can be established and the operation performed the better will be the patient's prospect, but it is interesting to know that the lesion can be dealt with successfully at so late a period after its occurrence as twenty-five hours.

The total number of published cases appears to be twenty-nine, taking Mr. Croft's and Mr. Battle's lists together. That seven of these should have been saved from otherwise certain death is surely an encouragement to deal boldly with such cases in the future.

Our experience during these seven years of laparotomy for ruptured bowel is confined to two unsuccessful cases. The first patient was a boy, aged 8, under Mr. Haward's care; the symptoms were not very marked, and the operation was not performed till next day, twenty-two hours and a-half after the accident. The lesion in the intestine was not detected, though the bowel was carefully traced up from the ileo-cæcal valve. It is a matter of interest to note that the boy did well for five days after operation, when it became necessary to remove the sutures of the abdominal wound, and substitute strapping. The wound burst open, and a coil of gut protruded. This was replaced, and the wound again closed, but he sank rapidly, and died in two days from acute peritonitis. On *post-mortem* examination a rent was found in the small intestine some 3 feet above the ileo-cæcal valve, which it is permissible to conjecture had been closed by the protrusion of the mucous membrane till the disturbance caused by the breaking down of the wound. At any rate, at the operation nothing but a small quantity of blood was found in the peritoneal cavity; and this doubtless proceeded from the rupture of the spleen, the preparation of which is before you. This preparation is of interest as showing this lesion practically cured by the adhesion of the spleen to the serous surface of the diaphragm; and it leads us to the question whether in future some cases of more extensive laceration of the solid abdominal viscera may not be rescued from death by free exposure of the rent and packing the abdominal cavity with gauze.

[1] The Medical Society's *Transactions*, vol. xxvi, p. 274.

With reference to the latter point, you will find in the *Lancet* for March 2nd, 1895, a most interesting case of inflammation and suppuration of the gall bladder, leading to its perforation, in which Mr. Sheild operated with success. The gall bladder was freely laid open and the wound packed with carbolised gauze. In this instance the tissues of the gall bladder were so thickened and so rotten that it was impossible to unite the edges of the ulcer by means of sutures, while the patient's condition did not admit of the total removal of the organ.

The second case, again, illustrates the difficulty which often besets the diagnosis of rupture of the bowel. A man, aged 50, was thrown off his cab when drunk, and the wheel passed over his belly. He was complaining of much abdominal pain when admitted. The urine was drawn off. Next day he became suddenly much collapsed, and an operation was performed when *in extremis*. Incision above the pubes opened a cavity containing foul-smelling fluid, which was thought to be urinous, and therefore the bladder was opened by an incision in the perineum, but was found to be uninjured. After death the laceration was found to be in the small intestine, and was an inch in length.

The statistics of the published cases of laparotomy for intraperitoneal laceration of the bladder are given in a recent volume of the *Annals of Surgery*. They show a total of 29 cases, 12 of which recovered. In one of these, however, the particulars are so loosely given that it is uncertain whether the lesion was not extraperitoneal.

Our experience of laparotomy for uncomplicated intraperitoneal rupture of the bladder during the period covered by these lectures has been *nil*. In a case under Mr. Turner's care, where a poor boy, who had fallen in climbing a tree, had his bladder perforated from the rectum by a branch which ran through into the peritoneal cavity, it was judged right to perform laparotomy, suture the peritoneal rent in the bladder, and wash the foreign bodies (pieces of twig, etc.) and the vesical and intestinal contents out of the peritoneal cavity; but the case was a desperate one, and terminated in death on the next day but one.

Our experience, then, of laparotomy for injury during these seven years has been very slight, and is purely negative; but I thought you would pardon this short reference to it, for the subject is an important one, and though the cases are rare, a life may occasionally be saved by timely operation, which would be sacrificed by refusal, or even delay, to operate. I have met with one case, at any rate, in our *post-mortem* book, during the period under review, of ruptured intestine, in which no operation was performed, yet which, to judge by the description, was very similar to some of those which have been treated with success.

Turning now to cases in which the peritoneal cavity has been opened in the attempt to remedy the effects of disease, the first class which I will select is that of operations undertaken as exploratory measures.

We have lately heard much about the unjustifiable nature of exploratory laparotomy; and, no doubt, all operations, and especially so grave a one as the free exposure of the peritoneal cavity, must be justified by some rational and adequate motive, in order to exempt the surgeon from merited blame; but as far as our experience goes such operations are (always under this condition) perfectly justifiable, for the only operations which turned out to be merely exploratory, that is, in which nothing was found, were followed by complete recovery. One, under Mr. Bennett's care, was an exploration of the kidney, in which the woman suffered from purulent urine, and was thought to have a movable kidney; another was in a case of Mr. Dent's of supposed impacted gall stone, and a third case was under Mr. Pick's care a few months ago, in which laparotomy was undertaken to ascertain the existence of perforation of the stomach. No perforation was found. The patient completely recovered.

The two following operations might possibly be classed as purely exploratory, since nothing was found at the operation; but they differ from the above cases of recovery in the essential particular that a real and necessarily fatal cause of death existed.

The first was a woman, aged 41, a patient of Mr. Pick, who had had symptoms of obstruction for three days. On cutting into the peritoneal cavity, nothing was found to account for

the symptoms; but on *post-mortem* examination the cause was discovered to be gangrene of the small intestine caused by a thrombosis of the mesenteric vein from vegetations on the cardiac valves.

Another case was that of a woman suffering from ascites, and in whom a tumour was thought to be felt. The operation was performed as a last resource by Mr. Dent to discover the nature of the supposed tumour. The case had been taken to be either malignant disease of the liver or enlargement of the gall bladder from impacted gall stones. Exploration led to the conclusion that it was malignant, but on *post-mortem* examination it turned out to be a cirrhotic liver, the diagnosis not being finally established till after microscopic examination. The tumour perceptible externally was the displaced spleen. She never rallied.

I think, then, we may say that exploratory operations seem rarely to prejudice the patient's prospect of recovery, and I am sure that a careful study of our *post-mortem* book would lead to the discovery of many cases where such an operation would very probably have led to effectual surgical interference.

The next class of which I shall speak is that in which from whatever cause a limited abscess-cavity is found in the peritoneum. The most familiar instance is that of hepatic abscess; but our list contains cases also of abscess around the cæcum coli, abscess due to perforation of intestine in which the suppuration has been limited by adhesions, and abscess lying behind the peritoneum and external to it, but only to be reached by opening that cavity and draining the abscess through it. These cases may be treated with almost certain success—if we can trust to our experience hitherto—by laparotomy with drainage, the walls of the abscess-cavity being attached to the wound so as to prevent the escape of its contents into the general peritoneal cavity. The following table shows the nature of these cases:

The next class of cases are those in which peritonitis is caused by perforation of the vermiform appendix or some other portion of the bowel which remains open, for we have seen that in some cases the perforation closes, leaving a limited peritoneal abscess.

Now in such circumstances it seems obvious that the patient has a far better prospect of surviving if the nature of the case, that is, the perforation, is ascertained at the operation. If the appendix be the seat of the lesion, it can easily be removed, and with fair prospect of recovery. If the perforation be in another part of the bowel, no doubt its operative treatment is not so easy; but in some cases the neighbouring part of the bowel may be healthy enough to allow of the suture of the edges of the ulcer, as in the successful case reported by Mr. Lockwood[2]; otherwise the surgeon's choice would lie between resection of the diseased part and the formation of an artificial anus.

But it is by no means easy to detect these perforations; in some cases it is not even easy to recognise the appendix, which is pushed away and hidden under masses of lymph and pus; so that a deliberate search is necessary, which must often be impossible if the operation has long been delayed.

I find 9 fatal cases reported in which perforation of the appendix existed, but was not discovered till after death. In 4 at least of these cases the operation had been postponed till an attempt thus deliberately to examine the conditions of the organs would have been impossible.

In a tenth case the perforation was in the small intestine; it depended on tuberculous mischief, and there were other complications which rendered successful treatment hopeless.

I find it most difficult to judge what the success of laparotomy hitherto has been when undertaken for the purpose of treating diffuse peritonitis. The most recent information on this subject has been given us by Mr. Lockwood[3] in a paper

Laparotomy for Limited Abscess.

Name	Age	Date	Nature of Abscess.	Surgeon.	Result.	Remarks.
1 —M	—	June, 1880	Perinæal	Mr. Bennett	R.	It is doubtful whether the peritoneum was opened or not.
2 (M.)	19	Dec., 1889	In peritoneum containing a fæcal concretion	Mr. Pick	R.	This must have proceeded from perforation of some bowel, which had healed.
3. H. W.	39	July, 1891	Hepatic	—	D.	—
4 (M.)	2–	Sept., 1890	,,	Mr. Haward	R.	—
5 —P (M.	28	June, 1891	In right iliac fossa	,,	R.	Appendix intact, but adher[illegible] to colon.
6 J. B.	29	Nov., 1894	In peritoneum	Mr. Pick	R.	—
7 ——	—	—— 1889	Abscess from perforation	Mr. Bennett	R.	Detailed notes lost.
8. S. J.	32	—— 1890	Perinæal	,,	R.	—
9 J. S.	—	—— 1892	In peritoneum	Mr. Pick	R.	Thought to be due to perforation
10. H. M.	20	Oct., 1894	Behind peritoneum	Mr. Bennett	R.	The displaced bladder was accidentally opened in reaching the abscess, and sutured.
11. J. M.	32	Aug., 1894	,,	Mr. Sheild	D.	The man was dying when admitted; the sigmoid flexure had been perforated by the abscess.

The rest of the operations in this section were undertaken for peritonitis; but these must be further subdivided into those in which the peritonitis was traumatic or "idiopathic"—that is, uncomplicated by any intestinal lesion—and those in which it depended on perforation of some viscus—commonly the appendix cæci. They are tabulated thus:

read and discussed at the Medico-Chirurgical Society October 23rd, 1894. This paper is founded on three successful cases, of which one was due to perforation; the others would, I think, be classified as "idiopathic." These cases are said to have been the only instances of recovery after laparotomy for diffuse septic peritonitis in St. Bartholomew's Hospital or

Laparotomy for Peritonitis.

Name.	Age.	Date.	Nature of Case.	Surgeon.	Result.	Remarks.
1. A. E.	20	Aug., 1892	? From injury	Mr. Dent	D.	Early peritonitis; recent hæmorrhage behind the peritoneum round the head of the pancreas.
2. F. N.	30	Oct., 1889	Adhesions from peritonitis	Mr. Haward	R.	Adhesions binding down the ileo-cæcal portion of bowel; much pain in walking, this was quite cured by freeing the bowel.
3. E. Y.	—	Sept., 1890	Acute peritonitis	—	D.	Old adhesions tying down the intestines.
4. [illegible]	41	Dec., 1890	,, ,,	Mr. Pick	D.	—
5. [illegible]	24	Feb., 1892	,, ,,	Mr. Dent	D.	Old adhesions; bowel also perforated.
6. E. L.	8	Sept., 1892	,, ,,	—	D.	Abscess in iliac fossa, which had burst into the cæcum.
7. A. F.	21	Sept., 1891	Tuberculous peritonitis	Mr. Dent	D.	Tuberculous peritonitis, with bands constricting the small intestine.
8. T. G.	30	July, 1894	,, ,,	,,	D.	There was also pneumonia.
9. — F.	Adult	—— 1894	,, ,,	Mr. Pick	R.	—
10. — F.	Adult	—— 1891	Diffuse peritonitis from twisted ovarian pedicle	,,	R.	Right ovary removed after ovariotomy.

[2] *Med.-Chir. Trans.*, vol. 78, p. 3.

[3] *Med. Chir. Trans.*, vol. lxxviii, 1.

the Great Northern Hospital up to that date; nor do I see that any of the speakers in the debate which followed referred to any others.

Fatal Cases of Diffuse Peritonitis from Perforation.

Name	Age.	Date.	Duration of Illness before Operation.	Part Perforated, Ruptured, or Not.	Surgeon.	Remarks.
F. B.	20	Sept., 1890	12 days	Appendix coeci not found	Mr Pick	This operation had been too long postponed, but was done at once after admission.
A. P.	13	June, 1894	5 ..	..	?	Operation immediately after admission.
A. (M)	44	Jan., 1895	3 ..	..	Mr. Turner	The peritonitis had resulted from bursting of a perityphlitic abscess into the peritoneum.
M. M.	17	May, 1895	3 ..	..	Mr. Dent	Two bands of adherent omentum were divided at the operation. Rapidity this prevented a careful examination of the bowels.
W. L.	31	April, 1890	6 ..	..	Mr. Pick	This operation was done at once, but too late.
C. F.	..	May, 1894	2 ..	..	Mr. Haward	Operation at once. He was too collapsed to bear even examination. Several collections of pus existed in the peritoneal cavity.
M. C.	24	May, 1895	?	..	Mr. Bennett	In this case also the operation was immediate, but she was too far gone. She had had symptoms more or less severe for a fortnight, but was at work three days before admission.
H. J.	..	Aug., 1893	4 Days before admission	..	Mr. Pick?	Operation only performed two days after admission, when in *extremis*.
F. C.	28	June, 1891	?	..	Mr Bennett	The symptoms were those of peritonitis. Exploratory operation two days after admission failed to detect the cause.
A. S.	6	May, 1894	?	Small intestine perforated by round worms	Mr. Dent	He survived the operation nine weeks, and died from general wasting.

Yet I suppose many cases of alleged success have been published, for a paper on Abdominal Section for Peritonitis by a Russian surgeon is abstracted in the *Annals of Surgery*, 1891 (vol. xiii), in which reference is made to 24 cases of laparotomy for "idiopathic peritonitis," in 10 of which recovery is claimed. The references, however, are not given, so that the cases could not be followed without great labour, and I must say that the result would not repay the trouble. No such ratio of success can reasonably be anticipated in any continuous series of cases. But Mr. Lockwood's and other published cases may encourage us in attempting the operative cure of the disease; and the suggestions which he gives for the details of operation seem eminently calculated to assist the operator in obtaining success.

I must allow that in looking over this series of cases the difficulties which stand in the way of success in the operative treatment of diffuse suppurative peritonitis come strongly before me. When the inflammation is purely traumatic I cannot doubt that the free irrigation and drainage of the peritoneal cavity will succeed in a large proportion of cases, but they are rare. No instance has been put on record here in these seven years. When the cases are classed as "idiopathic," this can only mean that the cause has not been discovered, and we cannot therefore feel much confidence either that incision and drainage will remove that cause, or will enable the patient to survive its continued action. Tuberculous peritonitis seems to me to hold out but a poor prospect of permanent recovery, though a large proportion of cases are noted in the paper just referred to, in which the patient has survived the operation, and there is one such case in the foregoing list; but the list of cases just produced shows in how large a proportion the peritonitis is caused by perforation, especially of the appendix; and it shows also how liable the surgeon is to overlook such perforations, and this must be much more frequently the case if the operation is delayed till the patient is *in extremis*, and unable to bear a prolonged and exhausting search amid the contents of the abdominal cavity. If the surgeon will bear in mind the frequency of ulceration of the appendix, which is covered and concealed by adherent intestine and masses of lymph, and if there is the opportunity for that deliberate separation of the intestines from each other which Mr. Lockwood recommends, the source of the peritonitis could be discovered and removed, and the patient's chance of survival indefinitely increased.

This course was pursued in three cases, with results which are encouraging as far as so small a number permit of any deduction, two of them having recovered after the removal of the perforated appendix.

THE CROONIAN LECTURES.

CONTRIBUTION TO THE HISTORY OF THE RESPIRATION OF MAN.

Delivered before the Royal College of Physicians of London.

BY W. MARCET, M.D., F.R.S.

LECTURE III.

MR. PRESIDENT AND GENTLEMEN,—In my last lecture the first three forms of breathing were considered. Let us now proceed to the fourth, which applies to respiration under the influence of volition; but before doing so allow me to recall the remarkable experiment of Professor Mosso, of Turin. This gentleman constructed a metal instrument, a sort of glove, through which his fingers were inserted, with the exception of the middle one; with this finger he worked a weight up and down until the digital muscles concerned in the labour were completely exhausted; at this stage the muscular contraction was carried on by means of electrical excitation, and he found that if, after a short period, the excitation was discontinued, the finger was able still to maintain its work, showing that the muscles had not ceased contracting from actual fatigue, but from exhaustion of the will which had been exercised to move them.

There is an interesting borderland between psychology and physiology which is narrowing daily. The discovery of the electrical excitability of the brain by Fritsch and Hitzig, and of the motor centres by Ferrier and Yeo, followed by Horsley and Schäfer, has opened altogether a new field of research, and brought the mental and physical functions nearer to each other. We do not know much of the physical effects exerted on the body by the perception of our senses. Moleschott, as far back as 1856, showed that from one-tenth to one-fourth more carbonic acid was exhaled by frogs under the influence of light than when in the dark, and also that this increase varied directly as the intensity of the light, which acted through the eyes and skin.

It occurred to me that if light exercises a distinct physical action on the living body, perhaps sound would produce a similar effect; but even a fairly loud sound, such as that produced by the beating of a gong close by, gave no positive result; the carbonic acid emitted under the influence of the sound being sometimes a little more and sometimes a little less than normal, and the same could be said of the oxygen absorbed. There was, however, a slight excess of air breathed (expired) while the noise was continued, which varied from 0.036 litres to 0.733 litres per minute in eleven experiments; and this slight excess was balanced by a corresponding diminution of the volume of air exhaled during the first five or six minutes after the sound had ceased.

The perceptions of our senses are certainly independent of our will, still the sight and hearing may not be entirely unconnected with volition; or it would, perhaps, be more correct to say that objects may act on the brain through sight, and sounds through hearing, without producing any corresponding impression. Take the case of a person lost in a brown study: he does not see objects though with eyes wide open, nor will he hear a sudden noise.

By submitting our senses to the exercise of volition, we train them and improve their perception. Thus we train the sight to the better appreciation of the beauties of Nature. Those thrilling descriptions of Alpine scenery must be the outcome of the training of the sight to the thorough enjoyment of mountain views. The rapture into which Sarasate or Joachim throw their hearers requires a certain training of the audition.

Mosso has shown that volition is a cerebral act attended with fatigue. I need hardly remind you of the fatigue experienced in listening to good music; two hours thus employed will, as a rule, be amply sufficient, and it often happens that in less time the attention begins to flag and the impression to subside. Operatic music may be listened to much longer, for the obvious reason that in an opera the exercise of volition is distributed between two brain centres—those of hearing and of sight—instead of being concentrated on a single one, and is on that account less exposed to fatigue.

We now come to the influence of volition on muscular movements. There are instinctive muscular movements in which volition is not concerned—for example, those required to balance the body—but these have been acquired in the first instance by the exercise of volition or by training. Hence it appears that training is of fundamental importance in all muscular exercise, such training being at the same time applied to the volition excited by the cerebral motor centre concerned in any special form of muscular work. Learning to play on a musical instrument is certainly training volition quite as much if not more, than training the muscles; the surprising rapidity with which the fingers run over the notes of the piano in response to the will is also a case in point, although, if I understand rightly Dr. Bastian's views contained in his book on *The Brain as an Organ of Mind*, it is very possible that such training, especially in young people, should develop a certain set of nerves through which these rapid impressions are conveyed, becoming automatic in their character. We shall see that volition has a direct action on respiration, hence training volition is at the same time training respiration. Let us now pass on to the subject which forms the substance of this lecture—the influence of volition on respiration.

Under ordinary circumstances, when sitting in repose, the mind is at rest as well as the muscles, and the breathing quiet and regular. Should a strong effort of volition be made, although unattended by any muscular contraction, it may be observed to react immediately on the respiration. If after a tracing of normal respiration has been obtained, the person under experiment sets his mind to work and exerts his volition strongly towards carrying a heavy weight, running to catch a train, or pursuing another person uphill, the tracing recorded on the chart will be observed to ascend more rapidly than in the case of mental rest showing a greater volume of air breathed in the same time. After, say, one or two minutes, let the influence of the will be withdrawn and respiration continued under mental repose; the first effect will be the production of a respiratory pause, the tracing taking a more horizontal direction, as seen in forced breathing, though perhaps somewhat less marked, after which the breathing will return to the normal, the tracing obtained being much like that of forced breathing.

Similar experiments on different persons invariably yielded the same kind of curve on the chart. It follows that the influence of the will is to increase the volume of air breathed, and that on releasing volition a pause is produced very like that which follows forced breathing; but there is this difference with forced breathing, that when the will is applied say to the act of locomotion, the increased pulmonary ventilation is absolutely automatic, while forced breathing is the direct effect of volition applied towards the expansion of the chest.

An explanation of the pause or apnœa after forced

The tracing "under exercise" is shown to contrast with that for breathing "under volition."

breathing is that forced breathing produces an increased absorption of oxygen, and this oxygen being used for the requirements of the body lessens for a few seconds the calls for pulmonary ventilation. This idea suggested that perhaps such an accumulation of oxygen in the body might be employed by the muscles for a temporary increase of power. The following experiment was therefore made: while sitting in an armchair a weight of 10 lbs. was alternately raised and lowered with the hand in keeping with the striking of a metronome, and to my surprise it was observed that after a succession of deep inspirations the weight could be raised a much greater number of times than after normal breathing; indeed, the increase of power was such that the weight could be lifted to the same height before exhaustion perhaps two thirds or twice as often after forced breathing as after natural respiration.

For a time this effect of forced breathing was to me absolutely unaccountable as there was no apparent call for an accumulation of oxygen in the tissues, and no proof of any such absorption; moreover, the excess of carbonic acid formed by the muscular power added was infinitely greater than could be accounted for from any excess of oxygen absorbed in the body. But perhaps in forced breathing there was really an increase of oxygen absorbed, which was taken up by the brain centres of forced breathing, and gave "volition" the power of doing so much additional muscular work through increased respiration. This view was subsequently investigated and its correctness shown, by experimental methods.

Allow me to quote the experiments which show to what extent muscular power may be increased by the preliminary exercise of "volition" exerted in the form of forced breathing. It might be added that in order to succeed with these experiments, the attention or "volition," should be given to the act. It failed once or twice when first tried, though successful on

every other occasion with that same person, probably because the will was not applied with sufficient power or was not yet possessed of sufficient training for that kind of experiment.

Person under Experiment.	Weight Lifted.	Number of Times Weight Lifted Normal.	Time of Forced Breathing.	Number of Times Weight Lifted after Forced Breathing.	Ratio of Increase.
	Lbs.		Min.		
Author	8	21	2	65	3.71
"	8	20	2	59	1.97
"	8	20	1	34	1.85
"	10	21	2	34	1.71
Assistant	8	20	2	32	[illegible]
"	8	23	2	49	1.47
"	8	23	2	41	1.91
"	8	20	2	63	1.52
"	10	41	2	69	1.68

It is remarkable to what extent the arm becomes accustomed to this kind of work, and can develop more and more strength with time from mere training. This is seen in the figures given later on, but it is important to observe that the present remark does not apply to the experiments taken singly, when the increased work was clearly due to increased power from a temporary cause. This point was set at rest by a very simple experiment. Two consecutive series of liftings were made without the intervention of any forced breathing. The weight was raised till stopped by exhaustion 26 times in the first series and 26.5 in the second; hence it cannot be said that any influence of training was exerted in the comparative experiments.

The effect of forced breathing in increasing muscular power can be tested by anyone while sitting quiet in his own room. My friend Dr. Louis Parkes lifted a weight of 8½ lbs. 50 times while in a state of physical and mental repose; and after forced breathing for 1½ minute, applying his mind to the act, he raised the same weight to the same height 125 times.

A lady reclining in an arm chair lifted with her right arm a tea kettle weighing 4 lbs. 13 ozs. 60 times, and after resting ten minutes and breathing forcibly for one minute, raised the same teakettle 100 times to the same height.

The greatest effect was produced on a medical friend, who after ordinary breathing lifted a weight of 4 lbs. 203 times in succession, and after a rest and forced breathing for two minutes lifted the same weight the same height no fewer than 700 times. In this case volition taxed the muscles to the utmost, and the arm remained tired and stiff for some days afterwards. The weights in all these experiments were lifted under natural or automatic respiration after forced breathing had been discontinued.

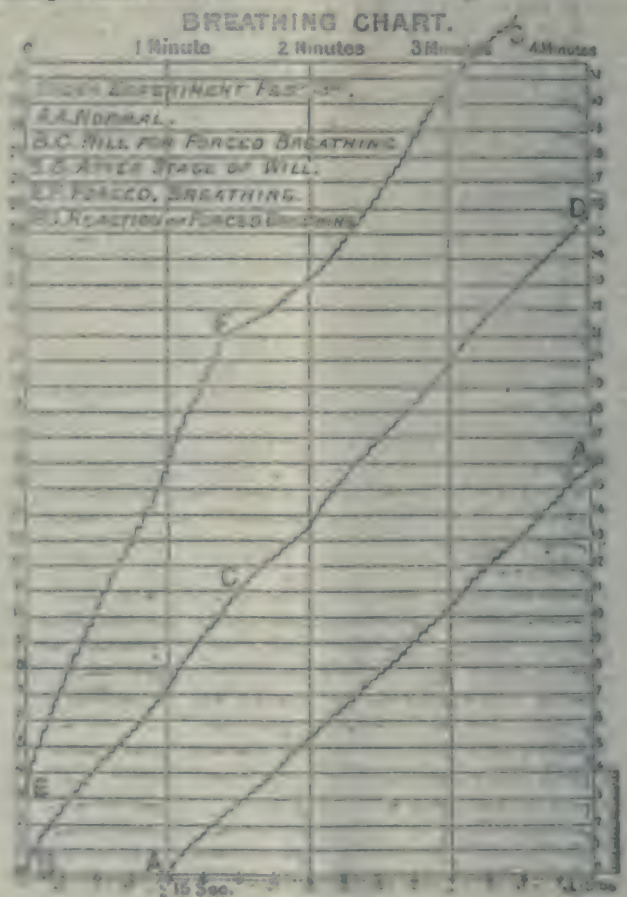
The absorption of an excess of oxygen in the body under forced breathing was so far an assumption, and it became necessary to determine experimentally if such were the case; the methods in use for the determination of carbonic acid and oxygen in the expired air being extremely delicate, the results obtained may be looked upon as thoroughly reliable.

The experiment was undertaken in the following way. After resting for some time in the arm chair the expired air in normal breathing was collected for subsequent analysis, then forced breathing was taken for about two minutes and the air expired collected separately. As soon as the appointed time had elapsed a signal was given, and the person under experiment relapsed suddenly into automatic breathing, while at the same time, by means of a three way stopcock, the air expired was diverted into a third receiver, breathing being continued until it had come back to its normal condition in repose, which took place within six or seven minutes. There were thus three samples of air for analysis. The volumes of air inspired in each stage were calculated, as previously explained, from the nitrogen found, which underwent no change; the volume of nitrogen obtained yielding by a simple proportion the volume of air inspired. The difference between the volumes of air inspired and expired (after the application of a correction for carbonic acid emitted from the blood, into which subject it would take too long to enter at present) gave the volume of oxygen absorbed, and it is the excess of this oxygen absorbed in the body in forced breathing over the oxygen absorbed in normal respiration which concerns the present question.

In eight experiments, the increase per minute above the normal of oxygen absorbed under forced breathing, or rather under volition for forced breathing and response, varied from 0.8 to 36.4 c.cm. with a mean of 13.9 c.cm (53.0 c.cm. = mean absorbed normal and 67.3 mean absorbed under forced breathing). At the same time the volumes of air expired were greater under forced breathing by 69 per cent. of normal. Therefore, in these experiments considerably more air had been inspired, and there was a marked increase of oxygen absorbed.

If the excess of oxygen absorbed in forced breathing has for its objects the exercise of volition, surely this absorption must take place in the motor centres of the brain concerned in forced breathing, and, therefore, in the medulla oblongata. So far the argument stands thus—forced breathing is accompanied by an excess of oxygen absorbed in the body and leaves in its wake increased muscular power, but this excess of oxygen absorbed is very insufficient to account for the increase of CO_2 produced hence it does no such thing. Nothing, therefore, is left to explain the excessive development of power but an increased effect of volition, brought about by the absorption of an excessive amount of oxygen in its motor centre, which is in the present case the motor centre of respiration.

This is a new departure, and one which appears to me fraught with interest. If the exercise of the will necessitated the absorption of oxygen in forced breathing, it was natural to conclude that the exercise of volition for forced breathing though without response would be attended by a similar result; and, if so, it should also produce an increase of muscular power as observed after forced breathing.



This reasoning gave rise to the following experiment. When in a state of mental repose I lifted a weight of 10 lbs.

42 times to a height of 18 inches, after which the arm became too tired to continue the work. After a sufficient rest the will was applied to forced breathing, but without response, for two minutes; and on suspending its action I was able to lift the weight 76 times, being an increase of 34 liftings.

A similar experiment with another person gave 70 liftings for normal, and 96 after the exercise of volition towards forced breathing without response; therefore, in both these instances, the increased development of muscular power was clearly the effect of volition only. The proof that the effort of volition in the present case was unattended with response is to be found in the form of the tracing obtained.

When volition attended with response is exerted towards forced breathing, the record on the chart invariably shows a pause or state of apnœa on returning to automatic breathing in repose; but when volition towards forced breathing is unattended with response there is no pause, or the pause is barely appreciable, as seen in the second chart on page 6. The same experiment was repeated with volition applied to various other forms of exercise, and an increase of power was invariably obtained; thus after volition for running without response I raised a weight of 8½ lbs. 77 times against 47 for normal. This increase of power must have been produced through the agency of the respiratory centres, as whatever be the form of volition it must supply the oxygen necessary for the heat required towards the increased muscular exercise.

If, after exerting volition without response, greater development of muscular power is obtained in the same way as when exerting volition towards forced breathing, and if the latter is, as I have shown, attended with an increased absorption of oxygen, it appeared probable that an excess of oxygen would also be absorbed under volition, though without response, exerted towards various forms of muscular exercise, and a number of experiments were made which showed most conclusively that such was the case.

In a first series of seven experiments, the will being applied without response to running or rowing, the excess of oxygen absorbed in four of the seven experiments varied from 7.7 c.cm. to 19.4 c.cm. per minute, with a mean increase of 12.4 c.cm. per minute, while in two of the other three there was a slight decrease in the volition stage by 2.1 c.cm.; one of these, however, showed an increase in the after stage, as if in this case the oxygen in excess had been taken in the first instance from that in store in the muscles and other tissues, and returned from the atmosphere on the resumption of mental repose. On releasing volition and relapsing into normal automatic breathing, the mean oxygen absorbed was less than normal, the deficiency compensating very nearly the excess taken in under volition. Therefore after the phenomenon was over the absorption of oxygen had apparently undergone no change or combination in the motor centre.

The oxygen absorbed was now determined on three different occasions after applying the will without response towards lifting a heavy weight; the results in these cases were well defined. In one experiment the excess of oxygen absorbed per minute under volition was 15.6 c.cm., in another 13.8 c.cm., and in the third 35.8 c.cm., with a mean of 21.7 c.cm. The oxygen absorbed in the after stage again very nearly compensated the excess under volition. This series, though consisting of only three experiments, therefore confirms the former in every way, and shows that volition towards lifting a weight causes an accumulation of oxygen in the body, clearly in the motor centres of the muscles of the arm. A third set of six experiments was made by applying volition without response towards forced breathing. The increased absorption of oxygen in the volition stage varied from 1.5 c.cm. per minute to 48.0 c.cm. per minute, with a mean of 23.9 c.cm., and this excess was also nearly balanced by a corresponding diminution of oxygen absorbed in the after stage. Probably these experiments in which the oxygen determined "as absorbed" is taken from the air, do not show the total volumes of oxygen absorbed by the motor centres as it is impossible to ascertain how much is supplied from the tissues.

It thus appears that whenever volition is applied towards any form of exercise, there is an absorption of oxygen in the cerebral centres concerned in the phenomenon; and apparently with an excess of oxygen absorbed more work can be done than if the excess be wanting. The following experiment in which a mixture of oxygen gas and air was breathed is a striking confirmation of this view. The author lifted a 10 lbs. weight 41 times before being exhausted. After a rest he exercised his volition strongly towards lifting a weight for 1⅓ minute, and then raised it 61 times in succession. Again, after another rest, he exercised the same kind of volition as before while inspiring a mixture of two-thirds of air and one-third oxygen containing nearly 43 per cent. of oxygen, instead of 20.9 per cent. as in atmospheric air; and immediately afterwards lifted the weight 87 times before being arrested by fatigue; therefore under the influence of volition and air twice as rich in oxygen he could lift the weight 26 times oftener than when inspiring atmospheric air, the will being applied in a similar manner. This experiment repeated on another person gave with volition and atmospheric air 77 liftings, and under the influence of volition and a mixture of air and oxygen, similar to the previous one, 94 liftings, or an increase of 17 liftings.

Returning to the respiratory tracings under the influence of volition, we find that whether the will be applied without response to locomotion, to manual labour, or to forced breathing with response, the curve is about the same; that is, first the tracing is steeper than normal; then on releasing volition there is a pause, followed by another rise, showing an increased volume of air breathed beyond the normal. One tracing under volition differs from all the others; it is that for volition towards forced breathing without response, when the pause is altogether wanting or hardly visible.

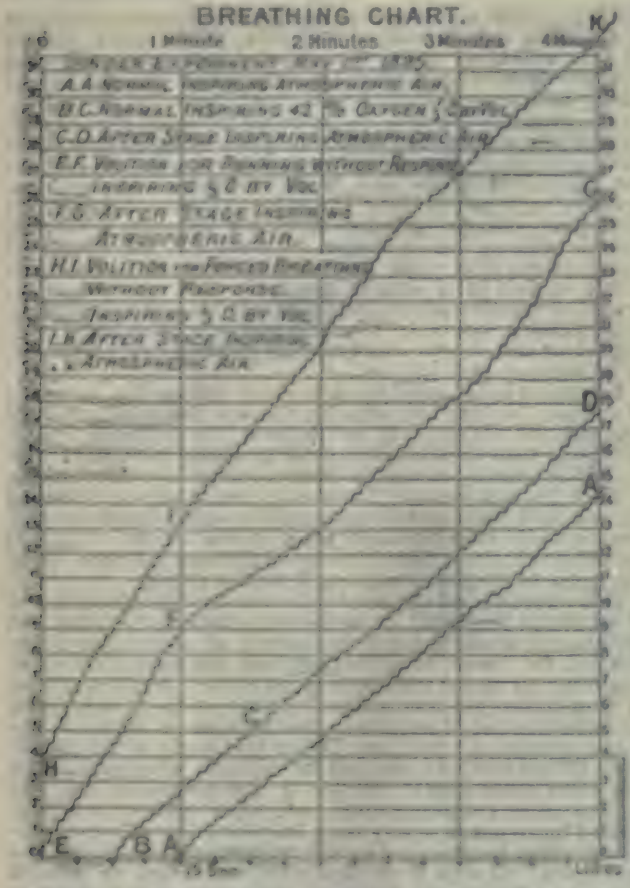
This pause at first appeared to be due to the accumulation of oxygen in the motor centre under the action of volition, but the absence of any pause in the records of respiration under volition for forced breathing without response, even after breathing air mixed with oxygen gas, showed the present view to be mistaken, since this form of volition is also attended with an accumulation of oxygen in the respiratory centres. The only explanation I can now offer for this pause is the following: All the centres concerned in volition, whether they be the motor centres for locomotion or manual labour, etc., act on the centres of respiration; and when volition is accompanied by response, a very large increase of breathing is produced which is controlled by the requirements of the centres concerned. As soon as volition without response is arrested there is no longer any excess of pulmonary ventilation required, and normal automatic breathing follows; but before the centre of respiration has shaken off the influence of the other centres, a short lapse of time intervenes during which the oxygen stored up in the tissues comes into use. This is the reason which appears to me to account for the pause, a view confirmed by the fact that, as shown in the breathing records, immediately after the pause, there follows a slight but decided increase of air inspired beyond the normal, whose object would be to replace the oxygen taken from the tissues. Now in volition towards forced breathing without response when the will is suddenly released no lapse of time is needed as there is only one centre concerned in the phenomenon, that of respiration; hence there is no pause and the tracing returns immediately to the normal. Even if a mixture of two-thirds of air and one-third of oxygen be inhaled whilst volition is exercised towards forced breathing, there is no pause; but a considerably increased pause is observed after inhaling the mixture of air and oxygen, and at the same time applying the "will" to other forms of exercise, as seen in the first chart on the next page.

It might be objected that the oxygen absorbed from the air in natural respiration is possibly liable to change every few minutes and that the increase obtained under volition is due to some other cause than the exercise of the "will." In order to answer this objection the following experiments were made:

Air was expired while in mental repose, and reclining in an arm chair, in three successive bell jars, each receiver taking seven or eight minutes to fill. The three samples of air expired were analysed separately and the experiment being repeated on three different days gave the following figures for oxygen absorbed per minute:

Cubic Centimetres of Oxygen Absorbed per Minute.

Experiment I.	Experiment II.	Experiment III.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	b—41 3
[illegible]	[illegible]	[illegible]



The greatest difference per minute in each experiment was therefore 5.3 c.cm. in the first experiment, 4.6 c.cm. in the second, and 3.8 c.cm. in the third, showing but little change in the oxygen absorbed in three successive experiments and giving much confidence in the method of analysis.

It may therefore be safely concluded that in the experiments on volition it was the effort of the will and no other circumstance, which increased the volume of oxygen absorbed. Out of 24 experiments there were 3 with an increase of less than 1.5 c.cm. per minute, and 2 with a decrease of 2 c.cm. The increase was marked in the other 19. In two series of experiments it amounted to means of 22 and 28 c.cm. There is no other way of accounting for that increased absorption of oxygen but through the agency of volition. Now, where can that oxygen go to in the body? It cannot remain in the blood, as haemoglobin on leaving the pulmonary circulation is considered as charged with oxygen as it can be. On the other hand, there must be a demand for oxygen somewhere, because, as I have shown in my first lecture, no oxygen is taken into the body unless it be required. Of what use can be that oxygen taken in for the requirements of volition if not to exercise some sort of direct action on the motor centres concerned in volition; a parallel case would be the absorption of increased volumes of oxygen for the performance of muscular exercise, although the mode of action in volition appears to be of a very different character.

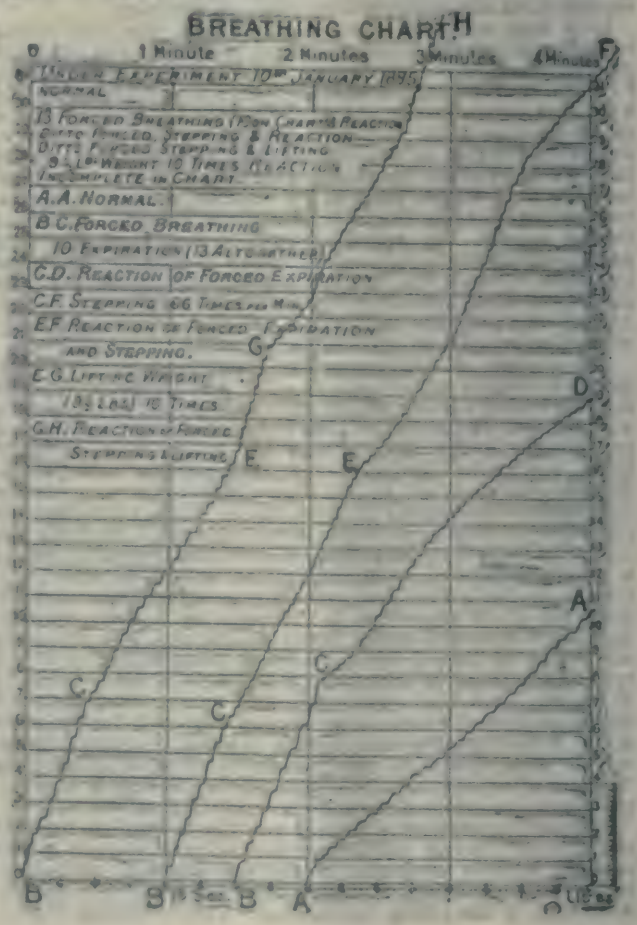
The fact that oxygen is required in the body towards volition is shown by the increased volume of air breathed under volition. If this air was wanted for an excess of carbonic acid, we should find an increase of carbonic acid produced. There is indeed a very slight increase, but it is wanted for the extra work done by the muscles of respiration, and there may be some slight oxidation of hydrocarbon in the brain substance, and in some cases it is impossible to find any production in excess of carbonic acid, this being probably due to physiological irregularities which it is impossible to control. We find, also, a certain volume of carbonic acid displaced from the blood by the increased volume of the air breathed. It might perhaps be objected that out of twenty-four experiments five results failed to agree with the other nineteen; but these exceptions occurred in the early part of the inquiry, and volition had very possibly not been brought to bear so earnestly as it was in subsequent experiments. It is a fact that the more experienced we became—my assistant and myself—in these volition experiments, the greater the volume of oxygen which was found absorbed.

There is evidence in favour of this view in addition to chemical analysis: this is increased muscular power, and I shall again beg to direct your attention to this phenomenon.

If additional power is given to the muscles by a preliminary effort of volition, naturally there must be an increased amount of carbonic acid produced in proportion to the increase of strength developed. Three experiments were made which showed clearly that such was the case. The mean relation of the strength developed was 1 to 1.300, that of CO_2 to CO_2 while engaged in the extra work was 1 to 1.396; there was not, therefore, much difference between those relations for such a small number of experiments.

If after exercising the will, instead of returning immediately to the state of physical and mental repose the weight of 10 lbs. be raised in the usual way for one minute, followed by repose, while a record of breathing is taken on the chart, the pause which has been checked by the exercise now appears, and afterwards respiration returns much increased in volume.

Finally, if immediately after the exercise of volition for one or two minutes, stepping exercise is taken for one minute, followed at once by a return to the sitting position, and lifting the weight, say, ten times in succession, on assuming



the state of rest the pause will again appear, though perhaps less marked, and there will be for a time a considerable increase in the pulmonary ventilation beyond the normal in repose. This is clearly seen in the second chart on page 8 recording the experiment.

If anybody should be still disposed to question my contention that the increased muscular work in these experiments is due to the influence of volition, the experiment of Mosso showing that fatigue of "volition" suffices to arrest muscular contraction would go far to dispel any doubt in that respect. The following experiment, which I have not seen quoted, confirms remarkably Mosso's discovery, while at the same time it is a strong argument in favour of the view advocated in this lecture, and differentiates very clearly the motor centres of the brain.

Let a person, while sitting in an arm chair, raise a weight as in the experiments related above until his arm is too tired to continue the work. He then takes a rest in mind and body of say one minute, and again resumes lifting the weight as long as he can. The number of times the weight is lifted is counted in both cases. Next a rest is taken perhaps for ten minutes, and the same kind of exercise repeated until the arm is exhausted; at the expiration of that time the arm is placed in a state of repose, but the "will" continues being applied as strongly as possible towards the exertion of lifting the weight, and this is continued for one minute. At the end of that minute the weight is again raised with that same arm, when it is found to be so tired that it is not equal to raising the weight by perhaps more than about one-half the number of times the weight was lifted under precisely similar circumstances without the application of the will.

If, however, during the interval of one minute between the liftings, the will be directed towards a different kind of muscular work, such as running uphill, on resuming the lifting, the arm is found to be fresh and rested, and can raise the weight the same number of times as if the mind had been at perfect rest for that minute.

The following are two experiments which illustrate the phenomena:

While reclining in a deck chair, I raised a weight of 10 lbs. 49 times, and gave up from fatigue; after resting for one minute the same weight was lifted to the same height 40 times; a long rest was now taken and the weight lifted 47 times, when the work was stopped by fatigue; then the arm was rested while applying volition as strongly as possible to a continuation of the same effort of lifting for a lapse of one minute. Lifting was now resumed, when the weight felt very heavy and could only be raised 21 times—clearly not because of the fatigue of the muscles as they were rested, but from the exhaustion of the power of volition. A similar experiment on my assistant gave the following results:

Normal liftings, 42; after one minute's mental and physical rest, 41 liftings; after a prolonged rest, 44 liftings; after one minute's physical rest, but with volition exerted towards a continuation of the same exercise, 31 liftings.

The same experiment was repeated by both of us without applying the will towards the continuation of the same exercise, but towards an exercise quite different, such as running, thereby resting the motor centre on which volition had exerted its action towards lifting the weight. After a minute the arm felt perfectly rested and I raised the weight the same number of times to the same height as before.

Arthur Durham Memorial.—The friends, and they are many, of the late Mr. A. E. Durham, have resolved to perpetuate his memory by the endowment of two beds at Guy's Hospital, one in each of his old wards, Lazarus and Martha, to be called the Arthur Durham beds. For this purpose a sum of £2 000 is requisite. Contributions may be paid to Mr. C. H. Wells, at the office of the Medical School, Guy's Hospital; and they will be acknowledged from time to time in the *Guy's Hospital Gazette*. All subscribers of one guinea and upwards will receive a platinotype enlargement of a life-like photograph of Mr. Durham. The circular asking for funds was posted on June 11th, and in ten days the sum of £683 was collected, being almost one-third of the entire amount that is required.

SELECTIONS FROM MY CASEBOOKS.

By ALFRED SHEEN, M.D.,
Senior Surgeon Cardiff Infirmary

I.

I.—Impacted Fracture of the Neck of the Femur in a very Old Man.

J. H., aged 91, a hawker, was admitted into Cardiff Union Hospital on January 17th, 1893. He had been a heavy drinker all his days, and had suffered from bronchitis for some years.

On admission he stated that he had been knocked down by a cab a few hours before, but was not run over. He could not get up without help, and complained of pain about the left hip, loss of power in the left leg, and great pain on the least movement of the limb. The left foot was everted, the limb lay flat on the bed, and was nearly 2 inches shorter than the right. No definite crepitus was obtained, but great pain was caused by manipulation, and there was thickening about the trochanter.

The limb was steadied by means of extension with pulley and weight, and a large sandbag on each side of thigh. After a few days he was allowed to sit up in bed, and six weeks later was allowed to get up on crutches, and he continued to get about until his death in April, 1894, from acute nephritis. The accompanying reproduction of a photograph of the upper

part of the femur will give a good idea of the displacement and the amount of repair.

II.—Left Subclavian Aneurysm cured by large Doses of Iodide of Potassium and Rest in Bed.

R. D., aged 36, single, a bargeman was admitted to Cardiff Infirmary on March 21st, 1893, with a history of an illness beginning suddenly four years earlier while under treatment for a wound of the leg. The knees swelled, and he had pains in most of his joints and limbs, attributed to rheumatism. The patient had had these pains off and on ever since. The left arm had for some years been getting weaker. Six months before admission, when rubbing gets in the patient discovered a swelling under the left clavicle, but did not seek advice till a month before admission. There was an obscure specific history. He was a fairly healthy man of good physique. Just below the left clavicle was a smooth pulsatile swelling the borders of which were not determinable. Pulsation ceased

on compressing the subclavian artery. On extending the arm from the side the swelling was distinctly felt in the axilla, and it extended up to and just above the clavicle. The fingers of the left hand were clubbed; the radial pulses were synchronous and equal in volume. The heart was normal but a *bruit* was heard over the tumour, which was the size of a goose's egg.

On April 2nd he was put on iodide of potassium (gr. x) thrice a day. The dose was gradually increased to 3j thrice a day. On April 28th and on May 14th he was put on 3jss thrice a day. This he took with slight intermissions, on account of diarrhœa, till the end of September. On July 23rd it was noted that there had been "no pulsation for at least five weeks." On August 21st he was made an out-patient. He was shown before the Cardiff Medical Society in October, 1894, when there was no evidence of the aneurysm, though the radial pulse was slightly weaker than on the other side. He was able to do his work.

Dr. Waldo, of Clifton, reports a somewhat similar case under his care in the Bristol Royal Infirmary, in 1881,[1] in a farm labourer, aged 40. In his case the treatment was "perfect rest in bed, bandaging the arm to the side, low diet, restricted allowance of fluids and iodide of potassium," gradually increased from 10 gr. to 20 gr. thrice a day. The man left the infirmary four months after his admission, returned to his work, and was quite well one year afterwards. It is not stated whether there was any specific history in this case.

III.—Cystic Thyroid: Excision: Death.

E. C., aged 24, single, a collier, was admitted to the Cardiff Infirmary on May 15th, 1894, with a history of a swelling on the left side of his neck, first noticed when he was 15 years old. It had slowly increased in size up to the present time. This illustration gives a good idea of his appearance on

admission. The patient was pale, rather anæmic; the respiration was noisy, except when the patient was quite still. After movement, exertion, or speaking there was marked stridor.

On June 9th chloroform was given and I removed the left half of the thyroid by a long oblique incision. The dissection was carried down to the wall of the largest cyst, and after that dissecting forceps were used almost exclusively for separating the tumour from its surroundings. Veins were

[1] *Bristol Med.-Chir. Journal.*

taken up and tied at frequent intervals; they were numerous and some of considerable size. The whole of the left half of the thyroid was converted into cysts of various sizes, and the part adjacent to the isthmus was of almost calcareous hardness. The dissection occupied about three-quarters of an hour. The patient breathed badly if deeply anæsthetised and whenever the tumour was at all drawn outwards. The operation took a little over an hour, and all antiseptic precautions were observed.

The wound was irrigated with perchloride of mercury solution, 1 in 4,000; interrupted silkworm gut sutures were used, a drainage tube inserted at the lower end, the whole dressed with iodoform, green protective, sublimate gauze and wool and bandage. The dressings were removed in the evening.

On June 10th he was restless, and complained of pain in the abdomen. The wound was dressed.

On June 11th he had a cough, and expectorated some mucopus. The face was pale. He slept with the mouth open. The tongue was coated, dry, and brownish. There was rapid running pulse; the temperature was 100° F. Crepitation was heard at the bases of both lungs, but was more marked on the right side. The wound was dressed and the tube removed. The wound was dry; there was no discharge, redness, or swelling. The temperature in the evening was 101°. Stimulants, ammonia, and strychnine were given. The patient was unable to cough up sputum.

On June 12th the face was dusky, the skin clammy, and the nares working. He was very restless, throwing his arms about. Stridor was marked. He died at 10 P.M.

Necropsy.—The wound was healed. The region operated upon was dissected, and everything found perfectly healthy. The sympathetic, the phrenic nerve, and the pneumogastric and its laryngeal branches were quite sound. The trachea, compressed laterally, had not resumed its normal shape. There was great congestion of the lungs, some œdema, and commencing hepatisation of both bases, the right lung more affected than the left.

IV.—Pedunculated Sebaceous Tumours of the Scrotum.—J. M., aged 23, married, a collier, was admitted to Cardiff Infirmary, August 16th, 1893. Four years ago he had first noticed small hanging tumours in scrotum. Several similar

growths appeared soon after, and increased slowly but steadily in size. On August 28th these tumours were removed under the usual antiseptic precautions. There were three sub-

sequent dressings, and the patient was discharged cured on September 15th.

V.—Hypertrophy of Left Breast.

A. C., aged 31, single, a housekeeper, was admitted to Cancer Infirmary on April 24th, 1888, with enlargement of the left breast, as shown in the accompanying illustration.

It had taken between eight and nine years to grow to the size shown. The breast was generally enlarged, the nipple was normal and freely movable. The skin over the gland was normal and freely movable. The vertical measurement over the tumour was 14½ inches, and the horizontal 17½ inches. The base measured 27½ inches in circumference. There was no pain.

On April 25th, under ether, I removed the breast by an elliptical incision under strict antiseptic precautions. The hæmorrhage was comparatively slight and chiefly venous. The breast weighed 7lb. 1 oz. On April 28th the temperature went up to 102° F. The patient was up for a few hours on May 1st, when all fourteen sutures were removed, and nearly the whole line of incision healed. The patient was discharged well on May 23rd.

VI.—So-called Perforating Tumour of the Dura Mater.

V. M., aged 4 years 8 months, was seen on December 2nd, 1889. Two months earlier, when the child rose one morning, the right ear was seen to be projecting, and on examination a swelling about the size of a hazel nut was seen behind it, smooth, uniformly hard, not painful, and the skin over it was unchanged in colour. The swelling gradually enlarged in all directions. A fortnight later a doctor saw it, said it was a "gathering," and ordered linseed poultice, which treatment was continued for four weeks. It was lanced a week ago, but only blood came out.

When the child came under treatment there was a soft, semi-fluctuating swelling, measuring 5½ inches horizontally and 4½ vertically, and there was right facial paralysis. There was marked optic neuritis on the right side, and commencing neuritis on the left side.

The child lingered on, losing much flesh, and the tumour increasing to such an enormous size as to resemble a second head. She died after several weeks.

Necropsy.—(Notes by Dr. D. R. Paterson). Surface of tumour ulcerated and discharging at several points. Seat of external ear could not be made out. The mass extended into the neck and the glands; these were enlarged. On removing the skull cap a flattened mass of tumour was seen, exerting considerable pressure on the parts about the lower end of the Sylvian fissure and fissure of Rolando. More posteriorly an offshoot of the tumour had penetrated into the

temporo-sphenoidal lobe, and there expanded into a pear-shaped mass. Many parts of the petrous bone retained their consistence of form; they were not absorbed entirely by the tumour mass; only at certain points were ingrowths sent into the brain. The whole tumour was soft and almost brain-like in consistence.

VII.—Another Case in an Old Man.

T. H., aged 75, hawker, was first seen on March 1st, 1890, complaining of nothing definite but suffering from general weakness. He had had a "stroke" eighteen months before on the right side, but recovered; no trace of such an attack was left. On the left side of the head, in front of the parietal region, was a soft, immovable swelling, the size of a hen's egg, which gradually increased to the size of a large orange. It never troubled him, and there was no pain. He was a feeble old man, and seemed to sink gradually, dying on October 19th, 1890. A slight cough troubled him. He was conscious to the last.

Necropsy.—(Notes by Dr. D. R. Paterson). On reflecting scalp, the tumour was found to be soft and friable, involving the bone of the skull, which was entirely absorbed, the hard edges of the bone being felt at the margin of the tumour. On removing the skull cap the tumour was found to go through the skull, forming in all a mass about the size of a large orange. It affected chiefly the upper part of the left parietal bone, the adjoining part of the left frontal bone being likewise involved, and extended over the middle line on the vertex. The tumour exerted considerable pressure on the brain, flattening to a large extent the convolutions of the frontal and parietal lobes on the left side. There were no adhesions between the dura mater and the brain. On section the tumour was soft, and had a marbled appearance: scraping of juice showed small, round, and spindle cells under the microscope. On the seventh left rib, in front of the angle, was a small tumour about the size of a walnut, growing from the rib, which was almost absorbed at this point. Microscopically it was similar to the one on the skull.

VIII.—Case of Fibro-Adenoma of Breast.

Miss K., aged 30, was first seen in March, 1891. She was suffering from a hard, irregular, freely movable tumour, the size of a goose's egg, in the upper half of the right breast. It had been first noticed in June, 1891, when it was the size of a small nut. I advised removal, which was declined. I

saw her again in September, when slight increase in the size of the tumour was to be noted. She had been trying Count Mattei's remedies, without any effect, of course. In September, 1894, she came to me again expressing a wish for an operation. She had been for nine months under a quack living near Birmingham, who had undertaken to cure her without operation, and had, she said, "nearly killed her."

On September 18th, under chloroform, with all antiseptic precautions, I performed what is called Thomas's operation, by making an incision along the curved groove below the breast, and shelling out the tumour. The drainage tube was removed on September 20th, and the stitches of silkworm gut on September 25th. There were three dressings, and the patient was up on September 30th. The temperature was normal throughout except on the evening of the tenth day,

when it went up to 100° F. The illustration shows the appearance of the breast on October 6th.

IX.—Case of Alopecia Areata.

H. R., aged 33, a soldier, was seen on June 13th, 1892. There were several bald patches at the back of the head, which had come on during the previous nine months. He was ordered an ointment of the yellow oxide of mercury (gr. iv to an ounce of vaseline), which he continued to use till the middle of September. The hair commenced to grow again, being at first quite white and very fine. When seen in November, 1894, the hair was black, and there was no remnant of the disease left.

I am indebted to Dr. Morland, House-Surgeon Cardiff Infirmary, and Dr. J. D. Williams, Resident Medical Officer, Cardiff Union Hospital, for assistance in preparing some of these notes.

TREATMENT OF FUNCTIONAL CURVATURES OF THE SPINE BY GYMNASTICS.

By CHARLES ROBERTS, F.R.C.S.

Our sympathy with Mr. Christopher Heath's efforts to rescue the treatment of lateral curvatures of the spine from the instrumentalists must not be allowed to lead us into the opposite fault of putting too great trust in the gymnasts. A knowledge of the various forms of gymnastics and considerable discrimination in their application is essential. There is no pathological relation between angular curvature due to caries of the vertebræ and its constitutional effects and the functional accommodation of the elastic spinal column to faulty positions and habits of the body, to unequal length of the lower limbs, or to imperfect or irregular action of a few or many of the spinal groups of muscles. The one should be called organic curvature, or, indeed, organic disease, while the others should be called functional curvatures of the spine. If we once get the functional nature of lateral curvatures impressed on our minds, we shall see the uselessness of the instrumental and the recumbent treatment necessary in organic disease, and we shall set about removing the causes and assisting Nature to restore the spinal column to its normal condition.

Functional curvatures of the spine are—in relation to the conditions which accompany them—healthy and normal. If one leg is shorter than the other there must be a curvature of the spine to a corresponding degree to keep the body erect. This is a cause, but not in my experience so common a cause as Mr. Heath has found it. The spine in young girls is very flexible, and placing a book under one foot will obliterate some lateral curvatures which are not due to unequal length of the two legs. Unless there is a measurable difference between the two legs the curvatures due to this cause need not be meddled with, and when the difference of the two legs is considerable all that is necessary is to alter the soles and heels of the shoes. Without the adjustment of the length of the legs, gymnastics will be injurious as tending to confirm a functional curvature of the spine on an unequal base. Gymnastics are not a remedy for this form of curvature, they serve only to improve the general health.

Next we have a series of curvatures caused by faulty positions in school owing to the left hand and arm being employed to support the body, and the right arm left free to write, draw, hold books, etc. Of the same kind are the curvatures produced by playing active games in which the right hand, arm, and leg are chiefly used. In this class of cases we have a functional accommodation of the spine to balance the body, and in addition, an unequal development of the muscles of the two sides of the body, those of the right side being stronger than those of the left. These are the most troublesome forms of spinal curvature, as correcting the position of the body does not correct the curvature of the spine, the faulty curves being fixed and retained by the unequally balanced muscles. At first sight there does not appear to be any reason why girls should be more liable to spinal curvatures than boys; but girls are excessively right handed much more so than boys, and this has much to do with initiating, if not actually causing, lateral curvature in girls. It is just because there is this disproportionate muscular development of the lateral halves of the body that gymnastics have to be employed with great caution.

To hand over these cases to the ordinary teacher of gymnastics is not to cure them but to make them worse, because the muscles on the stronger side, being better nourished, grow stronger more rapidly than those on the weaker side. In prescribing physical exercises for this class of cases the immediate needs of the weaker half of the body must be provided for, together with the avoidance of the faulty positions, until the curvatures have been corrected, when general gymnastic exercises may be adopted. Cases of this kind sometimes recover by the use of instruments or the recumbent position, because the faulty positions are forcibly corrected, and muscular action is restrained until both sides of the body become equally impoverished, and a fresh start is made on equal grounds. With proper supervision this class of cases is best treated by gymnastics of the simpler sort with dumb-bells and the like, and not by the trapeze and ropes above the ground. The so-called Swedish system has no advantages over the ordinary methods, and it is slower in its results.

The chief indications for the treatment by gymnastics of the lateral and the cervical angular curvature causing round shoulders are to equalise the muscular development of the two lateral halves of the body, and to favour the freest possible mobility of the vertebra in all directions on each other, and trust to a good carriage of body (due to a good all round muscular development) to secure the true erect position of the spinal column. In cases of functional angular curvature, lying in the prone position with the arms tucked under the chest favours its correction, but little is gained by adopting the supine position in any functional form of curvature except as avoiding unfavourable positions of body.

A very large number—probably the majority of the cases of functional spinal curvature—are hysterical, and are mere imitations of conditions which the patient has seen, or heard described, or read about. I have seen growing-out shoulders and spinal curvatures in cases of chorea maintained throughout the disease, and disappear only with the chorea symptoms, notwithstanding the lack of muscular control by such

patients. For these hysterical cases, sea air, sea bathing and swimming, together with games and gymnastic exercises, are the best remedies, combined with general medical treatment.

I have seen what might be described as an epidemic of "spinal complaints" in a girls' school where the discipline was foolishly prudish and constrained, just as one often sees epidemics—epidemic because catching from one to another—of laughing and crying and other hysterical outbreaks in the wards of a hospital.

NOTES ON THE ETIOLOGY OF GOITRE.

By H. C. L. MORRIS, M.D.Brux., L.R.C.P., M.R.C.S.,
Hambleden.

During two and a half years' residence in Hambleden, Buckinghamshire, I have seen over 50 cases of goitre in my practice—a strikingly large number out of a population of about 2000; and I have little doubt that there are many more cases that have not come under my observations. The district is situated on and at the foot of the southernmost spurs of the Chiltern Hills. The soil is excessively chalky, and, with a few exceptions, the water supply is obtained from deep wells sunk into the chalk. When the springs are low the water is drawn up and even consumed while still milky in colour, for the poor take little trouble to boil or let it settle. I have met with no cases from the tops of the hills, where spring water is unattainable and the people drink stored rain water.

Of my 50 cases, all were water drinkers, only 4 being males, and the ages ranged from 4 to 76. There seems to me to be little doubt that the presence of calcium and magnesium carbonates in the water is the sole cause of the disease in my cases. When the springs are high the water, tested by Clark's soap test, represents about 30 in 100,000 of total hard matter, but when the springs are low the water is turbid, owing to the buckets disturbing the bottom of the wells.

The following instances are a little remarkable.

A girl, aged 24, who is in service in London, invariably gets an enlargement of the thyroid about a week after she comes home, the enlargement disappearing shortly after her return to her situation.

In another case a family came to reside in this district, having previously lived on a clayey soil. Within six months three out of four children, aged 5, 7, and 8 years, presented thyroid enlargements. There was a little difficulty at first about these children, for I found that their water supply came from a rain water tank. I discovered, however, on making inquiries that the water they drank at school came from a chalk well, and was occasionally turbid. The fourth child, who did not attend school, showed no signs of the disease.

In several other instances new-comers have developed goitre shortly after settling in the neighbourhood.

I feel certain that heredity had nothing to do with the etiology of my cases, for in only one instance was there the slightest suspicion of it. Nor has intermarriage been a factor, for the one village in which the inhabitants have largely intermarried is, if anything, clearer of the disease than those round about it.

The amount of iron in the water is so infinitesimal that I think it can be left out of consideration. That goitre may be produced by other causes in other places I think probable, but that it is produced in this neighbourhood solely by the carbonates of lime and magnesia in the drinking water I feel convinced.

Professor Hasner of Prague, has been appointed to the chair of Physiology in the University of Leipzig, vacant by the death of Professor Karl Ludwig.

The annual festival of the Order of the Hospital of St. John of Jerusalem in England, was held on June 24th. After a religious service in St. John's Church, Clerkenwell, which has been restored, the original crypt of the old church of the Priory of the Order being preserved, the general assembly was held in the Charterhouse under the presidency of the Earl of Latham.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CASE OF HYPERPYREXIA FOLLOWING INFLUENZA.

The following case seems worthy of record both as regards the rarity of the complication in influenza, and also as being one of the highest temperatures on record in a non hysterical patient. Dr. Bryant, in a collection of 100 cases of hyperpyrexia published in the *Guy's Hospital Reports* for 1894, only quotes one higher temperature apart from pure hysteria, and that was in a hysterical patient suffering from phthisis, in which case the temperature rose to 128°.

A. W., aged 31, married, a publican, had been treated for intemperance. He was not of a hysterical type, and had generally enjoyed good health. From March 30th to April 1st he was laid up with an attack of epidemic influenza similar to the present one except that his temperature never gave rise to any anxiety. The course run by the disease was quite normal. The profuse sweating with its accompanying rash of sudamina was a marked symptom. The recovery from this attack was complete.

On April 15th he complained of feeling unwell, and was seen in the afternoon, when he had a temperature of 102.2°. The pulse was full, 90. He was sent to bed and put on fluid diet, and ordered a mixture containing liquor ammoniæ acetatis. As in the previous attack, there was severe sweating, which produced the most marked rash of sudamina and miliaria that we had ever seen. The next day he was more comfortable, the temperature 101.4°, pulse 90. On April 17th he was about the same, the temperature was 102°, on April 18th 101°, and on April 19th 101°. On April 20th he was seen about 3 P.M., the temperature was 105°, the pulse 104; he was chatting perfectly rationally, and apparently in no different condition from what he had presented during the last few days, except that the sweating had somewhat diminished. About 6 P.M. he became suddenly violent, requiring three people to hold him in bed. When seen a few minutes later he was quite unconscious, breathing stertorously; there was no corneal reflex; the pulse was extremely small, about 130; and the temperature was 110.2° (twice taken) in the axilla. Ice was placed in each axilla, and the trunk and arms rubbed with it, but this was of no avail, and he died within a quarter of an hour of being seen.

He had never complained of pains in his joints, nor had he suffered from severe headaches; the lungs were quite free from physical signs on the afternoon of his death.

Dr. Rodman subsequently learnt that after his visit at 3 P.M. on the day of his death the patient had expressed to his wife grave apprehensions of impending evil from his feverishness, from which he could not be dissuaded. He laid great stress upon the fact of his having heard Dr. Rodman say as he went down stairs that his temperature was 103°, and higher than during the previous days.

The case was one of great interest, as within the space of at the most three hours the temperature had risen upwards of seven degrees, and the history given points to the fact that it was only during the last half hour or so of his life that any symptom due to the existence of hyperpyrexia was noticed.

There were no symptoms to point to any pyæmic condition—for example, ulcerative endocarditis or meningitis.

Post mortem decomposition was extremely rapid.

G. H. Rodman, M.D.
East Sheen, S.W. Arthur C. Hovenden, M.B., B.S. Lond.

CONTROL OF HÆMORRHAGE IN AMPUTATION AT THE SHOULDER-JOINT.

In recent numbers of the British Medical Journal there have been articles by different surgeons on various methods of controlling hæmorrhage in amputation at the shoulder-joint. I should like to mention a method which I adopted in 1891, in a case of spreading traumatic gangrene of the arm. My method, I think, differs in some small degree from those already described. An elastic tourniquet was applied round the axilla and tied over the shoulder and an assistant's

finger placed over the subclavian. As these were considered unreliable, I took the extra precaution mentioned below.

An external skin flap was made first by dissection. A circular amputation was next performed through the middle of the humerus; the brachial artery here was plugged with a clot, and therefore did not require ligaturing. An internal skin flap was now made by dissection. The remaining portion of the humerus was next dissected out and disarticulated. The brachial artery was next dissected out, and followed up to its continuation, the axillary, which was ligatured high up above the base of the skin flaps. The knife was then applied circularly through the muscles at the base of the skin flaps, and the amputation completed.

The patient made an excellent recovery, and I used to see him periodically for two years after the operation. He was a native of India.

The cause of the gangrene was the application of a tight ligature (a common practice among natives) for a compound fracture of both bones of the forearm.

A. J. McOLOSKY, M.B., C.M.Edin.,
House Surgeon, General Hospital, Singapore, Straits Settlement.

"IS CANCER HEREDITARY?"

I THINK the following cases may, perhaps, go some little way towards strengthening the theory that cancer is hereditary, although they were not, as were those mentioned in Mr. Roger Williams's letter, "homotopic," that is, confined to the same organ in each case.

Mrs. J. came to me some months since, suffering from an enlargement on the left side of the neck. After questioning her, I elicited the following family history: Her grandmother (father's mother) died at the age of 99 with cancer of the tongue; she had nine children, of whom one son died at the age of 83 with cancer of the throat; another son died at 82 of cancer of the face; another son (her father), who is still alive and is aged 83, has suffered for years with tumours of the intestine (these, from the history, I should say are probably of a cancerous nature); one of her brothers has had a tumour in his neck, which was removed.

My patient, Mrs. J., I sent up to one of the London hospitals, where the tumour was found to be in the left portion of the thyroid gland. This was, as was then thought, successfully removed, and proved, on microscopical examination, to be cancer. A few weeks after the operation, however, it developed in the remaining portion of the thyroid, grew rapidly, and extended into the tissues of both sides of the neck. She also had a tumour present in the left iliac fossa, which was probably of the same nature; years ago she suffered from uterine polypi, for which she was in a woman's hospital.

In this family therefore we get the history of the grandmother, two uncles, the father (probably), the patient, and one brother (probably) all suffering with cancer; beside this, it is interesting to note the great ages to which the sufferers lived—the patient, the youngest to succumb to the disease, was 57.

South Woodford, Essex. REGINALD T. H. BODILLY.

SUPERFŒTATION: A "WHITE" CHILD AND A "BLACK" FŒTUS.

THE following case of "superfœtation" may prove of interest to some of the readers of the BRITISH MEDICAL JOURNAL, from the fact of its rare occurrence and the difference of colour in the fœtus and child:

On May 9th I was called to attend a woman in labour. On arriving at the bedside I found that the woman had already been delivered of a female fœtus, 6 inches long. The skin was fairly tense, the mouth large and open, the sex distinct, the nails just appearing, and the umbilicus near the pubes; from these conditions I inferred that the fœtus was about four months old, the cord being about 18 inches long. The fœtus was dark-coloured like the mother, who is an East Indian labourer. The placenta had to be removed. About half an hour after the removal of the placenta I delivered the woman of a fully-formed full-term female infant, which had all the appearance of a "white man's child," as it is here called. This was so very noticeable a fact that two or three persons who saw the infant made a remark to that effect. The placenta was expelled at the same time.

The mother denied any possibility of its being a "white man's child," but this is only natural on her part, particularly when there exists such an intense jealousy on the part of the East Indian husbands.

The child is doing very well, and the mother is up and has been attending to her house duties for some time.

A. W. WIGHT,
Government Medical Officer, Trinidad.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

UNIVERSITY COLLEGE HOSPITAL.

TWO CASES OF PERFORATED GASTRIC ULCER TREATED BY OPERATION.

(For the Notes of these Cases we are indebted to Mr. DOUGLAS DREW, F.R.C.S., Surgical Registrar.)

[CASE I.—Under the care of Mr. BILTON POLLARD.]

C. A., aged 18, was brought from her home, about one mile distant, in the hospital ambulance, on the evening of January 22nd, 1895.

She had been anæmic for some weeks and had suffered occasional pains in the epigastric region, not increased by taking food, slight vomiting at times, and shortness of breath on exertion. Some months previously she had had a more severe attack of pain accompanied by frequent vomiting. Indigestion had been complained of for about two years. Menstruation had been quite regular. She was fond of vinegar and frequently took it with food.

About 7 P.M. on January 22nd, she was lifting a pail of water, when she was seized with sudden and severe pain in the epigastrium, which radiated round the left side to the back, and was followed by the vomiting of a small amount of brownish material, and frequent retching, with severe shock and rapid distension of the abdomen. Two hours and a-half before she had had tea, consisting of bread and butter with two slices of cake, and no pain followed the meal until the sudden onset at 7 P.M. At the time of admission, about six hours after the accident, the abdomen was extremely distended and abdominal respiratory movement was absent; the percussion note was tympanitic all over, obscuring the liver dulness and extending upwards to the fifth rib in the right nipple line. There was no dulness in the flanks; shock was severe, the face being pale and extremities cold. The pulse was 120, small, regular, and compressible. Respirations 32.

Dr. J. Rose Bradford saw the patient with Mr. Pollard, and concluded that perforation of the stomach had occurred. Operation was at once decided on, and was performed by Mr. Pollard 7½ hours after the onset of the symptoms. Chloroform was administered and an incision in the middle line was made from 1 inch below the ensiform cartilage to 1 inch above the umbilicus. At a later stage of the operation, the incision was extended downwards for 3 inches in order to facilitate the flushing out of the peritoneal cavity. On opening the abdomen, a free escape of gas occurred and the walls collapsed. The anterior surface of the stomach was exposed; it was abnormally red, and scattered over the surface were flakes of lymph. Search was made for a perforation; but a view of the cardiac end could not be obtained on account of some firm adhesions between the organ and the parietal peritoneum. These were divided, and by gently drawing the stomach towards the right a perforation was found situated on the anterior surface 1½ inch from the greater curvature. As the space was rather limited, the wound was extended by a transverse incision to the costal margin. Several branches of the superior epigastric artery lying in the rectus muscle were divided and ligatured; the perforation was thus brought fully into view, and was found to measure ¼ by ¼ inch; its edges were smooth and thin, and,

as the stomach wall for about 2 inches around was much indurated, it was decided not to excise the edges of the ulcer. The perforation was closed by seven fine silk Lembert sutures inserted with a round sewing needle, and passing ¼ inch outside the edge of the ulcer. One suture at each end was placed beyond its limits; as an additional security a second row of seven sutures was inserted after the first row had been tied, so that by further invaginating the wall of the stomach the first row was buried.

The abdominal cavity was very thoroughly cleansed by flushing out with boiled water at 100° F., and by sponging until it was nearly dry. The fluid at first came away very turbid, and collections of semi-digested food were found beneath the liver and in the left flank. Flakes and films of lymph were removed from both surfaces of the liver and from the right flank by the flushing and sponging. The abdominal wound was closed without drainage. The patient bore the operation, which occupied an hour and forty minutes, remarkably well. An enema, consisting of an ounce of brandy with tincture of opium mxx, was given with warm water at its completion, and in a few hours the shock passed off. Eight hours after the operation she vomited a quantity of offensive sticky material resembling pus; microscopically it was found to consist of fat globules and *débris*, with a few pus cells and numerous streptococci.

The vomiting continued at intervals for rather more than twenty-four hours, so a little ice was given. It recurred in the evening of the second and fourth days. Nothing was given by the mouth, except the ice mentioned, until the fourth day, when a teaspoonful of hot water was given every hour. Flatulence was complained of, but no further vomiting occurred. The pulse was 82, the temperature 100° F., and the condition of the patient satisfactory. During the first three days hypodermic injections of morphine were administered on account of pain.

On the fifth day the dressings were changed. The lower part of the wound looked well, and was quite dry, but at the upper end a small quantity of sour-smelling pus was found. The edges of the wound were somewhat red; the stitches were beginning to cut. The abdomen was not distended, and moved with respiration. Daily dressings were resorted to as the suppuration was rather free. The temperature was slightly raised, varying between 97° and 100.2° F.

On the ninth day the deep stitches were removed; the lower half of the wound was completely healed, an abscess had formed in the track of one of the sutures on the left side, so a small drainage tube was inserted after the removal of the stitch.

On the tenth day milk and barley water, a drachm of each, was given hourly instead of the hot water, and nutrient enemata, which had been injected four-hourly from the first day, were continued.

On the twelfth day the superficial sutures were taken out. She was quite free from pain, and no vomiting had occurred after the food, which was therefore increased to half an ounce of milk and barley water hourly.

On the fourteenth day slight vomiting occurred. Food was omitted for a few hours. The discharge from the wound was rapidly decreasing.

On the seventeenth day she was taking three ounces of milk three-hourly, and after this date the diet was cautiously increased until ordinary light food was being taken at the end of a month.

An attack of phlebitis in the calf of the left leg came on towards the end of the third week; this subsided in about ten days.

At the end of a month she was allowed to sit up in bed. The wound was then almost healed. At the time of discharge on the forty-fourth day to her home in the country, the wound was firmly united. She was feeling very well, and gastric symptoms had not returned.

During the first week after the operation the percentage of urea was estimated and found to be as high as 0·4 per cent., the quantity passed was not measured, but was probably small on account of the limited supply of fluid. About the middle of April the patient reported herself as quite well.

Remarks by Mr. Pollard.—This case is an instance of the striking success which may attend the surgical treatment of perforated gastric ulcer. It was in several respects a favourable one for operation. The patient was a nursemaid in a doctor's house, and to this fact may be attributed the rapidity with which the seriousness of the accident was recognised and the care with which the patient was removed to the hospital. The operation was commenced 7½ hours after the perforation occurred. The time at which the perforation happened was fortunate. It took place 2½ hours after the smallest meal of the day—tea—which did not include any indigestible food. The diagnosis of the condition was simple. It rested on the sudden onset and severity of the symptoms, the situation of the pain, and the presence of free gas in the peritoneal cavity. The operation was unattended with difficulty after a transverse cut through the upper part of the left rectus muscle had been added to the original median incision. A good deal of creamy material had escaped from the stomach, but no particles of undigested food were recognised. The presence of large films of lymph on the surfaces of the liver and in the right flank as early as seven hours and a-half after the occurrence of the perforation was noteworthy. The induration extended so far beyond the perforation that the removal of the diseased tissues would have left a wound which would have been very difficult to close. It is, indeed, doubtful whether in any case it is wise to excise the ulcer. The perforation was easily inverted, and securely closed by a double row of Lembert's sutures. The only drawback in the case was the occurrence of an abscess in the track of one of the stitches uniting the transverse portion of the wound. It is probable that this portion of the wound was infected by the material which was washed out of the abdomen. There was at no time after the operation any evidence of intraperitoneal suppuration. The abscess in the abdominal wall was very septic, and to the general septic infection from this source, acting in conjunction with intense anæmia, the thrombosis of some superficial veins in the leg must be attributed. The rapidity with which the patient recovered from her anæmia was remarkable. Within three weeks of the operation she had a good colour, and looked better than her friends had known her to do for months previously.

[*To be continued.*]

REPORTS OF SOCIETIES.

BRITISH GYNÆCOLOGICAL SOCIETY.

Clement Godson, M.D., President, in the Chair.

Thursday, June 13th, 1895.

Specimens.

Dr. Macpherson Lawrie showed: (1) Removal of Suppurating Ovarian Tumour, with Purulent Peritonitis and Adhesions: (2) Fibroma of the Uterus, removed by Enucleation; (3) Total Extirpation of the Uterus and Ovaries for Prolapse, in a woman, aged 30, who had strained herself in lifting. An ineffective attempt was made to retain the uterus in position by pessaries; the uterus, together with the appendages, was removed. Later she suffered from rectocele, which was treated by a plastic operation. She was now well. The President questioned the advisability of removing the uterus and ovaries for prolapse in a woman of 30. Dr. Routh took exception both to the removal of the uterus and to the removal of the ovaries.—Mr. Christopher Martin showed two Uteri, removed by total extirpation, after removal of the appendages, in each case two years previously. In the first case the appendages were removed on account of double pyosalpinx. Menstruation continued very profusely. After other methods of stopping the hæmorrhage had failed, vaginal hysterectomy was performed. It was found that a piece of an ovary had been left behind. The patient made a good recovery, and had had no more hæmorrhage. In the second case the first operation was a double ovariotomy for cystic disease. Menstruation continued, not profuse, but with excessive pain. As a last resource he performed total extirpation of the uterus by abdominal section. It was found that part of the Fallopian tubes had been left behind. There was also a myoma in the anterior uterine wall. Mr. Martin attributed the persistence of menstruation to the fact that owing to incomplete removal of the broad ligament the nerve had been left

intact. Dr. Leith Napier said that the thickness of the uterine wall in the second case was suggestive of fibrosis, which often caused a continuance of hæmorrhage, even after removal of the ovaries. Mr. Taylor (Birmingham) said that these were examples of a class of case in which hysterectomy had an important place, contrasting in this respect with Dr. Lawrie's case, in which the procedure was open to serious criticism. When menstruation continued with severe pain or hæmorrhage, after removal of the appendages, hysterectomy was often the only cure.—Mr. Tenison Collins (Cardiff) showed an impacted Ovarian Cyst which, in all its signs and symptoms, simulated a myoma of the Uterus.

Some Difficulties in the Use of the Curette.

Dr. Fascourt Barnes read this paper. Curetting, he said, though a simple procedure, was not devoid of risk. The first step was dilatation, which should be carried sufficiently to admit the passage of the index finger. There were two methods of dilatation. The rapid method was done under an anæsthetic by means of Hegar's or other dilators. At the best it was a somewhat rough procedure, involving tearing and bruising of the cervix; he therefore generally preferred the gradual method. Gradual dilatation was obtained by tents, which secured a greater amount of dilatation with greater safety. Laminaria tents were to be preferred, because the salts with which they were impregnated rendered them aseptic and even antiseptic. Sponge tents were to be condemned. He used tents 4 inches long. Under an anæsthetic the curetting was next proceeded with; often the finger nail was sufficient and satisfactory; in other cases a curette had to be used. The risks attendant on curetting were perforation of the uterus and hæmorrhage at the time of operation; and, later, atresia of the canal and pelvic inflammation. The two principal conditions calling for the use of the curette were chronic endometritis and retained products of conception. Cases were related illustrating these conditions. In conclusion, the following questions were submitted for discussion: 1. What are the symptoms which point to the clear necessity of curetting the uterus? 2. Which is the safest and most natural method of dilating the uterus? 3. Should the curette be used in cancer of the uterus, more especially when the growth is at the fundus? 4. Is it advisable to resort to the use of the curette as a means of making a diagnosis? 5. Is it possible to establish a satisfactory system of drainage of the uterine cavity after curetting?

The President said that as curetting was a popular operation, it was advisable that the method of its performance and the selection of cases should be discussed. Whilst many operations rose for a time into prominence and then lapsed, he thought it unlikely that this one would fall into disuse, because the resulting benefit was often strikingly evident.

Dr. Macpherson Lawrie had done many curettings, but felt a certain anxiety about every case; yet no operation gave more satisfactory results. He used laminaria tents and a sharp curette; the cavity was then flushed with boiled water. Complete rest was required for some days after.

Surgeon-General Harvey had operated in India both on Europeans and on natives, and had not found an anæsthetic necessary. He agreed with Dr. Barnes that sponge tents should be abolished. Even laminaria tents were not always satisfactory, for sometimes they expanded in an hour-glass fashion, and their extraction was then difficult.

Professor Japp Sinclair had also not found chloroform necessary; he gave a hypodermic injection of morphine an hour before the operation, and an alcoholic stimulant half an hour before. He had never seen any bad symptoms follow curetting, nor need there be any if care was used. Tents formed the best dilators; it did not matter much how long they were left in, especially when the uterus was tough. He thought it was seldom necessary to introduce a finger, but when desired Hegar's dilators could be used up to No. 12. The curette had an important use for diagnosis of cancer of the body of the uterus; whilst in cases of suspected cancer of the cervix, if a sharp curette were drawn across the diseased part, if it brought away tissue the disease was cancer; if not, and there was only a little bleeding, they had to deal with an erosion. He believed this sign to be pathognomonic.

Mr. Greig Smith doubted the value of the sign given to them by Professor Sinclair in his last remarks. In his experience a sharp curette applied to an erosion would certainly bring away tissue. He usually neither dilated nor gave an anæsthetic; but pulling the uterine canal straight by means of a volsella on the posterior lip, any moderate sized curette could be introduced.

Mr. C. Martin said there was one condition which had not been referred to, but which was capable of causing serious trouble after curetting, namely, mild disease of the appendages. In America curetting was done for this very condition, but he did not think it safe. A careful examination of the appendages should, therefore, always be made before curetting. In Birmingham they always gave an anæsthetic and used metallic dilators; a sharp curette was used, after which the cavity was swabbed out with iodised phenol, and packed with iodoform gauze.

The discussion was adjourned.

REVIEWS.

The Galenical Preparations of the "British Pharmacopœia;" A Handbook for Medical and Pharmaceutical Students. By C. O. Hawthorne, M.B., Lecturer on Materia Medica and Therapeutics, Queen Margaret College, University of Glasgow. London: J. and A. Churchill. 1895. (Demy 8vo, pp. 126. 4s. 6d.)

The ultimate attainment of a desirable uniformity in medical practice may be regarded as having been one of the main objects with which the amalgamation of the three different *Pharmacopœias* of London, Edinburgh, and Dublin was undertaken, and consequently the precise definition of the substances which the physician prescribes is one of the most important conditions to be secured in regard to both medicine and pharmacy. The *British Pharmacopœia* has undoubtedly helped to promote progress in that direction, and from that point of view it requires to be carefully studied by medical men as well as pharmacists. While for the latter the *Pharmacopœia* is the standard and rule for the preparation of medicines, its utility would be diminished if medical practice were not generally regulated by regard for its definitions. It is to secure such a result that Dr. Hawthorne has for some years past delivered a course of lectures at Glasgow, and has now given, in book form, the facts forming the basis of his lectures.

The volume is chiefly intended for the use of medical students, and is therefore adapted to their special requirements when engaged in the application and administration of medicines as remedies. It is very properly considered unnecessary that medical students should burden their memories with details as to the preparation of medicines, or that they should be expected to have more than a general acquaintance with the materials and the processes by which medicines are prepared. The knowledge and technical skill appertaining to the selection of drugs and the manufacture of medicinal preparations fall within the province of the pharmacist, and the more the standards of the national *Pharmacopœia* become efficient and recognised, the more thorough will be the division of labour in regard to the preparation and use of medicines. But even with these limitations it is no light task for the medical student to acquire that thorough knowledge of official medicines which is essential for the practice of his art, and it is to facilitate the study of the subject from the therapeutical side that the work now published by Dr. Hawthorne has been prepared. It contains a careful classification of the facts to be borne in mind in prescribing, elucidated by explanation of principles and by the introduction of elementary therapeutic facts which will materially assist medical students in this part of their work, and prove of practical value to them.

After some brief introductory definitions and a general description of the processes by which Galenical preparations are made, the author proceeds to deal with these preparations in thirteen groups, commencing with infusions, decoctions, and waters as the first group, and ending with ointments and oleates. Within the space of about a hundred pages the formulæ, composition, strength, and dose of the preparation belonging to these several classes are described,

well as the principles involved in their manufacture, and useful hints are given as to their use as remedies in medical practice. The pharmaceutical information requisite for medical practitioners is thus furnished in a very convenient form, which is calculated to make this small volume a most useful and desirable source of instruction for students.

Brief appendices are added, describing the regulations of the Pharmacy Act relating to the sale and dispensing of poisons; the British and metric systems of weights and measures and their relations to each other; the chemical nature of alkaloids, glucosides, and other proximate principles of drugs. There is also a full and well-arranged index. The publication of this work—written with a very thorough knowledge of the subject it treats of—is decidedly opportune, and it may be expected to contribute very largely to making the official preparations of the *British Pharmacopœia* better known among general practitioners in the future and thus to give effect to the intention that the national medicine book should become the one uniform standard and guide, whereby the nature and composition of substances used in medicine may be ascertained and determined.

Textbook of Diseases of the Kidneys and Urinary Organs. By Professor Dr. Fürbringer. In two volumes. Vol. I. Translated by W. H. Gilbert, M.D. With a Preface by Sir T. Grainger Stewart. London: H. K. Lewis. 1895. (Demy 8vo, pp. 204. 7s. 6d.)

The first volume of the translation of Professor Fürbringer's work is limited to the strictly medical, whereas the second volume deals with the more surgical, part. The first volume is divided into two sections, the first of which is given to general remarks on albuminuria, hæmaturia, hæmoglobinuria, renal casts, dropsy, and uræmia. In the second section, the subject is dealt with under the following headings: (1) Circulatory disturbances; (2) nephritis; (3) affections of the kidneys leading to suppuration. Under the head of Circulatory Disturbances, the following affections are considered: (*a*) The cholera kidney; (*b*) renal affections in pregnancy; (*c*) the engorged kidney; and (*d*) the hæmorrhagic infarct. Under the inflammatory affections of the kidney, the ever-recurring difficulties of classification are to be found. To those with any *post-mortem* experience, the utterly unsatisfactory classification of the various forms of nephritis is only too obvious, and this fact is emphasised in these pages on several occasions. Diffused nephritis is here divided into (*a*) acute; (*b*) chronic form without atrophy or marked amyloid degeneration; (*c*) chronic form with decided atrophy and general renal sclerosis; completely contracted kidney; and (*d*) amyloid kidney. It is certainly open to some objection to classify the lardaceous kidney (as usually understood) as well as at least some forms of the contracted kidney under inflammatory affections. The author would enlarge the class of amyloid kidney at the expense of chronic nephritis, as some degree of lardaceous disease with or without other changes appears in his experience not to be uncommon. Physiological albuminuria, the so-called febrile albuminuria, and the etiology of acute nephritis are especially satisfactorily dealt with. This work will be read with much interest and profit, more perhaps by those already acquainted with the subject rather than by the beginner, as it is somewhat burdened with authorities. The laborious work of translation has mostly been well done, but occasionally the English is somewhat stilted. There can be no advantage in substituting such terms as "eliminate," "purulence," "expectatively," for the well-recognised forms of clinician, suppuration, expectantly.

Pèlerinage à la Mecque et à Médine [Pilgrimage to Mecca and Medina]. Par le Dr. Salem Soubhy. Le Caire: Imprimerie Nationale. 1894. (Demy 8vo, pp. 155. 6 50f.)

This book is mainly an account of the Mohammedan pilgrimage to Mecca and Medina, written by a medical man occupying an official position under the Egyptian Government, who spent over eight months in the Hedjaz and had ample opportunities of observing what went on. Its pages give the reader a fair idea of a modern pilgrimage carried on with the aid of railways and steamboats. Owing to the very large number of pilgrims who by these means can be rapidly concentrated upon a small area, a much more perfect system of sanitation becomes requisite than was the case in days of caravans and small sailing boats, when travel was so exhausting that the ranks of the great army of pilgrims were thinned before arrival, and so slow that the survivors had become inured to hardship before they reached the goal of their desires.

Now great shiploads of untrained travellers are dumped upon the shores of the Hedjaz in the midst of a sanitation suited only to the Middle Ages. The author describes the method adopted for disposing of the contents of the latrines by burying them in pits dug in the sandy soil, through which the fluid slowly but surely finds its way into the neighbouring cisterns. He also points out that although the Turkish Government gave a considerable sum for the construction of an aqueduct by which pure water could be brought to Djeddah, and although it was actually made, yet at the instigation of the rich and influential proprietors of the cisterns the aqueduct was either destroyed or allowed to get out of repair, so that the pilgrims still have to buy the cistern water, which is of the vilest description.

This is but an example of the way the unfortunate pilgrims are dealt with.

Little information is given regarding the sacred well of Zemzem in Mecca, but it is incidentally mentioned that, as this well is popularly considered to open into Paradise, many pilgrims did not hesitate in former times to commit suicide therein. The fact that their bodies were never recovered added no doubt to the strength of the superstition. At the same time it did not add to the purity of the water, and it is satisfactory to know that the Turkish Government has now placed a grating to prevent any further use of this short cut to Paradise.

A ghastly picture is drawn of the sacrifices at Mounah, where nearly 300,000 sheep are slaughtered, and of the evils which result from so great a mass of decomposing material. The author asks that the carcasses should be burned. He also suggests that more care should be taken as to excrement disposal, and the provision of purer water; that Yambo, the point of departure on returning by sea, should be provided with a telegraph, so that warning might be given to Egypt of any outbreak of disease among returning pilgrims; and that a railway should be constructed from Djeddah to Mecca, from Mecca to Medina, and from Medina to Yambo, so that the whole tour could be done by rail. He also makes the suggestion that as cholera reaches Mecca from the south it should be arranged throughout the Mohammedan world that pilgrimages to Mecca from the north and from the south should take place only on alternate years, so that the two sets of pilgrims should never touch or intermingle.

A Contribution to the Etiology of Cholera. By M. W. M. Haffkine and W. J. Simpson, M.D.

This pamphlet, which is a reprint from the *Indian Medical Gazette*, March, 1895, is an attempt to show that in Nature there are no water comma bacilli except those connected with cholera. The authors have made an exhaustive examination of the tank and other waters of Calcutta, and arrive at the conclusion that (within the limits of error of experiment) those tanks near which cholera has been known to exist during the past year contain comma, while others in the vicinity of which no cholera has occurred are free from that organism. This reasoning, as far as it goes, can never result in more than presumptive evidence, and the authors' conclusions must therefore only be accepted in this light. The authors do not tell us what measures were adopted to confirm the diagnosis of the comma as veritable cholera forms, and this, in view of the well-known results of modern investigations, according to which several well-defined species of non-cholernic comma have been described in water, and of the above criticism, might in the hands of anyone not knowing as we do the authority with which the authors can speak, seriously detract from the value of the paper. But we have no doubt that every precaution was taken, and the piece of work—which must have been laborious in the extreme—may be taken as affording additional argument to those who hold similar views on the etiology of cholera to those advanced by

the authors, though we might with the same justification consider as effect what the authors look upon as cause, and vice versâ.

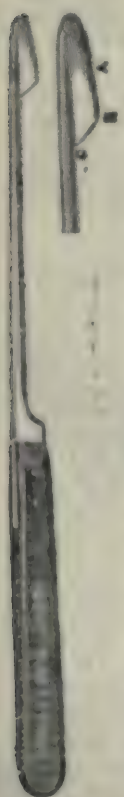
NOTES ON BOOKS.

Disinfection and Disinfectants; Practical Directions in Accordance with the most recent Information on Disinfectants. Compiled for the National Health Society by John Gay, M.R.C.S., L.R.C.P., D.P.H. (London: Allman and Son, Limited. 1895. 1d.)—The leaflet on disinfectants issued by the National Health Society has been revised and brought up to date by Mr. Gay, who gives in some dozen pages a brief account of such disinfectants as are of real practical value, with directions for their use in various circumstances. The information given is set out in a clear and condensed form. Exception may be taken to the inclusion of permanganate of potash among "the most reliable germicides which will kill the spores of bacteria," the question of time being here one of importance, and a 5 per cent. solution (the strength recommended) requiring twenty-four hours to destroy anthrax spores. Again, the advantages of steam over dry-heat forms of disinfecting apparatus are not sufficiently insisted upon. The pamphlet contains much information in a small space, and should prove a useful addition to the series of publications issued by the Society.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A URETHRAL KNIFE.

Dr. James MacMunn (Finsbury Pavement, E.C.) has designed a urethral knife, illustrated in the accompanying woodcut, for the division of strictures of the meatus and those not far down the urethra. The chief point in its construction is that it only cuts at B. At A it is blunt, and thus slides on the mucous membrane and severs only the obstruction. The angle C also is blunt to render withdrawal free from risk of injuring the healthy part of the urethra. If used for deeper strictures the handle ought to be elevated on withdrawal after the narrowing is cut. To cut flush with the mucous membrane and to a size not exceeding that of the urethra anterior to the stricture is the object aimed at. The site of the stricture should first be ascertained with a bulbous instrument, and the distance to which the knife should be introduced should be measured on it. The knife is made by Messrs. Arnold and Sons of West Smithfield, E.C.



CELLULOID VAGINAL DOUCHE.

Mr. Robert H. Rains, M.R.C.S. (Caledonian Road, N.) has designed a vaginal douche made of celluloid, for which he claims certain advantages. The vaginal tube is large enough to open out the vaginal folds, and being perforated, as shown in the drawing, renders it easier to wash out the vagina thoroughly than by other patterns. The material of which it is made is unbreakable, and being transparent contributes to ensure cleanliness. It is provided with an inflatable india-rubber cushion to occlude the vaginal outlet, and is self-retaining owing to the expanded extremity. It can thus be used by the patient herself, and being provided with a large wastepipe the risk of wetting the bed is obviated, and a drawsheet is unnecessary. Any ordinary india-rubber syringe can be used for supplying the fluid for injection, as is shown in the drawing. If it be desired to flush out the vagina this can be effected by pinching the wastepipe while the bulb of the syringe is compressed

two or three times; when the wastepipe is liberated the injected fluid, and with it any blood or discharge, is forcibly expelled through the numerous apertures in the vaginal tube and into the wastepipe. The apparatus takes to pieces easily for cleaning, and can be supplied with a uterine tube. The appliance is made by Messrs. Arnold and Son, of West Smithfield, E.C., and has been protected.

IMPROVED TONSIL GUILLOTINE.

Mr. Leonard Roper, M.B.Cantab., clinical assistant in the Throat Department of Guy's Hospital, writes that the accompanying woodcut shows a slight addition to Mackenzie's guillotine. Hitherto he has frequently found that the blade, when withdrawn and ready for use, presents on each side a sharp edge extending from a quarter to nearly an inch in length. Messrs. Down Brothers have extended the slot in

which the blade works, so that when the latter is withdrawn to its fullest extent it is still guarded. His excuse for venturing to add to such a well-known and generally used instrument is that when dressers first commence to remove tonsils under an anæsthetic, he has not infrequently seen the lips and tongue cut by unguarded sides of the blade. A comparison of an ordinary guillotine with the woodcut will make the addition more obvious.

On Tuesday, June 11th, a complimentary dinner was given at the Regent Hotel, Leamington, by the members of the medical profession in Leamington and the neighbourhood, to Dr. F. H. Haynes, upon the occasion of his election as a Fellow of the Royal College of Physicians of London.

WATERBORNE TYPHOID:

A HISTORIC SUMMARY OF LOCAL OUTBREAKS IN GREAT BRITAIN AND IRELAND, 1858-1893.

A Report Prepared for the Parliamentary Bills Committee of the British Medical Association.

BY ERNEST HART, D.C.L.,

Chairman of the Committee.

(Continued from page 1151.)

CANALS AS WATER SUPPLIES.

In his report on the river Trent, to which I have already had occasion to advert at some length, Dr. Bruce Low gives prominence to the use of canal water in relation to typhoid causation. This is especially the case in respect of the villages of Misterton and Walkeringham, in the Gainsborough rural sanitary district (No. 174). In view of the fact that canal water was still being used here in 1893, I think I ought to show what were some of the constituents of the supply which the villagers were consuming. Accordingly I quote a short passage from Dr. Low's report:

"The Chesterfield Canal, which passes through the parishes of Misterton and Walkeringham, joins the Trent at West Stockwith, where are a lock and canal basin. Inland beyond Misterton, and to the south-west, the most important place on the canal is Retford, whence cargoes of nightsoil are brought in barges for disposal on the celery-growing land in and round about Misterton parish. From the south-east cargoes of nightsoil are also brought into the Chesterfield Canal from Gainsborough, and from Lincoln *viâ* the Foss Dyke, another canal which joins the Trent at Torksey. This nightsoil, along with towns' manure, is unloaded on the banks of the canal in Misterton parish, sometimes close to the village, and some of the filth is usually spilt into the water and on the banks during the process of unloading. The nightsoil before being carted away is heaped up on the bank, a few feet from the water's edge, and eye-witnesses inform me that they have seen the liquid filth exuding from the heap, running directly into the canal. The bilge water remaining in the barges after unloading is pumped out into the canal. The amount of nightsoil manure passing *viâ* the canal from the river Trent is estimated at from 500 to 600 tons in the year; this does not include that which comes from Retford in the other direction."

This surely is bad enough; but even worse is told by Dr. Low, since he says that this canal water has a "general preference" expressed for it by the villagers as opposed to pump wells. In the same report we are told that the town of Thorne derives its supply of drinking water from a canal fed by the waters of the river Don. True, the supply is subjected to some amount of filtration of a rough character; but the canal itself is the recipient of untold abominations. Dr. Low says: "The canal in question is fed by the waters of the river Don, which itself forms, for some miles above, a part of the navigable waterway. The Don is largely polluted by sewage and other refuse matters in its course through the Sheffield, Rotherham, and Mexborough districts, and other populous places; it is also continually contaminated by the bowel discharges, urine, and slop water of a large floating population. On one occasion, a few years ago, the number of canal boats passing up and down through the Thorne Lock in one week was counted, and the number enumerated amounted to 500. So that 500 boats carrying each four persons would represent 2,000 persons contributing excrement to the canal in the Thorne district at one time or another during the week. Habitual throwing into the canal from barges of all their excrement and slops by boatmen was not denied. Towards the Doncaster end of it I myself saw many loads of black sludge being taken out. One lock-keeper told me he often saw the carcasses of dead dogs and cats in the canal, and that he had occasionally himself to assist in taking out of the water the decomposing bodies of drowned persons." That canals should be totally prohibited as suppliers of drinking water no one, I take it, will seek to gainsay after reading what is here said.

FILTRATION OF DRINKING WATER.

The importance of the method of filtration adopted in regard of water intended for human consumption need hardly be asserted. And yet it is one which has received far less attention in the past, at least in our country, than should have been given to it. Professor R. Koch has brought out very clearly in his paper of 1893 on Water Filtration and Cholera that it is not the sand of the filter beds that acts as the purifier of the water passed through the filter, but that a layer of mud on the top of the sand, brought there by a deposit from the still unpurified water, is in reality the means of filtering the water. The most important point in connection with efficient filtration is the deposition of this layer of mud, which after formation should not be disturbed until it becomes so thick that it requires removal on account of its impermeability. The layer of sand below this deposit should never be permitted to get under a certain thickness, about 30 cm., and in respect of the filtering mud layer it is essential that the water to be passed should in the first instance be allowed to remain on the sand bed a sufficient time to deposit the mud, the time required to bring about the deposit differing with different waters and the capability to rid themselves of their suspended mineral and vegetable matter. Some river waters, we are told, which are especially rich in clay constituents can deposit a good filtering mud layer in eight or ten hours, whilst others, having vegetable matter in suspension, require at least twenty-four hours for the process; hence the matter of sand filtration is seen to be by no means the simple subject that many have supposed it to be. We are further told that if a filter works satisfactorily there should never be more than 100 germs capable of development in each cubic centimetre of filtered water, and this notwithstanding the number in the unfiltered water, whether 100,000 or only a few hundreds. In the case of very contaminated natural water the germs after filtration should never exceed 100 in a cubic centimetre. A small proportion of the bacteria found in filtered waters have their origin, according to Fraenkel and Piefke, in the natural water; hence the very best filters yet devised cannot rid the waters of all micro-organisms, with the sole exception of the Pasteur filters. Indeed, at the rate of filtration which Professor Koch would allow, he fears that the bacteria of cholera could not be kept back; but whilst sand filtration cannot be held to give absolute protection against danger of infection, "it can give such a protection that in practice we may, under existing circumstances, be satisfied with it." The danger to be feared from the process of cleansing the filter beds is adverted to, and it is shown that even with the most careful manipulation of the plant there will be some disturbance of the filtering area by the inflowing water after the beds have been cleaned. This, however, need be but slight, and danger may be avoided if the proper precaution be taken of permitting the water to rest for the hours requisite to allow of a deposit before the filters are again put into play. Commenting on the cholera outbreak at Nietleben in 1893, Professor Koch states that if proper bacteriological examination had been made of the so-called filtered water prior to the outbreak, such an examination would have sufficed to show that the water passed through the filter beds was not of such a quality as was proper to be sent into the service reservoirs. The object to be aimed at in that case seemed to be to get as much water as possible through the filters, irrespective of the nature of the filtration to which the process treated the water. The fact was not appreciated that the water needed to be allowed to rest for four-and-twenty hours on the sand previous to fresh use of the filter beds. To such ignorance Professor Koch would seem to refer the cholera epidemic outburst at the asylum there.

This brings me to the further and very important matter of the periodical and frequent examination of water, after filtration, in a bacteriological sense.[1] It is perhaps scarcely necessary to state that in England this question has not received the amount of attention which it merits. Unless I am greatly mistaken, the waters of the individual companies supplying London are only examined (to the extent of a few drops) once a month. But what do we find Professor Koch

[1] In this connection I have thought it well to print in appendix the account which Dr. Klein has given of his "methods of examination" of water when searching for the bacillus of typhoid.

saying on the matter? This, namely, that there should be a rule that each filtering basin should when in use be bacteriologically investigated once every day, the basin being so arranged that a sample of the water can be taken immediately after passing the filter, and prior to mixing with the waters from other basins or reaching the storage reservoirs. He does, however, go on to say that if waterworks are so constructed that they give uniformly good results, periods of greatest use of water, of frost, or of danger of epidemics, are alone those in which the strict insistence of a daily examination need be carried out, an examination every three days of the total filtered water being in the meantime sufficient. But the practice of a weekly bacteriological examination at any time is recorded as insufficient. I much fear that the water companies of our country, if judged by this standard, would come out of the ordeal very badly. And again, if the water passing had in our country to stand the test of having a number of germs capable of development in each cubic centimetre below 100, I imagine that the companies would be in equally bad case. If we apply these various desiderata to the case of the Tees water as supplied to consumers, I am afraid that the inability of the Water Commission of 1893 to determine whether the fever in the Tees valley was or was not waterborne is shown to have less justification than ever. Coming to an instance of filtered water which has seemed certainly to have caused typhoid, I would draw attention to the case of the Chester-le-Street outbreaks of the winter and spring, 1892-93 (No. 195), where the incidence of the disease was most emphatically marked on one of two water services in the place. The data given in the appendix sufficiently demonstrate this fact. The inquiry which was made of the prevalences of typhoid for the Local Government Board by Dr. Maclean Wilson is an admirable instance of the reports issued by the Medical Department of that Board, and I feel that I may with advantage to this paper quote from the document as to the methods of filtration found to be in vogue when Dr. Wilson visited the district. The length of the extract is only the measure of the importance of the subject dealt with.

"The Chester-le-Street Company draws its supply from the Stanley Burn, about two miles above the village. At the intake there is a weir to direct the water into the pipes, the open ends of the pipes being protected by a double wire screen to keep out leaves and other floating bodies. But at the time of my visit these screens were so arranged that the water did not require to pass through them to enter the pipes. A few yards lower down these intake pipes deliver into a settling tank about 3 feet square, and from this the water flows into the main, which is said to be covered by a rose. The main conveys the water by gravitation (with a fall of 130 feet) to a filter bed. The man in charge says that there are several valves in the course of the main through which the water can be turned into the stream again, and that these have to be opened occasionally to scour the pipes, in order to keep them clear of sand and mud. The filter bed, which is situated on some high ground close to the village, and within 200 yards of the railway station, seems to have been made when the company was first formed, and not to have been much disturbed since, except for renewal of sand in a way presently to be described; at any rate, I am told that it has not been opened out for the last thirteen years. It is constructed of brick and mortar, forming a tank 24½ feet by 49½ feet, and of unknown depth. Surrounding it on three sides in the form of a horseshoe is the service reservoir, covered in, and, I am told, constructed of brickwork with a coating of cement. It is said that the filtered water enters this reservoir through holes in the walls of the filter bed. The filtering medium is said to consist of 4 or 5 feet of gravel and fine sand, with a layer of cobblestones at the bottom of the tank, but, as will be seen, the thickness of the sand varies immensely at different times. This is the method followed: Once a year, after the clogged surface layer of sand has been removed, about 150 cartloads of fresh sand are poured in. This sand is procured from the banks of the Wear close by, having been deposited by floods, and the Wear above this point receives the untreated sewage of a large population, both urban and rural. The water is turned on to the filter bed, and allowed to run through it until the surface layer of sand begins to get clogged, a period which varies from ten days to three weeks, according to the state of the water. The water is then turned off, and the bed allowed to dry, when the man in charge skims off about an inch of mud and sand, and delves the new surface to a depth of a foot or so. The water is again turned on, and the same process is repeated throughout the year until the sand has been in the main removed, when another 150 cartloads have to be filled in. The process of paring the surface of the filter was done in my presence, and I was told that the level of the sand was then at its lowest, as it was time for its periodic renewal. At that time the surface of the filter was 5 feet 5 inches below the level of the overflow pipe, and I was told that 3½ feet of additional sand was to be thrown in, so that the thickness of filtering medium varies as much as 3½ feet. As has been noted above, the filter bed is surrounded on three sides by the reservoir; on the fourth side is well-manured garden ground, extending up to the wall of the filter bed, and as the wall is made apparently of ordinary brick and mortar, and is dilapidated in many places, there is no doubt that in time of heavy rainfall the soakage from this garden gets into the filter bed. The reservoir is said to contain sufficient water to last for a fortnight if the supply is turned off at night. On the town side of the reservoir is the valve pit containing the pipe from the stream to the filter bed, as well as the distribution main from the reservoir to the town, and these two are joined together by another short main, so that the water from the burn can be turned into the town without passing through the filter bed. This, however, is said never to be done."

The state of things here set forth is sufficiently deplorable, and if I add that the bowel discharges of typhoid patients were prior to the outbreaks chronicled finding their way into the stream above the intake, there can be little wonder at the resulting dissemination of disease by the water of that stream when allowed, with such poor attempt at purification, to enter the distributing mains. Deplorable as was this state of things at Chester-le-Street, a larger question is behind it—namely, How far does the case represent the condition of water services in our country? The question is of serious import to the community, affecting as it does the public health in no mean degree. If filtration in its most perfect features does not arrest all the bacteria with which water is infested in its natural, and oftimes polluted, condition, what can be said of water which is subjected to only an elementary process of filtration? If it be contended that water from whatever source will not convey the means of harm when properly filtered, I for one will not quarrel with people who rely on that filtration, if only it be assured that the method of purification is indeed perfect so far as all reasonableness can demand, and such as shall reduce the germs in the water to less than 100 in each cubic centimetre, so far as development is concerned. If filtration is to be our safeguard, let it be of a kind to prevent all cause for cavil by those who look askance at the theory of the safety to be found in it. I must add one qualification to my adherence to the trust to be placed in efficient filtration, and that is my opinion that the water to be filtered shall be a water free so far as can be determined from even the risk of pollution. I refer, of course, more particularly to risk of excremental pollution. What I would like to see undertaken is a comprehensive survey of the several local and other water supplies in use in our country, all our gathering grounds, filter beds, methods of distribution and the like finding place in the scope of such an inquiry. The matter would doubtless take much time, but that would be a small matter if power were given to the department of State carrying out the inquiry to order the remedying of all defects of moment that were found to be existing. If we have regard to the valuable series of reports now available in the cases in which the Medical Department at Whitehall have made local inquiry into the sanitary circumstances of districts in England and Wales, we shall find that very seldom is the water service such as to prove satisfactory to that Department. But dissatisfaction without the power of remedy is but poor comfort to those desirous of righting the wrong.

Before I leave for the time this interesting subject of river water and filtration in relation to typhoid I should like to refer to one other instance of riverborne typhoid, that, namely, of the river Wear, which furnishes the water supply of Bishop Auckland. The data which I give in the appendix (No. 194) will show in a way not to be gainsaid that the inci-

dence was on the houses of consumers of the public supply from the river, even down to four cases in the village of South Church, in four houses taking the same river supply, to the exclusion of all other houses in that village and all houses in surrounding villages using other water. The waters of the river are undoubtedly grossly polluted above the intake of the supply. The Wear receives the sewage of all the towns in the upper portions of the valley, and, in addition, the raw sewage of several thousand people within a few miles of the intake, not including that of some thirty houses in the town of Bishop Auckland itself. But the water is filtered through a natural sand and gravel bank, the chemical analysis of the filtered water showing it to be of much greater purity than that of the river in its natural state. Yet the water is frequently, when supplied to the mains, quite turbid, thus giving evidence of the inefficiency of the method of filtration adopted. In his report for the quarter ended June 30th, 1893, Dr. Eustace Hill, the health officer for the county of Durham, states that the "county analyst reported of a sample of water taken from the mill race just below the entry of sewage from houses at West Mill and Daisy Bank, and Lotherbrush, 'that this sample yields very faint indications of the presence of actual sewage pollution.'" He proceeds to state very truly that the chemical purity of a water is no indication that it can be consumed without danger, and that at Bishop Auckland the filtration is not always effective; whilst there is evidence of the entry into the river just above the intake of sewage containing the specific contagium of enteric fever, at a time coincident with the outbreak of typhoid which I have chronicled in the appendix. It seems that the methods here adopted would not bear the scrutiny which Professor Koch would bring to bear upon them, and that if cholera were ever to find a footing in the upper reaches of the Wear whilst the conditions obtaining in 1893 are allowed to persist in the matter of a water supply drawn from that river, the chances are that Bishop Auckland will suffer very heavily. This instance, to my mind, sets forth very clearly the folly of trusting to so-called filtration, done in a manner which science has now shown to be short of the requisite. Filtration can only be relied upon when it fulfils the conditions laid down by Professor R. Koch, namely, when it secures a water with less than 100 germs capable of development in each cubic centimetre of filtered water, and where the other requisites of bacteriological examination and the like can be fulfilled.

Waterborne Typhoid Fever of Accidents.

It is conceivable that with our complicated machinery for the supplying of large populations with drinking water there would occur from time to time accidents of a nature to be deplored on account of their far reaching results of a harmful character; and so it is, for the history of waterborne typhoid is not without cases where the outbreaks have been directly the result of accident. I may recall attention to the Lewes epidemic of 1874 (No. 71), brought about by the leaving open of the valve of the intake pipe by some children. To this case I have already made reference in other connection, and so I pass on to consideration of additional instances where accidents have been concerned in the cause of outbreaks. One of the most curious of its kind was the outbreak at Perth in 1889 (No. 112), which lasted from May to November, causing 162 attacks and 21 deaths. It happened in this wise. The sewage of the city was disposed of in the river Tay, and quite close to the place of outfall into the river the mains of the public water supply cross from the filtering beds to the city. On a particular day some repairs were needed to the pipes, and by some error the sewage-polluted waters of the river were allowed to find entry to the distributing mains already charged with filtered water. On the next day succeeding there began an epidemic of diarrhœa in the city, and this was followed at the expiration of a week by an outbreak of typhoid, a circumstance by no means unusual in the case of waterborne typhoid, as witness, for example, the instance at King's Lynn. When we state that record of this remarkable case comes from the pen of Dr. Simpson, now health officer of Calcutta, it will be allowed that it demands credence. Of the Bangor epidemic of 1882 (No. 141) much was heard at the time, and after the issue of the report made to the Local Government Board by Dr. Barry. No fewer than 543 cases and 42 deaths occurred, and some attempt was made to exclude water as the cause of the disaster. This entirely failed, however, to convince any unbiassed mind as to the truth of the report, which unhesitatingly put the fever down to the water service. The town was no doubt deserving of a certain amount of commiseration for the lamentable circumstances. There were those who lost their lives by their persistent disregard of the theory of a waterborne pestilence; and yet after all the malady was brought about by an accidental act, if one may call a flood a matter of accident.

The facts leave no doubt that the river from which the water supply of the place was obtained was polluted some 700 yards above the intake by the excreta of typhoid patients cast into a creek which carried them by means of a rubble drain to the river. The flood which occurred in early July had for its result the bursting of a main, with consequent disturbance of reservoir and filter bed; and this disturbance was followed by a widespread and simultaneous epidemicity of the disease, the fever blazing forth after the lapse of a fortnight following on the bursting of the main. The water was much discoloured after the accident, and smelt badly. Houses not taking it were altogether exempt from fever. To add to the discomfort of those who had much to say by way of doubt of the theory of water, it was pointed out that the filtering beds were inefficient and dirty. And then, again, it can hardly be expected that a river can be polluted by the specific germs of typhoid without grave danger of mischief resulting, especially where the method of filtration is in any wise faulty. Therefore, whilst we may class the instance in our chapter of accidents, it nevertheless remains also as a case deserving of much censure that there should have been permitted to remain such a source of danger to the public water service as the disposal of excrement from houses so situate as to render the pollution of the service possible. If it be held that accidents as such cannot be guarded against, I must enter the lists and give it as my opinion that the health of a community should not be at the mercy of a child, or of an ignorant householder who is content to get rid of his domestic filth without regard for decency or safety. The instance of Perth is probably unique, but it is painful to think of the consequences of any damage or leak occurring in connection with riverborne water pipes, in the same way as it is dangerous to have pipes for water and sewage laid side by side without the greatest of care that any possible exchange of contents is guarded against.

Gathering Grounds and Water Pollution.

Where drinking water is derived from the surface drainings, the importance of having a gathering ground free from all possible means of pollution is self-evident. And yet to read the history of waterborne disease, one would imagine that to secure a gathering ground that should not directly contribute to the contamination of the supply was a matter of but little concern for those charged with the safeguarding of the public health. I have already had occasion to make some reference to this subject under one or more of the preceding subheadings, but not directly as matter of gathering ground so much as of pollution of streams and the like by surface drainage. This question of the relation of typhoid to the surface pollutions to which water is subjected while in process of collection is one that demands some consideration. We have recently seen some large corporate bodies brought to book on account of the disgraceful conditions which have been permitted to exist along the route of water collection, and to these I shall have to refer in this connection. It will be well that I should make special reference as matter of first instance to a few cases of polluted gathering grounds so far as the facts appear in the appended tables. I will take half a dozen instances. The first is by no means the least interesting. I refer to the Blackburn outbreak of 1881, investigated by Dr. Hubert Airy (No. 128), with its 260 attacks. The case is indeed of such vast importance as showing the conditions prevailing when Dr. Airy visited the borough that I am sure I shall be pardoned if I quote even somewhat lengthily from his report, only premising that the state of things to be now described in nowise obtains to-day. I cannot do better than reproduce Dr. Airy's account of the risks to which the old waterworks supply was exposed by reason of the circumstances in which the water was gathered.

"Now it is evident that this water supply of Blackburn runs the risk of pollution at its several sources. There is risk at the gathering ground above Pickup Bank; there is risk at the White Birk Colliery of some accident similar to that which befell the Caterham well; and there is risk at the well on Revidge, for houses are pretty numerous round about, and the soil is a porous sandstone rock. Moreover, as regards the water from Pickup Bank, there is risk at very many points along the route by which it is conveyed to the town. The stone culvert, . . . is of rough construction, built of the ragstone of the district in rude wedge-shaped lumps, fitted together without mortar or cement, but well bedded in thick puddle; and remembering that this culvert has lain for more than thirty years, only three or four feet deep, on the slope of the hill side, with a constant tendency to increase of pressure on the upper side and lessening of pressure on the lower side, it can hardly be supposed that the structure is still sound throughout. Indeed, on one or two occasions at different points the crown of the arch has fallen in, and probably at a hundred points it has yielded more or less, so as to admit a leakage of subsurface water on the upper side. The Corporation have been sensible of the danger involved in this condition of things, and have, some time back, taken pains to prevent the surface water from lodging on the upper side of the mound which overlies the culvert, by cutting trenches and laying drain pipes to carry it away either under or over the culvert. An inspection made last autumn (1880) by the health officer (Dr. Stephenson) and the inspector of nuisances (Mr. Tebbitt) revealed the presence of dangerous nuisances in the shape of town manure on the pastures immediately above the line of the culvert. Freedom of manuring was expressly reserved to the neighbouring owners, tenants, or occupiers by the Waterworks Act of 1845. The only remedy the Corporation can use is to refuse to sell manure to the farmers on these lands. They cannot prohibit the manuring of the land, and the farmers can get manure elsewhere; danger from manuring, therefore, still remains. There is also the sewage and ordure of Belthorn, the village on the crest of the hill above the line of the culvert, to be taken into account. At the time of construction of the waterworks Belthorn had no sewer nor cesspool, but disposed of its slops and excreta close around the dwellings. Of late years the house slops have been received in a roadside sewer, delivering into a watercourse which formerly was impounded in a little 'lodge' close above the culvert, and used to supplement the supply from Pickup Bank. Even to the time of my visit the conduit remained open at this point, but the lodge had long before been emptied by a pipe carried under the culvert. Still it has occasionally happened that this pipe has been choked with rubbish or with snow, and the water has half filled the lodge before it has been possible to clear the pipe again. The water bailiffs, however, declare that the water in the lodge under these circumstances never reached the open conduit. Again, there are one or two other points where sewage from Belthorn has to pass over or under the culvert, and where the accident of a defective joint might admit impure water to the latter. The drainage from one row of houses goes into a cesspool on the hill slope. The cesspool sometimes overflows, and the liquid runs down a lane and enters a drain which passes under the culvert. Even in the last twenty yards of its course, before it discharges into the Guide reservoir, the culvert is in manifest danger of receiving soakage from the neighbourhood of a row of cottages ('Shorrock's Row') in the village of Guide (see plan annexed). The slops from these cottages are thrown out partly in front into the road gutter, which carries them over the culvert with no security against percolation except the bed of puddle in which the culvert is wrapped, and partly into a 6-inch pipe drain at the back, which, at the lower end of the row, is carried under the last house and across the road to join a larger stone drain from a higher part of the village."

The above is sufficient to show that the gathering ground was by no means free from sources capable of seriously polluting the water collected in the reservoirs; and Dr. Airy goes on to describe the manner in which he thinks actual pollution may have been brought about by way of the drainage from some privy pits within nine yards of the culvert at one part of its course. Percolation of the contents of these privy pits was demonstrated at the point where those contents passed over the stone culvert, and a case of unequivocal typhoid occurred in February in one of the houses using one of the pits. Moreover, the discharges of the patient were cast into the privy, and though the use of carbolic acid powder is said to have been made, in so far as the stools were concerned, at any rate no such attempt at disinfection was made in the case of the slops and rinsings of vessels. All alike could find their way to the culvert. And even so, Sir Charles Cameron has stated that he has succeeded in developing typhoid bacilli in large numbers from dejecta treated with carbolic acid.[1] In the next month (March) the disease suddenly blazed out in Blackburn, with 149 cases, followed by 61 in April. Dr. Airy shows that the distribution of the water, complicated as it was, fitted in with the theory of

Plan of a Part of the Blackburn Waterworks, 1881.

contamination by the excreta of the single case of typhoid just referred to, whilst the widespread and slight incidence on the large population served equally fitted the theory, since, if the one case of disease contributed all the polluting agent then the amount would be very small in relation to the immense body of water to be infected. The heaviest incidence was on that part of the borough served by the reservoir chiefly concerned in the pollution to be derived from the specific evacuations. The case against the water to my mind admits of little room for doubt, and the lessons to be learned from the facts so admirably detailed by Dr. Airy are the folly of collecting water from a gathering ground subject to manurial and other means of probable pollution of the

[1] British Medical Journal, August 11th, 1894.

water so collected, and the necessity of looking after any disease within the area of drainage of water, rather than leaving the matter to the chance operations of an unskilled labourer, as was done in the case of the initial attack, which very probably was the starting point of the deplorable epidemic which lasted from March till May of 1881. Another instance of most foul conditions obtaining around the water used by a community subsequently invaded by typhoid was that of Barnoldswick, in Yorkshire, in the spring of 1883 (No. 146), where 48 cases occurred. The well here in question was, we are told by Dr. Atkinson, the health officer, fed from ground saturated by sewage, and itself situate between two sets of cesspools which intercommunicated, fever presenting in some of the very houses draining to the cesspools. Small as were the proportions when compared with the epidemic just chronicled, I much doubt if a case more deserving of censure of the sanitary authority can well be imagined. The people were for all the world drinking their own excrement, and veritably consuming the poison of typhoid. At Cowpen, where enteric seems to be almost endemic, there was an epidemic consisting of 74 cases and 13 deaths in the spring of 1884 (No. 151). Here the water was derived from a stream which received the drainage of highly manured fields on which human ordure was deposited for manurial purposes, and the heavy rains of the winter months preceded the outburst. In the case now to be referred to, three farmsteads were situate on the area from which the water was collected. I mean that of Swansea in 1885 (No. 161), where nearly 600 attacks were recorded, and nearly 50 deaths were registered, in two months of the summer. At two of the three farmsteads there occurred, it is supposed, cases of typhoid, and the evacuations of the patients under the local conditions and methods of treatment could not fail to gain access to the reservoir through the medium of the watercourses proceeding from the houses. The fever outbreak was conterminous with the service of water from the particular reservoir subjected thus to specific contamination, those districts outside this supply totally escaping. It is but right to state that immediately information was received by the sanitary officials of the suspected cases at the farms, and the danger to be appended therefrom, the water from the implicated reservoir was cut off.

As testifying to the fact that it was to the consumption of this water that the fever was due, it was found that at the time at which the action of cutting off the water might be looked to, to bring about a decline in the number of new cases, such declination did, as a matter of fact, take place. But the lesson here is again plainly written, namely, the folly of having within the area of the water drainage system any dwellings from which danger may be apprehended in the not unlikely event of specific disease manifesting itself on the premises, where, indeed, the methods of excrement disposal are such as cannot be regarded as absolutely to be relied upon as without the possibility of accident to the water service. Farmsteadings, with their invariable dirt and litter, are the least desirable dwellings to have near a gathering ground, at any rate, as we know such places in general. The instance of the outbreak so recently as 1891 at Rotherham, Rawmarsh, and Greasbrough, will still be fresh in the minds of many people, and its lessons are sufficiently important to warrant me in bringing the chief facts to the remembrance of any who may be without intimate knowledge of them at the present moment. The two former towns, and a definite but small part of the last, had a water service in common, furnished by the Rotherham Corporation. This service was from two gathering grounds and two wells. These gathering grounds (see No. 190) were subject to all manner of polluting media, especially one, the water from which had great hand (87 per cent.) of the total cases occurring, and these numbered in all 251, with 35 deaths, from October to December. The water supply was the only community of condition in the invaded areas. Now, the pollutions to which the gathering grounds were exposed comprised such dangerous elements as the drainage of highly-manured fields, on which were deposited the refuse of farmyards and the contents of privy middens; and in addition the sewage of whole villages found its way into the water; and, to crown all, the filtering beds had none of them been cleansed since 1885, one, indeed, not since 1881, analysis of the water for a series of years being of a compromising nature. That there should have been found in England such a combination of deplorable conditions obtaining in connection with the water service of one of our towns as has been the case at Rotherham is a sure sign that our boasting of our immense progress in matters sanitary is rather premature. With different climatic conditions in our country, who would like to predict what would happen in a time of adjacent cholera?

To close this sickening array of facts as to the manner in which potable water is drawn from the surface of sewage-laden land, I take note of the case of Atherstone (No. 139), where the outbreak of 1893 was related to the pollution of the water by way of a piece of common land thickly covered with animal ordure; a large pond also contributing its mud and filth to the pollution, whilst the collecting tank had in its near vicinity a place of defæcation for numerous tramps. I have referred somewhat fully to this outbreak already, in connection with the question of levels of mains as affecting the distribution of typhoid, and so I need not here recapitulate. But that a piece of ordinary common land should have been allowed to furnish water by drainage for a town seems scarcely credible. Nevertheless, the fact remains that Atherstone was content to see its water collected in the way described, with the results that will always follow on such a state of affairs. The whole subject of the relation of gathering grounds to typhoid enters so largely into the history of those outbreaks which have been traced to water as a cause, that I have felt no hesitation in thus lengthily speaking of the matter; and it seems to me that it is one that needs much more consideration than has hitherto been paid to it, since we see that some of the most glaring instances on record are of quite recent date. The entire question of surface drainage in so far as drinking water is concerned, calls for remedial action on the part of our companies. Far better trust to polluted waterways, such as rapid rivers, than to the constant presence of infiltrating human ordure, or the rank sewage of villages where disease may at any time become epidemic. Indeed, with efficient filtration, I would much rather see my drinking water coming from a polluted river than from the surface of meadows heavily manured by the visible refuse heaps collected from privies and the like. For one thing, the chances of a river ridding its waters of the harmful qualities of the polluting media are much greater than in the case of water gathered from saturated ground full of abominations, close to the tanks and reservoirs or to the streams which feed the service pipes and places of storage. Of two evils I would choose the least likely to cause mischief.

Churchyard Drainage in Relation to Typhoid Fever.

Man, however, does not appear content to pollute his drinking water by the voided filth of the living, but is too often careless in the matter of contaminating his supply by the drainage from the resting places of the dead, and thus it comes about that danger arises from the proximity of burial grounds to the areas of catchment for water impounding purposes. I will briefly refer to two instances in which the proximity of churchyards to sources of drinking water was seriously held in question. The two cases are wide apart in point of time and locality, the one being at Malpas, in Cheshire, in 1871 (No. 27), and the other at King's Lynn in 1891 (No. 189). At Malpas the churchyard has been in use for for many centuries, and not only was it situate on porous soil, but it was so located that all the decomposing animal matter getting away was led to the source from which the water supply was obtained. In the case of King's Lynn, the drainage of a churchyard into the Gaywood river, which furnishes the public water supply, was only one of very numerous sources from which the river derived pollution. Still these two instances serve to indicate the fact that places of burial are at times so placed in relation to water services that their natural drainage finds its way to the water drunk by man; and it does not want much thought to come to the conclusion that their proximity to sources of supply is, to say the least, very undesirable.

(To be continued.)

A Clinic of Mental Diseases has been established in the University of Giessen. Kiel and Rostock are now the only German universities which have no psychiatric clinic.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN LONDON, 1895.

THE MEDICAL INSTITUTIONS OF LONDON.

(Continued from page 1445.)

THE MEDICAL SOCIETIES OF LONDON.

By JAMES BLAKE BAILEY, B.A.,
Librarian of the Royal College of Surgeons.

THE material for writing a full history of the medical societies of London is very scattered, and is of a most meagre description. It is well nigh impossible to get a full account of many of the societies which have now disappeared. The chief cause of this is that their minute books have either been destroyed or remain in the hands of private persons and so are inaccessible. It would be well in future if at the dissolution of any society steps were taken to have all its minutes and records preserved in some public library, and perhaps the hint may not be out of place that if any of the minute books of societies already defunct are now in the possession of former officers, they might be deposited in some library where they would be cared for, and be accessible to persons interested in such matters. The migration of the profession from east to west is reflected in the homes of the societies; from the City proper they moved to Lincoln's Inn Fields and neighbourhood, and from thence to the district round about the present fashionable medical quarter of the metropolis. The specialism of the present day is shown in the rapid growth in recent years of societies directed to the study of special organs. This has now reached such a stage that there is hardly any department of practice which has not its special society. Before the establishment of the Medical Society in 1752 the Royal Society was the means by which medical men communicated their discoveries and published their cases. Dr. Fotherby has estimated that the medical papers (including Anatomy and Physiology) in the *Philosophical Transactions* up to 1848 number 1,000.

A good account of the Medical Society of London and some of the other early societies is to be found in the oration by Dr. Routh before the Medical Society in 1859. At the jubilee of the Hunterian Society in 1859 Dr. Fotherby gave an historical sketch of that Society. Sir Edward Sieveking did the same for the Royal Medical and Chirurgical Society in his address of welcome to the Fellows at their new premises in Hanover Square. The best account of the older societies is to be found in the late Mr. J. F. Clarke's *Autobiographical Recollections of the Medical Profession*. The societies connected with the various hospitals, being of a semi-private character, are not included in this paper.

MEDICAL SOCIETY.

This Society was established in 1752 with a view to collect and publish medical observations and inquiries. It must not be confounded with the Medical Society of London, from which it was quite distinct. The Medical Society published 6 volumes of *Medical Observations and Inquiries*. The first paper is dated 1753, and the sixth volume was issued in 1784. The full title of the set is *Medical Observations and Inquiries by a Society of Physicians in London*. This again is misleading, as there was in existence a "Society of Physicians" which was started about 1764, and which owed its origin chiefly to Dr. Alexander Russell. Its meetings were held at Old Slaughter's Coffee House, and its membership was confined to Licentiates of the Royal College of Physicians. According to the *Medical Register* for 1783, Dr. William Hunter was at that time President of the Medical Society. Hunter died in March, 1783, and as the last volume of *Observations* was issued in 1784, it is probable that the Society ceased to exist at about that date. The origin of the Medical Society is thus stated in the first volume of the *Medical Observations*: "A few years ago some physicians in London agreed to meet together for their mutual improvement in the practise of their profession ..... The persons who formed this Society were either such as had the care of hospitals, or were otherwise in some degree of repute in their profession, and, consequently, had frequent opportunities of making observations themselves, and of verifying in the course of their practice the discoveries of others. When difficult cases occurred to any of them the rest were consulted, and the method of cure which appeared most likely to be attended with success was tryed and the event communicated. When these meetings had continued a considerable time, some of the members became desirous of making the publick partakers of the advantages that might be derived from such an association. Accordingly they, with some other physicians, formed themselves into a Society for collecting and publishing Medical Observations and Inquiries." There is a copy of the laws of this Society and a list of its members in the British Museum.

THE MEDICAL SOCIETY OF LONDON

was founded chiefly by the exertions of Dr. Lettsom in 1773, "to give the practitioners of the healing art frequent opportunities of meeting together and conferring with each other concerning any difficult or uncommon cases which may have occurred, or communicating any new discoveries in medicine which have been made either at home or abroad." The first meetings were held in Dr. Lettsom's house; the number of members was originally limited to thirty physicians, thirty surgeons, and thirty apothecaries. The early days of the Society were marked by much dissension amongst its members, and so few attended the meetings that sometimes a quorum could not be obtained. In 1775 the home of the Society was in Crane Court, from whence it moved in 1788 to Bolt Court, Fleet Street. In 1850 a lease was taken for twenty-one years of premises in George Street, Hanover Square, after which the Society moved to its present quarters in Chandos Street, Cavendish Square. Dr. Lettsom presented to the Medical Society the house in Bolt Court where the meetings were held; it was to remain the property of the Society so long as the number of its members did not fall below ten; in the event of this happening the house fell to Dr. Lettsom's legal representative. At the time of the amalgamation of the Westminster and Medical Societies it was thought desirable that some definite arrangement should be come to respecting the house, and on the heir-at-law (Mr. John Lettsom Elliott) being approached by the officers of the Society, he very generously waived all claim to the property. Dr. Lettsom also established the Fothergillian Gold Medal, which was afterwards permanently endowed by Dr. Anthony Fothergill. This latter gentleman was not in any way related to the Dr. Fothergill in whose memory the medal was founded. This medal was given at irregular intervals down to 1888; the absence of competitors for the medal caused the Council to apply to the Charity Commissioners for a new scheme to govern its future award. In 1891 the new conditions were approved by the Commissioners; by this scheme it was decided that the charity should be applied by the trustees in providing a prize to be awarded once in three years, of a value not exceeding 60 guineas, either in the shape of a medal or an honorary premium. The first award under this scheme was made in 1893 to Dr. Gowers. The Lettsomian Lectureship was established in 1850 in honour of the early benefactor of the Society. In its early days the Society also gave silver medals for the best paper read at its meetings. It was mainly through dissatisfaction at the way the affairs of the Medical Society were carried on that the Medical and Chirurgical Society was established. One grievance was the continued re-election of Dr. James Sims as president, which office he held for twenty-two years. Dr. Sims seems to have had an eye to the main chance, for in 1800 we find that the Society paid him £500 for books, and also agreed to pay his wife an annuity of £40 should he predecease her. In 1850 the number of members had fallen to 60, and in that year it was decided to amalgamate with the Westminster Medical Society.[1] The amalgamated Society prospered exceedingly, as many as 60 new members being sometimes elected at one meeting. The celebrated picture by Medley of the founders of the Society hangs in the room in Chandos Street; it contains 25 figures of the principal men in the

[1] See account of Westminster society.

metropolis at the time the picture was painted. Jenner was not in the original painting, but was introduced subsequently. The engraving by Brunwhite was partly finished before this was done, and a piece of copper had to be let in the plate so that Jenner's head and shoulders might be engraved on a spot previously occupied by background details. The publications of the Medical Society did not appear with any regularity until recent years. In 1792 the first volume of *Memoirs* was issued; of this series there were six volumes, the last appearing in 1805; then nothing was published until 1810, when vol. i of the *Transactions* was issued; after this there is a great gap, the Society not publishing any report of its meetings until 1846, when *Transactions* (new series, vol. i) appeared; the new series, like the old, was limited to one volume. In 1851 another vol. i was issued, and in the following year vol. ii appeared. Then comes a gap again until 1874, when vol. i of the *Proceedings* was published; since that date they have appeared regularly.

Medical Society of Great Queen Street School.

There was another "Medical Society" started in 1779. This was connected with the Anatomical School of John Sheldon and Andrew Blacknall, in Great Queen Street, Lincoln's Inn Fields. In the library of the Royal Medical and Chirurgical Society there is a copy of the laws of this Society. The full title runs as follows: "Laws and Regulations of the Medical Society, instituted at the Anatomical Theatre, Great Queen Street, Lincoln's Inn Fields, December 19th, 1779." The date of publication is 1784. Though called simply "Medical Society" on the title page of the laws, the name in the form of diploma is given as "Societas Medica Londinensis." In the list of members an asterisk is prefixed to those who had occupied the presidential chair. From this it appears that John Sheldon, F.R.S.; John Jebb, M.D., F.R.S.; Robert Willan, M.D.; Adair Crawford, M.D.; Andrew Wilson, M.D.; William Bishop; and Joseph Hurlock, had filled the office. One of the rules is that "the President shall wear his hat while in the chair," and another states that "in order to keep up a constant fund, each member shall pay on the first Tuesday of each month one shilling and sixpence."

The Society for the Improvement of Medical and Chirurgical Knowledge

was founded in 1783 by John Hunter and Dr. Fordyce. Sir Benjamin Brodie gives the date of its foundation as 1793, but this is an error, as there is in existence a letter from John Hunter to Jenner in which he speaks of the formation of the Society, and offers to communicate Jenner's paper on Tartar Emetic. This was received in June, 1784, and published in the first volume of the *Transactions*. The Society was originally composed of nine members, with a provision that it might be increased to twelve, but that it should never exceed that number. Meetings were held once a month at Slaughter's Coffee House in St. Martin's Lane. The papers communicated were first read, and then discussed and corrected after dinner. The Society issued three volumes of *Transactions*, but after the publication of the third volume it existed only as a dining club. On June 2nd, 1818, the Society was formally dissolved, with the understanding that the minute book should remain in the possession of Mr. (afterwards Sir B. C.) Brodie, the then secretary. At Sir Benjamin's death the book came into the possession of Mr. Charles Hawkins, by whom it was presented in 1862 to the Royal Medical and Chirurgical Society. The minute book contains the signatures of all the members (18 in number) excepting Mr. Henry Cline. There is an interesting entry under the date October 7th, 1798: "There being so much joy and interest of conversation about Sir Horatio Nelson's victory, no business was done at this meeting." The Society was evidently a close corporation, for it is stated that Dr. Roget was proposed as a member, but that the ballot was not proceeded with when it was discovered that he had taken the office of secretary to another Society; this was the Medical and Chirurgical. There was another Society about this date with a very similar title: "The Society for Promoting Medical Knowledge." Two volumes of *Transactions* were published in 1788 and 1790, under the title of "Medical Communications." The secretaries were Dr. Edward Gray, of the British Museum, and Mr. Edward Ford, of Golden Square, Surgeon to the Westminster General Dispensary.

The Lyceum Medicum Londinense

was instituted for the advancement of medical knowledge on January 25th, 1785, under the patronage of Dr. Fordyce and Mr. John Hunter. The meetings were held at Hunter's Lecture Room in Castle Street, Leicester Square. All the cases read before the Society were entered in a minute book, and a Committee was appointed to examine them, with power to send such as they thought proper to Dr. Simmons to be published in his *Medical Facts and Observations*. The society had three classes of members: a first class, which consisted of those who had taken a degree in physic, were members of the Surgeons' or Apothecaries' Company, or were established in practice in surgery, pharmacy, or chemistry. Members of the second class must have attended at a hospital one course of lectures on anatomy and the practice of physic. The third class was intended for those who had only just entered upon a course of medical studies. The members of the first two classes were required to read to the society dissertations on some subject connected with medicine in the order of their names upon the list. The society gave a medal for a dissertation on a stated subject; the first was gained by Everard Home in 1787 for an essay on The Properties of Pus. Dr. Routh states, on the authority of Sir Benjamin Brodie, that the meetings of the "Lyceum" ceased in 1802. The name of the society, however, appears in the Royal Calendar up to 1815; the same names are given as holding office from 1802 to 1815. Dr. Bradley, who is down as President during these years, died in 1813; this fact almost proves that no return was made to the editor and that the Lyceum was inserted in the pages of the Calendar long after the society had ceased to exist. In March, 1838, £119 7s. was presented by the survivors of the Lyceum to the Society for the Relief of Widows and Orphans of Medical Men; this was the result of £100 invested some years before, which had been allowed to accumulate.

The [Royal] Medical and Chirurgical Society

of London was founded in 1805, and was an offshoot of the Medical Society. It was mainly formed by those who had seceded from the Medical, chiefly on account of the repeated re-election of Dr. Sims as President. The first suggestion of forming the new society came from Dr. Marcet and Dr. Yelloly; they were soon joined by Astley Cooper, who took great interest in the Medical and Chirurgical, and became its first treasurer. He was also the author of the first paper in the *Transactions*. In December, 1805, the first meeting of the Society was held at 2, Verulam Buildings, Gray's Inn. Dr. Saunders, who had been chairman of the preliminary Committee, was the first President, and Dr. Yelloly one of the first secretaries. The first volume of *Transactions* was issued in 1809, and from that date to the present time the volumes have appeared with great regularity. The Society also issues *Proceedings*, in the later volumes of which the discussions following on the reading of papers are fully reported. In 1810 the Society moved to 3, Lincoln's Inn Fields, and afterwards met at Nos. 30 and 32. An endeavour to obtain a charter was made in 1812, during the presidency of Sir Henry Halford; the cost of the application was raised by subscription amongst the Fellows, and so eager were they, that the whole amount (about £300) was subscribed in one morning. The opposition of the Royal College of Physicians was sufficiently strong to prevent the charter being granted. Another application in 1834 was successful, and the Society took the name of the Royal Medical and Chirurgical Society of London. In that same year they took possession of the house No. 53, Berners Street, and held their first meeting there on February 3rd, 1836. This house was originally built by Sir William Chambers, for his own residence; here he entertained all the leading scientific and literary men of his day.[9] The Patho-

[9] The following anecdote of Goldsmith's, related by Washington Irving, has reference to the Society's house: "He was one evening at the house of Sir William Chambers, in Berners Street, seated at a whist table, with Sir William, Lady Chambers, and himself, when all at once he threw down his cards, hurried out of the room and into the street. Sir William, after a little hesitation, ventured to ask the cause of his retreat, fearing he had been overcome by the heat of the room. 'Not at all,

logical, Clinical, and Obstetrical Societies held their meetings at the house of the Royal Medical and Chirurgical Society, which thus became the head quarters in London for the profession. Here the Society remained until 1889, in which year it removed to the handsome premises it now occupies at 20, Hanover Square. Additional space has enabled the Council to still further increase the accommodation for other societies. The Society possesses a fine library of about 40 000 volumes; the utility of this is greatly increased by the Fellows being able to borrow books for use at their own homes. There is also an extensive collection of engraved portraits of members of the profession. The celebrated Chamberlen midwifery instruments are in the possession of the Society. In 1872 the Society undertook to administer the fund which had been raised to found a memorial to Marshall Hall. It was decided that the memorial should take the form of a prize to be given every five years for the best original work done during that period on the nervous system. The first award was made in 1878, Dr. Hughlings Jackson being the recipient of the prize.

The Westminster Medical Society

was founded by Sir C. Mansfield Clarke and Sir Benjamin Brodie in 1809; its meetings were held at the School of Medicine in Great Windmill Street. For some years the Society seemed almost to be an appendage of the school, every student who attended the lectures becoming also a member of the Society. In 1824 it is said to have had about 1 000 members. After the breaking up of the Windmill Street School the Society met in Sackville Street, from there it went back to Windmill Street, then it met in Exeter Hall, and last of all moved to Savile Row. During its first occupation of Windmill Street no rent was paid, and so the Society was in a flourishing financial position; at the other places the necessary rent caused a drain on the funds. The interest in the meetings gradually declined, until in 1843 the Society was reduced to about twelve members; then it took a new lease of life, and at its close it showed 275 names on the books. The Society took the lead in discussing the nature and treatment of cholera during the epidemic of 1832, and in its discussions on the Anatomy Bill it did much to do away with the popular prejudice against that measure. During the presidency of Mr. Hird, in 1849-50, steps were taken for amalgamating the Westminster and the Medical Societies, and during Dr. Murphy's term of office this was successfully carried out. The motion for amalgamation was unanimously agreed to by the Medical Society on March 4th, 1850, and by the Westminster Society on March 28th of the same year. It was agreed that in the amalgamation scheme the President of the Medical Society should be the first President of the new body. Dr. (afterwards Sir) Risdon Bennett held this office, and the first secretaries were Dr. W. Cogswell and Dr. C. H. F. Routh. It was found impossible to unite the two names in the new Society, as the property of the Medical Society was so held that it could not change its name. The name of Westminster, therefore, disappeared, and the amalgamated body was known as the Medical Society of London; its first meetings were held in George Street, Hanover Square. At the time of amalgamation the Westminster had 237 names on its books, exclusive of honorary and corresponding members. The old Society only issued three numbers of *Proceedings*, which contain the record of the session 1848-49. The papers are, however, fairly reported in the medical journals of the day.

The Hunterian Society.

The idea of founding a medical society for the East of London originated with Mr. Armiger, Assistant-Surgeon to the London Hospital. Being himself unable to take an active part in the preliminary arrangements for starting the Society, this duty was undertaken by Dr. Cooke, of Great Prescott Street, who, on November 11th, 1818, called a meeting at his residence for the purpose of discussing the desirability of starting the proposed Society. The preliminary meetings do not seem to have been marked by any enthusiasm. The proposers of the scheme, however, persevered, and, having obtained the adherence of Sir William Blizard, called a meeting at the King's Head, in the Poultry, on January 20th, 1819, to inaugurate the Society. A subsequent meeting was held to draw up rules, etc., and on February 11th another meeting was called to elect officers, when Sir William Blizard was elected the first President and Dr. Conquest and Mr. Armiger appointed Secretaries. The original intention was to call the Society "The London Medical and Physical," but, on the suggestion of the President, it was altered to "The Hunterian Society," and "*Ratio Societatis Vinculum*" was adopted as its motto. A room was obtained at the London Orphan Asylum in St. Mary Axe, and there, on April 21st, the first business meeting was held. In 1821 the Society moved to new premises at No. 18, Aldermanbury, and in 1834, as these rooms were required for other purposes, a further move was made to No. 4, Blomfield Street, where arrangements for a tenancy were concluded with the managers of the Congregational Library. Here the Society found a home until the premises were required by a railway company in 1866. In that year the Council was enabled to secure accommodation at the London Institution, where the Society has remained ever since. A library for the use of members was established early in the history of the Society: the first grant was made in 1822, when £50 was voted for the purchase of books, and, very appropriately, the Works of John Hunter was the first book ordered. The *Reports of the Hunterian Society* were first published in 1825, and have been continued to the present day. The first Oration was delivered by Sir William Blizard in 1826, and, with a few breaks, this has been annually kept up.

(*To be continued.*)

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Owing to the numerous calls upon the pages of the British Medical Journal, and the large amount of space already given during the past few months to the report of cases of diphtheria treated by antitoxic serum, we are compelled to abstract the reports of the following cases received recently;

Dr. James H. Rodgers (Cardiff) reports two cases: (1) P. W., aged 2 years and 7 months, who had had several previous attacks of follicular tonsillitis, was taken ill on May 8th, and on the following day had a temperature of 102° F., with enlargement of the tonsils. On the following day the temperature was 103.4° F., and on May 11th two patches of white membrane were seen on the right tonsil. On that evening the temperature rose to 104.2° F., the pulse was 152, and the respirations 40, and the whole of the right tonsil was covered with straw-coloured membrane; there was also membrane on the left tonsil, and enlargement of the lymphatic glands. On May 12th the temperature was 104.4° F., the pulse 148, respirations 48. The membrane had extended to the soft palate, and there was a blood-stained discharge from the nostrils. At 4 P.M. 1 drachm of Schering's antitoxin was injected. At 8 P.M. the temperature was 103.6° F., and the patient was restless and prostrate. Next morning, after a good night, the temperature was 101° F., the pulse 112, and the respirations 24. The membrane was easily detached. In the evening the temperature was 99.4° F., and the membrane was clearing. On May 14th the temperature was 97.2° F., the pulse 100 but irregular, and the respirations 20. Membrane remaining on the left tonsil was easily detached. The patient was convalescent, but the temperature remained subnormal and the pulse irregular for a few days. (2) W. W., aged 5 years and 8 months, sister of the first patient, was taken ill on May 14th. On May 16th the temperature was 103.4° F., the pulse 148, the respirations 32, and both tonsils were enlarged and presented straw-coloured membrane. On May 17th the membrane had extended to the palate; that evening the temperature was 103.6° F., the pulse 152, and the respirations 40, and there was prostration. Half a drachm of antitoxin (all that was available) was injected. The temperature at 3 A.M. was 101° F., and the patient passed a better night. At

replied Goldsmith; 'but in truth I could not bear to hear that unfortunate woman in the street, half singing, half sobbing, for such tunes could only arise from the extremity of distress; her voice grated painfully on my ear and jarred my frame, so that I could not rest until I had sent her away.' It was in fact a poor ballad singer, whose cracked voice had been heard by others of the party, but without having the same effect on their sensibilities."

10 A.M. the temperature was 97.6° F., the pulse 104, and the respirations 20. That evening the patient was practically convalescent, but the temperature remained subnormal for a few days. In both cases there was albuminuria and loss of knee jerk. Quinine with perchloride of iron was given internally, and local applications of perchloride of iron and glycerine were made from the earliest stage.

Dr. T. LUSON (Norbiton, Surrey) reports a case of recovery after tracheotomy. A child, aged 5, was first seen on May 23rd, when the fauces were covered with membrane, breathing was croupy, and the urine contained albumen. On the next day the child was worse and the temperature was 101° F. On May 25th rapid aggravation of the asphyxia rendered immediate tracheotomy necessary, and a silver tube was introduced. Later in the day, when the temperature was 101.4° F., Schering's antitoxin ℥xx was injected. Next day the temperature was 100° F., and a large amount of membrane was expectorated. Two other doses of antitoxin were given —℥xv on May 28th and ℥x on May 30th—when the temperature was 99° F. A rubber cannula of smaller calibre was introduced on May 28th, shortened gradually on subsequent days, and withdrawn permanently on June 3rd. The child recovered without any complications.

Dr. H. W. WEBBER (Rickmansworth, Herts.) reports two cases. (1) A boy, aged 7, taken ill on May 18th, was first seen on the evening of May 19th, when there was membrane on the right side of the uvula, on the right tonsil, and on the pharynx. On May 20th the dyspnœa increased, and in the evening there was inspiratory stridor, aphonia, and retraction of the soft parts of the chest wall. Antitoxic serum (Burroughs, Wellcome, and Co.) 15 c.cm. was injected between the scapulæ. At 10 P.M. the child was transferred to the Watford Isolation Hospital, and at 11 P.M. tracheotomy was performed, Dr. Berry, of Watford, giving chloroform. The child was placed in a tent. On May 21st three large pieces of membrane had come away through the tracheotomy tube, the patch on the soft palate was loosened, and no fresh patches could be seen. At 11.30 A.M. 10 c.cm. of serum were injected. On May 22nd no membrane could be seen, and the child breathed comfortably when the tube was temporarily withdrawn. On May 23rd there were two small spots on the right tonsil, but the boy looked well, and was hungry. The urine on this day contained only a trace of albumen. The tube was removed (sixty hours after tracheotomy). He continued to improve, and on May 29th was allowed out. On May 31st a copious morbilliform rash appeared on the legs, and a few spots on the chest. These slowly faded, and had disappeared in five days. The tracheotomy wound healed quickly, and no signs of paralysis could be discovered. (2) The sister of the last patient, aged 4, had sore throat on May 26th, with enlargement of the tonsils and a greyish patch on each. On May 27th a thick greyish-yellow patch covered half the surface of each tonsil, and on the following day it extended to the right side of the soft palate. On May 29th the patch had cleared off the palate. The patient was croupy in the night, and on May 30th there were white patches on both tonsils. At 10 A.M. 10 c.cm. of antitoxic serum from the British Institute of Preventive Medicine was injected, and at 1 P.M. she was removed to the Watford Isolation Hospital. The injection was repeated on June 1st, when the child seemed comfortable and took nourishment. On the right tonsil only there was a thin whitish patch. On June 6th the throat had a normal appearance, and the glands, which had been enlarged, could hardly be felt. There was no albuminuria and no paralysis in this case. In both cases the local treatment consisted of the application of perchloride of iron and glycerine, and of perchloride of iron and subsequently tincture of digitalis internally. In both the diagnosis was confirmed by bacteriological examination at the British Institute of Preventive Medicine. In neither was the temperature at any time observed to be above normal.

Mr. JOSEPH WALKER, M.R.C.S. (Kirkby, near Liverpool), reports a case in a boy, aged 6, who after complaining of sore throat for some days became rapidly worse on May 27th. The soft palate, tonsils, and pharynx were congested, and upon each tonsil was a greyish patch. Some improvement followed treatment by local application of boracic acid, and a solution of perchloride of mercury (1 in 500) with iodide of potassium and salicylate of sodium internally. The membranous patches continued to spread; breathing became stridulous and the cough croupy. At 10 P.M. on June 1st all the symptoms became aggravated, and there was much dyspnœa. Next day, June 2nd, after consultation with Dr. Carter, of Liverpool, 15 c.cm. of antitoxic serum (Burroughs, Wellcome, and Co.) was injected. Dyspnœa at this time was intense. At 10 P.M. there was slight improvement, but the patient had a restless night with frequent paroxysms of dyspnœa. At 9.30 A.M. on June 3rd he was semi-conscious and livid, with cold extremities; a second injection (7½ c.cm.) was given. At 4 P.M. he was easier and the membrane appeared to be loosening. The improvement continued; several fragments of membrane were coughed up, and at 10 P.M. a third injection (7½ c.cm.) was given. He had a bad night, but next morning there was a general improvement; large pieces of membrane had been expectorated and the pharynx was clear. The improvement continued, and on June 7th he was allowed to get up. The urine was highly albuminous and of high specific gravity (1030) on June 2nd, but on June 5th there was only a trace of albumen, and the specific gravity was 1020. A portion of the membrane removed on June 4th was examined by Dr. Robertson, of St. Helens, who reported that the swabs contained very few diphtheria bacilli in comparison with the large number of other organisms, but they were quite characteristic.

Date.	Temperature.	Pulse.	Respirations.	
May 27th	103.0°	120	—	—
,, 28th	101.0°	100	—	—
,, 29th	98.4°	80	—	—
,, 31st	98.4°	80	—	—
June 2nd, 3 P.M. ...	100.5°	132	40	Injection
,, ,, 10 P.M. ...	100.0°	120	—	—
,, 3rd, 9.30 P.M....	—	—	—	Injection
,, ,, 10 P.M. ...	—	—	—	Injection
,, 4th, 11 A.M. ...	98.4°	100	—	—

Mr. H. W. KNOWLES (St. Helens) reports the case of a girl, aged 4, who, after complaining of sore throat for three days, was seen on January 4th with tonsillitis, pharyngitis, and patches of membrane on both tonsils and on the uvula. The glands were enlarged, there was a croupy cough, but no obstruction to respiration. The urine contained one-fifth albumen, and there was a good deal of general prostration. The temperature was 100° F., and the pulse 150; 6 c.cm. of antitoxin (supplied by Dr. Klein) was injected. On the following morning the membrane was still abundant, but the general condition was much improved. The temperature was 99° F., and the pulse 118. On January 6th the pulse fell to 80. The membrane disappeared altogether on the fourth day after the injection. The albumen disappeared on the seventh day, and the child was discharged well on January 21st. The diagnosis was confirmed after bacteriological examination by Dr. Robertson, M.O.H., St. Helens.

Dr. J. MASSON (St. Helens) reports a case of laryngeal diphtheria in which tracheotomy was performed in a girl, aged 4. When first seen on January 22nd the child had been ill for a week, and had had a croupy cough for four days. The temperature was 101.3° F. There was slight inspiratory stridor and a hard metallic cough. The tonsils and pharynx were congested. On January 23rd the stridor was greater and the lungs were not expanding freely. On the left tonsil was a patch of greyish-white membrane. At 6.45 P.M. an injection of 5 c.cm. of antitoxic serum, supplied by Dr. Klein, was given. On January 24th, at 10 A.M., the increased cyanosis and difficulty of respiration rendered tracheotomy necessary. A large quantity of membrane was coughed up through the tube, and the breathing became easier. On the following morning an injection of 5 c.cm. was given. The membrane on the tonsils came away during the day, and after two days no more membrane was coughed up through the tube. No fresh membrane formed after the first injection. A trace of albumen was present in the urine on January 23rd, 24th, and 25th. The child made an uninterrupted recovery, and the tube was removed on February 4th. Dr. Robertson found the bacillus diphtheriæ present in a piece of membrane removed on January 23rd, but not in the secretions from the throat and larynx on January 30th and February 13th.

Dr. James R. Purdy, M.O.H. to the Hutt County Council, New Zealand, reports a case in a policeman, aged 36, who on April 18th had a sloughing ulcer on the right tonsil. The temperature was 101° F., the pulse 86, and he complained of pains in the knees and elbows. He was ordered a gargle of biniodide of mercury (1 in 2000) and salicylate of sodium internally. He was taken suddenly worse on April 20th, and when seen on April 21st, the whole of the roof of the mouth, both tonsils the uvula, and the pharynx were covered with typical diphtheritic membrane. The cervical glands were swollen, the pulse feeble; 10 c.cm. of antitoxin from the British Institute of Preventive Medicine was injected. At noon next day the pulse was 96 and much stronger, the temperature normal; the throat was almost clear of membrane, but there was a black slough at the base of the uvula. The glands were smaller. On April 23rd the patient was much better and the slough was separating. On April 29th the man was quite well, but there were two white scars, one on the uvula and one on the right tonsil.

Dr. Leonard [illegible] (Winchester) sends us a report of the case of a child, aged 3½, who was first seen, after four days of illness, on May 3rd, and found to be suffering from diphtheria. On May 5th, at 3 P.M., the membrane covered both tonsils and stretched back towards the epiglottis. There was some recession of the lower ribs, cough was croupy, and the membrane had evidently begun to invade the larynx. An injection of 20 c.cm. of serum (Burroughs, Wellcome & Co.) was given. This serum had been kept for fourteen weeks. On May 6th the cough was less croupy, the respiration easier, but the throat was about the same. On May 7th the glands in the neck were much enlarged, but the condition of the throat was much improved and the breathing was easier, though the child was more restless. Another injection of 20 c.cm. of the serum, newly obtained, was given. On May 8th the fauces were quite clear, cough was frequent and hoarse, but not croupy, and there was no recession of the lower ribs. After this a rapid convalescence was made. The diagnosis was confirmed by bacteriological examination by the Clinical Research Association.

Date.	Temperature	Pulse.	Respirations.	
May 5th, 3 P.M. ...	101.4°	120	36	Injection
,, 6th	101.6°	120	34	—
,, 7th	99.4°	—	32	Injection
,, 8th	100.4°	108	28	—
,, 9th	99.0°	100	26	—

THE ANTITOXIN TREATMENT ABROAD.

Spain.—The *Union de las Ciencias Medicas* of Cartagena publishes the following statistics: The average death-rate from diphtheria at Cartagena was till lately 256, or 3 per 1,000 of population, and 15 per 1,000 of the total number of deaths. Of 156 patients treated with serum, 79 were males and 77 females, the great majority of them being aged from 2 to 3 years. Roux's serum was used in 125 cases, Behring's in 20, and Behring's in 6. Of the whole number, 21, or 13·46 per cent., died. During the ten years before the introduction of the serum treatment the average number of deaths from diphtheria in Cartagena was 21 per month. During the four months the serum method has been in use the total number of deaths from diphtheria has been 21; in other words, the mortality from the disease has been reduced to one-fourth of what it was.

France.—A decree has been passed appointing a Committee, under the Minister of the Interior, to consider all questions arising under the law of April 25th relative to the preparation, sale, and distribution of therapeutic serums and other analogous products. The Committee is especially charged with the examination of all applications for permission to place such products on the market, and with the carrying out of the inspections enjoined by the law. The Committee consists of the members of the Committee of Management of the Sanitary Services, of the Perpetual Secretary of the Academy of Medicine, and of eight members nominated by the Minister of the Interior, half to be chosen from among the members of the Academy of Medicine, and half from among the members of the Consultative Committee of Public Health in France.

THE EDINBURGH HARVEIAN FESTIVAL.

The 113th Harveian Festival was held in the Hall of the Royal College of Physicians, Edinburgh, on June 25th, when the Oration was given by Dr. Yellowlees, the Physician Superintendent of the Royal Asylum, Gartnavel, Glasgow. After returning thanks for being called to the President's chair, and for the consideration and compliment paid him by postponing the yearly festival from April 25th to this date, Dr. Yellowlees took as his subject The York Retreat and Dr. Daniel Hack Tuke. After a rapid glance at the barbarous treatment of the insane in older days, and the cruelties of the old madhouses he continued: At length, in 1791, a case occurred in the York Asylum which commanded public attention. A lady belonging to the Society of Friends was confined in that asylum, her relatives were refused admission to see her, and the treatment to which she was there subjected aroused their worst suspicions. These suspicions proved to be only too well founded, but it was deemed a hopeless task to reform that asylum, and William Tuke, a citizen of York, and a member of the Society of Friends, proposed that they should erect a new institution where there should be no concealment, and where sympathy and kindness, not terrorism and punishment, should be the essence of the treatment. In spite of difficulties and discussion, and prophecies of failure, the grand old Quaker held firmly to his purpose. He was resolved that the miserable condition of the insane should be ameliorated, and pleaded and toiled so earnestly that without delay the York Retreat was built, its foundation stone bearing the simple and noble motto: "Hoc fecit amicorum cultas in humanitatis argumentum. A.D. 1792."

Thus did the Society of Friends add another to the lessons of humanity and brotherliness which they had taught the world, and thus did William Tuke when he built the York Retreat unconsciously build for himself an everlasting name, for he inaugurated the wondrous revolution in the care and treatment of the insane of which we only now see the full fruit. Such an example could not but inspire others. Another member of the Society of Friends determined to do for the South of England what William Tuke had done for the north, and in 1799 Dr. Edward Long Fox purchased the estate of Brislington near Bristol, and proceeded to build an asylum thereon, which is still in the hands of his descendants, and is one of the best in England. The Foxes were like the Tukes, a grand race and strict Quakers. The father of the man who built Brislington House was Joseph Fox, surgeon, of Falmouth. An incident recorded of him shows that any profession might be proud to claim him. During the war with France two Falmouth vessels in which he owned a share were sent out, against his strongest remonstrances, under letters of marque to prey upon French commerce, and this they did so successfully that Fox's share of the spoil exceeded £22,000. This sum his partners wished to retain as he had opposed the expedition, but Fox insisted on his claim, lodged the money in the British Funds, and five years later, when the war was over, he sent his son to France to discover and to repay the rightful owners. After much difficulty and delay this noble purpose was accomplished. £22,000 was paid back, and the balance for which owners could not be found was paid some years later to the fund for the Invalid Seamen of France for the relief of "non combattants." The descendants of this man have been the heads of Brislington House for almost a century. A great grandson is its present head, another great grandson is Dr. Edward Long Fox, the President of the British Medical Association; another great-grandson, Dr. Charles Henry Fox, is present as a guest at our festival to-day.

It was natural, though much to be regretted, that the disuse of mechanical restraint, which appeared so wonderful after the long years of its abuse, should have given to this new method of treatment the name of "the non-restraint system;" and it is yet more to be regretted that some of the

followers of these great men of old should have sought with less wisdom than zeal to erect non restraint into an absolute, imperative, and universal law. William Tuke was far too wise and reasonable to hold any such opinion. His great-grandson thus places on record the views and practice of the Retreat: "When kindness failed to subdue maniacal excitement, when medical remedies exerted no calming influence, mild forms of restraint were reluctantly adopted rather than maintain a conflict between patient and attendant. It appears from the archives of the retreat that not more than 5 per cent., reckoning night as well as day, were restrained or secluded." "Coercion was regarded at the retreat as an evil—that is to say, it was 'thought abstractedly to have a tendency to retard the cure by opposing the influence of the moral remedies employed'—but at the same time a necessary evil—an unhappy alternative in certain cases." Samuel Tuke thus writes in his *Description of the Retreat:* "We greatly prefer to lay down no absolute rule of non-restraint, but to refer to our resident officers the exercise of a sound discretion in each individual case."

It is an unworthy narrowing of Tuke's great work to call it the "non-restraint system." It was far more and greater than the disuse of chains and bonds; it was a reversal of the whole tone and methods of former days. It was the substitution of sympathy, encouragement, and kindness for neglect, harshness, and cruelty. It was the recognition of the despised lunatic as a man and a brother, and feeling towards him, and dealing with him as a man and a brother ought. Humanity like this is its own best interpreter; it needs no party shibboleth, and owns no dogmatic rule.

All the best principles of treatment as we practise them to-day were laid down and practised at the York Retreat. The value of surroundings, of companionship, of occupation, especially out of doors, were fully recognised. A good meal, a wholesome stimulant, or a warm bath were found to be often better sedatives than drugs.

The fame of the Retreat soon spread, and its founders learned with deepest interest that Pinel had been acting on like principles at the Bicêtre, and that a simultaneous reaction wave in favour of the lunatic had visited both lands. The great example was soon followed, and in the beginning of the century the Royal Asylums of Scotland were built and carried out on the same great principles of treatment.

The old Retreat maintains its ancient spirit, and keeps fully abreast of the times. Three years ago its centenary was celebrated at a meeting, within its walls, of the Medico-Psychological Association of Great Britain and Ireland. America, Belgium, Holland, France, Switzerland, Germany, Russia all joined by letter or by representatives on the great occasion, and a resolution, which I had the great honour of proposing, was enthusiastically passed in which the Association placed on record its admiration "of the spirit which animated William Tuke and his fellow-workers a hundred years ago, its appreciation of the mighty revolution which they inaugurated, and its thankfulness for the beneficent results which their example has secured in the humane and enlightened treatment of the insane throughout the world." Prominent among us on that memorable day was William Tuke's great grandson. The spirit of the grand old Quaker descended to his children. His son Henry seconded all his efforts and shared his work, his grandson Samuel recorded them in his *Description of the Retreat*, one of the classic books of psychiatry, and his great-grandson worthily carried forward his great work in the ancestral spirit of constant and self-sacrificing devotion.

[Dr. Yellowlees then sketched the chief events of the life of Dr. Daniel Hack Tuke, which were related by a sympathetic hand in the BRITISH MEDICAL JOURNAL of March 9th, 1895, p. 563. Continuing he said:]

Psychiatry never had a more eager student, or a more untiring and forgetting one, than Hack Tuke. A strange case, a new theory, an original and improved treatment instantly awakened his interest, and he forgot time, food, and fatigue in inquiry and discussion. He had a singularly open and candid mind, and never dismissed even what seemed absurd without considering whether there might not be truth beneath it. While a man of wide knowledge and broad sympathies, his whole life was really devoted to the study of insanity in all its phases, and to the care of the insane in all their interests. He had no greater enjoyment than to talk with another alienist on their familiar themes. He contributed largely to the literature of the subject, and such work was a delight to him. His latest important work was a most valuable *Dictionary of Psychological Medicine*, written by many selected contributors, whom no one but Dr. Tuke could have brought together. He was also for many years joint editor of the *Journal of Mental Science*, an office which he greatly enjoyed, for it brought him into touch with what was newest and best in his favourite subject, and the duties of which he performed admirably.

Not a vivid genius, not an original discoverer, not a brilliant microscopist, he was fully up in all the knowledge of his time, and applied it in the best and wisest way for his patient's good.

No man of his time was so familiar with the world of the insane, at home and abroad, or with the work and the workers there, and certainly no one was so well known in that world as Dr. Tuke. He was a kind of living encyclopædia, and ultimate referee, on all that concerned the insane, and his death has left a blank in our ranks which no one will even pretend to fill. Of his personal character it is impossible to speak as apart from his professional work, for there was no such separation in his life. The beautiful sincerity, serenity, and truthfulness of the man, his consideration for others, his quick sympathy, his unfailing kindliness, his quiet humour, and the high Christian principle which strengthened and beautified all the rest; these qualities which endeared him to us, were the very qualities which made him what he was to the insane, not their physician only, but their guide, comforter, and friend. Thus lived Daniel Hack Tuke; and

> Thus cheerful in the light around him thrown,
> He did God's will as if it were his own.

After the Oration the Harveians, to the number of forty, dined in the Library of the College. Dr. Peel Ritchie, the President-elect, was croupier. After the usual loyal and patriotic toasts had been given and honoured, the PRESIDENT gave "The Immortal Memory of Harvey." Thereafter the toast of "The Medical Schools of Scotland" was given by Dr. STRUTHERS, and replied to in a clever and amusing speech by Dr. W. RUTHERFORD; "The Guests" (coupled with the name of Dr. Urquhart, Perth), by Dr. RENTON; "The President," by Dr. ARGYLL ROBERTSON; "The Vice-President," by Sir JAMES RUSSELL; and finally "Floreat Res Medica" from the Chair. The evening was further enlivened by songs from Drs. RUTHERFORD, PEEL RITCHIE, UNDERHILL, and LOCKHART GILLESPIE, and by stories from Drs. CRUM BROWN and JOHN CHIENE. Altogether the festival was felt to be one of the happiest and most successful of recent years. There were two neophytes who were reported on as having duly partaken of the traditional heart.

ROYAL COLLEGE OF SURGEONS.

COUNCIL ELECTION.

THE ballot for the election of five members of the Council was held on July 4th, with the following result:

Mr. Willett	415
Mr. Treves	323
Mr. Butlin	323
Mr. Alfred Cooper	295
Dr. Ward Cousins	291
Mr. Davies-Colley	249
Mr. Norton	247
Mr. Page	237
Mr. Anderson	210

Mr. Willett, Mr. Treves, Mr. Butlin, Mr. Cooper, and Dr. Ward Cousins were therefore declared elected. Only 40 Fellows voted in person, 621 send in voting papers by post. The poll was heavy, 189 more votes than last year.

OBITUARY.

The Right Hon. T. H. HUXLEY, F.R.S., D.C.L., LL.D., F.R.C.S., etc.,

Late President of the Royal Society; Corresponding Member of the Académie des Sciences; Dean and Hon. Professor of Zoology, Royal College of Science, London.

In Professor Huxley, who died at Eastbourne on June 29th, Science mourns her most distinguished champion, and the medical profession has lost one of its most illustrious members. His health had been failing for some time, and some seven or eight years ago the late Sir Andrew Clark warned him that his heart was in a condition which made his hold on life a frail one. Treatment at Maloja, however, by the system of graduated exercise introduced by Oertel, strengthened the failing organ so much that Huxley seemed to have entered on a new lease of life. Four or five years ago he pitched his tent at Eastbourne, almost under the shadow of Beachy Head, being attracted to the place not only by the bracing air, but by the opportunities for gentle hill climbing offered by the Downs. So well did this suit him that until a very few months ago his upright carriage and the springiness of his step made it difficult to believe that his years were already three score and ten.

T. H. Huxley

His Last Illness and Death.

At the beginning of March he was attacked by influenza, with serious lung complications which, in the weakened condition of the heart, more than once brought him to the very verge of death. He rallied so far, however, that during the warm weather in the early part of May he could be carried downstairs, and he appeared for a time to make satisfactory progress. About ten days ago however, a relapse occurred; embolic nephritis with further cardiac complications came on, and he passed away quietly on the afternoon of Saturday last, retaining consciousness almost to the last. The immediate cause of death was pulmonary embolism. He was confined to his room only a few days, having been in his garden for a short time so recently as the Tuesday before he died. He was attended throughout his illness by Mr. H. D. Farnell, F.R.C.S., of Eastbourne, who had the advantage of consultations on several occasions with Dr. Burney Yeo and once with Sir William Roberts, and the assistance of the Professor's son, Dr. Henry Huxley.

As a patient, Professor Huxley was all that the ordinary doctor, when himself ill, too often is not. From first to last he was perfectly calm, bearing his sufferings without complaint, taking a keen scientific interest in his own case, but leaving the management of it unreservedly in the hands of those who had charge of him. His playful humour remained unsubdued till the end. He jokingly warned one of his doctors not to argue with him on the physiological aspects of his case unless he wished to be "floored," and he offered to demonstrate the femur on his own emaciated limb. The very Sunday before his death he spent some hours in his garden delighting those about him with reminiscences and anecdotes told with nearly all his old wit and felicity of phrase. In one of the crises of his illness, when his perfect equanimity extorted some remark from his attendants, he said that when he was at sea he had sometimes been awakened by the rolling of the ship in rough weather; on hearing the voice of the officers on deck, however, he would quietly turn over and go to sleep again, with the thought that it was their affair, not his. In the same spirit, when difficulties arose in the conduct of his case, he told his physicians to do whatever they thought right, saying: "That is your business, not mine." In explanation of his docility as a patient he would say that all through his life he had been guided by two principles alone, namely, never to tell a lie, great or small; and always to obey lawful orders. In a word, Huxley died as he had lived, as a philosopher — steadfastly carrying out to the end, according to his lights, Goethe's precept *im Ganzen, Guten, Wahren resolut zu leben.*

Biographical Sketch.

Thomas Henry Huxley was born, as he himself has told us, "about eight o'clock in the morning on May 4th, 1825, at Ealing, which was at that time as quiet a little country village as could be found within half a dozen miles of Hyde Park Corner." His father was one of the masters "in a large semi-public school which at one time had a high reputation." Why he was christened Thomas Henry he did not know, but he referred to it as a curious chance that his parents should have fixed for his usual denomination upon the name of the particular apostle with whom he had always felt most sympathy. Like many other remarkable men, he owed much to the influence of his mother. In his autobiography he says: "Physically and mentally I am the son of my mother, so completely — even down to peculiar movements of the hands, which made their appearance in me as I reached the age she had when I noticed them — that I can hardly find any trace of my father in myself, except an inborn faculty for drawing, which unfortunately in my case has never been cultivated, a hot temper, and that amount of tenacity of purpose which unfriendly observers sometimes call obstinacy."

His regular school training was of the briefest, a circumstance which he himself accounted fortunate, inasmuch as the society he fell into at school was the worst I ever knew. The boys were simply left to the struggle for existence among themselves, believing being the least of the ill-[illegible] Huxley himself "read every-

thing from metaphysics to heraldry," Guizot's *History of Civilisation* and Sir William Hamilton's *Philosophy of the Unconditioned* in particular making a deep impression upon him, though he owns that of the latter work at least he could not possibly have understood very much.

As he grew up his great desire was to be a mechanical engineer, but the Fates were against this, and while very young he commenced the study of medicine under a medical brother-in-law. He owns that in later life he was occasionally horrified to think how little he ever knew or cared about medicine as the art of healing. The only part of his course which really and deeply interested him was physiology, "which is the mechanical engineering of the human body." The extraordinary attraction he felt towards the study of the intricacies of living structure nearly proved fatal to him at the outset. When between 13 and 14 years of age he was taken by some older student friends to the first *post-mortem* examination he ever attended. Throughout his life he was "most unfortunately sensitive to the disagreeables which attend anatomical pursuits," but on this occasion his curiosity overpowered all other feelings, and he spent two or three hours in gratifying it. He did not cut himself and none of the ordinary symptoms of dissection poison supervened, but poisoned he was somehow, and he sank into a strange state of apathy. He was sent to a farmhouse in Warwickshire and soon recovered, but for years he suffered from occasional paroxysms of internal pain, and from that time, to use his own words, his constant friend, hypochondriacal dyspepsia, commenced his half century of co-tenancy of his fleshly tabernacle.

As a medical student he worked extremely hard when it pleased him, and when it did not—"which was a frequent case"—he was, he confesses, extremely idle (unless making caricatures of his pastors and masters can be called a branch of industry) or else wasted his energies in wrong directions. He read everything he could lay his hands upon, including novels, and took up all sorts of pursuits, to drop them again as speedily. He says: "No doubt it was very largely my own fault, but the only instruction from which I ever obtained the proper effect of education was that which I received from Mr. Wharton Jones, who was the lecturer on physiology at the Charing Cross School of Medicine. The extent and precision of his knowledge impressed me greatly, and the severe exactness of his method of lecturing was quite to my taste. I do not know that I have ever felt so much respect for anybody as a teacher before or since. I worked hard to obtain his approbation, and he was extremely kind and helpful to the youngster who, I am afraid, took up more of his time than he had any right to do. It was he who suggested the publication of my first scientific paper—a very little one—in the *Medical Gazette* of 1845, and most kindly corrected the literary faults which abounded in it, short as it was; for at that time, and for many years afterwards, I detested the trouble of writing and would take no pains over it."

In 1845 he passed the first M.B. examination at the London University, in which he obtained honours in physiology, but failed to secure the medal, being, as he said in a speech at University College, "thoroughly well beaten" by Dr. Ransom, of Nottingham. In the early spring of 1846, having finished his obligatory medical studies, though still too young to qualify at the College of Surgeons, he was talking to his fellow student, Sir Joseph Fayrer, and wondering what he should do to meet the imperative necessity for earning his bread. On Fayrer's advice, he applied to Sir William Burnett, at that time Director-General of the Medical Department of the Royal Navy, for an appointment. Within a couple of months he was, after passing an examination, entered on the books of Nelson's old ship, the *Victory*, for duty at Haslar Hospital. At Haslar Huxley had among his messmates the late Sir Andrew Clark—whom he speaks of as "my kindest of doctors"—and two future Directors-General of the Medical Service of the Navy, Sir Alexander Armstrong and Sir John Watt Reid.

When he had been there seven months he was appointed to the *Rattlesnake*, Captain Owen Stanley (a brother of Dean Stanley). On the *Rattlesnake*, which was commissioned for a survey of New Guinea, the Louisiade Archipelago, and the Barrier Reef of Australia, he spent the greater part of the years 1846-1850, learning valuable lessons as to the realities of life, and using to the full the opportunities for scientific work the cruise afforded. During his four years of absence from England he sent home many communications to the Linnean Society, "with the same result as that obtained by Noah when he sent the raven out of his ark." Tiring of this unprofitable amusement, he in 1849 sent a more elaborate paper to the Royal Society, which on his return to England in 1850 he found had been published. The next three years were occupied by a battle with the Admiralty, which, instead of contributing, as it had partly pledged itself to do, to the expense of publishing his scientific work, at last ordered him to join a ship. Huxley thereupon threw up his commission, and looked about for a professorship of physiology or comparative anatomy. Among other unsuccessful attempts he mentions that Tyndall and he were candidates at the same time for the Chair of Physics and Natural History respectively in the University of Toronto; that seat of learning, however, would have none of them. At last in 1854, on the translation of Edward Forbes to Edinburgh, Sir Henry de la Beche, the Director-General of the Geological Survey, offered him the post of Paleontologist and Professor of Natural History in the Royal School of Mines vacated by Forbes. He refused the former point blank, and accepted the latter only provisionally, telling Sir Henry that he did not care for fossils, and that he should give up natural history as soon as he could get a physiological post. "But," he adds, "I held the office for thirty-one years, and a large part of my work has been paleontological." In the same year he was appointed Fullerian Professor of Physiology in the Royal Institution, and Examiner in Physiology and Comparative Anatomy in the University of London. In 1858 he was Croonian Lecturer to the Royal Society, taking for his subject "The Theory of the Vertebrate Skull." In 1863 he became Professor of Comparative Anatomy at the Royal College of Surgeons; this post he continued to hold till 1869. He was elected President of the Geological Society in 1869, and of the Ethnological Society in 1870. In the latter year he was President of the British Association. Two or three years later he was chosen Lord Rector of Aberdeen, in which capacity he delivered an address on Universities, Actual and Ideal, on February 27th, 1874. In 1875-76 he acted as substitute in the Chair of Natural History at Edinburgh for Professor Wyville Thompson, who was on board the *Challenger* on its famous voyage of scientific exploration.

Huxley was elected a Fellow of the Royal Society in 1851. In 1873 he was appointed its Secretary, and in 1883 he became its President in succession to Mr. Spottiswoode. The latter post he resigned, together with all his other public appointments, in 1885 on account of failing health. Moreover, he had reached the age at which he used jokingly to say that scientific men should be "poleaxed."

It would be tedious to enumerate all the honours of which he was the recipient. He was a corresponding member of most of the leading scientific societies in Europe and America; the Royal College of Surgeons (of which he became a Member in 1862) elected him a Fellow in 1884; and honorary degrees were conferred upon him by the Universities of Oxford, Cambridge, Dublin, Edinburgh, Würzburg, and Breslau. The Royal Society awarded him its medal in 1852, and the Geological Society gave him the Wollaston Medal in 1876. He was a trustee of the British Museum, and a member of the Senate of the University of London. In 1892 he was sworn of the Privy Council, a mark of distinction which is still unique as far as scientific men are concerned.

Huxley's work was by no means confined to scientific research and teaching. In 1870 he was elected a member of the first London School Board, and he took a very active part in its proceedings till his resignation in 1872. In 1881 he was appointed Inspector of Salmon Fisheries, and continued to discharge the duties of that post till ill-health compelled him to retire in 1885. He served on a number of Royal Commissions—on Vivisection, Contagious Diseases, Scottish Universities, Fisheries, etc. His last public act was when, in introducing the deputation to Lord Rosebery on the subject of the proposed new University for London, on January 22nd, he presented the case of the supporters of the Gresham scheme in a speech of great brilliancy and power.

His Literary Output.

Space will not allow us to give anything like a full bibliography of Huxley's writings. His first paper, which, as already said appeared in the *Medical Gazette* in 1845, contained a description of "Huxley's layer" in the human hair. In 1849 the Royal Society published his paper on the Anatomy and Affinities of the Medusæ, which had been communicated to it on his behalf by the then Bishop of Norwich (the father of Captain Stanley) on June 21st, 1849. In 1859 appeared his great work on the *Oceanic Hydrozoa*, which he had vainly tried to get the Admiralty to help in publishing. "My Lords," however, did nothing for him beyond expressing in gracious hope (which made no encroachment on the Navy Vote) that the work would be creditable to himself and to the nation.

At the meeting of the British Association at Oxford in 1860 he strenuously defended the doctrine of evolution against Bishop Samuel Wilberforce and other clerical assailants; a summary of this memorable debate is given in his *Evidence as to Man's Place in Nature*, published in 1863. In 1864 he published *Lectures on Comparative Anatomy*. In 1866 appeared his *Lessons in Elementary Physiology*, which has run through numerous editions, and still holds its place as the best introduction to the subject in the English language. Among his other works may be mentioned *Introduction to the Classification of Animals* (1869); *Lay Sermons and Addresses* (1870); *Anatomy of Vertebrate Animals* (1871); *Critiques and Addresses* (1873); *American Addresses* (1877); *Physiography* (1877); *Anatomy of Invertebrate Animals* (1877); *The Crayfish: an Introduction to Zoology* (1879); *Hume* (1879); *Introductory* to Macmillan's series of scientific primers (1880); *Science and Culture* (1882); *The Rede Lecture on the Origin of the Existing Forms of Animal Life: Construction or Evolution* (1883); *Controverted Questions* (1893); *Evolution and Ethics*, delivered as the Romanes Lecture at Oxford in 1893, besides numerous essays which have not yet been collected into book form. His last work was a criticism of Mr. Balfour's *Foundations of Belief*, the first part of which appeared in the *Nineteenth Century* of March. Huxley was taken ill immediately after writing this paper, of which we believe he was unable to correct the proofs. He was never afterwards able to do any literary work.

In all Huxley's writings the literary quality is of the best; his style in its incisiveness, strength, directness, and lucidity, being without an equal in scientific literature. Medical writers might with great advantage to themselves and unspeakable comfort to their readers take Huxley as a model. His mastery of style did not, like Dogberry's reading and writing, come to him by nature; his secret was that no sentence was ever allowed to go out of his hands until it had been made as perfect as possible, and he has left it on record that he thought nothing of writing a page two or three times over if by so doing he could arrive at a clearer expression of his meaning.

Personal Reminiscences.

We are indebted to Sir Joseph Fayrer, a life-long friend of Professor Huxley, for the following note on his life and character:

"It was with profound grief that I heard of the death of my old and much respected friend, T. H. Huxley. The loss of the foremost biologist of this or any other country will be universally deplored, for he has for many years had a predominant influence on the progress of biological science and the expansion of scientific teaching which was not surpassed by even that of his friends, Darwin and Tyndall, and has contributed beyond all others to the advancement of natural knowledge and the promotion of the scientific methods of investigation of the problems of life. To this end, indeed, the whole strength of his surpassing intellect was steadfastly, through good and evil report, devoted, and the results have been recorded in language so incisive and convincing as to leave on all who have followed his teaching the impression of incontrovertible truth, and the conviction that in this department of knowledge he was *maestro di color che sanno*. I have always felt it to be a great privilege to have known him so well during early life. The friendship and affection in which I held him never diminished, though after his departure in 1846 I had no opportunity of seeing him again until my return from India in 1872, when I had the gratification of finding that on his part the feeling was unchanged, whilst on mine it was enhanced by the admiration with which I regarded his great natural powers and the unwearying labour in scientific research which had raised him to the pre-eminent position he has since occupied.

"We were fellow-students from 1844 until he joined the Navy in 1846, and it was during that time that I learnt to recognise his great intellectual power and the keen interest he took in the physiological lessons of Wharton Jones and other teachers. It was not surprising that he took honours at the London University, and it was with a feeling of confidence that I looked forward to a distinguished career for him when he departed with Captain Owen Stanley in the *Rattlesnake* on his scientific mission.

"That he entered the naval service I have always felt proud to think was due to my persuasion, for after consultation one day I urged him to apply to the Director-General of the Navy. He did so, and the result was an appointment to *Hastor*, and subsequently to the *Rattlesnake*. Doubtless had he selected any other career the result would have been the same, but as some of his earliest contributions to science arose out of the expedition to the South Seas, one cannot but regard that as having in some degree determined the course and direction of his future work.

"To inculcate veracity of thought and action, to subordinate to it reasonable or unreasonable ambition for scientific fame, to develop and organise true scientific education, and to combat whatever might oppose it, were his aspirations, and that by which he hoped to be remembered by posterity. To quote his own words: 'I should not count these things as marks of success if I could not hope that I had somewhat helped that movement of opinion which has been called the New Reformation.'

"But he will be remembered not only as a great original thinker, investigator, and promoter of biological science, but as a man of the highest principle and unswerving devotion to truth, a genial and charming friend, a keen but courteous controversialist, and one who illuminated all he said or did with the brightness of a remarkable personality, and a goodness of heart that endeared him to all who knew him and now lament his loss."

On Thursday, July 4th, the remains of Professor Huxley were interred in the cemetery at Finchley, where two of his children are buried.

The late Dr. Wilhelm Meyer.

Concerning Dr. Wilhelm Meyer, of Copenhagen, whose death was announced in the British Medical Journal of June 22nd, Mr. Cresswell Baber writes: I cannot allow the death of my friend, Dr. Wilhelm Meyer, of Copenhagen, as recorded in your columns, to pass without asking you to allow me to render a short tribute to his skill as an observer and his worth as a friend. His well-known work on *Adenoid Vegetations of the Naso-pharynx* is so full and careful that, except in regard to treatment, scarcely anything essential has been added since its publication in 1870. When, in 1874, I had the good fortune to make Dr. Meyer's acquaintance on a visit to Copenhagen, I had the opportunity of seeing some of his original cases, and was impressed with the keen interest he took in the subject. At that time he was engaged in general practice, as well as that of laryngology and otology, and, I believe, continued to be so. I well remember that in reply to a question as to which he preferred, his reply was "that his heart was in his general practice; his head in his special work." That his interest in the subject of adenoids continued unabated is shown by a communication received by the writer only a few weeks before his death, in which he mentioned that he was occupied with an inquiry about the distribution of adenoid vegetations in different countries and races. Dr. Meyer made other contributions to medical literature, but it is with the subject of adenoid vegetations that his name will be inseparably connected.

Another medical practitioner who has fallen a victim to professional duty is Dr. Alexander Jelissejeff, who died recently in St. Petersburg at the age of 46, of diphtheria, contracted from a child whom he had been attending. Dr. Jelissejeff was well known as an African explorer, and was the author of a book entitled *My Journey to the Soudan*, in which he gives an account of expeditions made by him in 1882 and 1884.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 6TH, 1895.

DOUBTFUL DIAGNOSIS AND EARLY NOTIFICATION OF INFECTIOUS DISEASES.

In view of the recent decision in the case of Mason *v.* Hedden, to which we have already alluded on more than one occasion, it is desirable to draw the attention of the public, as well as of the profession, to the extreme danger both to the community and to patients suffering from infectious diseases which will necessarily follow that verdict if it be not reversed.

The legal teaching of that verdict seems to be that so long as there is the slightest loophole for doubt as to the nature of a case it shall not be notified. Should a doubtful case turn out to be small-pox, or scarlet fever, or some other infectious disease, if the medical man has been careful that acts and language should reflect the doubt which he felt, it will be easy to bring evidence to show that, however suspicious it might look, the symptoms were not so positive as to justify him in certifying its infectious nature. Moreover, even if an action for failure to notify went against him, the worst that could happen would be a £5 penalty; whereas if, in endeavouring to do his duty under the Notification Act by notifying in an early stage, he should make the slightest slip, he would be liable to be cast in an unknown and absolutely unlimited amount of "damages." Under such circumstances the Notification Acts would become a farce: no man could safely notify until the case was plain, which in the case of small-pox would in many cases not be until it had declared its nature by spreading to those around.

That this is not an exaggerated view of the situation is clear from the records published by the Metropolitan Asylums Board. So great has been the difficulty of diagnosis in the early stages of small-pox, especially in those cases which are modified almost out of recognition by previous vaccination, that out of 1,283 cases certified as small-pox, and removed to the wharves as such, 155, or 12.2 per cent., were found, in the opinion of the managers' medical officers, not to be suffering from that disease. This must not be taken as betokening carelessness, but simply as showing the great difficulties which stand in the way of accurate exact diagnosis in regard to a disease which, in any case, must be of rare occurrence in the practice of medical men, and it may be taken that this is an average of error which must somehow or other be provided for in the administration of the Notification Act.

We do not say that there may not have been carelessness here and there, but when we find in how large a proportion of cases mistakes are made year after year by practitioners who on the average are very careful men, and in this matter are certainly acting with a full sense of responsibility upon them, we may be perfectly sure that the problem put to them is a very difficult one, and one not always capable of an exact solution. Even with a specialist who passes his life examining these cases, who has power to detain them in case of doubt, and is provided with wards in which to observe their progress until the doubt is cleared up—even with such opportunities as this mistakes are sometimes made. Of the cases brought to the Wharfe in 1894, 61 were returned home at once as not suffering from small-pox, but 147 were retained for further observation, of whom 50 ultimately turned out to be suffering from small-pox, and 97 from other disorders. But even after all this careful sifting of the cases by a medical specialist of large experience, with every appliance, and with opportunity for calling to his aid that great clearer of all mysteries—time—mistakes were made, and 10 patients not suffering from small-pox ran the gauntlet and were admitted to the ships. This should be taken note of by judges and magistrates.

There always must be a certain average of mistakes in a matter like this, in which the most expert occasionally fail, and, however complimentary to science it may seem, it is an absolute misrepresentation of the facts to suggest that an error in such a matter shows either ignorance or negligence. The danger to the public which will result if this unfortunate verdict, to which we have alluded, be not reversed can only be understood by a recognition of the enormous services done to London by the Ambulance Committee of the Asylums Board. Again and again it has happened that by obtaining early information of the existence of small-pox they have been able to nip in the bud what otherwise might have been a great epidemic; but their early action has hinged on a liberal interpretation of the Notification Act and an understanding by medical men that if they act honestly in the matter they will be held free from blame.

All these benefits will be thrown away if once it is decided that a doctor cannot safely notify until he can be actually positive of the nature of the disease, and able to defend his opinion in a court of law. It is not a matter of small-pox alone. The diagnosis of either scarlet fever or diphtheria is equally full of pitfalls. During last year 320 mistakes were made in the diagnosis of scarlet fever, and 348 in regard to the much smaller number of cases of diphtheria. In fact in regard to the latter disease notification is utterly hopeless if strict certainty is to be insisted on, for there are, if one may so say, two diphtherias, according as one accepts the clinical or the bacteriological test, while the Notification Act says nothing as to which definition is to be followed, and no man could know which would be accepted by a magistrate. There is, however, another aspect of the question. Not only does anything which delays notification impede early isolation in hospital, and thus tend to spread disease among the healthy, but it inflicts much injury upon the sick themselves, by putting off the day of their removal to a period in their illness when the transit from home to hospital is attended with much greater danger than if it had been undertaken at an earlier stage.

In regard to this, Dr. Goodall, of the Eastern Hospital,

is most emphatic. He says: "With respect to enteric fever I have to observe that this disease is, especially in its early stages, often very difficult to diagnose with certainty. It is also most important that if a patient suspected to be suffering from enteric fever is on account of his surroundings to be removed to a hospital, he should be removed as early as possible, without waiting for several days until an absolutely certain opinion as to the nature of the disease can be given. For in many cases absolutely certain symptoms are only observed at a period of the disease when even a most careful removal is fraught with the gravest risk to the patient's life." This puts the thing in a nutshell—to wait for certainty before notifying makes removal dangerous to the life of the patient, and deprives the community of the very benefit for the sake of which sanitary authorities are so freely spending money on isolation hospitals; yet that is just what must be done if this most unfortunate verdict in the case of Mason *v.* Hadden is allowed to stand.

THE BEDFORD SCANDALS.

THE records of workhouse scandals are many and various, and we fear that the state of things to which we have had occasion already to call attention in connection with the management of the Bedford Workhouse and Workhouse Infirmary is likely to obtain an unenviable notoriety. It is the old story. In July, 1894, there arose two troubles. A nurse who had given the utmost satisfaction, and against whom no charge had been made, was practically turned out because she belonged to the Workhouse Infirmary Nursing Association, which, as all our readers know, is a very useful body under the presidency of the Duchess of Teck. About the same time Mrs. Stanley Lane-Poole and her friends, who had been doing their best to bring help and kindness into the workhouse, and who were at that very moment proposing to organise a ladies' visiting committee, found the door practically shut in their faces by the master for no reason whatever, except, possibly, that that official considered the free exercise of his authority to be endangered. This state of things led to heated discussions on the Board, and formed apparently the staple of the arguments upon which the new election of guardians was fought. Nothing was more plain in the course of these discussions than that the whole question turned upon the fact that everybody, from the Board of Guardians down to the lowest menial in the house, was practically under the thumb of the master. We have never suggested, and we do not suggest, that it is not perfectly proper that the master of such an establishment should have all the authority which is necessary for discipline: but it is obvious to everyone that with a sleepy Board of Guardians, and with lady visitors practically excluded, and nurses of any independence dismissed, a master of this sort may easily become an autocrat practically uncontrollable.

At Bedford certain specific complaints against the master were, however, put into shape, and one section of the Board insisted upon having a committee of inquiry. This was refused by the old Board, and was granted by the new one. A large quantity of evidence was taken, but it was taken *in camerâ*: and, although that was many weeks ago, the shorthand note does not appear to have even yet been fairly submitted to the judgment of the whole Board. The evidence was, however, privately submitted to the Local Government Board, who thought the charges sufficiently important to call upon the master for an explanation. The inspector for the district, Mr. Augustus W. Peel, is well understood to be no particular friend of reform, and presumably upon his advice the Local Government Board, although they reprimanded the master, considered that the evidence did not show "sufficient cause" for the holding of a Local Government inquiry. The independent report furnished to us by our own Commissioner as to the administration of the establishment, especially as regards the nursing of the sick, the care of the infants, the appointments of the infirmary, and the sanitary arrangements, convinces us that the management is defective. We are not surprised that those responsible for it are not anxious to have in the house such an independent and skilled observer as the nurse they dismissed appears to have been. Apart from the questions referring to the treatment of the inmates, the charges affecting the officers appear to resolve themselves into this—that sundry irregularities are said to have been committed in providing entertainment for the master's guests, and otherwise promoting their comforts and luxuries in ways that were improper. For all these charges the master of course had his answer. So far as we gather, he admitted many of the irregularities, and endeavoured to minimise and explain them away. That the Local Government Board did not altogether accept his view appears from their words of censure. In the end the master wrote a formal and, as it seems to us, in effect an impertinent, letter to the Board of Guardians expressing his regret that in some of the respects mentioned his past action had been "contrary to the views of the Local Government Board," and assuring the guardians in future that he would act strictly in accordance therewith. The same letter contained a threat of a libel action against the persons who had accused him of "tyrannous oppression" within the house, as to which it does not appear that any serious inquiry has yet been held at all. We do not know whether this threatened action is now pending, but in any case we do not propose to say anything about that aspect of the situation, as to which we have no facts before us. A workhouse master may be practically the autocrat of the establishment, and may be also a very humane and kindly man. It is the absence of efficient control which is the scandal. The occurrence of particular irregularities is only a symptom of the disease, and the object of those who criticise such a state of things is, or ought to be, not to vilify the master, but to reform the system. The present result appears to be that the Board by a small majority have resolved to support the master, and go on in the old way. The members who dissent from this course contend, with very good reason, that the investigation, so far from being finished, is barely begun, and that the evidence taken before them was merely such as they were in a position to gather together, in the face of the constant hostility of the master, who appears to be backed up by the clerk and, in fact, by the whole of the "old gang," and that the purpose and proper effect of their private and partial investigation was merely to lead up to a Local Government inquiry, which should be formally and regularly carried out.

We do not hesitate to say that it would be quite intolerable if the matter were to rest here. The Board of Guardians ought not to stop until they have forced the Local

Government Board to have the matter sifted to the bottom; and we venture to say that for that purpose it is not only necessary that an inquiry should be held, but it is also necessary that that inquiry should not be held by the gentleman who, as inspector for the district, has already to some extent taken sides in the matter. Few things about the Local Government Board arrangements are less satisfactory than their curious practice of sending the district inspector to act as a *quasi*-judge, where scandals are alleged to have arisen in institutions for which he is himself largely responsible. In this and in many other respects Bedford is a test case. It remains to be seen whether the new head of the Department will permit such a matter to be hushed up, even if a majority of the guardians are willing to consider it as terminated by a "conclusion in which nothing is concluded."

HUMAN AND VETERINARY MEDICINE.

IT is a matter of no small interest to observe how, from the earliest times, observation of the ailments of animals and the knowledge gained from the more or less experimental treatment of their diseases has influenced the progress of medicine proper as applied to man. Malm,[1] in a graduation thesis, discourses upon the relationship which has existed between veterinary and human medicine from the days of antiquity to the present time. The first historical references to the healing art in ancient times have to do with veterinary medicine. There is a tradition of a Greek shepherd, Melampus, who is said to have lived centuries before the siege of Troy, that on account of his knowledge of diseases of animals he was called in to see a King's daughter, whom he cured of a maniacal condition by means of the Helleborus albus. The result, according to the legend, showed the correctness of Melampus's deductions as to the similarity between the diseases of man and animals, for he had found this plant useful for apparently similar conditions in his sheep. In course of time Æsculapius appears, and for some centuries after him the veterinary art seems to have been neglected, until it was revived again by Hippocrates and Aristotle, both of whom derived their knowledge of human medicine from the study of animals.

After the commencement of the Christian era and up to the fifth century veterinary medicine was very flourishing, and put human medicine completely into the shade. To this result, the very opposite of what might have been expected, several causes contributed. Knowledge of veterinary medicine was improved partly owing to the appearance of such men as Columella (40 A.D.), who was the first to place veterinary medicine upon a scientific basis, and at a later period Apsyrtus (320 A.D.), who wrote a description of nearly every known disease in animals. Another cause of the advance of veterinary art at this time was the great military luxury prevalent in the Greco-Roman Empire, and especially at the Byzantine court, where, for instance, the office of chief master of the horse was one of the greatest honours conferred. Human medicine, on the other hand, had begun to be neglected even before the Christian era, and, until Cæsar gave them civic rights, the physicians were either slaves or freedmen. After the time of Christ it sank still lower, and Roman writers speak with great contempt of the practice of medicine. This inferiority continued until the twelfth century, and was probably caused in part by the influence of powerful ecclesiastical bodies which so often showed themselves hostile to scientific research and freedom of thought, but it was no doubt also largely due to the military spirit then so prevalent and to the growth of the feudal system, which gave small consideration to weakly men but thought everything of horses, which were the special appanage of the knightly classes, to whom, in fact, they gave their proud pre-eminence.

This long period did not produce any scientific writings of value. Human medicine during this time appears to have departed from the road of true research, and to have neglected the teachings of experience; it was completely dominated by mysticism and superstition.

With the establishment of the universities, however (twelfth to thirteenth century), human medicine made rapid progress. In the beginning of the thirteenth century Luzzi, in Bologna, began to make *post-mortem* examinations of human bodies, but it was not until the beginning of the sixteenth century that the real study of human and animal anatomy began. During this century Ruini wrote a book on the anatomy of the horse. It is interesting to note that it was this work which was the origin of the Italian opinion that the honour of having discovered the circulation of the blood should be given to Ruini. It is true, indeed, that this author understood the pulmonary circulation, but he had erroneous views about the function of the veins. It can scarcely be denied that Harvey knew Ruini's work, but most probably in this case, as with most human discoveries, the work was prepared by many, the discovery made by one. This work of Ruini's remained for long the only important contribution to veterinary science. In fact, the scale had turned. The knowledge of human medicine was gradually settling itself on a firmer basis, while by the time of the appearance of the great cattle plague, which was imported from Russia, and raged throughout Europe in the beginning of the seventeenth century, the veterinary art had sank almost entirely into the hands of the farriers. There was thus no one to meet the emergency, and the various Governments were obliged to turn to the practitioners of human medicine for help. This severe warning was the chief cause of the establishment of veterinary schools, the first of which was founded by a French advocate, Bourgelat, in 1762 in Lyons. But what was taught in these schools for a long time was chiefly human medicine applied to animals. Several countries possessed no such schools, but the subject was included in their courses by a few members of the medical faculty at the universities; and thus arose a praiseworthy effort to create a true comparative pathology. The realisation of this effort only became possible later by the advancement of experimental pathology, of which bacteriology has recently become a prominent department.

It is interesting to note the varying progress of the two great branches of medicine. Sometimes the veterinary, sometimes the human, has taken the lead, but whatever has been learned in the one has been of service to the other. While physiology shows the general similarity of the action of protoplasm, the basis of living matter, whether in animals or in man, we may fairly believe that those interferences with life processes which we call disease are analogous in both, and we can readily recognise the honourable part taken

[1] Nord Magasin for Lægevidenskaben, Kjøbenhavn, 1894.

by the veterinary art in the gradual evolution of that science of medicine which is now being applied for the equal benefit both of animals and man.

THE honour of knighthood was conferred on Mr. Thornley Stoker, President of the Royal College of Surgeons in Ireland, and on Dr. Christopher Nixon, Senior Physician to the Mater Misericordiæ Hospital, by the Lord-Lieutenant of Ireland (Lord Houghton) on July 4th.

AT a meeting of the Court of the University of Wales held on July 2nd at the University of London, Dr. Isambard Owen, Senior Deputy Chancellor, in the chair, the Prince of Wales was unanimously elected Chancellor of the University of Wales. The first Chancellor of the University was the late Lord Aberdare.

BY the will of the late Mr. Peter Waddell, Leith, which has been recorded in the books of Council and Session, it is ordained that the residue of the property should be paid in equal shares to the Longmore Hospital for Incurables, Edinburgh, to the Royal Edinburgh Blind Asylum and School, to the Edinburgh Royal Infirmary, and to the Leith Hospital and Humane Society. It is expected that this residue may amount to £200,000—that is, £50,000 to each of the four charities named.

ST. ANDREWS AND DUNDEE.

THE St. Andrews University Bill, the object of which was to disjoin Dundee University College from the University of St. Andrews, has been dropped. The two Colleges had been affiliated by an order of the Scottish Universities Commissioners appointed under the Act of 1889. It was contended that this affiliation was *ultra vires* on the part of the Commissioners.

THE MECCAN PILGRIMAGE.

THE Meccan pilgrims are now returning at a critical and momentous period. We learn by letter from an authoritative source that up to June 19th seven ships with about 6,000 pilgrims had arrived at Tor, and on two of them there were cases of cholera followed by death. At the time the despatch boat left Tor on June 19th only one of the cases had been confirmed by bacteriological examination. All the vessels arriving at Tor have it stated on their bills of health that there is a good deal of cholera at Mecca. Fifteen days' quarantine is imposed on all pilgrim ships arriving at Tor from Djeddah, and all passing the Canal will be sent through in quarantine. The Egyptian pilgrims, after passing their fifteen days in one encampment at Tor, will be required to undergo another period of three days' observation at that place in a new camp before they will be allowed to land at Suez.

HYGIENIC DAIRY FOR EDINBURGH.

AT a meeting held in Edinburgh last week it was arranged to establish a hygienic dairy company. Dr. Foulis, who presided, referred to the report published as to the insanitary condition of Edinburgh byres, and found in this the most powerful argument for the scheme they had met to inaugurate. He referred to the great susceptibility of milk to evil influences from infectious and contagious diseases, whether these latter existed in the animals or in the human beings working amongst them; to the unsatisfactory state of notification of disease; and to the want of fit supervision of persons supplying milk from outside the city. He urged the necessity for preventive measures, and the importance of constant and skilled medical supervision of all human beings and animals located on the proposed hygienic dairy farm. Thus there would be guaranteed to the inhabitants of Edinburgh a supply of milk uncontaminated in any way by the germs of bovine or human disease. Necessarily the water supply and sanitation of the new dairy farm would have to be beyond suspicion. A limited liability company is to be formed, with a capital of £30,000, in £1 shares. The scheme is being taken up, not from a speculative point of view, but from a philanthropic aspect, although care would be taken that the scheme was launched on a sound financial basis.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual general meeting of this Society was held at [illegible] Strand, on June 28th. Mr. Joseph Smith was elected President for the year, Mr. George Brown Hon. Treasurer, and Mr. W. G. Dickinson (Southfields, S.W.) Hon. Secretary. The Secretary reported the correspondence between the Committee of the Society and the Home Office in connection with the recent amendment of the by-laws of the College, the result of which met with the approval of the meeting. The following resolution was proposed by Mr. Nelson Hardy, seconded by Dr. Thos. Martin, and carried unanimously: "That this meeting is of opinion that the time has now come when active steps should be taken to secure for Members of the Royal College of Surgeons of England their due share in its management, in accordance with the request of nearly 5,000 Members, contained in the petition to the Privy Council in the year 1887." The Hon. Secretary will be glad to receive the names of any Members of the College wishing to join the Society. The annual subscription is half-a-crown.

MEDICAL OFFICER OF HEALTH FOR LAMBETH.

DR. JOSEPH PRIESTLEY, B.A., M.D., D.P.H., has been elected to the post of Medical Officer of Health for Lambeth by a very large majority. Dr. Priestley is the well known Medical Officer of Health at Leicester, and during the small-pox epidemic there was the centre of many attacks and abuse at the hands of the antivaccinationists, who did their utmost to force his hands. Dr. Priestley, however, stood firm to his opinions, and by so doing scored all round, whilst his *Reports on the Epidemic of Small-Pox* have had a widespread circulation and renown. Dr. Priestley has been three years at Leicester, and was formerly Assistant Medical Officer of Health to the Vestry of Camberwell, so that he has had a wide experience in administrative public health work, and has written some important papers and reports on various public health questions.

SIR H. D. LITTLEJOHN.

THE many friends of Dr. Littlejohn in all parts of the world will join in congratulations on the honour which Her Majesty has been pleased to confer upon him on the advice of Lord Rosebery. Dr. Littlejohn took the degree of M.D. at the University of Edinburgh in 1847; in the same year (as was then the custom) he became a Licentiate of the Royal College of Surgeons of Edinburgh, and in 1854 a Fellow of the same College. It was in connection with the famous Pritchard poisoning case, that Dr. Littlejohn first came to the front as a recognised toxicologist. Since that time, whether as medical officer of health and police surgeon for the city of Edinburgh, as officer of health to the Board of Supervision (now the Local Government Board) for Scotland, or as a medical expert in Crown cases (especially in poisoning), he has been prominently before the public, and has now a deservedly high reputation as medical jurist, toxicologist, and authority on matters of public health. Not only does Edinburgh owe much to him, but Scotland. It is difficult to realise the enormous improvement in the public health affairs of Edinburgh during his long term of office.

Typhus fever is no longer an appreciable quantity, and the rate of mortality has gone down to a very low figure. Dr. Littlejohn is lecturer in the Extramural School on medical jurisprudence and public health. He was an examiner in the same subject in the University of Edinburgh some years ago, and is now an examiner for the Royal Colleges of Surgeons and Physicians of Edinburgh and the University of St. Andrews. He was formerly President of the Royal College of Surgeons of Edinburgh and of the Medico-Chirurgical Society. When the British Institute of Public Health held its Congress in Edinburgh, in July, 1893, he was called to the presidential chair, which he occupied most admirably. On August 1st of that year the University of Edinburgh conferred upon him the honorary degree of LL.D. Personally Dr. Littlejohn is the most genial of men—a favourite with everybody. He finds relief from the severer duties of his profession by the cultivation of art. He has long been known as an admirer and judge of Landseer engravings, of which he has a large and valuable collection.

PATHOLOGY AT TRINITY COLLEGE, DUBLIN.

THE Board of Trinity College, Dublin, has appointed Dr. A. C. O'Sullivan to the new Lectureship on Pathology in the School of Physic. Dr. O'Sullivan is one of the most distinguished Fellows of Trinity. After taking his medical degree he proceeded to Vienna, where he studied for a considerable time, and on his return to Dublin he was appointed Pathologist to the Richmond, Whitworth, and Hardwicke Hospitals.

SHORT-TIME APPOINTMENTS IN THE PUBLIC HEALTH SERVICE.

WE find in the *Bradford Observer* of June 26th the following typical instance of the "fixity of tenure" enjoyed by medical officers of health outside London: "The period for which Dr. J. J. Rutherford had been appointed medical officer of health being about to expire, the Council proceeded to the election of a successor. The applicants were Dr. Rutherford, Dr. Foster, and Dr. Eames. It was resolved to decide the matter by a ballot vote, and, on the ballot papers being counted, it was found that 8 members had voted for Dr. Foster, 5 for Dr. Rutherford, and 2 for Dr. Eames. It was then formally proposed and adopted without dissent that Dr. Foster be appointed medical officer." This is not the way in which medical appointments ought to be held or terminated.

MEDICAL PRACTITIONERS AND PATIENTS' FRIENDS.

THE following case, which recently occurred in Belfast, illustrates the difficulties and even dangers which surround the practice of the healing art. On May 4th the wife of a carpenter was delivered of a child, her medical attendant being Dr. Cathcart. After delivery a tumour was discovered, and Dr. Smiley, a neighbouring practitioner, was called in consultation. As the case presented exceptional difficulties, Dr. John Campbell, surgeon to the Samaritan Hospital, was summoned. The diagnosis seemed to lie between extrauterine fœtation and a tumour, and after full examination the opinion of the doctors inclined to the latter view. The friends of the patient, however, became obsessed with the idea that a second child was present. The propriety of removing the woman to hospital and having an operation performed was strongly urged by the medical men, but the husband positively refused to consent. The next evening, however, the patient was taken to the Samaritan Hospital, on the understanding that no operation would be performed without consent. On the third day after admission the woman's condition became decidedly worse, and Dr. Campbell arranged a consultation with Dr. Cathcart and Dr. Smiley, with the view of further pressing the necessity of operation upon the husband. When the doctors met, however, it was evident that the time for operation was past, and the patient died soon afterwards. The death certificate stated that the cause of death was "Abdominal tumour and peritonitis." Nevertheless the friends of the patient persisted that a second child had been left in the womb. Finally, an order was sent down from Dublin Castle for the exhumation of the body and for the holding of an inquest. Dr. A. V. Macan, of Dublin, was instructed to make the *post-mortem* examination, in which he was assisted by Dr. Brice Smyth of Belfast, and Dr. Duff of Aghalee. The inquest was held on June 23th, at Soldierstown, near Moira, where the deceased had been buried, the presiding coroner being Dr. Musson, J.P., Coroner for South Antrim. The necropsy showed the presence of an ovarian tumour with a twisted pedicle and a rupture, and that this was the cause of death was deposed to by the three doctors who had made the *post-mortem* examination. Some peritonitis was also found. Evidence was given by Dr. Campbell, Dr. Smiley, Dr. Cathcart, and Dr. Darling, of Lurgan, who had also seen the patient; and, after a full investigation, the following verdict was returned by the jury—namely, "That Margaret Robinson died on Saturday, May 11th, 1895, at the Samaritan Hospital, Lisburn Road, Belfast, from natural causes—namely, the bursting of an ovarian tumour. The jury are of opinion that every care and attention was given to the deceased by the medical men who attended her." The medical men who have been subjected to so much annoyance have the heartiest sympathy of their brethren in Belfast and Ulster.

EPSOM COLLEGE.

THE Prince of Wales, who will be accompanied by the Princess of Wales, will lay the foundation stone of the new Lower School at Epsom College, at 3 P.M., on Monday next, July 8th, and not on Tuesday as previously arranged. Tickets of admission to the ceremony, which will be issued according to priority of application, can be obtained from the Secretary (37, Soho Square) or from the Bursar at the College. A special train will leave Victoria Station at 1 P.M., and will return from the Downs Station at 5 P.M.

WOOLSORTERS' DISEASE.

WOOLSORTERS' disease was the subject of a short conversation in the Factories Bill Committee on June 27th. Clause 26 gives the Home Secretary the power to prohibit or restrict employment for all or any classes of workers in any trade certified to be dangerous or injurious to health. Clause 27 provides that notice of certain industrial diseases, including arsenical poisoning and anthrax, shall be sent by every medical practitioner to the chief inspector. Upon this latter clause Mr. Byles, M.P., said that he had received strong communications on the subject both from the National Union of Woolsorters and from eminent medical men who had been specially concerned in cases of this kind. He asked Mr. Asquith whether steps would be taken under Clause 26 to provide regulations whereby those engaged in the sorting of foreign wools should be protected from danger to their health by the adoption of a code somewhat similar to that provided by the Bradford Corporation. Mr. Asquith replied that he hoped that after sufficient inquiry some such code of regulations would be imposed. He was thoroughly aware of the injurious nature of the occupation referred to, and had it fully in mind in framing the clauses under discussion.

NOTIFICATION DIFFICULTIES.

As far as we can make out from a long account in the *Oldham Chronicle*, a case which ought never to have been brought into court has been decided in the least unsatisfactory way possible under the circumstances. A medical practitioner, Dr. Thomson, was charged with an infraction of the notification clauses of the local Act, in having failed to notify "forthwith" certain cases of enteric fever. All the patients were members of the same household. It seems

that in the early stages the diagnosis was obscure as between typhoid and influenza, and although at the end of a week a provisional diagnosis of the former was made, it was not until some days later that all doubt was removed. After the lapse of a few days more, the medical officer of health, Dr. Tattersall, heard of the cases and called at the house for the purpose of making inquiries, and met there Dr. Thomson, who confirmed the report and expressed regret for the delay which had occurred. There the matter might very well have ended, but the Sanitary Committee of the corporation, who appear to have conducted their deliberations in the presence of reporters and without much reticence, decided to press it further. They summoned Dr. Thomson to meet them, and upon his refusal advised the institution of legal proceedings against him. The case accordingly came before the borough magistrates, who held that Dr. Thomson "had not wilfully and without reasonable excuse offended against the section of the Act in question." The case was dismissed with costs. The frequent difficulty of making a positive diagnosis in the early stages of enteric fever is well known to every medical man, and there was here no allegation of intentional concealment in the particular instance, or of habitual neglect of notification by Dr. Thomson. He might perhaps have notified earlier, and it would have been well to send a guarded notification to the medical officer of health when the provisional diagnosis was made, although the law scarcely imposes that as a statutory duty. These omissions, in an isolated instance, amount to little, and were surely amply covered by the verbal explanation given to Dr. Tattersall. The refusal to attend the meeting of the committee was not unnatural, since the members had permitted themselves singular latitude of speech in their previous discussion of the matter before the reporters. If, as an editorial note in the local paper suggests, the outcome of this case is to authorise medical practitioners to delay notification indefinitely, the responsibility rests with the Sanitary Committee, who selected their battle-ground with little discretion. We venture to think that no such evil consequences will follow, but that the notification system will continue to work smoothly and harmoniously for the public good, in Oldham as elsewhere, and none the less satisfactorily for the rebuff which the Sanitary Committee have courted and received.

THE LEICESTER PROVIDENT DISPENSARY.

A considerable amount of correspondence has recently appeared in the Leicester papers in regard to the article which appeared in our columns on June 8th in regard to the Leicester Provident Dispensary. No attempt has been made to traverse our facts, or to show that this institution, which is now being so largely used by the middle classes, is not a charity, or that it is not extravagantly managed. In fact, directly attention was drawn to the sums paid in salaries, and especially to the salary of £600 a year paid to the manager, it became evident that this was an old sore to many of the Leicester people, and was a matter regarding which many severe strictures had already been made. The correspondence has, however, served to bring into prominence the claim of the well-to-do to partake in the benefits of the dispensary; in fact one of the writers claims that Leicester has succeeded in organising the medical profession for the relief of the lower and middle classes by means of this provident dispensary. It is necessary therefore again to insist on the fact that this dispensary is a charity, that the medical men on its staff are among the largest supporters of it by means of their semi-gratuitous scale of fees, and that well-to-do people have no right whatever to partake of its benefits. Medical men have never held back from giving their services to the poor and needy, and in offering for small and unremunerative weekly payments to attend those who are not quite so poor as to be objects of simple charity, and yet cannot pay ordinary fees; but the intrusion of well-to-do people into this semicharitable organisation entirely alters the aspects of question, and it is strange that the working classes do not see that it threatens with destruction a scheme organised for their benefit. According to the plan of a properly organised provident dispensary, the doctors live by their private practice, and give their services to the deserving poor at a very low rate; give in fact far more than they are paid for. According to the plan which the Leicester people profess to have organised, but have not; each man gets only what he pays for, that is he gets the value of 2s. 10 9d. a year in medical attendance. It is impossible not to see that the poor are better off according to the first scheme, and that the attempt to "organise the medical profession" on the basis of a remuneration of a little over a halfpenny a week must, if it should ever be successful, end by limiting the medical attendance on the poor to attendance of such a character as is fairly remunerated by such a payment, which is not at all what the poorer members of the working classes want, or what they have been in the habit of receiving from these institutions.

THE DOCTOR'S LIFE AND WORK.

At St. Mungo's College, on Saturday, June 29th, Dr. D. C. McVail delivered the closing address to the students in the rooms of the Medico-Chirurgical Society. He said there was no enormous difference between men engaged in the ordinary work of life and a true and genuine member of the medical profession, except that his best work was done among those from whom he could expect no reward, and sometimes not even gratitude. In that respect the medical profession resembled the Church, but its work entailed far more labour and self-sacrifice. The true doctor was an unpaid medical missionary. The merchant, the manufacturer, and the engineer were as well educated, though on different lines, as the medical man: but they differed in this, that the best of the medical work was given to the poor as though they were rich. Government payments to medical men were a mere fraction of the market price of the work that the profession had to do. Though the medical man seemed to live a public life, the nature of his duties made him probably the most solitary man in his village, carrying secrets of importance, and knowing oftentimes conditions of life and health which he must keep locked up against his most unguarded moment. His duty lay with his own conscience alone. His patients could not judge of his failures or of his triumphs. The public could not estimate his work as they could that of a clergyman or a lawyer. The doctor's work, so far as the patient was concerned, was written in water. Work of this solitary type was fraught with grave temptations and dangers to the medical man. Why should he continue to be the plodding hard-working student, watching the advancement of medicine in all its particulars if no one could judge of his excellence or otherwise? This was the reason why so many men ceased to be students when comfortably settled in practice. They found the easy, charming, and pleasing manners as acceptable to patients as sound medical skill. These men found it easy to make their way in life. There was nothing wrong with that, quite the opposite, but they were apt to make these graces and accomplishments do the work of better qualifications and hard study. It was in this way that even in the Church the art of pleasing was now made to do the work of the scholar and the brainworker. The pulpit was paralysed and religion made an affair of emotion instead of intellect, which was its only safe basis. Thus medical men were apt to become servile, a kind of superior servant to the great man, a trifle above his butler. These persons were so apt to neglect those who were poor, and it was impossible for medical men to maintain the high position of the profession if they broke their connection with the poor. There the best work was done. It was done for no praise. It was there that the best of the men came out, partly because they were not concerned in pleasing the patient, and so could do what was best for him. In that work they

should not even expect gratitude for doing what they conscientiously knew to be the best. Social and influential position was dearly bought if it led to the degeneration of the whole man. If the medical man wanted satisfaction in his life's work it must be because it had been done in the most absolute self-sacrifice. Success in society was not the chief end of the true physician, though it might seem so to him who was merely a student or practitioner in the art of pleasing. In an assembly of medical men it was not always presidents and vice-presidents or hospital physicians and surgeons who were necessarily the best men present in point of medical knowledge or experience or training. Professional success consisted in doing the greatest good to the greatest number of people. The future of the race was in the hands of the profession, and the work of the doctor in obscure streets, in cottages and hovels, improved the populace, rendered the children healthy and strong, improved the manhood and the womanhood. There was no better work done in this country than that done in the East and South of Glasgow and London. The promise given long ago of a time to come when "the people would walk and not be weary, and run and not faint," would doubtless be attained, and in its attainment the medical profession would play the greatest part. Those listening to him would shortly have an opportunity of taking part in the work and of bringing it about. It was the poor work that would enable them to do all work well, and their work was worth doing well. From the very day on which they received diplomas they would affect not only the lives of those whom they were called upon to cure, but the lives and welfare of generations to follow. A vote of thanks was, on the motion of Mr. C. P. Legge, cordially given to Dr. McVail for his address.

CLUBS AND THEIR RESPONSIBILITIES.

THAT people who undertake to perform delicate services for others may sometimes be held liable, either criminally or civilly, for their failure to carry out their undertaking is a matter of common knowledge. The responsibility which attaches to them must constantly be present to the minds of all members of the medical profession; and reports of cases tried from time to time in the law courts show that this responsibility is a very real one. In a case tried recently in the county court at Lincoln there was an attempt to extend this liability beyond the limits hitherto fixed by our law, which if it had succeeded might have opened very wide the door for possible future claims. A friendly society contracted to supply medical attendance to its members and their families, and retained the exclusive services of a qualified medical man for the purpose, allowing him, however, to attend midwifery cases for the wives of the members, and to charge them for such attendance. One of these cases had an unsatisfactory result, and the member thereupon brought an action against the society to recover damages for the alleged negligence of the medical attendant. He was not a defendant, and the report does not say whether he had an opportunity of vindicating his professional character; but the jury found that he was negligent, and assessed damages against the society. The judge, however, held that they were not liable. The general contract to provide efficient medical attendance was fulfilled by securing the services of a fully qualified medical practitioner, against whose testimonials and general reputation nothing could be said; and that there was no contract between the society and the plaintiff to provide medical attendance in midwifery cases. In those cases the society did not direct or control the manner of treatment, and could not require their medical officer to treat at all. This decision seems right. The action was probably brought against the society as being a better mark for damages than the doctor. The midwifery fees in all probability amount to very little, though the one charged to the plaintiff sufficed to fix the legal liability. Whether the result of the case may not be on the whole beneficial to the medical profession time only can show. Recently there have been numerous complaints that the growth of benefit societies which provide medical attendance for their members in return for small subscriptions, out of which smaller salaries are paid, has interfered with private practice. The knowledge that they have no right to compensation in cases of unskilful treatment or neglect may perhaps make some people prefer to call in and pay their own medical man; but the passion for cheapness will probably prevail in most cases. Those who will not spend their money in fees should, however, remember that when they save these, they at the same time forego the right to blame anyone if things go wrong.

THE LATE PROFESSOR HUXLEY.

THE death of Professor Huxley deprives biological science of one of the most remarkably gifted minds which has been devoted to its study, not only in this generation, but at any time in its history. Huxley was in his time an ardent and successful student of minutiæ, but it is not for his achievements as an observer, admirable as those were, that he will be remembered. To quote the words of Haeckel, "More important than any of the individual discoveries contained in Huxley's numerous minor and greater researches on the most widely different animals, are the profound and truly philosophical conceptions which have guided him in his inquiries, and have enabled him always to distinguish the essential from the non-essential, and to value special empirical facts as a means chiefly of reaching general conceptions." It was as an expositor that Huxley exercised the greatest influence on his generation. Possessed of a singularly clear and logical intellect, and of a fearless rectitude of character which made him shrink only at the threshold of the unknowable, he was endowed also with the rare faculty of expressing his conclusions, and the argument upon which they were founded, in a perspicuous style which never left the reader for a moment in doubt of his meaning. Huxley had a larger share than any other man in driving the thesis of evolution into the very fibre of the mind not only of biologists of this generation, but into the popular intelligence, thereby influencing not only the development of biology, but the whole trend of scientific and even of political thought. It is hazardous to prophesy the duration of reputations nowadays, but there is no risk of the future falsifying the belief that the influence which Huxley has had on this generation will not die with it, but will continue to affect the course of scientific thought for many generations to come. We give in another column a brief account of the facts of his busy life, but his real history is written in the minds of men. He was essentially a teacher—a teacher not only of the ignorant, but a teacher of the teachers.

PHYSIOLOGY AND FICTION.

OUIDA has always professed to be a lover of animals, but in these latter days she would seem to have transferred her affections from guardsmen to dogs, birds, and other creatures which, if not much more intellectual, are a good deal more respectable from a moral point of view than her former pets. We congratulate her on the acquisition of a healthier taste; it is a symptom of literary regeneracy which makes one think it possible that she may yet come to see how grotesque a figure she cuts, flashing her little toy sword in the face of science. In the summer number of the *Illustrated London News* she has a "shocker" with the blood-curdling title of "Toxin," all about a wicked English surgeon, by name Damer, who, having saved the life of an Italian Prince (with a figure, it need hardly be said, "full of grace and strength like the form of the Greek Hermes in the Vatican"), stays on with him at Venice in peace and amity, like La Fontaine's cooks, till the beautiful Veronica Zaranegra comes on the scene, when, of course, the situation becomes one of more or less open war. The godlike Prince falls ill with what we are assured "the faculty call Boulogne sore throat"

and "the vulgar call diphtheria"; and Damer, finding him an obstacle to the conquest of the lady and her fortune, calmly helps Nature to suppress his rival by giving him a strong dose of "the venom of the toxin" on pretence of administering antitoxic serum. The story is as silly as Ouida's productions usually are, but with that we have no concern. What we do protest against is that a scoundrel like Damer should be presented as the type of a scientific surgeon. There can be no doubt as to the purpose of Ouida's story; it is an attack—feeble and futile, it is true, but most malignant in intention—on the medical profession. Damer practises vivisection in a place "where the clang of hammers and the roar of furnaces drowned the cries of animals which it was not convenient to make aphone (*sic*)"; he operates on a man "at death's door with cancer of the food and air passages," and although the patient dies under his knife, he boasts that he has solved "a doubt which has never been solved before, and never could have been without a human subject." When taxed with cruelty because of this operation, he replies that such terms as cruelty or kindness "do not enter into surgical vocabularies." This kind of thing is only an echo of the ravings of certain catchpenny newspapers, and deserves no serious notice. But when the man whom the reader is asked to accept as the representative of scientific medicine is made to justify murder on the ground that "science bade him take all the other sentient races of earth, and make them suffer as he chose and kill them as he chose," and to argue that, while "it would be what men called a crime . . . his school despises the trivial laws of men, knowing that for the wise there is no such thing as vice and no such thing as virtue," we think we have some reason to complain. Medical men, even if they have not had the advantage of being instructed by so eminent a teacher of virtue as the author of *Moths*, will, in respect of sense of duty to their fellow men, active charity, and self-sacrifice, compare favourably with any body of men whatever. Ouida, of course, has a perfect right to represent a doctor as a murderer, but she has no right to imply that he is a murderer because he is a doctor. When she speaks of the "hells created by modern science," and of the time being near at hand "when there will be no priests and no kings but those of science, and beneath their feet the nations will grovel in terror and writhe in death," she merely talks nonsense; but when she represents the search after scientific truth as naturally leading to crime she utters an infamous falsehood. We have never liked the fashion of Ouida's literary garments, but after reading "Toxin" we are willing to allow that she *can* write fiction.

DR. RUFFER.

We regret to hear that Dr. Ruffer, the Director of the British Institute of Preventive Medicine, whose researches in regard to the antitoxin treatment of diphtheria are so well known, has himself contracted a severe attack of the disease in the course of his investigations. Immediately on the nature of his complaint being ascertained he was treated by antitoxic serum, and, we are glad to learn, with most satisfactory results, as he is now making very good progress towards recovery.

THE ABUSE OF CLUBS IN GERMANY.

At the meeting of the Deutscher Aerztetag or Diet of German Physicians at Eisenach last week, the chief subjects discussed were the regulation of the relations between medical men and the life insurance companies, and the working of the labourers' medical clubs. The latter question has become of vital importance to the profession. It is calculated that, in accordance with the law enacted a few years ago making it compulsory for every working man, labourer, artisan, clerk, etc., not earning more than a certain amount to be enrolled in a club under supervision of Government, at present more than four-fifths of the whole population have become members of such societies. In consequence, since that time the amount paid for medical services as a whole has decreased by several millions of marks yearly. The clubs are easily able to obtain doctors willing to accept their appointment at a fixed salary, which, when compared with the work to be done, means a payment of about 2½d. a visit, or less than what a porter considers his due for the same amount of time expended. This would hardly have been possible if the originators of the law, notably Herr von Bötticher, Secretary of State, had not expressed the opinion that as these clubs are organised as a benefit to the people, the doctors are in duty bound to waive all considerations of self-interest, to content themselves with reduced fees, and to do as much work free as Government may think fit to demand. To remedy this ever-growing evil an association was founded in Berlin two or three years ago, calling itself the Verein der frei-gewählten Cassenaerzte, the "Society of Club Doctors with Unrestricted Selection," meaning that the patients may go to whichever doctor they choose. The statutes are principally these: The clubs make an agreement with the Association to employ as medical advisers only the members of the Association; the latter accepts as members all qualified reputable practitioners residing in or near the town who are willing to treat the club members at the rates fixed upon; physicians acting contrary to the interests of the club (that is, prescribing in too costly a manner, or encouraging malingerers, for these are the essential points) can be excluded only by decree of the Council of the Association but the clubs have also the right to demand the exclusion in cases of gross infringement of the rules. This method has already proved to be an excellent one. The patients are better satisfied with their attendants, the doctors get a slightly better though still meagre remuneration, and the expenses of the clubs are no higher than before, as the chemists' bills have, by careful supervision, been considerably reduced and malingerers are more promptly detected. Last, but not least, there is now no occasion for necessitous doctors pandering to the vanities and weaknesses of the members of the club Boards, as all appointments are entirely in the hands of the Society's Council. At Eisenach this arrangement was declared by an overwhelming majority (representing about 9,000 votes to 1,000) to be by far the best method; and it is to be hoped that the various medical practitioners throughout the land will soon bring about its accomplishment in other towns besides Berlin.

SUPER-TROPICAL HEAT AT CALCUTTA.

The heat at Calcutta has been excessive. Out of doors in the middle of the day the shade temperature has been as high as 115°. In many of the offices, notwithstanding all the appliances to cool the atmosphere, a temperature as high as 107° has been recorded, and in the coolest part of the city a temperature of 101° has been the average. Many of the judges have been obliged to adjourn their courts, and commercial business has been practically at a standstill. This intense heat has had a disastrous influence on the health of Calcutta, and the death-rate has risen as high as 58 per 1,000. Rural Bengal has, however, not suffered in the same proportion; for the death-rate has been somewhat below the normal for the same month, and has only reached 25.8 per 1,000. In the towns of Burdwar and Hooghley the death-rate has approached nearly 50 per 1,000. These figures seem to show that in India it is not so much heat which kills, as heat engendering unhealthy conditions in cities, for which scientific sanitation is alone the remedy.

The total number of students in the Medical Faculty of the University of Sydney during 1894 was 119.

A National Medical Congress is being organised by the Portuguese Sociedade de Sciencias Medicas. It will probably be held in Lisbon during the festivities in honour of the quatercentenary of the discovery of India by Vasco da Gama.

A REPORT
ON THE
MILK SUPPLY OF LONDON
BY A
SPECIAL ANALYTICAL AND BIOLOGICAL COMMISSION.

In laying before our readers the results of certain investigations which we have recently caused to be made regarding the milk supply to the metropolis, we would commence by some preliminary remarks on the general question of the trade in milk.

So far as legislative action has hitherto interfered to regulate the food supplies of the people, the aim has chiefly been, on the one hand, to prevent adulteration, and, on the other, to prohibit the sale of substances which are injurious to health, whether this arises from decomposition or, in the case of meat or milk, from disease in the animals from which they are derived.

Simple as it would seem to attain these objects, the task has been found in practice to be very difficult. If it is hard to trace the origin of a given piece of meat, how infinitely greater is the chance of error in the endeavour to trace to any particular cow, or even to any particular herd, a sample of milk bought in a London retail milk shop. Nor in estimating the purity of milk is it a matter of merely detecting adulteration; in fact, except so far as concerns the addition of water, which is not in itself a substance foreign to milk, adulteration in its ordinary sense hardly enters into our consideration. It is sophistication that we have to deal with.

Sophistication of Milk.

This word is in many ways unsatisfactory, but it has been necessary to find for common use a word which should express the act of tampering with the quality of a substance without any of that addition of something strange or foreign to it which is commonly held to be involved in the term adulteration; and the word which has come into use for this purpose is sophistication. But it must be understood that both these are popular terms, and that in the Acts regulating the sale of food and drugs neither of them is specifically employed, each offence being defined by such words as "mix," "colour," "abstract," etc., while the word "adulteration" has to be applied under existing Acts to all cases where an article is not of the "nature, substance, and quality" demanded or expected by a purchaser.

The two principal methods by which milk as it comes from the cow is manipulated so as to produce the article sold as milk to the consumer are (1) the addition of water; and (2) the abstraction of cream, the skim milk and fresh milk being afterwards mixed in such proportions as to produce a material which will pass the standard accepted or set up by the sanitary authority in the district where it is to be sold.

The first of these is a distinct swindle, a matter of selling as milk what is not and never has been milk, and is also a danger to the public, in that the water used for adulteration may be unfit for drinking purposes, a fact which has been the cause of many an epidemic of enteric fever.

Is it a Fraud?

The second is a swindle or not according to the definition adopted of the meaning of the word "milk," and although we are quite clear that milk is a substance produced by the cow, and ceases to be milk when it has gone through any manufacturing processes by which the proportions of its different ingredients are altered, we are quite aware that it is open to argument that milk is a substance that comes from the cow and conforms to certain standards set up by the authorities, and that so long as it conforms to those standards and contains nothing that has not been "milked" from the cow it is milk. We do not agree with this; we not only consider that the purchasers are thus robbed of the total value of the cream so abstracted, but that, unless much greater precautions are taken than are at all common, the universal mixing involved in the process greatly increases the chances of the milk becoming a means of distributing disease.

Nevertheless, we must not fail to recognise the fact that this method of abstracting cream and then mixing and standardising the residuum is the system under which the modern milk supply of towns is ordinarily provided and is one which is publicly practised, nay paraded, by men and companies of repute.

Milk is also liable to be purposely mixed with antiseptic substances to prevent it turning, besides being more or less accidentally polluted by admixture with a variety of most offensive substances in its transit from the cow to the kitchen; and beyond and anterior to all such chances of deterioration it may, and often is, rendered dangerous as a food in consequence of disease existing in the cow from which it came.

Forms of Sophistication.

It will be admitted then that any efficient inquiry into the milk supply of the metropolis is a matter of almost as great difficulty as it is of interest and importance. Briefly, the sophistications to which milk is liable are:

1. The addition of water—both dishonest and dangerous.
2. The addition of substances intended to prevent decomposition—not, perhaps, of themselves dangerously injurious in the quantities added, but facilitating the sale of stale milk.
3. The addition of substances intended to give colour—generally not injurious.
4. The abstraction of cream or the dilution of a rich milk with milk from which cream has been abstracted—dishonest and in many instances dangerous.
5. Pollution of the milk—always dangerous. This pollution may occur:

(*a*) From the hands of the milkers.

(*b*) By discharges from the genitals and faecal and other matters soiling the udders and teats, and gaining access to the milk.

(*c*) From the use of dirty utensils, either at the dairy or the retail establishment.

(*d*) From the washing of the utensils with dirty or infected water, or from the exposure of the milk or utensils to insanitary emanations, either at the dairy or the retail shop.

(*e*) From the dirty hands or clothes of the milkmen in the streets, and from their careless exposure of the milk during distribution.

In view of this list one is hardly surprised to hear it authoritatively stated that *unsophisticated milk* is practically unknown in the London supply.

The Difficulty of the Standard.

In any endeavour to enforce purity it is of the first importance to be able to define what is meant by pure, and it will be seen as we proceed that the establishment of some arbitrary standard of pure milk is an essential preliminary to any effective action being taken to put an end to the wholesale sophistication by which the poor especially are injured and imposed upon.

Roughly speaking, milk contains five principal constituents in somewhat the following proportions:

Water	87.17 per cent.
Fat	3.60 "
Proteids	3.15 "
Lactose	4.88 "
Salts	0.71 "

The difficulty, however, which arises in fixing a standard is that there is but little constancy either in these figures or these ratios, for although it may be true that the average milk of a district will almost always give at least 3 per cent. of fat and 8.5 per cent. of solids which are not fat, yet in individual cases cows will certainly give milk of a much poorer character. Thus it happens that those who maintain that whatever can be milked from a healthy cow is milk are able to show extraordinarily poor specimens, which for all their poverty still are milk.

The variations in the composition of milk are indeed very considerable. Stevenson and Murphy give them as follows:

Specific gravity	...	1028-1034
Water	...	85 to 88 per cent.
Casein, etc.	...	2.5 „ 5 „
Fat	...	2.7 „ 6 „
Lactose	...	3.5 „ 6 „
Salts	...	0.5 „ 0.75 „
Total solids	...	9.2 „ 17.75 „

Thus we see that the total solids may in some cases be nearly twice as great, and the fat more than twice as great as in others.

The Adulterator's Opportunity.

Ample play therefore is given to the adulterator, whose aim is either to produce as large a quantity of passable milk as possible, or else to extract from it as large a quantity of cream as he can, without rendering it unsaleable as pure milk. Usually not only is water added, but cream is removed as well; the raising of the specific gravity produced by the removal of the fat being made up by the addition of water, and on the other hand the lowering of the specific gravity caused by adding water being compensated for by skimming, which tends, by removing the light element, to raise the density. The limit to this process is, however, reached when either the fat or the specific gravity fall below the recognised standard; and when we consider how wide are the limits within which milk is still looked upon as milk, and how frequently, as shown by our analyses, the adulterator oversteps even those bounds, we may judge of the extent to which this comparatively simple and primitive method of adulteration is carried.

Watered Milk.

The analyses which we are about to publish bring out very clearly the extent to which milk in London is watered. In the meantime we may refer to the report of Mr. Pattinson, the public analyst for Newcastle on Tyne, to which attention is drawn in the Annual Report of the Local Government Board for 1893-94. Speaking of various public institutions of that city, he says that although some of them were supplied with genuine milk, others were receiving milk which had been grossly adulterated. The milk supplied to the workhouse contained 18 per cent. of added water; that to the barracks 36 per cent.; two samples supplied to the Girls' Orphanage, Town Moor, contained respectively 22 and 18 per cent.; two samples supplied to the Deaf and Dumb Asylum 18 and 14 per cent. respectively; and three from the milk supplied to the Fleming Memorial Childrens' Hospital were each adulterated with 30 per cent. of added water.

Modern Milk Sophistication.

Experienced milk sophisticators, however, have other methods more difficult to detect than this crude one of mere dilution. The introduction of cream separators has given them the opportunity of removing very cheaply and quickly almost the whole of the fat from milk, dividing the milk, in fact, into a cream much better than what is produced by ordinary skimming, and a skim milk, beside which ordinary "skim" is rich indeed. Moreover, this can be done in so short a time that the "skim" is in no way sour.

The sophisticator has thus the power of either separating his milk in a moderate degree, just taking from it what, from his point of view, is the "excess" of cream; in other words, reducing its cream to the lowest saleable standard without exposing himself to any such risks of detection as would attend the process of "watering," a process by which the total non fatty solids might be so reduced as to lead to detection of the fraud; or he may take off all the cream, using the "skim" to dilute or standardise other fresh milk; or he may sell the "skim," keeping his conscience clear, and leaving it to the retailer to produce, by judicious mixture of his two churns, any quality of milk which the character of his district or the carelessness and indifference of his customers may appear to require; or, finally, he may use the skim milk for making cheese, substituting a sufficiency of some other form of fat for the cream he has abstracted.

If carried out judiciously, and kept within the limits imposed by the standard which the magistrates will accept, it is next to impossible to prove this form of sophistication, although whenever the inspectors are able to discover the source of the milk, and have an opportunity of milking the cows from which the suspected milk is stated to have been drawn, it is possible to be morally certain that a fraud has been committed.

Difficulty of Detection.

The Report of the Local Government Board for 1892-93 says: "No doubt the chief obstacle in the way of further progress in this matter is to be found in the fact that in the present state of science, analysis fails to distinguish between the water which is a natural constituent of all milk and that which has been added by the dairyman, and therefore an analyst hesitates to condemn a sample of exceedingly poor milk because it may possibly be the genuine product of an old and ill-fed cow, although it has much more probably received an addition of water. He appreciates the fact that the Acts are intended to prevent the sale not of articles of poor quality, but of those which have been fraudulently tampered with; and it would not be in accordance with their design that a poor man should be subjected to penal proceedings because his cow does not produce as good milk as the better-bred and better-fed herd of his richer neighbours. It is the border cases which create the main difficulty." The case for the owners of poor pastures and the breeders of weedy cows could not be better put. On the other hand, writing on the same subject, Mr. Hehner, the public analyst for Derbyshire, observes as follows: "Owing to the natural variation in the composition of milk, the public analyst is bound to pass as genuine all milks which are at least equal in composition to the poorest genuine milk yet found, although in the great majority of cases thus passed he has to do with milk artificially and not naturally weak," showing how this interpretation of the statute tends to degrade the average supply to the level of the lowest known milk.

Extent of the Evil.

To appreciate at all the extent to which milk sophistication is carried on in London, we must then remember that the considerations quoted above express the official view, that the authorities at Somerset House decline to accept the higher standard asked for by the Society of Public Analysts, and that while more than one-fourth of all the samples taken in 1893-94 are officially returned as adulterated, that estimate is made on a basis which itself admits of adulteration of all but inferior milk. The want of a series of standards which should express definite nutritive values is well shown by the results of an analysis of 273 individual cows undertaken by Professor Bell at the request of the Local Government Board. The average composition of the milk was as follows:—Total solids, 12.90; solids not fat, 8 91; fat, 3.99. But the total solids in the milk of individual cows was found to range from 10.33 to 15.83 per cent., while the fat in the same manner varied from 2.43 to 5.97.

It is truly stated that "if between these limits a high standard were fixed the result would be to condemn much genuine milk, while if a low standard were adopted pure milk would be watered down to it." The teaching of this, however, is that a series of standards should be fixed, with one or other of which all milk that is solid should conform, and that however "pure" or "genuine" milk may be, it should not be allowed to be sold as whole milk if it is below the lowest standard. The public analyst for Cheshire has taken the trouble to follow up cases of poor milk to their source. In a case in which it did not come up to a very low standard he "found five half-starved cows which were nothing more than animated bundles of bones," and he truly remarks that "it must be perfectly patent to all that the milk supply of the United Kingdom is not to be brought down to such samples."

As things are then, the fact that more than one-fourth of the samples taken in London were found adulterated by no means suggests that only about one-fourth were sophisticated. It only shows that one-fourth were so clumsily or recklessly sophisticated as to overpass even the official limit of low standard milk.

Condensed Milk.

It must not, however, be imagined that milk is tampered with only by the milkmen, or the small retail dealers, or

even by the farmers; sophistication also takes place at the hands of companies and those who deal with milk in large quantity, as is shown by the extent to which condensed milk, which is mostly the product of large firms, suffers from the same tendency to degrade the standard to the lowest which is acceptable.

The Local Government Board Report, after giving the number of cases in which condensed milk was found adulterated, draws attention to the further fact that in some cases in which the samples contained little or no butter fat, they were protected by their labels indicating that the article was prepared from skimmed milk. "In some of these cases the words 'condensed milk' were printed in large letters, while upon another part of the label the word 'skimmed,' usually in much smaller type, was introduced." Of this our investigations afford full confirmation.

MAGNITUDE OF THE TRADE.

A word must be added regarding the magnitude of the business of supplying London with milk. In a paper read by Mr. Henry Rew before the Royal Statistical Society, April 26th, 1892, the total quantity of milk brought into London during 1890 by the nine great lines of railway is estimated (chiefly from actual figures furnished by the companies) at 40,431,819 imperial gallons, the amount produced within the metropolitan area at 7,300,000 gallons, and that brought in by road and from other sources 923,000 gallons, making a total of 48,654,000 gallons per year, or a daily consumption of 133,239 gallons of milk in London. In this estimate no account is taken of separated milk or of condensed milk, the use of which is largely increasing, but it is stated in the same paper that the consumption of condensed milk in London in 1890 might be taken at a rough estimate as equivalent to about 6,000,000 gallons of milk. Whether, then, we consider the money value of the milk supplied to London, its dietetic importance, or the loss both in pocket and health suffered by Londoners from its sophistication, we cannot but admit the great importance of making persistent and repeated efforts to maintain its purity at the highest possible standard.

MILKBORNE DISEASE:

AN APPEAL TO MEDICAL OFFICERS OF HEALTH.

MR. ERNEST HART is engaged on a general inquiry into milk-borne disease since 1881, in continuation of his paper of that year on the Influence of Milk in Spreading Zymotic Disease, and will be much obliged if those health officers who possess notes of outbreaks of disease traceable to the agency of milk will be good enough to furnish him with a brief statement of the facts, so far as known, in the shape of answers to the questions subjoined:

1. Date.
2. Locality.
3. Reporter.
4. Total number of cases.
5. Deaths.
6. Number of cases amongst drinkers of suspected milk.
7. Number of persons supplied by milkman.
8. Number of such families invaded.
9. Sanitary circumstances of farm or dairy from which milk was obtained.
10. Exciting cause of outbreak.
11. Circumstances implicating milk.
12. Facts showing special incidence of disease.
13. Reference to report.

THE GRACE TESTIMONIAL.

THE appeal of the *Daily Telegraph* for subscriptions towards the proposed "Shilling Testimonial" to Dr. W. G. Grace is being so liberally responded to by all sorts and conditions of men, that the Champion will receive a very solid and substantial proof of the admiration with which his countrymen regard his prowess in the cricket field. In this truly national testimonial it is peculiarly fitting that the members of the medical profession, to which Dr. Grace belongs, should take part. As doctors we feel an interest in the great cricketer as a splendid example of what exercise and training, under the guidance of a knowledge of the laws of health, can do for the development and preservation of physical vigour; and as Englishmen we are not less proud of him as a representative of all that is best and most wholesome in manly sports. We venture to remind our readers that the subscription list is still open. Letters enclosing contributions to the Fund should have "Grace Testimonial" marked on the envelope.

The following subscriptions have already been received:

	Shillings
Subscriptions already acknowledged	475
A Lover of the Game	1
Mr. J. W. Dowden (Edinburgh)	2
Mr. T. B. Murdoch (Edinburgh)	3
Dr. Byrom Bramwell (Edinburgh)	40
Miss Bessie Henderson (Edinburgh)	1
G. Harrison (Chester) ...	1
Herefordshire Medical ...	2
Frank Webb (Doncaster) ...	1
Dr. T. Telford-Smith (Lancaster)	1
Dr. Guy Courtney (London) ...	1
John E. Garner (Preston) ...	1
John D. Duncan, M.B. (Garlands)	1
Stenson Hooker (Hastings) ...	1
W. F. Farquharson, M.B. (Garlands)	1
Dr. A. Wynter (Rochenham) ...	1
C. Rice Morgan (Morriston) ...	5
Mr. D. G. Lewis	3
Mr. T. F. Foster (Brampton) ...	1
Per Dr V. Idelson (Berne) —	
Mme. Pauline L. Evanoff (Paris)	1
Mlle. Sophie S. Broido (Paris) ...	1
Mr. T. Heldt (Paris)	1
Mr. D. Flamm (Paris)	1
Dr. Boris Tschlenoff (Magglingen-Biel, Kt. Berne, Switzerland)	1
Mlle. Nadine N. Kostetchevskaia (Berne)	1
Mlle. Nadine F. Metelkina (Berne)	1
Mlle. Eugenie F. Dmitrenko (Berne)	1
Dr. Valerius Idelson (Berne) ...	1

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 10th day of July next, at 2 o'clock in the afternoon.

The following Committees will also meet:

Tuesday, July 9th, 1895.—2.0 P.M. Trust Funds Committee.—2.30 P.M. Premises and Library Committee.—3.0 P.M. Medical Charities Committee.—3.30 P.M. Branch Organisation Committee.—4.30 P.M. Parliamentary Bills Committee. *Wednesday, July 10th, 1895.*—11.0 A.M. Journal and Finance Committee.

FRANCIS FOWKE, *General Secretary.*

July, 1895.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF QUARTERLY MEETINGS FOR 1895. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on July 10th and October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

NORTH WALES BRANCH.—The forty-sixth annual meeting will be held at the George Hotel, Criccieth, on Thursday, July 18th, at 1 P.M. After the usual formal business, the President-elect, Mr. T. Baxter Hughes, Coroner for South Carnarvonshire, will deliver his address. Richard Jones, M.D., D.P.H.Cantab., Penrhyn Quarry Hospital, will read a paper on Disease and Death among Quarrymen—a statistical inquiry. R. H. Mills Roberts, F.R.C.S.Edin., Llanberis Quarry Hospital, will read notes on a case of Obturator Dislocation of the Femur. Henry Evans, M.R.C.S., Penmaenpool, will show cases of: (1) Progressive Muscular Atrophy; (2) Progressive Muscular Atrophy Complicated with Epithelioma; (3) Myxœdema in a Young Person.—W. JONES MORRIS, Honorary Secretary, Portmadoc.

LANCASHIRE AND CHESHIRE BRANCH.

The fifty-ninth annual meeting of this Branch was held in University College, Liverpool, on June 19th, Dr. Edwin Rayner, President, in the chair. About 200 members were present.

Confirmation of Minutes.—The minutes of the previous annual and three intermediate meetings were read and confirmed.

Installation of New President.—Dr. Rayner then introduced his successor in the Presidential chair, Mr. W. Mitchell Banks, who delivered an address on Overcrowding in the Medical Profession and its Remedy.—On the motion of Dr. Rayner, seconded by Mr. James Taylor, a hearty vote of thanks was accorded to the President for his very able address.

Report of Council.—The report of Council stated that the year had been marked by great activity, and such important subjects as the amendment of the Medical Acts, and certain alterations in the laws of the Branch had been under serious consideration. There had been no fewer than ten Council meetings, and three special meetings of the members of the Branch. The Branch showed a steady growth, though the accession of new members had not been so great as in the preceding year. There had been 67 new members elected, while the number of old members had been depleted by 24 deaths and 17 resignations, the majority on account of removal from the district. Among the deaths was specially mentioned that of Mr. Christopher Johnson, of Lancaster, a former President of the Branch, and one who took an active interest in all matters appertaining to the Association. There were now on the roll 968 members, which was the highest record to which the Branch had attained. The credit balance at the end of last year was £416 7s. 5d., being £130 7s. 3d. less than that of the preceding year. This had arisen from the exceptionally heavy expenditure of £250 3s. 6d., of which the Branch Committee had been directly responsible for £181 2s. 5d. The important resolution passed at the special meeting in Liverpool, on the motion of Mr. Walter Whitehead,

That in any Bill aiming at the suppression of unqualified practice, the act of having practised medicine, surgery, or midwifery, for gain or profit, by a person unregistered under the provisions of the Medical Acts, should be made penal,

had been referred along with other questions of an allied nature by the Parliamentary Bills Committee to a Subcommittee of that body. As one of the representatives of the Branch, Dr. Woodcock, had been placed on that Subcommittee, there could be no doubt but that the views of the Branch would be ably expounded. The alterations in the laws had given rise to considerable discussion, and perhaps to much divergence of opinion; but it was to be hoped that in their present form they would answer the requirements of the Branch for some time. The harmonious result of this election augured well for their efficiency. It was hoped that everyone would strive to increase the numbers and augment the influence of this great Branch. A cordial invitation, which had been provisionally accepted by the Council, had been received from the members resident in Southport, to hold its next annual meeting in that town.

Financial Statement.—The financial statement showed a balance to the credit of the Branch of £416 7s. 5d. On the motion of Dr. Watkins, seconded by Dr. Hayward, the report of Council and the financial statement were received and adopted.

Election of Officers and Council for 1895-96.—The Secretary announced that the following members had been elected to their respective positions in the Council, in accordance with the laws of the Branch:—*President:* W. Mitchell Banks, F.R.C.S., Liverpool. *President-Elect:* H. H. Vernon, M.D., Southport. *Vice-Presidents:* J. Nelson Cregeen, Liverpool; Walter Whitehead, F.R.C.S.Edin., Manchester. *Honorary Secretary:* James Barr, M.D., Liverpool. *Representatives on the Council of the Association:* J. Barr, M.D., Liverpool (General Secretary); E. H. Dickinson, M.D., Liverpool; George B. Barron, M.D., Southport; James Taylor, Chester; Samuel Woodcock, M.D., Manchester. *Representatives on Parliamentary Bills Committee:* G. E. Shuttleworth, M.D.; James Taylor, F.R.C.S.; C. T. Street; Samuel Woodcock, M.D. *Members of Council:* William Armstrong, Manchester; W. Bain, M.D., Heaton Chapel; *W. H. Barr, Bury; R. H. Beaman, Southport; W. Berry, Wigan; H. W. Boddy, M.D., Manchester; T. R. Bradshaw, M.D., Liverpool; *J. B. Brierley, M.D., Manchester; W. M. Campbell, M.D., Liverpool; *C. G. Campbell, Uppermill; William Carter, M.D., Liverpool; J. M. Chisholm, M.D., Woolton; R. Crean, M.D., Manchester; A. Davidson, M.D., Liverpool; *T. Fort, Oldham; *J. G. Gledhill, Manchester; A. Godson, M.B., Cheadle; A. Hamilton, Chester; Nathan Hannah, Ashton-in-Makerfield; A. C. E. Harris, M.D., Birkenhead; R. Harris, M.B., Southport; T. E. Hayward, M.D., Haydock; *John Holden, Preston; E. W. Hope, M.D., Liverpool; *W. H. Hughes, Ashton-under-Lyne; T. M. Johnson, M.D., Salford; J. Lambert, M.D., Birkenhead; H. Colley March, M.D., Rochdale; J. M. H. Martin, M.D., Blackburn; B. J. Massiah, M.D., Didsbury; *J. E. Moreton, Tarvin; R. A. Murray, M.D., Stockport; *J. T. Neech, Tyldesley; H. Laird Pearson, Birkenhead; Chauncy Puzey, Liverpool; *E. Rayner, Stockport; C. J. Renshaw M.D., Ashton-on-Mersey; *A. Brown Ritchie, M.B., Manchester; D. Lloyd Roberts, M.D., Manchester; *R. Robertson, M.D., Liverpool; *A. Samuels, M.D., Liverpool; T. Starkey Smith, M.D., Warrington; *J. Thornley, M.D., Bolton; Charles Thorp, Todmorden; Francis Vacher, Birkenhead; G. E. Walker, Liverpool; William Walter, M.D., Manchester; J. W. Watkins, M.D., Newton-le-Willows; *John Watson, Manchester; W. W. Wingate-Saul, M.D., Lancaster. *New nominations being gentlemen who were not ordinary members of Council, within the last twelve months.

Place of Next Annual Meeting.—On the motion of Dr. Barron, seconded by Dr. Robert Harris, it was unanimously resolved that the next annual meeting be held in Southport.

Auditors.—On the motion of Dr. Hughes, seconded by Dr. Barron, Dr. D. O'Sullivan and Dr. Joseph Thornley were appointed auditors for the next twelve months.

Vote of Thanks.—On the motion of Mr. Colin Campbell, seconded by Dr. G. G. Stopford Taylor, a hearty vote of thanks was accorded to the retiring President, Vice-Presidents, General Secretary, and other members of Council for their services during the past year.

The Case of Mr. W. H. Manifold.—The Secretary drew the attention of members of the Branch to the fund which is being raised in Liverpool for Mr. W. H. Manifold, formerly an active member and Vice-President of the Branch, who, in consequence of failing health and failing practice, was now entirely destitute of means. Subscriptions will be thankfully received by the Branch Secretary, Dr. James Barr, or by the treasurer of the fund, Mr. G. E. Walker, 45, Rodney Street, Liverpool.

Payment of Railway Fares of Representatives on the Parliamentary Bills Committee.—On the motion of Dr. Barron, seconded by Dr. Carter, it was resolved:

That the first-class return railway fares of the representatives of the Lancashire and Cheshire Branch on the Parliamentary Bills Committee be paid out of the funds of the Branch, excepting the fares of representatives who shall also be members of the Council of the Association, but in the event of any meeting of such Committee or of a Subcommittee being convened other than at the usual quarterly meetings then the fares of such members be paid.

The British Medical Association and the Protection of the Interests of the Medical Profession.—The Secretary brought forward some communications which he had received from Dr. Broadbent, of Manchester, and Dr. Welsford, of Dover, respecting a resolution which would be proposed at the annual meeting of the Association in London. The Secretary explained that the proposal seemed to him tantamount to an amalgamation of the Medical Defence Union with the British Medical Association. After some discussion the following resolution was proposed from the chair and carried unanimously:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties.

Communications.—The following communications were pre-

sented:—Dr. WM. ARMSTRONG: The "Nauheim" Bath and Exercises in Cardiac and Allied Diseases.—Mr. COLIN CAMPBELL: On the Range of Utility of Intrapulmonary Medication (demonstration).—DR. G. G. SCOFFERN TAYLOR showed Cases, Water-colour Drawings, and Photographs of Rare Skin Diseases.—DR. FRANK BARNDT showed Cases of Rare Skin Diseases.—Professor BOYCE gave a Pathological Demonstration with lime-light illustrations.—Mr. RUSHTON PARKER: Torn Semilunar Cartilage of Knee, cured by Operation (Two Patients).—Mr. DAMER HARRISON: Five Patients illustrating Brain and Nerve Surgery.—Mr. E. STANMORE BISHOP: On Ventro- and Vagino-fixation of the Uterus.—Mr. W. ROGER WILLIAMS: On the Increase of Cancer.—Mr. W. MITCHELL BANKS showed Patients on whom various Intestinal Operations had been performed.—Mr. F. T. PAUL: Case of Tendon Grafting.—Mr. G. GIMSON HAMILTON: Two Specimens of Colectomy in which Murphy's Buttons were used.—Dr. JAMES BARR: The Treatment of Meningitis.

Laboratories.—The Engineering, Chemical, and Pathological Laboratories of University College were open for the inspection of members.

Exhibition.—An Exhibition of Drugs and Surgical Appliances was held in the Museum.

Luncheon.—A luncheon, provided by the President and members of the Branch in Liverpool was served at University College from 1 to 3 P.M.

Dinner.—The annual dinner was held at the Adelphi Hotel. There were 70 members present, and the PRESIDENT (Mr. Mitchell Banks) occupied the chair. After the usual loyal toasts, the PRESIDENT gave "The Ministers of Religion" and "The Legal Profession," to which the Rev. T. W. LUND and the CITY CORONER (Mr. Samson) respectively replied. The SECRETARY replied for "The Lancashire and Cheshire Branch," which was happily proposed by the Rev. T. W. LUND. Many good things were said about University College both by Mr. STEWART and Principal RENDALL, while a hearty vote of thanks was accorded to Professor Hele-Shaw for kindly placing his department at the disposal of the Branch. The toast of "The Health of the President" terminated a very enjoyable day's proceedings.

EDINBURGH (LOTHIANS AND FIFE) BRANCH.

THE twentieth annual meeting of this Branch was held in the Hall of the Royal College of Physicians of Edinburgh, on June 27th, DR. ARGYLL ROBERTSON, Vice-President, in the chair.

Confirmation of Minutes.—The minutes of Branch meeting of January 11th, 1895, were read and approved.

New Members.—Intimation was made that the following gentlemen had been admitted members of the Association by the Council of the Branch: Robert Hutchison, M.B., C.M., George Campbell Laing, M.B., C.M., and Andrew Fleming Wood, M.B., C.M. The following applicants having been balloted for were admitted to the membership of the Branch: John Anderson, M.B., E. F. Armour, M.B., J. W. Ballantyne, M.D., R. J. A. Berry, M.D., T. Brown Darling, M.D., J. Haig Ferguson, M.D., Andrew Gilmour, L.R.C.P.E., Robert Hutchison, M.B., Claude B. Kerr, M.B., George C. Laing, M.B., J. H. A. Laing, M.B., John Mowat, M.D., William F. Robertson, M.B., Ernest George Salt, L.R.C.P. and S.E., A. R. Simpson, M.D., A. Logan Turner, M.D., A. Stodart Walker, M.B., J. C. Webster, M.D., and Andrew Fleming Wood, M.B.

Treasurer's Statement.—The Treasurer presented his annual statement, which showed a balance in favour of the Branch of £40 6s. 1d. The statement showed an excess of expenditure over income to the amount of £9 4s.

Election of Office-bearers.—Drs. Nesmyth (Cupar), Stockman, and Norman Walker were elected members of the Branch Council in room of Drs. Affleck, Dow (Dunfermline), and James Ritchie, who retire by rotation. Dr. William Russell was re-elected Representative of the Branch on the Council of the Association, and Dr. James Ritchie on the Parliamentary Bills Committee. The other office-bearers were re-elected. On the motion of the SECRETARY, seconded by Dr. BALFOUR (Portobello), it was agreed that the Representative of the Branch on the Parliamentary Bills Committee be invited to be present at the meetings of the Branch Council during the ensuing year, so as to advise the Council as to the proceedings of the Central Committee.

Midwives' Registration.—The following amended report of the Committee on the question of midwives' registration was adopted on the motion of Dr. HAIG, seconded by Dr. P. A. YOUNG. It was thereafter moved by Dr. A. BALFOUR, and seconded by Dr. CONMACK SMITH, that the report be transmitted to the Council of the Association. An amendment was moved by Dr. R. W. PHILIP, seconded by Dr. IRELAND that the report be remitted, along with additional papers on the subject, for the further consideration of the Committee. The motion was carried by a majority.

Your Committee beg to report their disapproval of the principle of the registration of midwives, but strongly support improvement in the instruction of midwifery nurses. Your Committee understand by midwife a person who undertakes on her own responsibility the care of [illegible], by a midwifery nurse a woman who undertakes the care of such cases under the supervision of a medical practitioner. They consider that no woman, unless a legally qualified medical practitioner, is competent to attend on her own responsibility even so called normal [illegible], as sudden complications may arise under apparently normal conditions, where prompt and active treatment, which such women are not qualified to undertake, is demanded. The diagnosis of complications must be in a number of instances beyond the midwives' power, and this will inevitably lead to delay in sending for skilled assistance. Legal registration of imperfectly trained women would lay on the medical profession, who would be the teachers and examiners, the onus of any dangers and evils which might arise. Your Committee are further of opinion that legal registration would open the door to serious abuses in the treatment of infants, and of the diseases peculiar to women. But while deprecating any proposals in the direction of founding a new order of registered midwives, your Committee are of opinion that the training of midwifery nurses, to act under a qualified practitioner, should be as thorough and practical as possible, and should be restricted to those public institutions which can satisfy the General Medical Council that they have sufficient facilities for the purpose.

Dr. Philip recorded his dissent on the ground that the report was too immature for publication. The Committee was thereafter continued.

Abuse of Medical Charities.—On a communication from the Council of the Association regarding the abuse of medical charities, it was agreed that the questions raised were not suitable for application within the district represented by the Branch.

The Cork Branch and the Benefit Societies.—A communication from the Council of the Association relative to the Cork protest against benefit societies was allowed to lie on the table.

The British Medical Association and Medical Defence.—The following motion, submitted by Dr. JAMES RITCHIE, and seconded by Dr. SPENCE (Burntisland), was adopted unanimously:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take powers and authority to protect, not only the collective interests of the medical profession, but also those of the individual members of the Association, and that the Council be requested to take such steps as may be necessary to enable it actively to undertake these duties. This Branch recognises that probably these steps include an alteration in the Articles of Association and the raising of the annual subscription.

It was agreed that a copy of the motion be sent to the Secretaries of all the Branches of the Association in the United Kingdom.

Royal Medical Benevolent College.—On a statement by the SECRETARY, the Branch reaffirmed its interest in the Royal Medical Benevolent College, and recommended its claims to the consideration of the members.

The Dr. Allan Testimonial Fund.—It was announced that a sum of £80 9s. had been subscribed through the Committee of the Branch towards the Dr. Allan Indemnity Fund. The Committee were instructed to make arrangements for the presentation of the testimonial as they might see fit in the circumstances.

Boundary of Branches.—With regard to the boundary of Branches, a letter was read from the General Secretary to the effect that there is no by-law to prevent a member joining a Branch other than that of the district in which he resides, and that, so far as the by-laws go, a member of the Association can, if elected, belong to any number of Branches he desires.

Joint County Meeting.—Intimation was made that the Council had arranged for the holding of a joint meeting with the Stirling, Kinross and Clackmannan and other Branches at Stirling on Tuesday, July 2nd.

Votes of Thanks.—The meeting terminated with a vote of thanks to the Chairman and to the Royal College of Physicians for the use of the hall.

SOUTH MIDLAND BRANCH.

The fortieth annual meeting of this Branch was held at the General Infirmary, Northampton, on June 27th. Forty members and visitors were present, and were, previously to the meeting, entertained at luncheon by the President, Dr. A. H. Jones.

New Members.—Mr. Alfred Stanbury Phillips and Mr. Frederick Paul Mandel, of Bedford, were elected members of the Association and Branch. Mr. Robert L. Brander, of Aspley Guise; Mr. Edward Somerset, Oundle; and Dr. P. Murray Braidwood, Amersham, were also enrolled as members of the Branch.

Autumnal Meeting.—It was resolved that the autumnal meeting of the Branch be held at Olney on October 3rd.

Election of Officers.—President for 1896-7: Mr. Geo. H. De'Ath, Buckingham. *Committee of Management:* Dr. Buzzard, Mr. Milligan, Mr. Crew, Dr. Walker, for Northamptonshire; Dr. G. P. Goldsmith, Mr. Kinsey, for Bedfordshire; Mr. Rogers, Mr. De'Ath, for Buckinghamshire. *Representative on General Council and on Parliamentary Bills Committee:* Mr. J. Hughes Hemming. *Honorary Treasurer:* Mr. G. H. Percival. *Honorary Secretary:* Mr. C. Jewel Evans.

Alteration of Rule.—An alteration was made in Rule 3, paragraph 2, as to the number of members in and the method of electing the Committee of Management. An additional member was appointed for Bedfordshire, and it was decided that each county, or division of the Branch, should elect its own representatives only; such election to take place at the annual meeting, and by the ballot of those members only who were present.

Abuse of Medical Charities.—A letter was read from the General Secretary on the subject of the abuse of medical charities, expressing a hope that the Branch would make inquiries in its own district, and, if desirable, suggest remedies. Letters were also read from the staffs of several hospitals in the district, stating that no obstacles would be placed in the way of an investigation. A long discussion ensued, and ultimately a small subcommittee was appointed to investigate the matter and report.—The Chairman read a circular received from some members of the South-Eastern Branch, embodying a resolution asking the Council of the Association to undertake the duties of medical organisation, medical defence, etc. Mr. R. H. Kinsey also read a paper dealing with the grievances in the profession, which led to a good discussion, and he proposed the following resolution, which was put to the meeting and carried unanimously:

That the Council of the British Medical Association be urged to lose no time in investigating thoroughly and impartially the relations of medical men to dispensaries, medical aid societies, and the Poor-law authorities, with a view to advising how they shall be regulated to the greatest advantage of the country, the poor, and the profession.

Cork Branch.—A letter was read from the General Secretary on the subject of the action taken by the Cork doctors, with resolutions of the General Council on the same. A donation of £5 from the Branch funds was voted to the Cork Branch of the Association, together with an expression of sympathy with them in their recent action.

President's Address.—Dr. A. H. Jones delivered a presidential address, taking for his subject a historical account of former medical and surgical worthies connected with the town and the infirmary, many of whose portraits were displayed in the room. On the proposition of Dr. Goldsmith, seconded by Mr. Veasey, a cordial vote of thanks was accorded to Dr. Jones for his able and interesting historical address.

Papers and Cases.—Mr. W. G. Nash (Bedford) read a paper on Adenoids, their Diagnosis and Treatment. He showed numerous specimens, with the instruments he employed in their removal. Mr. Winckworth agreed with the reader in the advantages of chloroform over ether in operating on these cases. Mr. Milligan considered the finger was by far the best instrument. Mr. Hemming, the Chairman, and others made remarks, and Mr. Nash replied.—Dr. W. Harding (Surgery Wood, Northampton) read a paper on Some Practical Points in the Management of the Acutely Insane in Private Houses. Dr. Bowne agreed with the speaker as to the desirability in many such cases of asylum medical officers consulting with private practitioners, a thing, however, impossible in the present state of the law. Mr. Hemming, Mr. Jacobs, Mr. Winckworth, and the Chairman also made remarks, and Dr. Harding replied. The paper was listened to with much interest.—Mr. R. A. Milligan related Two Cases of Recurrent Appendicitis successfully treated by Resection of the Vermiform Appendix. He showed the appendices removed, and Mr. Nash and others made remarks.

Votes of Thanks.—Hearty votes of thanks were accorded to the retiring President (Dr. Coombs) for his efficient services during his year of office; to the readers of papers; and to the President for his conduct in the chair, on the proposition of Mr. Linnell, seconded by Dr. Underwood (Hastings), who was present as a visitor.

BATH AND BRISTOL BRANCH.

The annual meeting of this Branch was held at Bath on June 26th. The chair was taken by Mr. Nelson C. Dobson, the retiring President, and thirty-eight members and one visitor were present.

New Member.—Mr. G. M. Keevil, M.R.C.S., L.R.C.P., L.D.S., of Bath, was elected a member.

Installation of the New President.—Mr. Dobson resigned the chair to Dr. Carey Coombs, who delivered the presidential address. A vote of thanks to the President for his interesting and valuable address was moved by Dr. Goodridge, seconded by Mr. Poole Lansdown, and carried by acclamation.

Report of Council.—Mr. W. M. Beaumont, Honorary Secretary for the Bath District, read the report of the Council, which stated that the total number of members was now 266; 17 new members had been elected during the year, 1 in the Bath Section and 16 in the Bristol. There had been 4 resignations in the former district and 8 in the latter, owing principally to the removal of members from the neighbourhood. Five members had been lost by death: Mr. G. E. Alford, of Weston-super-Mare; Mr. Corbould, Mr. Lovell, Mr. Metford, and Mr. Pritchett. Mr. Alford's loss was keenly felt by an unusually large number of friends and patients. His kindliness of heart, his willingness to enter into and help to alleviate the troubles of the numerous sufferers that he was daily brought into contact with, his strict probity of life, and his genial bearing endeared him to those who knew him, and his professional friends could bear testimony not only to his high medical and surgical skill, but also to his consistent upholding of the principles that make intercourse between the members of the profession a pleasure. Mr. Corbould, who was one of the consulting surgeons of the Bristol Dispensary, had been a member of the Branch for many years, and though for a long period an infrequent visitor at its meetings, he continued to take a keen interest in its proceedings; he could, however, plead with more justice than most men, as an excuse for this absence, the absorbing cares of one of the largest general practices in the provinces, which he conducted with conspicuous success until almost the last hour of his life. Mr. J. S. Metford was Honorary Surgeon to the Clifton Dispensary. At an early period he took diseases of the ear as a speciality, and for more than forty years was surgeon to a dispensary for diseases of the ear in Clifton. He manifested a practical interest in the Medical Benevolent College, and was the local honorary secretary and treasurer for that important place of education. He was much beloved by his circle of patients. Twenty-one communications had been made at the ordinary meetings during the session, and numerous patients had also been exhibited. The meeting at Bath on February 27th was devoted to a valuable discussion on the Surgery of the Thyroid Gland, which was ably introduced by Mr. R. J. H. Scott. The following gentlemen had been elected to fill the vacancies on the Council: Bath Section: Mr. Goss, Mr. Ransford, Mr. Caine. Bristol Section: Dr. Aust-Lawrence, Dr. Harrison, Mr. Harsant. The financial condition of the Branch was satisfactory, the balance-sheet showing a balance in hand of £30 17s. 0½d. The Council recommended a donation of £10 10s. to the Medical Benevo-

lent Fund, and a contribution of £5 5s. to the Royal Medical Benevolent College. In response to a letter from the Council of the Association suggesting an inquiry as to whether there was any abuse of medical charities in this district, the Local Council have appointed the following Subcommittee to consider the question and report upon it: For Bath: Dr. Preston King, Dr. Bannatyne, Dr. Ellis, Mr. Hopkins, Dr. Williams, Mr. Bloxam, Mr. Flemming, Dr. Wigmore, Mr. Martin, Mr. Harper. For Bristol: Drs. Jas. Swain, P. W. Williams, Parker, Lansdown, Rogers, and Powell, and Messrs. Dacre, Gibbs, Walker, Carter, Logan, Fendick, Hedley Hill, and Mr. Dobson (President), and Dr. Markham Skerritt (Secretary). The Branch had lost the advantage of the services of Dr. E. Markham Skerritt, as Secretary, a position which he had energetically filled for fifteen years. He was nominated President-Elect, and Dr. J. Michell Clarke was nominated Secretary in his place.

It was proposed by Mr. Gosse, seconded by Dr. Lansdown, and resolved unanimously:

That the report and financial statement now read be received and adopted.

Election of Officers.—The following were elected:—*President-Elect:* Dr. E. Markham Skerritt. *Secretary for the Bristol District:* Dr. Michell Clarke. *Representatives of the Branch on the Council of the Association:* Mr. R. S. Fowler and Dr. E. Markham Skerritt. *Representative of the Branch on the Parliamentary Bills Committee:* Dr. Harrison.

Votes of Thanks.—A vote of thanks to the retiring President for his courteous and able conduct in the chair during the past year was proposed by Dr. Shingleton Smith, seconded by Mr. C. E. S. Flemming, and carried by acclamation; and a vote of thanks to the Council and the Secretaries for the past year, with a request to Mr. W. M. Beaumont to continue in office, was proposed by Mr. Crossman, seconded by Dr. F. Stockwell, and carried unanimously. Dr. Ellis proposed, Dr. Rattray seconded, and it was carried unanimously that a vote of thanks be passed to the President and Governors of the Royal Mineral Water Hospital for the use of their Board room.

Annual Dinner.—The members afterwards dined together at the Grand Pump Room Hotel.

SOUTH WALES AND MONMOUTHRHIRE BRANCH.

Midwives' Registration.

In consequence of a further letter from Dr. Fiddian, of Cardiff, we have communicated with Dr. A. Sheen, the Secretary of the South Wales and Monmouthshire Branch, who informs us that the somewhat complicated history of the action of the Branch in the matter of midwives' registration is as follows:

At a meeting at Neath, on April 26th, 1894, the following resolution was proposed and seconded:

That this meeting recognises the necessity, in the interests of the public, for legislation to secure the proper education, registration, and supervision of midwives, and upholds the principle advocated by the Midwives' Registration Association that the education and registration of midwives should be under medical control and supervision.

The following amendment was then proposed and seconded:

That this meeting declines to express an opinion as to the advisability or otherwise of the registration of midwives until the Bill is before the profession.

When put to the vote the amendment was lost by a majority of two to one. The resolution, put from the chair, was carried *nem. con.*

At a meeting at Pontypool on October 25th, 1894, Dr. Sheen read a communication from the Midwives Registration Association enclosing a copy of their scheme, and it was resolved that copies of the scheme should be obtained, and circulated to each member with a view to its discussion at a special meeting.

This special meeting was held on December 13th, 1894. There was no formal discussion, but it was resolved:

That the subject of midwives' registration be discussed at the next meeting of the Branch.

At the next meeting of the Branch held at Aberdare on February 28th, 1895, it was resolved:

That the scheme for the registration of midwives submitted by the Midwives' Registration Association should lie on the table.

BRITISH GUIANA BRANCH.

The second quarterly meeting of this Branch was held in Georgetown on May 30th; Dr. Wallbridge, President, in the chair. Fifteen members were present.

Medical Annual.—The President announced that the publication of the *Medical Annual* would be proceeded with, though the full amount required had not yet been promised.

Certificated Midwives.—The President also announced that the Medical Board had altered the official title of certificated midwives to "nurse midwives."

Tropical Fevers.—A discussion then took place on Tropical Fevers, opened by the President, in which most of the members took part. The discussion was adjourned till the next meeting, when the adjourned discussion will be opened by Dr. Ross, Surgeon-General of the colony.

Specimens.—The following specimens were shown by Dr. Daniels (Secretary): (1) A new Tapeworm found in an aboriginal; it measured 8 inches in length, and in the mature segments the embryos were arranged in ball masses, in this it closely resembled tænia Madagascariensis, but differed in length, in the number of segments, over 300, in the size of egg masses, and of the number of embryos in each mass, as well as in size and number of segment in which genital organs first appeared and first became mature; (2) a Persistent Hyaloid Artery; (3) a Calculus removed by lateral lithotomy in an adult (the second recorded lithotomy in the colony); and (4), for Dr. Carter, a Fistulous Communication between a Perinephritic Abscess and the Large Intestine.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING.

The sixty-third Annual Meeting of the British Medical Association will be held in London on Tuesday, Wednesday, Thursday, and Friday, July 30th, 31st, August 1st and 2nd, 1895.

President: E. Long Fox, M.D.Oxon., F.R.C.P., Consulting Physician to the Bristol Royal Infirmary.

President-Elect: Sir J. Russell Reynolds, Bart., M.D., F.R.C.P., F.R.S., President of the Royal College of Physicians.

President of the Council: J. Ward Cousins, M.D.Lond., F.R.C.S., Senior Surgeon to the Royal Portsmouth Hospital.

Treasurer: Henry Trentham Butlin, F.R.C.S., D.C.L., Surgeon to St. Bartholomew's Hospital, E.C.

An Address in Medicine will be delivered by Sir William Broadbent, Bart., M.D., F.R.C.P., Physician-in-Ordinary to H.R.H. the Prince of Wales.

An Address in Surgery will be delivered by Jonathan Hutchinson, F.R.S., F.R.C.S., Consulting Surgeon to the London Hospital.

An Address in Physiology will be delivered by Edward Albert Schäfer, F.R.S., Jodrell Professor of Physiology, University College.

The Scientific Business of the Meeting will be conducted in Fifteen Sections, as follows, namely:

A. Medicine.

Lecture Theatre—Conjoint Examination Hall.

President: F. W. Pavy, M.D., F.R.S. *Vice-Presidents:* Sir Frederic Bateman, M.D.; D. W. Finlay, M.D.; W. S. Church, M.D.; J. W. Moore, M.D.; Stephen Mackenzie, M.D.; E. Markham Skerritt, M.D. *Honorary Secretaries:* William Collier, M.D., St. Mary's Entry, High Street, Oxford; W. P. Herringham, M.D., 13, Upper Wimpole Street, W.; Sir Hugh R. Beevor, M.D., 16, Serjeant's Inn, Fleet Street, E.C.

The following subjects have been selected for discussion:—

Wednesday, July 31st.—1. Discussion on Diphtheria and its Treatment by the Antitoxin (embracing the following points: (1) Pathology of Diphtheria and its Sequelæ; (2) Symptoms and Progress; (3) Statistics of Mortality under the Antitoxin Treatment and under other Treatment; (4) Effect of the Antitoxin Treatment upon the Local Affection, upon the General Condition, and upon the Sequelæ; (5) Effects that may arise from the Antitoxin Treatment). Introduced by Sidney H. C. Martin, M.D. The following

so intend to join in the discussion: G. Sims Woodhead, M.D.; E. W. Goodall, M.D.; Claude Muirhead, M.D. (if ssible); Alex. Johnston, M.D.

Thursday, August 1st.—II. Discussion on Acute Lobar or roupous Pneumonia, its Etiology, Pathology, and Treatent. Introduced by Douglas Powell, M.D. The following ve announced their intention of taking part in this dission: Professor Clifford Allbutt; Samuel Barton, M.D.; dney Coupland, M.D.; Samuel Gee, M.D.; G. A. Gibson, D.; James E. Pollock, M.D.; Walter G. Smith, M.D.; Sir Grainger Stewart; T. Henry Green, M.D.; W. R. Thomas, .D.; G. W. Balfour, M.D.; David Finlay, M.D.; Arthur xwell, M.D.; J. Dreschfeld, M.D.; Alfred Barrs, M.D.; A. Auld, M.D.; J. Sinclair Coghill, M.D.; F. M. Pope, M.D.; ovell Drage, M.D.; Samuel West, M.D.

Friday, August 2nd.—III. Discussion on the Causes of ute Rheumatism and its Relation to other Affections. troduced by W. B. Cheadle, M.D. The following will in the discussion: Archibald Garrod, M.D.; J. F. oodhart, M.D.; Alfred Mantle, M.D; J. T. Maclagan, M.D.; Newsholme, M.D.; P. G. Latham, M.D.; H. Handrd, M.D.; Sir Lyre Duckworth, M.D.; A. Haig, M.D.; T. nurton, M.D; R. Lane, M.D.; M. K. Hargreaves, M.D.; H. Caley, M.D.; M. Charteris, M.D.; Samuel West, M.D.

The following also hope to take part in these discussions: Magee Finny, M.D.; C. F. Nixon, M.D.; Alfred Parsons, .D.; M. A. Boyd, M.D.; J. O. Carroll, M.D.; Richard A. ayes, M.D.; H. C. Tweedy, M.D.; J. A. Lindsay, M.D.; C. Pearson, M.D.; R. J. Kinkead, M.D.; Walter Bernard, .D.

The following papers have been announced:

DDISON, F. H., M.D. Latent Ulcer of the Stomach.

MPBELL, Colin, L.R.C.P. On Intratracheal Treatment.

APLIN, Arnold, M.D. Phthisis in Relation to Heart Disease.

CHILL, J. Sinclair, M.D. The Hypodermic Use of Guaiacol in Acute Pulmonary Tuberculosis.

VIES, Arthur T., M.D. An Account of Fourteen Cases of Myxœdema.

RESCHFELD, Julius, M.D. On Ataxic Paraplegia.

WELL, Arthur, M.D. Hypertrophic Cirrhosis of the Liver.

LLIS, H. Cameron, M.D. The Natural History of Pain.

NES, E. Lloyd, M.D. Chlorosis.

VY, Hugh, L.R.C.P. Chronic Rheumatic Arthritis: further points in the Differentiation from Chronic Rheumatoid Arthritis.

OTHURST, Arthur E., M.D. The Use of Alcoholic Stimulants and their Reaction to True Physiological Health.

DISON, Alexander, M.D. The Treatment of Aortic Valvular Disease.

LIVER, G., M.D. The Exceptions to Cotes's Law and their Practical Teaching.

EVES, Alfred, M.D. Arsenical Multiple Neuritis following the Application of a Cancer Cure.

YSOLME, E. E., M.D. A Point in the Diagnosis between Chronic Rheumatism and Chronic Gout.

OWER, William, M.R.C.S. Notes on the Influence of Heredity in Disease.

MMELA, Professor. Sur la Toxicité des urines dans son degré et dans son polymorphisme comme élément de diagnostic et de pronostic dans les maladies en général, et surtout dans les maladies aiguës infectieuses.

ITH, W. Wilberforce, M.D. The Weighing Machine in Diagnosis and Treatment.

UMB, J. E., M.D. Influence of the Bacillary Theory of Tuberculosis on the Treatment of Phthisis.

YLOR, Seymour, M.D. On the Connection between Chlorosis and Gastric Ulcer.

THWAITE, T. W., M.D. Goitrous Dyspnœa.

ARBOUR, J. W., M.D. On the Pathology and Treatment of Pneumonia.

ger, Samuel, M.D. On the Treatment of Diabetes Mellitus by Uranium Nitrate.

B. Surgery.

Central Room, Second Floor—Conjoint Examination Hall.

President: Sir Wm. Mac Cormac, F.R.C.S. *Vice-Presidents:* . Bryant, F.R.C.S.; C. N. Macnamara, F.R.C.S.; eginald Harrison, F.R.C.S.; A. Willett, F.R.C.S.; ir W. Stokes, M.D.; Mayo Robson, F.R.C.S. *Honorary ecretaries:* J. D. Harris, M.R.C.S., 45, Southernhay, Exeter; J. Bland Sutton, F.R.C.S., 48, Queen Anne treet, W.; A. Marmaduke Sheild, F.R.C.S., 4, Cavendish lace, Cavendish Square, W.

The President will make some introductory remarks, in hich he will refer to the Effects produced by Modern Rifle ullets on the Human Body.

The following subjects have been selected for discussion:

1. The Diagnosis and Treatment of Fractures of the Upper hird of the Femur, including the Neck. To be introduced y Sir William Stokes, M.D. The following gentlemen have timated their intention of taking part in the discussion: Professor E. H. Bennett, M.D. (Dublin); Thomas Bryant, F.R.C.S. (London); Professor Chiene, M.D. (Edinburgh); H. H. Clutton, F.R.C.S. (London); J. Ward Cousins, M.D., F.R.C.S. (Portsmouth); Davies-Colley, F.R.C.S. (London); Damer Harrisson, F.R.C.S. (Liverpool); Sir George Murray Humphry, M.D., F.R.S. (Cambridge); Mansell Moullin, F.R.C.S. (London); Howard Marsh, F.R.C.S. (London); Professor Macewen, M.D., F.R.S. (Glasgow); Rushton Parker, F.R.C.S. (Liverpool); Mayo Robson, F.R.C.S. (Leeds); Thos. Sinclair, M.D. (Belfast); F. A. Southam, F.R.C.S. (Manchester); Greig Smith, M.B. (Bristol); A. Willett, F.R.C.S. (London).

2. The Surgical Treatment of Cysts, Tumours, and Carcinoma of the Thyroid Gland and Accessory Thyroids. To be introduced by H. Trentham Butlin, F.R.C.S. (London). The following gentlemen have intimated their intention of taking part in the discussion: Professor Annandale, F.R.C.S. (Edinburgh); James Berry, F.R.C.S. (London); Thos. F. Chavasse, M.D. (Birmingham); Kendal Franks, M.D. (Dublin); Damer Harrisson, F.R.C.S. (Liverpool); Victor Horsley, F.R.S. (London); Bowreman Jessett, F.R.C.S. (London); C. B. Keetley, F.R.C.S. (London); Professor Kocher (Berne); Dr. Kummer (Geneva); Professor W. Macewen, M.D. (Glasgow); Rutherford Morison, F.R.C.S. (Newcastle-on-Tyne); James Murphy, M.D. (Sunderland); Mayo Robson, F.R.C.S. (Leeds); W. G. Spencer, F.R.C.S. (London); Sir William Stokes, M.D. (Dublin); Charters Symonds, M.D. (London).

The following papers have been announced:

Anderson, William, F.R.C.S. Three Cases of Sacless Hernia of the Sigmoid Flexure through the Left Inguinal Canal, with Anatomical Specimen.

Browne, G. Buckston, M.R.C.S. A Hitherto Undescribed Locality in the Male Urinary Bladder where a Stone may lie and elude contact with any Instrument introduced through the Urethra.

Chavasse, Thos. F., M.D. A Successful Case of Removal of the Entire Upper Extremity for Injury by Berger's Method.

Cheyne, Watson, F.R.C.S. On Operations for Malignant Disease of the Pharynx and Naso-pharynx, with Cases.

Franks, Kendal, M.D. On Movable Kidney.

Horsley, Victor, F.R.S. The Results of Operative Treatment of Injury or Disease of the Cervical Vertebræ.

Keegan, Brigade Surgeon-Lieutenant-Colonel D. F., M.D. Rhinoplasty in India (Lantern Demonstration).

Keetley, C. B., F.R.C.S. On Thirty Cases of Osteotomy of the Hip, with Cases.

Lockwood, C. B., F.R.C.S. On the Treatment of Hydrocele by Incision.

Marsh, Howard, F.R.C.S. The Pathology and Clinical History of some Rare Forms of Bony Ankylosis.

Murphy, J. B., M.D. (Chicago). Peritonitis.

Murphy, James, M.D. On the Importance of Operating Early where an Operation is required in Abdominal Disease.

Paget, Stephen, F.R.C.S. Two Cases of Suppurating Hydatid of the Liver drained through the Chest Wall.

Robson, A. W. Mayo, F.R.C.S. A Series of Cases of Colectomy.

C. Obstetrics and Gynæcology.

Large Theatre—King's College.

President: Sir Wm. Priestley, M.D. *Vice-Presidents:* A. R. Simpson, M.D.; J. Watt Black, M.D.; Sir Francis Laking, M.D.; J. Knowsley Thornton, M.B.; W. J. Sinclair, M.D.; M. Handfield-Jones, M.D. *Honorary Secretaries:* W. S. A. Griffith, M.D., 96, Harley Street, W.; A. H. F. Barbour, M.D., 4, Charlotte Square, Edinburgh; W. R. Dakin, M.D., 57, Welbeck Street, W.

The following subjects have been selected for discussion:

Wednesday, July 31st.—The Aseptic and Antiseptic Precautions to be Observed in Private Midwifery Practice, to be introduced by G. E. Herman, F.R.C.P.

Friday, August 2nd.—The Early Diagnosis of Malignant Disease of the Uterus, and the Treatment by Partial or Total Excision, to be introduced by J. Knowsley Thornton, M.B.

D. Public Medicine.

Lower Hall—Exeter Hall.

President: Ernest Hart, D.C.L. *Vice-Presidents:* J. Spottiswoode Cameron, M.D.; C. H. W. Parkinson, M.R.C.S.; Wm. Collingridge, M.D.; Louis C. Parkes, M.D.; P. Boobbyer, M.D.; John C. Thresh, M.D. *Honorary Secretaries:* C. E. Paget, M.R.C.S., Town Hall, Salford; Reginald Dudfield, M.B., Sanitary Department, Vestry Hall, Harrow Road, Paddington, W.; F. W. Clark, M.B., Lowestoft.

The work of the Section will be inaugurated by an address from the President on Waterborne Diseases.

The regular business of the Section will commence each day with a formal discussion by gentlemen who have been invited to open the debates. The subjects selected are as follows:—

Wednesday, July 31st.—The Regulation of the Slaughter of Animals for Human Food and the Inspection of Animals before and during Slaughter. Opener: T. M. Legge, M.D.

Thursday, August 1st.—Hospital Isolation, House Quarantine, and Disinfection. Opener: P. Boobbyer, M.D.

Friday, August 2nd.—The Insecurity of Tenure of Extra-Metropolitan Medical Officers of Health under the Public Health Act, 1875. Opener: B. A. Whitelegge, M.D.

At the conclusion of the discussion of each day papers will be read, selected from the following, as time and opportunity may allow: On the Diagnosis of Doubtful Cases of Diphtheria and the Use of Bacteriology for that Purpose; On the Ventilation of Sewers; The Destruction of Town Refuse by Heat; The Overcrowding of Houses on Land; The Extension and Limitation of the Schedule of Diseases for Notification; Enteric Fever as an Infectious Disease; The Prevention of Milk Epidemics; Hospital Accommodation by the Use of Steps; Meteorology in Relation to Disease; The Desirability of Appointing Medical Men as Registrars of Births and Deaths. Some of the preceding titles are tentative, as the authors have not as yet definitively decided thereon.

Endeavours are being made to arrange excursions to various places likely to interest those engaged in sanitary work. An offer has been received to practically demonstrate the method of rendering horses immune to diphtheria.

Further details, with full information as to titles of papers, names of speakers, etc., will be announced later. All communications on the business of the Section should be addressed to Mr. Reginald Dudfield, M.A., M.B., 19, Blomfield Road, Maida Vale, W.

E. Psychology.

East Wing Room, Second Floor—Conjoint Examination Hall.

President: W. J. Mickle, M.D. *Vice-Presidents:* G. H. Savage, M.D.; T. Claye Shaw, M.D.; D. Nicolson, M.D.; Henry Rayner, M.D.; J. G. McDowall, M.D.; Lionel A. Weatherly, M.D. *Honorary Secretaries:* James Chambers, M.D., 93, Harley Street, W.; T. Seymour Tuke, M.B., 37, Albemarle Street, W.; James Taylor, M.D., 34, Welbeck Street, W.

The President will open the Section with an Address on the Brain, on Wednesday, at 10 A.M.

A discussion has been arranged to take place on each day, namely:

Wednesday, July 31st.—On the Treatment of Melancholia, introduced by Henry Rayner, M.D.

Thursday, August 1st.—On Insanity, in Relation to Criminal Responsibility, introduced by H. Maudsley, M.D.

Friday, August 2nd.—On Epilepsy, and its Relation to Insanity, introduced by W. R. Gowers, M.D.

The following papers have been announced:

Bond, C. H., M.B. The Relation of Diabetes to Insanity.
Campbell, A. W., M.D. A Comparison of the Breaking Strain of Ribs in the Sane and Insane.
Head, H., M.D. Mental Symptoms in Relation to Bodily Diseases in the Sane.
Mayer, A., L.R.C.P. Mental Symptoms in Relation to Exophthalmic Goitre.
Reynolds, E. S., M.D. Mental Symptoms of Bodily Diseases.
Savage, G. H., M.D., and Charles Mercier, M.D. Insanity in Conduct.
Shaw, James, M.D. The Early Symptoms of Insanity.
Shuttleworth, G. E., M.D. Operative Treatment of Idiocy.
Smith, Percy, M.D. Voluntary Boarders in Asylums.
Weatherly, L. A., M.D. The Law in Relation to Single Patients.

F. Physiology.

Physiological Laboratory—King's College.

President: David Ferrier, M.D., F.R.S. *Vice-Presidents:* E. E. Klein, M.D., F.R.S.; Wm. Stirling, M.D.; De Burgh Birch, M.D.; J. Berry Haycraft, M.D. *Honorary Secretaries:* C. S. Sherrington, M.D., F.R.S., Brown Institution, Wandsworth Road, S.W.; E. H. Starling, M.D., 14, Grosvenor Road, S.W.

A discussion on the Mechanics of the Cardiac Cycle will be introduced by Professor Haycraft and D. Paterson, M.D.

The following papers have been announced:

Bayliss, W. M., B.A., B.Sc., and Professor L. Hill. The Physics of the Cerebral Circulation.
Bayliss, W. M., B.A., B.Sc., and E. H. Starling, M.D. A New Method of Studying Vasomotor Changes.
Birch, Professor de Burgh, M.D. On the Equipment of an Experimental Laboratory, with Exhibition of Apparatus.
Brodie, T. Gregor, M.D. The Work of Muscle. Decomposition Products from Gelatine and Collagen.
Campbell, Harry, M.D. The Resistance which the Capillaries offer to the Blood Flow.
Eccles, Symons, M.B. The Incidence of Leucomaines in the Urine in Health and Disease.
Edridge-Green, F. W., M.D. On the Perception of Luminosity at Different Parts of the Retina.
Hallibburton, Professor, M.D., F.R.S. Nucleo-albumins.
Harley, Vaughan, M.D. Sugar as a Muscular Food.
Hunter, William, M.D. Experiments relating to the Functions of the Spleen.
Leathes, T. B., F.R.C.S. On the Interchange of Fluid between the Blood and the Tissues.
Pembrey, M. S., M.B. The Physiology of Heat Regulation.
Pickering, J. W., M.D. Intravascular Coagulation produced by Synthesised Proteid-like Substances.
Ramsden, W., L.R.C.P. Mechanical Coagulation of Proteids.
Stewart, Professor G. N. Further Researches on Circulation Time.
Stokvis, Professor. The Influence of Sugar on Muscular Work.
Turner, W. Aldren, M.D. (1) The Results of Lesions of the Tuberculum Rolandi. (2) The Results of Section of the Trigeminal Nerve and the Consequent Degenerations.

Communications have also been promised by Professor Allen, Dr. Haldane, Dr. Paterson, and others.

G. Anatomy and Histology.

Chemical Theatre—King's College.

President: Henry Morris, F.R.C.S. *Vice-Presidents:* A. Macalister, M.D., F.R.S.; W. J. Walsham, F.R.C.S.; A. H. Young, F.R.C.S.; B. C. A. Windle, M.D.; G. H. Makins, F.R.C.S.; A. W. Hughes, F.R.C.S. *Honorary Secretaries:* F. G. Parsons, F.R.C.S., St. Thomas's Hospital, S.E.; C. B. Lockwood, F.R.C.S., 19, Upper Berkeley Street, W.

The following subjects have been selected for discussion:—

Wednesday, July 31st.—Art in its Relation to Anatomy, to be opened by Professor William Anderson, F.R.C.S., Joint Lecturer on Anatomy at St. Thomas's Hospital, Professor of Anatomy in the Royal Academy of Arts.

Thursday, August 1st.—The Development and Structure of the Placenta, to be opened by Professor A. H. Young, M.B., F.R.C.S., Professor of Anatomy at Owens College, Manchester.

Friday, August 2nd.—The Topographical Anatomy of the Abdomen, to be opened by Professor A. Thomson, M.A., Professor of Anatomy at Oxford University.

The following papers have been announced:—

Griffiths, J., M.A., F.R.C.S. On the Anatomy of the Genito-urinary Apparatus in the Pig and Boar, with Remarks on the Effects of Castration.
Higgins, H., M.R.C.S. On the Mechanism of the Knee.
Keith, A., M.D. On Synostosis of the Mesosternum to the Presternum in Man and Anthropoids, considered as to its Prevalence among them and its Value as Evidence of their Genetic Relationship.
Kent, A. F. Stanley, M.A. On the Histology of the Generative Organs in a Hermaphrodite Dog.
Paterson, Professor A. M., M.D. On the Position of the Kidneys.
Payne, J. F., M.D. On an English Anatomical Manuscript of the 14th Century. (Some old anatomical works will also be exhibited.)
Robinson, A., M.D. Demonstration of the Structure of the Placenta in Carnivora and Rodentia.
Smith, T. Manners, B.A., M.R.C.S. (1) On some points in the Anatomy of Three Symmelian Monsters; (2) Notes upon the Supernumerary Elements of the Embryonic Hand and Foot.
Windle, Professor. Note on the Eustachian Tube.

H. Pathology and Bacteriology.

South Room, Ground Floor—Conjoint Examination Hall.

President: Samuel Wilks, M.D., F.R.S. *Vice-Presidents:* J. M. Purser, M.D.; J. F. Goodhart, M.D.; Sidney Coupland, M.D.; R. Saundby, M.D.; W. Watson Cheyne, F.R.C.S.; Anthony A. Bowlby, F.R.C.S. *Honorary Secretaries:* S. G. Shattock, F.R.C.S., St. Thomas's Hospital, S.E.; H. D. Rolleston, M.D., 13, Upper Wimpole Street, W.

The work of the Section has been arranged as follows:

Wednesday, July 31st.

10 A.M.—Introductory Remarks by the President.

10.30 A.M.—Demonstration of the Malaria Parasite by P. Manson, M.D. (Illustrated by Lantern Slides.) A discussion will follow, in which it is hoped the following will take part: Professor Crookshank; A. A. Kanthack, M.D.; G. Thin, M.D.

11.15 A.M.—A. Foxwell, M.D., on Exophthalmic Goitre; G. R. Murray, M.D., Some Results of Thyroidectomy.

12.30 P.M.—Papers on Cancer and other New Growths: R. Hewlett, M.D., On the Chemistry of Carcinoma and Sarcoma; D'Arcy Power, F.R.C.S.; H. Snow, M.D., The Insidious Marrow Infection of Breast Carcinoma; G. Thin, M.D.; W. Roger Williams, F.R.C.S., On Uterine Neoplasms and their relative frequency.

1.45 P.M.—A. R. Parsons, M.B., Specimen of Larynx from case of Typhoid Fever.

Thursday, August 1st.

10 A.M.—Discussion on Neuritis. Introduced by S. J. Sharkey, M.D. The following have promised to read papers or to join in the discussion: W. Gordon, M.D.; F. W. Mott, M.D.; W. M. Ord, M.D; Professor Trevelyan, M.D.; Russell Wells, M.B.; W. H. Wilson, M.B.

11.30 A.M.—Discussion on Vaccinia and Variola. Introduced by S. A. M. Copeman, M.D. It is hoped that T. D. Acland, M.D.; S. Coupland, M.D.; Professor Crookshank, M.B., and others will take part in the discussion.

12.30 P.M.—Discussion on Pernicious Anæmia. Paper by W. B. Ransom, M.D. S. A. M. Copeman, M.D., and W. Hunter, M.D., will speak.

1.15 P.M.—Paper by Professor Adami: The Effect of the Reactions of Media upon the Pathogenic Properties of Bacteria.

1.40 P.M.—Paper by A. G. Auld, M.D., on Hæmatogenous Jaundice.

Friday, August 2nd.

10 A.M.—Discussions on Lymphadenoma. Introduced by W. G. Spencer, F.R.C.S. The following have intimated their intention to take part in the discussion: W. J. Fenton, M.B.; H. Morley Fletcher, M.D.; R. M. Leslie, M.B.; A. A. Kanthack, M.D.; C. A. Morton, F.R.C.S.; G. N. Pitt, M.D.; D'Arcy Power, F.R.C.S.; H. Snow, M.D.; G. Thin, M.D.; Claud Wilson, M.D.

11.30 A.M.—Papers on Leprosy. By P. Abraham, M.D.; G. Thin, M.D.

12 NOON.—Professor Babes.

12.15 P.M.—Professor Crookshank on Actinomycosis.

12.30 P.M.—R. Hewlett, M.D.—(1) The Diazo Reaction in Typhoid Fever, (2) On Experimental Tetanus; R. Hewlett, M.D., and St. Clair Thomson, M.D.—On the Fate of Micro-organisms in Inspired Air.

1.30 P.M.—F. R. Walters, M.D.—Pulmonary Hypertrophic Osteo-arthropathy.

A. McFadyean, M.D., and R. Hewlett, M.D., will exhibit Cultures and Bacteriological Specimens.

The Secretaries venture to ask gentlemen who intend to show microscopic specimens to let them know the number of microscopes (and the powers) necessary to illustrate their papers, as this will be limited; and also to state whether the use of a lantern is required.

A separate room will be provided for the exhibition of microscopical and other specimens; lantern demonstrations will be given in the meeting-room.

I. Ophthalmology.

Large Committee Room, Ground Floor—Conjoint Examination Hall.

President: H. Power, F.R.C.S. *Vice-Presidents:* D. Argyll Robertson, M.D.; W. A. Brailey, M.D.; G. Anderson Critchett, M.A., F.R.C.S.Edin.; W. Adams Frost, F.R.C.S.; A. Emrys Jones, M.D.; A. H. Benson, M.B. *Honorary Secretaries:* R. W. Doyne, F.R.C.S., Kilcrone, Oxford; E. Treacher Collins, F.R.C.S., 84, Wimpole Street, W.; W. T. Holmes Spicer, F.R.C.S., 47, Welbeck Street, W.

The following subjects have been selected for discussion:

1. On Certain Rare Cases of Recurrent Ophthalmia. Opened by E. Fuchs (Vienna). The affection occurs in adults; it begins with conjunctival and ciliary injection, general or limited, myosis, slight transient myopia, with œdema of the lids in some cases, and occasionally vesicles on the cornea. The duration varies from twenty-four hours to a few days, and recurrence takes place at varying intervals. It is probably angeo-neurotic in its origin.

2. On the Diagnosis of Orbital Growths. Opened by H. R. Swanzy, F.R.C.S. (Dublin), and Panas (Paris).

3. On the Question of Operating in Chronic Glaucoma. Opened by E. Nettleship, F.R.C.S.

The following gentlemen will take part in the discussions: Messrs. Fuchs, Panas, Swanzy, Nettleship, Galezowski, Hirschberg, Gayet, Meyer, Juler, Lawford, Spencer Watson, Drake-Brockman, Glascott, Mackinlay, Little, Snell, Adams Frost, Critchett, Berry, Griffith, Hartridge.

The following papers have been announced:

Beaumont, W. M., M.R.C.S. On the Question of Latent Hypermetropia in the Visual Examination of Candidates for the Public Services.

Benson, A. H., F.R.C.S. Acromegaly with Ocular Complications.

Berry, G. A., F.R.C.S. On Injection of Chlorine Water into the Vitreous.

Fuchs, Professor E. A New Enemy of Erythropsia.

Griffith, John, F.R.C.S. (Title not yet received.)

Hartridge, G., F.R.C.S. Concomitant Strabismus.

Lee, Charles, L.R.C.P. Cases of Pemphigus and Essential Shrinking of the Conjunctiva.

Papers have also been promised by Messrs. McGillivray, Snell, Edridge-Green, and Juler.

There have also been promises of Specimens for the Museum.

J.—Diseases of Children.

Theological Class Room—King's College.

President: John H. Morgan, F.R.C.S. *Vice-Presidents:* W. B. Cheadle, M.D., F.R.C.P.; F. A. Southam, F.R.C.S.; H. Handford, M.D.; W. Arbuthnot Lane, M.S., F.R.C.S.; A. Foxwell, M.D., F.R.C.P.; D'Arcy Power, F.R.C.S. *Secretaries:* Dawson Williams, M.D., F.R.C.P., 25, Old Burlington Street, London, W.; Hugh R. Jones, M.D., 58A, Grove Street, Liverpool; Herbert F. Waterhouse, F.R.C.S., 81, Wimpole Street, London, W.

The following discussions have been arranged:

A. Congenital Syphilitic Manifestations in Bones and Joints, to be opened by the President of the Section, John H. Morgan, F.R.C.S. Howard Marsh, F.R.C.S., H. H. Clutton, F.R.C.S., Anthony Bowlby, F.R.C.S., Robert Jones, F.R.C.S. (Liverpool), H. B. Robinson, M.D., and Leopold Hudson, F.R.C.S., intend to take part in the discussion, and C. A. Ballance, F.R.C.S., Frederic Eve, F.R.C.S., and H. Stansfield Collier, F.R.C.S., will contribute a series of cases.

B. On the Nervous Sequelæ of Acute Infectious Diseases in Children, which will be introduced by H. Handford, M.D. (Nottingham), and discussed by W. R. Gowers, M.D., F.R.S., Thomas Barlow, M.D., W. B. Cheadle, M.D., Jules Comby, M.D., (Paris), Professor v. Ranke (Munich), R. Robertson, M.D. (Liverpool), James Taylor, M.D., William Hunter, M.D., H. B. Donkin, M.D., T. More Madden, M.D. (Dublin), Fletcher Beach, M.B., F. W. Mott, M.D., Montagu Murray, M.D., W. S. Colman, M.D., and Dawson Williams, M.D.

C. On the Treatment of Hernia in Children, to be introduced by Rushton Parker, F.R.C.S. (Liverpool). Sir William Stokes, M.D., Ward Cousins, M.D. F.R.C.S. (President of Council), Professor William Macewen, F.R.S. (Glasgow), Professor Chiene (Edinburgh), Mitchell Banks, F.R.C.S. (Liverpool), W. Alexander, F.R.C.S. (Liverpool), F. A. Southam, F.R.C.S. (Manchester), Jordan Lloyd, F.R.C.S. (Birmingham), J. Macready, F.R.C.S. (London), D'Arcy Power, F.R.C.S., W. Arbuthnot Lane, M.S., F.R.C.S., C. B. Lockwood, F.R.C.S., H. P. Symonds, F.R.C.S. (Oxford), Herbert Waterhouse, F.R.C.S., George Heaton, M.D. (Birmingham), Damer Harrison, F.R.C.S. (London), W. G. Black, F.R.C.S. (Newcastle), and Reginald H. Lucy, F.R.C.S. (Plymouth), intend to take part in this discussion.

D. Doses of Various Remedies suitable for Children at the Several Ages, to be introduced by J. Kingston Barton, M.R.C.P., D. J. Leech, M.D. (Manchester). J. Mitchell Bruce, M.D., H. H. Donkin, M.D., A. Foxwell, M.D. (Birmingham), N. J. Tirard, M.D., Neville Wood, M.R.C.P. (London), and T. More Madden, M.D. (Dublin), intend to take part in this discussion.

The following papers have been announced:

Ballantyne, J. W., M.D. (Edinburgh). The Relation of Certain Diseases of Infancy to Antenatal Anatomy and Physiology.

Barton, J. Kingston, M.R.C.P. (London). The Relation between the Foods of Early Life and the Condition of the Teeth in Youth and Early Adolescence.

Carr, J. Walter, M.D. A Protest against the use of the term "Consumptive Bowels."

Cautley, Edmund, M.D. On the Value of Trephining in Tuberculous Meningitis.

Comby, Dr. J. (Paris). The Non-pathogenic Streptococci and Staphylococci of the Throat in Children.

Eve, Frederic, F.R.C.S. 1. Spina Bifida cured by Excision of Sac. 2. Congenital Dislocation of Shoulder backward treated by Operation.

Garrod, Archibald E., M.D., F.R.C.P., and Fletcher, Morley, M.D. On the Maternal Factors in the Causation of Rickets.

GIBBONS, R. A., M.D. On Renal Colic in Infants.
GRATTAN, Nicholas, F.R.C.S.I. (Cork). Demonstration of Osteoclasts.
HANDFORD, Henry, M.D. (Nottingham). A Case of Erb's Paralysis following Enteric Fever.
LLOYD, Jordan, F.R.C.S. On Nephrectomy in Children.
LOCKWOOD, C. B., F.R.C.S. Hernia of the Ovary in an Infant with Torsion of the Pedicle.
LUCY, Reginald H., F.R.C.S. (Plymouth). The Causes of Hernia in Children.
TELFORD SMITH, Telford, M.D. (Royal Albert Asylum, Lancaster). The After-History of Two Cases of Craniectomy.

It is proposed also to arrange for the demonstration of cases of interest; among these will be:

CLARKE, J. Jackson, M.B. (London). Congenital Syphilis with Ulceration of Tongue.
MORGAN, J. H., F.R.C.S. (President). A Series of Cases of Excision and Erasion of the Knee-joint.

K. OTOLOGY.

Room 22 – King's College.

President: Sir W. DALBY, F.R.C.S. *Vice-Presidents:* CHARLES WARDEN, M.D.; G. P. FIELD, M.R.C.S.; E. CRESSWELL BABER, M.B.; J. DUNDAS GRANT, M.D.; EDWARD LAW, M.D.; C. A. BALLANCE, F.R.C.S. *Honorary Secretaries:* C. E. L. B. HUDSON, F.R.C.S., 16, Harley Street, W.; G. C. WILKIN, L.R.C.P., 39, Weymouth Street, W.

Thursday, August 1st.—Discussion on Cerebral Complications in relation to Middle Ear Disease. Opened by Professor Marewen, M.D., C.M., F.R.S., LL.D., Regius Professor of Surgery, University of Glasgow.

The Section has also arranged to hold a discussion on the the Treatment of Nerve Deafness. Particulars of this will be announced later.

Papers will be contributed and Specimens exhibited by the following amongst others:

COOMBS, J. Ward, M.D., F.R.C.S. On the Use of Artificial Tympanic Membranes.
GUYE, Professor. On a not yet described Form of Rotatory Sensation in Patients suffering from Labyrinthine Disease.
JONES, Carmalt, F.R.C.S. On Turbinotomy in Cases of Deafness and Tinnitus Aurium.
LAKE, Richard, F.R.C.S. On the Anatomical Connections of the Tympanic Membrane, with a few Remarks on their Pathological Importance. Specimens will be exhibited to illustrate this paper.
METCALFE, George, M.B., will show a Portable Electric Light Battery and Laryngoscope.
SCATLIFF, J. M. E., M.D. On the Use of the Pneumatic Speculum in the Treatment of Diseases of the Ear.

L. PHARMACOLOGY AND THERAPEUTICS.

East Wing Room, Ground Floor—Conjoint Examination Hall.

President: Sir WILLIAM ROBERTS, M.D., F.R.S. *Vice-Presidents:* J. TALFOURD JONES, M.B.; T. LAUDER BRUNTON, M.D., F.R.S.; J. MITCHELL BRUCE, M.B.; W. HALE WHITE, M.D.; DONALD MACALISTER, M.D.; M. MCHUGH, M.B. *Honorary Secretaries:* VAUGHAN HARLEY, M.D., 25, Harley Street, W.; W. SOLTAU FENWICK, M.D., 10, Devonshire Street, W.

The following subjects have been selected for discussion:

Wednesday, July 31st.—Discussion upon Serum-therapeutics. Drs. Klein and Washbourn, Professor Fraser, Drs. Charteris, Tirard, Sidney Phillips, Gayton, Caiger, Bokenham, Goodall, Bruce, MacCombie, R. T. Hewlett, and Lennox Browne, have promised to speak.

Thursday, August 1st.—Discussion upon the Requirements of the Profession with reference to the Revision of the *British Pharmacopœia*. Dr. Leech, Professors Fraser, Donald MacAlister, and Bradbury, Drs. Page, Spender, Hale White, Talfourd Jones, Charteris, W. Carter, C. Pearson, Tirard, Neville Wood, James Oliver, H. G. Lye, Kinsey-Morgan, W. Armstrong, and Ralph Stockman have promised to speak.

The following papers have been announced:

ARMSTRONG, Professor. Use of Alternating Currents of High Frequency.
ARMSTRONG, W., M.R.C.S. The Therapeutics of Rheumatoid Arthritis.
BOKENHAM, T. J., M.R.C.S. Erythrolæa Antiseptic.
CAUTLEY, E., M.D. Therapeutic Action of Iron in Diseases of Children.
CHURCHILL, F., M.D. Therapeutic Value of Massage.
CORMACK, C. E., M.D. Vichy and its Waters.
CRIPPS, Robert, M.R.C.S. The Waters of Woodhall Spa.
DUDFIELD, Thomas, M.D. Electric Treatment of Disease.
FARQUHAR WILMOT, R., M.B. The Waters of Leamington.
FENWICK, W. Soltau, M.D. Intestinal Antiseptics.
FOX, Fortescue, M.D. The Waters of Strathpeffer Spa.
GOODALL, F. W., B.S., and HARLEY, Vaughan, M.D. Action of Piperazine on Uric Acid in the Urine.
HARLEY, Vaughan, M.D. (Title of paper not received.)
HARRIS, Vincent, M.D. Creasote in Pulmonary Disease.
IRVING, Samuel, M.D. The Waters of Buxton.
ILLINGWORTH, C. R., M.D. Tobacco, Tobellin, etc., their Uses and Abuses.
MYRTLE, A. S., M.D. The Harrogate Waters.
OLIVER, George, M.D. Therapeutic Uses of Suprarenal Capsules.
OVEREND, Walker, M.B. Therapeutic Value of Arsenic and Bromide in Chorea.
PHILLIPS, C. D. F., M.D. The Pharmacological Action of Berberine.
ROSENDAHL, H. V., M.D. (Title not yet received.)
SHARP, Gordon, M.B. The Mydriatic Group.
SNOW, Herbert, M.D. Loretin.
SPENDER, J. Kent, M.B. The Waters of Bath.
SURVEYOR, N. F., M.D., and HARLEY, Vaughan, M.D. Action of β Naphthol and Bismuth Subnitrate as Intestinal Antiseptics.
TIRARD, Nestor, M.D. Treatment of Chronic Dyspepsia.
WALTERS, F. R., M.D. The Subcutaneous Use of Creasote.
WELSFORD, A. G., M.D. Artificial Foods.
WILSON, E. T., M.B. The Waters of Cheltenham.

M. LARYNGOLOGY.

North Room, Ground Floor—Conjoint Examination Hall.

President: FELIX SEMON, M.D. *Vice-Presidents:* Sir PHILIP SMYLY, M.D.; W. MACNEILL WHISTLER, M.D.; F. DE HAVILLAND HALL, M.D.; GRENVILLE MACDONALD, M.D.; SCANES SPICER, M.D.; A. W. SANDFORD, M.D. *Honorary Secretaries:* J. MIDDLEMASS HUNT, M.B., 55, Rodney Street, Liverpool; ST. CLAIR THOMSON, M.D., 28, Queen Anne Street, W.; E. B. WAGGETT, M.B., 66, Park Street, Grosvenor Square, W.

The following subjects have been selected for discussion:

Wednesday, July 31st.—The Etiology of Mucous Polypi of the Nose, introduced by Professor Guye (Amsterdam), Dr. Luc (Paris), W. B. Tomson, M.B. (Luton), and Dr. McBride (Edinburgh).

Thursday, August 1st.—The Infectious Nature of Lacunar Tonsillitis, introduced by Professor B. Fraenkel (Berlin), Dr. A. Bronner (Bradford), William Hill, M.D., and Dr. J. Macintyre (Glasgow).

Friday, August 2nd.—The Indications for Early Radical Operation in Malignant Disease of the Larynx, introduced by Dr. Bryson Delavan (New York), Mr. H. T. Butlin (London), and Dr. R. H. Woods (Dublin).

The following members have expressed their intention of joining in the discussions:

T. Mark Hovell, F.R.C.S.Ed., R. Lake, F.R.C.S., L. H. Pegler, M.D., A. Hodgkinson, M.D. (Manchester), W. Milligan, M.D. (Manchester), Charles Warden, M.D. (Birmingham), and R. McKenzie Johnston, M.D. (Edinburgh), on July 31st. T. Mark Hovell, F.R.C.S.Ed., A. Hodgkinson, M.D., Charles Warden, M.D., and Watson Williams, M.D. (Bristol), on August 1st. Philip de Santi, F.R.C.S., A. Hodgkinson, M.D., and Charles Warden, M.D., on August 2nd.

The following papers have been announced:

BRONNER, A., M.D. Some cases of Diseases of the Larynx and Bronchi treated by Intra laryngeal Injections.
HODGKINSON, Alexander, M.D. (Manchester). (1) A new form of Magnifying Laryngoscope; (2) On the Vibrations of the Vocal Cord; (3) On Chorditis Tuberosa; (4) On the Function of the Laryngeal Ventricle.
METCALFE, G., M.B. (Newcastle-on-Tyne). (1) Demonstration of a new powerful and extremely portable Electric Light Battery. (2) A primitive Electric Light Laryngoscope.
MILLIGAN, William, M.D. (Manchester). Vocal Defects among School Board Teachers, with special reference to the occurrence of teachers' nodes.
MORITZ, S., M.D. (Manchester). (1) The Laryngeal Symptoms and Sequelæ of Influenza. (2) A Self-Retaining Laryngoscope.
RUSSELL, J. S. Risien, M.D. The Representation of Abduction of the Vocal Cords in the Cerebral Cortex.
DE SANTI, Philip, F.R.C.S. The Operation of Thyrotomy, with a short account of the cases in which it has been performed at St. Bartholomew's Hospital during the last fifteen years.
STOKER, George S., M.R.C.P.I. An improved method of removing Naso-pharyngeal Tumours.

The following gentlemen purpose being present and taking part in the work of the Section: Professor Fraenkel, Professor Guye, Dr. Luc, Dr. Bryson Delavan, Professor Moritz Schmidt (Frankfort), Dr. F. H. Bosworth (New York), Dr. John Mackenzie (Baltimore), Professor v. Sokolowski (Warsaw), Dr. A. Brady (Sydney, N.S.W.), Dr. Walker Downie (Glasgow), Dr. Hillis (Dublin), Dr. W. Robertson (Newcastle-on-Tyne), and Dr. Cecil Shaw (Belfast).

N. DERMATOLOGY.

West Wing Room, Second Floor—Conjoint Examination Hall.

President: H. RADCLIFFE CROCKER, M.D. *Vice-Presidents:* McCALL ANDERSON, M.D.; MALCOLM MORRIS, F.R.C.S.Edin.; J. J. PRINGLE, M.B.; WM. ANDERSON, F.R.C.S.; H. A. G. BROOKE, M.B. *Honorary Secretaries:* J. HARRIET SPOWERS, M.D., 41, Finsbury Square, E.C.; JONATHAN

Hutchinson, Jun., F.R.C.S., 15, Cavendish Square, W.

Wednesday, July 31st, 10 A.M., President's Address.

The following subjects have been selected for discussion in the Section:

The Pathology and Treatment of Pruritus, introduced by McCall Anderson, M.D., of Glasgow, and H. A. G. Brooke, M.B., of Manchester.

Diet in the Etiology and Treatment of the Diseases of the Skin, introduced by W. Allan Jamieson, M.D., of Edinburgh, and Walter G. Smith, M.D., of Dublin.

The following papers have been announced:

Cotterell, Edward, F.R.C.S. The Treatment of Syphilis by Injections of Hydrargyrum Asparaginicum.

Galloway, James, M.D. Certain Nervous Lesions of the Skin.

Harrison, A. J., M.B. On Two Cases of Unusual Verruca Necrogenica (with Photographs).

Pye-Smith, P. H., M.D., F.R.S. Affections of the Skin occurring in the Course of Bright's Disease.

Roberts, Leslie, M.D. Treatment and Prognosis of Trichophytosis based on the Physiology of the Trichophytons.

Stowers, J. Herbert, M.D. On a Case of Dermatitis Repens (with Coloured Drawings).

O. Ethics.

Room B—King's College.

President: W. F. Cleveland, M.D. *Vice-Presidents:* Thomas Bridgwater, M.B.; J. Hughes Hemming, M.R.C.S.; D. B. Balding, F.R.C.S.; C. Parsons, M.D.; W. H. Axford, M.B.; A. Dempsey, M.D. *Honorary Secretaries:* Major Greenwood, M.D., LL.B., 243, Hackney Road, N.E.; T. F. Pearse, M.D., 12, Norfolk Street, Southsea; Hugh Woods, M.D., 11, Archway Road, Highgate, N.

Wednesday, July 31st.—General Address by the President. Subjects concerning more particularly the relations of medical men with each other:

1. Intraprofessional Etiquette, introduced by Thomas Garrett Horder, L.R.C.P.

2. Advertising, introduced by George Wm. Potter, M.D.

3. Unqualified Assistants, introduced by George Brown, M.R.C.S., and continued by J. Brindley James, L.R.C.P.

Thursday, August 1st.—The Ethics of Gratuitous and Cheap Contract Practice.

1. Clubs, Medical Aid Societies, and Contract Practice; introduced by R. W. Doyne, F.R.C.S. The discussion will be continued by Hughes Hemming, M.R.C.S., W. Gosse, L.R.C.P., W. A. Elliston, M.D., A. H. Bampton, M.D., W. Newman, M.D., and others.

2. Hospitals and Dispensaries, introduced by Hugh Woods, M.D. Frank Greaves, M.R.C.S., and R. R. Rentoul, M.D., will take part in the discussion.

The Secretaries will be glad to hear from members willing to join in the above discussions.

Friday, August 2nd.—1. Any subject, the discussion of which has not been completed on the two previous days. 2. The reading of any selected papers which do not come under the above heads.

The following papers have been announced:

Berry, Wm., F.R.C.S.I. On Contract, Club, and Dispensary Practice.

Dickinson, W. G., L.R.C.P. Provident Principle in Sickness Attendance.

Glendill, J. Grierson, M.B., Barrister-at-Law. Medical Polity.

Rich, William Richardson, M.D. The Public Medical Service and its Relation to Medical Ethics.

Sibley, Knowsley, M.D. State Aided v. Voluntary Hospitals.

Williams, A. D., M.D. Changing Relations of the Profession and the Public.

Honorary Local Secretaries:

Andrew Clark, F.R.C.S., 71, Harley Street, W.

Isambard Owen, M.D., 40, Curzon Street, W.

Honorary Local Treasurer:

George Eastes, M.B., F.R.C.S., 35, Gloucester Terrace, Hyde Park, W.

Programme of Proceedings.

Tuesday, July 30th, 1895.

9.30 A.M.—Meeting of 1894-95 Council. Council Room, Exeter Hall.
11.30 A.M.—Special Service at St. Paul's Cathedral. Sermon by the Most Rev. His Grace the Lord Archbishop of Canterbury.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business. Exeter Hall.
8.30 P.M.—Reception by the Metropolitan Counties Branch } In the Imperial
9 P.M.—General Meeting. President's Address. } Institute.
9.45 P.M.—Conversazione.

Wednesday, July 31st, 1895.

9.30 A.M.—Meeting of 1895-96 Council. Council Room, Exeter Hall.
10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
3 P.M.—Second General Meeting. Exeter Hall. Address in Medicine by Sir William Broadbent, M.D., F.R.C.P., Physician-in-Ordinary to H.R.H. the Prince of Wales. Any business adjourned from First General Meeting at 2.30 previous day.
3.30 P.M.—Musical Promenade of Gardens of Royal Botanic Society.
8 P.M. to 12 P.M.—Illuminated Evening Fête at Gardens of Royal Botanic Society.
9 P.M.—Reception at the Guildhall.

Thursday, August 1st, 1895.

9.30 A.M.—Meeting of Council. Council Room, Exeter Hall.
10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
3 P.M.—Third General Meeting. Exeter Hall. Address in Surgery by Jonathan Hutchinson, F.R.S., F.R.C.S., Consulting Surgeon to the London Hospital. Presentation of the Stewart Prize to Brigade-Surgeon-Lieutenant-Colonel D. Douglas Cunningham, M.B., C.I.E., F.R.S.
7.30 P.M.—Dinner of the Association at Queen's Hall, Langham Place.

Friday, August 2nd, 1895.

10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
3 P.M.—Concluding General Meeting. Exeter Hall. Address in Physiology by Edward Albert Schäfer, F.R.S., Jodrell Professor of Physiology, University College.
9 P.M.—Conversazione at the Royal College of Physicians.
9 P.M.—Conversazione at the Royal College of Surgeons.

Saturday, August 3rd, 1895.

Excursions.

Particulars of further Entertainments, open to a limited number of Members only, will be found in the Local Guide.

Reception Room

The large hall at King's College will be opened at 12 o'clock noon on Monday, July 29th, and on Tuesday, July 30th, and the following days at 9 o'clock, for the issue of tickets to members and for supplying all necessary information. A reception room for invited foreign guests will be provided next to the large hall. It is particularly requested that members on their arrival will at once proceed to the reception room, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult the list of lodgings, hotels, etc.

Only members of the British Medical Association, invited guests and accredited strangers will be allowed to attend the general meetings or the meetings of sections. Members and guests will be required to show their cards, which must be obtained and signed for at the Reception Room. Invited guests will be required to show their invitation cards upon entrance to any of the general meetings or meetings of sections. Members and guests are therefore earnestly enjoined to take care of their cards of admission, and to note that they are not transferable, and if lost cannot be renewed. Members or guests may take one lady only to any of the entertainments.

Only members and officially invited guests will be admitted to the dinner of the Association.

The Reception Rooms will be opened on Monday, July 29th, at 12 o'clock noon. Tickets for the dinner and excursions will not be issued until Tuesday morning. In applying for tickets members will be required to produce their membership cards to be stamped.

The members' Reception Room is in the large hall of King's College. There is a separate Reception Room for invited foreign guests next to the members' Reception Room, and another for ladies at the Royal Society's Rooms, Burlington House.

The post office and telegraph office are in the Reception Room, King's College. Members are requested to apply for letters and telegrams from time to time.

Members of the Association who intend visiting London during the annual meeting to be held on July 30th, 31st, August 1st and 2nd, are particularly requested to fill up the form in the centre of the Journal, and to stamp and post it, in order that the arrangements may be completed.

Notices of Motion.

Dr. Arthur Wellford hereby gives notice that he will move and Mr. J. F. Bullar will second:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power

and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties.

Dr. R. R. RENTOUL hereby gives notice that he will move, and Dr. H. WOODS will second:

That as Sections 7 and 8 of the Medical Act, 1858, provide for the election of only five direct representatives to the General Medical Council by the registered medical practitioners resident in the United Kingdom; and as Section 15, subsection 1, Paragraph 3 of this Act provides that the General Medical Council may represent to the Privy Council that it is expedient to confer upon the registered medical practitioners resident in any part of the United Kingdom the power of returning an additional number of direct representatives to the General Medical Council; and as the General Medical Council has, on November, 1881, and on November, 1891, and on November, 1893, refused absolutely to make such representation; and as the number of registered medical practitioners has increased from 23,719 in 1858 to 32,000 in 1881, and as we medical practitioners were not given our due and proper number of direct representatives in 1858; and as the registered practitioners constitute all the income of the General Medical Council, by which the Medical Acts are administered, while the twenty universities and colleges represented on the General Medical Council do not contribute any income to it; and as the representatives of the universities and colleges are elected to the General Medical Council by their small Convocations, Senates, and Councils, and not by open vote of all their medical graduates only; and as other important councils, having similar but larger duties to the General Medical Council such as the Councils of the Incorporated Law Societies of England and of Ireland, the Councils of the Pharmaceutical Societies of Great Britain and of Ireland, and the Council of Veterinary Surgeons) consist of direct representatives only, this Association instructs its Council to take immediate steps to have a Bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one additional direct representative to the General Medical Council.

Mr. LAWSON TAIT hereby gives notice that he will move, and Mr. COLIN CAMPBELL will second:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support, a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1858, as now existing. We protest against the Midwives Registration Bill because it proposes to establish a class of midwifery practitioners who would be very incompletely trained in midwifery, and entirely uninstructed in medicine, surgery, and pharmacy—a matter of supreme importance in midwifery practice. We therefore instruct the Council and the Parliamentary Bills Committee to use every means to oppose any Bill which proposes to give to persons registered under it power to conduct, on their sole and independent responsibility, any midwifery practice without the guarantee of a complete curriculum and qualification. That this Association recommends a sum not exceeding £1,000 be expended for the purpose of opposing any such Bill.

June, 1895. FRANCIS FOWKE, *General Secretary.*

The Ladies' Reception Committee have organised the following excursions, under the guidance of experts, for the benefit mainly of the wives of members of the Association. Should any lady, however, wish to obtain a ticket for an excursion for her husband it will be possible for her to do so. The number of tickets for each excursion will be strictly limited, and it is mentioned below. The cost of a ticket for each excursion, except for the one to the Cambridge Colleges, will be 1s. Ladies living in London will not be able to obtain tickets till the week of the meeting. Ladies living in the country or abroad may obtain them in advance by writing, and enclosing postal orders, to Mrs. R. Priestley, 81, Linden Gardens, Bayswater, London, W.

1. Girton and Newnham Colleges, Cambridge (40 tickets). The party will be entertained at the two Colleges. Date: Friday, August 2nd.

2. Westfield College, Hampstead (30 tickets). Date: Friday, August 2nd. Tea and coffee will be provided by the College.

3. British Museum. Mr. A. S. Murray will take a party of 15 on two days to the Greek antiquities, and Mrs. Tirard will take a party of 15 on one day to the Egyptian antiquities.

4. St. Paul's Cathedral. The Rev. Canon Gilbertson will take a party of 30 on July 31st.

5. Westminster Abbey. The Very Rev. the Dean of Westminster, Mrs. Murray Smith, and Mr. Weller will respectively take a party of 20 on July 31st, August 1st, and August 2nd. The Royal and other wax effigies in the Abbey will be shown.

6. The Tower of London. The Rev. W. J. Loftie will take a party of 25 on July 31st at 2 P.M. Special orders have been obtained from the Governor of the Tower.

7. National Gallery. Mr. Cosmo Monkhouse and Miss M. K. Bradby will take a party of 12 on July 31st and August 1st respectively.

8. Natural History Museum. Mr. George Murray will take a party of 30 on July 31st at 11.30 A.M.

9. South Kensington Museum. The Director, Mr. Armstrong, will take a party of 12 on July 31st and August 1st, at 2.30 P.M.

SPECIAL CORRESPONDENCE.

PARIS.

Opening of the Health Exhibition.—Piano Playing and Neuroses in Girls.—Laying the Foundation Stone of a New Hospital in Paris.—An Anti-alcohol League.—Hypnotism and Will making.—General News.

On June 28th the President of the Republic officially opened the Champ de-Mars Sanitary Exhibition. He was received by M. Brouardel, Dean of the Paris Medical School, and visited all the different sections of the exhibition. The present exhibition is not so important as the one held in 1885. It is divided into five sections, namely: (1) sanitation of dwellings; (2) sanitation of towns; (3) the prophylaxis of contagious illnesses, demography, sanitary statistics, and sanitary science; (5) industrial and professional sanitation.

A corresponding member of the Paris Academy of Medicine has sent to that learned body a memoir in which he maintains that the numerous cases of chlorosis, neuroses, and neurasthenia observed among young girls is due to learning to play on the piano and the hours devoted to practising. He has drawn up careful statistics from which he concludes that, among 6,000 pupils obliged before attaining the age of 12 to learn to play the piano, nearly 12 per cent. suffer from nervous troubles. The author does not attempt to draw up statistics of the victims among persons who have to listen to their performances.

Mme. Félix Faure, the wife of the President of the Republic, a few days ago laid the first stone of the hospital built by the Association des Dames Françaises in the Rue Michel-Ange, Auteuil. As a matter of fact building has been some time in progress, and one pavilion is already finished. Nevertheless the ceremony of laying the stone had not taken place. Mme. Félix Faure, acting as *présidente d'honneur*, threw the handful of salt over over the hollow stone containing the medal of the Association and the documents signed by the architect, Mme. Félix Faure, the Countess Foucher du Careil, and Dr. Duchaussoy. The benediction was then given. Dr. Duchaussoy, in his address, stated that ladies not positively embracing the medical profession were with difficulty admitted to the Paris hospitals; they were thus unable to gain the knowledge required of *ambulancières*. The hospital of the Dames Françaises supplied this want. All women could there fit themselves for such duties. According to Dr. Duchaussoy, in Germany there are special hospitals where women receive medical instruction; these exist in every German province. Aristocrats and crowned heads consider it a duty and honour to go through their terms in the hospitals, and become well informed reliable nurses, ready to do their duty in the time of war. Dr. Duchaussoy said it was with the intention of following the good example set by Germany that the hospital was organised. During peace there will be only twenty-four beds, twelve medical cases, twelve surgical; if war breaks out or epidemics threaten the public health, 120 beds will be ready to give relief to the suffering.

At Nimes a league has been organised to combat the increase of alcoholism. Every class is represented in it. The scheme is to organise a great petition to have "drink legislation" remodelled, and to organise temperance coffee-houses to be used as clubs by the masses.

The Third Chamber of the Civil Tribunal of Lyons has recently given judgment in a case in which the validity of a will was contested on the ground that the testator was under the influence of hypnotic suggestion. Mme. Guindraud, a widow, died, leaving £12,000 to M. and Mme. Jouve. The husband is a magnetiser and a *masseur*, and the wife a "somnambulist." Mme. Guindraud has only very distant relations. M. and Mme. Jouve, at Mme. Guindraud's request, lived in her house. Dr. Lacassagne, in his evidence, said it

was evident that Jouve exercised a great influence over Mme. Guindraud, and that he could have suggested to her to make a will in his favour. The court nonsuited the plaintiffs, the will was declared valid, and the defendants remain in possession of Mme. Guindraud's fortune.

The following names of distinguished scientific and medical men will be given to different Paris streets: Trousseau, Charcot, David Ulysse Trélat, Milne Edwards, Jean Baptiste Dumas.

HONG KONG.

The Plague in Hong Kong.—The Plague in Macao.—Cholera in Siam.

No cases of plague have occurred in Hong Kong since the last report sent to the British Medical Journal—now three weeks ago. At that time four cases only were recorded, and they represent the total met with. They were all importations from Macao or the country around. Plague is still prevalent in Macao, but neither in Canton nor in any of the large towns in this neighbourhood has plague recurred. It is now the end of May (29th), the rainy season has set in, and, as by this time last year the plague had reached its maximum, the colony begins to hope that the scourge will not return. The general health of the colony is excellent.

Under the heading of "The Plague in Macao" a paragraph appears in the Journal which has just reached us which requires answering. The Governor of Hong Kong had no pressure brought to bear upon him, publicly or privately, to stop immigration from Macao. The step was taken on his own initiative. Further, the unofficial members of the Sanitary Board did not resign on account of any acts of omission or commission on the part of the Government, but upon a mere quibble in connection with the position of the new appointment of medical officer of health. The unofficial members maintain that the officer should be a servant to the Board, whereas the Government wish him to be an independent adviser to the Board and the Government.

In Bangkok and throughout Siam cholera is epidemic. In Saigon and the French provinces of Tongkin cholera, if not epidemic, is very prevalent, and not a few Europeans have died. The condition of the river at Bangkok is filthy. Carcasses of animals float past the shipping in the river in great numbers, and the stench from the banks is abominable. The dead bodies of animals in the river indicate the state of affairs up country. In all cholera epidemics neglect to feed and attend animals is one of the first signs of the intensity of the disease. The death-rate of animals in consequence augments, and, as burial in water is more easily accomplished when labour is scarce than burial in earth, the river is chosen as the easier means. Round the lower reaches of the river, where the population is always most dense, cholera breaks out in consequence, and so the disease progresses.

CORRESPONDENCE.

THE LANCASHIRE AND CHESHIRE BRANCH AND THE MIDWIVES BILL.

Sir,—It is difficult to reason with Dr. Carter. Ignoring facts, he replaces them with the emanations of his own brain, and then calmly argues from the false premisses. His "negative fact" has turned out a mare's nest; but he still sticks to the "positive fact"—that the petition lately presented to the General Medical Council was not signed by the officers of the Lancashire and Cheshire Branch.

On June 22nd we pointed out that the petition *was* "officially" signed, and referred to the minutes of the Council for corroboration of our statement. His reply (June 29th) is characteristic. "Nowhere," he says, "so far as I have been able to discover, is a petition published, with the names of those officers attached to it." One would have thought that any man of scientific pretensions would have taken the trouble to "verify his reference" before rushing into print.

As Dr. Carter is apparently ignorant of the existence of the official "Minutes of the General Medical Council," we beg to refer you, Sir, to the minutes for May 29th, 1895, App. ii, p. 15, on which you will find the signatures of the Vice President and the General Secretary of the Lancashire and Cheshire Branch appended to the petition together with our own, in exact accordance with the resolution of the Branch, relied on by Dr. Carter in support of his "argument."

Towards the end of his lengthy letter, Dr. Carter apparently begins to feel his ground insecure, and therefore seeks to "hedge"—laying the blame for his inaccuracies on someone else.

One more fact, and we have finished with him. His letter to you is dated June 22nd; on June 17th he was present at the annual meeting of the Lancashire and Cheshire Branch at Liverpool, and heard the General Secretary, in reply to a question, affirm that the petition had been regularly signed and presented; and he sat, still silent, whilst the vote for the expenses of the Committee was passed unanimously.—We are, etc.,

Wm. Hugh Hughes,
Chairman.
Colin Campbell,
Honorary Secretary,
Lancashire and Cheshire Branch Committee.

Manchester, July 2nd.

MIDWIVES' REGISTRATION AND THE MIDWIVES BILL.

Sir,—Dr. Bruce practically states that incorrect medical certificates for death are manufactured on a wholesale scale throughout the country. He implies, moreover, that Mr. Charles Paget, the medical officer of health, publishes in his annual report information which is misleading, and that the whole system of the administration of the Health Department is behind the times. It is of course impossible for me to ascertain how far Dr. Bruce is right about the incorrectness of death certificates, but the statement certainly requires some definite proof before it can be accepted. Now let us see how the borough of Salford is looked after by its medical officer. The staff consists of a chief inspector of nuisances, an assistant inspector, two drainage inspectors, a smoke inspector, an inspector for lodging houses, another for canal boats and workshops, an inspector under the Shop Hours Act and for food and drugs, besides the veterinary department. There are six female health visitors working in the borough under the auspices of the Ladies' Health Society. In all, during 1894, without counting the inspections and visitations of the female health visitors, 33,118 inspections and 29,114 reinspections of premises of all kinds were made. Under these circumstances it is only fair to believe that the borough is watched in the most efficient manner practicable.

As to puerperal fever, Mr. Paget states "that special inquiries were made in all the cases, but it was not necessary for the Health Department to take any further action than to secure efficient disinfection of premises, bedding, and clothing." As to Dr. Holmes's evidence, which I have studied, if the General Medical Council prefers to base its decision and actions upon such evidence when such valuable reports as those of Mr. Paget are available I can only say that I am sorry for that Council. So far as I can ascertain the Bill is only based upon the authority of a few obstetricians, who have neither given the time nor taken the trouble to ascertain the facts.

It is very easy to assert that practitioners who are at work all over the country neither understand obstetrics nor the conditions and surroundings in which they work, and that medical officers of health are ignorant of the special conditions of their own districts, but I think it would be a matter of some difficulty to bring any evidence to show that such is really the case.—I am, etc.,

Hatfield, July 1st. Lovell Drage.

Sir,—In the British Medical Journal of June 22nd, you publish a letter from Dr. Smyly, Master of the Rotunda, which seems to indicate that he has fallen into some errors in respect to the Midwives Bill. He regards the definition of the term "midwife," as given therein, as indicating the inten-

tion of the Midwives Institute to obtain for midwives entire freedom from medical supervision. As a matter of fact the definition was drawn up by a Provisional Committee, which led up to the formation of the Midwives' Registration Association, and it was adopted by the Association at its first general meeting on July 3rd, 1893, as a part of its working basis. No midwife had any hand in its drafting. Dr. Smyly, himself a member, I am glad to say, of the Association, has, or should have, adopted the definition in common with the rest of the members as meaning the present anarchical condition of midwives; this is all it means. The Bill is intended to place the midwives under control. The definition is omitted altogether in the amended measure.

Another objection raised by Dr. Smyly is that the Bill does not sufficiently provide against midwives treating cases which are not normal. In the amended Bill a special clause provides against any further misconception on this point.

He also complains that all authority will be centralised in London; but, as a matter of fact, it is not so centralised, nor was it ever intended to be so centralised. But the proposed Board must have an office somewhere, though London is not mentioned even for this purpose.

It would be entirely against the policy of the Midwives' Board to keep the excellent Rotunda midwives from practising in England or Wales; Dr. Smyly is quite mistaken in what he states in this respect.

Perhaps Dr. Smyly would kindly suggest the amendments he desires to see in the present Bill, and they will, without doubt, obtain a fair hearing. As Secretary to the Midwives Bill Committee I will do all I can to get them well discussed, and in any case the authority for them will command respect.—I am, etc.,

Fellows Road, N.W., June 28th. F. ROWLAND HUMPHREYS.

PERMANGANATE OF POTASSIUM AS AN ANTIDOTE FOR OPIUM POISONING.

SIR,—The article by Dr. William Moor in the BRITISH MEDICAL JOURNAL of June 22nd was sent me by a friend who knows my claim to be the first to introduce potassium permanganate as an antidote to opium and morphine poisoning. There are some facts which ought to come under the notice of your readers with respect to this "new" antidote. I introduced acid solution of potassium permanganate as an elegant quantitative test for morphine and cinchona alkaloids in 1877.[1] I recommended solution of potassium permanganate in the year 1884 as an antidote for morphine, opium, and laudanum. Such 1 per cent. solution of potassium permanganate was my legal property prior to the introduction of a 1 per cent. solution into the *Pharmacopœia*. It was brought out for the convenience of workers using my method of oxidimetry introduced in 1877. I send you herewith a label on which you will see: "As an *antidote* to opium, morphia, and laudanum the *diluted* solution may be administered in doses of a wineglassful." This label was printed, together with a scientific pamphlet, by Messrs. Silverlock, Blackfriars Road, more than ten years ago.

As regards the "selective faculty" of potassium permanganate for morphine in the presence of albumen, I found so early as 1877 milk and albumen solutions react on my reagent. In the year 1880 the Belgian Academy appointed Messrs. Jorissen and Spring to inquire into my method applied to the estimation of food stuffs. Their report and my papers will be found in the *Bulletins* of the Royal Belgian Academy for 1880 and 1891. Those interested in this subject of estimation of food stuffs by means of acid permanganate should consult *Invention* from 1882, December 16th and 17th, and a long series of articles in the same, from October, 1883, to July, 1884. About fourteen articles may be found in the *Miller* dealing with my method applied to flour and bread, 1883 to 1886.

Those interested in knowing exactly the reactions of albumens and potassium permanganate, will find them recorded in my pamphlet *Rapid Analysis of Milk*,[2] by the permanganate method. However, when we recognise the fact that probably 50,000 cases of opium or morphine poisoning have occurred since I first published the antidote in 1884, we must confess that after all we must sometimes risk our lives, as Dr. William Moor has risked his, to secure serious and proper consideration of our convictions.—I am, etc.,

June 28th. J. BARKER SMITH, L.R.C.P.

[1] Vide *Year Book of Pharmacy* for 1878, and elsewhere.

[2] Messrs. Williams and Norgate, Covent Garden.

URGENT POOR-LAW CASES.

SIR,—I think we must all welcome with great satisfaction the recent action of the Local Government Board in reference to the answer given to the Whitechapel Guardians as regards accidents and sudden cases of illness amongst the poor. According to the orders last issued, the nearest medical man called in will now be able to receive his fee from the guardians, thus preventing delay and possibly death, and unjust comments in the daily press in reference generally to the Poor-law medical officer.—I am, etc.,

J. WICKHAM BARNES,
Honorary Secretary Poor-law Medical Officers Association.

July 1st.

PROPOSED COMPULSORY INSPECTION AND REGISTRATION OF STILLBORN CHILDREN.

SIR,—In the BRITISH MEDICAL JOURNAL of June 29th Dr. Mullins, of Sydney, calls attention to a error which appeared in my remarks on the above subject in the JOURNAL of April 6th. You will remember that you considered my "paper" too long, and therefore it was cut down from 18 to 7½ pages. The words in the original manuscript which I sent were: "Dr. Mullins, of Sydney, informs me that in New South Wales, under Section 16 of the Children's Protection Act, 1892, it is enacted that when a stillborn child has been born in a lying-in home, it must not be interred until the certificate of a medical practitioner or of a magistrate is obtained, and that a stillborn child is one born dead after the commencement of the sixth month of pregnancy."—I am, etc.,

Liverpool, June 30th. R. R. RENTOUL.

THE ANNUAL MEETING AND SOUTH WALES MEMBERS.

SIR,—Perhaps you will allow me an opportunity of informing the South Wales and Monmouthshire members that the Great Western Railway intend running an excursion train every Monday during the months of July, August, and September, from Swansea, Neath, and Cardiff to London, returning either on the following Saturday or the Saturday week. I have received a promise from the superintendent of the line that he will provide a saloon carriage for the use of medical men who intend travelling by the train leaving Cardiff on Monday, July 29th. It will be necessary for members to give me an early intimation of their intention to travel by this train. It will leave Cardiff about 4.20 P.M.—I am, etc.,

Cardiff, July 2nd. T. GARRETT HORDER.

CLUBS, MEDICAL AID ASSOCIATIONS, AND CONTRACT PRACTICE.

SIR,—Having been asked to read in the Ethical Section the opening paper on Clubs, Medical Aid Associations, and Contract Practice, I shall be much obliged if those who have personal experiences in these matters, favourable or otherwise, will kindly communicate the facts to me.—I am, etc.,

64, St. Giles's, Oxford, July 2nd. ROBERT W. DOYNE.

DILATATION OF THE CERVIX.

SIR,—I have read with much interest the article in the BRITISH MEDICAL JOURNAL of June 29th, by Dr. Braithwaite, on Dilating the Cervix Uteri. The physiological fact that the cervix is so much more easily dilatable immediately at the end of a menstrual period than that at other times is one of great practical importance, and the thanks of the profession are due to Dr. Braithwaite for laying emphasis on this fact, especially as there is no allusion to it in the textbooks in common use.

I have tried most forms of dilating the cervix of the non-pregnant uterus, including Tait's, Hegar's, and bladed metallic dilators, and have come to the conclusion that the best results can be obtained from a combination of the use of Tait's and Hegar's dilators, though not in the sequence Dr. Braithwaite uses them. The method I have adopted for

the past twelve months, both in hospital and private practice, has been to put in a laminaria tent at night; and on the following morning, on removing the tent, to proceed with dilatation by Hegar's dilators. The tent, in addition to expanding the cervix so that one may begin with No. 12 or 13 Hegar, softens the tissues and renders the use of Hegar's dilators a much easier and shorter operation.

I have never seen any of the ill-effects Dr. Braithwaite mentions follow the use of a Tait.

I may say that before introducing the tent the vagina is washed out thoroughly, and I endeavour to get a good view of the cervix and to wipe away all discharge. The tents are kept before use in a 5 per cent. solution of carbolic acid in absolute alcohol, and I have not found this impair their expansile power.—I am, etc.,

C. E. PUNSLOW, M.D.Lond., M.R.C.P.Lond.

Birmingham, July 2nd.

THE COLONIAL MEDICAL SERVICE AND THE ARMY MEDICAL STAFF.

SIR,—I propose that all appointments to the official Colonial Medical Service be made from officers serving in the Army Medical Staff who are willing to accept such service. Officers accepting colonial service to be placed on a reserve list such as exists in the Royal Engineer service. My reasons for making this suggestion are:

1. There is no competitive examination for colonial appointments, and the days of nomination for such appointments are over.

2. There is no training as to tropical diseases available for young medical officers sent to the colonies in the civil service.

3. If one colony does not suit a young official he may have to resign the service.

By recruiting from the Army Medical Staff officers serving in the colony could accept continuous civil employment there, and they would have benefited by the training of the Army Medical Staff. Up to the end of ten years' service officers could revert to the military service, but after ten years' service they would not be eligible to return to military employment, and would remain in colonial employ. Permanent service in a colony the climate of which suited an officer might be more acceptable than the continuous movements the military service needs; and whatever advantages the colonial service holds out should be first of all offered to those medical men who are serving the State in peace and war in her army. As we have no conscription, I feel sure that service in the Army Medical Staff should be a condition of entry into many branches of Government medical service besides this colonial branch.—I am, etc.,

June 28th. COLONY.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY

THE following appointments have been made at the Admiralty:—ARCHIBALD MCKINLEY, Fleet-Surgeon, and BENJAMIN S. HEATHER, Surgeon, to the *Gordon*, July 5th; EDWARD W. LUTHER, Fleet-Surgeon, and EDWARD T. P. EAMES, Surgeon to the *Theseus*, July 9th.

An examination of naval surgeons who are eligible and may be desirous of qualifying themselves for the rank of Staff Surgeons will be held at Haslar Hospital on July 15th. Intention to take part in the examination must be notified to the Inspector-General not later than July 6th.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN J. E. TRASK has been selected for service with the Egyptian army.

Surgeon-Lieutenant H. C. FRENCH who has not yet quite completed one year's service, has been selected for duty with the Coldstream Guards as an attached officer, *vice* Surgeon-Captain M. T. YARR, who has been appointed Physician to the Crown Prince of Siam.

INDIAN MEDICAL SERVICE.

THE Principal Medical Officers of the four commands in India are to have the rank of Surgeon-Major-General.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN A. T. WEAR, M.D., 1st Newcastle-on-Tyne Volunteer Artillery (Western Division Royal Artillery), to be Surgeon-Major, July 3rd.

Surgeon-Lieutenant J. H. MACLEAN, F.R.C.S.Edin., 2nd Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), to be Surgeon-Major, July 3rd.

THE VOLUNTEERS

THE undermentioned officers have received their commissions, July 3rd: Surgeon-Lieutenant J. H. GIBSON, M.D., 2nd Middlesex Artillery; Surgeon-Lieutenant E. ROE, 4th Volunteer Battalion the Hampshire Regiment; Surgeon-Captain H. ST. CLAIR-GRAY, M.D., 1st Volunteer Battalion the Highland Light Infantry.

Surgeon-Captain W. MASON, 1st Cornwall (Duke of Cornwall's Artillery), is promoted to be Surgeon-Major, July 3rd.

Surgeon-Majors W. WILSON, M.D., and W. FREW, M.D., 1st Volunteer Battalion the Royal Scots Fusiliers, are promoted to be Surgeon-Lieutenant-Colonels, July 3rd.

MR. WILLIAM BALFOUR FERGUSSON, M.D., is appointed Surgeon Lieutenant in the 1st Gloucestershire Engineers (Fortress and Railway Forces, Royal Engineers), and Mr. JAMES TAYLOR, M.D., in the same capacity to the 6th Volunteer Battalion the Gordon Highlanders, both dated July 3rd.

VOLUNTEER PROMOTION.

A CORRESPONDENT writes to point out that promotion to brigade-surgeon is governed by Paragraph 63 of the Volunteer Regulations. This paragraph states that the brigade surgeon is appointed on the recommendation of the brigadier (having first consulted the principal medical officer of the district), submitted through the general officer commanding the district. When appointed he becomes of the rank of lieutenant-colonel, but he need not have held that rank before. He may be promoted from surgeon-major or even surgeon-captain.

THE WAZIRISTAN AND CHITRAL EXPEDITIONS.

THE *London Gazette* of July 2nd contains a general order, dated May 10th, together with a despatch from Lieutenant-General Sir W. S. A. Lockhart, detailing the operations of the Waziristan Field Force; and general orders, dated April 26th and May 10th (three of the latter date), with despatches from Lieutenant-General Sir R. C. Low, regarding the operations of the Chitral Relief Force, which have been received at the India Office from the Government of India.

In giving the details of the services of the officers with the Waziristan Force, Sir William Lockhart says: "Surgeon-Colonel L. D. Spencer, M.D., Indian Medical Service has most ably administered his department in the field, and I commend the excellent work done by himself and by his officers and other subordinates for very favourable consideration. He has been well supported by all, but I wish to give special prominence to the valuable services of Surgeon Lieutenant-Colonel J. T. B. Bookey, Indian Medical Service, and Surgeon-Major J. Shearer, M.B., Indian Medical Service."

In the same despatch Surgeon-Lieutenant B. G. Seton, Indian Medical Service, is reported to have received a severe gunshot wound in the left knee.

THE SCOURGE OF INDIA (ENTERIC) IN 1895.

BRIGADE-SURGEON-LIEUTENANT-COLONEL W. H. CLIMO contributes to the current number of the *United Service Magazine* an article headed as above, in which he refutes the rejoinder of Surgeon-Major Perry Marsh, which appeared in May. Dr. Climo restates his two propositions, namely, (a) that since the introduction of short service there has been a marked improvement in the health of the army, both at home and abroad, resulting from causes almost entirely outside the action or control of the Army Medical Department; (b) that, so far as India is concerned, there has been during the same period an annually increasing admission-rate and death-rate from enteric fever of British troops consequent upon both sanitary and medical failure, resulting from regiments having no longer medical officers serving with them. The writer denies the assumption that he advocates a return to the old regimental system. Brigade-Surgeon Climo recommends the appointment of a Special Commission to inquire into and report to Parliament upon (1) the present sanitary condition of Indian cantonments, and (2) their relation to the increasing prevalence and mortality from enteric. He says: "The want of coherence in the department graphically described by Marsh affords the strongest reasons for the appointment of such a Commission."

LEAVE IN INDIA.

THE Government of India have decided to grant medical officers leave out of India on the usual conditions—namely, if their services can be spared locally and with the consent of the Principal Medical Officer at Army Headquarters.

HEALTH OF THE ITALIAN ARMY IN TIME OF PEACE.

DURING the period from 1872 to 1892 the average admissions during the seventeen years into the Italian military hospitals and infirmaries was 502 in an average force of 1,000. The average proportion of entries into the hospitals only, according to the different months, were as follows: the maximum in March, a diminution up to July, when it increased; the minimum in November, with an increase in December. The constancy was not great. It is impossible to compare the causes of morbility in the army with those of the civil population, as the statistics of the civil hospitals are so few. From an analogous study for the German army from 1867 to 1877 it appears that the maximum amount of illness occurs in January, a diminution from January to June, an increase in July, the minimum in September, and an increase in November. The oscillations of total morbility, as well as those of the various forms of disease, are as much allied in the civil population as in the military to the season of the year, in the way that this predominates over the other particular influences which determine the disease. The recruits exposed to the same atmospheric influences are taken ill in greater numbers than the older soldiers. During the year the particular conditions of the army have little influence on the development of diseases in comparison with general unhealthy causes. It also appears that traumatic lesions are not more frequent in the German army in time of peace. In Italy also the manifestations and the developments of the various diseases depend principally on the atmospheric conditions of the various seasons, and

that military life can only be a modifier of secondary importance. The more numerous oscillations in the causal movements of the seventeen years taken for examination must therefore depend on the greater variety and inconstancy of the Italian climate compared to that of Germany.

THE SECRETARY OF STATE FOR INDIA AND THE INDIAN MEDICAL SERVICE.

A CORRESPONDENT writes as follows: The following are briefly the points to be laid before the Secretary of State for India connected with the Indian Medical Service:

1. The need of putting a stop to military surgeons going into civil employ or duty.

2. To cause all military surgeons now in civil work to return to military duty.

3. To throw the so-called "expert" or "specialist" posts and leading appointments open to competition in India and in England.

4. To instal the uncovenanted as the nucleus for the Indian Civil Medical Service, and to fill up all Civil vacancies from the special additions that will be made to this service.

5. To utilise military surgeons and assistant surgeons with British and Indian troops under a central organisation, which is tantamount to the amalgamation of the Army Medical Staff and Indian Medical Service.

⁂ This programme must, in our opinion, sooner or later be adopted.

RETIRED PAY APPOINTMENS.

IT is rumoured that Brigade-Surgeon Whipple will obtain a five years' extension at the Duke of York's School. Another rumour, that the medical staff of the Royal Hospital, Chelsea, is in future to be drawn from the active list and posted for five years, is, we think, very unlikely. Such an appointment requires an officer of age and experience, and it would be most undesirable to change him at the end of five years. The comfort and well-being of the old pensioners is the first and chief consideration in the appointment of a medical officer. If, through the operation of age retirement, the hospital should lose the services of Dr. Ligertwood, who has so long and ably filled the post, he will be greatly missed by many of the old men, who are deeply attached to him.

ENTERING THE MEDICAL STAFF.

MILES.—Private income, however desirable, is not absolutely necessary in the Army Medical Service, and no one could possibly be looked down upon because he has not got it. The pay, to commence with, is over £200 a year, and is increased by quinquennial instalments; it varies in amount according to where the officer may be quartered abroad, and according as there may be local allowances. He may put down the cost of uniform, outfit, etc., at say £50. Full information can be obtained by application to the Director-General, Army Medical Department, 18, Victoria Street, Westminster, S.W.

WAR OFFICE ORGANISATION.

UT PROSIM writes: The attention of the medical profession should be drawn to the proposed War Office reorganisation sketched by the War Minister on the evening so eventful to him. The proposal was to "establish direct responsibility to the Minister of officers charged with certain well-defined duties." While the new Commander-in-Chief will be the principal military adviser of the Secretary of State, he, with the "other heads of military departments, will each be directly responsible to the Minister." Such an arrangement, our correspondent points out, ought to bring the head of the medical department into direct contact with the Secretary of State for War, which would prevent him and his department being made the scapegoat of War Office failures. It would surely, for instance, prevent the miserable shuffling and recriminations which took place after the Egyptian campaign of 1882, and saddle the real authors of breakdowns with the responsibility which they are only too ready to escape from afterwards. It is therefore important that in any new scheme of War Office reorganisation the medical profession should insist in Parliament on justice being done to the Army Medical Department.

SICK LEAVE TO MEDICAL OFFICERS.

420 writes: You have often protested against the injustice of only allowing medical officers half the ordinary time on sick leave, and then placing them on half pay which was not counted as service either towards promotion or retirement. Having been very active during the past fifteen years to get this unfair regulation altered, I have the pleasing duty to inform you that these strange regulations have been done away with. The time has been extended to its normal length, and by Article [illegible] of the Pay Warrant one year on half pay now counts towards retirement, and the Warrant of [illegible], expected next month, will further provide for one year on half pay counting towards promotion. So long delayed justice has at last been done.

⁂ We are very glad to hear it. It is an acknowledgment by the War Office that the former regulation was unjust.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE PHARMACY ACTS.

ON June 27th Messrs. Fannin, the well-known surgical instrument makers in Dublin, were prosecuted by the Pharmaceutical Society of Ireland for having kept open shop for the sale of poisons, not being properly qualified to do so under the Act. The case was admitted, but it was pointed out that Dr. [illegible], one of the proprietors, was a medical man. The magistrate fined the defendants £[illegible] in each of three cases.

A CURIOUS LUNACY CASE.

AN inquiry has just been held at [illegible] into a charge made by the police against the surgeon, Dr. Mayne, in reference to his behaviour in removing a lunatic patient from the hospital. It appeared that the woman had been admitted for injuries sustained by her in an attempt to commit suicide by throwing herself from a window. She was periodically insane. Dr. Mayne after a time wanted to have her removed, but Dr. Yorke refused to certify that she was fit for removal. Dr. Mayne applied to the Chief Secretary for instructions, but, not receiving a reply, he carried the woman outside the infirmary, and deposited her in the street in presence of a policeman. It was then necessary to remove her to the barrack. The Lords Justices instituted an inquiry. Dr. Mayne said he charged the woman as a dangerous lunatic, and she was duly arrested. The governors eventually found that Dr. Mayne acted for the benefit of the other patients in the infirmary.

MEDICAL ETIQUETTE.

A. WAS acting as *locum tenens* for a doctor who was away on holiday, and was called to see a girl one night about 6 P.M. A. saw her, and prescribed. At 9 A.M. next day A. got a letter from the father of the girl saying that she had been much worse through the night, and that early in the morning he had fetched another doctor, B., who saw her by himself. The father says he has "no fault to find with A., but one has more confidence in a doctor one knows." The father then adds, "B. is coming to see her again to-day, at 12 o'clock, and would like to have met A., but I think I would like B. to take charge of the case; however, I have no objection to A. coming back again."

⁂ The above instructive case is governed by the following rule (9) of the *Ethical Code*, chap. ii, sec. 5: "When a practitioner is called in to, or consulted by, a patient who has recently been, or still may be, under the care of another for the same illness, he should on no account interfere in the case, except in an emergency, having provided for which he should request a consultation with the gentleman in previous attendance, and decline further direction of the case except in consultation with him," etc. Under the circumstances related, and in view of B.'s expressed wish, we are clearly of opinion that A. would have acted wisely and in the interest of his principal by meeting him (B.) in consultation. It is scarcely necessary to add that the father's action in the matter was consistently natural, and that of B. apparently in conformity with the above rule.

GLYCOSURIA AND DIABETES.

DR. CAMPBELL D. BLACK, M.D., Professor of Physiology in Anderson's College, Glasgow, writes: Apropos of your remarks on the above subject in the BRITISH MEDICAL JOURNAL of June 29th, will you allow me to give the following experience, which may to some extent explain the discrepancy in the examinations of the gentlemen concerned? The other day I presented to my practical physiology class a specimen of urine which appeared puzzling. The case is that of a man about 60, and there is neither excessive thirst nor pronounced emaciation. When I first examined the urine it certainly contained sugar. The following complications exist; there is prostatic [illegible], with cystitis, and more or less pus in the urine, with phosphates and urates. On the occasion of my first examination of the urine I removed the albumen, the phosphates, and the urates, in the usual manner; and I got the various characteristic glucose reactions. On the second examination the albumen alone was removed, and Fehling's solution gave no reaction up to and during the boiling, but as the liquid cooled, a copious greenish-yellow precipitate resulted. The "Fehling" was quite unimpeachable, and there can be no doubt that the result obtained was due to the abundant presence of phosphates and urates. The urine evolved no carbonic acid in presence of yeast, nor did it give any reaction when mixed in the cold with "Fehling" for over twelve hours. Repeated testings showed that this precipitation depended on the amount of the "Fehling" used. If the quantity used was small, no precipitation took place on cooling. To obtain this, about a quantity equal to that of the urine had to be employed, and then the precipitate was copious. I have again examined this patient's urine to-day, and I find undoubtedly that it does contain sugar. It gives the usual reaction with "Fehling" and Böttger's test and the yeast test. The urine is alkaline, and microscopic examination now shows no phosphatic crystals as it formerly did, but only a few pus cells and granular urates in small amount. There can be no doubt that, particularly in aged persons, sugar may occasionally disappear in the urine for days at a time, and thus B. and C. might both have been right.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

ADDENBROOKE'S HOSPITAL.—At the quarterly court of governors held on July 1st, Dr. E. Carver, of St. John's College, retired from the office of Surgeon after twenty-four years' service, and was, on the proposal of Professor Sir G. M. Humphry, unanimously elected a Consulting Surgeon to the hospital. Dr. Joseph Griffiths, M.A., M.D., F.R.C.S., of King's College, Assistant to the Professor of Surgery and Hunterian Professor at the Royal College of Surgeons, was thereupon promoted from the position of Assistant Surgeon to the full Surgeoncy. This appointment left a vacancy for an Assistant Surgeon, and Mr. [illegible], M.B., M.R.C.S., of King's College, University Lecturer in Midwifery, was, without opposition, elected to the vacant office. Mr. A. [illegible], M.B.Camb., was at the same court appointed House Physician. The final steps were taken for the erection of a new building to accommodate, on an improved plan, the nurses and probationers of the hospital. The cost of the new block will be about [illegible], part of which will be met by means of two recent

donations of £[illegible] each. When the proposals were brought before the court it was stated that the reputation of the nursing school was of the highest, no fewer than [illegible] applications for admission as probationer having been received since last January, although there was no vacancy and a fee of some [illegible] is required for the three years' course of training.

SUMMER SCHOOL OF MEDICINE.—Some seventy practitioners have come into residence for a week's course of lectures and demonstrations in subjects connected with medicine, and appear to be highly satisfied with the arrangements made for their convenience and instruction.

ROYAL UNIVERSITY OF IRELAND.

FIRST EXAMINATION IN MEDICINE, SUMMER, 1895.—The following candidates have passed this Examination:

F. J. Allen, Queen's College, Cork; J. E. Clements, Queen's College, Belfast; Annie H. Crawford, Queen's College, Belfast; M. Curran, University College, Dublin; Frances A. Dreaper, B.A., University College, London; M. J. [illegible], Queen's College, Galway; P. Gavin, University College, Dublin; W. C. Gavin, University College, Dublin; J. Good, Queen's College, Cork; W. D. [illegible], University College, Dublin; J. Hartigan, Royal College of Science, Dublin; W. M. Hunter, Queen's College, Belfast; Alexandrina C. Huston, Queen's College, Belfast; A. F. Kennedy, Queen's College, Belfast; W. M. P. Keogh, Queen's College, Galway; P. Kerley, University College, Dublin; D. [illegible], Queen's College, Cork; W. Lapsley, Queen's College, Cork; R. Lee, Queen's College, Cork; G. F. Luke, Queen's College, Belfast; W. McCarthy, Queen's College, Cork; E. W. S. Martin, Queen's College, Belfast; Everina S. J. Massey, Royal College of Science, Dublin; R. A. Neilson, Queen's College, Galway; P. L. [illegible], Queen's College, Cork; R. A. O'Flynn, University College, Dublin; S. Park, Queen's College, Belfast; E. W. Powell, Queen's College, Cork; W. Rice, Queen's College, Cork; E. C. T. Smith, Mason College, Birmingham; M. G. [illegible], University College, Dublin; A. M. Thomson, Queen's College, Belfast; J. Tierney, Queen's College, Belfast; J. Torpey, Queen's College, Cork; J. Waddell, Queen's College, Belfast; J. J. Waters, Queen's College, Galway; J. W. West, Queen's College, Belfast; J. Young, Queen's College, Cork.

UNIVERSITY OF DUBLIN.

AT the summer commencements of Trinity Term, held on June 28th, in the Theatre of Trinity College, the following, among other degrees, were conferred by the University Caput in the presence of the Senate:

Licentiatus in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—J. C. Ennis.

Baccalaurei in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—R. J. Arundel, S. J. M'C. Bradshaw, A. E. Brunskill, E. W. W. Cochrane, R. Friel (B. Ch. *stip. cond.*), H. W. Irvine, T. P. C. Kirkpatrick, E. [illegible], A. H. [illegible], G. Miles, E. L. Parry Edwards, L. L. [illegible], J. J. Purser, and S. Synge.

Doctores in Medicinâ.—R. J. Arundel, C. H. Blood, S. M. Cox, C. C. [illegible], F. W. Goodbody, T. P. C. Kirkpatrick, J. Lumsden, R. B. M'Causland, J. S. Morton, A. Moore, G. M. Thompson, G. J. Thompson, A. Vigne, and E. W. Wade.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Monday, July 1st:

Passed in Anatomy and Physiology.—H. J. Taylor and W. A. Thompson, students of Owens College, Manchester; H. S. Clegg, of University College, Cardiff; T. W. Byrne and M. R. Maher, of University College, Liverpool; A. W. S. Curtis, O. H. Rogerson, W. H. Galloway, P. E. Middleton, R. Milnthorp, and E. A. Wraith, of Yorkshire College, Leeds; J. Phillips, E. M. Pearse, and F. Cox, of University College, Bristol; L. E. Richardson, J. A. O'Doud, W. A. Henshaw, J. O. Harvey, and R. C. B. Hall, of Mason College, Birmingham; and E. R. St. J. Caro, of Michigan University, U.S.A.

Passed in Anatomy only.—C. H. Bradbury, of Owens College, Manchester; and S. Wellby, of Oxford University and St. Thomas's Hospital.

Passed in Physiology only.—G. W. White, of Firth College, Sheffield; S. H. [illegible], of Cambridge University; C. M. Mitchell and F. C. Morgan, of University College, Bristol; and L. H. Lewis, of Guy's Hospital and University College, Cardiff.

Sixteen gentlemen were referred in both subjects, 4 in Anatomy only and 1 in Physiology only.

Tuesday, July 2nd.

Passed in Anatomy and Physiology.—S. H. Belfage and C. H. Bidwell, students of University College, London; A. Gentel and C. D. Leyden, of St. Mary's Hospital; J. Cowan, of Queen's College, Belfast; P. D. [illegible], of St. Thomas's Hospital; H. C. Barlow, of Westminster Hospital; W. E. A. Worley and E. C. Morland, of St. Bartholomew's Hospital; D. K. L. Nasmyth, of Charing Cross Hospital; and J. P. [illegible], of King's College, London.

Passed in Anatomy only.—E. S. Ransome, G. H. Dominy, and A. E. Malaher, of St. Thomas's Hospital; O. T. A. Phillips, of University College, Cardiff; and N. Buendia, of St. Bartholomew's Hospital.

Passed in Physiology only.—F. J. [illegible], of King's College, London; T. H. [illegible], of King's College, London, and Mr. Cooke's School of Anatomy and Physiology; A. W. Penrose, E. Ashby, and J. L. Payne, of Guy's Hospital; W. Green and W. H. Park, of Charing Cross Hospital; A. J. Pattison, of London Hospital; J. M. Carvell, of London Hospital and Mr. Cooke's School of Anatomy and Physiology; G. Beley, of St. Thomas's Hospital; and F. A. Pitts Tucker, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Eleven gentlemen were referred in both subjects, 8 in Anatomy only, and 3 in Physiology only.

Wednesday, July 3rd.

Passed in Anatomy and Physiology.—C. G. Watson, A. O. B. Wroughton, and R. Hatfield, students of St. Bartholomew's Hospital; C. M. Goodbody, E. F. C. Dowding, B. F. Howlett, and A. G. Graham, of St. Thomas's Hospital; T. Leah, D. [illegible], W. H. S. Liddell, and J. H. Lightfoot, of St. Mary's Hospital; L. D. Saunders, of King's College, London; H. J. M. D. S. Barker and C. Shepherd, of Guy's Hospital; W. St. A. F. Hubbard, of Charing Cross Hospital; H. T. Barrow, of Westminster Hospital; F. M. Morris, H. G. Frankling, and J. A. P. Cullen, of London Hospital; and C. B. Fairbank, of University College, London.

Sixteen gentlemen were referred in both subjects.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,166 births and 3,394 deaths were registered during the week ending Saturday, June 29th. The annual rate of mortality in these towns, which had been 15.4 and 16.2 per 1,000 in the two preceding weeks, further rose to 16.7 last week. The rates in the several towns ranged from 9.6 in Brighton, 9.9 in Derby, and 11.5 in Huddersfield to 21.0 in Salford, 22.8 in Gateshead, and 25.7 in Liverpool. In the thirty-two provincial towns the mean death rate was 16.5 per 1,000, and was 0.4 below the rate recorded in London, which was 16.9 per 1,000. The zymotic death rate in the thirty-three towns averaged 2.4 per 1,000; in London the rate was equal to 3.2 per 1,000, while it averaged 1.9 in the thirty-two provincial towns, and was highest in Salford, Liverpool and West Ham. Measles caused a death rate of 1.5 in Newcastle-upon-Tyne, 1.7 in Cardiff, 1.8 in Plymouth, and 2.9 in West Ham; scarlet fever of 1.0 in Burnley; "fever" of 1.0 in Huddersfield; and diarrhœa of 2.3 in Salford and 3.[illegible] in Leicester. The mortality from whooping-cough showed no marked excess in any of the large towns. The 55 deaths from diphtheria in the thirty-three towns included 38 in London, 3 in Liverpool, 2 in West Ham, 2 Portsmouth, and 2 in Birmingham. One fatal case of small-pox was registered in London, but not one in any of the thirty-two provincial towns. There were 34 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, June 29th, against 23, 18, and 22 at the end of the three preceding weeks; [illegible] new cases were admitted during the week, against 5, [illegible], and [illegible] in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital was 1,[illegible], against 1,589, 1,637, and 1732 at the end of the three preceding weeks; 319 new cases were admitted during the week, against 179, 19[illegible], and [illegible] in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 29th, 1,096 births and [illegible] deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.1 and 19.4 per 1,000 in the two preceding weeks, declined to 19.2 last week, but was 2.7 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.2 in Leith to 27.4 in Perth. The zymotic death-rate in these towns averaged 2.7 per 1,000, the highest rates being recorded in Edinburgh and Paisley. The 278 deaths registered in Glasgow included 29 from diarrhœa, 6 from measles, 6 from whooping-cough, and 3 from diphtheria.

EDINBURGH CITY BYRES

A REPORT has been presented to the Corporation of Edinburgh by Messrs. A. R. Young, M.R.C.V.S., and John Gibson on the city byres. By "The Cattle Sheds in Burghs (Scotland) Act, 1866" it is ordained that for every animal kept in a byre there shall be at least 800 cubic feet of space, but the reporters found that out of the 175 byres in the city, containing 2,204 cows, in only 16 cases did the cubic space amount to 800 feet, and in three byres the cubic space was under 300 feet. This alarming overcrowding depended on the following causes:

1. The licence was granted for too many cows.
2. More cows were kept than the licence authorised.
3. Animals were allowed to occupy the space set apart for the gangway.
4. The licence failed to specify the number of cows allowed for each byre.

The report recommends that instructions be issued peremptorily insisting that in every byre within the city each cow should have at least [illegible] cubic feet of air space, which would tend to improve the health of the animals, to ensure a better milk supply, and at the same time lessen the risk of tuberculosis and pleuropneumonia.

Lighting and ventilation were in too many cases very inadequate. In some cases the cows were housed in total darkness, while in others the sole means of ventilation was afforded by a defective roof. Very seldom was there any provision for sickness or other suspicious symptoms occurring among the stock in the shape of separate accommodation for affected animals, and this was an almost essential requisite in all well-regulated byres. There had been a marked improvement during the past year in the cleanliness of the cows, but still there is much room for further improvement.

The reporters think the arrangements for the systematic inspection of byres are defective, and suggest that one veterinary inspector of the city staff and also the dairy inspector should be empowered to devote themselves to this inspection, and that these officials should report quarterly to the Public Health Committee on the various points referred to in the statement.

PERTH AND THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

THE municipality of the fair city of Perth distinguished itself a couple of months ago by the rejection of a proposal for the adoption of the Infec-

tious Disease (Notification) Act, which had been brought forward in an extremely reasonable and intelligent manner by the Lord Provost and some other enlightened members of the Town Council. The arguments with which we have been rendered familiar in other reactionary quarters were again trotted out, and the suggestion was even made that medical men would, in default of actual cases, invent them. All the cases of infectious disease which occurred in the town were, it was said, already known to the sanitary authority, and the favourable opinion of the medical officer of health was treated with disdain. Nemesis, however, has already followed hard on the heels of the corporation, although they knew it not. The report of the medical officer for the month of May furnishes an illustration of retribution which it would be difficult to parallel. He had in the course of the month discovered that a certain "close" in the town had been a hotbed of disease since the beginning of the year. A death from typhus had been registered in the case of a woman admitted to the infirmary from this close; and a second case had been admitted from another part of the town. Following up the clue thus afforded, the medical officer ascertained that in the month of January a woman in the close referred to had had an illness, which appears to have been mistaken for typhoid. There went down in succession a daughter, a son, another daughter, and another son. On the flat below one of the cases afterwards recognised as typhus occurred, and on the same landing two young women and a young man were laid prostrate by the disease. Later on another woman in the same close was removed to the infirmary suffering from typhus. At this precise time the members of the corporation were proclaiming that the local authority was fully informed as to the existence of infectious disease in the town. With such an object lesson before them, it may be hoped that the ratepayers will take matters into their own hands, and compel their representatives upon the Town Council to take the necessary steps to prevent their town being decimated by disease, and to remove the reproach of being a plague spot from the town.

ROTHERHAM WATER SUPPLY.

DR. ROBINSON, the Medical Officer of Health of the Borough of Rotherham, has some significant remarks to make in his annual report for 1894 concerning the water supply of the town in relation to disease prevalence. He states that the death-rate was last year the lowest on record since the borough was incorporated over twenty years ago. This happy state of affairs he attributes to the closure of the Wellgate spring in the centre of the town, the spring to which Dr. Theodore Thomson, when reporting on epidemic typhoid fever in Rotherham a year or two back, drew such particular attention as endangering the water supply of the district, situate as it was in the midst of a populous town, and drawing its contents as it did from a subsoil which had been long subject to excremental fouling. Indeed, it will be remembered that Dr. Klein had to condemn the well on account of the evidence of excremental pollution of its water. The town council were warned as to the state of the well, and now we are informed that it has not been in use since 1893, with the result that the deaths from diarrhœa, which had in the eight years 1885-92 averaged 37 deaths annually, and which were as high as 75 in 1893, fell last year to 7 only. "These figures," says Dr. Robinson, "speak for themselves, and, in conjunction with the results of chemical analyses, prove that the water should be permanently cut off as a source of domestic supply."

THE PRINTING OF HEALTH OFFICERS' REPORTS.

THE matter of the printing of the annual reports of medical officers of health is one that seems to come up with yearly regularity in one or more counties. It now arises in Essex, and it appears to us to be a pity that it should not have been settled in the past in favour of the compulsory printing of such documents. The value of a report on a district is greatly enhanced when it has been placed in permanent form, and the certainty that the report would be so placed in type would be an incentive to those health officers who know that, as matters stand, their productions will probably be "read" before their council, and in this way see the end of their existence. We venture to think that it will be a distinct advance in sanitary administration when it is made a requirement that all annual reports of health officers be printed. The amount of clerical work now demanded of these officers before statutory requests are met is in itself a bar to real and effective reporting in localities where reports are not deemed worthy of the printer's charges.

COMBINED DRAINAGE: SEWERS AND DIPHTHERIA.

A report has been presented by Dr. Alexander to the Poplar District Board, in connection with the difficulties now being experienced by sanitary authorities in dealing with the redrainage of groups of houses drained by a combined system. Under the definition of the Metropolis Management Act the word drain includes "any drain for draining a group or block of houses by a combined operation laid or constructed before the first day of January, 1856, pursuant to the order or direction, or with the sanction or approval, of the Metropolitan Commissioners of Sewers." Dr. Alexander points out that a considerable amount of his time has been taken up in searching the petitions, deposited with the Metropolitan Commissioners of Sewers, with a view to determining whether particular drains received their sanction or approval. In the case of Poplar such a search means, in fact, a scrutiny of some eighteen thick volumes, only four of which "have any kind of index." Dr. Alexander's report has been printed with a view to its circulation among metropolitan sanitary authorities, in order to secure their co-operation for bringing about an amendment of the law relating to sewer or drain.

Dr. Alexander has also written a report in which he deals with the subject of sewers and diphtheria. He discusses the improved arrangements which have recently been made by means of a new sewer for carrying off the drainage of [illegible] North Poplar, South Bromley, and part of North Bromley, and he states that "it has been singularly interesting to note the diphtheria notifications in the Poplar and Bromley parishes for the past nineteen weeks since the new sewer above mentioned has been in use." The paragraphs which follow this statement do not, however, deal in any detail with the points of interest to which Dr. Alexander's attention has been directed.

LUNACY ORDERS.

"[illegible]" statement is not clear. The guardians cannot pay the medical officer of a workhouse for a certificate in support of an application for an order by a justice for detention of a lunatic in a workhouse. As to whether or not they are bound to pay such medical officer for a certificate in support of an application for an order under which a lunatic in such workhouse may be or is removed to an institution for lunatics, everything turns upon the agreement or understanding the medical officer has with the guardians with regard to the duties he is to perform for his fixed salary. If by it he is to perform all the duties and work that fall in the way of a workhouse medical officer in return for a fixed salary, he has, of course, no claim for extra fees; but if there is not such understanding, there is nothing illegal in the guardians paying for such certificate, if and as ordered by the justice who gives the "order" for the lunatic's reception into an asylum.

TYPHUS FEVER AT BURY.[1]

A RECENT report by Dr. Monckton Copeman on an outbreak of "fever" at Bury, in Lancashire, is of interest. After 2 and 3 cases respectively of "continued" fever had been notified in the first two quarters of 1894, the notified cases suddenly rose in the next quarter to 22, with 8 deaths, 8 typhus cases being notified in the same three months, with 7 deaths, and also 15 enteric cases, of which 11 proved fatal. Dr. Copeman, after visiting the hospital and conferring with the health officer, Mr. Ashworth, came to the conclusion that the majority of the continued cases were in reality typhus, and that enteric fever had also been diagnosed when the malady was in fact typhus. Fortunately the health officer was at an early stage alive to the gravity of the situation, and by prompt measures stayed what would otherwise probably have proved a wide dissemination. The typhus was spread largely by personal intercourse, and interesting charts and a genealogical tree of attacks are given.

THE SPREAD OF CONTAGION IN SCHOOLS.

THE Board of Health of the city of Boston, U.S.A., has instituted a system of school inspections with a view to preventing the dissemination of infectious disease. The plan adopted was as follows: A list of the children whom it was considered desirable the doctors should see was prepared by each teacher and sent to the head teacher by 9 o'clock every morning. Examination was made of these children by the doctor on his arrival, a minimum of disturbance of the ordinary school routine being as far as possible secured.

DISPENSARY DOCTORS AND VACCINATION FEES.

THE Local Government Board in Ireland has written a reply to certain questions submitted to it by the Rathdown Board of Guardians. It declares that a medical officer is entitled to be paid for each case of successful vaccination performed by him, whether the person vaccinated by him is or is not resident within his sub-district. A dispensary medical officer is not bound to perform vaccination except at the dispensary and the vaccination stations within his district or sub-district, and the guardians should not allow fees for persons vaccinated elsewhere. A gentleman employed as a temporary substitute for a dispensary medical officer is entitled to fees for vaccinations performed and certified by him as acting public vaccinator. It is not usual for medical officers to charge Boards of Guardians for the vaccination of persons in respect of whom they had received remuneration for their professional services.

WATERBORNE DIARRHŒA.

THE Medical Officer of Health for Rotherham (Dr. Alfred Robinson), in his annual report just issued, gives the death-rate as 16.61 per 1,000, against 18.70 in the previous year. These figures are the lowest on record since the borough was incorporated twenty years ago, but the important matter about the report is that the diminished death-rate is attributed to the abandonment of the Wellgate water as a source of domestic supply. During 1894 this water had not been used, and the very startling fact was chronicled that the deaths due to diarrhœa were only 7, whilst when this water supply was used in the previous year the deaths numbered 75.

THE VESTRY OF ST. GEORGE SOUTHWARK AND ITS MEDICAL OFFICER OF HEALTH.

IN the BRITISH MEDICAL JOURNAL of April 13th reference was made to an unusual proposal which was put forward by members of the vestry of St. George the Martyr, Southwark. The suggestion was made that the medical officer of health should pay what a member of the vestry called "surprise visits" to sick employees, with a view to detecting malingering. The medical officer of health stated that such visits could only be made by him in consultation with the medical man in attendance upon the patient. To this it was objected, however, that any regard for the rules of ordinary etiquette would defeat the object in view. The originators of the surprise visit scheme persisted in their endeavours, and the medical officer was informed that he was expected to carry the system into execution. At the vestry meeting on May [illegible] Dr. Waldo again pointed out that the custom of the profession was opposed to a second medical man visiting a case without the sanction or knowledge of the first. It was thereupon determined to refer the question at once to the Local Government Board for decision. It may be anticipated that the central authority will not hold that the payment of visits of the kind indicated forms part and parcel of the duties of a medical officer of health.

WISBECH BOARD OF GUARDIANS.

WE are pleased to see that at a recent meeting of this Board the Rev. J. [illegible] raised the question as to the provision by the guardians of all expensive medical and surgical appliances, pointing out that it was unreasonable to expect their medical officers to supply such things out of

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[1] Report to the Local Government Board on an Outbreak of "Fever" at Bury. [illegible] Messrs. Eyre and Spottiswoode, East Harding Street, E.C., price 1s.

their salaries. It appears from the discussion which ensued that when applications had been previously made to the Board to provide these articles the requests had been refused. The proposal of Mr. [illegible] was, however, unanimously adopted. This is as it should be, and we hope to see many other Boards of Guardians take the correct view of their duties, and follow the excellent decision of the Wisbech Board.

DIPHTHERIA AND SCHOOL ATTENDANCE.[1]

THE causal relationship of school life to diphtheria spread is shown unmistakably in a report just published on diphtheria at Potterne, in the Devizes rural district, by Dr. Monckton Copeman. The disease seems to have started early in July, 1893, in what were looked upon as mild throat illnesses in scholars at the national school, and these cases were unattended by any medical man. The graver malady soon developed, and by the end of the month some 30 cases had cropped up, some of them of a malignant character, and by the end of the year there had occurred 109 cases in 58 houses with 29 deaths, a mortality rate of 26.6 per cent. of known cases. The schools were repeatedly closed and reopened, with the result of further cases springing up both during periods of closure and also, and especially immediately after the reopening of the schools. Care was taken by the health officer to prevent the attendance of suspicious throat cases, but the disease went on until October, 1894, when 143 cases had been heard of in 65 households, and of these not one was among the large number of children of the wealthier residents in the place. Dr. Copeman looks upon school mingling of children and other personal intercourse as chiefly accounting for the spread of the disease. He also regards the absence of proper hospital accommodation when the epidemic commenced as responsible for the dimensions of the prevalence, although the council did all they could by way of extemporised means of isolation, nursing, and the like. We find the isolation of 53 patients and [illegible] cost the district [illegible]. Of 53 Potterne patients treated in hospital [illegible] per cent. died, whilst of 89 home-treated patients [illegible] per cent. died. But doubtless the most malignant cases were those removed for isolation, and they saved, it may be, many more attacks from arising in the homes from whence they were removed.

HALIFAX SMALL-POX ISOLATION ARRANGEMENTS.

WE much regret to see that the Town Council of the borough of Halifax have practically decided to abandon their long thought of scheme for the isolation of small-pox patients belonging to their town. Many months since a site of some 60 acres in extent was purchased for the ostensible purpose of thereon erecting a hospital for the treatment of small-pox cases, the site being so placed that, so far as we can learn, there would have been no objection to the use of the ground for the purpose in question. And now the old story comes up again of the immediate danger to the public health which led to the purchase having subsided, and the [illegible] consequent on that danger having come within hopeful distance of tranquillity the purse strings are suddenly tightened because, forsooth, "no further outbreak may occur for the next fifteen or twenty years." Quite true; so also a fresh epidemic may spring up in the present year. But, no matter when—inconceivable as it may seem in the face of the experience of Halifax in 1892-93—the further proposal is to leave the question of small-pox hospital provision over "until the disease appears again." And then temporary means are to be adopted. We can only hope that the scheme already thought out will not be allowed to drop in such a manner.

SOME RURAL DIFFICULTIES.

CYMRO D.P.H. asks: 1. What work will give him the best information as regards the best mode of conveying a water supply from, say, a spring by gravitation to a house, leaving a supply at its source for a cottage or animals.

2. Is it necessary to give forty-eight hours' notice to the rector if it is desirable to bury a parishioner in his churchyard not in accordance with the rites of the Established Church, granted the body in any way becomes a nuisance or injurious to health, is there any means by which the body could be buried in less than forty-eight hours? I do not refer to a death from infectious disease. There is no public mortuary in this parish.

3. What is considered the best deodorising agent for a room say from cancerous emanations? I have been told that a mixture of solutions of common salt and acetate of lead are very effectual, but can find no reference to such a mixture or mode of preparation for such object.

*** 1. On this point we would recommend our correspondent to consult an engineer with opportunities for acquainting himself with the conditions to be dealt with.

2. There is a clause in the Infectious Diseases Prevention Act, 1890 (if that is in force in the district) under which a magistrate upon application of a medical officer of health can deal with cases in which a corpse is retained in a building so as to endanger the health of the inmates.

3. A mixture of common salt and acetate of lead would not, so far as we can ascertain, be effectual. Perhaps carbolic acid or one of the essential oils might be employed with a view to masking the odour.

THE SEIZURE OF MEAT.

J. H.—Either the medical officer of health, or the inspector of nuisances acting alone, has the right to seize if the article appears to him to be unsound or unwholesome or unfit for the food of man; and to carry it before a magistrate, with whom alone it rests to condemn the article and order it to be destroyed. In the case in point the action of the inspector must be regarded as a seizure, whether so intended or not; and as a mistaken seizure of meat which was not unfit for food, since his superior officer, the medical officer of health, negatived the inspector's opinion as to unfitness. It seems that the magistrate, though present, was not officially called upon, and that the carcass was returned to the owner and accepted by him. Under such circumstances the corporation would properly be liable for any damage that could be shown to result from their officer's mistake in seizing presumably wholesome meat.

NOTIFICATION CERTIFICATES.

A. B. C. writes: What is the correct course to adopt as medical officer of health (a) where a local practitioner constantly sends notifications unpaid through the post, upon each of which I am charged 2d.? (b) where a disease is notified and, upon visiting the house for inspection immediately upon receipt of notification, I find that no such disease exists?

*** (a) The Local Government Board have held that deduction may be made from the fees to notifying practitioners under the Infectious Disease (Notification) Act of the amount charged by the postal authorities in respect of certificates posted unstamped. But in the case of Chisholm v. Radcliffe Local Board, Judge Jones decided to the contrary. In any case, we assume that a medical officer of health would in the first instance reclaim from his council all amounts so paid by him to the postal authorities. (b) It is held that that difference of diagnosis does not of itself warrant rejection of a certificate of the medical attendant on a case, and it is not one of the duties of the health officer to verify notified diagnosis in general. But where proof exists of *mala fides* on the part of the certifier, the facts should be laid before the council; and where there seems to be ground for such a grave suspicion, it is proper for the medical officer of health to communicate with the notifier and to make a thorough investigation.

LITERARY NOTES.

ONE of the most recent additions to periodical medical literature in Germany is the *Archiv für Verdauungskrankheiten*, founded and edited by Dr. J. Boas. The new journal takes all that appertains to disease of the digestive apparatus, disorders of metabolism, and dietetics for its province.

The *Journal des Connaissances Médicales* has unearthed the following anecdote concerning Claude Bernard. After his paper on the functions of the pancreas was presented to the Académie de Médecine (in 1849), Magendie got him the decoration of the Legion of Honour without his knowledge. By a curious misprint the *Journal Officiel* announced that Claude Bernard, of Villefranche, had been named a Knight of the Legion of Honour for his valuable research on the *musical* (instead of "medical") properties of the pancreas. The slip was corrected in the journal on the following day, but it seems to have become a kind of obsession in Bernard's mind, and he was always in some trepidation when lecturing on the pancreas lest he should refer to its "musical" properties.

Professor Edmond Souchon, of Tulane University, New Orleans, has republished some interesting "Reminiscences of Dr. S. J. Marion Sims," which appeared not long ago in the New York *Medical Record*. Dr. Souchon was in Paris studying medicine when he first met Sims, who had gone to the French capital to demonstrate his new method of operating for vesico-vaginal fistula. Dr. Souchon introduced Sims to Velpeau, and made himself useful as an interpreter and as an assistant at the operations which the American surgeon performed before his brethren of the Paris faculty. His triumph was complete, though in two of the earliest operations the patient narrowly escaped dying under chloroform, which was given against Sims's wish. Sims repaid the services rendered him by Dr. Souchon by helping him in the most generous manner at a time of need, and other instances of his kindness of heart and liberality of hand are given. Altogether the memoir, even allowing for the partiality natural under the circumstances, leaves a very pleasant impression of Marion Sims. Incidentally Dr. Souchon, who, by the way, is a Professor of Anatomy and Clinical Surgery, enriches the English language with a new word, which in the present set of the shifting currents of abdominal surgery may be found useful, though it can hardly be considered ornamental. After mentioning that Sims was at one time subject to attacks of pain and swelling in the right iliac region, which caused him some concern, he goes on to say: "Surely if it had been some years later he would have been *appendicitized*." He piously adds: "But, thank God, he got well without the knife."

In the *Bulletin of the Johns Hopkins Hospital* Dr. Hunter Robb, Professor of Gynæcology in the Western Reserve University, Cleveland, Ohio, gives an account of the writings

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[1] Report to the Local Government Board on an outbreak of diphtheria at Potterne. No. 61. Messrs. Eyre and Spottiswoode, East Harding Street, E.C. Price 1s.

of François Mauriceau, an old French obstetrician of credit and renown in his day. Mauriceau, whose professional titles are somewhat too literally translated by Professor Hunter Robb as "ancient provost and guard of the company of sworn Master Surgeons of the City of Paris," was born in 1637, and died in 1709. He was the author of a work on midwifery, which was the accepted textbook on the subject in France in the seventeenth century and the early part of the eighteenth, and which was translated into English by "one Hugh Chamberlen." Dr. Robb gives an excellent analysis of Mauriceau's teaching, and sums him up as an honest, upright man, who never allowed his common sense to be obscured by the various superstitions which prevailed in his time. Mauriceau lived in an age when the midwife played a more leading part in the drama of the lying-in room than she does now, and the following passage is, therefore, not without interest:

> Many midwives, for fear of displaying ignorance, will not send for a surgeon sufficiently soon, and prejudice the poor women against them, calling them butchers and executioners.

In the *New Zealand Medical Journal* for April, Dr. Daniel Colquhoun sketches the career of Dr. James Currie, of Liverpool, who was, as he justly says, "one of the fathers of modern medicine," though his name no longer *volitat per ora virum*. Currie was born in 1756, and took his degree at Glasgow in 1780. He practised at Liverpool with considerable success, was elected a Fellow of the Royal Society, and was on terms of friendship with Erasmus Darwin, the author of the *Loves of the Plants* and grandfather of Charles Darwin, and many of the leading literary and scientific men of his day. He died in 1805. His name is known in literature by his *Life of Robert Burns*, and he was also the author of pamphlets on matters of public interest, such as the slave trade (which he wished to see abolished) and the relations of England with France. In medicine his best claims to be remembered are that he was the first physician in Great Britain who used the clinical thermometer systematically and was guided by its teaching. He was also an early apostle of hydrotherapy, and his *Medical Reports on the Effects of Water, Cold and Warm, as a Remedy in Fever and Other Diseases, whether applied to the Surface of the Body or Used Internally*, the first edition of which was published in 1797, show that he was a pioneer in a method of treatment which only in recent years has won for itself full *droit de cité* in scientific therapeutics. Currie's attention seems first to have been called to the value of cold water in fever by Dr. William Wright, who had practised in Jamaica, and who published a report on the subject in the *London Medical Journal* in 1786. Among numerous cases of "fever" (including typhus, typhoid, scarlet fever, small-pox, measles, and influenza) successfully treated by "the affusion of cold water," Currie relates a desperate case of tetanus which he cured by having the patient (a soldier) "thrown headlong" into the public salt water baths of Liverpool, then of the temperature of 35° F. The effect was immediate. The process was repeated daily for a fortnight, and "in less than a month we had the satisfaction of seeing our patient under arms, able for the service of his country." It is sometimes said that as a race we are falling into the sere and yellow leaf, and that we are not as our fathers were; and indeed one cannot help feeling that they must have been men of truly heroic mould to live through the treatment which they often underwent at the hands of their doctors.

MEDICAL NEWS.

ST. THOMAS'S HOSPITAL.—The Corporation of the City of London has granted a donation of 200 guineas to the special fund for the closed wards of this hospital.

A MEMORIAL tablet of the late Dr. Danielssen, designed by Herr Max Klein, of Berlin, has been placed on the front of the Lungegaards-Hospital at Bergen.

PRESENTATION.—Dr. Arthur Parkins, of Wolston, Warwickshire, has been presented with a pair of candlesticks by the pupils of his ambulance class, all of whom passed the examination.

SUCCESSFUL VACCINATION.—Dr. T. Davies, Public Vaccinator for the Suburban District of the Whittlesey Union, has been awarded for the second time in succession the full amount of Government grant for efficient vaccination.

THE fifty-fourth annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be held on Thursday, July 25th, and the two following days at the rooms of the Association, 11, Chandos Street, Cavendish Square, under the presidency of Dr. David Nicolson.

The following medical practitioners have been recently placed on the Commission of Peace: For the County of Lancaster, Dr. James John Gorham; for the Borough of Preston, Dr. Joshua Archer Bowen, and Dr. John Louie, ex-President of the Preston Medico-Ethical Society.

SURGEON-MAJOR RONALD ROSS, Madras Medical Service, has obtained the Parkes Memorial Prize for 1894 for an essay on "Malarial Fevers: their Causation and Prevention." This prize is given triennially, and consists of a gold medal and 75 guineas.

THE war dogs belonging to the German Army, which were shown at the Sporting Exhibition at Dresden, acquitted themselves, it is stated, as successfully in Red Cross duties as in conveying ammunition. The trials consisted in testing the power of dogs in seeking the wounded on the field of battle.

AN "At Home," very largely attended, was given last week at University College, London, by the President (Sir John Erichsen) and the Council. In addition to the attractions afforded by a concert in the Botanical Theatre, and the band of the Royal Engineers, which played in the portico, Professor Ramsay gratified the scientific curiosity of many guests by demonstrating the spectra of argon and helium.

ULSTER MEDICAL SOCIETY.—The annual meeting was held on June 27th. The report showed that the past year had been one of great prosperity, and that the membership had been considerably augmented. The following were elected officers for the ensuing year: *President*, Professor Sinclair, F.R.C.S.; *Vice-Presidents*, Dr. Bingham and Dr. Mackenzie; *Council*, Dr. Lindsay, Dr. Dempsey, Dr. Calwell, Dr. McCaw, Dr. McDonnell, and Dr. Bigger; *Honorary Treasurer*, Dr. Kevin; *Honorary Secretary*, Dr. McKisach; *Honorary Librarian*, Dr. Cecil Shaw; *Pathological Secretaries*, Dr. Lorrain Smith and Dr. Lynass.

GUY'S HOSPITAL.—The prizes were distributed to the successful students at Guy's Hospital by the Master of the Salters' Company on July 3rd. The Treasurer's gold medals for clinical medicine and clinical surgery were presented to Mr. F. J. Steward: the Gurney Hoare Clinical prize to Mr. A. H. Leete; and the Beaney prize for pathology to Mr. F. J. Steward. Mr. Lushington, on behalf of the governors, and Dr. Pye-Smith, on behalf of the Medical School, thanked the Master of the Salters' Company for his presence and for the undertaking which the Company had given to contribute £250 a year to the special fund for making up the deficit caused in the funds of the hospital by the agricultural depression.

ON June 29th a new Masonic Lodge for the London district, called the Rahere Lodge, and numbered 2,546 on the roll of the Grand Lodge of England, was consecrated by the Earl of Lathom, G.C.B., in the large hall of St. Bartholomew's Hospital, in the presence of some 200 brethren, a very large proportion of whom were present or past Grand Officers. The Lodge has been founded for the convenience of members of the medical profession on the medical staff of the hospital. The Prince of Wales was unanimously elected the first honorary member of the Lodge.

PADDINGTON GREEN CHILDREN'S HOSPITAL.—The Duchess of Teck opened on July 1st the new buildings of the Children's Hospital on Paddington Green. The new structure has cost nearly £11,000, whilst the furnishing and other expenses came to some £2,000 or £3,000 more. It will accommodate forty-eight in-patients. Mr. Hanbury, the Treasurer, stated that through the generosity of certain friends of the hospital the new building would be opened free of debt.

GIRLS' SCHOLARSHIP AT ST. ANNE'S.—The Council of the Royal Medical Benevolent College give notice that they will shortly elect to a scholarship at the School of St. Anne's Society, open to the orphan daughter of a medical man. Candidates must be between the ages of 7 and 12, and the father must have been in independent practice in England or Wales for five years. The scholarship provides free education and maintenance. Further particulars will be found in our advertising columns, or can be obtained from the Secretary of the Royal Medical Benevolent College, 37, Soho Square, W.

WE are asked to state that the Æsculapius Lodge of Freemasons will give a smoking concert on Thursday, August 1st, at 9.30 P.M., at the Portman Rooms, Baker Street, in honour of provincial and foreign Freemasons, who may attend the annual meeting of the British Medical Association. Foreign, American, and Colonial Masons are specially invited. Masonic clothing will not be worn, and those who desire to attend should communicate with Dr. T. Dutton, 7, Portland Place, London, W., stating the name and number of the lodge to which they belong.

A MEETING was held on June 27th at the house of Dr. Herman Weber in support of the Davos Invalids' Home, which was founded eleven years ago and has since been maintained by the munificence of three English ladies whose names are well-known to those who have visited Davos. The unavoidable retirement, owing to ill health, of Mrs. Lord, who has managed the Home with much success and ability, has rendered necessary an appeal to the public generosity in order especially to obtain funds for the purchase of the freehold. For this purpose, and also to provide for the management of the Home in future, the following Committee was appointed: The Bishop of Marlborough, the Hon. Evelyn Ashley, Dr. Harford-Battersby, the Rev. R. R. Resker, Dr. Herman Weber, Dr. Symes Thompson, Dr. C. T. Williams, Dr. William Ewart, and Mr. Arthur Herbert. The help, either direct or indirect, of members of the medical profession, than whom none can better realise the importance of keeping the Home open, is invited by the Committee. The Home is designed to meet the needs of those whose limited resources would not otherwise permit them to take advantage of the health-restoring qualities of the higher Alps.

WILLS AND BEQUESTS.—The late Mr. John Proctor, of Highbury, who died on April 24th, has bequeathed £200 each to Guy's Hospital, the London Hospital, the London Fever Hospital (Liverpool Road), the Charing Cross Hospital, and King's College Hospital; £100 each to the Royal Hospital for Diseases of the Chest (City Road), the Poplar Hospital, the London Temperance Hospital, the North London Consumption Hospital, the Royal Free Hospital (Gray's Inn Road), the Cancer Hospital (Fulham), the Royal National Hospital for Consumption (Ventnor), the City of London Hospital for Diseases of the Chest (Victoria Park), the London Lock Hospital (Westbourne Grove), University College Hospital, the Royal London Ophthalmic Hospital, and the Zenana Bible and Medical Mission (Adelphi); and £50 each to the Metropolitan Hospital, the Middlesex Hospital (for the use of the cancer wards or patients), the Royal Hospital for Children and Women (Waterloo Road), St. John's Hospital for Diseases of the Skin (Leicester Square), the Evangelical Protestant Deaconess's Institution and Training Hospital (Tottenham), and the Hospital for Diseases of the Throat (Golden Square).

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; doubly qualified. Salary, £100 per annum, with an allowance of £20 per annum for cab hire, furnished rooms, fire, lights, and attendance. Applications to Alex. Forrest, Secretary, by July 15th.

BRADFORD INFIRMARY AND DISPENSARY.—Honorary Physician. Applications to the Secretary by July 22nd.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.—Assistant Bacteriologist in the Animal Department. Salary, £150 a year. Applications to the Director by July 22nd.

CANCER HOSPITAL (FREE), Fulham Road, S.W.—House-Surgeon; Appointment for six months. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by July 15th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer, doubly qualified. Salary, £100 per annum with board, etc. Applications to the Secretary by July 19th.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary, £15, board, (exclusive of beer, wines, and spirits), residence, washing, and attendance. Applications to the Secretary by July 20th.

DENTAL HOSPITAL OF LONDON, Leicester Square, W.C.—Two Assistant Dental Surgeons. Applications to J. Francis Pink, Secretary, by July 8th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 a year, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or in lieu thereof the sum of £20 per annum. A knowledge of Welsh desirable. Applications to Thos. Thomas, Secretary, Board Room, Bagillt Street, Holywell, N. Wales, by July 17th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Assistant Physician. Applications to the Secretary by July 15th.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary by July 12th.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End.—Senior Demonstrator of Anatomy. Salary payable by a percentage of fees. Applications to Munro Scott, Warden, by July 8th.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End.—Senior and Junior Demonstrators of Physiology. Salary for the senior post, £150 a year and a proportion of the fees paid for classes, and for the junior post £80 a year. Applications to Munro Scott, Warden, by July 8th.

NEWPORT AND MONMOUTHSHIRE INFIRMARY, Newport, Mon.—House-Surgeon, doubly qualified. Salary, £100 per annum, with board and residence. (No stimulants provided.) Applications to the Secretary by July 13th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer for the North-Western Hospital for Fever Patients, unmarried, doubly qualified, and not more than 35 years of age. Salary, £100 per annum during the first year, £120 during the second, and £130 during the third and subsequent years, with board, lodging, attendance, and washing. Applications on forms provided, to be sent to the Offices of the Board, Norfolk House, Norfolk Street, Strand, W.C., by July 11th.

MIDDLESEX HOSPITAL, W.—Assistant Physician, must be F. or M.R.C.P.Lond. Applications to F. Clare Melhado, Secretary-Superintendent, by July 8th.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by July 25th.

QUEEN'S JUBILEE HOSPITAL, Earl's Court.—Surgeon. Applications to the Secretary by July 14th.

ROYAL BERKS HOSPITAL, Reading.—Third or Assistant Medical Officer. Board, lodging, and washing, provided, but no salary. Appointment for six months. Applications to the Secretary by July 13th.

ROYAL VICTORIA HOSPITAL, Bournemouth.—House-Surgeon and Secretary. Salary, £100 per annum, with board. Appointment for two years. Applications to the Chairman of the Committee by July 17th.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon and Senior Assistant House-Surgeon, doubly qualified. Salary for the former, £120 per annum, with a prospective advance of £10 per year for the second and third years; and for the latter £80 per annum, with board, lodging, and washing. Applications to the "Medical Staff of the Sheffield General Infirmary, to the care of the Secretary," by July 13th. The election will take place on July 20th.

SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to Henry Bonner, Secretary, by July 15th.

UNIVERSITY OF GLASGOW.—Two Examiners for Degrees in Medicine to Examine in Chemistry and Materia Medica respectively. Applications to Alan E. Clapperton, Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by July 25th.

MEDICAL APPOINTMENTS.

ADAMS, Dr., reappointed Medical Officer of Health to the Long Ashton Rural District Council.

ADAMS, P. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior House Physician to the North-Eastern Hospital for Children, Hackney Road.

BEASLEY, J. G., L.R.C.P.Edin., L.F.P.S.Glasg., reappointed Medical Officer of Health to the Rowley Regis District Council.

BOND, W. A., M.A., M.D., B.C.Cantab., D.P.H.Cantab., M.R.C.P.Lond., M.O.H. for the St. Olave District Board, Southwark, appointed M.O.H. to the Holborn District Board.

BRODIE, W. S., M.B., C.M.Glasg., appointed Assistant House-Surgeon and Dispenser at the Worcester Infirmary.

CARVER, E., M.A., M.D., appointed Consulting Surgeon to Addenbrooke's Hospital, Cambridge, on retirement from the Surgeoncy.

COCKCROFT, M., M.D.St. And., M.R.C.S., reappointed Medical Officer for the Masham District of the Leyburn Union.

DAVIES, Alfred O., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Machynlleth Union District.

DOUTY, Edward H., M.A., M.B., B.C., M.R.C.S., L.R.C.P., appointed Assistant Surgeon to Addenbrooke's Hospital Cambridge.

ERSKINE, Robert, M.D.R.U.I., reappointed Medical Officer of Health to the Cambourne District Council.

FAUSSET, A., M.B., appointed Medical Officer for the No. 2 District of the St. George's Hanover Square Union.

FOSTER, Wm., B.A.Camb., M.B., D.P.H., appointed Medical Officer of Health to the Shipley District Council, *vice* J. J. Rutherford, M.D. St. And.

GAY, Charles Joseph, M.A., M.D., F.R.C.S., appointed Surgeon to Addenbrooke's Hospital, Cambridge, *vice* E. Carver, M.A., M.D., retired.

HANCOCK, J. F., M.B., C.M.Edin., M.R.C.S., appointed Medical Officer of Health to the Penrith Rural District Council.

HOWIE, A., M.B., C.M.Glasg., appointed Medical Officer for the Alberbury District of the Atcham Union.

MUSTOE, Frederick, M.D.Durh., appointed Medical Officer for the Stockton District and Workhouse of the Stockton Union.

JONES, Henry T., L.R.C.P., M.R.C.S., appointed Medical Officer of Health to the Tenbrook Rural District Council.

KELLY, Charles, M.D.Lond., M.R.C.S., reappointed Medical Officer of Health to the East Preston Rural Council.

MUIR, William, M.B., C.M.Glasg., appointed Medical Officer and Public Vaccinator to the Parish of Cramond, Midlothian, *vice* James Macartney, L.F.P.S.G., resigned.

PAUL, H. N., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the second District of the Wimslow Union, *vice* W. H. Walter, M.D.Brux., resigned.

TAYLOR, Mr. Geo., appointed Medical Officer and Public Vaccinator for the Ninth District of the Hexham Union, *vice* Robert Bradshaw, L.A.H.Dub., L.M., resigned.

PRIESTLEY, Joseph, B.A.Lond., M.D.Edin., appointed Medical Officer of Health for Lambeth, *vice* W. Verdon, M.D.Brux., resigned.

QUARRY, M. H., M.R.C.S., L.R.C.P., B.Ch., appointed Medical Officer of the Lambeth Infirmary and Workhouse.

SMITH, Thomas, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Brampford Speke District of the St. Thomas's Union, *vice* A. A. Macbeth, M.B., C.M., resigned.

SOMERSET, Edward, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health for the Oundle Union District, *vice* G. W. B. Calcott, M.R.C.S.Eng., L.S.A., resigned.

STODDART, W. H. B., M.B., B.S., appointed senior House Physician at the National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury.

TURNER, George, M.B.Camb., D.P.H., L.R.C.P.Lond., appointed Medical Officer of Health for the Cape Colony.

VALLANCE, Mr., appointed Assistant Medical Officer to the Chelsea Union.

YOUNG, Ralph, B.A.Durh., M.D., M.R.C.S.Eng., appointed Medical Officer of Health for the Royton Urban District, *vice* James Gardner, M.B., C.M.Glasg., resigned.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M.. Lecture at 4.

WEDNESDAY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Beevor.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 8.30 P.M.—Specimens: Dr. Purcell and Dr. Bantock. Dr. Fancourt Barnes: Some Difficulties in the Use of the Curette (adjourned discussion). Dr. Halliday Croom: A Case of Glycosuria complicating a Large Ovarian Cyst. Dr. Bamboo, of Rome, will exhibit and explain some Roman Antiquities relating to Obstetrics and Gynæcology, mostly Votive Offerings dug up in Italy.

NEUROLOGICAL SOCIETY OF LONDON, National Hospital for Paralysis, Queen Square, 8.30 P.M.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

WILDING.—On June 30th, at The Hawthorns, Hindley, wife of W. F. W. Wilding, Medical Officer of Health, of a son, prematurely—survived a short while.

CARR.—On May 24th, at Julfa, Ispahan, Persia, the wife of Donald W. Carr, M.B., B.C.Cantab (Church Missionary Society), of a son.

NORTHCOTE.—On June 8th, at Holly Lodge, Norbiton, Surrey, the wife of A. Beauchamp Northcote, M.D., of a son.

MARRIAGES.

RUSSELL—RITCHIE.—At the Free Middle Church, Perth, on June 18th, by the Rev. J. Calder Marshall, D.D., Pilrig, assisted by the Rev. D. W. Kennedy, Perth, and the Rev. A. C. Watt, Comrie, William Russell, M.D., F.R.C.P.E., to Beatrice Ritchie, M.D., elder daughter of James Ritchie, C.E., Perth.

MCKENZIE—SUTHERLAND.—At Waterslap, Larbert, on June 27th, by the Rev. Robert Lockie, John McKenzie, L.R.C.P.S.Edin., Kirkby-in-Ashfield, Notts., to Nellie, eldest daughter of the late John Sutherland, Waterslap, Larbert.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MUSICAL MEMBER writes: Can any member recommend a reliable treatment for excessive perspiration of hands in a violinist and pianist?

DR. J. W. would be glad to hear of any institution or home in which a woman of feeble intellect would be received on payment of a sum not exceeding £1 weekly.

ELECTROLYSIS OF SUPERFLUOUS HAIRS.

G. asks: How many cells of a Leclanché battery ought to be used for this operation? To which pole ought the needle to be attached? I have been using twelve cells with the patient under chloroform, and still the hairs recur.

*** Five Leclanché cells should be used, the needle on the negative wire: for the operation to be successful the needle must enter the hair follicle; if it is made of very fine platinum wire and is blunt-pointed the introduction of it into the follicle is easier than with a stiff sharp needle. Chloroform is quite unnecessary.

ANSWERS.

SARTOR.—We know of no institution which takes male inebriates free or on a very small payment.

MEMBER might do well to apply to the carriage company in question for references to any medical men who have purchased their vehicles.

LAYMAN.—*Hints to Mothers for the Management of their Health during the Period of Pregnancy and in the Lying-in Room*, by Thomas Inch, M.D., edited by R. W. Parkes, M.R.C.S. (London: Longmans, Green, and Co. 2s. 6d.), would probably meet our correspondent's requirements.

PUBLIC HEALTH.—The holder of a diploma in Public Health would have no prior claim in a legal sense, unless the town or district has a population of 50,000 or more. In any case the diploma ought to carry weight with the electing body as evidence of special knowledge of the kind which the appointment calls for.

W. G.—We know nothing of the composition of this secret "remedy." Some time ago it was reported in the press that the representative of this "remedy" had been fined for selling it, on the ground of its alleged poisonous character, in one of the colonies. Recently there have been published statements to the effect that there have been many relapses.

HARVEY'S WORKS.

DR. J. R. WILLIAMS.—Our correspondent is probably thinking of the *fac-simile* of the original edition of the *De Motu Cordis*, with translation and memoir. This was published by subscription in December last by Mr. G. Mordaunt, 42, Burgate Street, Canterbury.

CAMBERWELL PROVIDENT DISPENSARY.

WE have received a letter from Mr. James Wyeth, honorary Secretary to the Camberwell Provident Dispensary, complaining of the term "sweating the doctors" being applied to the system of remuneration of the medical officers of that institution. The term "sweating," we believe, is a word of recent introduction, and is meant understood to mean any man living in a trade wherein the trade workers are systematically deprived of what may be regarded as "fair" wages for their work. It is certainly, if by any remuneration among the public medical practitioners could be termed to accept as remuneration such payments as the champion those paid by the above institutions to their medical officers. It is difficult to see why the term "sweating" should not apply in their case as in the other.

If this institution is a charity it can hardly be considered a provident

dispensary, and other circumstances have to be taken into consideration, but our correspondent labours under a misapprehension if he imagines that "sweating" is not possible in the case of charities, for when these latter are abused, as they too frequently are, "sweating" of the most pernicious kind is the result.

To get so large a sum as £2,400, or £1,800 a year, out of such small payments as those charged to members of this institution must obviously imply a correspondingly large membership. We are free, however, to admit that the dispensary has rules which in one important respect are superior to some other institutions of a similar class. According to Rule 3 its benefits are not to be extended to those whose average earnings exceed 30s. a week. The Honorary Secretary speaks of the institution as a charity supported by voluntary contributions, whereas in the rules it is called a provident dispensary. As we have had occasion to point out recently on several occasions, among others, in commenting on the Leicester Dispensary, an institution cannot well be both provident and charitable.

Medical Aid Associations.

C.M.H.—If our correspondent had given any attention to the answers in our columns during the last few weeks he must have seen the subject of his question discussed over and over again. It has repeatedly been stated that medical aid societies are not desirable associations for medical practitioners to be connected with, and the one referred to by our correspondent is, perhaps, the worst of them all.

F. H. M.—If to accept 8s per cent. of penny-a-week subscriptions for medical attendance on persons regardless of their social and financial condition be derogatory from a professional point of view, especially when these miserable pittances are obtained by the wholesale "touting" of the public, including the patients of other practitioners, we cannot but consider the appointment referred to by our correspondent an objectionable one, and should therefore advise him to decline it.

NOTES, LETTERS, Etc.

Lunatic Asylums and Inhabited House Duty.

The First Division of the Court of Session at Edinburgh decided last week that the Dundee Royal Lunatic Asylum was liable to be assessed for inhabited house duty on the full value of the institution. This decision was arrived at on the ground that the asylum was not covered by the words of the exemption—"any hospital, charity school, or house provided for the reception or relief of poor persons." It was also held that certain parts of the income of the asylum were of the nature of an endowment. The board of private patients, too, was a difficulty.

The Dental Profession.

Dr. Hugh Woods (Highgate) writes: Mr. Storer Bennett characterises my statement as to unqualified dental practice as "absolutely unfounded" to the knowledge of those really acquainted with the facts, and he considers that I cannot be in a position to form an accurate judgment on the subject. I quite admit that neither I nor Mr. Storer Bennett can form an accurate judgment on the subject. We can only make a rough estimate, as I did in my letter. If Mr. Storer Bennett will give his estimate there will be a more profitable subject for us to discuss than that of my veracity. I do not think the possession of a dental diploma essential to a right judgment on such a subject. I have made special investigations in respect to the question, and have received much information from many dentists. I have also in my possession a sworn affidavit in reference to a large dental concern in London, and I can assure Mr. Bennett I did not make the statement recklessly. He will find that many firms who are carrying on large advertising dental practices pay no regard to the Dental Acts in the employment of their operators. The Dental Acts are almost inoperative as regards penalties against unregistered dentists. If there were any body which would undertake prosecutions in a manner likely to be effective, I would undertake to keep it supplied with cases for a long time to come. There is a dentist in this neighbourhood who has practised as a dentist in open disregard of the Dental Acts since the *Register* was founded. He could have registered, but he did not take the trouble. I may be wrong as to the precise amount of dental work done by unregistered persons; but my statement, instead of being "unfounded," has a very large foundation indeed. Probably some dental readers of the British Medical Journal will support my opinion.

Dry Gangrene after Snakebite.

Dr. Michael G. Dobbyn (Busrah, Persian Gulf) writes: The following curious case came under my notice at Busrah (Bassorah) in September, 1894. An Arab was brought to me suffering from dry gangrene of the left leg, extending to within 2 inches of the knee-joint; the leg was completely mummified. He gave the following history: About two months previously, while working in the gardens at Gerna—the presumed site of the Garden of Eden—which are situated at the junction of the Tigris and Euphrates, he was bitten in the foot by a snake. The local barber was immediately summoned, who tied a ligature tightly round the man's thigh, excised the flesh in the neighbourhood of the bite, and then bled him freely from the long saphenous vein. Having determined on amputating, I placed the patient on a mattress and left the room to get my instruments; but, hearing loud screams proceeding from the room, I ran back, and to my surprise saw a snake about 8 feet long within 10 feet of my patient. My servant who was present got a stick but failed to strike the snake, which made its escape under a pile of date wood. I may mention that this is only the second snake that I have seen in Busrah after a residence here of over a year. I amputated the limb through the condyles and the patient made an uninterrupted recovery, returning home in four weeks with an excellent stump. Perhaps some of your readers who are authorities on the effects of snakebites may be able to inform me whether the gangrene could be due to that cause or to the more possible one of the barber's ligature.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Advertiser; A. J. Anderson, M.B., Pembroke. (B) Dr. A. Bronner, Bradford; C. L. Birmingham, M.B., Highgreen; Messrs. Burt, Boulton, and Haywood, London; Messrs. Burroughs, Wellcome, and Co., London; Dr. D. C. Black, Glasgow; Dr. M. Beverley, Norwich; Mr. W. M. Beaumont, Bath; Mr. W. L'H. Blenkarne, Leicester; R. L. Brander, M.B., Aspley Guise; J. E. Blomfield, M.B., Sevenoaks; T. M. Burn-Murdoch, M.B., Edinburgh; Messrs. P. B. Burgoyne and Co., London; Mr. L. A. Bidwell, London. (C) H. Caiger, M.B., Jacobsdal, Orange Free State; Mr. S. Craddock, Bath; Dr. R. Caton, Liverpool; Mr. J. J. Coulton, London; Dr. R. W. Carter, Weymouth; Mr. E. Crompton, Victoria, B.C.; Dr. G. Courtney, London; W. H. Cooper-Pattin, M.B., Norwich; C. W. M.; A. Clarkson, M.B., Edinburgh. (D) Dr. B. Dyer, London; C. W. Daniels, M.B., Georgetown, B. Guiana; Dr. C. R. Drysdale, London; Dr. J. W.; E. H. Douty, M.B., Cambridge; J. D. Duncan, M.B., Carlisle; Mr. M. G. Dobbyn, Busreh; Dr. L. Drage, Hatfield; Mr. H. J. Dadysett, Bombay; Mr. R. W. Doyne, Oxford; Dr. T. Davies, Whittlesey; J. W. Dowden, M.B., Edinburgh; Mr. H. P. Dunn, London. (E) *Electrical Review*, The Editors of the, London; Experientia Docet; Dr. Wm. Ewart, London; Excelsior; Mr. A. de F. Egerton, M.P., London; E. E. (F) W. W. Floyer, M.B., Egham; Fair Play; Mr. J. E. Frazer, Ventnor; W. F. Farquharson, M.B., Carlisle; Mr. G. Fox, Eureka, Victoria; Dr. C. Forbes, London. (G) Messrs. R. W. Greef and Co., London; Mr. J. S. Gelston, Ixworth; G.; Dr. J. E. Garner, Preston; Governor; E. B. Garland, M.B., Gotham. (H) Mr. F. Haydon, London; Mr. W. B. Holderness, Windsor; Mr. C. H. Harcourt, Alfreton; H. Huskinson, M.B., Oakham; Miss B. Henderson, Edinburgh; Mr. J. S. Hooker, Hastings; Mr. E. H. Hankin, Agra; H. A. H.; Dr. T. G. Horder, Cardiff; Mr. W. H. Hughes, Manchester. (I) I. M. S.; G. W. Isaac, M.B., London. (J) Mr. H. T. Jones, Pembroke; Dr. A. H. Jones, Northampton. (K) Mr. H. W. Knowles, St. Helens; E. Knowling, M.B., Tenby. (L) Layman; Lover of the Game; L. Q. W. (M) Mr. A. G. Merson, Gifford; C. H. Milburn, M.B., Hull; Dr. J. Mackenzie, Burnley; A. Mouillot, M.B., Harrogate; Mr. G. D. Mackintosh, St. Anne's-on-the-Sea; Dr. C. W. M. Moullin, London; Member; Dr. A. Mantle, Halifax; Musical Member. (O) Observer; Mr. C. E. Oldacres, Daventry. (P) George Parsons, M.B., Hawkshead; B. Pollard, M.B., London; Dr. R. W. Philip, Edinburgh; Messrs. J. Parnell and Sons, Rugby; Dr. C. E. Purslow, Birmingham; Dr. C. Porter, Stockport; Dr. J. Priestley, Leicester. (R) Dr. A. T. Rattray, Portobello; A. J. Rice Oxley, M.B., London; Dr. H. M. Richards, Birmingham. (S) Surgeon-Captain A M R.; Mr. R. R. Sleman, London; Mr. J. Snowman, London; Dr. H. Shore, Walsall; Dr. J. S. Scriven, Borth; Sartor; Dr. J. Shaw, London; Mr. T. Smith, Exeter; E. A. Shaw, M.B., Nagasaki; Mr. W. H. Savery, Cleethorpes; W. H. I. Sellers, M.B., Preston; Dr. A. Sheen, Cardiff; Professor E. A. Schäfer, London. (T) Mr. J. M. Tractenberg, London; T. J. J. (V) Mr. H. B. Vincent, East Dereham. (W) F. C. Wallis, M.B., London; Mr. J. A. Whitty, Wynberg, Cape Colony; Dr. A. Wynter, Beckenham; Dr. W. Williams, Penarth; Dr. O. Wunderlich, London; Mr. H. T. A. Warnock, Donegal; Mr. R. S. Wylie, Newton Abbot; Mr. H. E. Waddy, Gloucester. (Y) M. Young, M.B., Brighouse; etc.

BOOKS, Etc., RECEIVED.

Die Krankheiten der Eileiter. Herausgegeben von A. Martin. Leipzig: E. Besold 1895. M. 13.

Hygiene and Public Health. By Dr. L. C. Parkes. Fourth Edition. London: H. K. Lewis. 1895. 10s. 6d.

Mentally Deficient Children: their Treatment and Training. By Dr. G. E. Shuttleworth. London: H. K. Lewis. 1895. 4s.

Textbook of Forensic Medicine and Toxicology. By Dr. A. P. Luff. Vols. I and II. London: Longmans, Green, and Co. 1895. 24s.

*** In forwarding books the publishers are requested to state the selling prices.

A CLINICAL LECTURE
ON
DISEASES OF THE BREAST.

Delivered at the Middlesex Hospital

BY

ANDREW CLARK, F.R.C.S.,

Surgeon to, and Joint Lecturer on Surgery at, the Hospital.

DURING the last few weeks we have had under our observation in Bird Ward no fewer than 9 and in Whitehead Ward 2 cases of diseases of the breast, and I take this opportunity of recalling them to your minds and making some observations which I hope may prove useful. The moment a woman notices anything wrong with her breast, whether it be painful or enlarged, or she can feel a distinct tumour in it, she at once begins to get uneasy lest she should have cancer, as there is a widespread idea, and there is certainly some ground for it, that the female breast is one of the commonest seats of cancer. The result is that we see a considerable number of patients with supposed cancer of the breast, who not only have no cancer but frequently have no tumour, and not infrequently have nothing more the matter than neuralgic pains, and this is particularly the case in women of a nervous temperament whose general health has been undermined by a long illness or nervous shock. *Apropos* of this I might mention that it is sometimes difficult to convince a patient that she has not a tumour, as, if a breast is manipulated in a certain way, namely, the gland seized between the thumb and fingers, and compressed, the idea of a tumour is presented to the touch; what is felt being nothing more than the compressed gland tissue. When examining a breast, therefore, you should make it a cardinal rule always to place the hand flat upon it and make gentle pressure against the ribs, carefully feeling every part; in this way you cannot fail to detect a tumour if one be present, and you do not manufacture one if it be not there.

Before detailing the cases, let me enumerate the chief of the abnormal conditions which are presented to us in the breast, some of which are represented in the cases I shall mention. Neuralgia, subacute mastitis, induration left after acute abscess, chronic abscess, cystic disease—and of this there are several varieties, those arising in the ducts of the gland, the simple serous cyst arising in the areolar tissue, and cystic developments in solid tumours being the commonest—and, lastly, solid tumours, which may be divided into non-malignant and malignant. Occasional instances of most varieties of the former class have from time to time been recorded, but the so-called adenoid is that most frequently met with: the majority of these tumours are not, however, pure adenoid growths. Although some of them have been found to consist entirely of imperfectly developed gland tissue, the majority are interspersed with more or less dense fibrous and connective tissue, hence the terms adeno-fibroma, adeno-sarcoma, or, putting it the other way, hard and soft fibro-adenoma; these varieties not infrequently undergo cystic degeneration, and result in the cystic adenoma.

Among the malignant tumours scirrhus is by far the commonest, but soft cancer and colloid are sometimes met with, and a good many cases of epithelioma or duct cancer arising in the columnar epithelium of the ducts have been described. Sarcoma, too, usually of the spindle-celled variety, is occasionally met with.

I will now give you an abstract of each of the eleven cases, and in order not to weary you, shall omit details which are unnecessary for our purpose.

CASE I.—C. B., aged 38, a married woman with one child, noticed a small lump in her right breast early in the year 1892; for two years it enlarged very slowly, but for the last twelve months the enlargement has been more rapid, and she has experienced a painful sensation about it, and the skin has become reddened; she has also noticed that she has been losing flesh. She, however, sought no advice until a fortnight ago, when she went to another hospital, where, she says, she was told that she was not strong enough to undergo an operation, and was discharged in seven days. No cancer or phthisis could be traced in the family.

On admission we found a retracted nipple, a hard tense tumour, the size of a pigeon's egg, in the right breast immediately below the nipple; the skin was red and firmly adherent to it, but it was freely movable over the chest wall, and no glands were found implicated. The diagnosis was scirrhus. The breast was removed, a good deal of the skin having to be sacrificed, which somewhat retarded recovery, as it was impossible to close the wound completely, but the patient left the hospital quite well six weeks after the operation.

CASE II.—J. M., aged 55, also a married woman, who had had two children, the youngest 27 years old, observed about four months ago that her right breast was larger than the left, and the nipple was drawn in. From that time to the present the enlargement has been increasing, but she has suffered no pain; no cancer or phthisis in the family. On admission the right nipple is seen to be retracted; a hard tumour the size of an orange can be felt in the upper segment of the breast, which is not adherent to the structures beneath, nor is the skin adherent to it. An indurated cord can be felt leading into the axilla, where there is decided glandular enlargement. The diagnosis here was scirrhus. The breast and axillary glands were removed in the usual way. The wound was completely closed except in the angle of the axilla, where a drainage tube was inserted. The greater part of the wound healed by the first intention, but recovery was retarded by some suppuration in the axilla. This patient, however, left the hospital quite well six weeks after the operation.

CASE III.—S. B., aged 38, married, three children, youngest 9 years old. She first felt a lump in her right breast when she accidentally touched it; this was, as far as she can remember, about a year ago; it has never given her any pain, and she has enjoyed fairly good health, but she states that the tumour has perceptibly but not rapidly increased in size. No history of cancer in the family. A brother died of phthisis. On admission, the right breast was obviously larger than the left; the right nipple was on a lower level than the left nipple, but was not retracted, and immediately below it a tumour about the size of a Tangerine orange could be felt. It was said not to be painful, but was very tender, and ached for some hours after manipulation. It was hard and inelastic, moved on the subjacent structures and the skin moved over it, and there were no enlarged glands to be felt. The diagnosis was doubtful, so, after the patient had been put under an anæsthetic, prepared for whatever was necessary being done, an incision was made into the centre of the lump. This settled the diagnosis immediately—namely, scirrhus—so the breast was removed in the ordinary way, the edges approximated, and firm pressure made on the wound by strapping. The wound healed by the first intention, and the patient left the hospital quite well three weeks after the operation.

CASE IV.—E. R., aged 44, married, three children, youngest aged 7, noticed a lump about the size of a walnut in the lower quadrant of her right breast. For a month it appeared to undergo no change, when it suddenly, without any cause that she knows of, became painful and got a little larger, so she came to see me, and I found an indurated swelling, adherent all round, which I believed to be inflammatory, and recommended treatment accordingly. A fortnight's treatment, however, resulted in no change except an increase in pain. Accordingly, I punctured the swelling with a negative result and advised the patient to go to the hospital. This, however, she would not consent to do till another month had elapsed, when she went and was admitted. During this time there had been practically no change in the tumour, and the report on her state on admission says: There is a rounded tumour in the lower quadrant of the right breast, circumscribed and abrupt above, but its edge ill defined below. It is hard and brawny to the touch, adherent to the pectoral fascia and to the skin, which is reddened for some distance and almost on the point of ulcerating at the most prominent part. One enlarged gland can be felt in the axilla, but it is not hard. No history of cancer or phthisis in the family. The diagnosis here was a little doubtful; it was obviously a solid growth, and so I decided to remove it, leaving the breast. This was done by a vertical elliptical incision, and though the naked-

eye appearance was something like scirrhus, a microscopic examination was necessary to determine its nature, which has proved it to be so. It was not possible to close the lower part of the wound, owing to the necessary sacrifice of some skin, but the patient made a good recovery and left the hospital a month after the operation, the wound well healed.

Case v.—M. C., aged 70, married, five children, the youngest 21 years old. A month before admission she noticed that her right nipple was drawn in, and on putting her hand to the breast she felt a hard lump which seemed to her, after feeling it a few times during the last month, to be increasing in size, and for the last week she has experienced occasional pains in it. There is no history of cancer or phthisis in the family. She remembers having a swelling in the same breast after her first child, which after a time burst and discharged matter. On admission the following was her condition: the superficial veins on the right side of the chest are enlarged, the right nipple is retracted, and a hard nodular mass can be felt in the lower and outer quadrant of the breast. It is not adherent to the structures beneath, the skin is slightly puckered over it; no enlargement of lymphatic glands can be detected. Diagnosis, scirrhus. Treatment: Excision of the gland in the usual way, and it is noted that there was only one vessel requiring a ligature; the edges of the wound were brought into good apposition, a drainage tube inserted, and the wound dressed with dry dressing. The dressings were reapplied the next day, as a blood-stained discharge had come through them; the wound looked healthy, so the tube was removed and the dressings reapplied. The patient left the hospital quite well three weeks after the operation.

Case vi.—A. A., aged 36, married, no children, gave the following history: Over two years ago she received a blow on the right breast, and a few months after she noticed a lump the size of a pea in the situation of the blow; this gradually enlarged, and in June, 1893, she consulted a doctor. This is the first accurate date she can give, but she thinks at that time she had had the swelling about six months. An incision was advised, which was made, and the tumour disappeared, but gradually formed again, and in March, 1894, the breast was removed. No history of cancer or phthisis in the family. On admission there was a horizontal scar 7 inches long over the right mammary region, and about a third of the distance from the inner end a swelling the size and shape of a Tangerine orange. The greater part of the swelling was hard but the inner part was softer and there was an indistinct sense of fluctuation communicated on manipulation; it was freely movable over the subjacent structures and the skin was movable over it. No enlarged glands could be detected. The diagnosis here was recurrent cystic adenoma, the old-fashioned sero-cystic sarcoma. Its removal was advised and carried out by elliptical incisions, when it was found to be a papillomatous cyst. The wound was dressed with dry dressing and strapped firmly, and the patient left the hospital quite well a fortnight after the operation.

Case vii.—M. A. H., aged 58, married, no children, noticed a lump about the size of a walnut in her right breast between three and four months before admission. It has been gradually increasing in size since that time but has never given her any pain; no family history of cancer or phthisis. On admission the breast was observed to be very small. A tumour the size of a Jaffa orange occupies the upper and inner quadrant of the right breast; it is elastic, and gives a doubtful sense of fluctuation; at one spot the skin is slightly discoloured and adherent, the tumour is freely movable over the chest wall, the nipple is not retracted, there are no enlarged glands to be felt. Diagnosis, cystic disease. The treatment decided on was removal, which was accordingly done in the usual way. A drainage tube was inserted into the lower angle of the wound, and removed after twenty-four hours, and dry dressing applied. The patient had no untoward symptoms, the wound healed rapidly, and she left the hospital convalescent in less than three weeks after the operation.

Case viii.—M. B., aged 44, widow, no children, gave the following history. A fortnight ago, while washing, she noticed a small lump in her breast. It was tender to the touch, and the skin over it was slightly reddened; it has not altered in character since first observed but is the seat of occasional shooting pains, and is a worry to the patient. Her mother and her mother's mother died of cancer, and her father's father, brother, and herself suffer from epileptic fits; no history of phthisis. On admission there is a small, ill-defined lump in the outer quadrant of the right breast, movable with the breast over the subjacent structures and not adherent to the skin, which is slightly reddened over it. It appears to be tender, and this tenderness extends into the axilla, though no enlargement of glands can be detected. Diagnosis, subacute mastitis. After a week's treatment the patient left the hospital, the swelling having entirely disappeared.

Case ix.—M. A. C., aged 85, widow, six children, youngest 50 years old, noticed that five years ago her left nipple was retracted, but she had no pain, and took no heed of it until about twelve months ago, when the skin became ulcerated; she then sought advice, and was given something to apply to it, but the ulcer spread, and nodules formed in the neighbourhood. On admission, in the site of the left breast was an ulcer about the size of a four-shilling piece adherent to the subjacent tissues; the nipple could not be seen, and there was a hard nodule near the centre of the ulcer; there was a thin puriform discharge, and several glands could be felt in the axilla. Diagnosis, scirrhus; treatment, palliative.

Case x.—E. B., aged 45, single, first noticed a swelling in her left breast about the middle of February last; it was slightly painful and tender. After a month she sought advice, and an operation was recommended; the swelling continued to increase in size until a fortnight ago, since which time it has remained stationary. On admission both breasts are very small; a rounded tumour, the size of a small Tangerine orange, can be felt in the upper and inner quadrant of the left breast; it is elastic and semifluctuating, neither adherent to the skin nor to the tissues beneath; no enlarged glands in the axilla. Diagnosis, cyst; treatment, excision of gland. There was an unusual amount of hæmorrhage for so small a breast, but it was completely stopped by pressure and catgut ligatures, the edges of the wound well brought into close apposition, dry dressings applied, and over this broad strips of strapping. The wound healed by the first intention, and the patient left the hospital convalescent sixteen days after the operation.

Case xi.—R. M., aged 66, spinster, noticed a small hard nodule in her left breast about twelve years ago. She says it looked and felt like a finger nail implanted there; she suffered no pain from it, and sought no advice. It gradually increased until it has attained its present condition, and lately the skin has been discoloured. No cancer or consumption in the family; she herself has been suffering from rheumatism for the past four years more or less severely, and is now quite helpless on account of it, being unable to move her legs or arms without great pain. There is a warty-looking growth, the size of a large orange, in the upper and outer segment of the left breast; it is adherent to the skin, but moves freely over the subjacent structures; no retraction of nipple, and no enlarged glands. Diagnosis, duct cancer. The patient objecting to operation, it was decided to treat it with Fell's paste, and now, three weeks after the commencement of treatment, the growth has nearly sloughed off.

Such, then, is a brief account of these 11 cases, 7 of which were cancer, 3 cystic disease, and 1 mastitis. Commenting upon them as a whole, although it would be unfair to base statistics on so few cases, I think that, from 11 chance cases, coming, as they have done, so close upon one another and not selected in any way, we are entitled to draw some general conclusions. We notice first that cancer is about twice as common as all other diseases of the organ, excluding of course acute inflammation; secondly we notice that the diagnosis in all but 3 presented but little difficulty as between malignant and non malignant disease, the exact nature of the latter not always being so easy to settle, and in 1 of these 3 (viii) twenty-four hours' watching confirmed the diagnosis. Then we notice that age does not help us much in determining whether we have a case of malignant disease, two patients aged 38 having cancer and the patients with cystic disease being respectively aged 58 and 45. Then we observe that the only case in which there is a history of malignant disease in the family was the case of mastitis, and in not one was there a history of tubercle. We observe, too, that nearly all enjoyed good health till the time of their attack. Then in every case the lump or the retracted nipple was

what drew the patient's attention to there being something wrong, and in only 2 of the cases of cancer was pain a prominent symptom at any time. In 3 of the 11 cases the disease appears to have lain dormant for a year or longer, and in only 1 can the patient suggest any cause, either for the original development or for the activity of the growth, and the cause given in 1 of the cyst cases was a blow some months previously. In 3 of the cases, and these were all cancer, retraction of the nipple was an early symptom. In no case was disease of the nipple recorded as an antecedent condition.

I have said that in only 3 of these cases was there any difficulty in coming to a conclusion as to whether the disease was malignant or not, and we may quickly reduce that to 2, because in 1, that of subacute mastitis, although on first examining the patient there was found an ill-defined non-circumscribed lump in the breast, tender to the touch, and this tenderness extending into the axilla, and a history of darting pains and a marked family history of cancer, the course of the disease had been too rapid for an actual tumour to have developed, and the idea of an inflammatory swelling was uppermost in our minds, which a few hours' observation proved this to be. The 2 cases that presented real difficulty were Nos. 3 and 4, both of which turned out to be malignant, and in the case of No. 4 it was only a microscopical examination that determined the nature of the disease. To recognise malignant disease in its early stage is of the utmost importance, because when it has spread to the adjacent glands the chance of cure is very much lessened even if they be thoroughly removed, and though some may say, If in doubt operate, I think we should, to say the least, feel dissatisfied with ourselves if we removed a breast and then found that we might have saved it. What then are the conditions most likely to be mistaken for cancer? I think they are the following—chronic mastitis, chronic abscess, cystic disease deep in the breast, and sometimes, but not often, fibro-adenoma.

The chief signs of cancer in the early stage are a patient over, or at any rate not far from, 40 years of age, often one whose health has previously been excellent, a rapidly enlarging diffuse indurated, inelastic tumour in the breast, sometimes attended with lancinating pains, but often painless, sometimes retraction of nipple or the level of the two nipples not the same. In some cases when it is deeply seated the breast does not glide freely over the subjacent tissues, and when it is superficial the skin gets early adherent, and often on manipulation the skin puckers; sometimes, even fairly early in the disease, there is enlargement of the axillary glands. All the above signs may be present in the first three conditions just mentioned, and in not a few it is impossible to diagnose between chronic mastitis and scirrhus without resorting to an incision; a puncture is not enough. In abscess and cyst there is generally more elasticity, and the centre is softer and more elastic than the periphery. In abscess there is often some œdema of the adjacent tissues as well, and tenderness along the line of the lymphatics and in the glands of the axilla, and in these cases a puncture should be made, and may be sufficient to confirm the diagnosis. Fibro-adenomata generally occur in younger people; they are also more distinctly circumscribed, and are more movable. In these two cases we are discussing one was painful the other not; neither had a retracted nipple, but in one the level of the two nipples was altered the other not. In one the tumour was freely movable and the skin moved over it; in the other the reverse was the case; in one the glands were not affected in the other they were. In neither was there a history of malignant disease in the family. In one the previous health had been excellent in the other indifferent; in one the history extends over a year in the other about two months. You see how the symptoms differ and yet they both turned out to be malignant.

In the one case an incision into the tumour at once revealed the nature of the disease, the peculiar hard crunching sensation communicated to the fingers the moment the knife entered the tumour being sufficient to make the diagnosis a certainty, but in the other case, after removal and an incision, the diagnosis was not certain, and it is only the microscope that has settled the question for us. Had time permitted I should have liked to have compared Case IV and these of non-malignant disease with a view to discussing the differential diagnosis of non-malignant tumours. I may, however, have an opportunity of doing that on some future occasion.

I wish now to say a few words on the treatment. Eight of the cases were subjected to operation, and the operation is a perfectly safe one; death is very rare even when the axilla is freely opened up, and union by the first intention, at any rate of the greater part of the wound, is the rule. All the patients got well without a bad symptom, the time required for the healing process varying from sixteen days to six weeks. In 1 of the cases the axillary glands were removed, and in 2 it was necessary to sacrifice so much skin that the edges of the wound could not be approximated, and it was these that took the longer time to heal, and in which union was accompanied by suppuration. Healing was most satisfactory in those cases that were healed by dry dressing and strapping firmly applied, great care being taken to stop all oozing before the dressings were put on. In those cases in which we could not satisfactorily apply the strapping so as to make firm pressure, a drainage tube was used, and removed at the expiration of twenty-four hours. They were all dressed with our usual dry dressing: the skin was dusted with iodoform, and covered with antiseptic gauze and wool.

The rule that I have adopted in regard to the extent of the operation is to remove the tumour when non-malignant and the breast when the disease proves to be malignant, as well as the axillary glands, if they are affected, but you may have observed that in these 8 cases there were 2 exceptions to this rule. In the one (Case IV) I left the breast, though the disease was scirrhus, removing only the tumour. The reason of this was that at the time of the operation I could not satisfy myself of the nature of the disease, and, though the principle When in doubt remove too much rather than too little, is a good one, in this case I felt satisfied in removing the tumour only, as it appeared to me that none of the diseased tissue remained. Time will prove whether this is correct. I saw the patient last week—a month after she had left the hospital—and up to that time everything was satisfactory, but I shall watch her carefully, and in the event of any recurrence in or near the scar I shall advise a radical operation. In Case X, although the disease was not malignant, the breast was excised. The reason of this was that the breast was very small and the tumour involved practically the whole of it. One more remark, and that is about Case XI. Why was not that excised instead of being treated by Pell's paste? I wished to excise it, and believe that would have been the best course, but the patient absolutely refused any operation, so the next best thing seemed to be the treatment adopted. She is still in the hospital, and you can see now in the place of the tumour, which has sloughed off, a healthy ulcer. In certain cases, such as this one, that method of treatment is effectual, though it is slower and more painful.

HUNTERIAN LECTURES

ON THE

EXPERIENCE OF ST. GEORGE'S HOSPITAL IN LAPAROTOMY:

EXCLUSIVE OF GYNÆCOLOGICAL OPERATIONS, FROM 1888 TO 1894 INCLUSIVE.

Delivered at St. George's Hospital Medical School

BY T. HOLMES, F.R.C.S.,

Consulting Surgeon and Treasurer to the Hospital.

LECTURE II.—CHOLECYSTOTOMY: LAPAROTOMY FOR TUMOURS AND FOR GASTRIC ULCER.

THE first topic of to-day's lecture is cholecystotomy, our recorded experience of which has been remarkably small, only three cases being noted; but I believe that there have been other successful cases which have not been recorded. In all three cases the operation was, as an operation, perfectly successful, but in the one which first occurred, that of a woman under Mr. Bennett's care, it was useless, as after the extraction of two gall stones from the bladder, it was found that a

malignant tumour lay behind, involving the common bile duct. The patient went home after recovering from the operation, and died there from the progress of the cancer about three months after. The other two were striking examples of the success of this operation in suitable cases. The first is recorded in the *Lancet* for May 23rd, 1891. The other patient was an elderly woman, deeply jaundiced, who was operated on by Mr. Bennett last year. After she had had been under medical treatment for a month with no benefit, numerous stones were removed, and the permeability of the cystic duct was established. Some polypous fragments of a suspicious appearance were removed from the interior of the viscus, but were judged on microscopic examination to be merely the result of irritation of the mucous membrane. The edges of the wound in the gall bladder were sewn to the abdominal parietes. The jaundice rapidly disappeared, and the wound was nearly healed on her discharge about five weeks afterwards.

The best summary with which I am acquainted of the indications for surgical operations on the gall bladder and bile ducts is in a paper by Mr. Mayo Robson, read at the International Medical Congress at Rome, and published in the British Medical Journal for April, 1894. This paper gives the results of 78 operations in Mr. Robson's own practice, of which only 4 proved fatal. In many cases the permanence of the cure had been ascertained. Mr. Robson's list contains not only cases of simple cholecystotomy, but other more complicated proceedings, such as the formation of anastomosis between the gall bladder and intestine (cholecystenterostomy), the crushing of the stones in the bladder or duct (cholelithotrity), the incision and suture of the common duct (choledochotomy), and the excision of the gall bladder (cholecystectomy).

Mr. Mayo Robson's experience appears to me to show that cholecystotomy is an operation which in skilful hands involves only slight danger; and the operation will in all probability be much more extensively used in the near future, to relieve the atrocious sufferings sometimes caused by gall stones; while the other more complicated proceedings, though some of them are no doubt highly dangerous, have their own field of application, and ought to be carefully studied by those who may be called upon to treat such emergencies.

Our own limited experience certainly favours such a conclusion.

I will next speak of laparotomy for tumours. The following is a tabular statement of our cases:

refused operation and left the hospital, but soon afterwards returned in a collapsed state from rupture of the tumour. She was then operated on unsuccessfully. Closely connected with these is the following very successful case of laparotomy for pancreatic cyst. Here, a man, aged 34, was admitted, under Mr. Turner's care, with a prominent fluctuating and obviously cystic swelling in the epigastrium, separated from the liver by an area of resonance. The symptoms had lasted for nine months and had become rather threatening, so that operation was necessary. The incision was made in the left linea semilunaris. This revealed nothing in front of the omentum, the fluctuating tumour lay behind that structure. It was explored with a needle and then aspirated, 37 ounces of dark-coloured fluid being withdrawn. The cyst was then opened sufficiently to allow the finger to explore its interior, which was smooth, but a hardish mass could be felt lying on the vertebral column. This was left undisturbed, and the opening in the cyst wall fixed to the abdominal wound and a drainage tube inserted. Everything went well except for some discomfort due to the necessary tension on the sutures. The interior of the cyst suppurated and gradually filled up, the tube was withdrawn in a month, and the patient soon afterwards discharged.

Careful and elaborate analysis of the fluid was made by Mr. Latham. It proved almost identical with that of a pancreatic cyst in the *Roy. Med. and Chir. Trans.*, vol. lxxiv, and left no doubt of the pancreatic origin of the cyst.

The number of such operations which have been successfully performed is as yet small. An interesting example, and one very similar to the above, was published by Dr. Newton Pitt and Mr. Jacobson in the *Roy. Med. and Chir. Trans.*, vol. lxxiv. The whole question of the origin, diagnosis, and treatment of these cases is very interesting, and we may hope to have a treatise on this subject from the surgeon who operated in this instance.

I do not quite know how to classify the following interesting case of an operation for hydronephrosis, which is, I believe, quite unique.

J. P. was admitted May 12th, 1891, under Mr. Bennett's care, on account of pain in the left loin and profuse renal hæmorrhage. The left kidney was of large size. It was explored through the loin on June 1st, and found to be hydronephrotic. There was no stone. A drainage tube was inserted. On June 25th, repeated attacks of bleeding from the kidney having occurred, both into the bladder and from the lumbar wound, the patient was nearly moribund. Laparotomy

Laparotomy for Tumours.

Name.	Age.	Date.	Nature of Tumour.	Surgeon.	Result.	Remarks.
1. J. K.	—	Nov., 1889	Hydatid of liver	Mr. Bennett	R.	
2. J. H.	—	Jan., 1894	Hydatid in pelvis	Mr. Haward	R.	
3. A. O.	44	Sept., 1894	Hydatid of liver	Mr. Dent	R.	
4. R. H.	—	Oct., 1894	Hydatid of gall bladder	Mr. Bennett	R.	Convalescence retarded by influenza. Was in the hospital in April, 1895, to have the sinus left by the operation dealt with.
5. M. L.	—	Feb., 1891	Hydatid of liver	Mr. Pick	D.	Had had the cyst twice tapped ineffectually.
6. E. A.	34	Nov., 1893	Hydatid of liver, ruptured	Mr. Turner	D.	Admitted for rupture of the hydatid into the peritoneum. Had just left the hospital, having refused to submit to laparotomy.
7. W. S.	34	Feb., 1894	Pancreatic cyst	..	R.	Cyst laid open and stitched to wound.
8. J. P.	—	May, 1891	Hydronephrosis	Mr. Bennett	R.	Removal of kidney attempted on account of hæmorrhage, but this was impossible on account of his exhaustion. Renal vessels tied with permanent success.
9. A. C.	38	April, 1895	Uterine fibroids	Mr. Dent	R.	Recovered after hysterectomy.
10. A. F.	28	.. 1895	Extrauterine fœtation	Mr. Pick	D.	Nature of case not discovered at operation.
11. C. M.	5	May, 1895	Glandular tumour of mesentery	..	D.	Tumour pressing on bowel, and causing obstruction. Died from peritonitis.
12. A. G.	—	Aug., 1889	Malignant tumour in peritoneum	Mr. Turner	D.	The tumour surrounded the intestines. The vermiform appendix and colon had given way.
13. S. T.	55	Nov., 1890	Malignant tumour in peritoneum	Mr. Bennett	R. from operation	The operation consisted in laying open a cyst near the liver, which, however, was found to be part of an epithelliomatous tumour. She recovered from the operation, and went home.
14. J. B.	—	Dec., 1891	Malignant tumour of umbilicus extending inwards	..	D.	Epithelioma implicating the omentum. Separate growths in the stomach, liver, and falciform ligament.
15. M. H.	52	March, 1892	Cancer of liver and gall bladder	Mr. Haward	D.	Exploratory operation for gall stones. Cancer found which lapped round the neck of the gall bladder, etc.

There were then 4 cases of hydatid tumours—3 in the liver, and 1 in the pelvis, which were operated on promptly, and recovered. 1 of hydatid in the liver, which was not operated on till after prolonged treatment by tapping, which died, and 1 of hydatid of the liver in which the patient

was performed with a view of removing the kidney, but this proved impracticable, as the patient was too weak to bear the operation. A ligature was therefore tied round the renal vessels. He rapidly recovered, and is now in good health, but with a permanent urinary fistula in the loin. A second

attempt was made to remove the kidney, but sudden collapse came on, and brought the attempt to an end.

This list of laparotomies for tumours of various kinds I think enforces the observation that I made in my first lecture, that the operation is seldom prejudicial to the patient's prospect of recovery; but that its postponement is often so. This is forcibly shown by the contrast between the complete recovery of the first four patients with hydatid, in whom the operation was timely performed, and the death of the sixth patient from her unlucky refusal of operation. Again, who can doubt that the patient with pancreatic cyst would have died but for the operation?

I do not, of course, go so far as to assert that the operation involves no danger, and in the solitary case of the third patient with cancer, it may have hastened by a few days the inevitable end of a painful and necessarily fatal disease.

My next topic is laparotomy for the cure of gastric ulcer.

None of the wonderful developments of modern surgery, or rather, I should say, "medico-chirurgery," has struck me personally with more admiration than the bold proposal to cut down on the stomach in cases of perforating ulcer, and by sewing up the rent (or, when that is impossible, by attaching its edges to the abdominal wall) save the patient from the death which is otherwise inevitable. I well recollect that the first *post-mortem* examination at which I ever assisted, when quite a young student, was on a case of this sort, where a young woman, never known to have been seriously ill before, died very shortly after a hearty meal. In a paper on the subject published by Mr. J. W. Taylor[1] it is shown that the average period of survival after perforation into the peritoneal cavity is twenty-four hours. This refers to free or sudden perforation, but there is a tolerably large class of cases[2] in which the ulcer perforates slowly, and the edges of the hole are fenced round by adhesions, so that a subphrenic cavity is formed, bounded usually by the stomach, the falciform ligament and liver, the spleen, the diaphragm, and the adhesions. In such cases life may be prolonged for an indefinite period, which, however, is not usually a long one. The circumscribed cavity will almost certainly burst into the peritoneum, its size being liable to sudden increase by gas poured into it from the stomach, when the adhesions are likely to give way, and thus general and probably rapidly fatal peritonitis is set up. Again, the inflammation is very liable to be transferred to the thorax, either by suppuration making its way through or behind the diaphragm, or by the absorption through the lymphatics of the diaphragm of irritating matters from the subphrenic cavity. In 7 out of 10 cases recorded by Drs. Penrose and Lee Dickinson[3] this complication had occurred. In these cases, therefore, laparotomy is urgently indicated in order that the cavity may be opened, its edges stitched to the abdominal incision, and its contents drained. This having been done, the gastric ulcer may be trusted to heal: or, as Mr. Haward says, if the adhesions have completely given way, or a large opening is found into the general peritoneal cavity, it may be right to attack the ulcer directly and treat it by suture, or attach it to the abdominal parietes.

All this is also true of duodenal ulcers. They may perforate acutely or may lead to a subphrenic cavity, the boundaries of which are usually somewhat different to those of the cavity caused by a gastric ulcer, but which is otherwise indistinguishable from it.

There are some subordinate points in the treatment of these cases which only further experience can clear up. One of the most important is how to prevent that "pocketing" of the contents of the cavity backwards, between the spleen and the diaphragm, on which both Mr. Haward and Drs. Penrose and Dickinson lay stress, and which seems to me to have had much to do with the fatal issue in some of the cases which nearly approached success, such as No. 5 in the following list. A counter-opening here, at the time of operation, if feasible, would seem to afford a considerable safeguard to the patient, as Mr. Haward has suggested. I append a table of cases.

I will give you the leading facts of the 3 cases of free perforation. The first is the well known case published in the *Clin. Trans.*, vol. xxvi, p. 179, by Dr. Lee Dickinson and Mr. Haward. The woman had clear symptoms of perforating gastric ulcer and peritonitis, and was operated on as soon as possible after admission, about fourteen and a half hours after the occurrence of the perforation, the incision being made in the linea alba. Turbid fluid and gas were found in the peritoneal cavity, and lymph in the neighbourhood of the stomach, but the peritonitis did not seem to have extended widely. The locality of the perforation could not be exactly determined at the operation, but was afterwards ascertained to be on the anterior surface, about 3 inches from the pylorus, near the lesser curvature. Much rotation of the stomach downwards and forwards was required in order to bring the ulcer in contact with the laparotomy wound. There was too much thickening of the walls of the stomach to allow of their inversion so as to bring the coats together over the edges of the ulcer, so the perforation was attached to the wound and a drainage tube inserted, the peritoneal cavity having been carefully washed out. She survived for six weeks, and when she died the subphrenic cavity was almost obliterated, but the gastric ulcer had not healed. Three days after the operation "that curious complication" came on, says Mr. Haward, "which has been observed in connection with so many cases of gastric ulcer—namely, inflammation and suppuration of the parotid glands;"[4] but save this she had nearly recovered. She died from abscess in the left pleura and multiple abscesses in the left lung, not apparently con-

[1] *Birm. Med. Rev.*, xxxii, 185.

[2] In our list the number of cases of sudden perforation is much smaller than those of limited cavity, but this is accidental. Dr. L. Dickinson, in a search through fifty years of our *post-mortem* records, found 8[illegible] examples of free perforation [illegible] from gastric and 12 from duodenal ulcer) and 26 in which the suppuration from the same cause was more or less limited; of these latter only 1 was duodenal.—BRITISH MEDICAL JOURNAL, February 3rd, 1894.

[3] *Clin. Trans.*, vol. xxvi.

[4] The same complication has been recorded in other abdominal cases, as in one of successful laparotomy for kinking of the bowel, under Mr. Rouse's care, to be mentioned in the next lecture.

Laparotomy for Perforated Ulcer of Stomach or Duodenum.

Name	Age.	Date.	Nature of Case.	Surgeon.	Result.	Remarks.
1. M. S.	26	Dec., 1892	Gastric, free perforation	Mr. Haward	D.	Ulcer sewn to wound; died six weeks after from suppuration in pleura and lung.
2. E. G.	41	July, 1894	.. .. ..	Mr. Bennett	R.	Ulcer sewn up; recovered without complications.
3. C. M.	27	Dec., 1894	Duodenal, free perforation	Mr. Sheild	D.	Ulcer sewn to wound; died; operation too late, when dying.
4. A. A.	28	Oct., 1891	Gastric, subphrenic cavity	Mr. Haward	D.	Pleurisy.
5. L. J.	21	Jan., 1892	.. .. ..	Mr. Pick	D.	Survived nearly eight weeks; gastric ulcer healed; suppuration perforating the diaphragm and involving the lung.
6. J. G.	—	Mar., 1892	.. .. ..	Mr. Turner	D.	Multiple gastric ulcer; also had perforation and pleurisy.
7. E. P.	19	Mar., 1893	.. .. ..	Mr. Dent	D.	
8. R. E.	42	May, 1893	Subphrenic cavity, origin not ascertained	Mr. Rouse	R.	Recovered rapidly.
9. M. M.	27	July, 1893	Gastric, subphrenic cavity	Mr. Pick	D.	Died two months after operation from empyema; gastric ulcer healed.
10. F. J.	23	Mar., 1894	.. .. ..	Mr. Dent	D.	Died third day; general peritonitis and left pleurisy.
11. F. —	25	Nov., 1893	.. .. ..	Mr. Bennett	R.	Recovery retarded by pleurisy.
12. H. B.	27	Nov., 1894	.. .. ..	Mr. Pick	D.	Multiple gastric ulcer.
13. E. H.	28	Nov., 1893	Subphrenic cavity	Mr. Bennett	R.	Recovery retarded by pleurisy.
14. W. H.	25	June, 1894	Duodenal, subphrenic abscess	Mr. Sheild	D.	There was general peritonitis also; it was necessary to incise the distended bowel, and suture it.

nected with any general septicæmia, but resulting from the absorption of irritating matters from the cavity by the lymphatics of the diaphragm. Mr. Haward's observations on this case are of the deepest interest, and although the patient died, the operation was of great importance as showing clearly the perfect possibility of success.

The next case was a brilliant success; it was that of E. G., aged 41, admitted April 5th, 1894, under Mr. Bennett's care. She had been seized suddenly at 2 P.M. with violent pain at the umbilicus. There was no sickness. On admission she was much collapsed, with evident symptoms of peritonitis, and was operated on at once at midnight, nine to ten hours after the access of pain. The incision was made in the middle line. Food was found in the abdominal cavity, and after careful search an opening the size of the little finger was found in the posterior wall of the stomach. The hole was stitched up and the cavity of the peritoneum thoroughly washed out with warm water. She went on well, was fed by the rectum for four days, then with a tablespoonful of milk hourly. The nutrient enemata were discontinued in a week, and in a month she was able to leave her bed, and left the house on May 23rd.

The third case was that of a woman, aged 27, who was admitted on December 21st, 1894, with symptoms which were not so marked as to lead to a confident diagnosis, so that some delay took place in the operation (by Mr. Sheild), which was not performed till the day after admission, about two days after the perforation took place and when the patient was in fact dying. General peritonitis was found, and the edges of the perforation, which was in the duodenum, were stitched to the wound.

The chief lesson of this case is the necessity for prompt operation. The diagnosis on admission lay between perforated gastric ulcer and peritonitis from tubal suppuration, and had an exploratory operation been performed earlier there might have been a fair prospect of recovery.

For the cases of gradual perforation, leading to the formation of a cavity beneath the diaphragm (the so-called subphrenic pyopneumothorax[a] which have been treated by laparotomy, I must refer you to the table.

I am not quite clear what the published results of laparotomy for gastric ulcer hitherto have been. On March 13th, 1894, Mr. Morse, of Norwich, read a very interesting paper at the Royal Medical and Chirurgical Society on a successful case of his own, and appended a list of 16 cases, including his own, of which only 2 had recovered. This list, however, was imperfect. In the discussion which ensued, Mr. Barwell stated that 24 cases had occurred to his knowledge, but gave no addition to the list of recoveries. Mr. Pagc, however, while referring to 2 fatal cases in his own practice (which were, I presume, included in Mr. Barwell's 24), read a communication from Mr. Maccaren, of Carlisle, who had operated three times and once with success. If this were correct, we should have 3 recoveries out of 27 cases. In the *Lancet* for 1895, vol. i, p. 545, however, Mr. Jowers gives a list of 25 published cases, in which the cases recorded by Dr. Ewart and Mr. Bennett and that of Mr. Haward are included; of these 16 died, 8 recovered, and in 1 the result is not recorded.

Our own experience of laparotomy for gastric ulcer is as follows:—There were 3 cases of acute perforation—1 perfectly recovered, 1 nearly recovered but died of parotid abscess and abscesses in the left lung and pleura, the result, doubtless, of a condition of local septicæmia which was caused in all probability by absorption of putrid matters from the peritoneal cavity through the lymphatics of the diaphragm. The great probability of this event is pointed out by Mr. Haward in his paper on this case, and is forcibly used by him as a motive for not delaying operation in any case of supposed perforation of the stomach. The third case was operated on too late. The perforation was in the duodenum, not the stomach. The number of cases of chronic perforation with subphrenic cavity was 11. In one of these also the ulcer was duodenal, and the cavity had burst into the peritoneum; 3 recovered.

This is, I submit, a very gratifying result, but only if regarded as a beginning. That such cases will be treated with a far larger proportion of success in the future (and I would say in the very near future), I am confident. The diagnosis is becoming much better understood, and it is also becoming much plainer that the risks of an exploratory operation which may negative the diagnosis are not nearly so great as the fatal consequences of delay would be in a case of real perforation. I have already alluded to a case in which such an exploration was made, and in which the symptoms disappeared and the patient recovered.

There are many details of the operation in cases of free perforation which are still unsettled, as indeed must be expected in so novel a proceeding; such as the best place for the incision, the best way of finding the perforation, and of dealing with it when found, and the desirability of washing out the stomach through the perforation. As far as I am able to form an opinion, I think the limited experience hitherto recorded goes to show that the incision is best made in the middle line; that the anterior wall of the stomach should be very carefully explored before taking the necessary steps to gain access to its posterior surface; that it is unnecessary to excise the ulcerated part; that it is far better to sew up the opening than to attach its edges to the wound; and that the advantages of washing out the stomach through the ulcer do not compensate its disadvantages in prolonging and complicating the operation.

But though we look forward with confidence to much better results for the treatment of gastric ulcer in future, it would be childish to ignore its essential difficulties. The preparations before you show what a formidable extent of the stomach wall is sometimes affected, the size of the perforation—in some cases far beyond anything that could be brought together by sutures—the great vessels which may lie near the opening, and the frequency of multiple ulcers;[a] while Mr. Haward's case above related shows that the tissue of the stomach may be so thickened by inflammation round the ulcer that its inversion for the purposes of the suture is impracticable. Some of these complications are beyond the surgeon's control, and must remain as permanent dangers both before and after operation. In ulcers of great size, and in those accompanied by extensive infiltration of the stomach wall, nothing can be done except to attach the stomach to the wound, and this no doubt may be successful; but it cannot but be accompanied by greatly increased risk. The most promising cases must be those in which the ulcer is of small size, and easily sewn up, and in which the contents of the peritoneal cavity can be completely washed out. In such instances, as Mr. Bennett's case shows, recovery may be complete, rapid, and permanent. And this really seems to me the most wonderful of all the surgical miracles of our time.

[a] In two of our own cases and one of those published by Drs. Penrose and L. Dickinson there were three ulcers.

[a] I do not want to waste time over verbal criticism, but may perhaps be pardoned for expressing a hope that our medical vocabulary may provide some more expressive and more appropriate word for this condition than "pyopneumothorax subphrenicus," a term which in spite of its "learned length and thundering sound" seems to me incorrect and misleading. The collection of air and fluid is no doubt partly under the ribs, and in that sense might be said to be in the "thorax," just as the liver itself might. But the diaphragm has for ages been regarded as the limit between thorax and abdomen, and most of these collections, though they may have displaced the diaphragm upwards, have not perforated it; while the fact that in some cases the cavity has burst into the thorax renders still more confusing the use of a term which seems to imply that in all cases such a communication exists. The meaning of the term "pneumothorax" is so definite and so well known that it seems not to be applied to a cavity which has usually no connection with the pleura.

The Canadian Medical Association will hold its annual meeting this year at Kingston, Ontario, on August 28th, 29th, and 30th. Sir Charles Tupper, M.D., the first President of the Association, is expected to be present.

At a recent meeting of the American Medical Editors' Association in Baltimore, Dr. George M. Gould, editor of the Philadelphia *Medical News*, was elected President, and Dr. A. H. Ohmann-Dumesnil, Vice-President.

Successful Vaccination.—Mr. Alfred E. Vaughan, Public Vaccinator for the Hartington District of the Nantwich Union, has for the second time been awarded a grant for efficient vaccination.

Mr. W. Kaye Parry, A.M.Inst.C.E., of Dublin, has been awarded a Mullins Gold Medal by the Institute of Civil Engineers of Ireland for a paper on the application of recent advances in the study and treatment of sewage.

THE CROONIAN LECTURES.

CONTRIBUTION TO THE HISTORY OF THE RESPIRATION OF MAN.

Delivered before the Royal College of Physicians of London.

BY W. MARCET, M.D., F.R.S.

LECTURE IV.

MR. PRESIDENT AND GENTLEMEN,—So far we have dealt with the phenomena of respiration as carried on in the ordinary course of life. I now wish to draw your attention to breathing under circumstances which are not of daily occurrence; the first of these being under the influence of diminished atmospheric pressure as met with on ascending into high altitudes. This subject is important not only physiologically, but also with reference to the modern treatment of phthisis.

It must be clearly understood that the carbonic acid expired is unconnected with the consumption of the oxygen taken in the previous inspiration, as the oxygen derived from the air is carried into the circulation by the hæmoglobin, and there serves the purpose of heat production and metabolism; the carbonic acid produced in the tissues passes out into the blood, and is ejected with the expired air. Thus it is impossible to tell when a certain volume of oxygen taken into the blood may reappear as CO_2. This point I wish to establish clearly, as I believe an objection to my work has been made on that score.

If experiments on the respiration of man could be continued for a length of time—say the whole day—then the volume of air breathed would certainly compare with the weight (or volume) of CO_2 produced; but it is not possible to do this, and the only alternative is to repeat the experiment as often as possible throughout the day, and take the means of the volume of air breathed and CO_2 produced—a method invariably adopted in my experiments. I do not claim a relationship between the oxygen inspired and the carbonic acid expired immediately afterwards, but I claim a relationship between the mean volume of air breathed and the mean weight of CO_2 expired in the course of one day.

On ascending a mountain the air pressure diminishes and the pulmonary ventilation increases, in order to aerate the blood to its full extent. Now, although the volume of air breathed increases on rising above the sea level, still the weight of that air falls; in other words, its volume reduced to dryness, freezing point, and seaside pressure diminishes. Hence it may be said that as one ascends, a less weight or volume (reduced to dryness and standard temperature and pressure) of air is breathed for the production of a given amount of carbonic acid. For instance, if at the seaside a person inspires a mean of 4·5 litres of air and expires 0·375 g. of carbonic acid per minute, or, what is the same thing, inspires 12 litres of air corresponding to the emission of 1 g. of carbonic acid, on rising to such a height that the atmospheric pressure falls by one-fourth its amount at the sea level, the volume of air breathed corresponding to 1 g. of carbonic acid, will not exceed the original 12 litres by one-fourth, and thus become 15 litres, but will be less than 15 litres.

It must be understood that the volumes of air breathed (reduced) decrease at increasing altitudes, a fact first published by a Swiss gentleman, Dr. Mermod, in 1875, and which I confirmed a few months later by observations made at much greater altitudes, his experiments being unknown to me at the time.

A number of experiments made on the Peak of Teneriffe have also shown me conclusively that in perfect health the amount of carbonic acid expired remains unaltered with increasing altitudes, at any rate, up to about 12,000 feet. According to Mermod, on the other hand, it becomes greater on rising above the sea level. On this point we therefore disagree.

Discarding for a moment the idea of the influence of altitudes, it is well known that when the temperature of the atmosphere falls, a greater volume of air is breathed and more carbonic acid expired, but the volume of air breathed for the emission of a certain weight or volume of carbonic acid is proportionately less, hence it appears that a fall of the atmospheric temperature gives rise to the same kind of effect on respiration as increasing altitudes without change of temperature. My earliest experiments made on the Alps were all attended with a fall of temperature at increasing altitudes, this circumstance necessarily producing an increased combustion in the body in order to overcome the action of the cold; it was therefore impossible by this means to determine the exclusive influence of atmospheric pressure on respiration, hence the necessity of selecting for these experiments a mountain of sufficient height near the tropics where one might expect to find the temperatures fairly equal at different altitudes. With this object in view I spent three weeks on the Peak of Teneriffe in the summer of 1878, selecting for this inquiry four stations varying in altitude. The temperatures differed but very slightly at the four stations, though somewhat higher at the lowest, but there was no cause for any marked influence of temperature on the formation of carbonic acid.

The air was expired into an india-rubber bag of known capacity, and a sample of the air was shaken with baryta water in a glass cylinder. The fluid, having absorbed all the carbonic acid, was afterwards collected in bottles, one for each analysis, and carefully stoppered, the final analysis being made at a subsequent period.

In the following results every figure is the mean of the number of experiments entered in parentheses, the table showing the number of litres of air expired (reduced to dryness, freezing point, and seaside pressure) for 1 g. of carbonic acid expired:

	Litres	Temp.	
Seaside	12.0	75.7°	(20)
Guajara (7,090 feet)	11.6	69.6°	(21)
Alta Vista (10,700 feet)	10.4	64.0°	(30)
Foot of terminal cone (11,700 feet)...	10.3	64.0°	(2)

The difference is not great, still for 10,700 feet it amounts to 1.6 litre, hence one eighth less air was required at the two higher stations to produce through the respiration the same amount of carbonic acid as at the seaside. In other experiments made on the Col du Geant the reduction for an increased altitude of 9,840 feet amounted to about one-fifth in my own case, and rather more than one-twelfth for a young companion. On other occasions at various altitudes, from 8,115 ft. to 13,680 ft., the mean height, 11,250 ft., gave a mean reduction of 2.03 litres of air breathed for 1 g. of carbonic acid produced. These experiments show clearly that the aeration of the blood takes place more readily under diminished pressures than at the seaside, which is not easily accounted for. Paul Bert observed that the blood of various animals forwarded to Paris from the town of Mexico situated at an elevation of 7,480 feet had the power of absorbing considerably more oxygen than the blood of similar animals kept in Paris, and he concluded that the Mexican blood contained more hæmoglobin. This may be correct, but such a character could only be acquired after a number of years, perhaps of generations, while in my experiments the effect was produced, if not immediately, certainly after a few hours, when no change in the constitution of the blood could possibly have taken place.

Frankland found that candles burn more brightly in air partially exhausted by an air pump than in the surrounding atmosphere, and concluded from this experiment that the molecules of oxygen have a greater mobility in the rarefied air. The more ready passage of oxygen into the blood at the lungs on reaching a high altitude may be due to a similar cause, but I cannot think that it is in any way connected with an increase of hæmoglobin.

As regards the medical aspect of the question, with reference to the treatment of phthisis in high winter stations, as Davos and St. Moritz, people residing there must live under circumstances facilitating the aeration of their blood, and I have no

doubt that this is a primary and important cause of the beneficial effects produced. The extreme cold experienced must also be beneficial, since cold reduces the volume of air that has to be inspired for the production of a given amount of carbonic acid, so that both altitude and cold join in facilitating the respiratory phenomena.

There is another experiment of Dr. Frankland which throws light on the circumstance that cold is so little felt on high winter stations. He found that if a platinum wire carried through an air pump receiver was made red hot by an electric current, it rose to white heat when the air pressure was reduced in the receiver, although the source of heat remained unchanged, from which he concluded that rarefied air removed less heat by conduction than the same air under atmospheric pressure. In accordance with this observation Frankland accounts for the fact that cold is felt less than might have been expected in the still air of Davos, from the circumstance that the lightness of the air checks the removal of heat from the body by atmospheric conduction.

This view gains support from the statement of Paul Bert, in his book on barometric pressures, that compressed air has a tendency to produce a sensation of cold, although the temperature of the compressed air chamber may be higher than that of the external air, and with persons subject to the impression of cold this effect of increased air pressure is observed to become greater the longer the exposure and the higher the pressure. I, therefore, cannot help believing with Frankland that increased lightness of the air, acting inversely to increased pressures, assists in accounting for the remarkable fact that patients at Davos are so little troubled by the intense cold.

An easy respiration at great altitudes is in a great measure the result of training; thus while practised climbers easily ascend Mont Blanc, tiros, after about 10,000 feet are attained, have to stop frequently for a few seconds to take breath, and often give way to fatigue or to a sleepy sensation or mountain sickness. Perhaps the most remarkable illustration of the influence of training is shown in the case of Mr. Whymper, who, having fought his way slowly and patiently to the summit of Chimborazo in spite of the suffocating effect of the low atmospheric pressure, experienced no difficulty whatever in repeating the same ascent six months later, having been engaged meanwhile in explorations at great altitudes in the Andes.

It may be remembered that in my last lecture I traced a connection between "volition" and respiration; it will now be interesting to observe the effect of low atmospheric pressure on volition. Paul Bert submitted himself to low pressures in a closed chamber. At a pressure of 17.5 inches of mercury, having attempted to whistle, he found it impossible to do so: at 17 inches he suffered from dizziness, which recurred at 16.6 inches; and at 16.4 inches he felt rather unwell, and, having counted 26 pulsations at the wrist in 20 seconds, found great difficulty in multiplying that figure by 3. These statements show that Bert experienced in a marked degree what we might call want of power to respond to volition under that low pressure. When the pressure had risen to 22.2 inches he began to recover his ability to whistle. Is not this an illustration of the action of oxygen towards promoting the power of the will?

A more remarkable illustration of the effect of a deficient supply of oxygen towards the suspension of the action of volition is found in the account given by Glaisher of his balloon ascent with Coxwell on September 5th, 1862, when, at an elevation of 29,000 feet, the balloon still rising rapidly, he lost consciousness. Allow me to extract verbatim from Glaisher's book, *Travels in the Air:*

"At 1 o'clock and 51 minutes the barometer read 10·8 inches. After this I could not see the column of mercury in the wet-bulb thermometer, nor the hands of a watch, nor the fine divisions on any instrument. I asked Mr. Coxwell to help me to read the instruments. In consequence, however, of the rotatory motion of the balloon, which had continued without ceasing since leaving the earth, the valve line had become entangled, and he had to leave the car and mount into the ring to readjust it. I then looked at the barometer, and found the reading 9¾ inches, still decreasing fast, implying a height exceeding 29,000 feet. Shortly after I laid my arm upon the table possessed of its full vigour, but on being desirous of using it, I found it powerless; it must have lost its power momentarily. On trying to move the other arm I found it powerless also. Then I tried to shake myself and succeeded, but I seemed to have no limbs. In looking at the barometer my head fell over my left shoulder. I struggled and shook my body again, but could not use my arms. Setting my head upright for an instant only, it fell on my right shoulder; then I fell backwards, my back resting against the side of the car, and my head on its edge .....As in the case of the arms, so all muscular power was lost in an instant from my back and neck .....In an instant intense darkness overcame me, so that the optic nerve lost power suddenly, but I was still conscious, with as active a brain as at the present moment while writing this .....While powerless I heard the words 'temperature' and 'observation,' and I knew Mr. Coxwell was in the car speaking to and endeavouring to rouse me before consciousness and hearing had returned. I then heard him speak more emphatically, but could not see, speak, or move.....Then the instruments became dimly visible, then Mr. Coxwell, then shortly I saw clearly, next I rose from my seat and looked around as though waking from sleep .....I then drew up my legs, which had been extended, and took a pencil in my hands and began observations.....It is probable that three or four minutes passed from my hearing the words 'temperature' and 'observation' till I began to observe."

The case of Mr. Glaisher is very remarkable if taken in conjunction with the fact, which I look upon as proved experimentally, at all events as far as an experiment can go for the present, that the exercise of volition requires the direct action of oxygen on the brain centre concerned. In the present instance the conception of volition was not in abeyance, as Mr. Glaisher could direct his will as he pleased, but there was no response; he wished to move his limbs and could not. Hence as far as can be concluded from the experiment of Bert and the narrative of Glaisher the conception of volition does not require oxygen, but the manifestation or response of volition cannot be carried out without it.

Another effect of rarefied air when accompanied by intense cold is that it appears to check the mental faculties, producing the sensation of drowsiness so often experienced on high mountains.

Thus far the effects of diminished pressure have been considered; those produced by increase of pressure have been the subject of many inquiries. Paul Bert assimilates the effect of an increased atmospheric pressure to the respiration of a proportional addition of oxygen at ordinary pressure; this view, however, does not take into account the cooling influence of compressed air.

From Dalton's law the solubility of gases increases proportionately with the pressures, hence under increased atmospheric pressure a little more oxygen should be absorbed by the blood, and this is found experimentally to be actually the case. There is also a slight increase of carbonic acid expired, which, according to Bert, may be observed up to about 5 atmospheres, the maximum increase occurring at about 3 atmospheres. At pressures above 5 atmospheres oxidation falls below the normal, the excess of oxygen arresting rather than exciting combustion. Quoting from Bert's book, this cessation of the oxidation of tissues from excess of oxygen takes place in all living tissues; even seeds no longer germinate when maintained under pressure. Dr. G. von Liebig, from experiments made in 1875, found that at pressures of about 40.5 inches of mercury the carbonic acid expired was increased by less than 1 per cent. These experiments correspond with others I had occasion to make, when atmospheric air was inhaled in which one-third was replaced by oxygen gas. According to the views advocated by Bert, this artificial air, containing 43 per cent. of oxygen instead of 20.9 per cent., would be equal to a pressure of about 2 atmospheres. In every experiment there was a large increase of oxygen absorbed by the blood, an increase which very clearly exceeded the absorbing power of the blood corpuscles, but the carbonic acid expired was but slightly, and in some cases not at all, in excess of the normal, thus illustrating very forcibly the remark made in my first lecture, that it is not the oxygen which by offering itself to the blood and tissues promotes the tissue changes. The slight excess of carbonic acid expired when the body is subjected to

increased atmospheric pressure is probably due to the greater conducting power of compressed air, which withdraws heat from the body.

Dr. C. T. Williams, in his book on *Aërotherapeutics*, states that in certain cases of asthma decided relief was obtained by the use of the compressed air bath. I account for this favourable action of compressed air in asthma by regarding the bath as a method of training the respiration. Dr. Williams observed that a larger volume of air was breathed after the use of the bath than before. This increased pulmonary ventilation will obviously assist in aërating the blood and ridding it of its carbonic acid, the percentage of which in the expired air would, I doubt not, be found lower than normal, thus assimilating the phenomenon to one of unconscious forced breathing.

To pass on to another subject: Allow me to draw your attention to the effects of the inhalation of carbonic acid, and first of all to the phenomena observed on rebreathing one's own expired air. I made experiments by rebreathing for five minutes 35 litres of air contained in a bell jar suspended over salt water. The air was inspired through nasal cannulæ connected with the roof of the receiver, and expired by the mouth into the bell jar in the usual way. At each inspiration the bell jar fell slightly, and rose at the following expiration. Little or no distress was felt during the first three or four minutes, though in the last minute a slight feeling of want of air was occasionally experienced, but this varied with different people.

Tracings of this kind of respiration show that as rebreathing continues the respiration becomes deeper and more rapid, while the direction of the tracing is not quite horizontal, but has invariably a tendency to fall; this is due to the absorption of oxygen and carbonic acid in the blood and the consequent diminution of the volume of air in the receiver. The history of the phenomenon is very simple. Oxygen is consumed from the air and partly converted into carbonic acid, while the remainder is used up in other ways. Under ordinary circumstances the carbonic acid produced is exhaled; but in this case it accumulates in the bell jar, and, being inhaled, prevents the free diffusion of the gas from the blood into the lung cavity, and therefore carbonic acid becomes retained in the blood in gradually increasing quantity. Moreover, the amount of oxygen in the air inspired falls rapidly, and this air therefore becomes less and less fit to maintain life. In my inquiries 5 persons submitted to a total of 42 experiments, each of which consisted of 4 stages. In the preliminary stage the carbonic acid was determined in normal respiration. In the second stage 35 litres of atmospheric air were rebreathed for five minutes and subsequently analysed. Immediately after rebreathing, the air expired was diverted into another bell jar, till about 35 litres had been expired, after which the air given out from the lungs was collected separately for a further period of four or five minutes, both quantities being analysed for carbonic acid.

The broad results obtained from this inquiry were as follows:

1. On rebreathing air in a closed vessel, less carbonic acid is expired in a given time than in ordinary breathing, a certain proportion remaining absorbed in the blood.

2. When fresh air is taken into the lungs immediately after rebreathing the volumes of air breathed and carbonic acid expired are greater than in ordinary breathing.

3. When after the rebreathing stage fresh air has been inspired for five or six minutes the blood has recovered its normal state of aëration, and given out the whole of the carbonic acid which had been absorbed in the rebreathing stage.

Paul Bert has shown that animals, when left to die in closed vessels, are not asphyxiated from carbonic acid, but die solely from want of air, the phenomenon being the same as if they were submitted to diminished pressures corresponding to the proportion of oxygen left in the receiver in which they were confined.

In five of the above rebreathing experiments the mean percentage of the original oxygen which had disappeared was 19.2; the pressure corresponding to this reduction of oxygen would be 24.23 inches, equal to an altitude of about 7,480 feet; such a low altitude explains the absence of any difficulty or distress in the breathing. On one occasion rebreathing was continued till the air in the bell jar contained 13.64 per cent. of carbonic acid and only 5.40 per cent. of oxygen, this percentage of oxygen corresponding to a pressure of 7.74 inches of mercury. The person under experiment felt very giddy, and the vision was obscured by a dark mist.

It is difficult to state the limit of altitude to which man can attain, because as he rises higher he needs less and less air; the secret of attaining to very great heights is training and time. Whymper reached an altitude of 20,517 feet on the Chimborazo, and Conway to 22,600 feet on the summit of the Pioneer Peak in the Himalayas.

Returning to the consideration of the influence of carbonic acid on respiration, it is often asked to what extent this gas can be breathed with impunity in the atmosphere. The subject has been investigated, amongst others, by Professor Emmerich and Dr. von Pettenkofer, who, in company with others, shut themselves up in a small vault of the Institute of Hygiene at Munich with bottles of liquid carbonic acid. Light was emitted from candles.

The gas was allowed to escape from the bottles, and when the lights went out most of the visitors left the chamber. Emmerich and Pettenkofer remained inside, and when seized with headache and discomfort took several samples of air, and then left the vault none the worse for the experiment. The analysis of the samples gave a mean of 8 per cent. of carbonic acid, which proportion can therefore be breathed for a short time without producing any serious effects. Rabbits have, according to Professors Friedländer and Herter, withstood for more than an hour 34 per cent. of carbonic acid; and even 60 per cent. was breathed for three-quarters of an hour, after which cramp and coma set in; after being exposed for a quarter of an hour in this 60 per cent. mixture, the rabbit quickly recovered in the open air.

ASTHMA.

Having said so much on respiration, allow me to offer a few remarks on a disease which is peculiarly one of the respiratory function, that is, asthma; and first of all, as an introduction to the subject, let us analyse the phenomenon of coughing. In coughing, a long breath is taken, which is exactly like a deep or forced inspiration, in which, as I have shown, a certain amount of carbonic acid is produced for work done, the oxygen being derived from that pre-existing in the contracting muscles, while a larger volume is displaced from the blood by a purely physical process; but though forced breathing is attended with but comparatively little work, in coughing the respiration is laboured, the muscles having to strain against the closure of the pharynx and forcibly expel the air from the lungs. This results in the production of an excess of carbonic acid, hence at the end of the expiration there is an increased amount of carbonic acid in the circulation.

After the forced expiration of coughing a deep breath is taken to supply the blood with a fresh quantity of oxygen and rid it of the excess of carbonic acid produced, and this process goes on till the fit of coughing comes to an end, then deep inspirations and expirations follow till the blood is again perfectly aired and the carbonic acid in excess completely eliminated. It therefore appears that in coughing there is a tendency to a want of oxygen and a distinct excess of carbonic acid in the blood, which are conditions met with, though in a much intensified form, in asphyxia. Now asphyxia is occasionally productive of spasm of the glottis, as seen in some cases of recovery from drowning, and might not the momentary want of air produced by a bad fit of coughing be the cause of asthma in people who are subject to it? The following observation was made by a physician who at times had severe attacks of asthma, though usually in the enjoyment of good health. On February 13th last, after taking a cup of tea at 2.30 A.M., loud wheezing and tightness of the chest came on, when a succession of forced inspirations had the immediate effect of arresting both the wheezing and tightness; a second attack the same night was averted in a similar manner. In this case the forced breathing returned to the blood the oxygen it was clearly in want of, while at the same time removing the carbonic acid.

I have shown in my third lecture that forced breathing is a means of supplying the centre of respiration with oxygen towards the respiratory phenomena; hence it appears to

follow that a deficient supply of oxygen to the respiratory centres has also something to do with asthma. In keeping with these remarks, it may be said that all circumstances productive of an excess of carbonic acid in the body and therefore of a deficiency of oxygen predispose to asthma. Cold and certain kinds of exercise do so pre-eminently, so does the ingestion of food, as happened in the case referred to above, where an attack of asthmatic cough came on pretty regularly two hours after dinner or at the time of the maximum production of carbonic acid from the meal.

A bad attack of asthma usually sets in with a sudden loud dry cough, coming on in the evening or at night; then follows a bronchial spasm during inspiration and the acute feeling of suffocation. After fighting for breath for ten, twenty, and in some cases thirty hours the respiratory muscles become very tired, and also volition towards the respiratory effort. Moreover, the impediment to breathing prevents oxygen reaching the centres of respiration to promote the exercise of volition for forced breathing; hence the power of the will becomes less and less.

It is difficult to reconcile the fact that some asthmatic persons find themselves better under lower atmospheric pressures, while others, on the contrary, suffer the moment they leave the sea level. This is apparently due to the circumstance that some persons take in oxygen more readily under low pressures, and others under high pressures. I cannot help comparing asthma in those who suffer under low pressures to a sort of mountain sickness—the higher they go the worse they are, and the moment they return into the lower plains the asthma passes off as by magic. If mountain sickness can be prevented by training for the exercise of climbing under low pressure, why should not asthma also yield to the training of the respiration, carried out by practising the respiratory movements wanted to carry the tidal air through the lungs to oxidise the blood and emit the carbonic acid, while imparting to the circulation a better tendency to work in perfect harmony with the respiratory requirements?

Of all means of training the respiration I think cycling is the best. When a person first takes to cycling he is troubled with shortness of breath, his heart beats uncomfortably, and his legs get tired, but after some training these discomforts all disappear. Why should not people liable to attacks of asthma also train their respiration by such a kind of exercise, of course on condition of the heart and lungs being in perfect health?

Cycling exercise first of all increases the depth of breathing, and that without fatigue, as the respiratory movements are automatic; at the same time it will accustom the rider instinctively to take in at each respiration the volume of air required to aërate the blood and to eliminate a fixed proportion of carbonic acid leaving in the circulation the precise amount compatible with health. In cycling, volition has also a good deal to do towards exercising the motor centres to take in the exact volume of oxygen required for that kind of work. Persons who do not care for cycling out of doors can take the same description of exercise at home by means of a dummy cycle.

My experience of the results of this treatment is unfortunately limited to one person; in which case it has proved eminently successful. This person took to bicycle riding three years ago for pleasure and afterwards on account of his health. He observed last summer that the attacks of asthma to which he was subject had become very much fewer, having only suffered two since last October, both of these being brought on by exposure to cold. The tightness and wheezing which occurred every night have nearly entirely disappeared, his sleep, which for years had been restless and broken, has very much improved, and all this he ascribes in a great measure to the use of the bicycle.

Allow me, gentlemen, to summarise shortly the Croonian lectures for the present year.

In the first lecture the oxygen of the atmosphere was shown to be the main agent of life, and Hermann's discovery that oxygen is an integral part of the tissues was appealed to with the object of explaining the remarkable tenacity of life of certain organisms—such as seeds. Next came an attempt to explain that it is not the oxygen of the air which, by offering itself to the tissues, produces the phenomena of metabolism, but that the living tissues call upon the oxygen to effect the changes they undergo. The influence of tissues as the prime movers in the matter was shown by the action of cold, which, through the nervous system, first increases their vitality and consequently their demand for oxygen, though when the cold is excessive it exerts an influence the reverse in its character. Muscular exercise invariably tends to the production of carbonic acid in excess; and this led to some remarks on the temperature of the body while in the act of ascending. It was concluded that with some people there is a slight increase and with others a slight fall of temperature.

The second lecture was prefaced with a short allusion to past investigations on human respiration; then followed the history of the different forms of breathing, which were illustrated by tracings (reduced in size) taken directly from the person under experiment. Attention was also drawn to the interesting phenomena of the absorption of oxygen in the body independently of the formation of carbonic acid, and a number of analyses were quoted showing to what extent this absorption takes place.

The third lecture was given up entirely to the influence of volition on the respiration. It was shown that volition towards any kind of muscular exercise, including forced breathing, is attended with the absorption of oxygen in excess, and that this oxygen is necessary towards the performance of volition, and, if necessary to volition it must be taken up by the motor centres of volition. A remarkable effect on the development of muscular force by this charging of the motor centres with oxygen was shown to take place. Finally, an experiment was described in which, volition becoming tired out, the muscles refused to work; this experiment being in keeping with Mosso's discovery.

The fourth lecture was devoted first of all to an account of the influence of climbing on the respiratory changes, and on the state of the respiratory phenomena at high altitudes. Next rebreathing and air breathed under pressure were considered, and it was explained that the effect of rebreathed air was apparently due more to the want of oxygen than the absorption of carbonic acid. After a few remarks on the effects of breathing mixtures of carbonic acid and common air, the lecture was concluded with an allusion to asthma, and a method of treatment suggested by the considerations which may be looked upon as the substance of these four lectures.

CATS AND DIPHTHERIA.

By WILLIAM WILLIAMS, M.A., M.D., D.P.H.Oxon.,
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I have read with interest in the British Medical Journal of June 29th your remarks under the above heading, calling attention to the possible association of diphtheria in human beings and a suspicious illness amongst cats.

Some years ago, when acting as deputy and assistant to Dr. Thursfield, M.O.H., Shropshire, it was my lot to investigate a limited epidemic of diphtheria coincident with the deaths of three cats in one of the infected households.

In the month of December, 1889, a limited epidemic of diphtheria took place at and in the neighbourhood of an agricultural village in Shropshire.

Thirteen cases, one of which proved fatal, occurred amongst five families. The first case occurred on November 7th, at the house of Mrs. L. (in the village), in the form of a slight sore throat, but that it was of an infectious nature is clear from the fact that the children at this house, eight in number, all suffered more or less severely since that date, including a grown-up daughter who came home at the time, and was laid up with a sore throat a few days after.

The second case—taken ill November 28th—was that of a child of Mr. B., whose house was quite a mile distant from the village.

The third case was that of a servant girl of Mrs. R., next door to Mrs. L. (in the village), who suffered very severely from marked diphtheria, but ultimately recovered. The fourth and fifth houses to be attacked were in the same street.

At Mr. B.'s there were three cats kept. All these cats were

taken ill and died. The symptoms observed were wasting, loss of appetite, inability to swallow, cough, and expectoration. They were ill some days before the children, and when ill were carried about and nursed by them. The children's illnesses were attributed to this cause by the household. The dates of the illnesses and deaths, as nearly as could be ascertained, were as follows:

First cat: taken ill November 18th and died December 1st.
Second cat (yellow Persian): taken ill November 18th and died December 4th.
Third cat: taken ill November 26th and died December 7th.

Mr. B.'s two children were taken ill on November 26th and 27th respectively, and the one taken ill on November 27th died on December 9th, so that the illness and deaths of the cats preceded those of the children, and it appeared as if they had been connected. This was the opinion of the parents and people of the house. Mr. B.'s house was quite a mile from the village, and strict inquiry from the nurse and parents failed to elicit at first any connection. The nurse, however, was sister to Mrs. R., where the third case had occurred. She had visited her sister with Mr. B.'s children, but does not appear to have suffered from sore throat. Although at first sight the disease would appear to have originated with the cats, and the symptoms during life (above described) were such as would be anticipated if diphtheria affected the throats of the animals, this piece of evidence, showing a possible source of personal infection, renders it impossible to say whether the disease in the cats was any more than a coincidence. The first cat to die was examined by the medical attendant, who did not examine further than the throat, where he found no signs of inflammation, but a round worm of large size, which had choked the animal by blocking up the larynx.

Dr. Thursfield was of opinion that this was merely a symptomatic incident, and could be explained by the fact he had observed that during a febrile attack in human subjects the ascarides lumbricoides, doubtless rendered uncomfortable by the abnormal heat of the intestines, seek an exit by the bowel or the mouth. It is, moreover, possible that the violent efforts at coughing, obviously to clear the throat (described as a marked symptom in the cats) may have been chiefly, if not entirely, observed in this one cat. Another cat was unfortunately buried so as to be useless. The cat which died on December 7th was secured, the symptoms of which were described as "coughing and something wrong in the throat." It was sent for examination to Dr. Klein, who reported that there was extensive disease of the lung not uncommon amongst cats.

Whether or not the illness of the children can be attributed to the cats or was merely coincident cannot be ascertained, but I consider that the incidents above related clearly show the desirability of examining the household cat or cats in every family infected with sore throat or diphtheria, and ever since it has been my custom to make careful inquiries after the cats.

The connection between infectious sore throat and diphtheria is well illustrated in the incidents of this epidemic, and I have often noticed that virulent diphtheria is very apt to occur shortly after the appearance of these ill-defined sore throats, and I am of the opinion that they are closely allied.

NOTES OF A CASE OF SEROUS EFFUSION INTO THE PLEURA TREATED BY FREE INCISION AND DRAINAGE AFTER THE FAILURE OF REPEATED TAPPINGS.

By RUTHERFORD MORISON, M.B., F.R.C.S.,
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Dr. Samuel West's report, in the British Medical Journal of April 27th, 1886, of a case of serous effusion into the pleura treated successfully by free incision after the failure of repeated tapping, and the interest his paper excited when read at the Medical Society of London, induce me to send the notes of a case very similar to his. My case occurred in 1882 and was recorded in a thesis presented by me to the University of Edinburgh, from which I have made the following extract.

E. A. L., aged 23, residing at West Hartlepool, was first seen on February 7th, 1882. The patient, a thin, pale, delicate looking little woman, was unable to lie down because of difficulty in breathing. Her feet were swollen. The temperature was 100.6° F.; the pulse was 96, when she was lying quiet, but ran up to 120 when she was disturbed. In the abdomen a large apparently multilocular ovarian tumour was discovered; and the right chest was found to be dull all over on percussion. Breath sounds, vocal resonance, and vocal fremitus were absent.

The abdominal swelling had commenced with what, from her description, was an attack of peritonitis seven months earlier, and three months afterwards her abdomen was tapped by her medical attendant to relieve difficulty in breathing. A large but unknown quantity of clear fluid was removed by the tapping with some relief, but the abdomen rapidly refilled.

On February 9th, 1882, I tapped her abdomen and obtained 4 gallons of the glairy fluid commonly found in ovarian cysts. The tapping relieved her, but dyspnœa at night was still troublesome.

On February 11th I aspirated the right pleura and withdrew the needle when 25 ounces of clear fluid had escaped. For two nights she was relieved; then the dyspnœa returned. On February 14th I aspirated again, slowly withdrawing through a small needle 4½ pints of fluid. The chest rapidly refilled, and by February 28th the dyspnœa had returned and the right chest appeared to be full again. I then decided to try if I could gain on the fluid by repeated small aspirations, and removed 1 pint of fluid. On March 2nd a second pint was aspirated; on March 6th a third pint; and on March 10th a fourth pint. On March 12th the chest seemed to be as full as ever, and the patient was steadily losing ground from fever, night sweats, the frequent tappings, and inability to eat.

On March 14th, 1882, with the antiseptic precautions practised at that time, under the carbolic spray, and without any anæsthetic, I made a free incision into the pleural cavity in the middle axillary line, and inserted 3 inches of large-bored india-rubber drainage tube. Fluid rushed from the tube during its escape. On several occasions, fearing that so sudden an emptying of the cavity might cause serious disturbance, I restrained the flow. The patient, however, only felt relief, and made no complaint of pain or discomfort, except a weak sensation. Large antiseptic dressings (carbolic gauze) were applied, but in spite of frequent change and liberal use of gauze the dressings were continually soaked during the first five days. For the first two days the tongue was dry and the temperature 100° at night, otherwise there was no constitutional disturbance. On the sixth day after drainage the discharge suddenly ceased, and the dressing was for the first time found to be almost dry. From the sudden cessation of discharge I feared the tube might be blocked, but, on removing it, I found its lumen patent. A director passed into the pleural cavity also showed that it was empty. The percussion note at this time was tympanitic all over; there was a complete pneumothorax. The tube was introduced and retained for two days longer, when it was finally removed, as there was no discharge from it. The patient steadily gained ground for a fortnight, at the end of which there were no physical signs of any chest derangement, except slight impairment of the percussion note and some weakness of the breath sounds.

The abdominal swelling now began to be troublesome again, and a week later I performed ovariotomy. The operation was a difficult and severe one from dense adhesions to the parietes in the left lumbar region and the patient died half an hour after being put into bed. No *post-mortem* examination could be obtained.

Remarks.—Before performing this operation I had seen Sir Joseph Lister open and drain knee-joints distended by fluid with success. This experience gave me confidence, and the result justified the means, for I have as little doubt as it is possible to have in the absence of a *post-mortem* examination that my patient's chest was well when she died. I have since always thought that an aseptic opening into the pleura was free from danger, that the proper surgical treatment of pleural effusions which resisted a moderate amount of tapping was to have them incised, drained, and dressed by a

careful surgeon; and my strong impression is that no present-day surgeon would be found unwilling to do as was done in Dr. West's case or my own.

CASES OF BILIARY COLIC CURED BY THE ADMINISTRATION OF OLIVE OIL.

By J. MICHELL CLARKE, M.A., M.D.Cantab., M.R.C.P.Lond.,

Physician to the Bristol General Hospital.

The case of hepatic colic cured by ingestion of olive oil, recorded by Dr. A. S. Gubb,[1] has led me to report very briefly three cases under my own observation, in which this treatment was followed by satisfactory results. The patients took the oil after meals with less difficulty than one would imagine. They began with a dose of ℥j, and rapidly increased it, and I found that the first few doses were best taken floated on the surface of a bitter acid infusion. A dose of 8 grains of salicylate of soda was also given in a mild saline purgative before breakfast two or three times a week during the administration of the oil. The patients sought for the passage of a stone in the faeces, but did not detect one.

Case I.—A man, aged 63, was seen by me in April, 1893, for a severe attack of biliary colic. He was a strong, healthy man, of temperate habits, who had never had any bad illness since the age of 22, when he had inflammation of the right lung. The attack for which I saw him came on suddenly without obvious cause, although he had suffered from acidity, flatulence, and dyspeptic pains for some months previously. The attack was not followed by jaundice. I saw him again in April, 1893, and he then said that he had returned to work in May, 1892, after the first attack, and was as well as he had ever been for ten weeks afterwards, but since then he had suffered from severe attacks of biliary colic about once in every three or four weeks; in the intervals his health was fairly good, but he had lost 30 lbs in weight during the year. The pain came on quite suddenly at any time of the day or night, without any cause. The attacks were preceded by indigestion, from which he appeared to suffer a great deal. The pain was so bad as often to necessitate morphine injections, and was accompanied by violent sickness; the whole attack lasting for six hours or longer, leaving him quite exhausted. When I saw him he was slightly jaundiced, but he stated that he had not had jaundice before, and that until the preceding two days bile had never been absent from the motions. He looked thin and anxious. The liver edge could be felt below the ribs, the gall bladder was not detected. The urine contained a quantity of bile pigment, which reacted well to Gmelin's test. He was recommended to take olive oil twice daily, beginning with a dose of ℥j, and increasing the dose as quickly as possible until ℥vj to ℥viij were taken at a time. This he did without much inconvenience, not disliking the oil, and he continued the treatment for about two months. The jaundice soon disappeared, and he had no return of the attacks from the time of taking the oil. I met him in the street recently looking hale and hearty. He said that he felt perfectly well, and had had no return of the attacks now for twelve months, and had regained his former weight.

Case II.—A gentleman, aged 30, living in London. In September, 1888, I attended him for an attack of catarrhal jaundice, unattended with pain or with any symptoms of gall stones. I next saw him at Christmas, 1893; he was on a visit to Clifton, and had been taken suddenly ill with typical biliary colic. This first attack was not a severe one, and was not followed by jaundice; and he returned to London in a few days. During the late winter and spring of 1894 he suffered from repeated attacks of biliary colic at frequent intervals. Some of these were very severe, laying him up for several days, and leaving him exhausted by the pain and vomiting. His general health suffered, and he lost flesh. After the more severe attacks he had slight jaundice, and after all of them the urine was loaded with bile, and the faeces clay coloured. He tried various methods of treatment without obtaining any permanent relief, including a month's residence at Llandrindod Wells for a course of the waters there in the early summer of 1894. After this he was a little better for a short time, but the attacks recurred as badly as ever during the months of July, August, and the first half of September. On the average he had an attack about once in every two or three weeks. During the whole time he had been careful to follow out the usual dietetic restrictions. On September 24th he applied to me for advice, and I recommended him to try the olive oil treatment. This he carried out thoroughly, beginning with a small dose and increasing it up to ℥iv, or occasionally ℥v, twice a day. He took the oil for from two and a-half to three months, leaving it off gradually. The result has been that from the time that he began to take the oil he has had no recurrence of the attacks, and has remained quite free from pain. The large amount of oil gave him little inconvenience, until towards the end of the treatment, when it began to excite nausea.

Case III.—A stout woman of 40, who had had a large family, and who came to the Bristol General Hospital as an out-patient suffering from jaundice with repeatedly recurring attacks of severe biliary colic. Treatment by olive oil at once stopped the attacks. She had more difficulty in taking the oil than the other two patients, and could not manage more than ℥iij at a dose taken twice, sometimes three times, daily. She attended as an out-patient for six weeks, and then ceased as she appeared quite well. I have not been able to obtain any subsequent information about her; but it is probable that if the attacks had recurred she would have come to the hospital again, as she was very pleased with the result of the treatment.

[1] British Medical Journal, April 20th, 1895, p. 868.

PERMANGANATE OF POTASSIUM AS AN ANTIDOTE FOR OPIUM POISONING.

By NATHAN RAW, M.D., Etc.,

Medical Superintendent and Pathologist Dundee Royal Infirmary.

I have read in the British Medical Journal of June 22nd with great interest the original communication on the new antidote for opium poisoning by Dr. William Moor, of New York, and beg to record my own experience of the efficiency of the drug after careful trial in five cases of opium narcosis.

Case I.—M. G., aged 27, admitted March 17th, 1893, had swallowed ℥ij of laudanum. She was profoundly unconscious and evidently in the last stage of narcosis. Her stomach was at once washed out with a warm solution of Condy's fluid (℥ij to a pint of water) until the washings were quite colourless. She afterwards was given ℥ij of liquor potassii permanganatis every hour for four hours. Artificial respiration was kept up for two hours in addition. She made a good recovery.

Case II.—E. S., aged 59, was admitted on August 28th, 1894, having swallowed a large quantity of tinctura opii. She was comatose and could not be roused. The pupils were "pin point," the respirations 6 a minute. Her stomach was at once washed out with a warm solution of Condy's fluid, and ℥ij of liquor potassii permanganatis given every hour. In a quarter of an hour she showed improvement, and in an hour she was able to speak. She recovered.

Case III.—J. H., aged 35, a chemist, was admitted, having been found in an unconscious condition in his shop. He had evidently taken opium several hours previously, and the amount was afterwards found to be over a pint of tinctura opii. The same procedure was adopted, and in addition I was about to inject permanganate of potassium subcutaneously when he suddenly died from respiratory paralysis.

Case IV.—C. M., aged 52, was admitted on November 16th, 1894, in a profoundly unconscious and comatose condition from opium and alcohol. Her stomach was at once washed out freely with Condy's fluid, and the effect was marvellous. In ten minutes she was answering questions, and it was thought she had recovered; but she relapsed into a comatose condition, when potassium permanganate was given in ℥ij doses every hour for three hours. The stomach was continually washed out with the solution until the washings were quite clear. This patient made a good recovery.

CASE V.—The same patient was readmitted two weeks afterwards in the same state. She went out next day recovered.

The above cases are to my mind abundant evidence of the great value of the permanganate salts in cases of opium poisoning. I have had no opportunity of trying it in any other poison, but the procedure is so simple and harmless as to readily recommend itself in all cases of poisoning by opium or any of its alkaloids.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

DIPHTHERIA IN THE PUERPERIUM.

THE following notes may be of interest as illustrating the occurrence of the primary lesion of diphtheria upon the perineum as well as upon the umbilicus of the infant.

Mrs. R. was confined with her first child on October 17th, 1894. The application of forceps was necessary, and a slight laceration of the perineum resulted, necessitating two sutures. The following day the nurse complained of *malaise* and sore throat, and although nothing was visible beyond general redness of the fauces, it was deemed advisable that she should cease attendance on a lying-in woman; consequently she was sent away at once, and was lost sight of for the time being. The torn surfaces of the perineum failed to unite, and on the fourth day the stitches were removed. At this period there was no reason to entertain any suspicion of diphtheria.

The patient did fairly well until the ninth day after the confinement and the eighth day after the occurrence of the sore throat in the nurse, when she had a rigor, and the temperature registered 103° F. She complained of pain and tenderness in the region of the perineum. An adherent dirty whitish membrane was visible on the site of the laceration. On the separation of the cord on the tenth day a similar membrane formed on the umbilicus of the infant. The child pined and refused its nourishment, and was removed without my knowledge or consent to a children's hospital, where it died on November 7th. No complaint of sore throat was made, and the fauces of both mother and infant were normal in appearance. Under appropriate treatment the false membrane disappeared and the laceration healed. On December 20th, about six weeks after the appearance of the false membrane, the mother was seized with paraplegia, which kept her confined to her room for nine weeks; she ultimately recovered.

Although the presence of the Klebs Loeffler bacillus was not demonstrated, I think there can be little doubt as to the diphtheritic nature of the false membrane both in the mother and infant. Several cases of ordinary diphtheria in the house soon followed, one of which proved fatal. I heard afterwards that the sore throat of the nurse turned out to be diphtheria, and she probably was the source of infection for all the cases which occurred in the house.

Sutherland Avenue, W. ROBERT FITZGERALD, M.D.

A CASE OF HYPERPYREXIA.

W.C., a retired farmer, aged 84 years, has always had good health, and, in spite of his advanced age, has had no medical advice for over twenty years. During the last year he had complained occasionally of difficulty in passing his water, but had had no treatment.

On April 18th, 1895, after his usual midday dinner, he went for a walk of about two miles in the neighbourhood of his house, and while out was suddenly seized with shivering and vomiting, but managed to return home without assistance. He went to bed, and the vomiting, coldness, and shivering continued, the whole body and bed being shaken; the bowels acted frequently, and the urine was copious. About 9 P.M. he began to lose the shivering and get warm, but the vomiting and retching continued, and the bowels acted repeatedly and unconsciously, the urine also being passed in the bed. Towards morning he became restless, tried to get out of bed and toss the clothes off, but about 11 A.M. he was quieter, and could not be roused.

I saw him at 2 P.M. on April 19th. He was lying on his back in bed, paying no attention to anything, but, on being shouted at, would turn his head, open his eyes, and look at one, but made no attempt to speak or take any notice of what was said. The skin was hot and dry, the lips parched and caked. The temperature in the axilla was 110° F. The respirations were Cheyne-Stokes in character, each cycle occupying fifty seconds, the number of respirations during that time being 38, and the period of apparent non-breathing seven seconds.

There was emphysema of the lungs, but otherwise percussion and auscultation gave no abnormal signs. The pulse was 120, equal in force, but intermitted a beat in every two, three, or four beats; the heart sounds were normal but weak. This semiconscious condition continued in spite of treatment till about 1 A.M. on April 20th, when the breathing became more laboured, and finally stopped about 1.30 A.M. From the time he was in his usual good health till death was only thirty-six hours. How long the temperature of 110° F. lasted is impossible to say, as I only saw the patient once, his house being six miles distant and very out of the way. His dinner, consisting of salt pork and bread, was shared by his wife, who was not affected by it. I had had several cases of influenza and high temperature in the same district as the patient resided. Extreme pallor after death and rapid onset of decomposition pointed to great blood destruction. A *post-mortem* examination could not be obtained.

St. Mark's Road, W. E. W. SIMMONS, M.R.C.S., L.R.C.P.

THYROID EXTRACT IN UNIVERSAL ALOPECIA.

THIS drug was prescribed for a patient of Dr. Cathcart's, whose father had suffered from the same disease. In April he complained that he could hardly touch the hair of scalp, moustache, eyebrows, and axillæ, without its coming out, and the loss of hair was very evident. Even on the legs it was readily pulled out. Alopecia was begun four months ago. After taking 5 gr. tabloids three times a day for ten weeks no further loss of hair on moustache and eyebrows was evident, and it did not readily pull out. The scalp has been shaved, so it is difficult to state what change has occurred; the shaved hair where present has hardly grown at all, but there is a good deal of downy hair. The patient was taking at the same time liquor strychninæ.

Even so small an amount of success in an ailment considered incurable makes this treatment worthy of further trial.

HUGH R. BRENAN, M.D.,
Assistant Physician King's College Hospital.

ANGIOMA OF THE PHARYNX.

RECENTLY a lady, aged about 40, consulted me. She complained of a feeling of soreness in the throat and a tickling sensation, as if she were always wanting to swallow. These symptoms had been going on for four or five years, and she had always been laughed at and told it was indigestion. I examined the throat, and at once noticed a small tumour (an angioma) in the right side of the soft palate. This tumour was the size of and in appearance not unlike a blackberry, and encroached on the margin and upper border of the soft palate as well as on the uvula. I may add that the uvula was much relaxed and, with the rest of the pharynx, was considerably congested. I think this worth recording, as Dr. McBride, in his book on the *Throat, Nose, and Ear*, says that according to his experience neoplasms of the pharynx, with the exception of papilliomata, are of extreme rarity. So far my patient has only allowed me to employ palliative measures, which have given considerable relief to the symptoms, and will not hear at present of any operative interference.

Pembroke, S. Wales ALEX. J. ANDERSON, M.B., C.M. Edin.

THE ETIOLOGY OF GOITRE.

WITH reference to Notes on the Etiology of Goitre, by Dr. Morris, in the BRITISH MEDICAL JOURNAL of July 6th, it may be interesting to mention another probable cause of goitre which I have met.

I was for some time in practice in a mining town in Monmouthshire, and goitre was very common. The cause

mentioned by Dr. Morris would not operate in my cases, the water being free from carbonates of lime and magnesia. Around the town, in closer proximity to the ironworks and pit heads are many rows of houses with a very defective water supply.

It used to be, and in some parts is, the duty of the women to bring the water from the wells to the houses, and they carried it on their heads in large earthenware "jacks," each holding about two gallons. It is easy to see that this would, for the time being, greatly increase the blood supply to the thyroid gland, which increase, being often repeated, would cause goitre.

Goitre is very much more common, too, among the older women of the place, and is getting less frequent, I was credibly informed, with each generation. The reason for this would seem to be that nowadays there are improved facilities for getting water, and less necessity for the women being "carriers of water."

I questioned several of my patients very closely, but could discover no cause for the goitre save the one mentioned. One girl, aged 20, whom I had frequently seen carrying water in the way mentioned, came to me with a goitre of recent development. The mode of carrying the water was in her case, too, the only discoverable cause.

Thomas A. Glover, M.B. and C.M.Edin.
Askern, Doncaster.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

UNIVERSITY COLLEGE HOSPITAL.

TWO CASES OF PERFORATED GASTRIC ULCER TREATED BY OPERATION.

(For the Notes of these Cases we are indebted to Mr. Douglas Drew, F.R.C.S., Surgical Registrar.)

(*Concluded from page 15.*)

[Case II.—Under the care of Mr. Victor Horsley.]

E. H., aged 20 years, a dressmaker, was admitted on March 23rd, 1895. She had been troubled with indigestion for about three years, with pain and a feeling of distension after food, but not associated with vomiting. These symptoms had been more severe for about two months before her admission to the hospital.

On March 22nd she felt quite well until after her midday dinner, when she complained of flatulence and a sense of distension, but was able to continue her work until 6.30 P.M., when she had tea. About half an hour after this meal she was seized with sudden and severe pain in the stomach, and vomited several times a small quantity. A medical man was called in, and the patient was put to bed, hot flannels applied, and a draught containing 2 drachms of brandy with powdered ginger and hot water to 10 ounces was given, and also a dose of castor oil. The pain continued during the night, and on the following day it was worse. She was brought to the hospital in a cab, the jolting greatly aggravating the pain. On arriving at about 7 P.M. she was suffering from shock, the face was pale and the lips blanched, and the eyes were sunken, with dark rings around them. The pulse was 132, and the temperature 102.4° in the rectum. Severe pain in the abdomen was complained of; it was found distended, and scarcely moved with respiration, the breathing being rather rapid. The distension was most marked below the umbilicus, and the abdominal wall was rigid, particularly on the right side. Tenderness was general, but chiefly below the umbilicus to the left of the middle line. The percussion note was tympanitic; no dulness was present in the flanks; and the liver dulness diminished in extent.

Dr. J. Rose Bradford saw the patient in consultation with Mr. Horsley, and the operation was performed by Mr. Horsley about twenty-six hours after the onset of severe pain. Chloroform was administered, and the abdomen was opened in the middle line by an incision extending from below the ensiform cartilage to below the umbilicus. Gas escaped on dividing the peritoneum. The intestines presented in the lower part of the wound, and appeared healthy; the transverse colon was inflamed, and some lymph was found around it. The anterior surface of the stomach was exposed; it was red, and in places covered with thick exudate, as also was the adjacent margin of the left lobe of the liver. During the examination of the stomach a sudden discharge of about a pint of sour-smelling thin fluid, with flakes of exudate, occurred from an abscess situated on the front of the stomach towards the left. This was sponged away, and on further examination of the cardiac end, a round perforation (¼ inch) was discovered, surrounded by exudate, which stripped off the stomach wall readily. In order to deal with the perforation the left side of the wound was firmly retracted, and the stomach gently drawn to the right. The edges of the opening were freshened with a knife, and five silk Lembert sutures were inserted with a curved Hagedorn needle from above downwards; on tightening them, two cut out from the softened wall. After the row had been completed, a second row was put in in a similar manner, and buried the first stitches completely. The abdomen was flushed out with warm water, and closed by deep silk and superficial horsehair sutures. A drainage tube about 6 inches in length was placed at the upper end of the wound, and passed upwards towards the left hypochondrium.

The operation, which lasted rather more than an hour, was borne well. The pulse at its completion was rather better than at time of admission.

A few hours after the operation enemata were given to clear the bowels before resorting to nutrient injections. No satisfactory action followed; the bowels had been confined for five days. The patient passed a quiet night except for some pain and flatulence. No morphine was given and no food by the mouth. Water was used frequently to rinse the mouth, and enemata of peptone ℥ss with water ℥ivss were given every four hours.

Vomiting occurred several times during March 25th. The tongue was dry and brown, the temperature 101.8°, and the pulse 108. A soap and water enema with ℥j of turpentine was followed by a free action of the bowel.

On March 26th (third day) the wound was dressed. A slight amount of sour smelling discharge was present. The drainage tube was shortened. There was no pain or distension of the abdomen, and the general condition was satisfactory.

On March 27th the improvement was maintained, but on March 28th (fifth day) swelling and pain around the left parotid came on during the night. The temperature was 100° and the pulse 92. The wound was dressed, the discharge had increased in amount and was very offensive; a smaller tube was inserted and daily dressings resorted to. Food was given by the mouth for the first time. It consisted of Benger's food ℥ij hourly. On the following day, as no pain or sickness had occurred, the quantity was increased to ℥iij hourly. The parotitis was treated with application of extract of belladonna and hot fomentations.

March 31st. The parotitis was decreasing, the temperature remained elevated (99.4° to 100.6°), the pulse was 94. The discharge remained about the same, but was less offensive. The quantity of Benger's food was increased to ℥ij two-hourly, but some flatulence was complained of, and the quantity was therefore slightly reduced.

On April 3rd (eleventh day) the swelling of the parotid had completely subsided; the silk sutures were removed.

On April 4th the patient became much worse, the temperature rose to 102°, the respirations to 32, and the pulse to 124. Signs of pneumonia were discovered at the left base.

On April 6th the condition was less favourable, the pneumonia had extended. Skodaic resonance was well marked at the left apex. Oxygen inhalations were given every four hours; the same evening the temperature rose to 103.2°, and the respirations became much more rapid. The next morning (fifteenth day) signs of pneumonia had developed at the right base, cyanosis came on, and the patient gradually sank.

Necropsy.—The lower part of the wound was firmly united; above this the union was not so firm, and for a space of 1 inch had gaped open and a small protrusion of the large in-

testine, ¾ inch in diameter, had occurred; this was due to a moderate degree of distension which came on a few hours before death. At the upper end was the sinus of the drainage tube; on opening the abdomen the intestines were slightly adherent along the scar. There was no general peritonitis present. The sinus of the drainage tube led into a cavity containing fœtid pus; it was bounded in front by the abdominal wall, above by the left lobe of the liver; on the left side the wall was formed by the diaphragm and spleen, and behind lay the stomach with the small omentum. At about the centre of this part of the wall of the stomach was seen the perforation; it was gaping open, the sutures had all cut through, and were lying on the right side of the opening, which latter measured about ¾ inch, and was situated near the small curvature towards the cardiac end. This abscess had extended backwards round the liver, and opened through an aperture in the diaphragm into the base of the left lung. Other abscesses were found; a small one between the liver and the diaphragm on the left of the falciform ligament, and another larger, containing about 3 ounces of offensive pus beneath the right lobe of the liver. A second ulcer was found on the posterior surface of the stomach, 2 inches to the right of the larger one, and also situated near the smaller curvature. The stomach at this spot was adherent to the peritoneum, covering the pancreas by recent adhesions, and on separating these a small perforation was discovered. On opening the stomach the mucous membrane was red and somewhat thickened around the ulcers, the edges of which were sharp. The remaining mucous membrane did not present any abnormal signs. The contents of the stomach were a thin, brown, offensive fluid. The colon was distended, and a small patch of redness was seen in the posterior part of the cæcum (*?post mortem*). The left lung was adherent generally by recent lymph. There was no fluid in the pleura. The diaphragm extended as high as the anterior end of the fourth rib on the left side. The base of the lung was firmly adherent to it, and on separating it the abscess communicating with the lung was opened; it measured 1½ inch in diameter, and extended into the lung about 1 inch, the cavity being irregular, sloughy, and very offensive. The lower lobe of the lung was small, and was nearly solid with pneumonia having a lobular distribution; the upper lobe was also very extensively affected with pneumonia. The right pleura and lung presented similar appearances, but not in such an advanced degree. The heart was normal. There was an excess of serous fluid in the pericardium. The kidneys were rather dark coloured, but otherwise normal. The capsule of the liver was thickened where it formed the wall of the abscesses; nothing abnormal was detected on cutting into it. The left lobe extended to within 2 inches of the left side of the chest.

Remarks by Mr. Horsley.—The unfavourable termination of this case was a source of the deepest regret, inasmuch as the progress having been so remarkably good during the first twelve days, and the operation naturally not revealing the retrogastric mischief, the patient's recovery seemed well assured. In a parallel case where so long a period elapsed from the time of perforation, it would seem advisable not only to make even a more extensive cleansing and breaking down of adhesions than was carried out, but in addition to examine as a routine measure the posterior aspect of the stomach, or at least its relations to the surrounding viscera, and, above all, to the diaphragm. So many cases have now been recorded of spread of the infection through the diaphragm that attention was specially directed to the possibility of this occurring, and long before the first physical signs in the left lung arose, but the development of the infection was sudden and rapidly fatal.

The summer session of Anderson's College Medical School, Glasgow, which closed last week, has, we learn, been the most successful in its history. Upwards of 175 students were in attendance, which is a number in advance of any previous year.

Dr. Ellerton, of Stoke Hall, Ipswich, has been added to the Commission of the Peace for the county of Suffolk.—Dr. R. D. Evans, surgeon to the Oakley Hospital and Festiniog Slate Quarries, has been placed on the Commission of the Peace for Merionethshire.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

F. H. Champneys, M.A., M.D., President, in the Chair.

Wednesday, July 3rd, 1895.

Specimens.

The following specimens were shown:—Mr. Doran (for Mr. Bradbury and Dr. Lowe): A Monster, Acardiacus Parasephalus.—Dr. Blacker: Uterus affected with Fibroids and Carcinoma of the Cervix, obtained 8 years after Oöphorectomy.—Mr. Targett: (1) Abscess in Ovary caused by direct infection through connective Tissue; and (2) Casts of Vaginal Mucous Membrane—Dr. Amand Routh: Macerated Skull of an Anencephalic Fœtus. Dr. Cullingworth: Pedunculated Fibro-myoma of the Broad Ligament with Twisted Pedicle.—Dr. Playfair: Tubal Abortion.—Dr. Galabin: (1) An improved form of "Sanitary Towel"; and (2) Pregnancy in a Rudimentary Uterine Horn.

Development of the Human Placenta: Adjourned Discussion.

Dr. Darin asked Dr. Eden how the specimens of placentæ and deciduæ from which the sections were made had been obtained and prepared, so as to exclude the possibility of the hæmorrhages into the decidua in the earlier stages being artificially produced. It was highly probable that the hæmorrhages were normal, for the process thus resembled that of the formation of the menstrual decidua, which was another example of intense activity of function. The resemblance was interesting as bearing on the connection of ovulation with menstruation. Hæmorrhages as part of an early stage in the formation of the placenta were known from the observations of Hubrecht and others to take place in the trophoblast of some of the lower animals, where cleavage occurred in this part of the chorion, and produced spaces which became filled with maternal blood. Dr. Eden had said that what had been described as multinucleated cells by many observers were practically always sections of buds of the chorionic villi lying in the sinuses. These cells had, however, been demonstrated in the sinuses of the uterus itself, and more deeply than the villi were likely to penetrate, and had been described by Heime as collecting around the vessels in the uterine wall towards the end of pregnancy in connection with the hyaline degeneration of the sinus epithelium which took place then. This change had been first described by Friedländer, and, in the Society's *Transactions*, by John Williams, vol. xx, p. 172.

Remarks were made by Dr. Griffith and Dr. Galabin.

Dr. Eden, in reply, said that the specimens of early ova shown at the last meeting might fairly be regarded as healthy; they were examples of abortion occurring from accidental causes, not from intrauterine disease. In answer to Dr. Galabin, he said that the maternal vessels became to a great extent opened up by the destructive action of the trophoblastic buds, and this process was the principal factor in the development of the circulation through the intervillous spaces. Similar changes had been described in the development of the placenta of many other animals besides man. The question of fibrinous and calcareous degeneration in the placenta he hoped to discuss in a subsequent paper.

Placental Polypus.

Mr. Doran read this paper. In examining the clots from tubes which he had recently removed in cases of suspected tubal gestation, he compared the clots with sections of true placenta, and of retained placental fragments. He also examined, for the second time, sections from a polypoid growth found in the uterus of a woman aged 29, who died many years ago after the removal of a cystic kidney by Sir Spencer Wells. There had been no hæmorrhage; in fact, the patient believed that she was pregnant on account of the absence, for several months, of menstruation. The uterus, with the polypus attached to its wall, and the ovaries showing a large corpus luteum on one side, are preserved in the Museum of the College of Surgeons (No. 4,633, Pathological series). In 1877 Mr. Doran believed that the polypus was a cavernous angioma. Dr. Boldt had quite recently detected a

tumour of that kind in the uterus. The College specimen, however, proved on careful examination to be made up of placental tissue. It was a true placental polypus. In all other recorded cases uterine hæmorrhage was present. The author dwelt on recent opinions concerning placental polypus. According to the recent researches of Klasson of Kieff, and Lejars and Lévi, of Paris, the so-called "fibrinous polypus" was only a form of placental polypus, if not identical, the placental tissue having been overlooked. The author finally referred to Hartmann and Toupet's important investigations on the results of retention of placental tissue when, instead of septic changes, organisation occurred. They found that this tissue might develop into innocent deciduoma (that is, placental polypus), hydatidiform mole, and chorion-celled sarcoma. This last growth was the "malignant deciduoma," or cancer following gestation, which had been so frequently described of late, on indisputable evidence, by Continental authorities. The author asked why, if this grave disease were so frequent in Europe, it had hitherto escaped the notice of British teachers and practitioners.

Dr. Herbert Spencer had six years ago met with a case which he believed to be of the nature of the deciduoma malignum of Continental authorities. A woman about 25 years of age died two months after delivery with symptoms of septicæmia and signs of uterine cancer. During life several pieces of putrid "placenta" had been removed. At the *post-mortem* examination growth and ulceration were found in the situation of the placental site where the wall was almost eaten through, and also (unlike most cases) in the cervix. The microscopic examination of the uterine growth was somewhat unsatisfactory, but it appeared to be sarcomatous. In the lungs were many secondary growths, some as large as a walnut; under the microscope they were evidently sarcomatous. He had hoped to meet with another case in which the microscopic examination of the primary growth would be more satisfactory; but as the above-mentioned appeared to be the only case of the kind in this country he would be happy to bring it before the Society. The specimens were in University College Museum.

Remarks were also made by Dr. Galabin and Dr. Griffith.

In reply to Dr. Galabin Mr. Alban Doran said that hydatidiform moles undoubtedly displayed malignant characters in certain cases. They were myxomatous, but it must be remembered that general pathologists were not all agreed as to the limits of the term "myxoma." Sometimes mucoid tissue was normal and not in any sense a new growth; sometimes it was clearly associated with sarcoma. Dr. Griffith's tumour seemed to be a true fibrinous polypus, as no placental tissue was detected in its substance. Dr. Herbert Spencer's case was of the highest interest; it appeared to be the first instance of malignant deciduoma in the British Isles. In conclusion Mr. Doran recommended careful inspection of all specimens of malignant disease of the uterus from patients under 40 already preserved in museums. In future in any patient of this kind, close inquiry should be made as to the occurence of abortion within a few years of the appearance of evidence of malignancy.

Registration of Midwives.

The report of the proceedings at the June meeting of the Society omitted to state that the President announced that the General Medical Council had approved of a form of certificate to be given to candidates successful at the Society's examinations in midwifery. Copies of the form were handed round.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

E. A. Browne, F.R.C.S.Edin., Vice-President, in the Chair.

Friday, July 5th, 1895.

The Association of Certain Forms of Myopia with Disease of the Nose and Pharynx.

This paper was read by Dr. Batten. After referring to a former paper read before the Society in July, 1893, in which he held that certain constitutional diseases produced myopias distinguishable and differing from each other according to their cause, he proceeded to describe a special form of myopic fundus which he associated with certain diseases of the nose and pharynx. The chief characteristics of this form of myopia were (1) the existence of localised posterior staphylomata at, or in the immediate neighbourhood of, the optic disc, or in the nasal side of the fundus; (2) the tilting of the optic disc in the direction of the staphyloma; (3) the œdematous condition of the more prominent margin of the optic disc. This œdema, or "pseudo-neuritis" he considered to be secondary to and caused by the tilting of the disc. The conditions of the nose and throat with which he associated this form of fundus were adenoid vegetations, enlarged tonsils, deviation of the septum, blows on the nose and forehead, ozæna, syphilitic disease of the nasal bones, and chronic otorrhœa. He quoted cases in which myopia had immediately followed the onset of some of these conditions, and in conclusion said that the presence of the œdema was generally a sign that the cause was still in active operation; that the visual acuity was seldom good in these cases, even when the degree of myopia was low, and was especially bad when the staphyloma was to the nasal side of the optic disc; that the whole condition was one indicative of a progressive myopia, and that the œdema and tilting both tended to disappear with the progress of the myopia.

The Chairman thought more evidence than was present in Dr. Batten's paper was necessary to convince those who had not specially studied the subject. Many factors, like previous attacks of scarlet fever, rheumatism, or rheumatic fever, would have to be eliminated. All these, as well as other exhausting diseases, were known to be sometimes followed by the production or increase of myopia.

Mr. Spencer Watson thought it a pity that nothing had been put forward by Dr. Batten to explain the relationship between the cases of nasal disease and myopia; he had looked for some information as to the constitutional cause at the root of these affections. He had seen interstitial keratitis of syphilitic nature in which myopia had developed, and he regarded this as due to the softening of the whole eye by the disease, leading to its expansion. This would explain the association between the myopia and some diseases of the nose having a similar constitutional origin.

In reply, Dr. Batten said he had dealt with the constitutional causes in his previous paper; he had only brought forward some evidence in the present one. There was a close connection between the sphenoidal cells and fissures and the blood supply to the eye; in a measure the eye was to be regarded as an end organ, and interference with its blood supply was likely to lead to changes analogous to that produced in clubbed fingers.

Indian Oculist's Instruments.

Mr. Adams Frost showed a complete set of Indian oculist's instruments which had been presented to the Society by Surgeon-Captain Drake-Brockman, and described the method of operating. There was no attempt at asepsis or ordinary cleanliness; the lower lid was everted, an incision made in the ciliary region with a lancet, and the lens was couched by passing an instrument through the incision. Most eyes were lost by panophthalmitis or secondary glaucoma.

Surgeon-Colonel Drake-Brockman commented on the difficulty of obtaining these instruments; they were handed down from father to son for generations. Fewer than 10 per cent. of the cases could be considered successful cures.

Card Specimens.

The following were shown:—Mr. E. H. Cartwright: Modification of Thomas's Arrangement of Holmgren's Wools.—Mr. Fischer: Symmetrical Ulcers of Both Cornea.—Mr. D. Marshall: Double Enophthalmos.

Election of Officers.

The following were elected office-bearers and members of Council for the session 1895-96:—*President:* *E. Nettleship. *Vice-Presidents:* Stephen Mackenzie, M.D., Henry Power, Edgar A. Browne (Liverpool), Thomas Barlow, M.D., G. Anderson Critchett, J. B. Story (Dublin), *John Couper, *G. A. Berry, M.D. (Edinburgh). *Treasurer:* George Cowell. *Secretaries:* Samuel Herbert Habershon, M.D., *John Bowring Lawford. *Librarian:* W. Adams Frost. *Other Members of Council:* M. A. Adams (Maidstone), Charles E. Beevor, M.D.,

*T. H. Bickerton (Liverpool), Ernest Clarke, M.D., *A. Dean Davidson, M.D. (Swansea), *E. F. Drake-Brockman, A. Hill Griffith, M.D. (Manchester), *Gustavus Hartridge, Joseph Nelson, M.D. (Belfast), *D. Argyll Robertson, M.D. (Edinburgh), A. E. Sansom, M.D., *James Taylor, M.D. *Honorary Member of the Society:* J. S. Bristowe, M.D., F.R.S. The gentlemen whose names are marked with an asterisk (*) were not in the Council, or did not hold the same office, during the preceding year.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

T. S. Clouston, M.D., President, in the Chair.

Wednesday, July 3rd, 1895.

Cases.

Dr. W. Allan Jamieson showed (1) A child suffering from Hydroa Vacciniforme (Hutchinson's Summer Rash) on the face, ears, back of hands and wrists. The condition was worse in summer, but not absent in winter. It had been treated by salicylic acid in resorcin, plus brown pigment so as to exclude the irritating rays of the sun: (2) A case of Ichthyosis in a patient aged 34.—Dr. Norman Walker showed a little boy suffering from Pityriasis Rosecla.—Dr. James showed a boy who three years ago when in a swing had got a blow on the head, a fracture (depressed), fragments of bone had been removed, and he had then been eight months in the infirmary. Last Christmas an epileptic fit occurred. Since then there had been several, but there had been no local manifestations, and no aura. He was trephined. Now he was brought to show the pulsations in the brain, and apparently a height of 4 ft. of water in this case was equal to the pressure in the vessels of the brain. Very slight mental effort evidently meant an increase of blood pressure in the brain.

Specimens.

Dr. Edward Carmichael showed a Sarcoma of the Jaw.—Dr. R. F. C. Leith showed (1) a specimen illustrating Rupture of the Pancreas and Duodenum at the Duodeno-jejunal Junction caused by the kick of a horse; only nine such cases had been recorded so far as he knew; (2) Rupture of the Liver in a vanman who had been in a collision, and who died of collapse from shock and internal hæmorrhage; (3) Rupture of Kidney caused by a falling tree: (4) Multiple Tuberculous Tumours in the Cerebellum, Chronic Hydrocephalus in the Brain (specimens and photograph); (5) Perforative Appendicitis, with Subcæcal Abscess, and resulting gangrenous abscess in the abdominal walls, thigh, and vulva (specimens and photographs).—Mr. A. G. Miller showed an Abscess in the Temporo-sphenoidal Lobe, the result of middle-ear disease. There had been practically no symptoms till quite late.

The Treatment of Fractures near a Joint, aided by Massage and Movement.

Mr. A. G. Miller read this paper. Arbuthnot Lane had expressed the opinion that the present treatment of such cases was not satisfactory, and Marmaduke Sheild had said that as soon as the bones had united the limb was put up in a stiff case, leading to atrophy, etc., and had recommended that the fracture should not be set till after seven days or so after the injury; stiffness, uselessness, and long time for treatment, seemed to be the main defects of present treatment. By way of illustration, Mr. Miller took first Colles's fracture, in which resulting stiffness was so common. The best results were got when early movement was employed and perhaps still better if there had been no treatment at all. Secondly, Pott's fracture. The points were, damage to bone, ligament, synovial membrane, and extravasation of blood. After six weeks' treatment the usual result was a stiff ankle joint and unfitness for work. It was too often the case that the fracture was treated, and the damaged joint ignored. Ununited fracture was rare, anky losis much more common. Rest alone did not cause ankylosis, the injury alone did not; but the long-continued rest was the main cause. Fractures were taken down several times without harm. But why not sooner? He believed massage led to more rapid unibility of fractures, prevented adhesions, and saved time. Passive movement of course was meant. Mr. Miller illustrated his remarks by showing a young man with a compound fracture below the knee, which had been treated according to the principles here laid down, and the result was excellent.

Dr. Joseph Bell said there were some fractures that did not do well however carefully they were treated. He used splints for a very short time in fractures near the elbow, none at all in Colles's fracture, and in Pott's full and free massage. In sprains he believed massage ought to be given very early.

Dr. J. H. A. Laing in sprain began massage when the swelling had gone down, on the third day or so passive movement, and usually walking was possible in a week. Fracture near a joint healed better and faster with careful massage. There was no necessity for moving the fracture itself.

Mr. Alexis Thompson thought that in cases of comminuted fracture near the elbow-joint the best way was to cut down and fix the fragments. Splints in such cases were not of much use.

Mr. Stiles said we were advised to begin massage 24 or 48 hours after the injury. But what were we to do during this period? How were we to get rid of the effused blood? Probably plenty of cotton wool and domestic bandage best aided this. The wool should be put not merely on the joint but above and below it.

Mr. A. G. Miller replied.

Rupture of the Pancreas.

Dr. R. F. C. Leith read a paper on Ruptures of the Pancreas: their relation to Pancreatic Cysts, with some remarks on Treatment. Cases following upon severe injuries and proving quickly fatal, in which the pancreas was found to be ruptured, were first spoken of. The author gave particulars of 2 new cases, one in a boy of 4 years, and the other in a young man, and then referred to 7 other cases previously published. In all of these except two some other viscus had suffered at the same time, and the cause of death (internal hæmorrhage) was referable to that rather than to injury of the pancreas. No one sign or symptom had pointed to this gland in particular, and a definite diagnosis was possible only after exploratory laparotomy. He explained how the gland and its covering peritoneum could be thoroughly explored by means of a Ferguson's speculum and an electric lamp. Hæmorrhage from the gland itself was comparatively slight, and could easily be controlled by pressure or by ligature of the divided ends as recommended by Senn. Suturing of the peritoneal covering alone (either continuous or interrupted) brought the ends of the gland into close approximation. He next referred to non fatal injuries implicating this gland, and their relation to the so-called "traumatic pancreatic cysts." He gave a table of 16 published cases of this kind, indicating that, while there was little or no doubt that the cyst had been caused by the injury, there was considerable room for doubt that that injury had been one of the pancreas. In investigating this question he said that, as *post-mortem* evidence was so scanty, we were compelled to argue from analogy, after considering all the possibilities. Cysts, both traumatic and spontaneous, had been met with in the peritoneum at a distance from the pancreas. These were sometimes hæmorrhagic and sometimes serous, and as they could occur elsewhere they might readily enough take their origin in the lesser omentum, and come to simulate true pancreatic cysts. He discussed the possibilities of spontaneous hæmorrhage from the pancreas and suprarenals, and the mode of action of such in the production of cysts. Other fallacies might arise in connection with cysts of the suprarenals, kidney, spleen, or even liver. It was, therefore, necessary to be careful in calling any mesogastric cyst pancreatic; chemical and microscopical examination might help, but failed to do so in many cases. As regards treatment, he objected to aspiration with or without the injection of iodine, and to the excision of the cyst, as both being dangerous. Anterior incision, with drainage, was the favourable method, and, while not universally successful, it had given very good results. It was, however, open to the obvious objections of interfering with the usefulness of the anterior abdominal wall, of imperfect and slow drainage, of the possibility of a permanent pancreatic fistula remaining, or even inviting to malignant disease. He therefore thought that all cases, particularly the blood sessile ones that did not reach the abdominal wall in front, had better primarily be

attacked from behind. From many observations on the cadaver he showed how this could be done by means of a vertical incision at the outer border of the left rectus, beginning at the twelfth rib. The posterior surface of the kidney and the renal vessels were easily defined, and the cyst could be easily reached by the exploring finger working inwards and slightly upwards from these vessels. In old-standing cases the cyst might even extend lower than these vessels, and could be opened below them. He anticipated that this method would be followed by much more speedy cure.

Dr. Joseph Bell made some remarks on his experience of pancreatic cysts.

Alcoholism and its Effects.

Dr. Lockhart Gillespie read a paper entitled "Statistics concerning the Patients admitted into the Royal Infirmary suffering from Alcoholism and its Effects during the last Five Years." During that period 1,264 patients had been admitted (only those were reckoned who were suffering from alcohol and its immediate effects), 935 males and 329 females. In this number there had been 44 deaths, 38 males (4 per cent.), and 6 females (1.8 per cent.). As to monthly admissions these were most in January; there was a slight rise in April, a great rise in July and August, and a fall from that time till the lowest number was reached in November. There was an excess in summer, more especially in female admissions. A graphic chart of the above facts closely corresponded to a similar chart of the deaths in the eight principal towns of Scotland for the same period. As to occupation: males, 461 labourers, of which 271 were outdoor labourers and 190 indoor. The outdoor workers drank most in summer, the indoor most in winter. One hundred and nineteen shopkeepers, who appeared to drink most in summer. Professional classes, 108. These drank most in summer, and were more prone to mental disturbances other than delirium tremens. Liquor trade, 84, with 32.7 of delirium tremens, but only 2 of neuritis. Cabmen, 68, in which class drinking apparently varies with wet weather. As to females, 169 were housewives and 28 per cent. were surgical cases. Fifty-four charwomen, with 44 per cent. of surgical cases. These were the most pugnacious of any. There were 101 cases of neuritis, chiefly in summer, and none in the five Novembers of the period covered. One hundred and seventy-nine cases of delirium tremens, with excess in July. Dr. Gillespie's inference from these facts was that drinking varied with the holidays.

Dermatological Society of Great Britain and Ireland.—At a meeting on June 26th, Dr. Pye-Smith, F.R.S., President, in the chair, Dr. Shepherd Taylor showed a Hypertrophied Nail removed by Dr. Collier, of Yarmouth, from a woman's thumb. It was about 3 inches in length, and nearly straight. It had been growing for eleven years, and had originated after an accident.—Dr. Eddowes showed a woman with considerable Hypertrophy of the Nails of both Great Toes. They were curved like a ram's horn, and had not been cut for the last twenty-five years. He suggested cauterisation of the nail bed. The President said Dr. Shepherd's specimen was the longest nail which he had seen, and compared it to a specimen in Guy's Museum of a sebaceous horn of the neck. He considered that the origin of the trouble in the toe was an affection of the matrix. Mr. Bidwell suggested that Dr. Eddowes's case would be best treated by the removal of the whole matrix; the edges of the wound being afterwards brought together with sutures.—Dr. Eddowes also showed a case of Angiokeratosis which had affected the outer side of the right leg. Above this were several varicose veins; others had existed beneath the patch of keratosis, but had since become obliterated. The skin at first was exceedingly rough, but had improved under treatment with iodine and creolin, followed by the application of an Unna's gelatine dressing, which was worn for twelve weeks.—Mr. Bidwell showed a man, aged 74, suffering from a Rodent Ulcer on the outer side of the Thigh. A portion had been removed for microscopic examination, and Dr. Abraham had pronounced the growth to be typical of rodent ulcer. Dr. Crocker suggested that the appearances were rather those of a slow-growing epithelioma. Dr. Abraham insisted that the sections showed typical rodent cancer, and that the appearance of the ulcer was almost unmistakable.—Dr. Stowers showed a young woman suffering from an Affection of the Nails. The matrix receded from the nail, and the nail itself grew up curved and brittle. It was similar to the condition seen in eczema and psoriasis, but there was no evidence of either disease. The patient had recently suffered from severe mental and bodily strain. The President remarked that in many of these cases the disease depended upon general depression in health, and that it was more common in old than in young people. Dr. Crocker considered that arsenic benefited most of these cases; he mentioned one in which a similar condition of the nails indicated when a patient was overworked, and after taking a holiday the condition of the nails improved. He considered the disease was more allied to eczema than to psoriasis.—Dr. Abraham showed a case of Bromide Rash in a young woman, aged 26, who had been taking bromide on and off for thirteen years. The eruption had started in the scar of a bite by another woman.—Dr. Abraham also showed (for Mr. Tay) a case of Prurigo in a young woman, aged 23 years. It had existed for four or five years as an eruption of large papules, which were very irritating. The condition was not like Hebra's prurigo. Dr. Crocker objected to the term "prurigo," and considered that the case should be called urticaria, with persistent nodules. He suspected that wheals would be found if the patient were watched.—Dr. Abraham also showed a case of Lupus Verrucosus affecting the Hand. In one of these the disease was now symmetrical, the patch on the right hand having appeared over thirty years after that on the left hand. At first sight the condition rather suggested syphilis, but the history was against this view.

REVIEWS.

Materia Medica, Pharmacology, and Therapeutics: Inorganic Substances. By C. D. P. Phillips, M.D., LL.D., F.R.S.Edin. Second Edition. London: J. and A. Churchill. 1894. (Demy 8vo, pp. 912. 21s.)

The present work is the second edition of one published under the same title in 1882, but the original has been out of print for several years. It is hardly a matter for surprise that in writing on a subject which has during the last decade made such great strides Dr. Phillips has found it necessary to make many alterations and additions. This has been, in his opinion, particularly necessary in the sections devoted to oxygen, nitrous oxide, the mineral waters, certain metallic agents and their compounds, and the more recently introduced substances, such as iodoform and similar compounds. By a reduction of the size of the type employed, such additions have been made without any material increase in the bulk of the volume.

The system of classification adopted seems at first sight somewhat perplexing, and it is difficult to see what has been gained either in accuracy or in convenience by arranging the various medicinal agents discussed in an order which is admittedly based neither on a chemical nor a physiological foundation. The student of the present day is accustomed to consider drugs under one or other of these methods of arrangement, so that it is perhaps hardly advisable to discard them unless it can be shown that by so doing some very material advantage is gained. The modified alphabetical arrangement adopted by Dr. Phillips can scarcely be said to have any features likely to recommend it for adoption by others, and is at the same time somewhat perplexing to the older student or practitioner, for whom the work is evidently chiefly intended.

As regards the material presented, while a good deal of space is devoted to questions of pharmacy and materia medica, it is the therapeutic observations which will be found of the greatest value. These are largely the outcome of the author's personal experience, but when this has been but slight the works of others—chiefly English and American writers—have been freely consulted; the information given as to the clinical application of remedies will, therefore, be found to be, for the most part, complete, and sufficient for the needs of the busy practitioner, to whom the

conciseness of the author's remarks will be a distinct advantage.

Chemical information is remarkable chiefly by its absence, and it is doubtful whether the pages devoted to such matters might not have been more advantageously utilised otherwise. Such information as is given on the pharmacy of the various drugs is not of a nature to satisfy the demands of the student, and is unnecessary to the physician already brought face to face with the problems of actual treatment. Some of the statements are a trifle misleading; for instance, boroglyceride is described as a compound of "glyceryl" with boric acid, while the equation given immediately afterwards illustrates the interaction of boric acid and glycerine, which is probably not quite so simple as is there stated.

The most valuable section of the volume is that devoted to the consideration of the composition and therapeutical indications of the "mineral waters." Brief notes, sufficient in most instances, are given on this subject, and as great pains seem to have been taken to include not only the well-known spas, but also many which have not already been prominently brought to the notice of the profession, this portion of the volume will be found particularly useful to those who have neither the time nor the opportunities for consulting works specially devoted to hydrotherapeutics.

The author promises a revised version of his book on the *Organic Materia Medica* at an early date.

LEITFADEN DER GERICHTLICHEN MEDICIN. [Guide to Legal Medicine.] By Dr. K. J. SEYDEL, Professor an der Universität und der gerichtlicher Physicus in Königsberg. Berlin: S. Karger. London: Williams and Norgate. 1895. (Demy 8vo, pp. 290. M.7.)

THIS is a well-written introductory manual for the study of a somewhat difficult subject. In the preface the author deprecates any claim for the book to be regarded as a complete treatise upon medical jurisprudence, but states that he has endeavoured to focus attention upon several important subjects as to which both students and medical practitioners are but imperfectly informed. These subjects are suffocation, poisoning, causes of death in children, and *post-mortem* examinations. The articles upon these matters are thorough and well arranged. The author is evidently quite at home in the *post-mortem* room, and his instructions for the routine examination of the dead body, and the interpretation to be placed upon facts observed is perhaps the best chapter in the book. The difficulties in connection with the questions of alleged rape, still and live birth, how long a child has lived after birth, and causes of death in infants are well discussed. The chapter on deaths from poisoning and the symptoms met with during life is also well written; it is a little too short, and could have been improved by more details as to the chemical examination of the fluids found in the body after death. The book, being written for Germans, naturally deals with the legislative code of Germany and the relations of the medical man to the law of the State. This part of the book is difficult to criticise, but it appears to be well arranged. It is interesting to read that by the Imperial law anyone who inoculates or vaccinates carelessly is liable to a fine of 300 marks or three months' imprisonment, and that anyone who illegally performs those operations is liable to a fine of 150 marks or fourteen days' imprisonment. Other fines and penalties resulting from malpractice are quoted from the code of laws controlling the whole practice of medicine in Germany. Some portions of the book may be of use to English readers, but on the whole it appears to be in no way superior to several well known manuals on the same subject in our own language.

MANUAL TRAINING MADE SERVICEABLE TO THE SCHOOL. By Dr. WOLDEMAR GOETZE, Director of the Leipzig School for Teachers. Translated by W. G. FIELD, M.A., lately Assistant Master in Lancing College. London: O. Newmann and Co. (Cr. 8vo, pp. 157. 3s.)

THIS book consists of a graduated course of lessons in the construction of apparatus, and is a practical attempt to utilise manual training in the general interest of school work. We learn from the two introductory chapters that the author advocates manual training because he believes it promotes the educational work of the school, and helps to train the pupils in neatness, order, and accuracy, as well as in industry. The school workshop, by intensifying the influence of writing and drawing, exercises the hand, eye, and sense of form, and deserves well of the school by cultivating a habit of close observation. The author also believes that manual training supplements school instruction by adding real experience to theoretic knowledge, and in so doing assists the development of practical intelligence; it also presents the ideas treated in the school in the form of immediate perceptions, and helps the learner to make for himself the appliances necessary for these perceptions and for experimental purposes. Manual training is not intended to qualify the trained for industrial pursuits, but to form a part of the essential education of the pupil. Exercises in cardboard work, bench work, metal work, and working in glass are fully described, and copious illustrations of the appliances used in various subjects are given. The book seems entirely to fulfil the purpose for which it was written, and the translator, we may add, has done his work well.

A SYSTEM OF LEGAL MEDICINE. By A. M. HAMILTON, M.D., and L. GODKIN, in two volumes. New York: E. B. Treat. 1895. Vol. i. (Roy. 8vo, pp. 657. 5.50dols.)

THIS is the first instalment of what promises to be a useful and standard work of reference. A large number of accomplished writers have assisted in its production, many of them men who have made their mark in the special subject of which they treat. Naturally, the articles vary a good deal in style; some are written solely from the practical standpoint, the author quoting only the cases which have occurred within his own experience; others rely mainly on the classical cases mentioned in all the leading textbooks; while others, again, have given a careful and accurate summary of all the facts relating to their particular subject, but have avoided any reference to actual cases. It appears to us that the writers of the first class have given what will actually prove to be the most valuable contributions for those who will need to use this book as a work of reference. The chief subjects included in this volume are Death, Wounds, Poisons, and Life Insurance.

We shall content ourselves in this notice with a brief reference to a few of the most striking of the many new and interesting cases here recorded, and first we note that four of the so-called Whitechapel murders are given in some detail. At page 89 we find mention of the case of a newborn infant who was left in a basket in the street in January, and remained there for twenty-four hours, and being then found by a policeman, and supposed to be dead, was taken to an undertaker's, where after a stay of some hours it was found by the doctor to be still alive, and under appropriate treatment it rallied well, and lived for some time. In the section on wounds there are several cases of the utmost importance, and especially two of bullet wounds of the thorax, where the bullet lodged in the sacrum or low down in the back, and where this very unusual course entirely bore out the statement of the prisoner in each instance as to the circumstances under which he had fired the fatal shot. It is worthy of note, too, that in one of these cases the man had run a quarter of a mile after the bullet had passed through his right auricle. But the most remarkable case, and one which our readers must exercise their own discretion about accepting literally, is the following: "During the war of the Rebellion, a general officer of the Federal forces, riding in a fog up to a picket, discovered it to be the enemy. He wheeled his horse, and leaning down on him as far as possible, drove in the spurs. The picket fired a volley. The general's horse carried him into our lines, but the general was dead. A bullet had entered the anus, leaving no mark of its entrance, and ended its course in the thorax."

In the section on the poisons we note a fatal case of iodine poisoning in a boy, aged 11, who died about four days after his mother had painted both his legs with a solution of iodine, strength not mentioned, but strong enough to blister them. In the very excellent account of arsenic poisoning we find the case of Mrs. Sherman, who was accidentally detected

on the death of her fourth husband, having also made away with some half-dozen or more children or step-children. But the case of a clergyman is even more remarkable, as he was able to continue to carry on his trade with impunity. On the death of the sixth wife of the reverend gentleman suspicions were aroused, and whilst the bereaved gentleman was preaching to large and appreciative audiences at a fashionable church in New York, inquiries were being made about him, which showed that his *modus operandi* was somewhat as follows: He would marry an elderly spinster with money, and then settle down in some country parish; in a short time he would spread rumours of his poor wife's indifferent health, and then she would fall ill, and, after vicissitudes of good and poor health, would die, having made her will in his favour; he would then insist on a necropsy, and immediately afterwards used to have the body embalmed by the local undertaker. Under these circumstances the local authorities felt that it would be useless to institute a prosecution, but the reverend gentleman getting wind of their investigations, left his fashionable congregation to shift for themselves, and retired to a distant part with bride number seven.

Ptomaines and other putrefactive products are dealt with in a separate chapter, and the section on life insurance is full of interesting cases, for the subject seems to have been a fertile source of litigation, and to have afforded ample scope for the ingenuity of that not small class of people who are always on the look out for a chance to live by their wits rather than by honest means. If the second volume maintains the high standard established in the first, this work will certainly be entitled to take a permanent place amongst the recognised works on the subject.

NOTES ON BOOKS.

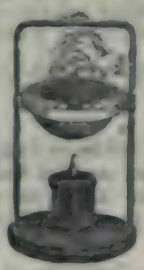
The Women's of Health. By Louis C. Parkes, M.D., Medical Officer of Health for Chelsea, and Lecturer on Public Health at St. George's Hospital. (London: J. and A. Churchill. 1895. Cr. 8vo. pp. 241. 3s. 6d.)—With so many books on hygiene, elementary and advanced, already in the market, the appearance of a fresh book on the subject naturally prompts a reference to the preface to see with what special design the new work is issued. In the little book before us "the author's main idea has been to give some simple yet practical information and instruction on the preservation of individual or personal health in the ordinary routine of domestic life." This idea has been well carried out. One of the claims to originality rests with the illustrations, which are by Mr. Henry Parkes, and are a welcome change from the diagrams usually met with in books of this kind. The subject matter is tersely written, clearly explained, and up to date. The book is essentially an introduction to an elementary knowledge of hygiene, matters relating to questions of public health, over which the individual citizen has little or no control, having for the most part been avoided. As an elementary manual the book meets a want; as a textbook it is doubtful whether it would be enough for any but the most elementary examination.

The Causes and Treatment of Lateral Curvature of the Spine. By Richard Barwell, F.R.C.S., Consulting Surgeon to Charing Cross Hospital. Fifth edition, carefully revised. (London: Macmillan and Co. 1895. Crown 8vo, pp. 232. 55 illustrations. 6s.)—This is a revised edition of a book which was first published in 1868 and rewritten nearly six years ago. In its present form it is intended chiefly to bring under the notice of the profession the advantages of an instrument devised by the author for giving rapid and concise measures of spinal deviations, and also to show the results of a special treatment described as rachilysis. Mr. Barwell, recognising the fact that the reading of a book on this subject is likely to be regarded rather as a duty than a pleasure, has sought by relegating dry and technical details to the appendix to render this an evenly flowing and interesting history. We doubt whether, in spite of all his experience and the zeal shown in the study of this subject, he has fully succeeded in doing this. We congratulate the author on the good results of his treatment and the success that has attended the publication of his book. Most patients, however, supposed to be suffering from this affection fall sooner or later into the hands of specialists, each of whom has his own pet and fixed method of treatment. The book in its latest form has been much improved both by the author's revision and by the excellence of many of the new illustrations.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

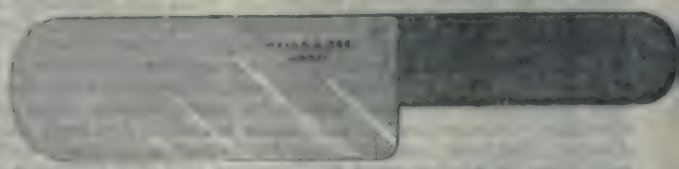
A VAPORISER.

We have received a specimen of the Arema vaporiser, manufactured by the Arema Manufacturing Company, of 27, High Holborn, London, W.C. It consists of a small oil vessel with a floating wick which supplies the heat; above this may be suspended at various heights a small pan into which hot water is poured, while the antiseptic or odorant to be used is poured into the upper cup which fits loosely over the water pan. This upper holder is notched, as shown in the illustration, to allow the water to be introduced into the water pan. By adjusting the pan in one of the notches, the rate of evaporation can be regulated. The construction of the apparatus is simple and ingenious, and it appears to be well calculated to answer the desired purpose. A full description of the vaporiser, together with the principles of its construction and use, will be found in Dr. W. H. Spencer's little book on *Inhalation*, published by the Scientific Press.



A SKIN-GRAFTING KNIFE.

Mr. Frederick C. Wallis, F.R.C.S., Assistant Surgeon to Charing Cross Hospital, sends us the accompanying drawing of a skin-grafting knife, which has been made for him by Messrs. Weiss and Sons. The blade is 8 inches long and 2 inches wide, and the handle is 5 inches long. He has had the knife in use for some time, and claims for it the advantages that no force is necessary to cut the graft as the weight of the knife carries it easily through; that a large graft can be made, as the blade is a long one; that the width of the blade allows the graft to be kept quite flat with the right side up, and that, being flat, either the edge or the back of the knife can be brought to any part of the wound, and the graft pulled into position directly without any fear of its rolling up or turning over.



THE TONSIL GUILLOTINE.

Mr. J. H. Montague (New Bond Street, W.) writes: In the British Medical Journal of July 6th you notice a "presumed" improved tonsil guillotine, and in justice to the many of well known surgical instrument makers I respectfully submit that it is quite contrary to the correct pattern of Mackenzie's tonsil guillotome to make them with the defect complained of; and, personally, I can confidently say I never have made any except with the blades fully guarded when open. I invite an inspection of my large stock of these instruments, not one of which will be found with the defect complained of.

At the conclusion of his speech before the prorogation of Parliament on Saturday, July 6th, Lord Salisbury spoke as follows: "There is much to be done in revising the operation of the Poor Law, which no longer corresponds to the state of things which now exists, and which does not recognise the vast changes that have occurred since it was enacted some sixty years ago."

WATERBORNE TYPHOID:

A HISTORIC SUMMARY OF LOCAL OUTBREAKS IN GREAT BRITAIN AND IRELAND, 1858-1893.

A Report Prepared for the Parliamentary Bills Committee of the British Medical Association.

BY ERNEST HART, D.C.L.,
Chairman of the Committee.

(Continued from page 83.)

EXCEPTIONAL SOURCES OF WATER POLLUTION.

ONE very peculiar case of pollution of water is reported by Dr. Beveridge, of Aberdeen, as having occurred at a dairy farm there in 1881 (No. 129). The cistern at the farm was situate in a corner of the cowshed, its contents being used for all dairy and byre purposes. Analysis showed the water to be pure prior to entry into the cistern, but to become highly polluted with organic material while in the cistern. All the 322 cases of fever occurring in the month of April were in consumers of the milk from this dairy, and no condition of the milch cows could be discovered, after very careful examination, to account for infectivity of the milk by the cattle. No one taking other milk was attacked, and persons whose cans were not washed in the cistern water escaped the fever. The epidemic was sudden, but as widespread as the distribution of the implicated milk. During the progress of the prevalence Professor Cossar Ewart discovered in the milk organisms identical with those found in the cistern water. The case is interesting as showing that despite the patent fact that the water was the *vera causa* of the epidemic, there is no knowing in what manner the water obtained its infective quality.

CHANCE SOURCES OF WATER SUPPLY AND TYPHOID FEVER OUTBREAKS.

In a category not far removed from the chapter of accidents to which I have lately referred, come those cases in which chance sources of supply of drinking water have figured as cause of typhoid fever. Two such instances of use of water in a more or less accidental way I may quote in this connection. They occurred widely apart in point of time and position, namely, the one at Bristol (No. 79), and the other at Evesham and neighbourhood (No. 142); the first in 1875 and the latter in 1892. In the first, it was among the inmates of an institution that the fever spread, the immediate cause of the 500 attacks which developed being the chance drinking by some of the orphan children of the contents of a stream during one of their walks. The stream received the sewage from houses in some of which typhoid had occurred, and as a result of this consumption thirty cases cropped up simultaneously in the asylum in children having thus drunk of the specially contaminated water. The disease once introduced, was kept going until 500 children had caught the infection out of some 2,000 in the asylum. Here, then, was quite an accidental usage of a water by thirsty children while out for a walk in a dingle near their home. And it has its lesson for other large aggregations of young persons when out of the charge of the attendants usually looking after them. The second instance was of a most exceptional character, having to do with the visitors to a regatta who, in some numbers, drank of the water of a well in a meadow near where the regatta was held, the well being contaminated with animal organic matter, and situate near a sewer. As showing how the disease was caused, I may mention that the infection was found to be present in eleven villages, the early sufferers being all of them users of the well on the day of the regatta, either in its natural state or in the form of lemonade mixed with water. Not one case of fever occurred in the large number of persons who thronged the other frequented meadow. The water of the well showed on examination signs of undoubted pollution, but the use of its water was a matter of accidental congregation in the meadow in which it found place.

CAUSE OF FEVER DISTANT IN TIME.

There have been not a few instances in which the cause of the outbreak of waterborne typhoid has been far distant in point of time from the result of its operation. I have already, in speaking of the action of frost and thaw on the spread of such typhoid, had occasion to mention the lapse of lengthy intervals between the deposition of the infective material which has later given rise to disease and the disease which has thus been created. It must indeed often happen that the one and the other will be somewhat widely separated, for the reason that climatic conditions have so much to do with the infiltration of the specific germs of a disease into the water. It will readily be granted that excrement cast on to dungheaps in a period of frost and in a time of heavy rainfall will reach an adjacent watercourse under the latter conditions much more quickly than when the surface of the ground is frostbound. We have again and again seen heavy rain causing typhoid epidemics by the action of the water newly fallen on the ground in its forward course either on the ground surface or with the subsoil water thus augmented, and acquiring a fresh impetus towards its natural level. To the instances under these headings I need not again refer; and with what has already been said on these points it will suffice if I give one instance in which neither frost nor thaw was in question, but where the cause was in existence in the spring of the year and the result was manifested in the summer. The case of which I am thinking is that of Swansea, which town, but not this outbreak, I had occasion to mention in another connection a short space back (No. 107). Here, as will be seen from the appendix, the outbreak with its 640 attacks was traced to the fouling of feeders of a reservoir by excremental pollution from a farm on the gathering ground of the service, the fever having occurred four months before the epidemic outburst, the immediate agency being a heavy rainfall. Here, then, it is seen that though frost and thaw had no place in the delayed outbreak, yet rain had a prominent part assigned to it; and indeed it may be laid down that the majority of such delayed appearances of effect following on cause are accounted for in one of two ways, namely, either absence of much rain or frostbound specific poisonous material which needs only opportunity for access to drinking water. These considerations point to the need for careful tracing back of the meteorological conditions for some time precedent to the prevalence under investigation.

METHODS OF SPREAD OF WATERBORNE TYPHOID FEVER.

That there should be various methods by which disease tends to disseminate itself is not surprising; but this does not remove from the region of surprise some of the methods by which spread is brought about. In the numerous instances in which typhoid has been set going by the medium of polluted water we have generally seen the disease appearing first in those persons who partook of the implicated water to the entire exclusion of all others for periods of time varying with the attendant circumstances. In some—indeed in very many—the disease has run a long course before any secondary cause has been found operating; whilst in others again the disease has soon ceased to operate through the original agency by such action on the part of sanitary authorities as closure of wells, or stoppage of supply, or the like, and has then fastened on other channels by which to propagate itself, as, for example, the methods of excrement disposal, the non-disinfection of bowel discharges or of infective slops, the attention of the nurses on the patients to duties which lend themselves to contact with the public, or with matters which come to be used for the preparation of foods or drinks for human consumption. The appendix is full of these various methods of spread of the disease; but I should like to draw attention to one case in which spread was brought about by what looks on the face of it to have been gross carelessness. At Temple Cloud in Somerset (No. 191), there occurred an epidemic of a very limited kind, seeing that it consisted of only 11 cases; but the circumstances were interesting on account of the family history which is contained in the report which Dr. Deane Sweeting made on the outbreak. He states, for example, that in one house the evacuations passed by three young patients were emptied only in the morning, being retained all night in the room occupied by the sufferers, and that in addition to this filthy and dangerous practice the nurse did not wash her hands or clean her nails after attending to the children; and he states

also as his opinion that the woman probably thus derived her infection. Moreover, no disinfectants were used at this house. The same condition obtained in other cottages in this outbreak, and the lesson to be learned as to the absolute need of perfect cleanliness is one that should be well taken to heart, not only in connection with typhoid, but in regard of all sick rooms, since, if we argue by analogy, we may expect to find a nurse who is careless about her own personal cleanliness, careless also about her patients; and in the sick room most assuredly cleanliness is next to godliness.

There is another method of spread of waterborne typhoid to which I shall have occasion to refer rather fully presently, and that is by means of foods rendered poisonous by polluted water, the chief of these being milk. If it seems odd to any of my readers that I should have included in the Appendix cases in which milk has played the chief part of spread, I would beg leave to state that I have given only cases in which the milk was primarily infected by means of specifically infected water, used either in the washing of milk utensils or in other fashion about the farms and dairies whence the infected milk was distributed; and I hold that these are as much waterborne outbreaks as are those where water is consumed in its natural state. But for the polluted condition of water used in the preparation of food for man these cases would never have had to be chronicled; and, indeed, their presence is a great stain on the state of sanitation in our country, since I opine to the view that our farmsteads are a standing disgrace to us in only too many instances, seeing that from them we derive one of our most staple articles of diet under conditions which are an invitation to disease in far too many places. Again, there are instances on record in which other drinks have been infected by the addition of polluted water, as witness the case of the Evesham regatta (No. 142), where the well water was not only partaken of in its natural state, but was also used for purposes of making lemonade and for mixing with spirit. I might name other methods of spread outside the mere consumption of the water as such, but the table in Appendix furnishes the means of finding them if any of my readers care to carry the matter further. One point, however, I should like to mention before I pass from this subject, and that is that the occurrence of a large proportion of cases in any given outbreak in persons who have not drunk of the polluted water does not necessarily constitute any weakening of the argument as to the water having been the original cause. There are those who would have us believe that if a given percentage of attacks does not occur in the water drinkers, then that the water was not the means of bringing the disease into existence in the particular instance. Such people forget that there are in every epidemic, almost without exception, secondary causes operating at some stages, and it may indeed be precedent to the use of the polluted water. That this has happened in the past I do not doubt, and that it will happen in the future to an even larger extent I feel quite certain, seeing that compulsory notification will give sanitary authorities an immense pull over their earlier predecessors, who laboured under the disadvantage of ignorance to a large degree of the dimensions of an outbreak, and did not in too many cases know of its presence until it had attained the proportions of a dangerous prevalence. Where the circumstances are favourable to the early detection of the polluting agent, and the water is cut off or the means of its contamination removed, then it is pretty certain that the number of cases will be small in water drinkers as compared with those in non-water drinkers if the epidemic be a large one, and there are other means of spread of the disease at work in the district, as we have too often seen in past outbreaks. Let me name a few such examples:

At Wing, in 1863 (No. 1), fever was kept going owing to the prevalence of insanitary conditions, altogether apart from the polluted well. A typical case is that of Winterton, in 1867 (No. 7), where the disease was associated with the drinking of polluted water, but where, to quote Dr. Thorne Thorne, "Given the existence of typhoid fever in a town, it is hardly possible to conceive conditions more favourable for its spread than these existing at Winterton." Another inquiry held by Dr. Thorne Thorne in which local conditions other than the water were in operation to cause the spread of fever was that of Radford, in Notts, in 1870 (No. 23), where the epidemic, having been set going by means of water, was kept up by the means of excremental contamination of air and soil, specific material being cast into the streets or middens near dwellings or stored in ill-ventilated houses. Coming to more recent times, I may refer to the case of Northallerton, in 1892 (No. 193), where the disease can be thought of as having in some measure been kept going by the poisoning of air by the sewage-saturated ground. And lastly, not to tire my readers by unnecessarily numerous references, I would draw attention to the instance of Atherstone, in 1893 (No. 199), where the incidence on the consumers of the polluted water was as high as 87 per cent. during the epidemic period, but where the disease, once fairly established, had the prevailing midden system to aid it in its successful attempts to propagate itself, the system in vogue lending itself to such dissemination as actually occurred.

Widespread Infection of Typhoid Fever.

An instance in which the infection of typhoid was of a very widespread nature was that of the three villages of Aylstone Park, Whetstone, and Narborough, in the Blaby Rural Sanitary District, in 1880 (No. 110). No fewer than eleven groups of attacks occurred in these villages, to the exclusion of a fourth village in the vicinity where the nineteen cases which cropped up were related to specifically infected midden privies and poisoned air. What was still more curious was the fact that the initial case in each group served as the cause of spread by means of the disposition of the evacuations in a way readily to contaminate a well. The cases to the total number among water drinkers of 211 occurred in the immediate vicinity of the several wells thus subjected to pollution. Users of other wells were entirely excluded from infection except in the case of the fourth village just mentioned. This instance of widespread results following the disposal of the excreta of only a few cases to my mind raises very decidedly the whole question of excrement storage in our country parishes. The close relation of our drinking water and our midden contents is a matter of the greatest importance, and people seem seldom to realise that filth and disease are synonymous terms until taught the truth by some such bitter experience as at these villages.

Short-lived Typhoid Fever Epidemics.

It will be observed, from the tabulated statement at the end of this report, that there are all sorts of epidemics recorded in regard of period of duration, some being prevalences long drawn out, and others again those of brief operation. Of the latter class I may mention the case of Swansea in 1879 (No. 107), where the cause of the outbreak was itself apparently of short duration, a uniform rise taking place in all the districts affected, namely, in the third week of the epidemic, with equally uniform decline from that time until the end of the fifth week. Yet another case of a brief but sharp prevalence was that of Pentrase, in Cornwall, in 1873 (No. 59), where no less than 28 per cent. of the consumers of the water causing the fever (71 cases in a population of 358, of whom 255 used the well) were attacked in the month of August. At Tregoney, in the same locality, there occurred over 50 cases in December, 1873 (No. 64), in a population of under 800, and some of these derived their infection from secondary causes. The case of the Orphan Asylum at Bristol, already mentioned in connection with chance sources of water supply (No. 79) was one where the primary cause was quickly arrested, and where the disease should have also been at once checked, but where, despite the continued spread of the fever in the institution, the epidemic of 358 attacks was over in a couple of months. Hitchin furnishes another example of short epidemics (No. 144), for there were two outbreaks in the two months of December and January, 1882-83, each of some amount, totalling to 100 cases in all. On the other hand we have in the accidental prevalence at Perth (No. 112), in 1880, an epidemic lasting from May to November, although the primary cause was only of one day's duration. I might quote additional instances, but those here set out suffice to make my point clear.

Waterborne Typhoid Fever and "Abstainers."

In epidemics of waterborne typhoid it is only natural to think of total abstainers from the use of alcoholic liquors as

suffering in proportions exceeding persons who make but little use of water in an unboiled state. Of course there will always be a large and major portion of the general community who, while consuming water in part in its natural condition, make use of it also in a boiled form in their daily beverages, in addition to those who also partake of other drinks to the exclusion of water in great measure. But in not a few instances the excessive incidence of attack on abstainers has shown beyond doubt that the drinking water has been at fault. Let me illustrate my point. At Bramham College, near Tadcaster, there occurred a prevalence of typhoid in March, 1869 (No. 12), 19 cases resulting as a consequence of the pollution of the water supply of the establishment by way of a defective closet pipe. Nearly all the attacks were in total abstainers, who were the chief, if not the only, abstainers in the college of 60 or 70 persons. In the succeeding month of the same year, at Ackworth Moor Top, in Yorkshire, there was an epidemic (No. 13) arising apparently from infiltration into the well of the village of excreta from the initial case. I have not been able to find out the exact number of cases, but an institution was involved in the outbreak, one that was carried on upon teetotal principles. Both in this institution and outside total abstainers were the first attacked and also the most numerously. These are but two instances culled from many that figure in the annals of waterborne typhoid; and the matter is not astonishing, but calls for the remark that what is needed in these, and other persons also for the matter of that, is that all drinking water should be boiled.

Effects on Typhoid Fever Outbreaks of Boiling Polluted Water.

Following on what I have just said, it will be interesting to consider the evidence which is available as to the influence on typhoid prevalences of the boiling of drinking water, if such evidence be forthcoming. Such evidence is, as a matter of fact, not difficult to find, and I will therefore adduce some of it in support of the practice. As long ago as 1864 the benefits of boiling water were pointed out by the late Dr. E. Seaton in his report on an outbreak at Page Green, Tottenham (No. 4), where in a row of five houses dependent upon local wells all the houses were invaded with one exception, where, namely, the inmates "first boiled all the water which they used for drinking." At Buckingham in 1888 (No. 168) the decline of the disease, which had been waterborne, was attributed in part to the precaution of boiling the implicated water, as reference to the report of Dr. Franklin Parsons shows. Perhaps the most unique instance of the boiling of drinking water in the face of disease is that recorded by the late Dr. David Page in connection with an outbreak of typhoid, undoubtedly waterborne, at New Herrington, in county Durham, in 1889 (No. 176). With a view of guarding against further distribution of the disease by means of the polluted supply, the water of another service was turned into the mains; but this not sufficing in point of quantity, Dr. Page said that "arrangements were made and actually carried out for boiling the supply pumped from the Herrington well before it entered the reservoir .....On the occasion of my final visit.....I witnessed the remarkable and unique instance of delivery to the mains of a water supply which had been actually submitted to a boiling temperature." Again, Dr. Bruce Low points to the fact that in the village of Sunnington, in the valley of the Rye, the fever ceased to attack the residents a fortnight after the issue of a warning to boil all drinking water. In reporting on the use of the Trent water for domestic purposes in relation to the incidence of typhoid on riverside populations (No. 174), Dr. Bruce Low states with reference to certain villages having but little typhoid, that their escape may be thought of as having to do with the use in them for drinking purposes of boiled water only. Indeed, in the district generally the medical men have done much apparently to stay the spread of typhoid by their counsel as to the boiling of the river water. And though I have made mention of Sunnington only in speaking of the Ryedale fever, Dr. Low thinks of other villages as owing their immunity from the disease to the same practice as obtained in that village. It will be evident from what is here said that the precaution is not by any means overlooked in the actual presence of the disease, but I much fear that the measure is too often neglected among our people, especially in our large towns, where persons seem to fancy that there must be safety, by reason of the water undertaking being in the hands of some body corporate or the like. But if the circumstances relating to the filtration of some of our water services in even the largest towns in England were to be made public, I doubt if we should be as a community so disposed to place blind trust in our water companies. The expedient of boiling the quantity of water needed in an uncooked state each day is a simple one, and the necessary quantity to be so treated can soon be gauged. Prevention is not only better than cure, but in this case at least it is infinitely cheaper.

Sanitary Inactivity and its Results.

Where so much could be said on this subject it is difficult to quote examples. In modern times the glaring instance of Rotherham stands out very clearly (No. 190), and I have already referred to the conditions which have long held in that town in relation to water supply. Dr. Theodore Thomson, in reporting on the cholera experience of 1893 there, said: "Rotherham had in 1891 actual experience of loss of life and health from fever due to specific pollution of the public water supply, but the sanitary authority do not appear to have profited by the lesson." I need not dwell further on this case, save to say that the medical officer of health states in his annual report for 1894 that the much polluted "Wellgate spring" has at length been closed, with beneficent results already apparent. Equally to the point is that of King's Lynn, of which place Dr. Bruce Low said, in reporting on its fever outbreak of 1891 (No. 189): "The dangerous condition of the King's Lynn borough water supply has been, time after time, pointed out by the medical officer of health and by others. The urban sanitary authority has more than once proposed to protect the water by piping it from a spring or springs, but this project has always hitherto been defeated by a section of the ratepayers who, ignorant of the dangers arising from the pollution of potable water by filth, regard the present supply as all that can be desired." Dr. Low adds the following interesting footnote to this sentence:

"Mr. W. Whitaker, F.R.S., of H.M. Geological Survey, in a presidential address to the Norwich Geological Society, delivered as far back as November 6th, 1883, and published in the *Geological Magazine* of January, 1884, drew attention to the Lynn water supply while discussing certain points in connection with drinking water derived from chalk springs piped to certain towns in Norfolk, as follows:

"'The enterprise of Wisbech is thus in strong contrast to the apathy, and one may say the stupidity, of the larger town, in which I have the misfortune to live, its Norfolk rival, Lynn, the corporation of which treat the inhabitants to one of the worst supplies that I know of. These guardians of the public health allow a set of chalk springs, some pure, but others contaminated, to mix together and to flow along an open channel of six miles or so, as the crow flies, receiving on the way the drainage of a fair tract of country, and at the last, close by the borough boundary, some part of the sewage of the village of Gaywood. Notwithstanding that the evil of this course has been pointed out for years, and constant complaints occur, yet our town councillors, in the multitude of whom there is not wisdom, have not yet made up their minds to any decided action, and a question that really admits of no debate is the subject of apparently endless discussion. "Words, not deeds," should be the town motto, at least as far as regards the water supply.'

"Since the above paragraph was written the town council of Lynn adopted a scheme for the supply of good water, but I fear in a half-hearted way; at all events, their scheme has been rejected at a meeting of the ratepayers, and I am therefore compelled to transfer the charges above made from the members of the town council to the body of the townsmen, who seem not to be educated up to pure water pitch! When they have had a serious epidemic perhaps they may acquire more sensible views on this matter." It is matter for congratulation that the health body have since seen the error of their ways.

At Appledore, where an outbreak of typhoid occurred in 1870 (No. 24), the conditions were disgraceful at the time, and such as to lead Dr. Thorne Thorne to state that "had the town been specially designed to favour outbreaks of

typhoid fever . . . the result could hardly have been more completely attained than has been the case at Appledore." The report teems with instances of sanitary neglect. At Oldbury the same writer shows a deplorable state of affairs to have existed in 1870, when fever prevailed. His own words best describe the place as he found it at the time:

"Wells are in many instances placed within a few feet of one or more privies and open middens, which are little better than reservoirs for liquid and excremental filth. Some parts of the township are without any water supply, and hence the inhabitants have either to travel a distance of sometimes half a mile to neighbouring springs or they buy it as often as they can afford it of persons who regularly bring it round for sale. This deficiency of water is a point of the most cardinal importance; it deprives the poor of the principal means of keeping themselves and their premises clean, and it must be considered as one of the prime predisposing causes of disease. The poor themselves urgently beg for a proper supply; some informed me that they were compelled at times to resort to the canal, which is in reality the main town sewer, in order to wash themselves; and on several premises I found that lumps of ice and masses of snow had been collected, and were being melted down for domestic use. The want of water has also, in a peculiarly offensive manner, been a cause in spreading typhoid fever, for during the past year some of the inhabitants have been compelled to wait until a rainfall before the linen of the patients could be washed; and the amount of unwashed and poisonous linen which has thus accumulated has, I am informed, in some houses caused an almost unbearable stench."

And here, be it remarked, I am only quoting one short passage to indicate the sort of place it was in which fever thus settled. It may be asked why I go so far back in order to get my instances of sanitary inactivity. My reply is that I have made reference to 2 cases of ancient and 2 of modern history. I do not see my way to showing up the deficiencies of sanitary bodies to any great extent lest I should weary my readers by iteration of much that is already contained in the preceding pages under other headings. The inactivity of our so-called health bodies need not be specifically spoken of as such to enable my readers to grasp the fact that nearly all that is here written is the history of neglected opportunities which, having been allowed to pass, have carried in their train the loss of life and the suffering which are here set out. It has been truly said that cholera saves in our country more lives than it destroys, for the reason that people are stirred up into activity in matters sanitary when that disease threatens or fears of its presence prevail, more than by the fevers that are now endemic among us. But since typhoid has ceased to have for us the horrors that are implanted by a disease which is far less fatal in our midst, these recurring outbreaks which are here chronicled continue to claim their victims. If one death by Asiatic cholera occur in a town, there is an immediate outcry on account of the danger that threatens the place, and people are forgetful of the patent fact that the conditions which operate for the spread of cholera are just those which favour the dissemination of typhoid. Not until the public come to see and understand that the truest economy lies in the reasonable expenditure of money on that which goes to remove the causes which lead to the spread of preventable disease, and which bring death and suffering and distress in their wake—not until then will our death-roll show that diminution in its total which is attainable.

Compulsory Notification: its Benefits in Relation to Typhoid Fever.

It is probably not necessary for me to say much on this subject, looking to the strides which have been made elsewhere in the way of settling the question of the utility of compulsory notification. Our country has decided in almost all its districts that such a system is necessary for the due safeguarding of the public health. The Infectious Disease (Notification) Act, 1889, has worked in a marvellously smooth manner, and has been a marked success. It stands to reason that if the early cases of infectious disease occurring in a district are made known to the sanitary officers at once on their arising, the chance of curtailing the spread of the disease is much more probable than if cases are allowed to give rise to others before attention is drawn to them by some such development as a fatal attack. If the system of notification is in force and proper hospital accommodation be behind that system, the district thus provided is in a fair way to check chance cases of infectious disease from growing into widespread epidemics. Let me give two or three references to reports which show the desirability of prompt notification. The one is that made by Dr. Deane Sweeting on the outbreak at Temple Cloud in 1891-92 (No. 191), in which the writer states that, early cases of typhoid not having been notified, the health officer was not enabled to see that proper precautionary measures were taken, and, as a matter of fact, it was in this district that there occurred spread of typhoid, owing to great want of proper regard to cleanliness in the sick rooms, as I have already taken occasion to show. The other report to which I may refer in this connection is that of Dr. Cresswell on the outbreak at Hebden Bridge in 1894 (No. 155), wherein he states as follows: "The importance of prompt notification and ready means of isolation in Hebden Bridge can scarcely be overrated." And he proceeds to refer to the local circumstances which went to favour the spread of the disease in the absence of such prompt knowledge of cases as should have been in possession of the health officer in order to enable equally prompt measures to be adopted. Overcrowded cottages, the working of members of invalided houses in factories and like aggregations of persons, and other circumstances conduced to dissemination of infection, even though enteric fever was in question.

A case very much in point was that of the Gainsborough rural district, wherein Dr. Bruce Low made inquiry as to the use of Trent water in relation to enteric fever (No. 174). He found that compulsory notification was not in force in the district, and this meant for him much trouble in addition to the feeling that when all was done that seemed possible in the circumstances, he could not be at all certain that all cases of fever which had arisen were accounted for in the lists which were prepared for him. It will be well to give his own words:

"Finally I obtained, after the expenditure of much time and trouble, particulars of cases from all the medical men living and practising in the different parts of the rural district. I soon found that my inquiries would have to be limited to the last four and a-half years. The lists had to be prepared in some instances from memory, with this result: Where a practitioner was having groups of cases every year, some of them club patients of whom no record was kept in ledger or day book, the lists of actual cases were admittedly incomplete; but where, on the other hand, the medical men met with sporadic cases only, sometimes not more than one in two years, the facts as to each occurrence remained in their memories, and their lists of cases were much more complete. I have considered it right to make this statement, as farther on I shall have to point out an inequality of incidence of enteric fever in certain localities, the inequalities being for the above reason even more pronounced, so it is believed, than is shown by the figures. A consideration of the two sets of figures will show that the sanitary authority were imperfectly informed as to the amount of preventable illness occurring in the district under their care, and that consequently their officials, no matter how active or willing, could not take the necessary steps to check the further spread of the infection. This insufficiency of information might have been obviated more recently had the rural sanitary authority adopted the Infectious Disease (Notification) Act of 1889."

Dr. Low's report is dated 1893, but in another presented to the same Department in September, 1894, on scarlatinal prevalence in Hucknall Torkard, Dr. Thomas Horne has much the same thing to say of the non-adoption of compulsory notification there. Proceeding to discuss the data of the epidemic, he says:

"As to the actual number of non-fatal cases occurring in the district definite information is not, in the absence of notification, forthcoming. The medical officer of health says in a special report on the epidemic which he presented to the sanitary authority, 'It is certain that only a small proportion of the cases were brought to my knowledge.' And again, 'owing to the fact that only a small proportion were notified to me, I am unable to give the number of non-fatal cases.'"

But no one will quarrel with my assertion that the adoption

of compulsory notification is a safeguard against the spread of infectious disease, if its information be used aright, hospital accommodation especially entering into the organisation by means of which epidemics are to be successfully combated.

Water-infected Milk and Typhoid Fever.

The relationship existing between dairies and milkshops and the like on the one hand, and the prevalence of typhoid on the other hand, is now admitted to be very close. It was not so admitted a quarter of a century back, when, indeed, the relationship was all but ignored. Writing on the whole subject of the influence of milk in spreading zymotic disease in 1881, I stated that the spread of such disease by the agency of milk was then almost a new danger revealed by hygienic science. Ordinary measures of sanitary (domestic) precaution did not seem to avail to secure immunity against the incidence of disease so spread, although the boiling of milk was seen to be a method of rendering that article innocuous. Upwards of twenty years' experience of milk-disseminated diseases has not led to any general observance of this simple safeguard against those epidemics which still from time to time startle the public by claiming victims from all classes of society by reason of neglect of the precaution of seeing that all milk is submitted to a boiling heat. Many a mother has had cause to sorrow over the neglect of her cook in carelessly omitting the injunction given to treat the milk in the way indicated. As a result of such carelessness the lives of only too many innocent children have been sacrificed, and the sorrow thereby caused has not been in any wise softened by the knowledge of the fact that but for the laziness—I might almost say criminal inaction—of some domestic servant the life taken would in all human probability have been saved. Not that I would be thought of as even seeming to throw the blame for milk epidemics on householders on account of the omission of this precaution—by no means. I simply state that things being as they are it is the duty of every housewife to see to it that the family milk service is treated as an infected commodity. That it should be necessary for such action is my chief complaint, since the condition of the milk trade, to my way of thinking, should be such that this act on the part of householders should be unnecessary. It is indeed against the vendors of our milk supply that I inveigh. The state of a vast proportion of the places whence milk is sent to our markets, and the state of only too many of the shops where that milk is retailed, is a disgrace to our nation. One cannot take up a report on any rural district without reading of circumstances attending the sale of milk from farms which are highly provocative of disease; and I am not here referring to times long gone by. On the other hand, I have in my mind instances where the conditions attaching to dairy farms have been most grossly insanitary within quite recent years.

But before I go into the matter any further in a general way, it may be advisable for me to refer to some actual instances in which disease has been traced to milk infected with the specific germ of typhoid by the agency of polluted water. I need not weary my readers by numerous references, so I have taken samples to the number of six from the appended tabular statement with the object of showing some of the ways in which milk is subjected to hurtful surroundings.

At Moseley and Balsall Heath, near Birmingham, in the winter of 1872-73 (No. 52), it was found that of 50 households invaded by typhoid as many as 47 were consumers of a certain milk service, and that at the premises of two adjacent milk sellers the conditions were such that there could be little doubt as to the source of infection of the milk distributed. Midway between two dairymen's premises was a house in which a case of typhoid occurred, the dejecta being cast into a pervious privy in such manner that the contents of the wells serving the houses in question could hardly escape contamination. The water of the one well was used by one of the dairymen for purposes of milk dilution, whilst the milkman on the other side made no profession of selling pure milk. The evidence against the milks was more telling even than that adduced by the above data, since no other cause of fever could be found, and use of the milk of other vendors, even in the same street, was attended by no untoward result.

At Crosshill, in Renfrewshire, in the early months of 1875 (No. 77), there occurred an epidemic of 183 cases, and related unmistakably to a particular milk service. The water supply of the farm whence the milk was sent was from a well situate close to a large collection of liquid refuse, and itself supplied from a spring dangerously situate in respect of a ditch, into which ditch, moreover, or on to an adjacent manure heap, the dejecta of some typhoid cases had been cast.

A somewhat curious case of water-polluted milk was that of a village near Leeds, in the summer of 1876 (No. 87), where some children of a household of ten persons were attacked by a lingering illness of a typhoidal nature. The single cow kept for the purpose of the domestic milk supply had during some months been getting thin, at last refusing to graze. Her water supply was a stream into which a watercloset drained and which became "mere sewage." The cow was at length sent away, and thereafter not only did no fresh case of illness occur at the farm, but convalescence set in, albeit of a very tardy character. This instance of, so to speak, transmitted typhoid through the milch cow, is one of much interest. The prominent feature of the series of cases was the lingering nature of the illness contemporaneously with the same tedious ill-health of the cow. It and the instance of the outbreak of the Glasgow Hospitals in 1884, already spoken of in discussing the relations of excrement to typhoid, are the only cases of this kind that I have come across in my study of the subject. In the summer of 1888 an outbreak of typhoid occurred in the village of Millbrook, in Cornwall (No. 113), which has become historic by reason of the prominence to which it attained at the time owing to the report made to the Medical Department of the Local Government Board by Dr. Ballard. The case in relation to milk was what may be called one of indirect infection, since there was no direct communication of contaminated water and milk, the circumstances being as follow. Imported fever having led to specific infection of a street sewer, this in its turn led to contamination of a well through the medium of an overflow pipe. This well caused typhoid in some of those drinking of its water, and the patients' dejecta were discharged by way of privies to a drain which had aërial connection with the room of a dairy farm wherein the milk was stored on shelves, the milk in this manner being exposed to the emanations of the specifically infected drain, with extension of the fever as a result in members of the dairyman's family, and an unknown number of his customers, twenty-two of whom were traced as having suffered. In this case the sale of the milk was never stopped, and the disease went on "until," to quote Dr. Ballard, "the whole village has become steeped with the contagium." If it be in any wise contended that this is not a case of water-infected milk causing typhoid, at least it cannot be set aside as a typical instance of waterborne disease, and hence finds fitting place in the appendix. I am, however, content to see it here mentioned in the category of milk-typhoid outbreaks, and to regard water as having played an important part in bringing about the infective quality of the implicated milk. I will only give one more reference to the appendix in this relation, but it will be to a case of most gross inattention to the first elements of sanitation, since it deals with an outbreak which was brought about by means of water which should never have been for one moment thought of as usable for any purpose whatever in connection with the preparation of food for the use of man. The occurrence took place at Great Coggleshall in the winter of 1893-4 (No. 90), Dr. Thorne Thorne being entrusted with report on the matter for the Local Government Board. He found after inquiry that the undisinfected discharges of a typhoid patient had been cast into a drain which found outlet into a brook, the water of which, only a few yards below the drain outlet, was used for dairy purposes. All the cases of typhoid to the number of 28, arising from consumption of the milk of this one dairy were among persons who had nothing in common save their milk service, and not one case arose outside this milk service, notwithstanding that there were four milk vendors in the town. The details of a story like this fill one with disgust, which is in nowise lessened by the thought that the milk on one's breakfast table may be merely that which it purports to be *plus* an unknown quantity of typhoid excrement. We live in times not one whit nearer the perfection of dairying from a sanitary view point than when this outbreak happened over eighteen years back. Let me give two or three

instances of the conditions prevailing at our dairy farms in recent times.

Mr. Harvey, in reporting for the Local Government Board in 1886 on an epidemic of typhoid at Swanage (No. 163), says of the dairy implicated in the spread of the disease there that it, "like all others in Swanage, has been under no sort of regulation or supervision, and in the circumstances of its water supply there would appear to be sufficient explanation of the method of infection of its milk. Its water supply is nominally from the pond near the church, but as a matter of fact it is without a supply of water, unless, indeed, the brook is to be thought of as furnishing such supply..... Certain it is that the water of the brook, from the moment of its approach to the town and far above the dairy, became eminently fouled by the overflow of drains and other circumstance." Surely this is a case as gross as that of the previously-named farm at Great Coggleshall. And again, Dr. J. H. Garrett, in reporting on the sanitary condition of Cheltenham in 1893, says of the premises of two milksellers in that borough, "Here again, however, as in the former instance, a polluted water from a well upon the premises..... was used for washing the milk utensils." And from this statement we see that if our milk supply be saved from pollution at the farm in the rural district, it by no means follows that it will not be exposed to dangerous contamination at our very doors. I was much struck on reading a report by Mr. T. W. Thompson, presented to the Medical Department of the Local Government Board in December, 1892, on the general sanitary condition of the York rural district, by the description therein given of the state of dairy farms in different villages in respect of their water supply. Thus, at one farm at Deighton the well was partly under a corner of the house and only some four feet from the foldyard, "the well was only dry steined, and doubtless served to drain the foldyard." Then, again, a farm at Fulford Water derived its water from a well close to the foldyard. At one farmhouse in the village of Copmanthorpe the only source of water supply was from a pump well in the middle of the foldyard, the water of which well tasted of the "oil" from the wooden covering of some adjacent creasoted red pine roofing after a rain storm, the first following upon the erection of the roofing. These, then, are some of the instances which were found to be existing in this district surrounding the city of York. Proximity of the farm wells to foldyards was a commonly-found defect in the district, and with the generally unsatisfactory state of the surroundings of wells all over the area the pollution of milk by the medium of water is not unlikely to frequently happen. In the neighbouring county of Lincolnshire we find, from the admirable report by Dr. Bruce Low on the Trent in relation to water supplies of the populations situate on its banks (No. 174), that in the rural district of Gainsborough, at some farmhouses on the river banks, "the water is pumped direct from the Trent to the house through a leaden pipe through the bank into the bed of the river." When one takes into account the highly polluted state of the Trent, subjected as it is in its whole length to gross excremental contamination from large aggregations of population, it is difficult to see how an unpolluted milk supply can be expected to emanate from the farmhouses where such a stream is the source of the water used for dairying purposes. I have already referred to the condition of this river, and need not here recapitulate the disgusting catalogue of pollutions to which it is open.

In illustration of the statement that it is not in the present time difficult to find a condition of affairs as bad as those just described, but existing in retail premises in our large towns and cities, I may mention the experience of the city of Edinburgh in the matter of the sanitary state of the milkshops there. In January, 1894, the Public Health Committee had their attention called to the serious condition of these premises for the retail sale of milk, inasmuch as it was found that many had their sleeping and living rooms in aërial communication with the rooms in which the milk was stored prior to sale. But worse still, many had these milk storerooms in aërial communication with waterclosets in the house, and in all it was found that some hundreds of the 760 retail vendors of the commodity had such dangerous intercommunications existing. It was, of course, not a state of things to be tolerated, and the Committee in the first place took steps to warn the poor people who eked out a living by the sale of small quantities of milk that either alteration of their premises must be carried out for cutting off the common atmosphere of the house from the milk storeroom, or they must desist from the selling of milk. As a consequence, a very large number of the shops were closed to the sale of milk, the people contenting themselves with the vending of the other articles which formed the staple stock in trade.

There is here, then, not only an instance of the deplorable state of things existing in a populous city, but also one of the value of mere verbal or written notice to even the poorest persons engaged in trade that they must seek to ameliorate the conditions under which they are carrying on their business to the danger of the community. But no one can read this account of the Edinburgh smaller milkshops without seeing to what a risk the city was exposed by reason of having a commodity so absorbent as milk open to the reception of drain air and other abominable stinks in a poor and populous quarter of the town. A food of such essential importance to the infantile population of a town cannot with impunity be allowed to be sold in a state of possible infectivity.

Turning to quite a different part of the country, I find Dr. Timbrell Bulstrode, in his report to the Local Government Board on the sanitary condition of Poole, giving an instance of a cowshed in that town in an insanitary condition. He tells us that it had not been whitewashed for a year, that it was dilapidated and dark in parts, and that immediately adjoining it was a huge accumulation of manure, at a higher level than the cowshed. In addition, the floor was defectively paved, and abutting upon the cowhouse was a double privy containing a vault which had not been emptied within the last year. He adds: "It was amid these surroundings that the milk supply of the customers was drawn from the cows."

I need not go further into details on this matter of the insanitary state of dairy farms and milkshops in our country, since if I say that the examples given of bad sanitary conditions are but typical of much that passes to-day as sufficient to warrant non-interference on the part of so-called health bodies, I think I have shown that we are still far from having arrived at that state of sanitary perfectness to which it should be our aim to attain. Milk is a food which is in great demand by the public at large, and especially in demand on account of the share which it takes in infantile feeding. Absolute purity of the commodity is accordingly correspondingly essential. It is bad enough to have a milk service which is far below the standard of the article as it is yielded by the cow, without the added horror of a supply mixed with water which is more or less of the consistency of sewage. If water of even the slightest doubtfulness is used for can-washing purposes, we have a right to demand that it be first submitted to boiling temperature; whilst if our farmer is so dishonest as to dilute his produce, we have at least good reason for claiming that the water paid for as milk shall be free from suspicion of contamination. Water of any kind at fourpence a quart is dear, but the pure article is preferable to the contents of a ditch or the oozings of a midden privy. And here for the moment I must leave this matter, hoping to treat of it again in my final recommendations.

[*To be concluded.*]

DEATHS UNDER ANÆSTHETICS.

Chloroform.

Dr. John Brown (Bacup) writes: It would appear that the number of deaths under chloroform is gradually on the increase. May I be allowed to again urge the chloroformists at our large metropolitan and provincial hospitals to give the "slow method" a fair and honest trial, and compare the results with the "rapid method." After several years' experience I published an article "On the Advantage of Producing Anæsthesia by Small and Continuous Doses of Chloroform."[1] My experience since has strengthened my views. In the *Asclepiad* there is an article by Sir B. W. Richardson on "Accidents under Anæsthetics," which I trust will command the serious attention of our medical schools and hospitals, and those who have to train the students how to give anæsthetics. I never saw the "slow method" in any of the

[1] British Medical Journal, ii, 1890, p. 1361.

hospitals, and I believe most men commence practice with the idea that complete anæsthesia in five minutes is the true ideal of a good chloroformist. Sir B. W. Richardson says: "My experience is that the correct way of administration of chloroform is to give the vapour properly diluted, and that the theory of pushing the vapour so as to get a rapid anæsthesia at all risks is as dangerous a plan as could be possibly devised. I can but look upon the excessive mortality which has followed administration as largely due to what must be considered a practice rough, ready, and venturesome." Rough, ready, and venturesome fitly describe the present method of administration.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

L.—BEDFORD.

The workhouse stands on the outskirts of the town, surrounded by extensive grounds, part of which is garden and part kept for hay. On approaching the building, there is nothing to indicate the workhouse, nor is there the porter's lodge to guard the entrance—indeed, ingress and egress on the part of anyone would be quite easy. The building itself is of ancient date. We were informed that it was built some time in the last century, and is one of the old houses of industry of that period. Within we found the lofty rooms and large windows that marked this period, before the cramped and squalid style of the early part of this century came into favour, when the window tax prohibited the entrance of light and air into the homes of the poor. The guardians having given ready assent to our request to go round the wards, Dr. Prior, medical officer to the house, most courteously placed himself at our disposal.

The Sick Wards,

as we expected, though of lofty construction and having an ample supply of light and air through the large windows which faced each other, are antiquated in their appointments and arrangements. The beds, facing each other round the walls, are of good width; some of them have spring mattresses; on the remaining beds there are flock beds, and straw is used for special cases. We found the usual deficiency of comfortable chairs for the inmates; some wooden armchairs without cushions, plain chairs or benches, a deal table, and a table-locker between the beds completed the ward furniture. The wards are warmed by open fireplaces, one or more according to the requirements of the room; fresh air is admitted through the open upper sash, which, as Dr. Prior said, is excellent in theory but defective in practice when the doctor's back is turned. The number of sick is difficult to arrive at, as the aged and the sick are mixed up together; but as far as we could make out there were beds for between 60 and 70 patients, and these are distributed in two wings on the first and second floor.

On the first floor is a ward of 13 beds, and above a similar ward for the sick, and adjacent a ward of 16 beds for the aged men or women; this latter ward looked crowded, the beds being close, but as there was no statement of cubic area on the door we were not able to verify our suspicion. On the female side on the second floor is a small room containing three beds used for lying-in cases, and another ward now used as a workroom. This appeared to be the only classification. There are no children's wards; when sick the children are placed with the adults. Those cases which have to be isolated, such as lock patients, itch, or erysipelas, are placed in small dreary wards in an isolation block at the back of the building. The females are attended to by the nurse on the female side, the males by the porter; as both these officers are occupied with their respective duties in other parts of the building this attention must be nominal only.

There is, besides, a block for quarantining, containing two wards, these were tenantless and dreary at the time of our visit. The matron informed us that there was no regular system of nursing of the patients consigned to this block, it was sometimes done by an inmate and sometimes an outside nurse might be engaged.

The Nursing

is divided between two nurses, one for the males and one for the females, with the usual pauper helps, and there is no night nurse. The nurse on the female side appears to be an assistant to the matron, as she has to leave the wards to see the materials for the dumplings weighed out; she also has to superintend the bathing of the able-bodied women and to superintend the women who may be at work in the workroom that is adjacent to the wards. Those who have apportioned these duties must have done so in ignorance of the requirements of the sick; the nurse may be wanted in two places at once, but of course an inmate can nurse the sick or deliver the parturient woman whilst the nurse is weighing out dumplings. We said there is no night nurse, and what that means to the inmates can be arrived at only by making a survey of the patients in bed at the time of our visit.

Among the women there was a case of hæmoptysis complicating rheumatic neuralgia, a case of fibrous tumour lately operated on, another whose leg had been broken, now united, suffering with varicose veins, hemiplegia, swelled legs, paralysis, and the ordinary cases of infirmity and old age. On the men's side there was a bad case of anæmia, a case of emaciation, who looked as if he needed scientific feeding by night as well as day, a man suffering from pressure on the veins of the legs, he was up; the cases on the male side not being so severe at the present time.

We found, to attend upon these people at night, on the female side, a young woman suffering from skin affection; that is to say, she slept in the ward, and was expected to rise when any attention was needed. We asked the nurse in what state she found her wards when she came on duty; her silence, accompanied with an expressive look, warned us that we had better not inquire further. On the male side there is an ancient pauper who attends on the sick during the night in the same way. We inquired whether the nurses were called in the night, and were told that these inmates were very careful in calling them when they were wanted. The nurse on the women's side is untrained, but she has had experience in workhouse nursing. On the men's side the nurse has been trained; she has been a long time in the work.

There were two women recently confined in the lying-in ward; there is no labour bed, nor did we see any screens or means to secure privacy in a small room. There is a separate lavatory for this ward placed alongside of it.

The Nursery

is a miserable little room on the ground floor; the door that gives access to it opens directly off a court, and has no screen or porch to break the draught; it faces another door, and to the left hand is the fireplace. Here we found six or more infants in the care of an old pauper assisted by one or two younger women. There is no proper lavatory attached to this ward, nor any bathing accommodation other than a movable bath. A few commode chairs were standing in a recess behind the door. The infants themselves were a sorry, sickly lot, evidencing that they do not receive skilled care or attention. There were no toys, but then that hardly mattered, for there was no space for play. The appearance of the children reminded one of the slum children in our London courts; they looked as if they and the gorgeous sun then flooding the garden had little to say to each other. It is a great pity that these infants are denied a fair start in life; no one seemed to understand them. The nurse on the female side is supposed to be responsible for them, but her duties are so manifold that she can give but a small fraction of attention to each. The infants leave the nursery at the early age of 2 years. At first we were prepared to regret that they were sent into the schools so young; but doubtless it is wise to transfer them to more sympathetic surroundings. At night the infants are with their mothers.

The Dinner

was being served in the wards at the time of our visit. Some patients were having rice pudding; this was nicely cooked. The woman with hæmoptysis had a mug of hot beef-tea beside her, standing in close proximity to a spittoon into which she had been vomiting blood. At the table we saw the old women served with portions of fat and bone, among which there were minute streaks of meat, and a few potatoes, many of which were bad. As we looked on, the thought crossed our mind, Where are some of those fine vegetables that we saw in the garden? The rations are cut up in the kitchen and sent on open wooden trays to the wards. In the male ward the dinner was finished, and a pauper was washing the plates in a bucket of water placed on a chair—a primitive arrangement indicating that there is no wash-up sink.

The Sanitary Arrangements

are of a makeshift character. On the female side a slice at the end of the ward has been partitioned off, wherein is a bath with hot and cold supply, a sink, and, enclosed in a corner, the watercloset, having a flush and ventilated by a window. The whole of these appliances struck us as being in too close proximity to the ward to be sanitary. This lavatory, which was taken off the ward with 13 beds, served for the old women in the adjoining ward, and was supplemented by commodes beside the beds. The same arrangement was on the second floor with the exception of the lying-in ward. On the male side the sanitary appliances are worse. The closet is at the end of a dark passage; there is a movable bath, but no means of emptying vessels or slops but in the closet. The authorities admit that this is all very faulty, but we failed to gather that any improved system was in contemplation.

The Impression

that we carried away was that the Bedford guardians are possessed of ample resources in the way of building and of space for the treatment of the sick and the rearing of the infants, but that for some cause or other neither of these results was accomplished. The sick are not nursed in the full sense of the word; by that we mean that there did not appear to be any energy in the carrying out of treatment ordered; but then how can it be otherwise when the patients are only nursed for twelve out of the twenty-four hours that go to make a hospital day, and when this duty is entrusted to women who have more patients to look after than they can nurse, whose patients, moreover, are scattered, and whose range of duty include many offices that of necessity take them away from their wards?

As for the infants, the less said about them the better; they are no credit, and they represent a grievous waste of opportunity, and therefore of public money. Again we say, Why are the old people not out in their own grounds? As we walked up the drive about 11 A.M. on that glorious June morning there were no inmates abroad but those who were working in the garden; we saw no seats, no pleasantly-planned corners for the old men or women, and as there are no dayrooms there is the more need for the change which going out of doors gives the paupers. What means is there of getting them down from the wards into the garden? Are they welcome when they get there? Does it never strike the guardians as they walk to and fro that to the old inmates, most of whom have been accustomed to entire freedom of going and coming, this is neither more nor less than a prison. We make these remarks in no captious spirit, but it would be a poor return to the guardians for their kindness in allowing us to see over the house if we did not try, in a friendly manner, to bring out those points which struck us, and into which they, as busy men and women, have not leisure to investigate for themselves. We are sure that they have the good of these poor people as much at heart as we have, and when they have grasped the fact that their lot might be improved by attention to detail, they will not rest satisfied until these matters are looked into.

Dr. J. Wright Grant, public vaccinator for the Woburn Union has been granted the Government grant for successful vaccination.

Dr. J. S. Brookfield, of Brondesbury, has been placed on the Commission of the Peace for the county of Middlesex.

THE COST OF AN EPIDEMIC.

As an illustration of the pecuniary loss to the community arising through the prevalence of infectious diseases, Dr. Campbell Munro, medical officer of health of the county of Renfrew, in his annual report makes the following interesting statement: In the course of an epidemic of enteric fever in 1893 there occurred 859 cases, and 74 people lost their lives. He put aside any reference with respect to the immense amount of bodily pain and suffering, the mental distress and anguish, the misery and wretchedness involved in these figures. He confined himself to the pecuniary aspect of the question. Having before him an approximate statement of the wages earned by each individual wage earner attacked in the course of the epidemic, together with the average period during which he was prevented by illness from pursuing his occupation, he was in a position to estimate the cost of the epidemic to the community through loss of wages at £3 2s. There was next to be considered the expense involved in connection with the treatment of these illnesses, extending, on an average, over seven weeks. He found that the average cost of treatment for each patient received into hospital in the course of the epidemic was about £8 15s. He was, therefore, well within the mark in estimating the average cost of treatment of cases, overhead, at £5. It might be taken that, in respect of a large proportion of the cases treated at home, the cost of treatment was limited by the pecuniary capacity of the household. The cost of treatment upon this scale amounted to £4 295. £5 was the accepted estimate of the average amount incurred in connection with funeral expenses, and the expenditure arising in this connection falls to be set down at £370. Finally, they had to estimate the value to the community of the lives lost in the course of the epidemic. That human life had a distinct pecuniary value was a consideration which had probably never entered the mind of the average citizen. Nevertheless, the matter was one susceptible of actuarial demonstration. A quotation from the writings of Farr, the greatest authority on the subject, would best illustrate the position of the matter: "As lands, houses, railways, and the other categories in the income tax schedules are of value, because they yield annual returns, so, for the same reason and on the same principle, the income of the population derived from pay of every kind, for professional or other services, and wages, can be capitalised; not precisely, it is true, unless the income of every person living were returned at least as nearly as incomes subject to income tax: but sufficiently near to the true value to show that the value of the population itself is the most important factor in the wealth of the country.....The capitalisation of personal incomes proceeds upon the determination of the present value, at any rate, of the future annual earnings at that and all future ages."

The value to the community of an individual member was ascertained by deducting the capitalised future cost of subsistence of the individual from his capitalised future income. Proceeding upon these lines Farr arrived at the conclusion that "the minimum value of the population of the United Kingdom—men, women, and children—was £159 a head; that was the value inherent in them as a productive, money-earning race." He estimated the value of the population of the United Kingdom at the time he was writing as equivalent to a capital sum of £5 250,000,000, while the "capital" of the country (using the term in its ordinary sense) amounted, according to Mr. Giffen's estimate, to £8,500,000,000.

Adopting Farr's figures as a basis for the calculation, he had made a rough estimate of the value "inherent in" the persons who died in the course of this epidemic, "as a productive, money-earning race." He found that it amounted to the very large sum of £13,540. So that the pecuniary loss to the community of Mid-Renfrewshire, arising in connection with the epidemic, amounted to the enormous total of £21,486. A consideration of these figures, Dr. Munro observes, might well suggest the reflection whether any investment was calculated to yield a better pecuniary return than the expenditure involved in the operations of the Public Health Department, which had for their main object the prevention of epidemics.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895

SUBSCRIPTIONS to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 13TH, 1895.

THE USE OF MEDICAL TITLES AFTER ERASURE FROM THE "REGISTER."

THE prosecution by the General Medical Council of Mr. Thomas Richard Allinson has been successful. We cannot conceive how it could have been otherwise. The result of the trial should stimulate the General Medical Council not only to institute proceedings in similar cases, but to obtain increased powers from the Legislature for dealing with what is a flagrant evil.

Mr. Allinson held the title of L.R.C.P.Edin. His name was erased from the *Medical Register* by the General Medical Council, and he was deprived of his title by the College of Physicians of Edinburgh. He appealed from the decision of the General Medical Council both to the Queen's Bench Division and to the Court of Appeal, but failed on both occasions. Having done so, he continued to use the title, and for doing this he has been subjected by the magistrate to the penalty of £20 imposed by the 40th Section of the Medical Act of 1858, and to the costs of the prosecution.

That a person should be at liberty still to use a title of which he has been legally deprived would indeed be a startling anomaly, nor is it possible to find a case more fitly covered by the words of the 40th section, which enacts that: "Any person who shall wilfully and falsely pretend to be or take or use the name or title of a physician. . . . or any name title addition or description implying that he is registered under this Act or that he is recognised by law as a physician etc. shall upon a summary conviction for any such offence pay a sum not exceeding £20." But will the profession remain satisfied without a further step being taken in the direction of medical reform?

Erasure from the *Register* prevents a person from recovering his fees in a court of law; and the assumption of a title which has been taken from him subjects him to a penalty of £20; but neither prevents him from continuing to practise. Not one medical man in a thousand has to sue for his fees, and the public never inquire what a man's titles are or how he obtained them. That, for example, it should be possible for a person who has been convicted of felony and undergone penal servitude to continue to practise at all is surely a very grievous state of things. What is impossible in the legal profession should be equally impossible in the medical. A solicitor struck off the rolls cannot practise at all. The Inland Revenue and the Incorporated Law Society secure that result by the penalties they are able to obtain for his practising without a certificate. Antecedent, however, to some such protection being afforded to the public against medical men struck off the *Register* must be introduced a procedure analogous to that which for minor offences allows a solicitor to be punished by suspension for a limited period.

Under the Medical Act of 1858 there is nothing short of erasure with power to restore (a cumbersome process), and the result is at present to make no distinction between cases where a restoration should properly be allowed and where it should not be. Every day brings some fresh evidence indicating the necessity for a reform of the General Medical Council and its procedure. This is, in our opinion, one of the burning questions of the hour in the medical profession, and the sooner it is dealt with the better.

At the recent session, Sir R. Quain stated that the investigation of one case of alleged infamous conduct in a professional respect had cost hundreds of pounds. This investigation represented a large share of the work of the session. Notwithstanding this startling expenditure, even in cases where the Council strikes the name off the *Register*, they cannot compel the bodies granting the original qualification to remove the name from their list of licentiates, and the universities are (as is well known) unable or unwilling to cancel their degrees in such a case. Permanent erasure from the *Register* should only be allowed where the offence does not admit of subsequent restoration, and erasure from the *Medical Register* should automatically operate on the lists of the licensing body which gave the qualification to the person whose name is struck off. In future the power to practise (irrespective of fees and titles) should be prevented by the enforcement of penalties similar to those which can be recovered from the solicitor who has been struck off the Rolls as unworthy to continue a member of an honourable profession.

IMPENDING LEGISLATION FOR INEBRIATES.

NOTWITHSTANDING that the overturn of the late Ministry cut short the life of the thoroughgoing and effective Inebriates Bill, 1895, which, under the guidance of Lord Herschell, had passed a second reading in the House of Lords, no friend of legislative reform for the curative treatment of habitual drunkards need feel discouraged. In any circumstances this Bill could not have passed both Houses of Parliament before another session, so that the prospect of its enactment is no more remote than before the dissolution. There has been this advantage, too, that the drastic proposals in the Bill have been subjected to a searching criticism at the hands of the present Prime Minister and of several of the highest legal authorities in the kingdom. The late Government merit the highest praise for the main provisions of their measure, which embodied the chief points that have for many years been urged by the British Medical Association, the Society for the Study of Inebriety, magistrates, reformatory and prison officials, with other influential bodies and persons throughout the kingdom.

It was satisfactory to find that in the debate on the second reading in the House of Lords there appears to have been a general approval of one of the two great divisions of the Bill. No opinion was expressed against the curative treatment of inebriate offenders against the law, so there seems to be warrant for the anticipation of a new and more successful procedure with police-court inebriate "repeaters."

and other offenders who are habitual drunkards. As we have repeatedly shown, our mode of dealing with such cases by fine and imprisonment neither reforms nor deters, and is a ridiculous failure. We may, therefore, reasonably look forward to that therapeutic treatment of inebriate criminals which has been strongly recommended by the Parliamentary Committee of 1872, by three recent Departmental Committees (the English and Scotch Committees on Inebriates and the Committee on Prisons), and by the recent Canadian Royal Commission on Intoxicants. This part of the now defunct Bill, with whatever alteration of details may be deemed desirable, will probably be brought forward again by the Cabinet, to several members of which we were considerably indebted for the Acts of 1879 and 1888.

Exception was taken, however, to the other great division of the Bill of the late Government—that embodying compulsory curative detention of habitual drunkards not charged with any offence against the law. It was objected that the liberty of a person who had not been charged with committing a legal offence was proposed to be placed at the discretion of a judge. The noble lords who so strongly condemned such a provision as a new and unheard-of infringement of individual liberty, appear to have forgotten that the liberty of a person not charged with a legal offence has already so been curtailed in alleged lunacy. Every year a large number of individuals who have not been charged with the commission of any offence are deprived of their liberty and put under restraint at the discretion, in non-pauper cases, of two justices, and in pauper cases of one justice. It is not a crime to be insane, yet in the interests of the non-criminal presumed mentally unsound, hundreds of innocent individuals, guiltless of any legal offence, are compulsorily secluded by two justices, one metropolitan stipendiary, or one justice. This old cry of "the liberty of the subject" has really no proper application to the habitual drunkard, who is an abject slave and involuntarily abuses his legal liberty to the destruction of the liberty of other persons.

We presume that Lord Ashbourne has been incorrectly reported when he is stated to have said that all habitual drunkards are already provided for by having an opportunity of voluntarily entering retreats. No provision has been made for the poor and for persons of limited resources, so that only a small proportion of habitual drunkards, especially of the male sex, have now the opportunity of placing themselves under therapeutic detention. Even if there were provision for the impecunious and destitute, the greater number of inebriates have become too will-paralysed to apply for curative seclusion of their own accord.

The objection urged by the Lord Chancellor that a serious temptation might be placed in the way of people with rich inebriate relatives would, if tenable, be equally fatal to our existing compulsory dealing with persons of unsound mind. Lord Salisbury's objection to vesting the power to sequester personal liberty in the discretion of a fallible judge applies as strongly to lunatics, and precautions can be taken to avert a miscarriage of justice.

These objections can all be fairly met by appropriate safeguards which we would heartily welcome. One safeguard suggested would, however, render compulsory procedure largely if not wholly inoperative. We mean the leaving of the decision in each case to a jury. Inebriates and their friends usually shun publicity, and it would be difficult to persuade either to bring their troubles before the public. But if a jury be insisted on, even then we urge the great importance of the enactment of compulsion. We believe, however, that individual liberty would best be protected by a close definition of habitual drunkenness, by ample power of appeal, and by frequent Government or other inspection. With Commissioners of Inebriety as now of Lunacy, complete security and supervision could be attained, and a dangerous class of helpless diseased inebriates, who are now a terror at once to their friends and to the community, could be cared for, and in considerable proportion cured.

CAMBRIDGE "SUMMER SCHOOL."

During the first week of July a novel experiment was tried in the University of Cambridge. It appeared to the professors and teachers of the University that many medical men too deeply engaged in practice, as is the case with most medical men, to be able to keep pace with the recent advances in the ancillary sciences would be glad of an opportunity of renewing their knowledge, and of seeing for themselves those newer methods and discoveries in physiology, pathology, and bacteriology which are changing the face of modern medicine. We may read about these things in journals, but after a time the reader, busy in other ways, begins to find himself distanced in the race; indeed, the very language of physiologists and pathologists gradually ceases to have any meaning for him. This is the greater misfortune as these very same men do not lose their interest in the scientific side of medicine; on the contrary, their daily experience convinces them more and more of the importance of it. To give the busy practitioner an insight into these new methods and new results was the object of the Summer School at Cambridge, and a week of very hard work was got through. About eighty medical men came into residence, and were accommodated for the most part in King's and Downing Colleges. The visitors were mature, thoughtful men of large experience, who followed the somewhat severe course laid out for them with an assiduous and even enthusiastic interest.

A great debt of gratitude is due to the professors and lecturers who, at the close of the hard work of term, were willing to postpone a well-earned holiday and to prepare lectures and demonstrations of no perfunctory kind. Some of the demonstrations indeed were of a very elaborate and complete kind, and must have needed many hours of preparation.

The fees charged were barely sufficient to cover the cost of board and lodging and the necessary printing and other immediate expenses of management.

The effort has had the reward of signal success. We hear from the visitors that they were intensely interested in all that they saw, and they express in the strongest terms their sense of the value the "school" has been to them, and their admiration of the thoroughness and variety of the work done in the several laboratories of the University and in the hospital. On the other hand we learn that the teachers on their part were much encouraged by the close attention and intelligent interest taken by their new pupils in the subjects which were brought before them.

A very strong desire was expressed both by those who were present, and by those who would have been present if they

could, that the University may be induced at no distant date to repeat the demonstrations.

The post-graduate courses given in London are carried out on a different plan, and with a different purpose; they are not occasional demonstrations of special subjects but systematic courses of instruction which the Cambridge Summer School does not pretend to give.

LEPROSY AT THE CAPE.

THE final report of the Cape Leprosy Commission has recently been presented to the Cape Parliament. According to the census of 1891 the total number of lepers in the colony, including Griqualand West and the native territories, was 625, or 4.77 per 10,000 of the population, and of these 366 were males and 259 females. Fifty-one of the cases were European or white, and of the remaining 574, 532 were born in the colony, 41 in extern Colonial Africa, and one in Asia. Of the 51 white lepers, only 4 were born out of the colony, and these had become diseased after their arrival in South Africa. The disease was most common among the Hottentots, the mixed races showing the next largest proportion, then the Malays and the Fingoes, and lastly the Kaffirs and Europeans. In January, 1895, the total number of colonial lepers officially known was 1,177, but it is believed that there are still more. The disease is thus showing a steady increase among the native races, as it is also among the whites.

With reference to the communicability of leprosy the Commission point out that, admitting as the most probable theory its spread by contagion, the chances of becoming inoculated are greater in the family circle, especially in South Africa, where family ties are strong, the close intercourse of relatives the prevalent custom, and hygienic precautions are to a great extent neglected. Living in crowded numbers in small houses, occupying the same bed, using the same utensils, dirty habits, etc., and the general belief that leprosy is a "visitation of God," all tend to the spread of the disease by contagion, and thus to a great extent may be explained the fact that leprosy runs in families. The theory of the communicability of the disease appears to be the only one which can satisfactorily clear up every point in connection with the gradual spread and gradual decrease at different epochs.

As regards the promulgation of leprosy by vaccination, no single instance was met with or brought forward where it was asserted that leprosy was caused by vaccination, and no distinct evidence could be adduced to show that it could be so caused. From the official returns the proportion of lepers per 10,000 was 1.35 for Europeans, 5.04 for Malays. Now the latter, being Mohammedans, do not submit readily to vaccination, and a large number of them are unvaccinated. Moreover, the proportion of lepers among the Hottentots and Fingoes in the native territories, where vaccination is only sporadic and partial, is much greater than it is among those at the Cape, where vaccination has been practised for a longer period and much more thoroughly. Leprosy, indeed, is least prevalent among the most vaccinated people—the whites—and most among the least vaccinated—that is the native and other races of the native territories. It is also pointed out that when arm-to-arm vaccination is practised the lymph is taken from healthy infants. For practical purposes, therefore, there cannot be the least fear that leprosy is likely to spread by means of arm-to-arm vaccination, even in the hands of careless and inexperienced vaccinators.

The Commissioners have come to the conclusion that there is no proof of the direct hereditary transmission of leprosy, and are further of opinion that a hereditary predisposition can be adduced, if at all, only in a very small number of cases.

As regards the marriage of lepers, the report shows that leprosy does not produce sterility in all cases. Conjugal intercourse therefore should not be permitted between the leprous and the healthy, and only after the child-bearing age is passed, when both husband and wife are affected.

A careful inquiry was instituted by the Commissioners into the alleged cures spontaneously or by treatment. Of 72 such cases only 6 could be looked upon as having the disease arrested. For practical purposes the Commissioners consider that when a case of anæsthetic leprosy has remained inactive for two years it may be regarded as one of "temporary arrest," and that when no fresh symptoms appear for a further period of three years it may be looked upon as permanently arrested. They are of opinion that the former class may be entitled to their liberty under certain conditions.

The Commissioners have come to the conclusion that all the recommended remedies for leprosy are of no avail, and that leprosy is an incurable disease so far as medicinal treatment is regarded.

The report strongly urges a modified system of segregation. There should be compulsory notification in every case of leprosy by the householder or occupier and by the attending medical practitioner. The isolation should be effected either in asylums, licensed houses, private dwellings, or in leper villages or locations. An asylum should at once be provided on the mainland in the western district, and another subsequently in the eastern district. The asylum of Robben Island should be temporarily maintained for the pauper class and for those unable to comply with the regulation as to isolation in their own homes. Those should also be sent to Robben Island who do not conform to the regulations.

MR. JOHN LENTAIGNE has been elected, without opposition, to fill the seat on the Council of the Royal College of Surgeons (Ireland) vacant by the death of Sir George Porter.

ON the occasion of the marriage of the Duke of Aosta, the King of Italy conferred on Dr. Vintras, senior physician to the French Hospital, and physician to the Italian Embassy, the Order of St. Maurice and St. Lazare (Officier), for the services he has rendered to the poorer members of the Italian colony in London.

DURING the annual meeting of the British Medical Association in London, the President and Fellows of the Obstetrical Society of London intend to give a banquet to distinguished foreign obstetricians and gynæcologists. The entertainment will take place at the Whitehall Rooms, on Friday, August 2nd, at 7 P.M.

CAMBRIDGE MEDICAL GRADUATES' CLUB.

THE annual general meeting and dinner of this Club was held on July 4th at the Hotel Victoria. The President of the Club, Sir George Humphry, M.D., F.R.S., was in the

chair and after the usual loyal toasts proposed "The Health of the Club." Dr. Norman Moore gave the toast of "The Guests of the Club," to which the Rev. Canon W. Page Roberts, Mr. O. Pemberton, and Mr. T. Pridgin Teale, F.R.S., responded. Prof. C. S. Sherrington proposed "The Health of the Chairman," Sir G. M. Humphry.

SURGEONCY TO THE QUEEN IN IRELAND.

Sir Philip Smyly has been appointed Surgeon to the Queen in Ireland, in room of the late Sir George H. Porter, Bart. He is Surgeon to the Meath Hospital, and has served as surgeon to various viceroys. Some years ago he resigned his position as Surgeon to take that of Physician to the Lord Lieutenant of the day.

WHAT IS A HABITUAL DRUNKARD?

The daily journals report the presentation of a petition to the House of Lords, praying that any person who has been twice convicted of drunkenness within two years in the same licensing district shall be defined to be a habitual drunkard, and that any licensed dealer serving or harbouring him after due notice shall be liable to penalties and forfeiture of licence. So severe a measure will, we feel assured, never be enacted by any civilised Legislature. In existing legislation three convictions within six months—as in South Australia—constitute an inebriate a "habitual drunkard;" but twice in two years is utterly irrational. The late Government's Inebriates Bill proposed three convictions within twelve months, but the too drastic character of this definition would have been altered if the Bill had gone on. The object of the petition is excellent, though the operation of the Bill could be effectual only in small communities, where the inhabitants would know such cases.

THE DIFFICULTIES OF MEMORISING.

"Sir," once said a black house-boy at a Chicago Hotel to a distinguished English doctor, "can you give me anything to help me to memorise? You see, sir, if I could only memorise orders I could get a place in the restaurant; but my memory is so short that by the time I have got to the kitchen I have forgotten the order." Alas for this dusky applicant and for others with short memories, no medicine has yet been discovered to enable one to memorise. We can help our patients to forget, we can, by the aid of drugs, give them for a short time a bath in the waters of Lethe; but, as every student knows who labours at his *memoria technica*, medicine will not help him to remember. In illustration of the difficulties some people find in remembering the small details of daily life an amusing story is told of Walter Savage Landor. He was extremely forgetful and was apt to arrive at a friend's without the keys of his portmanteau. Starting once on a journey he determined not to forget his keys. He carefully placed them in his pocket, and took them out several times during the journey to make sure they were there. On arriving at his journey's end he produced the keys with pride; but his treacherous memory had again played him a trick, for this time he had forgotten his portmanteau.

THE COUNTY MEDICAL OFFICER FOR ESSEX.

For some years past Dr. Thresh has been medical officer of health for two large rural districts in Essex—Maldon and Chelmsford—and has achieved a remarkable record of important sanitary work under circumstances of no small difficulty. He has also been engaged by the Essex County Council to advise them in various matters, including the collating of annual reports, but without formal and permanent appointment under the Local Government Act. This omission has now been rectified, and all who are interested in the public health of the county will learn with satisfaction that the Essex council have decided to fall into line with the pioneer counties, of which mention has often been made in the British Medical Journal. They have appointed Dr. Thresh as county medical officer, but without depriving the Chelmsford and Maldon districts of his services. The list grows slowly, but this latest addition is most welcome and encouraging from every point of view. The county council could not have made a better choice, nor could Dr. Thresh have found a more fitting field for the wider application of the skill and knowledge, which have already borne such good fruit in a portion of the county.

EDINBURGH NEW CITY HOSPITAL FOR INFECTIOUS DISEASE.

At last, after endless consideration, after consulting with the Royal College of Physicians, after taking advice here and there, after looking at this property and that, after thinking about it for years, the Town Council of Edinburgh at its meeting on Tuesday last suspended its standing orders to permit of remitting to the Public Health Committee the question of considering the suitability of the grounds adjoining Craiglockhart Poorhouse, and belonging to the City Parish Council, as a site for the new city hospital, with powers to consult experts, and if so advised to conclude arrangements for a sufficient part of the ground for their purpose.

NEW KNIGHTS.

We announced briefly in the British Medical Journal of July 6th that the honour of knighthood had been conferred on Mr. Thornley Stoker and Dr. Christopher Nixon, of Dublin. Sir Thornley Stoker is President of the Royal College of Surgeons, Ireland, having been elected a second time to that office. He was educated at the school of the College of Surgeons, and at Queen's College, Galway, and St. Vincent's Hospital, Dublin. Having graduated M.D. in the Queen's University (1866), he became a Demonstrator of Anatomy in the College of Surgeons, and was soon after appointed a surgeon to the City of Dublin Hospital. In 1873 he was elected to the surgical staff of the Richmond, Whitworth, and Hardwicke Hospitals, and later on he became Professor of Anatomy in the Royal College of Surgeons, an office which he held for several years. He is also Fellow and Examiner in Surgery in the Royal University, Surgeon to Swift's Hospital for Lunatics, and Professor of Anatomy and Hon. Academician of the Royal Hibernian Academy. He has written much on surgical subjects, and he is well known as a skilful surgeon. Sir Christopher Nixon, who was knighted on the same occasion, is Senior Physician to the Mater Misericordiæ Hospital. He was educated at the Catholic University School. In 1869 he became a Licentiate of the College of Physicians, and he was elected to the Fellowship in 1876. Having entered Trinity College he graduated M.B. in 1878. He also holds the degree of LL.D. in the University of Dublin. When the Royal University was founded he was made one of the Fellows and an examiner in medicine; these offices he resigned on being appointed a member of the Senate. He holds the degree of M.D. (*hon. causâ*) from that University. He is Visiting Physician to the Central Criminal Lunatic Asylum, Dundrum, and Professor of Medicine in the Catholic University Medical School. He has contributed a good deal to the literature of his profession, in which in Dublin he holds a prominent position.

ROCHFORD WORKHOUSE SCANDAL.

The epidemic of scandals relating to the administration of the Poor Law has now broken out in Essex. A Local Government Board inquiry, reported fully in the *Essex Evening News* of June 22nd, has lately been held at Rochford, as to certain allegations made by the guardians against the master of the workhouse, whom they had suspended from duty. It appeared that in 1890 a difficulty arose on the question of drink,

when the master was requested to resign by resolution of the guardians, but the resolution was withdrawn upon his signing a pledge of total abstinence. The guardians, in consequence of a large amount of evidence leading them to believe that he had not only broken his pledge of total abstinence, but had, in point of fact, been frequently and disgracefully drunk, had again invited him to resign; but they told the inspector that he had "set them at defiance." The case, as it was detailed before the inspector, presented all the usual phenomena. There was the usual anti-reform party on the guardians, who were prepared to stick to the master through thick and thin. There were those among the officers who were cordially prepared to back him up. There were others who appeared to know more than they cared to say, being, doubtless, of a cautious mind. The master denies the whole of the evidence deliberately, and the matron, who is his wife, gave evidence in his favour. In addition, the solicitor who conducted the case for the master brought up a whole body of the tradesmen of Rochford, who protested that they had known the master for years and years, and had never seen him the worse for drink. The Local Government Inspector, Mr. H. Preston Thomas, is now, we presume, deliberating upon the evidence, and in due time we shall hear what view he and his new chiefs take of this and the other pending cases. Without attempting to prejudge the allegations against this particular master, we feel bound to say that the accumulation of these cases is destroying public confidence in the administration of the Poor Law, and that it is high time that the Board dealt seriously with the reform of the Poor-law administration, upon which the happiness of so many thousands of helpless and poor people constantly depends.

TESTIMONIAL TO SIR JOSEPH LISTER.

Sir Joseph Lister will on July 30th be presented with his portrait, painted by Mr. J. H. Lorimer, A.R.S.A., at a meeting to be held at 4 P.M. on that day at King's College Hospital. The presentation will be made by Sir John H. Erichsen, President of University College. When Sir Joseph Lister retired from active hospital and teaching work last year, it was felt that the occasion ought not to be allowed to pass without showing in some tangible way the regard and esteem in which he is held by his former colleagues and pupils. The Honorary Secretary of the testimonial fund is Dr. J. Frederick W. Silk (29, Weymouth Street, Portland Place, W.), to whom applications for admission to the ceremonial should be addressed.

PROPOSED MEMORIAL TO PROFESSOR HUXLEY.

It has been decided to establish, in connection with the Charing Cross Hospital Medical School, a permanent memorial to one of its most distinguished students, the late Professor Huxley. To this end the following Committee has been formed: Sir Joseph Fayrer, K.C.S.I., F.R.S., Sir Guyer Hunter, K.C.M.G. (both old friends and fellow students of Professor Huxley at the Charing Cross Hospital); Dr. Watt Black (Honorary Treasurer), Mr. J. H. Morgan, Mr. Stanley Boyd, Dr. Montague Murray, and Mr. H. F. Waterhouse (Honorary Secretary). It is proposed that the memorial shall take the form of an annual lecture and a science scholarship and medal. A meeting to consider the matter will be held at the School, on Tuesday, July 16th, at 3 P.M., under the chairmanship of Sir Joseph Fayrer. Subscriptions will be received by Dr. Watt Black at the Charing Cross Hospital Medical School. Sir W. H. Flower, writing to the *Times*, says: "In the great hall of our National Museum of Natural History the noble statue of Darwin will hand down to posterity the image of the man as he appeared to all who knew him in life. Near this will soon be placed another statue remarkable for the accuracy with which the striking personality of Owen is represented, as all can testify. Surely this group of the great naturalists of this country and this century must be completed by the one which we have just lost, in some respects the greatest of the three. The statues of Pitt and Fox stand side by side in Westminster Abbey. Huxley and Owen, often divided in their lives, would here come together after death in the most appropriate place, and amid the most appropriate surroundings. I should have waited before venturing to launch such a suggestion in public until it had been considered by a properly chosen and representative committee, but that I see other memorial projects have already been widely circulated."

THE HIGH DEATH-RATE OF BELFAST.

A correspondence is going on in the Belfast papers regarding the high death-rate prevailing in that city. The rate for last week was 27.7. This is, however, considerably above the average. Nevertheless, the normal rate, which is about 24 or 25 per 1,000, is considerably too high. The causes of this are many, and some of them are undoubtedly remediable. The damp subsoil on which the city rests, and the fact that a very large proportion of the population are engaged in unhealthy trades, are causes always in operation, but up to the present the drainage and water supply have not been altogether satisfactory. Energetic steps are, however, being taken to remedy these defects. The large main drainage scheme is almost completed, and the new water scheme for bringing a supply from the Mourne Mountains is being pushed on rapidly. In estimating the significance of the high death-rate of Belfast, it should not be forgotten that the city is advancing in population with astonishing rapidity, and that this exceptional increase is fraught with various dangers to the public health.

THE MECCA PILGRIMAGE.

Dr. D. H. Attfield, M.A.Cantab., English Quarantine Medical Officer of the Egyptian Government at Suez, who last year, during the Mecca pilgrimage months, filled the post of Sub-Director of the Quarantine Camp at El Tor, has this year, during the similar period, been appointed the Chief Director of the extra Egyptian Camp at Ras Mallap. Dr. Attfield is the son of Dr. J. Attfield, F.R.S., whose services in connection with the editing of the *British Pharmacopœia* are well known.

ON DISGUISING THE TRUTH.

In another column we print a letter from a lay correspondent, which raises an important point of medical ethics. J. H. T. alleges that medical men are in the habit of concealing the truth from patients in whom they find evidence of serious disease. For a statement of his case we refer to the letter itself, in which our correspondent puts forth one aspect of the matter ably and clearly, and with fairness and moderation. Our own reply is a simple one—namely, that on the whole we agree with him. In each case there are found its own difficulties for which no general rule can be laid down, but we do not hesitate to say that, taking the cases related by J. H. T. in the unqualified way in which they are recorded, the medical men concerned acted very wrongly. We do not believe for a moment that medical men practise the habitual deceit which is attributed to them by J. H. T. That any physician should conceal the state of his patient from his family and confide it to a nurse seems to us inconceivable. A nurse has nothing to do with the diagnosis of her patient's disease, but with obedience to orders only. A nurse who has a becoming aversion to gossip will indeed prefer to avoid all unnecessary confidences; while those who are gossips must be deprived of the means of mischief. It must be remembered that some patients—and these not a few—are averse from being told the truth with whatsoever tact it may be conveyed; to force a painful truth upon such persons would be both unkind and mischievous. We believe that in all such cases physicians are

accustomed to convey the facts to some responsible member of the family, with whom the decision then lies, and a physician who fails to do this is, in our opinion, worthy of blame. It is incredible to us that any physician should detect epilepsy in a patient and fail to take the fullest care to warn his friends and provide for his security. To blurt out within the limits of an ordinary morning consultation so painful a discovery, and this to a patient who may be a perfect stranger, would be most inconsiderate; and when such discoveries are made in persons who call alone and unknown, the course to take is not always plain, but the course of absolute silence can never be right. When a person having already some forebodings of evil asks the physician to tell him the truth, it is the custom of all experienced medical men to tell the truth gently but clearly, tempering the communication with such allusions to any aspects of doubt and the fallibility of human prediction as may alleviate the hardness of the sentence. We remember one case only in which a deliberate untruth was told at the bedside; this was in the case of a very nervous and wistful young man who was lying in the crisis of a desperate pneumonia, and it was felt that an assurance of recovery might help to promote it. The assurance was given after full consultation with the family and consideration of the patient's worldly and spiritual state. However, the "suggestion" failed, and the physician chiefly concerned has never satisfied himself whether he then did right or wrong. He is disposed to think that he was wrong.

"COVERING."

The conduct of Dr. R. A. Lithgow, as brought out at the inquest last week on the body of Mrs. Scott-Campbell, in attending a patient in consultation with a man whose name has been erased from the *Medical Register*, and in subsequently giving a certificate of death, has been the subject of much comment in medical circles. Of recent years the General Medical Council has shown the utmost determination to deal severely with "covering" of unqualified practitioners by medical men; and though in the present instance the facts are a little different from the usual run of those cases, we have no doubt that the case is one that will be fully investigated by the General Medical Council. Dr. Joseph Kidd will doubtless be also given an opportunity by that body of explaining how it happens that he has held consultations with the same man, and as was alleged at the above-mentioned inquest, has signed a death certificate for him. Without in any way wishing to prejudge the case, we cannot refrain from asking of what avail it is to strike a man off the *Register* if medical men may help him out of the only dilemma which such a sentence entails.

CONVICTION UNDER THE REGISTRATION ACT, 1874.

Mr. Braxton Hicks, Her Majesty's Coroner for London and Surrey, is to be congratulated for the public-spirited way in which he has again shown that the Registration Acts are not dead letters—in his district at least. On July 4th he summoned Mr. Coppin, an unqualified assistant to a medical man living in the Westminster Bridge Road, for wilfully and falsely giving a certificate of the cause of death contrary to the Registration of Births and Deaths Acts, 37 and 38 Victoria, cap. 88. It may be remembered that Mr. Braxton Hicks brought the qualified principal in this case before the General Medical Council at the last session for "covering," and that the Council, in its wisdom, although finding that the offence was committed, did not erase the name of the offender from the *Register*, but "ordered him to come up for judgment in November." Mr. Braxton Hicks, in opening the case against Mr. Coppin before Mr. Kennedy, the police magistrate, stated that he had taken out six summonses in all. He did not, however, want the case to go for trial, but if a conviction was obtained, that the case should be dealt with summarily. Accordingly he withdrew five of the cases, and elected to deal with one only. The evidence was then produced, and there being practically no defence, the magistrate inflicted the full penalty of £10, with 2s. costs, and informed the defendant that he must consider himself very fortunate in not having the other charges pressed against him. Mr. Coppin, whose name will be remembered as having been mentioned before in connection with the Neil Cream case, has already brought other principals into professional difficulties whilst acting as their unqualified assistant. Why medical men should still continue to run such risks as the employment of unqualified assistants leads to is difficult to understand, especially when there are numbers of fully qualified and capable assistants to be obtained easily. Mr. Braxton Hicks has the courage of his convictions, and never loses an opportunity of seeing that the laws which regulate registration of deaths are carried out properly. He is a "terror to evil doers" in his district, and though not a member of the medical profession, has always the interest, honour, and dignity of that profession at heart.

SIGNS OF PROGRESS.

We are much impressed, whilst reading the reports of the guardians' meetings all over the country, by the evidence of progress all along the line since we commenced the publication of our series of reports on provincial workhouse infirmaries. At Barnstaple there is a lengthy discussion on providing improved and increased accommodation for the sick; at Basingstoke the need of a new infirmary is acknowledged, and a powerful majority on the Board are pledged to carry it through; at Elham the Board are building rooms for the night nurse; at Coventry a warm discussion on the need of a night nurse occupied the time of the Board, and though we are sorry to read that the stock arguments as to absence of complaints on the part of the inmates and the chronic nature of the cases carried the day, yet we quite expect to find the Coventry Board swept along on the tide of improved nursing which has evidently set in all over the country. Totnes is advertising for a trained and certificated nurse; and various other advertisements show activity among the workhouse infirmaries, which we hail as a proof that the local authorities are waking up to their duties.

PRESCRIPTIONS AND DISPENSERS.

A case of importance, raising the question of prescriptions, substitution, etc., was decided in the Edinburgh Sheriff Court, on June 17th, when Sheriff Rutherford heard proof in an action by David Middleton, chemist, 85, Bruntsfield Place, Edinburgh, against James M. Wilson and Co., chemists, 16, Leven Street, Edinburgh, and Patrick W. Wilson, chemist, the only known partner of the said company. Plaintiff sued for interdict against the defenders from dispensing prescriptions of the pursuer's special preparation known as "Middleton's Cod-Liver Oil Emulsion" by substituting for such emulsion some preparation of their own, and costs and damages. It was proved that the defenders had on several occasions substituted their own preparations for those ordered. It was shown that a chemist had no discretion in altering a prescription; he must conform strictly to what was ordered. If he has not the special preparation in stock he must send for it. There must be absolute honour between prescriber and dispenser. The Sheriff found that the defenders acted wrongfully in substituting a different preparation of cod-liver oil for the pursuer's emulsion, specially prescribed, and the defenders liable to the pursuer in expenses. In an appended explanatory note the Sheriff expressed the opinion that there could hardly be any room for doubt that a druggist or pharmacist is not entitled to deviate from the directions contained in the written prescription of a medical practitioner, but is bound to comply with them literally and implicitly.

It is to be hoped, our Edinburgh correspondent writes, that this decision will lead to greater care in making up prescriptions than prevails among some chemists. Physicians are sometimes annoyed by failing to get certain results from certain treatment and by discovering that inferior or different preparations had been substituted for those specifically ordered. Thus there are certain preparations of tincture of strophanthus known to be of excellent quality and some which are not so; or, again, when infusum digitalis recens is ordered, a chemist has no right to use a concentrated and preserved substitute.

"A DAY IN THE COUNTRY."

CANON BARNETT, whose genuine philanthropy is all the more effective that he has followed the advice of Johnson and cleared his mind of cant, calls attention to the many objectionable features of school treats as generally conducted. We are entirely at one with him in his outspoken condemnation of the whole thing as "an abuse of charity." Coming as it does from a quarter not open to the suspicion of what may be called sanitary pedantry, the protest is likely to have all the greater force. To the sentimentalist nothing can be more delightful than the idea of the pale little denizens of the slums escaping for a few hours from the unwholesome atmosphere in which they have their being into the sweet air and unconfined space of the country; when he reads the customary appeals in the papers, pictures of young lambs skipping in the meads and of happy children romping in the summer fields rise before his mind's eye, and he responds liberally. One need not, however, look at life through the spectacles of M. Zola to see a less idyllic picture. Vans and railway carriages crammed with seething masses of screaming, struggling children; little sons and daughters of Belial flown with insolence and bad ginger beer; a debauch of noise, guzzling, and excitement, followed by utter prostration from the combined effects of heat, fatigue, and indigestion—this is too often the reality of "a day in the country." The sentimentalist has his money's worth in the sense that he has made a slight rift in the dismal clouds which overhang the lives of poor children, but what of the little ones themselves? At best they get nothing but a day of feverish excitement, and they are fortunate if they escape with nothing worse than hoarseness and exhaustion. It is hardly necessary to explain that it is not to the "day in the country" itself, but to the manner of it, that we object. Holding strongly as we do that, in the words of Herbert Spencer, "happiness is the best of tonics," we think it would be well if every town child could have, not one, but many days in the country, and we should be glad if Canon Barnett's suggestion that the little ones should be sent one by one to spend a fortnight in labourers' cottages could be carried into effect. This is already done to a certain extent for the poor children of Paris, and surely it is not altogether impossible of accomplishment here. A fortnight or even a week in the country would do much to purify the bodies and souls of children from the taint of the slums. The money subscribed for "a day in the country" would assuredly be much better bestowed in aiding such a movement.

AN INSANITARY AREA IN SOUTHWARK.

AT a meeting of the Vestry of St. George Southwark on July 2nd a report was presented by the medical officer of health dealing with the mortality statistics of the area known as the Falcon Court area, which the London County Council and the vestry have determined to deal with by an improvement scheme under the Housing of the Working Classes Act. It appears that the area in question has a population of 707 persons, and that the actual space covered by dwelling houses is rather under 1¼ acre, so that there is considerable overcrowding. The returns of mortality for the three years 1893-3-4 show an average death-rate of 29 per mille as compared with 19.8 for the whole of London. The death-rate for the seven chief zymotic diseases is 4.4 per mille as against 2.5 in London, and the average deaths under 1 year of age to every thousand births number 208 in the area as against 151 in London. The medical officer of health comments upon the fact that his statistics are based upon a small area and population, and only deal with a period of three years; he very properly insists, therefore, upon the undesirability of attaching undue importance to his figures. He alludes, however, to the unsatisfactory nature of the results which have been obtained during the past three years by the service of notices upon owners and occupiers of property in the area, and states that the action taken has merely ended in the removal of a few of the grosser and more glaring defects; the faults of a structural nature, he states, are many in number and of a serious nature. This can only be remedied by carrying an improvement scheme into execution.

DIET IN PREGNANCY.

DR. EICHHOLZ, of Kreuznach, in a recent number of the *Frauenarzt*, maintains that a large proportion of the discomforts and difficulties preceding, attending, and following parturition might be avoided by a rigid adherence to some simple dietetic rules. Excess of albumen and of water are, he considers, the errors against which pregnant women should be warned, as tending respectively to excessive development of the fœtus and secretion of amniotic fluid. His rules are: Meat only once a-day, and that in small quantity, and rarely if ever salted; green vegetables, salad, potatoes, bread and butter, but avoiding as far as possible eggs, peas, and beans as being too rich in albumen. Thirst to be quenched by milk or water in very moderate quantities, and cocoa in preference to tea and coffee. Wine, beer, and spirits to be forbidden, and drink of any kind unless in case of urgent thirst; but fruit, raw or cooked, to be indulged in *ad libitum*. The general result of such a diet he found to be a remarkable feeling of well-being; the sense of fulness, bearing down, and weariness, thirst and constipation soon disappeared, and the patients have been able to walk many miles up to the eve of confinement. His own wife would leap ditches and climb hills, and even on one occasion ventured on a race for endurance. The ease and rapidity of the deliveries in some 25 consecutive cases, some of whom had previously had tedious or difficult labours, the small amount of liquor amnii, often not more than a teacupful and sometimes almost inappreciable, were striking, and all without exception succeeded in nursing their infants, though some had not been able to do so before. The children were healthy but small, mostly weighing 6 lbs., and the circumference of head was under 36 cm., averaging 33 to 34. The restriction of albuminous foods had no injurious effect on the quantity or quality of the milk.

THE MILK SUPPLY OF LONDON.

THE second report of the Special Commission on the milk supply of London will appear in the BRITISH MEDICAL JOURNAL of July 20th.

THE FORFARSHIRE MEDICAL ASSOCIATION.—The thirty-seventh annual meeting of this Association was held at Forfar on July 4th, Dr. Cable, President, in the chair. The financial statement showed that the Association was in a satisfactory condition. The following officers were elected:—*President*: Dr. Adam, Brechin. *Vice-Presidents*: Dr. Johnstone, Dundee; and Dr. Hunter, Forfar. *Council*: Drs. J. W. Miller, Sinclair, Buist, Mackie Whyte, Mackay, Steel Mann. *Local Secretaries*: Drs. Key (Montrose), Cable (Forfar), Laing (Arbroath), Adam (Brechin). A donation of three guineas was voted to the British Medical Benevolent Fund. The President (Dr. Cable) delivered an address on Micro-organisms and Disease, for which he received the thanks of the meeting. The next meeting will be held at Edzell.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN LONDON, 1895.

THE MEDICAL INSTITUTIONS OF LONDON.

(Continued from page 61.)

THE MEDICAL SOCIETIES OF LONDON.

By James Blake Bailey, B.A.,
Librarian of the Royal College of Surgeons.

The Royal Medico-Botanical Society of London was founded in 1821 mainly by the efforts of John Frost, who held the office of Director. The avowed object of the Society was for "the purpose of investigating, by means of communications, lectures, and experiments, the medicinal properties, botanical characters, and chemical constituents of plants; for encouraging the study of the materia medica of all countries, etc." Frost was only 18 years of age when he started the Society, and by his perseverance and impudence he soon put it on a good basis. The home of the Society was at 32, Sackville Street, Piccadilly, and Dr. William G. Maton, F.R.S., was the first President. His successors were Dr. Bree, Sir James McGrigor, and Earl Stanhope. Frost obtained not only the chief men of science of his day as members of the Society, but also politicians and men of letters; it is said that he had twelve Sovereigns on the list of members. His mode of obtaining these names was to present an elaborate album containing the signatures of the members to any distinguished man whom he desired to catch, and to inform him that he had been elected an honorary member. By this means he not only increased his list of members, but put together a most interesting and valuable collection of autographs. At the disappearance of Frost after the quarrel between him and the Society, the book vanished, and has never since been heard of. This is to be regretted, as it contained signatures of great interest. Some of the subterfuges to which Frost had resource for getting his book signed are well-nigh incredible: Having more than once failed to get an audience with the Duke of Wellington, Frost obtained the uniform of a lieutenant-general, and attended a *levée* of general officers at Apsley House. By sheer impudence he obtained an audience, and added the Duke's signature to his list. A most amusing account of this will be found in the Life of the Rev. R. H. Barham, vol. i. p. 176. So greatly were some of the foreign potentates impressed with the importance of Frost and his Society that two of them sent the insignia of one of their minor orders to the Director. These Frost appropriated and duly wore at all meetings of the Society. Some of the papers read were of considerable interest and importance, but, especially in the later years no proper supervision was exercised in the matter laid before the Society; in fact, Earl Stanhope would admit anything which could be classed under the head of medical botany. To such an extent was this carried, that Mr. Clarke[1] relates the case of a keeper of a herb bath who "read a paper to show that influenza, at that time epidemic, was caused by the cows eating buttercups, which in that season were most prolific." Frost's conduct became at last so overbearing that his colleagues could not submit to it. The result of the quarrel was that the office of Director was abolished, and Frost himself was expelled from the Society. The other Secretary was Dr. Sigmond, a man of very considerable learning. Whenever there was a lack of material for discussion, it was customary to fall back on Dr. Sigmond for a paper; among his communications may be mentioned one which in 1834 he brought before the Society on the subject of Endermic Medication. Three parts of *Transactions* were issued, the first containing the work of the Society for 1821-29, the second 1832-33, and the third 1834-37. Earl Stanhope was the mainstay of the Society in its later years, and soon after his death in 1855 it ceased to exist.

[1] Annals and Antiquities of Some Ancient Institutions of the Medical Profession, p. 230.

The Harveian Society of London was founded in the year 1831. The want of a society of this kind had long been felt by those who were practising in the western part of London. The preliminary meeting was held at the Western General Dispensary in Dean Street on September 12th, 1831, Dr. A. T. Thompson in the chair. It was then unanimously resolved that such a society should be established under the name of the Western London Medical Society. On September 15th the Society was formally constituted and the first officers were elected. At a meeting held on September 26th it was decided to change the name of the Society from that originally suggested to the Harveian Society. The early meetings were held at the Western General Dispensary, but before the end of 1831 apartments for this purpose were engaged at 28, Edward Street, Portman Square, from whence in 1835 the Society moved to the Marylebone Literary and Scientific Institution in the same street. A "Harveian Lectureship" has been instituted by the Society for the delivery of two or three lectures on some subject of practical interest in medicine, surgery, or midwifery. The Society does not publish any transactions, but its meetings are reported in the medical journals.

The South London Medical Society was founded in 1832; the preliminary meeting, under the chairmanship of Mr. Edward Evans, was held at the apartments of the Southwark Literary Society, Chester Terrace, Southwark. The Society was originally to have consisted of general medical practitioners of Southwark and its vicinity. The last reported meeting was held on August 16th, 1849, under the presidency of Mr. Hilton, to discuss the Treatment of Cholera. Addison's first paper on Disease of the Suprarenal Capsules was read before the South London Society on March 14th, 1849. A report of it may be found in the *London Medical Gazette*, n.s., viii. 1849, p. 517. Another society with this title was formed in 1867 (*vide infra*).

The Society of Medical and Surgical Observation was founded in 1839 to collect and arrange authentic histories of disease and to disseminate among the members a knowledge of the cases under treatment in the different London hospitals. The meetings were held at the members' houses, the president for the evening being the member at whose house the meeting was held. Mr. (afterwards Sir W.) Bowman was the first Secretary. The last meeting was held on April 30th, 1850, at the house of Mr. Partridge. It was then decided to dissolve the Society, and it was ordered that all the papers should be arranged and deposited, with the minute book, in the Royal Medical and Chirurgical Society's Library.

The Medico-Psychological Association is the successor of a society started in 1841 under the title of the Association of Medical Officers of Hospitals for the Insane. This Association originated in a circular addressed in 1841 to eighty-three medical men connected with the public lunatic asylums in the kingdom. The circular was signed by Dr. Samuel Hitch, the resident physician of the Gloucester County Asylum, and asked whether, in starting the Association, co-operation might be expected. Forty-four favourable replies were received, and a meeting of those who agreed to join the Association was held at the Gloucester Asylum on July 27th, 1841. At this meeting the Association was formally started, and it was decided to meet annually at a private or public lunatic asylum. For some time the Association contemplated publishing a journal, but it was not until 1852 that it was definitely decided to issue one. The title chosen was the *Asylum Journal of Mental Science*, and Dr. Bucknill was appointed the first editor. In 1858 the title was changed to the *Journal of Mental Science*, under which name it still appears.

The Sydenham Society was formed in 1843 for the purpose of meeting certain deficiencies in the diffusion of medical literature not likely to be supplied by the efforts of individuals. The Society issued between the years 1844 and 1857 many valuable works, including editions of Paulus Ægineta, Rhazes, Hippocrates, and Aretæus. In 1857 the Society was dissolved, the Council giving as its reason for this act that the work for which the Society was established was completed.

THE NEW SYDENHAM SOCIETY

was established in the year 1858 for the purpose of carrying on the work abandoned by the original Society. Dr. C. J. B. Williams was elected the first President; the success of the Society, however, has been mainly due to Mr. Jonathan Hutchinson, who has held the post of honorary secretary from the foundation of the Society until the present time. In addition to publishing many useful books, the Society has issued an Atlas of Pathology and another of Diseases of the Skin, and has partly completed a *Dictionary of Medical Terms*.

THE WESTERN MEDICAL AND SURGICAL SOCIETY

was founded in 1845, and held its meetings in Sloane Street. Sir Benjamin Brodie was one of its presidents, and his presidential address is printed in Mr. Charles Hawkins's edition of Brodie's works. The Society had a fair library of modern books; these chiefly came from the Chelsea and Brompton Medical Society, which presented the books which had been in circulation during the year previous to their deposit in the library of the Western Medical and Surgical Society. Owing to a great decrease in the number of members, which was chiefly caused by the establishment of other London societies, the Western came to an end in 1871. The books belonging to the Society were given to the Medical Library at St. George's Hospital, to which a large number of the members belonged.

THE PATHOLOGICAL SOCIETY OF LONDON.

In February, 1846, Dr. Edward Bentley, of Guy's Hospital, made an endeavour to start a separate society for the discussion of pathological subjects. This need was felt from the reluctance there was in the existing societies to devote any of their meetings solely to pathology. Dr. Bentley and Mr. Nathaniel Ward were appointed secretaries of a provisional committee formed to make the preliminary arrangements for starting the Society. A prospectus was issued by this Committee to the members of the profession setting forth the objects of the new Society. This appeal met with unexpected support, and on October 20th, 1846, at the first meeting 106 members were enrolled. Dr. C. J. B. Williams was appointed the first President, and it was at his suggestion that a medallion of the head of Dr. Matthew Baillie was chosen as the seal of the Society with the motto "*Nec plus ultra*." This has been stamped on the covers of all the volumes of *Transactions* up to the present day. The first volume of *Transactions* was published in 1848, and the yearly volumes have been continued without a break.

THE EPIDEMIOLOGICAL SOCIETY OF LONDON

was instituted on July 30th, 1850, at a meeting held at the Hanover Square Rooms under the presidency of Lord Ashley, afterwards the Earl of Shaftesbury. The object of the Society was the investigation of past as well as of existing epidemics not only amongst the human race, but also amongst animals. In addition to the discussion of papers calculated to carry out this object, the Society has endeavoured to further extend its work by the appointment of committees to investigate the causes, etc., of the various epidemic diseases. From 1850-58 the *Transactions* of the Society were issued with the *Journal of Public Health and Sanitary Review*. Since the latter date the *Transactions* have been regularly published in a separate form.

THE LONDON MEDICAL SOCIETY OF OBSERVATION

was founded in 1820 by Drs. Walshe, Jenner, Parkes, Snow Beck, Hare, and Sieveking. Dr. Walshe was the leading spirit in starting the Society, and was elected its first President. The number of members was limited, and the meetings were held at the houses of the various members in rotation. By the founders of the Society its objects were thus stated: "To promote the advancement of accurate pathology and therapeutics, by clinical and allied investigations, the value of which shall be estimated by the numerical method; and to exhibit the special advantages which may accrue to the science of medicine by the co-operation of several persons working on a uniform plan towards the elucidation of given medical questions." These objects were to be pursued "by the collection of records of cases observed by the members, the particulars in every instance (whether observed at the bedside or after death) to be noted in writing at the moment of observation, fulness of detail to be constantly held in view as deeply important, but accuracy alone to be considered absolutely necessary. By the accumulation of observations of special phenomena of disease and the relations subsisting between them, with the view of ascertaining their regulating laws; it being understood that the subject and the plan of observation shall, in each instance, be sanctioned by the Society." To accomplish these ends a handbook was issued by the Society in 1863 under the title *What to Observe at the Bedside and after Death in Medical Cases*. This book was published under the direction of a Committee, but the general supervision was entrusted to Dr. Ballard. It was originally proposed to publish an analysis of the cases accumulated, but this was never done. Part of the material got together was used by some members of the Society, but the original papers were returned to the Secretary. All the manuscripts of the Society were left in the hands of the late Dr. Wilson Fox, who was the last Secretary.

THE NORTH LONDON MEDICAL SOCIETY

was founded in 1833 mainly through the exertions of Professor Sharpey, Mr. Richard Quain being the first President. The meetings were held at Bedford Schoolroom, Charrington Street, Oakley Square, and subsequently at 30, Albert Street, Camden Road. The Society had not a very prosperous career, and ceased to exist about 1851.

THE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH

was formed by the medical officers of health in the metropolis in 1856 for the purpose of mutual assistance and the advancement of sanitary science. At the time of the formation of the Society there were forty-seven medical officers of health in the metropolis, nearly all of whom became original members. Mr. (now Sir John) Simon was elected the first President, and committees were appointed to inquire into subjects relating to the public health. In 1873 the name was changed from "Association" to the "Society of Medical Officers of Health." The annual reports of the Society were published in separate form from 1858 to 1879; from 1879 to 1886 *Transactions* were issued; since 1886 no separate publication has been issued by the Society. The proceedings are reported in *Public Health*.

THE ODONTOLOGICAL SOCIETY OF LONDON

was formed in 1856 mainly for the purpose of carrying on the movement then on foot for obtaining from the College of Surgeons some recognised qualification for those who were practising this branch of surgery. A memorial on this subject was forwarded to the College in 1855, and in November, 1856, a meeting of those interested in the new Society was held at which the by-laws were agreed to, and Mr. Cartwright was appointed the first president. In 1861 the title was changed to the "Odontological Society of Great Britain." The Society has a library and museum, and has published *Transactions* regularly since 1856.

THE ARMY MEDICAL AND SURGICAL SOCIETY

was started in 1856, shortly after the termination of the Crimean war, Dr. (afterwards Sir J.) Gibson being the President, and Mr. (afterwards Sir J.) Mount the Secretary. The members consisted of medical officers in London, Woolwich, and Aldershot, and its meetings were held in Sackville Street, Piccadilly. The Society existed only a few months, coming to a sudden termination on the outbreak of the Indian Mutiny, which scattered its members, most of whom were ordered on service. The meetings were chiefly taken up by discussions of interesting cases which occurred during the campaign.

THE OBSTETRICAL SOCIETY OF LONDON.

The meeting for inaugurating this Society was held at the Freemasons' Tavern on December 6th, 1858, Dr. Rigby in the chair. The object of the meeting was stated to be the formation of a Society for the purpose of the advancement of the knowledge of obstetrics and the diseases of women and children. On the motion of Dr. Tyler Smith, seconded by Dr. Granville, it was agreed to start a Society on the lines laid down. In 1825 an attempt had been made by Dr. Granville

to start a similar Society. A meeting was held at his house, under the chairmanship of Sir Charles M. Clarke, for the discussion of the subject. To the majority of those present the scheme, as proposed by Dr. Granville, seemed too large, and only that part of it was adopted which dealt with the political or State part of the question. Dr. Granville claimed that this was not without result, as by the action of that Society obstetricians had been enabled to take a more honourable place amongst the medical practitioners of the three corporate bodies. The first meeting of the Obstetrical Society was held on January 5th, 1859, Dr. Rigby, the first President, being in the chair. The meetings have always been held in the house of the Royal Medical and Chirurgical Society, but in 1868 apartments were opened at 291, Regent Street, for the Society's library and museum; in 1882 the Society took rooms at 54, Berners Street. When the Royal Medical and Chirurgical Society moved to Hanover Square the Obstetrical went with them. The Society has a good library, the books from which are lent out to the Fellows for use at home; there is also a museum of casts, models, and instruments relating to the obstetric art.

The Beaumont Medical Society

was started in 1865, and held its meetings at the Beaumont Institution, Mile End. The Society came to an end in 1876 or 1877.

The Clinical Society of London.

The Clinical Society owes its origin mainly to the energy of Drs. Headlam Greenhow and Burdon Sanderson. Under the presidency of the former physician, a private meeting was held at 49, Queen Anne Street on October 29th, 1867, to take into consideration the desirability of forming a Society "for the cultivation and promotion of practical medicine and surgery by the collection of cases of interest, especially of such as bear upon undetermined questions in pathology and therapeutics." At this meeting a Provisional Committee was appointed to carry out this object, and a Subcommittee, consisting of Dr. Buchanan, Mr. Callender, Dr. Greenhow, Mr. Heath, Dr. Ringer, and Dr. Burdon Sanderson was nominated to prepare a draft set of rules for the Society. Invitations to join the Society were then sent round to the members of the staffs of all the recognised metropolitan hospitals and medical schools, and it was determined to hold a meeting on December 9th, 1867, of all who should have signified their intention of joining the new Society. At this meeting it was reported that 116 original members had joined the Society. Dr. Greenhow was voted to the chair, and the election of the first officers took place, with the result that Sir Thomas Watson was appointed the first President, and Dr. Burdon Sanderson and Mr. Callender the first Secretaries. The Society has regularly issued volumes of *Transactions* since 1868. In 1883 a Committee, under the chairmanship of Dr. Ord, was appointed to consider the subject of Myxœdema; this Committee reported to the Society in 1888, and their valuable report was issued as a Supplement to the twenty-first volume of the *Transactions*. In 1892, as a Supplement to the twenty-fifth volume, the Society issued, under the editorship of Dr. Dawson Williams, the report of a Committee appointed to Investigate the Periods of Incubation and Contagiousness of Certain Infectious Diseases.

The South London Medical Society.

The second Society under this title was formed in 1867. In November of that year a preliminary meeting was held at the Ophthalmic Hospital, Southwark, Mr. J. Z. Laurence in the chair. A committee was appointed to carry out the details of forming the Society, and on December 3rd the first meeting was held, Dr. Clapton being appointed President, and Messrs. R. C. Moon and J. H. C. Constable, Secretaries. The Society had a prosperous career for about five years; at the end of that period financial difficulties and the deaths of the Honorary Secretaries caused the meetings to be discontinued.

The Medical Microscopical Society

was founded in 1872 mainly through the exertions of Mr. J. W. Groves. The preliminary meetings were held at St. Bartholomew's Hospital under the chairmanship of Mr. Morrant Baker. The Society started with thirty-nine original members and Mr. Jabez Hogg occupied the presidential chair for the first two sessions. The objects of the Society were stated to be the "discussion of questions of normal and pathological histology, medico-legal and medico-chemical microscopy, and mechanical and optical arrangements requisite for the proper examination and preparation of microscopic specimens." The meetings were held in the Board room of the Royal Westminster Ophthalmic Hospital. The Society lasted for about eight years; the cause of its breaking up was chiefly that the subscription, half a guinea, was too small to meet the expenses and assist the members in research.

The Ophthalmological Society of the United Kingdom.

This Society was formed in 1880. In response to an invitation issued to those interested in ophthalmology, a meeting was held at the rooms of the Medical Society of London on June 23rd, 1880, under the chairmanship of Mr. (afterwards Sir William) Bowman. The Chairman having delivered an address, the business of forming the Society was proceeded with, and on the motion of Mr. Critchett, seconded by Dr. Hughlings Jackson, it was unanimously agreed "That an Ophthalmological Society of the United Kingdom be formed." Mr. Bowman was elected the first President, and Dr. Stephen Mackenzie and Mr. Nettleship were the first Secretaries. Before this meeting, fifty gentlemen had agreed to join the Society when formed, and at the meeting thirteen others were enrolled as original members. The Society has issued *Transactions* regularly from 1880. It has a library of books bearing on the subject to which the Society is devoted.

The West London Medico-Chirurgical Society

was founded in 1882 at a meeting held in the Board Room of the West London Hospital, under the presidency of Dr. Goddard Rogers. The first meeting of the Society was held on October 6th, 1882, Dr. E. Hart Vinen, the President, in the chair. An annual lecture is given before the Society by some eminent man of science. This is called the Cavendish Lecture, after Henry Cavendish, who lived for some time near the spot where the Society meets. The first of these lectures was given by Mr. Timothy Holmes in 1884. The Society has issued five volumes of *Proceedings*.

The Dermatological Society of London

was founded in 1882 for the exhibition of cases only. The number of members was limited to thirty, but in May, 1895, it was decided to withdraw the limit.

The British Gynæcological Society.

The preliminary meeting for discussing the desirability of forming a Society to promote and encourage the science of gynæcology was held at the rooms of the Medical Society on December 27th, 1884, under the chairmanship of Dr. Routh. A resolution as to the desirability of founding such a Society was moved by Dr. Robert Barnes, seconded by Dr. Heywood Smith, and carried unanimously. The election of officers was then proceeded with, Dr. Alfred Meadows being elected the first President. The new Society received considerable support from all parts of the country, so that the secretaries were able to report that the number of foundation Fellows amounted to 266. The first meeting was held on March 11th, 1885, in Chandos Street; here the Society continued to meet until the Royal Medical and Chirurgical moved to Hanover Square, when rooms were secured there by the British Gynæcological Society. The Society has a small library, the nucleus of which was the collection of books belonging to Dr. Alfred Meadows, which came into the possession of the Society at that gentleman's death. The *British Gynæcological Journal* has been published regularly by the Society since 1885.

The Neurological Society of London.

This Society originated at a meeting held on November 14th, 1885, when, on the proposition of Dr. Broadbent, seconded by Dr. Hughlings Jackson, the desirability of forming such a Society was agreed upon. A Committee was appointed to draw up rules and to nominate a Council and officers. The report of this Committee was agreed to at a meeting held on January 14th, 1886. The first ordinary meeting was held at the National Hospital, Queen Square, on March 24th, when Dr. Hughlings Jackson, the first President, delivered an

inaugural address on the Scope and Aims of Neurology, and the manner in which a Society like the Neurological might be utilised for the advancement of science. The reports of the proceedings of the meetings are published in *Brain*.

THE BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION was started in 1888 with Sir Morell Mackenzie as first President. The reports of its proceedings are published in the *Journal of Laryngology*; a separate volume of *Transactions* was issued for the year 1891.

THE LARYNGOLOGICAL SOCIETY OF LONDON. The meeting held to discuss the desirability of forming a Society with the above title was held on February 13th, 1893, with Sir George Johnson in the chair. At this meeting it was unanimously agreed that such a Society should be established, and a list of original members was drawn up. In March of the same year the first general meeting was held for the purpose of electing officers and drawing up rules. Sir George Johnson was elected the first President, and the Society began its ordinary business on April 12th. The *Proceedings* are issued in a separate form, and are published soon after each meeting.

THE SOCIETY OF MEDICAL PHONOGRAPHERS chiefly owes its existence to the energy of Dr. Gowers. In July, 1894, an appeal was made by Dr. Gowers, Dr. Gray, of Oxford, and Dr. James Neil, of the Warneford Asylum, for the organisation of practitioners and students of medicine who were in the habit of using shorthand. In reply to this appeal 152 names were received; of these 112 were resident in the United Kingdom, 34 in America, 2 in India, and 4 in South Africa. On this basis the Society was started; it has a journal of its own printed in shorthand, with the title of the *Phonographic Record of Clinical Teaching and Medical Science*. For the use of medical students it has also issued a pamphlet in shorthand entitled "The Use of Shorthand by the Student, with examples." Although this Society is not strictly a London one it is included here on account of its unique position, this being the first attempt of any one of the learned professions to cultivate shorthand for professional purposes.

THE NORTH-WEST LONDON CLINICAL SOCIETY was started at the end of 1894. The meetings, which are held at the North-West London Hospital, are entirely clinical, no set papers being read. Sir Richard Quain is the first President of the Society.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND was formed in 1894. At the preliminary meeting held on April 13th Dr. Pye-Smith was elected President. A congress to inaugurate the new Society was held at the rooms of the Royal Medical and Chirurgical Society on May 30th, when the President delivered his inaugural address.

THE GRACE TESTIMONIAL.

THE appeal of the *Daily Telegraph* for subscriptions towards the proposed "Shilling Testimonial" to Dr. W. G. Grace is being so liberally responded to by all sorts and conditions of men that the Champion will receive a very solid and substantial proof of the admiration with which his countrymen regard his prowess in the cricket field. In this truly national testimonial it is peculiarly fitting that the members of the medical profession, to which Dr. Grace belongs, should take part. As doctors we feel an interest in the great cricketer as a splendid example of what exercise and training, under the guidance of a knowledge of the laws of health, can do for the development and preservation of physical vigour; and as Englishmen we are not less proud of him as a representative of all that is best and most wholesome in manly sports. We venture to remind our readers that the subscription list is still open. Letters enclosing contributions to the Fund should have "Grace Testimonial" marked on the envelope.

The following subscriptions have already been received:

	£ s. d.
Subscriptions already acknowledged	501
Mr. C. R. Salisbury (Stanningley)	5
F. C. P.	1
Dr. J. H. Stallard (Ashford) ...	10
D. L. (Kilmarnock)	5
Dr. J. Farquhar (Marlborough)	2
Fleet Surgeon A. Corrie (Portsmouth)	5
Dr. E. Bucknill (Manchester) ...	1
Mr. P. J. Reading Bucknill (Manchester)	1
Dr. E. B. Ffrench (Kimberley, Nottingham)	1
Mr. A. A. Lipscomb (Borough Green)	1
W. S. B.	1
Mr. H. J. Lloyd (Barmouth) ...	1
M. M. Bowlan, M.B. (London) ...	1
For the Secretary of the Medical College for Women, Edinburgh:	
M. A. Hendson	1
E. Cumming	1
D. Gillilan	1
Mr. W. Wallis (Groombridge) ...	5
Dr. Ralston (Ipswich)	1
Surgeon-Major J. E. Ferguson (Dumbarton) ...	1
Dr. John Orrell (Chesterfield) ...	1
Per Dr. C. H. Taylor (Derbyshire Royal Infirmary):	
Dr. Mence	5
Mr. Carter	1
Dr. Marshall	2
Dr. Vendrey	2
Mr. C. Green	2
Mr. J. Southern	1
Dr. H. Pechell	2
Dr. C. H. Taylor	2
Mr. C. H. Hough	2
Dr. Harkness	2
Mr. Rowan	5
Dr. Wilson	2
Mr. J. Moss	2
Mr. W. J. Reid	1
Mr. J. Lister Wright ...	2
Dr. Lundy	1
Dr. Bryson	5

EPSOM COLLEGE.

THE foundation stone of the new buildings of the Lower School of Epsom College was laid by the Prince of Wales on Monday afternoon, July 8th. The Prince was accompanied by the Princess of Wales, and by Princess Victoria of Wales. The Royal party drove from Epsom, where suitable preparations were made to welcome them, to the College on Epsom Downs. They were received by the Duke of Abercorn, President of the College; Sir Joseph Fayrer, Chairman of the Council; Dr. Holman, Treasurer; and other members of the Council of the College. The entrance of their Royal Highnesses into the marquee erected for the occasion was warmly applauded by a large and distinguished assembly which had gathered at the invitation of the Council of the College to receive them. Among those present were Sir J. Russell Reynolds, Bart., (President of the Royal College of Physicians), Sir Spencer Wells, Bart., Sir William Broadbent, Bart., Sir John Williams, Bart., Sir William Priestley, Mr. Christopher Heath (President of the Royal College of Surgeons), Dr. W. M. Ord, Dr. Douglas Powell, Mr. Ernest Hart, Mr. Arthur Cooper, Mr. Reginald Harrison, Mr. Malcolm Morris, and in addition a large number of ladies, whose summer toilettes made the scene within the marquee exceedingly bright.

THE HEAD MASTER (the Rev. W. Hart-Smith) was presented to the Prince of Wales by Sir Joseph Fayrer, and read an address in which reference was made to the foundation of the College through the efforts of the late Mr. John Propert, and it was pointed out how the objects of the founder—to provide help for the less fortunate members of the medical profession by affording a first-rate education for their children at moderate expense, and pensions in old age to those who had fallen by the way—had been fulfilled to a degree which could hardly have been hoped. The success of the school, which was shown by the number of its scholars who had won scholarships at the universities and the London hospitals, had been so considerable, that the numbers now overtaxed the accommodation of the present buildings. The occasion of their assembling arose out of this growth of the school, for the Council, encouraged by their past experience, had resolved to extend the school buildings by the erection of a separate building for 100 of the younger boys, a plan in accordance with modern principles. The address recalled the fact that forty years ago the Prince of Wales had accompanied his father when the late Prince Consort had opened the first buildings of Epsom College, and expressed the peculiar pleasure with which the presence of the Princess of Wales was welcomed by all interested in the work of Epsom College.

THE PRINCE OF WALES, in reply, said that it gave much pleasure to him and to the Princess to be present to take part in so interesting a ceremony. The College was in a flourishing condition, and he trusted that it might long continue to flourish. He had always taken an interest in Epsom College, and was glad to lay the foundation stone of the

Lower School, which would increase the College, and would increase also, he hoped, its usefulness.

The ARCHDEACON OF MIDDLESEX (the Ven. R. Thornton, first head master of Epsom College) having offered prayer, Mr. LUMSDEN PROPERT, a son of the founder, handed to the Prince a series of coins of the day and a copy of the *Times* and an illuminated scroll, which the Prince deposited in a hollow in the foundation stone, and then laid the stone, with the assistance of Sir Arthur Blomfield, the architect.

The "Old Hundredth" was then sung by the boys, after which the ARCHDEACON OF SURREY (the Ven. J. H. Sapte) gave the benediction, and the formal part of the ceremony ended, but the Prince and Princess of Wales and the Princess Victoria subsequently walked across the lawn, and were conducted by members of the Council to the library and other parts of the College buildings before returning to London.

The guard of honour at the entrance on arrival was furnished by the College Cadet Corps.

The new Lower School will contain six dormitories for 100 boys, five class rooms, a dining hall, box rooms for boys changing for play, sick rooms, kitchen and offices, full servants' accommodation, wardrobe, matron's and serving rooms, as well as a masters' house with accommodation for five unmarried masters. The total cost of these buildings—which are to be constructed of red brick with Bath stone quoins and dressings—is estimated to be £12,320. An addition is also to be made to the chapel, which will cost about £2,500. For these purposes further donations are required, and will be acknowledged by Mr. J. Bernard Lamb, Secretary of the College, 37, Soho Square, W.

THE MEETING OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

After the declaration of the poll on July 4th at the Royal College of Surgeons the half-yearly meeting of the Fellows took place in the Theatre of the College. Mr. CHRISTOPHER HEATH, President, who occupied the chair, referred to the loss which the College had sustained during the past year in the death of the late President, Mr. John Whitaker Hulke, Sir William Savory, Mr. Durham, and Professor Huxley. Mr. Heath then reported that the following alterations in the by-laws had been approved by the Home Secretary, namely: (1) An alteration in Subsections 5 and 6 of Section IV, providing that voting papers for the election of members of the Council shall be sent to the Fellows without the necessity of application, and that they shall be received up to the time appointed for the commencement of the election. (2) An alteration of Section XVI, giving the Council increased powers to deal with cases of misconduct by Fellows and Members of the College. (3) An alteration of Subsection 8 of Section XXV, providing for the increase of the fee for the Licence in Dental Surgery from ten to twenty guineas. Mr. Heath further stated, with reference to the alteration of Section XVI, that certain Members of the College had written to the Secretary of State objecting to the alteration of that Section in the form originally adopted by the Council and approved by the meeting of Fellows on July 5th, 1894, and by the meeting of Fellows and Members on November 1st, 1894, and urging that, in view of the harsh nature of Section XVII, no alteration in the by-laws should be sanctioned which did not include either its amendment or entire abrogation: that the Secretary of State had given the Council the opportunity of replying to the objections raised, and having considered the representations made to him by both sides had suggested that a single paragraph in terms similar to those of the Medical Act of 1858 should be substituted for the proposed paragraphs 1, 2, and 3: that after consultation with their legal advisers the Council had adopted the suggestion of the Secretary of State, and had ordained the by-law in the following form:

SECTION XVI. *Misconduct of Fellows and Members.*

1. If any Fellow or Member of the College shall, after due inquiry, be judged by the Council to have been guilty of disgraceful conduct in any professional respect, he shall be liable to removal by resolution of the Council from being a Fellow and Member or Member of the College.

2. Should any Fellow or Member of the College be convicted of any criminal offence, or have his name removed from the *Medical Register* by the General Medical Council under section XXIV of the Medical Act of 1858, the Council of the College may, if they should consider the offence of which he shall have been so convicted, or for which his name shall have been so removed, to be of such a nature as to render him unfit to remain a Fellow and Member or a Member of the College, remove such Fellow or Member by resolution to that effect from being a Fellow and Member or a Member of the College.

3. Any Fellow or Member who shall have been removed by resolution of the Council as aforesaid shall thereby forfeit all his rights and privileges as a Fellow and Member or a Member of the College; and his diplomas or diploma shall thereupon be void and shall become the property of the College, and be delivered up by such Fellow or Member to the College on demand, provided that if at any subsequent time the Council of the College, by resolution and subject to such conditions as they may think proper, rescind any resolution which may have been passed under any of the preceding by-laws for removing any person from being a Fellow and Member or Member of the College, such rescinding of the former resolution shall have the effect of restoring such person to the Fellowship or Membership of the College, and such person shall, notwithstanding such removal or forfeiture as aforesaid, but subject to such conditions as the Council may in the particular case see fit to impose, be restored to his rights and privileges as a Fellow and Member or a Member of the College.

It was also announced that in reference to the resolution adopted at the last meeting of Fellows requesting the Council to appoint a conjoint committee of members of the Council and other Fellows of the College to consider the desirability of obtaining a new charter, the Council had passed the following resolutions:

1. That in accordance with the opinion of the legal advisers of the College the Council do not deem it expedient to accede to the resolution passed at the meeting of Fellows held on January 3rd.

2. That a Committee of the Council be appointed to receive deputations from the Fellows of the College upon the subject of the resolution of the meeting of Fellows on January 3rd last, and to report thereon to the Council.

3. That copies of the foregoing resolutions be forwarded to the mover and seconder of the resolution of the meeting of Fellows.

Mr. HEATH said that on June 10th last the Committee of the Council received a deputation from the Association of Fellows by whom certain suggestions and recommendations were made in respect to the by-laws and charters. After a long discussion the deputation were asked to express their views in writing, and this request had been complied with. The Committee of the Council would hold a meeting on the following day in order to take these recommendations into consideration and then draw up their report with a view to laying it before the Council at an early meeting.

There was no other business upon the agenda, and accordingly Mr. Heath declared the meeting closed.

LITERARY NOTES.

THE *Handbuch der speciellen Therapie innerer Krankheiten*, edited by Professors Penzoldt, of Erlangen, and Stintzing, of Jena, and published by Fischer, of Jena, has now reached the twentieth fasciculus. The excellence of the articles contributed by the distinguished authorities whose co-operation the editors have been fortunate enough to secure is fully maintained.

The following letter shows that in the reign of Bluff King Hal doctors sometimes found it difficult to recover their fees. It is preserved in the Record Office among the uncalendared papers (30 Hen., viii U. 198):

My singular good Lorde.—After my most bounden duetye to your Lordshypp, this shalbe to advertyze the same, that wheras of late the Byshoppe of Rochestre at what tyme he was sycke, requyred me to loke to hyme and to gyve attendawnce on hyme bothe nyght and daye, promysynge to recompense my labour and payne, and wher after he was departede, all hys goodys war taken upp by Mr. Gostwycke and converted to the Kyngs Coferys, so that for xii dayes labour, and iiij nights watchyng, as yet I have recoveryd nothyngo, in so moteh, that except your lordshype be good to me, I shall bothe lose my labour, my [illegible] and also my physycke, and truely if physycyens should take no wayge for them that they kyll, as well as for them that they save theyr beyng sumtle be very thyne and bare, therfor I beseche your good Lordshyppe as to send to Mr. Gostwycke that I may have some recompense and reward for my payne. And I beseche your lordshyppe it may be so moteh the more liberall, becawse it shalbe the last payment, for of them that escape we may take the lease, becawse we hope they shall come agayne into our handys. I beseche your good lordeshypp, as I have in many other thynge ever fownde yor Lordshype good to me, so also in this my poor request, lett me not be destitute of your wonte favor and goodnes towarde me, as I shal daly pray for the preservation of your honorable estate, the whyche I pray God longe to maintayne and kepe in all honor and felicitie.

from London the xvith of August

Yor Lordshypp hys most humble servaunt

JON'E FRYR physytyen.

To my ryght honorable and my singular good Lord, my Lorde Privy Seale.

One cannot help hoping that the worthy "physytyen" succeeded in making the "Kings Coferys" disgorge enough to satisfy his just demand.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

NOTICE OF LAST QUARTERLY MEETING FOR 1895. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held on Thursday, July 25th, at 2 P.M., at the Royal Hotel, South Shields. Dr. Crisp, President-elect, will deliver the annual address; and two officers of the Branch will be elected. The dinner after the meeting will take place at the Royal Hotel, at 6 P.M., 6s. 6d. each, wine not included. —C. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 8, Eldon Square, Newcastle-on-Tyne.

NORTH OF IRELAND BRANCH.—The annual meeting of this Branch will be held in the Royal Hospital, Belfast, on Thursday, July 18th, at 11.30 A.M. Lunch will be provided in the Grand Central Hotel, at 2 P.M. Tickets, price 2s. 6d., may be obtained from the Honorary Secretary, JOHN [illegible], M.D., F.R.C.S.Eng., Belfast.

DORSET AND WEST HANTS BRANCH.—The next meeting will be held at Bridport on July 17th. The business meeting will be held at the Town Hall at 3 P.M. Agenda:—Election of new members of the Branch. Place of the autumn meeting. Receive report from the Committee on the Abuse of Medical Charities. Dr. MacDonald to move the following alteration in By-law VIII.: "The Council of the Branch shall consist of the President, the two Vice-Presidents, the two Honorary Treasurers and Secretaries, and nine elected members, three of whom shall retire in rotation at the annual meeting, and shall not be eligible for re-election for twelve months." In the event of this resolution being carried, Dr. [illegible] to move: "That nine members of council be elected in May, 1896, and that those retiring in 1897 and 1898 shall do so in alphabetical order." Communication from three members of the Association relating to proposed extension of the Association's work. Discussion: (To be opened by Mr. T. W. Blake, Vice-President), Is Cancer a Waterborne Disease? with special reference to its Occurrence in Chalk Valleys and Districts containing Pyrotechnical Springs and Rivulets. Communications:—Dr. [illegible] Apparatus required from Two Cases of Abdominal Section. Dr. Foster: Description of a new Ether Inhaler. Mr. Ewens: Enucleation of Tuberculous Glands. Dr. Clibborn and Mr. Hay will be pleased to see members and friends at their residences to luncheon before the meeting. Dinner at the Bell Hotel, at 5 P.M., charge 6s. each, without wine. Members intending to be present are requested to notify their intention to Mr. Hay, by Monday, July 15th.—WILLIAM VAWDREY LUNN, M.D., Weymouth, and C. H. WATTS FARRINGTON, Wimborne, Honorary Secretaries.

EDINBURGH, GLASGOW AND WEST OF SCOTLAND, PERTHSHIRE, AND STIRLING, KINROSS, AND CLACKMANNAN BRANCHES.

A combined meeting of these Branches was held in Stirling on July 2nd.

Excursion and Luncheon.—Sixty members assembled at Stirling Station at 10.45 A.M., where brakes were in readiness, and by the kind invitation of Sir James Maitland, Bart., of Sauchieburn, members visited the Howietoun Fishery, and in the unavoidable absence of Sir James Maitland were conducted by the foreman, Mr. Thomson, over the hatching houses and extensive ponds of this extensive fishery. Much interest was taken in the processes explained by Mr. Thomson, and members were unanimous in expressing their enjoyment of this most interesting excursion. From the Fishery the members drove to Sauchieburn House to enjoy the hospitality of Sir James Maitland, who most generously invited the whole party to luncheon; in his absence Miss Maitland received the members, and afterwards presided at luncheon. Dr. J. C MCVAIL, President of the Stirling Branch, proposed a most hearty vote of thanks to Sir James Maitland both for the opportunity of visiting the Fishery and for his kindness in entertaining the Branches. Dr. McVail also proposed "The Health of Miss Maitland," and expressed the appreciation of all the members for her gracious reception. The toast was cordially honoured, and Miss MAITLAND replied in an excellent speech.

The Meeting.—Members drove back to the Smith Institute, Stirling (the use of which had been kindly granted by the trustees) to meet those already assembled for the meeting at 3 P.M. Dr. McVail presided, supported by Dr. Renton, President of the Glasgow Branch and Dr. Philip, Secretary of the Edinburgh Branch.

Communications.—Owing to Professor GAIRDNER being prevented from attending at the last moment Dr. C. O. HAWTHORNE showed on his behalf: 1. A case of Pernicious Anæmia in a man showing marked improvement under treatment with raw bone marrow. 2. A man with a loud V. S. Murmur in the Second Left Intercostal Space simulating pulmonic obstruction, but without other evidence of disease of the right heart and with considerable hypertrophy of the left ventricle. 3. Two patients—members of the same family—illustrating the effects of Inherited Syphilis, the elder one with Hutchinson's teeth and slight opacity of one cornea, the younger with Hutchinson's teeth, interstitial keratitis, periosteal thickening over clavicle and ulna, and with enlargement of the spleen. 4. A tracing of Cheyne-Stokes Respiration from a case of Cerebral Softening. 5. Photographs of patients illustrating (*a*) Hutchinson's teeth, (*b*) progressive muscular atrophy in a youth aged 17, (*c*) deformity of hands with muscular atrophy in chronic rheumatoid arthritis, (*d*) solid œdema in lower limbs of a young woman resulting from repeated attacks of erysipelas.—Dr. J. CRAWFORD RENTON (Glasgow) showed two cases of Abdominal Section: (1) A case of gastro-enterostomy for dilated stomach done three years ago with excellent result. (2) A case of exploratory incision for tumour done twenty months ago, followed by disappearance of tumour. The patient was examined by members present, and no trace of tumour could be discovered.—Dr. LEWIS (Stirling) showed a case of Microcephaly. The child was born eighteen months ago with a swelling in the occipital region, chiefly on the left side of the mesial line. Early closure of the fontanelles followed, and the child was now deficient in intelligence, and quite blind in both eyes; but in other respects it was well developed, and its hearing, smell, and taste were normal. Ophthalmoscopic examination disclosed no abnormality of the fundus.—Dr. MACLEOD (Kilmarnock) showed a case of Fracture of both Femora treated without Splints in which an excellent result had been obtained.—Dr. FINLAYSON (Glasgow) showed Microphotographs from a case studied by a former assistant of his, Dr. H. E. Jones. The man had been in Egypt during the Soudan war, and he applied as an out-patient at the Glasgow Western Infirmary. The case was recognised as hæmaturia due to bilharzia hæmatobia. By using some pure water the eggs were hatched by Dr. Jones, and the photographs showed the embryo in the act of leaving the shell, the empty shells and free embryos as well as the ova. No embryos were ever found in the urine itself, although some authorities have described them as seen swimming about in the urine.—Dr. FINLAYSON said that medical Egyptologists recognised this endemic hæmaturia of Egypt as having been described in the Ebers Papyrus (16); its date was about 1550 B.C. He showed a translation of the passage as rendered into hieroglyphics and phonetics, kindly sent him by Baron Dr. Oefele, of Nuremberg, who was preparing for publication a fresh translation of the Ebers Papyrus.

Surgical Treatment of Empyema.—Mr. HENRY E. CLARK (Glasgow) read a paper on the surgical treatment of empyema. Effective drainage could be best obtained by resecting an inch and a-half of the ninth rib below the angle of the scapula. The operation was not a severe one, occupying not more than

three to five minutes. It gave dependent drainage both when the patient was sitting and lying, and it secured an opening as near to the floor of the thorax as was possible without the risk of blockage by the rise of the diaphragm. Having treated more than 40 cases in this way, he had every reason to be satisfied with the results obtained. He reprobated the extensive rib resections which had been recommended and practised by Continental surgeons, and showed a patient who had been operated on nearly three years ago by his method in order to demonstrate the amount of recovery which had taken place in the lung. Although at the time of the operation the dulness extended to the level of the third rib and more than 50 ounces of pus were evacuated, the only part of the lung demonstrable as collapsed after this interval was a small part of the lower lobe. He contended that if more extensive resection had been practised this expansion of the lung could not have taken place; such expansion was, however, more likely to take place in children than in adults, and there were undoubtedly cases where in the latter no expansion was possible, and more extensive resection was imperatively necessary. In one such case at present under his care he had performed Estlander's operation, resecting more than 2 inches of seven ribs (from the fourth to the eleventh), and had obtained a successful result.

Treatment of Syphilis.—Brigade-Surgeon Alexander (Portobello) had made a prolonged study of the treatment at Aix-la-Chapelle, which was yearly crowded by people of every nationality. He attributed the success there obtained to the fearless use of mercurial ointment, the daily use of the hot bath, the thoroughness with which the inunction was carried out, good dietary, and the absence of spirituous liquors. He did not attach much advantage to the drinking of the special waters of Aix-la-Chapelle, and considered that other things being equal the treatment could be carried out with good results anywhere. For five years he had carried out this treatment as a routine method in the hospital under his supervision with the best results summer and winter, and there appeared to be no reason why many favourably situated resorts should not be utilised for carrying out the treatment thoroughly and successfully for at least nine months out of the year.

Local Results of Vaccination and Variolation.—Dr. J. C. McVail (Stirling) showed a number of plates contrasting the local results of vaccination and variolation. The plates were from Jenner's *Inquiry*, and from early works published by Aikin and Pearson in this country, and by the Medical Society of Paris, all about the beginning of the century. In addition, Dr. McVail showed a very beautiful series of unpublished drawings dated 1802, the property of Dr. G. W. Collins, of Wanstead, by whose permission they were exhibited. The drawings illustrate day by day from the second day to the sixteenth the differences between the appearance of the vaccine and variolous vesicles. Dr. McVail's purpose was to indicate that the medical profession in the early days of vaccination was well acquainted with, and had ample means of being acquainted with, the distinctions between inoculated cow-pox and inoculated small-pox; and that, as a matter of fact, the plates of vaccination published between 1798 and 1802 showed vesicles indistinguishable from those of vaccination as known in the present day.

Exhibition of Instruments.—The Medical Supply Association displayed a collection of instruments in the institute during the meeting.

Visits, etc.—At the close of the meeting a section of the members, under the guidance of Dr. Haldane, drove to the Bridge of Allan Mineral Wells, where they were met by Dr. Paterson, and were entertained at tea by the Mineral Wells Company. A visit was then paid to Dr. Paterson's house, where the visitors were much interested in his unique collection of curios, and the party returned to the Station Hotel, Stirling. The remainder of the meeting had an opportunity of examining the picture gallery and museum of the Institute whilst afternoon tea was being served. Then they drove to Stirling Castle and other antiquities of the town, the beauties of which were pointed out, and the history related by Ex-Provost Yellowlees, of Stirling, who kindly acted as guide to this party.

Dinner.—All the members met again in the Station Hotel at 6 P.M. for dinner. Dr. J. C. McVail presided, and Drs Strachan and Haldane were croupiers. There were present Dr. Argyll Robertson, Vice-President of the Edinburgh Branch, and Dr. J. Crawford Renton, President of the Glasgow Branch, Dr. Urquhart, Honorary Secretary of the Perth Branch, Dr. Philip, Honorary Secretary of the Edinburgh Branch, Drs. Parry and Nicoll, Honorary Secretaries of the Glasgow Branch, Ex-Provost Yellowlees and Provost Kinross, Professor Struthers, Dr. George Buchanan, Dr. Bruce Goff, Dr. T. D. Savill, Dr. Finlayson, etc. After dinner apologies for absence were announced from Sir James Maitland, Bart., Professor Annandale, President of the Edinburgh Branch, Sir Thomas Grainger Stewart, Dr. G. W. Balfour, Professor Chiene, Professor McCall Anderson, Professor Gairdner, Professor McKendrick, Dr. G. A. Gibson, Dr. Byrom Bramwell, Dr. Walker Downie, etc. The following is the toast list: "Her Gracious Majesty the Queen and the Royal Family," by the Chairman; "The British Medical Association," proposed by Dr. Argyll Robertson, and responded to by Dr. Bruce Goff; "The Associated Branches," proposed by the Chairman, and responded to by Dr. Crawford Renton and Dr. R. W. Philip; "The Guests" proposed by Dr. Haldane, and responded to by Ex-Provost Yellowlees; "Sir James Maitland, Bart., the Trustees of the Smith Institute, and the Directors of the Bridge of Allan Mineral Wells Company," proposed by Professor Struthers, and responded to by Provost Kinross, Trustee of the Smith Institute. The "Health of the Honorary Secretary" was proposed by Dr. Spence, and that of "The Chairman" by Dr. George Buchanan.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

The twenty-fifth annual meeting of this Branch was held at the Swansea Hospital on June 28th.

Installation of New President.—Dr. Mulligan, the retiring President, having resigned the chair to Mr. J. Griffith Lock (Tenby), the President-elect, a unanimous vote of thanks was passed to Dr. Mulligan for his services during the year.

Confirmation of Minutes.—The minutes of previous meeting read and confirmed.

New Member.—Dr. Blagdon Richards, of Swansea, was elected a member of the Branch.

Report of Council.—The report stated that the number of members was 241, as compared with 228 last year and 223 the year before. Hitherto only two meetings had been held in the year in addition to the annual meeting. During the past year a new departure was taken by resolving to have two additional meetings—one at Cardiff, the other at Swansea—to be held as late in the afternoon as possible, devoted entirely to reading of papers and showing of cases, and not to be followed by the usual dinner. The first of these meetings was held at the Cardiff Infirmary on April 30th, at 3.30 P.M., and was an undoubted success, upwards of forty members attending. Some interesting cases were shown and valuable papers read. The usual autumn and spring meetings were held—the one at Pontypool, and the other at Aberdare; both were well attended. During the year numerous interesting papers had been read and cases and specimens shown. The following matters had also been discussed: The proposed amendment of the penal clauses of the Medical Acts. Proposal to alter rules so that retiring members of Council shall not be eligible for re-election. The subject of midwives registration. The desirability of the British Medical Association taking power to proceed against unqualified practitioners. The abuse of medical charities. The Medical Acts Amendment Bill. The statement of accounts showed a balance to the credit of the Branch of £78 6s. 10d. It was announced that the autumn meeting would be held at Bridgend and the spring meeting next year at Tenby. The next business meeting would be held at Swansea in September. The report went on as follows: "On this, our twenty-fifth anniversary, it seems not inappropriate that we should give a short history of our past life. The resuscitation of the South Wales and Monmouthshire Branch was due to the energy of Dr. Andrew Davies (late of Swansea), whom we are pleased to still have with us. Our first annual meeting was held here at the Swansea Hospital in June, 1871, Mr. Padley being our first President and Dr. A. Davies and Dr. Sheen Honorary Secretaries. Prior to this time, however, there was a South Wales and Monmouthshire Branch, for in 1852 a

Branch was formally constituted, with the late Mr. W. H. Michael, then partner of Mr. Ivor Davies, of Swansea (who is present here to-day), and afterwards a distinguished member of the Bar, as Honorary Secretary. The parent Association met at Swansea in 1863. In 1855 the Branch held its meeting at Abergavenny, with Glencis J. Steel as President, and in 1856 in Cardiff, with the late Dr. C. R. Vachell as President. Mr. Michael then left Swansea, and the Branch soon became defunct. Our membership in 1871 was 167, whereas we now number nearly 250. Dr. Andrew Davies and Dr. Sheen worked together as Honorary Secretaries till 1879, when Dr. Davies resigned owing to his having given up the active duties of his profession, and Mr. J. H. Wathen joined Dr. Sheen as joint Honorary Secretaries, but resigned on his removal to Clifton in 1881, when Dr. Arthur Davies was appointed in his place. Since that time we have gone on prospering, and now, as a Branch, occupy one of the highest positions, being sixth or seventh in the list as regards the number of members."

Election of Officers.—The following were elected for the ensuing year: *President-elect*, Dr. Redwood, Rhymney; *Members of Council*, H. A. Latimer, T. J. Webster, J. G. Hall, J. A. Rawlings, and E. P. Evans; *Honorary Secretaries*, A. Sheen and D. A. Davies; *Representatives on Council*, Dr. Sheen and Mr. Evan Jones; *Parliamentary Bills Committee*, Mr. Evan Jones.

Abuse of Medical Charities.—Dr. SHEEN read a report regarding Swansea Hospital.—Mr. HORDER read an independent report regarding Cardiff Infirmary, pointing out that, in his opinion, there was much abuse of the out-patient department of this institution, and in this particular disagreeing with Dr. Sheen, who considered there was not much ground for complaint. There was no report regarding Newport Infirmary. There was a good deal of discussion, and ultimately the following resolutions were passed:

1. This meeting receives with thanks the reports of the Subcommittee, but thinks that the information is not full enough to enable it to form an opinion on the matter. It therefore refers the matter back for further consideration and report.

2. That in all inquiries made into the abuse of out-patient departments in hospitals, definite inquiries should be made of patients as to their incomes, families, and charges on those incomes, and that no return can be considered satisfactory which is made without these inquiries.

Mr. C. Griffiths was appointed on the Subcommittee in place of Dr. Sheen, who declined to act further, and Dr. Latimer in place of Mr. Hopkins.

Proposed Alteration of Rules.—Mr. Collins's resolution *re* alteration of rules was deferred to the November meeting at Bridgend.

The British Medical Association and the Protection of Medical Interests.—On the motion of Mr. HORDER the following resolutions were passed:

That this meeting is of opinion that the Council of the Association should without delay take into consideration the best way of applying a portion of the surplus funds of the Association in proceeding against unqualified practitioners and other persons who are in the habit of practising medicine and surgery without legal qualifications.

That a copy of this resolution be sent to the General Secretary, to be placed on the agenda at the annual meeting in London.

SOUTHERN BRANCH.

THE annual meeting of this Branch was held at Salisbury on June 27th, forty-nine members being present. Professor CAYLEY (Royal Victoria Hotel, Netley) was in the chair.

Election of Officers.—The following officers were elected for the ensuing year: *President:* Mr. Harcourt Coates, Salisbury. *President-elect:* Dr. Watson, Southsea. *Vice-Presidents:* Professor J. Lane Notter, Netley; Dr. Axford, Southsea. *Members of Council:* Messrs. Knott, Wade, Darke, Sinclair Coghill, Brook, Harman. *Representative on Parliamentary Bills Committee:* Mr. Langdon, Winchester. *Representatives on Council of Association:* Dr. Trend, Southampton; Mr. H. J. Manning, Laverstock. *Honorary Secretary and Treasurer of the Branch:* Mr. H. J. Manning, Laverstock.

Communications: Interesting papers and specimens were submitted by Messrs. FULLER, LANGDON, BROWNE, LEE, and LUCKHAM.

Installation of New President: Professor CAYLEY resigned the chair to Mr. HARCOURT COATES, who delivered the address, for which a vote of thanks was proposed in cordial terms by Mr. CHRISTOPHER HEATH (President Royal College of Surgeons), who was present as a visitor, and carried by acclamation.

Registration of Midwives.—Mr. LANGDON reported to the meeting that a subcommittee of the Parliamentary Bills Committee had drafted a Bill for the registration of midwifery nurses, and desired the opinion of the Southern Branch thereon. It was resolved to refer the Bill to each of the districts for consideration, and Mr. Langdon undertook to forward a copy to each district.

Visit to Langford Castle.—During the afternoon a visit was paid to Langford Castle, the seat of the Earl of Radnor, who kindly threw open the picture galleries.

Dinner.—In the evening the members and their friends dined together at the County Hotel, Salisbury, the Mayor of Salisbury, the Dean, Mr. Hulse, M.P. for Salisbury, Viscount Folkestone, M.P. for the southern division of Wiltshire, and Mr. Christopher Heath being among the guests.

Next Annual Meeting.—It was decided to hold the annual meeting of 1896 at Southsea, under the presidency of Dr. Watson.

OXFORD AND DISTRICT AND GLOUCESTERSHIRE BRANCHES.

A COMBINED meeting of these Branches was held at Oxford on July 5th.

Annual Meeting of Oxford Branch.—Previous to the combined meeting, the annual meeting of the Oxford Branch was held at the same place. In consequence of the illness of the President, Dr. Hutcheson, the chair was taken by Mr. A. WINKFIELD.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Report of Council.—The report of the Branch Council was read. It stated that the Treasurer had a balance in hand of £41 15s. There were 102 members, and the Council was glad to report the continued prosperity of the Branch. The Treasurer's report was read and adopted.

Contribution to the Expenses of the Annual Meeting.—It was proposed and carried that the Treasurer be allowed to contribute a sum not exceeding £20 towards the expenses of entertaining 200 members of the British Medical Association on August 3rd; and that a Committee consisting of Mr. Symons, Mr. Winkfield, Mr. Morgan, Dr. Collier, and Dr. Dixie be appointed to carry out the arrangements.

Installation of President.—Mr. HORATIO P. SYMONDS was then installed in the Presidential chair by Mr. WINKFIELD.

The British Medical Association and the Protection of Medical Interests.—Mr. DOYNE proposed, and it was seconded and carried:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties.

Election of Officers.—Mr. Moore of Moreton-in-Marsh was elected President-elect. Mr. Winkfield was re-elected Treasurer, Representative on the Council, and on the Parliamentary Bills Committee. Mr. W. Lewis Morgan was re-elected Hon. Secretary. Dr. Collier, Mr. Caudwell, and Mr. Hayman were elected members of the Branch Council.

Next Annual Meeting.—Moreton-in-Marsh was selected as the place for the annual meeting in 1896.

Luncheon.—Mr. H. P. Symonds then entertained the members of the two Branches at luncheon, and was supported by by Mr. Fowler of Cirencester, the President of the Gloucestershire Branch. About sixty-five members of the combined Branches were present.

President's Address.—After luncheon Mr. HORATIO SYMONDS read a paper on Antiseptic Surgery, and at the conclusion Sir HENRY ACLAND addressed the meeting.

Visits to Laboratories, etc.—The members of the Oxfordshire Branch then showed the members of the Gloucestershire Branch the various colleges, scientific laboratories, and other objects of interest in Oxford, and a most pleasant day was spent.

SOUTH-WESTERN BRANCH.

The annual meeting of this Branch was held at Tiverton, on June 26th, Dr. Powell, of Torquay, Vice-President, in the chair. Forty-two members attended.

Installation of New President.—The minutes of the last annual meeting having been taken as read, and a cordial vote of thanks passed to the retiring President, Mr. Nettle, of Liskeard, Dr. Powell introduced the new President, Mr. Mackenzie, of Tiverton, who took the chair.

President's Address.—The new President delivered his inaugural address, in which he drew attention to the fact that the meeting was one of many in England at which a vote was being taken to alter considerably the constitution of the British Medical Association. At present the Association was too one-sided. They wanted the Association to become for medical men what the Incorporated Law Society was for lawyers. The medical profession was the least businesslike and the most philanthropic in the world. They were constantly giving their services, day and night, without any remuneration, until these services had come to be expected as a matter of course. The time had therefore arrived when for the benefit of all some arrangement should be made. If the proposed reform was carried out the Association, instead of numbering half the medical profession, would represent all. There was a few smaller Societies doing their best for the profession in medico-legal and other capacities. These, however were neither large enough nor powerful enough to succeed in establishing such a system of support as was anticipated to accrue from the reform of the British Medical Association which was to be proposed.—Dr. Deas, of Exeter, in moving a vote of thanks to the President for his address, said that the British Medical Association had an immense amount of latent power which could be developed for the benefit of the profession at large. In medical defence particularly it might take up a position of great usefulness. The vote of thanks was seconded by Dr. Rolston, of Devonport, and carried unanimously.

Report of Council.—The report of Council stated that the Branch had increased its numbers by 16. The financial position was satisfactory. The next annual meeting would fall to be held in the Three Towns, and the Council suggested the name of Dr. Hingston, of Plymouth, as President-elect. The report was adopted.

Election of Officers.—Dr. Gordon was re-elected Honorary Secretary; Mr. Mackenzie and Dr. Gordon were elected representatives on the Council of the Association; and Dr. Gordon was elected the representative of the Branch on the Parliamentary Bills Committee.

The British Medical Association and the Protection of Medical Interests.—The Honorary Secretary then submitted the following resolution:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake those duties.

Dr. Welsford, of Tiverton, seconded this resolution, and Mr. Bell, Dr. Slade King, and Dr. Barnes spoke in support of it. The resolution was unanimously carried.

Abuse of Charities.—It was resolved that the question of the abuse of charities be referred to the Branch Council.

Midwives Registration Bill.—The following resolution was proposed by Dr. Woodman:

That this Branch cannot approve the Midwives Bill now before Parliament, inasmuch as they believe that it would be not a benefit but an injury to the public.

This was seconded by Dr. Rolston, and carried unanimously.

Registration of Midwifery Nurses.—Dr. Rolston proposed that the consideration of the Bill suggested by the Parliamentary Bills Committee be postponed until a copy of it had been circulated in the British Medical Journal. This was seconded by Dr. Slade King, supported by the President, and carried unanimously.

Dinner.—After the meeting there was an excursion to Dulverton, and the members dined together in the evening at the Palmerston Hotel, Tiverton.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

The summer meeting of the Branch was held at Keith on June 20th, Professor Stephenson in the chair.

New Member.—Dr. P. Howie (Keith) was admitted a member of the Association and Branch.

Representative on Council.—Professor Finlay was elected representative to the General Council of the Association.

Notice of Motion.—Dr. Mackenzie Booth gave notice of a motion to be brought before the next meeting of the Branch.

Dinner, etc.—A dinner followed in the Royal Hotel, the President in the chair. Various toasts were given and replied to, and a very pleasant hour was spent. In the forenoon the members drove from Keith to Gordon Castle, and Fochabers, where luncheon was served under the Duchess's tree. After viewing the castle and grounds, they returned to Keith in time for the meeting.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

The annual meeting of this Branch was held at Elgin on June 20th, 1895, Dr. Cruickshank, of Nairn, in the chair. There was a large attendance of members.

Installation of New President.—The retiring President proposed as his successor the President-Elect, Dr. Simpson, of Buckie, who took the chair, and delivered an address on Physiological and Psychological Features of the Fishermen on the Banffshire Coast. He accounted for the situation of the various villages along the coast by some physical peculiarity of the coast line pertaining to the different localities—such as creeks, burns, promontories, etc. The Celtic and Scandinavian elements found in the inhabitants of the various villages were clearly discernible at the present day. The effect of environment on the different types in the way of modification of the original was shown. Intermarriage, idiocy, superstition, and their most common ailments were also dealt with. Compulsory education and the establishment of public dairies were shown to be of immense advantage to the "dwellers by the sea" in the way of producing healthy bodies and sound minds. The President was warmly thanked for his very interesting contribution.

Medical Clubs.—Dr. Munro Moir, of Inverness, proposed the following motion:

(1) That this Branch considers the action of the medical profession in Cork with reference to attendance on members of medical clubs highly commendable and deserving of support. (2) That a subcommittee of this Branch be appointed to consider the question of medical clubs, friendly societies, and medical aid societies, and to report.

Dr. Moir supported this motion in a lengthened and well-received speech, and the motion was unanimously carried and a subcommittee appointed.

New Members.—The following new members were admitted: Dr. Keay, Inverness District Asylum; Dr. Duncan, Invergordon; Dr. Kunz, Lossiemouth; and Dr. Bill, Elgin.

Election of Officers.—The following office bearers were then elected for 1895-96:—*President:* Dr. Simpson, Buckie. *President-elect:* Dr. Mackenzie, Inverness. *Vice-Presidents:* Drs. Cruickshank and Adam. *Representative to Council and Parliamentary Bills Committee:* Dr. Ogilvie Grant.

Dinner.—The members afterwards dined in the Gordon Arms Hotel.

CAMBS AND HUNTS BRANCH.

The annual meeting of this Branch was held on June 14th at Bishop Stortford, under the presidency of Dr. Morris.

Re-election of Officers.—Prof. Bradbury, Mr. Hough, and Mr. Gray were re-elected members of Council of Branch. Mr. Stear was re-elected Representative of the Branch on the Council of the Association. Mr. Balding was re-elected Representative of the Branch on the Parliamentary Bills Committee. Dr. Joseph Griffiths was re-elected Hon. Secretary.

Registration of Midwives.—It was resolved on the proposition of Mr. Balding, seconded by Dr. Bradbury:

That the Bill for the compulsory registration of midwives now before Parliament does not meet with the approval of the members of this Branch of the Association.

New Members.—The following were duly elected members

of the Branch: Dr. Lloyd Jones, Cambridge; E. Stanley Wood, L.K.Q.C.P.I., Cambridge; H. J. Hargrave, M.B.Camb., Haverhill; C. Hartley, M.R.C.S., L.S.A., Bishop Stortford; W. F. Haynes, L.R.C.P.Lond., Stanstead; O. Magoris, M.R.C.S., Gt. Shelford.

Proposed Conjoint Meeting.—It was resolved to accept the invitation of the members of the East Anglian Branch of the Association, and to join them in a combined meeting in the year 1896.

President's Address.—The PRESIDENT delivered a short and interesting address upon the history, antiquities, etc., of the ancient town of Bishop Stortford.

Senile Plethora.—Professor CLIFFORD ALLBUTT gave a summary of a lecture he had recently delivered on this subject. He showed how it differed from the usual forms of renal affections which not infrequently occurred in advanced years. This condition might be much benefited by the use of calomel followed by saline purgatives.—Professor BRADBURY, Dr. LATHAM and others took part in the discussion which followed.

Bichromate of Potassium in Gastric Affections.—Professor BRADBURY related seven cases in which he had tried this drug. In all it was administered in the form of capsules containing ½ grain each; one was given on an empty stomach. Five of the cases were greatly benefited, but in two no amelioration followed. The cases presented various clinical features of chronic gastric disease. Of the unsuccessful cases one was probably pyloric cancer; another was a young woman affected with severe gastralgia. Of the two successful ones, one was a clergyman who had been under observation for years. He complained chiefly of a "feeling of rawness and soreness in the stomach." No objective signs were present. Previously he had been relieved by a mixture containing bismuth and belladonna; potassium bichromate produced no amendment. The second was that of a lady, past the menopause, who complained of severe gastralgia. Bichromate capsules failed to give relief, although a powder containing bismuth, magnesia, soda, and compound opium powder had previously done so. Professor Bradbury referred to the successful cases reported by Vulpian and Fraser, which presented similar clinical characters to his own. The explanation of the action of the bichromate, he said, was difficult. Pharmacologically it acted mainly upon nervous and epithelial structures: in large doses it was an irritant poison. The salt probably acted by stimulating the blood supply of the stomach and modifying the depressed metabolic activity of the gastric cells. Dr. Bradbury concluded by referring to the methods of administration and the possible contraindications to its use. Experimentally Gergens had produced parenchymatous nephritis, and nervous symptoms had been produced by various other observers, but hitherto no such effects had followed the therapeutic administration of the drug.

WEST SOMERSET BRANCH.

THE fifty-second annual meeting of this Branch was held on July 4th, at the Gables, Stoke-under-Ham, the residence of the President-elect, Mr. Walter W. Walter.

Luncheon.—Twenty-four members, with several gentlemen not members, including the Vicar of Stoke, partook of an excellent luncheon by the kind invitation of the President-elect, before the business of the meeting commenced.

Installation of New President.—After a few remarks on his past year of office, Mr. WILLCOCKS resigned the chair to Mr. W. W. Walter.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Report of Council and Treasurer's Accounts.—The report of Council was read, and the TREASURER presented his accounts. The report of Council stated that an increase of members had taken place during the past year. Ten new members had joined, three old members had left the district, and one had resigned. The Branch now numbered 69 on its roll, as against 63 last year. The Treasurer's accounts, which had been audited by Mr. Rigden, showed a credit balance to the Branch account of £7 10s. 10d. A very successful autumnal meeting was held on October 26th, when Professor Cheyne, of King's College, delivered an address on the Development of Modern Methods of Wound Treatment. At the spring meeting, on March 7th, Mr. Abbott read a very instructive and interesting paper on Scoliosis and its Treatment. At the last annual meeting the question of proposed legislation for enforcing the registration of midwives was discussed, and the meeting resolved that in its opinion the plan as then proposed was not required. A Bill for "the Compulsory Registration of Midwives" was introduced into the House of Lords, which, however, had not met the approval of the Parliamentary Bills Committee of the Association. The Chairman of the said Committee, in a letter dated June 24th, had forwarded to the Branch a rival Bill which they had had drafted, entitled "A Bill to promote the better training of Women as Midwifery Nurses, and for their compulsory registration as such," with a request that it might be placed before the Branch, and that the opinion of the Branch thereon may be taken and sent to the Parliamentary Bills Committee as soon as possible. The representative of the Branch, Dr. Winterbotham, would, had he been able, have brought this matter forward in the course of the business as arranged for this day's proceedings, but he was only now convalescent from a long and dangerous illness.

Vote of Sympathy.—Resolved:

That the report of Council and the Treasurer's accounts be received and adopted; and that the Secretary be requested to write a letter to Dr. Winterbotham and convey to him an expression of the great sorrow the meeting has felt at hearing of his serious illness, and of their sincere hope that his convalescence, which they are happy to hear is progressing favourably, will soon end in complete recovery.

Election of Officers.—It was resolved (1) that W. L. Winterbotham, M.B., be the representative of the Branch on the Council of the Association and on the Parliamentary Bills Committee for the ensuing year; (2) that, of the three members of the Branch Council who retire in rotation, J. Meredith, M.D., and W. L. Winterbotham, M.B., be re-elected, and that, in the place of Mr. J. B. Cosens, who has left the district, Mr. C. E. Abbott be elected, for the ensuing year. Dr. Kelly was re-elected Secretary and Treasurer. No member being found willing to accept the office of President-elect for 1896-97, it was resolved that it be left to the Council to find a President-elect, and to arrange for the next annual meeting, and that they be also requested to arrange for an autumnal and a spring meeting as usual.

President's Address.—Mr. WALTER delivered an interesting address on his Personal Experience of the Practice of Medicine, Surgery, and Midwifery during the last Fifty Years. A short discussion followed.

Vote of Thanks.—The following resolution, having been moved and seconded, was carried by acclamation:

That the best thanks of the meeting be given to the President for his address, and also for the most kind and hospitable way in which he has received and entertained the Branch.

Communication.—Mr. MACILWAINE mentioned a case of Diphtheria treated by Antitoxin.

Registration of Midwives.—This matter was shortly discussed, and it was proposed:

That in the opinion of this meeting the Midwives Act, 1895, as in course of passage through the House of Lords is not required and should not be supported by the medical profession. If, however, legislation on the subject is found to be inevitable, then, in the opinion of this meeting a Bill on the lines of that drafted by the Parliamentary Bills Committee is to be preferred to the one before Parliament.

To this the following amendment was proposed:

That the last clause of the resolution commencing with the words "If however," be omitted.

On being put to the meeting the amendment was carried *nem. con.* The curtailed resolution, as follows, was then read from the chair:

That in the opinion of this meeting the Midwives Act, 1895, as in course of passage through the House of Lords is not required and should not be supported by the medical profession.

One or two speakers were averse to carrying such a resolution, but on a show of hands being taken about twenty were for it and only three against it. The resolution was therefore declared to be carried.

Entertainment.—This concluded the business. Tea on the lawn, at which Mrs. Walter and some lady friends presided, with an excursion to the Ham Hill Quarries and the Roman Camp brought a very pleasant and successful meeting to a close.

SPECIAL CORRESPONDENCE.

PARIS.

Honours for M. Roux.—The Sanitation of Match Factories.—A Commission on Foreign Medical Examinations.—Overcrowding in Flats.—General News.

At the end of last year the Municipal Council decided to give to Dr. Roux, in the name of the city of Paris, a gold medal. A few days later the General Council came to the same decision. On July 4th these medals were formally presented to Dr. Roux at the Hôtel de Ville. M. Pasteur was unable to be present on account of weak health. Dr. Roux replied to the numerous complimentary speeches by saying that he had worked under the direction of M. Pasteur and had only developed what others had done before him.

Dr. Magitot, a recognised authority on the question of phosphorism, in an excellent letter to the *Temps*, affirms that the evil results from using white phosphorus in making lucifer matches can be avoided by taking certain precautions. It is a mistake to attempt to suppress the use of white phosphorus; what ought to be suppressed is the unhealthy condition of the factories and the indifference of those who manage them. There are lucifer match factories which are perfectly healthy, where the hands are never attacked with phosphorism; whereas others are perfect hotbeds of necrosis and phosphorism. These factories, notwithstanding the ability and energy of the engineers who direct them, cannot be made healthy. The condition goes on from bad to worse, and radical measures are urgently called for. Dr. Magitot regrets that the Minister did not visit the lucifer match factories, accompanied by a competent guide; he would then have seen that these factories have become *foci* of disease. Few are constructed in a suitable manner; moreover, rudimentary buildings have been added, in which aëration and ventilation are absent, or a mere sham. There is no arrangement for evacuating the *débris*, neither running water nor sewers, but in the middle of a yard these dangerous pestiferous products burn in the open, adding their deadly emanations to those of the phosphorus. The workrooms send forth clouds of poisonous phosphorus vapour sufficient to poison the whole neighbourhood. Dr. Magitot says such factories must be suppressed; the others must be remodelled.

The Minister of Public Instruction has organised a Commission to examine the value of the foreign examinations passed by students of different nationalities asking for an "equivalent," which gives them the right of being inscribed on the list of students of the Paris Medical Faculty.

The Paris flats, composed of two or three rooms, are frequently overcrowded: 14 per cent. of the population live in that unhealthy condition. On the outskirts of Paris, Passy and Batignolles are the only exceptions to the rule. This overcrowding is coincident with an increased mortality, both resulting from indigence. Nevertheless, overcrowding is more frequent in Berlin, Buda-Pesth, and St. Petersburg than in Paris.

A bust of the late Dr. Dujardin-Beaumetz has, by means of subscription, been paid for and placed at the Cochin Hospital, in the court where the pavilions due to his initiative are constructed.

At Locerain a statue has been erected in honour of the late Father Damien, who devoted his life to tend the lepers at Honolulu, where he succumbed to the malady.

A statue to Boussingault was, on July 7th, placed in the courtyard of the Conservatoire des Arts et Métiers. The Minister of Agriculture was present as a substitute for the Minister of Commerce. In his speech he stated that, during half a century, Boussingault, at the Seine Sanitary Council, put in force the principles of modern sanitation. He was one of the first who fought against professional maladies, and formulated sanitary measures to be adopted by brass and lead workers and those who handle mercury and phosphorus.

MEDICAL MAGISTRATE.—Dr. A. O. Wiley, of Knaresborough, has been appointed to the Commission of the Peace for the West Riding of Yorkshire.

ST. PETERSBURG.

Superstition in Siberia.—Some Examples of Longevity.—The "Flying Squads" of Oculists and the Russian Peasants.—A Russian Medical Conference.

A CASE of considerable importance was recently tried before the Governmental Court of Tomsk in Central Siberia. At this trial thirteen peasants, belonging to the district of Barnaul, in the same Government, were charged with the murder in 1892 of a man, a stranger to the district, who was taken by the peasants for "the cholera." Firm in this belief they killed him. At the trial some curious circumstances were brought out, which throw a strange light upon the mental attitude of the chief actors in this tragedy. The murder was not committed on the impulse of the moment; it was carried out deliberately and with a sort of official sanction, for the *starosta*, or elder (the peasant head of the village), though not himself taking part, sent a representative—a Kirghiz named Tchekim—to assist in the "sacrifice." The unfortunate victim was a peasant from another district, who was passing through the village of Trubatcheva. The villagers were fearing the approach of cholera and conceived that the first stranger who came was the dreaded thing itself. They imagined that he was "destroying the people and their cattle." The fact that he had a passport did not save him, and a paper found on him containing a list of the surrounding villages only confirmed the suspicions of the peasants. They dragged him a hundred fathoms from the village, two of them shot him, the others beat him with sticks, and they then buried the body in the forest. The body was subsequently exhumed, the bullet wounds found, and a number of other hideous injuries, the skull being fractured into as many as sixteen pieces. The Court found all the accused guilty; two, being under age, were sentenced to five years' and four months' hard labour; the remainder to eight years' hard labour. "Extenuating circumstances" were found in every case, and the matter will consequently be referred to the Senate for final decision. The present case is not an isolated one in the history of cholera epidemics in Russia; it could be paralleled by similar instances from the epidemic of 1892.

This country, notwithstanding the severity of its climate and other drawbacks, would seem to be not unfavourable to longevity, if one may believe the newspaper reports of certain remarkable cases. Last year attention was called to an aged Frenchman, Nicolas de Savin, who shortly afterwards died in Saratof at the age of 126. He had fought in the Napoleonic wars, and fallen a prisoner to the Russians in 1812. A little later mention was made of a Cossack named Solodof, living in the Government of Poltava, also at the age of 126. Now the cases are reported of a Russian soldier, living in Wyburg in Finland, who is said to be 122 years old; and of another Russian in Samara, Lavrenti Efimof, who recently died at the patriarchial age of 150. He is said to have taken part in the famous rebellion of Pugatchef in Catharine's reign. He was taken prisoner by the rebel, and then served under him; he was present at the taking of Kazan, Simbrisk, and Saratof, and at the voluntary surrender of Samara and other towns, and took part in all the exciting events of the last year of the rebellion. That great rising (the subject of one of Puskin's most interesting prose tales) lasted from 1773 to 1775; if Efimof's age at death is correctly stated he would then be from 28 to 30 years of age. During recent years he became quite blind. Immediately after the suppression of the Pugatchef rebellion he was, of course, punished for taking part in it, and thirty years of his life he spent as a convict, and later as an exile, in Siberia, an interlude which would not, *a priori*, be regarded as conducive to long life. Since writing the above notes I observe the announcement of the death, in Thessaly, of a Greek priest at the age of 120. He is said to have kept his sight and hearing to the last.

As in each of the last three years, so in the present year, a number of "flying squads," as they are called, of oculists will be sent from St. Petersburg to various distant parts of the country by the trustees of the fund instituted in the interests of the blind by the Empress Marie Alexandrovna. This year as many as twenty "squads" will be sent, some as far as to the Siberian Government of Tomsk. In past years, there can be no doubt, this system has proved of immense

benefit to the more isolated peasantry, and is thoroughly appreciated by them. Eye diseases are extremely prevalent among them, and without some such system they would go practically untreated in many of the more sparsely inhabited Governments.

The tenth Conference of Russian Naturalists and Physicians will be held in the University of St. Vladimir, in Kief, in August, 1898, under the presidency of Professor Theophilaktof. The last Conference was held in Moscow in 1894.

CORRESPONDENCE.

THE LANCASHIRE AND CHESHIRE BRANCH AND THE MIDWIVES BILL.

SIR,—I will briefly make what corrections and admissions seem required with reference to the above subject:

1. In proof of my entire readiness to accept the assurance of Drs. Hughes and Campbell that official signatures had been obtained to the petition, I informed them in my second letter that but for their unique act of suppressing those signatures from the BRITISH MEDICAL JOURNAL'S report my first letter would have been differently worded; which is interpreted to be "sticking" to the statement that they had not been obtained.

2. I know that there are official minutes of the General Medical Council, as I obtain them when required from Messrs. Spottiswoode and Co. as a bound volume at the end of the year.

3. I had not seen those for May 29th, 1895, but gave my references quite fully, namely, the BRITISH MEDICAL JOURNAL for June 1st, 1895, and for the whole of 1894. I felt quite secure in these, and my sense of security, founded on the general accuracy of the JOURNAL, would have been absolute had I known then, as I do now, that every report would undergo the vigilant scrutiny of two gentlemen who consider that "inaccuracies in dealing with an important public question are inexcusable." I am presuming that it is inaccurate to permit the omission of essential names from a published report, seen by nearly the whole profession, to remain uncorrected week after week.

4. Perhaps I shall be pardoned some surprise at having to remind my severely accurate critics, who are becoming shocked at the non-verification of references, of their omission to state that the only reference that they themselves gave by which that verification was to be effected, even if inadvertently, was entirely inaccurate.

5. I did not hear the Hon. Secretary say that the official signatures had been obtained, though I thought I heard all that was said. If I had done so, I should have felt absolutely sure that they had been obtained.

6. The only question of any importance as to the Committee's expenses had been asked by me, and satisfactorily answered at a Council meeting held immediately before the general meeting.—I am, etc.,

Liverpool, July 8th. WILLIAM CARTER.

ON DISGUISING THE TRUTH: THE VIEWS OF A PATIENT.

SIR,—If a patient is content to accept his doctor's prescription without inquiring too closely into his opinion of the case, I do not think it is incumbent on the doctor to reveal in all cases his suspicions of grave danger; but where a patient is clamouring to know what is the matter with him it is too often the doctor's habit to return, not only evasive, but misleading replies, and I am strongly of opinion that the suspense and anxiety which result from this practice are frequently more injurious than the knowledge of the truth would be.

I must give an instance or two within my own knowledge to illustrate my meaning. A. B., a man about town, aged 30, had an epileptic seizure in which he fell and cut his head open. His usual medical adviser attended him, and to him A. B. explained the circumstances, supposing himself to have tripped over something and been stunned by his fall. That the doctor had at least some suspicions of the truth I take for granted, though I cannot be certain; but this I know, that he encouraged A. B. in his theory of the fall, and gave him no warning as to the probable real cause, with the result that A. B. continued in his ordinary course of life, had several dangerous repetitions of his first attack (which explained fully to the doctor what was the matter, though he continued to mislead the patient on the point), and he has now been for many months under the closest medical supervision. From what I know of the man and the circumstances, I have no hesitation in saying that had he been told at first what his real malady was he would have been able to avert much unnecessary suffering.

Again, C. D. went to consult an eminent London specialist in regard to a serious ailment from which he was suffering. He was accompanied by two doctors whom he was in the habit of consulting. After hearing the particulars and examining the patient, the specialist with his two professional brethren retired to a private room, where he told them that the case was a very serious one indeed, and the ultimate recovery of the patient was very doubtful. He returned to the consulting room and told C. D. that his symptoms were favourable, and that he might count on resuming his ordinary work in six months if he took complete rest in the meantime. On this opinion C. D. built up great hopes, the inevitable shattering of which at the end of six months occasioned him, I am sure, more keen disappointment than if the truth had been judiciously broken to him at the time of the consultation.

In both these instances the patient was a man whom there was absolutely no reason to suppose lacking in courage or resolution to face the worst. The sole reason that could be given for deceiving him was that it was the rule of the profession not to take the patient into their confidence in serious cases. I am able to add that in both instances the patient, as soon as he ultimately learned the truth, began to improve; and this I must maintain to be due, at least in part, to the bitter truth bringing out the proper resistive qualities in the nature.

I wish specially to call attention to another danger.

A doctor on being called in to see a patient frequently finds him seriously ill, nursed by a wife or near relative, the patient and the nurse both attributing his condition to a severe attack of a less serious ailment than is really the case. It is my experience that in such circumstances the doctor often encourages the patient in his delusion, but tells the truth to the nurse privately; and that the nurse eventually tells the patient in a way much more abrupt and dangerous than the doctor would have used. The very fact that the doctor has concealed it from him, and that he has only learned it by working on the feelings of the nurse, increases the apprehension of the patient, and if he can obtain access to an encyclopædia or dictionary of medicine he reads the article on the disease, and is apt to imagine, from no other reason than the doctor's reticence, that he has the very worst form of the disease therein described.

I might dwell on the ethical objections to any departure from the strictest truth, but that argument would carry me too far, as I admit, at least for the purposes of this note, that there are cases where it may be necessary to conceal the truth. But this much I may say, that were the impression that doctors habitually deceive their patients for the patient's good once removed, I am certain that the general esteem in which doctors are held would be greatly increased.

I believe that ninety-nine doctors out of every hundred have tact enough and skill enough to break the worst news to any ordinary patient as gently as it can be done. I lay stress on this quality in doctors in connexion with the relatives' less judicious way of telling the truth, to which I have already adverted.

If the majority of doctors were asked the chief obstacle with which they have to contend in the treatment of disease, I believe they would reply the patients' want of openness in telling all the circumstances of their case, especially where these involve anything discreditable. Is it fanciful to suggest that the patient's concealment is to some extent fostered by his belief that the doctor will not be open with him? A foolish and illogical reasoning on the patient's part I admit; but if patients believed that their doctors would tell them the truth so far as known to them, I venture to say that they would themselves be more truthful.

For these reasons I venture humbly to ask medical men to

consider whether it should not be made a rule of the profession to tell the patients the truth in all but very exceptional cases in which there may be fair grounds for a presumption that serious harm would be immediately caused by such a course.—I am, etc.,

J. H. T.

CASTRATION FOR ENLARGED PROSTATE.

Sir,—Mr. A. G. Faulds publishes in the British Medical Journal of May 4th a series of cases of castration for enlarged prostate, with results which are so remarkable that, as he alludes with surprise to my statistics, I cannot refrain from comment. He reports 5 cases of double castration with 4 deaths—a mortality of 80 per cent.! In 3 of the 4 mania preceded death; no other explanation of the fatality is given. In the fourth case hemiplegia, followed by death, occurred on the twenty-seventh day. In 2 other cases Mr. H. E. Clark did a single orchectomy, but both these patients died after showing mental aberration. No mention is made of a necropsy in any case. Mr. Faulds's fifth patient was alive at the end of thirty days, but showed no improvement.

Double castration in prostatics is an operation so recent that an accurate estimate of its mortality is not yet possible. It will, of course, vary greatly with the condition of the patient, especially as regards general atheroma and precedent renal infection. Guyon considers the hypertrophy of the prostate to be the result of a constitutional disorder beginning as arterial sclerosis. While I do not accept this theory of causation, the frequent association of the two conditions is a matter of common observation. It is obvious that, either with or without operation, such patients will often die from hemiplegia, and will still oftener die with symptoms associated with various degrees of cerebral degeneration, or with the mental phenomena of uræmic intoxication.

I have no wish to underrate these risks. If I have suggested an operation which will not stand the test of experience, the sooner that fact is known the better. But I must protest against such communications as the one in question being regarded as valid arguments at this time. Mr. Faulds asks, after referring to my statistics (gathered from various sources), and to the cases of Mr. Fenwick, "would it not be educative and equally important to give the details of non-successful cases?" It undoubtedly would. The details of a few carefully observed and thoroughly studied unsuccessful cases would probably be of more use just now than larger numbers with better results. But Mr. Faulds's "black list" as published does not meet the requirements.

In only two of the seven cases is the age given. In only one is the size of the prostate estimated. In two the urine is said to have contained "pus and blood;" no other urinary examination is alluded to. In only one is the amount of residual urine mentioned. The condition of the patient as to general health is not once described. In other words, nearly all the factors upon which prognosis is based have been omitted. Moreover, it is stated of these patients that "some had been relieved so far of bladder and kidney disturbance by perineal section, all with the object of minimising the immediate and remote effects of the operation." Perineal prostatotomy in such cases has a mortality of its own. It seems to me inconceivable that anyone familiar with the literature of the subject should perform it "with the object of minimising" the effects of castration. It will doubtless often be the operation of choice, and its previous performance need not necessarily prevent a later castration, but the combined operation would certainly have a higher mortality than either prostatotomy or orchectomy alone.

Double castration is one of the oldest known operations, and when performed in average subjects for local disease or injury is now generally regarded as almost without danger. Butlin estimates the proper mortality of single castration in malignant disease at about 2 per cent.

I shall shortly publish a complete statement of all the cases I have been able to collect, both successful and unsuccessful. In the meantime, I would respectfully ask that a mortality of 80 per cent. for double castration and of 100 per cent. for single castration be regarded as unusual and unnecessary even in prostatics.—I am, etc.,

Philadelphia, May 13th. J. William White.

ABUSE OF HOSPITALS.

Sir,—You may remember that in April you inserted a letter in the British Medical Journal in which I alleged that the percentage of applicants to the out patient department of the Gloucester Infirmary, found, on inquiry during six months, to be ineligible for free treatment, was 40.65.

It was intimated to me that my reference to the Senior Physician in that letter had held him up in an unfavourable light, so I forthwith wrote that I had no such intention, expressed my extreme regret, and apologised to him for my carelessness, and asked his nominees (Messrs. Ellis and Sumner) to send me (for publication in the Journal if desired) the draft of such a letter as they might think would rectify the wrong which it was thought I had done.

The apology was not accepted, nor was the draft of any letter sent, but Messrs. Ellis and Sumner, at a recent meeting of the Infirmary Committee, proposed the following resolution:

> The Committee having considered Mr. George Whitcombe's letter in the British Medical Journal of April 20th, 1895, resolved: "That the special mention of the Senior Physician, which places him before the medical profession in an unfavourable light, is very unfair and unjust."

The resolution was carried, and directions were given that the same should be forwarded to the British Medical Journal for publication.

For some reason Messrs. Ellis and Sumner have since requested the secretary to the infirmary not to insert the resolution in your columns, but I think that it is due to all that it should be published, leaving your readers to form their own opinion as to the weight of the words "very unfair and unjust" when used by a managing committee which considers itself attacked.

I hope that you will also allow me to set at rest a misapprehension which apparently exists in the minds of some who think that the sentence in my letter to you, in which I stated that the inquiry clearly proved certain facts, should have been preceded by the words "in my opinion." If the absence of these words have misled any of your readers I regret it, but I should have thought that a perusal of the preceding sentences would have prevented this.

The serious question, however, is: Am I right or am I wrong in the above allegation? If I have given my opinion too decidedly and in an offensive manner, I regret exceedingly that my unpremeditated want of courtesy has annoyed anyone, but the question of abuse still remains—a question, the importance of which is increasingly emphasised by the fact that the gratuitous out-patient medical relief at Gloucester Infirmary increasing by leaps and bounds: it has increased from 6,160 (the figure on which my report was founded) in 1890 to 7,832 in 1894. This increase is, in my opinion, alarming.—I am, etc.,

Gloucester, July 2nd. George Whitcombe.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

Sir,—Although the remarks made by your correspondent in the British Medical Journal, June 22nd, p. 1465, about the Metropolitan Provident Medical Association appear justified by the figures taken from the annual report, I venture to assert that the state of affairs which he discloses is only a fresh illustration of the fact that the chief enemy to the general practitioner's welfare is the general practitioner himself.

The Metropolitan Provident Medical Association was founded on lines laid down by a medical subcommittee, and the medical profession has always been well represented on the Council.

But after all it is in the branches themselves that the points which most affect the interests of the general practitioner are settled. Each branch is allowed to determine what is to be the wage limit and the rate of members' contributions; and it is precisely in the branches that the medical influence is supreme. The medical officers are all *ex officio* members of the Committee of Management, and by themselves constitute in most cases an absolute majority, so that they could carry any point upon which they were agreed.

In face of the overwhelming control which the medical profession could, if they so pleased, exercise over the man-

agement of the Association, what must we conclude from the figures given by your correspondent? There is but one answer: That the medical profession has neglected its opportunities and has here, as so often before, allowed things to drift into an unsatisfactory condition which a little forethought would have prevented.

Therefore I contend that it is absurd to say that the Metropolitan Provident Medical Association is giving charity at the expense of its medical officers. If a railway company issues cheap excursion tickets they cannot be looked upon as charity simply because they happen to be a half or a third of the usual price—nay, even if the company happened to make a loss on the transaction. Similarly if the medical officers choose to give their services at an unremunerative rate, they have no right to cry charity, when, as in the Metropolitan Association, they have the remedy in their own hands.

To show what a properly managed branch of the Association can do I will give the figures of the Tottenham Branch, which are most familiar to me. To begin with, this branch does not receive a penny from charitable contributions; it has paid off a small deficit from the year before, and has a balance in hand. The members' subscriptions are higher than those of any similar institution in the neighbourhood, clubs included. The amount paid to the doctors was 78 per cent. of the receipts, and if the fee of one penny charged upon each attendance is included, it amounts to 81 per cent. The average remuneration per attendance works out in my own case at a little over a shilling, a very high rate compared with that of other institutions.

I may add that this satisfactory working is in no way the result of merely local peculiarities. There is another provident institution in Tottenham, where years ago the medical staff were also *ex-officio* members of the Committee. In this case the lay members of the Committee had little knowledge of or sympathy with the requirements of the profession; while the medical staff would not undertake the work of management, and only turned up at rare intervals to indulge in futile remonstrances. The result was that their names were taken off the Committee, and the institution is now the type of those all over the country engaged in sweating the medical profession.—I am, etc.,

Bruce Grove, N., June 29th. **O. WUNDERLICH.**

CLEIDOTOMY.

SIR,—In the *Centralblatt für Gynäkologie* of June 1st there appears a paper by Professor Phänomenoff, of Kasan, recommending the division of the clavicles of the child as an aid to delivery in certain cases of obstructed labour.[1] As Professor Phänomenoff appears to be unaware, I should be glad if you will kindly state that this aid to embryotomy was previously advocated by me in the columns of the BRITISH MEDICAL JOURNAL of April 13th.[2] I have taught this useful little manœuvre at University College during the last seven years, the first case in which I practised it occurring in the year 1888, in an obstructed labour to which I was called by by my friend and late assistant, Dr. Walter Tate.—I am, etc.,

Mansfield Street, W., June 21st. **HERBERT R. SPENCER.**

ERRATUM.—In Dr. Purslow's letter on Dilatation of the Cervix, in the BRITISH MEDICAL JOURNAL of July 6th, p. 14, lines 2 and 3 from end, for "tails" read "tents," and on p. 15, line 5, for "Tail" read "tent."

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A SENIOR SURGEON-CAPTAIN, with over two years to do at home, will go abroad (not India) for two years in exchange. Apply "Blue-Black," 2, Vigo Street, London, W.

A MADRAS paper understands that Surgeon-Major Clarence Smith is to be reinstated in the Indian Medical Service if he consents to be tried by court-martial, and is thereby cleared of the charges brought against him.

THE NAVY.

THE following appointments have been made at the Admiralty:—HORACE E. F. CROSS, Fleet Surgeon, to the *Pembroke*, additional, for temporary service at Royal Naval Barracks, July 3rd; CHARLES S. FACEY, Surgeon, to the [illegible], July 3rd; BERNARD LEE, Surgeon, to the [illegible], July 3rd; EDWARD H. MCSHERRY, Surgeon to the *Wallaroo*, July 3rd; EDWARD CUFFEY, Surgeon to Haulbowline Hospital, July 3rd.

INDIAN MEDICAL SERVICE.

SURGEON-GENERAL WILLIAM CAMPBELL MACLEAN, M.D., C.B., Madras Retired List, is appointed Honorary Surgeon to the Queen, vice Inspector-General J. H. Orr, M.D., C.B., deceased, July [illegible]. Surgeon-General Maclean was for some time Professor of Military Medicine at Netley.

THE VOLUNTEERS.

SURGEON-MAJOR C. G. M. LEWIS, 1st Volunteer Battalion the Buffs (East Kent Regiment), has resigned his commission, with permission to retain his rank and uniform, July 10th.

Surgeon-Lieutenants J. T. WALSH, 5th (Irish) Volunteer Battalion the King's Liverpool Regiment, and E. L. [illegible], 1st (Exeter and South Devon) Volunteer Battalion the Devonshire Regiment, have also resigned their commissions from July 10th.

Mr. MICHAEL JOSEPH MAHONY, M.B., is appointed Surgeon-Lieutenant in the 6th Volunteer Battalion the King's Liverpool Regiment, July 10th.

Surgeon-Major T. M. DOLAN, M.D., 1st Volunteer Battalion the Duke of Wellington's West Riding Regiment, is promoted to be Surgeon-Lieutenant-Colonel, July 10th.

Surgeon-Captain W. S. CHEYNE, M.B., 2nd Volunteer Battalion the Gordon Highlanders, is promoted to be Surgeon-Major, July 10th.

ARMY SANITARY WORK.

AN important addition is made to the Regulations for Army Medical Services, 1894. Para. 30A runs: "Upon receiving notice from the Commanding Royal Engineer that the construction or reconstruction of any drainage system is undertaken by the War Department, the Principal Medical Officer of the district or command concerned will arrange that either he, or an officer deputed by him, is present at the tests which are applied to the various pipes and connections of the work, in order that he may be in a position to certify as to whether the drains have satisfactorily passed the tests." The tests are alluded to in the Regulations for Engineer Services.

An important substitute for Para. 33 of the Regulations appears in Army Orders for June, where will now be found not only Para. 33, but 33A, 33B, and 33C.

ADMISSION TO THE ARMY MEDICAL STAFF.

REVISED Regulations for Admission to the Army Medical Staff have been approved by the Secretary of State, and copies will be issued to all concerned. Army Order 184 of 1894 and the Regulations issued therewith are cancelled. It was reported some time ago that changes in these Regulations were in contemplation.

DRESS REGULATIONS A.M.S.

IN Army Orders of June amendments are made respecting patrol jackets for active service, forage caps for active service, and the serge patrol jacket.

MEDICO-LEGAL AND MEDICO-ETHICAL.

DELAY IN THE NOTIFICATION OF INFECTIOUS DISEASE.

AT the Edmonton Petty Sessions a medical man was recently summoned for delaying to notify a case of scarlet fever. The medical officer of health of the district stated that he had observed an ambulance in the parish, and, not having been notified of any case of infectious disease, he kept the vehicle under observation, and ascertained that a child suffering from scarlet fever was removed in it. It transpired that the nature of the malady was diagnosed on June [illegible], and the removal of the patient arranged for on the following day; the practitioner in attendance failed, however, to notify until four or five days later, his certificate being received on June [illegible]. The magistrate fined the defendant [illegible] and costs, the Chairman remarking that they considered that the notification should be sent in as soon as practicable. In view of the need for promptly taking the necessary precautions to prevent if possible the spread of infection the decision of the magistrate is an important one.

M. E. DUR. (Harrogate).—There is not, in our opinion, the least doubt but that Dr. M., in assuming charge of the case of J. W., after having very recently met our correspondent in consultation thereon on several occasions, has, however unwittingly, contravened the following rule, which is clearly and specifically expressed in the [illegible], chap. ii, sect. 4, rule 13: "N.B.—Should the practitioner who has been called in consultation be subsequently requested to take sole charge of the patient, he should courteously but firmly decline."

H. G. N.—That our correspondent and his partner, in allowing their names to appear in the prospectus of the company referred to as the consulting physician and surgeon, etc., however unwittingly, contravened the recognised ethical rule relating to [illegible], there cannot, we think, be a doubt; but inasmuch as they at once instructed the company's official to withdraw their names therefrom, we think that reasonable amends for their previous action have been made. To publish a disclaimer, however, in the local papers, as suggested, would tend to accentuate the initial error, and justly invite criticism.

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[1] Zur Frage ueber Embryotomie. Ueber die Durchschneidung des Schlüsselbeins (Cleidotomie).

[2] On Delivery in Certain Cases of Impaction of the Trunk of the Fœtus.

AN EXCEPTIONAL CASE.

A LADY is sent by a physician, A., to a health resort, provided with a closed letter addressed to a local practitioner, C. Before making acquaintance with C. she forms that of H. C. and H. are not upon friendly terms, and do not consult. H. requests the lady to let him see the contents of A.'s letter to C. Is he correct in doing so, even if she supposes it to refer only to the particulars of her own case, without either writing himself to A., or requesting the bearer to obtain the writer's permission?

*** In the absence of any medico-ethical rule in relation to the above exceptional question we must have recourse to the ordinary custom for a solution. In view, however, of the non-urgency of the case, and of the description of the state of feeling between C. and H., we entertain no doubt that it would be the duty of the lady patient to withhold A.'s letter until the latter's assent was obtained.

THE RESPONSIBILITIES OF EMPLOYERS.

L. Q. N. writes: A man comes to me from a local company's works with a foreign body in the cornea, which I remove under cocaine with considerable difficulty. I send a bill to the company, and they take no notice of it. Are they liable, and can I compel them to pay?

*** On the facts stated the company do not seem to have requested any services or attendance, and cannot be made to pay a debt which is not theirs, and for which they have not made themselves liable. The patient, of course, can be sued for a proper fee, and can be made to pay either at once or by instalments.

M. A. B.—If our correspondent will refer to the *Medico-Chirurgical Tariffs* published by Mr. H. K. Lewis, [illegible] Gower Street, W.C. [illegible], he will find under the Medical Tariff the fees suggested for "[illegible]." Under the peculiar circumstances, however, we would recommend him to charge a very moderate fee, and to debit the article in question at cost price.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

FINAL EXAMINATION.—The following gentlemen have passed the final examination for the degrees of M.B., C.M. Those to whose names an asterisk has been prefixed have passed with distinction:

S. J. Aarons, J. Allison, C. W. Anderson, G. Anderson, H. H. Balfour, N. D. Bardswell, W. Begg, B.A., J. A. T. Bell, H. M. Benson, E. T. F. Birrell, J. E. Blackburn, G. J. Blackmore, *J. E. Bowes, L. Bowman, E. E. Brierley, N. Caine, H. J. Cardale, S. H. Carr, J. M. Coates, W. W. Chapman, W. J. C. Coulthard, J. Crawford, E. Cross, R. W. Cunningham, J. M'E. Dalziel, J. M. Dawson, M. V. Dee, T. Dewar, A. W. Easmon, W. F. Eason, H. J. Ewald, H. M. Eyres, A. G. Fenn, F. W. B. Fitchett, A. M. Fleming, *J. Forbes, M.A. (Inverness), J. Forbes, M.A., B.Sc. (Ross-shire), J. A. Forrest, J. S. Fraser, *W. J. Garbutt, F. Gardiner, W. A. Gibb, T. Gibson, J. Gilchrist, S. J. Gilfillan, M.A.; J. Gillies, J. D. Gilruth, M.A.; W. Glegg, C. J. Gorringe, D. J. Graham, *J. Gray, E. D. W. Greig, J. M. Grieve, M.A.; J. H. K. Griffiths, H. Halton, J. B. Hay, *R. Haygarth, C. M. Hector, R. P. Heddle, G. Henderson, G. P. Henderson, J. H. Henderson, I. D. C. Howden, M. Hughes, W. H. Hunter, H. E. [illegible], A. L. Husband, D. M. Hutton, B.Sc.; G. J. Jenkins, D. J. Jones, J. I. Kelly, L. Ker, M.A.; J. Kirk, D. Landsborough, J. Landsborough, L. V. Laurie, D. Lawson, H. A. Leebody, R. M'W. Leith, T. G. Lewis, W. Lillie, G. F. Lundie, M.A.; A. C. Lupton, S. F. Lusk, P. C. Lüttig, W. L. Lyall, A. M'Carthy-Morrogh, R. M'Camon, A. Macdonald, M.A.; F. B. Macdonald, J. M'Donald, W. M. Macdonald, W. C. W. M'Dowell, B.A.; T. H. Macfie, D. M. Mackay, *T. M'Laren, K. M'Lean, J. G. [illegible], N. H. Macmillan, W. S. Malcolm, W. R. Mander, J. S. Martin, F. J. R. Mompié, R. L. Moorhead, J. S. Norwell, B.Sc.; T. T. [illegible], E. L. Owen, R. Owen, C. W. Peach, H. C. Pearson, A. D. [illegible], G. R. Plante, W. A. Potts, B.A.; W. H. Price, G. L. Procter, J. C. Rait, *D. Rankine, M.A.; M. T. Ran, M.A., B.Sc.; J. K. Raymond, E. S. Reid, H. Richardson, W. P. Richardson, R. J. [illegible], G. L. Roberts, R. G. Robson, M.A.; T. E. E. Roddis, V. A. Ross, R. Roycroft, T. D. Sadler, R. Samut, E. W. K. Scott, R. G. Selby, H. J. F. Simson, E. M. Skeete, E. R. Snijman, J. E. W. Somerville, F. S. Stanwell, W. H. Steele, J. Stenhouse, A. Steven, G. E. Stewart, W. Stokes, J. C. Stuart, T. Stuart, D. C. Sutton, W. M. Taylor, F. S. C. Thompson, J. A. Thwaites, J. B. K. Tough, J. O. Veitch, A. Wallace, G. Wallace, D. Waterston, *J. R. Watson, M.A., B.Sc.; J. Watt, *A. R. Wilson, M.A.; *W. de W. Wishart, J. Wood, and J. B. Wood.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Examiners on Thursday, July 4th:

Passed in Anatomy and Physiology.—A. H. M. Saward, O. Marriott, A. H. B. Kirkman, W. P. Grellett, V. J. Crawford, A. R. Thomas, J. E. Powell, and A. W. Nourse, students of Guy's Hospital; P. W. Rowland, L. A. Baiss, and C. P. Burd, of St. Bartholomew's Hospital; G. H. Coltart, of Westminster Hospital; H. H. J. Edwards, H. C. Ross, H. B. G. Newham, and E. E. Nicholl, of St. Thomas's Hospital; W. G. Porter and J. W. Browne, of Charing Cross Hospital; V. C. Bensley, of St. Mary's Hospital; and A. Mercer, of University College, London.

Passed in Anatomy only.—S. H. Mason, of Guy's Hospital.

Fifteen gentlemen were referred in both Anatomy and Physiology.

Friday July 5th:

Passed in Anatomy and Physiology.—J. H. Roberts, C. D. Outred, C. B. Thomson, T. H. W. Landon, and W. L. Baker, of Guy's Hospital; A. R. C. Parsons, of King's College, London; F. Horridge, G. E. Gask, and R. S. F. Hearn, of St. Bartholomew's Hospital; D. Davies, S. L. C. Mondy, of University College, London; W. F. Willis, G. A. Hutchinson, and H. T. Mann, of St. Mary's Hospital; S. A. Lucas, of Cambridge University and St. Thomas's Hospital; J. H. Robinson, of Charing Cross Hospital and Mr. Cooke's School of Anatomy and Physiology; H. W. Fisher, of London Hospital; and Arnold S. Good, of St. George's Hospital.

Eighteen gentlemen were referred in both Anatomy and Physiology.

Monday, July 8th:

Passed in Anatomy and Physiology.—F. Hasler and E. K. Brown, of London Hospital; E. E. Parrett and K. B. Alexander, of Guy's Hospital; T. P. [illegible] and H. Davies, of St. Bartholomew's Hospital; C. E. Fenn and G. O. Pierce, of King's College, London; C. E. Turner, of University College, London; P. Gardiner, of Middlesex Hospital; and P. D. Cogswell, of St. Mary's Hospital.

Passed in Anatomy only.—G. S. Moore, of London Hospital and Mr. Cooke's School of Anatomy and Physiology.

Passed in Physiology only.—E. C. Plummer, of King's College, London; F. R. [illegible], of St. Bartholomew's Hospital; E. [illegible] and W. W. Claridge, of Middlesex Hospital; and H. P. Shanks, of University College, London.

Nineteen gentlemen were referred in both subjects, 5 in Anatomy only, and 1 in Physiology only.

Tuesday, July 9th:

Passed in Anatomy and Physiology.—E. F. Rose, of St. Bartholomew's Hospital.

Passed in Anatomy only.—J. M. A. Manning and C. N. Chadborn, of St. George's Hospital; W. St. A. St. John, of St. Mary's Hospital; F. A. Johns, of London Hospital; L. E. Owen, of University College, London; and C. C. Poole, of Guy's Hospital.

Passed in Physiology only.—J. J. C. Hamilton, of King's College, London; C. A. C. Salmon, of Guy's Hospital; F. [illegible], of St. Thomas's Hospital; A. E. Seller, of London Hospital; and F. J. Waldmeyer, of Syrian Protestant College, Beyrout; and London Hospital.

Four gentlemen were referred in both subjects, 4 in Anatomy only, and 4 in Physiology only.

THE SOCIETY OF APOTHECARIES OF LONDON.

PRIMARY EXAMINATION, PART I.—The following candidates passed in:

Chemistry.—F. R. Greenwood, St. Bartholomew's Hospital; E. C. Scarlett, Royal Free Hospital.

Materia Medica and Pharmacy.—C. E. C. Child, Charing Cross Hospital; L. T. Lavan, St. Bartholomew's Hospital; E. E. H. Madden, Royal Free Hospital; G. H. Williams-Parry, Sheffield; A. Ross, Guy's Hospital; C. H. Thomas, London Hospital.

PRIMARY EXAMINATION, PART II.—The following candidates passed in:

Anatomy and Physiology.—M. E. Bennett, Royal Free Hospital; G. E. Brooke, Cambridge and London Hospital; H. J. Clutterbuck, Middlesex Hospital; A. M. Edey, Sheffield; T. A. E. Fawcett, Leeds; C. L. Francis, St. Bartholomew's Hospital; C. Franks, Westminster Hospital; G. C. Hobbs, St. Bartholomew's Hospital; W. E. G. Maltby, St. Bartholomew's Hospital; H. D. Matthews, Middlesex Hospital; C. Powell, Cambridge and St. Thomas's Hospital; B. G. Roscoe, Manchester; C. H. Thomas, London Hospital.

Anatomy.—W. F. E. Ashton, Birmingham; G. F. Beacher, Sheffield; H. J. de Saram, Middlesex; E. P. Marett, St. Thomas's Hospital; G. L. Meredith, London Hospital; H. Morris, St. Bartholomew's Hospital; G. Parnell, Charing Cross Hospital.

Physiology.—T. H. Bailey, King's College; F. E. Bissell, Birmingham; M. [illegible], [illegible]; R. F. W. Crawford, St. George's Hospital; G. A. Crowe, London Hospital; G. W. Dutton, Middlesex Hospital; M. B. Hebron, King's College; C. E. Hibbard, Guy's Hospital; B. Hogan, London Hospital; H. M. Maitland, Royal Free Hospital; S. J. Meredith, Birmingham; C. E. Proctor, Liverpool and Edinburgh; F. L. Roper, Dublin; E. G. Smith, Westminster Hospital and London Hospital; W. A. Sugden, St. Mary's Hospital; D. L. Thomas, Birmingham.

ERRATUM.—In the pass list of the University of Dublin which appeared in the BRITISH MEDICAL JOURNAL of July 6th (p. 58), the name of Mr. G. Myles, M.B., B.Ch., B.A.O., was incorrectly spelt "Miles."

OBITUARY.

T. GEORGE SLOAN, M.A.GLASG., M.B., C.M.EDIN.

WE regret to announce the premature death of Dr. Sloan, of West Calder, on July 3rd. The attendant circumstances are melancholy in the extreme. He was to have been married on July 16th. In February last he was thrown from his horse, sustained some concussion of the brain, and was unconscious for nearly two hours. He was seen by a brother practitioner, and advised rest for a few days at least. Unfortunately, in his extreme anxiety to save his invalid mother and his *fiancée* from worry, and in his desire to succeed in practice, he neglected this sound advice, and went about his professional duties after only a few hours' rest. Till the day of his death his friends never heard of this accident. But since that time, as is now known, he suffered off and on from pains in the head, lassitude, and sleeplessness. To relieve the pain and induce sleep he had on several occasions tried

a little inhalation of chloroform. On the night before his death he had told the local chemist that he was suffering from severe pains in the head. As he had an appointment in Edinburgh next day, he asked his housekeeper to call him early, so that he might be able to do his work at West Calder beforehand. After attempting in vain to rouse him next morning, she went into his room and found him dead, his face buried in his handkerchief, and a stoppered bottle of chloroform at his bedside.

Dr. Sloan took a full Arts course at the University of Glasgow, where he gained the Gold Medal in Senior Greek, with other distinctions, and took the degree of M.A. in 1887. In 1892, after a course in which he showed distinction in several of his classes, he graduated M.B. and C.M. at the University of Edinburgh.

After acting as assistant to Dr. Muir, of Selkirk, he went a voyage as surgeon to Calcutta. In February last he settled at West Calder. Personally Dr. Sloan possessed attractive and winning manners. He was the second son of the Rev. John M. Sloan, of the Chalmers Memorial Free Church at Edinburgh, and was 26 years of age. He was buried on July 6th in the Grange Cemetery.

PROFESSOR FRANZ VON RIED, the oldest of German surgeons, died at Jena on June 10th, aged 85. He was a pupil of Michael Jaeger, at Erlangen, and lectured in his place for some time. In 1846 Ried was appointed Professor of Surgery in the University of Jena, and this appointment he continued to hold till 1884, when he retired. His principal work is *Die Resectionen von Knochen* (Nüremberg, 1847), which in its day was a leading authority on the subject.

THE death is reported of Dr. **JOHN HADDEN**, of Hampton Court. He graduated as M.D. R.U.I., L.R.C.S.I. and L.M. in 1864, and had practised for twenty-five years in Horncastle. Some three years ago he entered into practice in London Road, Kingston. Recently he took a house at Hampton Court for the reception of resident patients. Dr. Hadden died at St. Thomas's Hospital, to which institution he was admitted a short time previously to undergo an operation. The deceased gentleman, who was 53 years of age, leaves a widow and a family.

WE regret to announce the death of Mr. **JOHN DUNLOP**, M.B., of Wilmslow, Cheshire, which occurred after an illness of a few days' duration at the early age of 30. Mr. Dunlop, who was much esteemed in the locality for his self-denying and compassionate bearing, succumbed to an attack of pneumonia following a chill caught in the discharge of his duties.

INDIA AND THE COLONIES.

INDIA.

THE COUNTESS OF DUFFERIN'S FUND.[1]—The tenth annual report records the steady expansion of the work of the Countess of Dufferin's Fund. The number of patients has increased, the building of new hospitals has made steady progress, and the number of students under training has "on the whole shown a fair improvement." The number of patients treated is very considerable, amounting in [illegible] to a total of [illegible], of whom [illegible] were in-patients, [illegible] out-patients treated at the hospitals, and [illegible] out-patients treated free at home. There seems to be considerable difficulty in obtaining suitable women to educate for the work. It is not found easy to persuade Native ladies of the higher classes to take up a medical career, but by degrees students have been attracted, so that now there are about [illegible] undergoing training for the various grades of assistant surgeons, hospital assistants, and nurses. It is to be noted, however, that nearly the whole of these are being assisted in their education by scholarships. The assistant surgeons, it is clear, are in many cases occupying posts of great responsibility, being in fact in charge of hospitals. In regard to the staff of completely qualified medical women, it is to be observed that five out of the twelve employed have received [illegible] education, having been sent to England [illegible], with the [illegible] of enabling the fund "gradually to discontinue the present expensive plan of engaging lady doctors from home." The comment is obvious that if the object of the association is to give the women of India the benefit of European medical skill, it would be better not to seek so carefully after cheapness.

DISPENSARIES.—Dispensaries are, says the [illegible] of May 28th, becoming more popular in the Central Provinces. Five more of these establishments were opened last year, while the total number of in-patients increased by [illegible], and of out-patients by more than [illegible]. This noticeable increase can be put down to no other cause than the greater favour in which the dispensaries are held, for the general health was better than in [illegible]. Operations for cataract, it may be remarked, have more than doubled within twelve months. In one country town in which this percentage was attained the Chief Commissioner asked the civil surgeon whether so high an average could be maintained. The reply was that the surgeon knew of a hundred more cases of cataract in the immediate vicinity. "The Chief Commissioner," says the resolution, "was much impressed with the amount of curable suffering of which this answer gave evidence." The municipalities are beginning to recognise in dispensaries a useful and profitable investment for their surplus funds. Of the increase of Rs. [illegible] observable in the total income of the dispensaries during [illegible], the greater part was provided from municipal funds. The expenditure is also larger by more than Rs [illegible], owing mainly, it is said, to an overcharge for European medicines. Private subscriptions have also increased, improved accommodation has been effected in many hospitals, whilst hospital inspection on the part of civil surgeons has also improved. These results are largely due to the energy and ability of Surgeon-Colonel Rose, late Administrative Medical Officer, Central Provinces, and now Inspector-General of Civil Hospitals, Bengal.

THE Maharajah of Patiala, acting on the suggestion of Surgeon-Major Owen, his medical adviser, has applied for the services of a medical officer to carry out an investigation into the fevers which prevail in his State during the rains. Surgeon-Major Ronald Ross, Madras Medical Service, is the officer named by the Maharajah, and his work would be to determine certain questions respecting the micro-organism of malaria in India. He has made a special study of the subject, and he won the Parkes Memorial Prize for [illegible]. The Durbar is prepared to bear all expenses connected with the investigation.

QUEENSLAND.

AT a recent meeting of the Central Board of Health a draft, setting forth in popular language the decisions of the Indian Commission on Leprosy, was approved and ordered to be widely circulated.

NEW GUINEA.

THE NATIVES OF NEW GUINEA.—Professor A. C. Haddon delivered an address at the Anthropological Institute on the Natives of New Guinea, on June 11th. The ethnography of this, our largest tropical insular protectorate, is still not well known, although, thanks mainly to the labours of the wise and energetic administrator, Sir William MacGregor (who, by the way, is a Doctor of Medicine of the University of Aberdeen), much information has recently been obtained. The natives fall into two distinct groups—the true Papuan of the Fly River and Papuan Gulf districts and of the mountain ranges. These are a uniformly dark, frizzly-haired people, with elongated skulls, most of whom scarify their skin. Sometimes numerous families live in immense houses, and there appears to be a good deal of club-life among the men. There are sacred or club houses, often called temples, and sacred ceremonies take place at the initiation of lads into manhood, masks being worn, and the bull-roarer being swung and shown to the youths. The stone club is used all over British New Guinea, but the bow and arrow is confined to the Fly River and Papuan Gulf districts. The natives of most of the coast of the south-east peninsula and of the archipelagoes beyond appear to belong to an immigrant stock of which the former may have come from the New Hebrides, and the latter from the Solomon Islands. They are usually lighter in colour than the true Papuans, often with broad skulls; they tattoo their bodies and live in smaller houses. There are no initiation ceremonies. The bow and arrow are replaced by the spear and the use of shields is universal. These natives have only recently learnt the use of tobacco, but they are inveterate betel chewers; the use of kava is unknown. Unlike the Papuans these people make pottery. The western Papuans are a totemistic people, and animal forms are frequently represented in their decorative art.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE HOSPITAL FOR SICK CHILDREN.

A NEW block has been added to the north block of the Hospital for Sick Children in Great Ormond Street, Bloomsbury, by means of which accommodation has been rendered available for [illegible] or more infectious cases. The cost of building the wing and of furnishing and decorating the whole of the block has been borne by Miss Anna Louisa Cohen and Miss Lucy Cohen as a memorial to their niece, the late Hannah, Countess of Rosebery. The building, which is entirely isolated, is mainly meant for the reception of cases of diphtheria.

PRIVATE ASYLUMS IN GERMANY.—The *Daily News* correspondent, telegraphing from Berlin on July 8th, states that the private lunatic asylums of Haus Kannen, near Amelsbüren, in Westphalia, belonging, like that at Mariaberg, to the Alexian brotherhood, received a surprise visit on July 3rd from an official committee. The inquiry lasted two days, and is said to have yielded such remarkable results that the provincial administration is already considering the advisability of either buying the asylum or building a new one, to be placed under medical supervision and lay guardians. Gross defects were disclosed in the sanitary arrangements.

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[1] The Countess of Dufferin's Fund. Tenth Annual Report of the National Association for Supplying Female Medical Aid to the Women of India. (Calcutta: Office of the Superintendent of Government Printing, India. 1895. Pp. 135. 1 rupee.)

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE SECOND QUARTER OF 1895.

IN the accompanying table will be found summarised the vital and mortal statistics of the forty-three sanitary areas of the metropolis based upon the Registrar-General's returns for the second or spring quarter of the current year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary areas in which the patients had previously resided.

The 33,708 births registered in London during the three months ending June last were equal to an annual rate of 30.8 per 1,000 of the population, estimated at 4,392,346 persons in the middle of this year; this rate precisely corresponded with the mean rate in the second quarters of the five preceding years 1890-94. The birth-rates during the period under notice in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in sex and age distribution of the population. In Kensington, St. George Hanover Square, Hampstead, Stoke Newington, St. Martin in the Fields, and London City the birth-rates were considerably below the average; while in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Olave Southwark, and Bermondsey the birth-rates showed a marked excess.

The 17,869 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 16.3 per 1,000; this death-rate was below that in the corresponding period of any year on record. During the June quarters of the ten preceding years, 1885-94, the mean death-rate was 18.5 per 1,000. The lowest death-rates last quarter in the various sanitary areas were 10.4 in Hampstead, 11.0 in Stoke Newington and in Lewisham (excluding Penge), 11.4 in Wandsworth, 12.7 in Lee, 12.8 in St. James Westminster, and 12.9 in Hammersmith; the highest rates were 20.8 in Poplar, 20.9 in Newington, 21.4 in St. George Southwark, 23.6 in Strand, 24.2 in Limehouse, 24.9 in St. Luke, and 28.4 in St. George-in-the-East. During the quarter under notice 2,011 deaths were referred to the principal zymotic diseases in London; of these 563 resulted from measles, 445 from whooping-cough, 439 from diphtheria, 314 from diarrhoea, 166 from scarlet fever, 81 from different forms of "fever" (including 1 from typhus, 78 from enteric fever, and 2 from ill-defined forms of continued fever), and 3 from small-pox. These 2,011 deaths were equal to an annual rate of 1.8 per 1,000, which was below that in the June quarter of any year on record, and 0.8 per 1,000 below the mean zymotic death-rate in the corresponding periods of the ten preceding years. The lowest zymotic death-rates during last quarter in the various sanitary areas were 0.3 in Lee, 0.6 in Hampstead and in St. Olave Southwark, 0.7 in Wandsworth, 0.8 in Kensington, and 0.9 in St. James Westminster, in Strand, and in Lewisham; while the rates ranged upwards to 3.5 in Mile End Old Town and in Whitechapel, 3.7 in Shoreditch, 3.9 in Poplar, 4.5 in St. Luke, 5.0 in Limehouse, and 6.6 in St. George-in-the-East.

Three deaths from small-pox of persons belonging to London were registered during the three months ending June last, of which 1 belonged to Hammersmith, 1 to St. Giles, and 1 to Rotherhithe sanitary areas. Measles showed the highest proportional fatality in St. Luke, Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and Battersea; scarlet fever in Hackney, St. George-in-the-East, Limehouse, and Rotherhithe; diphtheria in St. Giles, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Camberwell, and Greenwich; whooping-cough in Clerkenwell, Shoreditch, St. George-in-the-East, Limehouse, St. Saviour Southwark, St. George Southwark, and Newington; and "fever" in London City and Plumstead sanitary areas.

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions, during the Second Quarter of 1895.

SANITARY AREAS.	Estimated Population middle of 1895.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhoea.	Phthisis.	Deaths of Children under 1 year of age to 1,000 births.
LONDON	4,392,346	33,708	17,869	30.8	16.3	1.8	2,011	3	563	166	439	445	1	78	2	314	1,945	130
West Districts.																		
Paddington	122,756	744	427	24.3	14.0	0.8	25	—	2	2	8	1	—	5	—	7	39	130
Kensington	167,671	[illegible]	566	[illegible]	13.5	1.3	54	—	4	7	17	5	—	—	—	21	61	148
Hammersmith	108,429	702	349	26.0	12.9	1.1	30	1	2	3	6	9	—	2	—	7	41	125
Fulham	117,745	962	432	33.5	14.7	1.6	46	—	3	4	15	13	—	1	—	10	53	137
Chelsea	99,930	649	[illegible]	26.1	15.7	1.3	32	—	1	2	10	9	—	—	—	10	50	156
St. George Hanover Sq.	74,037	379	271	20.5	14.7	1.1	20	—	1	1	7	7	—	—	—	4	33	135
Westminster	54,008	325	226	24.1	16.8	1.1	15	—	—	2	5	5	—	—	—	3	30	145
St. James Westminster	23,140	132	74	22.9	12.8	0.9	5	—	—	1	—	4	—	—	—	—	10	106
North Districts.																		
Marylebone	137,392	1,141	576	33.3	16.8	1.0	33	—	2	3	5	8	—	4	—	11	71	99
Hampstead	77,592	[illegible]	201	18.7	10.4	0.6	12	—	1	2	3	3	—	2	—	1	21	97
St. Pancras	233,543	1,728	935	29.7	16.1	1.3	77	—	7	9	18	27	—	2	—	14	126	126
Islington...	[illegible]	2,460	1,208	29.4	14.4	1.4	117	—	39	13	18	24	—	1	—	22	122	127
Stoke Newington ...	35,234	183	97	20.8	11.0	1.0	9	—	3	—	1	2	—	—	—	3	9	77
Hackney	216,623	1,560	779	29.0	14.5	1.6	88	—	28	14	13	17	—	1	—	15	76	112
Central Districts.																		
St. Giles	37,654	282	193	30.0	20.6	1.8	17	1	1	1	6	6	—	—	—	2	40	135
St. Martin-in-the-Fields	13,588	43	57	12.7	16.9	1.5	5	—	—	—	1	3	—	—	—	1	9	279
Strand	22,586	151	133	26.5	23.6	0.9	5	—	—	1	3	—	—	—	—	1	20	139
Holborn	32,188	195	159	24.3	19.7	1.2	10	—	4	—	3	2	—	—	—	1	20	108
Clerkenwell	[illegible]	540	302	33.3	18.6	2.1	34	—	4	4	5	12	1	3	—	5	40	141
St. Luke	40,763	499	253	49.1	24.9	4.5	46	—	27	—	5	6	—	1	—	7	19	154
London City	33,824	152	161	18.0	19.1	1.9	16	—	6	2	3	1	—	3	—	1	15	132
East Districts.																		
Shoreditch	[illegible]	1,092	624	34.7	20.4	3.7	114	—	50	4	15	23	—	—	—	22	66	163
Bethnal Green	130,061	1,242	539	38.3	16.6	1.9	61	—	17	7	19	6	—	1	—	11	60	97
Whitechapel	75,820	908	381	48.0	20.2	3.5	67	—	36	3	14	6	—	2	—	6	52	106
St. George-in-the-East	45,227	573	320	50.8	28.4	6.6	74	—	41	7	9	8	—	3	—	6	24	148
Limehouse	56,555	492	343	34.7	24.2	5.0	71	—	31	7	12	16	—	—	—	5	27	163
Mile End Old Town ...	108,443	1,036	517	38.3	19.1	3.5	94	—	47	4	18	15	—	2	—	8	36	141
Poplar	171,230	1,437	887	33.7	20.8	3.9	168	—	96	7	33	22	—	4	—	6	75	161
South Districts.																		
St. Saviour Southwark	26,570	183	133	27.6	20.1	2.4	16	—	—	—	3	9	—	—	—	4	19	175
St. George Southwark	[illegible]	[illegible]	331	35.5	21.4	2.1	31	—	6	2	1	16	—	—	—	6	44	167
Newington	[illegible]	1,106	[illegible]	37.1	20.9	2.2	65	—	2	4	12	30	—	4	1	12	68	173
St. Olave Southwark	13,065	131	58	[illegible]	17.8	0.6	2	—	—	—	—	1	—	—	—	1	6	166
Bermondsey	83,661	777	378	37.2	18.1	1.4	30	—	3	2	9	9	—	1	—	6	43	163
Rotherhithe	40,713	316	183	31.1	18.0	3.4	34	1	6	4	17	2	—	1	—	3	18	114
Lambeth	[illegible]	2,257	1,193	33.3	16.8	1.9	132	—	33	9	20	42	—	2	1	25	126	119
Battersea	165,130	1,346	647	32.7	15.7	2.3	96	—	39	8	19	16	—	2	—	12	67	184
Wandsworth	185,966	1,185	529	25.6	11.4	0.7	33	—	8	3	12	3	—	2	—	5	60	97
Camberwell	252,737	1,945	968	30.9	15.4	1.5	97	—	3	9	41	25	—	3	—	16	102	117
Greenwich	175,183	1,368	704	31.3	16.1	1.6	[illegible]	—	5	8	26	20	—	3	—	6	64	117
Lee...	38,832	[illegible]	123	24.3	12.7	0.3	3	—	—	2	—	1	—	—	—	—	16	115
Lewisham	82,420	515	[illegible]	25.1	11.0	0.9	18	—	4	—	—	9	—	1	—	4	21	108
Woolwich	42,768	[illegible]	113	[illegible]	[illegible]	1.1	12	—	—	3	3	1	—	3	—	2	19	148
Plumstead	61,494	[illegible]	212	[illegible]	[illegible]	2.0	30	—	1	2	5	1	—	19	—	2	30	120

During the quarter ending June last 1,945 deaths from phthisis were registered in London, equal to an annual rate of 1.5 per 1,000. Among the various sanitary areas the lowest phthisis death-rates were recorded in Paddington, Kensington, Marylebone, Hampstead, Islington, Stoke Newington and Lewisham; the highest rate in St. Giles, St. Martin-in-the-Fields, Strand, Whitechapel, St. Saviour Southwark, and St. George Southwark.

Infant mortality in London last quarter, measured by the proportion of deaths under one year of age to registered births, was equal to 130 per 1,000; this rate almost corresponded with the mean rate in the June quarters of the ten preceding years. Among the various sanitary areas the rates of infant mortality were lowest in St. James Westminster, Marylebone, Hampstead, Stoke Newington, Bethnal Green, Wandsworth, Lewisham, and Plumstead; while they showed the largest excess in St. Martin-in-the-Fields, Shoreditch, Limehouse, St. Saviour Southwark, St. George Southwark, Newington, and St. Olave Southwark.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,420 births and 3,564 deaths were registered during the week ending Saturday, July 6th. The annual rate of mortality in these towns, which had increased from 15.4 to 16.7 per 1,000 in the three preceding weeks, further rose last week to 17.5. The rates in the several towns ranged from 9.1 in Croydon, 10.0 in Brighton, and 10.6 in Nottingham, to 21.4 in Bradford, 21.8 in Salford, and 24.4 in Liverpool. In the thirty-two provincial towns the mean death-rate was 17.2 per 1,000, and was 0.5 below the rate recorded in London, which was 17.7 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.3 per 1,000, in London the rate was equal to 3.0 per 1,000, while it averaged 3.7 in the thirty-two provincial towns, and was highest in West Ham, Leicester and Wolverhampton. Measles caused a death-rate of 1.5 in Manchester, 1.6 in Blackburn, and 2.0 in West Ham; whooping-cough of 1.1 in Sunderland and 1.3 in Bolton; and diarrhœa of 2.0 in London, 2.3 in Cardiff and in Salford, 4.3 in Wolverhampton, and 5.1 in Leicester. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 71 deaths from diphtheria in the thirty-three towns included 53 in London, 4 in West Ham, 3 in Salford, and 3 in Leeds. Four fatal cases of small-pox were registered in Oldham, 3 in London, and 1 in Liverpool, but not one in any other of the thirty-two provincial towns. There were 62 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 6th, against 19, 22, and 34 at the end of the three preceding weeks; 17 new cases were admitted during the week against 2, 5, and 25 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 1,637, 1,732, and 1,894 at the end of the three preceding weeks, had further increased to 2,044 on Saturday last, July 6th; 371 new cases were admitted during the week, against 190, 251, and 319 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, July 6th, 925 births and 560 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.4 and 19.2 per 1,000 in the two preceding weeks, rose again to 19.4 last week, and was 1.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.7 in Perth to 25.1 in Greenock. The zymotic death-rate in these towns averaged 3.4 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 285 deaths registered in Glasgow included 16 from diarrhœa, 7 from measles, 4 from scarlet fever, 2 from diphtheria, and 1 from small-pox. Five fatal cases of measles were recorded in Paisley.

LUNACY CASES IN WORKHOUSE HOSPITALS.

"Junior" does not state his case clearly. Probably he refers to a medical certificate in support of an application to a justice for an order for detention of a lunatic in a workhouse. If so, there is nothing to prevent the "medical certificate under the hand of a medical practitioner not being an officer of the workhouse" being signed by "Junior's" deputy, inasmuch as said deputy is not an officer of the workhouse. This certificate must be in Forms of Schedule 2 of the Act 53 and 54 Vict.

INCREASE OF SALARY FOR WORKHOUSE MEDICAL OFFICER.

From the report in the *Derbyshire Times* we learn that at a recent meeting of the Bakewell Board of Guardians, at which the question of an increase of salary to Dr. Allen, the medical officer of the workhouse was being considered on the presentation of a report made by a subcommittee that an increase of salary of £10 per annum should be awarded, there appears to have been most strenuous opposition by several of the guardians, but notwithstanding this the report of the committee was adopted by resolution of the majority. We are unable to see that there was any reasonable ground for opposing this report. The decision must be highly satisfactory to Dr. Allen and his supporters.

THE WEXFORD GUARDIANS AND THE LUNATICS.

The letter recently circulated through the press on the state of the Irish workhouses was discussed by the above Board at its last meeting, with the result that a committee was appointed to confer with the medical officer about the condition of the lunatics in the workhouse. Some of the guardians were of the opinion that much more should be done for these poor afflicted creatures, and that in many cases the absence of appropriate treatment and the surroundings of the workhouse contributed to accentuate and confirm the condition of mental instability, which in more favourable circumstances might have been arrested. This question is of extreme importance, and we trust that the action of this Board may have far-reaching results.

MEDICAL NEWS.

SOCIETY FOR THE STUDY OF INEBRIETY.—At a meeting on July 4th, Dr. Norman Kerr in the chair, Dr. A. Mansfield Holmes, of Denver, U.S.A., gave an interesting account of the records of the Dalldorf Asylum at Berlin. The proportion of cases of hereditary insanity to acquired insanity was from 2 to 1 to 3 to 1 in different periods. Of the former group, 9 per cent. of the cases were directly traced to drunken parents; of the latter, 10 per cent. The Director, Dr. Rust, placed heredity as the chief cause of insanity, and alcoholism the second. His conclusions were that alcohol excited to acquired insanity and produced hereditary insanity by bringing about organic changes in the ancestor which are transmitted to the children in the form of predisposition. Periodical drinking to excess was more detrimental to the individual parent and habitual to the offspring. Dr. Kerr, with reference to the objections urged in the House of Lords as to undue interference with the liberty of the subject and other abuses of a law for the restraint of habitual drunkards, said there would be no difficulty, by definition, ample inspection, power of appeal, etc., in so safeguarding the interests of habitual drunkards as to render any such abuse practically impossible.

THE first annual meeting of the Registered Nurses' Society (269, Regent Street, London) was held by the kind invitation of the Duke and Duchess of Abercorn at Hampden House on July 6th. The chair was taken by Dr. Bedford Fenwick, Treasurer of the Society, and the report of the Committee showed that the Society has achieved a marked success in its first year of working. It was formed in order to enable the public to obtain the services of registered trained nurses, it being an essential condition of membership that every nurse must have worked for at least three years in hospitals, and must possess the highest professional qualifications and personal character. The nurses obtain their entire earnings, less a deduction of 7½ per cent., to cover the expenses of management. That the Society has met a public want is evident from the fact that more applications for nurses have been made to the Society than it could supply. That the sixteen senior nurses on the average have received £111 12s. for an average of fifty-one weeks' work is conclusive proof of the benefits of the Society to the nurses themselves. The report of the Committee, and votes of thanks to Mrs. Bedford Fenwick, who founded the Society, and has since acted as its Honorary Superintendent, and to the Duke and Duchess of Abercorn for their hospitality, were carried by acclamation.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; doubly qualified. Salary, £150 per annum, with an allowance of £30 per annum for cab hire, furnished rooms, fire, lights, and attendance. Applications to Alex. Barrett, Secretary, by July 16th.

BOROUGH OF WEST HAM.—Medical Superintendent for the Borough Hospital for Infectious Diseases at Plaistow. Salary £200 per annum, with annual increment of £10 up to £250, with apartments, rations, and washing. Not less than 25 years of age. Applications, on forms provided, to be sent to F. E. Hillcary, Town Clerk, Town Hall, West Ham, E., by July 23rd.

BRADFORD INFIRMARY AND DISPENSARY.—Honorary Physician. Applications to the Secretary by July 22nd.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.—Assistant Bacteriologist in the Antitoxin Department. Salary, £200 a year. Applications to the Director by July 22nd.

CANCER HOSPITAL (FREE), Fulham Road, S.W.—House-Surgeon: Appointment for six months. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by July 15th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer, doubly qualified. Salary, £100 per annum, with board, etc. Applications to the Secretary by July 16th.

CHICHESTER INFIRMARY.—House Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by August 12th.

COUNTY ASYLUM, Gloucester.—Third Assistant Medical Officer, unmarried, doubly qualified, and not over 30 years of age. Salary, £100 per annum, with board (in attendance), lodging, and washing. Applications to the Medical Superintendent by July 20th.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary, £35, board, exclusive of beer, wines, and spirits, residence, washing, and attendance. Applications to the Secretary by July 20th.

DROITWICH UNION.—Medical Officer for the Ombersley Medical District; must reside in the District. Salary, £57 10s. per annum, with such extra fees as allowed by the Local Government Board. Applications to Arthur James Bearcroft, Clerk, Boardroom, Droitwich, by July 16th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 a year, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or in lieu thereof the sum of £20 per annum. A knowledge of Welsh desirable. Applications to Thos. Thomas, Secretary, Board Room, Baglitt Street, Holywell, N. Wales, by July 15th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Head, N.—Junior House-Surgeon. Appointment for six months. Board, lodging, and laundry provided. Applications, on forms provided, to be sent to Lewis H. Glenton Kerr, Secretary, by July 29th.

GUY'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Public Health. Applications to the Treasurer, Counting House, Guy's Hospital, S.E., by July 20th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident Assistant Physician. Applications to the Secretary by July 18th.

HOSPITAL FOR WOMEN, Soho Square.—Non-Resident House-Physician. Appointment for three months. Applications to the Secretary by July 31st.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by July 20th.

POPLAR HOSPITAL FOR ACCIDENTS.—Senior Assistant House Surgeon. Salary, £80 per annum, with board and lodging. Applications to the House Governor by July 19th.

QUEEN'S JUBILEE HOSPITAL, Earl's Court.—Surgeon. Applications to the Secretary by July 14th.

ROYAL VICTORIA HOSPITAL, Bournemouth.—House-Surgeon and Secretary. Salary, £100 per annum, with board. Appointment for two years. Applications to the Chairman of the Committee by July 17th.

SALFORD UNION INFIRMARY, Hope, near Eccles.—Assistant Medical Officer; doubly qualified. Salary, £180 per annum, with furnished apartments in the Infirmary. Applications, endorsed "Assistant Medical Officer," to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by July 23rd.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon and Senior Assistant House-Surgeon, doubly qualified. Salary for the former, £120 per annum, with a prospective advance of £10 per year for the second and third years; and for the latter £80 per annum, with board, lodging, and washing. Applications to the "Medical Staff of the Sheffield General Infirmary, to the care of the Secretary," by July 13th. The election will take place on July 26th.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon. Appointment for six months. Board and residence provided, and £10 after six months' satisfactory service. Applications to Major C. Tyler, Secretary, by July 16th.

STROUD GENERAL HOSPITAL.—House-Surgeon; doubly qualified. Salary, £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary, G. J. Holloway, the Hospital, Stroud, by July 17th.

SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to Henry Bonner, Secretary, by July 15th.

UNIVERSITY OF GLASGOW.—Two Examiners for Degrees in Medicine to Examine in Chemistry and Materia Medica respectively. Applications to Alan E. Chapperton, Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by July 25th.

YORK DISPENSARY.—Resident Obstetric House-Surgeon; unmarried. Salary, £— per annum, with furnished apartments, coals, and gas. Applications to Mr. W. Draper, De Grey House, York, by July 23rd.

MEDICAL APPOINTMENTS.

BAILEY, Thomas R., M.D.Edin., reappointed Medical Officer of Health to the Bilston District Council.

BALLANTYNE, J. W., M.D., F.R.C.P.E., F.R.S.Edin., appointed Examiner in Midwifery in the University of Aberdeen.

BRIDGES, Ernest C., M.B., B.S.Durh., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Great Northern Central Hospital.

CHARPENTIER, A., M.D.Durh., appointed Outdoor Medical Officer for the Uxbridge District of the Uxbridge Union.

CHRISTMAS, Charles Denn, M.D.Brux., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Streatham District of the Clapham Union.

GARSTANG, T. W. H., B.A.Oxon, M.R.C.S., appointed Medical Officer of Health to the Knutsford Urban District Council.

GIDLEY, G. G., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Collumpton and Kentisbere District of the Tiverton Union, *vice* J. H. Lloyd, L.R.C.P.Edin., M.R.C.S.Eng., resigned.

GOODMAN, Godfrey, L.R.C.P.I., L.R.C.S.I., L.M.R.C.P., L.M., appointed Medical Officer of Health to the Rural Sanitary District of the District Council, Brigg Union, *vice* Mr. Moxon, M.R.C.S., resigned.

GOODMAN, W. H., L.D.S.R.C.S.Eng., appointed Surgeon to the Devon and Exeter Dental Hospital, *vice* J. A. Mallett, resigned.

GREIG, W. C., M.B. and C.M.Edin., appointed Hon. Physician to H.B.M.'s Legation at Tangier.

HALPIN, J. E., L.R.C.S.I., L. and L.M.K.Q.C.P.I., appointed Public Vaccinator for Fifth District, Mansfield Union, *vice* H. Parry Jones.

HENDRIES, C.M., M.B.Durh., M.R.C.S.Eng., reappointed Medical Officer for the Stoke Lyne District of the Bicester Union.

HICHENS, F., M.D.Lond., M.R.C.S., D.P.H., reappointed Medical Officer of Health for the Redruth Urban District.

HIRST, Mr. J. C., appointed Medical Officer for the Burwash District of the Uckfield Union.

JOHNSTONE, E., M.B., appointed Medical Officer for the Clayton District of the Prestwich Union.

JONES, Dr., appointed Medical Officer for the Graugetown District of the Cardiff Union.

KELLY, Charles, M.D., F.R.C.P.Lond., M.R.C.S., reappointed Medical Officer of Health to the Midhurst Rural District Council.

MINTYNE, Dr., appointed Medical Officer of the Workhouse and for the Uxbridge District of the Uxbridge Union, *vice* William Rayner, M.R.C.S.Eng., deceased.

MUDGE, Z. B., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Pudsey Urban District Council, *vice* W. F. Cleaver, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

NAIRN, R. W., M.B., C.M.Glasg., appointed Medical Officer for the Farnsfield District of the Southwell Union, *vice* G. Y. Polson, M.B., C.M.Edin., resigned.

PERMEWAN, W., M.D.Lond., F.R.C.S.Eng., appointed Honorary Laryngologist to the Royal Southern Hospital, Liverpool.

PHILLIPS, Edgar V., M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.R.C.S.I., appointed Medical Officer and Public Vaccinator to the No. 5 District, Market Harborough Union; Medical Officer, Market Harborough Rural Sanitary District; and Medical Officer of Health, Orenden Rural Sanitary District, *vice* Thomas Macaulay, resigned.

RHIND, Thomas, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator No. 1 Western District, Billesdon Union, *vice* E. V. Phillips, resigned.

SELBY, Edmond Wallace, M.B., B.S.Lond., F.R.C.S.Eng., appointed Honorary Surgeon to the Doncaster General Infirmary and Dispensary.

SEWILL, J. Selton, M.R.C.S., L.R.C.P., L.D.S., appointed Dental Surgeon to the St. Marylebone General Dispensary, Welbeck Street, W.

SMITH, Dr. T., appointed Medical Officer for the Rampford Speke District of the St. Thomas Union, *vice* A. A. McKeith, M.B., C.M.Glasg., resigned.

SYMONDS, Charters J., M.S., M.D.Lond., F.R.C.S.Eng., appointed Consulting Surgeon to the Stockwell Orphanage, *vice* Arthur E. Durham, F.R.C.S., deceased.

VEALE, F. J. de Coverly, M.B., Ch.B.Vict., appointed Assistant Medical Officer at the County Asylum, Lancaster.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

WEDNESDAY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Gowers.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CARTER.—At Scarborough, on the 3rd inst., the wife of Deputy Surgeon-General H. Vandyke Carter, M.D., Q.H.S., of a daughter.

RICE.—On the 5th inst., at 5, Clarence Terrace, Leamington Spa, the wife of Bernard Rice, M.D.Lond., of a son.

SILLAR.—At 46, George Square, Edinburgh, on July 2nd, the wife of W. Cameron Sillar, M.B., of a son.

MARRIAGE.

LAWES—LUMBY.—On June 11th, at the Parish Church, Granchester, by the Rev. Dr. Perowne, Master of Corpus Christi College, Cambridge, assisted by the Rev. E. T. S. Carr, President and Fellow of St. Catharine's College; the Rev. C. E. Graves, Fellow and Tutor of St. John's College; and the Rev. E. Godfray, Vicar of the parish, Cuthbert Umfreville Laws, M.B., M.R.C.S., to Grace Margaret, daughter of the Rev. Dr. Lumby, Lady Margaret Professor of Divinity in the University of Cambridge.

DEATHS.

DAVIES.—On June 16th, Joyce Caroline, the dearly loved and only daughter of Arthur Templer and Alice Davies, 28, Finsbury Square.

SCATLIFF.—On the 10th of June, at Macaulay House, Macaulay Road, Clapham Common, Harriet Scatliff, aged 70, the devoted wife of the late J. P. Scatliff, M.D., formerly of 132, Sloane Street, and Clapham Common.

SMITH.—On the 4th inst., at 18, Harley Street, W., Gertrude Mary Heywood, eldest daughter of Heywood Smith, M.D., aged nearly 24.

SYLVESTER.—June 26th, at the Court House, Trowbridge, Wiltshire, George Mairis Sylvester, M.R.C.S., in his 78th year.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MEMBER wishes to know what will deodorise carbolic acid and deodorise chromic acid without interfering with their antiseptic properties.

M.B. has a patient residing in the North of England who has been suffering from influenza in the winter, with a troublesome cough which has persisted for several months. It has now entirely gone, but left portions of the lung weakened. He would like to know the most suitable place for her to reside in the South of England during next winter, where she would not be confined to the house, as would be the case in the North.

TREATMENT OF UNDESCENDED TESTICLE, ETC.

PLYMOUTH writes: I have a patient—a boy, aged 12—who has right congenital hydrocele with a rather large inguinal ring and a left testicle retained in the inguinal canal. The treatment that suggests itself to me is a truss for the right side and a horse-shoe protective pad for the left retained testicle. Will any reader who has had experience of a similar case give an opinion on the case?

ANSWERS.

C. W. M.—Our correspondent should consult a general practitioner.

M. H.—A slight varicocele would not necessarily disqualify a candidate for the Royal Navy, but no definite opinion in any individual case could be expressed except by the medical examiners.

SUMMER COURSES IN BACTERIOLOGY.

I.M.S.—The London Post-Graduate Course usually includes a series of lectures on bacteriology, each of which is followed by practical work in the bacteriological laboratory of King's College. Full particulars may be obtained from Dr. Fletcher Little, 32, Harley Street.

THE STRAIGHTENING OF ANKYLOSED KNEES.

E. E. (Oldham) writes, in reply to X., to report two of his cases suffering from the effects of rheumatoid arthritis in the knees. In one patient one knee affected had become flexed and ankylosed by fibrous adhesions; this has been successfully straightened with a Thomas's knee splint in a period of four weeks by the tightenings of bandages. Opium pill was given to allay most of the severe pain after each forcible stretching of the knee. The patient can now stand quite straight, and is commencing to walk without support. In the other case both knees are affected, and have been successfully straightened by the same process, but the patient has not recovered sufficiently yet to be up. This method of straightening ankylosed knees is fully treated in *Contributions to Orthopædic Surgery*, by Robert Jones, F.R.C.S.E., of Liverpool, and John Ridlon, M.A., M.D., Chicago.

DER DEUTSCHE ÄRZTETAG.

W.—The Deutscher Aerztetag, or Diet of German Physicians, consists of the deputies of the various associations of practitioners throughout the empire, and may fairly be considered to express the opinions generally prevailing on the various topics under discussion. Any medical association numbering at least twenty-five members acquires by entering the Aerztevereinsbund, or Union of Medical Associations, the right to depute a delegate, with the power of voting, to the yearly Convention, the Aerztetag. At the meeting at Eisenach on June 26th and 27th, which was the twenty-third annual assembly, 107 delegates, representing some 11,000 members of the medical profession, were present. A council is elected each time for the management of the affairs in general and the editing of the *Aerztliches Vereinsblatt*, the official organ of the Association. In reality this council is almost a permanent one, as the same members, with few exceptions, are reinstated by a great majority. Thus Dr. Graf, for the time being Vice President of the Prussian Landtag, has for several years occupied the post of President of the Aerztetag. Executive powers are not exercised by this congress, but, by expressing the views and wishes of the professions at large, it has repeatedly proved of much real value to members of high importance. The Aerztetag is not to be confounded with the Aerztekammern, or Chambers of Physicians, which were instituted under the administration of the former Minister, von Goßler, for each one of the various provinces. These boards consist of a certain number of members chosen by direct ballot in each district by all practitioners therein resident, irrespective of whether they belong to an association or not. Their duties and prerogatives are very much the same in their particular sphere as those of the Aerztetag for the whole country; each is a sort of medical county council without executive powers.

NOTES, LETTERS, ETC.

ERRATUM.—Dr. Charles Porter (Stockport) writes: I find there is a clerical error in the article on Metropolitan Water Supply, published at p. 1283 of the BRITISH MEDICAL JOURNAL of June 29th. In paragraph 4, beginning "Judged by the relatively," the words "carbon" and "nitrogen" ought, of course, to be transposed.

THE HORSES OF MEDICAL MEN.

THE annual report of the Society of Arts just issued for 1894-5 has the following paragraph: "The ninth and last course of the session consisted of two lectures by Mr. Ernest Hart upon a subject which he has made his own, that of 'Japanese Art Industries.' Mr. Hart dealt with his subject from a more commercial point of view than he adopted in his previous lectures on 'Japanese Art Work,' in 1886. He pointed out that much of the most modern Japanese work is of very high artistic value, and will bear comparison with the productions of the old Japanese masters, and indicated the direction in which he thought Japanese artists should work if they desired to supply the European market. The lectures were finely illustrated from Mr. Hart's own collection."

THE FUNCTION OF THE SUPRARENAL BODIES.

DR. C. DANIELS (British Guiana Medical Service) writes: In the recent Goulstonian Lectures on the Suprarenal Bodies, by Dr. Rolleston, doubt is thrown on the theory that these organs remove pigment from the blood. As bearing on this, it may be of some importance to point out that, whilst in acute malaria pigment is found in these organs in common with all others, it is not so to any great extent, and is chiefly in the capillaries. No such accumulation as always takes place in the spleen and liver have I ever seen. Further, shortly after acute malaria there is none to be found in them, nor is any evidence of it found in cases where the spleen shows old malarial pigmentation. Further, in ankylostomiasis, whilst the liver and other organs give pigmentary evidence of hæmolysis, there is no increased pigmentation of these organs. My standard of comparison in both is that of the coloured races. In connection with the hæmorrhages in the suprarenals in the newly-born in a case I had at Queen Charlotte's Hospital in June, and in two I have seen here, there was no laceration of the organs, and the blood was contained in the meshes of trabeculæ, which were unruptured in an orderly manner, not suggestive of violence.

"LOCAL CANDIDATES AND THE PUBLIC ADVERTISEMENT OF VACANCIES."

ANOTHER D. P. H. writes: Like "D. P. H.," I have during the past two months been at considerable expense in having testimonials printed for appointments which in every instance have been filled by a local man. Only last week I was fortunate enough to be one of three selected candidates, the other two being local men, sons of aldermen of the town. Naturally when I was asked to meet the guardians I thought I was surely in the "running," but imagine my disgust when the voting came out 22, 10, and 1, the last one being given to me (I admire one who has the "backbone" to vote according to his convictions). Such treatment as this is, I hold, a gross insult. When it was so cut and dried why put an outsider to such inconvenience, especially to be insulted? In addition to the insult, I was very much amazed next day to see the account of the meeting, with voting, published in a hampering local paper which has a wide circulation in the district where I am practising. Guardians and other electing bodies should remember that candidates are not devoid of some sense of feeling, and should bear in mind the good old motto, "Do unto others as you would they should do unto you."

IS CARBOLIC ACID A SUITABLE AGENT TO BE EMPLOYED IN CARRYING OUT THE ANTISEPTIC TREATMENT OF ENTERIC FEVER?

SURGEON LIEUTENANT-COLONEL R. H. CURTIS, A.M.S., writes: Of late years the soundness of the principle of treating cases of enteric by producing intestinal antisepsis has been steadily gaining ground, and among the numerous antiseptic agents employed for the purpose in view pure carbolic acid has occupied a foremost place. For the past three years I have used this acid largely in the treatment of enteric fever, and with very gratifying results. Certain theoretical considerations, however, have made me ask myself, Has carbolic acid been really responsible for the good effects which I have observed to follow its use in enteric fever?

While lately reading in the new edition of Quain's *Dictionary of Medicine* the article on Micro-organisms, I learnt that Chantemesse and Widal have experimentally proved that the enteric bacilli actually develop in the presence of carbolic acid, and that by its aid the enteric bacilli can be separated from many other putrefactive organisms which may happen to exist in the same medium, the latter being killed while the former developed.

I am well aware that carbolic acid is primarily given in enteric fever in order to attenuate, if not altogether destroy, the septic processes taking place in the intestinal canal; but any antiseptic agent may do more than this—it may be able to follow the enteric bacillus into the blood. If it does, and the experiments referred to are reliable instead of producing an antitoxic effect in the blood, it may have actually an opposite effect, encouraging the growth of the specific bacteria. I may

be answered that my fears are groundless owing to the minute quantity of the antiseptic which enters the blood. Is that the case?

In treating a case of enteric fever of any severity I am in the habit of giving, as a daily constituent, a solution of pure carbolic acid (advertised every second hour up to ten doses, and in many instances have continued doing so for ten days, or even longer, with, I am satisfied, unquestionable benefit to the patient. I think it is reasonable to assume that the daily administration for ten days or more of half a drachm of pure carbolic acid will result in a considerable quantity of the acid being absorbed into the blood. Granting this, it ought, if the experiments of Chamberlain and Vidal be correct, to produce an increase and not a diminution of the enteric bacilli in the circulation.

THE DENTAL PROFESSION.

DR. JOHN BROWN (Bacup) writes: From my own experience, as well as that of my friends, who are able to judge as to unqualified dental practice in some of our Lancashire towns, the statements of Dr Hugh Woods are amply justified. Mr. Storer Bennett's statement may be pertinently met by what he knows of the dental practice in Hanover square and its environments. I know of unregistered dentists who have far larger practices than registered men. There is nothing to prevent anyone practising dentistry so long as he avoids the words dentist, dental surgeon, etc. This is well known, and is acted upon in the North of England.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Mr. P. E. Adams, London; Dr. F. J. Allen, Birmingham; G. W. Ancram, M.B., Gloucester; Mr. S. E. Atkins, Axminster; Professor Attfield, Watford; Anti-Quack; Messrs. Arthur and Co., London; Mr. D. Ainley, Halifax; Dr. P. H. Anthonisz, Galle, Ceylon; C. A. Attmann, M.B., Port Lincoln, S. Australia; Antitoxin. (B) Dr. W. A. Bond, London; Messrs. Burt, Boulton, and Haywood, London; Dr. F. Beach, London; Dr. R. Broadbent, Leicester; Dr. B. Bramwell, Edinburgh; Mr. J. Blanche, Birmingham; Mr. M. M. Bonham, London; Mr. A. H. Boys, St. Albans; Dr. E. Bucknill, Rawtenstall; Dr. J. Brown, Bacup; Better Late than Never; Dr. W. Bruce, Dingwall; Mr. J. G. Bride, London; M. M. Bowlan, M.B., London. (C) Mr. A. H. Cock, Edinburgh; Mr. W. H. Cope, Birmingham; Mr. W. E. Chapman, London; J. R. Craig, M.B., Ballymoney; Mr. A. Carrie, Portsmouth; Dr. W. Carter, Liverpool; Dr. A. W. Campbell, Rainhill; C. C. Chidell, M.B., London; Mr. W. McE. Clendinnen, Coseley. (D) Mr. H. A. Duffett, Rickmansworth; Mr. J. M. Dowden, Bournemouth; Messrs. Deane and Sons, Batley; Dr. A. T. Davies, London; Mr. A. Davidson, London; Mr. P. Dunn, London; Disheartened; D. L.; Mr. W. R. Dunstan, London; Mr. B. Davies, London; Mr. R. J. Downes, Dublin; H. Distin, M.B., Enfield; Mr. D. Davies, Alderley Edge. (E) Mr. T. J. M. Ewart, Chapel Ash; Mr. R. Elliott, Carlisle; Enquirer. (F) J. H. Fraser, M.B., Bridge-of-Allan; Dr. E. B. Ffennell, Kimberley, Notts; Mr. C. Ford, Stafford; Dr. J. Farquhar, Marlborough; Dr. J. Farrar, Gainsborough; Furfarshire Medical Association, The Secretary of the, Forfar; W. Foster, M.B., Shipley. (G) Mr. J. A. Goodchild, London; Mr. G. Goodman, Brigg; T. A. Glover, M.B., Askern; T. P. Gemmell, M.B., Airdrie. (H) Mr. H. Hutchinson, London; W. Hardman, M.B., Blackpool; Mr. C. Hunt, Cheltenham; Mr. T. G. Horder, Cardiff; Mr. A. Hannan, London; Dr. J. Hamilton, Aberdeen; Mr. J. Braxton Hicks, London; Mr. J. E. Halpin, South Normanton. (J) Dr. W. A. Jamieson, Edinburgh. (K) Mr. J. N. Knott, Ashton-under-Lyne; Dr. W. Kelly, Taunton; Dr. J. Kerr, Bradford; Mr. C. E. Kingsford, London; Dr. A. Kellgren, London; Mr. G. M. King, Preston. (L) Mr. F. E. Layton, London; Mr. D. G. Lewis, Northampton; Messrs. Lea Bros. and Co., Philadelphia; Dr. C. J. Lewis, Stirling; Dr. R. J. Lee, London; Dr. J. O. Lane, Hereford; Mr. H. J. Lloyd, Barmouth; G. W. Laws, M.B., Newcastle-on-Tyne. (M) Dr. J. W. Moore, Dublin; Mr. H. J. Manning, Salisbury; Dr. A. Mantle, Halifax; Member; Messrs. M. Masters and Sons, London; Messrs. Maxton and Co., London; Mr. C. Myles, Limerick; Mr. W. L. Morgan, Oxford; Mr. J. H. Montague, London; Dr. D. McCaw, London; Mr. J. H. Marsh, Macclesfield; Mr. A. McAlister, Glasgow; Member of the B. M. A.; Dr. H. McClure, Cromer; Mr. A. J. Myers, London; Medicus; J. Middlemas, M.B., Edinburgh; Mr. J. S. Myles, Dayton, Ohio, U.S.A.; C. McCarthy, M.B., Calne. (N) Mr. P. Northcote, Scarborough. (O) Mr. T. O'Neill, Sheerness; Mr. W. W. Oldham, Stourbridge. (P) Mr. W. K. Parry, Mr. W. H. Pearson, Malton; Dr. J. W. Paton, Birkenhead; Dr. W. Permewan, Liverpool; Plymouth; Dr. C. E. Parslow, Birmingham; G. S. Perkins, M.B., London; Mr. C. J. Phillips, Leicester. (R) Professor C. Richet, Paris; Dr. A. Reid, London; Mr. H. R. Ramsden, Guernsey; Reformer; Royal College of Surgeons in Ireland, The Registrar of, Dublin; Dr. J. B. Ridley, Woking; Dr. R. R. Rentoul, Liverpool; Mr. J. F. Rymer, Brighton; Dr. H. D. Rolleston, Cambridge; Dr. A. Ritchie, Manchester; Royal Medical Benevolent College, The Secretary of, Epsom. (S) Mr. N. Stevenson, London; Mr. H. D. Stanistreet, London; Mr. J. O. Shemmonds, London; Mr. A. Sutcliffe, Burnley; Mr. W. H. Savory, Cleethorpes; Dr. A. Sheen, Cardiff; Dr. J. B. Siddall, Northam; Dr. C. C. Scott, Twickenham; Self Restorer; Dr. J. F. W. Silk, London; Mr. A. W. Steer, Penzance; J. B. Smith, M.B., London; E. W. Selby, M.B., Doncaster; Mr. G. Sharp, Leeds. (T) Mr. C. W. Thies, London; Dr. St. G. Thomson, London; Mr. R. W. Turner, London; Mr. W. C. Thompson, Bridgwater; Mr. L. Tracy, London; Travelling Member of the B. M. A.; Mr. H. Taylor, Guildford; Mr. W. Tibbles, Nottingham; C. B. Taylor, M.B., Manchester. (U) A Utopian; Urgent; C. T. Urquhart, M.B., Aberdeen. (V) F. J. De C. Veale, M.B., Bristol. (W) Mrs. T. Wilson, Manchester; Dr. H. F. Waterhouse, London; Mr. J. S. Watts, London; Dr. F. J. Waldo, London; Mr. A. O. Wiley, Knaresbrough; Mr. A. White, Manchester; Mr. J. E. Williams, Talgarth; Dr. D. C. Wray, Skegness; G. E. Williamson, M.B., Newcastle-on-Tyne; Mr. G. F. Woodroffe, Formby; Mr. W. Wallis, Groombridge; Dr. J. Wilson, Ballymena; Dr. H. Woods, London; W. T. B.; Mr. E. J. Williams, Blaenau Festiniog; A. E. Wright, M.B., Netley; etc.

BOOKS, ETC., RECEIVED.

The Mystery of Ourselves; or, Soul and Body. By Chillingham Hunt. London: Dean and Son. 1s.

Vivisection: Can it Advance Mankind? By C. S. Oakley, M.A. London: J. Davy and Sons. 1895. 6d.

Catechism Series.—Surgery: Part I. Edinburgh: E. and S. Livingstone. 1s.

Les Maladies Vénériennes dans les Armées Anglaise, Française, et Russe. Par Dr. O. Commenge. Paris: G. Masson. 1895.

Zeitschrift für sociale Medicin. Herausgegeben von Dr. A. Oldendorff. Erster Band, Heft 2. Leipzig: Georg Thieme. 1895.

A System of Surgery. Edited by Frederick Treves, F.R.C.S. Vol. I. London: Cassell and Co. 1895. (To be in 2 vols.

Atlas der pathologischen Histologie des Nervensystems. Redigirt von Dr. V. Babes. Lieferung IV, L'Anatomie Fine de la Moelle Epinière, par Prof. S. R. Cajal. Berlin; A. Hirschwald. 1895. M. 16.

The Bower Manuscript. Edited by A. F. R. Hoernlé. Part II, Fasciculus II. Calcutta: Government Printing Office. 1895.

Geschichte der jüdischen Ärzte. Von Dr. R. Landau. London: Williams and Norgate. 1895. 3s.

Studien ueber Malaria. Von Prof. G. Baccelli. London: Williams and Norgate. 1895. 2s. 6d.

Remote Consequences of Injuries of Nerves and their Treatment. By Dr. J. K. Mitchell. Philadelphia: Lea Brothers and Co. 1895. 1.75 dol.

Atlas des gesunden und kranken Nervensystems nebst Grundriss der Anatomie, Pathologie, und Therapie desselben. Von Dr. C. Jakob. Mit einem vorwort von Prof. A. Strümpell. Munchen: J. F. Lehmann. 1895. M. 10.

Report for 1894 on the Progress of Pharmacy in its Relation to the Future Revision of the "British Pharmacopœia," 1895. By John Attfield, Ph.D., F.R.S. London: General Medical Council Office. 1895.

A Medical and Surgical Help for Shipmasters and Officers in the Merchant Navy. By W. Johnson Smith, F.R.C.S. London: C. Griffin and Co. 1895. 6s.

Poisons: their Effects and Detection. By A. Wynter Blyth, M.R.C.S., F.I.C., F.C.S. Third Edition. London: C. Griffin and Co. 1895. 21s.

Skiascopy and its Practical Application to the Study of Refraction. By Dr. E. Jackson. Philadelphia: The Edwards and Docker Company. 1895. 1 dollar.

Early Scoliosis or Curable Curvature of the Spine. By Dr. P. G. Lewis. London: J. Bale and Sons. 1895. 2s. 6d.

Chemistry of Urine. By A. H. Allen, F.I.C., F.C.S. London: J. and A. Churchill. 1895. 7s. 6d.

A German-English Medical Thesaurus, or Treasure of Single and Compound Medical Words and Terms. By the Rev. Henry Losch, M.D. Philadelphia: Published by the Author. 1895. 2.50 dols.

Traité des Maladies de l'Enfance. Par J. Comby. Deuxième Edition. Paris: Rueff et Cie. 1895.

*** In forwarding books the publishers are requested to state the selling prices.

A DEMONSTRATION
ON
ANAL FISSURE OR ULCER

In the Out-Patient Department St. Bartholomew's Hospital.

BY HARRISON CRIPPS, F.R.C.S.,
Assistant Surgeon to the Hospital.

GENTLEMEN,—As we have now finished seeing our out-patients, I will take the opportunity of briefly referring to the two rectal cases we have examined, for they afford excellent examples of one of the commonest forms of rectal trouble, namely, anal ulcer or fissure.

When a patient complains of rectal disorder, it is possible by a few selected questions to form a fairly accurate view as to the nature of the trouble. Of course a positive diagnosis can only be arrived at after a careful and thorough examination of the part. In calling your attention to the questions that I asked the patient, you must not for a moment be led into the error of supposing that it would be right to treat any rectal disorder unless the diagnosis had been confirmed by a physical examination. Patients with rectal disease nearly always assert that they are suffering from piles, and unfortunately no inconsiderable number, who from a false modesty have objected to an examination, have been taken at their word, and treated for supposed hæmorrhoids, when in reality they had nothing of the kind, but were suffering from ulceration, polypus, or even cancer. The following are the chief questions which, before making an examination, the patients may be asked with advantage:

1. How frequently do you go to the closet?
2. Do you pass any discharge from the bowel, and what does it look like?
3. Do you have any pain, and does it come on immediately after passing a motion?
4. Does any part of the body come down at stool?
5. Do you pass any blood?
6. Is the pan ever sprinkled or splashed with blood as if it had come out in a fine jet?

The foregoing questions have the following significance: If patients say they have frequent calls to the closet extending over some months you will almost certainly find (if the trouble originates in the rectum) there is either ulceration, cancer, or stricture. On the other hand, if they complain of constipation or do not go to the closet more than once a day you may be pretty sure that none of these diseases are present. It is a common error for students to consider constipation as a symptom of stricture. In reality it is just the reverse, and patients with stricture nearly always complain of diarrhœa. If a discharge is complained of it is necessary to ask whether this comes from the interior of the bowel on going to the closet or whether it comes from the outside, as evidenced by stains on the linen. If from the inside and clear, like the white of an egg, it may be mucus from internal prolapse or piles. If the quantity is considerable, a villous growth or polypus may be suspected. If the discharge from the bowel is purulent or has a coffee-ground appearance there is possibly internal ulceration, fibrous stricture, or cancer. Discharge originating external to the bowel and staining the linen generally comes from fistula. When part of the body comes down at stool it will be either prolapse internal piles, or polypus. Bleeding is common to almost all forms of rectal disorder, but there is one particular form of bleeding which is almost characteristic. If the pan is sprinkled with blood, whatever else may be the matter with the patient, internal piles are almost certainly present.

PAIN.

Any disease situated about the anus or the last inch of the rectum gives rise to pain, whereas extensive ulceration or cancer situated above the internal sphincter may be almost painless. There is a particular form of pain, however, which is of peculiar interest as regards the subject we are discussing, and when present is most suggestive. Let us consider the answer which the first of the two patients gave to this question. The pain was what brought him to the hospital. He says that for some months every time on passing a motion he has severe pain, sometimes this starts whilst he is actually passing a motion, though more commonly it does not come on for half a minute or so afterwards. At times he describes it as positive agony, making him break out into sweat, sometimes it only lasts a minute or two, at others it may be half an hour or more before it goes; when it is gone he feels fairly comfortable till the next motion, when the whole phenomenon is repeated. A motion is so dreaded from the pain it causes that he often abstains from passing motions for days together.

The second case was a woman. Her general description of her symptoms was very much the same as in the first case, though in a less degree. The pain was described as of a burning nature, though occasionally pretty sharp, was often comparatively slight, and sometimes for a week or two she would have no pain at all.

From the description that these patients gave us of their condition it was almost certain that they were suffering from anal ulcer, and such after examination has proved to be the case. These ulcers may be situated in any part of the anal circumference, but in 9 cases out of 10 they are in the middle line behind. They are never very large, being seldom larger than half the size of a threepenny piece, and are placed so that half their circumference is on the mucous membrane and half on the muco-cutaneous surface. They vary in depth, the recent ones extending only just through the superficial membrane. In the older ones the submucous tissue is destroyed, so that the fibres of the external sphincter muscle are visible at the base of the ulcer. Sometimes on examination in place of an ulcer a little hole may be seen, and on passing a probe into this it will be found that the muco-cutaneous surface is detached over a little space, the ulcer being covered in as it were by the surface tissue. These cases are of the utmost importance, for the little orifice leading to the submucous ulcer is readily overlooked, and I have seen many cases where, on account of this, the patient has been told that there is nothing wrong with the part. The way to examine a patient with symptoms of fissure is to get them to the edge of a couch in a good light, and then, telling the patient to strain down, the anal folds should be gently drawn apart with the fingers. The lesion then can be clearly seen; generally, just external to the site of the ulcer, will be found a little rose-coloured œdematous fold of skin. On no account should the finger be passed at the time of the mere examination. The sphincter spasmodically contracts, and exquisite pain is caused. If there is any suspicion of disease higher up the bowel, it should be examined under an anæsthetic at the time of operating on the fissure.

If a patient has the characteristic pain caused by anal ulcer, and yet nothing can be seen at an ordinary examination, the patient should not be pronounced free from disease till a second complete examination under ether has been made.

TREATMENT.

This may be considered as palliative and operative.

Palliative.—If the case has been of comparatively recent origin, if muscular fibres are not exposed, and there is no undermined muco-cutaneous surface or sinus present, there is a fair chance of a cure being effected by simple remedies. The motions must be kept soft by a laxative; a teaspoonful of the confection of senna early every morning is effective. Capsules of 15 to 30 drops of the fluid extract of cascara sagrada may be taken at bedtime, or the following dinner pill: Pil. col. co., gr. x; pil. rhei. co., gr. xx; mix, and divide into six pills, one to be taken at dinner time. The anus should be gently washed with soap and water night and morning, and on no account should paper be used in the closet, the part being cleaned with a sponge or cotton wool and water. Two ointments may be prescribed; the one a soothing ointment to be applied five minutes before the motion is passed, the other an astringent ointment to be used at night. It is better for the patient to apply this with his finger than by any form of ointment introducer, for the ulcer is just at the orifice, and if the patient strains down it can be effectually applied. Six grains of morphine to an ounce of unguentum petrolli is a good soothing ointment; for an astringent ointment sulphate of iron, 10 grains to an ounce may be used, or tannic acid in the proportion of 20 grains to the ounce. Another ointment I have seen occasion-

ally effectual is 15 drops of carbolic acid, 10 grains of powdered camphor to the ounce of simple ointment or unguentum petrolii.

Operative.—Palliative treatment may have failed, or the case from the first may be one better treated by operation. If the ulcer is of old standing and the muscular fibres exposed, or if the edges be undermined or a sinus present, palliative treatment is mere waste of time, for by an operation properly performed the patient may be cured. It should be done as follows: At bedtime two days preceding that of operation the patient should take two pills (pil. col. co. gr. iv, pil. rhei. 10 gr. vi, mix and divide into two pills); this will ensure the bowels being well opened the day before the operation. On the morning of the operation, and an hour before its performance, the bowels should be washed out by an injection of a pint of hot water. The patient being under ether in the lithotomy position, the sphincter is gently dilated. The ulcer is now thoroughly examined with a fine probe to see if any fistulous tract exists, and the extent to which the edges may be undermined. If a sinus exists it must be laid open; if there is no sinus, or if present after it has been divided, a speculum is introduced into the rectum. The surface of the ulcer is then divided in the middle by a clean cut. The incision should commence on the mucous membrane half an inch above the ulcer, and end on the skin half an inch or a little more below it. The depth should be such as partly to divide the external sphincter, and to accomplish this it would have to be at least a third of an inch in depth in the middle. It is quite true that in many cases a more superficial incision will suffice, but as superficial incisions are often insufficient, it is better to make a bolder one at once. Moreover, the depth of the wound makes little difference in the time taken in its healing. After the incision has been made, a narrow strip should be cut with a pair of scissors off the two edges, which will otherwise overlap and interfere with the healing. A strip of lint smeared with eucalyptus ointment laid in the cut, and covered with a pad of aseptic cotton wool, completes the operation. For a fortnight the patient should be kept in the recumbent position, and as in all other rectal operations, the wound should be thoroughly washed and redressed night and morning. A dose of castor oil is given to open the bowels on the fifth day, and after this a mild laxative every alternate evening. When the patient is allowed to get up, it will do him no harm to walk about a bit, but he should sit as little as possible till the wound is completely healed. Nothing retards the healing of a rectal wound so much as the congestion produced by long sitting.

Gentlemen, no doubt you will think that the operation and subsequent treatment is rather elaborate for so small a lesion as an anal ulcer. It is quite true that many of these cases are cured by caustics, slight scarification of the surface, or simple dilatation; but if you wish to do the best for the patient and yourself by making a certainty of the cure, let me advise you to try no half measures, but perform a carefully-planned operation, as otherwise you will certainly from time to time have a percentage of failures.

CŒLIOTOMY FOR VOLVULUS OF THE SIGMOID IN A MAN AGED 85: INTESTINAL DRAINAGE: RECOVERY.

BY

J. GREIG SMITH, M.B., M.A., Professor of Surgery, University College, Bristol; Surgeon to the Bristol Royal Infirmary.

and CHAS. E. S. FLEMMING, M.R.C.S., Freshford, Bath.

This case seems worthy of a short notice from the great age of the patient. In recording the case the opportunity is taken of giving a short description of the method of intestinal drainage which is believed to be most suitable in such cases.

The patient was under the care of Mr. Charles E. S. Flemming, of Freshford, Somerset; operation was performed on January 30th, 1895. There had been complete obstruction for a week. The symptoms were of the usual character, and need not be detailed. The abdomen was distended to its utmost capacity, the parietes being hard and drum-like. There was a small umbilical hernia, which was very tender but not tense. The diagnosis was made of volvulus of the sigmoid flexure of the colon, but the presence of the umbilical hernia was recognised as a possible *vera causa*, and the parietal incision was made to enter the umbilical opening and to extend for 2 inches below it. Anæsthesia with the patient's stomach full of fluid was not free from risk, but Mr. Terry, of Bath, skilfully succeeded in establishing and keeping up without mishap complete unconsciousness with chloroform.

The umbilical hernia was only omental, and was easily detached. The fingers easily reached the sigmoid, which was enormously distended, and seemed to fill the whole pelvis and much of the lower abdomen. A fold was pinched up, pulled through the wound, and incised, when enormous quantities of gas escaped. The whole of the involved gut, as soon as it was small enough, was delivered through the wound, when the twist was at once manifest. There was one complete twist, perhaps a little more; the gut was only slightly inflamed at the seat of twisting, completely collapsed, and almost cord-like below, and ballooned up to great size immediately above it. The untwisted gut was further emptied, and replaced in the abdomen. As the abdomen was still greatly distended, it was decided to fix and drain the bowel for a few days.

The arrangements for drainage were made as follows. A piece of rubber tubing, about two feet long, and of the calibre of a crowquill was introduced, stretched over the point of a probe, through the small opening already made in the gut; this it fitted tightly, putting it on the stretch. Then a safety pin was made to transfix the peritoneal and muscular coats of the bowel by the side of the tube, and to pass through the side of the rubber tubing. This pin served to keep the tubing and gut attached, and, when the dressing was arranged, to prevent indrawing or extrusion of the gut. The peritoneum was not drawn forwards. Sutures were placed closely above and below the drainage opening, which were not to be tied till the gut was returned inside. Rolls of boric lint were placed around the gut under the pin, and one roll above it (Fig. 1). Over all was placed a broad strip of strapping carried round the back and split in front so as to interdigitate. This strapping effectually keeps the parts at rest, and prevents any chance of extrusion of the bowels (Fig. 2). The free end of the tubing was placed in a bottle which lay by the side of the patient.

Fig. 1.—Diagram to show method of draining the intestine. B, bowel; M, mesentery; T, rubber tubing; P, peritoneum pulled outwards. 1. Strapping; 2, pin holding tube. On the right (×) an enlarged drawing shows the details of fixation. 3. Dressing.

In this case it was necessary to provide only for the escape of gas and liquid fæces, so the tube was small. If a larger tube has to be used, it is possible to fix it in the bowel by the help of a suture so placed that when the pin is removed the mere tying of this suture serves to close the opening in the bowel. Such suture should never be made to grip the walls of the gut bodily, otherwise sloughing may take place. The dressing presses the bowel against the rubber tubing; there is no risk of extravasation of the fæces if this is properly attended to. In the diagram the peritoneum is shown as brought up to the opening in the gut; this is advisable in most cases to avoid the firm adhesion, preventing easy replacement, which takes place when bowel is laid on the raw surface. In this case the great age of the patient made strong adhesion improbable, and the parietes were thin, so the peritoneum was not brought up with the bowel.

Fig. 2.—Diagram to show arrangement for intestinal drainage.

The patient was fed by nutrient and stimulating enemata, and was soon able to take a little nourishment by the mouth. Flatus passed in quantities through the tube; the tube occasionally became blocked, but either pinching it or passing a small soft catheter down it into the bowel always cleared it.

On the third day the abdomen was nearly flat, and the patient was so well that Mr. Flemming removed the tube, the dressings being then removed for the first time. The wound in the bowel was closed by a Dupuytren's suture, the bowel was invaginated, and the parietal wound brought together over it.

Flatus was passed by the rectum on the same night, but there were two slight attacks of pain in the abdomen. Next day flatus did not pass by the rectum till the rectal tube was inserted and worn, when it passed freely. On the following day (February 5th) a turpentine enema resulted in the passage of liquid fæces and great quantities of flatus. On February 6th castor oil produced two copious evacuations in two hours. The condition of the patient was now excellent.

On the night of the 8th, however, the patient had an attack of pain, with collapse, which suggested an attempt at the formation of another volvulus. Opium, strychnine, and belladonna were administered; and after two somewhat anxious days he recovered, and at once picked up.

On the 12th, compound liquorice powder, followed by a turpentine enema, produced a free evacuation. On the 19th he sat up in his chair. He had some swelling of the left foot and leg which retarded his recovery. A week later, he was out in the garden.

The latest note is on May 15th, which states that the patient has quite regained his strength, and is in fact better than before the operation, for he has quite lost his old attacks of pain in the abdomen; and, with the help of a castor pill, has a daily evacuation of the bowels. The swelling in the left leg has not disappeared, and may be due to thrombosis in the left iliac vein, where it is crossed by the sigmoid mesocolon.

REMARKS BY MR. GUSS SMITH.—Ten years have now elapsed since I began to advocate and to practise evacuation and drainage of the intestines in obstruction. My experience, which now covers one hundred cases of operation for obstruction, goes steadily to raise my estimation of the proceeding; and it is gratifying to note that the same holds true with respect to other surgeons. Intestinal drainage as an accessory is scarcely inferior to removal of the cause of the obstruction in many cases as a means of getting the patient well. Properly managed it can scarcely do harm, and adds nothing to the operative risk, while its benefits in reduction of the mortality are very conspicuous.

In the process of drainage of the intestine after an operation for obstruction, one element of supreme importance is simplicity in method. It ought to be capable of rapid application by the surgeon, and of being easily managed by the usual attendant. For the drainage tube, at first I used rubber tubing; then I tried celluloid, and, in several shapes and forms, I used it chiefly for two years. I have also used vulcanite and have tried Paul's glass tubes. But I have finally abandoned all hard and unyielding material, and have returned to the use of the simple pliable rubber tube. Tubes of hard texture, which do not yield to the constantly contracting intestine, set up irritation and cause a secretion of mucus, which necessitates dressing and is difficult to collect. Ligature of the gut round the hard tube, as in Paul's method, causes sloughing of a ring of bowel; I have tried it once, and, although the patient did well, was not satisfied with it. Perfectly satisfactory drainage up to the full size of the bowel, as for colostomy, can be carried out by rubber tubing without any outward secretion of mucus, and without any necrosis of intestinal wall.

The rubber tube has incidental advantages. If it becomes blocked it can easily be cleared by pinching—"milking" its contents onwards. It permits movement to the patient without any addition of risk. It can be introduced on the stretch, of a smaller calibre than the opening in the bowel, and, when resilient, it distends and accurately fits the intestinal opening. It can be fixed in the bowel with great ease and rapidity, a simple transfixing pin or ligature holding bowel tissue to tube wall. The whole process can be carried out in less time than it takes to describe it.

The tubing in every case should have stout walls; it must be capable of being bent well beyond the right angle without kinking. Its calibre varies according to the nature of the material it has to drain. For gas a tube of very small calibre suffices; for fluids in the small intestine a tube the size of a crow-quill suffices. In these cases the fluids are probably poisonous to the system, and they are secreted abundantly after the obstruction is relieved, therefore I think they should be quickly drained. For drainage of the large bowel, even if the fæces are liquid, a larger tube may be used, because drainage is not so easy and also because rapid evacuation is very important. In all such cases of temporary drainage the tubing is fixed as described. In a young patient with a thick parietes I believe that replacement of the eventrated bowel is facilitated by bringing out the parietal peritoneum and fixing it to the bowel at the opening which holds the tube. In old patients with thin parietes this does not matter. It is possible to fix the tube in position by a suture so placed round the pin that merely tying this suture closes the opening in the bowel when the rubber tube is removed. A suture placed in the parietes in the line of drainage may be left untied till the drainage tube is removed; the opening is closed over the returned gut simply by tying the suture.

A similar proceeding with a larger tube converts drainage into the formation of an artificial anus. For this purpose I think Reclus's method of using a skewer to transfix the mesentery and support the extruded loop of bowel the best and simplest. A loop of colon pulled through the wound is supported on a skewer (I now use one of the vulcanite stirring rods used by chemists), the gut is opened by a cut with scissors and a large rubber tube is inserted, stretched over forceps. It is fixed to the margin of the incision in the bowel either by a running suture or by a couple of safety pins. It is dressed as shown in Fig. 3. As permanent fixation is desired the peritoneum is ignored. Colostomy may thus be performed under five minutes, and it need never require two stages. The subsequent perfection or imperfection of the artificial anus depends on the judicious arrangement of

muscular fibres and fascia around the gut, and on other considerations which pass beyond the limits of this paper.

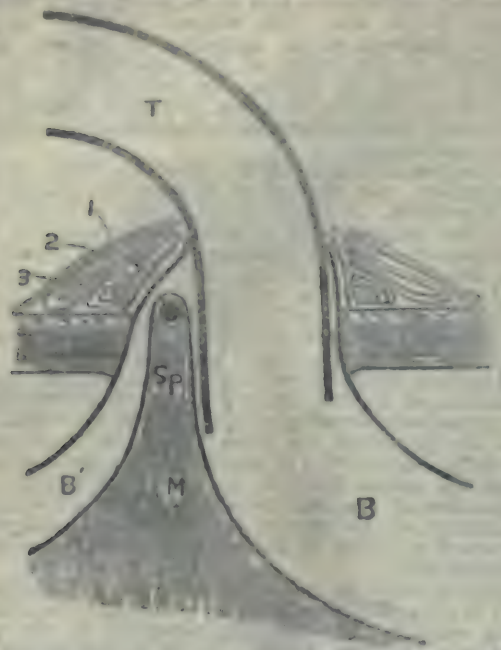

Fig. 3.—Diagram to show method of performing colostomy. B, bowel above spur; B', bowel collapsed below spur; T, rubber tubing; Sp., spur. At the top of the spur the black circle represents section of a supporting stiff rod.

As regards the age of the patient, special remark is scarcely called for, for it is now well recognised that mere age is no barrier to surgical operation. I have successfully amputated for gangrene the great toe of a gentleman, in his 98th year. I have made a complete excision of the mamma for cancer in a lady, aged 80, who is still alive and well in her 91st year. I have performed at least ten ovariotomies in patients between 70 and 80. If the patient is well guarded against shock and the operation is quickly performed recovery is quite as satisfactory in the aged as in the young.

A MODIFICATION OF THE OPERATION OF PYLOROPLASTY,

WITH A REPORT OF TWO CASES.

BY A. W. MAYO ROBSON, F.R.C.S.,

Vice-President of the Surgical Section of the British Medical Association; Senior Surgeon to the General Infirmary at Leeds; Professor of Surgery in the Yorkshire College of the Victoria University.

THE principle of obtaining increased calibre in a strictured channel by dividing the narrow passage longitudinally and suturing the wound transversely, is as ingenious as it is efficient, and in no situation can such a procedure be of more service than in simple stricture of the pylorus, where the operation is known as pyloroplasty.

The invention belongs to Heineke, who performed his first operation in March, 1886, though the name of Mikulicz, who did the second in January, 1887, is sometimes attached to the procedure.

Simple stricture of the pylorus is far from common, and therefore the experience of any one surgeon must be somewhat limited: this must be my excuse for basing my conclusions on so small a number as two cases.[1]

I think there can be no doubt that pyloroplasty will completely replace Loreta's operation, since with no greater or perhaps even less immediate risk, it affords a more certain prospect of freedom from relapse.

[1] Flemming...after operation, the patient gained 2 stones in weight within ... formed on ... obstruction

The modification of the operation by the use of the bone bobbin which I have adopted, not only expedites the procedure, but in my opinion renders it safer than when simple suture is employed. The following diagrams show better than words the original and the modified operations:

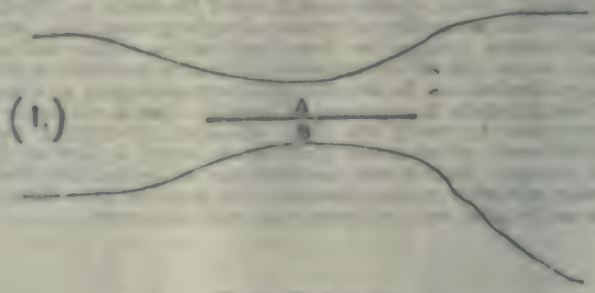

Fig. 1. First stage.

Fig. 2.—Second stage.

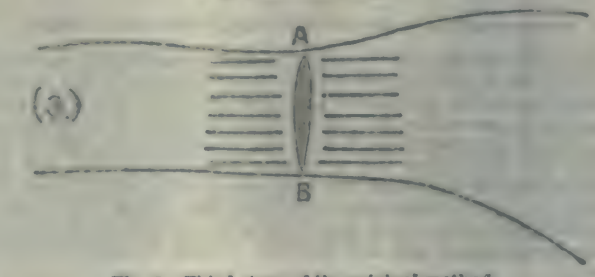

Fig. 3.—Third stage of the original method.

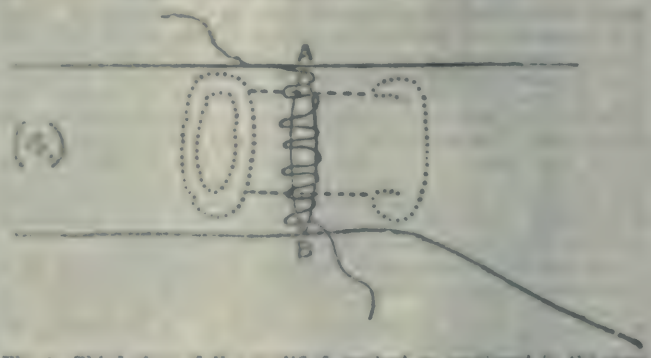

Fig. 4.—Third stage of the modified method as employed in the cases related.

It will be seen that by the use of a decalcified bone bobbin only two continuous sutures are required, the first to unite the mucous margins, the second the serous. The bone tube further secures an immediately and thoroughly patent channel, and affords protection to the line of sutures for from twenty-four to forty-eight hours, when union should be well established. The account of the following cases proves that the operation is both feasible in execution and satisfactory in results.

CASE I.—R. F., aged 34, residing in Scarborough, was sent to me by his medical attendant, and admitted to the Leeds

General Infirmary, January 10th, 1895. He gave the history of having been well up to five years before, when he began to have pain after food and vomiting, but he did not remember having vomited blood. His symptoms continued off and on until June, 1894, when he ceased work and sought advice. Between Christmas, 1893, and January, 1895, his weight diminished from 9 st. 5 lbs. to 7 st. 5 lbs.

On admission he was much emaciated, and the signs of dilated stomach were well marked. After taking food he had no rest until vomiting occurred; the vomit was sour smelling and yeasty but never contained bile or blood. He suffered much, not only from painful cramps in the extremities, which required morphine for their relief, but also from distressing spasms of the stomach, which could be distinctly felt contracting, the outline of the dilated organ showing through the abdominal walls. At times a sausage-shaped hard swelling could be felt a little above and to the right of the umbilicus; but as this was only occasionally felt, it was manifestly a contracting pylorus and not a permanent tumour. The stomach was washed out daily and the patient fed with peptonised food, but as all food produced pain and was rejected, rectal feeding was adopted. January 24th. Pyloroplasty was performed through an incision 3 inches long in the linea alba above the umbilicus. The pylorus was found to be surrounded by adhesions and tucked up to the under surface of the liver; its outer surface was puckered as if an ulcer had approached the peritoneal coat and had then healed without perforation. On opening the stomach close to the pylorus it was found that the pyloric orifice was contracted to the size of a No. 6 catheter, and that it was surrounded by cicatricial tissue. No shock followed the operation, and the after-progress was all that could be desired. Feeding by the mouth was begun on January 26th and the rectal feeding discontinued on January 29th. After the sickness due to the anæsthetic had passed off there was no further vomiting. The sutures were removed on the seventh day, when the wound was found to be healed. He rapidly gained flesh, and was discharged well and strong on March 2nd, having gained nearly a stone in weight, and being able to take ordinary food in full meals.

Case II.—W. F., aged 52, sent to me by Dr. Cheeswright, of Rotherham, on account of vomiting and loss of flesh, was admitted to the Leeds General Infirmary in the first week of April, 1895. He gave the history of indigestion for two years, but of being otherwise fairly well up to Christmas, 1894, when he began to have pain about two hours after food, which was at times followed by vomiting. The vomiting recurred every other day, when a large quantity of mucus and partly-digested food would be rejected. The vomit at first contained dark blood, though during the month before admission no blood had been noticed. During the early part of his illness there was marked tenderness over the epigastrium, but before admission the tenderness disappeared. He was not weighed until five weeks before admission, but in that short time he had lost a stone and a-half in weight.

On admission he had a starved look, and was feeble generally. The signs of dilated stomach were well marked, but no distinct tumour could be felt in the region of the pylorus. There were no other signs of disease. The stomach was washed out daily with a solution of boracic acid, and on April 8th pyloroplasty was performed through an incision 3 inches long in the middle line above the umbilicus. On exposure, the pylorus was found to be much thickened and surrounded by adhesions, which fixed it firmly to the under surface of the liver. After detaching adhesions it could be brought down sufficiently far to be manipulated. On making the longitudinal incision through the pylorus the channel was found to be surrounded by cicatricial material, leaving a passage which would only admit a No. 10 catheter. The operation, with the use of the bone bobbin, was performed as shown in the diagrams. The after-progress was perfectly satisfactory, and he began to take food by the mouth on the second day. In the second week he was taking solid food freely, and before going home at the month end he was eating large meals of the ordinary hospital diet. He never vomited after the operation, and the wound healed by first intention. When he left for home he had gained half a stone in weight and looked well.

With a little manipulative dexterity, the operation of pyloroplasty can be done so quickly and with so little exposure of viscera that post-operative shock need hardly be feared, and as the incision through the pylorus is through cicatricial tissue there is little or no fear of hæmorrhage; in fact, in the two cases related, not a single ligature was required. The only difficulty, and it is one which may usually be expected in these cases, is that the pylorus has to separated from adhesions set up by the inflammatory process which has caused the stricture. These are better separated by the fingers than by a cutting instrument.

It will be found to facilitate the application of the sutures if the longitudinal incision through the pylorus is made rather nearer the lower margin, so that when the slit is sutured transversely the upper angle is well within view. As regards sutures, fine catgut is the best for uniting the mucous margins and fine silk for the serous surfaces.

For simple stricture of the intestine I have found the same operation to prove equally satisfactory.

HUNTERIAN LECTURES

ON THE

EXPERIENCE OF ST. GEORGE'S HOSPITAL IN LAPAROTOMY;

EXCLUSIVE OF GYNÆCOLOGICAL OPERATIONS, FROM 1888 TO 1894 INCLUSIVE.

Delivered at St. George's Hospital Medical School

By T. HOLMES, F.R.C.S.,

Consulting Surgeon and Treasurer to the Hospital.

Lecture III.—Gastrojejunostomy: Internal Strangulation and Stricture of Bowel.

Conclusion.

The operation of gastrojejunostomy appears to mark another real advance in surgery, attaining without inordinate risk in cases of pyloric obstruction the object which surgeons have long pursued, but with little success, by gastrostomy, in cases of œsophageal obstruction, namely, the prolongation of life in tolerable comfort and with the power of taking natural food. And I believe that this operation has been so successful that it has displaced or will displace the complicated and dangerous procedure of pylorectomy.

Our experience of gastrojejunostomy during the period covered by these notes has consisted of four cases, in three of which complete success was obtained. The fatal case was that of a woman, under Mr. Haward's care, advanced in life (aged 75) and suffering from cancer in the groin as well as in the stomach. She died on the fifth day after the operation. The necropsy furnished this interesting specimen, which shows the small but adequate artificial communication provided by the operation and also the total disappearance of the Senn's bone plates used to approximate the viscera.

In the successful cases one of the most satisfactory features was the rapidity with which the patient recovered appetite, strength, and flesh. Thus in a case under Mr. Bennett's care, in 1891, published in *Clin. Trans.*, xxiv., 247, the patient had been suffering from nearly or quite complete obstruction of the pylorus and was in the last stage of emaciation. The operation was performed on February 27th, and he was discharged on April 23rd. During these two months he had increased 2½ stone in weight. I may notice here that his weakness was so extreme that it was necessary to feed him by the mouth even on the evening of the operation, when egg and brandy was given, and he was ordered small doses of brandy and milk at frequent intervals during the night. This man died in the country about nine months after the operation from secondary deposit of cancer in the lung.

Another of the patients also under Mr. Bennett's care, is since dead, having survived the operation rather more than eight months. The case was not an encouraging one, for the malignant mass was not confined to the stomach, in fact did not originate there, but spread from the umbilicus, where there was a mass of hard cancer, which passed inwards,

TABLE I.—*Laparotomy for Intussusception—All Fatal.*

Name.	Age.	Date.	Surgeon.	Remarks.
1. W. S.	8 m.	Sept., 1890	Mr. Bennett	The intussusception could not be disengaged. An artificial anus formed.
2. E. B.	18 m.	Mar., 1891	Mr. Pick	Intussusception easily reduced, but recurred in two days. Again reduced, but the child sank.
3. F. L.	5 m.	Apr., 1891	Mr. Dent	The gut burst in the attempt to disengage the intussusception.
4. L. M.	4 m.	Apr., 1892	"	Barker's operation for resection of intussusceped bowel. Sank immediately.
5. K. H.		Apr., 1893	—	The intussusception was not found till after death, which followed 3 hours after laparotomy.

TABLE II.—*Laparotomy for Kink and Volvulus.*

Name.	Age.	Date.	Nature of Case.	Surgeon.	Result.	Remarks.
1. J. W.	36	July, 1893	Kink probably from loaded bowel	Mr. Rouse	R.	Recovery delayed by suppurative parotitis.
2. E. M.	20	Jan., 1890	Volvulus	Mr. Turner	D.	There was also a large intussusception, caused by an intestinal polypus. This was disengaged, but she never rallied from operation.
3. H. F.	59	Apr., 1890	Volvulus	Mr. Bennett	D.	Cause of obstruction not made out at operation. There was a volvulus near the commencement of the ileum.
4. J. B.	78	Aug., 1894	Volvulus	Mr. Dent	D.	The operation was abandoned; the colon being found to be in a gangrenous condition. There was a volvulus of the sigmoid flexure. Operation immediately on admission, but too late.

TABLE III.—*Laparotomy for Strangulation by Bands.*

Name.	Age.	Date.	Nature of Case.	Duration.	Surgeon.	Result.	Remarks.
				Days.			
1. R. P.	47	Dec., 1888	Band formed by a Meckel's diverticulum	5	Mr. Dent	D.	No action of bowels after operation; bowel above constriction in an incipient state of gangrene; operation 3 days after admission (5 days of constipation).
2. W. D.	27	Feb., 1889	Band	3	Mr. Pick	D.	Gut gave way at operation.
3. F. M.	21	May, 1889	Band formed by mesentery and diverticulum	7	Mr. Turner	D.	Gut ulcerated by band; vermiform appendix also perforated; case too complicated for successful treatment.
4. E. G.	—	Sept., 1889	Band	6	Mr. Dent	D.	Gut gave way and an artificial anus formed; gut above the constriction was gangrenous; operation too late.
5. L. G.	65	Feb., 1892	Band	8	Mr. Pick	D.	Gut gave way and was resected; very collapsed at time of operation; operation too late.
6. J. W.	30	Mar., 1893	Meckel's diverticulum	3	Mr. Dent	D.	Operation not performed till the day after admission; gut leaking, was resected; operation too late.
7. E. H.	49	Feb., 1894	Band	3	Mr. Sheild	D.	A band found and divided; gut ulcerated by it; incised, emptied, and sewn up; survived 4 days, but no action of bowels; another band was found *post mortem*, not tightly constricting the gut; operation on day after admission, fourth day of constipation.
8. J. P.	13	Sept., 1891	Meckel's diverticulum and another band	3	Mr. Pick	R.	—
9. J. T.	28	Feb., 1893	Two or three bands	3	Mr. Haward	R.	—
10. E. J.	37	July, 1893	Long band	2	Mr. Dent	R.	Peritoneal cavity drained for the first 24 hours after operation.
11. E. S.	46	Feb., 1894	Band	3	Mr. Haward	R.	—

TABLE IV.—*Laparotomy for Stricture of Bowel—All Fatal.*

Name.	Age.	Date.	Nature of Case.	Surgeon.	Remarks.
1. A. L.	69	Nov., 1891	Old polypus, nearly closing the small intestine	Mr. Haward	Inguinal colotomy was attempted, but the colon was flaccid; so the small intestine was drawn up, and an artificial anus formed.
2. J. L.	42	Feb., 1891	Schirrus of jejunum	—	The operation was more exploratory than effective. He died more than a month afterwards of pneumonia.
3. G. J.	40	June, 1891	Malignant stricture of colon	Mr. Dent	An artificial anus was formed. Death soon after operation.
4. G. L.	63	June, 1893	Malignant stricture of rectum	Mr. Pick	The seat of stricture was not discovered. An artificial anus was formed.
5. W. H.	—	Mar., 1894	Malignant stricture of sigmoid flexure	Mr. Dent	A band was found constricting the cæcum, and divided; but it was recognised that this had not produced total obstruction. He died in a few hours.
6. W. S.	52	Mar., 1894	Stricture, probably malignant, of sigmoid flexure	Mr. Haward	The bowel was opened above the constriction, and fixed to the abdominal wall.
7. E. B.	17	April, 1894	?	—	This youth died a few hours after operation. There was no *post-mortem* examination, and the notes are mislaid. It is believed to have been a case of stricture of the bowel.

lapping round the pylorus, and causing obstruction. The operation therefore was performed merely with the hope of prolonging life, and rendering it more tolerable. In this it succeeded completely. He returned here to die in February of this year. I produce the preparation from this case also.

The other patient was also operated on by Mr. Bennett. He was lately in the hospital, having then enjoyed twenty months of tolerable health and active life. When the operation was performed, he was so reduced that he seemed almost moribund. His weight increased after the operation from 6 st. 11 lbs. to 10 st. 2 lbs.

Laparotomy for Obstruction.

We now come to the extensive and difficult class of cases in which laparotomy is performed for the relief of obstruction, the exact cause of which can in most cases only be conjectured. The success of the operation depends in a great measure on the anatomical cause of the obstruction, and in a great measure also on the promptitude of the operative interference. In my younger days, though the possibility of recovery was admitted and the operation was occasionally practised, nay, though possibly a few successful operations had actually been performed, it was looked on as a desperate measure, and was therefore almost always delayed too long; so that all the operations which I have myself practised, or which my colleagues performed during the period of my service here, were I believe unsuccessful. Now, however, we have a very different tale to tell; and though in some of the classes of obstruction we can still report no success, in others the percentage of recovery has been so encouraging as to inspire the surgeon with fresh hope, and to give fresh motives to both physician and surgeon for a more extensive and more careful study of the symptoms.

Cases of internal obstruction may be divided into (1) from the pressure of tumours; (2) from intussusception; (3) from volvulus or kink; (4) from bands crossing the intestine; (5) from stricture; (6) from hernia not perceptible externally; (7) from the lodgment of foreign bodies; of which last there are no examples in this list.

1. Total obstruction from the pressure of a tumour is of rare occurrence, but a case was spoken of in a former lecture in which an enlarged mesenteric gland so pressed on the bowel as to stop its action. Abscesses and hydatids often cause more or less obstruction, but this is seldom total. Gall stones, again, may produce obstruction, directly by impaction in the gut, or indirectly by exciting volvulus, but no such case is included in our list. I must refer you on this head to Mr. Mayo Robson's interesting paper lately read at the Royal Medical and Chirurgical Society, and to the discussion which followed.

2. The operative treatment of intussusception has not, in our experience, been successful. Most of the cases which I have found occurred in very early life. The infants were all admitted when in an advanced condition of the disease, and, as the operation was in all cases performed at once, the surgeon had not to reproach himself with any delay. Table I contains the leading particulars of these cases.

There was also another case, classed with those of volvulus, in which there was an intussusception produced by an intestinal polypus.

3. Our cases of laparotomy for kink and volvulus are shown in Table II.

4. *Intestinal Strangulation by Bands.*—The next class of cases of obstruction consists of those in which the bowel is strangulated by one or more bands crossing or encircling it, such bands being formed by a Meckel's diverticulum, by a peritoneal adhesion or adhesions, by a string of adherent and condensed omentum, or by some other structure of limited extent, such as an appendix epiploica adherent to a neighbouring appendix or coil of intestine. We have had numerous instances of this form of obstruction, and I think everything tends to show that if the case be dealt with sufficiently early, a good result may be fairly anticipated from surgical interference. On the other hand these bands are often very tense, and cut into the substance of the bowel rapidly; and if the bowel is incurably damaged, its resection introduces a formidable complication into the case, while frequently the patient's condition is not such as to permit so prolonged an operation, and then an artificial anus must be formed. But the more one sees of cases of laparotomy, the more strong I think will become the conviction of the undesirability of an artificial anus. It seems far better, if there is any chance of the patient's survival, to resect even a considerable portion of intestine and mesentery. Mr. Harrison Cripps has, however, recorded[1] a most interesting case in which, after the formation of an artificial anus, a permanent cure was effected by the resection of a foot of intestine. The patient, he informs me, is now in perfect health a year after the operation.

[1] British Medical Journal, December 17th, 1892.

We may then sum up our past experience of laparotomy for this form of obstruction thus. There have been 11 cases, of which 7 proved fatal. In 4 of these fatal cases the operation was evidently too late, the period of strangulation being five, seven, six, and eight days respectively; and the need for the promptest possible operation in such cases is shown by the fact that in the 3 other cases in which the period of strangulation was only three days, in each the gut had been fatally injured, so that it gave way. In one of these cases the lesion proved at once fatal, in the others an attempt was unsuccessfully made to remedy it—in the one case by the resection of the injured bowel, in the other by incision of the gut and evacuation of of its contents, followed by suture. In the four successful cases, the period of strangulation did not exceed three days. (See Table III.)

I cannot do better than direct your attention to a most interesting paper by Mr. Dent,[2] founded in part upon some of these cases. Mr. Dent dwells with just emphasis on the need for an accurate study of the symptoms, which are usually sufficient to establish a pretty confident provisional diagnosis, and on the absolutely imperative duty of the surgeon in all such cases to lose no time in operating. He gives, also, a graphic picture of the processes by which the rapid disintegration of the bowel is effected, and lays down most valuable rules for the operation and after-treatment.

5. *Obstruction from Stricture.*—Laparotomy for stricture of the bowel is a far less promising proceeding, for the stricture is often malignant, and frequently also the diseased portion is so extensive as to preclude all idea of its removal, and then the only thing that can be done is to form an artificial anus or to implant the bowel above the stricture into a lower coil of intestine. Very commonly also in hospital practice the symptoms have been too indefinite to induce the patient's medical attendant to send him in until the condition is too far advanced to have much chance for success from any surgical proceeding.

The number of cases operated on was only 7, but they all proved fatal. In one case, however, the operation seems to have had nothing to do with the death, which occurred more than a month afterwards from pneumonia. (See Table IV.)

6. Strangulation of an internal hernia, that is, a hernia not perceptible by external examination, bears the strongest analogy to strangulation by a band. We have 4 cases on our record, only one of which was successfully dealt with. This was the case of a man under Mr. Sheild's care last September, in whom the bowel was strangulated in a hole in the mesentery. In this case there was also an inguinal hernia, but it was rightly believed not to be strangulated, so that no time was lost in exploring it. Two of the other cases were small Littre's hernia, strangulated in or near the abdominal ring; the strangulation was relieved, but the patient was seen too late for the operation to be effectual. In the fourth case the notes are not sufficiently precise to enable me to give you exact particulars.

The only case I have found of resection of the intestine for gangrene after hernia was a desperate one, and terminated fatally, as was inevitable. The woman, aged 58, had had a femoral hernia, which seemed to be perfectly reducible on her admission, though there was a history of strangulation for several days, and of repeated and violent taxis. As stercoraceous vomiting came on the day after admission, it was decided to explore the abdomen in case the hernia had been reduced *en masse*. The cæcum was found gangrenous and was resected, but the patient was in too weak a condition to rally from the operation, and died next day.

I have so far fulfilled the task which I set before myself, and have given you as complete a statement as I can of the experience of St. George's Hospital in this important department of medicine and surgery. But I must ask your patience for a few minutes while I venture on some observations on the general question of laparotomy, as seen in the light of this experience.

In the first place, it is obvious that there are many conditions, necessarily fatal if left alone which are susceptible of cure by operation. Those which this series exemplifies are intraperitoneal rupture of the bladder or intestine, freely perforating ulcer of the stomach or duodenum, internal strangulation, and internal hernia. These conditions admit

[2] British Medical Journal, January 28th, 1893.

of relief only by operation, and though internal strangulation may be palliated by enterostomy, none of them can be cured except by laparotomy. I think, then, that the opinion of the surgical world will be unanimous in saying that such cases should be treated in that manner; and, if so, it follows as a matter of course that the operation should be performed at the earliest moment possible, since peritonitis comes on with extreme rapidity, and very soon the condition will be hopeless.

Again, there are other conditions which perhaps can hardly be said to be necessarily fatal, but which are so dangerous to life that they may be practically regarded as incurable without operation. This may be said of acute diffused peritonitis from perforation of the appendix, and of subphrenic cavity from gastric or duodenal perforation. Here, again, it seems to me hardly to admit of argument that laparotomy is urgently indicated; and we have had ample evidence that the fatal results of delay are only a little less rapid in this than in the former class.

Another category may be formed of cases which admit, indeed, of cure by laparotomy, but not without great risk, and which are not necessarily fatal, at any rate for the moment. I speak of idiopathic and tuberculous peritonitis, of intussusception, of obstruction from kink or volvulus and of internal stricture. The nearer these latter approach to total stoppage or strangulation the more urgent is the indication to operate; but surgical opinion, and perhaps medical opinion to a still greater extent, is as yet divided as to the propriety of early interference in such cases, though it is impossible to doubt that if relief is not obtained by medical and mechanical treatment the delay will seriously prejudice the chance of success by laparotomy.

Next we have cases of hydatid cysts, of pancreatic cyst, of other non-cancerous tumours, and of limited abscess in the abdominal cavity. The danger that such tumours will make their way into the general cavity of the peritoneum is very great, the patient's prospect of recovery is very much diminished if diffuse peritonitis has been thus set up, and the treatment by laparotomy is so very successful if undertaken before this has occurred, that I cannot myself doubt that early operation is a duty.

In cases of cancerous tumour or stricture it is doubtful whether the total excision of the tumour or of the viscus affected is worth its risks; but it is often possible to maintain nutrition and so preserve life by some "short circuiting" operation, of which gastro-jejunostomy is the most familiar example.

Finally, there are the cases of cholecystotomy and other operations on the gall bladder, operations performed on the ordinary surgical indications, for relief of pain and deliverance from future danger; and, as it seems, with no more than the usual risk and no less than the usual guarantee against recurrence.

If, however, it is so important in many cases to save hours, even minutes, of delay, are our hospital arrangements the best calculated to secure this end? Some surgeons have suggested that in cases requiring laparotomy "consultants should pass a self-denying ordinance, and leave the operation in the hands of the general practitioner." I cannot too strongly dissent from this suggestion. Delay involves great dangers, doubtless; but these operations are among the most difficult in surgery, and require, as Senn[1] has most truly said, that he who undertakes them should be "no tiro in surgery:" and the diagnosis requires also "no tiro in physic." That an operation can be better decided on and better performed at the hospital than at the patient's house, seems to me undeniable; and we may hope that as the fatal effects of loss of time become better understood the patients may be sent in earlier. Excluding traumatic cases, they should, I think, be still, as before, physicians' patients, but the house-physician might be instructed to send for both physician and surgeon immediately on the patient's admission, so that the consultation could be held without any further loss of time, and the operation performed, if necessary, on the spot.

If I were still in the active pursuit of operative surgery, and had thus taken a part in the noble surgical exploits about which I have been speaking, I should have become familiar with the details on which the success of these operations so much depends, and which have been so greatly modified of late, and so much improved. But alas! my most recent experience of laparotomy is nearly eight years old, and the whole proceeding has been revolutionised in that time. I cannot therefore speak with any authority on that subject; nor is it necessary. Treating of laparotomy for diffuse septic peritonitis, Mr. Lockwood in the current volume of the *Med. Rep. and Chir. Trans.* has given what seem to me admirable directions for the details of such cases. He has treated of the methods of stimulating the patient and combating the collapse before operation by subcutaneous injections and by alcoholic enemas, of the application of local warmth during the operation, of the kind of anæsthetic to use, of the necessity in some cases for evacuating the contents of the distended and semi-paralysed bowel by incision, and suturing the intestine (of which I have given you two instances from Mr. Sheild's practice), of the great assistance which is often found in these operations from a stout suture passed through the abdominal parietes on each side to hold the incision open, and avoid the embarrassment of retractors, a device for which we are indebted to Mr. Sheild; to the order in which the search should be conducted through the intestinal contents in seeking for perforation or obstruction; to the method of protecting the intestines, which have to be withdrawn out of the abdominal cavity; to the method of washing out the peritoneum, and carefully separating the adherent intestines; to the union and drainage of the wound, the care of the patient during the operation, and his treatment and feeding afterwards. Certainly the perusal of Mr. Lockwood's paper will lead all readers to agree with Senn that these operations are not the part of a "tiro in surgery;" while both the accessories of the operation, and the requisites for after-treatment, require the best resources of a great establishment, where every means of treatment is ready, and there are plenty of skilled persons to apply them.

The only matter which did not come within the scope of Mr. Lockwood's paper, as far as I can see, is the method of intestinal resection and suture; but this I do not venture to treat of. Operating surgeons alone are competent to judge of the value of the various contrivances recently introduced for obtaining safety in removing portions of irretrievably damaged bowel, and speed combined with security of adaptation in the reunion of its divided parts; and the time has not yet been sufficient for any consensus of opinion on the subject.

[1] *Intestinal Surgery*, p. 31, edition, 1894.

NOTES ON THE LIMERICK FOOD POISONING CASES.

By SIR CHARLES A. CAMERON, F.R.C.S.I.,
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THE following brief account of this sad case may interest the readers of the BRITISH MEDICAL JOURNAL: On July 3rd, 1895, about 70 inmates of a convent and boarding school in Limerick became very ill after dinner, and for several days suffered from vomiting and purging of a severe character. Three ladies died, and many of the other inmates were for several days in a precarious condition. Poison being suspected, portions of the vomit and dejecta were sent to me for examination on July 5th; also a portion of cornflour which it was suspected might contain poison—but none was found in it, nor in the other matters sent to me. Suspecting the case to be one of ptomaine poisoning, I telegraphed for portions of everything the patients had for dinner; but the only items available were sugar and sodium bicarbonate, both of which were pure. It has been clearly ascertained that the poison was not in the meat used, for some persons who had partaken of it were not ill, and the history of the carcass that furnished it was made out and negatived the hypothesis of unsoundness or disease in it. It appears that a custard formed part of the dinner, and that all who partook of it sickened. The cook (one of the sufferers) states that she prepared the custard as follows:

Tuesday, July 2nd, I took 4 quarts of skimmed milk of previous night, boiled it, added about ½ lb. loaf sugar, added 2 tablespoonfuls of cornflour, and boiled again; this was done in a tin vessel. At 3 or 4 P.M. resumed making of custard: Beat up 8 or 10 eggs, all fresh except one,

which had a reddish-brown colour but no bad smell; poured them into the milk, which was then about the temperature of tea, and then poured it into an earthenware bowl; removed to a cold place during the night. On Wednesday, July 3rd, 9 A.M., the custard had become quite thin, of the consistence of cream. Poured it over 1 or 2 quarts of strawberries, about a quart of which had been gathered on the previous night. Whipped the whites of eggs used above with 1 lb. of sifted sugar and spread over strawberries and custard on glass dishes.

That the strawberries were the cause of the illness is negatived by the fact that three or four persons who used gooseberries and not strawberries with the custard were amongst the sufferers.

The inquiry is therefore narrowed to the question, Was the *materies morbi* in the milk or eggs? It would seem that some surprise was manifested by the custard remaining thin. When I first heard this fact I thought that the fluidity might be due to the liquefying influence which certain bacilli have on gelatine and albuminous matters, though the rapidity of their action in this particular case seemed surprising. I therefore had a custard made similarly to that described by the cook, and found that it remained as thin as rather thin cream. This want of consistency was, however, due to the albumin of the eggs not having been coagulated by heat, for when my custard was heated to near the boiling point (as should always be done) it became on cooling quite thick. That a highly poisonous substance (tyrotoxicon) is generated in milk not necessarily very stale, is well known. In the Limerick case the milk was at least two days old when consumed, as at 11 o'clock on the previous day it was skim milk of "the previous night." It was however boiled, and, after the addition of cornflour and sugar, again boiled.

The question is, could the milk in presence of sugar and cornflour have generated tyrotoxicon from the time it was boiled at 11 o'clock on Tuesday until it was produced at dinner at 1 o'clock on Wednesday. The time of year was favourable to the fermentation of the unstable mixture. Suspicion falls stronger on the eggs. I have learned that they were market eggs and had been purchased four or five days before they were used. Though not putrid they were more or less stale, and one had a curious colour, described by one person as resembling that of claret. Now, after the addition of the eggs to the luke-warm milk, sugar, and cornflour, there was no further heating, and it is clear that the egg albumen was not coagulated. There is reason to believe that the discoloured egg was cracked and, if so, micro-organisms had access to its interior. The viscera of two of the ladies who succumbed to the attack were examined for ordinary poisons with negative results, but a substance was extracted from them which gave all the characteristic reactions of ptomaines. The quantity available for examination was altogether insufficient to differentiate the ptomaine or ptomaines present from others, of which there seem to be a very large number. I am not aware that in any case of ptomaine poisoning the ptomaine was extracted from the viscera and identified.

Another patient died on July 16th, thirteen days after partaking of the custard. The inquest was held same day, and the verdict given was in accordance with my evidence.

In this case it is much to be regretted that neither the custard nor the matter ejected from the patients on the first or even second day of their illness was available for bacteriological and chemical examination.

A case of poisoning from stale eggs is recorded by Dr. Marshall in the *Gazette Médicale de Paris*, 1839.

OBSERVATIONS ON THE ACTION OF THE LEE METFORD BULLET ON BONE AND SOFT SOFT TISSUES IN THE HUMAN BODY.

MADE DURING THE CHITRAL EXPEDITION.

BY SURGEON-LIEUTENANT JAY GOULD,
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AFTER the actions of Malakhand Pass, Khar, and Swat River, Major-General Alexander A. A. Kinloch, C.B., kindly allowed me to go into the surrounding villages, collect and treat Swatis wounded by the magazine rifle. After overcoming the suspicions of these tribesmen, I succeeded in collecting some twenty-five or thirty cases, and herewith attach short notes of the most interesting of them:

CASE I.—A male, aged 25. The entrance wound was small, the edges cleanly cut and very slightly inverted. It was situated 2 inches below and behind the right great trochanter, and passed obliquely upwards and to the left through the sacrum. The wound of exit, above and behind the left great trochanter, was very little bigger than the wound of entrance; its edges slightly everted, but not lacerated. The sacrum was simply drilled: the bones were neither fractured nor splintered, the muscles and other soft tissues were apparently little damaged. With free drainage and the usual antiseptic precautions the patient rapidly recovered, and in about three weeks was ready to fight again.

CASE II.—A male, aged 18. The entrance wound was behind the internal condyle of the right arm. It was small, the edges cleanly cut and slightly inverted. It passed obliquely downwards and outwards through the olecranon and the upper part of the shaft of the ulna. The exit wound was 2 inches below the tip of the olecranon and half an inch to the outer side of the posterior border of the ulna. The olecranon was pierced obliquely, no fracture could be made out, and only very slight splintering of the bone. The damage to the soft tissues was trifling. Rapid recovery took place, with good movement of the elbow.

CASE III.—A male, aged 27. The wound of entrance was in the middle third of the inner aspect of the right thigh. It was small, the edges cleanly cut, and there was little inversion. It passed obliquely downwards and outwards through the extensor muscles, grooving slightly the front of the shaft of the femur. The exit wound was at the outer aspect of the thigh in the upper part of the lower third. The bone was not fractured, but a small amount of bone was removed in very small pieces. The recovery of the patient was rapid.

CASE IV.—A Mullah, aged 45. The entrance wound, small and sharply cut, was situated in the left submaxillary region, about the level of the hyoid. It coursed upwards and to the right, through the lower border and horizontal ramus of the lower jaw of the right side. The wound of exit in the lower part of the cheek was a little bigger than that of entrance and slightly everted, but its edges were not lacerated. The bone was not fractured, but the lower border was splintered, though not to any great extent; some small fragments were removed. The teeth were intact. The injury to the soft tissues was slight.

CASE V.—A male, aged 18. The entrance wound was 2 inches above the external condyle of the left arm; the exit wound exactly opposite on the inner aspect of the arm. Both entrance and exit wounds were small, and there was no laceration of skin. The bone was drilled, but not fractured or splintered. Recovery was rapid, the wounds being perfectly healed in fifteen days.

CASE VI.—A male, aged 35. The entrance wound was behind the surgical neck of the humerus. It passed backwards and towards the vertebral column, passing the axillary border of the scapula, and coming out over the centre of the infraspinous fossa. The injury to the bone was slight. No splintering could be made out. The damage to the soft tissues was trifling. Recovery was rapid.

CASE VII.—A male, aged 20. The entrance wound in the upper third of the right forearm passed directly backwards through and to the outer side of the radius. The exit wound was opposite, on the posterior aspect of the forearm. Both entrance and exit wounds were small and sharply cut. The bone was not fractured, but slightly splintered, and several small pieces were removed. The damage to the soft tissues was slight. Recovery was rapid.

CASE VIII.—A male, aged 32. The entrance wound was at the anterior and inner aspect of the upper third of the right thigh; that of exit at the centre of the posterior aspect of the thigh 2 inches below the gluteal fold. Both wounds were sharply cut. There was no laceration or contusion of the skin, and the damage to the soft tissues was slight. The bone was uninjured. Recovery was rapid.

CASE IX.—A male, aged 40. The entrance wound at the middle of the right forearm was small, the edges sharply cut, and slightly inverted. It passed directly backwards through the ulna. That of exit, on the posterior aspect of the fore-

arm was a little bigger. There was no laceration of its edges. The ulna was fractured, and slightly splintered. Some fragments of bone were removed. The damage to the soft tissues was slight. Recovery was slow, as the patient attended very irregularly, and allowed the wounds to get dirty.

Case x.—A male, aged 17. The entrance wound was on the anterior aspect of the left forearm, in the lower fourth. It was small, and its edges sharply cut. It passed directly backwards through the lower extremity of the radius and out on the posterior aspect of the forearm above the wrist. The bone apparently was not fractured, but there was a slight amount of splintering, and a few small fragments were removed. The patient at the time of the report was making a good recovery; the movement of the wrist and fingers was fair, and improving daily.

Case xi.—A male, aged 30. The entrance wound was at the anterior and posterior aspect of the middle third of the right thigh. That of exit was on the same level on the anterior aspect, the bullet passing outside the femur. The damage to the muscles, etc., was slight. Both entrance and exit wounds were very small, and there was no laceration of the skin. Recovery was rapid.

Case xii.—Male, 75. The wound of entrance was at the inner and posterior aspect of the lower third of the right leg. It passed behind the tibia, through the fibula, and the wound of exit was on the external aspect of the leg on a level with that of entrance. The entrance wound was small, with sharply-cut edges: the exit wound a little larger, with edges slightly everted. The fibula was fractured and splintered, but not severely; several small fragments were removed. Recovery was rapid.

Case xiii.—A male, aged 20. The bullet had entered through the left cheek below the malar bone, and found exit in the right cheek at the anterior border of the masseter muscle, and at a slightly higher level than the entrance wound. Both wounds were small and sharply cut. Both superior maxillary bones had been pierced, together with the nasal septum. The palatal process of the superior maxillary bones was uninjured. The second bicuspid and first molar teeth on the left side were loosened, and were subsequently removed. No splintering or fracturing of either bone could be made out, and there was little or no subsequent swelling or inconvenience. Rapid recovery ensued.

Case xiv.—Male, aged 26. The wound of entrance was at the posterior aspect of the left shoulder below the acromion process. That of exit at the anterior aspect of the arm about 2 inches below the shoulder joint. Both wounds were small. The edges of the exit wound were everted. The humerus was pierced below the head; a few small splinters were removed, but fracture could be made out. The soft tissues were apparently little damaged. Recovery was fairly rapid, with good movement of the arm.

Case xv.—A male, aged 29. The entrance wound was over the left shin just below the patellar tubercle of the tibia. That of exit was at the back of the calf, 3 inches below the bend of the knee. Both wounds were small, and the edges sharply cut. The tibia was pierced, but not fractured, and there was a small amount of splintering. The soft tissues were apparently little damaged. During treatment there was a good deal of discharge. Two weeks after the wound was inflicted I enlarged the entrance wound, and removed two loose pieces of bone half and three-quarters of an inch long respectively. After this the discharge visibly diminished, and the patient made a rapid recovery.

Case xvi.—A male, aged 17. The wound of entrance was at the outer side of the right arm, in the upper third. That of exit was at the posterior aspect of the arm, on the same level as that of entrance. Both wounds were very small. The edges were sharply cut, and there was no bruising or ecchymosis. The bone was untouched, and the damage to the soft tissues must have been very slight, as it healed up in a very short time. This man stated that he did not know he was hit, and that he had no pain at the time or afterwards.

Case xvii.—A male, aged 40. The entrance wound was 3 inches above the ankle-joint, on the anterior aspect of the right leg; the exit wound was on the posterior aspect of the leg at the same level as that of entrance. Both wounds were small. The edges of the exit wound were everted. The tibia was pierced and splintered slightly, but there was no fracture of the bone. The damage to the soft tissues was slight, and recovery was rapid.

Case xviii.—A male, aged 25. The entrance wound was on the outer side of the right thigh, about the middle, that of exit on the same level at the inner aspect of the thigh. The bullet had passed in front of the bone, not touching it. Both wounds were very small, and the whole damage very slight.

Case xix.—A male, aged 20. The entrance wound was at the anterior aspect of the left forearm, about 2 inches below the elbow-joint. The exit wound was on the posterior aspect at the same level. The bullet had passed outside the radius, but touched the bone, which on examination I found loose and rough. Two or three very small pieces were removed. The bone was not fractured. Only trifling damage had been done to the soft tissues, and recovery was rapid.

Case xx.—A male aged 45. The entrance wound was just below the right malar bone, that of exit on the left side below the centre of the lower border of the zygomatic arch. The bullet had passed obliquely backwards from right to left. What course this bullet took I am not prepared to say, I could not pass a probe to any great length and found it utterly impossible to establish communication between entrance and exit. This patient had no severe symptoms, no pyrexia during treatment, and will soon be well and none the worse for being shot.

I have merely quoted in above cases the course of the bullet, giving in each case its effect on bones and soft tissues, purposely omitting details of treatment. Speaking generally my treatment of all cases of bullet wounds in the field is free drainage and surgical cleanliness, combined with as many antiseptic precautions as it is possible to apply in a field hospital on the move. The principal dressings used were iodoform in powder, boracic lint, and antiseptic absorbent wool.

There can be little doubt that from a humanitarian point of view the Lee-Metford rifle is a perfect weapon. The bullet obviously inflicts very little damage on the soft tissues and on bones its action is apparently not very severe, preferring rather to go through a bone than to badly fracture it. In one or two cases quoted the bone has been fractured, and in another case doubtful fracture. I am unable to state at what ranges these men were shot. Again I may have been unfortunate enough to treat only their slightly wounded cases, and the most unfortunate circumstance of all was my inability to get hold of any of their dead, open up the wounds and see what the actual effect of the bullet on bone is. These tribesmen almost invariably carry away their dead with them, and bury them rapidly.

From the little experience I have had in injury to bone tissue by the Lee-Metford bullet, I certainly think it causes but slight shock, and doubt its capacity of putting a man out of action. Instead of badly fracturing and comminuting the bone, it appears only to drill the bone and slightly splinter the edges. A hard bone like the shaft of femur it in all probability would fracture if it hit it fair, otherwise it would groove and glance off it. It apparently has little comminuting action even on the skull bones. How is it that this bullet does, or apparently does, so little harm? Is it that the small diameter, comparatively sharp apex and very hard thimble, combined with enormous spin and velocity, enable it to act as a rapidly working drill, and, consequently, simply bore a hole in the bone?

Very marked indeed is the action of the service bullet compared with Tweedie's, which is used for sporting purposes. In the latter the apex of the thimble is filed off, and its destructive effect on bone is enormous. On several occasions after shooting black buck and chinkara with a Lee Metford sporting carbine, using Tweedie's bullet, I have dissected the wound, and found that the bones touched by the bullet were literally smashed in all directions.

On the strength of the few cases I have quoted and others still under observation I infer that the Lee-Metford rifle is an excellent weapon in every respect but one, that is, would it stop a rush?

S. J. Aarons, M.B., C.M., and W. Macrae Taylor, M.B. and C.M., have been appointed resident surgeons to the Edinburgh Royal Maternity and Simpson Memorial Hospital, and enter on duty on August 1st.

GUNSHOT INJURIES PRODUCED BY THE LEE-METFORD RIFLE.

By H. KNAGGS, M.B., B.Ch.Dub.,
Surgeon-Captain Army Medical Staff.

LANCE-CORPORAL B. was admitted to hospital about midnight on April 1st, 1894, suffering from the effect of gunshot wound. On examination there was found a small circular wound, ½ inch in diameter and somewhat depressed, at the the left side, between the ninth and tenth ribs, at their junction with the cartilages. It was surrounded by a contused ring about ¼ inch deep, marking the wound of entrance. The wound of exit was situated on a level with the third lumbar vertebra, and 1 inch to the right of the spine; it was about the same diameter as the other wound, and presented three small triangular flaps which were everted; there was no contusion about it, and there was no external haemorrhage.

The pulse was small and fast, and he was suffering from the general symptoms of shock. The abdomen was flat and resonant, even in the iliac fossa when the patient lay on his side, and the area of hepatic dulness was not diminished. He complained of great pain about the anal region, and it was discovered that complete paralysis of the left lower extremity existed. He was put under the influence of morphine, and rallied partially, the pulse becoming comparatively full and strong, but about 5 A.M. on April 2nd he became very restless, and gradually sank and died at 6.20 A.M.

The *post mortem* examination was made twelve hours after death by the coroner's surgeon. The following notes were made at the time: The body was well nourished, and *rigor mortis* marked. The external wounds have already been described. The abdomen was flat. A large quantity of dark blood escaped on opening, and occupied also the abdominal cavity. The areolar tissue beneath the skin in the vicinity of the wound of entrance was much ecchymosed and pulpy. The spleen had been torn by the passage of the bullet at the lower margin. The wound was stellate, 2 inches in transverse and 1 inch in vertical measurement. The spleen substance was exposed, and protruding from the capsule. The areolar tissue around the left kidney was infiltrated with blood. The kidney was uninjured. The jejunum was injured in two places about 6 inches apart, and close to the duodenum. Two elliptical pieces of bowel were destroyed, amounting to half the diameter of the gut. The edges of the wounds were contused, and blood was extravasated between the layers of the mesentery. The psoas muscle on the left side was perforated opposite the third lumbar vertebra; the opening in the muscle was about half an inch in diameter.

The bullet striking the lateral aspect of the body of the third lumbar vertebra, near its upper surface had destroyed

Fig. 1.—Showing injury to the postero-lateral aspect of body and destruction of left pedicle.

an irregular wedge-shaped piece of bone about half an inch in depth, immediately below the intervertebral disc. From the lower angle of the cavity thus formed a fracture extended downwards and forwards to the inferior surface of the body, separating about one third of its area.

The pedicle on the left side was destroyed. The bullet, passing across the spinal canal with a slight inclination downwards, had severed the lash of nerves going to form the sacral plexus on the left side, and, splitting the right lamina

Fig. 2.—Inferior surface of vertebra, showing fracture through body and anterior aspect of lamina: the right lamina is completely divided, the split in the left is made evident by the insertion of a pin.

from its junction with the spine to the inferior articular process, emerged close to the spine.

The left lamina was also fractured on its anterior aspect, but the fracture passed behind the inferior articular process into the spine, and was incomplete, no bone being actually detached.

REMARKS.—The rifle was discharged at a distance of about 10 yards, and the cartridge was loaded with black powder. The course of the bullet was inwards, backwards, and downwards. From recent experience one would expect that the discharge of a small bore projectile with high velocity and at such close proximity would produce effects much more severe and with greater comminution of hard parts than was found in this case. The wound in the spleen, though of small extent, was distinctly "explosive" in character, but the injury to the bone was limited and well defined. Though a considerable portion of the body of the vertebra was destroyed, the wound of exit was hardly larger than the wound of entrance, which is unusual in such cases, especially at short ranges, where the exit of a bullet is often marked by a wound of great extent. The case goes to demonstrate the fact pointed out lately by Professor Horsley, in a lecture given before the Royal Institution, that the destructive effects of bullets with high velocity vary directly as the viscosity of the body.

DISLOCATION OF CARPUS BACKWARDS.

By THOMAS H. MORTON, M.D.Aberd.,
Sheffield.

THE infrequency of dislocations at the wrist-joint justify recording any case coming under a surgeon's notice. Accidents which might produce a luxation of the carpus generally cause fracture of the radius either in the middle or lower third, or near the joint (Colles's), or a separation of the epiphysis. Persons when falling with outstretched arm, the palm striking the ground, receive the shock mostly on the end of radius. The radio-ulnar and other ligaments unite with tense tendons to protect the joint, securing the carpus *in situ*. The following case may throw a little light upon the position when falling which influenced dislocation.

J. A., aged 16, on April 25th, 1895, when playing during breakfast time in the yard of a steel works, running and kicking, fell between two rails, his left arm backwards, the hand

probably slightly pronated and under him. The thumb hit the ground, as a contused abrasion over metacarpal showed. The arm at first glance had the appearance of Colles's fracture.

On examination the radial and ulnar processes were in the normal plane. The carpus projected upwards and backwards but not to any great extent, as is shown by the photograph. Reduction could be effected easily by fixing the forearm, grasping the hand and making forcible extension. A slight grating was felt. That no radial fracture existed was proved by the natural position being sustained when the patient moved the joint, and also by the satisfactory rotation of the radius without crepitus or displacement. The arm was put up in back and front splints, bandages, and a sling until May 4th, when a short gutta-percha splint was secured on the palmar aspect of the joint. There was some swelling about the wrist, but good movement. On May 13th a simple bandage applied.

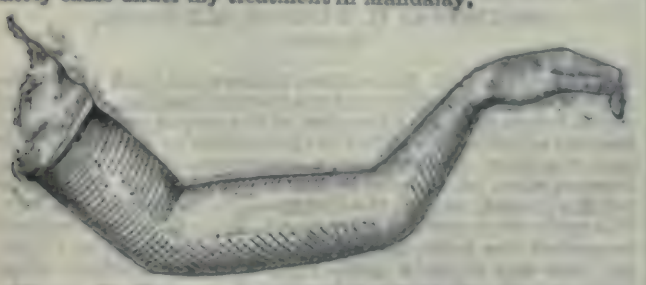
Although the position of limbs in persons falling cannot always be exactly ascertained, it may be assumed that in this case the injured arm was not placed anywhere voluntarily, and that the principal weight borne by the thumb side of the hand conduced to jerking the carpus backward, perhaps irrespective of any muscular action which so often influences fractures and dislocations.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CURIOUS FRACTURE OF THE FOREARM.

The accompanying sketch will serve to illustrate a somewhat unusual fracture of both bones of the forearm in a boy who lately came under my treatment in Mandalay.



Moung Po Nee, a well-nourished, healthy-looking Burman boy, aged 12 years, was brought to the hospital on March 14th, 1895, with his left forearm in the condition shown in the sketch. Both bones of the left forearm were incompletely fractured or bent at the junction of the lower and middle third, so that the lower third formed an obtuse angle with the rest of the forearm. On comparing the two sides no dissimilarity could be detected in measurements, neither was there any deformity other than that caused by the bending of the two bones. The history was as follows. While at play the patient fell. He put forward his left hand to break the fall, and a fellow playmate fell across the back of the forearm. The result was that the arm gave way, and assumed the position seen in the diagram.

The patient was anæsthetised, and the injured arm was slowly bent into its normal position without difficulty. In doing this a soft crepitus was felt. The arm was put up in splints in the ordinary way. On April 12th the splints were removed, and a week later the boy left the hospital well.

Is it not remarkable for a fracture of this nature (incomplete) to occur in a healthy child aged 12 years?

W. G. Fridmore,
2nd Burmah Battalion, Mandalay. Surgeon-Captain, I.M.S.

A CASE OF TETANUS NEONATORUM.

On January 1st, 1895, I was called to see an infant on account of some difficulty it experienced in sucking. The infant was 10 days old; it seemed perfectly healthy; was full grown and plump, presenting no congenital peculiarities. The mother, who had been attended in her confinement by a midwife, stated that for the two previous days the child had been unable to suck; she noticed that it did not yawn or gape, and that there was resistance to moving the jaws. On examination it was at once evident that there was hardening of the masseters on both sides; the lower jaw was quite fixed, the moderate force used not overcoming the spasm. All the other joints were quite normal, the muscular system was natural, and the knee-jerks were present. The umbilical stump was normal; it showed no signs of suppuration; it had received the familiar treatment, and had been dressed with fuller's earth powder.

With some difficulty the child could be fed with a spoon, and was thus able to swallow a little milk. It did not seem to be in pain. Pulse and temperature were normal. On January 3rd the jaws were immovably fixed; it was absolutely unable to suck, and could hardly get any nourishment with the spoon. Convulsions now appeared on the left side of the body; in the intervals of the clonic spasms the joints were becoming gradually rigid. On January 7th the infant was in a pitiable condition; no food had been taken at all for several days. The jaws were firmly clenched; there was occasional foaming at the mouth, and all the joints were perfectly rigid; the vertebral column also being stiff. The convulsive seizures were frequent. The left lower limb was in a state of adduction and inward rotation and quite immovable. Death appeared so imminent at any moment that all active measures for the sustenance of life were suspended. On January 10th, that is, on the twelfth day of the disease, when the infant was twenty days old, it was horribly emaciated, pinched and wrinkled, the tonic spasms were more intense, the hands and feet were crossed and rigid, the spine was unyielding. Not a particle of nourishment had been taken for a whole week. Death occurred three days later at noon of January 13th.

Remarks.—The frequency of this disease among the newborn is subject to considerable variation, ranging from severe epidemics to sporadic cases of extreme rarity. A severe epidemic occurred early in the century in the island of Heimacy, off the coast of Iceland; it has occurred epidemically also in Ireland; but the home of tetanus neonatorum is undoubtedly in the warm climates, especially in the West Indies and the equatorial regions of South America. The causes assigned to the disease, such as uncleanliness, impure air, exposure to cold and wet, are merely predisposing. The one etiological factor is the bacillus tetani, which gains an entrance through the umbilical cord. An unhealthy condition of the cord has often been noticed in these cases; it may be in a state of inflammation, suppuration, or even gangrene, and it has also been observed that greater cleanliness exercised in dressing the cord has been followed by a diminution of the disease.

The suggestion may occur that in the case recorded above

he infection was introduced by the use of the fuller's earth owder in which some spores of the bacillus may have existed. The case is, however, noteworthy for the duration of he disease, extending over fifteen days, the infant having een for ten days without any nourishment whatever. Usually death occurs in from one to five days. Except in his respect the case was fairly typical of what is happily now n exceedingly rare disorder.

J. Snowman, M.R.C.S.Eng., L.R.C.P.Lond.

Bethnal Green, E.

HEMORRHAGE AFTER TOOTH EXTRACTION.

I should like briefly to make known a simple method of topping continued bleeding after extraction of teeth, which as proved quite effectual in my hands in several cases, in ome of which plugging, various styptics, the actual cautery, c., had been tried without success. It consists in passing double silk thread through both sides of the torn gum, ither with an ordinary curved needle or a handled needle, nd then tying firmly over the alveolar border. In none of he cases in which this method has been employed has it ailed to stop the bleeding immediately and permanently. he stitch may be removed at the end of forty-eight hours. he merely temporary success or complete failure of the ual methods, and the perfect success of that described, ed me to think it may prove generally serviceable in what frequently a very troublesome, if not dangerous, form of emorrhage.

James McNaught, M.D., M.R.C.S.

Waterfoot, near Manchester.

LABOUR IMPEDED BY COILING OF THE FUNIS.

n attending Mrs. B. for her eighth confinement, I found he head well down and presenting, with the face looking to he front. As she had a similar presentation and a comparatively easy labour last time, I expected a speedy and natural termination. The pains were strong and regular, but the ead made no progress. After waiting some time, I delivered er with the forceps, and in the following disposition of the ord found the cause of delay. It passed up over the left de of the chest, round the neck, down across the breast to he outside of the left ankle, which it completely encircled, nd then to the right ankle around which it coiled in the ame way. The feet were drawn closely together, and the ord up over the front of the body. The funis was 25 inches ng, and about half of it was coiled round the child.

Hawick. James Brydon, M.D.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

NEWTON COTTAGE HOSPITAL AND DISPENSARY.

ALL STONES IMPACTED IN THE CYSTIC DUCT REMOVED BY INCISION: RECOVERY.

[By W. G. Scott, M.B., C.M., Senior Surgeon to the Hospital.]

F., aged 29, a married woman with three children, had suffered for five years from attacks of violent pain in the right hypochondrium, radiating over the abdomen and to ear in the angle of the right scapula. This was accompanied by sickness and slight jaundice. In the intervals there was still aching pain in the right hypochondrium and tenderness, the motions normal in consistence and colour.

She was a thin anæmic woman, and presented a slight sallow tinge of the conjunctivæ. The abdomen was flaccid. In the right hypochondrium and lumbar regions a hard, nodular, sausage-shaped tumour, which gave the impression of being packed with gall stones, extended to the umbilicus. It could be moved a little to the left of the umbilicus, and pressed into the right loin. It moved freely with respiration, and appeared to come from under the surface of the liver. The kidney could not be felt, and the urine contained no albumen.

Operation.—An incision 3½ inches long was made to the left of the linea semilunaris. The gall bladder presented; it was the size of a tennis ball and very tense. Five ounces of a glairy fluid, like the white of an egg, were removed by aspiration. The gall bladder was drawn into the wound and opened. The walls were found to be markedly œdematous. One stone, the size of a sparrow's egg, crenated on the surface and creamy-white in colour, broke on manipulation, and the remaining fragments were removed by syringing and a scoop. On passing the finger to the under surface of the liver a stone, slightly larger in size, could be felt firmly impacted in the lumen of the cystic duct. I was unable to reach it by probing through the duct. An attempt was made to crush it with padded forceps, but firm pressure made not the slightest impression. It was impossible to manipulate it into the gall bladder. The liver was therefore slightly tilted up and an incision large enough to allow the removal of the stone was made over its site. The mucous and fibrous coats were closed with interrupted silk sutures, and the peritoneal with Lembert's sutures. The abdomen was washed out and the gall bladder stitched to the edges of the wound with silk sutures. The rest of the abdominal wound was closed and a drainage tube was left in the gall bladder. The second stone was hard, crenated on the surface, and resembled the other in shape and colour.

For ten days after operation the dressings were practically dry, and three weeks elapsed before any bile appeared through the wound. The quantity then was slight and it ceased in a few days. The bowels were opened on the fifth day and the motion was natural in colour. The patient developed delusions (there was a family history of insanity). The wound was dressed and strapped over and she was allowed to get up, and finally left the hospital on March 21st with bile-stained discharge from the sinus.

On May 2nd an attempt was made to close the sinus; the mucous surface was pared and closed with silver sutures. This failed. Since the operation she has much improved in condition, has had no return of her original pain, and is able to do housework (she had been practically useless for the previous two years). Her mental condition is much better. The sinus is still discharging but the amount is much less and the opening appears to be slowly closing.

Remarks.—The comparatively long continued suppression of discharge, which I take to be due to inflammatory thickening causing temporary closure of the lumen of the duct, the result of the incision, the easy solution of the difficulty by this method of procedure are points of interest in this case.

REPORTS OF SOCIETIES.

EDINBURGH OBSTETRICAL SOCIETY.

Wednesday, July 17th, 1895.

A. H. Freeland Barbour, M.D., President, in the Chair.

The Condition of Midwives in Scotland: Should Midwives be Registered in Scotland?

The discussion was opened by Dr. Berry Hart, of Edinburgh, who referred to the various attempts to register midwives, and to the fact that Lord Balfour's Bill only applied to England, but would probably later be extended to Scotland. He complained that the discussion thus far had been conducted with too much feeling. He was glad the Bill was in the hands of Lord Balfour of Burleigh, and the selection of Sir William Turner as the Chairman of the General Medical Council's Committee was an excellent one, and such as to inspire the confidence of the profession. He referred to the fact that some 800,000 or 900,000 births occurred in this country yearly, that more than half of these were attended by midwives, and that the great majority of these so-called midwives were quite untrained. Apparently there were some 10,000 to 15,000 such women in England and Wales. He then went rapidly over the clauses of the Bill lately before the Legislature, and pointed out its defects. The whole question, he admitted, was one of great difficulty. No State licence was now required. In any scheme of registration existing right

would have to be recognised. There were certain definite objections: (1) It was admitted that 500,000 births were attended yearly by more or less untrained and ignorant midwives, yet it was proposed to register these merely on application; (2) registration was not education; (3) there was no provision in the Bill made for education; and (4) no scheme of thorough education was possible in this country at present. He suggested that we might have registered midwifery nurses, which the public would more readily understand. He maintained that no midwife was competent to attend labour on her own responsibility. Why, then, should a physician not first see the case, and, if quite normal, hand it over to a nurse? Briefly put, the whole matter seemed to resolve itself into these questions: 1. What preliminary education was to be insisted on? 2. Were there facilities for hospital training? 3. What demand was there for midwifery nurses? 4. What evidence was there of malpractice? Dr. Berry Hart's position briefly was that, keeping in mind the unlikelihood of an effective training for some time, we were face to face with the danger of launching a large number of unqualified women on the public. Might we not, then, have less severely trained nurses to act under qualified medical supervision?

Dr. Byrne (Dundee) spoke strongly in favour of the registration of midwives, and referred to his experience in practice amongst the poor of Dundee. Many of these people were too poor to pay a medical practitioner. A great many foolish objections had been urged against registration, amongst others that a new order of practitioners would thus be created; but all this existed even now, and there was no control over the existing order of affairs save in cases of malpractice. As things existed at present, a midwife might undertake and treat the puerperal state. Now, were she registered, she could be restrained from such treatment. What, then, were we to do? He believed that poverty was the key to the position. Were we, first, to leave things as at present, and allow midwives to certify stillborn children, etc.? Or secondly, were we to make use of the Poor-law medical officers? This, he thought, could not be attained for a long time. Thirdly, should there be insurance against confinements? Or fourthly, should there be cheaper medical work? The alternative to the registration of midwives was the registration of midwifery nurses, but this only meant protection to the rich.

Dr. Connel (Peebles) said he preferred the registration of midwifery nurses rather than midwives, though he felt the difficulties. Thirty years ago a sensible neighbour was usually called in, but in his district the doctor was now almost always sent for. This, he believed, was because knowledge had permeated into the minds of the public. If midwives were to be registered, why not also bonesetters? It was right to improve nurses, but he thought that the responsibility must still be left with qualified medical practitioners. Then what was a natural labour? This was really the *crux* of the whole matter in relation to the registration of midwives. He confessed he failed to see the difficulty of providing payment to a practitioner. People had seven or more months' notice, and they ought to make provision to meet this. To register midwives as they now existed was to go back to the Middle Ages.

Dr. McVie (Chirnside, Berwickshire) said practically he had not heard of a midwife in his district. No one employed her if a doctor could be had. The feeling among the working class in Berwickshire was that they ought to lay aside money for the confinement as much as for the rent. Because a patient could not pay a guinea, was that a reason why a poor woman should not have the benefit of skilled assistance? Why should not women doctors take up some of this kind of work? In some quarters the question appeared to be one of cost, but he did not think improvidence should be encouraged or made easy.

Dr. Ballantine (Dalkeith) was for leaving things pretty much as they were. If there was registration at all it ought to be limited to fully qualified women, and how in the existing state of affairs were these to be got?

Dr. Lucas (Dalkeith) said his experience had been among midwives who had been trained in Edinburgh, and he found that after a little experience they did very well, and that in several cases of difficulty they had acted in such a way as to cause no reflection. The position of a country doctor without the help of a nurse would be absolutely intolerable. It had been said that the whole question was a commercial one, but that was a difficulty which had never occurred to him.

Professor Simpson (Edinburgh) thought that the constitution of a special group of women with a certain inferior status was an experiment of a very dangerous kind. Midwifery could only be met by thoroughly trained practitioners. The women at present engaged in midwifery did very well so far, and he did not know that registration would greatly add to their worth. It would certainly give much more work to the General Medical Council. He supposed that by and by medical provision would have to be made for the poor.

Sir William Turner said that this Bill as amended on report was a very different Bill from that lately considered by the General Medical Council. He had not seen it until he entered the room. He had now glanced rapidly over it, and he found it so much altered that he could scarcely recognise it again. For example, the definition of a midwife had entirely dropped out. This definition was a limitation: it referred to women who undertook to attend cases of natural labour without the supervision of a medical practitioner. The Bill as amended on report apparently admitted midwives to attend all cases. He objected to the term midwifery nurse. A midwifery nurse should be on the same level as a surgical nurse, that is to say, solely to act under the supervision of a medical practitioner. Now, it was proposed to give women under the term midwifery nurse an initiative, and not to confine them to act as a midwifery nurse or as a surgical nurse. Then what was to be done with the existing midwives? To put them on the *Register* right away was felt to be a very sweeping proposition. The General Medical Council knew too well the difficulties ahead, from their experience of the *Dentists' Register*. The various suggestions of the Council's Committee had been almost entirely ignored. He noticed that there was a change in the constitution of the Midwives Board. In the draft it was proposed that this should consist of 12 persons, now it was 45, and one of them a woman. What was the Incorporated Midwives' Institute? It consisted of a body of philanthropic ladies who had applied to the Board of Trade for a charter of incorporation. Excellent ladies, no doubt, but what particular claim had they to play this particular part? He was unable to give any information. The three new members were to be appointed by the Lord President, and they also would probably be philanthropic. In all they would have six philanthropic persons. The midwife in Scotland seemed to him to be an accident, if he judged rightly what had fallen from many speakers today; but she was a clamant necessity in England, and there was in England a great amount of malpractice. If so, then these women ought to be educated and fitted for the work they had to do. He felt that he must support any properly constituted scheme for the education of midwives, but one of the great blots in this Bill was the neglect of the means of education. This practical matter must be met. There was no need to examine unless they were first educated. The General Medical Council would see to it that these women shall be properly educated, as tested by a rigid examination. It seemed to him that some of the speakers had failed to remember that education preceded examination and registration. In this amended Bill the difficulties were made still worse, because it was no longer a normal labour but a knowledge sufficient to attend any labour which was required.

Dr. Batty Tuke said that he could add little to what had been so ably stated by Sir William Turner. He thought that in Scotland registration of midwives was not required. He knew of some practitioners who had several midwives under their supervision and found work to support them. In the Bill as amended on report a midwife was a full-fledged practitioner. The whole aspect of the matter was thus changed, and changed in a very serious way.

Dr. Norman Walker said that he did not believe that any educated woman would ever submit to having a midwife to attend her. In his experience in country practice in the north of England he found few midwives. He had only met with one doctor in the same district who was in favour of the registration of midwives. Newcastle, he said, had solved the difficulty for itself by establishing a central bureau where doctors attended. He was sorry to say that there were still towns in England where medical men paid to women calling

themselves midwives a certain percentage on the cases sent to them.

Dr. THATCHER spoke as a teacher of nurses for twenty years. He said that women who had had a training and women who had not had been classed together. He took it that midwives were absolutely essential in some parts of Scotland; for example, in mining and colliery districts practitioners had not time to attend to all the cases. Properly qualified women were therefore an absolute necessity. As to training, he thought that a three months' course was too short. Women, so far as his course was concerned, had examinations theoretical and practical of no trifling kind. He expected such an amount of knowledge as would be equivalent to a pass-mark in the subject of midwifery for a medical student. He had had considerable experience of being sent for by trained women, and had never seen any bad result, nor had these women failed to detect the proper time at which to send for skilled help.

Dr. JAMES CARMICHAEL (Edinburgh) asked if Dr. Thatcher would have them understand that he expected or got from such women as he trained an amount of knowledge of midwifery sufficient to pass the final examination in medicine.

The PRESIDENT (Dr. Barbour) thanked the guests and especially Sir William Turner, Dr. Batty Tuke, and Dr. Norman Walker for contributing to the discussion. He thought the weak point of the amended Bill was the lack of definition of the term midwife, as Sir William Turner had rightly pointed out. Grave objection must also be made to the proposed constitution of the Midwives Board. Dr. Berry Hart was against the registration of midwives, but in favour of the registration of midwifery nurses. This made the further difficulty of the introduction of a new set of nurses. He thought the practical conclusion of the debate was that in Scotland at least there was no great need for the registration of midwives, or even of midwifery nurses. It was quite evident that there was no such call in Scotland as in England. One result of this discussion was that all would watch this Bill very carefully, and especially along three lines: 1. What is the definition or a midwife? 2. What provision is to be made for the education of midwives? 3. What is to be the composition of the Midwives Board?

DINNER.

At the close of the discussion, members and their friends dined together in the Waterloo Hotel, when Professor A. R. Simpson was the guest of the evening in respect that the twenty-fifth anniversary of his appointment to the Chair of Midwifery in the University of Edinburgh occurred near this date. The toast of "The Queen" was proposed by the PRESIDENT; that of "Our Guest" by Dr. JAMES RITCHIE; the "University of Edinburgh" by the PRESIDENT; and responded to by Sir WILLIAM TURNER; and "The President" by Dr. GEORGE GIBSON. Songs and stories added to the pleasure of the evening.

REVIEWS.

REGULATIONS AS TO DEFECTS OF VISION AND OTHER PHYSICAL DEFECTS WHICH DISQUALIFY CANDIDATES FOR ADMISSION INTO THE CIVIL OR MILITARY GOVERNMENT SERVICES. By N. C. MACNAMARA, F.R.C.S. London: J. and A. Churchill. (Pp. 31. 2s.)

ABOUT ten years ago Sir Joseph Fayrer, lately President of the Medical Board at the India Office, conceived the excellent idea of defining the standards of vision required for the various services, military and civil, under the administration of the Government of India. With the aid of Messrs. John Cooper, C. Macnamara, and H. Cayley rules were drawn up for this purpose, which obtained through Sir Joseph Fayrer's influence the sanction of the Secretary of State for India. These rules were subsequently published, together with some explanatory notes for public information, by Messrs. J. and A. Churchill, and two editions appeared in 1886 and 1887 with a preface by Sir Joseph Fayrer, whose name appeared on the title page. The pamphlet under notice appears to be in the main a reproduction of Fayrer's pamphlet, but the preface is written by Mr. MACNAMARA, under whose name the publication is issued. The title is changed by the addition of the words "and other physical defects." This addition is explained by the first few pages, which consist of a reproduction of the regulations laying down the physical qualifications for officers of the army, and an extract from the Army Medical Regulations laying down a systematic drill for the examination of recruits. Regulations as to "physical defects which disqualify" for other public services are conspicuous by their absence. Some changes have been made in the descriptive matter referring to refractive defects and colour blindness, and the methods of detecting and measuring these.

This portion of the pamphlet is correct and concise as far as it goes, but as the general practitioner will probably refer doubtful cases, say of astigmatism and diplopia, to the expert, these dissertations on ocular defects and aberrations are not likely to prove practically useful to either class. The pamphlet is, therefore, incomplete in some respects and redundant in others; it is also misleading in one or two places. The visual requirements of the Royal Navy, for example, are stated to be, in short, perfect form and colour vision. This is true as regards sailors and engineers, but chaplains, doctors, and clerks are allowed a moderate degree of refractive error corrected by glasses. Again, the Civil Service Commissioners are said to "refer each case to a competent medical adviser, leaving him to apply whatever tests he may deem suitable, and whatever standard the particular situation may require." This is not quite the case, for the Commissioners indicate by means of their forms and regulations the conditions which are held to disqualify for the Civil Service, and the tests and standards applied to candidates are not so entirely left to the discretion of the examiners as is here stated. The pamphlet does not altogether fulfil the expectations raised by its title.

LE MUSÉE DE L'HÔPITAL SAINT LOUIS. Iconographie des Maladies Cutanées et Syphilitiques, avec Texte Explicatif par MM. ERNEST BESNIER, A. FOURNIER, TENNESON, HALLOPEAU, DU CASTEL; avec le concours de M. HENRI FEULARD, Administrateur du Musée, Secrétaire-General, et M. L. JACQUET, Secrétaire de la Société de Dermatologie et de Syphiligraphie. [Coloured Representations of the Casts of Diseases of the Skin and Syphilis in the Museum of the Saint Louis Hospital in Paris, with explanatory text.] Paris: Rueff et Cie., Éditeurs, 106, Boulevard Saint Germain. (Imp. 4to.)

THE richness of the celebrated museum of the Saint Louis Hospital has been rendered possible by the combination of the unrivalled artistic talents of M. Baretta, the abundant supply of clinical material, and the wise and enterprising patronage of the physicians to that famous institution. In their introduction the compilers of the atlas in which this collection is to be represented state with truth that M. Baretta—who is the possessor of a special paste—by his capacity in moulding and in colouring, has produced a series of models of skin diseases of unequalled perfection, which are admired by all medical men who have seen them.

The projected Atlas, of which the two first parts are before us, will reproduce in coloured plates the casts at present existing in the hospital museum, and the scope and method of the work will be best understood by a summary of their contents. The first plate represents a typical case of tuberculous lupus of the centre of the face, the cast being taken from a patient of M. Besnier, who signs the explanatory letterpress. First there is a careful detailed description of the various appearances as seen in the plate, then the peripheral part of the eruption is described, special attention is called to the shades of colour, the form of the isolated tubercules is pointed out, the smooth appearance of their surface, their size, their appearance when confluent. Then the colour, surface, and infiltration of the central part are described. Facing the coloured plate is a woodcut in which the outlines of the plate are given and in which all the points alluded to in the description are marked out by numbered lines. A description of the plate under the respective numbers is placed below it,

these are applicable to the corresponding parts of the coloured plate. The whole affords an object lesson to the student of equal interest and value. There then follows a description by M. Besnier of the history of the case and of the treatment which was employed.

The second part or number presents a coloured representation of the dermatitis herpetiformis of Duhring, with the accompanying outline chart which gives the references to the various appearances. The plate shows the hand, wrist, and part of the forearm of a patient of M. Tenneson, who gives an excellent description of the case and an analysis of the various lesions, with remarks on the diagnosis and differential diagnosis of the case. A detailed clinical history follows.

The Paris school has long held a foremost place for the excellence of coloured illustrations, but we have never seen anything finer from the hand of even a Parisian artist than these two plates. Their excellence and truth to Nature are remarkable. It is very rarely that it can be said of a plate that the diagnosis could be made from it as easily as from the living subject, but in these two instances this could be said with justice. A good test of the artistic excellence of an atlas of skin diseases is the success of the representation of vesicles, bullæ, and pustules. Judged by this test, the plate of dermatitis herpetiformis may be pronounced as nearly perfect as can be.

The serious pretensions of the publishers that the practitioner who has to make a diagnosis in a case of skin disease would be able, if provided with this Atlas, to establish his diagnosis by comparing the appearances in his case with those of the plate which most resembled it, and that he would find in the accompanying text all the elements of rational treatment, is amply borne out by the numbers that have appeared. Armed with this work the practitioner living remote from the great centres will be able to reduce to a minimum the disadvantages of his position as regards an accurate knowledge of diseases of the skin.

An English translation of this work is in course of publication, under the title of *A Pictorial Atlas of Skin Diseases and Syphilitic Diseases*. The editor is Dr. J. J. Pringle. The English edition will be published in twelve parts, each containing four plates, with explanatory text, with the exception of the last part, which will contain five plates. The translation is well done, and the whole will form a veritable museum of skin diseases as far as pictures can replace the actual patients or specimens.

A JUNIOR COURSE OF PRACTICAL ZOOLOGY. By the late Professor MILNES MARSHALL and C. HERBERT HUNT, Ph.D. Fourth edition, revised by Dr. HUNT. London: Smith, Elder, and Co. 1895. (Cr. 8vo, pp. 518, 73 illustrations. 10s. 6d.)

SINCE the issue of the third edition of this well-known textbook the sad death of Professor MILNES MARSHALL has left to Dr. HUNT the sole responsibility of the present issue. The changes effected by him are both more numerous and more extensive than those in the second or third edition, and are such that are calculated to render the volume more convenient in consequence. So far as concerns the arrangement, the chief changes are in the chapter on the dissection of the rabbit—the dissection of the head has been deferred to a late stage. Experience fully justifies the propriety of this change, as the author remarks, many students in dissecting the head render the subsequent dissection of the neck impossible. In the chapter on amphioxus many changes have been made, and these suffice to bring the account of the anatomy of this animal more into accordance with the results of recent work. Dr. Hunt has, however, only added a comparatively small portion of these results, observing that "it is difficult to determine how far one should go in recording in a practical laboratory guide for junior students, results which few junior students, if any, will be able to verify for themselves in the laboratory." This observation, which is taken from Dr. Hunt's preface, is one that will bear consideration of all lecturers and teachers, and its truth—certainly as regards junior students—will, we think, not be called in question. In a textbook of this nature, which has long achieved its success and is reckoned as the standard volume on the subject, criticism is out of place; we have simply recorded the above changes as indicating the conscientious way in which Dr. Hunt has fulfilled his trust in giving us another edition of a textbook which is thus allowed to remain as a fitting memorial of the work of one of our best loved teachers.

NOTES ON BOOKS.

A Handbook of Pathological Anatomy, based upon the Catalogue of the Pathological Museum, University College, Liverpool. By RUBERT BOYCE, M.B., George Holt Professor of Pathology, and J. HILL ABRAM, M.D., M.R.C.P., Assistants to the Professor of Pathology. (Liverpool: Issued by authority of the Medical Faculty. 1895. Demy 8vo, pp. 510.

The practice of issuing such volumes as this, which is now rapidly gaining ground in many of our medical schools, is one that cannot be too highly commended. Such volumes facilitate the study of pathology by correlating the symptoms of disease during life with the tissue changes found in the *post-mortem* room. In order to bring this about the pathological anatomy of each section of a system, such as "lips," "tongue," "œsophagus," "stomach," etc., in the case of the diseases of the alimentary tract, is generally discussed, and then illustrated by a series of specimens furnished with short clinical and descriptive notes. Surgical and medical pathology are in this way equally treated, as well as the special pathological anatomy relating to the female generative organs, skin, eye, ear, parasites, etc. In this way the authors have produced what is practically a very readable catalogue. The advantages of such a handbook to students is obvious. The descriptions and general discussions are written in a style that is at once accurate and clear.

Surgical Pathology and Morbid Anatomy. By ARTHONY A. BOWLBY, F.R.C.S., Assistant Surgeon St. Bartholomew's Hospital. (London: J. and A. Churchill. 1895. Cr. 8vo, pp. 664. Illustrations 183. 10s. 6d.)—When a volume which is essentially a student's textbook has reached its third edition, this fact is ample evidence alone that the volume has fulfilled its main object. Mr. Bowlby is an actual teacher, and his works have all the more value from this fact. He writes in a clear and incisive style, and his descriptions are not overburdened with detail. The increasing importance of bacteriology has been recognised in the present edition by contributions from Dr. Kanthack, who has rewritten the chapter dealing with micro-organisms in their relation to pathological processes, and who has also added to various chapters such information in the various pathogenic bacteria as the scope of the work demands. Several chapters and paragraphs on fresh subjects which have of recent years become of increasing interest to surgeons have also been added. Twenty additional drawings have been inserted, and these are of the same excellence as those in former editions. Mr. Bowlby's manual is an excellent textbook and one well worthy the attention of students.

Die specielle Chirurgie in fünfzig Vorlesungen: ein Kurzgefasstes Lehrbuch für Aerzte und Studirende [Special Surgery in Fifty Lectures: a Concise Textbook for the Use of Practitioners and Students.] Von Professor Dr. EDMUND LEXER in Halle. Mitglied der Kaiserlichen Leopoldeus Carolinischen Deutschen Akademie der Naturforscher. Zweite wesentlich vermehrte und verbesserte Auflage. (Jena: Gustav Fischer. 1895. Imp. 8vo, pp. 1034; M. 18.)—To readers of German who wish to keep themselves in touch with Continental surgery this second and much improved edition of Professor Lexer's textbook will be found of service. It not only presents with more conciseness than is usually expected in German works a complete review of all branches of practical surgery, but it is also an excellent epitome of the teaching of the late Professor von Volkmann by a pupil and worthy successor. Although the first edition was published but five years ago, the rapid progress of modern surgery has compelled the author not only to enlarge his book, but also to rewrite many of the chapters. In his endeavour to render this a complete and useful book he has paid special attention to the sections on cerebral and abdominal surgery, and on tuberculous affections of the

bones and joints. We regret that we cannot congratulate the author on his illustrations, many of which are rough and wanting in clearness.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

LAWES'S DISINFECTANT FLUID.

MESSRS. LAWES CHEMICAL COMPANY, LIMITED, have forwarded us for examination a sample of their disinfectant fluid. It is a brown liquid, with an empyreumatic odour, which has nothing disagreeable in it, and which greatly resembles the odour of good tar. When mixed with water it forms an emulsion of milky appearance and of slightly alkaline reaction. According to a testimonial given by Professor Henri Beye, it contains the superior homologues of phenol, insoluble in water and maintained in a state of solution by means of soda. For use the strength recommended is 1 part of the fluid to 100 of water. A solution of this strength we found would kill bacillus pyocyaneus in five minutes—which was the least time tried—no growth occurring in broth after several days, while the control grew luxuriantly. This fluid is stated to be perfectly harmless, and, if further experiments confirm this statement, it ought to be a valuable addition to our list of antiseptics. As far as our experiments went, we consider it to be all the proprietors claim for it.

AN OPERATING AERO-URETHROSCOPE.

Mr. E. HENRY FENWICK, F.R.C.S. (Surgeon to the London Hospital) has had made for him an operating aëro-urethroscope. The first instrument was made for him by Leiter, of Vienna, but Messrs. Down Brothers, of St. Thomas's Street, have made alterations and improvements. Mr. Fenwick points out that since the method of inflation has come into use the investigation of the penile urethra has become both rapid and accurate, but the difficulty which the new instrument is intended to obviate is that the glass diaphragm employed to prevent the escape of the inflated air necessarily prevents the introduction of any instrument. The advantage of treating the diseased surface when in the tense condition is obvious. Diseased and turgid folds become flat surfaces; crevices which may hide inflammations are rolled out; rings of stricture and membranous obstructions are put upon the stretch, and when in this condition fly on the slightest touch of the knife; swollen glands project from the surface and can be incised with certainty. Mr. Fenwick believes he has overcome the difficulty indicated by the use of double tubes.

The instrument consists of an ordinary urethral cannula, inside which is another movable tube—"the instrument carrier." The end of this inner tube is armed either with a knife (D) or curette (C) or brush. It can be projected from the cannula by pressing on the shield (E). Directly the pressure is taken off it springs back under cover through the action of a spring (G).

The instrument is not intended to replace the urethrotome, for it is useless in any stricture other than the large calibred or the membranous. Its main use is in the treatment of chronic gleet.

A THERMO-ANÆSTHETIC INHALER.

DR. R. W. CARTER, of Weymouth, has designed a new form of ether inhaler, to which he proposes to apply the name thermo-ether inhaler. It is designed to maintain an equable temperature around the bottle containing the ether, or other anæsthetic fluid. The general form of the essential part of the apparatus is shown in the accompanying drawing. The anæsthetic bottle (A) is graduated to hold ℥ij, and provided with a Buxton funnel (B) for filling. The connection for the face piece or tube for operations about the mouth is shown at N, while the connection shown at M leads to a small bellows by compressing which, air is driven through the anæsthetic. The anæsthetic bottle is surrounded by a hot-water jacket (W W), which is provided with a funnel (F) for filling and a venthole fitted with a plug (P) for use during filling. A slice of Japanese tinder is lighted and introduced in the cylinder (H) into the tinder chamber (H T). This chamber is provided with a venthole (V), and the rate at which air is admitted to the tinder, and therefore the rate of its combustion is regulated by a shutter (S). The apparatus is suspended in front of the anæsthetist by a strap, attached to the loops (L L) which passes over his shoulder. The anæsthetic bottle is surrounded for about three fourths of its circumference by the hot water jacket, the front being left open to allow the quantity of the anæsthetic to be read. If there is only one case to be anæsthetised it will be sufficient to pour about two or three ounces of water at 100° F. into the jacket, but the temperature of the water may be regulated by opening or closing the shutter (S), which admits air to the smouldering tinder.

The advantages which Dr. Carter claims for this apparatus are, that it produces less, if any, asphyxia, that the anæsthetist has complete control over the anæsthetic, that as the ether is administered in the same way as chloroform in Krohne's improved Junker's inhaler the vapour is given only in inspiration, and the ether is not contaminated with the products of inspiration. For an operation lasting more than fifteen minutes a bag is necessary as in the ordinary ether apparatus; in some patients a bag may be required even for a short operation.

The apparatus is made by Messrs. Krohne and Sesemann, 8, Duke Street, Manchester Square, W.

THE GRACE TESTIMONIAL.

THE following subscriptions have been received on behalf of this fund:

	Shillings.
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AT an examination for inspectors of nuisances, held by the Sanitary Institute at Huddersfield on July 12th and 13th, 46 candidates presented themselves and 28 passed.

WATERBORNE TYPHOID:

A HISTORIC SUMMARY OF LOCAL OUTBREAKS IN GREAT BRITAIN AND IRELAND, 1858-1893.

A Report Prepared for the Parliamentary Bills Committee of the British Medical Association.

By ERNEST HART, D.C.L.,
Chairman of the Committee.

(Continued from page 90.)

Characters of Typhoid Fever.

The compilation of the tabular account of waterborne typhoid outbreaks has not been without its interest in regard to special features portrayed by the disease in its numerous methods of manifestation; and it may not prove altogether unwise to briefly chronicle some of the more special notes which I have made in passing. Thus, at Ingham, in 1869, Mr. Netten Radcliffe, in reporting on a limited outbreak of fever (No. 14), which was undoubtedly due to water, said that there had evidently been two kinds of fever in question, the one unequivocal typhoid and the other a "continued" fever; that not improbably they were independent in their manifestation, although the phenomena were contemporaneous. Dr. Oglesby reported a case, to which I have already made reference in other connection, in which four patients were attacked in a village near Leeds in 1876 (No. 87) after consumption of the milk of a cow which had been able to obtain only "mere sewage" as drink, the cases lingering on for months, while the cow was herself getting thinner and thinner, at last refusing to graze. After she was got rid of the disease disappeared from the house, but convalescence was tardy, though ultimately complete. But during the tedious stages of the illness one prominent feature was that of partial convalescence "by fits and starts," one day cheerfulness another day lassitude, first playfulness then a desire for rest. The dangers attending on a tedious convalescence are well illustrated by what occurred at Penistone in 1879 (No. 103), where the first case in the outbreak of 42 cases was imported from Oldham, the patient having a long convalescence, and in his movements about Penistone proving a source of danger by reason of his infectious evacuations, two of the three principal water supplies of the place being then open to excremental contamination. The second case was only made known by reason of fatality.

One special feature of note is the epidemic diarrhœa which not infrequently precedes typhoid, not only that type which is waterborne, but also the disease when originating in other ways. For instance, I may refer to three examples, far removed in time and place, and in which two causes were specially operating, namely, Perth in 1847 (No. 112), King's Lynn in 1891 (No. 189), and Shildon and East Thickley in 1893, the latter being a case in which the disease was held by Dr. Bruce Low to be sewerborne, and disseminated also by means of milk polluted by sewer emanations. In all these three instances the disease of typhoid was preceded by epidemic diarrhœa, in Perth this milder disease being followed in the space of a week by typhoid, and at King's Lynn the preceding illness being in large amount, at Shildon it being also copious in its extent. It will be well, I think, that I should here insert a short extract from Dr. Low's report on King's Lynn as shewing the character of the diarrhœal sickness which in that town was the forerunner of the typhoid outbreak. It will serve to illustrate this phase of much typhoid that has been of late investigated with the result of finding precedental diarrhœal illness in phenomenal amount.

"The recent epidemic of definite 'fever' was preceded by a severe and widespread outbreak of diarrhœa, which dated from the last three days of February—namely, 27th, 28th, and 29th. The diarrhœa of this outburst attacked all classes of persons and invaded most localities in the town. Sometimes every member of an invaded household suffered. In the majority of cases the illness lasted a week or ten days; and in many cases there were along with the diarrhœa symptoms elevation of temperature and sometimes sore throat. Early in March, with the waning of the diarrhœa outburst, more pronounced symptoms of typhoid fever began to appear, and such cases soon became numerous. Afterwards, during April, May, and early June, though fever cases continued to occur, they were in fewer numbers, many of them being secondary cases in previously invaded houses. On my arrival in King's Lynn ..... I learned that at the beginning of the outbreak under investigation there existed some difference of opinion as to the nature of the malady which was manifesting itself in the borough. It appears that influenza had been epidemic in the neighbourhood about the end of 1891; and when at the end of February, 1892, a sudden increase of illness accompanied with diarrhœa appeared, the opinion formed by some of the medical men was that 'gastric influenza' afforded an explanation of the symptoms. Even up to the date of my arrival in Lynn this opinion was still held by some, who contended that typhoid fever did not and had not existed in the borough. In reference, therefore, to this doubt as to the nature of the current malady, I took the opportunity, in company always with the medical men in attendance, of visiting several of the patients who were still under medical treatment. From what I saw I had no hesitation as to the disease being typhoid fever. At the same time, it is not to be denied that a number of the earlier cases failed to present in a definite way the customary symptoms of this disease, and consequently I can well understand there having been, at first, hesitation as to diagnosis. But, however this may have been, later experience of the cases induced the medical men of Lynn, almost without exception, to agree in pronouncing the current fever to have been true typhoid fever."

With reference to the above I may say that it is by no means alone in the fact of the confusion of the beginnings of typhoid being diagnosed as influenza. In many cases of late this has happened, especially where the district has been suffering under influenza. One other feature of interest which struck me was in the report of Dr. Campbell Munro, the Health Officer for the county of Renfrew, who, in reporting on an outbreak of typhoid at Paisley and Johnstone in 1893 (No. 205), stated that Dr. Macalpine, of Paisley, had found in samples of water drawn from a reservoir, the water of which was implicated, the typhoid bacillus, and that all the conditions necessary for the propagation of the bacillus were present in a bog at one end of the reservoir.

Period of Incubation of Typhoid Fever.

The deliberations of the Clinical Society on this point are of great interest to us in connection with our subject, and it may not be out of place if I reproduce their short and pithy "Conclusions" (1892):

"1. The general conclusion to be drawn from all the facts is that the period of incubation in enteric fever varies within rather wide limits. The interval between exposure to infection and the development of distinct symptoms is probably most often twelve to fourteen days. It is not very infrequently nine or ten days, occasionally eight, and possibly even less. According to Dr. Murchison, 'it may not exceed one or two days'; but no case of the kind has been reported to the Committee. In rare cases it is prolonged to fifteen, eighteen, or even twenty-three days. Dr. Murchison thought it 'very doubtful if the incubation period ever much exceeds three weeks.'

"2. A person suffering from enteric fever is capable of conveying the infection to others throughout the whole course of the disease, from the date of the earliest symptoms of illness until convalescence has been established for at least a fortnight.

"3. An epidemic due to milk contamination may be expected to cease at or about the end of the second week after the arrest of the contaminated supply; but an epidemic due to contamination of a public water supply may not come to an end until the fourth week after the source of specific pollution has been removed. Where an epidemic can be traced to well water its duration may be very much more prolonged, and no general statement as to the probable date of its spontaneous termination can be made.

"4. Infection can be conveyed by fomites, and retained in them, probably for two months at least."

These conclusions are backed by much evidence bearing

out their contentions, as very many of my readers will know; and it will not be necessary for me to enter into particulars as to that evidence, seeing that the volume issued by the Society is so largely known and so highly valued. But I will venture to refer to a somewhat remarkable outbreak which has been placed on record by Dr. Blaxall, of the Local Government Board for many years. At Fortune's Well, in the Isle of Portland (No. 164), there arose an outbreak of typhoid in 1886, after an absence of fifteen years, the infection being introduced by soldiers from Alexandria, 4 cases developing *en voyage*, and other 6 after landing, no one outside the regiment being attacked on board. In these latter circumstances it can only be held that infection was derived in Egypt, and, this being so, there comes the fact that the period of incubation varied from eighteen to as many as twenty-five days. Of the outbreak as it affected residents near a spring at Fortune's Well I need not speak; the facts in the appendix are clear to all as showing the source of the subsequent illness—some 80 cases—to have been due to polluted water.

SUMMATION OF THE CASE AGAINST WATER.

I think I may leave here the case against water as an important agent in the causation of typhoid, though I could fain proceed with a subject so interesting and so vital to the health of the community. I have studied to be brief; but it has not always been possible to limit myself to hard and dry facts, one and another point demanding special prominence and notice. Nor do I hold to have by any means exhausted the subject of my report; indeed, I have, perhaps, rather only touched the fringe of the matter, seeing that the question of water in relation to disease is too large to treat of within the scope of the BRITISH MEDICAL JOURNAL in the way befitting the importance of the subject. But let it suffice that I have endeavoured to show in what way I consider water to have played its part in the causation and dissemination of typhoid as we have been used to see it in our own country. It will have been observed that I have not travelled beyond the confines of the United Kingdom for instances of waterborne typhoid, deeming it best to confine my report to the British Isles. And truly I have not found much trouble in discovering the material on which to base my conclusions. In the period of less than forty years which I have selected for the purposes of my summary tables I have, as already pointed out, laid under contribution the reports of no fewer than 206 distinct outbreaks in which water has proved a factor in the spread of typhoid fever; and it is by no means in the earlier years of this period that I have found the disease thus to be prevailing. Analysis of the chronological column displays the significant fact that in the last fifteen years as many as 105 of the total find place. The reason of this I shall hope shortly to show.

In having thus brought together what I may claim to be a unique collection of waterborne outbreaks, I make known my indebtedness to the literature emanating from the Medical Department of the State, at Whitehall, the reports of which Department I have, in an especial manner, laid under contribution in my summary. And again, it will be noticed that in illustrating my points I have in large measure confined myself to references to reports issued from the Public Health Department, not for the reason that there are not reports from others to which I could have referred, but because the inquiries held by that Department have in most cases been carried out with an amount of detail and width which has been next to impracticable on the part of local health officers, hampered as they are with much work, and meagre as their experience has for the most part been on matters of disease causation when elaborate and sustained inquiry has been called for in the elucidation of some obscure point. This is no discredit to the local officers, but it is a reason for the prominence which is here given to reports issuing from Whitehall. It has been impossible for me to escape from the fact that nearly all the great epidemics of typhoid fever which have occurred from time to time in our country, have called for the intervention of the Department of State Medicine. And one can well see that a body of men trained as is the small body at Whitehall must needs have a grasp of subjects connected with their particular branch of research far and away beyond the comparatively circumscribed experience which pertains to the local officers of our sanitary districts, especially in view of our present pernicious system of short tenure, bad pay, and do-the-least-possible policy. And I would here pay my humble tribute to the excellent series of reports which continue to issue from the Medical Department at Whitehall, concerning local prevalences of infectious disease in England and Wales—a series unique in the whole world, and unsurpassed by any nation. Under the successive leaderships of Sir John Simon, the late Dr. Seaton, Sir George Buchanan, and more recently and at the present moment of Dr. Thorne Thorne, we have seen immense strides made by the sanitary bodies of the country towards the perfecting of our sanitary system; the progress being in no mean degree due to the indefatigable labours of these leaders of sanitary science to educate the people to a just idea of the importance of all that goes to make health, alike for the individual and the people at large. The careful and elaborate reports which emanate from the pens of the medical staff of the Local Government Board are worthy of emulation, and they were never abler or more appreciated than to-day. These reports find an honoured place in the library of the British Medical Association, and I acknowledge the vast assistance which these classic documents have been to me in my present paper, easing my inquiry to no mean extent by their clearness and precision.

There may be found those who will attempt to argue that waterborne typhoid is a watchword of a particular section of the public during a comparatively recent period; that the theory is one that has not received the approval of some men of unquestioned scientific attainments. It may be so to some extent. But why? As to the first point I agree that it is in the last fifteen years or so that the theory has come into greater prominence, but the reason is not, to my mind, far to seek. Prior to and during the seventies, whenever an outbreak of typhoid fever had to be investigated, there was as a very general rule a desire on the part of the Government to show up the insanitary circumstances with which the disease had been associated rather than to elaborate the inquiry with a view of differentiating between the potency of one and another possible cause of the disease; so that while there was seldom little doubt as to the relation of the disease to insanitary conditions in a general sense, there was not often any very pronounced thesis advanced as to the part played by any one of the many possible causes. True, the summary tables show that my statement can be brought in question in many instances, but taken as a whole the inquiries of earlier years did not proceed to an elucidation of the precise manner of propagation of the fever. It has thus come about that I have waded through numerous reports to no purpose, seeing that though there was undoubted possibility that water had been a factor, more or less special, in the causation of a particular epidemic, there was no definite and detailed consideration of the part played by water. Notable cases wherein the disease was traceable to water are of course to be readily found, or my summary table would not have assumed its present bulk in regard of the earlier years of the period covered. But it is apparent to me that in the latter fifteen years, roughly, of the period there has been a manifest and ever growing tendency to push the matter of cause as far as possible in order that the local health body might be enabled to lay their hand, so to speak, on the spot and heal it, the weakness of their sanitary defence being thus held up to the light of publicity, and its strengthening as matter of course thus more easily brought about. Indeed, it is this excellent method of holding up recalcitrant sanitary authorities to the public gaze that has undoubtedly done much to stimulate them to sanitary activity. Next to threatened dissolution there seems to be no step so calculated to stir a body into activity as public opinion.

In this way, then, has it come about, to my mind, that we hear to-day so much more concerning waterborne typhoid than we did twenty years ago. Had inquiries always been conducted on the plan now commonly adopted at Whitehall, I do not for one moment doubt that my summary tables, already lengthy, would have been much extended from their present shape. But the labour entailed in the process of exclusion of those outbreaks in respect of which the reports were so meagre as to necessitate omission of them from my *précis*, has been very great; how great may to some extent be

gathered from the fact that in the four years 1870-73 the Medical Department at Whitehall chronicled no fewer than 148 inquiries made by their staff into separate outbreaks of typhoid fever; and it was essential that all these, or such majority of them as found place in accessible reports, should be studied for the purpose of seeing in which of them water had been shown to have had a part in the causation or spread of the disease. But however loud is the outcry in some quarters on the subject of waterborne typhoid, I hope that the most sceptical hitherto on the matter will have been convinced by a perusal of the preceding pages of this report that the case against water as a disseminator of typhoid fever has been fully made out. My aim has been to place the question beyond the pale of doubt. I shall be more than rewarded if I have succeeded in my object.

What have the pages of my report shown? They have shown typhoid fever caused and spread in a variety of ways by the agency of water; they have testified to the fact that water can become polluted at its source, on its way to the consumer (alike before and after entry to the distributing mains), and within the precincts of the domestic dwelling. We have seen outbreaks caused by polluted wells, by sewage-contaminated rivers and streams, by water services which have received the drainage of manured fields, the sewage of whole villages, and innumerable excremental pollutions over the areas of the gathering grounds; by the careless laying, in close proximity and in badly jointed fashion, of watermains and sewers (the former sometimes even passing through the latter); by the washing of milk cans with polluted water; by the mixing of milk with water equally polluted; and by numerous other ways, all of which are set out in my report under their respective headings. I need not here enlarge on the matter; let the facts in my tables and the illustrations therefrom, with which I have striven to picture my several points, suffice.

For the rest, it seems necessary only that I should consider briefly the points which the foregoing pages show to be those which should engage the attention of sanitarians in the future if a continuance of the constantly-recurring outbreaks of waterborne typhoid fever is to be prevented.

THE OUTLOOK: SOME POINTS FOR FUTURE CONSIDERATION.

My study of the subject dealt with in this report has led me very strongly to support the theory that sees in the soil the natural habitat and breeding ground of the bacillus of typhoid fever outside the human body. This belief in no-wise lessens my regard of the disease as being largely caused by water—rather the reverse. We are most of us aware of the possibility of transmission of tetanus to man from the lower animals, as, for example, by a kick from a horse. Yet the bacillus of tetanus lives in the soil. It is taken up by the hoof of the quadruped, and the animal is thus made the medium of transmission of the malady induced by the organism. I do not myself incline to the belief that the bacillus of typhoid fever is conveyed to man by the medium of water, save in so far as the bacillus has gained access to the water by excremental pollution from soakage or the like. Certain it is to my way of thinking that the essential element in the prevention of waterborne typhoid fever is cleanliness. All that goes to cause pollution of the soil tends to foster disease. No point is so strongly or so persistently brought out in the history of typhoid fever occurrences in our country as that dirt and disease go hand in hand. Only in the case of rivers does man seem to place his excrement directly into his own or his neighbour's drinking water, but he does not scruple in only too many instances to so dispose of his filth that it must in the natural order of things find its way to that drinking water. It is not alone in our rural and sparsely-populated districts that such disposal takes place; it is just as common to see people harbouring up their filth in proximity to dwellings and local water supplies in our towns. Those abominations which to-day persist in so many of our towns—leaky and huge midden privies, uncovered and ill-constructed ashpits, cesspools permitting soakage of their contents, no one knows where—all these and more are the accompaniments of daily life in scores of towns. And where town populations have the good sense to so dispose of their filth as not to poison the air they breathe or their local wells, too often we find them in their selfishness and negligence endangering the water service of a vast aggregation of people in some adjacent city or borough by so ridding themselves of their excrement as to pollute a gathering ground or a stream or river used for purposes of domestic water supply.

WHAT IS THE REMEDY? I WILL ATTEMPT THE ANSWER.

1. *Local Water Supplies.*—I would see carried out in their entirety, so far as is at all possible, the recommendations of the Committee appointed by the Local Government Board in 1875 to inquire into the various methods of sewage disposal, where they suggest ridding the country of cesspools in the midst of towns; and would also see cesspit middens improved off the face of the earth. I would see the conclusion of the Society of Arts Committee on the Health of Towns of 1876 carried out—namely, that all middens, privies, and cesspools in towns should be abolished by law, feeling that these disease-disseminating abominations as we permit them to-day are annually costing the country enormous sums by these very qualities of disease provocation. To this end I would see the statutory duty of sanitary authorities to make provision of proper sewers for their districts enforced in all cases where sewerage is practicable. There will probably always be found reason for retaining some form of storage of excrement and refuse near dwellings for a time in the case of rural localities, but only in such places. And here we see the wisdom of the excellent series of model by-laws which have been drawn up by the Local Government Board for the guidance of local authorities who desire to secure for their constituents the minimum of danger from use of these receptacles. Thus the by-laws prescribe the method of construction and position in respect of water supplies of such receptacles as midden privies, ashpits, earthclosets, cesspools, and the like; and it will be well when by-laws come to be adopted by sanitary bodies, and in turn enforced where thus adopted. It is one thing to have an admirable series of safeguards at hand, and another to see to it that those safeguards are made to apply. It will, however, not be enough that cesspools and such like be abolished; it will be necessary also that the old disused forms of excrement disposal be so done away with as not to prove dangers by reason of their condition at the time of abolition. So I would see the application of some powerful disinfectant to the receptacles when emptied finally, as well as the complete filling in of the space occupied by them, in such manner that no danger shall accrue to water supplies by reason of future soakage of filth left in the middens, etc.

But there is another side to this question of local supplies, and that is that wells from a subsoil liable to pollution should in no wise be made use of as sources of water supply. The soil on which many of our towns are built has been subjected to gross contamination for many years, and it is not to be thought of as likely that the mere abolition of cesspools, and so forth, will at once render safe the abstraction of water from wells sunk in their proximity. Indeed, it may well be that no return could with safety be made to wells circumstanced as they are in some places; whilst in others it will take a long time to rid the soil of its accumulated filth. It is, however, obvious that many wells to-day in our country are not only so circumstanced as seriously to threaten the health of consumers of their contents, but also that the wells are constructed in such fashion as to permit of soakage from the surrounding soil into them, both surface and subsoil drainage. It should therefore be the aim of all sanitary bodies to secure the internal lining of wells being so finished as to prevent the ingress of water from any questionable source. I have already given Professor R. Koch's method of securing wells against pollution. I say nothing concerning it. But I do impress upon health bodies the necessity of seeing to it that wells in the areas of their jurisdiction are not allowed to remain in a condition favouring their pollution by water of doubtful quality. The further danger of contamination of well water by reason of rain storms and resulting floods is one to be thought of; and one that calls for the proper construction of well mouths, lest they be subjected to periodical overflow by surface water of polluted character. It would seem, then, that middens and other similar structures will be at times a necessity, and it also seems that wells will be still more of an essential element in rural life; the condition of cleanliness necessary to guard against pollution of the one by the other should be aimed at, therefore, in all

places where these methods of disposal and supply obtain.

The sanitary authorities of rural districts have an excellent power in their hands for the inspection of water supplies in the areas over which they have jurisdiction under Section 7 of the Public Health (Water) Act, 1878, and it would be well if more use were generally made of the power thus conferred upon them. Not that I would be thought of as holding the view that rural water supplies are not subject to scrutiny; what I have in my mind is the desire to see practical use made of the inspectorial duty cast upon rural authorities. It will often happen that action can be taken on inspections carried out with the object of securing wholesome for impure supplies, and much more can be done in the direction of closing polluted wells and the like than has been effected in the past. I am of course well acquainted with the difficulties in the way of securing the closure of polluted wells, and I would welcome the alteration in the wording of Section 70 of the Public Health Act, 1875, from "injurious to health" to "dangerous to health" in accordance with the prayer of the Society of Medical Officers of Health and of Public Analysts presented some time back to the Local Government Board. The section as it stands has ofttimes proved an obstacle in the way of closure of wells undoubtedly "dangerous" to the health of consumers of their contents.

Before I leave the region of domestic supplies there is one other point which I would like to name, and that is the danger of continuing anywhere the flushing of waterclosets directly from water mains. I know that the practice is by no means so common as it was twenty years ago, but it is far from uncommon even yet. Not only should a cistern be used for the purpose of flushing, but a separate cistern to boot, since it may well be that a cistern common to the whole house will be contaminated by the passage of air from the closet pan up the pipe, the liability to this form of pollution being obviated by the intervention of a separate flushing cistern. It may be argued that a sanitary authority has no power to compel the provision thus of flushing apparatus to existing closets. I am only sorry that it is so. The sooner the omission is rectified by the adoption of the Public Health Acts Amendment Act of 1890 the better. At least let health bodies see to it that all closets hereafter erected are so furnished. I would also see the covering and frequent cleansing of house-supply cisterns insisted upon.

I know that in thus leaving this important section of domestic water service I am going from it with but poor attempt to emphasise the needs of the community at the present time for the perfecting of such service; but if my remarks attract attention to some of the most pressing wants, I shall have achieved something. The foregoing pages testify to the terrible consequences of neglect of elementary principles of domestic cleanliness in the past; let them enforce the lessons so slow of being learned.

[*To be concluded.*]

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN LONDON, 1895.

THE MEDICAL INSTITUTIONS OF LONDON.

(*Continued from page 136.*)

THE HOSPITALS WITH MEDICAL SCHOOLS.

By D'ARCY POWER, M.A., F.R.C.S.Eng.,

Demonstrator of Surgery at St. Bartholomew's Hospital, and Surgeon to the Victoria Hospital for Children.

THE hospitals in London, like those throughout England, Scotland, and Wales, are remarkable in that they are not endowed by the State. A few have large revenues derived from landed property or from funds obtained from private munificence. The rest, and these are by far the greater number, derive their income from subscriptions contributed annually and in small sums by large numbers of private individuals.

The hospitals are divisible into two great groups, those which have a medical school attached and those which have no regular medical school, though students may and often do attend them.

Every hospital has a visiting or consulting staff, of whom the seniors take charge of the patients admitted into the hospital, whilst the junior members are occupied in attending to the out-patients. Each hospital also has a resident staff, consisting of recently qualified practitioners, who are elected to hold their office for a term of six months or a year. The visiting staff in the larger hospitals to which medical schools are attached act as teachers by lecturing and giving instruction at the bedside.

The nursing in nearly every hospital is unsectarian. It is carried out by a matron, who exercises a general supervision and by a head nurse for each ward, who is usually called "the sister." Each sister has to assist her one or more properly-certificated nurses and a subordinate group of nurses, or "probationers," who are being taught their duties. The matron and the sisters are more or less isolated, but the nurses usually live in common.

Each hospital is governed by a lay committee, consisting either of the whole body of subscribers or of a certain number to whom the larger body delegate their authority. The committee usually possess two permanent officers, the Treasurer and the Secretary. The power of appointing all the officers of the hospital is vested absolutely in the lay Committee.

The hospitals to which medical schools are attached are twelve in number. Two of these are almost coeval with the Norman conquest of England, whilst the remainder originated under a variety of circumstances either in this or in the previous century.

ST. BARTHOLOMEW'S HOSPITAL.

St. Bartholomew's Hospital, in West Smithfield, stands near St. Paul's Cathedral, upon the site which Rahere, its founder, acquired for it in 1123. Rahere afterwards founded the neighbouring Priory of St. Bartholomew, and became its first prior. The hospital, however, had an independent constitution and a separate estate, though it was for some purposes under the control of the Priory. It had a master, eight brethren and four sisters, the community being subject to the rule of St. Austin. It was a hospital from the beginning, and not a mere almshouse. St. Thomas Becket, the great Archbishop of Canterbury, was one of its early benefactors.

The hospital had an uninterrupted existence until the dissolution of the Priory in 1537. It then passed with its revenues into the possession of Henry VIII, who refounded it by Royal Charter in 1544, at the petition of Sir Richard Gresham, Lord Mayor of London, and father of that Sir Thomas Gresham, who built the Royal Exchange. A fresh Charter was granted in 1547, giving back to the foundation the greater part of its former revenues. It then contained 100 beds, it now has a service of 700 beds; there were then but few out-patients, they now amount to more than 175,000 annually.

For many years the hospital seems to have been a group of detached buildings. The majority of these disappeared about 1725, to make way for the present quadrangle, built by Gibbs in 1730. The main entrance, however, remains where it has always been, and although it was rebuilt in 1702, and was closed for many years, we can think as we pass through it that it was traversed 770 years ago by men whose fathers saw William the First enter London as a conqueror. It witnessed a notable sight on Saturday morning June 15th, 1381, for Wat Tyler, by altercating with the king (Richard the Second) in the open space which still exists immediately in front of the hospital, so enraged the Mayor, William Walworth, that he arrested him on the head with a sound blow. Whereupon Wat Tyler furiously struck the Mayor with his dagger, but hurt him not, by reason he was well armed. The Mayor, having received his stroke, drew his basilard (or long dagger generally worn suspended from the girdle, which when decorated with silver, could only be "carried by those possessed of a yearly income of £20) and grievously wounded Wat in the neck, and withal gave him a great blow on the head. Wat, spurring his horse, cried to the commons to

revenge him. The horse bare him about eighty feet from the place, and there he fell down half dead; and by-and-by they which attended the king, environed him about so as he was not seen of his company. Many of them thrust him in divers places of his body, and drew him into the hospital of St. Bartholomew, from whence again the Mayor caused him to be drawn into Smithfield, and there to be beheaded."

The hospital still presents many features of interest attesting its ancient and, in many respects, unique position. It forms a parish in itself, and has within its walls a small parish church served by the Vicar, or as he is known technically "the hospitaller." It possesses, too, a large hall, to which access is obtained by a noble staircase whose walls are ornamented with frescoes painted by Hogarth. The hall itself contains numerous paintings, some of a very high order of merit, notably the picture of Percivall Pott, by Sir Joshua Reynolds, and of Abernethy, by Sir Thomas Lawrence.

The liberality of its late Treasurer, Sir Sidney Waterlow, long provided the hospital with a most suitable and efficient convalescent home at Highgate, but the munificence of Mr. Kettlewell superseded this home by a much larger one at Swanley in Kent. It was opened on July 13th, 1885.

The school is a large one, and is accommodated in buildings which are leased from the hospital authorities. There is a good library and a splendid museum, both deserving of a visit.

The hospital and school have been well and ably served by a long succession of illustrious men, amongst whom William Harvey, David Pitcairn, William Clowes, and Percivall Pott are accounted the chiefest ornaments. The whole neighbourhood of the hospital is classic ground, and the visitor to the hospital should not omit to visit the priory church of St. Bartholomew-the-Great, which lies within two minutes' walk of the church of St. Bartholomew-the-Less. Midway between the two churches, and let into a part of the wall of the hospital is a tablet marking the site of the stake at which Henry VIII burnt those who denied his ecclesiastical supremacy, Mary burnt Protestants, and Elizabeth, her sister, burnt Anabaptists.

St. Thomas's Hospital.

St. Thomas's Hospital has nearly as great an antiquity as that of St. Bartholomew's, and, like it, took its origin in that great philanthropic movement started by Lanfranc, the Norman Archbishop, about the year 1100. It has been less fortunate than St. Bartholomew's, however, for it has changed its name, its site, and has lost many of its revenues.

The exact date at which the original hospital was founded is unknown. It belonged to the canons of the Priory of St. Mary Overy at the foot of London Bridge, and it was burnt about 1207 by the fire which destroyed a great part of Southwark and extended over the bridge into the city of London. The first hospital being thus destroyed the prior and convent immediately proceeded to erect a second hospital upon the old site (now covered by the Bridge House Hotel and the Westminster Bank) upon the west side of London Bridge, a convenient position, for it was immediately by the side of the great road leading into Kent and extending from Dover to Wroxeter. This building was used temporarily for religious purposes and mass was said there until the priory could be rebuilt. Peter de Rupibus, Bishop of Winchester, in 1228 began to build a new and larger hospital, which he placed on the eastern side of the Watling Street, a position which the hospital maintained until it moved to the foot of Westminster Bridge, when the land was bought for the London Bridge railway station in 1865. The hospital thus built was assisted by Bulls from the various Popes and obtained valuable grants of land. Many of these grants show that it maintained its ecclesiastical character until quite late in its history, for they were bequests of property made by individuals in exchange for lodgings, living, and pious observances within the precincts of the hospital. Thus the master and brethren in one case agree to find for Alicia within the court of the hospital a suitable bed with everything necessary to a bed for her so long as she lives; she is to have good service and money for clothing and fuel, but is to make no further claim of any kind. The hospital was dedicated to St. Thomas (Becket) the Martyr, and it was rendered independent of the priory to which it had at first owed its support. It was sometimes known from its patron saint as "Bekket's spytell." In later years it was the hospital of the Holy Trinity, a title which gave place to the "King's Hospital," out of compliment to Edward VI, its refounder; finally it was called the Hospital of St. Thomas the Apostle. It consisted, like the Hospital of St. Bartholomew's, of a custos or master, of brethren, and of three lay sisters, who, in 1535, had the charge of forty beds for poor and infirm people who were to be supplied with food and firing.

The hospital was surrendered to the King at the dissolution of the monasteries in 1538, and, although some efforts were made by Gresham to refound it, nothing was done effectually until the citizens of London, aided and encouraged by Bishop Ridley, took the matter in hand, when King Edward VI granted letters patent to it in 1553 and endowed it with 4,000 marks by the year.

The third hospital—built in 1228—became so ruinous and deficient that it was rebuilt a little nearer to Tooley Street about 1507. This hospital was in many respects a poorhouse rather than a true hospital, but in 1571 Mr. Bull was appointed physician to the hospital at a salary of 20 marks a year, whilst the surgeon was paid for those cases which he cured. A few years later there was an apothecary and herb-woman, who received £4 a year for physical herbs, whilst in 1652 a midwife was paid 2s. 6d. for her help to two poor women. The status of none of these officers was high; they were all subordinate to an official governor, whilst the surgeon ranks between the shoemaker and the barber. Two "fitting ministers" were appointed: one for the poor and officers of the hospital, who was called "the hospitaller;" the other was for the parish of St. Thomas's Hospital. The hospital had again fallen into decay in 1694, after it had been extensively used as a military and naval hospital for the reception of soldiers and sailors wounded in the Dutch war. It was rebuilt by the energy of Sir Robert Clayton, the "Ishban" of Dryden's *Absalom and Ahitophel*, whose statue still stands outside the present medical school buildings in Lambeth, and the first mention of a medical school occurs about this time.

The fame of Cheselden and of Mead raised the school to a first-rate position, but the internal dissensions were so great that its prestige soon began to decline, in spite of the fact that it entered into an alliance with Guy's Hospital, by which the students of one hospital attended the practice of both, and although Sir Astley Cooper—the most popular and influential man in his profession—was attached to it for many years as lecturer on anatomy.

The separation between Guy's and St. Thomas's Hospitals took place in 1824, and St. Thomas's remained in the Borough until 1865, when its site was required for the London Bridge railway station, and was sold for a sum of £300,000. The hospital was then accommodated temporarily on the site of the Surrey Music Hall until the new buildings were finished in 1870-71. These buildings are situated at the foot of Westminster Bridge, and close to Lambeth Palace, the seat of the Archbishops of Canterbury. The hospital now faces the Thames, and consist of eight distinct buildings or pavilions, containing three tiers of wards above the ground floor, and coupled together by a double corridor. The school buildings are situated at the west end of the block, and contain a first-rate museum. Amongst the many notable men who have been attached to St. Thomas's Hospital, none, perhaps, are more notable than Sir Gilbert Blane and Sir John Simon, the pioneers of sanitary science in this country.

Guy's Hospital.

Guy's Hospital arose directly out of St. Thomas's Hospital, and for many years remained intimately associated with it. Thomas Guy, a wealthy and benevolent citizen of London, had aided materially in the expense of rebuilding a part of St. Thomas's Hospital at the beginning of the eighteenth century. Early in 1721 the records of St. Thomas's Hospital contain the following minute: "Our worthy governor and benefactor Thomas Guy, intending to found and erect an hospital for incurables, in the close of this hospital, in the parish of St. Thomas, we have agreed to grant him a lease.....of several parcels of ground at a ground rent of £17 14s. per annum....." A design was procured from Mr. Lane, an emi-

nent architect and surveyor, and the building was carried out so rapidly that it was roofed in before the death of the founder on December 27th, 1724. In a little more than a week after his death Guy's Hospital was opened, and on January 6th, 1725, sixty patients were admitted. The governing body was incorporated by Act of Parliament in 1725, with a president and treasurer as permanent officers. Two physicians and two surgeons were appointed in May, 1725, to take charge of the patients, a matron, eleven sisters, and eight nurses having been appointed a few weeks earlier. The medical school attached to Guy's very soon rose into repute, and it has always been maintained in a state of the highest efficiency. One of the earliest public courses on anatomy and surgery was that given by Samuel Sharp, surgeon to the hospital from 1733 to 1757. The great repute of the surgical and anatomical teaching was maintained by Sir Astley Cooper, and in later years by John Hilton. The long line of physicians has been even more distinguished than that of the surgeons, and is certainly the noblest list possessed by any hospital in London. Wollaston and Bright, Addison and Golding Bird, Gull and Habershon, Moxon and Hilton-Fagge, not to mention those who are happily yet alive, followed each other in a remarkable succession. It is not surprising that the students flocked to such teachers, and that in spite of those unseemly disputes and of the lives too soon cut short, which a few years ago threatened to sap the vitality of the school, Guy's Hospital now boasts one of the largest and most active of the metropolitan schools of medicine.

The connection between St. Thomas's and Guy's Hospitals was most intimate between the years 1768 and 1824, and it was then that the terms "The Borough Hospitals" and "The United Hospitals" came into use. The surgical lectures during this period were given at St. Thomas's Hospital, and the medical lectures at Guy's; and the students of each hospital had the right to attend the practice and teaching at the other. Some friction eventually arising between Sir Astley Cooper and J. H. Green, Mr. Harrison, the autocratic treasurer of Guy's Hospital, took the matter into his own hands, and built a separate medical school for the students of his hospital, which was in use on June 21st, 1826. The privilege of attending the practice of the two hospitals remained until December, 1836, when the students themselves came to loggerheads, and the arrangement was formally cancelled.

The hospital is an interesting one as it now stands, for it is a unique combination of the new and of the old. Its laboratories are excellent. The museum contains a most remarkable collection of models in wax representing very various pathological conditions. They were made by Mr. Towne, who spent his life in bringing his curious art to perfection. The school is further noteworthy for the special attention which it has recently given to the instruction of dental students.

The London Hospital.

The London Hospital contains 786 beds, and being situated in Whitechapel, near the docks and in the poorest part of London, it has perhaps greater clinical resources than any of the metropolitan hospitals. It commenced its existence in 1740 as a small infirmary in Featherstone Street. It was then moved to Prescott Street, Goodman's Fields, a neighbourhood inhabited then, as now, by a large Jewish population. Additional accommodation was soon required, and buildings were erected in 1757 upon a portion of the site which the hospital now occupies, and about this time the governors were incorporated by a Royal Charter. The west wing was opened in 1831, the east wing a few years later, and further improvements have recently been made, so that the hospital now boasts itself the largest in Great Britain. The medical school began when the first student was admitted in January, 1741. Mr. Harrison in 1749 obtained permission of the hospital authorities to deliver a course of lectures on surgery within the hospital, and a similar permission was accorded to Mr. Thomson in 1755. This school was therefore one of the earliest in England. Isolated courses of lectures gave place in 1783 to systematic instruction carried out in a building erected for the purpose, and chiefly at the expense of Sir William Blizard, one of the most active surgeons of his day. The hospital is well worthy of a visit; although it is situated in the heart of the most populous part of London, it has contrived to retain a considerable amount of garden. It has an excellent museum, and splendid accommodation for students. It has always been the home of good clinical teaching, for a course of lectures on clinical medicine were given in 1792, and were successfully resumed after an interval by Dr. Billing in 1828. Here, too, about 1773 Mr. Henry Thomson (surgeon to the hospital 1753-1780) amputated the hip for the second, or if his case was later than Perrault's, for the third time in the history of the operation.

Sir Andrew Clark and Sir Morell Mackenzie have been attached to the hospital as physicians. John Scott, from whom are derived Scott's dressing and ointment; Curling, Critchett, and Jonathan Hutchinson, amongst many other illustrious men, have been surgeons.

The Westminster Hospital.

The Westminster Hospital, situated in Broad Sanctuary, under the very shadow of Westminster Abbey, is remarkable as being the first general hospital founded, and entirely supported by voluntary contributions. It was originally established in 1719 by several individuals, who had previously made common cause for the relief of sick prisoners in Newgate, the Clink, and other prisons of the metropolis. A house was taken in Petty France, now called York Street, on March 25th, 1720, and patients were admitted upon the following May 11th. This hospital was known as the Infirmary for the Sick and Needy, and was established in the midst of one of the poorest and most neglected neighbourhoods of London. It at once received the support of the two sergeant-surgeons to King George I, Claudius Amyand and Ambrose Dickins. Its usefulness was so great that in 1724 a larger house, capable of containing sixty beds, was rented, and at the same time Cheselden was appointed principal surgeon, whilst "the princely" Mead became its consulting physician. The infirmary again outgrew its accommodation, until in 1733 it became necessary to find larger premises. The majority of the governors determined to purchase a house in James Street, but a small and influential minority were dissatisfied with this decision, as they held that Lanesborough House, at Hyde Park Corner, offered a better site. A split took place. The infirmary was established, with 100 beds, in James Street, and was opened in January, 1733-34. The dissatisfied minority bought Lanesborough House, and opened it on January 1st, 1733-34, with 30 beds, thus laying the foundation of the noble institution now known as St. George's Hospital. It is interesting to notice that the consulting physician and the three principal surgeons of the Westminster Hospital were amongst the seceders. In 1754 the Westminster Infirmary became the Westminster Hospital, but it continued to occupy the same position in James Street until 1834, when the buildings had become so dilapidated that the hospital was moved into the one which it now occupies in Broad Sanctuary, where in 1836 it obtained its charter of incorporation.

The school attached to the hospital has led a most chequered existence. The hospital was utilised for clinical instruction from its foundation, but, at any rate, during the early part of the present century the students had to obtain their systematic instruction as best they could, usually by attending one of the private schools. An abortive attempt was made to found a school in direct connection with the hospital in 1833 again by Guthrie in 1834, and again later, but it was not until 1841 that the Westminster Hospital School of Medicine was formally established, only to fail through again in 1847, when the College of Surgeons withdrew their recognition of the anatomical lectures in the school. The students were therefore transferred for this branch of their teaching to King's College. The school, however, was soon reorganised, and was carried on in spite of most disadvantageous surroundings by the self-denying labours of Basham, Heath, and Power. The matter was at last taken in hand, and proper accommodation was provided in 1885 by building sufficiently large premises in Caxton Street, a short distance from the hospital, and the school, in the hands of an energetic staff, is now worthy the hospital to which it is attached.

St. George's Hospital.

St. George's Hospital, as we have seen, originated in a schism amongst the governors of the Westminster Infirmary in 1733. The seceders maintained that Lanesborough House was better adapted for a hospital than any other available site "on account of the strength of the building and of the airiness of the situation," whilst the majority of the governors thought that Hyde Park Corner was too far away from Westminster to render a hospital there of much service to the people whom it was their design to benefit. The scheme was well supported. Mead and Sir Hans Sloane took a personal interest in the well-being of the new institution, and it was opened with thirty beds, soon afterwards increased to sixty, on January 1st, 1733-4.

The work of the hospital was carried on so successfully that it was soon found necessary to alter the buildings to fit them for maintaining 200 beds. In this state the hospital continued without material alteration until 1825, when a new one was erected immediately behind Lanesborough House. The new building was finished in April, 1733, and was adapted to receive 326 in-patients. It had a theatre for lectures and a museum for pathological preparations. In June, 1834, an Act of Incorporation was obtained empowering the trustees of the hospital to hold property to the amount of £30,000. The hospital has also been particularly fortunate in having the Atkinson-Morley Convalescent House attached to it.

The staff of St. George's Hospital has at all times been peculiarly rich in the possession of men of the widest scientific attainments and of far more than local reputation. John Hunter, Matthew Baillie, William Heberden, Thomas Young the physicist, Cheselden, and the various members of the Hawkins family, Sir Benjamin Brodie, and Prescott Hewett represent but a few of the illustrious names on its roll. The medical school was not established until 1831; before that time the students of the hospital attended the necessary lectures in the Great Windmill Street School, which originated with John Hunter, and was carried on by a series of St. George's men, whilst at a still later time they were taught anatomy by Mr. Lane at the Grosvenor Place School. Mr. Lane was harshly treated by a part of the staff of St. George's Hospital, and a separation between his school and the hospital became inevitable. The hospital, therefore, secured dissecting rooms in Kinnerton Street, which were long of the greatest service, though they have lately been rendered unnecessary by the recent additions to the hospital buildings.

St. Mary's Hospital.

St. Mary's Hospital arose out of St. George's Hospital in much the same manner as St. George's had itself arisen from the Westminster Hospital. It practically owes its origin to the zeal and ability of Mr. Samuel Armstrong Lane, who died in 1892 at the mature age of 90. Lane was for many years the most able teacher at the Grosvenor Place School of Medicine, where many of the students of St. George's Hospital were taught. He was an accomplished anatomist and a skilful surgeon, yet when he applied for an appointment as assistant surgeon at St. George's Hospital he was rejected in favour of one who, though much his inferior, was a relative of Sir Benjamin Brodie. Lane, nothing daunted, determined not to offer himself again, but to start a rival hospital. The project was mooted in 1843, the first stone was laid in 1845, and the building was opened with accommodation for 50 patients in June, 1851, when Mr. Lane was appointed one of the surgeons. The governors of the hospital were able to open wards for the reception of 150 patients in June, 1852, as this was the full complement of the hospital. The original building was at first called the Marylebone and Paddington Hospital, though it very soon acquired its present name. The hospital stands in Cambridge Place, close to the Great Western railway station, and on a site which once formed the reservoir of the Grand Junction Waterworks. It has not yet obtained any charter or Act of Incorporation. The medical school attached to the hospital was opened in 1854. Both the hospital and the school have recently undergone great improvements, for they are happy in possessing one of the most energetic teaching staffs in London. The medical school contains a remarkably complete museum of pathology.

Charing Cross Hospital.

The Charing Cross Hospital began its career in 1815 as a dispensary in the house of Dr. Benjamin Golding, first in Leicester Place and afterwards in St. Martin's Lane. It assumed the name of the West London Infirmary about the year 1818. Mr. Pettigrew became attached to the institution about 1819 and it was doubtless by the influence which he exercised that it obtained the patronage of the Duke and Duchess of York. The Committee took a house in Villiers Street, near Charing Cross, in January, 1823, and out-patients were seen there until 1827, when the name was changed to Charing Cross Hospital, and arrangements were made to provide twelve or fifteen beds for use in cases of emergency. Dr. Gabriel Sigmond became a physician to the dispensary about 1825 and it was mainly owing to his energy in collecting and contributing money that the dispensary became converted into a hospital. The hospital soon outgrew its accommodation, and, a site having been obtained where the present hospital stands, the foundation stone of a new building was laid with full Masonic ceremonies on September 15th, 1831. The design was furnished by Decimus Burton, and the hospital was opened in February, 1834, a medical school being inaugurated in the following year.

The medical staff had serious disagreements in 1835-36, which terminated in the resignation of Dr. Sigmond and Mr. Pettigrew, the cause of dissension being the condition of the school, which seemed, to some members of the staff, so bad as to require an amalgamation with its somewhat more prosperous rival at King's College. About this time, too, the Council of the Royal College of Surgeons took away from the hospital their recognition of it as a medical school. The school recovered itself in due course and was again allowed to become a teaching body. The hospital was entirely rebuilt in 1876, was enlarged in 1887, and the Out-patient Department has since been remodelled.

The Medical School is separated from the hospital by the width of the roadway, the two buildings being connected by an underground passage. It was rebuilt in 1881, and is very conveniently arranged. Its proximity to the Dental Hospital in Leicester Square has rendered it necessary for the school to give special facilities to students requiring systematic instruction for the diploma in dental surgery.

The Middlesex Hospital.

The Middlesex Hospital was founded in 1745 under the name of the Middlesex Infirmary. It consisted at first of two dwelling-houses, situated in Windmill Street, Tottenham Court Road, rented from Mr. Goodge, one of the early governors. It only contained six beds for the first two years after its foundation, but on November 11th, 1746, it assumed the name of the Middlesex Hospital. The first midwifery patient was admitted on June 30th, 1747, and soon afterwards the governors directed that a board should be put up at the end of the street "in a cheap and frugal manner inscribed with the following words: Middlesex Hospital for Sick, Lame, and Lying-in Married Women." The notice broke "Priscian's head," for it was thoroughly ungrammatical, but it doubtless served its purpose of drawing attention to the charity. The midwifery department at first threatened to swamp the other cases, but by the adoption of radical measures this was eventually prevented, though the cases remained so numerous that on May 15th, 1755, the first stone of a new and larger hospital was laid by the Earl of Northumberland in the Marylebone Fields, on the site of the present building. The transfer of patients appears to have taken place between August 30th and September 5th, 1757. A west wing was added to this building in 1770, and the wards, which had hitherto been known by the names of the sisters tending them, were given permanent names. The finances of the hospital were in so flourishing a state that it was proposed to erect an east wing in 1775; at this time, too, and for many subsequent years, the hospital garden was a conspicuous ornament. The expense of the new building proved too much for the resources of the hospital, and it passed through a long period of financial depression from 1781. It was not until January, 1824, that its condition was sufficiently improved to warrant the opening of all its wards. The hospital was incorporated

by Act of Parliament, which received the Royal assent in April, 1836.

The hospital is remarkable from the fact that it has possessed, since January, 1792, a fund for the endowment of a ward for the reception of persons afflicted with cancer. The fund was provided by S. Whitbread, and it has enabled the officers of the hospital carefully to check the remedies which have been recommended at various times for the cure of this deadly affection.

An attempt to teach students of the hospital was made as early as 1796, when a laboratory was fitted up in order that chemical lectures might be given, but for many subsequent years the students of the Middlesex Hospital attended the Windmill Street School of Medicine. The founders of the London University (afterwards University College), in 1828, endeavoured to attach the Middlesex Hospital to the new institution, but with a curious blindness to their own interests, the governing body of the hospital rejected every overture, and the University authorities therefore established the North London or University College Hospital. The Windmill Street School was dissolved about the same time, in consequence of Sir Charles Bell's appointment as Clinical Professor in the new University, and it became imperative to establish a school in the Middlesex Hospital. This was accordingly done in 1835. The most notable members of the staff have been Dr. Peter Mere Latham, Sir Henry Halford, who was called Dr. Henry Vaughan, during the time (1793-1800) he served the hospital, Sir Thomas Watson, Mr. John Shaw, Sir Charles Bell, and perhaps the most highly gifted of all, whose loss we still mourn, Mr. John Whitaker Hulke.

University College and its Hospital.

Enormous strides were made in the social and political state of England during the first thirty years of the present century, and University College marks the advance made by education about this time. The idea of establishing a liberal university in London which should be free from the trammels of the older universities and teaching bodies was long a favourite idea of the poet Thomas Campbell. This idea became a reality owing to the energy of Mr. (afterwards Sir) Isaac Lyon Goldsmid and of Lord Brougham. Active measures to found an establishment under the title of the London University were taken in April, 1825, and in 1826 seven acres of freehold ground were obtained between Upper Gower Street and the New Road. Mr. Wilkins, R.A., immediately proceeded to the erection of the present buildings upon the site thus acquired, and professorial work commenced in them in the autumn of 1828. The institution, commenced as a private enterprise, was strong enough to apply for and obtain a charter of incorporation granted in November, 1836. Some opposition, however, having arisen, and King's College having become incorporated in the meantime, a separate charter was granted to a new body, whose business it was to examine and not to teach, and to this body was applied the title of the London University, which it still retains, the older teaching establishment in Gower Street being subsequently known as University College.

The medical faculty was at first well represented by excellent teachers, but internal dissensions drove them out, and for the first few years of its existence the faculty passed through most troublous times. Matters mended in course of years, and the teaching staff as well as the medical staff attached to the hospital has been an unusually strong one for many years past; the Quains, Sharpey, and Ellis being perhaps the foremost teachers; whilst Liston, Syme, Parkes, Jenner, and Reynolds represent the most celebrated of the hospital staff.

The Hospital commenced as the University Dispensary at No. 4, George Street, Euston Square, on September 8th, 1828, a week after the authorities of the Middlesex Hospital had disavowed any arrangement or connection with the University. The staff consisted of Anthony Todd Thomson, Jones Quain, David Davis, Samuel Cooper, Richard Quain, the surgeon, and J. Hogg. Steps were immediately taken to found a hospital fully equipped for clinical teaching, and funds were so rapidly obtained for this purpose that the centre block adapted to contain 130 beds was commenced in 1833 and opened in the following year. The hospital staff consisted at its opening of Dr. Elliotson, Dr. Thomson, and Dr. Carswell as physicians; Dr. Davis as obstetric physician; Sam. Cooper, Robert Liston, and Richard Quain as surgeons. The hospital was at this time called the North London Hospital, it then became the University College Hospital, and in 1851 both names were combined. New buildings were added from time to time, and in the year 1859 the hospital authorities improved the nursing arrangements by entering into an arrangement with the All Saints' Home for a supply of trained nurses, who were to be under the supervision of the Lady Superior of the Home, though they were subject to the control of the matron of the hospital. The hospital was fitted up, at the instance of Dr. Tilbury Fox, the physician to the Skin Department, with an elaborate system of medicated baths, which under certain conditions are available for other than patients of the hospital.

King's College and its Hospital.

The origin of King's College, London, was a meeting held at the Freemasons' Tavern on June 21st, 1828, when the Duke of Wellington took the chair. It was decided that a college for general education should be founded in the metropolis, in which, while the various branches of literature and science are made the subjects of instruction, it was to be an essential part of the system to imbue the minds of youth with a knowledge of the doctrines and duties of Christianity as inculcated by the United Church of England and Ireland. The College, being under the immediate patronage of George IV, was to be called "King's College." Letters patent were granted to it on August 14th, 1829, and the new institution was placed under the care of various high officials and Church dignitaries. A secession of the extreme Protestant party took place in 1829, and it was not until October 8th, 1831, that the College was formally opened. The Chairs in the Medical Department were then occupied by J. H. Green, Herbert Mayo, Dr. Bisset Hawkins, Dr. Frank Hawkins, Richard Partridge, and Dr. R. Ferguson. The connection of the College with the Established Church has always been maintained, and has lately been reaffirmed by the Council, though students of almost all religions and sects have been pupils. King's College has done good service to the medical profession by constantly advocating the necessity of a sound preliminary education for medical students.

King's College Hospital arose naturally out of the requirements of the medical department of the College, and it was established chiefly by the exertions of Dr. R. B. Todd, the Professor of General Anatomy and Physiology. It is situated at some little distance from the College and was, until recently, surrounded by slums of the worst description. It was opened in 1839, upon the site of the old St. Clement Danes Workhouse in Portugal Street, at the back of Lincoln's Inn Fields, and unless report lies more than usual a part of the buildings of the hospital were erected upon a burial ground in which upwards of 5,500 bodies had been interred within the previous twenty-five years. One hundred and twenty beds were utilised in 1839, but in 1849 it was found that the accommodation was insufficient both for the patients and the students. The present building was erected and opened upon the old site in 1861. The nursing was in the hands of a voluntary nursing sisterhood from 1856 to 1885, but since that time the nursing arrangements have been entirely in the hands of the Hospital Committee.

King's College School and Hospital have had a long array of glorious names upon its staff. Sir Thomas Watson delivered his classical lectures upon medicine in the school soon after it was opened, Dr. Paris occupied the Chair of Materia Medica, Sir William Fergusson was Surgeon to the charity for many years, Sir William Bowman was Ophthalmic Surgeon, Ferrier gained his laurels here, Sir Joseph Lister perfected his system and made the hospital known throughout the world as the home of antiseptic surgery.

The Royal Free Hospital and the London School of Medicine for Women

The Royal Free Hospital, situated in Gray's Inn Road, was founded as a protest against the system then in vogue at the large hospitals of requiring a letter of recommendation before a sick pauper could obtain admission. The hospital owes its foundation to the following accident:

In the winter of 1827, Mr. Marsden, a practitioner living at

the top of Holborn Hill, found a girl of 18 dying of disease and starvation at midnight upon the steps of St. Andrew's Church, in Holborn. He conveyed her in a hackney coach to three or four of the large hospitals, but at each she was refused admission because the necessary letter of recommendation was wanting, and eventually he was obliged to take her to a lodging, where she died unrecognised two days later. This scandal produced so great an effect upon Marsden's mind that he determined to found a hospital into which disease and destitution should be the sole passports for admission. Friends came forward, and in 1828 a house was opened in Greville Street, Hatton Garden, under the name of the London General Institution for the Gratuitous Cure of Malignant Disease. The sympathies of Mr. (afterwards Sir) Robert Peel—the Home Secretary—were enlisted, and through him the patronage of King George IV was obtained, and the Duke of Gloucester became the first President.

The reputation of the hospital was greatly increased by the liberal policy pursued by its managers during the great epidemics of cholera in 1832-33-34, 1848, and 1854. The doors of the hospital were thrown open to all persons afflicted with the disease, at a time when the other hospitals closed theirs on the ground that the admission of cholera patients would endanger the safety of those already in the hospital.

A fund was started in the spring of 1843 to build a larger hospital. A site was obtained in the Gray's Inn Road, which had been formerly in the occupation of the Light Horse Volunteers, and the nucleus of the present building was erected. The hospital is still supported by spontaneous contributions from charitable people. It is recorded that the subscription box at the gate has more than once been found to contain banknotes of great value contributed by persons who desired that their donations should be absolutely without a name.

No school was attached to the hospital for many years; but in 1877 an agreement was entered into by which the medical staff of the hospital were permitted to give clinical instruction to students attending the London School of Medicine for Women in Handel Street, Brunswick Square.

THE LABORATORIES OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND ROYAL COLLEGE OF SURGEONS OF ENGLAND.

In 1886 a Joint Committee was appointed by the two Royal Colleges to report on the subject of the disposal of an unoccupied plot of land adjoining the Examination Hall on the Embankment. The Committee reported that it was desirable to utilise the vacant ground for scientific purposes under the control and management of the two Colleges, and that the "scientific purposes" should be in the first place the investigation and exposition of such branches of science connected with medicine and surgery as the two Colleges should from time to time determine. It was then agreed to erect a building suitable for the purposes named above, together with a Lecture Theatre capable of accommodating 400 persons. Plans were prepared by Mr. Stephen Salter, the architect of the Examination Hall, and a contract was entered into with the builders for £24,667. Modifications having been subsequently introduced, the original estimate was reduced by £900 3s. 9d. In 1889 regulations were drawn up for the management of the laboratories by the Joint Committee of Management appointed by the two Colleges. In 1890 Dr. German Sims Woodhead was appointed Director, and the Committee were able to report that the laboratories were in working order. Permission to work in the laboratories is not restricted to those whose names are on the *Medical Register*. Application for this permission must be made to the Director in the first instance; the application is then submitted by him to the Committee at their next meeting. The publication of the results of work done in the laboratories is under the control of the Committee of Management. Ever since the completion of the building the workrooms have been fully occupied, and much good original work has been accomplished. The laboratories and workrooms are thoroughly fitted up with the most modern appliances for bacteriological and other kinds of research. A note of the work done in each year is published in the Report of the Secretary of the Royal College of Surgeons, which may be found in the *Calendar* of that institution. No separate publication has been issued by the Laboratories Committee, but the results of the work done have been for the most part communicated by the various workers to the medical journals.

DONARIA OF MEDICAL INTEREST

IN THE OPPENHEIMER COLLECTION OF ETRUSCAN AND ROMAN ANTIQUITIES.

From Notes by Dr. LUIGI SAMBON,
Rome.

The custom of making offerings to the gods is found among the ancients from the earliest times of which we have any record. Such gifts were called *donaria* by the Romans, and were generally offered as tokens of gratitude but often they were intended to induce the deity to grant some favour.

Anything could be offered to the gods—land, buildings, cattle, fruit, war implements, tools of trade, jewellery, cast-off clothes. Repairs of the temple and embellishments of the sanctuary by paintings and decorations were considered most suitable donaria. Some donaria, such as materials for the religious ceremonies, statues of gods and money were given indifferently to all deities; other offerings were given only to some special divinity; thus the temple of Artemis Brauronia was filled with women's clothing.

In the temples of healing gods were gathered mostly instruments of surgery, pharmaceutical appliances, painted tablets representing miraculous healings, and great numbers of images of various parts of the human frame shaped in metal, stone and terra-cotta.

Some of these temples were magnificent buildings richly decorated, but often they were mere shrines at the source of some hot spring or mineral water where great numbers of patients flocked from far and near. Here they would bathe or else only drink the water. The priests regulated the use of the waters and prescribed further for each patient. The patient always threw an offering into the water before leaving, a bronze astragalus, a silver cup, a coin or some terra-cotta model of a limb, which was left bubbling in the water while the sufferer, dragged himself off muttering a prayer. A representation of a woman throwing her donarium into a tank of healing water appears in a painting on a Greek vase in the Louvre. More often the donaria were hung about the walls of the temple and clustered round the statues of the gods, as we learn from the inventories engraved on marble which have been found among the ruins of the old temples.

When the temples or the tanks of healing waters were overcrowded with valueless donaria, the priests used to remove them to grottoes or wells dug in the neighbourhood or they buried them enclosed in large wooden boxes or simply in deep furrows from which they are now occasionally disinterred.

Magnificent offerings such as cups of valuable metal with votive inscriptions have occasionally been found. The old temples contained many objects of gold and silver, but few remain because donaria of precious metals were, after a time, melted into ingots, and disposed of by the priests according to special regulations peculiar to each temple.

Amongst the votive deposits are nearly always found coins of every epoch and place, from the shapeless pieces of bronze called *æs rude* which was the primitive money of Italy and preceded the coined metal or *æs signatum*, to coins of the empire. Such coins give most interesting information as to the approximate dates of the period in which the sanctuary where they are found was frequented, and perhaps of how far its fame was spread. The coins were sometimes attached by means of wax to the hands of the images worshipped. Many bear countermarks very likely to prevent their returning into use, others *grafito* inscriptions such as "sacred to Apollo."

Surgical instruments were offered by patients or surgeons often as a thanksgiving for a successful operation. Erostratus offered to Apollo in the temple of Delphus a forceps of lead to show how little he approved of the extraction of teeth which were not loose enough to be pulled out by the fingers.

Among the many surgical instruments and appliances found in all parts of the Roman Empire more than a hundred different ones are known, which are certainly not inferior to those of the present day. The old Roman instruments were entirely of metal, mostly of bronze and iron; some were beautifully shaped and richly inlaid with silver.

Large quantities of pottery are usually found, mostly broken into fragments; there are cups and vessels of every form and description, but generally of the coarsest kind. Even this pottery can give a certain idea of the epoch at which the sanctuary was frequented. Sometimes the cups are pierced with a hole by which they were hung up as a votive offering after they had been used, but generally they were thrown into the water. We are told gravely in a Greek inscription from Epidaurus of a boy who had been carrying his master's favourite cup, and had gone to sleep by the roadside, to wake up and find the cup broken in pieces. He was in despair, when a passer-by remarked that only Asclepius, the healing god of Epidaurus, could mend the crock. This the god is recorded to have done, to the delight not only of the boy but also of his master, who, when he heard of the incident presented the cup to the temple.

Among the pottery I have found invalid medicine cups and feeding bottles for infants (*guttæ*). Many of these are ingeniously fashioned in the shape of the female breast, some offer curious shapes of animals. I have found some which have a woman suckling her infant worked in relief on their surface evidently indicating their use, but what positively confirms these *guttæ* to be feeding bottles is that they have been found by Mr. E. Toulouze, Dr. Allaire and myself in the tombs of children who died during the period of lactation. Here they had been deposited by mothers sometimes together with a rattling toy, as the most suitable furniture for the tiny grave. They replaced the dishes of various foods which were placed in the tombs of grown up people.

These old feeding bottles are so constructed that no flies or dust can reach their contents. The milk was generally introduced by inverting the bottle and pouring it through an open tube ascending within from the middle of the base almost to the apex, which also prevented its escape when the bottle was placed again on its base. The child obtained

Fig. 1.—Feeding bottle.

nourishment by sucking through a spout on the side of the article. On the opposite side is a small round handle. In my collection is a tiny feeding bottle of lead which had probably been made to be offered as a thanksgiving for successful feeding by artificial means.

Amongst the pottery of votive offering are often found vessels of very minute dimensions, which certainly could not have been of any practical use, some being hardly an inch high; this toy-like pottery had evidently been brought to the shrine as a symbolical offering, instead of the usual vessels which now filled up the tanks. A great number were found in Civita Lavinia by Lord Savile; they have also been found in tombs.

The most interesting and least known donaria are certainly those representing limbs and viscera of the human body or images of patients showing evident marks of disease upon them. There is hardly any part of the body which has not been shaped out of the clay. It was a common custom amongst patients to offer an image of a limb or organ which was diseased.

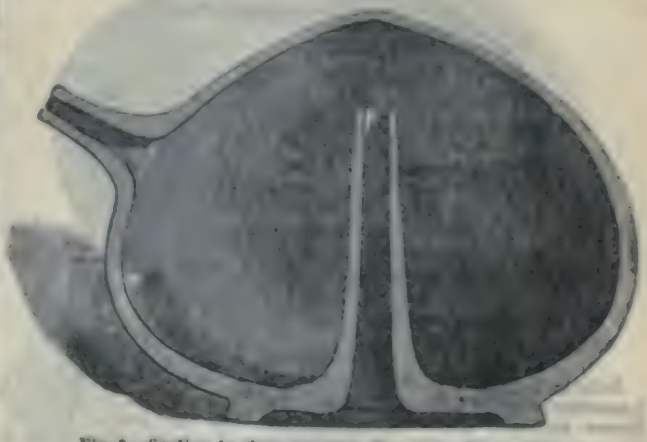

Fig. 2.—Section to show construction of feeding bottle.

Innumerable are the heads found in each votive deposit. They are of every epoch and size; some few are of bearded men, a large number of youths and children, but the great majority is of women of every age. Mostly the whole head is represented, but sometimes only one side of it is shaped, the other being replaced by a flat surface. The most archaic are solid, the later ones are hollow and generally have a square or round hole behind by which they might be suspended. All these heads of different epochs from the most archaic to those of the latest periods offer an interesting study on the hairdressing and adornment. The hairdressing in return giving a certain information as to the period and locality to which they belong. In a general way those wearing diadems belong to the earliest period, the others veiled in many ways to the latest. Their age varies from the fifth century B.C. to the second A.D.

These heads or half heads were most commonly consecrated as representing the part of the body affected by disease, but many represented the grateful patient himself, and some, which are modelled by the hand instead of being cast, are perhaps portraits of the same. Of the many hundreds I have examined none present signs of disease; only one head modelled which was found in a votive deposit consecrated to Minerva Medica in Rome, suggests alopecia areata, but the locks which are missing, chiefly at the back of the head, may have fallen off accidentally, the tresses or ringlets having, as was not infrequent, been separately modelled and attached afterwards to the head. None of these heads offer

Fig. 3.—Ear from Palestrina.

any special attributes which might prove them to be images

of gods. Often only a part of the face or head is represented, generally the fronto-labial region, on a square or rounded plaque.

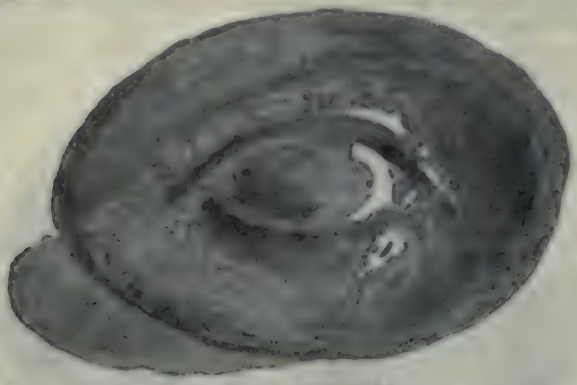

Fig. 4.—Eye found at Vei.

Ears and eyes are found singly in large numbers and vary immensely in shape and size. In the National Museum of Rome are two terra-cottas representing the labial region. In my own collection is a very neat representation of a tongue with its ligaments (glosso-epiglott. med. and glosso-epiglott. later.), on each side of its base are two rounded prominences, probably representing the tonsils.

Fig. 5.—Dissected trunk found near Rome.

Numerous trunks of both sexes and all sizes are found. In many of them we observe large openings, either limited to the chest, or extending to the pubes and exposing the internal organs. The openings present the *technique* of our days. Sometimes only the pelvis is represented; one in the Florence Museum shows the uterus through an abdominal section. Often the internal organs of one or both cavities are represented on distinct plaques. The anatomy of these sections is generally very poor, but the workmanship varies immensely from one terra-cotta to another, and while some of them offer a totally mistaken and conventional form or grouping, others are formed with extraordinary skill. These terra-cottas had no aim at scientific accuracy; they were modelled in vast quantities by any wayside potter and sold for a trifling sum on the road to the temples, mostly to ignorant peasants. A careful study of human anatomy was therefore not needed and the majority of potters who shaped these donaria probably contented themselves with a short examination of the butcher's shop.

Very different must have been the anatomical knowledge of the medical men of those days, because we know that human anatomy was eagerly studied on the bodies of prisoners and slaves. Celsus, in his work which is the masterpiece of Roman medical literature, repeatedly emphasises that there can be no rational medicine without a complete knowledge of human anatomy. Erasistratus had dissected the human body at Alexandria and Herophilus had even vivisected criminals under sentence of death.

From the vast quantities of anatomical terra-cottas bought and dedicated by patients of all classes, we can surmise that gross anatomy was thus far better known to the general public than it is at the present day.

Arms, legs, hands and feet are found very abundantly and sometimes single fingers. The hands are generally represented as opened in the attitude of worship. A left hand in Dr. Charles's collection in Rome presents nodulated tumours over the first phalanx of the ring and little fingers; another one in the same collection has two fingers flexed at the metacarpo-phalangeal joint, probably the result of broken extensor tendons. One in my collection offers over-extended fingers as occurs from injury of one of the main nerves of the arm supplying the flexors and skin.

The feet are sometimes clad in sandals, the sole being shaped in the clay and the straps only painted. A foot in Professor Charles's collection stands on a very high sole probably to improve the gait in ankylosis.

Hearts (Fig. 6) with their auricles very prominently

Fig 6—Heart.

shaped, kidneys, uteri, ovaries and coils of intestines are often found singly. In the National Museum of Rome is a rough model of the larynx and trachea (Fig. 7).

Female breasts are extremely common.

Male genitals are also found in great number, always with long foreskin completely covering the glans penis; many of these terra-cottas suggest phimosis from venereal disease.

Reproductions of the vulva are often found, sometimes offering the characteristics of childhood, at other times those of puberty.

Fig. 7.—Larynx and Trachea.

Uteri are found in great numbers, some generally of the size of the normal viscus with a smooth surface; others are larger in size and offer a wrinkled surface and patulous cervix as after delivery (Fig. 8). They were offered as pro-

Fig. 8.—Uterus after delivery

pitiatory gifts to ensure an easy labour or given by way of thanksgiving after safe delivery, or after recovery from difficult labour or disease.

Some of these uteri have on one side the appendages attached (Fig. 9). I have found that the left ovary and tube is far

Fig. 9.—Ovaro-salpingitis with adhesions.

more commonly represented, proving even in those days a marked prevalence of disease of the appendages of the left side.

Some uteri present a double opening at the os (Fig. 10); they

Fig. 10.—Uterus septus.

are undoubtedly representations of uteri septi. I have found no other malformation of the womb represented by these terra-cottas, such as uterus bicornis, although they are, com-

paratively far more frequent. But this is not surprising because uterus septus is easily diagnosed during life by a simple manual examination if the septum extends as far as the os, while other malformations are difficult to detect except in *post-mortem* examinations. As the terra-cottas representing uteri septi are rather frequent although the malformation is rare, I believe that the idea of twin pregnancy was closely connected with it, and thus the double opening may be considered, in most cases, as a conventional form indicating it.

(*To be concluded.*)

A REPORT
ON THE
MILK SUPPLY OF LONDON
BY A
SPECIAL ANALYTICAL AND BIOLOGICAL COMMISSION.

II.

In carrying out our investigation into the quality of the milk supplied to London, we have, in the first instance, caused samples to be taken in poor districts by reliable persons who made the purchases in such a manner as to ensure that each sample represented what was being supplied at the time to the ordinary customers of the shops selected. The quantity asked for in each instance was small, and no information was given as to the object of the purchase. In this manner, during the month of June, thirty samples were taken in the poorer districts of Westminster, Marylebone, Lambeth, and Battersea. The report which we have received upon these samples shows results of a striking kind. Of the 30 samples only 6 were reported as being of "genuine composition," 16 were found to be more or less sophisticated by the addition of water or the abstraction of fat, or both, even where the calculations of the results were based on the lowest limits of quality which it is possible to adopt, 7 were unquestionably sophisticated upon the basis of a somewhat higher but perfectly fair standard of quality in regard to fat; and 1, while otherwise of genuine composition and fair quality, had been tampered with by the admixture of a boric acid preparation, 9 of the otherwise sophisticated samples having also been found to contain boric acid.

There are different ways of reporting the results of analyses of this kind, and the variations necessarily existing in the composition of a natural product like milk create some amount of difficulty; but the composition of genuine cow's milk is well known to vary within such limits that, leaving out of consideration the peculiar fluids that single animals may be made to yield or that may be extracted from abnormal ones, the assertion of important sophistication in any given case is a fairly easy matter with the aid of a full and accurate analysis. If deficiency of fat is found, the amount of that deficiency may be calculated on the assumption that a genuine milk should contain not less than 3 per cent. of fat as determined by modern and accurate methods of analysis, or on the higher and fairer standard of 3.5 per cent. The deficiency may be stated as a percentage of "original fat abstracted," but inasmuch as deficiency of fat is now generally brought about by the admixture of "separated milk"—which contains practically no fat—with a milk of genuine composition, it is convenient to regard milks sophisticated in respect of fat deficiency as made up of "milk devoid of fat" and of a milk of genuine composition.

It is a well-known fact that, under existing conditions, public analysts to whom samples of milk are officially submitted under the Adulteration Acts are compelled to base any condemnatory reports or certificates upon very low limits of quality. It must be admitted that 3 per cent. of fat is as low an amount as can possibly be allowed in an article to which the term "milk"—meaning thereby cow's milk—can still be legitimately applied. It is true that certain animals may be made to produce almost any liquid from their udders by improper or inadequate feeding and by bad management and unhealthy surroundings; but because this is the case it is absurd to contend, as it is sometimes contended, that a purchaser who asks for milk is entitled only to get the very worst product that can be extracted from the udder of an abnormal cow. It has been proved by thousands of analyses that, especially at this time of year, a purchaser may justly expect to get at least 3.5 per cent. of fat in the milk with which he is supplied. If he does not get it, and the "milk" which he does get is, as we have already pointed out, "standardised" by the admixture of separated milk until the amount of fat present is just on the limit that will "pass" the public analyst, the fraud is as obvious as any for which the law provides punishment far more drastic than that which is ever visited upon the milk swindler.

Some idea of the nature of this form of milk fraud and of the profits attending it may be gained by a consideration of the fact that a sample such as No. 1 in the table which we print on the next page, reported as containing 3 per cent. of milk devoid of fat, or as having had 8 per cent. of the original fat abstracted—which amounts to the same thing—would be reported as being deficient to the extent of 20 per cent. of the original fat, or as containing 20 per cent. of milk devoid of fat, upon the 3.5 standard. The magnitude of the frauds revealed by the results shown in the table is made more striking by observing what the figures mean when applied to "bulk," that is, to considerable quantities; 25 per cent. of added water means that in 100 gallons of mixture foisted on the public there are 23 gallons of water—perhaps in itself filthy and dangerous—and 77 gallons of a fluid defined as "milk of the poorest quality." A glaring case is furnished by a sample of a preparation 100 gallons of which would contain 26 gallons of separated milk having no fat, 21 gallons of water, and 53 gallons of "milk of the poorest quality." The artificial colouring and the dosing with boric acid preparations, whereby stale milk is made to pass as fresh, afford additional illustrations of the manner in which so many milk purveyors conduct their trade, and are points which, with those previously commented upon, may well be pondered over by those who consider that adulteration and sophistication are only "forms of trade competition," and that no Acts of Parliament are required to keep certain traders, shopkeepers, and trading companies from committing the meanest and most atrocious frauds.

REPORT UPON THE ANALYSIS OF THIRTY SAMPLES OF MILK.

By CHARLES E. CASSAL, F.I.C.,
Public Analyst for Kensington, St. George Hanover Square, etc.

I CERTIFY that I have analysed 30 samples of milk, numbered from 1 to 30, on behalf of the British Medical Association Special Commission. From a consideration of the results of my analyses I have arrived at the understated opinions concerning the composition of the samples (see Table). It is to be noted that 3 per cent. of fat is the lowest amount which should be present in a sample to which the term "milk" can still justifiably be applied, and that a purchaser ought fairly to receive not less than 3.5 per cent. of fat in an article sold to him as milk. A sample of milk of the Aylesbury Dairy Company, purchased in the ordinary way shows 4.2 per cent. of fat. In those cases where the fat found was less than 3.5 per cent. but not below 3 per cent., the percentage of fat deficiency on the 3.5 standard is shown. Inasmuch as deficiency of fat is generally brought about by the admixture of separated milk, which contains practically no fat, with a milk of genuine composition, it is convenient to regard milks deficient in fat as made up of "milk devoid of fat" and milk of "genuine" composition. In those cases where the amount of fat found was below 3 per cent. the calculations have been made on the lowest or 3 per cent. limit, a fact which is indicated by the genuine milk present being reported as "milk of genuine composition but of the poorest quality."

Results of Analysis.

No.	Name of Sample.	Date of Purchase.	District.	A Percentage of Milk [illegible] of Fat (on 3 Per Cent. standard).	B Percentage of Milk of Genuine Composition, and of the Poorest Quality.	C Percentage of Added Water.	D Percentage of Milk [illegible] of Fat (on 2.5 Per Cent. Standard).	E Remarks.
1	Milk	1895. June 7	Westminster	8	92	—	—	Boric acid present sample artificially coloured.
2	..	..	..	—	—	—	—	Boric acid present; otherwise genuine; fair quality.
3	..	..	..	—	—	—	9	——
4	..	..	..	—	—	—	14	——
5	..	..	..	—	—	—	15	Boric acid present.
6	..	..	..	10	90	—	—	Boric acid present.
7	..	June 10	Marylebone	—	95	5	—	Artificially coloured.
8	..	..	..	—	—	—	—	Genuine composition; fair quality.
9	..	..	..	—	—	—	—	Genuine composition; fair quality.
10	..	..	..	12	76	12	—	——
11	..	..	..	—	—	—	—	Genuine composition; good quality.
12	..	..	..	—	—	—	—	Genuine composition; good quality.
13	..	June 11	Westminster	—	—	9	—	Boric acid present.
14	..	..	..	14	63	23	—	——
15	..	..	..	—	—	—	14	——
16	..	..	..	—	—	—	14	Boric acid present.
17	..	..	..	50	45	5	—	Boric acid present.
18	..	..	..	—	83	17	—	——
19	..	June [illegible]	Lambeth	—	87	13	—	——
20	..	..	..	—	77	23	—	——
21	..	..	..	—	86	14	—	Boric acid present.
22	..	..	..	—	—	—	—	Genuine composition; fair quality.
23	..	..	..	—	87	13	—	——
24	..	..	..	—	95	5	—	——
25	..	June [illegible]	Battersea	—	92	8	—	——
26	..	..	..	26	53	21	—	Boric acid present. Sample artificially coloured.
27	..	..	..	—	—	—	—	Genuine composition; fair quality.
28	..	..	..	—	—	—	9	Boric acid present.
29	..	..	..	—	—	—	14	——
30	..	..	..	—	87	13	—	——

(To be continued.)

REPORTS
ON
THE NURSING AND ADMINISTRATION OF WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

LI.—ST. GEORGE HANOVER SQUARE.

Though it retains its old name, this workhouse now serves the parishes of Westminster and Chelsea as well as that of Hanover Square, and has incorporated into itself the old Chelsea house called "Little Chelsea." It has accommodation for about 2,000 inmates; the infirmary is adjacent, and communicates by a covered corridor with the chapel which thus serves the two buildings.

Classification

is almost impossible, as the quarters are crowded; on the female side smaller day rooms and better airing courts enable the authorities to keep the older and better-class women from consorting in the daytime with the worthless and ill-conditioned, but the crowded state of the dormitories must go far to nullify the good effect of better classification by day; the master seemed to feel the hopelessness of his task under present conditions.

The Building

is another instance of the style known as "patched," and still there is a cry for more room. The house is built in blocks, of which the upper floors are connected by bridges; the old part consists of four blocks, and the newer part is in the same style. There are single bedrooms for the married couples, with a cheerful day room common to all; here we saw the men playing games, and the women were mostly occupied with needlework. Near the entrance is the probationers' ward, where the new comer is detained until classified by the medical officer.

The Old and Infirm

are located in separate blocks; there were 60 in the male wards and 153 in the female. For these there are two nurses, with pauper help, and there is one nurse at night, also assisted by paupers. We were glad to learn from the master that the guardians contemplate increasing the staff, for, though the inmates are not sick, they require in many cases as much assistance as children, and it is useless to expect attendance from the pauper helps. There is no doubt that the cunning old hands levy contributions from the helpless before rendering service. The system is hopelessly wrong; it is not the fault of the officers, who have far more work on their hands than they can properly execute, and adequate supervision is impossible with the present proportion of administrators to administrated. And in the meantime those who know the conditions are aware that the practice of setting one pauper to tend and control another is responsible for much petty tyranny, and even absolute cruelty, which can never be exposed and punished.

On Visiting the Dormitories

we found them in possession of the cleaners, who were endeavouring to eradicate the vermin by burning out the nests and eggs in the interstices of the bedsteads. The old frame of the bedsteads must be favourable to the propagation of these pests, and it seemed to us that until they were discarded for others of a more modern make, which will take to pieces and wash in chloride of lime, the wards will still be infested, especially as the old building is also likely to harbour vermin in the joints of the floors and woodwork.

The wall surface is of painted brick. Some of the ventilators consist of a square piece cut out of the ceiling, hanging from cords, which are presumably attached to some framework in the roof. They looked somewhat dangerous, as there was no means of ascertaining the state of the cords. In other wards the ventilation was supplied by the upper sash of the window.

The Nursery

is a cheerful and pleasant room, but it is badly situated, since the children must mix with the able bodied in the airing court on to which it opens. Girls of 12 or 14 years of age are detained here when from any cause they are in the workhouse, and this arrangement ought not to be tolerated for a moment. Two trained nurses are in charge of this department, and the mothers come to suckle their infants; otherwise they only visit the nursery on visiting days. We were sorry to see the tube feeding bottle in use, and would recommend that the old-fashioned boat-shaped bottle should be substituted for it. Another desirable improvement is the provision of a metal lined receptacle for the soiled napkins which are waiting removal to the laundry.

The Lunatics

have a small self-contained department of 8 beds for each sex, under the charge of an attendant. The padded room is very good. Here are detained the patients waiting removal, and also those whose noisy habits render them unfit to be with the sane. We were surprised to notice that neither here nor in the epileptic wards were any special beds provided;

the narrow beds with unprotected sides seemed hardly safe for such patients.

The Sanitary and Lavatory Arrangements were undergoing alterations. On the female side there are fixed basins outside the dormitories with hot and cold supply; on the male side the fixed basins are out of doors, with the result, as the master said, that the old men do not wash in cold weather, or they make use of the chamber utensil in the dormitory. The old women, as we were informed by an inmate, preferred to make this use of the chamber vessel instead of that for which it is intended; we can understand that among this large number of paupers, many coming from the very lowest class, there will be some who, if left to themselves, will show every trace of the state of savagery out of which they have come, but we do not see the necessity of the workhouse lowering itself to their level.

The sanitary arrangements are weak, baths few and not well placed; that for the infants and children appeared to us to be too deep, but already the engineers were at work turning the place upside down, so that it was not easy to gain a clear idea of details.

The Laundry is of ancient construction, small and ill-found; when we consider that from 16,000 to 17,000 pieces pass through the laundry in a week we wonder that the task can be accomplished at all. The mangles are turned by hand, the washing machine is small, there is only one wringer, the drying closets are small, there is no callender, indeed no machinery to speak of. The small room for counting the soiled linen is dark and ill-ventilated: the folding and ironing are carried on in a recessed room off the drying room. For all these defects there is but one remedy—to build a new laundry; and we trust that the guardians will put that matter in hand without loss of time.

DEATHS UNDER ANÆSTHETICS.

Chloroform.

Our Berlin Correspondent writes, under date July 14th:—Two deaths under chloroform, one following close upon the other, have occurred in Berlin. The inquest in both cases showed the presence of a heart defect, which should not have passed unnoticed by the operator, and which should, it was held, have caused him to abstain from using chloroform. It remains to be seen whether the verdict of the inquest will be the last one spoken in this matter.

ROYAL COLLEGE OF SURGEONS.

A quarterly Council was held at the College on July 11th, Mr. Christopher Heath (President) in the chair.

The President reported the result of the election of members of the Council at a meeting of the Fellows on July 4th. He further stated that 681 Fellows had voted, and of these 621 sent their votes through the post, while 60 voted in person, the votes of 2 of these Fellows being, however, invalid. Mr. Davies-Colley received 29 plumpers, Mr. Alfred Cooper 19, and Mr. William Anderson 17.

The newly-elected members of Council were introduced, and, having made the customary declaration, took their seats on the Council.

The minutes of the last meeting were then read and confirmed.

On the recommendation of the Museum Committee it was resolved to purchase the skeleton of a *Dinornis maximus* from the Canterbury Museum, Christchurch, New Zealand, for £70, in accordance with the valuation of Dr. Woodward, of the Natural History Museum, and to employ Mr. Barlow to articulate the skeleton at a cost not exceeding £15.

A donation by Miss Greenhill, of several volumes in MS. of a lexicon of Greek medical terms, compiled by the late Dr. Greenhill, of Hastings, was accepted with the best thanks of the Council.

The President reported that a half-yearly meeting of the Fellows had been held on July 4th, at which 45 Fellows, including 14 members of the Council, had attended, but that as no notices of motion had been given for the meeting, no discussion of any kind took place.

The following statement of the attendance of the members of the Council during the past year was announced:

Eleven Meetings of the Council in the Year.

Name.	Meetings Attended.	Name	Meetings Attended.
Sir T. Spencer Wells, Bart. ...	9	Mr. Alfred Willett (Vice-President)	11
Mr. Jonathan Hutchinson ...	9	Mr. T. Pickering Pick	10
Mr. William Cadge	10	Mr. H. G. Howse	11
Mr. Thomas Bryant	11	Mr. John Langton	11
Mr. Thomas Smith	11	Mr. W. Mitchell Banks	9
Mr. J. W. Hulke (died after 7th meeting)	7	Mr. W. Rivington	11
Mr. Christopher Heath (President)	11	Mr. T. R. Jessop	9
Sir William Mac Cormac	10	Mr. F. Howard Marsh	11
Mr. A. E. Durham (died after 9th meeting)	8	Mr. J. Tweedy	11
Mr. N. C. Macnamara	11	Mr. Henry Morris	11
Mr. Oliver Pemberton	9	Mr. A. W. Mayo Robson	9
Mr. Reginald Harrison (Vice-President)	11	Mr. J. Hardie	6

A letter was read from Mr. H. R. Hope-Pinker, stating that he would be pleased to make a replica of his marble bust of the late Sir William Savory, Bart.

It was announced that the signatures of the Secretary of State and Lord Chancellor to the new By-laws had been obtained.

A petition from the London School of Medicine for Women, asking the Council to admit women to the examination for the diploma of Membership, was referred to the Committee of Management.

Mr. Heath was elected President of the College for the ensuing year, and Messrs. Harrison and Pick as Vice-Presidents.

The next meeting of the Council will be held on Monday, July 29th.

A LEGISLATIVE JOKE.

We have received from a correspondent at Cape Colony a copy of a Bill to amend the Pharmacy Act, 1891, published in the *Cape Times* of June 5th, 1895.

Our correspondent draws attention to the fact that the editor of the *Cape Times* calls the Bill "a Legislative joke," but our correspondent thinks that readers may be interested in the manner in which medical legislation is carried on, or attempted, in the Colony.

The Bill, we understand, is suggested as being in the public interest, but the fees prescribed thereby would apparently be rather the other way. Certainly the fees relating to surgical operations are somewhat vaguely indicated.

The Bill proposes that no fees shall be recovered in a court of law unless they are in accordance with the subjoined tariff. A second clause would enact that every physician when rendering an account shall specify all items for "medicine," and shall not be entitled to payment for such "medicines" of any sum "beyond that which, according to law, the chemist and druggist can lawfully charge."

Schedule.—Tariff of Charges for Physicians.

	£	s.	d.
Examination of a person and certificate	1	1	0
Each visit within the limits of the town:			
Daytime	0	5	0
At night	0	10	0
Each visit beyond such limits with the exception of the fees allowed by this tariff:			
If travelling at his own cost, per hour	0	10	0
If travelling at the cost of the patient	0	7	6
Accouchement	3	0	0
A certificate of cause of death (not including the viewing of the body)	0	10	0
A surgical operation, including the loss of a limb ...	10	0	0
A usual surgical operation	0	10	0

The reading of the Bill was received with roars of laughter. The Bill was set down for second reading on the 19th instant.

Presentation.—Mr. Hugh Lewis Hughes, L.R.C.P. and S., of Dowlais, has been presented with a timepiece and candelabra, bearing the inscription: "Presented to Dr. Hughes by the members of the Women's Ambulance Class. Dowlais, June 14th, 1895." This is the seventh occasion on which the members of the local St. John Ambulance classes have shown their appreciation of his services as surgeon-instructor.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895

SUBSCRIPTIONS to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 20TH, 1895.

THE WASTE OF EXPERIENCE.

THE three Hunterian Lectures that Mr. T. Holmes has just delivered at St. George's Hospital are welcome for many reasons and profitable in many ways. In the first place they give us a mass of valuable cases full of instruction—the whole six years' wealth of work, unsifted, unselected, all as they happened, good and bad together. Let any student who does not know the unique value of unselected cases make a careful abstract of these lectures, and then he will find that unselected cases teach us twice as much as selected cases can ever teach.

In the next place these lectures show us how we may check the terrible waste of experience that goes on in every hospital throughout the world. These 110 cases of abdominal section were useless to the profession till Mr. Holmes put them together and published them. Each case at the time taught something to those who watched it from first to last, but each new case effaced the lessons taught by its predecessors; and thus the whole mass of cases, utterly useless outside the walls of the hospital, became, even within those walls, an ill-defined bundle of memories. Each case was exciting enough at the time, and floated a few days on the broad stream of hospital talk, but they left behind them no clear rules to guide the student when he came to be in practice.

Now here is a way to make a real and honourable privilege out of that most barren of all compliments—the position of consulting physician or consulting surgeon to a hospital. You must have, first, a loyal and united staff; you must have also a consulting physician or surgeon still keen for the advancement of his art, still in touch with "the surgical miracles of our time," still possessed of exact judgment as to the value of the new methods and the old. To him the notes of every case in the hospital should lie open; it should be his duty to survey the whole work, past and present, of the hospital, and from time to time he should take some great theme in medicine or surgery and should set forth the whole experience of the hospital during many years in that particular subject, publishing every single case and making use of every scrap of knowledge that could be got out of the hospital casebooks. Such work as this would be of the very highest value, but at present, in every hospital, the precious materials for it are running to waste.

In the third place, these lectures are full of good advice and sound encouragement. Mr. Holmes is not one of those who overpraise the past. Speaking of abdominal section for acute obstruction, for example, intussusception or internal strangulation, he says: "All the operations which I have myself performed, or which my colleagues performed during the period of my service here, were, I believe, unsuccessful." He delights to count the lives saved at St. George's Hospital during the last six years: 4 recoveries after the operation for internal strangulation, 3 after gastro-jejunostomy, 4 after perforation of gastric or duodenal ulcer, and so on; he has the happiness of recording a total of 42 recoveries out of the 110 cases; and of the operation for perforated gastric ulcer he says: "This really seems to me the most wonderful of all the surgical miracles of our time." He is careful to praise the admirable work of Mayo Robson, Lockwood, Morse, Reginald Jowers, and others, besides that of his colleagues, Dent, Penrose, and Lee Dickinson. His tone throughout is one of delighted and thankful recognition of the advance all along the line.

And in this respect he gives a very wise answer to those unhappy and distracting questions, with a personal sting in them, as to the duty of the physician towards the surgeon in these cases. Surely, in such emergencies, the physician and the surgeon should act together "for the mutual society, help, and comfort that the one ought to have of the other." But some physicians prefer the old paths; the case belongs to them; they will watch it; if they think the surgeon is wanted, then they will send for him. Let us hear Mr. Holmes's decision: "These cases should be still, I think, as before, physician's patients; but the house-physician might be instructed to send for both physician and surgeon immediately on the patient's admission, so that the consultation can be held without any further loss of time, and the operation performed, if necessary, on the spot." This advice is pure gold both for the patient and for the surgeon. How can the surgeon hope to study these cases aright unless he sees them at once? What can he learn if he be suddenly called to the bedside several days after the admission of the patient? The patient's condition is masked by drugs; the physician, the house-physician, the patient all give him their own "history of the case." He may operate, and he may be successful, but if he is ever to be a master of abdominal surgery he must see each case at once on its admission and study it for himself.

These considerations of Mr. Holmes's lectures have not touched the actual stuff of which they are woven. That does not matter; there are the lectures, to be read diligently again and again by everybody who is or desires to be a good surgeon.

LITTLE WARS AND THE SMALL-BORE RIFLE.

FOR a nation which, like ourselves, is frequently involved in small frontier wars and engaged with enemies whose nervous development is apparently less exalted than that of the European, a question which has been raised more than once before—in the Zulu War and in the Soudan campaign for example—in connection with the new small-bore rifles, assumes very serious importance. The question is, Will these new rifles stop a rush, a charge of savages or of fanatical dervishes? It is all very well to be able to hit a man at 2,000 yards range, but it is of greater moment to know that when hit at 100 or 200 yards distance, a man

cannot still continue his onward rush so as to come within striking limits.

We publish this week a very interesting series of cases of gunshot injury by the Lee-Metford rifle as observed in the recent Chitral expedition. These cases, as briefly reported by Surgeon-Lieutenant Gould, indicate very clearly an effect resulting in actual warfare, which, as we have hinted, has been more or less anticipated by military surgeons and others, not only from theoretical generalisations, but from experiments on the cadaver and from the observation of gunshot injuries caused by the same weapon under circumstances of accident or homicide. The remarkable penetrating powers of this rifle, the peculiar drilling effect of its projectile, and the curious absence of shock and extensive smashing of bones in those hit is well illustrated in these reports.

Of the 20 cases recorded by Mr. Gould we find all ending in recovery, notwithstanding the fact that the conditions of treatment were necessarily rude, and that in more than one instance the anatomical structures involved were of such importance that their injury, under most ordinary conditions, would have entailed the severest consequences. Possibly some allowance must be made for the fact that all the patients were native tribesmen, and drawn from a race who are notoriously tolerant of surgical and operative interference. It would be interesting to know whether a similar series of European cases would yield equally satisfactory results from the surgical point of view. It is unfortunate that information is wanting as to the precise range at which these men were hit, but the presumption is that it was well within a thousand yards. Even in the absence of exact details on this point these cases constitute an important contribution to the literature of the effects of the modern small-bore rifles and their bullets; the series further endorse the so-called humanitarian claim on behalf of these weapons; but, as we have said, they tend to confirm the very serious doubts felt from a fighting point of view as to whether they will stop a rush.

The facts at present collected are insufficient to justify any want of confidence in this weapon for fighting at close quarters against fanatics, but, at the same time, they clearly indicate a possible disadvantage in its use, and further emphasise the need of close observation of all wounded, and the casualties caused by these small-bore rifles at all ranges by medical officers. Their interpretation cannot fail to be of value to those whose duty it is to advise the War Department upon ordnance questions.

THE LEPROSY QUESTION.

We have already called attention to a recent resolution of the Government of India in reference to the leprosy question in that country, and have noted that the conclusions of the Leprosy Commissioners have been to a great extent accepted by the authorities, and that there is no intention of adopting any general measures for the compulsory segregation of all the lepers of India. It is satisfactory to observe that one of the conclusions at which the Commissioners arrive has been abundantly confirmed by the final statistics of the late census—namely, that the number of lepers in India has been greatly overstated, that the available figures showed either a decrease in the number of persons affected, or at any rate good evidence that the progress of the disease had been checked, and that consequently the alleged spread of leprosy could not be regarded in the light of a national danger. The revised figures at the census of 1891 give 120,361 lepers, of whom 31,069 were females. The recommendation of the Commission that lepers should be prevented from engaging in certain trades and occupations has been adopted in so far as the prohibition may apply to municipalities, and to the larger fairs and gatherings. The general recommendations, directed against mendicant lepers leaving their homes and crowding into large centres of population are also in a great measure accepted, and the Government propose that vagrant lepers in municipalities be dealt with in the same way as vagrant lunatics under the Act of 1858.

The Government also endorse the recommendation that competent medical authority be consulted before any action with regard to lepers be taken. To carry out these regulations asylums on the model of the Matoonga institution in Bombay are to be erected and maintained at the cost of the municipalities and local boards; and it is recommended that the necessary local legislative enactments be on the lines of the Bengal Leprosy Bill which has been lately brought forward. The suggestion of the Commission in reference to the establishment of leper farms or colonies has not been adopted by the Government, or at any rate its consideration has been postponed.

In contrast to the authoritative opinion of the Indian Leprosy Commissioners, now practically endorsed by the Government and its sanitary advisers, that leprosy is not a contagious disease, we may point to the notice, in the last number of the BRITISH MEDICAL JOURNAL, of the report recently presented by a Special Commission appointed by the Government of the Cape of Good Hope. A diametrically opposite view is therein taken, and a system of general isolation strongly recommended. A definite increase of leprosy in South Africa appears to be well established, and the belief in medical quarters that the disease has increased by inoculation from person to person is as strongly maintained as ever.

The facts and arguments in this report are ably stated, and its appearance at this time forcibly shows the wide difference of opinion still existing among competent authorities with regard to the etiology of leprosy and its practical management.

SURGEON-GENERAL WILLIAM CAMPBELL MACLEAN, M.D., C.B., has been selected for appointment as an Honorary Surgeon to the Queen in the room of the late Inspector-General J. H. Orr, M.D., C.B.

THE Council of the Royal College of Surgeons of England has appointed a committee to receive a deputation of the Members regarding the proposed amended charter on July 26th, at 3 P.M.

H.R.H. the Princess of Wales will present certificates to the third and fourth thousand nurses of the Royal National Pension Fund for Nurses, at Marlborough House, on Friday, July 26th, at 3 P.M.

THE Electoral Anti-Vivisection League issues the following as a leaflet: "Vote for no one who will not promise to insist on the total prohibition of vivisection—that means, experimenting on living animals—which always leads to experimenting on patients in hospitals."

OUTBREAK OF TYPHUS FEVER AT LEITH.

THE medical officer on July 16th reported to the Leith Town Council that there had been an outbreak of typhus fever, but it was being kept well in hand; there had been twelve cases, some doubtful cases, and two deaths. On the whole, it was a mild outbreak. All the cases had sprung from one source.

AN ENGLISH EVICTION.

SINCE the publication of an article in the BRITISH MEDICAL JOURNAL under the above heading, we have received a communication from Sir William Worsley's solicitor, taking exception to the version of the case given by the *Leeds Mercury* (as being influenced by political bias), and justifying the action taken on behalf of Sir William Worsley. We are pleased to give the same publicity to this statement as we did to the story as told by the *Leeds Mercury*.

LOCAL ENTERTAINMENT AND EXCURSION COMMITTEE.

IN consequence of the unavoidable absence of Dr. R. Boxall, it is requested that all future communications referring to the entertainments and excursions be addressed to Dr. Symons Eccles, 23, Hertford Street, Mayfair, W.

MIDWIVES REGISTRATION.

DR. R. R. RENTOUL AND DR. HUGH WOODS have issued a circular summoning a meeting of practitioners opposed to the formation of an inferior order of midwifery practitioners at the St. Martin's Town Hall, Charing Cross Road, on Monday, July 29th, at 9 P.M. The circular states that it is of the utmost importance that members should attend, as those opposing "their views are using every means to defeat the motion of Mr. L. Tait and Mr. C. Campbell."

IRISH DISPENSARY DOCTORS' LOCUM TENENS.

A CASE of much importance has just been decided by Mr. Justice Johnston at the Cavan assizes. The Kingscourt Dispensary Committee allowed the medical officer, Dr. Dempsey, fourteen days' leave, and agreed to pay his *locum tenens*, Dr. McEvoy. The guardians, however, refused to pay the sum of £3 3s. a week, as agreed upon, on the ground that the Dispensary Committee had no right to make the appointment. In the court below Dr. McEvoy's action for his salary was dismissed, but Mr. Justice Johnston reversed that decision and gave a decree for the full amount claimed.

THE LATE PROFESSOR TRAUBE OF BERLIN.

A BUST of Ludwig Traube, the eminent Berlin clinician, who died nineteen years ago, has been placed in the garden of the Charité Hospital, Berlin. Traube's two daughters and many distinguished medical men, among them Virchow and Leyden, were present at the ceremony of unveiling. Professor B. Fraenkel spoke of Traube as the unforgotten teacher, whose admirable exactitude of observation and immense pathologico-physiological knowledge which enabled him to judge the value of clinical symptoms, had remained an ever-present example to his pupils.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

THE Duchess of Portland on July 9th distributed the prizes to the students of this school. After an address by the Dean, Mrs. E. Garrett Anderson, M.D., the Duchess of Portland presented the prizes, and said that there was a large field for medical women in Eastern countries, and also in hospitals for women and children in our own country. Mr. Arthur T. Norton, the President, in laying the balance-sheet before the meeting, stated that there was a balance in favour of the school last year of £100. He especially appealed for assistance to the building fund. Before the meeting closed an address of thanks was presented to Sir James Stansfeld, from the Council of the school, for the assistance he had rendered in the establishment and encouragement of the institution, and generally in the cultivation of female medical education.

BIRTHS TO ORDER.

IN India it is customary to entrust the duty of registering births and deaths in outlying country districts to natives, who are generally as ignorant of reading and writing as they are of English. Their memories, unperplexed by knowledge, are, however, retentive, and these registration officers may frequently be seen tramping, in companies of four or five together, into the city, to hand over verbally to the collector the data regarding the births and deaths in their several localities. Suspecting once that the records were carelessly kept in a certain village, a collector reported that the ratio of births was below the average, and suggested to the registrar that his returns could bear improvement. "Ah, it's more births the sahib wants," was the inner thought, and, with Indian amiability and actuated by the desire to say the thing which pleased, the registrar's returns showed at once a remarkable increase in the number of births. All the babies were duly registered by name, and there was evidence that the village was prospering as population increased. Presently the vaccination officer began to ask why it was that he had no increase of vaccinations, and why these numerous babies were not brought to him. This natural question led to an inquiry, and to the discovery that the children registered so accurately had been born only in the ardent imagination of the registrar, and had been produced in his earnest desire to please the *burra sahib*.

ENDOWMENT OF SCIENCE IN JAPAN.

DR. KITASATO is not only the most brilliant scientific investigator in Japan, but one of the most original biologists of the present day of any nation. He worked for many years with Koch at Berlin; and last year, when the plague was devastating Hong Kong, he and Dr. Aoyama discovered the bacterial cause of the plague, and were thereby instrumental in arresting its ravages. He has been extremely successful in carrying out the antitoxin treatment of diphtheria, and out of 34 cases treated by him 31 have recovered. He is at present engaged in carrying out a series of experiments on leprosy with the most satisfactory results. If it is a fact that Dr. Kitasato is on the road to discovering not only the cause, but the cure, of leprosy, he will confer an immense benefit on a long-suffering section of the human race. Japan has always been celebrated for generously acknowledging the services of her men of genius in art and literature, and it is gratifying to learn that Dr. Kitasato's discoveries are looked upon as contributing to the national glory, and that the Government has unanimously voted him a sum of money to be devoted to the laboratory superintended by him.

THE COST OF TYPHOID FEVER.

DR. MUNRO, medical officer of health for the county of Renfrew, has published the approximate cost of an epidemic of typhoid fever which occurred in Mid-Renfrewshire. There were 839 cases, out of which 74 were fatal. The average cost of hospital treatment was about £8 15s., on which figure Dr. Munro puts the average cost of treatment all round at £5 per head, a figure which seems certainly well within the mark. From data to which he has had access he puts the amount of wages lost to the patients at £3,291. The cost of funerals is taken at £5, and the capital value of a human life at Farr's low figure of £159 per head. The total pecuniary cost of the epidemic to the community of Mid-Renfrewshire was accordingly £21,496, or just over £25 for each

case. These figures are all calculated on the very lowest scale, and no doubt were in fact exceeded. If local authorities could realise such figures they would see that, quite apart from questions of sentiment or moral duty, no expenditure could yield a better return on the investment than that which is bestowed on the provision of pure water supplies and the establishment of isolation hospitals and adequate means of disinfection.

BRAZILIAN QUARANTINE.

We are glad to learn that there is a prospect of some diminution and improvement in the severe quarantine restrictions which have been hitherto maintained by the Government of Brazil. Perhaps the most unwarrantable of these has been the maintenance of a single quarantine station for a country having such an immense seaboard as Brazil possesses, an arrangement which often involved a sea voyage of a thousand miles when a vessel was ordered into quarantine. It is now announced that at a sanitary conference held at Rio de Janeiro between the Brazilian Government and representatives of Great Britain, Germany, Italy, and of the French and Argentine Republics, four fresh quarantine stations are be maintained; and there is also to be some relaxation of the undue and exceptional severity of some of the quarantine restrictions. One or two special hospitals are to be constructed, so that the sick may be removed from the ships. Suspected ships—that is those on which there is at the time no sickness—will be allowed to unship passengers and cargo under certain circumstances, provided there is no personal intercourse with the shore. Mail bags are to be landed from any vessel, whether there is disease on board or not; and it will then rest with the Brazilian authorities to deal with the letters, etc., as they think fit. Ships which are healthy, but which happen to have sailed from infected or suspected ports, will only be subject to "observation" instead of quarantine—whatever this may mean. In this way another country is making some useful advance in the direction of British freedom from restriction; and we can only hope that it will before long be made evident to all nations that it is the abolition of restrictions that has always gone hand in hand with those sanitary improvements afloat and ashore which in the end show how useless restrictions are. We cannot refer to quarantine without expressing regret that, owing to the recent dissolution of Parliament, we shall be compelled for another year to maintain our useless quarantine hulks, which are forced upon us by the effete and antiquated Quarantine Act of 1825, and the Orders made under that statute.

CHOLERA IN THE EAST.

Suspected cholera cases have been reported at the quarantine camp of El Tor, and the Quarantine Board has declared that the place will be regarded as infected until the end of the pilgrim season. The epidemic in Asia Minor, which was first reported from Tarsus, so far from having terminated, has spread recently, being apparently carried by refugees, and at the meeting of the Comité Consultatif d'Hygiène, M. Monod observed that the ease with which the capital of the vilayet has been infected, in spite of all the efforts of the civil and military authorities, indicates once more what value is to be assigned from the prophylactic point of view to the sanitary cordons and interminable land quarantines to which the Turkish Government seems to attach importance which increases in proportion as facts accumulate to prove its inefficacy.

THE EDINBURGH ROYAL SOCIETY.

The last meeting of the session was held on July 15th; Sir Douglas Maclagan (President) in the chair. The Macdougall-Brisbane Prize for the biennial period 1892-94 was presented to Professor James Walker (University College, Dundee) for his work on physical chemistry. Professor T. R. Fraser made a further communication on antivenene, and on the production of immunity against the venom of serpents. Subcutaneous injection had always been used—a method attended with inconvenience. But the venom was nearly inert in the stomach, though a certain amount of resistance to subsequent lethal doses was obtained. Some of the results obtained might afford an explanation of the immunity enjoyed by certain snake charmers in India, and these results might also explain the immunity possessed by venomous serpents themselves.

CHELSEA HOSPITAL FOR WOMEN.

An unfortunate event has broken the seeming smoothness of the course on which the Chelsea Hospital for Women had lately embarked. No details have as yet been made public, but a grave question has been raised concerning the performance of a serious operation, in regard to which, it is alleged, the new rules of the hospital as to consultations were not complied with, and which was carried out in opposition to the adverse advice of one of the operator's colleagues. The Chairman of the Board, it is said, has summarily called for the resignation of the medical officer in question, which he declines to tender. It is also stated that the medical officer involved in the matter is one whom the Board of Management had itself taken the responsibility of placing on the staff of the hospital, in disregard of the recommendations of its medical committee of selection, a proceeding on the part of the Board on which we commented at the time. It is of importance to him, as well as to the profession and the public, that the whole matter, which is being much talked of, should be publicly cleared up.

DIPHTHERIA AND SCHOOLS.

The Mayor of Wrexham (a town in which there appears to have been some prevalence of diphtheria of late) should undertake a course of reading in the reports of the Local Government Board, and pay especial attention to those which refer to outbreaks of diphtheria; had he done so earlier, he would scarcely have ventured to characterise a suggestion of school closure as nonsense, or have committed himself for the whole of futurity to a policy of non-closure. He contended, and rightly, that even if excluded from school the children would continue to meet, but he left out of account the difference of conditions between meeting in the school atmosphere and out of doors, a difference which has repeatedly been found to decide the question of epidemic or no epidemic. The report of the council's proceedings in the *Wrexham Advertiser* concludes with an intimation that this question was ultimately referred to the Public Health Committee, so perhaps the medical officer of health will carry his point after all, although he has failed to convince the mayor.

THE "PHARMACEUTICAL JOURNAL."

We heartily congratulate the Pharmaceutical Society upon the new departure which has taken place in the extension and the improvement of the *Pharmaceutical Journal*. Its matter could hardly be improved. This new departure dates from the celebration of the twenty-fifth year of Dr. B. H. Paul's editorship. All those who have watched the progress of scientific pharmacy and of pharmaceutical administration, will be ready to testify to the skill, moderation, sound judgment, and tact, which have never failed to characterise the conduct of the *Pharmaceutical Journal* during that period. The attitude of a journal which is at once the mouthpiece, the leader, and the controlling influence in a great Association is a work requiring the combination of many qualities. The editor needs discretion, devotion, progressive instincts, and the faculty of initiation; his journal must never be stagnant or dead; he must never disregard

the material interests of his constituents, and he would be very unwise if he were, in seeking to attain a temporary popularity, to allow them to assume a predominant influence, whether by pure terrorism or unreasoning alarms seeking to cloak themselves under whatever disguises, and so to drown the voice of conscience and those greater interests of the profession which are identical with the public interests. In the claim for new privileges he must always calmly distinguish the part which should be assigned to duties. It is his part to seek out modest merit, and to give every capacity its opportunity, and to the humblest unit of many thousands his place on the platform and his equal voice where intrinsic merit should speak for him. Dr. Paul has passed through the period when organisation requires extension and purification of these unmannerly elements which must at first exist in every newly constituted body. He has been able to surmount all these difficulties. The *Pharmaceutical Journal* stands now in a foremost place among professional and technical journals of Europe, and it is no small credit to him that he has attained for it that position without ever sacrificing all those lower elements of popularity which sometimes purchase cheap success at the expense of higher and more enduring good. Everyone will wish a further career of extended popularity to a journal so ably edited and conducted in so excellent a spirit.

OFFICIAL HONOURS AND UNOFFICIAL GIFTS.

MR. J. J. FRANCIS, Q.C., and Mr. F. H. May were both active members of the Permanent Committee of the Sanitary Board of Hong Kong, to whose efforts were due the successful measures taken to combat the plague when it was devastating Hong Kong last year. Mr. Francis was chairman of the Committee, and claims to have been its brain and motive power. In recognition of the services of these two gentlemen the Government have made Mr. May C.M.G., but have presented Mr. Francis (the Chairman) with a silver inkstand. The gift was returned, with a letter, to Lord Ripon. Public sympathy is with Mr. Francis, and the *Hong Kong Weekly Press* says: "It was generally understood that Mr. Francis should at least be made a C.M.G., and to ask him to accept a paltry inkstand, while conferring a C.M.G.-ship upon his colleague on the Permanent Committee, Mr. F. H. May, can only be construed as a marked and intentional insult." The reason is said to be that Mr. Francis is not an official, and in Crown colonies public services are not recognised by public honours if performed by those outside the charmed circle. It is not only in Crown colonies that this is the case; but we trust that services such as those rendered by Mr. Francis to the cause of public health and at a period of such crisis and alarm as that of the recent plague will be adequately acknowledged by the Government.

COUNTRY PRACTICE IN SOUTH AFRICA.

IN the July number of the *Phonographic Record of Clinical Teaching and Medical Science*[1] Mr. Herbert Caiger gives his experience of country practice in South Africa. His work extends over an area for twenty miles on every side of a small village of 200 souls in the Orange Free State. The fees are regulated by a tariff fixed by the State, £5 being allowed for an ordinary midwifery case, and all time spent in travelling is paid for at the rate of ten shillings per hour. The Dutch farmers have large families, twelve or sixteen children being quite common, so that midwifery is an important branch of practice. Mr. Caiger tells of one doctor who had fifteen cases on hand at once. The Dutchman does not resort to the doctor until he is compelled; but he has great faith in a bottle of physic, and describes a good doctor as one who gives good medicine. In spite of the comparative isolation, of the fact that the doctor is sometimes mistaken for a superior kind of chemist, and notwithstanding the warning that an up-country doctor may find life so dull that he is tempted to take either to morphine or whisky, Mr. Caiger says that a man who will rough it and take things as he finds them may make a comfortable living, and have a fair amount of leisure time in up-country practice at the Cape. He points out, however, that owing to trade depression and the influx of medical men from the old country, the openings are not so numerous as they were.

[1] Issued by the Society of Medical Phonographers. Price 6d. London: Sir I. Pitman and Sons.

DEMONSTRATION OF THE PREPARATION OF ANTI-TOXIC SERUMS.

THE Director of the British Institute of Preventive Medicine, Dr. M. Armand Ruffer, will demonstrate at the Institute's farm at Sudbury, near Harrow, on July 31st and August 2nd, at 4.30 P.M., the mode of the preparation of therapeutic serum for various diseases, including diphtheria, tetanus, erysipelas, etc. The demonstrations will be open to all members of the Association, but Dr. Ruffer will be greatly obliged if members wishing to be present will kindly give notice of their intention to the Director, 101, Great Russell Street, on or before July 30th.

Train from Euston to Sudbury (Brakes will meet the train at Sudbury.)	...	3.40 P.M. Return trains from Sudbury at 5.51 and 8.21 P.M.
Lecture	...	4.30 P.M.
Tea	...	5 to 6 P.M.

THE LONDON HOSPITALS AND THE APPROACHING ANNUAL MEETING.

AT several of the hospitals in London the medical and surgical staff have announced their intention of offering special hospitality to provincial members of the Association. A large number of special invitations have been issued by the staff of St. Bartholomew's Hospital to a luncheon in the great hall of the hospital at 2 P.M. on Wednesday, July 31st. On Thursday afternoon a garden party will be given at the Hospital for Sick Children, Great Ormond Street, by Mr. John H. Morgan, surgeon to the hospital, and President of the Section of Diseases of Children. On Friday from 3 to 6 P.M., members of the Association are invited to visit Guy's Hospital. The staff will exhibit cases of interest, and afterwards tea will be provided.

THE SICK POOR IN WORKHOUSES: ST. GEORGE HANOVER SQUARE.

IN consequence of the ugly rumours which have been current for some time past about the arrangements and management of this house, we sent a representative to visit and report on the matter. Any criticism of such an institution must, to be fair, take into account the fact that actual Boards of Guardians have to deal with structures which were erected when population was smaller, and the ideas of sanitation and even of common decency were very different to what they are now. Nor must we forget the difficulty of dealing with the London pauper, who often seems to be ignorant of the very rudiments of civilisation. But neither consideration can justify the policy of "laissez faire," and the Guardians of the richest parish in London should look to it that such obvious defects as are pointed out in the report be remedied with all possible despatch. But the question is a wider one than the eradication of vermin from one particular house, or the construction of suitable laundries. When is some statesman going to introduce order into the chaos of our Poor-law administration? In all the great towns there should be classification of houses, the sick in one department, the infirm in another, the tramps in a third; the children separated from the adult, and sent to mix with other non-pauper children. In every country union there should be an equally careful classification of inmates. This is the great need of the day. Not until there is some adequate form of classification will there be any real hope for the diminution of pauperism. But when there is security that

the innocent child, the honest labourer past work, and the sick, will not be confounded with the idle and dissolute, housed under the same roof, subject to the same undiscriminating discipline, then the good sense of the people will not oppose such deterrent measures as shall really make the condition of the able-bodied pauper less eligible than that of the poorest wage labourer. As things now are, many Boards of Guardians, knowing that the house is no place for the decent man or woman, are apt to lean, if they are humane, to the out-relief which perpetuates the evil of pauperism. It is the absence of classification which gives weight to the cry for increased relief out of the house. Let the sentimentalists of to-day read the report of the Poor-law Commission of 1834, and see what comes of the abuse of out-relief; while wiser men study to remove evils which stimulate a demand to which it were ruinous to yield.

THE PROPOSED HUXLEY MEMORIAL.

Sir Joseph Fayrer presided on July 16th at a meeting in connection with the Huxley Memorial, which it is proposed to establish at Charing Cross Hospital Medical School. Mr. Waterhouse (Secretary of the movement) read a letter from the Duke of Saxe-Coburg, who was to have presided, and who wrote highly commending the scheme if it was not likely to interfere with obtaining additions to the funds for the maintenance of the hospital itself, an augmentation which was much needed. Among others who wrote were Surgeon-General Sir Guyer Hunter, Dr. Henry Huxley, Sir James Paget, the Hon. W. F. D. Smith, M.P., and Sir Savile Crossley. The Chairman said the great national memorial which would doubtless be erected to Professor Huxley's memory would not interfere with the memorial which they proposed to commemorate his connection with the school. He moved a resolution to the effect that it is desirable by means of a suitable memorial in connection with the school to permanently record the fact that the late Professor Huxley received his early scientific and the whole of his medical education within its walls, and thus to keep the example of his life and work constantly before succeeding generations of Charing Cross Hospital students. This was unanimously agreed to, and it was decided that the memorial should take the form of a Huxley scholarship and medal, to be awarded annually, and, if funds permitted, an annual public lecture dealing with recent advances in science and their bearing upon medicine.

VACCINATION DURING AN EPIDEMIC.

We feel bound to draw the attention of the profession to the case of Dr. E. C. Greenwood, who holds the appointment of Public Vaccinator under the Board of Guardians of the parish of St. Marylebone. This gentleman, it appears, had, when his parish was some time back threatened with a formidable outbreak of small-pox, much extra work thrown upon him—namely, that of visiting houses in the neighbourhood where the epidemic was prevalent, and vaccinating at their own homes all persons who might appear to require it as soon as they could be induced to submit to this protective operation. It must be evident that this was no easy duty, and that to render it effective would require considerable energy, and above everything else very great discretion. These qualities were, we believe, displayed to a very marked extent by Dr. Greenwood; and though, of course, it cannot be proved that the epidemic in question was cut short by his labour, it is impossible to doubt as to its having been very materially modified by his exertions. In any other department, valuable services such as these, rendered on an emergency when there was no time or opportunity to enter into a special contract in reference to the payment for them, would have been fairly or even liberally remunerated, without dispute or quibble. Such, however, has not been Dr. Greenwood's good fortune. He was in the first instance led to suppose that he would be paid not less than 100 guineas for these extra and high-class services, but instead of this he received a cheque for one-quarter of this amount; this he returned as being quite inadequate. He has since been paid 50 guineas, or one-half the sum he considers he is entitled to claim. We should have expected the guardians of a wealthy West End parish to have treated any of the officials very differently from this, and are surprised to find that the Marylebone Board does not yet appear to have learnt that the prevention of such a disease as small-pox is even more to be desired than its cure, and that every case which actually occurs not only throws great and very serious responsibility on the sanitary authority of the district, but has the effect of paralysing the general business of the locality, and this at a pecuniary loss to the ratepayers which is impossible to calculate. It is in our opinion very questionable whether good judgment was displayed when the power of carrying out the Vaccination Acts now in force was entrusted to the Boards of Guardians throughout the county. Many of these Boards have since shown that they were quite unfit to undertake this important duty, and we regret to find that the guardians of St. Marylebone must now be placed in this list. Unless these Boards show greater ability in future, and better disposition to remunerate fairly for extraordinary services, the working of any vaccination laws must be placed in other and more efficient hands. The recent action of the Marylebone guardians will probably hasten this proposed and much-to-be-desired change.

HONOURS FOR THE CHITRAL EXPEDITION.

The *London Gazette* of July 16th contains very long official despatches concerning the labours, the losses, and the successes of the Chitral Expedition. No particularly new points are developed, but the country will learn with satisfaction that Surgeon-Captain Whitchurch, who so gallantly attempted to save the life of Captain Baird during the sortie from the Chitral fort of March 3rd, has been granted the Victoria Cross by Her Majesty. Unhappily his heroic efforts were in vain, for though Dr. Whitchurch did all it was possible for man to do Captain Baird succumbed to his injuries after the fort had been regained. Dr. Whitchurch, observes the *Daily Chronicle*, is the fifteenth medical officer now living who has gained the coveted bronze medal and red ribbon "for bravery," the others being Surgeon-Major Hall, Assistant-Surgeon Sylvester, Surgeon-General Mouat, Surgeon-General Home, Surgeon-Major Jee, Surgeon-General Reade, Surgeon-General Manley, Brigade Surgeon Temple, Surgeon-Lieutenant-Colonel Douglas, Brigade-Surgeon-Lieutenant-Colonel Reynolds, Surgeon-Lieutenant-Colonel Hartley, Surgeon-Major Crimmin, Surgeon-Captain Le Quesne, and Surgeon-Major Lloyd. There are but 147 holders of the Victoria Cross for the army now surviving, and it is certainly remarkable that nearly 10 per cent. of them should be doctors to whom for so long the rank of combatant officers was denied. And now the very last to be conferred has also been won by a doctor. The Queen has further been pleased to nominate and appoint Surgeon-Major George Scott Robertson, C.S.I., Indian Medical Service, British Agent, Gilgit, to be Knight Commander of the Most Exalted Order of the Star of India.

THE METRIC SYSTEM.

It seems probable that what the arguments of men of science could not alone accomplish will be achieved owing to the pressure of competition in trade with foreign countries. A Select Committee of the House of Commons has again reported in favour of the legalisation of the metric system of weights and measures for trade purposes in this country, and has advised that the use of the system should be made compulsory after two years. Whatever there may be to be said for the duodecimal system on theoretical grounds, it is hopeless to expect that the majority of the nations of the world will adopt it; and for our own system, which is a

clumsy mixture of the decimal and the duodecimal, there is really nothing to be said. Lord Kelvin has called "our English system a wickedly brain-destroying piece of bondage," and there can be no doubt that it would be a great relief not only to men of science but to schoolboys if it were abolished. The medical profession is nearly interested in the change. The translation of a French or German prescription into British weights and measures is a tedious obstacle to free interchange, and in ninety-nine cases out of a hundred it cannot be achieved with convenience and absolute accuracy. The report of the Select Committee affords another argument for introducing the metric system into the revised *British Pharmacopœia* at least as an alternative, and for making the official solutions of decimal or percentage strengths. The arguments in favour of this change or addition were very fully set out in the last of the series of articles which we published recently on the revision of the *British Pharmacopœia*, and we anticipate with some confidence that they will prevail with the representative Committee which the General Medical Council has appointed to take charge of the work of revision.

CONGRATULATIONS TO PROFESSOR A. R. SIMPSON, OF EDINBURGH.

On July 4th, being the twenty-fifth anniversary of his appointment to the Chair of Midwifery in the University of Edinburgh, Professor A. Russell Simpson was entertained to dinner by his former and present assistants. During the evening a presentation of plate was made to Professor Simpson. Dr. J. Halliday Croom was in the chair, and a number of guests were present. On the following day the members of Professor Simpson's summer class also made him a presentation. As will be seen by our report of the meeting (at page 135) the members of the Edinburgh Obstetrical Society also entertained Professor Simpson as the guest of the evening at their dinner on July 10th.

ARISTOCRATIC BABY SHOWS.

Times may be proud of seeing many of its ideas and its forms of enjoyment accepted finally by the upper ten thousand. Thus cycling, which was for years the joy of the masses, has now become the fashionable pleasure of the classes, and baby shows have now become the means of manifesting the maternal pride of aristocratic mammas. Truly there is no reason why little lords should not be appraised for their weight, size, number of teeth etc., in their infancy as well as the babes of Mrs. Jones, of Whitechapel, and Mrs. Brown, of Camden Town; but the competition for prizes should, we think, be national and be open to all proud mothers, whether of the masses or classes. It would be interesting to trace the subsequent history of prize babies and to ascertain if they furnished more distinguished men and women to the world than those who did not start so well in life. Mrs. Robert Crawshay recently held at her house an aristocratic baby show, which was very largely attended. The first prize for weight and general excellence for babies under 1 year of age was awarded to Dermot Browne, son of Lord and Lady Castlerosse, who, though but 11 months old weighed 38½ lbs. The prize for weight and general excellence of development for babies over 1 year of age was awarded to Angela Mildred Baring, daughter of Lord and Lady Ashburton, who was 18 months old, weighed 28 lbs., and had 14 teeth. Information as to the feeding of these children would have been interesting.

THE LAW OF INFANTICIDE.

Dr. John Glaister, in an admirable paper in the *Edinburgh Medical Journal* (July, 1895), calls attention once more to the exceedingly unsatisfactory state of the law on the subject of infanticide. It has long been recognised by writers on medico-legal subjects that the child is amply protected by our laws immediately after its birth, and to a less extent whilst still in the uterus, but the law affords no protection whatever to it during the act of birth, and the killing of a child during birth is no crime unless the circumstances should be such as to bring the case within the definition of criminal abortion. All who have studied our records will know the extreme difficulty, we had almost said the utter impossibility, of obtaining a conviction against an unmarried girl for the murder of her illegitimate infant, no matter how overwhelming the evidence may be, the assumption in law being that the infant was born dead unless the contrary is made to appear by evidence. As a rule the prisoner is acquitted on the charge of murder or manslaughter, but convicted of another offence—namely, concealment of birth. No doubt this state of things has been passively acquiesced in because it has afforded a way of meting out some punishment to the girl, who is, however, often more sinned against than sinning. But it is eminently unsatisfactory, and savours somewhat of inconsistency that a prisoner should be convicted of concealing the birth of a child which has just been judicially declared to have never had existence. The Capital Punishment Commission made a very excellent suggestion on this subject some thirty years ago which has never become law, but which if adopted would go a very long way towards minimising the difficulty. Their report says: "We have arrived at the opinion that an Act should be passed making it an offence, punishable with penal servitude or imprisonment, at the discretion of the court, unlawfully and maliciously to inflict grievous bodily harm or serious injury upon a child during its birth or within seven days afterwards, in case such child has subsequently died. No proof that the child was completely born alive should be required. With respect to the offence of concealment of birth, we think that no person should be liable to be convicted of such an offence upon an indictment for murder, but should be tried upon a separate indictment. The accused should not be entitled to be acquitted in either of the above cases if it should be proved in the trial that the offence amounted to murder or manslaughter." Some such legislation as is indicated in these sentences is urgently needed, and we trust that in the new Parliament there will be found some who will take this subject up, and not rest until they have effected a change in our law upon the lines indicated.

THE MEDICAL HISTORY OF THE CRUSADES.

In the *Revue Scientifique* of June 1st M. A. Corlieu gives a sketch of the medical history of the Crusades as far as it can be gathered from Joinville and other authorities. The condition of things may be summed up by paraphrasing the midshipman's description of the manners and customs of certain savages: there was no sanitation, and medicine (such of it as there was) was for the most part beastly. Albert, of Aix, relates that in the first crusade some champions of the Cross were bitten by snakes at Sidon and suffered from "tumours" (presumably œdema) and intolerable thirst. The treatment had perhaps best be given in the historian's own words. It was recommended *ut vir percussus sine mora coiret cum muliere, cum viro mulier, et sic ab omni veneni tumore liberarentur utrique.* This method of neutralising the poison does not seem to have been particularly successful. The surgeons naturally acquired a very large experience in the treatment of wounds, incised, lacerated, and contused. Baldwin was severely wounded before Jerusalem, having received a spear thrust "through the thigh and the loins." He fell fainting from his horse, but the most skilful leeches were summoned "by whose art and skill the King and valiant athlete was enabled to recover from this deadly wound." Baldwin was also wounded in the foot before Antioch, and the surgical talent available was baffled by the injury to such a degree that is was proposed to kill a Saracen after wounding him in the same part, so as to learn the proper course to pursue. Baldwin, however, refused to allow this crude attempt at experimental surgery to be made. There seem to be no

medical records of the second crusade. In the third the French King Philippe Auguste and our own Cœur de Lion suffered grievously from a disease, the symptomatology of which included extensive exfoliation of the skin, shedding of the nails, and loss of the hair. The disease is called *Arnoldia* by the chroniclers, and is variously conjectured to have been leprosy or syphilis. It could hardly have been leprosy, for both the royal sufferers recovered, Cœur de Lion being killed eight years later at the siege of Chalus, and Philippe Auguste dying of quartan ague twenty-four years after Richard. Of the fourth crusade we have no medical details. In the fifth St. Louis of France was accompanied by his private physician Dudon and other leeches; among them was a lady doctor or *physicienne* named Hernandis, who probably attended the Queen in her confinement, which took place at Damietta. The expedition suffered terribly from scurvy, typhus, and other pestilences. The part played by water in the diffusion of disease would seem to have been recognised, though the methods of water examination would hardly satisfy a modern chemist. A piece of white linen was dipped in the water to be tested and then dried; if there were any stains on the linen the water was condemned, but if not it was pronounced pure. The addition of four crushed almonds or beans was believed to make the water of the Nile safe for drinking. The method of disinfection adopted for the King's tent was to fumigate it with a mixture of amber, chick peas, or lupine, which were macerated in wine, and then placed on live charcoal. In the sixth crusade, which took place twenty-two years later, vast numbers, including St. Louis himself, fell victims to ignorance of the elements of sanitation. M. Corlieu gives some account of military surgery as practised in the Crusades, but in this part of his article we cannot help suspecting that he has followed the example of the author of a certain famous essay on "Chinese Metaphysics," by studying the *Cyrurgia* of Theodoricus, the *Chirurgie de Maître Henri de Mondeville*, and other mediæval writers on surgery, and "combining his information."

THE PATHOLOGIST TO THE LONDON ASYLUMS.

The opportunities for the investigation of the pathology of nervous and mental disease in this country are so few in number, that the creation of the office of Pathologist to the London County Asylums has been hailed with much satisfaction. The duties of this office, to which Dr. F. W. Mott, Assistant-Physician to Charing Cross Hospital, has been appointed by the Asylums Committee of the London County Council, are to conduct researches into the pathology of insanity in all its bearings, and to make examinations of the pathological material at London County Asylums. He will be provided with a laboratory at the Claybury Asylum, and will have access to the wards of the asylums for the purposes of clinical study. The office thus affords many admirable opportunities, of which Dr. Mott may be expected to make excellent use, for advancing our knowledge of diseases of the nervous system. The salary attached to the appointment is £700 a year, and the pathologist will be required to devote the whole of his time to the duties of the office.

METHYLENE BLUE IN FILARIASIS.

Dr. Austin Flint, in the New York *Medical Journal* of June 15th, 1895, advocates the use of methylene blue in chyluria and filariasis, basing his advocacy on his experience in one case of severe chyluria. In this case prior to treatment filariæ were so abundant that "in each field of the microscope an average of ten embryonic filariæ" were found; from the context we are led to infer that the field was that of an eighth objective. On March 5th two grains of methylene blue were given and repeated at intervals of four hours during the day. The same evening in four slides only two filariæ were found, and these were sluggish and stained by the dye. The urine had become clear and of a characteristic greenish blue. Treatment was discontinued. Blood examined on March 8th and 11th contained no filariæ. On March 12th the urine had lost its blue colour, and had again become milky. During the night of March 13th filariæ were found in the blood in great abundance; at the same time it was observed that the parasites showed a considerable amount of aniline staining, and that their movements were sluggish. On the following day methylene blue was again given; on the third day thereafter, on examining the blood, several dead and disintegrating filariæ were found deeply stained. The urine had also cleared again. At the end of five days treatment was discontinued, and although the blood was frequently examined subsequently no filariæ could be found, and the urine remained normal. We have had so many cures for chyluria and poisons for the filariæ, which on subsequent trial have been found wanting, that we may be excused if we entertain a little scepticism about the virtues of methylene blue until we have further evidence. Unless the parent parasites are killed, even although the drug may for the time kill the embryos, which is still open to doubt, the patient is not much the better for the treatment; the embryos are sure to reappear in the blood. It is not the embryo that does the mischief—it is the parent worm; and even supposing that the parent worms are killed, it does not follow that the obstruction of the lymphatics which they gave rise to will disappear. The lesions they produce, and which are the proximate cause of filarial diseases, are permanent. Cases of chyluria are often met with in which the filariæ which had given rise to the disease in the first instance had long disappeared; as a matter of fact, it is a rare thing to find filariæ in ordinary elephantiasis. We fear there may have been some error in observation, or in the recording of this case, seeing that it is stated that no fewer than ten filariæ were seen in one field of an eighth of an inch objective. It is difficult to understand how so many filariæ could be packed into so small a space, or, if the blood vessels were so packed with parasites, what became of the blood corpuscles.

A NEW FRENCH TEMPERANCE MOVEMENT.

For some time past the thinking French mind has been growingly exercised on the urgent necessity for a resolute stand being made against the ravages of alcoholism. Consequent on the many recent outspoken medical counterblasts in France, *Le Soleil* and other leading journals have inveighed in the strongest language against specially the heavy premature mortality compared to which mortality from cholera is declared to be of "unparalleled benignity." In little less than half a century, since 1850, the consumption of alcohol has quadrupled in France, averaging in 1894 four litres per head. Dr. Legrain, Head Physician of Asylums in the department of the Seine, dwells on alcoholic heredity, and presents tabulated observations leading to these three conclusions: 1. Double parental alcoholism creates an irresistible tendency to drinking in the children. 2. Parental absinthism seems directly to transmit (very frequently fatally) epilepsy to the offspring. 3. The parental combination of absinthe drinking and epilepsy is a common cause of epilepsy in the children. Dr. Moreau de Tours gives cases of juvenile intoxication, stating that in the Lower Seine children drink large quantities of brandy on holidays. Dr. Roubinovitch, of St. Anne's Asylum, has begun to lecture on drunkenness and alcoholism to schools of teachers and pupils, and has heartily aided the recently-formed French Temperance Society, which seems to be based on the plan of the old English temperance societies, abstinence from spirits and strict moderation in wines, malt liquors, and cider.

Notification of Infectious Diseases.—At a special meeting of the Perth local authority on July 9th, it was agreed, after a long discussion, by 14 votes to 5, to adopt the Infectious Diseases Notification Act.

PARLIAMENTARY BILLS COMMITTEE.

A meeting of the Parliamentary Bills Committee was held at the offices of the Association, 4, 9, Strand, W.C., on Tuesday, July 25th, 1865.

Present:

Mr. Ernest Hart in the Chair.

Dr. Ward Cousins, President of Council.

Mr. Butlin, Treasurer.

Dr. S. H. Agar (Henley-in-Arden).
Dr. A. G. Bateman (London).
Dr. T. Bridgwater (Harrow-on-the-Hill).
Dr. J. Spottiswoode Cameron (Leeds).
Dr. W. F. Cleveland (London).
Dr. R. Fisher (London).
Mr. E. H. Galton (London).
Dr. Fraser Gopp (Bothwell).
Dr. W. Gordon (Exeter).
Mr. J. H. Hemming (Kimbolton).
Professor V. Horsley (London).
Mr. Evan Jones (Aberdare).
Mr. T. C. Langdon (Winchester).
Dr. A. R. Mandy (East Rudham).
Dr. W. J. Mickle (London).
Dr. J. W. Miller (Dundee).
Mr. Jones Morris (Portmadoc).
Dr. James Murphy (Sunderland).
Mr. C. H. Watts Parkinson (Wimborne Minster).
Dr. James Ritchie (Edinburgh).
Dr. G. E. Shuttleworth (Richmond Hill).
Dr. R. Somerville (Galashiels).
Mr. C. T. Street (Newton-le-Willows).
Mr. W. Thomson (Dublin).
Mr. T. Jenner Verrall (Brighton).
Dr. S. Woodcock (Manchester).

The minutes of the last meeting were read and confirmed.

Registration of Midwives Bill.

The Chairman said that perhaps it would be for the convenience of the Committee if they took first the report of the Subcommittee to which the Medical Acts Amendment Bill was referred at the last meeting. Subsequent to the meeting he had asked the Subcommittee—consisting of Dr. R. W. Batten (Gloucestershire Branch), Dr. Spottiswoode Cameron (Yorkshire Branch), Mr. E. H. Galton (South-Eastern Branch), Professor Victor Horsley (Metropolitan Counties Branch), Mr. Evan Jones (South Wales and Monmouthshire Branch), and Dr. S. Woodcock (Lancashire and Cheshire Branch)—to consider the Midwives Registration Bill, and at the first meeting the Subcommittee decided to take the Midwives Registration Bill first, in view of it being already before the House of Lords, and they had prepared an amended Bill, which had been sent to the Branches for their opinion. The Bill, which was introduced into the House of Lords, had necessarily lapsed by the dissolution of Parliament and the resignation of the Government, so that there was in fact no Bill in existence and no Bill before the House of Parliament, and no one could tell when the matter would be again introduced into Parliament. He might add that when it seemed likely that the Bill might come on he provisionally communicated the draft Bill of the subcommittee to Lord Balfour, telling him that it was a report from a subcommittee. Lord Balfour wrote that he would consider the amended Bill carefully when Parliament assembled. He wrote to Lord Balfour again to ask him to what extent he had been affected by the suggestions of the subcommittee, and what he had done in respect to the matter or proposed to do. Lord Balfour replied that in his present circumstances he could not in the near future undertake to write at length in regard to the proposals contained in the draft Bill, but when the pressure of the present emergency was over he would turn his attention to the subject. Lord Balfour had also sent two copies of his Bill as finally amended in the House of Lords. He proposed to have the Bill received from Lord Balfour and the Bill drafted by the subcommittee published in the British Medical Journal for the information of the Branches and the matter could then be discussed at a future meeting when a fresh Bill was before Parliament.

Dr. Cameron (Leeds) said the Yorkshire Branch had considered the Bill, and their opinion was practically that they would not be satisfied with any Bill which recognised the practice of midwives at all apart from medical practitioners. There must be something incorporated in the Medical Acts which made it necessary for midwives attending cases being in touch with some qualified medical practitioner.

Dr. Woodcock (Manchester) said he should like to say, for the information of the Committee, that he had information that the Parliamentary Bills Committee had already exercised some influence over the minds of the Legislature. He had seen Lord Balfour, who had been supplied in a confidential manner with the draft Bill of the subcommittee, which gave him sufficient indication that the mind of the profession was turning to the question. Lord Balfour had said that he had seen that the profession was not blindly and obstinately opposed to the Bill, and he would be very glad to know what was the opinion of the British Medical Association, and what they proposed doing. At the annual meeting of the Lancashire and Cheshire Branch, the draft Bill was submitted, and it was felt that the matter affected so generally the whole of the profession that it would be unwise to take it into consideration; and it was decided to ask the Council of the Association to give directions for the Bill to be published in the British Medical Journal, so that the whole of the members of the Branches would have it before them, and have an opportunity to consider it.

Dr. Somerville (Galashiels) said the Committee ought to consider whether the mind of the profession was sufficiently made up on the subject for them to come to a decision about it just now. If the matter was postponed for a little while, he thought it would be well. There was now no Bill before Parliament, and Parliament was now dissolved. Lord Balfour of Burleigh was now a member of the Government, and he no doubt had other things to think about, and he had stated himself that he was not likely to bring in his Bill again. The Committee might consider whether on a subject about which the members of the Association were so much divided they should come to a decision on the matter. He thought, perhaps, it might be as well to postpone it.

Mr. Jones Morris (Portmadoc) said at a meeting of the Council of his Branch it was decided to postpone the consideration of the Bill. They would rather postpone the consideration of the Bill until the whole of the Branches had considered the Bill. Expressing his own views on the matter, having a very hilly Poor-law appointment it could easily be imagined how very convenient it would be for him to have in the remote districts a woman who was properly qualified, who would be able to attend cases of natural labour, and if she found any difficulty in the case to at once send for a medical man. What was felt was that all those women who might, under the exigencies of circumstances, be called upon to attend women in their labours, should have some amount of education, and be qualified for that purpose, let it be training under a medical man or training in a hospital, and they should be registered in order that the district should know that that woman was one they could call in.

After some further discussion it was proposed by the Chairman, seconded by Mr. Victor Horsley, and resolved:

That the report of the Subcommittee be received and entered on the minutes, but the Committee postpone further action seeing that Lord Balfour has withdrawn his Bill, and that there is at present no Bill before Parliament. At a future date the Committee will resume the discussion with the aid of the comments of the Branches upon the amended Bill drafted by the Subcommittee.

Dr. Bridgwater (Harrow-on-the-Hill) said, did not the Committee think it would be well to agree upon one point, that of the necessity of some change in the present system? They ought to go before the world with it prominently admitted that there was a necessity for a change, and then upon that would spring other steps. It was then proposed by Dr. Bridgwater, seconded by Dr. Galton, and unanimously resolved:

That it is desirable that there should be a change in the present system in the practice of midwifery by unregulated, unexamined, and uneducated women.

The further consideration of the subject was postponed.

Annual Report.

The Chairman said the next item on the agenda was the consideration of the annual report of the Committee which had been circulated.

It was proposed by Mr. Jones Morris, seconded by Dr. Cleveland, and resolved:

That the report of the Parliamentary Bills Committee be received and adopted, and laid before the next meeting of the Council.

Medical Acts Amendment Bill.

The Chairman said he had received from the Lancashire and Cheshire Branch a rough draft Bill to amend and consolidate the Medical Acts, which probably the Committee would wish to be referred to the same Subcommittee to which the other amendments of the Medical Acts had been referred, who would consider it and take legal advice upon it if necessary.

Factory Acts Legislation.

The Chairman said they had not succeeded in getting all the amendments proposed inserted in the new Factories and Workshops Act. He had been working in co-operation with Dr. Holmes, Secretary of the Certifying Factory Surgeons Association, who had drawn up the following note, which showed the advantages which the new Bill conferred on certifying factory surgeons:—Under the present Factory Acts the duties of certifying surgeons are confined to the examination of children and young persons for certificate of fitness, and to reporting on accidents. In the latter case only have they the power to enter a mill to examine into the cause of an accident, and no power to enter the office to examine the Factory Register. Under the Factory Bill as passed by the House of Commons, Clause 18 clears up a doubtful point about accidents to be reported, and will thus in many districts increase the remuneration of certifying surgeons. Clause 20, causing a register of all accidents to be kept, will lead to many being reported to the certifying surgeon which have hitherto been neglected, thus again increasing his remuneration, but, what is more, it gives him the power to enter and examine the Factory Register, which hitherto he has not been entitled to do. Clauses 22 and 23 will give increased work, and, as all work is paid by fees, increased pay. Clause 29 ditto, and, for the first time, brings sickness due to the employment directly under the notice of certifying surgeons. Clause 46 provides for a limited amount of re-examination, and for the employment of certifying surgeon on special inquiries, the latter being an acknowledgment of their utility never made before. The clause also provides for the payment for services rendered under any special rules the Home Secretary may make. Hitherto the Home Secretary has had no such power to employ certifying surgeons. Undoubtedly Schedule 2 may affect injuriously a few certifying surgeons who are now getting special fees from enlightened employers for the periodical examination of hands employed in dangerous trades, yet the number affected is not likely to be large, as the Chairman only knew of one case, a correspondent to the British Medical Journal. None have made any complaint to the Association of Certifying Surgeons; had they done so the Association would have had a tangible ground on which to approach the Home Office for an increase of the schedule. A second correspondent writes to the British Medical Journal under a misapprehension as to the nature of Schedule 2.

Grievances of Army Medical Officers.

The Chairman said the subcommittee to which the three cases of grievances of army medical officers were submitted at the last meeting had considered the merits of each case, and, without going into the precise reasons, the subcommittee recommended that the Committee should not interfere in two cases, and that in the third, the case of Surgeon-Major H. G. Gardner, they had reason to believe that he would be reinstated. If he should not be reinstated, the Committee should make further representations to the new Secretary of State for War that he be either reinstated or employed in a recruiting district.

CORK SOCIETIES MEDICAL OFFICERS' INDEMNITY FUND.

The following additional subscription is acknowledged by Dr. Denis Dempsey Donovan, King Street, Cork, Treasurer to this fund:

	£	s.	d.
Yorkshire Branch, British Medical Association	10	0	0

MILKBORNE DISEASE:

An Appeal to Medical Officers of Health.

Mr. Ernest Hart is engaged on a general inquiry into milkborne disease since 1881, in continuation of his paper of that year on the Influence of Milk in Spreading Zymotic Disease, and will be much obliged if those health officers who possess notes of outbreaks of disease traceable to the agency of milk will be good enough to furnish him with a brief statement of the facts, so far as known, in the shape of answers to the questions subjoined:

1. Date.
2. Locality.
3. Reporter.
4. Total number of cases.
5. Deaths.
6. Number of cases amongst drinkers of suspected milk.
7. Number of persons supplied by milkman.
8. Number of such families invaded.
9. Sanitary circumstances of farm or dairy from which milk was obtained.
10. Exciting cause of outbreak.
11. Circumstances implicating milk.
12. Facts showing special incidence of disease.
13. Reference to report.

Mr. Ernest Hart desires to express his thanks to the following medical officers of health for information which they have kindly furnished with reference to outbreaks of disease traced to the agency of milk: Dr. Ainley, of Halifax; Dr. John Brown, of Bacup; Dr. Gairdner, of Crieff; Dr. Paul Karkeek, of Torquay; and Dr. W. Brown, of Stapleton. Also to Mr. B. Davies, of Marylebone, for his paper of proposals in regard of the milk supply of London.

LITERARY NOTES.

In the *British Journal of Dental Science* of July 1st, Mr. H. W. Moore shows that the ancients knew a thing or two about dentistry. The Egyptians of course, as we know from Herodotus, made the teeth one of the innumerable allotments into which they parcelled out the human body for the benefit of professors of the healing art. Hippocrates recommended gold wire as the best fastening for loose teeth, and evidence that this method was used has been found in Greek tombs. Among the ordinances of the twelve tables of old Rome there is one forbidding the removal of gold fastenings from the teeth, which were to be burnt or buried with the body. Celsus speaks of scraping carious teeth, and from Martial we learn that the Roman ladies repaired imperfections in their dental apparatus by the help of art. The artificial teeth which they used were composed of bone and ivory, as we learn from the following lines of Martial:

Sic dentata sibi videtur Ægle
Emptis ossibus, Indicoque cornu

which Mr. Moore translates as follows:

So Ægle, with her bought and Indian bone,
May seem to have a second mouth of her own.

Mr. Moore is, we doubt not, a most skilful dentist, but we venture to say of him, as Dryden said of Swift, that he is not a poet.

The editor of the Philadelphia *Medical News*, in denouncing the use of such terms as "ii-para," "iii-para," "iv-para," "v-para," etc., to designate a multipara in her second, third, fourth, or fifth pregnancy, says, it seems strange that the inventiveness of medical philologists "has not been equal to the emergency of devising names for these simple facts, instead of designating them by an unpronounceable monstrosity." He suggests, "with proper fear and trembling," the coinage of suitable terms on the pattern of the existing "primipara" and "multipara"—thus, "duipara" or "deutipara" (which, by the way, should be "deuteripara," and even then would be a vile hybrid), "tripara," "quadripara," "quintipara," "sextipara," "septipara," "octipara," "nonipara," "decipara." But what about ladies who strive to act up to Napoleon's ideal of female "greatness," like those who are earning capitation grants of land for their lords in Canada by their fecundity? Are we to speak of them as "undevicesisimipara," "vicesimoquintipara," etc.?

The current issue of the *Gentleman's Magazine* contains an excellent article written by Mrs. J. E. Sinclair in view of the forthcoming meeting of the British Medical Association in London. She gives particulars of Linacre's life, and points out that the copy of his translation of Galen's *Methodus Medendi*, which he presented to Cardinal Wolsey, is at present in the British Museum, and that it contains an auto-

graph dedication from the great physician to the greater Cardinal. The authoress has obtained several new facts about the marriage and death of John Chambers, the first on the roll of the six physicians who formed the College of Physicians. She says that he was more remarkable for the religious preferment he had than for his position in medicine, but, like his contemporaries Butts and Vicary, we are perfectly familiar with his aspect, for has not his portrait been handed down to us in that masterpiece of Holbein, to whose impending sale we recently drew attention? John Chambers, it appears, was married to Jone Wardell in St. Margaret's Church, Westminster, November 9th, 1545; their son was christened in the following year, and Jone died in June, 1549; whilst on July 2nd, 1549, there is an item in the churchwardens' account books of "viiid" for "bille" paid at the burial of "Sir John Chamber." The author adds that the ordinary price for a funeral at this period appears to have been about 24.

ASSOCIATION INTELLIGENCE.

NOTICE OF LAST QUARTERLY MEETING FOR 1895.
ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

NORTH OF ENGLAND BRANCH.—The annual meeting of this Branch will be held on Thursday, July 25th, at 5 P.M., at the Royal Hotel, South Shields. Dr. Crisp, President-elect, will deliver the annual address; and the officers of the Branch will be elected. The dinner after the meeting will take place at the Royal Hotel, at 6 P.M., 6s. 6d. each, wine not included.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 8, Eldon Square, Newcastle-on-Tyne.

GRAHAMSTOWN AND EASTERN PROVINCE BRANCH. THE usual bimonthly meeting was held in the Albany General Hospital on Thursday, June 20th. Present, Dr. GREATHEAD, in the chair; Drs. Greenlees, Fitzgerald, Adam Becker, W. G. Atherstone, Edington, and Caldwell; Dr. Bruorton as visitor.

Minutes.—The minutes of the previous meeting were read and confirmed.

Election of Branch Representative.—Dr. Edwin Atherstone was appointed the representative of the Branch on the Council for the ensuing year.

South African Medical Congress.—It was resolved that an invitation be issued to the South African Medical Congress to hold its next session in Grahamstown.

Papers.—Dr. FITZGERALD gave particulars of a case of unusual Fœtal Presentation; also of a case he had attended in which the lower jaw had been broken in several places, and which had been successfully treated by wire suturing.—Dr. CALDWELL read a paper on an outbreak of Fever, affecting chiefly the coloured population in Grahamstown. The subject gave rise to a great deal of discussion as to the nomenclature of the fever.

TRINIDAD AND TOBAGO BRANCH.

THE annual general meeting of this Branch was held at the Colonial Hospital, Port of Spain, on June 19th, 1895; the Hon. Dr. J. A. DE WOLF, President, in the chair. Drs. Mitchell, C.M.G., A. Lota, H. M. Alston, J. W. Eakin, W. V. M. Koch, E. J. Read, S. M. Lawrence, E. N. Darwent, Louis Lota, A. P. Lange, J. A. Macfarlane, A. J. Perez, N. A. Rodriguez, C. B. Reid, J. R. Stollmeyer, R. Schenlt, and the Hon. Secretary, Dr. E. Prada, were present.

Report for 1894.—The report showed that the Branch had been in a quiescent state during 1894.

Election of President-elect.—Dr. Antoine Lota was elected, but declined on account of his limited acquaintance with the English language. Dr. J. W. Eakin, of San Fernando, was then elected unanimously.

New Members.—The following were elected members: Hon. Dr. H. J. Lovell, C.M.G., Surgeon-General; Drs. A. Duprey, C.M.S., Farmin, Louis Lota, C. F. Lassalle, and J. A. Macfarlane.

President's Address.—The PRESIDENT read his inaugural address. After giving a brief history of the Branch, he referred in touching terms to the late President, Dr. Beaven Rake. He ended by exhorting the younger members not to lose the good opportunities for research which they had in this tropical colony.

New Rules.—The new rules submitted to the meeting by the Council were passed with a few amendments.

Communication.—Dr. ALSTON exhibited a specimen of Perforation of the Œsophagus in a child aged 2 years. The interesting point about the case was that on opening the chest the right pleural cavity was found to contain thirty ascarides, and, while the œsophagus and adjacent parts were being removed, five more ascarides were seen to wriggle out of the œsophagus through the opening, and pass into the right pleural cavity. The bowels contained several ascarides. The case was pronounced unique in the experience of those present.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING.

THE sixty-third Annual Meeting of the British Medical Association will be held in London on Tuesday, Wednesday, Thursday, and Friday, July 30th, 31st, August 1st and 2nd, 1895.

President: E. LONG FOX, M.D.Oxon., F.R.C.P., Consulting Physician to the Bristol Royal Infirmary.

President-Elect: Sir J. RUSSELL REYNOLDS, Bart., M.D., F.R.C.P., F.R.S., President of the Royal College of Physicians.

President of the Council: J. WARD COUSINS, M.D.Lond., F.R.C.S., Senior Surgeon to the Royal Portsmouth Hospital.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., D.C.L., Surgeon to St. Bartholomew's Hospital, E.C.

An Address in Medicine will be delivered by Sir WILLIAM BROADBENT, Bart., M.D., F.R.C.P., Physician-in-Ordinary to H.R.H. the Prince of Wales.

An Address in Surgery will be delivered by JONATHAN HUTCHINSON, F.R.S., F.R.C.S., Consulting Surgeon to the London Hospital.

An Address in Physiology will be delivered by EDWARD ALBERT SCHÄFER, F.R.S., Jodrell Professor of Physiology, University College.

The Scientific Business of the Meeting will be conducted in Fifteen Sections, as follows, namely:

A. MEDICINE.

Lecture Theatre—Conjoint Examination Hall.

President: F. W. PAVY, M.D., F.R.S. *Vice-Presidents:* Sir FREDERIC BATEMAN, M.D.; D. W. FINLAY, M.D.; W. S. CHURCH, M.D.; J. W. MOORE, M.D.; STEPHEN MACKENZIE, M.D.; E. MARKHAM SKERRITT, M.D. *Honorary Secretaries:* WILLIAM COLLIER, M.D., St. Mary's Entry, High Street, Oxford; W. P. HERRINGHAM, M.D., 13, Upper Wimpole Street, W.; Sir HUGH R. BREVOR, M.D., 18, Serjeant's Inn, Fleet Street, E.C.

The following subjects have been selected for discussion:—

Wednesday, July 31st.—1. Discussion on Diphtheria and its Treatment by the Antitoxin (embracing the following points: (1) Pathology of Diphtheria and its Sequelæ; (2) Symptoms and Progress; (3) Statistics of Mortality under the Antitoxin Treatment and under other Treatment; (4) Effect of the Antitoxin Treatment upon the Local Affection, upon the General Condition, and upon the Sequelæ; (5) Effects that may arise from the Antitoxin Treatment). Introduced by Sidney H. C. Martin, M.D. The following also intend to join in the discussion: C. Syms Woodhead, M.D.; E. W. Goodall, M.D.; Claude Muirhead, M.D. (if possible); Alex. Johnston, M.D.; Professor von Ziemssen, Leopold Browne, M.D.; W. P. Herringham, M.D.; J. Campbell Hall, M.B.; W. Squire, M.D.

Papers by:

Dreschfeld, Julius, M.D. On Ataxic Paraplegia (Clinical Varieties and their Pathology).

Ernest, C. E., M.D., and Horsley, V., F.R.S. On the Pathology of Severe Athetosis (Two Cases treated by Operation on the Cortex Cerebri).

Thursfield, T. W., M.D. A Case of Goitrous Dyspnœa.

Morgan, George, M.D. Notes on the Progress and Present Condition of the First Case of Myxœdema treated by Thyroid Extract.

West, Samuel, M.D. On the Treatment of Diabetes Mellitus by Uranium Nitrate.

Hanot, Professor. Notes sur le Diabète Bronzé.

Campbell, Colin, M.R.C.S. Notes on Direct Intrapulmonary Medication.

And, should there be time available:

Sedgwick, William, M.R.C.S. Notes on the Influence of Heredity in Disease.

Taylor, Seymour, M.D. On the Connection between Chlorosis and Gastric Ulcer.

Aldridson, F. H., M.D. Latent Ulcer of the Stomach.

Jones, E. Lloyd, M.D. Chlorosis.

Thursday, August 1st.—II. Discussion on Acute Lobar or Croupous Pneumonia, its Etiology, Pathology, and Treatment. Introduced by R. Douglas Powell, M.D. The following points will be suggested for special consideration:

Etiological.—1. How far chill arising from (*a*) low external temperature, (*b*) sudden change of external temperature, is causative of pneumonia. 2. How far the reception of a microbe is alone to be regarded as a sufficient cause of pneumonia. 3. How far pneumonia is a disease brought about by conditions favourable to the aggressive germination of an organism ever more or less present. 4. In what does septic or pythogenic pneumonia differ etiologically from the classical form of the disease? 5. Is infection a possible or considerable agency in the propagation of pneumonia?

Pathological.—Ultimate or minute pathology. 1. (?) A neurosis. 2. (?) A direct result of microbic toxins upon the lung parenchyma. 3. (?) The *rôle* of leucocytosis in pneumonia.

Therapeutical.—1. The value of a routine treatment in cases of moderate degree and favourable omen. 2. The value of certain modern methods and the indications for their employment. Pyrexia, the cardiac state, and microbic conditions will especially be held in view in discussing points of treatment.

The following gentlemen will join in the discussion: J. W. Washbourn, M.D.; A. G. Auld, M.D.; Julius Dreschfeld, M.D.; J. E. Pollock, M.D.; A. Foxwell, M.D.; W. J. Tyson, M.D.; G. W. Balfour, M.D.; A. Barrs, M.D.; Professor Baümler (Freiburg); Professor Clifford Allbutt; Samuel Barton, M.D.; Sidney Coupland, M.D.; Samuel J. Gee, M.D.; G. A. Gibson, M.D.; Walter G. Smith, M.D.; Sir T. Grainger Stewart, M.D.; McCall Anderson, M.D.; Sinclair Coghill, M.D.; Lovell Drage, M.D.; David Finlay, M.D.; T. H. Green, M.D.; F. Hawkins, M.B.; H. McClure, M.D.; F. M. Pope, M.D.; E. Markham Skerritt, M.D.; Shingleton Smith, M.D.; J. E. Squire, M.D.; William Squire, M.D.; W. R. Thomas, M.D.; and Samuel West, M.D.

Papers by:

Cechill, J. Sinclair, M.D. The Hypodermic Use of Guaiacol in Acute Pulmonary Tuberculosis.

Foxwell, Arthur, M.D. Hypertrophic Cirrhosis of the Liver.

Maragliano, Professor. Sur le Traitement de la Tuberculose Pulmonaire avec la Sérotherapie Spécifique.

Squire, J. E., M.D. Influence of the Bacillary Theory of Tuberculosis on the Treatment of Phthisis.

Harley, George, M.D., F.R.S. On the Formation of Calculi, particularly of Gall Stones.

And, should there be time available:

Longhurst, Arthur E., M.D. The Use of Alcoholic Stimulants and their Relation to True Physiological Health.

Smith, Wilberforce, M.D. The Weighing Machine in Diagnosis and Treatment.

Gillies, H. Cameron, M.D. The Natural History of Pain.

Lane, Bruce, L.R.C.P. Chronic Rheumatic Arthritis: further points in its Separation from Chronic Rheumatoid Arthritis.

Friday, August 2nd.—III. Discussion on the Causes of Acute Rheumatism and its Relation to other Affections. Introduced by W. B. Cheadle, M.D. The following will join in the discussion: Archibald Garrod, M.D.; J. F. Goodhart, M.D.; Alfred Mantle, M.D.; J. T. Maclagan, M.D.; A. Newsholme, M.D.; P. G. Latham, M.D.; H. Handford, M.D.; Sir Dyce Duckworth, M.D.; A. Haig, M.D.; T. Churton, M.D.; H. Lane, M.D.; M. K. Hargreaves, M.D.; H. A. Caley, M.D.; M. Charteris, M.D.; Samuel West, M.D.; Stephen Mackenzie, M.D.; Gilbert Bannatyne, M.D.; A. P. Luff, M.D.; D. B. Lees, M.D.

Papers by:

Semmola, Professor. Sur la Toxicité des urines dans son degré et dans son nosographisme comme élément de diagnostic et de pronostic dans les maladies en général, et surtout dans les maladies aiguës infectieuses.

Morison, Alexander, M.D. The Treatment of Aortic Valvular Disease.

Caton, R., M.D. On the Arrest of Endocarditis in Acute Rheumatism.

Thorne, Beely, M.D. On Certain Changes in the Cardio-vascular System which follow treatment by the Schott Methods.

And, should there be time available:

Reynolds, E. S., M.D. A Point in the Diagnosis between Chronic Rheumatism and Chronic Gout.

Parsons, Alfred, M.D. Arsenical Multiple Neuritis following the Application of a Cancer Cure.

Laffan, F., M.D. Differential Diagnosis in Malignant Endocarditis, Typhoid Fever, and Acute Tuberculosis.

B. Surgery.

Central Room, Second Floor—Conjoint Examination Hall.

President: Sir Wm. Mac Cormac, F.R.C.S. *Vice-Presidents:* T. Bryant, F.R.C.S.; C. N. Macnamara, F.R.C.S.; Reginald Harrison, F.R.C.S.; A. Willett, F.R.C.S.; Sir W. Stokes, M.D.; Mayo Robson, F.R.C.S. *Honorary Secretaries:* J. D. Harris, M.R.C.S., 45, Southernhay, Exeter; J. Bland Sutton, F.R.C.S., 48, Queen Anne Street, W.; A. Marmaduke Sheild, F.R.C.S., 4, Cavendish Place, Cavendish Square, W.

The President will make some introductory remarks, in which he will refer to the Effects produced by Modern Rifle Bullets on the Human Body.

The following subjects have been selected for discussion:

1. The Diagnosis and Treatment of Fractures of the Upper Third of the Femur, including the Neck. To be introduced by Sir William Stokes, M.D., with lantern demonstration. The following gentlemen have intimated their intention of taking part in the discussion: Professor E. H. Bennett, M.D. (Dublin); Thomas Bryant, F.R.C.S. (London); Professor Chiene, M.D. (Edinburgh); H. H. Clutton, F.R.C.S. (London); J. Ward Cousins, M.D., F.R.C.S. (Portsmouth); Davies-Colley, F.R.C.S. (London); Damer Harrisson, F.R.C.S. (Liverpool); Sir George Murray Humphry, M.D., F.R.S. (Cambridge); Mansell Moullin, F.R.C.S. (London); Howard Marsh, F.R.C.S. (London); Professor Macewen, M.D., F.R.S. (Glasgow); Rushton Parker, F.R.C.S. (Liverpool); Mayo Robson, F.R.C.S. (Leeds); Thos. Sinclair, M.D. (Belfast); F. A. Southam, F.R.C.S. (Manchester); Greig Smith, M.B. (Bristol); A. Willett, F.R.C.S. (London).

2. The Surgical Treatment of Cysts, Tumours, and Carcinoma of the Thyroid Gland and Accessory Thyroids. To be introduced by H. Trentham Butlin, F.R.C.S. (London). The following gentlemen have intimated their intention of taking part in the discussion: Professor Annandale, F.R.C.S. (Edinburgh); James Berry, F.R.C.S. (London); Thos. F. Chavasse, M.D. (Birmingham); R. C. Chicken, F.R.C.S. (Nottingham); Kendal Franks, M.D. (Dublin); Damer Harrisson, F.R.C.S. (Liverpool); Victor Horsley, F.R.S. (London); Bowreman Jessett, F.R.C.S. (London); C. B. Keetley, F.R.C.S. (London); Professor Kocher (Berne); Dr. Kummer (Geneva); Jordan Lloyd, F.R.C.S. (Birmingham); R. H. Lucy, F.R.C.S. (Plymouth); Professor W. Macewen, M.D. (Glasgow); Rutherford Morison, F.R.C.S. (Newcastle-on-Tyne); James Murphy, M.D. (Sunderland); Mayo Robson, F.R.C.S. (Leeds); W. G. Spencer, F.R.C.S. (London); Sir William Stokes, M.D. (Dublin); Charters Symonds, M.D. (London); Thelwall Thomas, F.R.C.S. (Liverpool).

The following papers have been announced:

Anderson, William, F.R.C.S. Three Cases of Sacless Hernia of the Sigmoid Flexure through the Left Inguinal Canal, with Anatomical Explanation.

Banks, Mitchell, F.R.C.S. The Statistics of Modern Breast Operations.

Browne, G. Buchanan, M.R.C.S. A Hitherto Undescribed Locality in the Male Urinary Bladder where a Stone may lie and elude contact with any Instrument introduced through the Urethra.

Chavasse, Thos. F., M.D. A Successful Case of Removal of the Entire Upper Extremity for Injury by Berger's Method.

Cheyne, Watson, F.R.C.S., F.R.S. On Operations for Malignant Disease of the Pharynx and Naso-pharynx, with Cases.

Cripps, Harrison, F.R.C.S. A Complication occurring in Inguinal Colotomy.

Franks, Kendal, M.D. On Movable Kidney.

Eve, Frederic S., F.R.C.S. A Successful Case of Laparotomy for Intussusception in an Infant, with remarks.

Fenwick, Hurry, F.R.C.S. A Series of Seventy Cases of Ablation of Tumours of the Bladder.

Heiss, John, M.D., F.R.C.S. Some Points in the Operative Treatment of Club Foot.

HOMSLEY, Victor, F.R.S. The Results of Operative Treatment of Injury or Disease of the Cervical Vertebræ.

KENNAN, Surgeon-Lieutenant-Colonel D. F., M.D. Rhinoplasty in India (Lantern Demonstration).

KENTISH, C. B., F.R.C.S. On Thirty Cases of Osteotomy of the Hip, with Cases.

LITTLE, E. Muirhead, F.R.C.S. Tarsectomy for Talipes Equinus in Adults and Adolescents.

LOCKE, Jordan, F.R.C.S. 1. On Gonorrhœal Inflammation in and about the Seminal Vesicles. 2. On a Simple Method of Securing the Tongue during Lingual Operations.

LOCKWOOD, C. B., F.R.C.S. On the Treatment of Hydrocele by Incision.

MAHER, Howard, F.R.C.S. The Pathology and Clinical History of some Rare Forms of Bony Ankylosis.

MORISON, Albert E. Notes on a Case of Jacksonian Epilepsy Treated by Trephining.

MORTON, Alex. A., F.R.C.S. Specimen showing the Junction made by Murphy's Button, Three Months after Operation, in the Case of Intestinal Anastomosis published in the BRITISH MEDICAL JOURNAL, April 20th, 1895.

MURPHY, J. B., M.D. (Chicago). Peritonitis.

MURPHY, James, M.D. On the Importance of Operating Early where an Operation is required in Abdominal Disease.

NEWMAN, W., M.D.Lond. Symmetrical Necrosis of the Lower Third of Each Femur: Large Removal of Bone; Ultimate Amputation through the Left Thigh (Recovery).

PAGET, Stephen, F.R.C.S. Two Cases of Suppurating Hydatid of the Liver drained through the Chest Wall.

ROBSON, A. W. Mayo, F.R.C.S. A Series of Cases of Colectomy.

SHAW, W. Dunnett, F.R.C.S Edin. 1. On Splenectomy, with Notes of Three Cases. 2. On Dilatation of Stricture of Œsophagus by Expanding Bougies.

WATSON, Spencer. A Case of Tachycardia Associated with Nasal Growths.

WILSON, Albert, M.D. The Treatment of Acute Pleural Effusion by Early Incision.

C. OBSTETRICS AND GYNÆCOLOGY.

Large Theatre—King's College.

President: Sir WM. PRIESTLEY, M.D. *Vice-Presidents:* A. R. SIMPSON, M.D.; J. WATT BLACK, M.D.; Sir FRANCIS LAKING, M.D.; J. KNOWSLEY THORNTON, M.B.; W. J. SINCLAIR, M.D.; M. HANDFIELD-JONES, M.D. *Honorary Secretaries:* W. S. A. GRIFFITH, M.D., 96, Harley Street, W.; A. H. F. BARBOUR, M.D., 4, Charlotte Square, Edinburgh; W. R. DAKIN, M.D., 57, Welbeck Street, W.

The following subjects have been selected for discussion:

The work of the Section has been provisionally arranged as follows:

Wednesday, July 31st:

10 A.M. President's Address. 10.30. Discussion: The Aseptic and Antiseptic Precautions to be Observed in Private Midwifery Practice, to be introduced by G. E. Herman, M.B., F.R.C.P. The following gentlemen are expected to take part in this discussion: Dr. Stuart (Brooklyn), Professor Lusk (New York), Dr. Smyly, Professor Simpson, Dr. Swayne, Dr. Playfair, Professor Byers, Dr. More Madden, Dr. Watt Black, Professor Murdoch Cameron, Dr. Aust-Lawrence, Dr. Boxall, Dr. Forbes Ross, and others.

Papers by:

APOSTOLI, Dr. (Paris). On Electro-therapeutics as a Means of Diagnosis in Gynæcology.

MADDEN, More, M.D. (Dublin). Gonorrhœal Infection in some of its Gynæcological Aspects.

MURPHY, James, M.D. (Sunderland). The Surgical Treatment of so-called Puerperal Fever.

Thursday, August 1st:

10 A.M. Papers by:

MARTIN, Professor (Berlin). Anterior Colpotomy.

TAYLOR, J. W. F.R.C.S. (Birmingham). Vaginal Cœliotomy.

DONALD, A., M.D. (Manchester). A Case of Vaginal Cœliotomy for Tubal Pregnancy.

PLAYFAIR, W. S., M.D. (London). Remarks on the Education and Training of Girls at and about the Period of Puberty.

SWAYNE, J. G., M.B. (Clapham). The Treatment of Eclampsia occurring during Pregnancy, and Preceding the Stages of Labour.

Instruments will be shown by Professor Lazarewitch (St. Petersburg), Mr. F. Stanmore Bishop (Manchester), and by Dr. Ludan (Ostend).

Specimens will be shown by Dr. Muret (Lausanne).

Friday, August 2nd:

10 A.M. Discussion: The Early Diagnosis of Malignant Disease of the Uterus, and the Treatment by Partial or Total Excision, to be introduced by J. Knowsley Thornton, M.B.

The following gentlemen are expected to take part in this discussion: Professor Martin (Berlin), Professor Pozzi (Paris), Professor Lusk (New York), Mrs. Scharlieb, M.D. (London), Professor Murdoch Cameron, Dr. More Madden, Dr. Murphy, Dr. Smyly, Mr. J. W. Taylor, Dr. A. Donald, Mr. Alban Doran, and others.

Papers by:

CAMERON, Professor Murdoch (Glasgow). A New Theory as to the Position of Fœtus in Utero.

BARBOUR, A. H. Freeland, M.D. (Edinburgh). The Changes in the Uterus during the Third Stage of Labour.

JESSETT, F. B., F.R.C.S. (London). A New Method of Performing Abdominal Hysterectomy for Uterine Fibroids.

DONALD, A., M.D. (Manchester). Vaginal Hysterectomy for Fibroids.

FRANCIS, J. Hosack (Bridge of Allan). Notes on a case of Uterine Cystic Fibroma.

The following papers have also been received, and will be read if time permits:

HAMILTON, A. H., M.D. (Ilkley, Leeds). Cases of Concealed Hæmorrhage, Placenta Prævia, and Puerperal Eclampsia.

HELE, R., M.D. (Glasgow). The Use of Ichthyol in the Treatment of Diseases of the Uterine Appendages.

CAMERON, Professor Murdoch (Glasgow). Exceptional Gynæcological Experiences.

EDIS, F., M.D. (Wolverhampton). Radical Cure of Uterine Prolapse.

ROBERTS, Lloyd, M.D. (Manchester). Case of Tumour of the Fallopian Tube.

NAIRNE, Stuart, F.R.C.S. (Glasgow). Influence of Pregnancy on Uterine Fibroids.

NAPIER, Leith, M.D. (London). Some Complication of the Menopause.

NEWNHAM, W. H. C., M.B. (Clifton). Sterility.

TREVELYAN, Basil, M.R.C.S. (Bath). Labour in Young Primiparæ.

D. PUBLIC MEDICINE.

Lower Hall—Exeter Hall.

President: ERNEST HART, D.C.L. *Vice-Presidents:* J. SPOTTISWOODE CAMERON, M.D.; C. H. W. PARKINSON, M.R.C.S.; WM. COLLINGRIDGE, M.D.; LOUIS C. PARKES, M.D.; P. BOOBBYER, M.D.; JOHN C. THRESH, M.D. *Honorary Secretaries:* C. E. PAGET, M.R.C.S., Town Hall, Salford; REGINALD DUDFIELD, M.B., Sanitary Department, Vestry Hall, Harrow Road, Paddington, W.; F. W. CLARK, M.B., Lowestoft.

The regular business of the Section will commence each day with a formal discussion by gentlemen who have been invited to open the debates. The subjects selected are as follows:—

Wednesday, July 31st.—Presidential Address: Waterborne Disease and its Prevention. Discussion: The Regulation of the Slaughter of Animals for Human Food and the Inspection of Animals before and during Slaughter. Opener: T. M. Legge, M.D.

Papers by:

FARKAS, Dr. (Buda-Pesth). The late Visitation of Cholera in North-Eastern Districts of Hungary.

LAWS, J. Parry, F.I.C., and J. T. NEALE, L.R.C.P. Ventilation of Sewers.

WALDO, F. J., M.D., and WALSH, D., M.B. Underground Bakehouses.

POORE, G. V., M.D. Dry Method of Dealing with Urine.

SIBLEY, R., M.D., PRINGLE, R., M.D., and GRAHAM, W., M.D. Smoke Abatement.

Thursday, August 1st.—Discussion: Hospital Isolation, House Quarantine, and Disinfection. Opener: P. Boobbyer, M.D.

Papers by:

KLEIN, Professor, F.R.S. and BIGGS, Hermann, M.D. Diagnosis of Doubtful cases of Diphtheria and the use of Bacteriology for that purpose.

BIGGS, Hermann, M.D. Use of Antitoxin for Immunising Members of Institutions.

NEWSHOLME, A., M.D. Extension of Scholastic Notification.

PRIESTLEY, J., M.D. Enteric Fever as an Infectious Disease.

KENWOOD, H., M.B. Prevention of Milk Epidemics.

DIXEY, F. A., M.D. Vital Statistics of Diphtheria, 1891-5.

BRAIDWOOD, F. M., M.D., and GREGORY, A. J., M.D. Hospital Accommodation by use of Ships.

Friday, August 2nd.—Discussion: The Insecurity of Tenure of Extra-Metropolitan Medical Officers of Health under the Public Health Act, 1875. Opener: B. A. Whitelegge, M.D.

Papers by:

MORRIS, A. Campbell, M.B. The Need of Appointing Medical Officers of Health to County Councils.

PARKES, Louis, M.D. The Desirability of Appointing Medical Men as Superintendent Registrars of Births and Deaths.

CAMERON, J. Spottiswoode, M.D. The Destruction of Town Refuse by Heat.

SQUARRY, T. C., M.D., and KENWOOD, H., M.D. Midwifery and Disease.

GRAHAM, W., M.D., and HOLDER, T. G., M.D. The Vaccination Laws.

LAFFAN, T., M.R.C.S. Extension of the Army Compensation System to the Irish Poor Law Medical Service.

Owing to the amount of work to be done, readers of papers will be rigidly limited to fifteen minutes, and all other speakers to ten minutes. The names of those who have

signified their intention to speak will be announced in the Daily Programme.

E. Psychology.

East Wing Room, Second Floor—Conjoint Examination Hall.

President: W. J. Mickle, M.D. *Vice-Presidents:* G. H. Savage, M.D.; T. Claye Shaw, M.D.; D. Nicolson, M.D.; Henry Rayner, M.D.; J. G. McDowall, M.D.; Lionel A. Weatherly, M.D. *Honorary Secretaries:* James Chambers, M.D., 6 Mansfield Street, W.; T. Seymour Tuke, M.B., 37, Albemarle Street, W.; James Taylor, M.D., 34, Welbeck Street, W.

The President will open the Section with an Address on the Brain, on Wednesday, at 10 A.M.

A discussion has been arranged to take place on each day, namely:

Wednesday, July 31st.—On the Treatment of Melancholia, introduced by Henry Rayner, M.D. The following are expected to take part in the discussion: Dr. Blandford (London); Dr. Weatherly (Bath); Dr. Norman Kerr (London); Dr. Cooke (Worcester); Dr. Hayes (Newington); Dr. Hyslop (London).

Thursday, August 1st.—On Insanity, in Relation to Criminal Responsibility, introduced by H. Maudsley, M.D. The following have intimated their intention of taking part in this discussion: Professor Gairdner (Glasgow); Dr. Urquhart (Perth); Dr. Norman Kerr (London); Dr. Weatherly (Bath); Dr. Savage (London); Dr. Clouston (Edinburgh); Dr. Mercier (London); Dr. Shuttleworth (London).

Friday, August 2nd.—On Epilepsy, and its Relation to Insanity, introduced by W. R. Gowers, M.D. The following are expected to take part in this discussion: Professor Sir T. Grainger Stewart (Edinburgh); Dr. Buzzard (London); Dr. Clouston (Edinburgh); Dr. Dreschfeld (Manchester); Dr. Ferrier (London); Dr. Fletcher Beach (London).

The following gentlemen are also expected to participate in the work of this Section: Dr. P. W. Macdonald (Dorchester); Mr. Macphail (Derby); Dr. Henry Blake (Yarmouth); Dr. Outterson Wood (London); Dr. Hicks (London); Dr. Wigglesworth (Rainhill); Dr. Orange, C.B. (London).

The following papers have been announced:

Bond, C. H., M.B. The Relation of Diabetes to Insanity.
Campbell, A. W., M.D. A Comparison of the Breaking Strain of Ribs in the Sane and Insane.
Head, H., M.D. Mental Symptoms in Relation to Bodily Diseases in the Sane.
Maudr, A., L.R.C.P. Mental Symptoms in Relation to Exophthalmic Goitre.
Reynolds, E. S., M.D. Mental Symptoms of Bodily Diseases.
Savage, G. H., M.D., and Charles Mercier, M.D. Insanity in Conduct.
Shaw, James, M.D. The Early Symptoms of Insanity.
Shuttleworth, G. E., M.D. Operative Treatment of Idiocy.
Smith, Percy, M.D. Voluntary Boarders in Asylums.
Weatherly, L. A., M.D. The Law in Relation to Single Patients.

F. Physiology.

Physiological Laboratory—King's College.

President: David Ferrier, M.D., F.R.S. *Vice-Presidents:* E. E. Klein, M.D., F.R.S.; Wm. Stirling, M.D.; De Burgh Birch, M.D.; J. Berry Haycraft, M.D. *Honorary Secretaries:* C. S. Sherrington, M.D., F.R.S., Brown Institution, Wandsworth Road, S.W.; E. H. Starling, M.D., 14, Grosvenor Road, S.W.

A discussion on the Mechanics of the Cardiac Cycle will be introduced by Professor Haycraft and D. Paterson, M.D. The following will take part: Noel Paton, M.D.; Lauder Brunton, F.R.S.; and Dr. Gibson.

The following papers have been announced:

Bayliss, W. M., B.A., B.Sc., and Professor L. Hill. The Physics of the Cerebral Circulation.
Bayliss, W. M., B.A., B.Sc., and E. H. Starling, M.D. A New Method of Studying Vasomotor Changes.
Birch, Professor de Burgh, M.D. On the Equipment of an Experimental Laboratory, with Exhibition of Apparatus.
Brodie, T. Gregor, M.D. The Work of Muscle. Decomposition Products from Gelatine and Collagen.
Campbell, Harry, M.D. The Resistance which the Capillaries offer to the Blood-flow.
Eccles, Symons, M.B. The Incidence of Leucomaines in the Urine in Health and Disease.
Edridge-Green, F. W., M.D. On the Perception of Luminosity at Different Parts of the Retina.
Halliburton, Professor, M.D., F.R.S. Nucleo-albumins.
Hewlett, Vaughan, M.D. Sugar as a Muscular Food.
Jeffreys, Professor. (1) Innervation du Coeur. (2) Sur les Echanges Nutritifs Pendant l'Inanition.
Hunter, William, M.D. Experiments relating to the Functions of the Spleen.
Kent, A. F. Stanley. On Outlying Cells in the Optic Chiasma and in the Optic Tracts.
Leathes, T. B., F.R.C.S. On the Interchange of Fluid between the Blood and the Tissues.
Marinesco, Dr. On Tertiary Atrophy and Degeneration of the Central Nervous System.
Pembrey, M. S., M.B. The Physiology of Heat Regulation.
Pickering, J. W., M.D. Intravascular Coagulation produced by Synthesised Proteid-like Substances.
Ramsden, W., L.R.C.P. Mechanical Coagulation of Proteids.
Stewart, Professor G. N. Further Researches on Circulation Time.
Storvis, Professor. The Influence of Sugar on Muscular Work.
Turner, W. Aldren, M.D. (1) The Results of Lesions of the Tuberculum Loisii. (2) The Results of Section of the Trigeminal Nerve and the Consequent Degenerations.
Turner, Aldren, M.B. Demonstration of Several Recently Described Tracts in the Brain and Spinal Cord.

Communications have also been promised by Professor Allen, Dr. Haldane, Dr. Paterson, and others.

G. Anatomy and Histology.

Chemical Theatre—King's College.

President: Henry Morris, F.R.C.S. *Vice-Presidents:* A. Macalister, M.D., F.R.S.; W. J. Walsham, F.R.C.S.; A. H. Young, F.R.C.S.; B. C. A. Windle, M.D.; G. H. Makins, F.R.C.S.; A. W. Hughes, F.R.C.S. *Honorary Secretaries:* F. G. Parsons, F.R.C.S., St. Thomas's Hospital, S.E.; C. B. Lockwood, F.R.C.S., 19, Upper Berkeley Street, W.

The following subjects have been selected for discussion:—

Wednesday, July 31st.—Art in its Relation to Anatomy, to be opened by Professor William Anderson, F.R.C.S., Joint Lecturer on Anatomy at St. Thomas's Hospital, Professor of Anatomy in the Royal Academy of Arts.

Thursday, August 1st.—The Development and Structure of the Placenta, to be opened by Professor A. H. Young, M.B., F.R.C.S., Professor of Anatomy at Owens College, Manchester.

Friday, August 2nd.—The Topographical Anatomy of the Abdomen, to be opened by Professor A. Thomson, M.A., Professor of Anatomy at Oxford University.

The following papers have been announced:—

Griffiths, J., M.A., F.R.C.S. On the Anatomy of the Genito-urinary Apparatus in the Pig and Boar, with Remarks on the Effects of Castration.
Higgins, H., M.R.C.S. On the Mechanism of the Knee.
Keith, A., M.D. On Synostosis of the Mesosternum to the Presternum in Man and Anthropoids, considered as to its Prevalence among them and its Value as Evidence of their Genetic Relationship.
Kent, A. F. Stanley, M.A. On the Histology of the Generative Organs in a Hermaphrodite Dog.
Paterson, Professor A. M., M.D. On the Position of the Kidneys.
Payne, J. F., M.D. On an English Anatomical Manuscript of the 14th Century. (Some old anatomical works will also be exhibited.)
Robinson, A., M.D. Demonstration of the Structure of the Placenta in Carnivora and Rodentia.
Smith, T. Manners, B.A., M.R.C.S. (1) On some points in the Anatomy of Three Symmelian Monsters; (2) Notes upon the Supernumerary Elements of the Embryonic Hand and Foot.
Windle, Professor. Note on the Eustachian Tube.

H. Pathology and Bacteriology.

South Room, Ground Floor—Conjoint Examination Hall.

President: Samuel Wilks, M.D., F.R.S. *Vice-Presidents:* J. M. Purser, M.D.; J. F. Goodhart, M.D.; Sidney Coupland, M.D.; R. Saundby, M.D.; W. Watson Cheyne, F.R.C.S.; Anthony A. Bowlby, F.R.C.S. *Honorary Secretaries:* S. G. Shattock, F.R.C.S., St. Thomas's Hospital, S.E.; H. D. Rolleston, M.D., 13, Upper Wimpole Street, W.

The work of the Section has been arranged as follows:

Wednesday, July 31st.

10 A.M.—Introductory Remarks by the President.

10.30 A.M.—Demonstration of the Malaria Parasite by P. Manson, M.D., with Some Facts as to its Life-history. (Illustrated by Lantern Slides.) A discussion will follow, in which it is hoped the following will take part: Professor Crookshank; A. A. Kanthack, M.D.; and G. Thin, M.D. (who will give a demonstration before the discussion).

11.15 A.M.—A. Foxwell, M.D., on Exophthalmic Goitre; G. R. Murray, M.D., Some Results of Thyroidectomy.

11.45 A.M.—Mr. J. H. Targett, on Syringomyelia and Joint Disease.

12.0 P.M.—J. Risien Russell, M.D., on Congenital Defects of the Cerebellum.

12.15 P.M.—Dr. Robertson, on Arachnoid Haemorrhage.

12.30 P.M.—Papers on Cancer and other New Growths. The

following will read papers or take part in the discussion: R. Hewlett, M.D., On the Chemistry of Carcinoma and Sarcoma; D'Arcy Power, F.R.C.S.; H. Snow, M.D., The Insidious Marrow Infection of Breast Carcinoma; G. Thin, M.D.; Mr. T. W. Eake, The Occurrence of Cancer in Chalk Valleys; W. Roger Williams, F.R.C.S., On Uterine Neoplasms and their relative frequency; Dr. Braithwaite, Fungi in Malignant Disease; E. C. Bousfield, L.R.C.P.; T. N. Kelynack, M.D.

1.45 P.M.—A. R. Parsons, M.B., Specimen of Larynx from case of Typhoid Fever.

Tuesday, August 1st.

10 A.M.—Discussion on Neuritis. Introduced by S. J. Sharkey, M.D. The following have promised to read papers or to join in the discussion: F. W. Mott, M.D.; W. M. Ord, M.D.; Professor Trevelyan, M.D.; Russell Wells, M.B.; W. H. Wilson, M.B.

11.30 A.M.—Discussion on Vaccinia and Variola. Introduced by S. Monckton Copeman, M.D. It is hoped that T. D. Acland, M.D.; S. Coupland, M.D.; Professor Crookshank, M.B., and others will take part in the discussion.

12.30 P.M.—Discussion on Pernicious Anæmia. Introduced by Dr. W. Hunter, and Dr. Monckton Copeman will speak.

1 P.M.—Dr. Allan Macfadyen, The Formation of Methyl-Mercaptan on the Body and its Production by Bacteria.

1.15 P.M.—Paper by Professor Adami: The Effect of the Reactions of Media upon the Pathogenic Properties of Bacteria.

1.30 P.M.—Paper by A. G. Auld, M.D., on Hæmatogenous Jaundice.

1.45 P.M.—P. Furnivall, L.R.C.P., on Acromegaly.

Friday, August 2nd.

10 A.M.—Discussions on Lymphadenoma. Introduced by W. G. Spencer, F.R.C.S. The following have intimated their intention to take part in the discussion: W. J. Fenton, M.B.; H. Morley Fletcher, M.D.; R. M. Leslie, M.B.; A. A. Kanthack, M.D.; Mr. F. S. Eve; Mr. J. Jackson Clarke; C. A. Morton, F.R.C.S.; G. N. Pitt, M.D.; D'Arcy Power, F.R.C.S.; H. Snow, M.D.; G. Thin, M.D.; Claud Wilson, M.D.

11.30 A.M.—Papers on Leprosy. By P. Abraham, M.D.; G. Thin, M.D.

12 NOON. Professor Babes.

12.15 P.M.—Professor Crookshank on Actinomycosis.

12.30 P.M.—R. Hewlett, M.D.—The Diazo Reaction in Typhoid Fever. F. F. Westbrook, M.D.—The Growth of the Cholera Vibrio and other Bacilli in Sunlight. R. Hewlett, M.D., and St. Clair Thomson, M.D.—On the Fate of Micro-organisms in Inspired Air.

1.30 P.M.—F. R. Walters, M.D.—Pulmonary Hypertrophic Osteo-arthropathy.

A. M. Fadyen, M.D., and R. Hewlett, M.D., will exhibit Cultures and Bacteriological Specimens.

The Secretaries venture to ask gentlemen who intend to show microscopic specimens to let them know the number of microscopes (and the powers) necessary to illustrate their papers, as this will be limited; and also to state whether the use of a lantern is required.

A separate room will be provided for the exhibition of macroscopical and other specimens; lantern demonstrations will be given in the meeting room.

I. OPHTHALMOLOGY.

Large Committee Room, Ground Floor—Conjoint Examination Hall.

President: H. POWER, F.R.C.S. *Vice-Presidents:* D. ARGYLL ROBERTSON, M.D.; W. A. BRADLEY, M.D.; G. ANDERSON CRITCHETT, M.A., F.R.C.S.Edin.; W. ADAMS FROST, F.R.C.S.; A. EMRYS JONES, M.D.; A. H. BENSON, M.B. *Honorary Secretaries:* R. W. DOYNE, F.R.C.S., Kilcrone, Oxford; E. TREACHER COLLINS, F.R.C.S., 84, Wimpole Street, W.; W. T. HOLMES SPICER, F.R.C.S., 17, Welbeck Street, W.

The following discussions have been arranged:

July 31st.—On Certain Rare Cases of Recurrent Ophthalmia. The affection occurs in adults; it begins with conjunctival and ciliary injection, general or limited, myosis, slight transient myopia, with œdema of the lids in some cases, and occasionally vesicles on the cornea. The duration varies from twenty-four hours to a few days, and recurrence takes place at varying intervals. It is probably angeo-neurotic in its origin. The discussion will be opened by Professor E. Fuchs (Vienna), and continued by G. A. Berry, F.R.C.S. (Edinburgh), J. Griffith, F.R.C.S. (London), John Hern, M.D. (Darlington), and A. Emrys Jones, M.D. (Manchester).

August 1st.—On the Diagnosis of Orbital Growths. Opened by H. R. Swanzy, F.R.C.S. (Dublin); and Professor Panas (Paris). Continued by G. A. Berry, F.R.C.S. (Edinburgh); W. J. Collins, M.D., F.R.C.S. (London); Hill Griffith, M.D. (Manchester); G. Hartridge, F.R.C.S. (London); H. Macnaughton Jones, M.D. (London); H. Juler, F.R.C.S. (London); J. B. Lawford, F.R.C.S. (London).

August 2nd.—On the Question of Operating in Chronic Glaucoma. Opened by E. Nettleship, F.R.C.S. (London). Continued by G. A. Berry, F.R.C.S.Edin.; G. Anderson Critchett, F.R.C.S.Edin. (London); Adams Frost, F.R.C.S. (London); G. E. Glascott, M.D. (Manchester); John Griffith, F.R.C.S. (London); G. Hartridge, F.R.C.S. (London); H. Macnaughton Jones, M.D. (London); H. Juler, F.R.C.S. (London); C. G. Lee, M.R.C.S. (Liverpool); D. Little, M.D. (Manchester); G. Mackinlay, F.R.C.S.Edin. (London); Priestley Smith, M.R.C.S. (Birmingham); H. R. Swanzy, F.R.C.S.I. (Dublin); Spencer Watson, F.R.C.S. (London); R. Williams, M.R.C.S. (Liverpool); W. J. Cant, M.R.C.S. (Lincoln); A. Bronner, M.D. (Bradford); W. H. H. Jessop, F.R.C.S. (London); Professor Galezowski (Paris).

The following papers have been announced:

BEAUMONT, W. M., M.R.C.S. On the Question of Latent Hypermetropia in the Visual Examination of Candidates for the Public Services.

BENSON, A. H., F.R.C.S. Acromegaly with Ocular Complications.

BERRY, G. A., F.R.C.S. On Injection of Chlorine Water into the Vitreous.

BICKERTON, T., M.R.C.S. (Liverpool). The Utter Neglect of the Eyesight Question in Board of Trade Official Inquiries into Shipping Disasters.

BULL, Geo. J., M.D. (Paris). Optometry by the Subjective Method.

DONALDSON, E., L.R.C.P.I. (Londonderry). Case of Acute Glaucoma occurring in a patient with Advanced Carcinoma of the Rectum.

EDRIDGE-GREEN, F. W., F.R.C.S. (London). Tests for Colour Blindness.

FUCHS, Professor E. A New Theory of Erythropsia.

GRIFFITH, John, F.R.C.S. Choroidal Sarcoma in Infancy.

HARTRIDGE, G., F.R.C.S. Concomitant Strabismus.

JESSOP, W. H. H., F.R.C.S. (London). Membranous Conjunctivitis.

JONES, H. Macnaughton, M.D. (London). Cases illustrative of the importance of the Correction of Errors of Refraction in Neurasthenic Women.

JULER, H., F.R.C.S. (London), and HARRIS, W. J. Case of Carcinomatous Tumour of the Body of the Sphenoid causing Blindness of Both Eyes.

JULER, H., F.R.C.S., and SMALE, Morton, M.R.C.S. Case of Acute Orbital Cellulitis following Dental Abscess implicating the Antrum of Highmore.

LEE, Charles, L.R.C.P. Cases of Pemphigus and Essential Shrinking of the Conjunctiva.

MACGILLIVRAY, A., M.D. (Dundee). Hereditary Congenital Nystagmus.

MACKAY, Geo., F.R.C.S.E. (Edinburgh). A Note on the Surgical Treatment of Dislocated Lens.

RUSSELL, J. S. Risien, M.D. (London). The Influence of the Cerebrum and Cerebellum on Eye Movements.

SCOTT, Kenneth, M.B. (Cairo). Radical Operative Treatment of Trichiasis.

The following gentlemen have also promised to take part in the proceedings: E. F. Drake-Brockman, M.D. (London); Professor Galezowski (Paris); Professor Gayet (Lyons); Professor Meyer (Paris); A. MacGillivray, M.B. (Dundee); Simeon Snell, F.R.C.S.Edin. (Sheffield). A. M. Ramsay (Glasgow).

The following gentlemen will show specimens in the Museum: E. Treacher Collins, F.R.C.S.; John Griffith, F.R.C.S.; G. Hartridge, F.R.C.S.; H. Juler, F.R.C.S.; D. Marshall, F.R.C.S.; R. W. Doyne, F.R.C.S.; W. J. Cant, M.R.C.S. (Lincoln).

W. Adams Frost, F.R.C.S. (London) will give a lantern demonstration of ophthalmoscopic pictures at noon on August 1st.

J.—DISEASES OF CHILDREN.

Theological Class Room—King's College.

President: JOHN H. MORGAN, F.R.C.S. *Vice-Presidents:* W. B. CHEADLE, M.D., F.R.C.P.; F. A. SOUTHAM, F.R.C.S.; H. HANDFORD, M.D.; W. ARBUTHNOT LANE, M.S., F.R.C.S.; A. FOXWELL, M.D., F.R.C.P.; D'ARCY POWER, F.R.C.S. *Secretaries:* DAWSON WILLIAMS, M.D., F.R.C.P., 25, Old Burlington Street, London, W.; HUGH R. JONES, M.D., 58A, Grove Street, Liverpool; HERBERT F. WATERHOUSE, F.R.C.S., 81, Wimpole Street, London, W.

The following are the arrangements for this Section. The dates and order of the discussions will be adhered to as closely as circumstances permit.

Wednesday, July 31st.

A discussion on Congenital Syphilitic Manifestations in Bones and Joints, to be opened by the President of the

Section, John H. Morgan, F.R.C.S. Howard Marsh, F.R.C.S., H. H. Clutton, F.R.C.S., Anthony Bowlby, F.R.C.S., Robert Jones, F.R.C.S. (Liverpool), H. B. Robinson, M.D., Frederic Eve, F.R.C.S., and Leopold Hudson, F.R.C.S., intend to take part in the discussion, and C. A. Ballance, F.R.C.S., and H. Stansfield Collier, F.R.C.S., will contribute a series of cases.

A discussion on the Treatment of Hernia in Children, to be introduced by Rushton Parker, F.R.C.S. (Liverpool). Sir William Stokes, M.D., Ward Cousins, M.D., F.R.C.S. (President of Council), Professor William Macewen, F.R.S. (Glasgow), Professor Chiene (Edinburgh), Mitchell Banks, F.R.C.S. (Liverpool), W. Alexander, F.R.C.S. (Liverpool), F. A. Southam, F.R.C.S. (Manchester), Jordan Lloyd, F.R.C.S. (Birmingham), J. Macready, F.R.C.S. (London), D'Arcy Power, F.R.C.S., W. Arbuthnot Lane, M.S., F.R.C.S., C. B. Lockwood, F.R.C.S., H. P. Symonds, F.R.C.S. (Oxford), Herbert Waterhouse, F.R.C.S., George Heaton, M.D. (Birmingham), Damer Harrison, F.R.C.S. (Liverpool), W. G. Black, F.R.C.S. (Newcastle), and Reginald H. Lucy, F.R.C.S. (Plymouth), intend to take part in this discussion.

The following papers will be read:

LOCKWOOD, C. B., F.R.C.S. Hernia of the Ovary in an Infant with Torsion of the Pedicle.

THOMSON, John, M.D. (Edinburgh). Congenital Hypertrophy of the Pylorus and [illegible] Wall.

GIBBONS, R. A., M.D. On Renal Colic in Infants.

LLOYD, Jordan, F.R.C.S. On Nephrectomy in Children.

Thursday, August 1st.

A discussion on the Nervous Sequelæ of Acute Infectious Diseases in Children will be introduced by H. Handford, M.D. (Nottingham), and continued by W. R. Gowers, M.D., F.R.S., Thomas Barlow, M.D., W. B. Cheadle, M.D., Jules Comby, M.D., (Paris), Professor v. Ranke (Munich), R. Robertson, M.D. (Liverpool), James Taylor, M.D., William Hunter, M.D., H. B. Donkin, M.D., T. More Madden, M.D. (Dublin), Fletcher Beach, M.B., F. W. Mott, M.D., Montagu Murray, M.D., W. S. Colman, M.D., and Dawson Williams, M.D.

The following papers will be read:

GARROD, Archibald E., M.D., F.R.C.P., and FLETCHER, Morley, M.D. On the Maternal Factors in the Causation of Rickets.

BARTON, J. Kingston, M.R.C.P. (London). The Relation between the Foods of Early Life and the Condition of the Teeth in Youth and Early Adolescence.

BALLANTYNE, J. W., M.D. (Edinburgh). The Relation of Certain Diseases of Infancy to Antenatal Anatomy and Physiology.

COMBY, Dr. J. (Paris). The Non-pathogenic Streptococci and Staphylococci of the Throat in Children.

TELFORD-SMITH, Thomas, M.D. (Royal Albert Asylum, Lancaster). The After-History of Two Cases of Craniectomy.

CAUTLEY, Edmund, M.D. On the Value of Trephining in Tuberculous Meningitis.

Friday, August 2nd.

A discussion on Doses of Various Remedies suitable for Children at the Several Ages, to be introduced by J. Kingston Barton, M.R.C.P. D. J. Leech, M.D. (Manchester), J. Mitchell Bruce, M.D., H. B. Donkin, M.D., A. Foxwell, M.D. (Birmingham), N. J. Tirard, M.D., Neville Wood, M.R.C.P. (London), and T. More Madden, M.D. (Dublin) intend to take part in this discussion.

The following communications will be made:

CHATTAN, Nicholas, F.R.C.S.I. (Cork). Demonstration of Osteoclasis.

CARR, J. Walter, M.D. A Protest against the use of the term "Consumptive Bowels."

It is proposed also to arrange for the demonstration of cases of interest on each day; among these will be:

CLARKE, J. Jackson, M.B. (London). Congenital Syphilis with Ulceration of Tongue.

EVE, Frederic, F.R.C.S. (London). (1) Spina Bifida cured by Excision of Sac. (2) Congenital Dislocation of Shoulder backwards treated by Operation.

MORGAN, J. H., F.R.C.S. (President). A Series of Cases of Excision and Erasion of the Knee-joint.

K. OTOLOGY.

Room 22—King's College.

President: Sir W. DALBY, F.R.C.S. *Vice-Presidents:* CHARLES WARDEN, M.D.; G. P. FIELD, M.R.C.S.; E. CRESSWELL BAKER, M.B.; J. DUNDAS GRANT, M.D.; EDWARD LAW, M.D.; C. A. BALLANCE, F.R.C.S. *Honorary Secretaries:* C. E. L. B. HUDSON, F.R.C.S., 16, Harley Street, W.; G. C. WILKIN, L.R.C.P., 39, Weymouth Street, W.

Wednesday, July 31st.—A discussion on the Treatment of the Various Forms of Nerve Deafness. Opened by J. Dundas Grant, M.D., F.R.C.S.

Thursday, August 1st.—Discussion on Cerebral Complications in relation to Middle Ear Disease. Opened by Professor Macewen, M.D., C.M., F.R.S., LL.D., Regius Professor of Surgery, University of Glasgow.

The following gentlemen have signified their intention of taking part in these discussions: W. Milligan, M.D.; George Heaton, F.R.C.S.; Dr. Luc (Paris); A. M. Sheild, F.R.C.S.; G. W. Hill, M.D.; Lewis Jones, M.D.; H. Macnaughton Jones, M.D.; W. Downie, M.D.; Thomas Barr, M.D.; L. H. Pegler, M.D.; P. McBride, M.D.; J. Walton Browne, M.D.; Farquhar Matheson, M.D.

Papers will be contributed and Specimens exhibited by the following amongst others:

BAKER, E. Cresswell, M.B., will show (1) a Dummy for Teaching Palpation of the Naso-Pharynx. (2) A case of Objective Pulsating Tinnitus.

BARR, Thomas, M.D. The Treatment of Intractable Suppurations of the Middle Ear by Operation through the Mastoid.

BRUNNER, Adolph, M.D. Notes of Five Cases of Disease of Attic treated by Modified Stacke's Operation.

COUSINS, J. Ward, M.D., F.R.C.S. On the Use of Artificial Tympanic Membranes.

GOVE, Professor. On a not yet described Form of Rotatory Sensation in Patients suffering from Labyrinthine Disease.

HILL, G. Wreford, M.D., will show Specimens.

JOSEPH, Carmont, F.R.C.S.Edin. On Turbinectomy in Cases of Deafness and Tinnitus Aurium.

JONES, H. Macnaughton, M.D. (1) On some Otological Considerations in the Treatment of Nerve Deafness. (2) Brief Notes of a Case of Hypermethesia Acoustica.

LAKE, Richard, F.R.C.S. On the Anatomical Connections of the Tympanic Membrane, with a few Remarks on their Pathological Importance. Specimens will be exhibited to illustrate this paper.

LAW, Edward, M.D., will exhibit some Preparations sent by Professor Politzer.

LAWRENCE, L. A., F.R.C.S., will also show some Normal Bone Preparations made by Professor Politzer.

METCALFE, George, M.B., will show a Portable Electric Light Battery and Laryngoscope.

MILLIGAN, William, M.D. Tuberculous Disease of the Mucous Membrane of the Middle Ear and its Adnexa: an experimental investigation. Diagrams and Specimens will be exhibited to illustrate this paper.

PEGLER, L. H., M.D., will show Microscopic Sections illustrating the Histology of Turbinal and Septal Hyperplasias.

PRITCHARD, Urban, M.D. Microscopical Specimens of Aspergillus.

SCATLIFF, J. H. E., M.D. On the Use of the Pneumatic Speculum in the Treatment of Diseases of the Ear.

L. PHARMACOLOGY AND THERAPEUTICS.

East Wing Room, Ground Floor—Conjoint Examination Hall.

President: Sir WILLIAM ROBERTS, M.D., F.R.S. *Vice-Presidents:* J. TALFOURD JONES, M.B.; T. LAUDER BRUNTON, M.D., F.R.S.; J. MITCHELL BRUCE, M.B.; W. HALE WHITE, M.D.; DONALD MACALISTER, M.D.; M. MCILROY, M.B. *Honorary Secretaries:* VAUGHAN HARLEY, M.D., 25, Harley Street, W.; W. SOLTAU FENWICK, M.D., 10, Devonshire Street, W.

Wednesday, July 31st.

10 A.M. The President's introductory remarks. 10.15 A.M. Discussion upon Serum-therapeutics: Dr. Klein. 10.35 A.M. Dr. Washbourn. 10.55 A.M. Professor Fraser. 11.5 A.M. Dr. Charteris. 11.15 A.M. Dr. Hewlett. 11.25 A.M. Dr. Tirard. 11.35 A.M. Dr. Sidney Phillips. 11.45 A.M. Dr. Gayton. 11.55 A.M. Dr. Caiger. 12.5 P.M. Mr. Eskenbaum. 12.15 P.M. Dr. Goodall. 12.25 P.M. Dr. Bruce. 12.35 P.M. Dr. MacCombie. 12.45 P.M. The opener's reply.

Papers by:

FRASER, Professor. The Antitoxin of Snake Poison.

BOKENHAM, T. J., M.R.C.S. The Antitoxin of Erysipelas.

APOSTOLI, Professor. The Therapeutic Value of Alternating Currents of High Frequency.

MOSSO, Professor. (1) The Therapeutic Action of Formaline. (2) The Interchange of Gases in the Lung at High Altitudes.

OLIVER, George, M.D. The Therapeutic Uses of Suprarenal Capsules.

OTTOLENGHI, Professor. The Therapeutic Value of Calomel followed by Salt and Acid Substances.

ROSENDAHL, Professor. (Title not yet communicated.)

Thursday, August 1st.

10 A.M. Discussion on the Requirements of the Profession with reference to the Revision of the *British Pharmacopœia*: Dr. Leech. 10.20 A.M. Professor Donald MacAlister. 10.30 A.M. Professor Bradbury. 10.40 A.M. Dr. Page. 10.50 A.M. Dr. Talfourd Jones. 11 A.M. Dr. Charteris. 11.10 A.M. Dr. W. Carter. 11.20 A.M. Dr. C. Pearson. 11.30 A.M. Dr. Tirard. 11.40 A.M. Dr. Neville Wood. 11.50 A.M. Dr. Thomas Oliver. 12. Dr. H. G. Lys. 12.10 P.M. Dr. A. Kinsey-Morgan. 12.20 P.M. Dr. W. Armstrong. 12.30 P.M. Dr. Ralph Stockman. 12.40 P.M. The opener's reply.

Papers by:

BALLOCH, George, M.D. Therapeutics of the Digitalis Group.

PHILLIPS, C. D. F., M.D. The Pharmacological Action of Berberine.

Sharp, Gordon, M.B. Notes on the Action of the Mydriatic Group.
Jennings, Thomas, M.D. The Dietetic Treatment of [illegible]
Carter, E., M.D. Therapeutic Action of Foods in Diseases of Children.
Churchill, F., M.D. The Therapeutic Value of Massage.
Stevenson, S. F., M.D., and Harley, Vaughan, M.D. The Action of β Naphthol and Bismuth Salicylate as Intestinal Antiseptics.
Fenwick, W. Soltau, M.D. Intestinal Antisepsis.

Friday, August 2nd.

Papers by:
10 A.M. Cuffe, Robert, M.R.C.S. Therapeutic Value of the Waters of Woodhall Spa.
10.15 A.M. Eardley-Wilmot, R., M.B. Therapeutic Value of the Waters of Leamington Spa.
10.30 A.M. Fox, Fortescue, M.D. Therapeutic Uses of the Waters of Strathpeffer Spa.
10.45 A.M. Hyde, Samuel, M.D. Therapeutic Value of the Waters of Buxton.
11 A.M. Myrtle, A. S., M.D. Therapeutic Value of the Waters of Harrogate.
11.15 A.M. Spender, J. Kent, M.D. Therapeutic Value of the Waters of Bath.
11.30 A.M. Tomkins, W., M.R.C.S. The Brine Baths of Droitwich.
11.45 A.M. Cormack, C. E., M.D. Vichy and its Waters.
Armstrong, W., M.R.C.S. The Therapeutics of Rheumatoid Arthritis.
Harris, Vincent, M.D. Creasote in Pulmonary Disease.
Walters, F. R., M.D. The Subcutaneous Use of Guaiacol.
Tirard, Nestor, M.D. The Treatment of Uræmic Dyspepsia.
Snow, Herbert, M.D. [illegible]
Illingworth, C. R., M.D. Tabellæ and Tabloids, their Uses and Abuses.
Overend, Walker, M.B. Arsenic and Belladonna in Chorea.
Goodbody, F. W., M.D., and Harley, Vaughan, M.D. Action of Piperazine on Uric Acid in the Urine.

M. LARYNGOLOGY.

North Room, Ground Floor—Conjoint Examination Hall.

President: FELIX SEMON, M.D. *Vice-Presidents:* Sir PHILIP SMYLY, M.D.; W. MACNEILL WHISTLER, M.D.; F. DE HAVILLAND HALL, M.D.; GREVILLE MACDONALD, M.D.; SCANES SPICER, M.D.; A. W. SANDFORD, M.D. *Honorary Secretaries:* J. MIDDLEMASS HUNT, M.B., 55, Rodney Street, Liverpool; ST. CLAIR THOMSON, M.D., 28, Queen Anne Street, W.; E. B. WAGGETT, M.B., 66, Park Street, W.

The following subjects have been selected for discussion:

Wednesday, July 31st.—The Etiology of Mucous Polypi of the Nose, introduced by Professor Guye (Amsterdam), Dr. Luc (Paris), and Dr. McBride (Edinburgh).

Thursday, August 1st.—The Infectious Nature of Lacunar Tonsillitis, introduced by Professor B. Fraenkel (Berlin), and Dr. J. Macintyre (Glasgow).

Friday, August 2nd.—The Indications for Early Radical Operation in Malignant Disease of the Larynx, introduced by Dr. Bryson Delavan (New York), and Mr. H. T. Butlin (London).

The following members have expressed their intention of joining in the discussions:

T. Mark Hovell, F.R.C.S.Ed., R. Lake, F.R.C.S., L. H. Pegler, M.D., A. Hodgkinson, M.D. (Manchester), W. Milligan, M.D. (Manchester), Charles Warden, M.D. (Birmingham), and R. McKenzie Johnston, M.D. (Edinburgh), Scanes Spicer, M.D., and William Hill, M.D., on July 31st. T. Mark Hovell, F.R.C.S.Ed., A. Hodgkinson, M.D., Charles Warden, M.D., Watson Williams, M.D. (Bristol), Adolf Bronner, M.D. (Bradford), Scanes Spicer, M.D., and W. Hill, M.D., on August 1st. Philip de Santi, F.R.C.S., A. Hodgkinson, M.D., Charles Warden, M.D., and Robert H. Woods, M.B. (Dublin), Charters Symonds, M.S., F.R.C.S., on August 2nd.

The following papers have been announced:
Bronner, A., M.D. (Bradford). Some cases of Diseases of the Larynx and Bronchi treated by Intra-laryngeal Injections.
Hodgkinson, Alexander, M.D. (Manchester). (1) A new form of Magnifying Laryngoscope. (2) On the Vibrations of the Vocal Cord; (3) On [illegible]. (4) On the Function of the Laryngeal Ventricles.
Illingworth, C. R., M.D. (Ventnor). Some points in the Anatomy and Physiology of the Larynx.
Metcalfe, G., M.B. (Newcastle-on-Tyne). (1) Demonstration of a new powerful and extremely portable Electric Light Battery. (2) A [illegible] Electric Light Laryngoscope.
Milligan, William, M.D. (Manchester). Vocal Defects among School Board teachers, with special reference to the occurrence of teachers' nodes.
Moritz, S., M.D. (Manchester). (1) The Laryngeal Symptoms and Sequelæ of Influenza. (2) A self-retaining Laryngoscope.
Russell, J. S. Risien, M.D. The Representation of Abduction of the Vocal Cords in the Cerebral Cortex.
De Santi, Philip, F.R.C.S. The Operation of Thyrotomy, with a short account of the cases in which it has been performed at St. Bartholomew's Hospital during the last fifteen years.
Stoker, George, M.R.C.P.I. An improved method of removing Nasopharyngeal Tumours.

The following gentlemen purpose being present and taking part in the work of the Section: Professor Fraenkel, Professor Guye, Dr. Luc, Dr. Bryson Delavan, Professor Moritz Schmidt (Frankfort), Dr. F. H. Bosworth (New York), Dr. John Mackenzie (Baltimore), Professor v. Sokolowski (Warsaw), Dr. A. Brady (Sydney, N.S.W.), Dr. Walker Downie (Glasgow), Dr. Hillis (Dublin), Dr. W. Robertson (Newcastle-on-Tyne), Dr. Cecil Shaw (Belfast), Dr. W. Bolton Tomson (Luton), Mr. R. Stow Armstrong, and Dr. Dmochowski (Warsaw), Dr. Logan Turner (Edinburgh).

N. DERMATOLOGY.

West Wing Room, Second Floor—Conjoint Examination Hall.

President: H. RADCLIFFE CROCKER, M.D. *Vice-Presidents:* MCCALL ANDERSON, M.D.; MALCOLM MORRIS, F.R.C.S.Edin.; J. J. PRINGLE, M.B.; WM. ANDERSON, F.R.C.S.; H. A. G. BROOKE, M.B. *Honorary Secretaries:* J. HERBERT STOWERS, M.D., 41, Finsbury Square, E.C.; JONATHAN HUTCHINSON, Jun., F.R.C.S., 15, Cavendish Square, W.

Wednesday, July 31st, 10 A.M., President's Address.

The following subjects have been selected for discussion in the Section:

The Pathology and Treatment of Pruritus, introduced by McCall Anderson, M.D., of Glasgow, and H. A. G. Brooke, M.B., of Manchester.

Diet in the Etiology and Treatment of the Diseases of the Skin, introduced by W. Allan Jamieson, M.D., of Edinburgh, and Walter G. Smith, M.D., of Dublin.

The following papers have been announced:
Anderson, William, F.R.C.S. The Treatment of Adenoma Sebaceum.
Cotterell, Edward, F.R.C.S. The Treatment of Syphilis by Injections of Syphilitic Antitoxin.
Davies, Arthur T., M.D. A Case of Lupus; Result of Treatment by Thyroid Feeding (with Photographs).
Eddowes, Alfred, M.D. Brief Notes on Corns—true and so-called (Drawings and Microscopic Specimens).
Fox, T. Colcott, M.B. Two Short Papers.
Galloway, James, M.D. Certain Nervous Lesions of the Skin.
Harrison, A. J., M.B. On Two Cases of Unusual Verruca Necrogenica (with Photographs).
Hutchinson, Jonathan, jun., F.R.C.S. Microscopic Sections, and Drawings of Case of Rodent Ulcer of Forearm.
Liddell, John, M.D. (Harrogate). Case of Pityriasis Rubra Pilaris, Clinical Features, and Minute Anatomy (with Microscopic Sections).
Mackey, Edward, M.D. (Brighton). Cheiro-pompholyx in association with Eczema.
Manson, P., M.D. Short Communication on the Guinea Worm (with Microphotographs).
Pernet, George, L.R.C.P., M.R.C.S. Pemphigus.
Pye-Smith, P. H., M.D., F.R.S. Affections of the Skin occurring in the Course of Bright's Disease.
Roberts, Leslie, M.D. Treatment and Prognosis of Trichophytosis based on the Physiology of the Trichophyton.
Smith, Gilbert, F.R.C.S.Edin. (Birmingham). Note on a Case of Lichen Planus Verrucosus.
Startin, James, M.R.C.S. One or Two Living Specimens of Uncommon Eruptions, and Short Notes.
Stoker, George, M.R.C.P.I. The Treatment of Alopecia Areata by Oxygen Gas.
Stowers, J. Herbert, M.D. On a Case of Dermatitis Repens (with Coloured Drawings).
Waldo, Henry, M.D. (Clifton). Paper on Alopecia Areata.
Walker, Norman, M.D. (Edinburgh). The Methods of Examination of the Skin Histologically.

Friday, August 2nd, will be devoted to the demonstration of cases. Notice should be sent by members intending to exhibit, with description of cases to J. H. Stowers, M.D., not later than July 27th.

O. ETHICS.

Room B—King's College.

President: W. F. CLEVELAND, M.D. *Vice-Presidents:* THOMAS BRIDGWATER, M.B.; J. HUGHES HEMMING, M.R.C.S.; D. B. BALDING, F.R.C.S.; C. PARSONS, M.D.; W. H. AXFORD, M.B.; A. DEMPSEY, M.D. *Honorary Secretaries:* MAJOR GREENWOOD, M.D., LL.B., 243, Hackney Road, N.E.; T. F. FRASER, M.D., 12, Norfolk Street, Southsea; HUGH WOODS, M.D., 11, Archway Road, Highgate, N.

Wednesday, July 31st.—General Address by the President. Subjects concerning more particularly the relations of medical men with each other:

1. Intraprofessional Etiquette, introduced by Thomas Garrett Horder, L.R.C.P.

2. Advertising, introduced by George Wm. Potter, M.D.

3. Unqualified Assistants, introduced by George Brown, M.R.C.S., and continued by J. Brindley James, L.R.C.P.

Thursday, August 1st.—The Ethics of Gratuitous and Cheap Contract Practice.

1. Clubs, Medical Aid Societies, and Contract Practice; introduced by R. W. Doyne, F.R.C.S. The discussion will be continued by Hughes Hemming, M.R.C.S., W. Gosse, L.R.C.P., W. A. Elliston, M.D., A. H. Bampton, M.D., W. Newman, M.D., Philip Lee, L.R.C.P.I., and others.

2. Hospitals and Dispensaries, introduced by Hugh Woods, M.D. Frank Greaves, M.R.C.S., R. R. Rentoul, M.D., and Nelson Hardy, F.R.C.S., will take part in the discussion.

The Secretaries will be glad to hear from members willing to join in the above discussions.

Friday, August 2nd.—1. Any subject, the discussion of which has not been completed on the two previous days. 2. The reading of any selected papers which do not come under the above heads.

The following papers have been announced:

Berry, Wm., F.R.C.S.I. On Contract, Club, and Dispensary Practice.
Black, D. Campbell, M.D. On Hospitals Advertising and Medical Etiquette.
Dickinson, W. G., L.R.C.P. Provident Principle in Sickness Attendance.
Glenhill, J. Grierson, M.B., Barrister-at-Law. Medical Polity.
Mullins, George Lane, M.D. On the Profession in New South Wales.
Pearse, T. F., M.D. The Sweating of the Profession by Various Friendly [illegible]
Rich, William Richardson, M.D. The Public Medical Service and its Relation to Members [illegible]
Sibley, Knowsley, M.D. State Aided v. Voluntary Hospitals.
Williams, A. D., M.D. Changing Relations of the Profession and the Public.

Honorary Local Secretaries:

Andrew Clark, F.R.C.S., 71, Harley Street, W.
Isambard Owen, M.D., 40, Curzon Street, W.

Honorary Local Treasurer:

George Eastes, M.B., F.R.C.S., 35, Gloucester Terrace, Hyde Park, W.

Programme of Proceedings.

Tuesday, July 30th, 1895.

9.30 A.M.—Meeting of 1894-95 Council. Council Room, Exeter Hall.
11.30 A.M.—Special Service at St. Paul's Cathedral. Sermon by the Most Rev. His Grace the Lord Archbishop of Canterbury.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees, and other business. Exeter Hall.
8.30 P.M.—Reception by the Metropolitan Counties Branch } In the Imperial
9 P.M.—General Meeting. President's Address. } Institute
9.45 P.M.—Conversazione.

Wednesday, July 31st, 1895.

9.30 A.M.—Meeting of 1895-96 Council. Council Room, Exeter Hall.
10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
3 P.M.—Second General Meeting. Exeter Hall. Address in Medicine by Sir William Broadbent, M.D., F.R.C.P., Physician-in-Ordinary to H.R.H. the Prince of Wales. Any business adjourned from First General Meeting at 2.30 previous day.
8.30 P.M.—Musical Promenade at Gardens of Royal Botanic Society.
8 P.M. to 12 P.M.—Illuminated Evening Fête at Gardens of Royal Botanic Society.

Thursday, August 1st, 1895.

9.30 A.M.—Meeting of Council. Council Room, Exeter Hall.
10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
3 P.M.—Third General Meeting. Exeter Hall. Address in Surgery by Jonathan Hutchinson, F.R.S., F.R.C.S., Consulting Surgeon to the London Hospital. Presentation of the Stewart Prize to Brigade-Surgeon-Lieutenant-Colonel D. Douglas Cunningham, M.B., C.I.E., F.R.S.
7.30 P.M.—Dinner of the Association at Queen's Hall, Langham Place.

Friday, August 2nd, 1895.

10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
3 P.M.—Concluding General Meeting. Exeter Hall. Address in Physiology by Edward Albert Schäfer, F.R.S., Jodrell Professor of Physiology, University College.
9 P.M.—Conversazione at the Royal College of Physicians.
9 P.M.—Conversazione at the Royal College of Surgeons.

Saturday, August 3rd, 1895.

Excursions.

Particulars of further Entertainments, open to a limited number of Members only, will be found in the Local Guide.

Reception Room

The large hall at King's College will be opened at 12 o'clock noon on Monday, July 29th, and on Tuesday, July 30th, and the following days at 9 o'clock, for the issue of tickets to members and for supplying all necessary information. A reception room for invited foreign guests will be provided next to the large hall. It is particularly requested that members on their arrival will at once proceed to the reception room, King's College, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult the list of lodgings, hotels, etc.

Hotel Accommodation and Lodgings.

A list of hotels offering special tariffs or discounts on their tariffs, together with a list of apartments which are recommended by members of the Association, may be had on application to the Honorary Secretary of the Reception Committee, 11, Chandos Street.

Only members of the British Medical Association, invited guests and accredited strangers will be allowed to attend the general meetings or the meetings of sections. Members and guests will be required to show their cards, which must be obtained and signed for at the Reception Room. Invited guests will be required to show their invitation cards upon entrance to any of the general meetings or meetings of sections. Members and guests are therefore earnestly enjoined to take care of their cards of admission, and to note that they are not transferable, and if lost cannot be renewed. Members or guests may take one lady only to any of the entertainments.

Only members and officially invited guests will be admitted to the dinner of the Association.

The Reception Rooms will be opened on Monday, July 29th, at 12 o'clock noon. Tickets for the dinner and excursions will not be issued until Tuesday morning. In applying for tickets members will be required to produce their membership cards to be stamped.

The members' Reception Room is in the large hall of King's College. There is a separate Reception Room for invited foreign guests next to the members' Reception Room, and another for ladies at the Royal Society's Rooms, Burlington House.

The post office and telegraph office are in the Reception Room, King's College. Members are requested to apply for letters and telegrams from time to time.

Members of the Association who intend visiting London during the annual meeting to be held on July 30th, 31st, August 1st and 2nd, and who have not already sent in their names, are particularly requested to fill up the form in the centre of last week's Journal, and to stamp and post it, in order that the arrangements may be completed.

Notices of Motion.

Dr. Arthur Wellford hereby gives notice that he will move and Mr. J. F. Bullar will second:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties.

Mr. Lawson Tait hereby gives notice that he will move, and Mr. Colin Campbell will second:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support, a practical scheme for the registration of medical, surgical and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1858, as now existing. We protest against the Midwives Registration Bill because it proposes to establish a class of midwifery practitioners who would be very incompletely trained in midwifery, and entirely uninstructed in medicine, surgery, and pharmacy—a matter of supreme importance in midwifery practice. We therefore instruct the Council and the Parliamentary Bills Committee to use every means to oppose any Bill which proposes to give to persons registered under it power to conduct, on their sole and independent responsibility, any midwifery practice without the guarantee of a complete curriculum and qualification. That this Association recommends a sum not exceeding £1,000 be expended for the purpose of opposing any such Bill.

Dr. Inch hereby gives notice that he will move as an amendment to the above:

That in the interests of the mothers of the United Kingdom the registration of midwives, after suitable training and examination, is a subject deserving the early and careful consideration of the Legislature, and in that consideration it is equally desirable that the legitimate rights and privileges of duly qualified medical practitioners should not be overlooked.

Dr. Bedford Fenwick hereby gives notice that he will move:

That in the opinion of this meeting it is expedient that an Act of Parliament should, as soon as possible, be passed providing for the registration and education of medical, surgical, and obstetric nurses; and the Council of this Association are therefore requested to consider this matter, and to take such measures as may seem to them advisable to obtain such legislation.

Proposed Increase in the Number of Direct Representatives on the General Medical Council.—Dr. R. R. Rentoul hereby gives notice that he will move, and Dr. H. Woods will second:

That as Sections 7 and 8 of the Medical Act, 1886, provide for the election of only five direct representatives to the General Medical Council by the registered medical practitioners resident in the United Kingdom; and as Section 10, Subsection 1, Paragraph c of this Act provides that the General Medical Council may represent to the Privy Council that it is expedient to confer upon the registered medical practitioners resident in any part of the United Kingdom the power of returning an additional number of direct representatives to the General Medical Council; and as the General Medical Council has, on November, 1889, on November, 1891, and on November, [illegible], refused absolutely to make such representation; and as the number of registered medical practitioners has increased from 22,718 in 1886 to [illegible] in 1891; and as we medical practitioners were not given our fair and proper number of direct representatives in 1886; and as the registered practitioners contribute all the income of the General Medical Council, by which the Medical Acts are administered, while the twenty universities and colleges represented on the General Medical Council do not contribute any income to it; and as the representatives of the universities and colleges are elected to the General Medical Council by their small Convocations, Senates, and Councils, and not by open vote of all their medical graduates only; and as other important councils, having similar but larger duties to the General Medical Council, such as the Councils of the Incorporated Law Societies of England and of Ireland, the Councils of the Pharmaceutical Societies of Great Britain and of Ireland, and the Council of Veterinary Surgeons consist of direct representatives only, this Association instructs its Council to take immediate steps to have a Bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one additional direct representative to the General Medical Council.

Dr. Bedford Fenwick hereby gives notice that he will move:

That, in the opinion of this meeting, the time has arrived when it is expedient that the registered medical practitioners resident in England, and also the registered medical practitioners resident in Wales, should separately be granted the privilege of returning one additional member to the General Medical Council; and the Council of this Association are therefore requested to petition the General Medical Council to represent to Her Majesty's Privy Council the expediency of such an addition to their members, in accordance with Section 10 of the Medical Act of 1886.

The Unrestricted Sale of Poisons and other Dangerous Drugs by Chemists by means of Prescriptions of Medical Practitioners.—It will be moved by Dr. R. R. Rentoul:

That owing to the unrestricted dispensing by chemists of prescriptions of medical practitioners on more than one occasion which contain poisons and other dangerous drugs, having regard to the evils arising therefrom, and following the law in other countries, this Association recommends its members to write across the face of such prescriptions the words, "Not to be repeated," or "To be repeated once," and "To be returned by the chemist to the practitioner," duly stamped and dated. And that if chemists refuse to adopt this rule, the members residing in cities and towns are recommended to establish, own, and manage under their exclusive control depôts at which all their prescriptions shall be dispensed.

Proposed Fund for the Benefit of the Widows and Orphans of Medical Practitioners.—It will be moved by Dr. R. R. Rentoul:

That this meeting instruct the Council to obtain a table from an actuary showing the amount of annual and other payments necessary to provide the widows and orphans of subscribers (as their right and not as a charity) with an annuity of £[illegible], or any multiple of £[illegible] not exceeding £50. That such fund consist of two departments: First, an annuity department, the payments to which shall consist of entrance tax, marriage tax, age tax, husband and wife equalising age-tax, annual tax, and foreign resident's tax. The annuity to go to the widow so long as she remains a widow, and on the death of the widow, or on the death of the subscriber not leaving a widow, to the male and female children the issue of the subscriber, until the youngest male child has attained the age of [illegible] and unmarried, or the youngest female child the age of 21 and unmarried. Secondly, an immediate benefit department, to be based upon the principle of having no annual fees, but an agreement made by each subscriber who is a member of the annuity department to pay a small sum of money (in no case exceeding [illegible]) on the death of each subscriber. The death of the subscriber to be notified to the General Secretary, who shall give notice in the next issue of the British Medical Journal of the death, and call upon each subscriber to contribute the amount of call. Subscribers of this department, whether married, single, or widowers, to possess the power to bequeath the proceeds of such "call" either to their widows, orphans, parents, or other nominees. That Mr. James Chatham, F.I.A., Edinburgh, who has advised R. R. Rentoul regarding the formation of such a medical practitioners', widows', and orphans' fund, be requested to draw up the above-mentioned table.

Proposed Improvement in the Training of Medical Students in Practical Midwifery.—It will be moved by Dr. Lovell Drage:

That we view with deep concern and regret the recommendation of the General Medical Council to the medical examining bodies that they should admit students to their final examinations who present a certificate stating that they have "conducted personally" only three, and "been present at" only nine confinements; and as the General Medical Council has refused on November, [illegible], to alter this recommendation, we instruct our Council to petition the General Medical Council to recommend that no student be admitted to his final medical examination until he presents a certificate showing that he has personally conducted at least thirty confinements under the direct supervision of a registered medical practitioner. We also instruct the Council to take immediate steps to have Section 29 of the Metropolitan Poor Act, [illegible], repealed, which prevents workhouse infirmaries from being used for the clinical instruction of medical students in practical midwifery where pupil midwives are now admitted; and also to petition the committees, medical staffs, and, if need be, the subscribers to the City of London Lying-in, the British Lying-in, and the Clapham Maternity to withdraw their rule which excludes male medical students from clinical instruction at these hospitals, seeing that these are now used by pupil midwives.

June, 1895. Francis Fowke, *General Secretary.*

The Ladies' Reception Committee have organised the following excursions, under the guidance of experts, for the benefit mainly of the wives of members of the Association. Should any lady, however, wish to obtain a ticket for an excursion for her husband it will be possible for her to do so. The number of tickets for each excursion will be strictly limited, and it is mentioned below. The cost of a ticket for each excursion, except for the one to the Cambridge Colleges, will be 1s. Ladies living in London will not be able to obtain tickets till the week of the meeting. Ladies living in the country or abroad may obtain them in advance by writing, and enclosing postal orders, to Mrs. R. Priestley, 81, Linden Gardens, Bayswater, London, W.

1. Girton and Newnham Colleges, Cambridge (40 tickets). The party will be entertained at the two Colleges. Date: Friday, August 2nd.

2. Westfield College, Hampstead (30 tickets). Date: Friday, August 2nd. Tea and coffee will be provided by the College.

3. British Museum. Mr. A. S. Murray will take a party of 15 on two days to the Greek antiquities, and Mrs. Tirard will take a party of 15 on one day to the Egyptian antiquities.

4. St. Paul's Cathedral. The Rev. Canon Gilbertson will take a party of 30 on July 31st.

5. Westminster Abbey. The Very Rev. the Dean of Westminster, Mrs. Murray Smith, and Mr. Weller will respectively take a party of 20 on July 31st, August 1st, and August 2nd. The Royal and other wax effigies in the Abbey will be shown.

6. The Tower of London. The Rev. W. J. Loftie will take a party of 25 on July 31st at 2 P.M. Special orders have been obtained from the Governor of the Tower.

7. National Gallery. Mr. Cosmo Monkhouse and Miss M. K. Bradby will take a party of 12 on July 31st and August 1st respectively.

8. Natural History Museum. Mr. George Murray will take a party of 30 on July 31st at 11.30 A.M.

9. South Kensington Museum. The Director, Mr. Armstrong, will take a party of 12 on July 31st and August 1st, at 2.30 P.M.

SPECIAL CORRESPONDENCE.

PARIS.

Alcoholism and its Remedies.—Death from Roux's Serum.—Acetic Acid in Fainting Fits.—Coffee Adulteration.—"Le Secret Professionel" and Law Proceedings.—Methylene Blue as an Analgesic.—The President's Visit to the Hôtel Dieu Hospital.—General News.

At a recent meeting of the Paris Academy of Medicine, M. Rochard declared that the first step to take to combat the increase in alcoholism and its terrible results is the suppression of inferior *eau de vie*, and of the artificial "bouquets" used in making up wines and spirits. This result, M. Rochard believes, can only be attained by the State assuming the right and responsibility of "rectifying" alcoholic drinks, though ethylic alcohol is a poison even when pure. During the last twenty years the quantity of alcoholic beverages con-

named has been doubled. The number of insane from alcoholism has increased to such an extent that the municipal council has voted funds to create at Ville Evard an asylum for the insane capable of containing 500 men and 200 women. M. Laborde suggested that the number of wine shops should be limited. M. Rochard considered that the law of 1855, which forbade wine shops to be opened without an authorisation from Government, should be reinstated. In 1871 this law fell into abeyance, and since then the number of wine shops has increased to a terrible extent. A wine shop can be closed if drunkenness takes place in it, but this law is not enforced. M. Lagneau, the eminent statistician, stated that the principal causes of degeneration and destruction among the French population were tuberculosis and alcoholism. At Rouen and Havre, where the yearly average consumption of alcohol is 14 litres a head, there are 402 and 502 deaths yearly from phthisis in a population of 100,000; whereas at Toulon, where the consumption is at the rate of 2 litres, the mortality from phthisis is 200. Alcoholism is an important factor in the increased death-rate from phthisis among men compared to that among women. At Paris in 1890 there were 29,583 wine shops, that is at the rate of one in every three houses, or 82 inhabitants. M. Lagneau suggests to increase the price of their licence and to impose heavy taxes on all such shops. M. Motet declared that drunkenness nowadays is much more serious in its results. This affirmation is confirmed by a mother, who said to M. Motet: "When my husband was drunk he was only troublesome, but now when my son is drunk I am frightened of him, he is like a madman." The Bill which has been passed in the French Parliament relieving the *boisson hygieniques* of taxes and giving the State the monopoly of alcohol rectification is only an apparent remedy. The law is not yet formulated, and many difficulties remain to be grappled with.

At a recent meeting of the Société Médicale des Hôpitaux M. Morzare read notes on a case of death which resulted from the injection of Roux's serum in the case of a child who was not attacked by diphtheria. Dr. Sevestre, Dr. Legendre, and Dr. Variot have observed and commented on the serious disturbance caused by serum injections. Paralysis has been observed in some instances, also cerebral trouble and diminished urinary secretion, but all the children thus affected were cured. MM. L. Guinon and Rouffilange were the first to notify a case of death from serum injections.

The *Annales d'Hygiène et de Médecine Légale* draws attention to the practice of using acetic acid to restore consciousness in swoons. Dr. Langier has pointed out that if the inhalations are continued for too long a time inflammation of the pituitary membrane may result; further, the patient whilst struggling may jerk the bottle and cause some drops to fall on the skin. Dr. Langier mentions two such cases resulting in legal proceedings taken against the medical men who treated the patients.

M. Ch. Girard and M. Dupré, of the Paris Municipal Laboratory, have described some of the manifold adulterations to which coffee is subjected. In ground coffee, they detected several plants better absent than present, in order to assure a good "coloration" to this detestable compound. "Floor sweepings" are mixed with it. Whole coffee is adulterated by soaking it in water; thus the weight is increased. During the roasting process fatty substances are added, and eggs or treacle; the beans thus present a shiny surface. The adepts even fabricate coffee beans with coffee grounds and burnt flour.

A curious case of failure to observe the *secret professionnel* has figured in the Paris law courts. Dr. Catuffe, at the request of M. Bertrand, an architect, attended a lady during her confinement. M. Bertrand showed no desire to pay the fees justly claimed by Dr. Catuffe, who wrote to the lady in question in order to receive his remuneration, and stated that otherwise he should take proceedings. No answer being returned, Dr. Catuffe was as good as his word. His fees, amounting to £16 15s., were reduced to £12, and M. Bertrand in his turn took proceedings against Dr. Catuffe for violation of the professional secret. Dr. Catuffe lost the day, and is fined £12.

Dr. Lemoine, of Lille, has used methylene blue as an analgesic with great success in neuralgia, sciatica, and locomotor ataxy. He gives 30 centigrammes a day.

The President of the Republic has visited the Hôtel Dieu Hospital, and as usual has expressed his entire satisfaction. Before leaving, he presented M. Tillaux, the well-known surgeon, with the Cross of Commander of the Legion of Honour, the Cross of Officer to M. Nicaise, surgeon at the Laennec Hospital, and M. Constantin Paul, of the Chante Hospital; that of Chevalier to M. Delens, surgeon at the Lariboisière Hospital, and M. Kirmisson, surgeon at the "Enfants Assistés." The President also distributed eight medals among the staff of nursing attendants, male and female.

During the last few days several animals have been bitten by vipers in the Haute Vienne department, they were treated with chromic acid injections and recovered.

A fine of eleven francs has been inflicted by a Paris law court on somnambulists for professing to interpret dreams and prophesy future events.

M. Louis André Anastay, the father of the murderer of the Baroness Deleard, has been sentenced to imprisonment and fined for illegally practising medicine; he gives consultations on specific disorders.

The fete given at Lyons for the benefit of the Madagascar Ambulance has realised £780.

M. Paul Reclus has been elected member of the Paris Academy of Medicine.

The death is announced of Octave Doyen, Mayor of Rheims, Chevalier of the Legion of Honour, Municipal Councillor, and father of M. Eugène Doyen, the well-known surgeon.

ROME.

Infectious Diseases in Italy.—Unhealthy Industries.—A Society for the Protection of Children.—The Milk Supply of Rome.—General News.

The Sanitary Act of 1888 compels medical practitioners throughout the kingdom to report all cases of infectious diseases they attend to the syndics of the various communes in which these diseases occur. The syndics are required by the same Act to send a monthly bulletin of those diseases to the Director of Public Health at the Ministry of the Interior. With the view of preventing any mistakes in the returns, the syndics are also obliged to send a blank form whenever they have no infectious diseases to report during the month. Notwithstanding these requirements, Dr. Pagliani states in his report on "Cases of Infectious Diseases reported by the Medical Attendants to the Syndics of the Communes in 1894," that although the reports are more complete than in previous years, yet he has to deplore many lacunæ in the compilation of the bulletins. There are altogether 8,257 communes in Italy, and of these a monthly average of 1,253 have not sent in even a negative notice. It will be seen, therefore, that there is an element of doubt as to the following figures being complete:—In the year there were reported 7,894 cases of small-pox, 109,506 of measles, 18,482 of scarlatina, 37,260 of typhoid fever, 7 of typhus, 23,896 of diphtheria, 3,094 of puerperal fever, 2,400 of malignant pustule, 103 of hydrophobia, and 81,449 of influenza. Considering these diseases separately from the point of view of greatest and least monthly prevalence, it appears that small-pox was most prevalent in March, April, and May. April had the greatest number (1,207), least in December (408 cases); measles was most prevalent in March, April, May, and June, highest in April (16,657 cases), and lowest in October (3,457 cases); scarlet fever varied very little throughout the twelve months; the highest figures were in May (1,789 cases), and the lowest in February (1,172 cases); typhoid fever was most prevalent in August, September, and October, highest in September (6,442 cases), and lowest in February (1,226 cases); of the 7 cases of typhus reported, 5 occurred in September and the remaining 2 in October. It is strange that these cases occurred in different provinces, with the exception of 2 in Potenza; diphtheria was most prevalent the first and fourth quarters of the year; it was almost equally prevalent in April, September, and October, highest in November (2,352 cases), and lowest in June (1,383 cases); puerperal fever did not vary very much in different months; the highest was in March

(302 cases), and the lowest in August (213 cases); malignant pustule was most prevalent in August, September, and October, highest in September (497 cases), and lowest in April (77 cases); hydrophobia was most prevalent in May, July, August, and October, highest in August (15 cases), and lowest in April (2 cases); influenza was most prevalent in January, when 10,271 cases were reported; in February there were 27,681; there was a rapid fall each month until July, when it totally ceased until December, when there were 124 cases reported. Contrasting these figures with those of the six previous years, and taking into consideration the estimated increase of the population of the kingdom, there has been a gradual diminution in the number of cases reported in nearly all these diseases.

The Minister of the Interior has by decree approved of the list of unhealthy occupations compiled by the Superior Council of Health. The list is divided into two classes; it comprises in the first class those which must be isolated in the Campagna and at a distance from habitations; and in the second those which require special caution for the safety of the neighbourhood.

On June 7th the Queen of Italy received in private audience Senator Costa, Professor Pagliani (Director of Public Health), and Professor Biasi (Director of the Brefotrofio), who presented Her Majesty with a volume entitled *Pro Infantia*, containing a collection of writings and drawings by the best Italian authors and artists on the protection of ill-nourished and badly-treated young children. This work is the first manifestation of a great association which is being founded, with its centre in Rome and branches in every town in Italy, for the purpose of uniting the scattered strength of the many philanthropic persons who interest themselves in this sad question. The Queen and also the King—to whom was presented a similar volume a few days before—are taking the greatest interest in the establishment of this new society, and have encouraged the promoters to carry on their good work by promising them all necessary support and their full protection.

For some time past excellent regulations have been in force in Rome proper in relation to the health of milch cows and other animals which supply milk to the residents. By an order of the syndic just issued similar regulations are put in force for the whole of the Commune, which includes a considerable extent of the surrounding Campagna. They are to the following effect: All milch cows and other animals which supply milk in the suburbs and Agro Romano will be subjected to a rigorous examination by the municipal veterinary surgeons. To this purpose notice of every animal introduced into the Commune must be given to the health authorities before the milk can be sold, and it is then placed under the inspection of the veterinary surgeon. When the animal is healthy and capable of furnishing good milk it will be marked in the horn, and a special licence will be given to the owner. These animals will be inspected every year, in the months of April, May, and June, and also on any other occasion that the authorities may deem necessary. The cows suspected of tuberculosis will be treated with tuberculin at the expense of the owners, and those diseased will be slaughtered. The extension of these regulations to the whole Commune is a great boon to the inhabitants, as now all the cows which supply milk to the city will be under inspection, and this will prevent the owners in Rome proper sending tuberculous cows into the Campagna, where they might continue to supply milk. The milk coming from the Campagna will be preferable, as it will be obtained from cows kept in the fields.

Professor Baccelli, Minister of Public Instruction, intends to introduce immediately to Parliament, which opened on June 10th, his Bill entitled "Autonomia Didattico Amministrativa Disciplinare Universita."

Dr. Toscani, Professor of Legal Medicine in the University of Rome, has been re-elected President, for three years, of the Medico-Chirurgical Faculty of the University. This is the fourth time the Professor has been elected.

Professor Durante has been elected a foreign member of the Academy of Medicine of Paris, Surgical Section.

MR. JAMES HOGG has received a Civil List pension of £75 a year for his contributions to medical science.

MELBOURNE.

Decrease in the Population of Victoria.—Tuberculosis in Cattle.—The Feeding of Troops on Active Service.—The Consumption of Sugar in Australia.—Overworking of Nurses.—A Medico-Legal Sensation.—The Female Medical Students at the University.—General News.

THE population of Victoria has decreased by 40,000 during the last three years. The net loss by emigration for one year was nearly 14,000. In the year 1894 the population of Victoria was 1,179,101, while that of New South Wales was 1,251,450.

The prevalence of tuberculosis among man in Victoria has directed attention to the subject of tuberculosis in cattle, and the danger to children in the consumption of milk from tuberculous cows. An effort is now being made, thanks to a persistent agitation on the part of Dr. J. J. Miller, to compel the Government to arrange for a regular veterinary inspection of dairy herds. An attempt is also being made to induce the various municipalities to undertake the work themselves. In Queensland, out of a herd of 150 cattle taken from off the best grazing grounds, only 25 head were found free from tuberculosis.

At a special meeting of the Naval and Military Club, and in the presence of the commandant and principal officers of the forces, Dr. Miller delivered a most instructive lecture on the means of examining meat, and detecting its unwholesomeness while either in the field or in garrison. In the discussion which followed Dr. Henry indicated the importance of the selection of suitable food stuffs previous to an engagement in active campaigning. He declared that the efficiency of the troops to withstand a struggle would be better maintained by the indulgence in food which contained nothing fermentable. For this reason saccharine and starchy food should be avoided, inasmuch as they inclined to produce a condition favouring lethargy and loss of activity.

The amount of sugar consumed by each head of the population of Victoria is calculated at 90.75 lbs. per annum. South Australia consumes 102.10 lbs. per head per annum, Western Australia 93.51, Tasmania 90 49, New Zealand 87 18, Queensland 62 93, New South Wales 60.93 lbs. per head per annum. For the rest of the world the figures are, for comparison sake: United Kingdom 68.99, United States of America 43, Holland 28.37, France 22.56, Germany 15.01, Austria 3.38, Russia 7.69, Spain 5.11, and Italy 3.20. The explanation of the excessive quantity partaken of in Australia is attributed to the tea drinking tastes of the people, whereas in wine-drinking countries very little sugar is consumed. Here people are also great jam eaters and beer drinkers. So far statistics of diseases said to be caused by sugar feeding have not been tabulated.

Attention has been recently directed to the excessive duties which hospital nurses are called upon to fulfil. It has been shown that in many instances a nurse's duties extend uninterruptedly for fifteen hours. As the nurses themselves exhibit a good deal of diffidence in pleading their own cause, the matter of relief remains in abeyance.

The present medico-legal sensation is a strychnine-arsenic poisoning case. A Mrs. Dean, living in Sydney, accuses her husband, who is a man who has hitherto borne a remarkably good reputation, of attempting to poison her. At the trial the judge, in charging the jury, declared the evidence of poisoning to be to his mind as clear as if he had seen the prisoner place the poison in the food. The prisoner, who asserted his innocence throughout, was condemned to death, which sentence was afterwards commuted to imprisonment for life. In connection with this case some rather startling disclosures are promised, and a Royal Commission is being demanded to have the whole of the case reopened. It is stated, for instance, that there is no evidence except that of Mrs. Dean that her husband was seen to put poison in her food; that the medical evidence as to the symptoms being that of poisoning was merely based on the description of the symptoms by Mrs. Dean and her mother; that the doctor did not attend Mrs. Dean while she was suffering from these symptoms; that there was no direct evidence that the poison was ever in Mrs. Dean's body; that the only poison found was in the excreta and in remnants of unconsumed food; that there was

no scientific evidence to show that the poison in the excreta had ever passed through the body; that the quantity of poison in the excreta was so great as to make it improbable that it could have passed through a human body without causing death.

The female medical students of our University have appealed to the Council against the decision of the medical faculty in compelling them to occupy a joint dissecting room with the male students. The Council has supported the objection of the ladies, and have directed that in future a separate room shall be provided for them.

Mr. F. D. Bird, Honorary Surgeon to the Melbourne Hospital, has been appointed lecturer on surgery at the Melbourne University.

Dr. T. Rowan, who is now on a visit to Europe, is a gentleman occupying one of the most distinguished positions in the profession in Melbourne. For many years he has been the senior surgeon to the Women's Hospital, and he is regarded as one of the leading representatives and exponents of this special branch of surgery in this colony. Such attention as may be shown to Dr. Rowan on his visit to the old country will be warmly appreciated by his professional brethren in this part of the world.

CORRESPONDENCE.

THE WEBER-PARKES PRIZE AND MEDALS.

Sir,—I should be grateful if you could find space in your columns for the following particulars respecting Dr. Hermann Weber's Prize Foundation at this College, which have not hitherto been made public.

The prize is of the value of £150 or thereabouts, to be awarded triennially to the author of the best essay upon some branch of the subject of tuberculosis, especially with reference to pulmonary consumption in man.

The first award will be made in 1897. The adjudicators have selected the following as the subject for competition in that year: "The Means, Prophylactic or Curative, deemed by the Author to have Value in the Control of Tuberculosis; especial regard being had to their application to Human Tuberculosis."

The essay must be based on original work and observations (experimental or other) of the author, and must include a detailed exposition of the methods employed and their mode of application.

The competing essays must be delivered to the Registrar of the College on or before July 1st, 1897.

I enclose the regulations printed in full, of which copies may be had on application at the College.—I am, etc.,

Edw. Liveing,
Registrar.

Royal College of Physicians, S.W., July 16th.

ANTIVENOMOUS SERUM.

Sir,—As a sequel to the article published in the British Medical Journal of June 15th concerning the researches of Dr. Thomas Fraser about the immunity against the venom of snakes, researches which corroborate the results that I have myself made known in my statements published in the *Annales de l'Institut Pasteur* in May, 1894, and in April, 1895, also by several communications to the Académie des Sciences de Paris, I would be very much obliged to you to inform your readers that since last January I prepare, at the Institut Pasteur de Lille, antivenomous serums from both horse and ass. I have already sent numerous samples of this serum to be used in treatment of man in the British East Indies, in Australia, and in the West Indies, and I have always on hand doses at the disposal of doctors who may wish to try it. Each bottle has with it a paper of instructions as follows:

Instructions.

The antivenomous serum is serum taken from an ass or a horse immunised against venom of snakes. It will retain its effects if kept in as cool a place as possible, away from daylight and without taking the phial out of its box. At or above the temperature of 50° Cent.—122° Fahr.—the serum becomes inactive. Its preservation has been guaranteed by adding a very small quantity of camphor.

Preventive Power.—The preventive power of this serum is, at the least, of 10,000, that is, it is sufficient to inject rabbits preventively with a quantity of serum equal to $\frac{1}{10000}$ of their weight to enable them to bear, one hour afterwards, without their being intoxicated, a dose of 1 milligramme of dry venom of [illegible] of maximum activity, said dose sufficient to kill proof rabbits in less than [illegible] hours.

Curative Action.—It is injected in sufficient quantity to persons bitten by snakes, the antivenomous serum will prevent the effects of the venom providing intoxication is not too far advanced. It must be injected as soon as possible after the bite. Generally its intervention is still very efficacious an hour and a-half after the bite with adults, who rarely die but three hours after the bite of the most dangerous species of snakes. The serum is active against the venom of all species of snakes existing in the ancient and new world. It has been experimented with the venoms of the *cobra capella* and *trimeresurus* of Asia, the *naja haje* and *cerastes* of Africa, the *crotalus* of America, the *bothrops* of the West Indies, the varieties of *pseudechis* and *hoplocephalus* of Australia, and the vipers of Europe. The dose to employ varies according to the species of the biting snake, the age of the person bitten, and the time of the intervention. Generally 10 cubic centimetres are sufficient for children under 10 years and 20 cubic centimetres for adults. However, when the bite comes from a very dangerous species, such as the *cobra capella*, the *naja haje*, the *crotalus*, the *bothrops* of the West Indies, it will be prudent to make one single injection at first of a double dose.

Treatment of Venomous Bites.—The first precaution to take is to surround tightly the bitten limb as near as possible to the bite and between the latter and the trunk with a strip or handkerchief. The wound will have to be washed with a solution of hypochlorite of lime diluted to 1 gramme for 50 of water previously boiled, titting between 0·01 to 0·02 of chlorine per 1,000 cubic centimetres. The dose of serum must be injected in the subcutaneous cellulary tissue in the right or left side of the belly, and with the usual antiseptical precautions. Then, with the same syringe, 8 or 10 cubic centimetres of the solution of hypochlorite of lime will be injected altogether, but in the different parts surrounding the bite and in the passage of said bite. These injections are intended to destroy there the venom which has not yet been absorbed. From that time the strip can be taken away from the limb; the patient must be frictioned and coffee or tea be administered, and he be covered warmly so as to provoke an abundant perspiration. The administration of ammonia or alcohol must be avoided; it would only be injurious both to the patient and to the treatment by the serum. It is also unnecessary to cauterise the bitten limb either by red iron or chemical substances.

—I am, etc.,

D. A. Calmette,
Directeur de l'Institut Pasteur de Lille.

Lille, July 12th.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

Sir,—Referring to the letter from "A Governor" in the British Medical Journal of June 29th, page 1470, the objects for which the British Medical Association was founded and is carried on are strictly defined in the Memorandum and Articles of Association and By-laws of the Association. They are stated thus:

3. The objects for which the Association is established are the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession by the aid of all or any of the following:

(a) Periodical meetings of the members of the Association, and of the medical profession generally, in different parts of the country.

(b) By the publication of such information as may be thought desirable in the form of a periodical journal, which shall be the journal of the Association.

(c) By the occasional publication of transactions or other papers.

(d) By the grant of sums of money out of the funds of the Association for the promotion of the medical and the allied sciences in such manner as may from time to time be determined on.

(e) And such other lawful things as are incidental or conducive to the attainment of the above objects.

It cannot be pretended that this includes the giving in charity; nor can it be alleged that the objects so set forth are yet so fully accomplished and so definitely terminated that a diversion of funds towards a quite alien though admirable purpose is logically justified or morally necessary. It is convenient and easy and satisfying to the conscience without drawing upon the pocket, to apply public funds in a sympathetic way, without too narrowly questioning the authority or the wisdom of such gifts. But are there not in every Branch calls for the prescribed use of surplus funds in protection of the dignity of the profession and the welfare of the individual members of the Branch in the suppression of illegal practice by quacks and prescribing chemists, in the formation of local unions and their vigorous organisation to oppose medical aid societies, to combine against club encroachments and underpayments? It has become here and there the fashion to suggest that something vaguely called "The Association" should do more in these directions. But it should be remembered that "The Association," apart from its Branches, is but *nominis umbra*—mainly a list of subscribers to a cheap and popular Journal. The Council, which can meet but rarely and at distant intervals, is largely

a formal and administrative body, having important controlling duties in these matters, but deriving all its authority from the local Branches. It is in the Branches, which have personal contact, local knowledge of men and things, and leisure and occasion for really effective combinations, that this battle must be fought out; and the local surplus funds appear to be the first sources from whence the necessary outlay might be drawn. It is, from this point of view, not altogether inspiriting to see the Branches inactive and asking for a Jupiter without putting their own shoulders to the wheel. Nor does the dissipation of these funds in doles seem altogether consistent with the duties and obligations of the Branches.—I am, etc.,

A BRANCH MEMBER.

"VARIETY IN DIET."

SIR,—In some recent remarks on "Variety in Diet" you refer to the condensing and sterilising of milk as an instance of a process of cooking which "may do much more harm to the nutritional value of our food than is explained by the mere change in its physical properties ..... by destroying the antiscorbutic properties of milk." Now this statement raises a very wide question because, as a matter of fact, we eat very little raw food of any kind. In former years it used to be taught that raw milk was more digestible than boiled milk, and the latter was consequently tabooed in respect of its administration to infants. Modern researches having proved on irrefragable data that various infectious diseases are commonly spread directly by the use of infected milk, eminent authorities in matters hygienic have inculcated the paramount necessity of boiling milk before giving it to children. Bacteriological investigations have amply confirmed the conclusions arrived at by official inspectors and others, and one of the most important points elucidated by the Royal Commission on Tuberculosis was the dependence of infantile tuberculosis on the consumption of the milk of diseased animals. Under these circumstances the use of sterilised milk ought shortly to become universal, and the objection to the use of condensed milk falls to the ground.

For uniformity of composition and richness in the essential constituents of normal milk condensed milk of good brand is far and away superior to ordinary milk, or to any of the so-called sterilised milks. The great point to which I desire to call attention is, however, the principle of using only sterilised milk. If this be desirable (and eminent authorities assure us that it is so), then no more satisfactory guarantee of sterility can be provided than by the process of condensation in which the cooking is not carried beyond the point at which sterilisation is ensured.

This is a matter of such immense importance to a community in which condensed milk is so largely used, that no apology is needed for having called attention to what seems to me to be an illogical and unjust criticism.—I am, etc.,

Gower Street, W.C., July 16th. A. S. GUBB, M.D.

THYROID EXTRACT IN UNIVERSAL ALOPECIA.

SIR,—In the BRITISH MEDICAL JOURNAL of July 13th Sir Hugh Beevor briefly reports a case of universal alopecia treated with thyroid extract, and concludes by saying that even so small an amount of success in an ailment considered incurable makes this treatment worthy of further trial. May I be allowed to repeat what I have stated previously elsewhere, that I have given the thyroid treatment a full trial in both universal and partial alopecia, and have been unable to observe any beneficial effect therefrom. The remarkable results of the thyroid treatment in curing the baldness of myxœdema at once suggested to me, as no doubt it did to others, a trial of the same treatment in baldness due to other causes. This treatment I carried out in a number of cases between two and three years ago. I had the patients photographed at the commencement of the treatment in the hope, which was disappointed, that I might have some improvement to show at the end.

Although universal alopecia is generally incurable it is not always so. I have seen two cases where the malady has been recovered from, apparently quite independent of treatment. In such exceptional cases had the thyroid gland or pituitary body been administered an altogether erroneous conclusion might have been deduced.

At the present day suggestions as to possible uses of remedies which are being boomed by manufacturing chemists have to be made with great caution. These suggestions, often made with the best intentions, are sometimes reproduced in the advertising columns as reasons why these remedies should be used for quite inappropriate purposes and in diseases in which experience has already shown that they are of no value.—I am, etc.,

Welbeck Street, W., July 13th. HECTOR W. G. MACKENZIE.

THE LATE PLAGUE IN HONG KONG.

SIR,—As you are aware this colony last year was attacked by a virulent form of epidemic, that is, the bubonic plague. To describe the chaos and perturbation that existed in all circles—official, social, and military—would require a power of word painting of which I am not capable; suffice it to say that chaos existed, and with that chaos the accompanying bickering, backbiting, and thrusting of responsibility on the shoulders of those who had the pluck to take it. The fight is now over, and the spoils in the shape of honours and rewards you would imagine would go to those who had so manfully fought the battle. I am not concerned in this letter as to the rewards or wants of rewards that fell or otherwise to other departments, but will confine myself to the Colonial Medical Department, and more especially to the work done by the Acting Superintendent of the Civil Hospital. On his shoulders were thrown the organisation of all the plague hospitals, and it was by his heroic efforts and devoted zeal in spite of great opposition that they were efficiently equipped and maintained. This is no personal tribute to his ability and pluck, but a tribute that by common consent is paid him by all who were here in this anxious period. C.M.G.s, presentation inkstands, cheques, and commendations have been flying round, but the Colonial Medical Department, as represented by the Acting Superintendent, Civil Hospital, has not yet received any recognition of his efforts. The recognition by public opinion here and of his professional brethren at home will, I am sure, be considered by this officer of more value than any decoration that could be conferred by the Colonial Government, but it is nevertheless another gross instance of neglecting the claims of the medical profession.—I am, etc.,

Hong Kong, June 18th. FIAT JUSTITIA RUAT CŒLUM.

THE SOCIETY OF MEDICAL PHONOGRAPHERS.

SIR,—Will you kindly grant me space to express a hope that any members of the profession who use shorthand, and may be intending to join our Society, will do so at once by a communication to Dr. Neil, Warneford Asylum, Oxford? We are anxious to include as many as possible before the general meeting on July 30th. Although we have now 151 members, we find that there are still many who should join and have not yet done so.

Among the visitors whose presence we hope for on July 30th, at 4 P.M., at 20, Hanover Square, are General Sir Charles Wilson, K.C.B., K.C.M.G., the Director-General of Military Education, and Dr. J. H. Gladstone, F.R.S., who has used phonography as an aid to scientific work since 1846.

I may add that the varied service the Society is rendering to its members far exceeds, both in degree and character, our early anticipations. To this many members could bear strong testimony.—I am, etc.,

W. R. GOWERS,
Cavendish Square, W., July 15th. President.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

SIR,—Dr. O. Wunderlich's letter in the BRITISH MEDICAL JOURNAL of July 13th will have dispelled many wrong notions on the subject of the Metropolitan Provident Medical Association. I have for a long time thought out the matter of attending the poor who really cannot afford to pay ordinary fees any more than and in the same proportion to the ordinary householder with an income of £150 or so a year not being able to keep his carriage. The Metropolitan Provident Medical Association serves as an association conducted by members of the profession themselves, a club, provident association, or whatever it may be called, conducted on the very lines which the JOURNAL has on more than one or two occasions suggested. So let me, as one whose lot is cast in a

district where the labouring classes live, refer my colleagues to this Association. How much better would it be for the wretched keepers of sixpenny, fourpenny, and threepenny dispensaries who are qualified medical men to attend their poor under the auspices of this Association rather than to become the laughing stock of their professional brethren as well as placing themselves in a mean position towards the public? I would, too, with Dr. Wunderlich, advise those of our profession who serve under—and are sweated by, shall I say?—a lay committee to manage their dispensaries for themselves. The remedy is in the hands of the profession itself.—I am, etc.,

Tottenham, July 13th. G. HERKLOTS VOS.

SIR,—I quite agree with Dr. Wunderlich that it is the supineness of the medical officers which allows the branches to be mismanaged. Having been one of the promoters of the Tottenham branch, and having continued till last year as a member, I found myself usually, till Dr. Wunderlich joined, the only medical member of the Committee present; there were nine at first and later ten other doctors on the staff, and one hour a month was given to the meetings of the Committee. With regard to the payment, I found it work out with the penny paid for each attendance at 10½, or 10¾d. The trouble I found was one common to all clubs, that of having a few unreasonable members, who would not, when wanting attendance, send before 10 o'clock, but expected immediate attention to a call at any time. Frequently after a long round I have come in to find five or six messages from different directions, all of which might have been sent early, and I think in any rules for an institution of the kind this point ought to be very strongly insisted on that a special fee must be paid for a special call if the case is urgent; it is worth it in the interest of the patient: and if not the message will be sent at a proper time, otherwise the doctor's time is remorselessly wasted, to save a halfpenny card or a walk to his house, and he has either to walk a few extra miles daily or take his horse and carriage over the same ground two or three times in the same day.—I am, etc.,

Bournemouth, July 15th. GEO. B. BEALE, M.D.

MEDICAL AID ASSOCIATIONS.

SIR,—In view of the discussion on this topic at the coming congress of the British Medical Association, perhaps you can kindly republish [1] the subjoined pledge, which has been signed by all the practitioners, with one exception (and he agrees with the principle) in and about Malvern. I believe the general adhesion to this pledge has prevented the formation of a medical aid association here, and recommend similar action in other districts.—I am, etc.,

Malvern, July 18th. STANLEY HAYNES, M.D.

"We the undersigned members of the medical profession of Malvern and its neighbourhood, taking into consideration the fact that there are well established provident dispensaries in our midst, pledge ourselves not to undertake the care of families of members of friendly societies at a contract rate of payment."

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

AN Officer of field rank, who expects to be ordered abroad this trooping season, wants an exchange with an officer of the same rank who will have about three years to do at home.—Address Medicus, United Service Club, Stephen's Green, Dublin.

THE NAVY.

MR. WILLIAM DOUGHTY has been appointed Surgeon and Agent at Torcross and Hallsands, July 16th.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON JOHN MARTIN COATES, M.D., late Bengal Establishment, died of cholera at Calcutta on July 10th. He was appointed Assistant Surgeon, August 4th, 1856, and Brigade-Surgeon, January 28th, 1881. He retired from the service July 9th, 1890. He served in the Indian mutiny campaign in 1857-58, and had received the medal for that campaign.

Surgeon-Lieutenant-Colonel C. W. CALTHROP, M.D., Bengal Establishment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel from March 20th, 1895. He dates as Assistant-Surgeon from April 1st, 1869, and as Surgeon-Lieutenant-Colonel from April 1st, 1889. He was in the Afghan war in 1879-80, and was in the engagement at [illegible] and in the operations round Cabul in December, 1879, including the investment of Sherpur (medal with clasp).

Surgeon-Lieutenant-Colonel W. A. C. [illegible], Bengal Establishment, is also promoted to be Brigade-Surgeon-Lieutenant-Colonel from March 20th. He entered as Assistant-Surgeon, [illegible] 1st, 1869, and became Surgeon-Lieutenant-Colonel twenty years thereafter.

THE VOLUNTEERS.

SURGEON-MAJOR C. ARROL, M.D., 1st Kent Artillery (Eastern Division Royal Artillery), is promoted to be Surgeon Lieutenant-Colonel, July 17th.

Messrs THOMAS W. J. ALLEN and GEORGE H. [illegible] are appointed Surgeon-Lieutenants in the 1st Lincolnshire Artillery (Western Division Royal Artillery), July 17th.

Surgeon-Lieutenant J. C. WRIGHT, 2nd West Riding of Yorkshire Artillery (Western Division Royal Artillery), is now appointed Lieutenant in the same corps, July 17th.

Surgeon Lieutenant W. D. FRASER, M.B., 2nd Volunteer Battalion the Royal Welsh Fusiliers, is promoted to be Surgeon-Captain, July 17th.

Mr. MARK RINGWOOD RICH is appointed Surgeon-Lieutenant in the 2nd Tower Hamlets Rifles, July 17th.

CHANGES OF STATION.

THE following changes of Station amongst the officers of the Army Medical Staff have been officially notified to have taken place during the past month:

		From	To
Surg.-Major-General	T. Welsh	Madras	Bengal.
Surgeon-Lieut.-Col.	J. S. Forrester	R. H. Guards	1st Life Guards.
Surg.-Major	E. H. Fenn, C.I.E.	Coldstrm. Gds.	Scots Guards.
"	H. J. Mitchell	Egypt	Dover.
"	P. Mulvany	[illegible]	Belfast.
"	R. R. Maclean	Madras	Chatham.
"	W. J. [illegible]	Half Pay	"
"	W. B. [illegible]	York	Shrewsbury.
"	A. H. Morgan	West Africa	Weymouth.
Surg.-Capt.	P. L. Jobling	West Africa	Colchester.
"	A. P. H. Griffiths	Wrexham	Blackpool.
"	J. F. Bateson, M.B.	York	Alnwick.
"	J. S. [illegible], M.B.	Brecon	Exeter.
"	R. A. Bostock	Grenadier Gds.	Scots Guards.
"	R. H. Hall, M.D.	Colchester	Devonport.
"	G. F. H. Marks, M.D.	New Romney	Shorncliffe.
"	[illegible], M.B.	Portsmouth	Portland.
"	E. [illegible]	Great Yarmouth	Colchester.
"	A. O. C. Watson, M.B.	Egypt	Edinburgh.
"	E. W. Gray, M.B.	"	Dublin.
"	H. I. [illegible]	Devonport	Monmouth.
"	C. R. Elliott, M.D.	Belfast	Holywood.
Surg.-Lieut.	J. G. M'Naught, M.D.	Newbridge	Bombay.
"	H. A. Gray	Aldershot	Bombay.
"	E. W. Slayter, M.B.	—	"
"	H. S. Shurston	Portsmouth	Bengal.
"	L. P. More, M.B.	Netley	"
"	C. O'C. Hodgens	Dublin	Bombay.
"	T. P. Jones, M.B.	—	"
"	W. J. Taylor, M.B.	Shorncliffe	Hythe.
"	J. H. Farmer	Dublin	Bengal.
"	H. E. B. Porter	Shorncliffe	Lydd.
"	L. P. Tomlinson	Lydd	Dover.

MEDICAL ARRANGEMENTS IN MOUNTAIN WARFARE IN INDIA.

SOME pregnant remarks on medical and sanitary arrangements in Indian mountain warfare fell from Major F. C. Carter, Royal Berkshire Regiment, during his recent lecture at the Royal United Service Institution on the 3rd inst., on Mountain Warfare. He pointed out the danger of false economy in cutting down the medical staff and the number of field hospitals required for hill campaigns exemplified with the Tirah Field Force of 1892, when, owing to fever, sunstroke, and cholera, the resources of the medical department with the force were severely taxed. Major Carter pronounced the stretchers now in use as quite unsuitable for steep hill sides. The remarks on sanitation emphasise the necessity of a far more careful inspection of the *minutiæ sanitatis* as he terms them.

THE SOBRIETY OF THE ARMY.

THE money grant of £500 by the late Minister for War to the treasury of the one-year old Army Temperance Association, was an unmistakable proof of the belief at headquarters in the value of abstinence as conducing to the health and good conduct of British soldiers. Lord Roberts's evidence is that 12,000 abstaining soldiers are equal to 15,000 non-abstainers, a remarkable testimony to the superior mental and bodily vigour of the abstaining men, as well as to the greater economy of a sober army. Sir George White has stated that courts-martial in the third of the Indian forces which is abstinent are at the rate of only 3.26 per 1,000, against 57.45 per 1,000 in the non-abstaining two-thirds. In Britain there are 8,000 soldiers now on the rolls of the Army Temperance Association, and the Duke of Connaught recently found 1,285 teetotallers, or 9 per cent. of the division stationed at Aldershot. This new organised temperance movement in the forces at home has the active support and co-operation of the Duke of Connaught, Lords Wolseley and Roberts, the Chaplain-General, and many general officers, with a goodly number of the medical and surgical service.

[1] BRITISH MEDICAL JOURNAL, October 5th, 1889, p. 794.

MILITARY ADVICE ON MEDICAL SUBJECTS.

THE *Indian Medical Record* of June has a leading article on "The various defects of the System of Station Hospitals," and supports the contention of Brigade-Surgeon Lieutenant-Colonel [illegible], set forth in the *United Service Magazine*, relating to the deterioration in the sanitary condition of Indian cantonments.

The article is too long for reproduction, but should be read by medical officers. The following passage is worth extracting: "Our military medical requirements have evidently been worked out and based on station hospital needs, on which has been provided a small percentage of a reserve for casualties and war emergencies, and that our strength of medical officers and subordinates has been fixed at dangerously low figures becomes quite plain when the smallest demand is made for medical [illegible]."

In the face of this the Secretary of State for India quite recently, in reply to a question in the House, stated that his "military advisers" had informed him that the medical staff in India was quite sufficient for all requirements. Here we have the "military" adviser, but what, it may be asked, do the "medical" advisers say?

EMPLOYMENT OF RETIRED ARMY COMPOUNDERS.

A NOTIFICATION which appears in the Medical Staff Corps' orders materially benefits army compounders; it is that the Local Government Board recognises men thus qualified for appointment as dispensers to unions, etc.

VOLUNTEER PROMOTION.

A CORRESPONDENT, referring to the promotion of Volunteer medical officers to brigade rank, says: The *Army List* shows that in [illegible] brigades the senior medical officer had been promoted while in only 3 had a junior been selected. This shows that selection has hitherto been the exception and not the rule.

*** Theoretically, no doubt, all such promotion is by selection although the seniors are seldom passed over.

PRINCIPAL MEDICAL OFFICERS IN THE *ARMY LIST*.

BETTER LATE THAN NEVER draws attention to the fact that at last principal medical officers on the head quarter staff of districts have their names inserted in proper alphabetical sequence in relation to other departments. This point, small in itself and yet of no little significance, has long been pressed by us on the attention of the authorities, and we are glad that the names of medical officers are at last to be removed from the tag end of staff lists.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ASSISTANTS AND INCIDENTAL FEES.

PERPLEXED.—Although we have repeatedly answered similar questions to those submitted we quote once more the following rule in its entirety from the *Code of Medical Ethics*, 4th edit.: "The question of right to the fees for evidence given by assistants and *locum tenentes* in coroners' and other courts of law having been raised and pertinaciously urged, it is deemed desirable, with the view to avert any disturbing or other mischievous effect on the relations between practitioners and their assistants, to distinctly reaffirm the principle—sustained as it is by long-established usage and its indisputable justness—that such and all other fees belong to the principals for the time being unless otherwise arranged at the time of the mutual engagement; in reference to which, moreover, it may be expedient to note that the entire services of an assistant—be he a yearly or (as in the case of a *locum tenens*) a temporary one—pertain to the employer, to whom he is rightly held responsible for all moneys received in his professional capacity."

GRATUITOUS ATTENDANCE ON THE FAMILIES OF DECEASED MEDICAL MEN.

[illegible].—A careful perusal of the subjoined rule will enable our lady correspondent to judge how far she is fairly entitled to the gratuitous services of the faculty, nor can we doubt but that if the medical attendant on her daughter were made acquainted with the alleged fact of her having been "left totally unprovided for and had since to gain her own living" he would willingly forego the charge in question. "All legitimate practitioners of medicine, their wives, and children while under the paternal care are entitled (not as a matter of right, but by professional courtesy) to the reasonable and gratuitous services, personal and like expenses excepted, of the faculty resident in their immediate or near neighbourhood whose assistance may be desired. In the case also of near relatives who are more or less dependent on a professional brother (other than wealthy) it will likewise be well, at his request, to forego or to modify the usual fee. On the other hand, a son or a daughter altogether independent of the father, or the widow and children of a practitioner left in affluent or well-to-do circumstances, should be charged as ordinary patients, unless feelings of friendship or other special reasons render the attendant practitioner averse to professional remuneration; in such case the rule need not apply. Moreover, if a wealthy member of the faculty seeks professional advice and courteously urges the acceptance of a fee it should not be declined, for no pecuniary obligation ought to be imposed on the [illegible] which the adviser himself would not wish to incur."—[illegible], chap. ii, sect. 3, rule 1.

LODGINGS AND INFECTION.

ON July [illegible], at the Court of Appeal, composed of Lord Esher (the Master of the Rolls) and Lord Justices Kay and A. L. Smith, the appeal of the defendant in the case of [illegible] was disposed of. Damages had been recovered by the plaintiff on the ground that while his wife and daughter were staying in furnished apartments at the defendant's house they caught scarlatina. The defendant is an inspector of nuisances at [illegible], and in the summer months he lets a portion of his house furnished. The plaintiff, who resides at Llandudno, sent his wife and two children to lodge with the defendant, and while there they, as alleged, contracted scarlatina from the grandchild of the defendant, who happened to be on a visit to him. The question to be decided was merely one of law.

The Master of the Rolls, in giving judgment, said, notwithstanding the verdict of the jury, [illegible] that the plaintiff's wife had [illegible] contracted the scarlatina in the defendant's lodgings, he must hold that he was not liable for the damages awarded. The appeal would, therefore, be allowed with costs. Lord Justices Kay and Smith concurred.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF DURHAM.

THE first woman graduate of the University of Durham was Miss Ella Bryant, who received the degree of Bachelor of Science at the meeting of Convocation on June [illegible]. The degree was granted under the powers granted by the supplementary charter received last month. Women students can receive instruction in the various subjects of the Medical and Science Faculties at the College of Medicine, or the College of Science, Newcastle-on-Tyne.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen were at the quarterly meeting of the Council on Thursday, July 11th, elected to the various offices for the ensuing year.

Hunterian Professors.—Charles Stewart, M.R.C.S.Eng., Conservator of the College Museum (St. Thomas's Hospital), subject of lecture not stated; John Alfred Coutts, M.B.Cantab., M.R.C.S.Eng. (St. George's Hospital), on Infantile Syphilis; Leonard Erskine Hill, M.B.Lond., M.R.C.S.Eng. (University College Hospital), on Cerebral Pressure and the Cerebral Circulation.

Arris and Gale Lecturer.—Ernest Henry Starling, M.D. and B.S.Lond., M.R.C.S.Eng. (Guy's Hospital), on the Physiological [illegible].

Erasmus Wilson Lecturer.—Walter George Spencer, F.R.C.S.Eng., M.S. and B.S.Lond. (Westminster Hospital), on the General Pathology of Bone.

Pathological Curator.—James Henry Targett, M.B., B.S., and M.S.Lond., F.R.C.S.Eng. (Guy's Hospital), re-elected.

Anatomical Assistant in the Museum.—Richard Higgins Burn, B.A.Oxon., re-elected.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

SCHOOL PRIZES.—The Barker anatomical prizes have been awarded to N. H. Alcock and C. J. Patten (equal). A special prize has been awarded to W. J. Sweeny. The Carmichael Scholarship has been won by P. J. Palmer. In Surgery the gold medal has been won by L. [illegible], the silver by G. A. Robinson. In Practical Histology the first prize was gained by D. Hadden; the second by H. Hall. In Practical Chemistry F. A. Frazer gained the first prize, and C. C. Meck and W. J. Anglim were equal for the second prize. In Public Health and Forensic Medicine A. I. Eades gained the first prize and Miss C. L. Williams the second. In Materia Medica R. H. D. Pope won the first prize and G. R. McDonald the second. In Practical Pharmacy S. R. Godkin obtained the first and M. Gavin the second prize. In Biology M. Gavin gained the first prize and W. McLorinan and W. J. Anglim were equal for the second.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, IRELAND.

THE preliminary examinations for the commencement of medical studies of the Royal Colleges of Physicians and Surgeons in Ireland, for the session 1895-96, will be held on Tuesday and Wednesday, October 1st and 2nd. Prospectuses can be had on application to the Registrar, at the Royal College of Surgeons, St. Stephen's Green W., Dublin.

SURGEONS' HALL, EDINBURGH.

MR. J. RYLAND WHITAKER, B.A., M.B.Lond., F.R.C.P.Edin., L.R.C.S.Edin., has been elected Lecturer on Anatomy, at Surgeons' Hall, School of Medicine, Edinburgh, in place of Dr. Macdonald Brown, who has resigned with the view of going to London.

OBITUARY.

DAVID J. BRAKENRIDGE, M.D., F.R.C.P.E.

Consulting Physician to the Royal Infirmary, Edinburgh.

BY the death of Dr. Brakenridge the medical profession in Edinburgh has lost one of its most eminent and, perhaps, its most genial member. Since the death of Angus Macdonald this is the first break in the front rank of the active staff of the school.

David J. Brakenridge was born at [illegible], Perthshire, fifty-six years ago, the son of a medical officer in the service of the East India Company; was educated at Perth Academy, and subsequently in the Arts course of the University of Edinburgh. He then proceeded to the study of medicine, graduated M.D. in 1863, L.R.C.S. in 1866, and F.R.C.P.E. in 1867.

His first appointment was as Physician to the Edinburgh New Town Dispensary. Later he was in succession Extra

Physician, Physician-in-Ordinary, and Consulting Physician to the Royal Hospital for Sick Children. In 1876 he was appointed one of the Physicians to the Royal Infirmary, a post he held for the usual period of fifteen years; and in July, 1894, Physician to the Chalmers Hospital. He was Medical Examiner for the Edinburgh district for the Scottish Union and National Assurance Company. At the time of his death he was one of the Managers (for the second time) of the Royal Edinburgh Asylum at Morningside. He had also been a Director of the Orphan Hospital.

His publications were numerous and important. The first, On the Influence of a Digestive Habit in the production of Tuberculosis, and Indications for Treatment drawn therefrom, appeared in 1863; A Contribution to the Theory of Diathesis, in 1869, a paper which had the distinction of being quoted by Darwin in *The Descent of Man;* in 1875 appeared The Prevention and Treatment of Scarlatina and other Infectious Diseases by the Internal Administration of Disinfectants; papers On the Action of Citrate of Caffeine and Oxide of Zinc followed. Then in 1890 came The Present Epidemic of so-called Influenza, and in 1892 his last paper, The Transfusion of Human Blood in the Treatment of Pernicious Anæmia. Such is the brief outline of his life's work now too early closed. Such the scaffolding, but what a superstructure and what a filling up!

Very soon after his admission to the Royal Infirmary, Dr. Brakenridge was recognised, at first by a select few, later by a large body of students, as a close observer, a thoughtful physician, and one of the most sympathetic and attractive of teachers. He seemed always to be seeking after the determination of new points and the discrimination of lines of difference. This habit of mind was seen more particularly in his papers on the influence of the digestive habit, on diathesis, and his most carefully thought out paper on influenza, published when there was less to be said with certainty on the matter than now.

During the whole fifteen years he was physician to the infirmary his clinical lectures were masterly studies most patiently elaborated on the subject on hand. Hence it came that his cliniques were for many years frequented by the more thoughtful students, both of the University and the extra-academical school of medicine, and the post of resident physician to the wards under his charge a prize much sought after.

At the societies, specially the Medico-Chirurgical, his contributions were always pre-eminently thoughtful and his observations bore the stamp of truth. He had the honourable position of introducing to the Society on several occasions important topics for discussion; for example, on Transfusion, Pernicious Anæmia, and on Influenza.

In the Royal College of Physicians he was especially at home. For many years he was a member of the Council, where his shrewd judgment, his logical grasp of principle, and his unflinching manliness made for him a quite unique position of confidence. With all this he ever maintained a courtliness of manner and expression that made him beloved even by those from whom he differed most. He was known on more occasions than one to differ in the strongest way from other colleagues and to express his views in no half-hearted fashion and yet leave a meeting after some such encounter arm-in-arm with the man whom he had hit hardest. For a number of years he was librarian to the College, and till the development of his last sad illness he held the position of examiner. But for this illness it was well known that he would have been asked to assume the Presidential Chair in November next. The intervention of the mortal malady had been anticipated by him. While not then looking on the continuance of symptoms with serious alarm he concluded some two months ago that in the interests of the College it was better that he should not face the arduous responsibilities which necessarily attended the occupancy of that chair.

It was qualities like these which won for him the thorough confidence of a large number of practitioners, both among his own students and older men, so that latterly his consultation practice had become very considerable.

Never very robust, he had, during the past four years, suffered from occasional attacks of hæmaturia, and six weeks ago it became plain that there was malign vesical disease. He died, as he had lived, with uncomplaining Christian fortitude.

He was carried to his grave in the Dean Cemetery on July 13th amid universal regret. The funeral was very large and representative, the many members of his own profession being specially conspicuous.

Dr. Brakenridge was a deeply religious man, and followed with close and intelligent interest the movement of ecclesiastical affairs in Scotland. For twenty-five years he was an elder in the Free Church, and for the last twelve years under the ministry of his intimate friend, Dr. Walter C. Smith, the distinguished author of *Olrig Grange*. He took a keen interest in art, and was himself a painter of no mean order. His interest, as usual, took practical shape, for he was a lay member of the Council of the Society of Scottish Arts and of the Scottish Arts Club.

It is difficult to trace to their sources the elements of the personal charm of Dr. Brakenridge. Perhaps one comes nearest the mark when one quotes what was said of the late Dean Stanley: "He was so pleasant." That really sums it up: he was so pleasant. He was always brightness and gentleness personified, and his ways were so winning. From his finely-strung and sensitive nature there constantly came a quick sympathy that touched the heart. And it was always so, for there was an absolute uniformity and perfect sincerity about him that falls to the lot of the few. He was indeed one of Nature's nobility.

We regret to announce the death of Mr. C. S. Hall, surgeon, of Carlisle, which took place on July 6th. He was one of the oldest practitioners in the city, and the holder of several public appointments. He studied at the London Hospital, and during his course was one of the medical visitants in the London cholera plague of 1874, after that he served on the medical staff in the Crimea. He took the diplomas of M.R.C.S.Eng. in 1856 and L.S.A. in 1857. After his return home he spent eighteen months in Manchester, whence he moved to Carlisle. In 1862 he became Certifying Factory Surgeon, in 1864 Medical Officer to the Workhouse Hospital, in 1875 Medical Officer to the Carlisle Rural Sanitary Authority, and in 1888 Surgeon to the City Police. He always took great interest in Volunteer movements, and attained the rank of Brigade-Surgeon-Lieutenant-Colonel of the North-West Brigade. Of scientific subjects he was especially fond, and was president of the Carlisle Microscopical Society for many years. His name is especially identified with workhouse nursing, in the reform of which he was one of the pioneers. He was universally respected, and his death will cause general regret through a wide circle of friends.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Sébire, Member of the French Senate for La Manche, aged 88; Dr. Elias Rodriguez, Professor of Therapeutics and Forensic Medicine in the University of Caracas; and Dr. José Maria Teixeira, Professor of Pharmacology and Therapeutics in the Medical Faculty of Rio de Janeiro.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE SECOND QUARTER OF 1895. The vital and mortal statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending June last 83,378 births were registered in these thirty three towns, equal to an annual rate of 31·5 per 1,000 of their aggregate population, estimated at rather more than ten and a half millions of persons in the middle of this year. In the corresponding periods of the three preceding years the birth-rates in these towns was 32·9, 32.2, and 30.4 per 1,000 respectively. In London the birth-rate last quarter was 30.8 per 1,000, while it averaged 32·1 in the thirty-two provincial towns, among which it ranged from 20.3 in Huddersfield, 22·5 in Halifax, 25.6 in Brighton, and 25.8 in Croydon to 36.0 in Hull, 35.2 in Salford, 36.4 in Sunderland, and 37.5 in Liverpool.

During the quarter under notice 47,060 deaths were registered in the thirty-three towns, corresponding to an annual rate of 17.8 per 1,000, against 19.5, 19.8, and 17.4 in the second quarters of the three preceding years, 1892-3-4. In London the rate of mortality was equal to 16.7 per 1,000, while it averaged 18.6 in the thirty-two provincial towns, among

which it ranged from 12.4 in Croydon, 14.4 in Portsmouth, 15.1 in Leicester, 15.2 in Cardiff and in Nottingham, and 15.8 in Swansea to 21.8 in Preston, 22.4 in Burnley, 23.1 in Bolton, 23.9 in Manchester, and 24.4 in Liverpool. The 47,060 deaths registered in the thirty-three towns last quarter included 4,514 which were referred to the principal zymotic diseases, equal to an annual rate of 1.7 per 1,000; in London the zymotic death-rate was equal to 1.8 per 1,000, while it averaged 1.6 in the thirty-two provincial towns, and ranged from 0.6 in Halifax, 0.7 in Croydon and in Bradford, 0.8 in Bristol and in Swansea, and 0.9 in Portsmouth, in Huddersfield, and in Leeds to 2.4 in Preston, 2.6 in Liverpool and in Salford, 2.8 in West Ham and in Manchester, 3.0 in Plymouth, and 3.6 in Bolton. The 4,514 deaths referred to the principal zymotic diseases in the thirty-three large towns included 1,172 which resulted from measles, 1,022 from whooping-cough, 855 from diarrhœa, 761 from diphtheria, 334 from scarlet fever, 334 from "fever" (principally enteric), and 15 from small-pox. The fatal cases of measles, which had declined from [illegible] to [illegible] in the four preceding quarters, rose again to 1,172 during the three months ending June last; in London the measles death-rate was 0.52 per 1,000, while it averaged 0.39 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in West Ham, Plymouth, Cardiff, Bolton, Manchester, and Newcastle-upon-Tyne. The deaths referred to whooping-cough, which had been 568 and 1,165 in the two preceding quarters, declined to 1,022 during the three months under notice; in London the death-rate from this disease was equal to 0.41 per 1,000, and corresponded with the mean rate in the thirty-two provincial towns, among which whooping-cough was proportionately most fatal in Salford, Burnley, Blackburn, Preston, Gateshead, Manchester, and Liverpool. The 855 fatal cases of diarrhœa considerably exceeded the low number recorded in the corresponding period of last year; in London the death-rate from this disease was equal to 0.29 per 1,000, while it averaged 0.33 in the thirty-two provincial towns, and was highest in Preston, Salford, Cardiff, and Blackburn. The deaths from diphtheria, which had been 1,086 and 760 in the two preceding quarters, further declined to 761 during the three months ending June last; in London the diphtheria death-rate was equal to 0.41 per 1,000, while it averaged 0.20 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in West Ham, Wolverhampton, Cardiff, Birmingham, Birkenhead, and Burnley. The fatal cases of scarlet fever, which had declined from 598 to 386 in the five preceding quarters, further fell to 334 during the three months under notice; in London the death-rate from this disease was equal to 0.15 per 1,000, while it averaged 0.11 in the thirty-two provincial towns, among which scarlet fever was proportionally most fatal in Nottingham, Salford, Burnley, and Huddersfield. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of "fever"), which had been 684 and 436 in the two preceding quarters, further declined to 334 during the three months ending June last; in London the "fever" death-rate did not exceed 0.07 per 1,000, while it averaged 0.16 in the thirty-two provincial towns, and was highest in Liverpool, Salford, Sunderland, Birkenhead, and Portsmouth. The fatal cases of small-pox in the thirty-three towns, which had declined from [illegible] to 20 in the five preceding quarters, further fell to 15 during the three months under notice, of which 4 were registered in Derby, 3 in London, 3 in Liverpool, 3 in Oldham, 1 in Birmingham, and 1 in Bolton.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under one year of age to registered births, was equal to 139 per 1,000 last quarter, against [illegible], [illegible], and 132 in the corresponding periods of the three preceding years. In London the rate of infant mortality was 131 per 1,000, while it averaged 145 in the thirty-two provincial towns, among which it ranged from 100 in Croydon, 107 in Huddersfield, 116 in Nottingham, 118 in Portsmouth, and 125 in Cardiff to 159 in Plymouth, 171 in Manchester, 177 in Bolton, 178 in Burnley, and [illegible] in Preston.

The causes of 707, or 1.5 per cent., of the 47,060 deaths in the thirty-three towns during the second quarter of this year were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London did not exceed 0.5 per cent., while it averaged 2.0 per cent. in the thirty-two provincial towns. The causes of all the deaths during the quarter in Croydon and in Plymouth were duly certified; in the other towns the lowest proportions of uncertified deaths were registered in Brighton, Wolverhampton, Derby, Bolton, and Oldham, and the highest in Birmingham, Liverpool, Sheffield, Hull, and Leicester.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, [illegible] births and 4,033 deaths were registered during the week ending Saturday, July 13th. The annual rate of mortality in these towns, which had increased from 15.4 to 17.5 per 1,000 in the four preceding weeks, further rose last week to 19.9. The rates in the several towns ranged from 8.9 in Huddersfield, 10.2 in Swansea, and 10.5 in Brighton to 26.4 in Preston, 27.4 in Wolverhampton, and 30.2 in Liverpool. In the thirty-two provincial towns the mean death rate was 19.0 per 1,000, and was 2.0 below the rate recorded in London, which was 21.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 4.3 per 1,000; in London the rate was equal to 5.3 per 1,000, while it averaged 3.6 in the thirty-two provincial towns, and was highest in West Ham, Leicester, and Preston. Measles caused a death-rate of 1.5 in Manchester and 2.5 in West Ham; whooping-cough of 1.5 in Birkenhead and in Oldham, and 2.1 in Burnley; "fever" of 1.1 in Sunderland; and diarrhœa of 4.3 in Wolverhampton, 4.6 in Bradford, 4.8 in Salford, 5.3 in Leeds, 6.5 in Preston, and 7.5 in Leicester. The mortality from scarlet fever showed no marked excess in any of the large towns. The 72 deaths from diphtheria in the thirty-three towns included 50 in London, 5 in West Ham, and 4 in Liverpool. One fatal case of small-pox was registered in London, but not one in any of the thirty-two large provincial towns. There were 72 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 13th, against [illegible], [illegible], and [illegible] at

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Second Quarter of 1895.

Towns	Estimated Population in middle of 1895	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one Year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
				Births.	Deaths.	Principal Zymotic Diseases.										
33 Towns	10,921,580	82,278	47,060	31.5	17.6	1.7	4,514	15	1,172	334	761	1,022	334	855	139	1.5
32 Provincial Towns	6,579,134	49,310	28,732	32.1	18.6	1.6	2,491	12	606	168	315	606	253	511	145	2.0
London	4,349,166	32,709	18,328	30.9	16.7	1.8	2,023	3	566	166	446	416	81	344	131	0.5
West Ham	299,423	2,384	977	33.5	15.6	2.8	176	—	83	8	46	17	8	14	137	3.5
Croydon	114,823	740	364	25.8	12.4	0.7	19	—	1	—	7	5	1	5	100	—
Brighton	119,804	769	480	25.4	16.5	1.3	39	—	6	3	6	17	3	6	101	0.6
Portsmouth	174,361	1,151	628	26.4	14.4	0.9	39	—	1	—	5	16	11	3	118	1.1
Plymouth	89,095	624	432	28.1	19.4	3.0	67	—	44	—	3	9	3	8	159	—
Bristol	230,139	1,646	930	28.9	16.4	0.8	45	—	2	—	3	15	2	23	166	1.1
Cardiff	155,527	1,353	590	34.9	15.2	2.1	81	—	31	2	10	7	2	29	125	1.3
Swansea	97,006	828	380	34.2	15.8	0.8	19	—	1	1	3	6	5	3	138	1.4
Wolverhampton	85,300	745	445	34.8	20.8	1.8	79	—	—	2	24	13	—	1	163	0.2
Birmingham	499,751	4,083	2,250	33.0	18.1	1.3	161	1	1	16	42	53	15	39	141	3.1
Norwich	107,187	835	467	31.3	17.5	1.3	34	—	1	3	6	16	3	7	132	1.7
Leicester	188,699	1,506	730	31.8	15.1	1.4	70	—	3	6	6	27	8	29	149	3.0
Nottingham	220,608	1,678	869	29.7	15.2	1.0	54	—	—	12	1	13	11	14	116	1.5
Derby	100,272	730	389	28.6	15.4	1.0	25	4	—	2	2	4	2	9	124	0.2
Birkenhead	107,489	829	473	30.9	17.7	1.3	34	—	—	3	4	11	2	3	140	0.9
Liverpool	509,691	4,174	2,093	32.5	24.4	2.6	323	3	74	21	37	84	21	61	166	3.3
Bolton	119,387	981	687	33.1	23.1	3.6	108	1	77	3	3	15	3	9	177	0.4
Manchester	524,866	4,314	3,125	32.7	23.9	2.8	364	—	145	19	24	99	17	56	171	1.3
Salford	210,833	1,690	1,130	32.2	21.6	2.6	164	—	6	15	9	54	19	31	168	3.3
Oldham	141,979	953	702	26.9	19.9	1.1	40	3	3	1	8	16	3	9	154	0.4
Burnley	98,561	855	556	34.4	22.4	2.0	49	—	3	4	8	23	3	6	178	3.0
Blackburn	126,919	1,095	649	31.6	20.6	1.7	55	—	3	2	1	26	6	17	166	2.0
Preston	112,686	901	611	31.9	21.8	2.4	67	—	14	3	3	23	3	23	[illegible]	2.8
Huddersfield	99,462	584	361	23.3	14.4	0.9	21	—	1	5	4	4	2	4	107	2.6
Halifax	92,081	587	420	25.5	18.3	0.6	15	—	—	1	3	6	3	1	136	0.7
Bradford	230,934	1,651	931	28.5	16.1	0.7	39	—	—	5	3	4	4	12	122	1.0
Leeds	389,240	3,168	1,710	32.5	17.6	0.9	92	—	13	3	14	16	6	35	139	0.5
Sheffield	342,180	2,979	1,471	34.1	17.2	1.3	104	—	47	9	2	9	11	25	144	3.3
Hull	219,752	1,609	954	29.6	17.6	1.0	53	—	2	9	11	11	2	13	143	2.5
Sunderland	138,756	1,080	624	32.4	17.9	1.9	42	—	—	3	3	9	13	9	134	1.3
Gateshead	98,971	794	427	34.1	17.6	1.3	39	—	1	—	4	10	4	9	135	0.1
Newcastle-on-Tyne	208,232	1,855	944	35.6	18.3	1.3	94	—	65	3	6	9	16	14	154	0.1

the end of the three preceding weeks; [illegible] new cases were admitted during the week, against [illegible], [illegible], and [illegible] in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been [illegible], [illegible], and [illegible] at the end of the three preceding weeks, had further increased to 2,211 on Saturday last, July 13th; [illegible] new cases were admitted during the week, against [illegible], [illegible], and [illegible] in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 13th, 949 births and [illegible] deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.3 and 19.4 per 1,000 in the two preceding weeks, further rose to 20.3 last week, and exceeded by 0.4 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from [illegible] in Dundee to [illegible] in Paisley. The zymotic death-rate in these towns averaged 4.2 per 1,000, the highest rates being recorded in Paisley and Greenock. The 287 deaths registered in Glasgow included 40 from diarrhœa, 10 from whooping-cough, 5 from measles, and 4 from "fever." Eleven deaths from diarrhœa were recorded in Paisley and 7 in Greenock.

COTTAGE HOSPITALS FOR INFECTIOUS CASES IN RURAL DISTRICTS.

A CORRESPONDENT has asked us to express our opinion on the subject of cottage hospitals for rural districts which are mainly composed of scattered villages of some thousand or two of inhabitants; whether such hospitals are to be commended, and whether, as a matter of fact, they are found to work well.

As to the latter question, we should say decidedly (treating the matter broadly) that infectious hospitals established in cottages are never likely to be commendable substitutes for permanent structures specially built and adapted to the requirements of infectious disease isolation. It is true, as our correspondent points out, that the official memorandum of the Medical Department of the Local Government Board on Hospital Provision speaks of the feasibility of cottages fulfilling the needs of villages in some measure in regard of disease isolation; but we read the reference to these—at best, subterfuges—as being in the nature of "any port in a storm" rather than an official declaration of the fitness of even isolated cottages to fulfil the demands of a district. Indeed, the whole aim of the department in question is well known to be to secure proper, adequate, and therefore—and pre-eminently—permanent special buildings for isolation purposes; but undoubtedly even a rudimentary hospital is better than having a number of improperly home-treated cases of infectious disease, acting as so many foci for disseminating sickness. Beside which, it may well be that a county council would look askance on proposals to expend the rates on such questionable methods of isolation, and that they might, by some central scheme, include several adjacent sanitary areas unprovided with any or possessing only inadequate means of disease repression; the Hospitals Act being in point in this direction. And certainly sanitary authorities will be well advised to abandon all temporary means in favour of separate or joint action on other and better lines.

Nevertheless, there are many bodies which have tried cottage hospitals, and in order to meet our correspondent's wish we name a few taken haphazard from a recent Parliamentary return on the subject of hospital accommodation in England and Wales: Bodmin, three-roomed house; [illegible], detached eight-roomed cottage and garden; Halstead, two cottages in an acre of ground; Burnley, row of four cottages, converted into a hospital, within three yards of a public road; Easington rural district, isolated six-roomed cottage; Newport (Salop) urban and rural districts, small cottage with kitchen, pantry, and one bedroom.

FEE FOR PAUPER MIDWIFERY.

"ENQUIRER" writes saying that he was called to attend a midwifery case in charge of a woman, as the infant at birth showed slight signs of life, and that when he arrived at the patient's house, some miles off, three or four hours after delivery, he found the child dead. He asks whether he is entitled to a fee of 10s., his services having been required for the child rather than for the mother.

*** We consider our correspondent is entitled to the fee in question as medical attendance required for an infant immediately after birth, apparently for debility at birth, can hardly be considered a separate and distinct duty from attendance on the mother, who no doubt in this case also received medical attention.

LUNACY CASES IN WORKHOUSE HOSPITALS.

"JUNIOR" has now stated his case more clearly, although not with all the details. Presumably the patient referred to is a pauper (or is in such circumstances as to practically become one for the purposes of the operation of the Lunacy Acts). If so, only one medical certificate is required, and "Junior's" difficulty does not arise. Indeed, this medical certificate is to be signed by the medical man called in to do so, by the justice acting in the case; and the justice may select any registered medical practitioner, as, for example, "A." or "B," or some other. But if, in the circumstances described, the case should by chance be a "private" one, then, of course, "A." and "B." could not both sign "medical certificates" in regard to it.

THE PLAGUE IN CHINA.

MACAU (Macao), a Portuguese settlement thirty miles from Hong Kong along the coast, is severely affected by plague. The disease first appeared in May, 1894, but only 6 cases occurred then, importations evidently, and the authorities believed that their sanitation and strict quarantine had succeeded in preventing an inroad. The immunity of Macau during the whole of 1895, whilst the only two towns it is in daily communication with by steamer—namely, the cities of Canton and Victoria in Hong Kong were decimated—is peculiar.

In February, 1895, plague broke out in the fish market at Macau, and from that time until now (June 12th) the disease has raged in an epidemic form. The Hong Kong Government inquired officially as to the real facts as soon as the rumour reached them, but the Macau Government again and and again denied the presence of the epidemic until the month of June. Private inquiries elicited the truth that plague was causing havoc, and in the month of April Chinese passengers from Macau were prohibited from landing in Hong Kong.

There are no official returns to guide one as to the probable mortality. During the second week in May, however, it is known that as many as 70 to 80 burials took place daily owing to this disease. At the present date, June 12th, the death-rate is 15 daily. When visited by our correspondent during the first week in June Macau presented all the appearance of a plague-stricken city. Junks and sampans in the harbour were drawn up at a considerable distance from the shore, as if to avoid contamination. The quays, usually swarming with people, were well-nigh deserted. The streets were empty, the population had left their houses and locked and barred their doors on the outside, a sure sign the houses were empty, and the few shops open were provision shops, with the shutters only half removed.

Of the population of some 80,000, only 10,000 were believed to be left in the town. The chief sufferers are, of course, the Chinese, but the Portuguese in Macau have also suffered severely. In Hong Kong, when plague raged in 1894, very few, some six or eight, of the English, were attacked, showing as then stated an immunity to Europeans. The prevalence of the disease amongst Portuguese scarcely upsets that belief, as the residents in Macau are not European Portuguese. They are descended from the parent stock, which came to Macau 350 years ago, and freely intermarried with the Chinese.

An accession of Indian blood was imported from Goa, and a Eurasian tribe resulted of Portugo Chinese-Indian blood, which is known locally as Macenese. These indigenous residents have acquired many of the ways, customs, and manner of living of the natives, and they are being attacked by plague in considerable numbers. With this explanation it will be seen that Europeans still preserve an immunity from bubonic plague. The disease is exactly of the same type as that met with last year in Hong Kong; the mortality is as severe, and the bacillus is identical. The sanitary and hospital arrangements in Macau are excellent, but with all these the pest has already lasted four months, and in all probability will maintain its hold for one month more. This is in exact accordance with the length of its stay in Canton and Hong Kong, and it may be taken as the typical period for which a town of any considerable size may be expected to suffer.

Plague is a disease which travels slowly, and it remains long in any community attacked, in spite of the fearful virulence of its ravages whilst prevalent. It will be asked, How did the disease reach Macau? The answer must be either from Canton or Hong Kong, but the disease in Hong Kong was a consequence of its presence in Canton. Hong Kong is practically a suburb of Canton, for, although eighty miles apart, 10,000 people travel between the places weekly. Macau was infected from the land side, that is, from Canton. With Canton as an infecting centre, we know now that the disease spread in a spreading circle, and that Macau, some 100 miles from Canton, was attacked seven months after the disappearance of the disease in Canton. Assuming that it had started from Canton during the height of the epidemic there, say in May, 1894, it took nine to ten months to travel 100 miles. That it is a soil-bred and a soil-supported disease there seems little doubt, and the belief that animals, especially rats, are the carriers, daily receives confirmation.

Reports, which are fairly authentic, have it that both Amoy and Foo Chow are, or have been lately, infected by plague.

Hong Kong is entirely free from plague this summer.

INDIA AND THE COLONIES.

NEW SOUTH WALES.

In his anniversary address to the Royal Society of New South Wales, the President, Dr. Anderson Stuart, Professor of Physiology in the University of Sydney, deals with various matters of interest and importance to the Colony of New South Wales at the present time or in the near future. Dr. Smith first discusses the supply of artesian water in Australia. He then gives an account of an expedition which is to be undertaken to bore an atoll in order to throw light on the formation of coral islands; the effect of certain animal poisons, and the prevalence of anthrax and hydatid disease next come under discussion, and the address concludes with a reference to the organisms of sewer air, and a summary of the Sanitary Acts in force in New South Wales. The address is a most interesting one, the several topics are dealt with in a clear and scientific way, and the attention of the reader is never allowed to become wearied. The account given of the poisonous secretions of the platypus and of the leech that opens up subjects of some novelty, while the remarks upon sewer air show that a question which is exciting much attention in this country at the present time is also being investigated on the other side of the world. The review of the Sanitary Acts in force in New South Wales is interesting, and the hints as to the direction in which legislation should proceed in the near future are suggestive.

MEDICAL NEWS.

Mr. J. BUCKENHAM, M.R.C.S.E., etc., public vaccinator for the borough of Cambridge, has been awarded for the fifth time the Government grant for efficient vaccination.

AT the Great Northern Central Hospital the Ladies' Association inaugurated on July 15th a bed which they had endowed by a contribution of £1,050 in honour of Dr. William Cholmeley, one of the founders of the hospital.

THE fortieth yearly dinner of the Poplar Hospital for Accidents was held at the Holborn Restaurant on July 17th, under the presidency of Mr. John Aird, M.P. Donations to the amount of £3 825 were announced.

PRESENTATION.—On the occasion of resigning the office of secretary of the Forest Gate Shakespeare Society, Dr. Battesen was presented by the members with a timepiece and silver inkstand, in acknowledgment of the care and labour that he has devoted to the interests of the Society.

WE are requested to state that Messrs. Oppenheimer, Son, and Co., Limited, of 14, Worship Street, London, E.C., have been appointed wholesale agents for the supply of the antitoxic serums prepared at the Pasteur Institute in Paris. The firm is now in a position to supply the diphtheria and the tetanus antitoxic serums.

THE BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The annual general meeting of this Association will be held on Monday, July 29th, at the Café Royal, Regent's Street, W., at 6.30 P.M. At 7 P.M. the members and their friends will dine together, and Sir Walter Foster, Dr. Glover, and Mr. Ernest Hart will be the guests of the Association. Any Brussels graduate wishing to be present at the dinner is requested to communicate with the Hon. Secretary, Dr. M. Greenwood, 262, Hackney Road, N.E.

THE BARBER SURGEONS' HOLBEIN.—Alderman Sir Stuart Knill, who, with the Governor of the Bank of England and Sir Joseph Lumsdaine, is heading a movement to secure from the Barber-Surgeons' Company their famous historical painting by Holbein for the Guildhall Art Gallery, has received a letter from Sir Francis Cook, of St. Paul's Churchyard, who offers to contribute £500 towards its purchase if during the next six months such a sum as the Barber-Surgeons' Company might consider sufficient could be raised.

VEAL POISONING AT LARNE.—A case recently occurred at Larne in which an old woman died with symptoms of inflammation of the stomach and bowels after partaking of veal which was unfit for food. The case is interesting because the analyst to whom the viscera were sent for examination, Mr. J. F. Hodges, F.Inst.C., of Belfast, was able to demonstrate the presence of ptomaines. The jury acquitted the butcher of any culpable negligence in the matter.

PHARMACEUTICAL CHEMISTS IN GERMANY.—By order of the Prussian Cultusminister a statistical inquiry is to be instituted in Prussia concerning the number of chemists' shops, the number of assistants employed in them, and the amount paid for the goodwill at the last time of changing hands. This statistical material when collected will form a basis for new legislation on the subject.

THE annual summer meeting of the British Laryngological, Rhinological, and Otological Association will be held at the house of the Royal Medical and Chirurgical Society, Hanover Square, London, W., on Thursday and Friday, July 25th and 26th, under the presidency of Dr. W. M[illegible] Whistler. The meetings will begin at 10 A.M. on each day. A discussion on the antitoxin treatment of diphtheria will be introduced by Dr. Sims Woodhead and Professor Sherrington. Several distinguished foreign guests have accepted invitations to take part in the proceedings, and members of the profession in this country will be welcomed.

THE inaugural meeting of the Association of Asylum Workers was held at the rooms of the Medical Society of London on July 18th. The chief objects of the Association were stated to be to improve generally the status of asylum nurses and attendants, to secure the sympathy and co-operation of persons interested in institutional work, and to provide a home of rest and nursing for those engaged in asylum work. The honorary secretary is Dr. F. H. Walmesley, Metropolitan District Asylum, Dartford, Kent. The annual subscription for ordinary members will be 2s. 6d.; the life subscription for medical or honorary members, one guinea.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly Court of Directors of this Society was held on July 10th, at 8.30 P.M. Sir James Paget, President, took the chair. One fresh application for a grant was read from a widow, and assistance given. The death of a widow had occurred who had received grants since June, 1877, and had had £1,247 in all, her husband having paid 38 guineas to the funds of the Society. One new member was elected, and the deaths of two reported. A sum of £1,264 was voted to be distributed among the 53 widows, 9 orphans, 24 orphans on the Copeland Fund. A grant of £52 10s. was made for a widow under By-law 70. A legacy of £300 stock, duty free, was announced from the executors of Dr. Bisset Hawkins, V.P. The expenses of the quarter came to £62 11s.

MEDICAL VACANCIES.

The following vacancies are announced:

BOROUGH OF LEICESTER.—Medical Officer of Health and Public Analyst. Must devote his whole time to the duties. Total salary, £500 per annum. Applications, endorsed "Medical Officer of Health," to James Bell, Town Clerk, Town Hall, Leicester, by July 25th.

BOROUGH OF WEST HAM.—Medical Superintendent for the Borough Hospital for Infectious Diseases at Plaistow. Salary, £[illegible] per annum, with annual increment of £10 up to £[illegible], with apartments, rations, and washing. Not less than 25 years of age. Applications, on forms provided, to be sent to F. E. Hillcary, Town Clerk, Town Hall, West Ham, E., by July 23rd.

BRADFORD INFIRMARY AND DISPENSARY.—Honorary Physician. Applications to the Secretary by July 22nd.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.—Assistant Bacteriologist in the Antitoxin Department. Salary, £[illegible] a year. Applications to the Director by July 22nd.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon, doubly qualified. Appointment for two years. Salary to commence at £[illegible] per annum, with residence and maintenance in the house. Applications to the Chairman of the Board of Management, [illegible] Eastgate Row North, Chester, by July 24th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £[illegible] per annum with board, lodging, and washing. Applications to the Secretary by August 12th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Junior House-Surgeon. Appointment for six months, board, lodging, and laundry provided. Applications, on forms provided, to be sent to Lewis H. Gordon Kerr, secretary, by July 22nd.

HOSPITAL FOR WOMEN, Soho Square.—Non-Resident Assistant Obstetric Physician. Appointment for three years. Applications to the Secretary by July 23rd.

LEEDS GENERAL INFIRMARY.—Assistant House Surgeon. Appointment for six months, subject to re-election. Remuneration at £[illegible] for the six months, together with board and residence in the Infirmary, and washing. Applications to the Secretary, 24, Park Lane, Leeds, by July 22nd.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End, E.—Assistant Lecturer on Physiology. Salary, £[illegible] per annum, and a proportion of the fees paid for courses not less than [illegible] in all. Applications to Dr. Stephen Smith, Warden, by July 20th.

NORTHERN DISPENSARY, [illegible] Square, W.—Physician, doubly qualified, unmarried. Salary, £[illegible] per annum. Applications to Dr. J. Wright, [illegible] North Crescent, by July 24th.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer. Salary £[illegible] per annum, with board, lodging, and washing. Applications to the Secretary by July 25th.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Assistant House Surgeon. No salary. Board and residence provided. Applications to the Secretary by July 27th.

PARISH OF CAMBERWELL.—Assistant Medical Officer and Assistant Medical Officer for the Infirmary at Havil Street, doubly qualified. Salary for the former at the rate of £120 per annum, increasing £10 annually to £150, with apartments, board, and washing; and for the latter, whose appointment will be for one year only, £80 per annum, with the same allowances. Applications to be forwarded at once to the Guardians Offices, 29, Peckham Road, S.E.

ROYAL ORTHOPÆDIC HOSPITAL, 397, Oxford Street.—Resident House-Surgeon; must be M.R.C.S.Eng. and L.R.C.P., and unmarried. Salary, £100 per annum, with partial board. Applications to the Secretary by July 25th.

ROYAL VICTORIA HOSPITAL, Bournemouth.—House Surgeon and Secretary. Salary, £100 per annum, with board. Appointment for two years. Applications to the Chairman of the Committee by July 17th.

SALFORD UNION INFIRMARY, Hope, near Eccles.—Assistant Medical Officer; doubly qualified. Salary, £100 per annum, with furnished apartments in the Infirmary. Applications, endorsed "Assistant Medical Officer," to T. H. Bagshaw, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by July 23rd.

SHEFFIELD GENERAL INFIRMARY.—House-Surgeon and Senior Assistant House-Surgeon, doubly qualified. Salary for the former, £80 per annum, with a prospective advance of £10 per year for the second and third years; and for the latter £60 per annum, with board, lodging, and washing. Applications to the "Medical staff of the sheffield general Infirmary, to the care of the Secretary," by July 24th. The election will take place on July 26th.

UNIVERSITY OF GLASGOW.—Lecturer on Surgery and Clinical Surgery at Queen Margaret College. Appointment for one year. Salary, £100 per annum. Applications to Alan E. Clapperton, Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by July 23rd.

UNIVERSITY OF GLASGOW.—Two Examiners for Degrees in Medicine to Examine in Chemistry and Materia Medica respectively. Applications to Alan E. Clapperton, Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by July 25th.

YORK DISPENSARY.—Resident Obstetric House-Surgeon: unmarried. Salary, £80 per annum, with furnished apartments, coals, and gas. Applications to Mr. W. Draper, De Grey House, York, by July 23rd.

MEDICAL APPOINTMENTS.

ALLAN, Ebenezer, L.R.C.P. and S. Edin., late House-Surgeon Glasgow Royal Infirmary, appointed Assistant Medical Officer Barony Parish Hospital, Barnhill, Glasgow, *vice* James Rutherford, L.R.C.P. and S. Edin., resigned.

ALLAN, Fras. J., M.D. Edin., appointed Examiner in Medical Jurisprudence and Public Health at the University of Aberdeen.

BALLANTYNE, John W., M.D. Edin., appointed Examiner in Midwifery at the University of Aberdeen.

BELL, Dr., appointed Deputy Medical Officer of Health to the Lowestoft Town Council.

BERRY, Dr., appointed Medical Officer for the Enniskillen Dispensary District, *vice* B. Gamble, L.R.C.P., L.R.C.S.I., resigned.

BRADFORD, J. Rose, M.D., D.Sc.Lond., F.R.S., appointed Examiner in Medicine at the University of Aberdeen.

BUNCOMBE, Wm. Dewey, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Superintendent of City of London Infirmary, Bow, *vice* C. H. Buncombe, F.R.C.S., resigned.

BOND, W. E., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Brighton and Hove Hospital for Women.

BYRNE, E., L. and L.M.K.Q.C.P.I., L.R.C.S.I., appointed Medical Officer and Medical Officer of Health Bannow Dispensary District, co. Wexford, *vice* Dr. B. Byrne, resigned.

GEORGE, Chas. F., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Blyborough District of the Gainsborough Union.

GIBSON, R. J. Harvey, M.A.Aberd., appointed Examiner in Botany at the University of Aberdeen.

GIDLEY, Gustavus Geo., M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., appointed Medical Officer and Public Vaccinator for the Cullompton and Butterleigh and Kentisheave and Blackboro' Districts of the Tiverton Union, *vice* Dr. T. H. Lloyd, resigned.

GRIFFITH, Thos. W., M.D. Aberd., appointed Examiner in Anatomy at the University of Aberdeen.

HUNTER, John, F.I.C., F.C.S. Edin., appointed Examiner in Chemistry at the University of Aberdeen.

JONES, Richard, M.D. Edin., D.P.H. Camb., reappointed Consulting Medical Officer of Health for the Merioneth County Council.

KEITH, Arthur, M.D., F.R.C.S., appointed to the Demonstratorship of Anatomy in London Hospital Medical College.

KITE, Edwin W. D., M.B., M.R.C.S., L.S.A., appointed Surgeon under the Factories Acts to the Oulerton District, Sheffield, *vice* Henry Payne, M.R.C.S., resigned.

MACLACHLAN, John T., M.B., C.M. Glasg., appointed Assistant Medical Officer to Lanark District Asylum, Hartwood.

MINTER, L. J., M.D. Brux., M.R.C.S., L.R.C.P., L.S.A., appointed Medical Officer of the Workhouse of the Uxbridge Union, and Certifying Factory Surgeon for the Uxbridge District.

MOTT, F. W., M.D. Lond., F.R.C.P., M.R.C.S., appointed Pathologist to the London County Asylum.

PHILLIPS, Dr., appointed Medical Officer of Health to the Market Harborough Rural District Council.

RANDALL, Dr. W., appointed Medical Officer of Health to the Maesteg Rural District Council.

ROWNOTHAM, A. J., M.R.C.S.Eng., reappointed Medical Officer for the Newton on Trent District of the Gainsborough Union.

SMITH, Jas. Lorrain, M.A., M.D. Edin., appointed Examiner in Pathology at the University of Aberdeen.

STUART, J. A. Erskine, L.R.C.P. Edin., L.R.C.S. Edin., appointed Medical Officer of Health for the Borough of Batley, *vice* Alfred Swann, M.D., M.R.C.S.Eng., deceased.

THOMPSON, W. H., F.R.C.S., appointed Examiner in Physiology at the University of Aberdeen.

THOMSON, J. A., M.A. Edin., appointed Examiner in Zoology at the University of Aberdeen.

WARNER, Francis, M.D. Lond., appointed Examiner in Materia Medica at the University of Aberdeen.

WHITAKER, J. Ryland, B.A., M.B. Lond., F.R.C.P. Edin., L.R.C.S. Edin., appointed Lecturer on Anatomy at Surgeons' Hall School of Medicine, Edinburgh, *vice* Macdonald Brown, F.R.C.S., resigned.

WILL, John C. Ogilvie, M.D. Aberd., appointed Examiner in Surgery at the University of Aberdeen.

WILLS, Dr., appointed Medical Officer of Health to the Blythe and Cuckney District Council.

WILMOT, Thos., L.R.C.P. Lond., M.R.C.S., appointed Honorary Medical Officer to the Bradford Infirmary.

WILLSON, George, L.R.C.P. Lond., M.R.C.S. Eng., reappointed Medical Officer of Health for Newington.

MACKAY, John Sutherland, M.A., M.D., D.P.H., appointed Medical Officer of Health for the Burgh of Kircaldy, *vice* Henry Gordon, M.D., deceased.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

WEDNESDAY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Beevor.

THURSDAY.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, 20, Hanover Square, 10.30 A.M.—President's Address. 11 A.M.—Discussion on the surgical Treatment of the Accessory Cavities of the Nose, introduced by Dr. Luc (Paris), Dr. Bryson Delavan (New York), Dr. John N. Mackenzie (Baltimore), Dr. F. H. Bosworth (New York). 3 P.M.—Discussion on the Treatment of Chronic Laryngeal Stenosis, introduced by Dr. Sajous (Paris).

FRIDAY.

BRITISH LARYNGOLOGICAL RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, 20, Hanover Square, 10 A.M. — Exhibition of Cases. 11 A.M.—Discussion on the Therapeutics of Diphtheria, with special reference to Antitoxin, introduced by Dr. G. Sims Woodhead, Professor C. S. Sherrington. 3 P.M.—Discussion on the Surgical Treatment of Laryngeal Tuberculosis, introduced by Dr. Heryng (Warsaw), Professor Krause (Berlin), Dr. Gleitsmann (New York).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

ANDERSON.—At Faversham, Kent, on July 14th, Maud, wife of Dr. C. M. Anderson, of a son.

OWEN.—On July 10th, at Hampton-on-Thames, the wife of Arthur Deaker Owen, M.R.C.S., L.R.C.P. Lond., of a son.

MARRIAGES.

CLAY—HEAVEN.—On July 16th, at St. Mary's, Moseley, by the Rev. Canon Wilkinson, D.D., assisted by the Rev. W. H. Colmore, M.A., Augustus Clay, M.R.C.S. and L.S.A. Lond., youngest son of the late Professor John Clay, Birmingham, to Katie, daughter of Henry Heaven, Esq., Chantry Road, Moseley. At home, "Ravenscroft," Alcester Road, August 14th, 16th, 21st, and 23rd.

NORTHCOTE—ANDERSON.—On July 11th at Christ Church, Lancaster Gate, by the Rev. F. R. Hodgson, M.A., Rector of Little Gaddesden, assisted by the Rev. F. A. O'Brien, M.A., Vicar of Walton, Warwick, Ernest Augustus Northcote, LL.B. Camb., Puisne Judge of the Supreme Court of Judicature, Jamaica, son of the late Stafford Henry Northcote, of Belgrave Road, S.W., to Helena Jane (Lena), eldest daughter of Izett W. Anderson, M.D. Edin., formerly of Kingston, Jamaica.

DEATH.

GRIFFIN.—On July 18th, at the residence of his mother, 11, East Park Terrace, Southampton, John Griffin, M.B., of Port Elizabeth, South Africa, eldest son of the late R. W. Wandby Griffin, M.D.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MEMBER B.M.A. desires to hear of a home where a girl aged 16, an incurable cripple, would be received either free or for a small weekly charge.

DR. A. H. BOYS (St. Albans) is anxious to hear of a home to which a child, crippled and disfigured by burns, could be sent to learn a trade.

C. I. K. would like to know where he could get information relating to hypodermic medication in syphilis, and also what results have followed the use (hypodermically) of olive oil, lanoline, and mercury in this disease.

MAY asks for hints or cautions to be observed in the operation of circumcision in a child. Would be especially obliged for an opinion on the Malay operation practised by Haji Rasah Bob who, he believes, dispenses with any ligatures or stitching of mucous membrane.

DR. R. CLEGG (Clayton-le-Moors) asks for suggestions in the treatment of a case of excessive secretion of saliva. There is no abnormality in the mouth or salivary glands; the patient is a man of 50, temperate, and a non-smoker. Belladonna and astringents have been tried with no good effect.

AN ALTERNATIVE FOR CONTREXÉVILLE.

A MEDICAL man of more than thirty years' practice has been for some time past suffering from the after-effects of influenza with suppressed gout. A physician has recommended his going to Contrexéville for the baths and water. As he has a dislike to such banishment and absence from business, can any medical brother suggest any place in England excepting Bath, where he might look for the same results?

TREATMENT OF CHRONIC CONSTIPATION.

PHENAS writes: Can any reader give me advice as to treatment in a case of chronic constipation of several years' standing? The patient is a lady, aged 35, and dieting, purgatives, massage, electricity, and enemata, have only given temporary or no relief. There is no organic disease, but the circulation is somewhat feeble.

ANSWERS.

VERITAS.—Hypnotism in the hands of properly qualified medical men is legitimate, and many medical men avail themselves of it in suitable cases. The use of ozone has been found useful by members of the profession.

MEMBER B.M.A.—We would recommend our correspondent to obtain Parkinson's *Hygiene and Diseases of Warm Climates*, Young J. Pentland. It is not a small book, but, so far as we are aware, there is no short work on this great subject published in English.

GAMMA.—Under the Medical Act (1886) a registered medical practitioner can only require a foreign degree in medicine to be added to his name as an additional title in the *Medical Register* if he can satisfy the General Medical Council that he obtained such degree prior to the passing of the Act (Sec. 6).

SELF RESTORER.—The Medical Defence Union has had this matter in hand for some time, and is taking steps with the Metropolitan police to bring the offender to justice; but there are many difficulties yet to contend with before this can be done. The attention of the Postmaster-General has been called to the circulation of this pernicious literature, which there is power to stop under the Postal Acts.

DR. GEO. B. BEALE (Bournemouth) advises "M.B." to send his patient to Bournemouth. There is no doubt some quality in the air, attributed by some to its dryness and by others to the exhalations from the pines, which is very salutary to all suffering from lung affections, and more especially bronchial troubles, even during the last winter it was seldom that some hours enjoyable exercise in the open air was not possible even for invalids.

NOTES, LETTERS, ETC.

A MOWGLI IN REAL LIFE.

FROM Calcutta we have a new version of Mr. Kipling's Mowgli stories. A little girl was said to have been found a few years ago in the woods suckled by a she bear together with her own cubs. The child was sold to a menagerie, from which she escaped; after this she spent five years in a hospital and was discharged as incurable, the complaint being addiction to the wild habits of her foster mother. Later we are told that this wild little waif was found wandering about the streets of Jalpaigiri, and was rescued by the manager of the Calcutta Orphanage, under whose care she remained two years. Attempts were made to humanise the strange little creature, and to teach her human speech and to eat human food, but civilisation was too much for her and she died. We hope that Mr. Kipling will not borrow the fortunes of the rising generation by giving a similar sad end to Mowgli. But did not Mowgli marry and enter the Forest Department?

A GRAVE RECEPTION OF THE CHOLERA.

A GRUESOME story reaches us from France of the preparations made by a certain mayor of a village to receive cholera, which showed more *naïveté* of resource than knowledge of sanitation. There was an outbreak of cholera, and the mayor received instructions from headquarters to make all necessary preparations and to take the required precautions as the epidemic was rapidly spreading. The worthy mayor was puzzled, for he did not know what to do and how to prepare for cholera. After a while he reported, however, that all was in readiness. On inquiry it was found that he had ordered a number of graves to be dug in the cemetery sufficient to bury the entire parish if necessary. He had certainly taken a very grave view of the situation.

THE ASSOCIATION AND THE INTERESTS OF GENERAL PRACTITIONERS.

DR. T. GARRETT HORDER (Cardiff) writes: In a letter I received from the late Dr. Withers Moore, he made use of the following words in writing on the question of medical reform, and referring to the General Practitioners Committee, which at that time he was endeavouring to get appointed: "But all this will be of no avail unless the general practitioners in a body shake off their apathy, and really know and express what they want." And you, Sir, writing last year on the subject of Dr. Arthur Welsford's paper, urged the members of the Association through the agency of their Branches to make known their opinions on this question. I have noted with pleasure that a considerable number of Branches have passed resolutions urging the Association to take the necessary steps to defend the interests of its members.

My object in writing you to-day is to call the attention of members to the resolution which will be proposed at the annual meeting by Dr. Arthur Welsford, and to urge them to be present and make their opinions known. The London meeting affords the best possible opportunity of gauging the feeling of the Association on this vital question. The Council will naturally be influenced by the amount of support the resolution obtains, and, if it voices the honest convictions of a vast majority of the members, the Council will take up the subject *con amore*, and do everything in their power to draw up a practical scheme for presentation to the members at an early date.

THE WATER SUPPLY AND DRAINAGE OF PARIS.

A RECENT Paris thesis—which has been added to the Library of the British Medical Association—by E. Brun gives a sketch of the recent development of municipal hygiene in Paris and its influence upon health. By recent legislation a complete scheme of sanitation has been initiated dealing with water supply, drainage, and purification of sewage. The Parisians already receive a supply of spring water, caught at its point of emergence, carefully conducted through covered aqueducts, and protected from the air and from causes of contamination up to the tap, amounting to more than 100 litres a head a day. According to new regulations, all soiled water must be immediately conducted into the public sewers and carried beyond the city boundaries, and it is expected that in a dozen or fifteen years all this will be purified and utilised by application to the land. Already there is provision for dealing with one-fifth, and in the current year for one-third of the total volume received by the drains. According to M. Brun,

In 1878-78 the mortality was			23.49 per 1,000
In 1879-83	"	"	23.43 "
In 1884-88	"	"	20.14 "
In 1889-93	"	"	18.62 "

The great difference between the second and the third period marks the introduction of these two sanitary measures. The scheme is at present so far from complete, that it may be questioned whether other influences may not be at work to produce the improvement in the death-rate.

THE REALITY OF APPARENT DEATH.

DR. GEO. STEELE PERKINS (Wimpole Street, W.) writes: In answer to Dr. Jennings's query: "Is the feeling of the pulse a sufficient delicate test to decide conclusively cessation of the heart's action?" I would answer emphatically "No."

In 1882, at Exmouth, Devon, I was called by a midwife to a case of accidental hæmorrhage at full term. The patient became collapsed and quite unconscious. The pulse at the wrist had grown weaker and weaker until it could not be felt, and the ear placed over the apex of the heart was the only means of telling that life was not extinct as natural breathing had ceased. From the time of her becoming unconscious I frequently injected ether subcutaneously, and directly breathing ceased performed artificial respiration; no means for transfusion was obtainable. Whilst performing artificial respiration, I frequently placed my ear over the heart apex to know if life was ex-

tinct, and on one occasion for the space of at least one or two minutes there was no movement of the heart audible, and looking up to her mother I said: "Your daughter is dead." Raising myself I happened to put my fingers over the apex, and presently felt a slight flutter like a butterfly's wing. Setting to work again at artificial respiration and subcutaneous injections of ether, I presently found the heart getting a little stronger, and in course of time an effort at respiration was made. The pulse at the wrist could certainly not be felt for considerably over half-an-hour. The patient made an excellent recovery.

Public Trapezing.

Dr. G. Herklots Vos (Tottenham, N.) writes: I noticed lately at a seaside resort, the use by the public at large of the new trapezes on which the performer for his own pleasure and the inward delight of being seen and admired by others, holding on to a bar fixed to a moving pulley block slides down an inclined wire several yards, and on reaching the end brings the journey to a sudden end by elevating the knees or legs against a sack of some soft material. The shock of stopping is great. I saw both sexes, and even women of 30 years or so performing. I leave it to my professional brethren to judge of the result to uterus, ovaries, intestine, etc.

Ice Cradling in the Treatment of Acute Disease.

Surgeon-Lieutenant-Colonel R. H. Quill, A.M.S., writes: In the British Medical Journal for May 11th, 1895, Dr. Blaikie Smith has an article On the Treatment of Acute Pneumonia by Ice Cradling. I use an ordinary surgical cradle or cradles, made somewhat broader than is usual, and I attach a tray to each cradle. The tray is made of a light tin frame about 14 inches long by 10 broad, with sides 2 inches deep and pierced with a few holes; a floor for this frame is made by attaching to it a piece of flannel lined on its outside with oiled silk. The tray thus formed, having been lightly filled with ice in small lumps, is attached by means of tapes to the cradle, and suspended over the patient in such a way that, although the floor of the tray is in close apposition with the whole of the abdomen or chest wall, as may be required, there is still no pressure or undue weight on them.

Should there be no abdominal or thoracic indication for the apposition of ice to the patient's body, the tapes are shortened, when the tray or trays will then be suspended over the patient's body in much the same way as Dr. Fenwick's ice pails; and by throwing over them a light sheet a constant current of cooled air will surround the naked or lightly clad patient, and his temperature be kept thereby in check.

In cases of enteric fever, when we have abdominal distension or any appearance of blood in the stools, I invariably employ the ice trays closely apposed to the abdomen in the manner I have described. The advantage I claim for this modification of ice cradling is that with one apparatus we have the means of either surrounding our patient with cooled air, or of applying to his body an iced poultice, as the nature of his case may require.

Varicose Aneurism from a Stiletto Wound.

Dr. W. Wilson (Florence) writes: Professor Colzi, the distinguished chief of the Surgical Clinic at the Sta. Maria Hospital of Florence, had under his care a man, aged 37, with a traumatic varicose aneurysm between the left vena innominata and the arch of the aorta, produced by a wound from a stiletto, perforating both vessels at the same moment. The wound was followed by profuse hæmorrhage and insensibility. He was confined to bed for a month, and the wound healed by first intention; four months after, having resumed work, the left side of the face and left arm began to swell. Two years later there was a dark red discoloration of the parts in the same localities, and shortly afterwards non-pulsating exophthalmos; the veins also in the supraclavicular region and on the anterior superior part of the thorax became pulsating and dilated. On auscultation there was a thrill over the sternum, continued along the course of the internal jugular, left axillary, and brachial veins, which could also be detected along the cranial sinuses. On December 10th, 1894, eleven years after the injury, the patient was seized with thrombosis, followed by apoplexy and death. The *post-mortem* showed acute cerebral œdema; the vena innominata was distended, forming a sac the size of an orange, communicating with an opening of about 7 mm. in the arch between the innominata and the origin of the left carotid. The fact of a man living for so many years and following his ordinary occupation is extraordinary and the nature of the accident so singular that the writer is unable to find any record of a similar case, and would feel greatly obliged for any assistance in further search.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Dr. F. H. Alderson, London; F. J. Allen, M.B., Birmingham; A. J. Anderson, M.B., Pembroke; C. M. Anderson, M.B., Faversham. (B) Mr. A. T. Bacon, Leeds; Mr. H. Brook, Bridgwater; Mr. G. F. Blake, London; Dr. E. M. Brockbank, Manchester; Mr. C. A. Ballance, London; Mr. G. H. Bate, London; Dr. G. B. Beale, Bournemouth; Dr. H. W. R. Bencraft, Southampton; Behar; Mr. J. Buckenham, Cambridge; Mr. W. E. Bond, Brighton; Mr. W. Baker, Bognor; Mr. J. Batteson, London. (C) Messrs. Thomas Christy and Co., London; A. Calder, M.B., London; Mr. T. Chismon, London; Mr. E. Clegg, Clayton-le-Moors; Dr. A. Calmette, Lille; Dr. J. Campbell, Belfast; Sir Charles A. Cameron, Dublin; C. J. K. (D) A. Davidson, M.B., London; Mr. B. Davies, London; Disgusted; Miss D'Orsey, London; Mr. T. V. de Denne, Cradley Heath; Mr. W. G. Dickinson, London; Dr. Bernard Dyer, London. (E) Enquirer; A. S. Eccles, M.B., London; Mr. H. S. Elliott, Southsea. (F) Dr. M. J. Foster, Maloja; Messrs. Fletcher, Fletcher and Co., London; Dr. J. L. Firth, Bristol; Mr. W. Freeman, Reading; Dr. S. G. Felce, Saltburn; F.R.C.P. (G) Dr. J. Griffin, Llanhilleth; W. C. Greig, M.B., Tangier; Mr. N. Grattan, Cork; J. Gibson, M.B., Doune; F. E. Gahagan, M.B., South Norwood Gamma; Mr. G. G. Gidley, Cullompton; G.H.B. and T.F.B.; G. Gledhill, M.B., Oldham. (H) Mr. H. Hutchinson, London; T. E. Hughes, M.B., Wandsworth; R. Howden, M.B., Newcastle-on-Tyne; Mr. T. G. Horder, Cardiff; Mr. W. Y. Harris, Calne; Mr. F. B. Hallowes, Redhill; Dr. B. Haynes, Malvern. (I) Ignoramus. (J) Junior; Dr. T. Jones, Eastbourne; Dr. R. Jones, Blaenau-Festiniog; Mr. F. W. Jolliye, Alresford; Mr. H. W. Joynt, Armagh. (K) Mr. L. H. G. Kerr, London; E. W. Kite, M.B., Sheffield; Mr. M. Koettlitz, Butterknowle; Dr. J. Kerr, Bradford; Dr. A. Keith, London. (L) Mr. A. A. Lipscombe, Borough Green; Mr. G. H. Lough, London; Dr. A. Lorand, Carlsbad; Leprosy; Mr. F. S. Less, Holywell; Mr. A. T. Lowe, Boothstown; Dr. E. Liveing, London. (M) Dr. R. G. Macdonald, Paisley; M.B.; Dr. W. Marcet, London; Mr. J. T. Maclachlan, Shotts; Member of the B.M.A.; Dr. H. W. G. Mackenzie, London; Mr. J. G. Macnaughton, Arbroath; Medicus; Mr. D. J. Minter, Uxbridge; Member. (N) G. P. Newbolt, M.B., Liverpool; Mr. J. W. Nicholson, Gainsborough. (O) Messrs. O'Driscoll, Lennox, and Co., London. (P) Mr. N. Palmer, Woking; Puzzled; Sir W. O. Priestley, London; Mr. W. O. Prash, London; Dr. G. W. Potter, London; Messrs. Pease Sons and Co., Darlington; C. E. Piers, M.B., Cape Town; Mr. S. Paget, Bude; Mr. N. Parriti, Huddersfield; Mr. D. N. Paton, Edinburgh; Mr. A. Price, Birmingham. (R) Mr. J. M. Richards, London; Dr. J. Rutherford, Shipley; Dr. A. Routh, London; Mr. E. Ringrose, Newark-on-Trent; Mr. J. Rand, London. (S) Dr. C. J. Symonds, London; Mr. J. P. Smith, Edinburgh; Mr. A. Stradling, Watford; Mr. J. A. E. Stuart, Didsbury; Dr. F. Semon, London; J. Gordon Sharp, M.B., Leeds; Dr. P. C. Smith, London; Mr. J. H. Scott, Camberley; C. F. Scott, M.B., Horseforth; W. P. Simpson, M.B., Lincoln; Scalpe. (T) Dr. C. H. Taylor, Derby; Mr. H. Taylor, Guildford; Mr. C. W. Thies, London. (U) T. E. Underhill, M.B., Barnt Green; Dr. J. C. Uhthoff, Brighton. (W) Dr. F. Warner, London; Mr. O. M. White, Eltham; Mr. E. F. Wright, London; Mr. R. Walker, Aberdeen; Mr. B. Wiggins, Barnsley; Mr. N. J. Wright, Morpeth; Dr. W. Whitelaw, Kirkintilloch; Dr. J. W. Washbourne, London; Mr. J. Wilson, Spalding; etc.

BOOKS, Etc., RECEIVED.

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Microbes and Disease Demons. By Edward Berdoe, L.R.C.P.Edin., M.R.C.S.Eng. London: Swan Sonnenschein and Co. 1895. 1s.

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The Theory and Practice of Counter-Irritation. By Dr. H. C. Gillies. London: Macmillan and Co. 1895. 6s.

*** In forwarding books the publishers are requested to state the selling prices.

AN ADDRESS[1]
ON
OVARIAN HERNIÆ, AND THE PROTRUSION OF THE APPENDAGES THROUGH RUPTURE OF THE VAGINAL WALL.

BY JOHN WARD COUSINS, F.R.C.S., M.D.LOND.,
President of the Council of the British Medical Association, and Senior Surgeon to the Royal Portsmouth Hospital.

[ABSTRACT.]

GENTLEMEN,—Ovarian displacements are of various kinds. Sometimes an ovary is protruded in the inguinal region, either above or below Poupart's ligament. When it is displaced in the groin it occupies the position and exhibits the appearance of an ordinary inguinal hernia. Occasionally it is found in the sac of a femoral hernia; an ovary is often displaced within the pelvis backwards and downwards into Douglas's space; when lodged behind the uterus it can be recognised by vaginal or rectal exploration as a small and elastic swelling filling the recto-vaginal fossa. Occasionally the vaginal wall is ruptured, and the appendages are protruded into the vagina or even appear externally.

In some cases of ovarian inguinal hernia the displacement is congenital, and arises from a slight error in the early development of the organ. In its descent from the lumbar region it undergoes a considerable change of position, attended by the shortening of a band which corresponds to the gubernaculum testis in the male. Now this band consists of a fold of peritoneum containing involuntary muscular fibres, and it extends downwards from the lower part of the Wolffian body towards the rudimentary uterus, where the ovary is normally arrested in its downward course. Occasionally, however, the organ takes too much the direction of the testis, and by the atrophic shortening of this band it becomes fixed to the skin of the groin which is destined to become the scrotum. Thus, by a slight error, the ovary gets attached a little out of its normal position, and is drawn towards the abdominal ring, and ultimately escapes into the open vaginal process of peritoneum and is protruded into the labium. This form of ovarian hernia is in my experience always irreducible, for the proximal end of the canal soon becomes obliterated.

In the acquired form of ovarian inguinal hernia the protrusion may take place into the sac of an old rupture, and this accident generally occurs soon after labour. Women who have had several children seem prone to this displacement, and I think this can be traced to the relaxed condition of the abdominal walls and the elongated state of the broad ligaments; for the uterine appendages must undergo very considerable stretching before an ovary can find its way into the inguinal canal. The displaced organ is always liable to inflammatory changes, and occasionally it has been known to undergo cystic or sarcomatous degeneration.

Now, as regards diagnosis, an ovary displaced into the inguinal or femoral region presents many of the characters of an ordinary hernia. Whenever it occupies the sac alone, it is usually a small oval and non-resonant tumour, it never gurgles on manipulation, and it does not feel soft or doughy. When of small size it really presents very much the appearance of a swollen inguinal gland.

I do not think it is often possible to recognise an ovary in a hernial sac. Schroeder[2] states that in one of his cases the diagnosis was remarkably clear. "While the left ovary could be felt lying rather far back but in every other respect normal, nothing resembling an ovary could be found among the uterine appendages on the right. On this side, however, the uterine appendages were drawn down towards the inguinal canal, and in front of them lay a body of the size and form of an ovary in a little hernial sac. This body was only slightly sensitive on deep pressure, and the patient had not noticed that it ever appeared swollen during the menstrual periods. On grasping it externally with one hand and with the other pushing the uterus backwards and towards the left a decided traction could be exerted upon the body in the hernial pouch; it would slip upwards and outwards from between the fingers which held it, but it could not be drawn through the inguinal canal, nor could it be replaced by external manipulation."

Sometimes the diagnosis has been assisted by changes occurring in the tumour during the menstrual epoch, as the displaced organ may become enlarged and painful from functional activity, and then as soon as the period passes off these symptoms gradually subside. These changes, however, do not always occur in ovarian hernia, and therefore their absence cannot be regarded as conclusive evidence that the protrusion does not contain an ovary. In the following case of acquired inguinal ovarian hernia pain, swelling, and obstinate nausea followed a miscarriage which was attended with considerable hæmorrhage.

C. D., a stout woman, aged 34, was admitted under my care into the Royal Portsmouth Hospital in November, 1894. She was the mother of eight children, and had had three miscarriages. On examination an ovoid tumour, about the size of a small egg, was found in the right groin. The swelling was both firm and fixed, and it occupied the position of an inguinal hernia. She stated that it had never exhibited any enlargement or tenderness at the menstrual period. It had existed ten years, and had never caused her any inconvenience until her last miscarriage, but since that occurrence it had become larger, often very painful, and the slightest pressure excited a sickening uneasiness. On account of these urgent symptoms she was very anxious to have it removed, and at her request I excised the tumour. It contained an ovary, and the sac and its coverings were much thickened by chronic inflammatory changes. On section it exhibited a well-marked corpus luteum. The patient returned to the hospital some weeks after her discharge in good health.

A few words as regards treatment. In ovarian inguinal herniæ all efforts at reduction are generally useless. In the congenital form it is impossible to return the organ into the abdominal cavity, as the neck of the sac becomes occluded in a similar manner to the normal closure of the canal after the descent of the testicle. Whenever the displaced ovary excites very little inconvenience surgical treatment is scarcely necessary. If the organ becomes inflamed our efforts must be directed to relieve pain and congestion. I have never seen an abscess occur as the result of acute or chronic inflammatory changes, but whenever this is a sequel it should be treated in the ordinary way by free incision. Herniotomy with replacement may be occasionally possible in recent cases of acquired hernia. When pain and swelling are distressing at the time of menstruation, and the patient becomes a chronic invalid, excision is the only remedy. Occasionally an ovary, like a displaced testicle, may undergo sarcomatous or malignant degeneration, and under these circumstances early operation would be the only hope of relief.

The treatment of displacement of the ovary into Douglas's space is often a very simple matter, and in a large number of cases the symptoms can be greatly relieved by rest in the prone position, attention to the action of the bowels, and the application of a well-adjusted pessary. This displacement is sometimes associated with other serious disorders, such as an ovarian tumour, a uterine fibroid, or a chronic malposition of the uterus. Whenever the organ is the seat of hopeless structural change, and is exciting both local and constitutional trouble, surgical treatment is absolutely necessary.

RUPTURE OF DOUGLAS'S POUCH AND PROTRUSION OF THE APPENDAGES.

Prolapse of the abdominal or pelvic viscera through a rupture of the vaginal wall is a very uncommon accident, and is scarcely referred to by any English writers on gynæcology. In all the recorded cases this laceration has been associated with some abnormal condition which has weakened and stretched the vaginal wall. The small intestine and the uterus have been prolapsed through a vaginal rent, and in the case I shall briefly narrate, the appendages were suddenly protruded and strangulated.

Breisky[3] states that spontaneous rupture of the vaginal

[1] Delivered before the Southern Branch.

[2] Diseases of Female Sexual Organs, p. 356, *Cyclopædia of the Practice of Medicine*, Ziemssen.

[3] Billroth and Luecke, *Deutsche Chirurgie*, Lf. 60, s. 99.

wall occurs almost exclusively during labour. A few cases only have been recorded as occurring under other circumstances. Grenser has reported a case in which in a pregnant woman suffering from ascites the retroverted uterus, which was the size of the fist, passed through a rent in the posterior vault of the vagina, and became prolapsed through the vulva. Death in this case was hastened by surgical interference. In another case (Samples) rupture of the posterior vault of the vagina occurred three months after parturition. A finger could be passed through the rent into a cavity which did not communicate with the peritoneum. The rent was closed with a couple of sutures and the patient got well. Breisky agrees that it is probable that the rupture in this case was due to the bursting of a hæmatoma. In another case reported by Fehling, the woman, who was 63 years old, and had had 11 children and 1 abortion, had been in the habit of forcibly replacing a prolapse, which had existed for fifteen years, when it was brought down by exertion. In this case there was rupture of the posterior vaginal wall and prolapse of intestine. Rokitansky recorded a case in which a similar accident was found *post-mortem*, but there was no clinical history.

I am indebted to Mr. Alban Doran for this reference and to Dr. Brunton, the assistant medical officer at the Asylum for the following notes.

Diagram showing the protrusion of the appendages externally. A Rectal prolapse. B Uterus. C Uterine appendages.

L. B., aged 50, a tall and cachectic-looking woman, and the mother of several children, was admitted into the Portsmouth Asylum, under the care of Dr. Bland, in October, 1893, suffering from melancholia. Shortly after admission she was found to be labouring under severe prolapsus of the uterus and rectum. The uterus was completely prolapsed, and appeared externally like a large sausage-shaped body covered by the vaginal wall. The rugæ were all effaced, and some abrasions existed on the cervix. The rectum protruded about 4 inches, and was marked by many superficial ulcerations. Both organs were reducible by manipulation, but no amount of mechanical support was sufficient to retain them in position for any length of time in consequence of the persistent straining of the patient.

A few weeks after admission the attention of Dr. Bland was called by the nurse to a large swelling that had come down during the night. On examination, a fleshy and irregular mass was discovered protruding from the vulva directly behind the prolapsed uterus. On December 29th I was called in to examine the case. The protrusion was found to be an ovary and tube in a condition of acute strangulation, which had escaped through a laceration of the vaginal wall. The patient was in a state of great depression and her pulse was quick and feeble. She complained of great pain, and occasionally vomited. The protruding organs were returned at once, the mass was pulled down, secured at the neck by a ligature, and then cut off. The vagina was wiped dry, dusted with iodoform, and a gauze plug inserted into it. During the after-treatment the patient gave a great deal of trouble by tearing off the bandages; her habits, too, rendered it impossible to maintain local cleanliness, although antiseptics were constantly used and the vagina was assiduously wiped out with iodoform.

The protruded organs fortunately gave very little trouble. Two weeks after the operation a little vaginal hæmorrhage occurred. By the end of February the patient had made a good recovery. She is still under treatment. Her mental condition has not improved, but neither organ has been protruded externally for many months.

In this singular case the uterine and rectal prolapse must be regarded as the primary cause of the laceration. The patient, in a state of mental derangement, gave way to violent and persistent expulsive efforts, which greatly tended to stretch and weaken the pelvic structures. During a fit of straining the rupture occurred, and the uterine appendages, including one ovary and tube, slipped out at once through the rent in the vaginal wall. At the time of the operation the protrusion was in a state of acute strangulation bordering upon gangrene; it was deeply congested and thickened, and presented some resemblance to a placenta. The safety of the patient was fortunately secured by adhesive peritonitis around the seat of laceration.

PRESIDENTIAL ADDRESSES

DELIVERED AT THE

ANNUAL MEETINGS OF THE BRANCHES

OF THE

BRITISH MEDICAL ASSOCIATION.

RATIONALISM IN THE STUDY AND PRACTICE OF PHYSIC.

Delivered at the Annual Meeting of the Birmingham and Midland Counties Branch on June 18th, 1895.

By ALFRED H. CARTER, M.D.Lond., F.R.C.P.,

Senior Physician Queen's Hospital, Professor of Therapeutics Mason College, Birmingham.

[Abstract.]

Gentlemen,—By "rationalism" I refer not to any doctrine or set of doctrines, but to an intellectual temper, a mental attitude which recognises a right and a wrong way of approaching even the simplest things and nourishes the desire to take the right way, or at least to avoid the wrong way, though at the risk of temporarily standing still. It is a mental temper in which the results of observation are submitted to the crucible of reasonable reflection with a view to educe some general principle—some general truth or law. Rationalism is, in short, the exercise of common sense in an uncommon degree. Science without common sense amounts to nothing more than vain and barren scholism. But so long as we bring to bear a shrewd common sense upon the examination of our patients the observation of signs and symptoms and the interpretation of the disturbance on which they depend, and so long as we exercise the same common sense in the selection of remedies, with the effects of which we are daily becoming more familiar, we may claim that our methods are as rational and scientific as those of the student of astronomy, geology, or chemistry.

Again, it is said that medicine is inexact. But I contend that the conclusions or facts of anatomy and biology, on which

the superstructure of medicine so largely rests, are as exact in their way as those of mathematics, and the statement is equally true of medicine itself. If the charge of inexactness when applied to medicine means nothing more than that many of its laws are still imperfectly worked out, and that many of them are as yet altogether unknown; or if it means that by reason of the complexity of its subject matter and the number and variety of interfering conditions we are in many cases only able to forecast with approximate probability the results which will occur under given conditions, it is a charge which is applicable in a greater or less degree to every science known to man.

The methods of all sciences are the same, and consist of (1) observation, (2) comparison and classification of observations, (3) generalisation, and (4) verification; and it is no figure of speech to assert that the methods of modern medicine conform to this test in all essential respects. Let us take typhoid fever as a single example. Simple observation teaches us that in the presence of defective drainage a continued fever is apt to occur, which can be rigidly distinguished by signs, symptoms, and anatomical lesions from all other febrile disorders; we observe that persons living outside the insanitary area may be attacked, if allowed to drink water which flows from it or near it; and, lastly, we observe that the disease is liable to be communicated by those suffering from it to healthy persons, if the former are not kept scrupulously clean, and especially if not kept free from alvine contamination. So much for observation. Then by comparison and classification of our observations we arrive at the following conclusions: (1) That the fever is due to some definite cause associated with defective drainage; (2) that this cause is something which can be carried about in water; and (3) that probably it has some definite relation with the dejecta of those already stricken with the disease. Finally comes the verification, when on the occurrence of several cases in different places at the same time, under a variety of conditions, with the only discoverable agreement in the fact that they have all partaken of milk supplied from the same source, served in vessels which have been washed out with water tainted with sewage.

A contrast is often drawn between rational and empirical medicine as if they involved a natural antithesis. As a matter of fact, empiricism in its best sense, such as occurs for instance in making a carefully balanced comparison between the effects of remedies upon a given disease and the results obtained by using other remedies, or by leaving the disease in question to take its own course, is not by any means opposed to reason or common sense, and has in many instances been productive of most fertile additions to our stock of organised knowledge. All science takes its origin in empiricism; and between purely empirical facts on the one hand and facts having a definite scientific basis on the other we meet with every degree of certitude.

The whole fabric of rational medicine rests upon a tripod, of which the one division is clinical observation and study of the signs and symptoms of disease; the second is the study of the seats and processes of disease; and the third is the study of remedies employed for the relief and cure of disease.

Of the three, clinical study is the natural antecedent of the other two, and is at the same time the most ancient, dating its origin from Hippocrates, 400 years before the Christian era. He it was who first prepared the way for the rational study of medicine, by separating the pursuits of the physician from those of the priest and philosopher, with which it had previously been inseparably identified. He overthrew the doctrines which referred diseases to the malign influence of angry gods, and struck the keynote of rational medicine by declaring that no one disease was more divine or human than another, and that none arose without a natural cause. From this starting point he set himself seriously to observe the signs and symptoms of disease with surprising detail and precision, paying particular attention to their mode of evolution. Such doctrines as Hippocrates adopted in order to give cohesion and definiteness to his practice are often unnatural and erroneous; but he never strongly urged them upon others, and, beyond insisting upon the importance of waiting upon Nature and assisting her in the process of recovery, he nowhere seems to regard his doctrines as more than provisional hypotheses.

The very intellectual strength of Hippocrates as a physician was a source of weakness in the promulgation of his teaching after he had passed away. The spirit of his methods was so far in advance of his age that it was difficult for anyone to follow exactly as he had led. But this is not all. Hippocrates knew no anatomy or physiology; his generalisations rested on no experimental or scientific basis; and therefore, wise as were his precepts, and excellent as was his practical common sense, his teaching lacked just that measure of rationalism which was necessary to ensure its persistence after his death. When the memory of the master grew dim his followers began to split up into sects, many of which entirely threw off his authority. Among these sects there are three to which just a brief allusion must be made: the dogmatists, the empirics, and the methodists. The first were nearest to the Hippocratic model in the importance they attached to the discovery of the causes of disease. The aim indeed was excellent, but in the heat of their desire to establish causes at any price they attempted to build where there was as yet no solid foundation, and to make up for what was wanting in fact by the incontinent employment of their imagination. Are there no dogmatists nowadays? I think there are, and the hindrance which they oppose to the progress of scientific medicine is especially difficult to meet because, owing to the increasing complexity of the problems to be solved, the nearer we get to the final causes of disease, and owing to the technicalities which surround their solution, criticism is necessarily confined to the few, and the results obtained by accredited observers are apt to be taken too much upon trust.

The empirics repudiated all concern with the causes of diseases, and taught that they were to be judged by their symptoms alone, and thus reduced the whole of medicine to questions of treatment, occupying themselves with an endless search for specific remedies. They existed as a separate school for some centuries, and then split into two branches—the one philosophical, culminating in sceptic agnosticism; the other practical, culminating in an apotheosis of the wildest credulity. Empiricism of this kind is with us to-day, leading as before to scepticism and credulity. Nor is it surprising: for, though much of it is probably due to ignorance or idleness, yet we must not ignore another cause, arising from the inevitable fact that the actual demands made upon us all in our daily work of ministering to the needs of the sick are always largely beyond the limits of precise knowledge.

The methodists strained after a pseudo-simplicity by referring all disease to one or other of two groups, according as they were attended with constriction or relaxation of the "pores," to which corresponded a dual system of treatment, on the principle of *contraria contrariis curantur*—namely, by laxatives (bleeding, cupping, and leeches) or astringents (cold air and water, vinegar, and certain mineral substances) respectively. They disdained anatomy, regarded all diseases as general in their nature, and deemed it quite unnecessary to learn their remote causes. This was simplicity at all costs, and it was the boast of one of their most eminent partisans—Thessalus, of Tralles—that he could teach the whole system to anyone in the course of six months. The methodists also have their representatives to-day in the school of homœopathy, in so far as it is still practised conformably to the teaching of its founder. Homœopathic methodism, on the one hand, assumes to have brought the entire cure of disease under the operation of a single law—that like things are cured by like—a law which stands quite outside any considerations with regard to the causes of disease, claiming perfect simplicity and perfect safety; while, on the other hand, homœopathy excludes within the limits of its application every possibility of failure and condemns every system other than its own.

Sydenham revived the Hippocratic method in basing his practice almost exclusively upon clinical observation. "The improvement of physic," he says, "depends upon collecting a generic and natural description or history of all diseases, so far as can be secured." If he had confined himself to this his influence would possibly have been greater than it actually was; but unfortunately he greatly exaggerated the importance of searching for specific remedies, and his well-known doctrine of "epidemic constitution," which he bor-

rowed directly from Hippocrates, was distinctly harmful, by relieving the practitioner from all responsibility in troubling about investigation in the presence of influences entirely beyond his control. On the whole, however, the influence of Sydenham's teaching was bracing in the extreme, and was ably developed by Baglivi in Padua and Boerhaave in Leyden. No praise is too high for the zeal with which Baglivi attacked the prevailing tendency to system making, nor for the luminous simplicity and strong common sense of dear old Boerhaave.

It is astonishing how history repeats itself. As with the teaching of Hippocrates of old, so with that of its glorious triumvirate. It was unable to resist successfully those philosophic tendencies which formed so striking a feature of the eighteenth century. Attention was diverted from clinical observation and study by the animism of Stahl, the vitalism of Barthez, the organicism of Haller, and the methodism of John Brown, in succession. In spite of all this, the silver thread of clinical research was not utterly broken. Auenbrugger, a junior physician at the Vienna Hospital, had published in 1761 a small pamphlet on "A New Invention for discovering Obscure Thoracic Disease by Percussion of the Chest," but its importance was never recognised until it was unearthed and brought into prominence by Corvisart, in 1808, which date marks the effective birth of the art of percussion. Eleven years later Laennec invented the stethoscope, and gave to the world his epoch-making treatise "On Mediate Auscultation." By these new methods of investigating disease at the bedside, and the interest which they aroused, an enormous impetus was again given to the progress of clinical medicine—a result which has since been repeated over and over again by the discovery of fresh instruments of clinical research. By these means, not only has the extent of clinical knowledge been greatly increased, but it has attained a degree of accuracy which probably never entered into the wildest dreams of the mighty clinicians of the seventeenth and eighteenth centuries.

The central and primary idea which underlies pathology as applied to practical medicine is essentially anatomical. *Ubi est morbus?* as Virchow so eloquently argued in his address to the International Congress at Rome, is the question with which every examination of a living patient must begin. To Morgagni (1761) belongs the honour, in his memorable work, *De Sedibus et Causis Morborum*, of being the first anatomist to insist upon the fundamental importance of this question to the practitioner of medicine; and he himself went a long way to provide the means of giving a correct answer to it, thus laying the foundation of morbid anatomy, and bringing it into closer association with practical medicine than it had ever been before. After his time the search for the true localisation of diseases was carried by Bichat from the organs to the tissues; and still later, by Virchow, from the tissues to the cellular elements of which they are built up.

But it is not enough to be able to tell the seat of disease and its likely termination, important as these questions undoubtedly are. We have to recognise the fact that disease is a process, to find out as clearly as we may the nature of the process, and to work out as far as possible the chain of causation involved in the process. It also obvious that a knowledge of perverted bodily processes must be preceded by a knowledge of the same processes in a state of health. Before Harvey's time physiology can scarcely be said to have existed. His discovery of the circulation of the blood produced nothing short of a revolution in the attitude of medicine to the vital processes of the body; but, at the same time, his general conception of their nature was little, if at all, in advance of those who preceded him. The steps by which the modern position was arrived at are briefly these. Descartes, in the seventeenth century, was the first to regard all the properties of living matter as purely physical in their nature, looking upon the body as a mere machine actuated by some central source of power, like the mechanism of a watch. Then came Stahl, who ascribed all vital processes to the working of the soul. Next was Barthez, who attributed them to a central vital principle; and then Haller, who took an important step forward by recognising that the processes of the living body represented the processes of the living parts of which it was built up. This doctrine was still more clearly and definitely expounded by Bichat, who says: "All animals are assemblages of different organs, each of which performs its functions, and concurs, after its fashion, in the preservation of the whole."

The latest addition to rational medicine consists in the systematic efforts which are now being made, and with considerable success, to ascertain the actual effects of remedies upon the body, with a view to our guidance in their selection, and in the application of them to the treatment of disease. The study of pharmacology is yet in its infancy, and the larger part of our practice is still purely empirical; but it has already profoundly influenced the attitude of the practitioner in the employment of remedies.

Where so large a portion of our practice is empirical, it is impossible to lay down universal principles for guidance. There are some general rules, however, to which I attach special importance. (1) In the front rank I place the Hippocratic maxim, "to do good, or to do no harm." 2. The treatment of causes should take precedence of the treatment of symptoms; and with this end in view the investigation of causes should be pushed back as far as possible. 3. In the treatment of symptoms, precedence should be given to those which most obviously hinder any natural tendency to recovery. 4. No active remedies should be used without a distinct conception as to the indication they are selected to meet, not without some definite idea as to what is expected from their employment. 5. In dealing with serious disease, a therapeutic as far as possible to remedies with which we are familiar. 6. The importance of simplicity in the selection, prescription and administration of remedies.

The circumstances of our time are by no means uniformly favourable to the interests of rational medicine. There are two, especially, of which I should like to say a word or so. The first is over-work, by which I refer to an obligation to deal with a large number of cases in a space of time, which makes it impossible to go properly into each. Our hospital and dispensary out-patient departments afford striking illustrations of this. As a result of overcrowding, it is out of the question to give to every case the attention that it requires, and personally I entertain no doubt as to the demoralising influence which out-patient practice—conducted under those conditions—has upon those who engage in it. It accustoms the medical officer in charge to a superficial and haphazard way of practice, and familiarises the student with an example which is most pernicious. Fortunately, in our medical schools the worst results are to some extent obviated by the selection of a few suitable cases for special examination and study, and also by the example of the better methods pursued in the in-patient departments. Similar remarks apply to club practice and parish practice on a large scale, and in a tenfold degree to those abominations known as medical aid societies. Here, however, there is not only the element of over-pressure, but that of under-pay. The weight of remuneration is so woefully low that it is not in human nature to expect that men practising under such conditions are able to do justice either to themselves, their patients, or their profession. It is easier to state the evil than to find a remedy; but nothing can be conceived which is more inimical to the interests of rational medicine than the circumstances to which I have referred.

Another unfavourable influence arises from certain defects in the present system of medical education. So long as the curriculum is crowded with subjects, and with examinations in ever-increasing number, even the best students experience the greatest difficulty in obtaining a firm rational grasp of their work; while the majority are sorely tempted to give up all honest work in despair, and trust implicitly to the "tips" of a crammer and the indulgence of a beneficent Providence. When rational methods of thought and study are thus neglected from the outset they are more often never afterwards acquired.

The remedies for this evil lie largely with the examining Boards. In the first place there should be one uniform preliminary examination compulsory for all, which should be a real trustworthy test of a candidate's intellectual capacity, instead of requiring nothing more than a mere smattering of some half-dozen subjects. Speaking as a teacher of considerable experience, I do not complain of want of ability in the students who come under my notice, but rather of the lamentable absence in so many of them of any kind of exact-

ness or method in their habits of thought and expression. Of course this is traceable to defects in the prevailing system of middle-class education; and I believe, with Mr. Goschen, that the fault is due in large measure to the fact that our upper-class education has been framed in accordance with the wants of a section of society which has no need to work, and that this example, which has been set in the highest educational plane, has made itself felt down to the lowest.

Again, the knowledge that a student is required to possess of chemistry, physics, and elementary biology should be obtained, and the examinations in these subjects should be passed before he is permitted to register; while materia medica might be altogether eliminated from the curriculum with positive advantage and relief, both to teachers and taught. It is also very doubtful whether, in view of the heavy demands made upon a student, if he works as he ought, systematic lectures on medicine and surgery are really necessary. I believe that the fees expended in this direction would be much more profitably employed in maintaining professorships of clinical medicine and surgery, to conduct frequent systematic demonstrations of disease at the hospitals, in which the students should personally take part, and from whom written reports and commentaries of cases should be periodically received for correction. A plan of this kind would have the advantage of bringing the teacher and students into more intimate personal contact, the work done would be more attractive, with the further advantage of securing efficiency both in the substance and style of teaching.

Owing to the short time at their disposal students cannot expect to obtain a large experience. Their object should be rather to lay up a store of useful general principles by the rational and scientific study of a small amount of carefully selected material, which will be the best possible foundation for the practical experience of the future to rest upon. The noblest and highest ideal for teachers is not to load students with a mass of detailed information, however sound, nor with long strings of empirical maxims, however shrewd, but to develop in them an intellectual capacity, and to inspire them with an intellectual interest, which will enable them to go through life teaching themselves. This, in my opinion, can only be done by a vigorous endeavour to make our teaching above everything intelligent, suggestive, and rousing, and by trying to place all we do or say upon as rational and scientific a basis as the state of knowledge permits.

I wish to lay especial stress upon the intellectual interest which belongs to and is an inherent feature of rational methods of work. There are other interests—the interests of success, ambition, profit, and duty, for instance—which, valuable as they often are as incentives to undertake our work and to persevere in it, yet, after all, are external to work, while intellectual interest takes its origin and grows in the work itself. External interest leads us to undertake work for what we can get out of it, while intellectual interest leads us to work for the sake of the work itself.

There are many who care little or nothing for laws, principles, or general truths, whose least it is that they are above everything practical men of affairs; and it is doubtless true that, with vigorous energy, good natural ability, and native shrewdness, such men often command great success, in the usual sense of the word. But, at best, they only serve themselves; their success dies with them; they have nothing which they can impart to others, and have done nothing to broaden the foundations of their work or to lift it on to a higher plane. On the other hand, the man who works from intellectual interest serves others as well as himself. He leaves behind him general principles and truths which not only enrich the common stock of knowledge at the time, but give stability and guidance to all who come under their influence.

I do not pretend for one moment that the whole duty of medical life is summed up in rationalism, be it never so thorough. All the rationalism in the world, by itself, will not make a man a good doctor; but if he has in him the making of a doctor at all, rationalism will give life to his work; it will give him keen pleasure in his work, and will lift forward the work of others in the same calling as himself.

I have only dwelt upon the subject of rationalism as it affects the purely professional side of our work, but unless I am much mistaken there is ample room for the wider application of rational methods into the commercial side of medical life and practice. On this and other phases of my theme I should like to have touched had time permitted.

I have undertaken to show that modern medicine can claim a rational and scientific basis. I have indicated the more important historical steps by which this result has been attained, and I have pointed out one or two of the unfavourable influences with which rational medicine has still to contend. Rational observation and study have immeasurably extended the range of our knowledge, revealed many new truths, and practically created preventive treatment of disease. But above all they have made us free, emancipated us from the thraldom of dogma and the chains of orthodoxy. Such, in brief, is the conquest of rationalism. It does not belong to any one man, to any one country, to any one race, or to any one epoch. It is still in progress, and the full fruition of it has yet to be won, and may be long delayed.

A HISTORICAL SKETCH OF THE PHYSICIANS AND SURGEONS OF THE NORTHAMPTON INFIRMARY IN THE LAST CENTURY.

Delivered at the Annual Meeting of the South Midland Branch at Northampton on June 27th, 1895.

BY ARTHUR H. JONES, M.D.LOND., M.R.C.P.,

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[ABSTRACT.]

DR. JONES prefaced his address with a few remarks in eulogy of those who had preceded him in the presidential chair. He reminded his auditors that in the fifth year of the Branch Dr. Francis, then its President, detailed the history of many of the physicians connected with the town of Northampton. Dr. Jones then proceeded to say that of the physicians and surgeons attached to the Northampton Infirmary none, perhaps, was more distinguished than the founder of the institution, Sir James Stonhouse. His coming to the town was in the days when Northampton wore its early beauty, before the modern factory and other disfigurements had robbed it of so many attractions. "It is on the whole," says a chartographer in 1742, "one of the most elegant towns and delightful situations in Britain, and is surrounded with a greater number of gentlemen's seats than are to be found within an equal distance of any other market town in England so far from London." In the portrait of a divine over the mantelpiece you will perhaps hardly recognise a professor of the healing art. But this remarkable man, who commenced his career as the popular physician, ended it as the popular preacher of fashionable Bristol. Such phenomenal success is seldom attained as Stonhouse achieved. Being but 26 years of age when he came to the town he was prepared to wait for practice, but fortune favoured him, and by the death of Dr. Freeman, his learned and skilful predecessor, he suddenly found himself a prosperous man. In a few months his influence had so increased that he was successful in gathering around him all the nobility and gentry of the county, to found the infirmary, while in the following year he was so well established that the poet Akenside, with all his ability, was not able to share with him the emoluments of his work.

He owed his popularity to his affable and polished manners and his brilliant and instructive conversation. His unbounded interest in infirmary affairs gave him great influence in the management of that institution. His aggressive deism, for such were his opinions on coming to Northampton, soon made him enemies, and his vulnerability lay in his impetuosity and imprudence, which none of his friends could restrain. The storm of opposition broke around him in the committee-room of the infirmary in the autumn of 1746, when he was openly charged with having "rid the gentlemen of the county for three years past," on an attempt made to expel him. This only just failed of success through the judicious interference of his close friend Dr. Doddridge, to whom he was indebted for many acts of kindness, and not the least that he was the means of leading him to abandon the atheistic views he had imbibed from his former master, Dr. Nichol.

This remarkable man was at some time or other at various

with nearly all his colleagues. If the present tendency of professional criticism in the medical world is for the surgeon to be scandalised, if the physician soils his fingers by the catheter or such like minor operation, the reverse obtained 150 years ago, when we find Stonhouse advocating before the committee the creed then maintained (the physicians as a body) that "it was irregular for a surgeon to prescribe internal medicines and that if Mr. Lyon" (his surgical colleague and mayor of the borough) "was still allowed to do so," he would resign, "lest he should render himself contemptible in life and so obnoxious to all his brethren in the profession, as, if he permitted things to go on in this channel he must necessarily become." And what was Lyon's offence? He had operated on a case of fistula, and then prescribed for a subsequent diarrhœa. The house apothecary, according to his instructions, had refused to dispense the remedy, and he had therefore "sent it from his own shop." That this practice was *ultra vires* is proved by the verdict of Mr. Ford, then surgeon at Bristol, which was emphatically against Mr. Lyon. So different was the status of the surgeons in those days. It will be remembered that this occurred just at the time when the surgeons had advanced their position by separating from their union with the barbers to form a company of their own.

The causes of Stonhouse's disputes with his other colleagues are happily unrecorded, but matters proceeded to such extremities that the Committee bid them "pursue the business of the hospital without pique or rancour," distinctly threatening that any one of them against whom "a complaint might be made or misbehaviour proved" should be reported to the general court as "incapacitated from the service of the hospital."

Of Stonhouse's scientific and professional achievements there are no remains. His published writings, though many of them belonging to the early days of his medical career, are of the nature of religious tracts, which passed through many editions. His later career as a preacher was as honourable as his earlier one, and his influence and popularity in no way lessened.

It is interesting to trace the origin of the Leicester Infirmary to one of the physicians of our own hospital. Dr. Watts—himself a Leicester man—practised here from 1757 to 1762, when he returned to the neighbourhood of his native town, and, after a four years' struggle with opposition and misunderstanding, founded a similar institution to our own, amid the plaudits of those who rallied round him. He is said to have been "a man of philanthropic aims and persuasive eloquence. In friendship few exceed him; in benevolence none." This physician also appears to have had some connection with the sister profession, for an ode to him as founder of the Leicester Infirmary is inscribed "to the Rev. Dr. Watts."

Dr. Anthony Fothergill[1] was a learned and scientific man, Dr. Lettsom, the well known genius of the Medical Society, described him as "one of the most amiable of men," and our own Sir James Stonhouse considered him "one of the best physicians in England," to whose hands "he should entrust his life." He has no doubt been often confounded with the famous Dr. John Fothergill, the Quaker. There was no relationship between them, but it was by John's advice that Anthony settled in Northampton, and the senior very considerately encouraged the younger man during the ten years which passed before any satisfactory amount of practice came to him. In Northampton his scientific bent had many opportunities. The severe frost of 1766, during which Fothergill made sundry observations, furnished material for a paper to the Royal Society, of which he was later elected Fellow. Vapour baths and electrical apparatus at the infirmary underwent improvement during his time. The foul air in the wards of the old hospital in George Row supplied him with a sphere of investigation for which the governors supplied the appliances.

Priestley's discovery of oxygen, then called phlogistic air, which occurred so aptly during the early enterprise of the Royal Humane Society, set Fothergill experimenting and theorising. His essay on apparent death dealt with the function of respiration and the application of the facts known, to the restoration of persons drowned and suffocated. This essay secured the prize of the Society. In it he advocated the supply of pure oxygen to law courts and other public buildings, as a valuable means of promoting ventilation. Stoves were to become much more effective under the influence of the same gas. The most remarkable suggestion was that at the stations of the Royal Humane Society glass jars containing oxygen should be stored inverted over lime water, for the restoration of drowned persons. What interest he would have felt in our present method of storing in cylinders and the use of oxygen in pneumonia following influenza, for which latter he himself proposed its employment. An amusing narrative *apropos* of the value of agitating the body of an apparently drowned person, occurs in his prize essay, and cannot be better told than in his own words:

> A remarkable instance accidentally occurred some years ago at a funeral procession, when a sudden jolt of the hearse is said to have disturbed the repose of the apparently dead lady within, who, to the surprize of the attendants and utter confusion of her husband, instantly gave a piercing shriek. This being repeated in the usual shrill and well-known key, left him no room to doubt of his case upon being still actually alive. It therefore obliged him, though very reluctantly, to put an end to the sepulchral ceremonies, and release the supposed corpse, who, it is added, lived many years after, till at last she had the satisfaction of seeing the husband peaceably inurned near the very same spot.

The Bath and Cheltenham waters which he analysed furnished material for another pamphlet. The Japanese altering stone, which had been advocated as an absolute preventive of gout, gravel, and rheumatism, provoked his amusing satire. "What joy and triumph," he writes, "will it not afford thus at once to deposit their gout and stone and bid a long adieu to their nurses, crutches, flannels, and other disagreeable accoutrements! What unspeakable pleasure to triumph over their doctors and apothecaries—to rally them on their ignorance, and finally to put them for ever after at defiance! But they must put on their spectacles and sift the affair more closely, and they will find with grief and astonishment that the morbific particles of gout and stone are too subtil to be caught, and the Japanese have been too hasty in their conclusions."

Leaving Northampton, he made a futile effort to succeed his namesake and patron in London, then went to Bath, where he had an extensive practice. On his decease, at the age of 77, he proved the success of his career by the amplitude of his fortune and the extent of his bequests, amongst which were a sum of money to the Medical Society of London for the Fothergillian medal and £200 to the Northampton Infirmary.

Northampton has furnished its quota to the line of specialists in the person of Dr. Robert Bue, who, being disappointed here, in 1783 repaired to Leicester. Unfortunately his success was interrupted by severe asthma, which compelled him to relinquish the practice of his profession. The value of open air occupation with abundant exercise in the treatment of this malady is well illustrated by his experience, for, after three years' constant employment in attending to the duties of captain of a militia regiment, he fully regained his health and resumed practice at Birmingham.

He contributed to medical literature a work on the disorders of respiration, which was considerably in advance of any then extant, and contained the narrative of his own case. The patronage of the Duke of Sussex, a fellow sufferer from asthma, led to his migrating to London, where he held an honourable position and gained an extensive practice.

The most obvious case of unappreciated genius in the list of our physicians is that of James Curry. For five years and four months he sought to win the notice of the inhabitants of Northampton, then in despair concluded, as Bue and others had done, that to attempt to cope with Kerr's rising popularity was vain. At first he turned to Kettering, but the rejection at Northampton was soon followed by promotion, on March 10th, 1802, at Guy's, where he became one of its most distinguished physicians. Zealous as a student to the degree of permanently impairing his sight by burning the midnight oil, he won the praise of the governors of our infirmary for his regularity and attention to his duties, while his colleagues and successors at Guy's could not speak too warmly of his ardour, acuteness of mind, and brilliant talent.

[1] Born at Sedbergh. Graduated M.D. Edin. October, 1763. He visited America after leaving Leith, but returned home a year before his death, which occurred on May 11th, 1813. He is buried at St. George's Fields, Surrey.

Curry recognised the duty of every man to help his brother in emergencies, but this involved matters which the popular mind regarded as beyond its ken, a long cherished superstition, perhaps too jealously fostered by the profession. His first work written for the Northamptonshire Preservative Society, a branch of the Royal Humane Society, dealt with the means of restoring the apparently drowned and other modes of rendering "first aid." Although his methods were crude and clumsy, they were a step in the direction of that later ambulance movement which now promises to prove a valuable aid to the beneficent work of our profession.

Curry displayed some amusing eccentricities. He had a strong belief in calomel and its universal application. With him there was only one organ discussed—the liver, and only one medicine prescribed—calomel. Curry roundly claimed, when confronted at the *post mortem* examination with an apparently healthy liver, that he had cured it with calomel. This fed of his gave rise to the allegation that he took sandwiches in his carriage which he sprinkled with calomel, and won for him the sobriquet, "Calomel Curry."

His other eccentricity was in extraordinary contradiction of his usually penurious habits. He would frequently visit auction sales, and purchase books, scientific instruments, electrical apparatus, and such like which, once delivered at his house, were simply stowed away and never unpacked. He appears to have been a most unfortunate man as far as his personal health was concerned. A painful ophthalmia, which in a paper he read to the Medico-Chirurgical Society[2] he describes as remittent, was a constant hindrance to him, and once subjected him to Dr. Kerr's lancet, while it necessitated the wearing of those broad-brimmed spectacles which give him so knowing a look in his portrait.

I must not venture to cross the threshold of the present century in my sketch of our predecessors, and therefore must part company with the physicians, only wishing that I had time to tell of Robertson, once president of the British Medical Association at its annual meeting in this town, who figures in literature as the physician from Northampton in *Tom Brown's School Days*; of Kerr, nephew of the first of that name; of Francis, the cautious and refined, whose work on climate, especially that of Spain, may still be read with interest. The list of physicians is a long one owing to the fact that so many resigned the task of competing with Kerr; but the surgeons were not many. This was partly due to Kerr's monopoly, but partly to the long lives that many of them lived.

Of Alderman Lyon I have already spoken. His senior colleague, Mr. Litchfield, who was long connected with the infirmary, is practically unknown to us. The *Mercury* of 1745 contains a curious advertisement in which a gentleman named Daventry, who had been a patient of Litchfield's, seeks to dispel the idea which had gained publicity that his charges were extortionate. I do not think that any member present will regard 25 guineas as an extortionate fee for the senior infirmary surgeon to charge for amputation of the leg and more than thirty visits afterwards to Preston-on-the-Hill near Daventry.

Fabian, on the pretext of silencing calumny, boldly advertised that he would deliver any woman for two guineas in Northampton, or three guineas within five miles, further he would cut for the stone at reasonable fee and search for it for one guinea and a half. One David Bull, who removed to Northampton from Oxford, followed the next month with midwifery fees at half the rate, and further declared that he had restored people the use of their limbs in one tenth the time taken by other country practitioners, seldom confines patients to their beds for fracture more than seven or eight days, and never wounds the rectum in cutting for stone. That Dr. Kerr should have allowed the committee to insert a paragraph in the paper stating that a patient of his had been discharged perfectly cured after cutting for stone in 1774 is a further instance of the low organisation of the professional conscience.

The uncertainty which existed as to the status of any medical practitioner was remarkably illustrated at the appointment of the original physicians and surgeons to the infirmary. Stonhouse, whose qualifications were impugned in common with those of Lyon, had little difficulty in demonstrating his claim to be accepted. Lyon, however, could produce nothing which in these days would pass for a qualification. He had served Cunningham, a regular surgeon, for seven years as an apprentice, was a pupil of Cheselden for a year, was appointed to Joshua Simons for a year, and Rushworth had recognised him as a regular practitioner by placing himself under his care during his own illness, and committing his patients to his charge. Cheselden, Ranby, Shepton, and Bigg had also acknowledged him in consultation.

I must now devote a few moments to that veteran of our locality, Dr. Kerr. He stepped upon the scene in youth as surgeon-in-ordinary and colleague of his partner Litchfield. He soon reigned alone in surgery, till in 1793, with the title of superintending surgeon, he seized the sceptre of the empire of Medicine, and with the enlarged sphere of the new infirmary, of which he was the founder, he ruled as he would, supported only by his juniors, Harden and Locock, till, amid the glories of age, he passed away, leaving the institution again with its unaltered constitution of two physicians and two surgeons.

As an operator he led the van, advancing the point of the amputating knife higher than any preceding surgeon into the region of the hip. Pioneers in surgery often mingle errors with their successes, and so it was with Kerr. Posterity has condemned the occasion of his interference, though it has justified its temerity. Surgeons do not now remove the limb at the hip joint amid suppuration and caries, involving the pelvis, though, with greater precaution, they follow his example in other cases. The record of this case and a four-page pamphlet on the prevention of hydrophobia by the use of mercury are his only contributions to medical literature. But in the open field of surgery he was always to the front, reserving for some special occasion, such as his birthday, any unusually brilliant performance he might be able so to postpone.

The adjoining building is the monument of his fame. To him was due the exposure of all the faults and incapacity of the old hospital in George Row, and his genius evolved all the principles of construction of the present infirmary with such success that to this day it would have been considered admirably adapted to modern requirements had not the necessity of addition revealed some minor drawbacks.

In the committee room his influence was paramount, but his method was not the resistless sway of a dictator, as his detractors insinuated. It was, as his letters show, by that *suaviter in modo, fortiter in re*, which is more resistless still. Thus it came about that Kerr was the man whom the governors delighted to honour. His power did not, however, rest on words and phrases. Those were the days when apprenticeships were in vogue, and a man of eminence attracted many pupils, whose enormous fees, in this case, swelled the coffers, not only of the surgeon, but also of the infirmary. Three hundred guineas was paid by all resident pupils, and of his receipts from others Kerr commonly presented £50 to the institution.

Outside the infirmary his reputation was also established. The poet Cowper refers to him as "quite a gentleman, and a very sensible one." For public spirit he was also known in raising the body known as the Northamptonshire Fencibles, commanded by his son; and the volunteer cavalry of the county, of which he was himself the respected commandant. Before the close of his long career of sixty-one years, the governors entrusted the painting of the portrait hanging opposite to Thomas Phillips, R.A., and an excellent engraving was afterwards executed from it by Say.

One somewhat lesser light calls for a short notice before I close. You see around you, gentlemen, the records of the beneficence of past contributors to the infirmary, but some of you little guess that those extensive hoardings hide a museum the work almost entirely of one indefatigable worker. It was in consequence of the bequest to this hospital of the excellent anatomical and pathological models which the patience and skill of Mr. Robertson, once house surgeon, had made and collected, that this room in which we meet was erected. To the same genius the institution was indebted for an apparatus for reducing dislocation of the shoulder, and another for crushing stone—one of the earliest lithotrites ever invented. But these have been eclipsed by more perfect instruments and more scientific methods.

[2] Vol. iii, p. 315.

I will not weary you with further searchings among the tombs of those who have passed away. On us falls the burden which their shoulders once bore. We may easily point to the faults and foibles of those actors on Northampton's stage, but with their opportunities and disadvantages we might not have done half so well. If in our heavens the sun of knowledge has risen higher, and we no longer grope amid the veiled forms and shapes which met them in those twilight days, be it our aim to fight with at least as great zeal and determination as they to advance the progress of their race and alleviate the ills of our fellow men; not blurring our vision by prejudice nor weakening our powers by internecine strife.

MEDICAL POLITY, AND THE LAW AS IT DIRECTLY AFFECTS THE MEDICAL PROFESSION;

WITH SPECIAL REFERENCE TO THE POINTS WHICH SHOULD BE DEALT WITH IN A MEDICAL ACTS AMENDMENT BILL.[1]

By A. BROWN RITCHIE, M.B., C.M.Edin.

On January 12th last there was published in the British Medical Journal a Bill aiming at the suppression of practice by unqualified persons. That Bill has been condemned by the Lancashire and Cheshire Branch of the British Medical Association as being wholly inadequate, dealing as it does only with the assumption of titles or descriptions implying possession of a degree or licence, or even skill necessary for the practice of medicine, surgery, or midwifery, or any branch of these. The committee of this Branch, having had under its consideration, *inter alia*, that Bill, appointed a subcommittee to inquire into the question of what amendments were desirable, and to draw up a scheme which would serve as a basis or model, and indicate the lines on which a satisfactory Bill should run. In the paper which I have to read I am permitted to lay before you the result of the labours of that subcommittee. Our subject then is, "What are the points which it is desirable should be considered and dealt with in the framing of any Bill purporting to amend the Medical Acts?" In looking at the law as it now stands from this point of view, there are many unsatisfactory points of minor consideration. These, I think, it will be best to avoid. Let us take, then, the principal deficiencies.

Broadly speaking there are six lines on which reform may be advocated. These are:—I. The constitution of the General Medical Council. II. The powers of the General Medical Council. III. The powers of the corporations and universities. IV. Practice by unregistered persons. V. Medical advertisements (indecent, etc.). VI. Certification and registration of deaths.

I.—The Constitution of the General Medical Council.

At the present time 5 members of the Council are Crown nominees, 20 members represent the various corporations and universities, and are elected by cliques of professors or teachers and others, numbering together about 300, while 5 members directly represent the 30 000 registered medical practitioners. With the exception of Victoria University, which includes Liverpool, Manchester, and Leeds Medical Schools, from one of which a representative is sent every five years, each taking rotation, the representatives of the corporations are practically elected for life, and long service is apt to produce apathy, while in some cases the member does not represent the views and interests of the diplomates or graduates of his corporation. The dentists are controlled by the Medical Council; they pay a registration fee, and number about 5,000, but have no representative on the Council, nor has the Council power to appoint one. We propose to amend the present state of affairs by having representatives of corporations or universities elected by the licentiates, diplomates, or graduates of such; a limited term of office on the Council, say four or five years; a member representing the British Dental Association; or by an alternate scheme providing (1) district representation; (2) one Crown nominee; (3) representation of universities and corporations in turn; (4) a member representing the registered Dentists of the United Kingdom.

As the deficiencies in law regarding the powers of the General Medical Council, the powers of the Corporations and Universities, and the practice by unregistered persons, cannot be separated and put under the different headings, one often applying to all three, we will take them together and separate the subjects when we propose treatment for these deficiencies.

The chief points are: (1) Referring specially to the Council: In all matters of control, reform, regulations, recognition of diplomas, standard of proficiency, etc., the Council has no power to act, but can only make recommendations to the Privy Council, two members of which (a quorum) can control it, and through which everything must be done. There is no control over students. There is no control over unregistered persons. Registration is not compulsory for practice.—(Aberdeen Graduate.) A person may be disregistered without being disqualified.—(Sutherland.) Before disregistration the Council must conduct an inquiry which is costly, and could be done much more cheaply and quite as well by the licensing body.—(Partridge, Allbutt.) The Council does not receive the penalties recovered by them in London; they have to bear the costs of the prosecution in case of failure, but the penalty goes to the metropolitan police if the case is won. This is in cases of prosecution for false assumption of titles, etc. (2) Referring to Corporations and Council and unregistered practice. The regulations, standard of proficiency, course of study, and method of conducting examinations vary with the different Corporations. The only body which can prosecute unqualified practitioners is the Apothecaries' Society, and it can only prosecute for practice of medicine, not surgery or midwifery. The Universities (except Cambridge and Durham) cannot withdraw a degree.—(Sutherland.) Some of the Corporations can withdraw, but not restore, a diploma. An infinite variety of titles or descriptions, implying skill necessary to treat disease or injury, can be used by unqualified persons without infringing the present law. An unqualified person may practise without assuming any title or description. A person falsely assuming a title, or pretending to be a physician, etc., must first be warned, and can only be prosecuted if he persist in so doing. An institution wholly supported by voluntary contributions may employ an unqualified medical officer or surgeon. A registered practitioner is liable to be sued for damages for neglect, want of skill, or injury, while an unqualified person is not, though both are supposed to be, equally liable by law. (A registered or qualified practitioner is supposed to have competent skill for treatment. If there is no qualification you cannot assume skill, and if the case requires skill for treatment, and no malice is proved against the unqualified man, there is no case for damages.) The public have to pay the costs of inquests directly caused by practice of unqualified persons.—(Harpurhey Chemist.) Dispensaries may be carried on anonymously when it is difficult to get at the responsible person or to know whether he is qualified or not, etc. Any person may use the name of a duly qualified practitioner with reference to an appliance or proprietary medicine, and the practitioner can get no injunction or restraint, nor can he recover damages for injury to status caused by this practice.—(Williams, Henry Scott, Dr. Fox, etc.)

II.—The Powers of the General Medical Council.

Taking as our model the profession of law, we find that the Council of the Inns of Court is the supreme authority. There is no Privy Council interference—the Council acts independently. The various Inns send representatives to the Council, which controls them as regards examinations and suggests regulations for their adoption. The Inns govern themselves, but as regards affairs common to all they are subject to the Council. There is a uniform examination, but each Inn calls its own students—that is, admits to the Bar. We propose to extend the powers of our Council over (1) registered students, (2) registered medical practitioners, (3) foreign and colonial practioners practising in the United Kingdom, (4) medical Corporations and Universities, (5) unqualified practitioners and their employers.

[1] Read before the Council of the Lancashire and Cheshire Branch of the British Medical Association.

These powers would include granting a representative to any corporation (for example, Dentists' Association). Enacting laws and regulations for the corporations (aiming at uniformity). Making regulations as to course of study, method of examination, etc. Conducting or supervising examinations of corporations. Demanding inquiry by corporations as to conduct of their graduates or licentiates. Discipline over students and practitioners for unbecoming conduct, etc. (by means of bond and declaration signed previous to registration). Compelling registration simultaneously with qualification and making these concurrent. (Precedent—Dentists Act, 1878, Clauses xiii and xiv.) Unregistration and restoration to *Register*. Cancelling of licence or degree and restoration of same. Suspension of licence or degree or from *Register*. Raising or altering fees for registration (annual or compounding). Conducting inquiry by means of judicial committee. Prosecution of unqualified persons practising in medicine, surgery, or midwifery, or any branch thereof. Prosecution of employers of such practitioners having unqualified deputy). Prosecution of persons allowing employment of such (managers or companies allowing doctors to employ an unqualified deputy to do the work). Right to penalties recovered in London. It is also desirable that all premises used for or in the practice of medicine, surgery, or midwifery should bear the name of the person so practising, exposed to public view. And that no institution, whether wholly supported by voluntary contributions or not, shall be allowed to employ an unqualified person as medical officer, surgeon, etc.

III.—THE POWERS OF THE CORPORATIONS AND UNIVERSITIES.

These would require powers of discipline over graduates or diplomates by means of bond and declaration signed previous to registration, and by granting diplomas to be held conditional to observance of by-laws and regulations). Cancelling, withdrawing, suspending, and restoring a diploma or degree. Raising or altering fees for examination or registration.

IV.—PRACTICE BY UNREGISTERED PERSONS.

There are many ways of checking irregular practice. As precedents to our proposals we have, with regard to unqualified practitioners, the Solicitors Act, 1843, Sec. ii and xxxii; the Apothecaries Act, 1875, Sec. xiv and xx (as to assistant, Sec. xvii); with regard to assumption of titles or descriptions, the Dentists Act, 1878, Clause iii; the Veterinary Act, 1881, Clause xvii, Sec. i. We suggest therefore a penalty for the practice, direct or indirect, of medicine, surgery, or midwifery, or any branch of either of them, for or in expectation of gain or profit.—(Mr. Whitehead's resolution.) A penalty for assumption of titles or descriptions implying qualification or even skill necessary for the practice of medicine, surgery, or midwifery, or any branch of either of them, or administration of medical treatment. (JOURNAL Bill, January 12th, 1895. Dentists and Veterinary Acts.) We also propose a penalty for the employment of an unqualified deputy in cases of public appointments, mines, works, etc., which are contracted for at a low fee and worked by unqualified assistants). A penalty for allowing employment of unqualified deputy (affecting managers or companies or owners of mines, etc.). Right of action for damages (tort), if cause for such, when a person is attended by an unqualified practitioner, any contract to the contrary notwithstanding, that is, without the unqualified person having the power to bind a patient not to prosecute him. Right of action by representatives, if cause for such, when a person dies, having been treated by an unqualified practitioner, any contract to the contrary notwithstanding. Criminal proceedings for injury or death caused by unqualified practitioner. Right to public to recover fees paid to unqualified practitioners. Fine of costs in cases of fees paid by attendance of unqualified practitioner. And that any person using the name of a duly qualified practitioner with regard to any appliance or proprietary medicine shall on demand show evidence of his having received authority to do so, and if he cannot he shall be liable to an action for damages by any duly qualified practitioner bearing the same surname as that used.

V.—MEDICAL ADVERTISEMENTS.

The Indecent Advertisement Act applies only to London and such cities as have adopted it—for example, Liverpool. It only makes the posting up to public view or the delivery of pamphlets, pictures, or advertisements of that character penal, and does not apply to advertisements in the newspapers, nor, it seems, to those on sandwich boards or sent through the post. This requires making the London Act refer also to newspapers and sandwich boards, etc.; extending it to the United Kingdom; including within its scope advertisements suggesting the procuration of abortion—"removal of obstinate irregularity," etc.

VI.—CERTIFICATION AND REGISTRATION OF DEATHS.

At present the registrar, an unqualified person, is the judge as to whether there are suspicious circumstances about a death or not. Unregistered persons may notify a death, and their notification is accepted.—(Herbalist.) Certification of the fact of death and identification of the body are not necessary. Fraud by personation of living by dead, obtaining certificate by false information, or forging certificate is easy. The medical practitioner gets no fee for the certificate of death, while the registrar is paid for copies of it. The practitioner is not bound to certify that he attended deceased in the last illness. There is no definition of "attendance during last illness," nor rule as to when a certificate must be given and when not. A very large proportion of stillbirths are uncertified, or certified by unqualified persons (midwives and others); 45 per cent. in Manchester are so certified. Stillborn children need not be buried in a public burial ground, and if not, neither the birth, death, nor burial need be registered.

Following the recommendations of the Special Commission appointed to inquire into this subject—at least in their main lines—we propose: That all uncertified deaths be compulsorily reported to the coroner; that no certificate issued by an unqualified person be accepted; that the fact of death be certified and the body identified; that certificates of death and all copies thereof be got directly from the practitioner; that there be a fee for each certificate or copy; that grounds should be defined for refusing certificates; that "attendance during last illness" should be defined; that stillbirths should be registered and certified the same as ordinary deaths.

Gentlemen, we, as registered medical practitioners, have a recognised legal status. That the benefits accruing from this are so insignificant is, in my opinion, largely due to the apathy and want of cohesion in the profession. The proposals which I have submitted to you are already considered Utopian by some, and no doubt will be by others, as are most schemes of a comprehensive nature when first put forward. These proposals are not original; they have nearly all been advocated by others before, but are now brought together as a whole. We must remember that in advocating provisions which shall be of advantage to our profession, if we are to hope for some measure of success, they must be blended with others which are directly of advantage to the public; this is most clearly shown in the provisions for suppression of practice by unregistered persons. To my mind there is nothing either impracticable or unreasonable in any of our proposals, and Dr. Gledhill, barrister-at-law, to whom I am indebted for the information contained in this paper, has undertaken to show the necessity or advisability of any one of them.

A FURTHER ANALYSIS OF THE WATER OF THE ZEMZEM WELL IN MECCA.

BY

E. H. HANKIN, M.A., Fellow of St. John's College, Cambridge; Chemical Examiner and Bacteriologist to the North-West Provinces and Oudh, and to the Central Provinces,

AND

DR. BAPUJI P. GADIALLY, L.M.&S., Assistant to the Chemical Examiner.

[From the Government Laboratory, Agra, India.]

We owe to the kindness of Mr. Kenrat Hart the opportunity of making a fuller examination of Zemzem water than that reported by one of us in the BRITISH MEDICAL JOURNAL of June 30th, 1894, p. 1412,

The specimen of water in question was brought from Mecca in the year 1894 by Haji Abdush Shukur. The quantity was about 500 cubic centimetres. The results of analysis are shown in the following table, together with the analyses of water from three other sources for comparison:

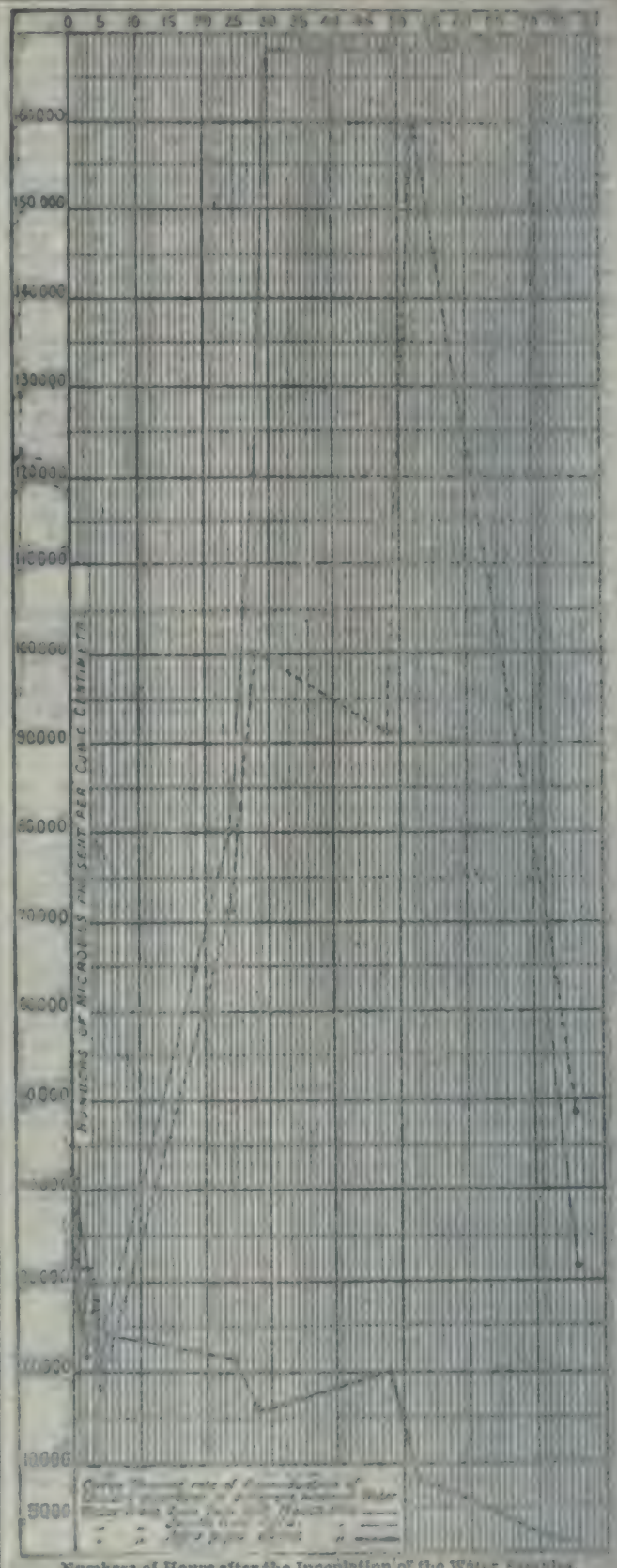
Source of Water.	Total Solids, Grains per Gallon.	Chlorine, Grains per Gallon.	Total Hardness, Grains per Gallon.	Fixed Hardness, Grains per Gallon.	N. as Nitrates, Parts per Million.	N. as Nitrites, Parts per Million.	Free Ammonia, Parts per Million.	Albuminoid Ammonia, Parts per Million.	Sediment.
Zemzem Water, from Surgeon-Major Hankin	280.0	91.24	—	—	—	—	0.23	0.45	Scanty sediment.
Zemzem Water, from Mr Ernest Hart	250.0	77.00	—	—	0.4351	0.0004	0.61	0.24	Very slight.
Water from Jacob's Koti Agra	33.6	1.42	4.2	2.8	—	—	0.00	0.07	None.
Agra Municipal Water	12.6	2.84	5.6	2.8	—	—	0.00	0.04	None.

It is almost superfluous to point out that each one of the results contained in the above table indicate that the water from the Zemzem well must be subject to a large amount of contamination.

The water was also subjected to a qualitative bacteriological examination. A "vibrio," or "comma bacillus," and a microbe resembling the B. coli communis in every respect, except that it did not give the indol reaction, were isolated. The "vibrio" exhibited the ordinary characters of the group when cultivated on different media. It differed from a typical cholera microbe (if the term typical may be ascribed to so variable a microbe as that of cholera) in that it was harmless to guinea-pigs when injected into the peritoneum, and it only gave the indol reaction faintly in a ten-day-old culture and not at all in fresh cultures.

In several cholera epidemics in different parts of these provinces we have found that the cholera microbe was almost universally present in well water at the time of the outbreak, that a short time after the outbreak it was still present, but showing various cultural characters that may be taken as signs of degeneration, and that at a later period (two or three months) it had completely vanished except in a few exceptional instances. Consequently it appears that the finding of a vibrio in water is a sign that it has been exposed to human contamination, and that it may have been concerned in the production of cholera. That the vibrio we met with in the Mecca water had such significance we could not at once conclude, for the water appears to have been brought from Mecca in a vessel that was not hermetically sealed, and had been decanted into a bottle before being sent to this laboratory. We owe our thanks to Surgeon-Major Roberts, of Aligarh, who sent us a further specimen of Zemzem water which reached us within two months of its collection. This water was contained in a hermetically sealed tin vessel known as a "dibia." There was therefore in this case no chance of further contamination after the water left Mecca. In this water we discovered a vibrio which appeared to be a little less attenuated than the other, for its three-day-old cultures gave the indol reaction, and it killed a guinea-pig in thirty hours.

We have applied to the Zemzem water what we believe to be a new method of estimating its fitness for drinking purposes. We have tested its capacity of acting as a culture medium for the cholera microbe. It is, we think, obvious that the presence of not living organic matter in water is objectionable not only because it may be evidence of sewage contamination, but also because it may act as food for microbes. It would seem probable that in the latter respect a direct experiment would give more reliable results than a chemical analysis. The adjoining chart contains the result of our experiment in a graphic form. Three specimens of water were used in this experiment; one, as already mentioned, was the Zemzem water; the second was water from a well in Agra known as Jacob's Koti; the third was the Agra municipal water. Ten cubic centimetres of each kind



Numbers of Hours after the Inoculation of the Water Samples.

of water were put into test tubes and sterilised in an autoclave. They were then inoculated with cholera microbes that had been cultivated for some days previously in very dilute peptone solutions. Immediately after the addition a test was made to see how many cholera microbes were present in a cubic centimetre of each of the specimens of water. At intervals other similar tests were carried out. The results are shown in the chart. It will be seen that (1) in Agra municipal water the cholera microbe nearly or completely dies out within two days, (2) that in Zemzem water on the other hand the cholera microbe reproduces vigorously. At first a slight diminution in numbers took place, but after this the microbe reproduced with facility. (3) In the Jacob's Koti water a similar reproduction of the microbe occurred.

If the above experiment can be taken as representing a natural occurrence, it may be expected that the cholera microbe would produce far more serious effects if it got into the Zemzem well than if it got into Agra pipe water. The latter water is derived from the Jumna, and is subjected to Anderson's purifying process before it passes into the pipes. Other experiments have shown us that probably the bactericidal action of Agra pipe water is also possessed to some extent by the original Jumna water, from which it is prepared. Control cultures were made, and proved that we had to deal with a pure culture of the cholera microbe in the above experiment.

A noteworthy fact may be seen from an examination of the appended curve, namely, that no definite relation exists between the chemical composition of the different specimens of water and their power of nourishing the cholera microbe. On comparing the data for the Zemzem water with those for the Jacob's Koti water, it is seen that the water that is better chemically is the better food medium for the cholera microbe. Further, the comparatively slight difference chemically between the Jacob's Koti water and the Agra pipe water gives no indication of the difference in their powers of nourishing the cholera microbe. It is conceivable that the application of this test on a larger scale might lead to an explanation of certain cases of "local immunity" against cholera.

A PROTEST AGAINST OVER-TREATMENT IN ECZEMA.

By MALCOLM MORRIS, F.R.C.S.Ed.,
Surgeon to the Skin Department, St. Mary's Hospital.

THERE is no general formula for the treatment of eczema, and, to use a famous phrase, no one—not even the youngest among us—is infallible in his methods of dealing with it. Here, however, as in the case of other diseases, he will be most successful who tries to see things as they really are, and not in the light of any preconceived theory. Of the clinical facts eczema we probably know nearly all that is to be known; of the laws which govern the evolution of the process we know something; of the pathological force which sets it in motion we know little or nothing. But if little is known a great deal has been imagined, and the subject has been enveloped in an atmosphere of hypothesis which in practice too often darkens counsel. The notion is still somewhat widely prevalent that eczema is the expression of a definite constitutional "dyscrasia," or in the language of the old pathology (from which the professional mind has not even yet altogether shaken itself free) the outward and visible sign of an inward "peccant humour" of some kind. This superstition, for it is nothing else—leads to errors in the treatment of the disease in two opposite directions—on the one hand of doing too little; on the other, of doing too much. Some, believing that the skin lesions act as "issues" whereby the supposed mischievous principle is withdrawn from the system, leave them untreated in the fear that the healing of them might cause "morbid determinations" to internal organs, a fear for which, according to my experience, there is simply no foundation. Others direct all their therapeutic efforts to forcing on what they call a "crisis," their plan of campaign apparently being to drive the enemy into the open country where he can (in theory) be crushed without difficulty. It is, naturally enough, at hydropathic institutions that this method is most in favour, for there "critical eruptions" are among the usual incidents of the treatment, and therefore easily come to be looked upon as being an essential element in the cure. There is something seductive in the notion of bringing the disease to the surface, and there dealing with it in a summary fashion, but unfortunately the plan does not answer in practice. It is much easier to fan the flame of eczema than to subdue it. The "critical eruption" is very apt to forget that it is merely a strategical manœuvre, and to behave exactly as if it were a natural exacerbation of the disease; like a foreign power called in as an ally it sometimes remains as a conqueror, more oppressive and more difficult to get rid of than the original enemy.

I have seen so many cases of eczema made worse by misdirected therapeutic energy that I think it my duty, for the credit of the profession as well as in the interests of patients, to say a few words of warning on the subject. The importance of avoiding this error has quite recently been impressed on my mind by the following case which I relate as a typical example of the evils of over-treatment in eczema. I give it as far as possible in the words of the patient, who is of intelligence and position:

> On January 9th I consulted a doctor at the request of my friends, and told him of my complaint, which up to that time had been pronounced as gout coming out. The doctor told me I was suffering from eczema in an acute form, and put me on a diet and treatment. This, however, did not seem to be the correct treatment, for I grew rapidly worse and took to my bed. On March 9th I went on leave to my father's house, and there saw the family doctor, who at once recommended a course of hydropathic treatment. I went to a well known hydropathic establishment on March 20th, being only then fit for travelling. I was on arrival put to baths and massage in all its forms. At 7 A.M. I had a glass of hot water, followed by a Russian bath at 7.30. At 10 A.M. I saw the doctor, and then had a sitz bath of oatmeal and borax at 70° F. At 3 P.M. I had a cool pack to make me perspire freely, and then was at once given an oil enema. At 8 P.M. I had a series of bandages put on: (1) To the spine, between shoulders (bread and chillie); (2) to the abdomen, to produce a crisis (bread); (3) to the anus, the part affected, to soothe (bread and boracic). If the irritation became intense at night I was to apply a solution of cocaine and water; if this was useless to use a solution of coal tar and olive oil. For insertion into the anus a suppository of cocaine, cocoa butter, and oil of olives. On these remedies I continued, with restricted diet—only fish and chicken, oat flour, hot water and dry toast, mutton once a day (meals three only)—till May 4th. My eczema when I went to the hydropathic institution consisted of an intertrigo at the anus and round the testicles slightly. When I left on May 4th I had a broad band on the abdomen, highly irritable and suppurating readily; the patch on the testicles had spread down along each leg; the patch round the anus had spread from the hips to a plentiful covering of each buttock. I could not sit or walk, and was forced to sleep in a standing posture, leaning my shoulders against the walls or balancing my legs and shoulders on to armchairs, with a support for the hollow in the back.

There is nothing remarkable about the case here recorded, but it serves to point a moral. A localised eczema had been aggravated by over-treatment till it was on the way to become general; the bread poultice intensified the inflammatory process and the bandages acted as vehicles for the conveyance of inoculable material to the parts to which they were applied. The dietetic restrictions helped to lower the patient's strength without having any beneficial effect on the disease. The plan of treatment, in fact, was founded on an erroneous notion as to the nature of the disease. It cannot be too strongly insisted upon that though some constitutional disorder, such as gout or diabetes, is sometimes associated with eczema and may indirectly react on the skin affection by its effect on the patient's health, eczema in itself is essentially a local catarrh, and as such should be treated by local remedies. Even in the use of these the practitioner should be guided by the spirit of Talleyrand's maxim: *Surtout, Messieurs, pas trop de zèle.*

Too much zeal in the use of strong remedies which cause irritation is more disastrous than the do-nothing policy of those who look upon eczema as a mental derivative. My own method of treating the disease has been fully described elsewhere, it need only be stated here that I trust mainly to local applications of antiparasitic substances, feeling my way with the greatest caution so as to destroy the agents which are causing the mischief without setting up additional inflammation. Constitutional treatment is employed only when there is a definite indication that it is required.

THE Gaskell Medal and Prize in Mental and Nervous Diseases has been awarded, after examination at the Royal Bethlem Hospital, to George W. F. Macnaughton, M.B., C.M.Edin.

ACQUIRED SUBLUXATION OF THE KNEE-JOINT IN YOUNG CHILDREN.

By H. BETHAM ROBINSON, M.S.Lond., F.R.C.S.Eng.,
Assistant Surgeon to, and Demonstrator of Anatomy at, St. Thomas's Hospital; Assistant Surgeon to the East London Hospital for Children, Shadwell.

During the past two years in my out patient room at the Shadwell Children's Hospital I have had three cases which presented the lesions denoted under the above title. As the condition is evidently a rare one, and I am not aware of any previous reference to such a lesion, I have thought them worthy of being embodied in a short paper. One of the cases, S. C., I exhibited at the Clinical Society in April, 1894, when the diagnosis was confirmed by many present, and short notes of this case appear in vol. xxvii of the *Transactions*.

Before detailing the cases I would lay stress upon the following facts as being common to all, and as giving an indication as to the causes at work to bring about this condition. All three cases were in young female children close on twelve months old, who had all been previously healthy and just getting on to their feet. All suddenly, from some altered condition of health, perhaps associated with teething trouble, got flaccidity of the muscles of the lower extremities and probably laxity of ligaments, and, with the advent of this loss of support, the altered movements in the knee-joints were noticed. In none of the cases was there any evidence of rickets, nor was there any reason to consider the wasting associated with any infantile paralysis.

As will be noticed from the accounts of the cases, a favourable prognosis may be given. With simple internal remedies to restore the general health, and rubbing the leg muscles to increase their bulk and tone, the looseness of the joints soon disappears, leaving apparently no evidence behind.

Case I.—E. M., aged 9 months, came to my out-patient room on May 12th, 1893. She had always been healthy, and was the youngest of eleven children. The birth was normal. For the past few days the child had been out of sorts and peevish, apparently in relation with dentition. The mother noticed that she had developed some looseness of knee-joints and general flabbiness of muscles, particularly of the lower extremities. On examining the knees, there appeared no deformity. The joint surfaces and patella were normal, and the relation of the tibia and fibula on either side to each other was quite natural. The range of movement in the knee-joint in the antero-posterior direction was not altered, but laterally displacement could be easily effected. On watching the knees, the child is noticed to shoot the tibia and fibula outwards laterally, at the same time rotating the bones outwards, so that the inner tuberosity of the tibia is directed almost forwards, while it occupies the intercondylar notch. The bones are actively returned to the normal position with a loud snap. The child was given vinum ferri, and the knees and muscles were ordered to be rubbed by the mother with lin. saponis. On June 27th, the condition was very much improved. The muscles had recovered some of their tone, and the displacement could not so readily be brought about. The child also was beginning to get down on its feet again. The improvement was maintained, and the child soon got all right. The child was brought up to me for inspection on April 20th, 1894, when her knees were absolutely right, except perhaps for a slight excess of lateral movement. The muscles were bulky and firm, and she could stand and walk well.

Case II.—S. C., 1 year old, came under my care on February 20th, 1894. She had bronchitis at Christmas. The child before that had been in good health and very strong. Since that time she had not been able to stand down on her feet, and her leg muscles were not as firm as before. There was no evidence of rickets. She was the first child. With the onset of the inability to stand, the mother noticed that the bones of the knee were displaced, returning to their normal position with a loud snap. On watching the child the tibia and fibula on each side were seen to be displaced outwards and forwards, so that the inner tuberosity of the tibia came into the intercondylar notch and looked directly forwards. On manipulation there was some lateral movement but not as much as in the other two cases. The legs were ordered to be well rubbed with lin. saponis, and iron and strychnine given internally. Up to March 6th the child very much improved but she then developed measles. When next seen towards the end of the month the legs muscles were very flabby, and the looseness of the knee-joints was much more marked. She was shown at the Clinical Society on April 27th, when the condition was easily demonstrated. From this time, as she improved in health, the displacement became less and less noticeable, and when last seen, towards the end of the year, her muscles were firm and strong; there was no displacement to be detected, and she could stand and walk fairly well.

Case III.—E. D., aged 9 months, first came under my care, October 2nd, 1894. She had always been a very healthy child, and could just stand on her feet but not walk. Three weeks before the first visit she had a fall, and it was after this that anything abnormal was first detected in the legs. When the child moved her knees it was noticed that they now clicked. The only other features worth noting are that the child appeared "out of sorts" after the fall, and her muscles seemed weak so that she could not now stand. The legs, especially the right one, could be easily rotated at the knee joints, so that the inner tuberosity of the tibia came into the notch. This same position could be effected by crossing one leg over the other. Voluntarily the normal position was reassumed with a loud snap. There was also in this case some freedom of movement in ankle joints. A week later the muscles were more flabby, and in consequence the looseness of the joints was more marked. Under treatment the muscles rapidly regained their proper tension, and with this the abnormal movement of the joint surfaces was less and less able to be demonstrated.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

A CASE OF SPINA BIFIDA CURED BY EXCISION.

(Under the care of Mr. Morgan.)

[By Gerald R. Baldwin, F.R.C.S., Surgical Registrar.]

W. B., a boy, aged 2 months, was admitted into the Children's Hospital on June 14th. From birth he had had a tumour in the back. Examination showed the presence of a large and very tense spina bifida in the lower lumbar region of the spine. In size it was nearly as large as a cocoanut. The skin round the base was normal, but that over the more prominent part of the tumour was red, scar-like, and translucent. There was a free impulse between the tumour and the anterior fontanelle, which was widely open. No umbilication was noticed. There was free movement of the lower limbs, and perfect control over the sphincters. No other deformity was present.

On June 14th Mr. Morgan tapped the tumour with a hydrocele trocar and cannula, withdrawing 6 ounces of cerebro-spinal fluid. After the contents had been withdrawn a large gap was perceptible, corresponding to two or more of the lumbar spines and laminæ, which were deficient. Next day the tumour was as large and tense as before tapping, but no bad symptoms had followed. Therefore, as no signs pointed to the presence of nerve tissue in the sac wall, it was decided to excise the tumour. Another and stronger reason for adopting this method of treatment was the almost uniformly unsuccessful result which Mr. Morgan has experienced with other methods of treatment. The injection of Morton's fluid and simple tapping have both been tried on several occasions without success. In some cases death has rapidly followed these methods, and in others life has been preserved for only a short time after treatment. Accordingly on the 22nd, after a preliminary tapping, the tumour was excised. The sac wall was formed of skin and

...cranial membranes without any nerve tissue, but the sac communicated with the vertebral canal through an opening as large as a threepenny piece. The presence of this communication was suspected before operation on account of the rapid filling up of the tumour after the first tapping. Both the wall and skin were united with silkworm gut, and the wound was powdered with iodoform, over which flexible collodion was painted. Pressure was applied to the wound by means of sublimate wool and an ordinary medium-sized bandage.

On the morning of the 24th the child's temperature was 99°, and on that evening and the following morning it had risen to 103°, but fell to normal next morning. There was also temporary paralysis of the bladder requiring the employment of a catheter on the 23rd, 24th, and 25th, but since then the urine has been passed naturally. These were the only serious symptoms following the operation, although several stitches gave way, and for a time a small quantity of cerebro-spinal fluid escaped. On several occasions the child vomited, but this was stopped by lessening the quantity of milk.

On July 13th the wound had healed completely, and at the present time the only thing to be noticed is a slight protrusion of the scar when the child cries. This is natural, considering the number of spinous processes which are deficient.

REMARKS.—Of course excision is practicable in only a small number of cases of spina bifida. The favourable symptoms in this case were the perfect control over the limbs and sphincters, the absence of umbilication, and the translucency of the growth, which pointed to its being a case of simple meningocele. It was only as a desperate remedy for an otherwise certainly fatal disease that the treatment was adopted, and its very successful result appears to hold out hopes of curing other favourable cases in a similar manner. The case will be exhibited with other patients by Mr. Morgan at the meeting of the Section of Diseases of Children of the British Medical Association on Thursday, August 1st.

REVIEWS.

ARCHBOLD'S LUNACY. Fourth Edition. By S. G. LUSHINGTON, M.A., B.Cl. London: Shaw and Sons. 1895. (Demy 8vo. pp. 1168. 42s.)

THIS edition comprises The Lunacy Acts 1890 and 1891, the Lancashire County (Lunatic Asylums and other Powers) Act, 1891, and all the statutory rules, orders, and forms in force thereunder, also the statutes relating to criminal lunatics, the Lunacy (Vacating of Seats) Act, 1886; and the Idiots Act, 1886.

The book forms a portly volume of nearly 1,200 pages. The table of contents and table of cases occupies 51 pages; 207 are devoted to an introductory part, and 905 pages are taken up with the Acts, and commentaries, and explanations on their sections, as well as with a very full general index.

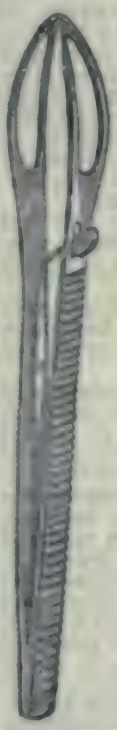
The "Introduction" is a valuable part of the work, giving in essay form a summary of the chief provisions of the various Acts, together with due references to the sections of the Acts which bear upon the particular points which are being described. Following each of the numerous sections and subsections of these long and intricate Acts, and in smaller type, so as not to be confused with the wording of the Acts themselves, there are references to the pages at which the legal definitions of the various terms used may be found, and explanations as to the bearing of some other paragraph, or case, or decision on the particular section, so that the reader consulting the work is spared a large amount of unnecessary research, and has his attention directed immediately to all the essential provisions without being compelled to study an index with anxious care, and to turn to the text of every reference on the subject found under the heading of the particular points on which the work is being consulted.

To the legal profession, also, the book is valuable, and for the fact, among other reasons, that it distinctly states wherefrom each section is taken, and, indeed, a little summary history is sometimes given of the various preceding enactments, amendments, and alterations as to the provisions of the section under scrutiny.

The explanations given are plain. Selecting at random a short example, we notice under Section 36, subs. (1); and following the wording of the subsection; that there are instructions where to find the definition of words used in the subsection, statements of what the subsection is a re-enactment, and that it relates only to summary reception orders; references to the provisions for suspending such orders, and as to temporary removal to workhouse, being also added.

NOTES ON BOOKS.

Infant Feeding by Artificial Means. By S. H. SADLER. (London: The Scientific Press, Ltd. 1895. Cr. 8vo. pp. [illegible]. 5s.)—The importance of the subject discussed in this book will not be disputed, and Mrs. Sadler has brought together much reliable information upon the various divisions of the subject. After discussing briefly the general principles which must be understood in all cases, she deals in succession with cow's milk, condensed milk, and with the milk of goats, mares, and asses. Many useful receipts and alternative methods are given for preparing cow's milk, and the remarks on the use of condensed milk are sound. Special attention is directed to the danger of putting the infant on a starvation diet by using the condensed milk too much diluted—a very common error. The book is rather diffuse, but this is perhaps a fault in the right direction. It is copiously illustrated, and many of the drawings will have all the charm of novelty in this country, where the direct suckling of infants by the goat and ass is not resorted to, and where, indeed, the process is unknown to the general public except through the pages of Daudet's *Nabob*, where the results are not represented in a very favourable light. This was, perhaps, owing to the exigencies of the plot.



REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES

IMPROVED ARTERY FORCEPS.

DR. E. MANSEL SYMPSON (Surgeon to the Lincoln County Hospital) has sought, in the artery forceps illustrated in the accompanying woodcut, to obviate a defect which he finds in nearly all of these instruments. In tying an artery it is desirable that the assistant's fingers should be well out of the way, but in the ordinary pattern, roughened for only half the length of the shaft, it is difficult to get a firm grip unless the finger and thumb are placed low down on the roughened portion, when there is the further objection that there is a considerable risk of loosening the grip. In the forceps designed by Dr. Sympson and made by Messrs. Arnold and Son the sides of the forceps are roughened for nearly three quarters of their length. The improvement also makes the forceps more convenient for use as tentacula for dealing with small tumours, since the longer the pull the easier.

MEDICAL MAGISTRACY.—Mr. Russell Bencraft, of Southampton, has been placed upon the Commission of the Peace for the borough of Southampton by the late Lord Chancellor.—Mr. R. D. Evans, surgeon, has received an intimation that the Lord Chancellor (Herschell) has placed his name on the Commission of the Peace for Merionethshire.

BRITISH MEDICAL ASSOCIATION.

[The following Reports of the Council and of the Committees will be presented at the Annual Meeting to be held in London on July 30th and 31st and August 1st and 2nd, and are published in accordance with the regulations for the conduct of Annual Meetings, which requires that all Reports of the Committees of the Association shall be printed in the JOURNAL *before the Annual Meeting.]*

REPORT OF COUNCIL OF BRITISH MEDICAL ASSOCIATION FOR 1895.

On the occasion of the annual meeting of 1895, your Council have the pleasure of meeting you, after the lapse of twenty-three years, in the metropolis of the British Empire, and, in accordance with By-law 19, of presenting to you the Sixty-third Annual Report.

Since the last meeting held in London in 1873 the Association has been entertained in many of the principal cities and towns in the United Kingdom, so that it has now become the privilege of the metropolis to entertain the members and to show again the hospitality for which it is so justly distinguished. From the great increase in the number of members throughout the British Empire the present meeting is expected to be both large and representative. The Council trust that the accommodation provided for the general meetings in Exeter Hall and the sectional meetings in King's College and the Conjoint Examination Hall (the two last-named Institutions have been most kindly lent by the authorities), will prove adequate for the occasion. Every possible exertion has been made to meet the convenience and comfort of the members and guests attending the meeting.

During the year 1894 the revenue was £36 571, while the expenditure, inclusive of losses on subscriptions from deaths and resignations, was £32,043, leaving a surplus of £4 528; of this £1 [illegible] has been invested in Bristol Three-and-a-Half Per Cent. Corporation Stock. The estimated value of assets over liabilities is £[illegible] and the savings of the Association amount to £45 389. It is expected that a large part of this sum will be shortly required, either for a renewal of the lease of the premises at present occupied by the Association or in acquiring land and building new premises. The Premises and Library Committee have for some time past been employed in the consideration of this important matter.

The investments were valued at the end of the year and were found to have increased in value since the original purchase by £6 334, showing the care with which they have been made.

The number of members reported on the books last year was 15,090. During the year 1,223 new members have been elected, 193 have died, and 451 have resigned, leaving on the books 15,069.

The JOURNAL has, in addition to the usual literary and scientific matter, occupied itself usefully with the thorough investigation of the system of barrack schools as against boarding-out; it is an important question in which medical opinion can most usefully influence the public and the Government, and a series of articles published has formed the basis of an important departmental Commission which is likely to take a new departure. The services thus rendered have been extensively and widely recognised. A systematic investigation has been made of a great number of provincial workhouse infirmaries with the view to extending throughout the country benefits of that improved medical and nursing organisation which has done so much to raise the character of the treatment of the sick poor in the metropolis under Gathorne Hardy's Act. These reports, 51 in number, have produced already a most beneficent and widespread result, not only in the particular places which have been the subject of investigation and report, but also collaterally by their influence on the standards of the Local Government Board, and the methods adopted by its inspectors. A circular has been issued by the Local Government Board in accordance with the general views expressed in the reports of the BRITISH MEDICAL JOURNAL. Every one of these reports has, it is understood, been brought before the official inspectors, who have been desired to comment upon them, and to suggest such proceedings as may be necessary. Cordial acknowledgments are due to Mr. Shaw Lefevre and Sir Walter Foster for their sympathetic and effective action in relation to these reports, of which the good effects are far reaching and likely to be continuous. The reports of Dr. Woodhead and Dr. Cartwright Wood on filters have also disclosed most important results as to the necessity for the adoption of a very much more rigid standard in respect to filters. These reports are likely to have important results in this country and in India, where it has been shown that the inefficiency of potable water filters is the widespread cause of the cholera and typhoid epidemics. It is anticipated that some steps will be taken to secure standards of filters similar to those adopted in respect to thermometers and chronometers at Kew. The widespread and favourable reception of the BRITISH MEDICAL JOURNAL beyond the limits of the United Kingdom has once more been evidenced by the public demonstrations and receptions with which the Editor has been received throughout India during his winter visit there.

The Library is now becoming well established, and forms in itself a useful branch of the work of the Association. Three lists of presentations have been published during the year, and a fourth is well in hand. From the items contained in these lists it will be seen that new editions and new works form no inconsiderable part of the additions of the past year, and for these the Committee desire to express their thanks to numerous members of the Association for their contributions generally, and to the Honorary Librarian in particular, from whom such specially valuable works have been received during this past year. The number of attendances made is steadily increasing, there having been 4 570 during the past twelve months, which shows an increase of 14 per cent. over those of the previous year. In letters received and by remarks frequently made, members express great satisfaction at being able to consult some of the latest and most valuable works without the delay attending a visit to a larger library. The library contains considerably over 7,000 volumes as well as a number of pamphlets and a complete series for several years past (with index) of the Paris *Theses*, which it is believed are not to be consulted elsewhere in London. During the year 470 odd and duplicate volumes have been presented by request to other medical libraries, and further applications are awaiting consideration. Special thanks are also due to a great many medical officers of health who, in responding to our request for their reports, have done so far more generously than in former years.

The Council have much satisfaction in announcing that it has been decided by the New Zealand Medical Association to join the British Medical Association as one of the colonial Branches.

An important Branch has been recognised for Singapore and Malaya.

Both the Council and the Committees of Council have had much anxious work during the past year. In October last the question of medical aid associations was referred to the Council from the annual meeting, and was considered together with a resolution passed at the East Sussex District of the South Eastern Branch asking for an inquiry into the grievances, wants, and requirements of the general practitioners as they are found to exist in the Branches of the Association.

A Committee of the Council was appointed to consider the various questions involved. An interim report has been drawn up by the Committee, which will be laid before you separately; the Committee proposes to continue its work, the various complicated questions laid before it being of great difficulty, and requiring much consideration.

In January last a deputation from the Cork and South of Ireland Branch waited upon the Council of the Association to ask for their advice and support in the movement then going on against the extremely inadequate rate of payment of professional attendance by the clubs and benefit societies at Cork. After hearing the deputation, your Council passed the following resolutions:—

Resolved: That the Council of the British Medical Association receive most cordially the deputation from the South of Ireland Branch, and much regret to hear of the unfortunate contention which has occurred within the area. The Council

strongly condemn the admission of improper persons as members of medical aid societies. They deeply sympathise with those medical men who have been compelled to resign their positions, and unanimously resolve to render them all the assistance in their power.

Resolved unanimously: That notice be given in the Journal that a fund has been opened in the South of Ireland Branch for assisting the medical men in Cork who have resigned their positions, and that subscriptions be received from members of the Association towards this fund.

Copies of the foregoing resolutions were ordered to be sent to the Branches in the United Kingdom.

Your Council have the pleasure to report to you that the aid that the Association has given to the Cork members is stated to have had the effect of stimulating them to stand by one another in a struggle which affects the whole profession. The question is now one of widespread and general interest, as shown by the number of resolutions which the Cork members have received in support of their conduct.

In accordance with a resolution of the last annual meeting expressing a desire that the Council would constitute an ethical section, the Council have carried the recommendation into effect, and an Ethical Section has been formed for the first time. Your Council trust that you will not be disappointed in the result of the experiment.

The Council have had under consideration the arrangement of times of the annual meeting, and have fixed the first general meeting at 2.30; this gives at least four hours without adjournment for consideration of the various reports and business that may arise. The adjourned evening meeting at 9 o'clock will be devoted to the President's address. The business adjourned from the afternoon meeting (if any) will be considered at the general meeting on Wednesday, after the Address in Medicine. Your Council trust that these modifications of the arrangements will prove satisfactory.

An application was made from the Civil Rights Defence Committee for a donation to their fund for appeal to the Privy Council from certain judgments of the courts in Tobago and Trinidad for restoration of rights in the case of Mr. Anderson; and, though many of your Council were favourable to such a use of the funds, they considered it desirable to obtain counsel's opinion before making a grant, for if the Council act contrary to the Memorandum of Association, serious penalties may be incurred. The following is a copy of the opinion of counsel:

"I am of opinion that in construing the Memorandum of Association of the British Medical Association, the objects referred to in paragraph (*e*) of Clause 3 must be held to be the objects specified at the commencement of that clause, namely, 'the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession,' but I think that it is so doubtful whether the words in paragraph (*e*) 'and such other lawful things as are incidental to or conducive to the attainment of the above objects' include things which are not similar to any of the things specified in paragraphs (*a*), (*b*), (*c*), and (*d*), that the Council cannot be advised to incur the responsibility and risk which, under Clause 6, might, perhaps, be serious, of expending money of the Association on anything which is not so specified, and is not clearly similar to some of the things which are so specified, and consequently that the Council cannot be advised to expend money for any of the purposes referred to in the case.—(Signed) John Dixon, 11, New Square, Lincoln's Inn, May 15th, 1895."

The attention of the Parliamentary Bills Committee has been occupied by many important questions. Among them have been the Registration of Midwives Bill and the Amendment of the Medical Acts; both have been the subject of careful study, and the resulting drafts, which are not yet completed, have been at various stages of their progress, and will further be submitted for the opinion of the Branches. A special Subcommittee has ultimately been appointed to reduce these drafts into an improved and extended form of Bill, with the help of the amendments suggested by the Branches and of the criticisms of individual members. The question of mortality among the children of women employed in factories has been submitted in detail to the late Home Secretary, and as the result of the series of articles in the Journal on the important question of the health and sanitary condition of pauper children in great conjoint schools, an independent Commission has been appointed by the President of the Local Government Board, as to the composition of which the Chairman of the Committee was consulted, and his evidence taken at length before the Commission. A great body of evidence has been taken, and an important report, recommending considerable changes, is likely to be submitted at an early date. Pressure had been put upon the Government to accelerate the publication of the report of the Royal Commission on Vaccination, the delay of which has had serious effects throughout the country, but thus far without success. Useful action has been taken in regard to the Poor-law Officers' Superannuation Bill, the Cantonments Acts Amendments Bill, the prevention of cholera, and the Meccan pilgrimage. On these points more detailed information will be found in the report of the Parliamentary Bills Committee.

Last year it will be remembered that there were certain proposals of the Council modifying the arrangements for making grants for scientific research. It was then decided to appoint three scientific scholars instead of two, and a grant of £350 was also made for other research, making the vote for the purposes of the Scientific Grants Committee for the year £725. The three scholars appointed are Dr. Cartwright Wood, of Edinburgh; Dr. Lloyd Jones, of Cambridge; and Dr. Soltau Fenwick, of London.

The persistent work of the Inebriates Legislation Committee for a quarter of a century has been bearing good fruit during the past year. The Home Secretary not having been able to fulfil his intimation to a joint deputation of the Committee and the Society for the Study of Inebriety that he would introduce a Bill into Parliament founded on the report of the Departmental Committee last parliamentary session, the Association Committee presented anew the main improvements in the law which they had urged, especially compulsory curative seclusion, provision for the poorest class of inebriates, and the inclusion of excess in morphine and other drugs, as well as alcoholic intoxicants. The issue has been that the Lord Chancellor has secured the first reading in the House of Lords of the promised measure.

The Bill adopts the chief proposals of the British Medical Association and the Society for the Study of Inebriety: (1) The power of involuntary therapeutic detention of a habitual drunkard is vested in the county court (with right of appeal to the High Court) and the High Court. (2) Provision is made for the poor by power to county councils to establish and maintain retreats. (3) Habitual drunkenness is to include habitual excess in any drug. (4) Voluntary applicants will have to appear before one justice only. (5) Inebriate offenders can, at magisterial or judicial option, be subjected to curative treatment in a reformatory instead of imprisonment in a gaol.

The Scottish Departmental Committee has just issued a valuable and exhaustive report, with proposals for amended legislation, which will provide for the compulsory therapeutic detention of every habitual drunkard. The Departmental Committee on Prisons has reported in favour of the medical treatment of habitual inebriate offenders instead of their present imprisonment, which is stated to be neither elevating nor deterring. The recent Canadian Royal Commission on Intoxicants has reported to the like effect. Thus within the period of two years four Governmental inquiries have resulted in unanimous endorsement of the involuntary remedial treatment of inebriates, a conclusion come to by the Parliamentary Committee of 1872.

The Committee on School Children have worked continuously since 1893 and have examined and reported on 10,000 children, showing among other points the frequency, and to some extent the causation, of defectiveness of body and brain; the constitutional differences between boys and girls; many causes of deficacy, as well as the proportion of the children needing special care and training. Information is afforded as to the conditions of the children of the nationalities and social classes, and much attention has been bestowed upon methods of reporting and studying groups of cases, enabling us to make practical recommendations, which have to some extent been urged upon the Government departments and the London School Board.

The Medical Charities Committee have extended the move

ment against the abuse of medical charities to the provinces, and have communicated with all the Branches of the Association, many of which have responded sympathetically, and have promised an investigation and a report upon the subject.

Since the reappointment of the Anæsthetics Committee at the last annual meeting, the work of analysing the records—deputed to a subcommittee—has been steadily continued. The subcommittee, assisted by a staff of clerks, resumed their meetings in October, 1894, and from that time till the present date have met on 67 occasions, each meeting lasting at least two hours. Upwards of 23,000 uncomplicated cases have been submitted to an elaborate scheme of tabulation and cross tabulation.

The Committee for the Efficient Control of Railway Servants' and Mariners' Eyesight continues its labours. It organised an important deputation of ophthalmic surgeons, which waited upon the President of the Board of Trade on February 1st, and by thus bringing the subject entrusted to it prominently before the authorities and the public, is able to report that, though much remains to be done before efficient control can be said to have been secured, more attention is now being paid to the eyesight of these classes.

The Therapeutic Committee present a short interim report.

In asking you to express your cordial thanks to the Honorary Secretaries of Branches for their voluntary but arduous labours during the past year, your Council would point out the increase in the number of members of many of the Branches, and the joint interesting meetings for the discussion of questions of medical and surgical science and medical policy which have been organised.

Amongst the changes that have occurred, Dr. Peter Bancroft has retired from the Honorary Secretaryship of the Brisbane and Queensland Branch, Dr. E. D. Rowland from the British Guiana Branch, Dr. Damian from the Trinidad and Tobago Branch, Dr. Anderson from the Cape of Good Hope Branch, Dr. Freeland Fergus from the Glasgow and West of Scotland Branch, Dr. H. A. Lafleur from the Montreal Branch, Dr. J. G. Cooke from the Londonderry Branch, Dr. H. W. Pigeon from the East York and North Lincoln Branch, Dr. John Molony from the Dublin Branch, Dr. J. Altham from the Border Counties Branch, and Dr. E. Markham Skerritt from the Bath and Bristol Branch, while your Council have to regret the loss by death of Dr. J. Bigg Robertson, of the Grahamstown Branch. The following gentlemen have been elected respectively to fill the vacancies: Dr. A. B. Brockway, Mr. C. W. Daniels, Dr. E. Prada, Dr. D. J. Wood, Dr. J. H. Nicoll, Dr. J. A. Springle, Dr. E. Donaldson, Dr. J. B. Close, Dr. James Craig, Dr. R. Dundas Helm, and Dr. J. Michell Clarke; while Dr. Caldwell has been elected to fill the vacancy caused by the death of Dr. Robertson. In March, 1894, upon the retirement of Dr. E. J. Jenkins from the Honorary Secretaryship of the Sydney and New South Wales Branch, Dr. L. R. Huxtable was appointed.

Amongst those who have passed away during the year, your Council have to mourn the loss of Dr. Withers Moore, who was President in 1886, when the Association met at Brighton. He was President of Council from 1890 to 1893, and was a Vice-President at the time of his death. Dr. George Henty, a Vice-President of the Metropolitan Counties Branch, whose services on the Medical Charities Committee will be remembered; Dr. Bevan Rake, late President of the Trinidad and Tobago Branch; Mr. John Crerar, a Vice-President of the Border Counties Branch; Mr. Arthur Durham, a former President of the Metropolitan Counties Branch, who was appointed to give the Address in Surgery at this meeting. Also Mr. David Davies, of Aberceri, who was President of the Public Health Section at the annual meeting of the Association held in Bath in 1878; Brigade-Surgeon G. C. Gribbon; Mr. S. Wm. North, of York, who was President of the Yorkshire Branch; Mr. Wm. Lees Underhill, of Tipton; Dr. Robert Jolly, of Birmingham; Mr. John Clay, of Birmingham; Mr. John Brockwell, of Norwood; Mr. J. Capron Smith, of Great Yarmouth, who was President of the East Anglian Branch; Dr. Andrew Miller, of Hampstead; Dr. Herbert Goude, of Highgate; Dr. W. Joseph Lunn, of Hull; Inspector-General Mark Style, of Cheltenham; Mr. Charles E. Thompson, of South Australia; Mr. Robert McNicoll, of St. Helens; Dr. Waldemar I. Roeckel, of Melbourne; Dr. Walter Dickson, R.N., of Upper Norwood, late Honorary Treasurer to the Metropolitan Counties Branch, whose face and genial manner were so familiar to those attending the annual meetings; Mr. Albert Napper, of Guildford, the great authority on cottage hospitals; Deputy Surgeon-General E. Humphrey Roberts; Dr. Wm. Walker, of Redcar; Mr. W. Palmer Rowe, of Liverpool; Dr. J. J. Neville, of Chorley; Mr. A. W. Loveridge, of Newport, Mon; Mr. Robert Farrer, of Brighouse, Leeds; Dr. James Hall, of Preston; Mr. Philip G. Philips, of Peckham; Dr. H. W. Maunsell, of London; Dr. T. T. Hamilton, of Bury; Dr. D. Hack Tuke, of London; Dr. S. H. Adams, of Bedford; Mr. M. H. Higginbottom, of Nottingham; Mr. Charles H. Robinson; Dr. T. A. G. Balfour, of Edinburgh; Mr. G. T. Lee, of Salisbury; Mr. Daniel Ball, of Stoke-on-Trent; Mr. James H. Coveney, of Prestwich; Dr. W. J. Cleaver, of Sheffield; Deputy Surgeon-General S. S. Skipton, of Liscard; Brigade-Surgeon-Lieutenant-Colonel J. D. Gunning, A.M.S.; Mr. Harris Butterfield, of Sevenoaks; Mr. G. G. Corbould, of Bristol; Dr. A. E. Turnour, of Denbigh; Dr. G. E. Alford, of Weston-super-Mare; Dr. J. S. Metford, of Clifton; and Dr. Robert K. Johnston, of Dublin.

J. Ward Cousins, M.D.,
President of Council.

INTERIM REPORT OF THE COMMITTEE ON THE COMPLAINTS OF GENERAL PRACTITIONERS.

In consequence of a feeling expressed by many members that something should be done to correct the grievances of general medical practitioners, and also in consequence of a resolution which had been passed by the East Sussex District of the South Eastern Branch, copy of which is as follows:

Resolved: That in view of the prevalent and widespread feeling that the Executive of the Association are not alive to the wants and misfortunes of the general practitioners, and do not, therefore, render them such assistance as they, being members, have a right to expect, this meeting respectfully requests the Council to appoint a Committee (1) To inquire into the grievances, wants, and requirements of the general practitioners, as they are found to exist in the Branches of the Association. (2) To ascertain in what ways, if any, the influence and organisation of the Association can be most usefully employed for the amelioration of these grievances, and for promoting the welfare of the general practitioners generally. (3) To report to the Council.

The Council at their October meeting passed the following resolutions:

Resolved: That the resolution passed at the East Sussex District of the South Eastern Branch having been duly considered by the Council, the request therein contained be granted, and a committee appointed to carry out the suggestions.

Resolved: That the President of Council, Dr. Bridgwater, Mr. Wallace, Dr. Bruce Goff, Mr. Jones Morris, Mr. Nicholson, Dr. Saundby, Mr. Parkinson, Dr. Parsons, and Dr. Withers Moore be appointed the Committee to consider the preceding resolution.

At a subsequent meeting of the Council the Treasurer of the Association and Mr. Hemming were added to the Committee.

Resolved: That the question of medical aid associations, brought forward by the Oxford and District Branch, be referred to the Committee to report to this Council at the earliest possible date.

The Committee of the Council decided to inquire into the following subjects for consideration in the first instance:—

1. Cheap Anonymous Dispensaries and Medical Aid Societies.
2. Midwives.
3. Pay Wards of Hospitals.
4. Lack of Competent Assistants.
5. Insecurity of Local Sanitary Appointments.
6. Inadequacy and Uncertainty of Retiring Pensions of Poor Law Officers.
7. Alteration of Memorandum of Association so as to permit funds to be used for Medical Defence and Prosecution of Quacks, Bonesetters, and Prescribing Chemists.

8. Underselling for Public Appointments.
9. Relations of Consultants to General Practitioners.
10. Censorship of Association.

It will be obvious to any member who has given consideration to the work of the Committee that to investigate and to report fully upon these ten subjects would take much longer than the few months which have been at their disposal; they therefore offer this as an interim report.

ANONYMOUS DISPENSARIES.—The attention of the Parliamentary Bills Committee has been called to the question, and the Committee was requested to insert a clause in the Medical Acts Amendment Bill rendering it compulsory to announce the name of the responsible medical officers to such establishments.

MEDICAL AID SOCIETIES.—The Committee understands by this title those societies or clubs which have been recently established for the purpose of affording medical attendance, etc., in return for a small annual subscription. The proprietors are laymen, the doctor is paid a fixed salary, and the balance of the income is appropriated for investment or other purposes. These societies do great harm to the established practitioners by their system of canvassing for members among all classes. It is greatly to be regretted that any qualified practitioner should become the instrument of a system which is lowering the prestige and position of the profession in many parts of the country, and in the opinion of this Committee the medical officers of such societies as canvass for members and have no wage limit should not be elected, or if elected should not remain, members of the British Medical Association.

MIDWIVES.—The question of midwives has been fully considered, and it is felt that the employment of midwives other than skilled nurses is fraught with danger to the public and injustice to the qualified practitioner. Your Committee passed the following resolution, which was transmitted to Sir Walter Foster:

That inasmuch as the proper care of parturient women before, during, and after labour involves a knowledge of almost the whole art of medicine and surgery, no one should be entrusted with this care save fully trained and qualified practitioners; at the same time, there is a general demand for an improved class of trained midwifery nurses.

As a Bill for the registration of midwives has been before Parliament, and as the movement is supported by no inconsiderable body of lay and professional opinion which will not rest satisfied with things as they are, this Committee recommends the Council to endeavour to formulate and agree upon a scheme for the training and registration of all classes of nurses, among which those who, in addition to their regular hospital training, shall have qualified by a special course of instruction at a lying-in hospital, will be registered as obstetric nurses.

Your Committee believes that the dangers to be apprehended from the legislative recognition of midwives would by this scheme be reduced to a minimum, while the class of women so trained would be most efficient for the purpose for which they are required. Nothing could be worse than the present system, and, in the opinion of this Committee, the General Medical Council has only done its duty to the profession by the firm stand it has made against the illegal traffic in midwifery diplomas.

PAY WARDS.—This question has been left for the present, as it is under the consideration of the Medical Charities Committee and also a Committee of the Council of the Metropolitan Counties Branch.

LACK OF COMPETENT ASSISTANTS.—The information on this head which has reached your Committee has not been sufficient to enable an opinion to be formed as to the causes of the deficiency. That there should be such a difficulty is surprising in view of the other painful evidences of the increasing competition within the profession, and would appear to point to the need for making these appointments more attractive to the better class of men by improving the conditions under which they are held.

The Committee is strongly of opinion that all assistants employed by practitioners should be duly qualified medical men.

It is hoped that the recommendation of the General Medical Council that students should take the last year of their curriculum with a general practitioner will do something to remedy the present want of experience of the details of general practice among recently qualified medical men.

INSECURITY OF SANITARY APPOINTMENTS.—With regard to this question, the President of Council, with others, had an interview with Sir Walter Foster, of the Local Government Board, who stated on behalf of the Board that an important decision had been arrived at, namely, that short periods and precarious tenure of office are injurious to the public health, and the Board are anxious to encourage the authorities everywhere to give up the system of short terminable appointments.

INADEQUACY AND UNCERTAINTY OF RETIRING PENSIONS OF POOR-LAW OFFICERS.—In considering this, your Committee found that a Bill to provide for the superannuation allowances to Poor-law officers and servants, which your Solicitor was of opinion also included Poor-law officers, had been prepared and brought in by Mr. Walter Long, M.P., and others, and accordingly a petition was signed on behalf of the Association by the President, Dr. Long Fox; the President-elect, Sir Russell Reynolds, Bart.; the President of Council, Dr. Ward Cousins, and the Treasurer, Mr. Butlin. The petition was kindly presented by Sir Walter Foster of the Local Government Board. Mr. Shaw Lefevre, on the part of the Government, expressed a favourable view upon the second reading, but as the Bill was opposed the second reading was postponed. In the meantime your Committee trusts that the Branches will endeavour to influence local members of Parliament to support the Bill.

MEDICAL DEFENCE AND THE PROSECUTION OF UNQUALIFIED PERSONS.—The suggestion has been made that these duties should be assumed by the British Medical Association. The Committee has the very strongest sympathy with the large body of members which complains of the unprotected condition of the medical profession, and desires to see constituted some authority provided with the means and charged with the duty of protecting the profession and the public against injustice, ignorance, and fraud. Unfortunately there are many difficulties in the way; in the first place the present law only penalises the improper assumption of medical titles and the unqualified practice of medicine where the unqualified person not only prescribes but compounds and supplies medicine for gain, while it permits surgical practice to be carried on to any extent by ignorant persons. Secondly, there are no funds for this purpose except those of voluntary associations for medical defence, which have undertaken useful action of this kind to a limited extent. Thirdly, although any person may take proceedings for the unqualified assumption of medical titles, there is no authority empowered in respect of the unqualified practice of medicine except the Society of Apothecaries, which in many instances is unwilling to proceed of its own motion, although it permits its name to be used upon the understanding that it should be put to no expense. Fourthly, there is always very great difficulty in getting evidence upon which conviction can be obtained, even in some of the most flagrant cases of illicit practice.

The Medical Acts Amendment Bill, drafted by the Parliamentary Bills Committee, will, if it becomes law, strengthen considerably the hands of future prosecutors, and the whole influence of the Association should be employed to secure its enactment.

It is not easy to devise a plan under which these duties could be performed by the British Medical Association.

Is it proposed that the Association should defend its members and prosecute quackery all over the world? If so, the proposal is plainly impracticable, and beyond the means of our organisation. On the other hand, if it is intended to limit these benefits to members residing within a certain area, the proposal is open to the fatal objection that it would apply general funds to local purposes, and would be naturally unfair to those whose property would be endangered without benefit to themselves.

One suggested alternative is to raise a separate fund for local purposes by voluntary subscriptions to be administered for the benefit of subscribers, but such an organisation could not take legal action without risk of contingent liability falling upon the funds of the parent Association, unless it was made quite clear that there was no real connection between the two; and if this were the case it is difficult to see what advantage the plan offers over existing arrangements.

It also has been proposed to subsidise one of the existing medical defence associations by a grant from the funds of the Association to be used for specific purposes. But this scheme would probably fall far short of satisfying the demands of many, and is equally open to the capital objection which applies to all these proposals—namely, that they are outside the objects of the Association as at present constituted, and can only be included by altering the Memorandum of Association. Upon this point the Committee has sought the advice of counsel, whose opinion is subjoined:

COPY OF COUNSEL'S OPINION.

I am of opinion that in construing the Memorandum of Association of the British Medical Association the objects referred to in paragraph (*e*) of Clause 3 must be held to be the objects specified at the commencement of that clause—namely, "the promotion of medical and the allied sciences and the maintenance of the honour and the interests of the medical profession;" but I think that it is so doubtful whether the words in paragraph (*e*) "and such other lawful things as are incidental to or conducive to the attainment of the above objects" include things which are not similar to any of the things specified in paragraphs (*a*), (*b*), (*c*), and (*d*), that the Council cannot be advised to incur the responsibility and risk which under Clause 6 might perhaps be serious, of expending money of the Association on anything which is not so specified and is not clearly similar to some of the things which are so specified, and consequently that the Council cannot be advised to expend money for any of the purposes referred to in the case. JOHN DIXON.

May 14th, 1895. 11, New Square, Lincoln's Inn.

The Committee does not recommend this alteration of the Memorandum of Association for the following reasons:

1. No such change should be proposed by the Council until it has been well considered in all its bearings, and unless there is good reason to believe that the Association would be practically unanimous in supporting it.

2. The change is one which is radically inconsistent with the objects for which the Association was originally founded.

3. It is impossible, therefore, to assume that an alteration in the Memorandum of the Association involving such a change would be permitted, and unless permitted such a fundamental alteration in the constitution of the Association would be impossible without liquidation and reconstruction.

4. The change would involve the Association in consequences not easily foreseen; for example, it might render it liable to taxation from which it is at present exempted as a scientific body.

5. It has been already shown that there are real practical difficulties in the way of making such extended functions coextensive with the whole sphere of operations of the Association or of limiting them to a part of its area; nor is it easy to devise any plan by which a fund could be raised and administered for this purpose without risk of liability to the corporate body.

For these reasons, and after due consideration, the Committee recommends that it is not desirable to seek to alter the Memorandum of Association for these purposes.

Another suggestion, and one which meets with the approval of the Committee, is that the Association should endeavour to get part of this duty imposed by statute upon the General Medical Council.

This would follow the precedent of at least one of our Colonies, as described in the following letter from Dr. J. M. Lefevre:

12, Duchess Street, Portland Place, W.,
April 20th, 1895.

Dear Sir,—In reference to our conversation of Tuesday last, I may state that in British Columbia licences to practise medicine and surgery are granted by the British Columbia Medical Council. This authority is vested in the Council by an Act passed some seven or eight years ago by the Legislature of the province. This Act is known as the British Columbia Medical Act, and it gives the Council power to make rules and regulations for the granting of licences to graduates in medicine and surgery of any recognised University. It also gives the Council power to fix the annual fee and the fee for registration. The former fee at present is 5 dollars, and the latter 100 dollars. The revenue derived from these sources is used by the Council principally in defraying the expenses of examinations for licence to practise and for legal expenses in connection with the prosecution of illegal practitioners. I shall be very glad to give you any further information you may require on this subject at any time.—Yours very truly, J. M. LEFEVRE.

FRANCIS FOWKE, Esq.,
General Secretary, British Medical Association.

As at present constituted, the General Medical Council does not adequately represent the medical profession. It is mainly composed of the representatives of what may be called the privileged classes of the profession, and falls far short of what is needed as a central governing body. Its reform may be a difficult task, but it is certain that the profession will never be able to make its views and wishes properly felt so long as this Council remains as it is, and the Committee urges the importance of making this great reform a main policy of the Association. The Committee is glad to learn that the Parliamentary Bills Committee has also recognised the need for such a step, and is considering the possibility of tacking on a clause to its Medical Acts Amendment Bill with this object.

UNDERSELLING FOR PUBLIC APPOINTMENTS: RELATION OF CONSULTANTS TO GENERAL PRACTITIONERS.—The Committee has unavoidably been compelled to postpone any special report upon these important subjects from want of time, but it is desirable to point out that most of the questions arising under these heads might be dealt with by local Ethical Committees, which could report any flagrant cases of misconduct to the Council in the usual manner. The Committee recommends the formation of such local Ethical Committees in connection with the Branches, and believes that, rightly constituted, they will be productive of much benefit.

CENSORSHIP OF THE ASSOCIATION.—The Council possesses the power to consider any complaint against members respecting acts derogatory to the profession, and has passed motions of expulsion in suitable cases. As there is no reason to believe that the Council is unwilling to exercise the ample powers of censorship it already possesses, the Committee has only to point out that it rests with the Branches to make these powers effective by reporting all serious cases of professional misconduct to the Council for censure or expulsion.

The Committee asks to be reappointed.

J. WARD COUSINS, M.D., *President of Council.*

REPORT OF PARLIAMENTARY BILLS COMMITTEE.

MANY matters of very considerable importance, both to the profession and to the public, have occupied the attention of the Parliamentary Bills Committee during the past year. Some, such as the amendment of the Medical Acts and the standing question of Vaccination, have been matters of perennial interest for years past, and, it is to be feared, will not attain a final settlement for years to come; others have been affairs of great but more or less ephemeral importance.

AMENDMENT OF THE MEDICAL ACTS.

The position of affairs at the beginning of the year was this: The Chairman had been authorised to submit certain documents in the possession of the Committee to counsel, and to prepare a draft Bill based upon the reports received from the Branches. In order to give weight to the remarks made upon the subject during the discussion upon it at the Bristol meeting he had also sent copies of the speeches made on the subject, lest any point which had been raised should chance to be overlooked.

As the result of this reference to counsel a draft was sent in, which, however, was not considered to cover a sufficiently large field, being, in fact, principally limited to a reconstruction of the penal clauses. After further consideration and consultation the basis of the memorandum was considerably widened, the principal point left out being the question of medical aid associations which were employing medical men and making a profit out of their work.

On the draft being submitted to the Committee, it was resolved that the documents submitted should be forwarded to each of the Branches with a request for any further observations thereon.

The Branches were also asked to call general meetings for the discussion of the matter, and to let the Committee have their observations early in the year.

At the meeting of the Committee held in April it was reported that some of the Branches had replied approving of the Bill, others had not replied, while some had replied offering suggestions and additions. Most of these suggestions required further consideration as to whether they were possible, and on submitting them for legal comment the Committee were advised that it would be well to deal with each of the suggestions made by the Branches separately and fully. Several members of the Committee, however, thought that they ought to have an opportunity of discussing the provisions of the draft as it stood, and various comments and criticisms were made upon it, especially in regard to its inadequacy in the important matter of dealing with those unqualified persons who practised without assuming any qualification. It was stated that the Medical Defence Union had great difficulty in prosecuting in these cases, as most of the persons did not assume any title at all, and thus escaped the operation of the Act, and that it was imperative that the Bill should be altered so as to include a clause to control this form of unqualified practice.

After some further discussion, it was proposed by Mr. Victor Horsley, seconded by Dr. Batten, and resolved:

That the draft Bill, together with the amendments and suggestions forwarded by the Branches, be handed to a Subcommittee, with power to take such legal advice as may be necessary to redraft the Bill where thought desirable.

The following subcommittee was appointed to consider the draft Bill to amend the Medical Acts: The Chairman, Dr. Batten (Gloucester Branch), Dr. Spottiswoode Cameron (Yorkshire Branch), Dr. Galton (South-Eastern Branch), Mr. Victor Horsley (Metropolitan Counties Branch), Mr. Evan Jones (North Wales Branch), Dr. Somerville (Border Counties Branch), and Dr. Woodcock (Lancashire and Cheshire Branch).

After some discussion, it was proposed by Dr. Milburn, seconded by Mr Taylor, and resolved:

That the subcommittee also report on the advisability and practicability of including in the draft Bill the subjects of—(1) The constitution and powers of the General Medical Council; (2) the penal powers of the medical corporations and universities in respect of the conduct of their medical graduates and diplomates; (3) certificates and registration of deaths.

This Committee has since been actively occupied in the performance of these duties.

Mortality among Children of Women Employed in Factories.

At the first meeting of the Committee it was reported that no progress had been made in this matter, except that Mr. Asquith had promised to receive a deputation on the subject from the Committee early in November. A full statement was made to Mr. Asquith, to which, however, he did not give a very sympathetic reply. It is hoped, however, that some of the provisions of the new Factory and Workshops Bill will have a good influence in the desired direction.

Barrack Schools.

With reference to this question, the Chairman reported that he had had several interviews with Mr. Shaw Lefevre, who probably would have granted the Royal Commission which was asked for by the joint deputation which waited upon him, but for the feeling that by so doing the matter might be hung up for two or three years. Finally, an independent Committee under the chairmanship of Mr. Mundella, has been appointed as the result of which great reforms were hoped for. That Committee, which was nominated after conference with the Parliamentary Bills Committee, is powerfully constituted. The first evidence taken was that of the Chairman of this Committee. Much evidence has since been taken, and an important report may forthwith be expected.

Cholera at Hardwar and Mecca.

The subject of the distribution of cholera by fairs and pilgrimages was discussed by the Committee, and steps were taken to bring the facts in regard to the Mecca pilgrimage under the cognizance of the Sultan by the intervention of the Mohammedans themselves. Mr. Hart's visit to India was followed by important resolutions passed at great public meetings of Mussulmans in Calcutta and Hyderabad, calling for reforms (much needed) at the quarantine stations at Mecca.

Vaccination.

The great evils which were being caused by the delay in the issuing of the report of the Royal Commission on Vaccination were brought before the notice of the Committee. It was pointed out that the Commission had been sitting for five years, and that a great many Boards of Guardians had decided not to prosecute in cases of non-compliance with the Vaccination Acts pending the issue of the Commission's report.

Mr. Galton proposed, and Dr. Holman seconded, the following resolution, which was carried unanimously:

That the Parliamentary Bills Committee greatly regret the delay in the issuing of the final report of the Vaccination Commission, and trusts that the Commission will issue it at the earliest possible date. Should it be impossible to issue a detailed report soon, they hope the Commission will, at any rate, issue an interim report, so as to set at rest all doubts as to the value of vaccination.

The preoccupations of the Chairman and other members of the Commission, and the special inquiries instituted at the seats of the epidemic in 1893-94, have, however, caused further delay, and the date for the presentation of the report is not yet fixed.

The Army Medical Department.

The Chairman received in February last the following letter from the War Office:

War Office, Pall Mall, S.W.,
February 15th, 1895.

SIR,—Adverting to my communication of August 20th, 1894, and to that section thereof in which it was stated that the question of posting officers of the British Medical Service to particular Presidencies for duty was reserved for further consideration, I am now directed by Mr. Campbell-Bannerman to acquaint you, for the information of the Parliamentary Bills Committee, that it has been decided, with the concurrence of the Secretary of State for India in Council, to revert to the former system, whereby the allocation of medical officers proceeding to India was carried out in this country. I am, however, to add that, consequent upon impending changes in Indian army organisation, postings will be made to commands instead of to presidencies, and the distribution of officers to the several commands will be subject to such occasional transfers as the exigencies of the service in India may dictate. I have the honour to be, Sir, your obedient servant,

RALPH THOMPSON.

The Chairman of the Parliamentary Bills Committee of the British Medical Association, 429, Strand, W.C.

Poor-law Officers Superannuation Bill.

The question having arisen whether the Poor-law Officers Superannuation Bill introduced into the House of Commons included Poor-law medical officers, the opinion of the solicitors had been taken on the point, and they had replied that the Bill did not include the medical officers. It was then proposed by Mr. Jones Morris, seconded by Mr. Parkinson, and resolved:

That the Parliamentary Bills Committee strongly supports the Bill, and requests the members of the Branches to interview their members of Parliament with the view of getting them to use their influence to get the Bill through Parliament.

Cantonments Act Amendment Bill.

In this Bill a clause was included which was highly dangerous and derogatory to army medical officers. Not only were they ordered not to do certain things, but if they did not carry out the orders they were not dealt with by their own department, but were liable to be taken before a magistrate, and they were to be punishable by the civil jurisdiction. The Chairman reported that he was able just in time to make a very strong protest in India at the request of the Indian men, who, as officials of the Government, could do nothing. He saw Sir Anthony MacDonnell on the subject, telegrams were sent to this country to the India Office of a very urgent nature, and a meeting was called to make arrangements for a deputation to Mr. Fowler, but before the meeting could be held Mr. Fowler withdrew the whole of the objectionable clause. That result gave very great satisfaction in India, and tended a great deal to the credit of the British Medical Association.

Other subjects dealt with during the year included legisla-

tion for the regulation of massage houses, which is held over till next year, and suggested alterations and additions to the Factory and Workshops Bill.

Midwives Registration Bill.

Subsequent to the meeting of the Parliamentary Bills Committee, held on May 30th, 1895, the Chairman referred the Midwives Registration Bill to the Subcommittee appointed to consider the draft Bill to amend the Medical Acts, and also that the Midwives Registration Bill be considered first. The Bill was considered clause by clause, and certain amendments were made, the principal ones being the substitution of the term "midwifery nurse" for that of "midwife" in certain clauses, and the insertion of a provision in Clause 4 that a woman registered under the Act shall not assume any title implying that she is by law recognised as a licentiate or practitioner in midwifery except in cases of natural labour. All documents on the subject in the possession of the Journal have been submitted to this Committee, whose interim report has been issued to all the Branches.

Ernest Hart, *Chairman.*

REPORT OF THE SCIENTIFIC GRANTS COMMITTEE.

The Scientific Grants Committee have to report that during the past year, 1894-5, the sum of £349 16s. 6d. has been granted in aid of scientific research, and £450 for three scientific scholars. The following are particulars of the grants made:

	£	s.	d.
Brodie, T. G., M.D., Lindfield, Uxbridge Road, Surbiton.—To complete and extend a work on the chemistry of cancerous tumours of fibroid degenerations; and for the purchase of new apparatus constructed for the study of the amount of work performed by muscles under varying conditions ...	20	0	0
Cooper, C. D., M.R.C.S., County Asylum, Claybury, Woodford, Essex.—An investigation on the subject of the metabolism in general paralysis of the insane	5	0	0
Gillespie, A. L., M.D., 23, Walker Street, Edinburgh.—For the purpose of testing the action of alkalies and acids on that of the pancreas and intestines	10	0	0
Grünbaum, Albert S., M.B., 45, Ladbroke Grove, W.—For an investigation into the cutaneous distribution of the peripheral nerves in the monkey. (Wrote for amount June 13th, 1894)	10	0	0
Hallibburton, W. D., M.D., F.R.S., 9, Ridgmount Gardens, Gower Street, W.C.—To continue research work on the proteid constituents of animal tissues	25	0	0
Harris, A. Butler, M.B., 189, High Street, Newington, N.—For an investigation on the processes of oxidation in the various tissues and organs, the relative degree of the same, and the alterations in disease	20	0	0
Hayward, John A., M.D., 88, Brook Street, W.—(1) For an investigation to improve, if possible, our means of cultivating the diphtheria bacillus, whereby the diagnosis of disease bacteriologically may be facilitated. (2) To test the action of certain drugs and ferments in the diphtheria bacillus. (3) To examine a series of cases of membranous sore throats, whether simple, scarlatinal, or diphtheritic, and to determine their relation to the diphtheria bacillus	10	0	0
Hewlett, R. T., M.D., 161, Great Russell Street, W.C.—To defray expenses to be incurred in the completion of the research on the chemistry of cancer	4	16	6
Horne, R. M., M.B., Physiological Laboratory, The Owens College, Manchester.—For an investigation on muscle. (1) The nature of the muscle ferment. (2) The influence of calcium salts on the coagulation of muscle. (3) The existence of a myo-albumose	5	0	0
Kanthack, A. A., M.D., St. Bartholomew's Hospital, E.C.—To continue a research on the nature and behaviour of wandering cells	15	0	0
Kent, A. F. S., Physiological Department, St. Thomas's Hospital, S.E.—For a continuation of an investigation upon the functions of the thyroid gland	15	0	0
Lazarus-Barlow, Walter S., M.D., Pathological Laboratory, New Museums, Cambridge.—(1) The œdema which accompanies inflammation. (2) The physiological action of the diphtheria toxin on the heart	20	0	0
Levy, A. G., M.B., 156, High Street, Stoke Newington, N.—For a research to investigate the elastic recoil of the living brain after compression for varying lengths of time, and to establish the vascular conditions which have an influence upon the brain's elasticity	10	0	0
Mott, F. W., M.D., 84, Wimpole Street, W.—For a continuation of a research upon the functions and structure of the central nervous system	20	0	0
Muir, Robert, M.D., 20, Hartington Place, Edinburgh.—(1) An inquiry into the nature of leucocytosis. (2) An inquiry into the changes in the lymphoid tissues during leucocytosis ...	10	0	0
Murray, G. R., M.B., 2, Saville Place, Newcastle-upon-Tyne.—To continue an investigation into the active substances contained in the secretion of the thyroid gland	15	0	0
Pembrey, M. S., M.B., Physiological Laboratory, Oxford.—For a continuation of a research upon the effect of section of the spinal cord and of anæsthetics upon the reaction of changes of temperature	10	0	0
Samways, D. W., M.B., 9, Rue Dauphine, Montpelier, France.—(1) To demonstrate the physical cause of the wave. (2) To investigate the time relation in the contraction of the left auricle and ventricle, when the former is hypertrophied in cases of mitral stenosis	20	0	0
Shennan, T., M.B., 71, Leamington Terrace, Edinburgh.—For continuing a research on cells in edulis	5	0	0
Smith, Hugh R., M.D., Pathological Laboratory, University College Hospital, W.C.—For an investigation into the nature of the various exudations and transudations found within the body. (a) Special attention will be given to the examination of the different forms of fluid found in the various cysts originating within the female pelvis. (b) The investigation of pleuritic, ascitic, œdemic, and other fluids	20	0	0
Symes, W. L., M.R.C.S., 39, Bronsdesbury Villas, N.W.—For continuing his work on nerve section	10	0	0
Tubby, A. H., M.B., F.R.C.S., 39, Finsbury Circus, E.C.—For an investigation on the effect of stimuli on the pleural and pericardial membranes. Observations to be made on heart, blood pressure, and respiration by the application of heat, cold, various antiseptic substances, etc.	10	0	0
Vincent, Swale, M.B., Mason College, Birmingham.—For prosecuting a research upon the physiology of the suprarenal capsules. To purchase $\frac{1}{12}$ inch oil immer. lens (by Zeiss). To purchase microspectroscope	10	0	0
Webster, J. C., M.D., 20, Charlotte Square, Edinburgh.—For the following researches.—(1) The place of fertilisation of the ovum. (2) External and internal wandering of the ovum. (3) The reaction of the peritoneum to the fertilised ovum, involving the consideration of the question of primary abdominal gestation	20	0	0
White, A. H., L.R.C.P.I., 81, Grosvenor Square, Rathmines, Dublin.—For a research in connection with the changes in the composition of the blood in traumatic anæmia ...	20	0	0
White, W. Hale, M.D., and Washbourn, J. W., M.D., 65, Harley Street, W.—For expenses in connection with the working of their animal calorimeter. (Pamphlet submitted being a reprint of a report from the *Journal of Physiology*)	10	0	0
Total	349	16	6

Dr. J. Jackson Clarke, loan of $\frac{1}{12}$ inch Zeiss water immersion objective.

The following sums have been returned as unused:—

	£	s.	d.
Dr. A. L. Gillespie	5	9	4
Dr. A. S. Grünbaum	5	5	6
Dr. J. A. Hayward	8	2	8
Dr. R. T. Hewlett	0	13	9
Dr. R. Muir	6	17	4
Dr. G. Murray	15	0	0
Dr. M. S. Pembrey	5	7	3
Dr. D. W. Samways	18	2	3
Dr. T. Shennan	1	8	2
Dr. A. H. Tubby	5	14	6
Dr. J. C. Webster	20	0	8
Total	92	1	1

The gentlemen appointed as scientific scholars are Dr. Soltau Fenwick, Dr. Lloyd Jones, and Dr. Cartwright Wood.

Dr. T. G. Brodie reports that during the past year he has been engaged in continuing his research upon the work of muscle. A preliminary report, giving a description of the method he has devised for the purpose of these experiments, has already appeared in the *Proceedings of the Physiological Society*, February, 1895. They are now nearly completed, and a full paper of the results obtained will shortly be ready for publication. He has also been engaged in investigating the differences in the behaviour of collagen and gelatine when treated with alcohol. This has led him, after an examination of Siegfried's work and description of the isolation of a new substance—reticulin—from reticular tissue, to search for some of the products obtained on the decomposition of these two bodies under the action of hydrochloric acid in the presence of stannous chloride. This work is now nearly completed. He has also continued his work upon the constitution of the envelopes of the coccidia frequently found in rabbits' livers, which was undertaken with a view to the examination of cancer tumours for a similar substance. He has been able to show that these envelopes are neither chitin nor cellulose, but as yet he has not been able to obtain these envelopes isolated from nuclein, etc. He is at present engaged upon this work.

Dr. J. Jackson Clarke has submitted the following abstract of some observations on an affection of pigeons and fowls, and states that among pigeons and fowls an acute and usually fatal disease, which is termed by poultry rearers "canker," is not uncommon among birds kept in captivity.

The affection begins as a rule in the mouth, on the hard palate, and elsewhere. For twenty-four or forty-eight hours it shows itself by the presence of a yellow soft coating on the mucous membrane. This yellow substance can at first be scraped off, and leaves a red moist surface beneath it. Examined under the microscope the yellow substance is seen to consist almost entirely of flagellate protozoa in active movement. The bodies of organisms are a little larger than the red blood corpuscles of pigeons, and present at one extremity one or more, rarely two, strong flagella as long as their body, and at the opposite extremity a sharp-pointed process about half as long as the flagellum. Along one side of the oval body these protozoa possess an undulating membrane, and in their interior are a nucleus and several vacuoles. Dr. Clarke was unable to find these organisms in the mouth of birds free from the disease. After two days the lesions are changed in character, and are replaced by tough yellow infiltration of the mucous membranes and submucous tissue. In this infiltration only a few moving flagellates are to be found, but sections reveal beaded hyaline bodies which resemble the figures given by Kartulis[1] of protozoa in sections of livers containing abscesses secondary to dysentery. The affection spreads from the mouth to the skin of the eyelids and other parts of the face. In the lesions in this situation histological examination reveals in the epidermal cells bodies in every way similar to molluscum contagiosum of man. So far the observations are in accord with those of L. Pfeiffer.[2] In the cases Dr. Clarke observed he has failed to find tubercle bacilli either in the earlier or later stages of the affection. He hopes to continue the investigation by inoculation experiments in order to decide finally whether the disease is connected with tuberculosis, and also to ascertain if possible whether the protozoa are the caused agent in producing the affection.

MR. DUDLEY COOPER reports that his observations were made on the metabolism of general paralysis of the insane, with a view of ascertaining the cause of the great wasting that takes place so constantly in this disease. A typical general paralytic was fed on a mixed diet containing 15·8 grammes of nitrogen; his urine and faeces were analysed for the total nitrogen by Kjeldahl's method. The result of the investigation showed, during the early period of observation, there was an increased elimination of nitrogen due to a deficient absorption of proteids, and as the case progressed the analysis showed that not only was there a diminution in the power of proteid absorption, but also a destruction of the tissue proteids.

Dr. A. L. GILLESPIE has been engaged during the past year in testing the action of alkalies and acids on that of the pancreas and intestines; he states that he has now reached the middle of the first series of experiments, a full report of which he hopes to publish during next year.

Dr. A. S. GRUNBAUM reports that only a few observations, owing to pressure of other work, have been made by him. These were on the ulnar nerve, and tended to show that its sensory distribution in the monkey is more limited than generally supposed. He hopes to continue the investigations with greater rapidity during the coming year.

Professor HALLIBURTON, M.D., F.R.S., reports that during the past year the following researches have been carried out, either by himself or under his supervision, in the Physiological Laboratory, King's College, London: (1) On proteoses and peptone in serous effusions. Recently introduced methods for the detection of these substances have been applied with negative results. A paper by himself and Mr. F. C. Colls has been sent to the *Journal of Pathology and Bacteriology*, and is at present in the press. (2) On the effect of saturating normal urine with certain neutral salts. Magnesium sulphate and ammonium sulphate are much used for the precipitation of proteids. A precipitate so produced in urine, however, is not indicative of the presence of albuminous material, the precipitate produced by ammonium sulphate consisting principally of ammonium urate, and that by magnesium sulphate is inorganic, consisting of calcium sulphate and magnesium phosphate; in the urine of herbivora magnesium carbonate is also present. A paper on the above subject by Mr. A. Edmunds has already been published in the *Journal of Physiology*. (3) On creatinine. The experiments of Sir G. Johnson, F.R.S., and Mr. G. S. Johnson on urine have been repeated, and while the general results obtained confirm those of the investigators just quoted, some new points have been made out. Creatinine has also been sought for in the blood by similar methods, and so far the result is a positive one. The investigation has been carried out by Mr. F. C. Colls, who will shortly be in a position to publish his results. (4) On the coagulation of milk. This research, carried out by Mr. Edmunds, is also not completed.

Professor VICTOR HORSLEY, F.R.S., and Dr. A. BUTLER HARRIS, have sent the following report on Ehrlich's method of estimating the oxidation changes in living tissues: Since Professor Ehrlich has demonstrated that the intravenous injections of methylene blue afford ready means of estimating the degree to which oxidation or reduction relatively occurs in every living tissue, little use seems to have been made of this valuable method. The authors, believing that this was probably due to the fact that but few records were made of the phenomena relating to normal animals, have carried on during the last two years a large series of experiments, in order to map out the above-mentioned distribution. Such is easily obtained, since the intensity of the blue coloration or the absence of the same depends upon the degree of oxidation or reductions occurring in the tissues. The following is the order of the tissues in which they are found to be coloured just before death (after which, as Ehrlich has shown, reduction takes place):

DEEP BLUE COLORATION.	
Parathyroid, thyroid.	Liver.
Heart.	Ovary.
Pancreas.	Ileum.
Kidney.	Testis.
Pyloric end of stomach.	Cardiac end of stomach.
Central nervous system	Adrenals.
Duodenum.	Cartilage.
Spleen.	Lung.
Jejunum.	

As regards excretion of the methylene blue and the condition of oxidation of the secretory products the following has been observed:

Stomach.—Notable excretion of methylene blue for the most part as such into the cavity of the stomach; the remainder being excreted as a greenish tint, which, by exposure to the air, rapidly oxidised to the normal blue.

Kidneys.—In a perfectly normal animal the kidneys excreted the methylene blue as such, but in due proportion to the degree to which fatty degeneration of the organ had occurred; the urine was altered, the body excreted being of a greenish tint, or in extreme cases of a greenish grey colour. In each instance the urine became blue on exposure to the free oxygen of the air.

Salivary Glands.—After the injection of blue has commenced saliva is freely excreted, but contains no blue or reduced blue until the substance has been introduced in large quantity into the animal; but in proportion as the quantity introduced becomes greater the methylene blue as such is excreted in small quantities by the salivary gland.

Milk.—Methylene compounds are excreted in this secretion in the reduced form; exposure to air rapidly oxidises them to a blue colour.

RELATION OF THE COLOUR TO THE ACTIVE PHYSIOLOGICAL PROCESSES.

As regards the relation of the blue coloration to physiological activity, this can be best seen, as Ehrlich has pointed out, in the brain. They have repeated his experiment many times, and are fully convinced of its accuracy. It consists in the fact that if the cortex be excited with a faradic current while the blue coloration is at its height local reduction occurs in the area stimulated; whereas if the tissue be kept warm and protected at rest recuperation occurs and the blue coloration is rearrested. This process of physiological reduction and reoxidation can be repeated as long as the cortex is excitable, but ceases, as may naturally be expected, as soon as the excitability is lost.

Another good example which they have observed is in the pyloric end of the stomach. In this region the blue coloration is best marked when the digestion is in active progress.

Another case is that afforded by voluntary muscles, in

[1] Kartulis, [illegible], p. 20.

[2] L. Pfeiffer, [illegible], pp. 149 and 194.

which the blue coloration indicative of active oxidation appears in a very marked degree in muscles which are kept in a condition of marked activity by excitation of their respective nerves.

Relation of the Colour to Active Pathological Processes.

The authors commenced the foregoing work with a view to determining the relation of oxidation to fatty degeneration, but this portion of the research is still in progress, and therefore incomplete; nevertheless certain facts have appeared clearly.

As regards the voluntary muscles, if a motor nerve is divided at varying periods before the injection is made the muscle which is paralysed shows a more intense coloration after methylene blue has been injected than in the normal condition. This appears to last for some weeks.

As regards the parenchymatous organs, they have repeatedly examined the stages of fatty degeneration on the kidney, and have found that the degree of blue coloration is directly proportional to the stage of degeneration; and further, that this condition commences in two cortical convoluted tubules, and when markedly present the excretion is of the greenish type already referred to.

To avoid error of interpretation of the estimation of the colour, the authors have throughout the research employed the method of subcutaneous injection, and not the intravenous method originally introduced by Ehrlich.

Dr. John A. Hayward reports that the research in aid of which a grant has been afforded to him has been conducted chiefly with the view of determining the best method of recognising and cultivating the diphtheria bacillus from membrane, and thus simplifying the early diagnosis of doubtful cases. Thirty cases of suspected diphtheria were examined, and the relative growth of the bacillus on nutrient agar, glycerine agar, gelatine, ox serum, horse serum, antitoxic horse serum, and hydrocele fluid was investigated. The latter medium was sterilised after fractional sterilisation by heating to a temperature of 60° C. Dr. White has since simplified the process by a modification of Lorrain Smith's treatment in the preparation of ordinary serum. Thus prepared, the hydrocele fluid forms a clear, solid, semitransparent nutrient medium. The bacillus was found to grow more readily on serum and the coagulated hydrocele fluid than on any other medium, the latter presenting the further advantage in that it seems to be inimical to the growth of staphylococcus aureus and albus, and to a certain extent of some of the varieties of streptococci, which are so constantly found in the membrane, and which on other media overcrowd and render difficult the detection and separation of the bacillus. Both on serum and hydrocele fluid the bacillus can be recognised and separated generally within twenty-four hours. The cultures were most readily made by taking a small piece of membrane, washing it thoroughly in saline solution, drying between blotting paper, and then smearing over the surface of the nutrient medium; using the same needle subcultures are made successively on four or five fresh tubes, thus separating and diminishing the number of colonies. This method is both preferable and less troublesome than making plate cultivations. Hydrocele fluid has the disadvantage that it varies in coagulability, and on it, as with other media, the rapidity of the growth of the colonies varies in different cases. Horse serum and antitoxic horse serum, when solidified at a high temperature, were found to form as good nutrient media as ox serum. In fluid antitoxic serum the bacillus remained alive for at least forty-eight hours, as proved by subcultures. At this time many "involution" forms were observed, but further observation was hindered by contamination of the tubes and lack of material. The serum which had been inoculated with the bacillus, and incubated at 37° C. for forty-eight hours, still retained its antitoxic properties as proved by the protection which it afforded to a guinea-pig inoculated at the same time with a virulent broth culture. Nutrient and glycerine agar are not suitable for early diagnostic purposes, as the overcrowding of other micro-organisms which grow more quickly than the diphtheria bacillus render recognition and separation difficult. In the examination of these thirty cases a particularly striking feature has consisted in the great variability exhibited in the size and shape of the bacillus, and in the relative rapidity of the growth of colonies from different cases. *Ceteris paribus*, as might be expected, the colonies grow more readily the earlier in the disease the cultures are made, and when the membrane is being actively formed or renewed. No correspondence could be made out as regards the association of particular varieties of the bacillus with clinical varieties of the disease, and in the majority of cases after cultivation mixed forms were observable. It would appear that any deductions on this point must be made from direct microscopical examination of the bacilli as they occur in the membrane, and not after artificial cultivation. Experiments have also been made to test the relative value of certain so-called solvents of diphtheritic membrane. Small portions were subjected to the action of lime water, bicarbonate of soda (10 grains to the ounce), bicarbonate of potash, Benger's liquor pepticus and pancreaticus, lactic acid, papain (Finkler), hydrogen peroxide (20 vols. per cent.). Of these lime water was found the most efficient; small pieces of a tough membrane were dissolved in about 15 minutes, leaving a slight loosely coherent and flocculent residue. Next in solvent power comes liquor pancreaticus, a drachm of which with a few grains of bicarbonate of soda dissolved a tough piece of membrane in 20 minutes when kept at a temperature of 39° C. Liquor pepticus, acidulated with hydrochloric acid, was considerably slower in action. The remaining agents were practically without effect on the membrane. A saturated solution of papain (Finkler in glycerine had no appreciable effect in half an hour. Hydrogen peroxide (20 vols. per cent.) has been strongly recommended from America as a powerful remedial agent for clearing away membrane and destroying the bacillus, especially when the solution is acidulated. As far as experimental results go, it has proved disappointing; it has no distinct solvent effect on membrane, and bacilli grew readily in subcultures from a solution five minutes after they had been introduced. A favourable opportunity occurred for examining the air expired in an early and virulent case of diphtheria. A sterile glass funnel, the sides of which were coated with a thin layer of glycerine, was fitted over the nose and mouth of the patient, and the narrow end of the funnel loosely plugged with cotton wool. Respiration was conducted through this apparatus for ten minutes. Subcultures were immediately made from the glycerine surface, but no colonies of bacilli could be detected by culture or direct examination of the glycerine, but a colony of cocci appeared on one of the agar subcultures. Attempts have also been made to determine something of the life-history of the bacillus diphtheriæ when grown in sewage which has been previously freed from micro-organisms by either (1) sterilisation or (2) filtration. No definite results have been obtained as yet; the bacilli appear to remain active in the sewage for at least a week. In one instance they ceased to yield subcultures after ammoniacal decomposition of the fluid.

Dr. R. T. Hewlett reports that his investigations of the chemical nature and constituents of malignant tumours has been continued in several directions. One of the most important results obtained so far is the fact that proteoses (albumoses) seem to be completely absent from carcinoma, sarcoma, and fibro-adenoma. On the other hand, a small amount of a proteose has been obtained from the livers of rabbits suffering from coccidial disease. This substance, however, did not seem to possess any marked physiological action. A report on this part of the subject is practically ready for publication, and will be forwarded shortly. The examination of the proteoses contained in the spleens of carcinoma patients and a comparison of these with the same substances met with in the spleen in other diseases has been continued and will shortly be completed. A micro-chemical investigation of the so-called parasitic protozoa of carcinoma has also been undertaken. The examination of carcinomatous tissues for chitin has so far given negative results. A detailed examination of the proteids of carcinoma and sarcoma has still to be made.

Dr. R. M. Horne reports that in his investigation he has first of all endeavoured to determine whether an albumose is normally present in muscle. Halliburton has stated that the muscle ferment is of the nature of an albumose. Whitfield, however, whose paper was published after Dr. Horne had

began this research, was unable to find any evidence of the existence of an albumose in muscle. His own experiments led him to believe that there is normally in rabbit's muscle a small quantity of an albumose possessing characters which indicate that it is closely related to the dentero-albumose of Kühne. Dr. Horne has also obtained from rabbit's muscle, by Wooldridge's method, a substance having the properties of a nucleo-albumen. After purification it was found to contain organic phosphorus; it yielded a residue after long-continued digestion in artificial gastric juice, and its solutions produced intravascular coagulation when injected into the blood vascular system of rabbits. Dr. Horne made some experiments to determine the action of solutions of nucleo-albumen, leuco-nuclein and leuco-histin, upon the coagulation of salted muscle plasma (prepared by extracting rabbit's muscle before rigor mortis had set in, with various saline solutions). The varying results obtained, depending upon variations in the reaction of the media in which the substances were dissolved, do not admit of any conclusions being drawn. The reaction of muscle extracts is one of the most important factors influencing their coagulation. A slight alteration in the reaction towards the alkaline side delays or prevents coagulation; a slight alteration towards the acid side materially hastens coagulation. Myo-albumose hastened coagulation even in a faintly alkaline medium.

Dr. A. A. KANTHACK has sent the following preliminary report on the distribution of the bacterium coli commune. It is either stated or tacitly understood by most observers that the presence of the above organism implies fæcal contamination, and water or food has been condemned on that account. The above group of organisms is considered to be a normal inhabitant of the large intestine. For reasons which need not be stated here, these statements seemed not to rest on facts, and if they are incorrect much harm may be done to water companies, food venders, etc. It was found that the bacterium coli group is as widely distributed as the bacillus fluorescens liquefaciens group. The latter also is found in the intestines, and we have therefore no right to assume that fluids or substances containing a bacterium coli, even in abundance, have been contaminated with or from fæcal matter. The bacterium coli organisms were found plentifully in (*a*) sputum, whether pneumonic, bronchitic, influenzal, tuberculous, or normal; (*b*) in saliva very frequently; (*c*) in many diphtheritic membranes; (*d*) in various suppurating wounds; (*e*) in all cases of gangrene, cancrum oris, phagedæna; (*f*) in cases of angina Ludovici; (*g*) *post mortem* in the lungs of almost all individuals; (*h*) in the secretion from the cervix uteri; (*i*) often in the urine that had stood for twelve hours; (*k*) often also in cystitic urine; (*l*) dust was hardly ever free from them; nor (*m*) sand or earth, or (*n*) water exposed to the air; (*o*) frozen mutton was also inhabited by them; and (*p*) they were found also in the snow crystals of the freezing chambers. It is seen then that these organisms are not merely restricted to fæces, but are ubiquitous, and that, therefore, we have no right to conclude that their presence means fæcal contamination. Dr. Kanthack is continuing the research as to the variability and pathogenic properties of these organisms, their morphological and biological characters. So far his criticism is directed against the fæcal contamination theory and its obvious fallacies.

Dr. W. S. LAZARUS BARLOW and Mr. G. E. PHILLIPS have been engaged during the past year in an investigation into the œdema of inflammation. The results are not yet in a sufficiently advanced condition for full publication, but it may be stated that so far they have found that there is a marked difference between the specific gravity of the muscles immediately beneath a blister, those underlying the edge of the blister, and those at a distance from it. If these muscles be compared with those on the uninjured side, it is found that the muscles immediately beneath the blister are considerably lower in specific gravity, and those beneath the edge of the blister are somewhat lower in specific gravity. This fact might have been suspected, but the interesting point shows itself with regard to the muscles at some distance from the blistered area. Here there is a considerable rise in specific gravity as compared with the uninjured side. It appears, therefore, that fluid is abstracted from the regions around an inflamed spot to supply fluid immediately beneath that spot. Other investigations carried out by aid of the grant from the British Medical Association have already been published and acknowledged by one of them (W. S. L. B.) in a paper on the Pathology of Œdema, published in the JOURNAL on March 23rd and 30th of the present year. The research is still being carried on. The investigation into the action of the diphtheria toxin upon the heart has not made great progress during the year, chiefly because of the amount of time consumed in the isolation and preparation of the toxin. This, however, has been prepared in some quantity in the dry state, and has been compared in its action upon the living animal with albumose obtained by the kindness of Dr. Sidney Martin. The experiments show that there is no essential difference between the action of the filtrate from diphtheria cultures and of the purified albumose, excepting of course in the amount to be injected. Future experiments, therefore, will be carried out with the filtrate, and consequently it is to be expected that the work will progress more rapidly.

Dr. MOTT has been engaged in an experimental inquiry upon the afferent tracts of the central nervous system of the monkey. Results of fourteen experiments (for full details of which *vide Brain*, vol. i, p. 1, 1895). The column of Goll is formed especially by fibres entering by the fifth, sixth, and seventh subthoracic roots. After uncomplicated unilateral section, even of a large number of roots, there is no degeneration in the opposite posterior column. The nuclei of Goll ends in the nucleus of the funiculus gracilis. When this nucleus is destroyed or the fibres issuing from it separated from the cells of the nucleus, a degeneration occurs in the internal arciform fibres, the opposite interolivary layer, and fillet, which can be traced up to the optic thalamus. It is impossible to injure Goll's nucleus without Burdach's nucleus being involved, and he finds experimentally that the greater number of fibres of the fillet come from the latter nucleus. In no case could degenerated fibres be traced to the cortex. Thus there is no experimental evidence in favour of the existence of a cortical fillet direct from the posterior column nuclei. Unilateral section of lumbo-sacral roots is followed by degeneration of a variable number of fibres in both antero-lateral regions. A similar degeneration, but much more extensive in this region, occurs after median section in the upper lumbar region. In the paper mentioned Dr. Mott points out the fact that the antero-lateral tract of Gowers probably consists of fibres arising from cells of the grey matter of the opposite side, and that they are of two sets, having different destinations: (1) The more numerous are cerebellar, which cross in the anterior commissure, and, after looping over the fifth nerve, run on the posterior surface of the superior cerebellar peduncle, to reach the middle lobe of the cerebellum. (2) Another set of afferent fibres, which also cross in the anterior commissure to form probably the crossed afferent tract of Gowers and Edinger, the function of which is unknown. This tract can be traced up the cord, the medulla, the pons, terminating in the corpora quadrigemina. The lesions and the resulting degeneration are all illustrated by photomicrographs. The method of staining adopted has been the Marchi method, which, properly controlled, is by far the best for tracing early degenerations.

Dr. ROBERT MUIR reports that during the past year he has prosecuted an experimental research on leucocytosis, for which he obtained a grant, and in which he is still engaged. He states that the earlier part of the work was beset with many difficulties and fallacies, but now the progress is more satisfactory; many results are ready for publication, and he hopes to continue the research during the next year.

Dr. G. R. MURRAY has returned his grant.

Dr. M. S. PEMBREY reports that the relation of muscular activity to the maintenance of a constant temperature can be studied by testing the response of an animal to changes of external temperature under conditions in which the control of the animal over its muscular system is varied. The response of the normal animal is compared with that exhibited by the animal under anæsthetics, or after section of its spinal cord. This investigation differs chiefly from that of other observers in the shortness of the consecutive periods in which the respiratory exchange was determined. Thus it is possible to follow the immediate effect of changes of temperature. The results show that a mouse whose spinal cord has been divided only responds in a manner similar to that of a

cold-blooded animal when it is no longer able, by the activity of the few muscles over which it still has control, to keep up the temperature of its tissues. The relationship of muscular activity to the regulation of heat production is even better shown by the result obtained on anæsthetised mice. A preliminary account on this research was given before the Physiological Society on February 16th, 1895. A full account will probably be published shortly.

Dr. H. W. Samways reports that in his research, of which he has already sent full particulars, he has endeavoured to show that the dicrotic wave of the pulse is in all probability not produced by reflection at the aortic valves or in other ways commonly suggested as possible, but rather is consequent on the shortening of the first part of the aorta when the ventricle relaxes. The fact of the elongation and straightening of the ascending aorta during the cardiac systole is well known, but he has never seen discussed the pressure changes which occur within the aorta on its longitudinal recoil after the systole is over. He has shown in his experiments that the dicrotic wave of the pulse and natural pulse tracings may be perfectly imitated by employing a pump and an elastic system of tubes to represent the circulation in the ordinary class-room manner. It is necessary only while working the pump to stretch the portion of tube adjacent to it during the systole and release it during the diastole, thus mechanically imitating the natural circulation. The superposition of the dicrotic rise on the descending limb of the main pulse wave is then very evident. Dr. Samways shows also that in the dog, if the longitudinal movement of the first part of the aorta be prevented by fixing it near the heart the dicrotic wave at once disappears. He regards, therefore, the dicrotic wave as chiefly, perhaps entirely, due to the "ballistic action" of the aorta recoiling longitudinally on the blood column. This raises the blood pressure locally and starts a wave, which may be easily shown to be greater when the recoil is more rapid, that is when the liquid pressure is less. The longitudinal recoil commences somewhat later than the circular, upon which latter the transmission of the main pulse wave along the arteries depends. At the end of his paper Dr. Samways has suggested that it is this longitudinal recoil of the aorta which, pulling on the base of the ventricle like a receding piston, tends to open up its cavity and is the probable mechanical cause of the negative pressure often observed in the ventricle at the commencement of its diastole. Lack of time has prevented his completing his experiments, but he hopes to confirm and extend them at an early opportunity.

Dr. Theodore Shennan reports that since his last report he has obtained a fair quantity of catha leaves. These, when examined microscopically, show few peculiarities which are out of the way. The upper surface shows the ordinary network of cells. The lower, in addition, shows stomata, with well-marked guard cells and groups of crystal containing cells. Under the epithelium there are two rows of palisade cells, of which the lower has the less number. Dr. Shennan has obtained an alkaloid in small quantity which is not caffeine; also tannic acid, glucose, a resin in small quantity, and chlorophyll. The leaf as obtained here contains 5.52 per cent. of moisture. The alkaloid (impure) was got as a fawn-coloured syrupy liquid. This, when dissolved in absolute alcohol and filtered into ether, falls as a white flocculent precipitate, which in time forms a viscous layer on the bottom of the beaker. It gives precipitates with phosphomolybdic acid, phosphotungstic acid, picric acid, solution of iodine in potass. iodine solution. No precipitate with tannic acid in neutral, acid, or alkaline solutions; light-green coloration with strong sulphuric acid *plus* potassium bichromate. No change with Fehling's solution. It is non-volatile. If a neutral solution of it be instilled into the conjunctival sac of a rabbit, it dilates the pupil. If the impure alkaloid, as obtained by precipitation of an alcoholic strong extract by ether, be injected into the common rat, hypodermically or intraperitoneally, it causes death with tetanic convulsions, easily induced, in from four and a-half to twenty-eight hours—that is, with a dose varying from 0.007 gramme to 0.063 gramme per gramme of body weight. *Post mortem* the heart was in diastole. The first indication of action in these animals was an opacity of the cornea, after which a staggering gait was noticed. In frogs, if a large dose be given, coma and death supervene; if smaller, after a time reflexes, particularly the abdominal, are increased and at last tetanic spasm can be induced very readily. *Post mortem*, ventricles generally in systole. Such results are very closely allied to those got with caffeine, and argue the presence of that active principle. So far, however, no one has been able to isolate it from catha. Dr. Shennan is now engaged in trying the various methods of extracting caffeine from tea, and applying them to catha, in order to afford a check, and make sure that the absence of caffeine is not due to faulty methods of extraction.

Dr. H. R. Smith reports that he has been enabled to make a complete chemical examination of 24 different pathological fluids, including 6 ovarian tumours, 2 parovarian, 5 cases of ascites, 3 pleuritic effusions, 2 hydroceles, 1 œdema fluid, 1 dermoid fluid, and the contents from 1 pancreatic cyst. In every case he has estimated the specific gravity by means of the picrometer; the total solids, water, and ash have also been determined. The total quantity of albumen has been estimated by weight after precipitation with absolute alcohol; it has also been estimated by Esbach's method in order to form some definite idea of the accuracy of this latter method; the presence or not of pseudomucin and nucleo-albumin has been determined and the total quantity of nitrogen has been estimated by Kehjdahl's method, and this compared with the total albumin to determine if it were all accounted for by proteids, or whether some were due to extractives; the total alcoholic extract and ether extracts (so-called fats) were estimated, and in the latter the percentage of cholesterins lecithin, and fat acids have been determined. The result, show conclusively that the chemical analysis of pathological fluids is not to be relied upon for assisting in the diagnosis as to the origin of the fluid, with the exception that fluids of inflammatory origin contain more albumin than simple effusions. In no instance was any single constituent or group of constituents present in such a form or quantity as to enable one to form any reliable idea as to the origin of the fluid. One interesting fact brought out in these researches is that the presence of pseudomucin is by no means pathognomonic of ovarian fluid, as was once imagined. Dr. Smith detected its presence in the following fluids, in addition to ovarian and parovarian fluids, in ascites of varying origin, in one case of pleurisy, in one of hydrocele, and in dermoid secretion. The total salts in all the fluids were exceedingly constant, varying only from 0.54 per cent. to 0.82 per cent. The percentage of cholesterin, lecithin, and fats varied very greatly, and this variation bore little or no relation to the nature of the fluid.

Dr. W. L. Symes reports that during the past twelve months his work on nerve sections has been in abeyance, and attention has been given to certain crystals that form in strong solutions of alkalate albumin. Lieberkuhn's jelly (soda), in the course of a few hours or days, liquefies, and if exposed to the air the fluid develops a large crop of colourless rhombic or monoclinic crystals, which are freely soluble in distilled water, and which on drying tend to become efflorescent. They are strongly alkaline, and consist largely of sodic carbonate. Prolonged washing fails to free them from proteid, as evidenced by the precipitability of their aqueous solution, by picric, trichloracetic, and salicyl-sulphonic acids; and its colour reactions with the xantho-proteic, and (after elimination of CO_2) Piobrowski's reactions. They are now under quantitative analysis.

Dr. A. H. Tubby reports that experiments have been carried out by him with reference to the following points: (1) The immediate and more remote effects of opening the pleural cavity on blood pressure. (2) The effect of the injection of various fluids in the pleural cavity, the fluids being such as are in ordinary surgical use. (3) The possibility of transference of solid particles suspended in saline solution from the peritoneum to the pleural cavities. With reference to No. 1: In six experiments the effect of opening one pleural cavity—say the right, for example—in cats is to cause a somewhat sudden fall of blood pressure, varying from 10 mm. to 18 mm. of mercury, and lasting for one and a-half to two minutes. Blood pressure then rises again nearly to the normal. In some cases it happens that the two pleural cavities in the cat communicate, and the opening of one is followed by a condition of pneumothorax on both sides of the chest. When, however, the pleural sacs are duly separated, on sucking out the air which has been let into

one of them the normal pressure is immediately restored. No. 2. The fluids which have been injected into the pleural cavity are three, namely, carbolic acid solution, 1 in 40; tincture of iodine solution, 1 in 60; and perchloride of mercury, 1 in 3,000. The effects of injection of 30 c.cm. of carbolic acid solution, 1 in 40, are very consistent. There was an immediate fall of blood pressure, varying from 12 mm. to 25 mm. of mercury, accompanied by inspiratory convulsions and great irregularity of the heart, death ensuing in from two to three minutes. In one instance, the carbolic acid having been injected into the right pleural cavity, the lung was found to be intensely red, while in the left pleural cavity there was some fluid, coagulable on heating. In another case, whereas 30 c.cm. of carbolic acid solution were injected into the right pleural cavity, causing death in four minutes and a half, 50 c.cm. were found on making an immediate *post mortem* examination. The effects of putting in 30 c.cm. of 1 in 160 iodine solution were very slight. A temporary fall of blood pressure occurred, followed by a subsequent rise, accompanied by irregularity of the heart, but beyond that no ill effects seem to have been felt. The effects of injection of the solution of 1 in 3,000 perchloride of mercury were at variance, and it is intended to make some more experiments with this substance. If 60 c.cm. of normal saline solution be put into one pleural cavity, and the animal be kept alive for four days and examined afterwards, it will be found that no trace of the fluid remains in the cavity. No. 3. The possibility of the transference of solid particles suspended in saline solution from the peritoneum to the pleural cavities; 50 c.cm. of 1 per cent. berlin blue solution in 0.75 sodium chloride solution were put into the peritoneal cavity, and into the right pleural cavity 50 c.cm. of saturated salt solution were put. In one hour, on removing the fluid from the pleural cavity and centrifugalising it, no signs of any blue particles were found in it. If, instead of placing saturated saline solution, normal saline solution were placed in one pleural cavity, the Berlin blue being in the peritoneal cavity as before, and artificial respiration be kept up for one hour, again no trace of Berlin blue is found in the fluid recovered from the pleural cavity. But to make these experiments of value, they should be conducted for from six to twelve hours. However, it would seem from some experiments by Dr. Starling and Dr. Tubby detailed in vol. xvi of the *Journal of Physiology* that lymphatics play but a very subordinate part in the entrance to and exit from the pleural cavity, even of soluble methylene blue dissolved in normal saline solution.

Dr. SWALE VINCENT reports that his work is by no means complete, but he has a paper ready for publication which embodies the work as far as it has progressed. He has endeavoured to make the investigation a contribution to the comparative anatomy and histology of the suprarenal capsules, and for this purpose he has investigated these bodies in certain orders of fishes, namely, in Elasmobranchii, Ganoidei and Teleostei, and to some extent also in the Dipnoi. He has examined in all fifty types, including representatives from the above named orders. The Cyclostomi are not included. He has noted in each species examined the exact anatomical relations of the suprarenal bodies, and in the case of the Elasmobranchii their relation to the sympathetic nervous system. He has also made careful histological preparations of the suprarenal of all the types examined, employing very various modes of hardening, staining, and preparing. As a general result, he has come to the conclusion that the suprarenal capsules in fishes are secreting glands just as those of mammals are now supposed to be, that is, that these bodies manufacture and pour into the blood some material which is essential for that fluid. They are therefore in a true sense "blood-vascular glands."

Dr. J. C. WEBSTER reports that during the past year he has carried on his work with reference to the determination of the question of wandering of the ovum, external and internal; the other parts of his research he has not been able to continue in consequence of the severity of last winter; he is returning his grant, and applying for a renewal.

DR. A. H. WHITE has been engaged in a research on the effects of repeated haemorrhage on the composition of the blood, and reports that the subject is of such an extensive nature and the amount of work entailed in its thorough investigation so great that, notwithstanding the very large number of analyses already made its outskirts only have been touched. Large dogs were employed, and so far as possible it was endeavoured to have the conditions under which the bleedings were performed identical. Estimates and analyses of the first portion of blood lost were made of the number of corpuscles and percentage of haemoglobin, of the time it took to coagulate, its specific gravity, the amount of water and solids, total proteids, fibrin, ash, and ether extract; while in addition about a dozen cover-slip preparations of the blood were made, fixed, and put aside for subsequent staining and examination. Up to the present nine dogs in all were used, but from two of these no results were obtained, the animals dying a few hours after the first bleedings (4.4 per cent. and 4.5 per cent. of body weight respectively lost). Appended is a table giving the full result of the analyses, etc., in the case of the dog.

Weight.—The animals were in all cases carefully weighed before being bled, and the total amount of blood lost at each bleeding was carefully estimated. In consequence of the bleedings the animals lost weight, but not in proportion to the quantity of blood withdrawn.

Quantity of Blood Lost.—The amount of blood taken away at a single successful bleeding varied from 0.8 per cent. to 4.2 per cent. of body weight. Cohnheim says animals often do not recover after the loss of 3 per cent. of body weight, and further, that when the quantity of blood lost equals 3.5 per cent. to 4 per cent the animal is seized with convulsions and dies. In these experiments no dog died from the loss at first bleeding of less than 4.4 per cent. of body weight, and one dog lived in spite of a loss of 4.2 per cent. Of course a much greater quantity of blood may be lost when spread over a few days, as, for example, one dog in three days lost 5.3 per cent. of original body weight, or about five-sevenths of the original quantity of blood.

Specific Gravity.—The specific gravity was, as a matter of course, always lowered, but never seemed to fall so much below normal as it does in bad cases of chronic anæmia and chlorosis. This fall in the specific gravity bore no constant relationship to either the corpuscles or haemoglobin; there does, however, seem to be some relationship between the amount of its fall and that of the proteids.

Water and Solids.—The disturbance between the relative proportions of the water and solids is well marked.

Total Proteids.—The quantity of total proteids is greatly diminished, but not in proportion to the amount of blood lost; for example, the loss of 38 per cent. of total blood in two bleedings reduced the proteids to only 89.3 per cent. of original amount.

Fibrin.—After each successive haemorrhage the increase in the amount of fibrin is steady and striking. For example:

	Blood Lost. (Per cent. of Body Weight).		Fibrin in 100 parts of blood.
Normal blood	0.0	...	0.4
Twenty-four hours after 1st bleeding	1.1	...	0.6
" " 2nd "	0.9	...	0.7
" " 3rd "	0.8	...	0.9
" " 4th "	1.1	...	1.1
" " 5th "	1.0	...	1.6

(See also table at end.)

Ash.—The amount of ash, contrary perhaps to general opinion, was markedly diminished as a result of the bleedings.

Ether Extract.—The ether extract would seem to be increased, but many further analyses and by different methods must be made.

Coagulation Time.—As regards the time which the blood takes to coagulate, it appears to be wholly uninfluenced by the amount of blood lost; and also the amount of fibrin bears no relation to the rapidity or slowness of the act of coagulation. There appears to be, however, some connection between the coagulation time and the quantity of ash, but at present it would be unsafe to push the connection too far.

Haemoglobin.—The fall in the proportion of haemoglobin at the end of twenty-four hours is exactly proportional to amount of blood lost. Its restoration to the blood seems to begin between twenty-four and forty-eight hours after the bleeding.

Formed Elements.—A full examination of the formed elements has not yet been made. The *red corpuscles*, however,

Specimen Table showing Complete Results in the Case of One of the Dogs.

	Grammes. Per ct. of Body Weight.	Weight of Dog.	Specific Gravity.	In 100 Parts of Blood. Solids.	Proteids.	Fibrin	Ash.	Ether Extract.	Coagulation Time.	Hb. per c.c. of Standard.	No. of Red Corpuscles in c.mm.
Normal		K'los. 26·4	1060	21·30	12·01	0·14	0·72	0·030	Sec. 75 to 80	115	6,080,000
Twenty-four hours after Bleeding.											
1st	of 441 or 2.5	23·4	1052	22·95	20·42	0·37	lost.	0·097	85	75	6,080,000
2nd	of 326 or 1.4	26·1	1057	21·71	18·38	0·43	0·73	0·072	65 to 70	70	—
3rd	of 311 or 1.2	25·1	1060	17·95	16·45	0·53	0·68	0·137	75	66	4,920,000
4th	of 196 or 0.8	Dog died some few hours afterwards.									

greatly diminished, though not in proportion to the amount of blood lost; there is little or no change as regards their size and shape. In a few cases the increase in the *hæmatoblasts* was quite striking. The *white corpuscles* are increased, indeed, in some instances the leucocytosis is quite marked in the later days of bleeding, in which cases almost, if not more than, 90 per cent. of the corpuscles are of the polynuclear variety.

The experiments were carried out in the Chemical Pathology Department of the University College, London, under the kind direction of Dr. Vaughan Harley.

Dr. Hale White has, in conjunction with Mr. F. G. Hopkins, continued his work in connection with animal calorimetry. During the winter much has been done to improve the accuracy of working of the instrument.

Research Scholarship.

Dr. W. Soltau Fenwick has sent the following report, which is a short abstract of a paper which was published in the Journal of April 13th last, in conjunction with Mr. Bokenham, entitled, Some Researches into the Chemistry of Typhoid Fever. The spleens obtained from four cases which had succumbed to enteric fever during the third week of the disease were removed from the body as soon as possible after death, and submitted to the same chemical process which they had formerly employed in their researches upon scarlatina. In this manner three varieties of organic extracts were obtained: (1) A material which was insoluble in absolute alcohol, but freely soluble in water, and which afforded all the chemical reactions of an albumose. (2) A substance which was extremely soluble both in water and in absolute alcohol, and possessed most of the characteristic features of an alkaloid. (3) A dark coloured, semi-solid material consisting of a mixture of fat and fatty acids. The pathological effects of the different substances were next tested by injection into rabbits, guinea pigs, and rats. 1. The Albumose. This was administered in doses ranging from 0.02-0.8 gramme per kilo of the body weight. In all cases both the subcutaneous and intravenous injection was followed after an interval of four or five hours by severe pyrexia, thirty hours or more elapsing before the temperature regained the normal point. During this period the animals lost appetite and weight, but death never occurred, even when large and repeated doses were given. The animals were killed at varying intervals after the injection, and the tissues of the body submitted to microscopical examination. With the exception, however, of some degree of cloudy swelling in the renal epithelium, no evidence of disease was forthcoming. These results present a marked contrast to those obtained by Martin in cases of diphtheria, and by Dr. Fenwick and Mr. Bokenham in scarlatina. 2. The Alkaloid. This extract was employed in doses varying from 0.05-0.5 gramme per kilo. No phenomena of interest followed the injection of this substance, nor did the various tissues after death present any signs of disease. 3. The Fatty Extract. This was liquefied by the action of heat, and administered subcutaneously. Its only effect was to cause a temporary fall in the temperature of the body, but neither fever nor temporary leukæmia followed its repeated injection. During the past four months Dr. Fenwick has been occupied with an investigation into the etiology and pathology of the marasmus of infants, which he hopes to have ready for publication by the end of next October. The following are some of the facts which have been ascertained up to the present time: 1. The stomach, intestines, liver, and spleen derived from 10 fatal cases of marasmus were submitted to careful microscopical examination. In every instance the stomach was found to be the seat of a chronic form of gastritis, which commenced as a round-cell infiltration in the interstitial portions of the mucous membrane, and finally gave rise to complete cirrhosis of the organ. The duodenum, small intestine, and colon were affected in a similar manner, but parenchymatous inflammation often coexisted with the interstitial form. In most cases the liver was found to be in a state of fatty degeneration, and the kidney exhibited signs of parenchymatous inflammation. 2. Bacteriological examination of the diarrhœa resulted in the isolation of numerous varieties of micro-organisms, each of which has been separated and cultivated in a pure state. Experiments have been performed with the pure cultures in order to discover the pathological and clinical phenomena which result from the inoculation into inferior animals. Finally, the toxins of the principal varieties have been manufactured and their action upon animals investigated. The various micro-organisms have been grown upon media containing definite proportions of antiseptic substances, and the results compared with those obtained from the internal administration of the same drugs to children suffering from diarrhœa and marasmus. This portion of the subject will be embodied in a contribution to the Therapeutic Section at the annual meeting. Exhaustive investigations have also been made into the secretion of the gastric juice in similar cases, and the compositions of the excreta have been studied with a view of determining the cause of the hyperacidity of the fæces which usually exists.

Dr. E. Lloyd Jones reports that during the past year he has continued his observations on the blood in healthy persons, measuring the specific gravity of the whole blood, and as often as possible the proportion of corpuscles to serum, the quantity of hæmoglobin, and the specific gravity of the serum. He has also kept records of cases of chlorosis. These observations show that the blood of the female before puberty resembles the blood of the male, but at about 16 years of age the quantity of hæmoglobin becomes diminished, the specific gravity of the blood becomes less, the red corpuscles become relatively fewer. In many women there is a slight change in the same direction at each menstrual period. The blood varies in different types of healthy persons; thus persons with light eyes, hair, and complexion have lighter blood than darker persons. These differences bear a curious relation to the fertility of the mother. Thus in the case of a number of healthy males the relation between the specific gravity of the blood and the number of brothers and sisters was as follows:

[illegible]	...	...	...	...	8 to 9
1057	...	...	...	...	6 to 7
[illegible]	...	...	...	...	[illegible]
1059	...	...	...	...	5 to 6
1061	...	...	...	...	4 to 5

Showing that the males whose blood most nearly approached the female kind of blood, had many brothers and sisters. He

is not yet provided with a sufficient number of observations on suitable females. In chlorosis the blood exhibits: (1) Marked diminution of the hæmoglobin, (2) diminution of the specific gravity, (3) a diminution of the volume of red corpuscles. Among the signs of chlorosis bearing most on its pathogeny are probably dilatation of the heart, rapidity of the pulse, gastroptosis, a tendency to gastric pain, gastric and intestinal congestion and hæmatemesis, with or without the occurrence of ulceration; slight but evident enlargement of the thyroid, and weakening of certain voluntary muscles. Chlorotics are most prone to relapse at or about their menstrual periods. Some experiments reported by Dr. Jones the year before last show that after section of the splanchnic nerves or destruction of the spinal cord high up in the neck, the injection of saline solution leads to a more permanent lowering of the specific gravity of the blood than is usually the case, while there is very marked gastro-intestinal congestion and even hæmatemesis. Recognising some analogies between Graves's disease and chlorosis, he sought for some source of auto-intoxication in the latter disease. So far his experiments with ovarian, Fallopian, and uterine tissue have given negative results. The combined administration of Fallopian tissue with common salt, however, produced a marked diminution of the percentage of hæmoglobin, and in this relation it may be added that he found the blood of chlorotic women to be more alkaline than that of healthy women. Before the August meeting he will have investigated the action of salt given alone. If salt alone will produce this effect we have a means, possibly, of treating those persons (of whom he has written in other reports) who are pale, but who have an excessive proportion of red corpuscles. In conclusion, the blood of chlorotics presents in an exaggerated degree the characters shown by the blood of those healthy persons whose mothers were most prolific. Of this he was aware last year, and reported so to the Scientific Grants Committee, but only during this year has he found that in all persons of unmixed race one can tell the fertility of the mother from an examination of the blood of the children. With regard to the treatment of chlorosis, the most successful prophylactic measures appear to be a plentiful flesh diet, combined with a due amount of exercise. Among drugs, no one appears to be capable of replacing iron in the treatment of chlorosis. No form of iron does better than the reduced metal, the carbonate or the hydrate. Some of the newer preparations—for example, ferratin, hæmogallol—sometimes acted well, but, like all the others, failed in certain cases. Dr. Jones proposes during this year to continue his observations upon healthy persons, to obtain, as far as may be possible, exact figures showing the relation between the composition of the blood and fertility, to determine if possible the relation between the blood of the parents and that of the children, and to continue his observations on chlorotic women with the object of determining the cause of the disease, and particularly whether it be due to an auto-intoxication of any kind.

Dr. G. E. CARTWRIGHT WOOD reports that the object of his research was to investigate one of the acute exanthemata, in order if possible to recognise and separate out its specific organism. The first and chief difficulty which confronted him was the fact that the lower animals appeared to be insusceptible or to be practically refractory to these diseases, which rendered not merely the recognition of the parasite—even when separated out—very difficult, but also deprived one of the most efficient means of obtaining fresh and "clean" material for experimental purposes. In consideration of these facts he selected variola and its probably modified form, vaccinia, as the object of investigation, inasmuch as the latter at any rate can be inoculated on certain animals. Unfortunately the animals which are specially suitable for its inoculation—for example, the calf—are not such as can be used for general laboratory work. Dr. Wood obtained several samples of vaccine matter from different sources, and investigated chiefly from the bacteriological point of view, in order if possible to eliminate these from the experiment. The material which he has been able to get has, however, been so very unsatisfactory, from its evident gross contamination from the bacteriological point of view, that it was evident that no advance could be made until the production of the vaccine material could be carried on directly under his own eye as in ordinary laboratory experiments. Dr. Wood has been engaged accordingly for some time in experiments for the purpose of ascertaining if he could not render the ordinary laboratory animals, such as guinea-pigs and rabbits, susceptible to vaccinia by placing them under certain special conditions. That such a method could be devised was very probable, since it has been known for a long time that one can render the infection much more rapid and fatal than usual by subjecting them to special conditions, and may sometimes even produce such profound constitutional changes in an animal that even ordinary harmless saprophytes can invade the animal body and produce fatal results. He has already obtained certain results in the case of rabbits, which render him very hopeful that this method may be of great service. Dr. Wood also refers to the fact that he has obtained a somewhat similar result with gonococcus material on rabbits, which are naturally absolutely refractory to such material under normal conditions. When, however, the animal has been treated in a special manner, a purulent discharge makes its appearance in the course of the next few days, and continues for several weeks. In this material pus organisms and also gonococci appear to be present, but he has not yet had an opportunity of carrying out the experiments with a pure culture of gonococcus.

J. WARD COUSINS, M.D., *Chairman*.

REPORT OF COMMITTEE ON LEGISLATION FOR INEBRIATES.

ABOUT the beginning of the present session of Parliament your Committee presented a memorial to the Home Secretary, expressing their regret that Mr. Asquith had been unable to introduce the measure which he had announced his intention to present to Parliament, during the preceding session. The Committee reaffirmed their suggested amendments on existing legislation, especially as to removal of the present hindrances to the prompt reception of habitual drunkards in retreats licensed under the Inebriates Acts, as to compulsory curative detention, and as to provision for the poor at the public charge, with the inclusion of excessive indulgence in morphine, and other drugs besides alcohol. The Committee also expressed a hope that the Home Secretary would be enabled to carry out his intention during the present session. The Cabinet and Mr. Asquith have since redeemed their promise by the introduction of a Bill in the House of Lords by the Lord Chancellor on May 21st, when the first reading was passed.

The Government in their Bill has adopted the principal amendments which were put before Mr. Asquith by the joint deputation from your Committee, the Society for the Study of Inebriety, and the Homes for Inebriates' Association: (1) Compulsory curative seclusion of the habitual drunkard is to be secured by an order of the County Court of the district where the alleged inebriate resides (subject to an appeal to the High Court) or of the High Court itself, on application by a relative or friend and evidence on oath. (2) The poor are provided for by county councils being empowered to establish and maintain retreats. (3) The term habitual drunkenness is to include the excessive use of opium or any other drug. (4) Appearance of voluntary applicants for admission to a retreat is to be before one justice instead of two justices as at present. (5) Inebriate offenders may, at the discretion of a judge or magistrate, be awarded a term of curative detention in a reformatory in place of imprisonment in a prison.

The report of the Scottish Departmental Committee on Habitual Offenders, Inebriates, etc., of which two of your members—Sir Charles Cameron, Bart., M.D., M.P., Chairman, and Dr. Farquharson, M.P.—were members, has recently been issued. The inquiry was most thorough, largely through the indefatigable labour of the Secretary—Dr. J. F. Sutherland; 151 witnesses were examined, among whom were judges, sheriffs, provosts, prison reformatory school and asylum officials, a convict, and an ex-convict. The evidence of physicians and medical experts was also taken, among whom were your Chairman, Sir James Crichton Browne, Professor Gairdner, Dr. Alex. Peddie, Dr. Clouston, and Dr. Hoffman, Inspector of Retreats. The recommendations of this Committee practically embody most of the proposals which have for many years been urged by your

Committee in concert with the Society for the Study of Inebriety. The police court inebriate "repeater" is provided for by proposed labour settlements, to which he would, at magisterial option, be committed for curative purposes. The additional powers suggested would provide for the compulsory therapeutic seclusion of the habitual drunkard as defined by the 1879 Act, at the instance of his or her friends, if these could support him or her; and at that of the Procurator Fiscal, at the public cost, if the inebriate were a public nuisance. Though this procedure is not so satisfactory as would be the much more costly establishment *de novo* of State or municipal special retreats, your Committee is of opinion that the Departmental Committee is justified in affirming that their suggested plan "meets the case of every habitual inebriate."

Your Committee has accordingly resolved to memorialise the Scottish Secretary of State to introduce legislation on the lines proposed by the Scottish Departmental Committee.

The failure of the existing penal treatment of inebriate offenders as a reformative or a deterrent from drunkenness has been clearly enunciated by the late Departmental Committee on Prisons from a prison point of view. In their report this Committee state that, while it is recognised that habitual drunkards are not criminals in the ordinary sense and should stand by themselves in a special category, the physical craving for drink is a disease which requires medical treatment not at present provided; that this class of prisoners should be dealt with as patients rather than as criminals.

These conclusions of three Departmental Committees within two years, which conclusions were arrived at by the Parliamentary Committee of 1872, have just been confirmed by the Canadian Royal Commission on Intoxicants. Their report condemns the sending of habitual drunkards to prison as neither elevating nor deterring, and approves of the establishment of places to which these persons could be committed for such time as might be deemed desirable, to be subjected during such period of detention to fitting treatment calculated to lead to their reformation.

The Committee recommends its re-election as follows: The President and President-elect, *ex-officio*; the President of Council, Mr. D. B. Balding, J.P.; Mr. R. Welsh Branthwaite, Dr. T. Bridgwater, J.P.; Sir Charles Cameron, Bart., M.D., M.P.; Dr. G. B. Clark, M.P.; Dr. C. R. Drysdale, Mr. George Eastes, Dr. J. W. Eastwood, J.P.; Dr. R. Farquharson, M.P.; Dr. W. T. Gairdner, F.R.S.; Dr. W. C. Garman, Dr. J. Hill Gibson, Dr. A. Grant, Mr. F. J. Gray, Dr. C. J. Hare, Dr. Arthur Jamison, Mr. H. R. Ker, Dr. Norman Kerr, Dr. Longhurst, Mr. R. H. B. Nicholson, Surgeon-Major G. K. Poole, M.D.; Brigade-Surgeon R. Pringle, M.D.; Fleet-Surgeon George Robertson, M.D.; Dr. James Stewart, Clifton; Dr. George Danford Thomas, coroner; Dr. Wynn Westcott, coroner; and Dr. H. W. Williams.

Norman Kerr, M.D., *Chairman*.

REPORT OF MEDICAL CHARITIES COMMITTEE.

The Medical Charities Committee has been carrying on the work of investigating the abuse of medical charities in the metropolis during the past five years, and is now extending its action to the provinces. Communications have been made with the various Branches of the Association, asking them to take the matter up and report upon any abuse of charities in their locality, and from many of these centres replies have been received; but as the Branches have only recently been communicated with, many of them have not yet had time to reply. The Committee therefore desire to continue their labours during the following year. Amongst those from whom the Committee have had replies is one from the Birmingham and Midland Counties Branch, where a very extensive inquiry has been held and valuable results arrived at. It was a meeting convened by the Mayor, at which about fifty were present, consisting equally of laymen interested in hospital management and representative medical men chosen at a meeting of the profession some days previously. The following recommendations were made at the termination of the report:

1. The formation of a General Council representative of all the public medical institutions of the city.
2. The formation of an inquiry agency to investigate the circumstances of applicants for treatment at the hospitals.
3. That, apart from first aid and urgent cases, regulations should be framed by the hospitals to exclude trivial cases, and cases where either the patients are in a position to pay for such treatment as they may require, or which could be more properly dealt with under the Poor Law.
4. That facilities should be given for cases so excluded being dealt with by dispensaries or provident associations.
5. That any person recommended by an approved provident association or by a qualified medical practitioner should, as a rule, be admitted to the out-patient departments of the hospitals without further formality.

Other replies received are as follows:

Bath and Bristol Branch.—Have appointed a committee to investigate the subject, and have come to the conclusion that abuse does exist in Bristol, and trust to be able to report upon some remedies which they hope may be carried out.

Border Counties Branch.—The Secretary was directed to write to members resident in places where hospitals existed for their opinion. Members from Hawick and Galashiels reported that no abuse existed in their districts.

Dundee Branch.—That as the difficulties referred to do not exist in our local medical charities, the adoption of the Committee's recommendations is unnecessary.

East York and North Lincoln Branch.—The Hon. Sec. writes: "I am desired to inform you that at present no inquiry as to the abuse of hospitals is deemed necessary in Hull."

Edinburgh Branch.—Resolved: That the Edinburgh Branch of the British Medical Association, while sympathising with the recommendations of the Report of the Committee on Medical Charities, is of opinion that the details of the same are not applicable to this district.

Londonderry and North-West of Ireland Branch.—The only hospital in the district is the County Infirmary. There is no out-patient department attached to it except for the treatment of accidents. No medicine or advice is given to out-patients. The dispensaries in the town are under the Poor-law and regulated by Act of Parliament.

North of Ireland Branch.—Resolved: That this meeting, having heard the statements regarding indiscriminate medical relief afforded in various charities throughout the kingdom, approves of the general principles enunciated with the view of minimising the evil. Regarding the abuse of medical charities in Belfast, the opinion of the speakers was that it was not serious, and that the endeavours now made to prevent it were sufficient. It was also stated that the means of present abuse in the large general hospitals could not be used in the smaller and special hospitals to the full extent, so that while the general principles should be adhered to it might be advisable to vary the methods of carrying out these principles in accordance with the needs of different institutions.

South-Eastern Branch.—There is a general agreement as to the recommendations of the Committee on Medical Charities. Most of the recommendations of the above Committee are practically carried out throughout the whole district over which the South-Eastern Branch extends. There is comparatively little abuse of the hospital system in our district. In many of the smaller provincial hospitals and dispensaries the funds would not be forthcoming to pay for an official to inquire into the pecuniary condition of each patient. This is hardly necessary, for in small towns the patients attending are better known than patients living in large districts; again, the information required of each person as asked for by the Committee, namely, that the name, age, residence, occupation, wages, etc., should be placed upon the hospital letter, is almost invariably done in this District of our Branch. Where a charity organisation society exists in any town it would be advisable, when in difficulty as regards the condition of the patient, to apply to its committee for information. It is the general opinion of our subcommittee that there is very much less abuse of the hospital system than existed ten or twenty years ago. This is doubtless due to the general agitation of the question by the medical profession themselves. The average wage limit for single men we

recommend should be 18s. to 20s. per week, and for married men 25s. There seems to be less abuse where the out-patient letters system is adopted than when the method of free admission is in vogue; as in the former, the difficulties of obtaining letters and the necessary knowledge requested thereon act as deterrents.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The recommendations were received with general approval, but it was not practicable at this time for the Branch to inquire into the abuse of medical charities in this district.

THAMES VALLEY BRANCH.—There are no large hospitals in our district. This Branch has taken no steps to investigate the abuse of medical charities.

WEST SOMERSET BRANCH.—It was mentioned by one of the medical staff of the Taunton and Somerset Hospital that the subject had been fully considered not long since by the Committee of that hospital, and such steps had been taken by them as were deemed best suited to deal with the abuse referred to, but they did not feel it right to incur the expense of a special "inquiry officer." The recommendations of the Committee will be sent to the Taunton and Somerset Hospital.

It is with great regret that we have to report the death of Dr. Withers Moore and of Dr. George Henty, both of whom devoted great attention to the work of this Committee, and whose places it will be difficult to fill. We are specially indebted to Dr. Henty for having personally visited, with Mr. Brown and Dr. Hugh Woods, and specially reported upon almost every hospital and medical charity in London.

THOMAS BRIDGWATER, M.D., *Chairman*.

REPORT OF COMMITTEE ON THE MENTAL AND PHYSICAL CONDITIONS OF CHILDREN.

YOUR Committee, first appointed in 1888, have worked continuously since that year, and now present a report completing the results of the investigations among 100,000 children seen individually 1888-94. Our first report was published in the BRITISH MEDICAL JOURNAL of July 27th, 1889, a committee of investigation being then appointed by the Charity Organisation Society, to which you nominated delegates; this Committee worked in conjunction with them, and presented a full report on 50,000 children (1888-91), which you forwarded to the Local Government Board, and which was subsequently published by the American Government. In 1891 the International Congress of Hygiene and Demography, which met in London, appointed a Committee to which you sent your representatives, and we have since worked in conjunction with that body.

Since 1892 the methods of actuarial investigation have been greatly improved, showing the advantages derived from a mixed Committee of members of the Association and actuaries, while your Committee have been able to conduct the observations and determine the directions the investigation should take, the assistance of actuaries and gentlemen acquainted with other branches of work has proved most valuable in compilation of the report. The children were seen and reported on by Dr. Francis Warner, in conjunction with Dr. Shuttleworth and Dr. Fletcher Beach. In our last report[1] we presented a nomenclature or list of the defects observed in children, with definitions, showing also the numbers of boys and girls with each defect respectively as found among 50,000 children (boys, 26,287; girls, 23,713) seen, 1892-94. We are now able to present the same children in groups, defined by points seen or physical signs found to be present.

The principal indication of defectiveness of body and brain is found in defective development of the body and its parts as enumerated in the last report: the physiognomy and proportioning of the head, palate, the separate features, and conditions of growth. It is shown in Table III that such children present associated conditions in large proportion as indicating nerve defect or disturbance, especially the boys and delicacy or mental dulness, especially among girls.

The cases presenting nerve irregularities—abnormal nerve signs—showed a high proportion of mental dulness (see Table III); these conditions are to a great extent removable by efficient training in school. In schools where such training is neglected the proportion of dull children rises. Low nutrition or delicacy of the body and its tissues is found in more than half the cases to be associated with developmental defect; these children bear the strain of life badly, yet need efficient training to keep their brains in good order.

Lastly, the children reported by the teachers as mentally dull or backward form a large group, especially among the boys: to the extent of 15 per cent. of the boys and 19 per cent. of the girls; they were also delicate children, very many also presenting indications of defect in body and in brain action.

That the physical signs or points for use in observation and description as employed throughout this inquiry are such as are worthy of record in clinical medicine and in investigation of the causes and pathology of mental dulness has been demonstrated by a large experience. The percentage of children with each sign who were reported by the teachers as dull or backward has been determined;[2] it is now found that a large proportion of these children—amounting to about 30 per cent.—were over age for the educational standard in which they were placed, thus confirming the evidence that such children were dull or backward. Cases with defects were most frequent in the "classes for dull pupils" found in some schools. This fact shows the importance of reporting on the bodily and mental condition of children congregated on account of mental deficiency, as they are apt to present coexistent physical and brain defects.

Many of the problems dealt with in previous reports and papers written on this investigation have been confirmed by our later inquiry, and others are now given, supported by sufficient evidence to enable us to make recommendations, some of which appear to be of urgent social importance.

The marked differences in the make and in the constitutional power of boys and girls is strongly indicated. On reference to the numbers given in Table II. it is seen that the boys present more cases of defect, but reference to Table III shows that these defects are more associated with ill consequences in the case of girls. Cases delicate, thin and pale, without associated defects, are equally common among boys and girls. This suggests the desirability that in all returns of mortality and other vital statistics the numbers of males and females should be kept separate; also that "developmental diseases" equally with zymotic diseases should be included in the returns of medical officers of health.

Inspection of day schools has shown that there are cases of mentally feeble and afflicted children who may with benefit be kept in such schools under special training, and who cannot be justly excluded from the benefits of free national education on account of their feebleness; but the proper selection and classification of such cases should be entrusted to responsible medical men, and an individual report should be made annually upon all such cases. This class of children appears to form about 1 or 1·5 per cent. of the school population, a small proportion, but giving about 10,000 children for London alone. Our experience, which is supported by many correspondents, English and foreign, shows that both in this and in other countries there is a distinctly appreciable proportion of feeble-minded children and adults in all ranks of society who become a burden and source of danger to the public whom the State cannot afford to leave undealt with. Such children were till recently but little recognised; efforts are now being made in many directions to aggregate them, suggesting the need of caution and of the scientific safeguards that prudence dictates for the careful selection, classification, and reporting that is desirable to ensure the proper management of these most difficult cases. Many such children are to be found in philanthropic homes, in certified industrial schools, and in punitive schools, where the discipline enforced is unsuited to the crippled, the deformed, and those mentally defective. Individual report on each case in such schools should be made annually. It is hoped that the earnest attention of many members of the profession may be directed to study these cases, and to the responsible work which some must

[1] BRITISH MEDICAL JOURNAL, July 28th, 1894.

[2] See paper in [illegible] Journal, March 1895.

be called upon to discharge in connection with the care of defective children. Equally urgent is the need of a trained staff of teachers in whose training our profession should take a part.

Much pains have been bestowed on the arrangement of the best methods of reporting as to the mental and physical conditions of children who present some form of weakness calling for special care; a form of special report has been drawn up which may be found useful, especially in view of legislation now being promoted by the London School Board for the further care of weak children in day schools. The Committee have also devised methods of reporting on groups of children or groups of schools in such a manner as to enable their conditions to be compared together or with an established average, based upon a wide experience. In this way it is possible to compare the effects of the educational methods employed.

The 63 day schools reported on have been divided into groups as English, Scottish, Irish, and Jewish. The relative condition of these children is given in Table IV.

Table IV.—*Showing the 50,000 Children seen 1892-94 distributed according to Nationalities, giving also Percentages of Children presenting certain Conditions.*

—	Numbers Seen.		Defects in Development.		Nerve Defects.		Pale, Thin, Delicate.		Dull or Backward.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
			Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
English ...	[illegible]	[illegible]	8.62	6.60	10.3	8.4	2.8	3.3	7.7	6.9
Scottish ...	[illegible]	[illegible]	7.90	4.50	12.0	10.3	2.2	3.3	9.0	6.3
Irish (in London) ...	2,171	[illegible]	11.60	9.60	14.6	9.0	3.2	3.8	[illegible]	6.5
Jewish ...	[illegible]	[illegible]	9.30	6.30	11.8	7.9	2.9	2.3	8.1	6.5

The results of this investigation have elicited many facts of clinical and pathological interest which want of space will not allow us to enter upon, as well as many points of social interest which amply repay the heavy work expended. The records of observation afford material for an almost indefinite analysis and compilation of facts, the study of which will afford information on many important questions. It appears likely that the continuation of similar investigations will throw much light upon the causation of defectiveness and the means of amelioration.

Table I.

Defects taken alone, not in combination.	Number.	Per cent.	Number.	Per cent.
	Boys.	Boys.	Girls.	Girls.
A. Defects in development only	[illegible]	3.05	445	1.87
B. Nerve defects only ...	[illegible]	[illegible]	[illegible]	3.21
C. Delicate, thin, pale only ...	[illegible]	[illegible]	[illegible]	[illegible]
D. Mentally dull only	[illegible]	[illegible]	[illegible]	1.23
AB. Defect in development and nerve ...	415	1.57	[illegible]	0.87
AC. Defect in development and delicate	[illegible]	[illegible]	163	0.68
AD. Defect in development and dull	[illegible]	[illegible]	[illegible]	[illegible]
BC. Nerve defect and delicate	[illegible]	[illegible]	[illegible]	[illegible]
BD. Nerve defect and dull	[illegible]	[illegible]	[illegible]	2.03
CD. Delicate and dull	[illegible]	0.23	53	0.22
ABC. Defect in development and nerve, also delicate	[illegible]	[illegible]	[illegible]	0.33
ABD. Defect in development and nerve, also dull	[illegible]	[illegible]	[illegible]	0.94
ACD. Defect in development and delicate, also dull	[illegible]	[illegible]	[illegible]	0.46
BCD. Nerve defects, and delicate and dull	[illegible]	[illegible]	[illegible]	0.29
ABCD. Defect in development and nerve, also delicate and dull	[illegible]	[illegible]	70	0.32
EFG. Other conditions than above	[illegible]	[illegible]	[illegible]	1.38
Total number noted ...	5,112	19.44	[illegible]	16.14
Total number seen ...	[illegible]	—	[illegible]	—

These tables give an account of the conditions found among the 50,000 children seen in 1892-94. (For other particulars of these children see British Medical Journal of July 28th, 1894):

Percentages are taken upon the total number of boys and girls seen respectively.

Table II.—*Showing the Total Number of Cases in Groups indicated, whether alone or in combination with other Conditions.*

Defects taken alone or in combination.	Number.	Per cent.	Number	Per cent.
	Boys.	Boys.	Girls.	Girls.
A. All development cases ..	2,308	[illegible]	1,618	[illegible]
B. All nerve cases	[illegible]	10.09	[illegible]	[illegible]
C. All delicate cases	749	[illegible]	770	[illegible]
D. All dull cases	2,074	7.88	[illegible]	[illegible]
AB. Development cases with nerve	[illegible]	3.38	587	2.47
AC. Development cases, delicate	374	1.42	[illegible]	1.80
AD. Development cases, dull ...	[illegible]	3.37	727	3.07
BC. Nerve cases also delicate ...	[illegible]	1.34	[illegible]	1.41
BD. Nerve cases also dull ...	1,195	4.54	860	[illegible]
CD. Delicate cases also dull ...	323	1.22	312	1.31
ABC. Development cases with nerve defect, also delicate	149	0.56	156	0.65
ABD. Development cases with nerve defect, also dull ...	408	1.55	[illegible]	1.27
ACD. Development cases also delicate and dull	171	0.65	[illegible]	0.79
BCD. Nerve cases also delicate and dull	169	[illegible]	[illegible]	[illegible]
ABCD. Development cases with nerve defects, also delicate and dull	80	0.3	70	0.32

The groups of cases are larger than in those in Table I. Percentages are taken upon the total numbers of children seen.

Table III.—*Showing the Correlations or Frequency of Coexistence of the Main Classes of Defects.*

—	With Defect in Development.		With Nerve Defect.		Delicate.		Dull.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
A. Defect in Development	—	—	[illegible]	34.2	16.2	[illegible]	[illegible]	45.0
B. Nerve defect	31.0	20.1	—	—	[illegible]	[illegible]	41.5	[illegible]
C. Delicate	50.0	[illegible]	47.1	[illegible]	—	—	[illegible]	40.5
D. Dull	[illegible]	44.4	[illegible]	[illegible]	[illegible]	19.0	—	—

Percentages indicate the proportion of cases named in first column with conditions as given in succeeding columns respectively.

Francis Warner, M.D., *Hon. Sec.*

REPORT OF ANÆSTHETICS COMMITTEE.

Since the reappointment of the Committee at the last annual meeting the work of analysing the records, deputed to a subcommittee, has been steadily continued. The subcommittee, assisted by a staff of clerks, resumed their meetings in October, 1894, and from that time till the present date have met on sixty-seven occasions, each meeting lasting at least two hours.

As the preparation of the final report has taken a much longer time than was at first anticipated, the Committee feel

that they should take this opportunity of presenting to the Council a short statement of the work which has been already accomplished, and an outline of the method upon which they hope to arrive at their conclusions.

The record books were returned to the Committee from the observers early in 1893, and these, supplemented by some special reports and by press cuttings during the year in which the observations were made, constituted the evidence which it was the business of the Committee to investigate.

By the time of the annual meeting of 1893 the cases in the observers' books had been arranged under the different anæsthetics employed, and counted, while abstracts of all cases of danger and death under chloroform, ether, and gas and ether had been printed, and a report upon these lines was in an advanced stage of preparation. Most of this work was done by the Honorary Secretary, with paid assistance, the Executive Committee of that year meeting frequently to confirm the classification of the cases of danger and death.

In October, 1893, it began to appear that unless every case in the record books, whether normal or complicated, was submitted to an exhaustive analysis, much valuable material would be lost. After much deliberation the Executive Committee determined to classify each recorded case, analysing it systematically in the most complete manner. After eighteen prolonged sittings the uncomplicated (or normal) cases contained in 42 of the record books had been thus dealt with as a trial of the method which had been adopted. It was then decided, on December 1st, 1893, that a subcommittee, consisting of Dr. Dudley Buxton, Mr. Eastes, Dr. Hewitt, and Mr. Rowell (as Honorary Secretary) should treat the whole of the cases in this manner. Fifty-three additional meetings took place for this purpose up to the time of the annual meeting of 1894.

During the past year the same system has been carried out, and on February 4th last the subcommittee—three constituting a quorum—had considered each recorded case, and had transferred all the analysed data of the uncomplicated cases to fourteen different analysis books which had been prepared for the purpose. Upwards of 23,000 uncomplicated cases had thus been submitted to an elaborate scheme of tabulation and cross tabulation. As a result of this any case can now be readily identified in the analysis books. Some idea of the diversity of the data which had to be transferred and tabulated in the analysis books may be gathered from the fact that records of the administration of no fewer than forty-two distinct anæsthetics, mixtures of anæsthetics, and successions of anæsthetics were sent in, the large proportion of which were administered in many different ways, and that all the particulars of each case—for example, age, condition of patient, nature of operation, phenomena during administration, after effects, etc.—had to be tabulated under the particular anæsthetic employed. During this analysis many doubtful points arose, upon which letters of inquiry were addressed to the observers, and the Committee wish to express their thanks to these gentlemen for the help afforded by their replies. Many points of interest were also found while going through the cases *seriatim*, each as it arose being noted for the final report.

Having completed this work, the Subcommittee was in a position to formulate the following definitions and scheme, to express their view of the character of the cases submitted to and classified by them:

DEFINITIONS.

Uncomplicated cases are those in which, so far as the effects of the anæsthetic are concerned, nothing unusual occurs.

Complicated cases are those presenting unusual symptoms or sequelæ referable wholly or in part to the anæsthetic.

Cases with minor complications are those showing some noteworthy departure from the usual phenomena of the anæsthetic given, but not involving actual anxiety or danger.

Cases of anxiety are those presenting symptoms referable wholly or in part to the anæsthetic, and requiring the adoption of remedial measures, but not involving immediate danger.

Cases of danger are those in which symptoms caused wholly or in part by the anæsthetic threaten the patient's life.

Cases of death are those in which the death is wholly or in part due to the effects of the anæsthetic given.

SCHEME.

—	I. Capable of Exact Classification.	II. Capable only of Approximate Classification.
A. Uncomplicated cases	...	...
B. Complicated cases	...	...
(a) Cases with minor complications ...	...	...
(b) Cases of anxiety	...	...
(c) Cases of danger	...	...
(d) Cases of death	...	...

C. Excluded Cases (that is, those which the Committee felt could not be included in Classes A or B).

Upon the foregoing basis the Subcommittee proceeded to reconsider every case which was not *primâ facie* an "uncomplicated case capable of exact classification" (A.I.), with a view to the revision of its classification. This work, although long, was facilitated by reason of the analysis already completed. In the exact classification of a case the Committee would point out that there are often three or four unknown quantities to be measured, or at least to be approximately gauged. For example, the exact state of the patient's health, the effect of the surgical procedure, the amount of hæmorrhage, and the personal equation of the observer, may all conceivably effect a certain recorded case, and, when dealing with such, much time, care, and comparison with other cases have been found necessary.

At the present time (June, 1895) some 200 cases remain to be reconsidered, in order to complete the classification of every recorded case.

Upon the accomplishment of this, the Subcommittee propose to treat the whole of the complicated cases (B) by the same methods of analysis and tabulation as the uncomplicated cases have already undergone, for purposes of comparison, and the more easy deduction of conclusions. They propose, also, to abstract and print the whole of the cases in Class B, arranged in groups for the report. When this has been done the facts will be ready to hand for drawing up the final report.

The Committee desire to express their obligation to the following gentlemen who, as voluntary assistants, have given valuable help in the task of analysing the cases: Dr. Cecil Morgan, Mr. G. L. Eastes, and Messrs. Howard, Humphris, Vicars, and Byles. They also desire to record their thanks to the staff of clerks who have worked with much painstaking zeal.

The Committee trust that the time and labour devoted to this work by those who have been so long engaged upon it will sufficiently indicate their belief that results of considerable value will be attained.

The Committee therefore beg that the Council will reappoint them, in order that they may bring their work to a conclusion.

JONATHAN HUTCHINSON, *Chairman*.
CHRISTOPHER CHILDS, *Hon. Sec.*
GEORGE ROWELL, *Assistant Hon. Sec.*

REPORT OF THERAPEUTIC COMMITTEE.

During the past year the Therapeutic Committee have held numerous meetings to consider the approaching revision of the *British Pharmacopœia*, and they have considered carefully various alterations, omissions, and additions, and have embodied their views in a Memorandum which was printed in the BRITISH MEDICAL JOURNAL of June 8th.

With regard to possible omissions, it was thought desirable to circulate amongst members of the Association in the United Kingdom a list of drugs and preparations, with a request that each member should indicate whether he uses these drugs often, rarely, or never. Of this list, 12,000 copies

have been issued, and, at the time of tabulation, answers had been received from about one half of this number. The data thus collected have been placed at the service of the General Medical Council, and a cordial letter, recognising the material assistance thereby furnished, has been received from the President.

The information elicited in this inquiry is of considerable interest, and must materially influence the retention or omission of drugs from the *Pharmacopœia*; thus its great value to the medical profession can scarcely yet be estimated.

The Committee hope, during the ensuing year, to pursue investigation of numerous questions which have arisen in connection with the *British Pharmacopœia*, both concerning the introduction of newer remedies and the improvement of older Galenical formulæ.

Nestor Tirard, *Hon. Sec.*

REPORT OF COMMITTEE FOR THE EFFICIENT CONTROL OF RAILWAY SERVANTS' AND MARINERS' EYESIGHT.

The most important action taken by the Committee during the past year was the organisation of a deputation of ophthalmic surgeons, which waited upon the President of the Board of Trade (the Right Hon. James Bryce, M.P.), at Whitehall, on February 1st, 1895.

The composition of the deputation, the names of the speakers, and an abstract of the speeches, have already been published (see British Medical Journal, February 9th, p. 315, and May 18th, p. 1112).

The Committee takes this opportunity of thanking all those gentlemen who supported it upon that occasion. A more important representation of ophthalmic opinion could scarcely have been secured in this country, and the "weight and influence" of the deputation was fully acknowledged by Mr. Bryce.

The Committee has reason to believe that, if the results of its action are not immediately apparent, it has at least impressed upon the permanent officials of the Board of Trade the importance of including defects of vision among the possible causes of disaster by land and sea, and has excited a public interest in the subject which will not soon pass away.

The Present Position of the Question on the Railways of the United Kingdom.

The Board of Trade has at present no power to enforce any uniform system of eyesight testing on our railways, and, as indicated by Mr. Bryce in his reply to the deputation, the Government officials are unwilling to ask for further power until some grave accident shall be proved to have been caused by defective vision. Considering the very unsatisfactory methods of examination still employed on some railways, this inaction is not commendable. But apart from the possibilities of jeopardy to the public which this policy entails, there can be no question that the adoption and enforcement by properly qualified examiners of uniform standards of vision for railway servants would be of the greatest advantage to the men, and would considerably lighten the responsibilities of the railway managers in promoting desirable reforms.

Under the present system, by which each company is left to adopt its own standards, there is no security for the men that these may not be altered at any time.

The hardship of such a change was well illustrated during the past year, when the North British Railway officials, having determined to increase the stringency of their examinations, found themselves obliged to dismiss from their employment, or transfer to positions of less responsibility at reduced wages, more than 100 drivers, firemen, and guards, many of whom had seen several years' service. Nearly all of these were rejected for defective sight (*not colour blindness*), and yet this company even now requires no higher standard than the army dot test, or, in other words, men with *only one-third of normal vision* can still be admitted.

This test is now used on many railways. Its insufficiency is already recognised by a few of the more progressive railway managers, and, as the number of these increases, the weeding-out process will again press hardly on men who should never have been admitted to railway responsibilities, and who, if they had been properly examined at the outset of their careers, and warned in time, might have found more permanent occupation in industries better suited to their visual capacity.

There is undoubted evidence, however, on all sides that the railway companies are now attaching more importance to visual examinations, and it may fairly be claimed that, during the past year, some progress has been made towards the more effective control of railway servants' eyesight.

The Control of Mariners' Eyesight.

In September, 1894, the new regulations for the examination of the eyesight of masters and mates in the mercantile marine came into force. The adoption of Holmgren's test for colours and the introduction of a test for distant vision mark an important advance in the official modes of testing, but grave defects still exist in the present methods of control. For instance, boys are apprenticed to the sea without compulsory examination of their acuteness of vision or colour sense, and cannot legally escape from their indentures should their vision be found later to be defective. Similarly men are allowed to serve at the wheel or on the look-out without any inquiry as to their visual fitness. No visual examination is enforced until promotion to officer's rank is sought, and, needless to say, rejection is then harder to bear, and a false start in life is less easily remedied. The employment of lay examiners and the omission of refractive measurements increases the liability to error in judging of the visual capacity of candidates. These deficiencies and some suggestions for their removal were duly laid before Mr. Bryce, and are fully stated in the British Medical Journal of May 18th, pp. 1112 and 1113.

The Committee desires to express its special obligations to Mr. Bickerton, of Liverpool, for his admirable exertions in this connection.

It is satisfactory to know that the reforms which were urged upon Mr. Bryce were heartily endorsed by several societies of shipping and navigating officers, and that only a regard for Mr. Bryce's expressed wish that the deputation should be limited to medical men prevented a very definite expression of opinion being submitted to him by representatives of the above societies in favour of the Committee's recommendations. Under these circumstances the Committee is encouraged to persevere in its labours, and requests a continuance of its appointment.

N. C. Macnamara, *Chairman.*
George Mackay, *Hon. Sec.*

DONARIA OF MEDICAL INTEREST.

By Dr. LUIGI SAMBON,
Rome.

(*Concluded from page 150.*)

Amongst some terra-cottas sent to me from Capua, I found two perfect models of the placenta; they probably came from the Temple of Maternity which was discovered there.

In a heap of broken terra-cottas and marble fragments piled outside the new museum of the "Orto Botanico" in Rome, I found a most interesting votive terra-cotta. It represents an elbow, on the extensor aspect of which are numerous thick circular patches generally of the size of a three-penny bit. This elbow is not a fragment of a statue, but a donarium of the arm from which the hand alone has been broken off. The patient having offered the representation of an arm, it is natural to believe that that limb only was affected by the disease. The patches are limited to the point of the elbow and to the immediate neighbourhood. If diagnosis of skin diseases is often difficult on the living subject, it must seem almost impossible on a rough terra-cotta made for no scientific purpose by a simple potter many centuries ago, but curiously enough the diagnosis in our case is relatively easy, the donarium offering apparent signs of psoriasis. The only doubt might arise from psoriasiform syphilides and the little difference in size of the various nodules would be in favour of a manifestation of this disease, which seems to have been

known to the Romans under the name of *morbus campanus*, but syphilides appear mostly on the flexor surface of the limbs which in our terra-cotta is entirely free from the disease.

Fig. 11.—Psoriasis of elbow (Rome).

Psoriasis and other similar diseases were known to the ancients by the name of *lepra*, which meant roughness, and must not be confounded with leprosy.

Together with these images of anatomical parts there have

Fig. 12.—A kidney (Capua).

nearly always been found numerous statuettes greatly varied in subject and treatment, many presenting points of medical interest on close observation. Similar statuettes have also been found apart from votive offerings, often in tombs and not only in Italy and Sicily, but also in Greece, France, Spain, Asia Minor and Africa. Those of Tanagra in Greece have attracted most attention on account of their great beauty.

Much difficulty has hitherto been experienced by archæologists in understanding the subject of many of these statuettes and their use. Some have considered them all as connected with funeral rites, although few offer subjects that can be related to the grave. Many of those found in tombs had been placed there by the relatives simply as things to which the deceased had been most attached during life. Other writers believe them to have been domestic ornaments or household gods which were kept apart in small shrines such as the *sacrarium* represented at Pompeii. Archæologists have frequently erred in believing all the figures to be images of gods and goddesses, and wishing to find a mythological explanation for each group. A certain number are undoubtedly representations of deities, but I believe the majority to be donaria representing patients or devotees in the act of adoration or bringing gifts to the gods. The gift most acceptable to each god being generally also an attribute or symbol of the same has often led to the error of mistaking the representation of the worshipper offering donaria for the image of the deity. Some were undoubtedly toys. I have no doubt that the explanation given here of many terra-cotta statuettes instead of a far-fetched mythological interpretation will make their classification far more easy. Many statuettes which have been classed by archæologists among grotesque figures are representations of patients bearing signs of deformity from disease most admirably depicted. Obesity, dropsy, rickets and other diseases are clearly represented. Some statuettes represent patients unclothing the part of the body diseased so as to attract the attention of the deity to their infirmity. They remind us of the numerous beggars exposing their sores and deformities to the passers-by who may be seen even now in many towns of Italy. Such figures represented as uncovering a part of their body have generally been mistaken for obscene representations.

A large and most interesting series of terra-cotta figures is connected with childbirth and lactation. Many are the images of women in labour. Some are in the kneeling position, a favourite one in the first stage of labour, still common in many parts of Italy. This position was naturally and instinctively changed to the knee-elbow or to the genu-pectoral position at the time of expulsion. A marble votive bas-relief of my collection found near Rome shows a woman just delivered in the knee-elbow position. The kneeling figures are also represented with both hands on the abdomen performing a kind of uterine expression. In this same position

Fig. 13.—Parturient woman in the kneeling position, perhaps a Nixi. (Oppenheimer Collection.)

were represented the Nixi, Roman deities to which petitions were made for a rapid and safe delivery.

Other parturient women are represented in the sitting position, sometimes on a kind of obstetrical chair. In the

Louvre Museum in Paris is a terra-cotta group of a parturient woman in the sitting position leaning against another woman who holds her from behind, while the obstetrix or midwife in front of her has received the new born child. A similar group in marble found at Cyprus in 1871 by General Cesnola is now in the New York Museum.

A frequent subject in old Roman sculpture is the birth of Bacchus by Cæsarean section from the corpse of Semele. This operation was often performed *post mortem matris*. It is said that Julius Cæsar and Scipio Africanus were born thus.

Very numerous are the figures referring to disorders of lactation or diseases of the breasts, from the very old rigid images pressing both mammæ with their hands to the graceful, seated figures of later art sweetly smiling on their suckling infant. Some are represented supporting with their hands an inflamed breast, others holding fissured and ulcerated nipples. A few hold a vessel beneath one breast evidently affected by galactorrhœa. A terra-cotta in my collection represents a young woman with an enormous left breast due to hypertrophy or to some new growth. Some women hold a child on one arm, while with the other hand they point to the breast glands imploring lactation.

There are groups of figures representing a husband and wife sitting side by side, the woman generally presenting

Fig. 16—Husband and wife offering thanks for offspring. Group found in the Tiber by the Insula Sacra.

evident signs of pregnancy. Very often a child is seated between them or in the mother's lap. They represent grateful people offering a thanksgiving for offspring after a long period of sterility, although they have again and again been described as Demeter with the infant Bacchus. Women raising the right hand opened in the act of adoration and holding in the other hand a pomegranate with bursting rind are not images of Venus but barren women imploring pregnancy.

Children with arms and legs tightly bound in swaddling clothes, as is still the custom in Italy, are of common occurrence. They were frequent offerings of anxious mothers.

Children represented dragging themselves along in a crouched position with contracted and atrophied legs, are certainly cases of infantile paralysis or sometimes pronounced lordosis, cases of rickets with powerless and wasted lower limbs.

Figures of hermaphrodites have been found amongst the votive terra-cottas; sometimes a bearded figure in female clothes and adornments with rounded forms and swollen breasts; at other times figures with female features and male genitals. I have in my collection a terra-cotta of a tall graceful woman disarranging her clothes to show a clitoris enormously hypertrophied.

A large number of figures of both sexes, generally standing and entirely wrapt up in clothing, may, possibly, represent fever-stricken patients. Malaria, which prevailed in many places with far greater virulence in summer and autumn, was a dreaded disease as is proved by the many altars erected to Febris and Mefitis. Febris had three temples in Rome, and only a few years ago the goddess of fever was still worshipped under the name of Madonna delle Febri at the foot of the Vatican hill in a place called the Valley of Hell.

Numerous figures of animals are found amongst the other votive terra-cottas, mostly domestic animals. Horses and oxen are very common, but pigs are by far the most numerous. Pigs are often ornamented all over by geometrical designs or studded with bits of coloured glass. Some are represented with children on their backs. These figures of animals may in some cases have been symbolical offerings of animals sacrificed but they were generally brought to the shrine for disease, especially at the time of cattle plagues. The single heads, feet, or internal organs of animals which are often found confirm this view. The children carried on the back of pigs may be connected with the worship of the goddess Carna, a very ancient goddess who strengthened the heart and entrails. The pig was sacred to her, and on the first of June it was sacrificed, when those who ate of the lard believed themselves to be preserved from all intestinal disease. Children suffering from wasting diseases were taken to the temple of Carna and fed upon raw pork as directed by the priests of the goddess. A bronze statuette found in Naples represents a woman carrying an infant on her left arm and holding with her right hand a sucking pig by its hind legs. Brutus the first consul erected a temple to this goddess on the Celian hill.

All these terra-cottas were painted in various colours, mostly red and blue, as exemplified by the remnants of pigmentation still visible on some of them. The eyes and hair of the statuettes were generally black; yellow was not a common colour and green and gold were rarely used. Before applying colours the terra-cottas were dipped in a bath of lime and many which have lost the colouring have retained this white coating. Some few were covered with a glaze which produces the appearance of an enamelled surface. The colour having disappeared from these terra-cottas has no doubt deprived us of much additional information.

Except the earliest examples, which are rudely modelled with the hand, these statuettes were made from clay moulds, many specimens of which still exist. The mould was only used for the front of the figure, the back of it being, as a rule, merely a plain piece of clay shaped by the hand. If any design was desired at the back also, it was invariably executed by the hand. Sometimes the head, the arms, and other accessories were added afterwards; thus two casts from the same mould differed considerably.

The terra cottas found in the same votive deposit often belong to very different periods and localities. The most archaic types are sometimes found with those of the latest and purest art. To a certain extent they can be distinguished by the different quality of clay, the different firing, and by peculiarities of treatment and colouring. But great caution is necessary in determining their age or locality on account of the long continued and faithful copying of the old hieratic idols, the persistency in use of old moulds, the exchange of moulds, the migration of workmen, and the local reproduction of foreign images, often by casts.

These terra-cottas pressed out of the clay in vast numbers were sold together with other donaria in the neighbourhood of the temples, as in our days the scapulars and images of saints can be purchased at the doors of churches.

In some places, similar images have been found made of tufo. Marble donaria are not so common; two fine specimens are in the Vatican museum, one of these represents the chest of a child dissected in the middle line; the organs thus exhibited are not free from mistakes. The other represents the thoracic skeleton of an adult; it has thirteen ribs on each side. Both these marbles were found in the Tiber by the Insula Sacra (Island of S. Bartolomeo) where a temple had been erected to Æsculapius. This temple had the form of a ship in memory of the famous embassy which had been sent to Epidauros to fetch the god of medicine, this being ordered by the Sybilline oracle during a great plague which devastated Rome in the year B.C. 291.

Bronze donaria are more numerous; they represent, like

the terra-cottas, figures of gods, patients offering gifts, domestic animals, or various parts of the body. The figures, which generally vary in size from two or three to twenty inches, were generally fixed by means of lead to small bases of tufo, marble or *travertine*, some of which bear votive inscriptions. These pedestals were square or conical in shape and always scooped out at the top. Some of the images had lead or bronze pedestals or no base whatever, and were made to be thrown into the water. Amongst the bronze donaria of my collection is a model of the scalp with neatly plaited hair, a votive offering, probably to Minerva Medica, for recovery from loss of hair. At Falterona many interesting pathological bronzes were found. Bronze figures of leeches are of common occurrence.

In the temples were also placed votive tablets of wood or terra cotta on which were paintings of miraculous healings and portraits of divinities or donors; they were also hung about the walls with the other offerings or on the sacred trees. All things thus suspended were called *ambita*.

A curious sight must have been the old temples crowded with donaria of all kinds, which filled up each corner, covered the walls, hung from the ceilings, clustered round the shapeless *xoana* or the beautiful statues of gods, like swarms of bees. The deep red terra-cotta limbs and blue coated statuettes contrasted with the white bas-reliefs of marble, while bright donaria of bronze and gilded offerings shone among the gorgeously coloured tablets. All these offerings told one tale of human suffering and divine charity. Together with the inscriptions which covered pillars and walls they recorded dreadful diseases and wonderful cures. Every day new donaria were collected, new miracles registered. The temples became interesting museums, great schools of medicine and many eminent men, amongst whom was Hippocrates, learnt in them the principles of medical science. Votes were chiselled on walls and pillars as on the leaves of a great book, profusely illustrated by the never ending rich donaria. At an early date a regular profession of medicine sprang up and attained considerable importance. All specialities were soon represented as largely as in our modern days, and wonderful operations were successfully performed, but the old temples, strongly founded on faith, were always crowded.

Sir William Hamilton published in 1780 a description of the feast of SS. Cosmas and Damian in Isernia (near Naples), which continued unchanged to only a few years ago. I give here an abstract of some parts which bear closely on our study:

"In Isernia, at the annual fair which is held on September 27th, exvoti of wax representing different parts of the body, but especially the male parts of generation, are publicly offered for sale. The devout distributors of these votive offerings carry a basket full of them in one hand, and hold a plate in the other to receive the money, crying aloud 'SS. Cosmo e Damiano.' If you ask the price of one, the answer is 'The more you give the more's the merit.' In the vestibule are two tables, at each of which one of the canons of the church presides, crying out this 'Here masses and litanies are received,' and the other 'Here the votive offerings are received.' The price of a mass is 15 Neapolitan grani (5 pence), and of a litany 5 grani (about 2 pence). On each table is a large basin for the reception of the different offerings. The votive offerings are chiefly presented by the female sex.

* * * *

"At the great altar in the church, another of its canons attends to give the holy unction with the oil of S. Cosmo, which is prepared by the same receipt as that of the Roman ritual with the addition only of the prayer of the holy martyrs SS. Cosmo and Damiano. Those who have an infirmity in any of their members present themselves at the great altar and uncover the member affected, the priest anoints it, saying, 'Per intercessionem beati Cosmi, liberet te ab omni malo.'"

In nearly all the churches of Italy and often at the small shrines in the streets are numerous votive offerings in wax, silver and wood many of which have only been recently consecrated, but the modern donaria are of no interest compared with those of the ancients.

MIDWIVES REGISTRATION.

THE text of this Bill in the House of Lords has been modified in several important respects owing to the amendments adopted on report. We therefore print the Bill as it stood at the close of the last Parliament. The text of the Bill as introduced by Lord Balfour of Burleigh was published in the BRITISH MEDICAL JOURNAL of May 11th, pp. 1025, 1026.

We subjoin also the text of the "Midwifery Nurses Act" drafted by a Subcommittee of the Parliamentary Bills Committee, consisting of Dr. R. W. Batten (Gloucestershire Branch), Dr. Spottiswoode Cameron (Yorkshire Branch), Mr. E. H. Galton (South Eastern Branch), Professor Victor Horsley (Metropolitan Counties Branch), Mr. Evan Jones (South Wales and Monmouthshire Branch), and Dr. S. Woodcock (Lancashire and Cheshire Branch).

MIDWIVES REGISTRATION BILL.

HOUSE OF LORDS.

(AS AMENDED ON REPORT.)

BE it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Short Title.*—This Act may for all purposes be cited as the Midwives Act, 1895.

2. *Definitions.*—In this Act "Midwives Register" means a register of midwives kept in pursuance of this Act; "Midwives Board" means the Board constituted under this Act for the purpose of carrying out the provisions of the Act.

3. *Establishment of Register.*—A midwives register shall be established under this Act, and subject to the provisions of this Act any woman shall be entitled to be registered therein as a midwife who passes the qualifying examination held for the purpose under this Act.

4. *Penalization.*—(1) From and after the expiration of eighteen months from the date of the establishment of the midwives register a woman shall not take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition or description implying that she is registered under this Act or is specially qualified to act as a midwife, unless she is registered under this Act. (2) If any person acts in contravention of this section, she shall be liable on summary conviction to a fine not exceeding five pounds. (3) Nothing in this section shall apply to legally qualified medical practitioners.

5. *Privileges of Registration.*—From and after eighteen months from the date of the midwives register, no woman shall be entitled to recover any fee or charge in any court for attendance or service rendered as a midwife unless such woman be registered under this Act. A woman shall not by reason of being registered as a midwife under this Act have any right or title to be registered under the Medical Act, 1858, or the Acts amending the same, or to assume any name, title, or designation implying that she is by law recognised as a Licentiate or practitioner in medicine or surgery, or that she is qualified to grant any medical certificate or any certificate of the cause of death.

6. *Provision for Existing Midwives.*—Any woman who at the passing of this Act is in bonâ fide practice as a midwife, or has obtained a certificate in midwifery from some hospital or workhouse infirmary, or from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be approved by the General Medical Council, and claims to be registered before the expiration of two years from the passing of this Act, and produces the prescribed evidence of her title to be so registered, shall be entitled to be registered by the General Medical Council, shall be entered on the midwives register, and shall on such registration be liable to such reduced fee as the Midwives Board shall prescribe.

7. *Constitution and Duties of Midwives Board.*—(1) Within six months from the passing of this Act a Midwives Board shall be formed, which shall consist of twelve registered medical practitioners, three to be appointed by the Royal College of Physicians of London, three by the Royal College of Surgeons of England, three by the Society of Apothecaries, and three by the Incorporated Midwives Institute, and of three persons in addition, to be appointed by the Lord President of the Council, of whom one at least shall be a woman. One of each of the sets of three members so appointed shall retire in every year, and his place shall be filled by a fresh appointment made in the same manner as the original appointment. A retiring member shall be eligible for re-appointment after the lapse of one year. Subject to the provisions of this Act and of any rules made thereunder, the Midwives Board shall, in addition to any other duties under this Act—(a) Establish and keep the midwives register under this Act, and provide for holding qualifying examinations. (b) Conduct the examinations and appoint, if necessary, assistant examiners. (c) Decide upon the places where and the times when examination shall be held. (d) Make regulations for governing their own procedure. (e) And generally do any such duty as may be necessary for the due and proper carrying out of the provisions of the Act. The Privy Council and the General Medical Council shall take steps to secure the appointment of the first Midwives Board in accordance with this section, and the Privy Council shall call the first meeting thereof. (2) Upon the Midwives Board have made the arrangements necessary for keeping the midwives register under this Act and for holding the qualifying examinations, they shall give notice thereof to the Privy Council, and the Privy Council shall fix a day on the date of the [illegible]

wives register, and give notice thereof in the *London Gazette*, and the day so fixed is in this Act referred to as the date of the establishment of the midwives register.

8. *Rules Respecting the Examination of Midwives.*—(1) For the purpose of the examination of women desiring to be registered as midwives the Midwives Board shall, as soon as may be after the passing of this Act, frame, subject to the approval of the General Medical Council, rules regulating the method and subjects of the qualifying examination, and the general standard to be attained by persons passing the examinations with a view to secure the possession of adequate knowledge and skill in midwifery by all persons who pass such examinations. (2) The Midwives Board shall make rules as to the conduct and superintendence of examinations, as to the number of ordinary examinations to be held, as to the grant of certificates of registration, as to the regulation of inquiries by the Board into the conduct of registered midwives, and as to the steps to be taken to keep the register correct. The rules shall provide for the examinations being held, so far as possible, at such places as will enable persons to be examined within a reasonable distance from the place where they reside. (3) All rules made under this section shall be submitted to the Privy Council for confirmation, and certified copies of the rules when so confirmed shall be forthwith forwarded in duplicate by the Privy Council to Her Majesty's Stationery Office for official publication. In the event of the General Medical Council failing to perform the duties entrusted to it under this Act the Privy Council shall invite some other suitable body to undertake those duties, or shall itself forthwith proceed to do so.

9. *Fees and Expenses.*—There shall be payable by every woman presenting herself for examination a fee of two guineas. Should a candidate fail to pass, then for her second or any subsequent examination the fee shall be half a guinea. In respect of registration, the fee shall be five shillings. All fees paid by midwives or by candidates for examination shall be paid to the Midwives Board. Such Board shall devote such fees firstly to the payments connected with the examination and registration, secondly to the general expenses of the Board.

10. *Supplemental Provisions as to Register.*—(1) The midwives register kept by the Midwives Board shall be open to inspection at all reasonable times on payment of such fee not exceeding , as may be fixed by the Midwives Board. (2) The midwives register shall be deemed to be in proper custody when in the custody of such officer as the Midwives Board may appoint to keep the same, and shall be deemed to be of such a public nature as to be admissible in evidence on its mere production from that custody. (3) The Midwives Board shall cause copies of the midwives register to be printed, and shall at least once a year cause a new and correct edition of such copies to be published and sold, and such copies shall be admissible in evidence. (4) The Midwives Board shall, on the publication of each new edition of the copies of the midwives register, supply one copy to the council of every county in England and Wales free of charge.

11. *Power of County Councils to Pay Expenses of Examinations.*—(1) The council of an administrative county may require the Board to hold any examination in their county in addition to those usually held on guaranteeing the expense of such additional examinations, and may pay any such expenses out of the county fund. (2) This section shall apply to a county borough with the substitution of borough fund or rate for county fund.

12. *Removal of Name from Register.*—(1) Where a registered midwife is convicted of any felony or misdemeanor, or an inquiry held by the Midwives Board either on a complaint under this Act or otherwise is found to have been guilty of professional misconduct, the Midwives Board may remove her name from the midwives register. (2) Where the name of a registered midwife has been removed from the midwives register under this section, the name shall not be again entered in the register except by the direction of the Midwives Board, or the Privy Council, or a court of competent jurisdiction. (3) If the Midwives Board think fit, they may restore any name removed under this section to the register either without fee or on payment of such fee, not exceeding two shillings and sixpence, as the Midwives Board fix. (4) If in any case the Midwives Board decide to remove the name of a midwife from the register under this section, or not to restore to the register the name of any midwife, the Board shall on application by the midwife state in writing their reasons for the decision, and the midwife may appeal to the Privy Council, and the Privy Council, after communication with the Board, may either dismiss the appeal or order the Board either not to remove the name or to restore the name, as the case may require. (5) For the purposes of this section professional misconduct shall, in addition to any other form of misconduct, include any omission to send for a medical practitioner where the case is not one of natural labour.

13. *Exercise of Powers by Privy Council.*—(1) The powers by this Act vested in the Privy Council may be exercised by any two or more of the Privy Council. (2) Any order of the Privy Council may be made conditionally or unconditionally, and may contain such terms and directions as the Privy Council think just.

14. *Complaints of Misconduct on Part of Registered Midwives.*—(1) If any person has reason to complain of any professional misconduct on the part of a registered midwife, that person may complain either directly to the Midwives Board or to the medical officer of health of the district, or to the council of the county, or the district council of the district in which the misconduct is alleged to have occurred or the midwife usually practises, and it shall be the duty of the medical officer of health to report any complaint made to him to the council by whom he is appointed. (2) Any council to whom any such complaint is made or reported shall forward the complaint to the Midwives Board, and that Board shall inquire into it and give the council by whom the complaint was made information as to the result of their inquiry.

15. *Notice of Death of Midwives.*—Every registrar of deaths in England and Wales shall on receiving notice of the death of any registered midwife forthwith transmit by post to the Midwives Board a certificate under his hand of such death with the particulars of the time and place of death on the receipt of such certificate the Midwives Board shall cause the name of the midwife to be erased from the midwives register, and shall transmit to the said registrar of death such sum as the Treasury may fix not exceeding two shillings and sevenpence for the cost of the certificate and transmission.

16. *Penalty for Obtaining Registration by False Representation.*—Any woman who wilfully procures or attempts to procure herself to be placed on the register of midwives by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein shall be deemed guilty of a misdemeanor, and shall on conviction thereof be liable to a fine not exceeding ten pounds, or to be imprisoned, with or without hard labour, for any term not exceeding three months.

17. *Penalty for Wilful Falsification of Register.*—If any person appointed to keep the register of midwives, wilfully makes or causes to be made any falsification in any matter relating to the register of midwives he shall be deemed guilty of a misdemeanor and shall be liable to a fine not exceeding twenty pounds, or to be imprisoned with or without hard labour for any term not exceeding six months.

18. *Prosecution of Offences.*—Any offences under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction may be recovered, in manner provided by the Summary Jurisdiction Acts.

19. *Appeal.*—Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of, or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

20. *Extent of Act.*—This Act shall not extend to Scotland or Ireland.

A BILL TO PROMOTE THE BETTER TRAINING OF WOMEN AS MIDWIFERY NURSES, AND FOR THEIR REGISTRATION AS SUCH.

Be it enacted by the Queen's Most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled and by the authority of the same as follows:

1. *Short Title.*—This act may for all purposes be cited as the Midwifery Nurses Act, 1895.

2. *Definitions.*—In this Act

The term "midwifery nurse" means a woman who undertakes to attend cases of natural labour.

"Midwifery Nurses Register" means a register of midwifery nurses kept in pursuance of this Act.

"Midwifery Nurses Board" means the Board constituted under this Act for the purpose of carrying out the provisions of the Act under the direction of the General Medical Council.

3. *Registration.*—(1) From and after the first day of January one thousand eight hundred and ninety-six no woman shall be entitled to take or use the name or title of midwifery nurse or midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is registered under this Act or is in fact possessed of the skill necessary to act as a midwifery nurse or midwife, unless she be registered under this Act.

(2.) Any person who after the first day of January one thousand eight hundred and ninety-six not being registered under this Act shall take or use the name of midwifery nurse or midwife, or any other name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding five pounds, provided that nothing in this section shall apply to registered medical practitioners.

(3.) No woman shall be placed on the midwifery nurses register until she shall have complied with the rules and regulations for admission to registration to be laid down in pursuance of the terms of this Act by the Midwifery Nurses Board acting under the direction of the General Medical Council.

4. *Privileges of Registration.*—A woman registered under this Act shall be entitled to act as midwifery nurse in England and Wales. From and after the first day of January one thousand eight hundred and ninety-six no woman shall be entitled to recover any fee or charge in any court for attendance or service rendered as a midwifery nurse unless such woman be registered under this Act, and the certificate of registration under this Act shall be a certificate entitling a woman to act as a midwifery nurse in cases of natural labour only in accordance with the prescribed regulations made in pursuance of the terms of this Act. A certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Act, 1858, or the Acts amending the same in respect of such certificate, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine, or surgery, or midwifery except in cases of natural labour, or that she is qualified to grant a certificate of death, or of stillbirth, or any medical certificate.

5. *Provision for Existing Midwives.*—Any woman who at the passing of this Act has been in *bonâ fide* practice as a midwife for a period of not less than one year, or has obtained such certificate in midwifery as may be approved by the General Medical Council, and claims to be registered before the expiration of two years from the passing of this Act and produces to the satisfaction of the General Medical Council both evidence of her title to be so registered, and evidence of good character, shall be entered on the midwifery nurses register at such reduced fee as the Midwifery Nurses Board shall prescribe.

6. *Constitution and Duties of Midwifery Nurses Board.*—Within six months of the passing of the Act a Midwifery Nurses Board shall be formed, which shall consist of twelve registered medical practitioners to be appointed by the General Medical Council. One-fourth of the members of the Board shall annually retire, but shall be eligible for re-election during a period not exceeding five years. The duties of the Midwifery Nurses Board shall be as follows:

(a) To lay down rules for education and training for qualification of midwifery nurses.
(b) To make rules for conducting and superintending the examinations for qualification of midwifery nurses.
(c) To conduct the examinations and appoint the examiners.
(d) To decide upon the places where and the times when examinations shall be held.
(e) To frame for approval by the General Medical Council rules for regulating the practice of midwifery nurses.

(c) To investigate and to report upon all cases of complaint made against any midwifery nurse to the General Medical Council.

(g) And generally to do any such duty as may be necessary for the due and proper carrying out of the provisions of the Act.

7. *Training and Examination of Candidates.*—For the purpose of the examination of women desiring to act as midwifery nurses the Midwifery Nurses Board shall, as soon as may be after the passing of this Act, frame, subject to the approval of the General Medical Council, rules regulating the conditions of admission to examination, the course of study to be pursued previous to examination, the method, the period, and the subjects of such examination, and the general standard to be attained by women passing the examination.

The General Medical Council shall submit the rules approved by them to the Privy Council for confirmation, and the rules when so confirmed shall be forthwith officially published under the superintendence of Her Majesty's Stationery Office.

8. *Fees and Expenses.*—There shall be payable by every woman presenting herself for examination such fee as the Midwifery Nurses Board may, with the approval of the General Medical Council, from time to time determine. Should a candidate fail to pass the fee paid by her for any subsequent examination shall not exceed half the amount of the first fee. All the expenses of the Board shall be defrayed by the General Medical Council, and all moneys paid in respect of fees or otherwise shall be paid to the Treasurer of the General Medical Council.

9. *Register of Midwifery Nurses.*—The General Medical Council shall provide by their regulations for the keeping, and the publication from time to time, of a register of midwifery nurses.

10. *Publication of Register.*—The General Medical Council shall cause a new edition of the register kept by them under this Act to be printed and published on the first day of January in each year, and a copy of such register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act, and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not registered according to the provisions of this Act. Provided always, that in the case of any woman whose name does not appear in such copy, a certified copy under the hand of the registrar of the entry of the name of such woman on the register shall be evidence that such woman is registered under the provisions of this Act.

11. *Local Registration.*—Each medical officer of health throughout England and Wales shall be supplied with a copy of the register from year to year, and he shall keep this register accessible at all reasonable times for public inspection. No midwifery nurse shall commence practice in any district until she has first produced her certificate of registration to the medical officer of health for the district in which she purposes to practise.

12. *Notice of Death of Midwifery Nurses.*—Every local registrar of deaths shall at once transmit the death of any midwifery nurse in his district to the Registrar of the General Medical Council, with particulars of time and place of death, and may charge the cost of such certificate and transmission as an expense of his office, and on receipt of such certificate the Medical Registrar shall erase the name of such deceased midwifery nurse from the register.

13. *Removal from the Register.*—If any midwifery nurse shall be convicted in England or Ireland of any felony or misdemeanor, or in Scotland of any crime or offence, or shall after due inquiry be judged by the General Medical Council to have been guilty of infamous conduct in any professional respect, the General Medical Council may, if they see fit, direct the Registrar to erase the name of such midwifery nurse from the register.

14. *Restoration to the Register.*—The General Medical Council may after due inquiry restore to the register the name of any midwifery nurse removed therefrom.

15. *Penalty for Obtaining Registration by False Representation.*—Any woman who wilfully procures or attempts to procure herself to be placed on the register of midwifery nurses by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof, be liable to a fine not exceeding ten pounds, or to be imprisoned with or without hard labour for any term not exceeding three months.

16. *Penalty for Wilful Falsification of Register.*—Any person who wilfully makes or causes to be made any falsification in any matter relating to the register of midwifery nurses shall be deemed guilty of a misdemeanour, and shall be liable to a fine not exceeding twenty pounds, or to be imprisoned with or without hard labour for any term not exceeding six months.

17. *Prosecution of Offences.*—Any offence under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recovered on summary conviction may be recovered in manner provided by the Summary Jurisdiction Acts; and all penalties shall be paid to the Treasurer of the General Medical Council, anything contained in the enactments in the Metropolitan Public Acts or any Act passed before the passing of these Acts notwithstanding.

18. *Appeal.*—Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of, or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the Court of Quarter Sessions.

19. *Extent of Act.*—This Act shall not extend to Scotland or Ireland.

THE University of Buda-Pesth, in response to an inquiry addressed to it by the Minister of Instruction, has expressed the opinion that women should be admitted to the classes in the medical and pharmaceutical faculties, and should be eligible for degrees in those subjects.

THE bathing establishment at Kreuznach has been enlarged by the erection of Russian and Roman baths and of appliances for inhalation.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons, England, was held at 101, Harley Street on July 17th, 1895. The minutes of the last meeting were read and confirmed. Mr. PERCY DUNN (honorary secretary) pointed out that two of the candidates supported by the Association had been successful at the election of members of the Council at the College on July 4th. A vote of thanks was unanimously passed to Mr. A. T. Norton for representing the Association at the election. The Honorary Secretary then read a correspondence with the Secretary of the Royal College of Surgeons, from which it appeared that the Committee of the Association of Fellows would wish that Clause 3 in the proposed Charters and By-laws of of the College as altered should stand as follows:

That no alteration in the constitution or external relations of the College shall be effected without the body corporate being convened to discuss such proposed alteration.

The proceedings at the half-yearly meeting of the Fellows at the College were then discussed, and attention was drawn to the fact that the President abruptly declared the meeting closed without affording the Fellows an opportunity of discussing the business which appeared on the agenda. This appeared to the Committee to be of so much importance that the following resolution was proposed, seconded, and unanimously passed:

That the attention of the President and Council of the Royal College of Surgeons be drawn to the fact that the half-yearly meeting of the Fellows on the 4th instant was closed without any discussion being possible in respect to the business on the agenda, and that in the opinion of the Committee of the Association of Fellows such a mode of conducting these meetings would be destructive of the privileges conceded by the Council to the Fellows, and would render the meetings nugatory.

It was also agreed that a copy of the above resolution should be forwarded to the Secretary of the College, with the request that it should be laid before the Council at the next meeting.

It was determined that the annual meeting of the Association should take place in November, at or about the date fixed for the annual meeting of the Fellows and Members of the Royal College of Surgeons.

THE SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

As stated in the BRITISH MEDICAL JOURNAL of July 20th, the Council has appointed the same Committee which recently received a deputation of Fellows on the subject of the proposed changes in the charters to receive a deputation of Members with reference thereto. The deputation will attend to-day (Friday, 26th), and the following are the amendments to the charters which the Society of Members will advocate:

1. That no alterations in the constitution and external relations of the College shall be effected without the consent of the Corporation convened to discuss such alterations.

2. That a statutory annual general meeting be held of the Corporation, to which the Council shall present a report of its proceedings during the past year, together with a duly audited account of the income and expenditure of the College; this report must be submitted for the approval of the meeting, and formally adopted.

3. That the number of the Council be increased to thirty-two, of these eight of these shall be Members (who are not also Fellows), and shall be elected by the Members only.

4. Provided that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council.

5. That the same by-laws and regulations which are at present in force for the election and admission of Fellows to the Council shall govern the election and admission of Members, the word "Member" being substituted for "Fellow" throughout.

6. That of the eight Members first elected on the Council two shall retire annually in rotation, commencing with those two who have received the lowest number of votes, but that these shall be immediately eligible for re-election; after the end of the fourth year, when the eight members first elected on the Council shall all have been retired, the two members to go out of office annually shall be those two who have been longest on the Council without re-election.

The deputation will further support the election of the President, as at present, from and by the enlarged Council.

The Committee of the Society regard the first three clauses as the essentials of their proposal; they bring forward the remainder, as the absence of any detailed scheme has on previous occasions been made a subject of complaint.

BRITISH MEDICAL JOURNAL REPORTS.

SPECIAL REPORT ON THE CONDITION OF THE ALDERSHOT CAMP SEWAGE FARM.

By E. BAILEY DENTON, M.Inst.C.E.

In compliance with the request of the Editor of the British Medical Journal that I should examine the present condition of the Camp Sewage Farm at Aldershot, and report to him thereon, I visited it on July 16th, and carefully inspected it.

I desire to state prefatorily that the average population of the garrison tributary to the farm in question is about 16,000, with a daily water supply of between 600,000 and 700,000 gallons.

The camp is said to be sewered on the duplicate system—that is to say, the surface or storm waters are professedly conducted into the watercourses of the district, and the sewage only into the sewers. As in most other instances, however, perfect separation has not been effected, with the result that, during times of rain, the quantity of sewage discharged into the sewers is considerably more than the water supply.

The Camp Farm, which has been from time to time the subject of such a virulent comments in the House of Commons and in the press, was, I am informed, laid out by Mr. James Blackburn, a well-known advocate of sewage farming, in or about 1865, when the question of sewage treatment generally was nothing like so well understood as at the present time. It consists of 115 acres of free soil, most suitable for sewage treatment, 100 acres of which are actually sewaged. Mr. Blackburn paid no rent to the Government, and held the farm for a term of fourteen years, giving it up at Michaelmas, 1880. During his occupancy things were well managed, and there were no complaints.

In 1880 a Mr. Brown succeeded Mr. Blackburn, and was granted a lease until Michaelmas, 1894, staying on, however, as tenant at will until June of this year (1895). Mr. Brown paid the War Office a rent of £400 a year, and during the latter portion of his term things began to present a very different appearance to what they did in Mr. Blackburn's time.

In June of this year, in consequence of the frequent complaints publicly made against the farm, Lieutenant-Colonel Jones, V.C., late of Wrexham, who has had much experience in sewage farming, was entrusted with its management by the War Office, who began to see that there was real ground for complaints; and he was instructed to apply such remedies as he thought proper in order, it may be presumed, to satisfy public opinion. As Colonel Jones has only been in residence for a few weeks, he naturally has not yet had an opportunity to do anything of a thoroughly practical character.

The appearance of the farm on the day of my inspection was the reverse of agreeable, for the systematic neglect of years is apparent at every turn. The homestead, which on a sewage farm should be an example of order and careful maintenance, especially in such a place as Aldershot, is next door to a ruin; and there is not a gate on the whole farm. The condition of the roads and fences likewise is very bad. The tanks at the outlets of the four outfall sewers, which were never of good design, and which are most unsuitable for the deposition of sludge, have fallen into decay, and having apparently never been cleaned out for a long time present a disgraceful appearance, the large quantities of sludge collected in them giving off nauseating odours. Much of the land is out of cultivation, and its surface has in many places lost the even level, or slope, to which it was apparently carefully reduced and maintained by Mr. Blackburn, with the result that the sewage collects in the low places, forming stagnant and offensive pools. The main furrows by which the sewage ought to be rapidly conveyed from the various tanks for distribution over the land have, from want of proper attention, become simply large and ill shaped ditches, which serve to collect the sewage and check its rapid conveyance to the various points of outlet. The smaller branch furrows have been equally neglected.

Not content with applying, or rather misapplying, the sewage to the land which he leased from the Government, the late tenant, presumably whenever he wished to do so, was allowed to convey the sewage to several low-lying meadows of his own beyond the sewage farm and in proximity to the river Blackwater. Here were the same evidences of careless management, and obviously the sewage had been allowed to flow as it pleased towards, and eventually into, the river, thus causing needless pollution of a serious character.

I have no hesitation in stating my belief that the present outcry is not only perfectly justifiable, but that the present disgraceful state of things is entirely traceable to long and continued neglect. Upon whose shoulders the responsibility for this neglect lies is not within my province to inquire. It would almost look as if the War Office, after obtaining the large annual rent of £400 for 115 acres, had closed their eyes to everything else, for certain it is that if the late tenant had been bound down by the ordinary rules inseparable from successful sewage farming, and had their due observance been systematically maintained, there would never have been cause for complaint.

I am convinced that even now if the farm throughout were properly laid out for the reception of sewage, the surface of the land carefully levelled and prepared, new tanks of modern and improved design built, and pipe conduits laid or small earthen carriers made, so that the liquid could be rapidly conveyed and distributed over the whole of the area, there would not be a better or more successful sewage farm in England, for it is seldom that such suitable soil is met with; whilst the area at command is sufficient to successfully purify the sewage of at least 40,000 people without the slightest nuisance.

The authorities should realise the exceedingly lamentable condition of things as soon as possible, and give the necessary money and instructions to immediately carry out what is required, for temporary or palliative measures will be of no avail.

The only alternative to such a course, but one which will involve a far greater outlay, is to remove the sewage farm to another site at a greater distance from the camp, one argument in favour of this alternative being that a new hospital may possibly be built on the adjacent high ground between the sewage farm and the Marlborough lines at a distance of about 280 yards from the nearest point to which the sewage is now applied; but whether the present farm is retained or a new one acquired, it is imperative that the authorities should settle the question without delay.

It having been suggested that the town of Aldershot and the camp should combine and take their sewage to a site near Cove Common, where a new and extensive sewage farm could be laid out, I visited the sewage disposal works of the town, where I was courteously received by Mr. Rushford, town surveyor, and given every information. I found that the sewage, which amounts to a daily quantity of about 650,000 gallons, was being treated satisfactorily, and that after mixture with sulphate of alumina, and subsequent deposition in tanks, the liquid is conveyed to thirty-two acres, over which it is distributed. The effluent, which is discharged into the Blackwater after filtration through this land, was clear and good. The site, however, where the accumulated sludge, after being raised from the tanks, is deposited, is very near the town, and a nuisance must at times result. An improvement would be advisable, and the district council would do well to consider whether, as there appears to be available land in proximity to their thirty-two acres, at a safer distance from the town, to which the sludge could be raised (as may be seen by a visit to the farm of Mr. Heath at Hendbrooks), it is necessary, or even desirable, to join with the camp authorities in the larger scheme of total removal, which must necessarily involve all concerned in very great expenditure.

The *Pediatric Gazette* is the name of a new journal which will begin to appear at fortnightly intervals on January 1st, 1896. A specimen number will be issued in October next. As the name denotes, it will be devoted to the study of disease in infants and children. Dr. Dillon Brown of New York, who at present edits the *Archives of Pediatrics* will be the Editor of the new journal, the annual subscription to which in this country it is intended to fix at 8s.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895

SUBSCRIPTIONS to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JULY 27TH, 1895.

FOOD-POISONING.

CASES of alleged food-poisoning occur constantly, but whether reported in the daily press or in a scientific journal, they are almost always unsatisfactory reading. This is due to the fact that in most instances an official report has to be drawn up on insufficient data or on an evidence most unsatisfactory in nature. Although Brieger's researches have been popularised to such an extent that "ptomaine" has almost become a household word, and although bacteriology has thrown much light on the nature of food poisoning, yet confusion is still great, and our means of prevention utterly inadequate. We shall not presume to suggest fresh measures, but shall venture to offer a few critical remarks with regard to some commoner errors often found in official reports of medical officers of health and others. A few notes published by Sir Charles Cameron in the last number of this JOURNAL contains at least one of these popular delusions. The writer alludes to the well-known Limerick Convent food-poisoning case. It is doubtful what the cause of the distressful symptoms was; Sir Charles Cameron thinks that it certainly could not have been the meat, "because some persons who had partaken of it were not ill." Here the reasoning may be at fault, for we know that the poison, supposing it to be a ptomaine, is not necessarily diffused throughout the whole substance of the meat, but may be collected at one or other part or parts. In the case of Lieutenant Huddlestone, for instance, who died from ptomaine poisoning after partaking of tinned sardines, Dr. Stevenson clearly showed that a few of the sardines only were poisonous. Numerous cases all proving the same might be mentioned. The Limerick case was undoubtedly one of acute poisoning and not a bacterial infection, but the meat cannot be excluded, unless it can be clearly shown that some of the sufferers had not consumed any of it. It is a common error to argue from positive evidence alone. Thus Sir Charles Cameron argues that the poison must have been in a custard, because all who partook of it sickened. Whether this be so, and whether the poison was generated in the milk as tyrotoxicon or in the eggs, it is impossible to say, because there was nothing left for an analytical examination, and as usual there are no facts to go upon, and therefore criticism is useless. Certainly tyrotoxicon is poisonous, and putrefying eggs contain toxic bodies: further we cannot go, for the evidence is too meagre. Thus if the poison really was in the custard, we should like to know whether those who consumed much of it suffered more than those who were less tempted by what hardly appeared to be a tempting dish.

How these poisons arise in food is unknown; undoubtedly organisms gain access, and through some form or another of fermentation lead to the manufacture of ptomaines, but how they get there is purely a matter of conjecture. An amusing account is given in a special report on a case of food poisoning at Homerton. Here a family of nine, living in a badly-drained house, all suffered from acute poisoning after eating a meat pie which, after having been used hot on the Sunday, was consumed cold on Monday. The medical officer rightly argues that since symptoms came on soon after the meal, there was an intoxication and not an infection. The appearance of the poison in the pie is thus explained: "The baking of the pie led to the formation of a certain amount of gelatine, which is a most suitable nutrient medium for the growth of organisms. The foul odours from the drain were probably laden with harmful organisms, which multiplied in the pie and produced the poison." How comforting it must have been to find foul-smelling drains.

The number of food poisoning cases during the hot weather has again been great. Among the articles of food suspected in the various instances we may mention (*a*) tinned potted meat (27 persons suffered, with 1 death), (*b*) tinned tomatoes, (*c*) exposed meat (several fatal cases), (*d*) brawn (a common offender), (*e*) food kept for a few days. Most verdicts end with the clause, "But no blame was attached to anyone." This is just enough, so long as we are ignorant of the processes leading to the formation of ptomaines and other poisonous bodies. People, however, should realise the danger of eating any but fresh meat, especially during the hot season. Some of the "scraps" which butchers sell later in the day or later in the week are disgusting in appearance, and it does not seem right to tempt even the poorest to consume such stuff. Fishmongers also are not careful enough in their liberality towards the poor; a tainted fish is a dangerous gift. An adequate food inspection is a most difficult problem, but surely it is easy enough to put a stop to obvious errors by strict prohibition.

THE PHARMACY OF THE "BRITISH PHARMACOPŒIA."

For some years past Professor Attfield has been charged with the duty of reporting to the Pharmacopœia Committee of the General Medical Council upon matters relating to the pharmaceutical improvement of the *Pharmacopœia*, and the report presented by him during the late session of the Council has now been issued. Like the reports of previous years, it contains for the most part a summary of suggestions which have been published in the *Pharmaceutical Journal* and other papers as to various details considered, from the pharmaceutical point of view, to require notice in the revision of the *Pharmacopœia*. As representing, in a connected form, the work done in that direction the report furnishes much useful information; and though the proposals made in some of the papers referred to in the report are not recommended for adoption, their mention may be regarded as proof that they deserve consideration. There are, however, several specific recommendations made by the reporter, and the one of chief importance relates to the

standardisation of Galenical preparations, so far as advanced knowledge of the therapeutic action of drugs and of the chemical nature of their constituents will admit of that being carried out in practice.

It is proposed that in regard to belladonna, hemlock, ipecacuanha, and some other drugs, definite standards shall be introduced into the new *Pharmacopœia* based on specified amounts of alkaloid or other active principles. The strength of Galenical preparations of these and other drugs is also to be adjusted in like manner. The object is that the directions given in the *Pharmacopœia* for making such preparations shall be sufficient to secure fairly constant proportions of the alkaloids or other active principles of the respective drugs, and uniform therapeutic value of their several preparations. With that object methods of assay are suggested as applicable for the purpose either to the drugs or to some preparations of them from which other preparations of definite strength can be obtained either by dilution or by other simple means. The endeavour, by such proceedure, to ensure greater uniformity of medicinal preparations, especially those of considerable potency, may be regarded as an important step in advance of former practice. But such standardisation, as pointed out in the report, is not by any means a perfect process, either from a chemical or therapeutic point of view. The precise action of alkaloids and other active principles in a pure state and when associated with other substances, as is the case with many drugs in their natural state, is still too little known to admit of any particular constituents being regarded as the active principles of the respective drugs. If the contrary were the case, the analytical separation of alkaloids can rarely be carried out in such a manner that their individual amounts can be determined with precision. Very frequently the utmost that can be done is to ascertain the amount of total alkaloids, and owing to their varying relative proportions a constant percentage is not necessarily synonymous with an equal degree of medicinal potency. In nux vomica, for instance, the relative proportions of strychnine and brucine are known to vary, but in default of a ready method of separation, standardisation on the basis of strychnine alone cannot be recommended. The analytical determination of total alkaloids may may also be inaccurate in consequence of experimental errors. When alkaloids are extracted from drugs or separated from medicinal preparations by solution in ether or chloroform, the residue left on evaporating such a solution invariably contains some admixture of resin and colouring substances, etc, so that, taking its weight as the measure of the amount of alkaloid, the result arrived at will be too high. The methods suggested in the report for the purpose of standardising *Pharmacopœia* preparations are in some instances open to this objection; and they certainly admit of being improved by substituting titration with an acid for the weighing of residues which contain other substances besides the alkaloids to be determined.

Among other points of importance, mention is made of Dott's suggestion that the specific gravity of chloroform should be reduced, by the addition of alcohol, to 1490 or 1495, so as to make it more capable of being kept without decomposition. Improved definitions are also suggested in the case of carbolic acid, chrysarobin, saffron, liquid extract of ergot, podophyllin, resin, and other articles.

Sir Julian Goldsmid has been elected Vice-Chancellor of the University of London.

The members of the Northern Counties Branch of the British Medical Association presented Dr. Mackay, of Elgin, with his portrait on June 20th, in recognition of the valuable disinterested and unremitting services rendered by him as Secretary and Treasurer of the Branch from its inauguration in 1868. The portrait was painted by Sir Geo. Reid.

Among the medical men who have been returned to the new Parliament we notice the following: Dr. R. Ambrose (West Mayo), Dr. G. B. Clark (Caithness-shire), Dr. Robert Farquharson (West Aberdeenshire), Sir B. Walter Foster (Ilkeston, Derbyshire), and Dr. M. A. Macdonnell (Leix, Queen's County).

LOCAL ENTERTAINMENT AND EXCURSION COMMITTEE.

In consequence of the unavoidable absence of Dr. R. Boxall, it is requested that all future communications referring to the entertainments and excursions be addressed to Dr. Symons Eccles, 28, Hertford Street, Mayfair, W.

THE LONDON HOSPITALS AND THE APPROACHING ANNUAL MEETING.

St. Thomas's Hospital is to be added to the hospitals in London mentioned last week which propose to offer special opportunities to members attending the annual meeting of the British Medical Association in London. On Thursday, August 1st, from 3 to 6 p.m., a series of interesting cases will be exhibited and demonstrated by the members of the medical staff, and a garden party will be given at the same time, to which all members of the Association, together with ladies accompanying them, are invited.

THE VICTORIA CROSS.

Dr. R. E. Burges (Chester) writes to us: In the British Medical Journal of July 20th, page 158, I see a notice of the Victoria Cross having been granted to Surgeon-Captain Whitchurch by Her Majesty, and afterwards there is a list given of those medical officers who have been awarded the distinction. I would beg to call your attention to the fact that Surgeon William Bradshaw was awarded the Victoria Cross for bravery at the same time as Surgeon-General Home, but he unfortunately did not live to have the distinction actually conferred on him. In the Victoria Cross Gallery is to be seen the picture of Surgeons Home and Bradshaw earning the V.C. I am inclined to think that when his portrait actually appears in the Victoria Cross Gallery Dr. Bradshaw's name ought not to be totally ignored as it is at present.

CLUBS AND FRIENDLY SOCIETIES IN THE SOUTH OF IRELAND.

Owing to the death of one of the medical men, Dr. O'Sullivan, who went to Cork to take up the appointments to the medical clubs and societies of that city rendered vacant by the resolve of the medical men in Cork no longer to accept the utterly inadequate remuneration offered by these bodies, the Oddfellows Society are finding it necessary to seek for a successor. We would remind medical men who may be approached with the view of accepting the appointment that, should they do so, they will be acting in opposition to the general opinion of the medical profession in the United Kingdom, as expressed by various representative bodies, and as further shown by the action taken by the medical profession resident in Inverness, Portsmouth, and other towns. The council of the Dublin Branch of the British Medical Association, when the action of the medical men in

Cork in resisting the demands of the clubs and societies in Cork was first made known, adopted a resolution expressing the hope that the medical men in Cork would "maintain a united front against the attempt of the said societies to impose unworthy and inadequate terms on their medical officers." The Council of the British Medical Association, at its meeting on January 16th, 1895, after hearing a deputation from the South of Ireland Branch, adopted unanimously a resolution condemning strongly "the admission of improper persons as members of medical aid societies," expressing their deep sympathy "with those medical men who have been compelled to resign their positions,' and promising to render to them all the assistance in the power of the Council. The Irish Medical Association on February 20th, 1895, adopted a resolution expressing "its sympathy with the medical officers heretofore acting for clubs and benefit societies in their effort to resist the admission of persons with ample means to the benefit of such societies." Many of the Branches of the British Medical Association have adopted similar resolutions, and we venture to hope that these very significant expressions of opinion, and the very general movement within the profession to vindicate its right to determine the conditions upon which medical services should be rendered to clubs and similar organisations, and, in particular, to provide that a suitable wage limit should be enforced, will have the effect of deterring members of the profession from accepting appointments to clubs in which no such limit exists.

EDINBURGH CITY HOSPITAL FOR INFECTIOUS DISEASE.

AFTER all the supposed solution of the Edinburgh Fever Hospital difficulty has fallen through. At the Town Council meeting on July 23rd the Lord Provost announced that Sir Henry Littlejohn and Dr. Muirhead, the visiting physician, had reported on the proposed Craiglockhart site in very adverse terms. They could not recommend the site as one suitable for such a hospital as the requirements of Edinburgh demanded, the ground was too restricted in size, and the position faulty. In winter it was exposed to mists, and for several months had no direct sunshine. Surprise was expressed at the report, and some grumbling. Sir James Russell said he did not think they would get a single man of eminence or experience to recommend the site. The Lord Provost thought the report rather exaggerated. But by general agreement the matter dropped, and Edinburgh is still in need of a fever hospital. It cannot but be felt that much more vigorous effort should be used to secure this. The present hospital is admittedly, if not notoriously, unsatisfactory, inconvenient, and unsuitable.

DEAD MEN'S BROTH.

THE Rev. Harry Jones tells some excellent stories in his interesting little book of personal reminescences, just published, called *Dead Leaves and Living Seeds*. Mr. Jones's work, both in the West and East End of London, brought him much in contact with medical men and medical matters, and—always a keen sanitarian—he used his influence to enforce practical sanitation among the poor. Speaking of the famous Broad Street pump and of the part it played in a cholera epidemic, he tells how the water of a certain pump, situated in the churchyard of St. George-in-the-East, was greatly appreciated by the people for its cool and sparkling character. There were rumours of cholera in the air, and Mr. Harry Jones tried in vain to dissuade his parishioners from filling their pails and jugs at the favourite churchyard pump till he hit upon the device of hanging a placard on the pump with this inscription, "Dead Men's Broth." This startling announcement was enough to make the water distasteful; and he says he used to watch the arrival of disobedient souls, who paused to read the notice and retired with empty buckets. Of the great visitation of cholera in 1866, Mr. Harry Jones is able to give some more lively reminiscences than are usually told of this terrible time. He says that he thinks in the first panic some people must have been buried alive. In one case a neighbour obtained leave to rub the supposed dead corpse of Sarah B. with mustard. She was about to be carried off by the mortuary cart for burial, but sat up under this external stimulant; and Mr. Jones tersely adds that in subsequent years he baptised four of her children. In another case a more energetic stimulus was most effectual. A potman was seemingly *in articulo mortis* when his sister called in Dr. Joseph Rogers, who said he feared he could do nothing for the man, but would lay a towel dipped in spirits of wine down his spine. For this purpose he was laid on his face. It was night, and his sister held a candle. But the doctor had no sooner placed the soaked napkin on his back ready to be stretched along it, than she nervously set it alight. Upon this the patient sat up, and eventually recovered. These methods of treating cholera have not yet recommended themselves to the medical profession.

THE EVIDENCE BEFORE THE SCOTCH DEPARTMENTAL COMMITTEE ON INEBRIATES.

THE very full and valuable testimony adduced in support of further legislation for inebriates which was elicited by the Scottish Departmental Committee on Inebriates has just been issued by Neill and Co., Edinburgh. In this bulky volume of 676 pages (6s. 3d.), will be found a compendium of skilled opinion which amply warrants the thoroughgoing suggestions made by the Committee. The evidence in favour of compulsory therapeutic seclusion is so overwhelming as to render further legislation certain. Sooner or later inebriate offenders must be treated remedially as diseased persons, and non-criminal habitual drunkards brought under curative restraint voluntarily or involuntarily. Amongst some curious information given is that of the system of a money pledge often given in Glasgow police offices on recovering sobriety, which is forfeited if the person does not appear at the police court next morning. In 1893, 5,832 persons arrested out of 16,043 forfeited their pledge, the amount in one year being as large a sum as £12,000. The evidence of an American practitioner who is connected with a secret cure institution is as suggestive as it is amusing. Everyone interested in the treatment of inebriety should study this extended report of the minutes of the evidence.

MIDWIVES REGISTRATION AND THE ANNUAL MEETING.

WE published last week a notice of a meeting called by Dr. Rentoul and Dr. Hugh Woods requesting the attendance at a preliminary meeting of those who propose to support the resolution against the registration of midwives. Dr. Boxall and Mr. F. R. Humphreys, 27, Fellows Road, N.W., request us to publish a notice asking those who are in sympathy with the principle of registration of midwives to attend the general meeting of the Association in Exeter Hall on Tuesday, July 30th, at 2.30 P.M., to vote or to speak against the motion standing in the name of Mr. Lawson Tait, which will be taken in the discussion on the report of the Council of the Association produced at that meeting.

REGISTRATION OF MIDWIVES.

AN experienced coroner of a large district writes to us: Under the startling heading of "Child Murders in the East End," reports and articles have appeared in some of the daily newspapers, calling special attention to the numbers of newly-born children found dead in the streets and other places, usually wrapped up as parcels. During last year in the eastern district of London it is said that 102 inquests have been held on such children, and in the majority of these, after *post-mortem* examination, medical witnesses have stated that these children were born alive and died from suffocation at or soon after birth. It is often found that no skilled attendance could have been given to the child, the cord being often cut or torn across at varying

lengths from the abdomen, without any attempt at tying. It is very seldom that the parentage of these children is traced or the persons by whom they are disposed of known. A very strong suspicion, however, prevails in the mind of the coroners, the police, and the medical witnesses as well as the juries, that a large majority of such cases are the result of child murder; and from the very low class of women who practise in such localities under the title of "midwife," without any qualification to do so, beyond that which they themselves assume, it is not unreasonably surmised that many of these children are not permitted to live beyond a few minutes after birth, and then on the first favourable opportunity are quietly dropped as parcels in the streets or left under the seats of railway carriages, or placed within the railings of some square or enclosure. It is exceedingly difficult to trace these cases further, or to charge or apprehend even a suspected person, as long as the law remains in its present state. To quiet the public mind and to remove or verify the very strong suspicion that exists regarding the method of disposal of the life and bodies of these newly born children certain suggestions have been made; first, that the law regarding the registration of the birth of children should be more stringent, so that all births, including stillbirths, should be registered, and that it should not only be compulsory to parents, but to any other person present at the birth, to notify the same. Further, that midwives should be registered after proper examination, and should be compelled to notify the births of all children the mothers of whom they attend. If this were so, in course of time the class of women upon whom in these matters considerable suspicion rests would disappear, and with them we have reason to believe a large number of the suffocated, if not murdered, infants found dead under the circumstances we have already described would disappear also.

THE INDEX MEDICUS.

As will be seen by the correspondence between Mr. MacAlister, the librarian of the Royal Medical and Chirurgical Society, and Dr. Billings, the librarian of the Surgeon-General's Office at Washington, a determined effort is to be made to resume the publication of the *Index Medicus*. Of the value of this publication to all engaged in the study and interested in the advancement of medicine and the ancillary sciences, we have spoken recently. It is a guiding thread which leads the inquirer through the mazes of the literature of modern medicine. Without it, or some such guide, the attempt to find a reference, when the subject or author only is known, is almost as hopeless as looking for a needle in a bottle of hay. The subscription proposed is, it must be admitted, very high, but the production of such a serial is extremely costly, and there ought to be a sufficient number of libraries and societies alone in this country to supply a large proportion of the sixty subscribers required from us. The margin might probably be made up, as Mr. MacAlister suggests, by groups of medical men formed for the purpose of obtaining a copy in common. The suggestion to issue the *Index Medicus* in future quarterly instead of monthly will, we believe, meet with general approval, inasmuch as the value of the work would not be diminished to an appreciable extent by such an alteration.

INSUFFICIENT WATER AND DISEASE.

THE inefficient water supply of the East End of London has been again and again the subject of inquiry, and the supply of specifically tainted water has been the cause of more than one epidemic of disease. In a summer of unusual heat and prolonged drought the East London Waterworks Company have failed as completely to fulfil their contracts to give a constant supply of water as they did in the winter, when severe frost utterly paralysed their methods. In the winter want of water was bad enough; but in the summer it is a grave danger to the public health. Mr. Thomas Taylor, Medical Officer of Health Mile End Old Town, writes to a contemporary: "Very numerous cases of diarrhœa have been reported to me, and I have no doubt that the fact of so little water flushing the house drains is a direct cause of this disease. Just now, when the accommodation for diphtheria patients at the Asylum Board's Hospitals is nearly exhausted, is not the time for lessening the water supply either for flushing effectually house drains and sewers or for ablution purposes. We shall be told by the water companies that every householder should provide storage cisterns. I should say, No; it is the very thing that we as sanitary experts set our face against, having too frequently seen the results of cisterns neglected to be cleansed." Householders have been complaining that the supply is shut off at 9 P.M., and that the pressure is so slight that the water cannot rise to the top of houses of the usual number of storeys; hence, lodgers in the upper storeys of model lodging houses have been suffering severely for want of water. The conditions produced by the lack of water for flushing of drains, etc., are largely conducive of disease. The complaints against the water company are bitter and well deserved. High rates are imposed on the water company's undertaking to give a constant water supply: the contract is broken, and ratepayers are justly beginning to argue that a contract broken cannot be enforced against one contracting party alone. The water company is pressing for the payment of rates for water not supplied, and East Enders are summoning the water company for breach of contract in not supplying water for which the rates are levied. The East Enders are in the right. The recent rainfall may fill the river Lee and the empty storage tanks, and public indignation may have its ardour damped, but this does not release the East London Waterworks Company from the necessity and the duty of storing water against the accidents of the English climate, and of fulfilling their contract to give a constant water supply in return for rates paid.

THE HYGIENE OF TRAVELLING.

A HYGIENIC conference of a new kind very appropriate to this age is to be held in Amsterdam on September 20th and 21st. It is designed to bring together medical men interested in sanitary questions affecting railways and ships. It will be divided into three sections, the first dealing with the provisions for ensuring the efficiency of the persons employed, the second with the organisation of the medical service, and the third with the protection of the health of the men employed and of the passengers. Railway companies will be invited to send delegates, and it is hoped that those from each country will draw up a memorandum on the regulations existing in their several countries. The Dutch delegates have already prepared such a memorandum. The Secretary of the Congress will be Dr. Pijnappel, Stadhouderskade 60, Amsterdam, from whom further information can be obtained. Professor H. Snellen is president of the Organising Committee. Special facilities will be given to the members for visiting the exhibition now open in Amsterdam. The official languages of the Congress will be French, English, and German.

CONDENSED "MILKS."

IN Dr. Gubb's interesting letter which we published in the BRITISH MEDICAL JOURNAL of July 20th on the condensing and sterilisation of milk, he points out the value of condensed milk in that he desired to call attention to the principle of using only sterilised milk. If this be desirable then no more satisfactory guarantee of sterility can be provided than by the process of condensation in which the cooking is not carried beyond the point at which sterilisation is ensured. There can be no doubt of the vast importance of the use for infant feeding of condensed milk and for the community at large of sterilised milk. Milk condensed under heat has for adult consumption the disadvantage of certain alterations in flavour which makes it unpopular as

an ordinary beverage, or for use with tea, and it is desirable that some means should be found for condensing and sterilising milk without the use of heat, or, at any rate, at such low temperatures that the essential quality and flavour of the milk shall not be altered. Meantime, there can be no doubt of the immense value of condensed milk in the present and ordinary acceptation of the term. But then it is highly desirable that it should really be condensed milk. That which is now sold in a great variety of brands as condensed milk has in a great majority of instances little or no title to that claim; it is, in fact, very largely condensed separated milk; that is to say, milk that has been wholly deprived of its cream, and which is altogether unfitted for the dietary of children or of adults if used to replace milk properly so-called. It will be seen that in the "Milkmaid" brand, which is taken as a standard, the proportion of cream is 10 to 12 per cent., which may be accepted as a good reliable standard, but in the majority of milks examined the amount of cream only showed an average of 0.72 per cent. Certainly there should be legislation to prevent this most dangerous and deleterious practice, which is a constant danger in the rearing of children and often a serious fraud. In respect to the best condensed milks, it is still very desirable that their condensation and sterilisation should be effected without employing the high temperatures now generally in use, which undoubtedly alter the physical conditions and quality, as well as affect the flavour and acceptability of the milk. We feel convinced that the means will before long be found of doing this, and thus effect what will be one of the most beneficent revolutions in modern dietetics.

SIR JOSEPH LISTER.

A COMMITTEE has been formed, with Mr. Davies-Colley (35, Harley Street) as Treasurer and Mr. Bilton Pollard (24, Harley Street) as Secretary, to present a portrait of Sir Joseph Lister to the Royal College of Surgeons of England, to be "placed by the side of the portraits of John Hunter and other great surgeons of the past." The Committee has selected Mr. W. W. Ouless, R.A., as the artist by whom the portrait is to be painted, and a certain amount of irritation, we are told, has been caused by the Committee having arrived at this decision without holding a meeting of intending subscribers. The Committee may not have been well-advised in this respect, but any such error of judgment will not, we feel sure, be allowed to weigh against the proposal they make. It will command the universal assent and support of all surgeons in this country who have a just perception of the enormous debt which surgery owes to the life-work of Sir Joseph Lister. If he were never again to make any contribution to the science and art which he has adorned, his record would place him in the very forefront. The proposition now made is an eminently proper recognition of a great surgeon by those of his own household. But this country will not be true to itself if it does not raise a national memorial to one of its greatest sons.

MEDICAL OFFICERS OF SCHOOLS' ASSOCIATION.

ON Thursday, July 18th, about a dozen members of this Association, including the President, Dr. Eustace Smith, journeyed to Haileybury College, at the invitation of the head master, the Hon. and Rev. E. Lyttelton, who is an honorary member of the Association. Arrived at the school they were received by Dr. Shelly and Dr. Horace Savory, the consulting and resident medical officers, as well as by some of the masters and the bursar. A visit was first paid to the kitchens and the dining hall, the arrival of the party being happily timed for the boys' dinner hour. Subsequently the whole of the school buildings and premises were inspected by the visitors, the chief points of interest being the water softening apparatus. The water is obtained from a well some 200 feet deep in the chalk bed. The earth closets and earth sheds, the swimming bath (a large open-air bath which was in full working order), the laundry (likewise fully occupied), the sick house and the new sanatorium (a separate building capable of isolating sixty boys); one of the school dormitories and the bathrooms adjoining were also visited, as also a recent and most excellent innovation—the drying rooms, to which the boys clothes are removed after football or in wet weather, and which provide a certainty that they will always have dry clothes to put on. The visitors were most hospitably entertained by the head master and Mrs. Lyttelton, and the visit was not only very enjoyable but highly instructive. It has long been contemplated that the Association should visit some of the leading schools, and now that the ice has been broken, as it were, it is to be hoped that in successive years other schools will be in turn visited, as such meetings cannot fail to be beneficial not only to the school visited, but to the community at large.

THE LONDON SCHOOL BOARD AND MEDICAL CERTIFICATES.

THE medical staff of the Victoria Hospital for Children, Chelsea, and of the Paddington Green Childrens' Hospital, have made a formal protest against a resolution adopted by the School Board for London, authorising the West Lambeth Divisional Committee to appoint six doctors in the division "to examine cases in which the medical certificate produced is considered by the divisional superintendents to be doubtful, or in which it is desirable to have a definite medical opinion." The conditions laid down to govern this experiment are: "(*a*) That each case be first referred to the divisional member in charge of the school where the child ought to attend. (*b*) That a payment of 2s. 6d. shall be made for each case examined. (*c*) That the number of cases to be dealt with in this manner shall not exceed 100 in the year. (*d*) That the names of the doctors selected shall be forwarded to the magistrates having jurisdiction in the division." The whole scheme appears to be a piece of meddlesome legislation, and another example of the intrusion of the official between the medical attendant and his patient. If the School Board cannot trust the medical profession to give honest certificates, it had better take the whole matter into its own hands, and appoint medical inspectors to make a medical examination of every child who is away from school on the ground of ill health. It would be very expensive to the ratepayer, but it would save the general practitioner a world of trouble. The certificates are given by the general practitioner as a rule, and by the medical staffs of hospitals invariably, without fee. If the School Board chooses to go out of its way to reflect on the medical profession, it must be prepared to find the profession less ready to meet its onerous requirements. Who calls the tune must pay the piper.

INFECTION IN LODGINGS.

THE Court of Appeal has reversed Mr. Commissioner Chalmers's decision in the Bettws-y-coed lodging-house case. The plaintiff claimed damages on account of his children having caught scarlet fever while in lodgings at the defendants' house. Admittedly no fault was to be found with the sanitary condition of the house at the time when the lodgings were let, but one of the defendants' family contracted the disease, and so the infection spread to the lodgers. The jury found that the defendant, knowing the child had an infectious disease, concealed that fact from his lodgers, and so caused them to run the risk of infection. On these facts, the learned Commissioner formally entered judgment for the plaintiff, leaving the question of legal liability to be decided by the Court of Appeal. The Court has decided that they are not sufficient. The law apparently does not cast upon a person who lets lodgings the duty of reporting to his lodgers the fact that an inmate of his house is suffering from an infectious disease. If a lodger

brings infection into his house he is bound to disinfect the rooms he occupied before letting them again. So also any person in charge of one suffering from infectious disease is liable to penalties if he conveys or exposes the sufferer in any public place so as to endanger the public safety; but, in the absence of express contract, the landlord is not liable for infection afterwards coming into his house if it was not infectious at the time of letting. He does not warrant his premises to be free from all faults, and cannot be held liable for defects unless he has made himself responsible for them. In the present case the evidence was not sufficient to show that he had incurred such a liability, and the lodger has consequently to put up with his loss without recompense. The result seems likely to encourage letters of lodgings in their proverbial carelessness or indifference to the welfare of their lodgers, which often, as in this case, seems culpable. It emphasises, however, the general principle of our law that, in order to make a man civilly or criminally responsible, whatever he may be morally, some misfeasance on his part must be proved. The mere failure to do something which might seem desirable, but which he was not bound to do, is usually not enough for the purpose of imposing a legal liability. Lodgers who wish to impose more than the ordinary burdens on their landlords must make a special bargain for the purpose; if not, they must look after their own interests. Another state of the law might be better for the public health; but sanitary protection might then be secured at too high a price. So at any rate think the judges of the Court of Appeal.

ASYLUM THERAPEUTICS.

In the volume of the *Proceedings* of the fiftieth meeting of the American Medico-Psychological Association is reported an address by Dr. Weir Mitchell, which demands the gravest attention at the hands of all those who are interested in the care and treatment of the insane. Dr. Weir Mitchell undertook the task upon the express understanding that he was to have unfettered licence to criticise, and was not to be expected to prophesy smooth things. He used his opportunity to much purpose, and, while we cannot but admire the candour of the speaker, we have almost more admiration for the spirit of the members of the Association, who, knowing what his theme would be, could patiently endure to be thus addressed. Our own asylums are, of course, impeccable, but even granting that they are altogether out of reach of criticism, how, we wonder, would their administrators bear to be addressed in terms such as these? "My next query is as to whether you, who thus govern and make reports and live amongst your armies of the insane, are in all respects doing what you should and might do? We have done with whips and chains and illusage, and having won this noble battle, have we not rested too easily content with having made the condition of the insane more comfortable? The question we here ask at starting is if you, who are so powerful within these alien camps, are really doing all that might be done? . . . . Frankly speaking, we do not believe that you are so working these hospitals as to keep treatment or scientific product in the front line of medical advance. Where, we ask, are your annual reports of scientific study, of the psychology and pathology of your patients? We commonly get as your contributions to science odd little statements, a report of a case or two, a few useless pages of isolated *post mortem* records, and these are sandwiched among incomprehensible statistics and farm balance sheets. . . . What is the matter? You have immense opportunities, and seriously, we ask you experts, what have you taught us of these 91,000 insane whom you see or treat? . . . . It is not a mere well-worked, so-called model institution which I want to see, where easily pleased managers come and go, and routine is perfect, and everyone is satisfied, and the nice little reports describe the new dairy, and the statistics are there, and we lament the death of our efficient manager Mr. Blank; the whole smug business as monotonously alike as are your asylum corridors. . . . . You are labelled as medical superintendents, and some of you allow your managers to think you can be farmers, stewards, caterers, treasurers, business managers, and physicians. You should urge in every report the stupid folly of this. Knowing what we do of the rate of growth of medicine, does any man in his senses think that you can be even decently competent, and have anything to do with outside business? . . . . It is a grave injustice to insist that you shall conduct a huge boarding house—what has been called a monastery of the mad—and keep yourselves honestly able to move with the growth of medicine, and to study your cases, or add anything of value to our store of knowledge." These are burning words. Of course the withers of our superintendents are unwrung, but how the galled jade must wince—in America!

FEE TO MEDICAL WITNESS.

The question of payment to a medical witness of a proper fee for attending court to give evidence has again been raised, this time at Farnham. Mr. Scott was summoned from his home ten miles off to give evidence, but received no conduct money. When called into the witness box he declined to give evidence unless his fee was paid. The magistrates said they had no power to allow a fee unless the case should be sent for trial. But Mr. Scott declined to be sworn until his fee was secured; so his evidence was dispensed with, and no fee was paid him for his loss of time. He was quite within his rights in declining to give evidence under the circumstances, but he would have been better advised if he had disregarded the summons and not gone near the court at all. Where a witness lives close to the court it may not be safe for him to disregard a summons, where no conduct money has been tendered—the point is doubtful; but where he is so far away as ten miles no court would impose a penalty on him for not attending until the means of doing so had been furnished. This, of course, is only a minor point. The more important matter is that adequate remuneration should be provided in all cases for men who are obliged to sacrifice valuable time for a public object. Hard cases are constantly occurring, but nothing is done to remedy them. The authority with whom it rests to alter the existing regulations is the Home Office. If all those interested were to bring pressure through their Parliamentary representatives (who now presumably will be inclined to please their constituents), something might be done. If they do not, the existing regulations will continue to be unsatisfactory.

CHLOROFORM MANIA.

It would seem that there is no drug capable of producing anæsthetic effects which may not be abused by weak-minded persons to their destruction. Opium, morphine, cannabis indica, and the more recently discovered drugs, such as cocaine, sulphonal, and many others, are all abused to a greater or less extent by persons who, having discovered that they obtain relief from pain or unrest from their use, quickly become slaves. It is a symptom of the hysteria and exhausted self-control of the age, out of which we may hope the next generation is taking the best means to grow by a more reasonable attention to physical training. Chloroform is not a drug used at all commonly as a habitual hypnotic, but from time to time cases come to light in which men have become the slaves of the habit of inhaling chloroform daily, or many times a day, to procure sleep or escape from pain. Men of no little eminence in the medical and other professions have become obsessed with the idea that they could not sleep unless thrown into a state of unconsciousness by chloroform. The habit is either more widespread than is generally supposed, or it is spreading, for during recent years a large number of cases of deaths have been inquired into by coroners in which it appeared to be certain that the

deceased was a slave of chloroform. The most recent instance is afforded by an inquest held by Mr. Drew at Hammersmith as to the death of a commercial traveller, who was unnerved by the pain of a whitlow. He used to put chloroform on a cone of paper, which he then placed over his nose and mouth. One morning he was found dead with the cone over his mouth. His widow stated that for nearly eighteen months a bottle containing 2 ounces of chloroform had been delivered at the house daily, so that it is clear that the habit had become well established long before the whitlow began. All forms of habitual intoxication are more or less inimical to health, but there is probably no form of self-indulgence which is attended by so much immediate danger to life.

BACTERIOLOGY AT THE CAPE.

The Colonial Bacteriological Institute, under the direction of Dr. Edington, appears to be in full and active work, and the Government of the Cape is to be congratulated upon the institution of a department likely to do so much good in the advancement of science and arrest of disease. The report for the year 1894 has recently been laid before the House of Assembly, and from it we see that not only have many important investigations been started, but vaccine lymph and a vaccine for "lung sickness" have been largely prepared and distributed. The manufacture of the diphtheria antitoxin, of mallein for glanders, a vaccine for *Sponziekte* and the disease known as liver sickness in calves, and the antirabic virus has also been commenced.

ART IN ITS RELATION TO ANATOMY.

The address of Professor William Anderson on Art in its Relation to Anatomy in the Anatomical Section of the meeting of the British Medical Association will be illustrated by a series of lantern slides representing some of the masterpieces of Greek sculpture, and a selection of plates from the older treatises on anatomy. The address will be given on Wednesday, July 31st, at 10 A.M., in the Chemical Theatre, King's College, Strand. An exhibition will also be made of a collection of illustrated books on anatomy from Berengario de Carpi down to the present day.

THE NEW UNITED STATES ARMY RIFLE AND ITS EFFECTS.

The June number of the Kansas City *Medical Index* contains a report upon further experiments with the new United States army rifle (Krag-Jorgensen) by Brigadier-General J. D. Griffith. The experiments appear to have been made by firing at a cadaver at ranges varying from 500 to 1,000 yards. Judging by the description of individual wounds produced, and by the photogravures which illustrate the paper, the effects of this weapon at these ranges is distinctly severe, the explosive action of the bullet being most marked upon the encapsuled organs; comminution was extensive whenever any bones were struck. Arteries were cleanly cut, not torn, hence the death-rate on the field from hæmorrhage from this weapon will be great. A certain wound of the wrist, mentioned in this report as being made at a range of 600 yards, shows that the extensor tendons of the hand were not injured, although the bullet passed between them, severing their sheaths and pushing the tendons aside. It would seem, therefore, that tendons are the only tissues in the body which, in these experiments, seemed at all turned aside by the ball. Not the least interesting fact elicited by these experiments is that the best protection against the fire of the rifle is loose dry earth; the next best loose sand. The practical deduction is that newly-made and loosely-constructed earthworks will be a better protection than old, or damp, or well-rammed-down parapets of soil. The bullet does not appear to have weight enough to carry it through loose earth. A soldier will be practically safe behind an embankment of from 30 to 36 inches of loose earth, provided it be dry. It is a little difficult to reconcile the severity of the injuries produced by this rifle upon the cadaver with those produced by the Lee-Metford on the living, and reported in the British Medical Journal of July 20th. It is just possible that the cadaveric tissues have a different potential of resistance to those of the living body. The difference in weight and diameter of the respective bullets is insufficient to account for the disparity in effect. Time and more extended experience of small-bore rifle fire may clear up these discrepancies.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The quarterly meeting of the Committee of the above Society was held at 429, Strand, W.C., on July 10th. There were present the Chairman (Dr. F. de Havilland Hall) Dr. J. B. Ball, Dr. J. Rickett, Dr. Major Greenwood, Mr. J. Brindley James, Dr. W. Knowsley Sibley, Dr. A. S. Gubb, Dr. G. W. Crowe, Mr. R. S. Charsley, Dr. F. J. Allan, Mr. W. J. Stephens, and Mr. H. P. Symonds.

The principal business transacted was the consideration of the report for the year ending June 29th last. It is a very satisfactory record of progress, and shows that the Society, in addition to paying the bonus of £5,000 to its members, has, during the twelve months under review, added to its reserves £9,492 6s. The normal increase of funds was, therefore, over £14,000, and this large reserve was made notwithstanding the fact that the members received the largest amount of benefit money that has ever been expended by the Society in one year. With the view of illustrating the nature of the benefits which the Society confers upon its members a list has been prepared showing the amounts of sickness pay granted during the past year, and, in addition, some examples are given of the heavy sickness claims which the Society has paid since it started in 1884. The list shows that in the year 1894-5 seven members were in sickness benefit during the whole twelve months. Of these 5 received 2 guineas per week, or £109 4s. each, while the other 2 had assured for only half this amount; 1 member received 26 weeks full pay, another 24 weeks, 2 others 23 weeks, and so on. In the statement relating to the whole period of the Society's business 1 case is given in which the member has been in continuous benefit for more than 10 years, and up to the end of June last had received in sickness pay the sum of £1,191. The next case on the list is that of a member who has been in 259 weeks' sickness benefit, amounting in all to £652 10s. In the next the total amount received is £439 18s., and in these and some 5 or 6 other cases there is little hope that the members will ever be able to resume professional work. The Society is now in its twelfth year of working, and its success proves that it was founded on a sound basis and has been conducted with ability and economy. Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Assurance Society, 33, Chancery Lane, London, W.C.

THE GRACE TESTIMONIAL.

The following subscriptions have been received on behalf of this fund:

	Shillings.		Shillings.
Amount already acknowledged ...	[illegible]	J. Willis (London) ...	1
Surgeon Major A. M. S. and wife	2	W. H. Burke (Harpenden) ...	2
William Spence "Dollar" ...	5	Per Mr. T. Wilmot (Bradford):	
Dr. Alwyn Raines	1	H. C. Major	5
Mr. F. Dingley Pitt	1	J. H. Bell	5
E.J.W.C.	2	A. [illegible]	5
Dr. Farris (Blackawton) ...	1	W. L. Roberts	1
Mr. E. S. Norris (Eton) ...	20	C. F. M. A[illegible]	1
Messrs. W. J. Gill and H. Slater (Liskeard) ...	2	T. J. Wood	1
		J. Kerr	1
Per J. Victor Hartley, Yorkshire College Medical School:		H. [illegible]	1
		W. [illegible]	1
M.S.	1	T. Wilmot	1
A. Holroyde	1	J. H. [illegible]	1
Anon	1	S. A. [illegible]	1
J.V.H.	1	A. Rutherford	1
Per Mr. W. T. Brooks (Oxford):		C. Smith	1
W. T. Brooks	10	J. S. Barber	1
A. A.	2	A. E. Fowler	2
E. A. Ryman Hall ...	1	J. Fowler	2
M. W.	1	H. E. Taylor	1
Rev. C. Fletcher	1	Harry Meade	1
Dr. Wilson	1	W. A. [illegible]	1
J. C. Borden, M.B. (London) ...	1		

A REPORT
ON THE
MILK SUPPLY OF LONDON
BY A
SPECIAL ANALYTICAL AND BIOLOGICAL COMMISSION.

CONDENSED MILKS.

III.

Of the seventeen brands of milk examined by Dr. Dyer and Mr. Cassal, fourteen are found to be prepared entirely from skimmed milk, and show an average of only 0·72 per cent. of fat. Three brands, prepared from partly skimmed milk, or from skimmed milk to which a small proportion of unskimmed has been added, show an average of 3·14 per cent. of fat.

Genuine full-cream brands of condensed milk, such as the well-known "Milkmaid" brand prepared by the Anglo-Swiss Condensed Milk Company, contain from 10 to 12 per cent. of fat.

In the present state of the law, as interpreted by the judicial authorities, condensed skimmed milk, that is to say, milk deprived of one of its chief constituents, namely, fat, in the absence of which it ceases to be milk in the true sense of the word, may lawfully be labelled "condensed milk," although when sold uncondensed it must be distinctly stated at the time of sale that it is skimmed milk; that is, a small milk vendor is fined for selling what a condensed milk manufacturer is at liberty to sell provided he condenses it first, and in an obscure manner states upon the tin that the tin "contains skimmed milk," although upon the face of the same label it is described as "condensed milk."

An examination of the seventeen brands above referred to shows how urgently an alteration in the law is required. Here we have an article of food on which young children are to a very large extent fed. It is scarcely too much to say that the purity and genuineness of this food is of greater importance than that of any other, since any tampering with it or sophistication of it cannot fail to be attended with lamentable results. The abstraction of fat from milk used as food for young children is a most serious matter. In his *Lectures on the Artificial Feeding of Infants*, Dr. Cheadle has rightly pointed out that fat serves a vital purpose in the nutrition of young growing animals, being largely concerned in all cell growth, and necessary for the perfect formation of bone. "I wish to lay special stress," he says, "upon the paramount importance of a due proportion of fat in the feeding of infants, because it is a point most imperfectly recognised by the majority of medical men who direct the feeding of young children. In spite of the significant fact that milk is a rich emulsion of fat, little children are constantly placed on artificial foods which are almost destitute of this vital element." Privation of fat, he adds, is alone sufficient to produce rickets.

It is evident that "milk" is not the same thing as "skim milk" or "separated milk," and that these latter cannot rightfully be described as "milk" without qualification. Milk being essentially "a rich emulsion of fat," as Dr. Cheadle points out, it ought not to be called "milk" after 90 to 95 per cent. of its fat has been removed.

According to the report of our Commission, the "Milkmaid" brand contains 9·60 per cent. more butter-fat than is contained, on an average, in the other brands examined. This is a fact of great importance to the public, and should also serve as a guide to the medical profession when prescribing condensed milk. We have taken the "Milkmaid" brand as a standard, because it is the original condensed milk introduced into Europe about thirty years since, and its uniformly high reputation has helped to maintain the demand for such a product.

Considering the far-reaching and deplorable effects which the use of inferior and impoverished foods must have upon the lives and well-being of infants to whom they are given (to say nothing of the anxiety and disappointment of parents who are misled into using such foods for their children), we think it of the utmost importance that the medical profession should lay stress on the necessity of using only such brands as are known to come up to this acknowledged standard of excellence.

Misleading Labels.

The existence of these will be apparent to all our readers who will give attention to those shown below. For instance, the "Goat" brand label is illustrated by a maid milking a goat, the inference being that the tin contains condensed goat's milk, and it would scarcely be suspected by the unsophisticated that the tin actually contained Irish skimmed milk. The same might be said of the "Swiss Dairy" brand, with its Swiss *châlet* as a trade mark, the inference naturally being that the tin contains Swiss milk, though it actually contains Irish skimmed milk. These instances might be multiplied, but the foregoing are sufficient for our purpose, which is to place adequate information before our readers respecting this important subject of infant feeding, and to lay stress on the dangerous prevalence in the market of so-called "condensed milks," which are deprived of the cream, which is a prime element in the value of milk as an element of dietary, especially for the young.

A REPORT
ON SEVENTEEN SAMPLES OF CONDENSED MILK, RECEIVED ON JUNE 8TH, 1895, FROM THE EDITOR OF THE "BRITISH MEDICAL JOURNAL."

By BERNARD DYER, D.Sc., F.I.C.,
Public Analyst for the Counties of Leicester and Rutland and the City of Truro.

"SHAMROCK" BRAND (Fat, 0.79 per cent.).

The milk in this sample is all "separated" milk. The principal label describes it in bold letters as "Shamrock brand condensed milk." A side label states in legible, but not what I should call conspicuous, letters that "this tin contains skimmed milk."

"SWISS DAIRY" BRAND (Fat, 0.63 per cent.).

The milk in this sample is all separated milk. The prominent words on the principal label are "Dairy milk." One of the side labels contains in legible, but not what I should call conspicuous, letters the statement "this tin contains skimmed milk."

"CALF" BRAND (Fat, 0.60 per cent.).

The milk in this sample is all "separated" milk. The principal label bears as its conspicuous words "Calf milk." A side label contains in legible, but not what I should call conspicuous, letters the statement "this tin contains skimmed milk."

"CUP" BRAND (Fat, 0.42 per cent.).

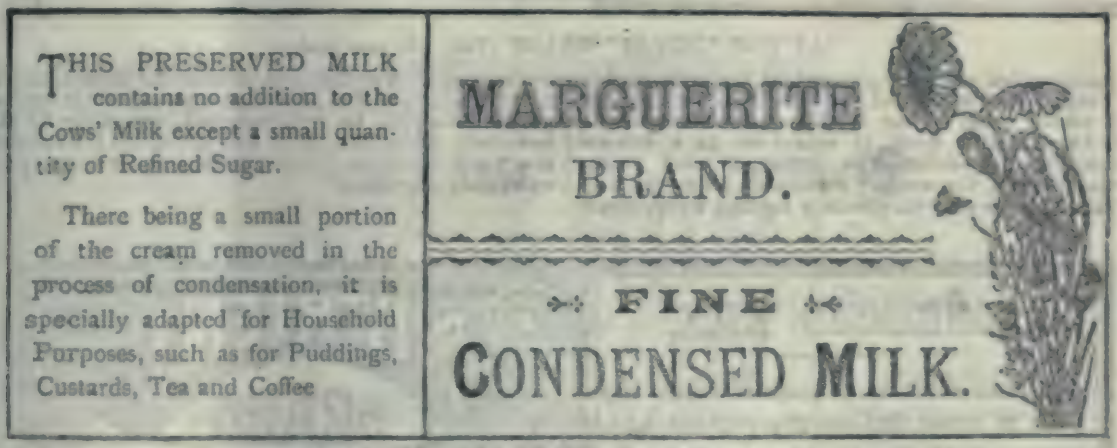
The milk in this sample is all "separated" milk. The principal label bears as is conspicuous words "Cup milk." A side label contains in legible, but not what I should call conspicuous, letters the statement "this tin contains skimmed milk."

"TEA" BRAND (Fat, 0.48 per cent.).

The milk in this sample is all "separated" milk. The main label bears the inscription "Tea brand," two side labels containing the clear statement that the tin contains condensed skimmed milk and sugar only, and also a descriptive paragraph in which the milk is spoken of as "condensed skimmed milk." Although the lettering of the word "skimmed" is not remarkably conspicuous, it is nevertheless as conspicuous as the words "condensed" and "milk;" in fact, the only words on the tin that could really be described as conspicuous are the words "Tea brand."

"WHEATSHEAF" BRAND (Fat, 0.62 per cent.).

The milk in this sample is all "separated" milk. The principal label bears, in conspicuous letters, the words "Wheatsheaf brand best condensed milk." The statement that it "is prepared from skimmed cow's milk" occurs in small and comparatively inconspicuous letters in a descriptive paragraph to be found on a side label.



"MARGUERITE" BRAND (Fat, 0.42 per cent.).

The milk in this sample is all "separated" milk. The principal label bears in conspicuous letters the words "Marguerite brand fine condensed milk." One of the side labels bears, in small but fairly conspicuous letters, the statement that "this is sold as skimmed milk." The other side label states that "there being a small portion of the cream removed in the process of condensation, it is specially adapted for household purposes, such as for puddings, custards, tea and coffee." This statement that a small portion of the cream has been removed appears to be a directly misleading one when applied to a sample manufactured altogether from highly "separated" milk—of course with the addition of sugar, which is common to all the samples.

"DAILY" BRAND
(Fat, 0.40 per cent.).

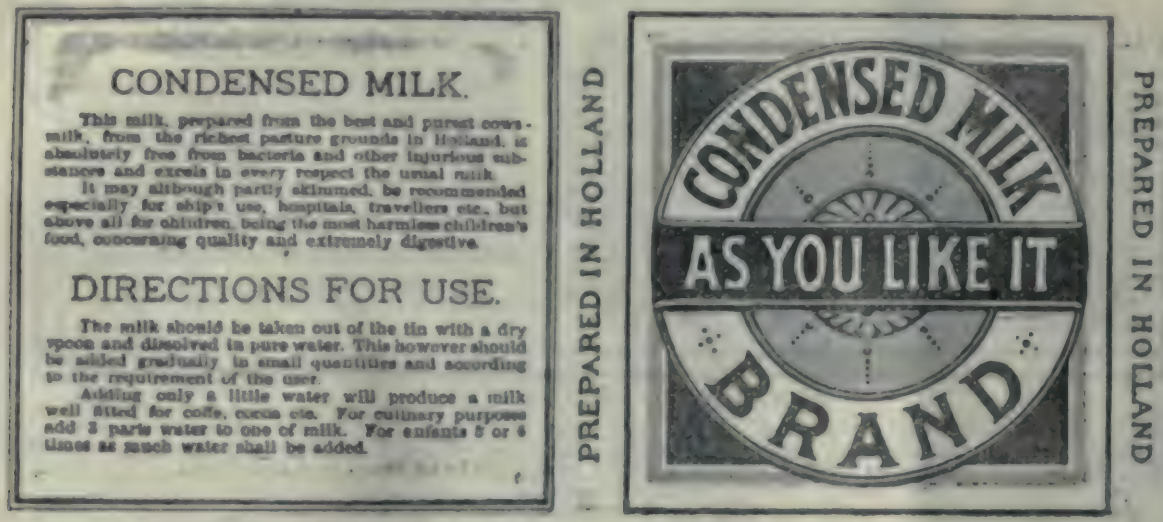
The milk in this sample is all "separated" milk. The label contains, in very small and comparatively inconspicuous letters, the words "skimmed milk."

"GONDOLA" BRAND (Fat, 0.49 per cent.).

The milk in this sample is all "separated" milk. All three labels on the tin bear the inscription "skimmed milk." The description on the main label contains the words "skimmed milk" in clear and conspicuous characters.

"CLIPPER" BRAND (Fat, 0.73 per cent.).

The milk in this sample is all "separated" milk. The main label bears the inscription "Clipper brand condensed skimmed milk" in clear and conspicuous letters.



"AS YOU LIKE IT" BRAND (Fat, 4.23 per cent.).

I am of opinion that about 60 per cent. of the milk in this sample is "separated" milk, and not more than about 40 per cent. of it whole milk. The total proportion of fat is only about two-fifths of what it would be in a sample prepared from whole milk. The principal label bears, in conspicuous letters, the words "condensed milk, 'As You Like it' brand." It is only on carefully reading a paragraph in very small type that one obtains the information that it is partly skimmed. The paragraph states that "it may, although partly skimmed, be recommended, especially for ships' use, hospitals, travellers, etc., but above all for children, being the most harmless children's food concerning quality, and extremely digestive."

"NUTRIENT" BRAND (Fat, 2.36 per cent.).

I am of opinion that about 80 per cent. of the milk in this sample is "separated" milk, and only about 20 per cent. whole milk. There is a distinct statement on the label, though not in very large type, to the effect that "this tin contains skimmed milk." There is also a statement to the effect that the contents of the tin are "prepared from the milk of cows fed on the richest pastures in Holland," and that "it is especially adapted for use with tea or coffee, for all culinary purposes, and on board ship, while the regularity in its quality and food constituents *renders it particularly suitable for infants' food*," a statement which in my opinion ought scarcely to be made in reference to a condensed milk prepared with so large a proportion of separated milk that it contains not more than about one-fifth of the fat that would be found in condensed milk made from whole milk.

"GOAT" BRAND (Fat, 0.56 per cent.).

The milk in this sample is all "separated" milk. The principal label bears as its conspicuous words "Goat brand," with a picture of a goat being milked. A side label contains in legible but not what I should call conspicuous characters the statement "this tin contains skimmed milk."

"COW" BRAND (Fat, 2.84 per cent.).

I am of opinion that at least 70 per cent. of the milk in this sample is "separated" milk, and not more than 30 per cent. of it whole milk. The milk is described on the label in small though fairly conspicuous letters as "partly skimmed." Although a literally correct description, it does not necessarily convey that the removal of fat has been carried so far that the sample contains only about one-fourth of the fat to be found in condensed milk made without any admixture of separated milk.

"HANDY" BRAND (Fat, 1.49 per cent.).

I am of opinion that at least 90 per cent. of the milk in this sample is "separated" milk. The label contains, in a tolerably conspicuous position, the statement that the tin contains condensed skimmed milk, but the word "skimmed" is printed in letters sufficiently small to render them much less noticeable than the words "condensed" and "milk."

"CROSS" BRAND (Fat, 0.96 per cent.).

The milk in this sample is all "separated" milk. It is described on the labels as "condensed skimmed milk," but the word "skimmed" is in exceedingly small and inconspicuous type. There is also, in small type, the statement that "this milk is skimmed, but is absolutely pure, and free of any foreign substance but the best cane sugar."

"HOME" BRAND (Fat, 1.02 per cent.).

The milk in this sample is, practically speaking, all "separated" milk. The tin bears, in a tolerably conspicuous position, the statement that it contains condensed skimmed milk, but the word "skimmed" is printed in letters sufficiently small to render them less noticeable than the words "condensed" and "milk."

"MILKMAID" BRAND (SWISS).

A sample of the Milkmaid Brand milk was subsequently submitted to Dr. Dyer who reports that it contains 10.92 per cent. of fat. This will show the amount of fat which a condensed milk of good quality should contain.

BATHS AND HEALTH RESORTS OF THE UNITED KINGDOM.

The Report of the Royal Medical and Chirurgical Society.[1]

I.

A resolution was passed at a meeting of the Council of the Royal Medical and Chirurgical Society on May 14th, 1889:

That a Scientific Committee be appointed for the purpose of investigating questions of importance in reference to the climatology and balneology of Great Britain and Ireland, and to report hereon to the Council from time to time.

The Committee, as at present constituted, consists of Dr. W. M. Ord (Chairman), Dr. R. Barnes, Dr. Mitchell Bruce, Dr. Cheadle, Dr. Dickinson, Dr. W. Ewart, Dr. Lazarus-Barlow, Dr. R. Maguire, Dr. Norman Moore, Mr. Malcolm Morris, Dr. Murrell, Dr. Penrose, Dr. F. Roberts, Dr. F. Taylor, Dr. Symes Thompson, Dr. Hermann Weber, Dr. Theodore Williams, and Dr. E. Garrod (Secretary).

The first report of the Committee, now published in the form of the solid volume before us, presents the result of their inquiries. It embodies (1) a large mass of information received from medical men practising in various places in reply to a schedule of questions; (2) the results of personal investigation in various localities by members of the Committee; and (3) the analysis of published and trustworthy statistics as to the several localities included in the scope of the inquiry.

The work is divided by a natural line of cleavage into two parts, dealing respectively with the effects of climate, and with the therapeutic action of mineral springs. In the climatological portion of the Southern Counties, and particularly the South Coast of England from the Land's End to the North Foreland, are considered. In some excellent "Introductory Remarks" Dr. Ord rapidly reviews the physical and climatic characteristics of the South Coast. He takes the opportunity of giving a few words of advice as to the precautions to be observed by inland dwellers who go to the seaside, which are especially opportune at the present moment. He points out that as a rule they require warmer clothing than at home, and he explodes the dangerous superstition that sea water is always innocuous and stimulating whether it is applied in wet clothing or directly to the naked body. As regards bathing more particularly, Dr. Ord reminds us that the average temperature of the water on our coasts, although raised by the presence of the Gulf Stream, is not more than about 50° F., that is to say at least 48° less than the natural temperature of the body.

Dr. Dickinson discusses the climatology of Cornwall in a manner at once judicial and sympathetic; his description of the manifold beauties of its broken coastline gives evidence of a considerable gift of word painting, but his feeling for the picturesque by no means blinds him to climatic shortcomings. He admits that Cornwall is a region to be avoided by persons of rheumatic tendencies, that the coasts in general appear to favour the development of skin disease, especially eczema; and that anæmia is promoted by some of the maritime districts, notably the Scilly Islands. On the other hand, he states that the county as a whole presents influences, probably in the water, which are preventive of urinary stone and gravel; that renal affections attended with albuminuria are generally infrequent on the Cornish coasts; that the absence of extremes of cold on the south coast, and more especially in Scilly, tends to minimise inflammatory affections of the respiratory organs in the population, and to ameliorate them in the individual. The north coast he thinks a promising resort for asthmatics, and its climate, especially of that high level district of which Camelford is the centre, he considers to be adverse to the development of tubercle.

Dr. Symes Thompson and Dr. Lazarus-Barlow treat of the climate of Devonshire. Its therapeutic effects are considered mainly in reference to three classes of disease, (1) respiratory, particularly phthisis, (2) renal, and (3) rheumatic, with allied and subsequent conditions. As regards phthisis, the advantages are said to be that the air is moist and unirritating, that there is a large average amount of sunshine, and that the temperature is comparatively equable. The disadvantages are the moistness of the air, the physical character of the ground, and the prevalence of easterly winds in spring. "Winter cough" is greatly benefited, and asthma of the bronchial and cardiac forms is often relieved by residence in Devonshire. South Devon is markedly serviceable in cases of recurring catarrh of an irritative type, particularly in children; but the climate is not favourable for healthy children. For the subjects of renal disease Exeter, Sidmouth, and the more dry, elevated, and sunshiny resorts in the neighbourhood, "are perhaps the least injurious spots in England." Cases of rheumatism ought not to be sent to Devonshire, which appears to be generally unsuitable for persons suffering from cardiac disease. The climate is not sufficiently bracing for scrofulous children, but it is especially favourable to old and debilitated persons, and to convalescents from most illnesses, the principal exception being acute rheumatism.

Drs. Symes Thompson and Lazarus-Barlow also deal with the climate of the Channel Islands. The strong point in these resorts is the sunshine, their record in this respect being considerably in excess of that of any other part of the United Kingdom. The Channel Islands are remarkably free from acute diseases. Phthisis is mainly seen in the acute form and does not seem to be affected by the custom of intermarriage, which, owing to the existence of the law of gavelkind, is very general among the natives. The moisture of the air makes the islands unsuitable in renal disease and in all rheumatic and neuralgic affections, and its salt-laden condition renders it injurious to all forms of eczema. On the other hand the value of the Channel Islands for delicate strumous or rickety children is said to be immense.

The report on the climate of Somerset is from the pen of Dr. Mitchell Bruce. Owing to the fact that Bath is dealt with under the head of Medicinal Springs, the article is something like *Hamlet* with the part of the Prince of Denmark left out. But the coast towns—Minehead, Weston-super-Mare, Clevedon, Burnham, etc.—in which the chief interest of the county from the climatological point of view is localised, are described in sufficient detail.

(To be continued.)

SOME BATHS OF SWITZERLAND AND GERMANY.

The somewhat fugitive literature of baths and health resorts falls thickly upon us at this season of the year. Switzerland is always well to the fore with its almost countless resorts and endless variety of attractions. Among the handbooks before us, some refer to old acquaintances, others are comparatively new.

Magglingen.[1]

Magglingen is a mountain resort in the Swiss Jura, situated above the lake and town of Bienne, at an elevation of 3,000 feet above the sea. It is about 1½ hour's drive from Bienne railway station, and there is also a funicular railway by which to ascend. The Kurhaus is surrounded by pleasant woods on a sunny declivity of the foremost chain of the Jura, and commands an extensive though distant view of the Alps. The climate is subalpine and mild, and the place is free from great heat and cold, and free from dust. It is especially recommended to convalescents, to cases of anæmia and neurasthenia, sleeplessness, catarrhal respiratory affections, obesity, and circulatory disturbances. Treatment by hydropathy, electricity, gymnastics, massage, diet, and by an adaptation of Oertel's terrain cure is applied to suitable cases under the directions of a resident physician from Berne.

St. Beatenberg.[2]

St. Beatenberg is finely situated above the Lake of Thun, at an elevation of nearly 4,000 feet above the sea. It is already well known, and is a favourite Alpine resort, especially for those who need an after-cure in mildly bracing air, as the complement of a bath cure at one or other of the Continental spas. A funicular railway now connects the western

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[1] *The Climates and Baths of Great Britain*, being the Report of a Committee of the Royal Medical and Chirurgical Society of London. Vol. I.—The Climates of the South of England, and the Chief Medicinal Springs of Great Britain. London and New York: Macmillan and Co. 1895. Demy 8vo. 21s. nett.

[1] Magglingen: Climate, Air, and "Terrain" cure.

[2] Beatenberg: Climatic and Health Resort.

end, near the Kurhaus, with the Lake of Thun, and the transit takes only a quarter of an hour. St. Beatenberg stretches away along the side of the mountain for nearly three miles from the Kurhaus to the Alpen-Rose Hotel, at the eastern end, where pleasant walks abound. There are fine views of the Bernese Alps. The Kurhaus is open both winter and summer, and is especially destined for the reception of cases of chronic catarrhal affections of the respiratory organs.

SCHIMBERG.[3]

These baths (situated at an elevation of about 4,600 feet above the sea) possess an alkaline sulphur spring (cold) and a chalybeate spring. The Kurhaus is reached by a drive of two and a-half hours from Entlebuch Station, on the line of rail between Lucerne and Berne. It is a moderately high mountain resort, with sulphur and iron waters. The bath establishment is built on an incline looking west, and is surrounded by pine woods. It is protected by the mountain (Schimberg) from the north and east, but is fully exposed to the south-westerly winds, which sometimes blow with violence. The relative humidity is rather high. Fogs occasionally rest at this elevation, and sudden changes of temperature must be at times expected. The alkaline-sulphur water is used in the treatment of catarrhal affections of the air passages, of the stomach and intestines, of the bladder, and other pelvic organs; the iron spring in cases of chlorosis and anæmia.

FARNBUHL.[4]

These baths are approached from the station of Malters, on the same line as Entlebuch, and between it and Lucerne. Farnbuhl is situated about an hour's drive from the station, and possesses an iron spring which is utilised in the treatment of cases of chlorosis and anæmia, and is an appropriate, quiet, mild mountain resort for convalescent and debilitated neurasthenic persons. It lies in a sheltered situation, and promenades through shady woods are adjacent to the Kurhaus. Living there is very cheap.

LEUKERBAD.[5]

The baths of Leuk we have on a former occasion fully described. The little guidebook which is now before us is written by Dr. Ad. Brunner de Riedmatten, and translated into English by J. P. Sandlands, who observes in his preface "There is nothing better for a man, tired in body and wearied in mind, than to seek invigoration for both at Löeche." Few travellers in Switzerland have missed seeing the quaint and interesting baths of Leuk at the foot of the remarkable Gemmi pass. The thermal springs are resorted to more especially for chronic eczema and other forms of chronic skin disease; but the situation of the place is so attractive that many stay there simply for an air cure, and for its pleasant walks and excellent hotel accommodation. It elevation is about 4,700 feet above the sea.

SOOLBAD RHEINFELDEN.[6]

This salt bath is pleasantly situated on the left bank of the Rhine, at a distance by rail of only eight or nine miles from Bâle, so that it is quite easily accessible. Lying between the Black Forest and the Jura, there are most pleasing excursions to be made in the neighbourhood. The salt waters are used chiefly for baths and other external applications. Douches of river water as well are employed, and massage and electrical treatment can be obtained. The cases suitable for treatment there are similar to those sent to Kreuznach or Bex, and the situation of Rheinfelden is much superior to that at Kreuznach. All forms of scrofula, chronic diseases of the bones and joints, chronic rheumatism, vascular sluggishness of the skin, anæmia, and disease of the pelvic viscera in the female, these are the maladies there dealt with.

WILDUNGEN.[7]

This little book is designed to make the springs of Wildungen better known to English practitioners. These are alkaline earthy springs, and they are employed principally in the same class of cases as the waters of Contrexéville and Vittel, in France—namely, in diseases of the urinary passages, and especially in calculous disorders. It has also a chalybeate spring (the Stahl Quelle). Wildungen is in the principality of Waldeck, and is reached by a branch line from Wabern, a station on the railway between Cassel and Frankfort. Such cases as we have indicated, and especially calculi of the urinary tracts, are quite as advantageously treated there as at Contrexéville.

(To be continued.)

[3] *The Baths of Schimberg.* [4] *The Baths of Farnbuhl.* [5] *The Baths of Leuk.* [6] *Soolbad Rheinfelden.*

[7] *Wildungen: its Baths and Mineral Springs.* By Dr. A. Stoecker. Translated by Dr. Hunter. London: Trübner and Co., Ludgate Hill, E.C. Small 8vo, pp. 40.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETINGS.

MEETINGS of the Council will be held in the Council Room, Exeter Hall, Strand, London, W.C., on Tuesday, July 30th; Wednesday, July 31st; and Thursday, August 1st next, at half-past 9 o'clock each day.

NOTICE OF LAST QUARTERLY MEETING FOR 1895. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 22nd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH.—The annual meeting, which was unavoidably postponed, will be held at Ireleth in the third week of August. Due notice will be given by circular.—J. ALTHAM, Honorary Secretary, Penrith.

MIDLAND BRANCH: DERBYSHIRE DIVISION.—There will be a meeting at the Whitworth Institute, Darley Dale, on Thursday, September 5th. The President, Dr. Morson, kindly invites the members to afternoon tea, and Lady Whitworth will throw open her gardens and grounds. Afterwards it is proposed to drive to Matlock Bath to dine at the New Bath Hotel. Members are requested to give notice of communications to be brought before the meeting before August 20th to J. A. SOUTHERN, Honorary Secretary, Friar Gate, Derby.

DORSET AND WEST HANTS BRANCH.

THE summer meeting of this Branch was held at Bridport on July 17th, under the presidency of Mr. C. H. W. PARKINSON. Twenty-three members and visitors were present.

New Members.—The following were elected:—Mr. Charles Percival Felvus (of the Dorset County Asylum), Mr. Percy John Kingston (of Yeovil), and Mr. Henry William Scratchley (of Poole).

The Abuse of Medical Charities.—The following report from the Committee on the Abuse of Medical Charities was received and adopted:

That a series of questions has been addressed to the Secretaries of the Medical Charities in the district; that replies had been received from all; that the replies had been tabulated; and that the Committee had resolved: "That all hospitals and institutions that receive out patients should either require out patient tickets or a letter of recommendation from the patient's medical man stating that the case is a suitable one."

Discussion.—A discussion on "Is Cancer a Waterborne Disease?" with special reference to its occurrence in chalk valleys and districts containing periodical springs and rivulets, was opened by Mr. T. W. Blake, Vice-President, and taken part in by Mr. Marsh, Dr. McLean, the President, Dr. Carter, Dr. Lush, Dr. Lawson, and Dr. MacDonald.

Communications.—The following communications were made: Dr. Lawrie, Appendages Removed from Two Cases of Abdominal Section; Dr. Carter, Description of a new Ether Inhaler; Mr. Ewens, Enucleation of Tuberculous Glands.

Next Meeting.—It was resolved that the autumn meeting should be held at Boscombe on October 16th.

Dinner.—The members dined together at the Bull Hotel.

NORTH OF IRELAND BRANCH.

The annual meeting was held in the Royal Hospital, Belfast, on Thursday, July 18th, at 11.30 A.M. Dr. Dempsey, the President, occupied the chair, and 44 members were present. The minutes of the last annual meeting were confirmed.

Reports.—The Secretary's report and Treasurer's statement were taken as read, and adopted by the meeting, on the motion of Dr. John Campbell, seconded by Dr. Lindsay. The report showed that the number of members was 242. The Council deeply regretted that they had to record the deaths of two young members, Drs. Daniel Jamison and Hugh Heron. Four meetings had been held during the year, and a large number of communications had been discussed. The balance sheet showed that the Treasurer had in hand £70 8s.

Election of Office-Bearers.—Dr. James Stuart (Ballymena), having been nominated by Professor Byers Dr. Lindsay, and Dr. O'Hara, was unanimously elected *President*. *Vice-Presidents:* Dr. Gaussen (Dunmurry) and Professor Sinclair (Belfast). *Members of Council: Country:* Dr. St. George (Lisburn), Dr. Palmer (Armagh), Dr. Hall (Monaghan), Dr. O'Hara (Ballymena), Dr. Thompson (Omagh), Dr. M'Alister (Carrickfergus), Dr. Dunlop (Holywood), and Dr. Tate (Downpatrick); *Belfast:* Mr. Fagan, Professor Cuming, Dr. Walton Browne, Dr. Calwell, Dr. Lindsay, Dr. M'Caw, Professor Byers, and Dr. Bingham. On the motion of Dr. Dempsey, seconded by Dr. O'Neill, Dr. George Gray (Newcastle, co. Down) was re-elected *Treasurer*, and, on the motion of Dr. Dempsey, seconded by Mr. Fagan, Dr. John Campbell was re-elected *Secretary*. Dr. M'Krown moved and Dr. Stuart seconded the appointment of Dr. Dempsey and Dr. John Campbell as *Representatives of the Branch on the Council of the British Medical Association*. This was passed unanimously. On the motion of Dr. St. George, seconded by Dr. Mackenzie, Dr. Stuart (Ballymena) was elected *Representative of the Branch on the Parliamentary Bills Committee*. Drs. M'Caw and James Wallace acted as scrutineers of the voting papers.

New Members.—Dr. Lorrain Smith was elected a member of the Branch, and Drs. Tweedie and James Graham were re-elected.

President's Address.—The retiring President (Dr. Dempsey) delivered an interesting and instructive address on the Clinical Aspects and Treatment of Pelvic Inflammation. —When he had concluded, Mr. Fagan proposed that the best thanks of the meeting be given to Dr. Dempsey for his conduct in the chair and for the devotion he had shown to the best interests of the Branch during his year of office as well as for the address he had just read. This was seconded by Dr. Mark and passed by acclamation.

Communications.—Mr. John Fagan showed three cases illustrating the Surgery of the Ankle-joint: (1) A case of Chronic Arthritis, where he removed the joint together with the astragalus and upper surface of the os calcis; (2) a case of Simple Fracture Dislocation of the Astragalus, where the bone was removed; (3) a case of Compound Fracture Dislocation of the Astragalus, where this bone, together with the scaphoid and tips of the malleoli, were removed. Dr. O'Neill testified to the great advantage of early and thorough operation in such cases, and Drs. Darling, M'Donnell, and Dempsey also spoke of Mr. Fagan's admirable results.—Dr. Lindsay showed a case of Tachycardia, dating from severe emotional disturbance, and made brief remarks on the affection. Many of the members examined the patient, and much interest was taken in the case. Drs. O'Neill, M'Donnell, and Darling made some remarks, and the President (Dr. Dempsey) mentioned a similar case, where a complete and permanent cure suddenly took place.—Dr. Henry O'Neill showed a patient on whom he had operated with success for Dupuytren's Contraction of the fingers. He exhibited casts of the hand taken before and after treatment, and an appliance made by Mr. Sloan for the purpose of preventing recurrence. Dr. O'Neill recommended operation by multiple punctures and subcutaneous division of the fascia. He contrasted the condition of one hand of the patient, which had been treated in Glasgow by free incision and removal of the fascia, with that of the other upon which he had operated by the subcutaneous plan. Mr. Fagan spoke of the anatomy of the disease, and said he preferred excision of the fascia. Dr. Bingham referred to his experience in treating a case of hammer toe, and Dr. Fraser mentioned a case where riding a tricycle appeared to have started the contraction. Dr. O'Neill replied.—Dr. S. Alexander read notes of five cases of Puerperal Eclampsia. Dr. MacCormac made some remarks regarding the cause of paralysis in one of the cases.—Professor Sinclair read notes of a successful Laparotomy for Acute Intestinal Obstruction by Meckel's diverticulum, and showed by a drawing the relation of the bowel to the obstructing band. He also read notes of a successful operation for Recurrent Appendicitis. The patient, a young gentleman, had had seven successive attacks, and was unable to take solid food of any kind. The appendix was shown, and a coprolith in its interior was pointed out. Much interest was evinced in both these operations. Owing to lack of time several important contributions were held over.

Lunch.—At the conclusion of the business the members lunched together in the Grand Central Hotel.

CORK AND SOUTH OF IRELAND BRANCH.

A special meeting was held on July 13th, 1895, Professor E. R. Townsend in the chair.

Massage Establishments.—The following resolution was unanimously adopted:

The South of Ireland Branch of the British Medical Association having read the draft Bill to regulate establishments for massage and hypnotism approve of the same, and also of its being extended to Ireland.

Midwives Registration Bill.—It was proposed to postpone the consideration of this Bill until the annual meeting in October.

Hospital Abuse.—It was resolved:

That this Branch is strongly of opinion that active measures should be taken to try and limit the present extern abuses of hospital charity, and would therefore suggest that with this intention a general hospital inspector should be appointed to inquire into the merits of any case coming under his notice, and to take any subsequent steps to correct the abuses in accordance with the suggestions of the Medical Charities Committee of the British Medical Association. That the notice sent by the Secretary of the British Medical Association be hung in all the extern departments of the hospitals in the city.

Medical Defence.—The following resolution was adopted:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the interests, individual and collective, of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties.

Medical Clubs in Cork.—The Committee on Cork Medical Clubs for the year ending July 9th, 1895, presented the following report:

In presenting their report the Committee wish to give a brief summary of the struggle which is being waged by the members of the medical profession of the city of Cork against the abuses of clubs and societies in the city. For some years this subject had engaged the attention of the South of Ireland Branch of the British Medical Association, and under the auspices of this body a series of general meetings of the profession practising in the city was held towards the end of July, 1894, and a code of rules adopted and signed by all the medical men resident in the city, with one exception. These rules were forwarded to the secretaries of the various clubs and societies on October 26th, 1894, and on November 23rd a joint circular was received from sixteen of those societies, refusing to accept them. Acting under legal advice the medical officers of these societies sent in their resignation on December 26th, and finally ceased to act as medical attendants on February 1st, 1895. A lengthened newspaper controversy arose in which the action of the profession was grossly misrepresented, but the members of the profession, with commendable wisdom, refrained from entering into it. A deputation, consisting of Drs. Corby, Cummins, and Lee, introduced our representa-

tive Dr Sandford, waited on the Council of the British Medical Association at its quarterly meeting on January 18th, 1895, to bring the facts of the dispute before that body. The Council passed a resolution fully concurring in the movement, and sent a minute of the proceedings to all the Branches, bringing the matter under their notice. As a result of this and of the cordial support of the various medical journals and associations we are happy to be able to state that a.d both moral and material has been received from all parts of England, Scotland, and Ireland, so that the indemnity fund, to which £200 was subscribed by the profession in Cork, is now increased to over £500. In imitation of the stand which we are making, the profession in many places elsewhere have combined and drawn up rules which are pretty closely modelled on our code, so that the recusant clubs will soon find arrayed against them the medical profession of all the United Kingdom. With a view to forward this generalisation of the movement, we would suggest that a resolution be framed similar to that adopted at Dover and Edinburgh, recommending that this and other cognate subjects should be taken up by the British Medical Association, and that if necessary the constitution of that body should be altered, so as to admit of this being done efficiently.

Branch Representatives.—Dr. Arthur W. Sandford was re-elected representative of the Branch on the Council of the Association, and Professor E. R. Townsend, M.D., on the Parliamentary Bills Committee.

PROCEEDINGS OF THE COUNCIL.

AT a meeting of the Council, held at the offices of the Association, 429, Strand, London, W.C., on July 10th, 1895:

Present:

Dr. J. WARD COUSINS, President of the Council, in the chair.
Dr. E. LONG FOX, President.
Mr. HENRY T. BUTLIN, Treasurer.

Dr. JAMES BARR, Liverpool.
Dr. G. B. BARRON, Southport.
Dr. MICHAEL BEVERLEY, Norwich.
Dr. THOMAS BRIDGWATER, Harrow-on-the-Hill.
Mr. LANGLEY BROWNE, West Bromwich.
Dr. J. SPOTTISWOODE CAMERON, Leeds.
Mr. ANDREW CLARK, London.
Dr. H. RADCLIFFE CROCKER, London.
Dr. GEORGE W. CROWE, Worcester.
Dr. E. H. DICKINSON, Liverpool.
Dr. J. LANGDON H. DOWN, London.
Brig.-Surg.-Lt.-Col. E. F. DRAKE-BROCKMAN, London.
Mr. GEORGE EASTES, M.B., London.
Dr. W. A. ELLISTON, Ipswich.
Dr. J. H. GALTON, Upper Norwood.
Dr. BRUCE GOFF, Bothwell.
Dr. WILLIAM GORDON, Exeter.
Dr. H. HANDFORD, Nottingham.
Dr. JOHN D. HARRIES, Shrewsbury.
Mr. J. HUGHES HEMMING, Kimbolton.
Dr. C. HOLMAN, London.
Mr. T. VINCENT JACKSON, Wolverhampton.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Mr. C. N. MACNAMARA, London.
Mr. H. J. MANNING, Salisbury.
Dr. J. W. MILLER, Dundee.
Mr. W. JONES MORRIS, Portmadoc.
Mr. C. H. WATTS PARKINSON, Wimborne Minster.
Dr. CHARLES PARSONS, Dover.
Dr. F. M. POPE, Leicester.
Dr. ROBERT SAUNDBY, Birmingham.
Dr. E. MARKHAM SKERRITT, Clifton, Bristol.
Mr. NOBLE SMITH, London.
Dr. R. SOMERVILLE, Galashiels.
Mr. HENRY STEAR, Saffron Walden.
Dr. J. ROBERTS THOMSON, Bournemouth.
Dr. WILLIAM THOMSON, Dublin.
Dr. THEOPHILUS W. TREND, Southampton.
Mr. T. JENNER VERRALL, Brighton.
Dr. W. F. WADE, Birmingham.
Mr. FREDERICK WALLACE, London.
Mr. C. G. WHEELHOUSE, Filey.
Mr. JOSEPH WHITE, London.
Dr. A. D. WILLIAMS, Hampton Hill.
Mr. ALFRED WINKFIELD, Oxford.

The minutes of the last meeting having been printed and circulated, were taken as read and signed as correct.

Read letters of apology for non-attendance from Mr. Jordan Lloyd, Mr. Arthur Jackson, Dr. Urquhart, Dr. Batten, Dr. Winterbotham, Dr. Finlay, Dr. Campbell, and Dr. Philipson.

The new by-laws of the Lancashire and Cheshire Branch were then considered, together with a letter from Dr. Rentoul on the same.

Resolved: That the proposed new by-laws of the Lancashire and Cheshire Branch be received and approved.

Read communications from Shropshire and Mid-Wales Branch, one strongly commending the action of the medical men of Cork in reference to the benefit clubs in that city as worthy of all support, and strongly condemning the conduct of those medical men who accept such appointments under existing circumstances; and "That the members of this Branch consider that the time has arrived when the Council of the British Medical Association should take action whereby they may be able to devote some of their funds to the prosecution of unqualified practitioners."

In reference to the minute of Council 3129: Read letter from the Solicitor enclosing counsel's opinions on Dr. Anderson's case, and the use of the funds of the Association for the prosecution of unqualified practice.

DR. ANDERSON'S APPEAL.

14, Austin Friars, London, E.C., May 16th, 1895.

My dear Sir,—I send you copy of Mr. Dixon's opinion on the above, and which you will see is governed by his opinion on the subject of proceedings in respect of unqualified practice.—Yours very truly,

F. Fowke, Esq. JAMES R. UPTON.

DR. ANDERSON'S CASE.

Copy Opinion of Mr. Dixon.

For the reasons given in my opinion on the case relating to the prosecution of quacks, I think that the Council cannot be advised to make a grant towards the expenses of Dr. Anderson's appeal.

(signed) JOHN DIXON,

May 15th, 1895. 11, New Square, Lincoln's Inn.

Copy of Counsel's Opinion.

I am of opinion that in construing the Memorandum of Association of the British Medical Association, the objects referred to in paragraph (c) of clause 3 must be held to be the objects specified at the commencement of that clause—namely, "the promotion of medical and the allied sciences and the maintenance of the honour and the interests of the medical profession," but I think that it is so doubtful whether the words in paragraph (c) "and such other lawful things as are incidental to or conducive to the attainment of the above objects" include things which are not similar to any of the things specified in paragraphs (a), (b), (c), and (d) that the Council cannot be advised to incur the responsibility and risk which under clause 6 might perhaps be serious, of expending money of the Association on anything which is not so specified and is not clearly similar to some of the things which are so specified, and consequently that the Council cannot be advised to expend money for any of the purposes referred to in the case.

(Signed) JOHN DIXON,

May 15th, 1895. 11, New Square, Lincoln's Inn.

Resolved: That the General Secretary be instructed to communicate the result of counsel's opinion to the Civil Rights Defence Committee.

Read letter from Dr. Warner, Honorary Secretary to the Committee on the Mental and Physical Condition of School Children.

Resolved: That the consideration of the letter be postponed until the reappointment of the Committee at the annual meeting.

Read letter from Mr. F. G. Parsons asking permission to invite three anatomists who are not members of the Association to take part in the proceedings of the Section.

Resolved: That the permission of the Council be granted to the Section to invite the three gentlemen who are not members to take part in the proceedings.

Read letter from the Honorary Secretaries to the annual meeting, of which the following is a copy.

11, Chandos Street, Cavendish Square, W., June 13th, 1895.

Dear Sir,—We beg to enclose resolution passed at a meeting of the Executive Committee held yesterday, and shall be obliged if you will bring it before the Council of the Association in due course.—We are, yours faithfully,

ANDREW CLARK, } Hon. Secs.
ISAMBARD OWEN, }

Francis Fowke, Esq.

That it be suggested to the Council of the Association that members of the Council and officers of the Association and of the annual meeting should be asked to wear academic dress at the Association Service in St. Paul's.

Moved by Mr. Andrew Clark, seconded by Dr. Crocker:

"That members be requested to wear academic dress on the occasion of the service at St. Paul's Cathedral."

The motion having been put from the chair the same was declared to be lost.

Resolved: That the question of the Council of the Association wearing a distinctive badge at the annual meeting be referred to the Executive Committee.

Read applications for rooms from the Irish Graduates' Association, Foreign Medical Missions, the Association of Certifying Surgeons, and the Medical Sickness Assurance Society.

Resolved: That the usual permission be given to these Societies to hold their meetings at a convenient time so as not to interfere with the meetings of the Association.

Resolved: That 170 of the 171 candidates whose names appear on the circular convening the meeting, together with the 58 of the 59 on the supplemental list, be and they are hereby elected members of the British Medical Association.

The consideration of the application of two of the candidates was postponed till the next meeting of the Council.

Read minutes of the General Practitioners Committee together with Interim Report.

The Interim Report was then considered and after considerable discussion it was moved and seconded:

"That the minutes of the General Practitioners Committee of May 23rd, June 20th, and July 4th, together with the Interim Report (see page 200) be received, approved, and the Interim Report of the Committee published in the JOURNAL for presentation to the annual meeting.

Whereupon an amendment was moved and seconded:

"That the last paragraph of the report 'Nothing could be worse, etc.,' down to 'midwifery diplomas,' be struck out."

The amendment having been put from the chair, the same was declared to be lost.

The original motion was then put and declared to be carried, 16 voting for and 5 against.

Mr. Vincent Jackson requested that his name should be recorded as voting against the original motion as representing the views of the Staffordshire Branch.

The Annual Report of the Council was then considered.

Resolved: That the Report of the Council as amended be received, approved, and published in the JOURNAL for presentation to the annual meeting (see page 198).

Resolved: That the Report of the Parliamentary Bills Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting (see page 202).

Resolved: That the Report of the Scientific Grants Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting (see page 204).

Resolved: That the Report of the Committee on Legislation for Inebriates be received, approved, and published in the JOURNAL for presentation to the annual meeting (see page 211).

Resolved: That the Report of the Medical Charities Committee be received, approved, and published in the JOURNAL fore presentation to the annual meeting (see page 212).

Resolved: That the Report of the Committee on Scientific Examination of School Children be received, approved, and published in the JOURNAL for presentation to the annual meeting (see page 213).

Resolved: That the Report of the Anæsthetics Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting (see page 214).

Resolved: That the Report of the Therapeutic Committee be received, approved, and published in the JOURNAL for presentation to the annual meeting in London on July 30th (see page 215).

Resolved: That the Report of the Committee on the Efficient Control of Railway Servants' and Mariners' Eyesight be received, approved, and published in the JOURNAL for presentation to the annual meeting in London on July 30th (see page 216).

Resolved: That the minutes of the Inebriates Legislation Committee of 20th June last be received and approved and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Medical Charities Committee of the 9th inst. be received and approved and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Premises and Library Committee of May 23rd and the 9th inst. be received and approved and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Trust Funds Committee of the 9th inst. be received and approved and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Scientific Grants Committee of the 4th inst. be received and approved and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Parliamentary Bills Committee of the 9th inst. be received and approved and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved and the recommendations contained therein carried into effect.

Read resolution of the Dundee Branch, copy of which is as follows:

It was also agreed to ask the Council of the Association to definitely urge on the Pharmacopœia Committee the necessity of adopting the metric system in the forthcoming edition of the *British Pharmacopœia*.

Resolved: That a copy of the resolution be sent to the Therapeutic Committee.

The resolutions of which the following are copies were reported from the South Wales Branch, the South Midland Branch, and the Edinburgh Branch.

That this meeting is of opinion that the Council of the British Medical Association should without delay take into consideration the best way of applying a portion of the surplus funds of the Association in prosecuting against unqualified practitioners and other persons who are in the habit of practising medicine and surgery without legal qualifications.

That a copy of this resolution be sent to the General Secretary to be placed on the agenda at the annual meeting in London.

A. SHEEN.

Resolution passed by the South Midland Branch:

That the Council of the British Medical Association be urged to lose no time in investigating thoroughly and impartially the relations of medical men to dispensaries, medical aid societies, and the Poor-law authorities, with a view to advising how they shall be regulated to the greatest advantage of the country, the poor, and the profession.

Resolution passed by the Edinburgh Branch:

4, Melville Crescent, Edinburgh, July 9th, 1895.

Dear Sir,—I am directed to send you copy of a resolution which was passed at the annual meeting of this Branch on the 27th ult. inst. with reference to the subject of Medical Defence. I venture to express the hope that the Council will give it [illegible] careful consideration.—I am, dear Sir, yours faithfully,

R. W. PHILIP, Hon. Sec.

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect, not only the collective interests of the medical profession, but also those of the individual members of the Association, and that the Council be requested to take such steps as may be necessary to enable it actively to undertake these duties. This Branch recognises that probably these steps include an alteration in the Articles of Association and the raising of the annual subscription.

Various notices of motion which had been given for the general meeting were also reported.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING.

By a by-law of the British Medical Association all communications to the Association are the property of the Association. Applications from other journals for copies of papers or abstracts should therefore be referred to the Editor of the British Medical Journal.

THE sixty-third Annual Meeting of the British Medical Association will be held in London on Tuesday, Wednesday, Thursday, and Friday, July 30th, 31st, August 1st and 2nd, 1895.

President: F. Logo Fox, M.D.Oxon., F.R.C.P., Consulting Physician to the Bristol Royal Infirmary.

President Elect: Sir J. RUSSELL REYNOLDS, Bart., M.D., F.R.C.P., F.R.S., President of the Royal College of Physicians.

President of the Council: J. WARD COUSINS, M.D.Lond., F.R.C.S., Senior Surgeon to the Royal Portsmouth Hospital.

Treasurer: HENRY TRENTHAM BUTLIN, F.R.C.S., D.C.L., Surgeon to St. Bartholomew's Hospital, R.C.

An Address in Medicine will be delivered by Sir WILLIAM ENNISKILLEN, Bart., M.D., F.R.C.P., Physician-in-Ordinary to H.R.H. the Prince of Wales.

An Address in Surgery will be delivered by JONATHAN HUTCHINSON, F.R.S., F.R.C.S., Consulting Surgeon to the London Hospital.

An Address in Physiology will be delivered by EDWARD ALBERT SCHÄFER, F.R.S., Jodrell Professor of Physiology, University College.

The Scientific Business of the Meeting will be conducted in Fifteen Sections, as follows, namely:

A. MEDICINE.

Lecture Theatre—Conjoint Examination Hall.

President: F. W. PAVY, M.D., F.R.S. *Vice-Presidents:* Sir FREDERIC EATEMAN, M.D.; D. W. FINLAY, M.D.; W. S. CHURCH, M.D.; J. W. MOORE, M.D.; STEPHEN MACKENZIE, M.D.; E. MARKHAM SKERRITT, M.D. *Honorary Secretaries:* WILLIAM COLLIER, M.D., St. Mary's Entry, High Street, Oxford; W. P. HERRINGHAM, M.D., 18, Upper Wimpole Street, W.; Sir HUGH R. BEEVOR, M.D., 18, Serjeant's Inn, Fleet Street, E.C.

Wednesday, July 31st.

10 A.M. Opening Remarks by the President.

10.15 A.M. Discussion on Diphtheria and its Treatment by the Antitoxin (embracing the following points: (1) Pathology of Diphtheria and its Sequelæ; (2) Symptoms and Progress; (3) Statistics of Mortality under the Antitoxin Treatment and under other Treatment; (4) Effect of the Antitoxin Treatment upon the Local Affection, upon the General Condition, and upon the Sequelæ; (5) Effects that may arise from the Antitoxin Treatment). Introduced by Sidney H. C. Martin, M.D. The following also intend to join in the discussion: G. Sims Woodhead, M.D.; E. W. Goodall, M.D.; Claude Muirhead, M.D. (if possible); Alex. Johnston, M.D.; Professor von Ranke; Lennox Browne, F.R.C.S.; W. P. Herringham, M.D.; J. Campbell Hall, M.B.; W. Squire, M.D.

12.15 P.M. Papers by:

DRESCHFELD, Julius, M.D. On Ataxic Paraplegia (Clinical Varieties and their Pathology).

BEEVOR, C. E., M.D., and HORSLEY, V., F.R.S. On the Pathology of Severe Affections (Two Cases treated by Operation on the Cortex Cerebri).

THORNFIELD, T. W., M.D. A Case of Goitrous Dyspnœa.

MURRAY, George, M.D. Note on the Progress and Present Condition of the First Case of Myxœdema treated by Thyroid Extract.

WEST, Samuel, M.D. On the Treatment of Diabetes Mellitus by Uranium Nitrate.

HANOT, Professor. Notes sur le Diabète Bronzé.

CAMPBELL, Colin, M.R.C.S. Notes on Direct Intrapulmonary Medications.

And, should there be time available:

BRADSHAW, William, M.R.C.S. Notes on the Influence of Heredity in Disease.

TAYLOR, Seymour, M.D. On the Connection between Chlorosis and Gastric Ulcer.

ATKINSON, F. H., M.D. Latent Ulcer of the Stomach.

JONES, E. Lloyd, M.D. Chlorosis.

Thursday, August 1st.

10 A.M. Discussion on Acute Lobar or Croupous Pneumonia, its Etiology, Pathology, and Treatment. Introduced by R. Douglas Powell, M.D. The following points will be suggested for special consideration:

Etiological.—1. How far chill arising from (*a*) low external temperature, (*b*) sudden change of external temperature, is causative of pneumonia. 2. How far the reception of a microbe is alone to be regarded as a sufficient cause of pneumonia. 3. How far pneumonia is a disease brought about by conditions favourable to the aggressive germination of an organism ever more or less present. 4. In what does septic or pythogenic pneumonia differ etiologically from the classical form of the disease? 5. Is infection a possible or considerable agency in the propagation of pneumonia?

Pathological.—Ultimate or minute pathology. 1. (*f*) A neurosis. 2. (*f*) A direct result of microbic toxins upon the lung parenchyma. 3. (*f*) The *rôle* of leucocytosis in pneumonia.

Therapeutical.—1. The value of a routine treatment in cases of moderate degree and favourable omen. 2. The value of certain modern methods and the indications for their employment. Pyrexia, the cardiac state, and microbic conditions will especially be held in view in discussing points of treatment.

The following gentlemen will join in the discussion: J. W. Washbourn, M.D.; A. G. Auld, M.D.; Julius Dreschfeld, M.D.; J. E. Pollock, M.D.; A. Foxwell, M.D.; W. J. Tyson, M.D.; G. W. Balfour, M.D.; A. Barr, M.D.; Professor Bäumler (Freiburg); Professor Clifford Allbutt; Samuel Barton, M.D.; Sidney Coupland, M.D.; Samuel J. Gee, M.D.; G. A. Gibson, M.D.; Walter G. Smith, M.D.; Sir T. Grainger Stewart, M.D.; McCall Anderson, M.D.; Sinclair Coghill, M.D.; Lovell Drage, M.D.; David Finlay, M.D.; T. H. Green, M.D.; F. Hawkins, M.B.; D. B. Lees, M.D.; H. McGuire, M.D.; F. M. Pope, M.D.; E. Markham Skerritt, M.D.; Shingleton Smith, M.D.; J. E. Squire, M.D.; William Squire, M.D.; W. R. Thomas, M.D.; and Samuel West, M.D.

12.30 P.M. Papers by:

CHOVELL, J. Sinclair, M.D. The Hypodermic Use of Guaiacol in Acute Pulmonary Tuberculosis.

FOXWELL, Arthur, M.D. Hypertrophic Cirrhosis of the Liver.

MARAGLIANO, Professor. Sur le Traitement de la Tuberculose Pulmonaire par la Sérothérapie Spécifique.

SQUIRE, J. E., M.D. Influence of the Auditory Theory of Tuberculosis on the Treatment of Phthisis.

HARLEY, George, M.D., F.R.S. On the Formation of Calculi, particularly of Gall Stones.

And, should there be time available:

LOVEGROVE, Arthur E., M.D. The Use of Alcoholic Stimulants and their Relation to True Physiological Health.

GILLIES, H. Cameron, M.D. The Natural History of Pain.

LANE, Hugh, L.R.C.P. Chronic Rheumatic Arthritis: further points in differentiation from Chronic Rheumatoid Arthritis.

Friday, August 2nd.

10 A.M. Discussion on the Causes of Acute Rheumatism and its Relation to other Affections. Introduced by W. B. Cheadle, M.D. The following will join in the discussion: Archibald Garrod, M.D.; J. F. Goodhart, M.D.; Alfred Mantle, M.D.; J. T. Maclagan, M.D.; A. Newsholme, M.D.; P. G. Latham, M.D.; H. Handford, M.D.; Sir Dyce Duckworth, M.D.; A. Haig, M.D.; T. Churton, M.D.; H. Lane, M.D.; M. K. Hargreaves, M.D.; H. A. Caley, M.D.; M. Charteris, M.D.; Samuel West, M.D.; Stephen Mackenzie, M.D.; Gilbert Bannatyne, M.D.; A. P. Luff, M.D.; D. B. Lees, M.D.

12 noon. Papers by:

SEMMOLA, Professor. Sur la Toxicité des urines dans son degré et dans son nosographisme comme élément de diagnostic et de pronostic dans les maladies en général, et surtout dans les maladies aiguës infectieuses.

MORISON, Alexander, M.D. The Treatment of Aortic Valvular Disease.

CATON, R., M.D. On the Arrest of Endocarditis in Acute Rheumatism.

THORNE, Beslý, M.D. On Certain Changes in the Cardio-vascular System which follow treatment by the Schott Methods.

And, should there be time available:

REYNOLDS, E. S., M.D. A Point in the Diagnosis between Chronic Rheumatism and Chronic Gout.

PARSONS, Alfred, M.D. Arsenical Multiple Neuritis following the Application of a Cancer Cure.

LAFFAN, F., M.D. Differential Diagnosis in Malignant Endocarditis, Typhoid Fever, and Acute Tuberculosis.

B. SURGERY.

Central Room, Second Floor—Conjoint Examination Hall.

President: Sir WM. MAC CORMAC, F.R.C.S. *Vice-Presidents:* T. BRYANT, F.R.C.S.; C. N. MACNAMARA, F.R.C.S.; REGINALD HARRISON, F.R.C.S.; A. WILLETT, F.R.C.S.; Sir W. STOKES, M.D.; MAYO ROBSON, F.R.C.S. *Honorary Secretaries:* J. D. HARRIS, M.R.C.S., 45, Southernhay, Exeter; J. BLAND SUTTON, F.R.C.S., 48, Queen Anne Street, W.; A. MARMADUKE SHIELD, F.R.C.S., 4, Cavendish Place, Cavendish Square, W.

PROVISIONAL AGENDA.

Wednesday, July 31st.

10 A.M.—Introductory Remarks by the President: Some Points in connection with the Surgery of War. (Lantern Demonstration).

10.15 A.M. KENEGAN, Brigade Surgeon Lieutenant-Colonel D. F., M.D. Rhinoplasty in India (Lantern Demonstration).

The following subjects have been selected for discussion:

1. The Diagnosis and Treatment of Fractures of the Upper Third of the Femur, including the Neck. To be introduced by Sir William Stokes, M.D., with lantern demonstration. The following gentlemen have intimated their intention of taking part in the discussion: Professor E. H. Bennett, M.D. (Dublin); Thomas Bryant, F.R.C.S. (London); Professor Chiene, M.D. (Edinburgh); H. H. Clutton, F.R.C.S. (London); J. Ward Cousins, M.D., F.R.C.S. (Portsmouth); Davies Colley, F.R.C.S. (London); Danny Harrison, F.R.C.S. (Liverpool); Sir George Murray Humphry, M.D., F.R.S. (Cambridge); Robert Jones, F.R.C.S.I. (Liverpool); Mansell Moullin, F.R.C.S. (London); Howard Marsh, F.R.C.S. (London); Professor Macewen, M.D., F.R.S. (Glasgow); Rushton Parker, F.R.C.S. (Liverpool); Mayo Robson, F.R.C.S. (Leeds); Thos. Sinclair, M.D. (Belfast); F. A. Southam, F.R.C.S. (Manchester); Greig Smith, M.B. (Bristol); A. Willett, F.R.C.S. (London).

1.45 P.M. FRANKS, Kendal, M.D. On Movable Kidney. (Lantern Demonstration.)

Thursday, August 1st.

10 A.M. MANSELL, Howard, F.R.C.S. The Pathology and Clinical History of some Rare Forms of Bony Ankylosis.

10.30 A.M. BROWNE, G. Buckston, M.R.C.S. A Hitherto Undescribed Locality in the Male Urinary Bladder where a Stone may lie and elude contact with any Instrument introduced through the Urethra.

11 A.M. NEWMAN, W., M.B.Lond. Symmetrical Necrosis of the Lower Third of Each Femur; Large Removal of Bone; Ultimate Amputation through the Left Thigh; Recovery.

11.30 A.M. 2. The Surgical Treatment of Cysts, Tumours, and Carcinoma of the Thyroid Gland and Accessory Thyroids. To be introduced by H. Trentham Butlin, F.R.C.S. (London). The following gentlemen have intimated their intention of taking part in the discussion: Professor Annandale, F.R.C.S. (Edinburgh); James Berry, F.R.C.S. (London); Gilbert Barling, F.R.C.S. (Birmingham); J. Paul Bush, M.R.C.S. (Bristol); Thos. F. Chavasse, M.D. (Birmingham); R. C. Chicken, F.R.C.S. (Nottingham); Kendal Franks, M.D. (Dublin); Damer Harrisson, F.R.C.S. (Liverpool); Victor Horsley, F.R.S. (London); Bowreman Jessett, F.R.C.S. (London); C. B. Keetley, F.R.C.S. (London); Professor Kocher (Berne); Dr. Kummer (Geneva); Jordan Lloyd, F.R.C.S. (Birmingham); R. H. Lucy, F.R.C.S. (Plymouth); Professor W. Macewen, M.D. (Glasgow); Rutherford Morison, F.R.C.S. (Newcastle-on-Tyne); James Murphy, M.D. (Sunderland); Mayo Robson, F.R.C.S. (Leeds); W. G. Spencer, F.R.C.S. (London); Sir William Stokes, M.D. (Dublin); Charters Symonds, M.D. (London); Thelwall Thomas, F.R.C.S. (Liverpool).

Friday, August 2nd.

10 A.M. HORSLEY, Victor, F.R.S. The Results of Operative Treatment of Injury or Disease of the Cervical Vertebræ.

10.20 A.M. BANKS, Mitchell, F.R.C.S. The Statistics of Modern Breast Operations.

11 A.M. MURPHY, J. B., M.D. (Chicago). Peritonitis.

12 NOON. MORTON, Chas. A., F.R.C.S. Specimen showing the Junction made by Murphy's Button, Three Months after Operation, in the Case of Intestinal Anastomosis published in the BRITISH MEDICAL JOURNAL, April 20th, 1895.

12.15 P.M. RONSON, A. W. Mayo, F.R.C.S. A Series of Cases of Colectomy.

12.30 P.M. CRIPPS, Harrison, F.R.C.S. A Complication occurring in Inguinal Colotomy.

1 P.M. ANDERSON, William, F.R.C.S. Three Cases of Sacless Hernia of the Sigmoid Flexure through the Left Inguinal Canal, with Anatomical Specimen.

1.20 P.M. SPANTON, W. Dunnett, F.R.C.S.Edin. On Splenectomy, with Notes of Three Cases.

CATHCART, Charles, F.R.C.S. On a Simple Form of Exhaust Pump for Use after Suprapubic Cystotomy.

CHAVASSE, Thos. F., M.D. A Successful Case of Removal of the Entire Upper Extremity for Injury by Berger's Method.

CHEYNE, Watson, F.R.C.S., F.R.S. On Operations for Malignant Disease of the Pharynx and Naso-pharynx, with Cases.

EVE, Frederic S., F.R.C.S. A Successful Case of Laparotomy for Intussusception in an Infant, with remarks.

FENWICK, Harry, F.R.C.S. A Series of Seventy Cases of Ablation of Tumours of the Bladder.

HERN, John, M.D., F.R.C.S. Some Points in the Operative Treatment of Club Foot.

KEETLEY, C. B., F.R.C.S. On Thirty Cases of Osteotomy of the Hip, with Cases.

LITTLE, E. Muirhead, F.R.C.S. Tarsectomy for Talipes Equinus in Adults and Adolescents.

LLOYD, Jordan, F.R.C.S. 1. On Gonorrhœal Inflammation in and about the Seminal Vesicles. 2. On a Simple Method of Securing the Tongue during Lingual Operations.

LOCKWOOD, C. B., F.R.C.S. On the Treatment of Hydrocele by Incision.

MORISON, Albert E. Notes on a Case of Jacksonian Epilepsy Treated by Trephining.

MURPHY, James, M.D. On the Importance of Operating Early where an Operation is required in Abdominal Disease.

PAGET, Stephen, F.R.C.S. Two Cases of Suppurating Hydatid of the Liver drained through the Chest Wall.

STOKER, Graves, M.D. On Movable Liver.

WATSON, Spencer. A Case of Tachycardia Associated with Nasal Growths.

WILSON, Albert, M.D. The Treatment of Acute Pleural Effusion by Early Incision.

Dr. Stoker will give a demonstration of the Oxygen Treatment of Wounds and Ulcers in a room provided for the purpose at King's College; the day and hour will be announced in the *Daily Journal*.

C. OBSTETRICS AND GYNÆCOLOGY.

Large Theatre—King's College.

President: Sir WM. PRIESTLEY, M.D. *Vice-Presidents:* A. R. SIMPSON, M.D.; J. WATT BLACK, M.D.; Sir FRANCIS LAKING, M.D.; J. KNOWSLEY THORNTON, M.B.; W. J. SINCLAIR, M.D.; M. HANDFIELD-JONES, M.D. *Honorary Secretaries:* W. S. A. GRIFFITH, M.D., 96, Harley Street, W.; A. H. F. BARBOUR, M.D., 4, Charlotte Square, Edinburgh; W. R. DAKIN, M.D., 57, Welbeck Street, W.

The following subjects have been selected for discussion:

The work of the Section has been provisionally arranged as follows:

Wednesday, July 31st:

10 A.M. President's Address. 10.30. Discussion: The Aseptic and Antiseptic Precautions to be Observed in Private Midwifery Practice, to be introduced by G. E. Herman, M.B., F.R.C.P. The following gentlemen are expected to take part in this discussion: Dr. Stuart (Brooklyn), Professor Lusk (New York), Dr. Smyly, Professor Simpson, Dr. Swayne, Dr. Playfair, Professor Byers, Dr. More Madden, Dr. Watt Black, Professor Murdoch Cameron, Dr. Aust-Lawrence, Dr. Boxall, Dr. Forbes Ross, and others.

Papers by:

APOSTOLI, Dr. (Paris). On Electro-therapeutics as a Means of Diagnosis in Gynæcology.

MADDEN, More, M.D. (Dublin). Gonorrhœal Infection in some of its Gynæcological Aspects.

MURPHY, James, M.D. (Sunderland). The Surgical Treatment of so-called Puerperal Fever.

Thursday, August 1st:

10 A.M. Papers by:

MARTIN, Professor (Berlin). Anterior Colpotomy.

TAYLOR, J. W., F.R.C.S. (Birmingham). Vaginal Coilo'omy.

DONALD, A., M.D. (Manchester). A Case of Vaginal Cœliotomy for Tubal Pregnancy.

PLAYFAIR, W. S., M.D. (London). Remarks on the Education and Training of Girls at and about the Period of Puberty.

SWAINE, J. G., M.D. (Clifton). The Treatment of Eclampsia occurring during Pregnancy, and Presenting no Signs of Labour.

Instruments will be shown by Professor Lazarewitch (St. Petersburg), Mr. E. Stanmore Bishop (Manchester), and by Dr. Laffan (Cashel).

Specimens will be shown by Dr. Muret (Lausanne).

Friday, August 2nd:

10 A.M. Discussion: The Early Diagnosis of Malignant Disease of the Uterus, and the Treatment by Partial or Total Excision, to be introduced by J. Knowsley Thornton, M.B.

The following gentlemen are expected to take part in this discussion: Professor Martin (Berlin), Professor Pozzi (Paris), Professor Lusk (New York), Mrs. Scharlieb, M.D. (London), Professor Murdoch Cameron, Dr. More Madden, Dr. Murphy, Dr. Smyly, Mr. J. W. Taylor, Dr. A. Donald, Mr. Alban Doran, and others.

Papers by:

CAMERON, Professor Murdoch (Glasgow). A New Theory as to the Position of Fœtus in Utero.

BARBOUR, A. H. Freeland, M.D. (Edinburgh). The Changes in the Uterus during the Third Stage of Labour.

JESSETT, F. B., F.R.C.S. (London). A New Method of Performing Abdominal Hysterectomy for Uterine Fibroids.

DONALD, A., M.D. (Manchester). Vaginal Hysterectomy for Fibroids.

FRASER, J. Hosack (Bridge of Allan). Notes on a case of Uterine Cystic Fibroma.

The following papers have also been received, and will be read if time permits:

BAMPTON, A. H., M.D. (Ilkley, Leeds). Cases of Concealed Hæmorrhage, Placenta Prævia, and Puerperal Eclampsia.

BELL, R., M.D. (Glasgow). The Use of Ichthyol in the Treatment of Diseases of the Uterine Appendages.

CAMERON, Professor Murdoch (Glasgow). Exceptional Gynæcological Experiences.

EDGE, F., M.D. (Wolverhampton). Radical Cure of Uterine Prolapse.

ROBERTS, Lloyd, M.D. (Manchester). Case of Tumour of the Fallopian Tube.

NAIRNE, Stuart, F.R.C.S. (Glasgow). Influence of Pregnancy on Uterine Fibroids.

NAPIER, Leith, M.D., (London). Some Complication of the Menopause.

NEWNHAM, W. H. C., M.B. (Clifton). Sterility.

TREVELYAN, Basil, M.R.C.S. (Bath). Labour in Young Primiparæ.

D. PUBLIC MEDICINE.

Lower Hall—Exeter Hall.

President: ERNEST HART, D.C.L. *Vice-Presidents:* J. SPOTTISWOODE CAMERON, M.D.; C. H. W. PARKINSON, M.R.C.S.; WM. COLLINGRIDGE, M.D.; LOUIS C. PARKES, M.D.; P. BOORDYER, M.D.; JOHN C. THRESH, M.D. *Honorary Secretaries:* C. E. PAGET, M.R.C.S., Town Hall, Salford; REGINALD DUDFIELD, M.B., Sanitary Department, Vestry Hall, Harrow Road, Paddington, W.; F. W. CLARK, M.B., Lowestoft.

The regular business of the Section will commence each day with a formal discussion by gentlemen who have been invited to open the debates. The subjects selected are as follows:—

Wednesday, July 31st.—Presidential Address: Waterborne Disease and its Prevention. Discussion: The Regulation of the Slaughter of Animals for Human Food and the Inspection of Animals before and during Slaughter. Opener: T. M. Legge, M.D.

Papers by:

FARKAS, Dr. (Buda-Pesth). The late Visitation of Cholera in North-Eastern Districts of Hungary.

LAWS, J. Parry, F.I.C., and J. T. NEECH, L.R.C.P. Ventilation of Sewers.

WALSH, F. J., M.D., and WALSH, D., M.B. Underground Workshops.

[illegible], C. V., M.D. Dry Method of Dealing with Crime.

SIMEY, R., M.D., PATMORE, R., M.D., and GRAHAM, W., M.D. Smoke Abatement.

Thursday, August 1st.—Discussion: Hospital Isolation, House Quarantine, and Disinfection. Opener: P. Boobbyer, M.D.

Papers by:

KLEIN, Professor, F.R.S. and BIGGS, Hermann, M.D. Diagnosis of Doubtful cases of Diphtheria and the use of Bacteriology for that purpose.

BIGGS, Hermann, M.D. Use of Antitoxin for Immunising Members of Institutions.

NEWSHOLME, A., M.D. Extension of Schedule of Notification.

PRIESTLEY, J., M.D. Enteric Fever as an Infectious Disease.

KENWOOD, H., M.B. Prevention of Milk Epidemics.

DIXEY, F. A., M.D. Vital Statistics of Diphtheria, 1891-5.

BRAIDWOOD, P. M., M.D., and GREGORY, A. J., M.D. Hospital Accommodation by use of Ships.

Friday, August 2nd.—Discussion: The Insecurity of Tenure of Extra-Metropolitan Medical Officers of Health under the Public Health Act, 1875. Opener: B. A. Whitelegge, M.D.

Papers by:

MUNRO A. Campbell, M.B. The Need of Appointing Medical Officers of Health to County Councils.

PARKES, Louis, M.D. The Desirability of Appointing Medical Men as Superintendent Registrars of Births and Deaths.

CAMERON, J. Spottiswoode, M.D. The Destruction of Town Refuse by Heat.

SQUANCE, T. C., M.D., and KENWOOD, H., M.D. Meteorology and Disease.

GRAHAM, W., M.D., and HORDER, T. G., M.D. The Vaccination Laws.

LAFFAN, T., M.R.C.S. Extension of the Army Competitive System to the Irish Poor-Law Medical Service.

Owing to the amount of work to be done, readers of papers will be rigidly limited to fifteen minutes, and all other speakers to ten minutes. The names of those who have signified their intention to speak will be announced in the Daily Programme.

E. PSYCHOLOGY.

East Wing Room, Second Floor—Conjoint Examination Hall.

President: W. JULIUS MICKLE, M.D. *Vice-Presidents:* G. H. SAVAGE, M.D.; T. CLAYE SHAW, M.D.; D. NICOLSON, M.D.; HENRY RAYNER, M.D.; J. G. MCDOWALL, M.D.; LIONEL A. WEATHERLY, M.D. *Honorary Secretaries:* JAMES CHAMBERS, M.D., 6, Mansfield Street, W.; T. SEYMOUR TUKE, M.B., 37, Albemarle Street, W.; JAMES TAYLOR, M.D., 34, Welbeck Street, W.

The following arrangements have been made for the work of this Section, and the programme here given will be adhered to as closely as circumstances will permit:

The President will open the Section with an Address on the Brain, on Wednesday, at 10 A.M.

A discussion has been arranged to take place on each day, namely:

Wednesday, July 31st.

On the Treatment of Melancholia, introduced by Henry Rayner, M.D. The following are expected to take part in the discussion: Dr. Blandford (London); Dr. Weatherly (Bath); Dr. Norman Kerr (London); Dr. Cooke (Worcester); Dr. Hayes Newington (Tewkesbury); Dr. Hyslop (London).

The following papers will then be read and discussed:

MAYOU, A., L.R.C.P. Mental Symptoms in Relation to Exophthalmic Goitre.

REYNOLDS, E. S., M.D. Mental Symptoms of Bodily Diseases.

HEAD, H., M.D. Mental Symptoms in Relation to Bodily Diseases in the Sane.

SHUTTLEWORTH, E., M.D. Operative Treatment of Idiocy.

Thursday, August 1st.

On Insanity, in Relation to Criminal Responsibility, introduced by H. Maudsley, M.D. The following have intimated their intention of taking part in this discussion: Professor Gairdner (Glasgow); Dr. Orange, C.B. (London); Dr. Urquhart (Perth); Dr. Norman Kerr (London); Dr. Weatherly (Bath); Dr. Savage (London); Dr. Clouston (Edinburgh); Dr. Mercier (London); Dr. Shuttleworth (London).

Also the following papers:

SAVAGE, G. H., M.D., and CHARLES MERCIER, M.D. Insanity in Conduct.

CAMPBELL, A. W., M.D. A Comparison of the Breaking Strain of Ribs in the Sane and Insane.

FOX, Bonville B., M.d. A Medico-Legal Case.

CAMPBELL, Harry, M.D. Morbid Doubt.

Friday, August 2nd.

On Epilepsy, and its Relation to Insanity, introduced by W. R. Gowers, M.D. The following are expected to take part in this discussion: Professor Sir T. Grainger Stewart (Edinburgh); Dr. Buzzard (London); Dr. Clouston (Edinburgh); Dr. Dreschfeld (Manchester); Dr. Ferrier (London); Dr. Fletcher Beach (London).

Also the following papers:

BOND, C. H., M.B. The Relation of Diabetes to Insanity.

SMITH, Percy, M.D. Voluntary Boarders in Asylums.

WEATHERLY, L. A., M.D. The Law in Relation to Single Patients.

SHAW, James, M.D. The Early Symptoms of Insanity.

HUGHES, Dr. C. H. (St. Louis, U.S.A.) will show a Model of the Brain.

In addition to those enumerated above, the following gentlemen are also expected to participate in the work of the Section: Dr. P. W. Macdonald (Dorchester); Dr. Macphail (Derby); Dr. Henry Blake (Yarmouth); Dr. Outterson Wood (London); Dr. Hicks (London); Dr. Wigleworth (Rainhill).

F. PHYSIOLOGY.

Physiological Laboratory and the adjoining Theatre of Anatomy—King's College.

President: DAVID FERRIER, M.D., F.R.S. *Vice-Presidents:* E. E. KLEIN, M.D., F.R.S.; WM. STIRLING, M.D.; DE BURGH BIRCH, M.D.; J. BERRY HAYCRAFT, M.D. *Honorary Secretaries:* C. S. SHERRINGTON, M.D., F.R.S., Brown Institution, Wandsworth Road, S.W.; E. H. STARLING, M.D., 107, Clifton Hill, N.W.

The work of the Section has been arranged as follows:

Wednesday, July 31st.

10 A.M. Introductory remarks by the President.

10.30 A.M. to 2 P.M. The following communications will be given, accompanied for the most part by demonstrations:

BIRCH, Professor de Burgh, M.D. On the Equipment of an Experimental Laboratory, with Exhibition of Apparatus.

RIVERS, W. H. R., M.D. On Some Reaction Time Apparatus.

EDRIDGE-GREEN, F. W., M.D. On the Perception of Luminosity at Different Parts of the Retina.

MARINESCO, Dr. On Tertiary Atrophy and Degeneration of the Central Nervous System.

TURNER, W. Aldren, M.D. (1) The Results of Lesions of the Tuberculum Rolandi. (2) The Results of Section of the Trigeminal Nerve and the Consequent Degenerations.

TURNER, Aldren, M.B. Demonstration of Several Recently Described Tracts in the Brain and Spinal Cord.

KENT, A. F. Stanley. On Outlying Cells in the Optic Chiasma and in the Optic Tracts.

HUNTER, William, M.D. Experiments relating to the Functions of the Spleen.

SHERRINGTON, C. S., M.D., F.R.S. The Sensorial Apparatus of Muscles.

Thursday, August 1st.

Discussion on the Mechanics of the Cardiac Cycle, to be introduced at 10 A.M. by Professor J. Berry Haycraft, M.D., and D. Paterson, M.D. The following gentlemen have announced their intention to join in the discussion: Dr. Noel Paton, Dr. Lauder Brunton, F.R.S.; and Dr. Gibson.

The following communications will be given, accompanied for the most part by demonstrations:

HEIDENHAIN, Professor. Innervation du Coeur.

BAYLISS, W. M., B.A., B.Sc., and Professor L. HILL. The Physics of the Cerebral Circulation.

BAYLISS, W. M., B.A., B.Sc., and E. H. STARLING, M.D. A New Method of Studying Vasomotor Changes.

STEWART, Professor G. N. Further Researches on Circulation Time.

LEATHES, T. D., F.R.C.S. On the Interchange of Fluid between the Blood and the Tissues.

CAMPBELL, Harry, M.D. The Resistance which the Capillaries offer to the Blood flow.

Friday, August 2nd.

The following communications will be given, illustrated for the most part by demonstrations:

STRAVIS, Professor. The Influence of Sugar on Muscular Work.

HAMLET, Vaughan, M.D. Sugar as a Muscular Food.

BRODIE, T. Gregor, M.D. The Work of Muscle.

HEIDENHAIN, Professor. Sur les Echanges Nutritifs pendant l'Inanition.

PEMBREY, M. S., M.B. The Physiology of Heat Regulation.

HALLIBURTON, Professor, M.D., F.R.S. Nucleo-albumins.

PEARMINE, J. W., M.D. Intravascular Coagulation produced by Synthesised Proteid-like Substances.

RAMSDEN, W., L.R.C.P. Mechanical Coagulation of Proteids.
BRUCE, T. Gregor, M.D. Decomposition Products from Gelatine and Collagen.
ECCLES, Symons, M.B. The Incidence of Leucomaines in the Urine in Health and Disease.

G. ANATOMY AND HISTOLOGY.

Chemical Theatre—King's College.

President: HENRY MORRIS, F.R.C.S. *Vice-Presidents:* A. MACALISTER, M.D., F.R.S.; W. J. WALSHAM, F.R.C.S.; A. H. YOUNG, F.R.C.S.; B. C. A. WINDLE, M.D.; G. H. MAKINS, F.R.C.S.; A. W. HUDSON, F.R.C.S. *Honorary Secretaries:* F. G. PARSONS, F.R.C.S., St. Thomas's Hospital, S.E.; C. B. LOCKWOOD, F.R.C.S., 19, Upper Berkeley Street, W.

Wednesday, July 31st.—10 A.M. Opening remarks by the President. 10.15 A.M. Discussion: Art in its Relation to Anatomy, to be opened by Professor William Anderson, F.R.C.S., Joint Lecturer on Anatomy at St. Thomas's Hospital, Professor of Anatomy in the Royal Academy of Arts.

11.30 A.M. PAYNE, J. F., M.D. On an Early English Anatomical Manuscript of the 14th Century. (Some old anatomical works will be exhibited by Dr. Payne and Professor Anderson.)
12 NOON. WINDLE, Professor. Note on the Eustachian Tube.

Thursday, August 1st.—10 A.M. Discussion: The Development and Structure of the Placenta, to be opened by Professor A. H. Young, M.B., F.R.C.S., Professor of Anatomy at Owens College, Manchester.

11 A.M. ROBINSON, A., M.D. Demonstration of the Structure of the Placenta in Carnivora and Rodentia.
11.30 A.M. KENT, A. F. Stanley, M.A. On the Histology of the Generative Organs in a Hermaphrodite Dog.
12 NOON. GRIFFITHS, J., M.A., F.R.C.S. On the Anatomy of the Genito-urinary Apparatus in the Pig and Boar, with Remarks on the Effects of Castration.
12.30 P.M. SMITH, T. Manners, B.A., M.R.C.S. (1) On some points in the Anatomy of Three Synotian Monsters; (2) Notes upon the Supernumerary Elements of the Embryonic Hand and Foot.

Friday, August 2nd.—10 A.M. Discussion: The Topographical Anatomy of the Abdomen, to be opened by Professor A. Thomson, M.A., Professor of Anatomy at Oxford University.

11.15 A.M. PATERSON, Professor A. M., M.D. On the Position of the Kidneys.
11.45 A.M. KEITH, A., M.D. On Synostosis of the Mesosternum to the Presternum in Man and Anthropoids, considered as to its Prevalence among them and its Value as Evidence of their Genetic Relationship.
12 NOON. STOKER, Mr. Graves. On Floating Liver. (A specimen will be shown.)
1.30 P.M. HIGGINS, H., M.R.C.S. On the Mechanism of the Knee-joint.

H. PATHOLOGY AND BACTERIOLOGY.

South Room, Ground Floor—Conjoint Examination Hall.

President: SAMUEL WILKS, M.D., F.R.S. *Vice-Presidents:* J. M. PURSER, M.D.; J. F. GOODHART, M.D.; SIDNEY COUPLAND, M.D.; R. SAUNDBY, M.D.; W. WATSON CHEYNE, F.R.C.S.; ANTHONY A. BOWLBY, F.R.C.S. *Honorary Secretaries:* S. G. SHATTOCK, F.R.C.S., St. Thomas's Hospital, S.E.; H. D. ROLLESTON, M.D., 13, Upper Wimpole Street, W.

The work of the Section has been arranged as follows:

Wednesday, July 31st.

10 A.M.—Introductory Remarks by the President.

10.30 A.M.—Demonstration of the Malaria Parasite by P. Manson, M.D., with Some Facts as to its Life-history. (Illustrated by Lantern Slides.) A discussion will follow, in which it is hoped the following will take part: Professor Crookshank; A. A. Kanthack, M.D.; and G. Thin, M.D. (who will give a demonstration before the discussion).

11.15 A.M.—A. Foxwell, M.D., on Exophthalmic Goitre; G. R. Murray, M.D., Some Results of Thyroidectomy.

11.45 A.M.—Mr. J. H. Targett, on Syringomyelia and Joint Disease.

12.0 NOON.—J. Risien Russell, M.D., on Congenital Defects of the Cerebellum.

12.15 P.M.—Dr. Robertson, on Arachnoid Hæmorrhage.

12.30 P.M.—Papers on Cancer and other New Growths. The following will read papers or take part in the discussion: E. Hewlett, M.D., On the Chemistry of Carcinoma and Sarcoma; D'Arcy Power, F.R.C.S.; H. Snow, M.D., The Insidious Marrow Infection of Breast Carcinoma; G. Thin, M.D.; Mr. F. W. Blake, The Occurrence of Cancer in Chalk Valleys; W. Roger Williams, F.R.C.S., On Uterine Neoplasms and their relative frequency; Dr. Braithwaite, Fungi in Malignant Disease; E. C. Beasley, L.R.C.P.; T. N. Kelynack, M.D.

1.45 P.M.—A. R. Parsons, M.B., Specimen of Larynx from case of Typhoid Fever.

Thursday, August 1st.

10 A.M.—Discussion on Neuritis. Introduced by S. J. Sharkey, M.D. The following have promised to read papers or to join in the discussion: F. W. Mott, M.D.; W. M. Ord, M.D.; Professor Trevelyan, M.D.; Russell Wells, M.B.; W. H. Wilson, M.B.

11.30 A.M.—Discussion on Vaccinia and Variola. Introduced by S. Monckton Copeman, M.D. It is hoped that T. D. Acland, M.D.; S. Coupland, M.D.; Professor Crookshank, M.B., and others will take part in the discussion.

12.30 P.M.—Discussion on Pernicious Anæmia. Introduced by Dr. W. Hunter, and Dr. Monckton Copeman will speak.

1 P.M.—Dr. Allan Macfadyen, The Formation of Methyl-Mercaptan on the Body and its Production by Bacteria.

1.15 P.M.—Paper by Professor Adami: The Effect of the Reactions of Media upon the Pathogenic Properties of Bacteria.

1.30 P.M.—Paper by A. G. Auld, M.D., on Hæmatogenous Jaundice.

1.45 P.M.—P. Furnivall, L.R.C.P., on Acromegaly.

Friday, August 2nd.

10 A.M.—Discussions on Lymphadenoma. Introduced by W. G. Spencer, F.R.C.S. The following have intimated their intention to take part in the discussion: W. J. Fenton, M.B.; H. Morley Fletcher, M.D.; R. M. Leslie, M.B.; A. A. Kanthack, M.D.; Mr. F. S. Eve; Mr. J. Jackson Clarke; C. A. Morton, F.R.C.S.; G. N. Pitt, M.D.; D'Arcy Power, F.R.C.S.; H. Snow, M.D.; G. Thin, M.D.; Claud Wilson, M.D.

11.30 A.M.—Papers on Leprosy. By P. Abraham, M.D.; G. Thin, M.D.

12 NOON.—Professor Babes.

12.15 P.M.—Professor Crookshank on Actinomycosis.

12.30 P.M.—R. Hewlett, M.D.—The Diazo Reaction in Typhoid Fever. F. F. Westbrook, M.D.—The Growth of the Cholera Vibrio and other Bacilli in Sunlight. R. Hewlett, M.D., and St. Clair Thomson, M.D.—On the Fate of Micro-organisms in Inspired Air.

1.30 P.M. F. R. Walters, M.D.—Pulmonary Hypertrophic Osteo-arthropathy.

A. McFadyen, M.D., and R. Hewlett, M.D., will exhibit Cultures and Bacteriological Specimens.

The Secretaries venture to ask gentlemen who intend to show microscopic specimens to let them know the number of microscopes (and the powers) necessary to illustrate their papers, as this will be limited; and also to state whether the use of a lantern is required.

A separate room will be provided for the exhibition of microscopical and other specimens; lantern demonstrations will be given in the meeting-room.

I. OPHTHALMOLOGY.

Large Committee Room, Ground Floor—Conjoint Examination Hall.

President: H. POWER, F.R.C.S. *Vice-Presidents:* D. ARGYLL ROBERTSON, M.D.; W. A. BRAILEY, M.D.; G. ANDERSON CRITCHETT, M.A., F.R.C.S.Edin.; W. ADAMS FROST, F.R.C.S.; A. EMRYS JONES, M.D.; A. H. BENSON, M.B. *Honorary Secretaries:* R. W. DOYNE, F.R.C.S., Kilcrone, Oxford; E. TREACHER COLLINS, F.R.C.S., 81, Wimpole Street, W.; W. T. HOLMES SPICER, F.R.C.S., 47, Welbeck Street, W.

The following discussions have been arranged:

July 31st.—On Certain Rare Cases of Recurrent Ophthalmia. The affection occurs in adults; it begins with conjunctival and ciliary injection, general or limited, myosis, slight transient myopia, with œdema of the lids in some cases, and occasionally vesicles on the cornea. The duration varies from twenty-four hours to a few days, and recurrence takes place at varying intervals. It is probably angeo-neurotic in its origin. The discussion will be opened by Professor E. Fuchs (Vienna), and continued by G. A. Berry, F.R.C.S. (Edinburgh), J. Grindon, F.R.C.S. (London), John Hern, M.D. (Darlington), and A. Emrys Jones, M.D. (Manchester).

August 1st.—On the Diagnosis of Orbital Growths. Opened by [illegible], F.R.C.S. (Dublin); and Professor Panas (Paris). Continued by G. A. Berry, F.R.C.S. (Edinburgh); W.

J. Collins, M.D., F.R.C.S. (London); Hill Griffith, M.D. (Manchester); G. Hartridge, F.R.C.S. (London); H. Macnaughton Jones, M.D. (London); H. Juler, F.R.C.S. (London); J. B. Lawford, F.R.C.S. (London).

August 2nd.—On the Question of Operating in Chronic Glaucoma. Opened by E. Nettleship, F.R.C.S. (London). Continued by G. A. Berry, F.R.C.S.Edin.; G. Anderson Critchett, F.R.C.S.Edin. (London); Adams Frost, F.R.C.S. (London); C. E. Glascott, M.D. (Manchester); John Griffith, F.R.C.S. (London); G. Hartridge, F.R.C.S. (London); H. Macnaughton Jones, M.D. (London); H. Juler, F.R.C.S. (London); C. G. Lee, M.R.C.S. (Liverpool); D. Little, M.D. (Manchester); G. Mackinlay, F.R.C.S.Edin. (London); Priestley Smith, M.R.C.S. (Birmingham); H. R. Swanzy, F.R.C.S.I. (Dublin); Spencer Watson, F.R.C.S. (London); R. Williams, M.R.C.S. (Liverpool); W. J. Cant, M.R.C.S. (Lincoln); A. Bronner, M.D. (Bradford); W. H. H. Jessop, F.R.C.S. (London); Professor Galezowski (Paris).

The following papers have been announced:

BRAITHWAITE, W. M., M.R.C.S. On the Question of Latent Hypermetropia in the Visual Examinations of Candidates for the Public Services.

BROWNE, A. H., F.R.C.S. Acromegaly with Ocular Complications.

BERRY, G. A., F.R.C.S. On Injection of Chlorine Water into the Vitreous.

BRAMWELL, T., M.R.C.S. (Liverpool). The Utter Neglect of the Eyesight Question in Board of Trade Official Inquiries into Shipping Disasters.

DELL, Geo. J., M.D. (Paris). Optometry by the Subjective Method.

DONALDSON, E., L.R.C.P.I. (Londonderry). Case of Acute Glaucoma occurring in a patient with Advanced Carcinoma of the Rectum.

EDRIDGE-GREEN, F. W., F.R.C.S. (London). Tests for Colour Blindness.

FROST, Professor E. A New Theory of Erythropsia.

GRIFFITH, John, F.R.C.S. Choroidal Sarcoma in Infancy.

HARTRIDGE, G., F.R.C.S. Concomitant Strabismus.

JESSOP, W. H. H., F.R.C.S. (London). Membranous Conjunctivitis.

JONES, H. Macnaughton, M.D. (London). Cases Illustrative of the Importance of the Correction of Errors of Refraction in Neurasthenic Women.

JULER, H., F.R.C.S. (London), and HARRIS, W. J. Case of Carcinomatous Tumour of the Body of the Sphenoid causing Blindness of Both Eyes.

JULER, H., F.R.C.S., and SMALE, Morton, M.R.C.S. Case of Acute Orbital Cellulitis following Dental Abscess implicating the Antrum of Highmore.

LEE, Charles, L.R.C.P. Cases of Pemphigus and Essential Shrinking of the Conjunctiva.

MACGILLIVRAY, A., M.D. (Dundee). Hereditary Congenital Nystagmus.

MACRAY, Geo., F.R.C.S.E. (Edinburgh). A Note on the Surgical Treatment of Dislocated Lens.

RUSSELL, J. S. Risien, M.D. (London). The Influence of the Cerebrum and Cerebellum on Eye Movements.

SCOTT, Kenneth, M.B. (Paris). Radical Operative Treatment of Trichiasis.

The following gentlemen have also promised to take part in the proceedings: E. F. Drake-Brockman, M.D. (London); Professor Galezowski (Paris); Professor Gayet (Lyons); Professor Meyer (Paris); A. MacGillivray, M.B. (Dundee); Simeon Snell, F.R.C.S.Edin. (Sheffield); A. M. Ramsay (Glasgow).

The following gentlemen will show specimens in the Museum: E. Treacher Collins, F.R.C.S.; John Griffith, F.R.C.S.; G. Hartridge, F.R.C.S.; H. Juler, F.R.C.S.; D. Marshall, F.R.C.S.; R. W. Doyne, F.R.C.S.; W. J. Cant, M.R.C.S. (Lincoln).

W. Adams Frost, F.R.C.S. (London) will give a lantern demonstration of ophthalmoscopic pictures at noon on August 1st.

J.—DISEASES OF CHILDREN.

Room 8, Ground Floor, King's College.

President: JOHN H. MORGAN, F.R.C.S. *Vice-Presidents:* W. R. CHEADLE, M.D., F.R.C.P.; F. A. SOUTHAM, F.R.C.S.; H. HANDFORD, M.D.; W. ARBUTHNOT LANE, M.S., F.R.C.S.; A. FOXWELL, M.D., F.R.C.P.; D'ARCY POWER, F.R.C.S. *Secretaries:* DAWSON WILLIAMS, M.D., F.R.C.P., 25, Old Burlington Street, London, W.; HUGH R. JONES, M.D., 58A, Grove Street, Liverpool; HERBERT F. WATERHOUSE, F.R.C.S., 61, Wimpole Street, London, W.

The following are the arrangements for this Section. The dates and order of the discussions will be adhered to as closely as circumstances permit.

Wednesday, July 31st.

A discussion on Congenital Syphilitic Manifestations in Bones and Joints, to be opened by the President of the Section John H. Morgan, F.R.C.S. Howard Marsh, F.R.C.S., H. H. Clayton, F.R.C.S., Anthony Bowlby, F.R.C.S., Robert Jones, F.R.C.S. (Liverpool), H. E. Robinson, M.D., Frederic Eve, F.R.C.S., and Leopold Hudson, F.R.C.S., intend to take part in the discussion, and C. A. Ballance, F.R.C.S., and H. Arnold Collier, F.R.C.S., will contribute a series of cases.

A discussion on the Treatment of Hernia in Children, to be introduced by Rushton Parker, F.R.C.S. (Liverpool). Sir William Stokes, M.D., Ward Cousins, M.D., F.R.C.S. (President of Council), Professor William Macewen, F.R.S. (Glasgow), Professor Chiene (Edinburgh), Mitchell Banks, F.R.C.S. (Liverpool), J. Langton, F.R.C.S. (London), W. Alexander, F.R.C.S. (Liverpool), F. A. Southam, F.R.C.S. (Manchester), Jordan Lloyd, F.R.C.S. (Birmingham), J. Macready, F.R.C.S. (London), D'Arcy Power, F.R.C.S., W. Arbuthnot Lane, M.S., F.R.C.S., C. B. Lockwood, F.R.C.S., H. P. Symonds, F.R.C.S. (Oxford), Herbert Waterhouse, F.R.C.S., George Heaton, M.D. (Birmingham), Damer Harrison, F.R.C.S. (Liverpool), W. G. Black, F.R.C.S. (Newcastle), and Reginald H. Lucy, F.R.C.S. (Plymouth), intend to take part in this discussion.

The following papers will be read:

LOCKWOOD, C. B., F.R.C.S. Hernia of the Ovary in an Infant with Torsion of the Pedicle.

THOMSON, John, M.D. (Edinburgh). Congenital Hypertrophy of the Pylorus and Stomach Wall.

GIBBONS, R. A., M.D. On Renal Colic in Infants.

LLOYD, Jordan, F.R.C.S. On Nephrectomy in Children.

Thursday, August 1st.

A discussion on the Nervous Sequelæ of Acute Infectious Diseases in Children will be introduced by H. Handford, M.D. (Nottingham), and continued by W. R. Gowers, M.D., F.R.S., Thomas Barlow, M.D., W. B. Cheadle, M.D., Jules Comby, M.D., (Paris), Professor v. Ranke (Munich), R. Robertson, M.D. (Liverpool), James Taylor, M.D., William Hunter, M.D., H. B. Donkin, M.D., T. More Madden, M.D. (Dublin), Fletcher Beach, M.B., E. Mackey, M.D. (Brighton), F. W. Mott, M.D., Montagu Murray, M.D., W. S. Colman, M.D., and Dawson Williams, M.D.

The following papers will be read:

GARROD, Archibald E., M.D., F.R.C.P., and FLETCHER, Morley, M.D. On the Maternal Factors in the Causation of Rickets.

BARTON, J. Kingston, M.R.C.P. (London). The Relation between the Foods of Early Life and the Condition of the Teeth in Youth and Early Adolescence.

BALLANTYNE, J. W., M.D. (Edinburgh). The Relation of Certain Diseases of Infancy to Antenatal Anatomy and Physiology.

COMBY, Dr. J. (Paris). The Non-pathogenic Streptococci and Staphylococci of the Throat in Children.

TELFORD-SMITH, Telford, M.D. (Royal Albert Asylum, Lancaster). The After-History of Two Cases of Craniectomy.

CAUTLEY, Edmund, M.D. On the Value of Trephining in Tuberculous Meningitis.

Friday, August 2nd.

A discussion on Doses of Various Remedies suitable for Children at the Several Ages, to be introduced by J. Kingston Barton, M.R.C.P. D. J. Leech, M.D. (Manchester), J. Mitchell Bruce, M.D., H. B. Donkin, M.D., A. Foxwell, M.D. (Birmingham), N. J. Tirard, M.D., Neville Wood, M.R.C.P. (London), and T. More Madden, M.D. (Dublin) intend to take part in this discussion.

The following communications will be made:

GRATTAN, Nicholas, F.R.C.S.I. (Cork). Demonstration of Osteoclasis.

CARR, J. Walter, M.D. A Protest against the use of the term "Consumptive Bowels."

CATHCART, C. W., F.R.C.S. (Edinburgh). On a simple form of Milk Steriliser.

It is proposed also to arrange for the demonstration of cases of interest on each day; among these will be:

CLARKE, J. Jackson, M.B. (London). Congenital Syphilis with Ulceration of Tongue.

EVE, Frederic, F.R.C.S. (London). (1) Spina bifida cured by Excision of sac. (2) Congenital Dislocation of shoulder backwards treated by Operation.

MORGAN, J. H., F.R.C.S. (President). A Series of Cases of Excision and Erasion of the Knee-joint.

K. OROLOGY.

Room 22—King's College.

President: Sir W. DALBY, F.R.C.S. *Vice-Presidents:* CHARLES WARREN, M.D.; G. P. FIELD, M.R.C.S.; E. CRESSWELL BAUER, M.D.; J. DUNDAS GRANT, M.D.; EDWARD LAW, M.D.; C. A. BALLANCE, F.R.C.S. *Honorary Secretaries:* C. E. L. B. BEDDOE, F.R.C.S., 10, Harley Street, W.; G. C. WILKIN, L.R.C.P., 39, Weymouth Street, W.

Wednesday, July 31st.—A discussion on the Treatment of the Various Forms of Nerve Deafness. Opened by J. Dundas Grant, M.D., F.R.C.S.

Thursday, August 1st.—Discussion on Cerebral Complications in relation to Middle Ear Disease. Opened by Professor Macewen, M.D., C.M., F.R.S., LL.D., Regius Professor of Surgery, University of Glasgow.

The following gentlemen have signified their intention of

taking part in these discussions: W. Milligan, M.D.; George Heaton, F.R.C.S.; Dr. Luc (Paris); A. M. Sheild, F.R.C.S.; G. W. Hill, M.D.; Lewis Jones, M.D.; H. Macnaughton Jones, M.D.; W. Downie, M.D.; Thomas Barr, M.D.; L. H. Pegler, M.D.; P. McBride, M.D.; J. Walton Browne, M.D.; Farquhar Matheson, M.D., J. S. Risien Russell, M.D.; E. F. Trevelyan, M.D.; Robert H. Woods, F.R.C.S.I.

Papers will be contributed and Specimens exhibited by the following amongst others:

BARR, E. Cresswell, M.B., will show (1) a Dummy for Teaching Palpation of the Naso-Pharynx. (2) A case of Objective Pulsating Tinnitus.

BARR, Thomas, M.D. The Treatment of Intractable Suppurations of the Middle Ear by Operation through the Mastoid.

BRONNER, Adolph, M.D. Notes of Five Cases of Disease of Attic treated by Modified Stacke's Operation.

COUSINS, J. Ward, M.D., F.R.C.S. On the Use of Artificial Tympanic Membranes.

GUYE, Professor. On a not yet described Form of Rotatory Sensation in Patients suffering from Labyrinthine Disease.

HILL, G. Williams, M.D., will show Specimens.

JONES, Carmalt, F.R.C.S.Edin. On Tarsectomy in Cases of Deafness and Tinnitus Aurium.

JONES, H. Macnaughton, M.D. (1) On some Otological Considerations in the Treatment of Nerve Deafness. (2) Brief Notes of a Case of Hyperæsthesia Acoustica.

LAKE, Richard, F.R.C.S. On the Anatomical Connections of the Tympanic Membrane, with a few Remarks on their Pathological Importance. Specimens will be exhibited to illustrate this paper.

LAW, Edward, M.D., will exhibit some Preparations sent by Professor Politzer.

LAWRENCE, L. A., F.R.C.S., will also show some Normal Bone Preparations made by Professor Politzer.

METCALFE, George, M.B., will show a Portable Electric Light Battery and Laryngoscope.

MILLIGAN, William, M.D. Tuberculous Disease of the Mucous Membrane of the Middle Ear and its Adnexa: an experimental investigation. Diagrams and Specimens will be exhibited to illustrate this paper.

PEGLER, L. H., M.D., will show Microscopic Sections illustrating the Histology of Turbinal and Septal Hyperplasias.

PRITCHARD, Urban, M.D. Macroscopical Specimens of Aspergillus.

SCATLIFF, J. M. E., M.D. On the Use of the Pneumatic Speculum in the Treatment of Diseases of the Ear.

WOODS, Robert H., F.R.C.S.I., will show specimens.

L. PHARMACOLOGY AND THERAPEUTICS.

East Wing Room, Ground Floor—Conjoint Examination Hall.

President: Sir WILLIAM ROBERTS, M.D., F.R.S. *Vice-Presidents:* J. TALFOURD JONES, M.B.; T. LAUDER BRUNTON, M.D., F.R.S.; J. MITCHELL BRUCE, M.B.; W. HALE WHITE, M.D.; DONALD MACALISTER, M.D.; M. MCHUGH, M.B. *Honorary Secretaries:* VAUGHAN HARLEY, M.D., 25, Harley Street, W.; W. SOLTAU FENWICK, M.D., 10, Devonshire Street, W.

Wednesday, July 31st.

10 A.M. The President's introductory remarks. 10.15 A.M. Discussion upon Serum-therapeutics: Dr. Klein. 10.35 A.M. Dr. Washbourn. 10.55 A.M. Professor Fraser. 11 5 A.M. Dr. Charteris. 11.15 A.M. Dr. Hewlett. 11.25 A.M. Dr. Tirard. 11.35 A.M. Dr. Sidney Phillips. 11 45 A.M. Dr. Gayton. 11.55 A.M. Dr. Caiger. 12 5 P.M. Mr. Bokenham. 12 15 P.M. Dr. Goodall. 12.25 P.M. Dr. Bruce. 12.35 P.M. Dr. MacCombie. 12.45 P.M. The opener's reply.

Papers by:

FRASER, Professor. The Antitoxin of Snake Poison.

BOKENHAM, T. J., M.R.C.S. The Antitoxin of Erysipelas.

APOSTOLI, Professor. The Therapeutic Value of Alternating Currents of High Frequency.

MOSSO, Professor. (1) The Therapeutic Action of Formaline. (2) The Interchange of Gases in the Lung at High Altitudes.

OLIVER, George, M.D. The Therapeutic Uses of Suprarenal Capsules.

OTTOLENGHI, Professor. The Therapeutic Value of Calomel followed by Salt and Acid Substances.

ROSENDAHL, Professor. (Title not yet communicated.)

Thursday, August 1st.

10 A.M. Discussion on the Requirements of the Profession with reference to the Revision of the *British Pharmacopœia*: Dr. Leech. 10 20 A.M. Professor Donald MacAlister. 10 30 A.M. Professor Bradbury. 10.40 A.M. Dr. Page. 10 50 A.M. Dr. Talfourd Jones. 11 A.M. Dr. Charteris. 11.10 A.M. Dr. W. Carter. 11 20 A.M. Dr. C. Fearson. 11.30 A.M. Dr. Tirard. 11.40 A.M. Dr. Neville Wood. 11.50 A.M. Dr. Thomas Oliver. 12. Dr. H. G. Lys. 12 10 P.M. Dr. A. Kinsey-Morgan. 12 20 P.M. Dr. W. Armstrong. 12.30 P.M. Dr. Ralph Stockman. 12.40 P.M. The opener's reply.

Papers by:

BALFOUR, George, M.D. Therapeutics of the Digitalis Group.

PHILLIPS, C. D. F., M.D. The Pharmacological Action of Berberine.

SHARP, Gordon, M.B. Notes on the Action of the Mydriatic Group.

DUTTON, Thomas, M.D. The Dietetic Treatment of Disease.

CAUTLEY, E., M.D. Therapeutic Action of Foods in Diseases of Children.

CHURCHILL, F., M.D. The Therapeutic Value of Massage.

SURVETOR, N. F., M.D., and HARLEY, Vaughan, M.D. The Action of β Naphthol and Bismuth Subnitrate as Intestinal Antiseptics.

FENWICK, W. Soltau, M.D. Intestinal Antisepsis.

Friday, August 2nd.

Papers by:

10 A.M. CUFFE, Robert, M.R.C.S. Therapeutic Value of the Waters of Woodhall Spa.

10.15 A.M. EARDLEY-WILMOT, R., M.B. Therapeutic Value of the Waters of Leamington Spa.

10.30 A.M. FOX, Fortescue, M.D. Therapeutic Uses of the Waters of Strathpeffer Spa.

10.45 A.M. HYDE, Samuel, M.D. Therapeutic Value of the Waters of Buxton.

11 A.M. MYNTLE, A. S., M.D. Therapeutic Value of the Waters of Harrogate.

11.15 A.M. SPENDER, J. Kent, M.B. Therapeutic Value of the Waters of Bath.

11.30 A.M. TOMLINS, W., M.R.C.S. The Brine Baths of Droitwich.

11.45 A.M. CORMACK, G. E., M.D. Vichy and its Waters.

ARMSTRONG, W., M.R.C.S. The Therapeutics of Rheumatoid Arthritis.

HARRIS, Vincent, M.D. Creasote in Pulmonary Disease.

WALTERS, F. R., M.D. The Subcutaneous Use of Gualacol.

TIRARD, Nestor, M.D. The Treatment of Uræmic Dyspepsia.

SNOW, Herbert, M.D. Loretin.

ILLINGWORTH, C. R., M.D. Tabellæ and Tabloids, their Uses and Abuses.

OVEREND, Walker, M.B. Arsenic and Belladonna in Chorea.

GOODBODY, F. W., M.D., and HARLEY, Vaughan, M.D. Action of Piperazine on Uric Acid in the Urine.

M. LARYNGOLOGY.

North Room, Ground Floor—Conjoint Examination Hall.

President: FELIX SEMON, M.D. *Vice-Presidents:* Sir PHILIP SMYLY, M.D.; W. MACNEILL WHISTLER, M.D.; F. DE HAVILLAND HALL, M.D.; GRENVILLE MACDONALD, M.D.; SCANES SPICER, M.D.; A. W. SANDFORD, M.D. *Honorary Secretaries:* J. MIDDLEMASS HUNT, M.B., 55, Rodney Street, Liverpool; ST. CLAIR THOMSON, M.D., 28, Queen Anne Street, W.; E. B. WAGGETT, M.B., 66, Park Street, W.

Wednesday, July 31st.—Introductory Remarks by the President, to be followed by a Discussion on the Etiology of Mucous Polypi of the Nose, introduced by Professor Guye (Amsterdam), Dr. Luc (Paris), and Dr. McBride (Edinburgh).

The following members have expressed their intention of joining in the discussion: T. Mark Hovell, F.R.C.S.Ed., R. Lake, F.R.C.S., L. H. Pegler, M.D., A. Hodgkinson, M.D. (Manchester), W. Milligan, M.D. (Manchester), Charles Warden, M.D. (Birmingham), and R. McKenzie Johnston, M.D. (Edinburgh), Scanes Spicer, M.D., and William Hill, M.D.

Original papers:

RUSSELL, J. S. Risien, M.D. The Representation of Abduction of the Vocal Cords in the Cerebral Cortex.

HODGKINSON, Alexander, M.D. (Manchester). (1) On the Vibrations of the Vocal Cord: (2) On the Function of the Laryngeal Ventricles.

ILLINGWORTH, C. R., M.D. (Ventnor). Some points in the Anatomy and Physiology of the Larynx.

Thursday, August 1st.—The Infectious Nature of Lacunar Tonsillitis, introduced by Professor B. Fraenkel (Berlin), and Dr. J. Macintyre (Glasgow).

The following have expressed their intention of speaking on the subject: T. Mark Hovell, F.R.C.S.Ed., A. Hodgkinson, M.D., Charles Warden, M.D., Watson Williams, M.D. (Bristol), Adolf Bronner, M.D. (Bradford), Scanes Spicer, M.D., and W. Hill, M.D.

Original papers:

BRONNER, A., M.D. (Bradford). Some cases of Diseases of the Larynx and Bronchi treated by Intralaryngeal Injections.

MORITZ, E., M.D. (Manchester). The Laryngeal Symptoms and Sequelæ of Influenza.

STOKER, George S., M.R.C.P.I. An improved method of removing Naso-pharyngeal Tumours.

Friday, August 2nd.—The Indications for Early Radical Operation in Malignant Disease of the Larynx, introduced by Dr. Bryson Delavan (New York), and Mr. H. T. Butlin (London).

The following members have expressed their intention of joining in the discussion: Philip de Santi, F.R.C.S., A. Hodgkinson, M.D., Charles Warden, M.D., Robert H. Woods, M.B. (Dublin), and Charters Symonds, M.S., F.R.C.S.

Original papers:

MILLIGAN, William, M.D. (Manchester). Vocal Defects among School Board Teachers, with special reference to the occurrence of teachers' nodes.

HODGKINSON, A., M.D. (Manchester). On Chordilis Tuberosa.

DE SANTI, Philip, F.R.C.S. The Operation of Thyrotomy, with a short account of the cases in which it has been performed at St. Bartholomew's Hospital during the last fifteen years.

Demonstrations of Instruments:

METCALFE, G., M.B. (Newcastle-on-Tyne). (1) Demonstration of a new powerful and extremely portable Electric Light Battery. (2) A Prismatic Electric Laryngoscope.
MORITZ, S., M.D. (Manchester). A Self-retaining Laryngoscope.
HOGKINSON, A., M.D. (Manchester). A new Form of Magnifying Laryngoscope.

The following gentlemen purpose being present and taking part in the work of the Section: Professor Fraenkel, Professor Guye, Dr. Lue, Dr. Bryson Delavan, Professor Moritz Schmidt (Frankfort), Dr. F. H. Bosworth (New York), Dr. John Mackenzie (Baltimore), Professor v. Sokolowski (Warsaw), Dr. A. Brady (Sydney, N.S.W.), Dr. Walker Downie (Glasgow), Dr. Hillis (Dublin), Dr. W. Robertson (Newcastle-on-Tyne), Dr. Cecil Shaw (Belfast), Dr. W. Bolton Tomson (Lutton), Mr. R. Stow Armstrong, Dr. Dmochowski (Warsaw), Dr. Logan Turner (Edinburgh), Dr. Samuel Johnston (Baltimore), Dr. H. S. Birkett (Toronto), and Dr. Irving Kimball (Maine).

N. DERMATOLOGY.

West Wing Room, Second Floor—Conjoint Examination Hall.

President: H. RADCLIFFE CROCKER, M.D. *Vice-Presidents:* MCCALL ANDERSON, M.D.; MALCOLM MORRIS, F.R.C.S.Edin.; J. J. PRINGLE, M.B.; WM. ANDERSON, F.R.C.S.; H. A. G. BROOKE, M.B. *Honorary Secretaries:* J. HERBERT STOWERS, M.D., 41, Finsbury Square, E.C.; JONATHAN HUTCHINSON, Jun., F.R.C.S., 15, Cavendish Square, W.

Wednesday, July 31st, 10 A.M., President's Address.

The following subjects have been selected for discussion in the Section:

The Pathology and Treatment of Pruritus, introduced by McCall Anderson, M.D., of Glasgow, and H. A. G. Brooke, M.B., of Manchester.

Diet in the Etiology and Treatment of the Diseases of the Skin, introduced by W. Allan Jamieson, M.D., of Edinburgh, and Walter G. Smith, M.D., of Dublin.

The following papers have been announced:

ANDERSON, William, F.R.C.S. The Treatment of Adenoma Sebaceum.
BARENDT, Frank H., M.D., F.R.C.S. A Case of Cheiro-Pompholyx.
CORFIELD, Edward, F.R.C.S. The Treatment of Syphilis by Injections of Syphilitic Antitoxin.
DAVIES, Arthur T., M.D. A Case of Lupus; Result of Treatment by Thermal Freezing (with Photographs).
EDGWORTH, Alfred, M.D. Brief Notes on Corns—true and so-called (Drawings and Microscopic Specimens).
FOX, T. Colcott, M.B. Two Short Papers.
GALLOWAY, James, M.D. Certain Nervous Lesions of the Skin.
HARRISON, A. J., M.B. On Two Cases of Unusual Verruca Necrogenica (with Photographs).
HUTCHINSON, Jonathan, jun., F.R.C.S. Microscopic Sections, and Drawings of Case of Rodent Ulcer of Forearm.
ILLINGWORTH, John, M.D. (Harrogate). Case of Pityriasis Rubra Pilaris, Clinical Features, and Minute Anatomy (with Microscopic Sections).
MACEY, Edward, M.D. (Brighton). Cheiro-pompholyx in association with Eczema.
MANSON, P., M.D. Short Communication on the Guinea Worm (with Microscopical Specimens).
PEARCE, George, L.R.C.P., M.R.C.S. Pemphigus.
PITTSMITH, P. H., M.D., F.R.S. Affections of the Skin occurring in the Course of Bright's Disease.
ROBERTS, Leslie, M.D. Treatment and Prognosis of Trichophytosis based on the Pathology of the Trichophytons.
SMITH, Gilbert, F.R.C.S.Edin. (Birmingham). Note on a Case of Lichen Planus Verrucosus.
STANTON, James, M.R.C.S. One or Two Living Specimens of Uncommon Conditions, and short Notes.
STARR, George, M.R.C.P.I. The Treatment of Alopecia Areata by Oxygen Gas.
STOWERS, J. Herbert, M.D. On a Case of Dermatitis Repens (with Coloured Drawings).
WALSH, Henry, M.D. (Clifton). Paper on Alopecia Areata.
WALKER, Norman, M.D. (Edinburgh). The Methods of Examination of the Skin Bacteriologically.

Friday, August 2nd, will be devoted to the demonstration of cases. Notice should be sent by members intending to exhibit, with description of cases to J. H. Stowers, M.D., not later than July 27th.

O. ETHICS.

Room B—King's College.

President: W. F. CLEVELAND, M.D. *Vice-Presidents:* THOMAS BRIDGWATER, M.B.; J. HUGHES HEMMING, M.R.C.S.; D. B. BALDING, F.R.C.S.; C. PARSONS, M.D.; W. H. ALFORD, M.B.; A. DRUMMEY, M.D. *Honorary Secretaries:* MAJOR GREENWOOD, M.D., LL.B., 243, Hackney Road, N.E.; T. F. PEARSE, M.D., 12, Norfolk Street, Southsea; HUGH WOODS, M.D., 11, Archway Road, Highgate, N.

Wednesday, July 31st.—General Address by the President. Subjects concerning more particularly the relations of medical men with each other:

1. Intraprofessional Etiquette, introduced by Thomas Garrett Horder, L.R.C.P.
2. Advertising, introduced by George Wm. Potter, M.D.
3. Unqualified Assistants, introduced by George Brown, M.R.C.S., and continued by J. Brindley James, L.R.C.P.

Thursday, August 1st.—The Ethics of Gratuitous and Cheap Contract Practice.

1. Clubs, Medical Aid Societies, and Contract Practice; introduced by R. W. Doyne, F.R.C.S. The discussion will be continued by Hughes Hemming, M.R.C.S., W. Gosse, L.R.C.P., W. A. Elliston, M.D., A. H. Bampton, M.D., W. Newman, M.D., Philip Lee, L.R.C.P.I., and others.

2. Hospitals and Dispensaries, introduced by Hugh Woods, M.D. Frank Greaves, M.R.C.S., R. R. Rentoul, M.D., and Nelson Hardy, F.R.C.S., will take part in the discussion.

The Secretaries will be glad to hear from members willing to join in the above discussions.

Friday, August 2nd.—1. Any subject, the discussion of which has not been completed on the two previous days. 2. The reading of any selected papers which do not come under the above heads.

The following papers have been announced:

BERRY, Wm., F.R.C.S.I. On Contract, Club, and Dispensary Practice.
BLACK, D. Campbell, M.D. On Hospitals Advertising and Medical Etiquette.
DICKINSON, W. G., L.R.C.P. Provident Principle in Sickness Attendance.
GLEDHILL, J. Grierson, M.B., Barrister-at-Law. Medical Ethics.
MULLINS, George Lane, M.D. On the Profession in New South Wales.
PEARSE, T. F., M.D. The Sweating of the Profession by Various Friendly Societies.
RICE, William Richardson, M.D. The Public Medical Service and its Relation to Medical Ethics.
SIBLEY, Knowsley, M.D. State Aided *v.* Voluntary Hospitals.
WILLIAMS, A. D., M.D. Changing Relations of the Profession and the Public.

Honorary Local Secretaries:

ANDREW CLARK, F.R.C.S., 71, Harley Street, W.
ISAMBARD OWEN, M.D., 40, Curzon Street, W.

Honorary Local Treasurer:

GEORGE EASTES, M.B., F.R.C.S., 35, Gloucester Terrace, Hyde Park, W.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 30TH, 1895.

9.30 A.M.—Meeting of 1894-95 Council. Council Room, Exeter Hall.
11.30 A.M.—Special Service at St. Paul's Cathedral. Sermon by His Grace the Archbishop of Canterbury.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business. Exeter Hall.
8.30 P.M.—Reception by the Metropolitan Counties Branch } In the Imperial
9 P.M.—General Meeting. President's Address. } Institute
9.45 P.M.—Conversazione.

WEDNESDAY, JULY 31ST, 1895.

9.30 A.M.—Meeting of 1895-96 Council. Council Room, Exeter Hall.
10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
3 P.M.—Second General Meeting. Exeter Hall. Address in Medicine by Sir WILLIAM BROADBENT, M.D., F.R.C.P., Physician-in-Ordinary to H.R.H. the Prince of Wales. Any Business adjourned from First General Meeting at 2.30 precisely.
8.30 P.M.—Musical Promenade at Gardens of Royal Botanic Society.
8 P.M. to 12 P.M.—Illuminated Evening Fete at Gardens of Royal Botanic Society.

THURSDAY, AUGUST 1ST, 1895.

9.30 A.M.—Meeting of Council. Council Room, Exeter Hall.
10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
2 P.M.—Third General Meeting. Exeter Hall. Address in Surgery by JONATHAN HUTCHINSON, F.R.S., F.R.C.S., Consulting Surgeon to the London Hospital. Presentation of the Jacksonian Prize to Deputy Surgeon-Lieutenant-Colonel D. Douglas Cunningham, M.B., C.I.E., F.R.S.
7.30 P.M.—Dinner of the Association at Queen's Hall, Langham Place.

FRIDAY, AUGUST 2ND, 1895.

10 A.M. to 2 P.M.—Meetings of Sections. King's College, Conjoint Examination Hall, and Exeter Small Hall.
3 P.M.—Concluding General Meeting. Exeter Hall. Address in Physiology by EDWARD ALBERT SCHÄFER, F.R.S., Jodrell Professor of Physiology, University College.
9 P.M.—Conversazione at the Royal College of Physicians.
9 P.M.—Conversazione at the Royal College of Surgeons.

SATURDAY, AUGUST 3RD, 1895.

Excursions.

Particulars of further Entertainments, open to a limited number of Members only, will be found in the Local Guide.

Reception Room

The large hall at King's College will be opened at 12 o'clock noon on Monday, July 29th, and on Tuesday, July 30th, and the following days at 9 o'clock, for the issue of tickets to members and for supplying all necessary information. A reception room for invited foreign guests will be provided next to the large hall. It is particularly requested that members on their arrival will at once proceed to the reception room, King's College, enter their names and addresses, and obtain their tickets and Daily Journals containing programme, inquire for letters and telegrams, consult the list of lodgings, hotels, etc.

Notice to London as well as Country Members.

Members of the Association who intend visiting London during the annual meeting to be held on July 30th, 31st, August 1st and 2nd, and who have not already sent in their names, are particularly requested to do so at once that they may be included in the list of those intending to be present.

Those desirous of obtaining dinner tickets are requested to send in their applications without delay. Tickets and plans of the tables will be issued, on presentation of receipts, in the Reception Room, King's College, where seats can be selected, on and after Tuesday, 30th instant, from 9 A.M.

Hotel Accommodation and Lodgings.

A list of hotels offering special tariffs or discounts on their tariffs, together with a list of apartments which are recommended by members of the Association, may be had on application to the Honorary Secretary of the Reception Committee, 11, Chandos Street.

Only members of the British Medical Association, invited guests and accredited strangers will be allowed to attend the general meetings or the meetings of sections. Members and guests will be required to show their cards, which must be obtained and signed for at the Reception Room. Invited guests will be required to show their invitation cards upon entrance to any of the general meetings or meetings of sections. Members and guests are therefore earnestly enjoined to take care of their cards of admission, and to note that they are not transferable, and if lost cannot be renewed. Members or guests may take one lady only to any of the entertainments.

Only members and officially invited guests will be admitted to the dinner of the Association.

The Reception Rooms will be opened on Monday, July 29th, at 12 o'clock noon. Tickets for the dinner and excursions will not be issued until Tuesday morning. In applying for tickets members will be required to produce their membership cards to be stamped.

The members' Reception Room is in the large hall of King's College. There is a separate Reception Room for invited foreign guests next to the members' Reception Room, and another for ladies at the Royal Society's Rooms, Burlington House.

The post office and telegraph office are in the Reception Room, King's College. Members are requested to apply for letters and telegrams from time to time.

A list of members who have already expressed their intention of being present at the annual meeting of the Association has been printed, and may be seen on application at the office of the annual meeting, 11, Chandos Street, Cavendish Square, or at the offices of the Association.

Messrs. Thomas Cook and Sons, the well-known tourist agents, state that they will be in a position to make special railway arrangements for members attending the annual meeting when a considerable number are coming from the same town. Messrs. Cook and Sons will have a stall in the Reception Room at King's College for the sale of railway and tourist tickets.

Cards for the breakfast of the British Medical Temperance Association will be placed for distribution in the Reception Room, and may be applied for by members. In the unavoidable absence of the President, Sir B. W. Richardson, Dr. Long Fox will preside.

Notices of Motion.

Dr. Arthur Wellford hereby gives notice that he will move and Mr. J. F. Bullar will second:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties.

Mr. Lawson Tait hereby gives notice that he will move, and Mr. Colin Campbell will second:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support, a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1858, as now existing. We protest against the Midwives Registration Bill because it proposes to establish a class of midwifery practitioners who would be very incompletely trained in midwifery, and entirely uninstructed in medicine, surgery, and pharmacy—a matter of supreme importance in midwifery practice. We therefore instruct the Council and the Parliamentary Bills Committee to use every means to oppose any Bill which proposes to give to persons registered under it power to conduct, on their sole and independent responsibility, any midwifery practice without the guarantee of a complete curriculum and qualification. That this Association recommends a sum not exceeding £1,000 be expended for the purpose of opposing any such Bill.

Dr. Inch hereby gives notice that he will move and Mr. Horatio Nelson Hardy will second, as an amendment to the above:

That in the interests of the mothers of the United Kingdom the registration of midwives, after suitable training and examination, is a subject deserving the early and careful consideration of the Legislature, and in that consideration it is equally desirable that the legitimate rights and privileges of duly qualified medical practitioners should not be overlooked.

Dr. Bedford Fenwick hereby gives notice that he will move:

That in the opinion of this meeting it is expedient that an Act of Parliament should, as soon as possible, be passed providing for the registration and education of medical, surgical, and obstetric nurses; and the Council of this Association are therefore requested to consider this matter, and to take such measures as may seem to them advisable to obtain such legislation.

Proposed Increase in the Number of Direct Representatives on the General Medical Council.—Dr. R. R. Rentoul hereby gives notice that he will move, and Dr. H. Woods will second:

That as Sections 7 and 8 of the Medical Act, 1886, provide for the election of only five direct representatives to the General Medical Council by the registered medical practitioners resident in the United Kingdom; and as Section 10, Subsection 1, Paragraph c of this Act provides that the General Medical Council may represent to the Privy Council that it is expedient to confer upon the registered medical practitioners resident in any part of the United Kingdom the power of returning an additional number of direct representatives to the General Medical Council; and as the General Medical Council has, on November, 1890, on November, 1891, and on November, 1892, refused absolutely to make such representation; and as the number of registered medical practitioners has increased from 22,713 in 1876 to 32,634 in 1894; and as we medical practitioners were not given our due and proper number of direct representatives in 1886; and as the registered practitioners contribute all the income of the General Medical Council, by which the Medical Acts are administered, while the twenty universities and colleges represented on the General Medical Council do not contribute any income to it; and as the representatives of the universities and colleges are elected to the General Medical Council by their small Convocations, Senates, and Councils, and not by open vote of all their medical graduates only; and as other important councils, having similar but larger duties to the General Medical Council (such as the Councils of the Incorporated Law Societies of England and of Ireland, the Councils of the Pharmaceutical Societies of Great Britain and of Ireland, and the Council of Veterinary Surgeons) consist of direct representatives only, this Association instructs its Council to take immediate steps to have a Bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one additional direct representative to the General Medical Council.

Dr. Bedford Fenwick hereby gives notice that he will move:

That, in the opinion of this meeting, the time has arrived when it is expedient that the registered medical practitioners resident in England, and also the registered medical practitioners resident in Wales, should separately be granted the privilege of returning one additional member to the General Medical Council; and the Council of this Association are therefore requested to petition the General Medical Council to represent to Her Majesty's Privy Council the expediency of such an addition to their members, in accordance with Section 10 of the Medical Act of 1886.

THE UNRESTRICTED SALE OF POISONS AND OTHER DANGEROUS DRUGS BY CHEMISTS IN LIEU OF PRESCRIPTIONS OF MEDICAL PRACTITIONERS.—It will be moved by Dr. R. R. RENTOUL and seconded by Dr. D. CAMPBELL BLACK:

That owing to the unrestricted dispensing by chemists of prescriptions of medical practitioners on more than one occasion which contain poisons and other dangerous drugs, having regard to the evils arising therefrom, and believing the law in other countries, this Association recommends the members to write across the face of such prescriptions the words, "Not to be repeated," or "To be repeated once," and "To be repeated by the chemist to the practitioner," duly stamped and dated. And that if chemists refuse to adopt this rule, the members residing in towns and towns are recommended to establish, own, and manage under their exclusive control depots at which all their prescriptions shall be dispensed.

PROPOSED FUND FOR THE BENEFIT OF THE WIDOWS AND ORPHANS OF MEDICAL PRACTITIONERS.—It will be moved by Dr. R. R. RENTOUL:

That this meeting instruct the Council to obtain a table from an actuary showing the amount of annual and other payments necessary to provide the widows and orphans of subscribers (as their right and not as a charity) with an annuity of £10, or any multiple of £10 not exceeding £50. That such fund consist of two departments: First, an annuity department, the payments to which shall consist of entrance-tax, marriage-tax, age-tax, husband and wife equalising age-tax, annual tax, and foreign residents tax. The annuity to go to the widow so long as she remains a widow, and on the death of the widow, or on the death of the subscriber not leaving a widow, to the male and female children the issue of the subscriber, until the youngest male child has attained the age of 18 and unmarried, or the youngest female child the age of 21 and unmarried. Secondly, an immediate benefit department, to be based upon the principle of having no annual fees, but an agreement made by each subscriber who is a member of the annuity department to pay a small sum of money (in no case exceeding 5s.) on the death of each subscriber. The death of the subscriber to be notified to the General Secretary, who shall give notice in the next issue of the BRITISH MEDICAL JOURNAL of the death, and call upon each subscriber to contribute the amount of call. Subscribers of this department, whether married, single, or widowers, to possess the power to bequeath the proceeds of such "call" either to their widows, orphans, parents, or other nominees. That Mr. James Statham, F.I.A., Edinburgh, who has advised R. R. Rentoul regarding the formation of such a medical practitioners', widows', and orphans' fund, be requested to draw up the above-mentioned table.

PROPOSED IMPROVEMENT IN THE TRAINING OF MEDICAL STUDENTS IN PRACTICAL MIDWIFERY.—It will be moved by Dr. LOVELL DRAGE and seconded by Dr. R. R. RENTOUL:

That we view with deep concern and regret the recommendation of the General Medical Council to the medical examining bodies that they should admit students to their final examination who present a certificate stating that they have "conducted personally" only three, and "been present at" only nine confinements; and as the General Medical Council has refused on November, 1894, to alter this recommendation, we instruct our Council to petition the General Medical Council to recommend that no student be admitted to his final medical examination until he presents a certificate showing that he has personally conducted at least twenty confinements under the direct supervision of a registered medical practitioner. We also instruct the Council to take immediate steps to have Section 5 of the Metropolitan Poor Act, 1869 repealed, which prevents workhouse infirmaries from being used for the clinical instruction of medical students in practical midwifery while pupil midwives are now admitted; and also to petition the committees, medical staffs, and, if need be, the subscribers to the City of London Lying-in, the Samaritan Lying-in, and the Chelsea Maternity to withdraw their rule which excludes bona fide medical students from clinical instruction at these hospitals, seeing that these are now used by pupil midwives.

Proposed by R. TEMPLE WRIGHT, M.D., Brigade-Surgeon-Lieutenant-Colonel retired, seconded by F. W. PARSONS, M.R.C.S., L.R.C.P., of Wimbledon:

That this meeting desires to submit a respectful suggestion to the General Medical Council that every medical officer whose name appears in the Navy List, the Army List, and the Indian Army List shall be considered to be still alive and at the post opposite his name.

June, 1895. FRANCIS FOWKE, *General Secretary.*

The Ladies' Reception Committee have organised the following excursions, under the guidance of experts, for the benefit mainly of the wives of members of the Association. Should any lady, however, wish to obtain a ticket for an excursion for her husband it will be possible for her to do so. The number of tickets for each excursion will be strictly limited, and it is mentioned below. The cost of a ticket for each excursion, except for the one to the Cambridge Colleges, will be 1s. Ladies living in London will not be able to obtain tickets till the week of the meeting. Ladies living in the country or abroad may obtain them in advance by writing, and enclosing postal orders, to Mrs. R. Priestley, 81, Linden Gardens, Bayswater, London, W.

1. Girton and Newnham Colleges, Cambridge (40 tickets). The party will be entertained at the two Colleges. Date: Friday, August 2nd.

2. Westfield College, Hampstead (30 tickets). Date: Friday, August 2nd. Tea and coffee will be provided by the College.

3. British Museum. Mr. A. S. Murray will take a party of 15 on two days to the Greek antiquities, and Mrs. Tirard will take a party of 15 on one day to the Egyptian antiquities.

4. St. Paul's Cathedral. The Rev. Canon Gilbertson will take a party of 30 on July 31st.

5. Westminster Abbey. The Very Rev. the Dean of Westminster, Mrs. Murray Smith, and Mr. Weller will respectively take a party of 20 on July 31st, August 1st, and August 2nd. The Royal and other wax effigies in the Abbey will be shown.

6. The Tower of London. The Rev. W. J. Loftie will take a party of 25 on July 31st at 2 P.M. Special orders have been obtained from the Governor of the Tower.

7. National Gallery. Mr. Cosmo Monkhouse and Miss M. K. Bradby will take a party of 12 on July 31st and August 1st respectively.

8. Natural History Museum. Mr. George Murray will take a party of 30 on July 31st at 11.30 A.M.

9. South Kensington Museum. The Director, Mr. Armstrong, will take a party of 12 on July 31st and August 1st, at 2.30 P.M.

SPECIAL CORRESPONDENCE.

PARIS.

The Struggle against Alcoholism.—House Refuse and its Treatment.—The last News of the Paris Odours Commission.—Bacteriological Diagnosis of Diphtheria.—Dissecting at Clamart.—The Treatment of Skins.—Small-pox at Marseilles.—Honours in the Scientific World.—General News.

THE struggle against alcoholism, if not throughout France, is, in the capital, certainly the question of the day. M. Henri Rochefort, in the *Intransigeant*, vigorously combats the growing vice and scourge. M. Poincare, the Minister of Public Instruction, has appointed a Commission to formulate the measures to be adopted to introduce instruction on the effects of alcoholism in school education. This Commission has decided on the following programme: 1. That Ministerial circulars be sent to all institutions urging them to perfect their instruction in this sense; also that rewards be accorded to those who distinguish themselves in this struggle against alcoholism. 2. That a manual, prepared by distinguished specialists, be distributed among the institutions to guide them in the alcoholic instruction they give their pupils. 3. In the *écoles normales* and the *écoles primaires supérieures* masters and directors give lectures on the subject or, whilst treating his own special subject draws from it practical conclusions qualified to combat alcoholism. 4. In superior and normal schools two or three lectures are to be given every year. The same instruction will be given in girls' schools. It is believed that these propositions will be put in practice in the opening scholastic term.

M. Petsche, urges that house refuse ought to be removed during the night. The recipients containing it, whilst awaiting removal, ought to be lined with galvanised iron, provided with well-fitting lids, and of convenient dimensions. Broken glass and china, pieces of old iron and rusty metal, ought to be placed apart, and M. Petsche wishes to see the regulations concerning this point revised and strengthened. The carts removing the refuse ought to be covered; the danger incurred by allowing the army of Paris *chiffonniers* and others to rummage one after the other the dust boxes placed on the Parisian pavement awaiting the dust cart has not yet even been notified, therefore not combatted. So long as this dispersion of deleterious dust is practised over and over again during the early morning by the seekers of broken bread, rags cinders, etc., each having their special attraction for the army of their ragged and needy searchers, it is useless to provide iron-lined receptacles with well-fitting lids. Dr. Bourneville, one of the most practical sanitarians in France, has long ago called attention to the faulty system of removing house refuse and hospital *débris*. He energetically pointed out the necessity of improving the carts used by the Souffrice Company, which undertake its removal.

These carts leave in their track a terrible and dangerous stench.

The most recent news of the administrative Commission entitled "Des Odeurs de Paris", is that it has decided to divide into two subcommissions each numbering five members. One technical will investigate the origin of the "Odeurs," the other will study the legal side of the question, determine the value of the laws as they are, and the means of rendering them more efficacious.

Since January 1st, 1895, facilities have been offered to medical men at the bacteriological laboratory of the city of Paris for the bacteriological diagnosis of diphtheria. On application at the laboratory suitable tubes and swabs are forwarded, and the result of the analysis is communicated to the medical men twenty-four hours after it is received at the laboratory. Stamps forwarded to the amount of 5f. entitle the applicant to an answer by telegram. The laboratory, Rue Lobau, is open from 8 A.M. to 8 P.M., Sundays and holidays included.

It has been at last decided that 200 students of the Paris Faculty of Medicine are to dissect at the Clamart dissecting rooms, hitherto reserved for hospital house surgeons, the faculty dissecting rooms being overcrowded. The two Clamart prosectors will receive increased salaries amounting to 120 francs per year, and two *aides* are to be appointed.

Professor Riche has reported to the Health Council of the Seine department that skins coming from abroad should be unpacked in the open air on ground moistened with a solution of carbolic acid. Those who handle the skins should wear a special tight-fitting costume; face, hands, neck, and arms should immediately after the unpacking be washed with an antiseptic solution. The *débris* should be removed at once. Skins should never be removed by being carried on the backs of the people employed, but in barrows. Localities where the skins are prepared should be constructed without side walls in order to allow the free ingress and egress of the air. The skins should be arranged in low piles in order to prevent dust from them from accumulating. Cases of malignant pustule may thus be prevented. Professor Riche calls attention to the fact that in preparing skins in France arsenic is used in a much greater proportion than formerly to preserve them during the transport from abroad. He suggests that sulphide of sodium should be used as a substitute.

According to statistics furnished by Dr. Proust at the Comité Consultatif d'Hygiène de France, during the first six months of 1895, there were 175 deaths at Marseilles resulting from small pox, a rate of 4 per 10,000. At Paris during the same period, according to M. A. J. Martin, there were 10 deaths due to small-pox, a rate of 0.01 per 10,000.

M. Malassez, the well known histologist of the Collége de France, has received the long deferred and well-merited honour of the nomination as a Chevalier of the Legion of Honour.

Sir William Flower and Professor Ramsay have been elected Membres Correspondants of the Paris Academy of Science.

The death is announced of Dr. H. Baillon, Professor of Botany at the Paris Medical Faculty, Fellow of the Royal Society, and officer of the Legion of Honour. Cerebral congestion overtook him whilst in his bath, and he was found drowned in it. He published several works, the principal is *Le Dictionnaire Botanique et l'Histoire des Plantes*.

The death is announced of Dr. Kiener, Professor of Pathological Anatomy at the Montpellier Medical Faculty and director of the health service of the 116th Regiment. Dr. Kiener was *professeur agrégé* at the Val de Grace military hospital; it was he who organised the anti-diphtherial laboratory at Montpellier. He and Professor Kelsch, the Director of the military school, published many joint works.

At Montpellier a municipal decree forbids tradespeople to use coloured paper for folding up any edible articles.

WE are glad to see that the Poplar Union has joined in the movement in favour of trained nurses, and are advertising for a trained nurse.

THE Grocers' Company have voted £100, and the Mercers' Company £52 10s., in aid of the Queen Charlotte's Lying-in Hospital, Marylebone Road.

CORRESPONDENCE.

THE *INDEX MEDICUS*.

SIR,—I trust you will kindly find room for the following correspondence, which makes quite clear how this important question now stands. I beg leave to ask through the medium of your pages that those members of the profession who realise the paramount importance of keeping this publication alive will at once communicate with me if they are willing to subscribe the amount named by Dr. Billings and Dr. Fletcher. Twenty-five dollars (£5) is, of course, a rather large sum for individuals to subscribe, but it should be easy for workers to form groups of five who would subscribe £1 per annum, and in return receive a copy of the *Index* for common use. As regards institutions and societies, it is such an obvious duty to support the *Index* that the money should be voted without hesitation. I earnestly beg that the officers of the various medical societies of the country will bring this question before their committees at the earliest possible moment, and enable me to write to Dr. Billings and tell him that the estimated support from Great Britain has been secured.—I am, etc.,

J. Y. W. MACALISTER,
Resident Librarian of the Royal Medical and Chirurgical Society.

Hanover Square, W., July 19th.

War Department, Library of the Surgeon-General's Office,
Washington, D.C., July 8th, 1895.

MY DEAR MR. MACALISTER,—I have just seen in the *Lancet* and in the BRITISH MEDICAL JOURNAL of June 29th your friendly communication about the *Index Medicus*, which I highly appreciate. I have not yet received the letter which you mention as about to be written to me, but the suggestions in your communication to the journals correspond to the conclusions I had arrived at, and which are embodied in the enclosed copy of a letter which I am sending to friends in the larger cities. My estimate is that 120 subscriptions of 25 dollars each can be obtained in the United States, 60 subscriptions in Great Britain, and 20 in France and Germany. This last may be excessive but we can make up the balance. It is my impression that the quarterly form will be preferred by the majority of users, but on this point I shall be glad to have your opinion. Thanking you for what you have done, and hoping that you will continue, I remain, yours sincerely,
JOHN S. BILLINGS.

J. Y. W. MacAlister, Esq., Resident Librarian,
Roy. Med. and Chir. Soc., London.

Washington, D.C., July 8th.

DEAR DOCTOR,—After considerable correspondence on the subject of reviving the *Index Medicus*, we think that the following plan is the most feasible:

The cost of producing the work is about 4,800 dollars per annum, but as the amount of medical literature is increasing it is safest to put it at 5,000 dollars. It is proposed to try to get 200 subscriptions at 25 dollars each. Only 202 copies will be printed, no exchanges will be made, and there will be no advertisements. The subscriptions are to be paid in advance for one year to either of the undersigned. When 200 subscriptions have been received the list will close and the work will commence. It is thought that the first number may appear in November. If by December 1st the 200 subscriptions have not been obtained the money then received will be returned to the subscribers and the attempt will be abandoned.

If you approve of this plan will you endeavour to procure subscriptions in accordance with it? Please also express your opinion, and that of others whom you may consult, as to the advisability of changing the form of the *Index Medicus* from monthly to quarterly.—Very respectfully,
JOHN S. BILLINGS, M.D.
ROBERT FLETCHER, M.D.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

SIR,—In reply to "A Branch Member," I hope that you will allow me to point out that the funds of the Branches are distinct from the general funds of the Association, and that while the latter can be distributed only as provided by the Memorandum of Association, the former can be spent by the Branches as it may seem good to them. The granting of charitable donations by the Branches is therefore not illegal.

The Branch funds are not, as a rule, very large, and are quite insufficient for the effective carrying out of medical defence. Independent action on part of Branches in this direction would be not only unconstitutional, but tantamount to the formation of a large number of small defence societies, and would be productive of but little good.

The British Medical Association is neither a shadow nor an abstraction, as "A Branch Member" would have us believe, nor is the work of the Council purely formal. Such an expression of opinion indicates complete ignorance of the working of the Association. "A Branch Member" is no better informed when he proceeds to criticise the action that many Branches have already taken in calling upon the Council to

take such steps as may enable the power of the Association to be used for the maintenance of the honour and interests of the medical profession. It is not because the Branches refuse to "put their own shoulders to the wheel" that these resolutions have been passed, but because if the proposed reform is to be effected it can only be done by and through the Council. Any independent action on the part of the Branches would be entirely out of order. What the Branches can do is to urge the reform upon the Council, and more than half the home Branches have already done so.

Although the maintenance of the honour and interests of the medical profession is stated to be one of the two objects of the founders of the Association, yet they omitted to provide in the Memorandum of Association any means of effecting this object. Consequently the work of the Association has been seriously hampered. It is to remedy this unfortunate oversight that the Council of the Association will be asked at the approaching annual meeting to take such steps as will enable the second great object of the Association's existence to be effected; and those who have the interests of our profession at heart will, I hope, attend the meeting and support the resolution which will be moved.

Finally, may I point out to "A Branch Member" that an elementary acquaintance with what is to be criticised is at least one of the essentials of a good critic?—I am, etc.,

Dover, July 20th. A. G. WELSFORD.

CHELSEA HOSPITAL FOR WOMEN.

SIR,—I see in the BRITISH MEDICAL JOURNAL of July 20th that it is stated in reference to the Chelsea Hospital for Women that the Board of Management had itself taken the responsibility of making an appointment to the staff of the hospital in disregard of the recommendations of its Medical Committee of Selection. I wish to say that in reply to my questions at the general meeting of the hospital held on June 26th, when the Governors were asked to confirm the elections to the staff, the Chairman stated that the recommendations of its advisory Medical Committee had been followed in every single instance, and that it was untrue to state that the advisory Medical Committee were dissatisfied with the way in which their recommendations had been received.

I hope in the interests of the hospital the matter may be publicly cleared up.—I am, etc.,

A. J. MYERS,
July 24th. A Governor of the Hospital.

*** The statement that the Board of Management had made appointments to the staff of the hospital in disregard of the recommendations of their Medical Committee of Advice was originally made in the BRITISH MEDICAL JOURNAL of January 26th, p. 216, and has never been contradicted or questioned. We certainly think that some explanation is due from the Board.

THE PROFESSION AND MEDICAL AID SOCIETIES.

SIR,—We are directed to inform you that a meeting of the medical profession in Eastbourne, called by the invitation of the local medical society, has been recently held for the purpose of considering proposals for the formation of a provident medical association, in order to combat the growing evil of commercial "medical aid societies" in this town. At the meeting it was resolved that an association should be started upon the following lines:

1. All duly qualified resident medical men not practising as homœopaths to be eligible for the acting staff, subject to the approval of the committee.

2. The committee to be exclusively a professional one, consisting of the staff and a certain number of members appointed by the Eastbourne Medical Society.

3. A wage limit or other check to abuse to be adopted, and

4. The profits, after payment of working expenses, to be divided amongst the acting staff proportionately to the number of members upon their respective lists.

The following resolutions were also adopted:

1. That every medical man in Eastbourne be invited to sign a statement agreeing neither to accept any appointment himself in any "medical aid" or similar society, nor to have any professional intercourse whatever with any medical practitioner holding any appointment in, or associating himself in any way with, any of the so-called "medical aid societies," or with any similar company, so long as the methods adopted by these societies include (a) canvassing for members in the interest of individual practitioners, (b) the virtual "sweating" of their medical officers by the inadequate remuneration for the work done.

2. That, considering the necessity for permanently maintaining united action on the part of the profession towards these medical aid societies, this meeting approves the plan of requesting the Committee of the Eastbourne Provident Medical Association to depute one of its members to call upon every new medical practitioner settling in Eastbourne with the object of warning him against the methods of the medical aid societies, and of courteously inviting his signature to the above agreement.

3. That the British Medical Association be requested to approach the deans of the various medical schools in the United Kingdom and urge them to point out to their senior and recently qualified students the very objectionable character of these medical aid societies. (b) That the Royal College of Surgeons of England and the Royal College of Physicians of Ireland have both expressed in clear terms their disapproval of their diplomates associating themselves with these societies. (c) That the Committee appointed by the General Medical Council to inquire into the working of these societies in relation to the medical profession unanimously condemned their methods. (d) That by accepting appointments in these societies medical practitioners will cut themselves off from their professional brethren.

It was further agreed to send copies of these resolutions to the medical journals in the hope of warning inexperienced junior practitioners who might otherwise accept posts under medical aid societies in Eastbourne.

The following practitioners signed the agreement embodied in the first resolution: James Adams, A. R. Barnes, D. Matthews Browne, Chas. H. H. Cameron, Henry Colgate, Wm. J. Daly, J. N. d'Esterre, E. Downes, Frank Elvy, J. H. Ewart, H. D. Farnell, Kenneth Frazer, Henry Habgood, C. O'Brien Harding, A. Harper, Charles N. Hayman, H. A. Hinds, Henry J. Holman, Otto Holst, G. H. Jackson, J. Talfourd Jones, Thos. MacQueen, Fredk. Marsdin, William Pollock, Astley Roberts, Charles Roberts, A. Edw. Rook, Arthur P. Sherwood, A. R. Sieveking, George P. Skinner, Wm. Muir Smith, A. Wheeler Taylor, Rich. Watts White, Neville S. Whitney, and Edmund Willett.—We are etc.,

J. H. EWART,
President Eastbourne Medical Society.
A. HARPER,
Hon. Sec. *pro tem.* Eastbourne Prov. Med. Association.
Eastbourne, July 22nd.

REGISTRATION OF MIDWIVES.

SIR,—The result of the debate upon this question at the annual meeting of our Association will be looked for with anxious interest by the whole profession. The point of first importance is united action, and so far as the authors of the various resolutions already published are concerned, this is assured, each and all indicating a desire to remove the recognised evils of the present practice of uneducated and ignorant "midwives," to afford protection to "the poor mothers of England," and to protect the interest of the profession. The position has been made most difficult by the extraordinary action of the General Medical Council. This body is looked upon as the "supreme authority on all matters of medical education," but it has thrown the profession away. Intimidated by the Midwives' Institute, and alarmed lest they might incur the disfavour of a small section of London society they have not only stultified their own action, but have also done an act they had no legal authority for, namely, given their sanction to the Obstetrical Society of London to grant a midwifery certificate. It is incredible that the Council should have given way to the pressure of a few lay agitators, but several of its members have over again declared that something must be done because the registrationists say the evils of "midwives'" practice are so great they therefore set about to consider the "wretched Bill" of which we have heard so much, although they averred that its vaunted object, namely, to provide cheap and efficient help to the poor women in time of their labour was in no way provided for in the measure. How much respect the promoters of the Bill or the Legislature have for their feeble attempt to modify its clauses is shown by the fact that in the amended Bill which was dropped by the House of Lords just before the dissolution of Parliament the alterations proposed by the Council were completely

ignored. They timidly suggested that the worthless documents they have been compelled from time to time to condemn should not be legalised; but the agitators were more courageous, stuck to their demands, and kept in the objectionable clause—in fact, the Council have been completely beaten by the Midwives' Institute. This being so, it is perfectly clear we must act without any regard to the General Medical Council or the expressed opinions of the majority of its members. If we are to have a Bill at all, a "midwife" or midwifery nurse should be defined as "a woman who attends a case of natural labour under medical control, and personally undertakes the subsequent nursing of the mother and child." This is what the public understand by a midwife, but the registrationists will not like this clear definition of her duties.

We are promised early reform of the Poor Laws, and it would seem almost wiser that we should wait to see what proposals are made in this direction before proposing legislation for amending or repealing but a small part of the Poor-law system.

Old age pensions are to form a part of the proposed reform. This is simply another form of parish relief. I have long ago pointed out that a poor person receiving State help is far worthier than one who accepts charity, yet we have been constantly told by the advocates of the "new midwife" that she is necessary, because the State medical service is not sufficiently high toned for the class of women it is provided for. What makes the services of the district medical officer so distasteful is that the order for his attendance must be got from the relieving officer. Surely it would be a very easy matter in the contemplated reforms to adopt some more acceptable system.—I am, etc.,

Old Trafford, July 22nd. JAS. BRASSEY BRISBLEY.

THE INOCULATION OF TUBERCULOSIS BY TATTOOING.

SIR,—In the BRITISH MEDICAL JOURNAL of June 29th there appeared a letter from Dr. Vincent D. Harris, in which he points out that our notes on the cases of "Inoculation of Tuberculosis following Tattooing" do not conclusively prove that such was the case. We do not hold that the suppuration must have been due to the presence of tubercle bacilli, nor was the enlargement of the epicondylar and axillary glands a point which influenced us in our diagnosis. Is it not likely that the saliva itself, as well as containing tubercle bacilli, also contained pyogenic organisms, or that these subsequently found their way into the wounds from the surrounding skin or from the linen. We have had opportunities both at home and abroad of studying tattooing, and have repeatedly known "sore arms" follow it. These mostly consisted of simple cellulitis, which we have always found allayed by ordinary treatment in a few days. In these cases the glands in the neighbourhood were almost invariably enlarged. Normally, after a surface of any extent is tattooed, slight inflammation follows, the area being swollen and raised above the surrounding skin, with sometimes enlargement of the neighbouring glands. This, however, rapidly subsides, and is due probably either to the irritation of the pigment or the damage done to the tissues.

As to whether the ulcers which were left in J. H.'s case after the scabs were removed were typically tuberculous or not matters little, as any local tuberculous manifestations most likely would have been modified for the time by the local irritation due to the aforementioned causes. This was the only case in which ulceration took place and the ulcers rapidly granulated up and skinned over, as on December 10th, that is two months afterwards, when shown at Mr. J. Hutchinson's museum, they were, to use Mr. Hutchinson's own words "simply inflamed patches of swollen skin."

In one of the cases of tuberculous inoculation following tattooing already on record and in which bacilli were demonstrated ulceration was present. In this case, reported by Dr. Jadassohn,[1] a phthisical man tattooed a healthy woman, using saliva to mix the pigment. Scabs formed, which, on being removed brought into view a "shallow sharp-bordered ulcer." The ulcers which we characterised as deep were deep because the edges were raised above the level of the surrounding skin. We examined the sections microscopically and came to the conclusion that they were tuberculous, but, to make assurance doubly sure we sent a piece of skin to the Clinical Research Association's laboratory, and a slide was returned with the following report:

In each section examined there were tubercles in the corium immediately under the Malpighian layer. Two or three typical giant cells were seen in each section, and, although it is doubtful whether tubercle bacilli existed in the nodules yet the tuberculous nature of the lesion admits of no question.

The sore arms gave the boys very little trouble, and we had the greatest difficulty after the first week or two in making them attend with anything approaching regularity. The parents would not hear of surgical interference. The last opportunity we had of seeing them was at the beginning of January last, and then the condition was practically the same as when shown at Mr. Hutchinson's museum. It must be remembered that this was more than three months after the operation. Our diagnosis was based on the following:

1. The tuberculous appearance and chronic nature of the lesions.
2. The stubbornness to yield to simple treatment which was persevered with for some weeks.
3. The operator was in the last stage of phthisis when he pricked his saliva into his victims.
4. The similarity in the cause, appearances, and course of three lesions in three different persons.
5. The fact that from the time the acute symptoms (which lasted for about fourteen days) subsided until more than three months after the operation, the lesions were practically *in statu quo*.
6. The result of the microscopical examination. The fact that no bacilli were found is rendered of less moment owing to the well-known difficulty in demonstrating these in lesions of the skin.

In spite of the extreme difficulty we have had in following up the cases, we hope to be more successful in the future, if only to be able to record the appearances of the lesions and their effect on the lives of their possessors.—We are, etc.,

D. W. COLLINGS,
Tottenham, July 9th. W. MURRAY.

HEALTH INSPECTIONS IN PUBLIC SCHOOLS.

SIR,—The subject of the spread of contagious diseases in public schools has been of late largely discussed. Reading from time to time much matter adverting to it, I have been struck with the need there exists for careful weekly health inspections in all public schools by the attendant medical officer, so as at once to identify any contagious or infectious disease and adopt measures for isolation. Such periodical health inspections by medical officers are ordered for military bodies; why, therefore, should they not be carried out in public schools? I am not aware (I write, though, on this point subject to correction) that any such system exists in schools. A disease may often be well advanced before a boy thinks of complaining to such an extent as would draw the attention of the master or medical attendant to the illness. A paper read by Dr. Clement Dukes before the College of Preceptors on November 21st, 1894, which appeared in the *Educational Times* of December 1st, 1894, might be studied with much profit by medical officers of schools, whose inspections should have the twofold object of being both medical and sanitary. Even in this admirable paper I see no allusion to the advantage, or even need, of any periodical health inspection for the early detection of disease. Dr. Clement Dukes's admirable scheme for the inspection of schools from the medical and sanitary point of view was pronounced by the Chairman at the meeting to be "a *beau ideal* which should be kept in view as far as possible, though no teacher could be expected to carry it out thoroughly."—I am, etc.,

July 9th. M.D.

ABUSE OF HOSPITALS.

SIR,—As the prevention of hospital abuse is largely in the hands of the medical profession, the following plan has been tried at a provincial hospital: Patients who are plainly objects of charity receive advice and treatment. Those who are supposed to be in good circumstances are examined; the name of their usual attendant is obtained; a paper stating

[1] Virch. Arch., Bd. cxxi.

the diagnosis and the treatment recommended is handed to them, and they are advised to return with it to their own doctor and continue under his care. Most patients are satisfied with this, and many medical men appreciate the system. Some, however, scold the patient for having gone to hospital and so lose the case, while others regard the hospital diagnosis and recommendation as reflecting on their skill and take offence. Thus, a system which has many advantages is rendered by the men who alone gain by it a source of irritation to the patients who submit to it and to the doctor who takes the trouble to carry it out.—I am, etc.,

July 22nd. PROVINCIAL.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A SURGEON-MAJOR with about two years' more home service wishes to exchange with an officer who has partly completed a tour of service in India; Bombay preferred.—Apply Respite, Messrs. Holt and Co., Whitehall Place, London.

ARMY MEDICAL STAFF.

SURGEON-GENERAL ROBERT BOWEN died at Weston-super-Mare on June 7th. He entered the service as Assistant-Surgeon May 18th, 1841; was appointed Surgeon, December 26th, 1851; Surgeon-Major, May 18th, 1861; Deputy Surgeon-General, March 9th, 1867; and Surgeon-General, April 28th, 1876. He retired on half-pay, June 28th, 1877. We learn from Hart's *Army List* that he served in the Kaffir war of [illegible] (medal), and acted as Principal Medical Officer to the expedition against the Kaffir chief Kreli, in August, 1858; was shipwrecked in her Majesty's ship *Birkenhead* off Danger Point, Cape of Good Hope, February 26th, 1852; and was in the Eastern campaign of 1854-55, including the battles of Alma and Inkerman and siege of Sebastopol (medal with three clasps, and Turkish medal), was acting Principal Medical Officer of the 4th Division during the march from Old Fort to Cathcart's Hill, and for a short time afterwards.

Brigade-Surgeon-Lieutenant-Colonel ROBERT NELSON MALLY died at Oghill, county Sligo, on July 7th, aged 59. Appointed Assistant-Surgeon October 2nd, 1855, he became Surgeon, March 1st, 1873, Surgeon-Major, October 2nd, 1875; and Brigade-Surgeon-Lieutenant-Colonel, December 27th, 1887, having attained the rank of Lieutenant-Colonel, October 2nd, 1883. During the Zulu war in 1879 he had medical charge of the 2nd Battalion 3rd Buffs and the 3rd Battalion 60th Rifles, and of the troops at the Black Umvolosi River. He had received the South African medal with clasp.

Surgeon-Colonel SAMUEL ARCHER is placed on retired pay July 9th. He entered the service as Assistant-Surgeon August 3rd, 1858; became Surgeon March 1st, [illegible]; Surgeon-Major April 1st, 1873; Brigade-Surgeon October [illegible], 18[illegible]; and Surgeon-Colonel from November 23rd, 1889. He was attached to the 101st Fusiliers with the Eusofzai Field Force on the North-West Frontier of India in November and December, 1863, and was present at the storming of the Conical Hill and the destruction of Umbeylah (medal with clasp); served with the Nile Expedition in 1884-85 in charge of the field hospital at Korti (medal with clasp and Khedive's star); and with the Soudan Frontier Field Force in 1885-86 in medical charge at Wady Halfa and of the line of communications to Akasheh.

INDIAN MEDICAL SERVICE.

THE following promotions, which have already appeared in the BRITISH MEDICAL JOURNAL, have received the approval of the Queen, dated March 31st: Madras Establishment—Surgeon-Majors G. T. THOMAS, A. J. STURMER, and ARCHIBALD ADAMS, M.D., to be Surgeon-Lieutenant-Colonels; Surgeon-Captain A. O. EVANS to be Surgeon-Major. Bombay Establishment—Surgeon-Majors A. H. C. DANE, M.D., J. P. GREANY, M.D., G. E. F. [illegible], and JAMES MCCLOGHRY to be Surgeon-Lieutenant-Colonels; Surgeon-Captains M. A. T. COLLIE and W. H. QUICKE to be Surgeon-Majors.

Her Majesty has also sanctioned the retirement from the service of Surgeon-Colonel A. PORTER, M.D., Brigade-Surgeon-Lieutenant-Colonels A. L. [illegible], F. F. [illegible], M.D., and Surgeon-Major DONALD [illegible], all of the Madras Establishment, and of Surgeon-Lieutenant-Colonel G. E. E. [illegible], of the Bombay Establishment.

Surgeon-Lieutenant-Colonel G. E. E. [illegible], Bombay Establishment, has retired from the service July [illegible]. He was appointed Assistant-Surgeon, March [illegible], and became Surgeon-Lieutenant-Colonel March [illegible]. He was in the Afghan war [illegible], and was present in the engagements at [illegible] (mentioned in despatches) and [illegible], at the defence of Candahar, and at the battle of Candahar (medal with clasp).

Surgeon-Lieutenant-Colonel H. HYDE, Madras Establishment, has also retired from the service from May [illegible]. His commission as Assistant-Surgeon dates from October 1st, 1866; and as Surgeon-Lieutenant-Colonel twenty years [illegible].

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT W. G. CRESWELL, M.D., is promoted to be Surgeon-Captain July [illegible].

THE VOLUNTEERS.

SURGEON-LIEUTENANT W. MCCLELLAND, M.B., 9th Lancashire Artillery, has resigned his commission, July 24th.

Mr. HENRY ASHTON [illegible] is appointed Surgeon-Lieutenant in the 2nd (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment, July 24th.

Surgeon-Major P. E. HILL, 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers, is promoted to be Surgeon-Lieutenant-Colonel, July 24th.

Mr. ALFRED CROUDSON TUNSTALL, M.D., is appointed Surgeon-Lieutenant in the 1st Tower Hamlets Rifles, July 24th.

Surgeon-Lieutenant-Colonel P. H. WATSON, the Queen's Rifles Volunteer Brigade the Royal Scots, is appointed Brigade-Surgeon-Lieutenant-Colonel in the Forth Brigade Volunteer Infantry Brigades, July 24th.

Surgeon-Lieutenant-Colonel T. L. GENTLES, 1st Volunteer Battalion the Derbyshire Regiment, is appointed Brigade-Surgeon-Lieutenant-Colonel in the North Midland Brigade Volunteer Infantry Brigades.

THE MEDICAL STAFF IN THE CRIMEA.

Two recently published books—namely, *The Crimea in 1854 and 1894*, by General Sir Evelyn Wood, and *The Story of the Highland Brigade in the Crimea*, by Lieutenant-Colonel A. Sterling—contain allusions to the Medical Department that will be read with amusement and interest. The bungling of the medical arrangements and their breakdown during that war are now matters of history. Sir Evelyn Wood speaks of the medical officers as "being of a high social class, many having entered the service with excellent professional qualifications," but points out that, owing to a different department holding and issuing drugs, and the manner this department treated the requisitions of medical officers, "it had come to be understood, at least by some, that a medical officer was valued in inverse ratio to his demand for drugs and medical comforts."

Sir Evelyn Wood comments on the ignorance of Ministers and the public about military affairs in those days, and gives an example where in the House of Commons "panniers" were set down as "for the conveyance of the sick," and of such a "statement being accepted."[1] He also says that when cholera was raging in one division on August 1st there was no wine, brandy, arrowroot, or sago. There was a small reserve at headquarters, but the medical officer in charge of the division had been admonished in July to demand less medical comforts, as he had asked "for more of one article than the whole amount of the reserve supply." The same medical officer having demanded urgently a particular drug, was answered that, "as it did not make an araba (country waggon) load, it could not be sent unless he supplied a man to carry it the few miles intervening between the division and headquarters."

Lieutenant-Colonel Sterling in his work goes for the doctors, and accuses them of conniving at economies by putting sick soldiers on low diet, so as to save something to the Treasury out of hospital stoppages. Miss Nightingale also receives some notice of a sneering character, while the author does not fail to complain of many effective soldiers being withdrawn from the ranks for hospital work.

ARMY SANITATION.

REFORMER adverts to the new regulation by which the Royal Engineers are to submit the condition of newly constituted or repaired drains to the judgment of the Medical Department as a step in the right direction. The same order, he says, practically gives the Royal Engineers away, by ruling that competent civilians may be called in, if necessary, for the carrying out of sanitary works. The late War Minister did, indeed, state that Mr. Tyndale was always available at headquarters for consultation on sanitary matters; but how often was that gentleman's opinion or supervision asked? The Royal Engineers' regulations (paragraph [illegible]) enjoin that, on the initiation of sanitary work, it is to be submitted to headquarters through the senior medical officer of the district, a regulation notoriously more regarded in the breach than in the observance.

OUTFIT FOR MEDICAL STAFF.

WE stated lately that about £[illegible] should cover the cost of uniform, but some correspondents place the outfit at £[illegible], £[illegible], or even £[illegible]. Outfit is, of course, an elastic term, and may be held to include other clothing beside uniform, and also barrack furniture, and even saddlery. Of course if a variety of items are included, then £[illegible] would not be too much.

CORRUPT PRACTICES.

OUR contemporary, *Truth*, under the head of "Corrupt Practices at 18, Victoria Street," makes grave allegations, which either ought not to be made, or if made, should certainly be cleared up. Such charges cannot rest as they are.

DISCIPLINE.

A MILITARY contemporary, says [illegible], ridicules the idea of rejecting a medical officer for promotion on account of want of knowledge of service regulations, apparently on the ground that a doctor can have nothing to do with anything but doctoring. The object of such misstatement is to prepare the public for the conversion of the army medical department into a civil body, with no power in hospitals or elsewhere. The great military Powers of Europe [illegible] a policy exactly the contrary, and endeavour to cultivate the military instinct in medical officers; our system is to make it impossible for military surgeons to exercise command. At best only a smattering of military instruction can now, under a reduced term, be imparted at Aldershot.

THE INDIAN MEDICAL SERVICE.

A WELL-INFORMED correspondent writes that alterations in the existing constitution of the Indian Medical Service not only are [illegible] but must soon compel the attention of the India Office. Present arrangements

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[1] *Hansard*, vol. cxxxv, p. [illegible], Debate on Vote of Credit.

tend neither to harmony nor efficiency: the interchangeability of medical officers between civil and military appointments is anomalous and irregular. The reputations for precedent of Brigade Surgeons who may have passed years in civil employ to administrative berths in the army are also quite insufficient to insure administrative efficiency. This was pointed out by Sir James Dormer, when Commander-in-Chief in Madras. Lord Sandhurst also, in 1881, placed on record the opinion that "it would be of essential benefit to civil and military interests if the Government would create a distinct civil medical service for India, quite independent of the army." If in the Staff Corps ten years' continuous civil employ disqualifies for command, a similar rule should be extended to posts of military medical administration. Yet we find medical officers employed in civil capacities for almost twenty years suddenly turned into responsible posts of military administration. Complete separation of the civil and military branches is advocated in influential quarters, leading, of course, to fusion of the latter with the Medical Staff, and a single door of entrance. The civil branch should be part of the Civil Service, and recruited through competition embracing Indian graduates. The present "loan system" has been authoritatively pronounced as unsatisfactory in mobilisation.

, There are two sides to this question, and some years ago we discussed them, showing both the advantages and drawbacks to a separation of the civil and military branches. It is a matter embracing policy as well as finance and efficiency. The great advantage of the "loan system" is, of course, the hold the Government retains upon all medical officers whatever in the event of sudden military emergency. But we think this might be retained even in a purely civil service, for if it came to the worst, every European in India must play the part of a soldier. The chief drawback is the impairing of military efficiency by the long divorce from military duties involved in civil employment. The separation of the service into civil and military would facilitate the entrance and employment of native graduates, who for reasons of State cannot enter the Army Medical Staff. The entire question must be approached and considered from the threefold aspect of policy, efficiency, and finance; but we trust the historic continuity and splendid traditions of the Indian Medical Service may in any change be as much conserved as possible.

MEDICO-LEGAL AND MEDICO-ETHICAL.

DEATH OF A PATIENT AT THE HOLLOWAY SANATORIUM.

Mr. William Court Gully, Q.C., M.P., has issued his report of an inquiry which was ordered by Mr. Asquith, when Home Secretary, into the cause of the death of a patient named Thomas Weir at the Holloway Sanatorium, St. Ann's Heath, Virginia Water, a registered hospital for the insane. Mr. Gully was assisted in his inquiry by Dr. George H. Savage, and both the relatives of the deceased and the committee of the hospital were represented by counsel. Weir, it will be remembered, had, for a considerable time previous to his death, been confined in an apparatus called the "dry-pack." Mr. Gully reports that at the time of the inquiry he was informed that the dry-pack was no longer used in the form in which it had been used upon Weir, and the apparatus had been destroyed. The new method of restraint now employed in its stead he considered to be a great improvement upon the abandoned process. Two questions arose to Weir's treatment: (1) Was the "dry-pack" proper treatment? (2) was it administered with proper care and precautions? He was advised by Dr. Savage that "dry-pack" administered for a short time, say two to four hours, and with proper supervision and precautions, was a useful remedy in cases of mania both as a curative and as a restraining process; and, subject to those conditions, he thought Weir's case was a proper one for its application. But he was of opinion that such restraint continued from Wednesday to Sunday in such a severe and trying apparatus, and with such short intervals of freedom as were allowed, was dangerous and excessive, even if all proper precautions were taken. In Weir's case almost every ordinary and proper precaution seemed to have been neglected. No attendant was told off to sit with the patient and watch him either by night or day, no special directions were given to the attendant by the medical officer as to food, exercise, watching, stimulants, or any other matter, and though it was admitted the case required special care and frequent visits, about twenty-four hours elapsed on one occasion without Weir being seen by any medical man. It was impossible to avoid the conclusion that at the time in question, not only was there an insufficient medical staff, but there was also a total absence of that systematic watchfulness, discipline, and supervision which were absolutely necessary in a great hospital for the insane, and that those deficiencies largely contributed to cause the death of Thomas Weir. It was fair to add that the Committee of the hospital were, he believed, anxious to conduct the institution on humane and liberal principles, and to spare no pains to make it a first-class establishment for the several classes of patients for whom it was intended. And he had no reason to doubt that Dr. Philipps as medical attendant wished to carry out the Committee's views, but the administration of so large an establishment left him very little time for purely medical work or for the supervision of medical officers or attendants.

FEES TO MEDICAL WITNESSES.

J. W. N. writes: I have recently had to attend the assizes as a medical witness in a case of manslaughter. I had to leave the station here at 9.37 A.M. on three days, Friday, Saturday, and Monday; on the first two days I reached the station here at 5.55 P.M., and on Monday was released in time to get here at 12.42 P.M. The fee paid was one guinea per diem; total, with allowance for expenses, £3 15s. 10d. I have already written a protest to the judge, but I am in hopes that some united action may be taken by members of the profession with the object of obtaining fees which may more nearly compensate for the expenditure of time and trouble.

, The fee paid was in accordance with the authorised scale, which was settled forty years ago and has never yet been amended in spite of frequent grumblings by members of the profession. A somewhat more liberal scale is in force in Scotland. It might be worth while to represent to the new Home Secretary the inadequacy of the fees now allowed, and to press for an allowance which will in some measure compensate for time lost in the discharge of a public duty. The matter will be brought under the notice of the Parliamentary Bills Committee of the British Medical Association.

TITLE OF "DR."

Medicus writes: My qualifications are M.R.C.S Eng. and L.R.C.P.Lond. Is there anything actionable in my putting "Dr." to my visiting card?

, We believe it not to be an infrequent practice for a medical practitioner, although not entitled to the degree M.D., to prefix the title of "Dr." to his name on doorplate or card. Strictly speaking, however, in the light of not remote decisions it may possibly be that legal proceedings would lie against such practitioner under Section 40 of the Medical Act for so doing, but we doubt very much if on such ground alone legal proceedings would be successful, and we should certainly not recommend their being taken. The question is a vexed one, and has been much discussed in our columns.

W. B. H. inquires if it is really the case that holding the "L.S.A." diploma he can call himself "Dr." and have that prefix on his doorplate.

, Licentiates of the Society of Apothecaries have no greater claim to prefix "Dr." to their name than any other legally qualified general medical practitioner. The prefix of "Dr." has been largely adopted as belonging by courtesy to the medical practitioner, but having regard to a recent decision of the High Court (to which we have before had occasion to refer) it would appear to be a matter of doubt whether anyone not possessing a registrable degree of M.D. is, strictly speaking, entitled to call himself "Dr."

TESTIMONIAL TO TRADE PREPARATIONS.

M. B. writes that he received recently a blotting pad from a firm which advertise largely certain preparations of wine designed for the use of invalids. This pad, he states, bore testimonials to the value of the firm's preparations from two members of the medical profession.

M.B. protests, also, against consultants allowing their names to be appended to bulletins in the daily papers.

, As to the first point, we have frequently expressed the opinion that the giving of such testimonials is most undesirable. We have, indeed, so frequently given this opinion, that we are a little weary of repeating it, but may quote the following resolution recently adopted by the Hanoverian Medical Council (Aerztekammer): "In view of the recent active dissemination of an advertisement of a hygienic toilette soap, the Council considers it to be its duty to call the attention of the medical profession to the fact that the authority of the profession, and in particular of medical recommendations, is compromised seriously by such recommendations. Only the strong determination never, and under no circumstances, to place in the hands of a manufacturer a written expression of opinion as to a secret remedy, can protect a medical man from the misuse of his name."

As to the second point mentioned by "M.B.," a carefully considered expression of opinion was published in the British Medical Journal of January 6th, 1894, p. 20.

UNQUALIFIED PRACTICE.

A Member writes: We have here a man in charge of a surgery with "Surgery" printed on the window. He prescribes for patients inside but does not visit. He does not hold a diploma. Could anything be done to remove the "Surgery" from the window, as people in the neighbourhood think he is legally qualified.

, We think their ought not to be much difficulty in procuring sufficient evidence in such a case to authorise proceedings being taken under Section 40 of the Medical Act, 1858, for wilfully and falsely assuming a medical title. Anyone may take these proceedings in a magistrate's court.

If evidence of prescribing for patients, in two or three instances, were furnished to the Clerk to the Society of Apothecaries, Blackfriars, London, we have no doubt that that Society would be willing to take proceedings against the person in question, under the Apothecaries Act.

It must be shown that the unqualified practitioner has prescribed for patients requiring medical (as distinguished from surgical) treatment, and has compounded and supplied medicines for their cure or relief, for gain.

ANÆSTHETISTS AND UNQUALIFIED DENTISTS.

J. F. R. writes: Is it unprofessional conduct for a registered medical man to give gas or any other anæsthetic at the house of dental esta-

[illegible] which are not recognised by any registering body in the United Kingdom.

*** The question raised by our correspondent is a delicate one, and an expression of a "pious opinion" by the General Medical Council would be valuable and would probably be adopted by all anæsthetists as a guide to their actions. Our own opinion is that medical men should not administer anæsthetics for unregistered practitioners, whether medical or dental, nor for registered dentists who are guilty of the unprofessional conduct of advertising, and certainly not for "the institutions" that are found throughout the country but to which no practitioner's name is attached, and evade the provisions of the Dentists Act. Anæsthetists might with advantage refuse (even at a patient's request) to administer anæsthetics for unprofessional practitioners. It is difficult for patients to understand that there is any difference between registered and unregistered if the same anæsthetist is found at both. In London those gentlemen who are known to administer for illegitimate are usually ostracised by the legitimate practitioner.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

EXAMINATIONS.—The Second Professional Examination for Degrees in Medicine began on July [illegible], when the written papers on Anatomy and Physiology were set. On July [illegible] Materia Medica and Pathology, and later in the day the viva voce examinations were taken up. The First Professional Examination began on July [illegible] with Practical Chemistry, followed on July [illegible] by Chemistry and Botany, on July 23rd by Zoology and Physics, on July [illegible] by the viva voce examinations.

UNIVERSITY COURT.—The Court met on July [illegible]. A letter was read from the Secretary of the Scottish Universities Commission, informing the Court that the Finance Act, 1895, including the provision for the repeal of the stamp duty on the M.D. Degree, is now law. A letter was read from [illegible], thanking the Court for the letter of sympathy which they had sent him on the occasion of the death of his uncle, Dr. [illegible]. The Court appointed the following gentlemen to be University Lecturers for the Academical Year 1895-96 in the subjects specified: Mr. C. M. Douglas, B.Sc., in Psychology; Mr. William Peddie, D.Sc., Advanced Experimental Physics; Mr. John Beard, D.Sc., Embryology; Mr. Leonard Dobbin, Ph.D., in Chemical Theory; Dr. Joseph Tillie in Experimental Pharmacology; Dr. Robert Muir, in Pathological Bacteriology; Dr. David Hepburn, in Regional Anatomy; Dr. A. P. Aitken, in Agricultural Chemistry; and Dr. W. G. Smith, in Plant Physiology. On the recommendation of the Senatus the Court recognised Dr. [illegible] Campbell Black, Anderson's College Medical School, Glasgow, as a teacher whose course of instruction in Physiology qualifies for graduation in Medicine. On the recommendation of the Senatus the Court recognised Dundee University College as an institution the courses of instruction in which qualify for graduation in Science.

UNIVERSITY OF GLASGOW.

THE following have passed the Final Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):

A. Candidates who have Passed the Final Professional Examination.—J. C. [illegible], T. Armstrong, F. J. Barker, M.A.; T. Baxter, A. Blair, H. A. [illegible], T. Campbell, V. E. Chang, H. Davies, W. Donaldson, R. J. Edwards, S. English, J. Findlay, E. M. Fraser, M.A.; W. Graham, W. Hay, B.D.; J. A. Hope, A. B. Hughes, G. Jubb, W. J. Kerr, W. D. Miller, D. M'Donald, W. J. Mackinnon, M. N. MacLay, F. Macrae, E. J. Primrose, M.A.; J. Rankin, J. Sandilands.

B. Candidates who passed [illegible] in Third Professional Examination.—J. [illegible], W. Alexander, W. Allan, A. R. Anderson, J. Anderson, J. [illegible] Anderson, I. I. Anderson, W. S. Baird, R. R. Barr, T. Bell, H. [illegible], W. [illegible], [illegible], W. [illegible], M.A., B.Sc.; F. H. Cormick, [illegible] Cowan, M.A.; J. Cumming, J. Devine, J. H. Douglas, M. Dunning, J. Ferguson, M.A.; W. D. Findlay, A. A. Finkelstein, J. L. [illegible], J. Forster, J. L. Foulds, A. F. Galloway, T. C. Garrett, J. [illegible], M.A.; J. D. Graham, J. A. Graham, W. Grove, A. Hunt, R. [illegible], G. P. Hunter, J. Jack, J. W. Jackson, D. Kerr, D. C. Kirkhope, J. Kirkwood, W. H. Lang, B.Sc.; W. Lawson, D. Lewis, J. P. [illegible], R. K. Miller, J. M. W. Morison, G. Mowat, A. C. Muir, J. A. D. McDonald, D. [illegible], J. M'Cash, D. M'Coll, W. M. M'Cormick, L. MacLachlan, H. M'Laren, W. Macleod, C. M'Pherson, M.A.; A. R. Oliver, H. A. Pattullo, J. R. Rae, J. N. Robertson, W. [illegible], B.D.; J. Smith, T. O. Speirs, J. [illegible], A. Stevenson, H. Stevenson, A. Stewart, A. H. Stewart, J. Stewart, J. Stirling, H. W. Thomson, J. M. Townsley, C. E. [illegible], I. A. Walker, M.A.; H. A. Watson, M.A.; M. Watson, J. [illegible], A. Young, B.Sc.; J. Young. Glasgow; Emmeline Marie Stuart.

UNIVERSITY COLLEGE, DUNDEE.

THE trustees of the late Miss Margaret Harris have determined to carry out the recommendation of the Universities Commissioners to establish a chair of Physics at Dundee. A number of first-class securities, valued at [illegible], and yielding [illegible] a year, are to be set apart to provide the salary of the professor and some of the expenses of the chair. The new professor will be appointed before the beginning of next session, and the salary will be [illegible], with a share of the fees.

The trustees are to reserve the balance of Miss Harris's estate, amounting to some [illegible], and to apply the interest of it from time to time for College purposes.

THE CONJOINT BOARD IN SCOTLAND.

THE quarterly examinations in Edinburgh for the Triple Qualification of the Royal College of Physicians, Edinburgh, Royal College of Surgeons, Edinburgh, and Faculty of Physicians and Surgeons, Glasgow, took place in July with the following results:

First Examination, Four Years' Course.—Of 14 candidates, the following 7 passed:

T. Donovan, E. B. Anderton, D. [illegible], J. W. Dickson, M. P. Rodgers, J. J. Anthony [illegible], C. H. Bennett.

Three candidates entered for divisions and passed in one division each.

Five Years' Course.—Of 25 candidates, the following 15 passed:

G. F. Stooke (with distinction), W. F. [illegible], J. [illegible], C. Jones, G. W. Hardie, E. A. Boxer, J. S. Hamilton, T. [illegible], H. J. Clarke, J. R. Gibbs, Hilda Maud McFarlane, Jeannie Hamilton [illegible], Emma Bond, G. A. Paulin, J. McGrath.

Twenty-four candidates entered for divisions and 14 passed in one or two divisions.

Second Examination, Four Years' Course.—Of 17 candidates the following 12 passed:

G. J. Goldie, B. J. Nolan, P. Brady, J. J. Fuller, P. E. [illegible], W. F. Campbell, S. S. Broadbent, J. A. Holmes, R. S. Wells, E. S. Saunders, J. A. Finch, and W. G. Cook.

Ten candidates entered for divisions and 4 passed.

Five Years' Course.—Of 19 candidates the following 14 passed:

R. Mackie, Rosalie Berthon, Elsie Rosa Cresswell Taylor, Matilda Hetty Grace Russell, J. McGrath, C. F. Ackland, E. H. Sheldon, J. Cotter, T. J. O'Donovan, W. S. Soutar, E. L. Munn, Margaret Grant Campbell Brodie, J. Owens, and J. K. Calder.

Third Examination, Five Years' Course.—Of 7 candidates the following 4 passed:

E. B. Kitching, A. Cameron, W. Robertson, and J. Liddle.

Final Examination.—Of [illegible] candidates examined for the whole examination the following 39 passed, and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P.and S.G.:

E. A. Purcell, M. T. Archdall, F. G. Bennett, A. E. Clayton, Laura Elizabeth Forster, Margaret Penelope Munro, P. K. Chitale, C. B. Rossiter, A. L. Levy, J. A. B. Colaço-Belmonte, G. Singh, P. Sullivan, E. F. de Jong, J. W. N. Hudson, K. P. Popat, Sarah B. McMordie, T. J. Kennedy, Lydia Ann Leney, J. Craig, H. Paine, E. H. [illegible], Mary Harriet Simson, W. Craig, A. K. [illegible], Agnes Lillie Cousins, H. W. Lloyd, H. H. Gourley, C. C. [illegible], H. Winstanley, W. A. McCutchan, T. Murphy, J. H. Waddington, J. C. Forbes, A. T. Savage, G. A. I. Mackay, E. A. R. Laing, A. Speight, Helen Lauder, E. P. Hasluck.

Twenty-two candidates entered for divisions, and the following completed the examination and received the diplomas:

R. M. Johnson, W. Morris.

One candidate passed in one division.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates passed in:

Surgery.—J. L. Challice, London Hospital; H. H. Thomas, Charing Cross Hospital; A. E. Lovett, London Hospital; C. A. E. [illegible], St. George's Hospital; M. White, St. Thomas's Hospital; H. G. Jones, St. Mary's Hospital; H. C. Watt, Liverpool; H. England, Sheffield; T. J. [illegible], Camb. and St. Mary's Hospital; R. C. T. Dalton, Charing Cross Hospital; J. Cryer, Manchester; and C. W. Moorshead, Guy's Hospital.

Medicine, Forensic Medicine, and Midwifery.—W. B. Maurice, St. Mary's Hospital; T. W. Gale, St. Bartholomew's Hospital; W. S. Dibbs, Leeds; C. M. Beadnell, Guy's Hospital; [illegible], London School of Medicine for Women; and H. C. Watt, Liverpool.

Medicine and Forensic Medicine.—C. C. Preston, Manchester; and B. S. Kesteven, St. Bartholomew's Hospital.

Medicine and Midwifery.—H. W. Ramsay, St. Mary's Hospital.

Medicine.—T. E. H. Keogh, St. Mary's Hospital; R. P. Cox, St. Mary's Hospital; and T. H. P. Peers, Charing Cross Hospital.

Forensic Medicine and Midwifery.—A. P. [illegible], St. Mary's Hospital; H. W. Silver, Charing Cross Hospital; and H. England, Sheffield.

Forensic Medicine.—G. S. Taylor, Manchester; H. E. [illegible], Birmingham; and J. M. A. Lamb, London.

Midwifery.—G. A. Child, St. Thomas's Hospital.

To Messrs. Challice, Thomas, Lovitt, Maurice, Gale, Dibbs, Beadnell, Watt, Kesteven, Keogh, Cox, and Peers was granted the diploma of the Society.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

CASES OF SMALL-POX IN ST. GEORGE SOUTHWARK.

IN a report recently presented to the vestry of St. George Southwark, on [illegible] cases of small-pox which occurred during the latter part of June and the early part of July in the district, the medical officer of health points out that the majority of the cases were traceable to infection from a man whose illness was notified on June [illegible], and who had been sleeping at a Salvation Army shelter in Blackfriars Road.

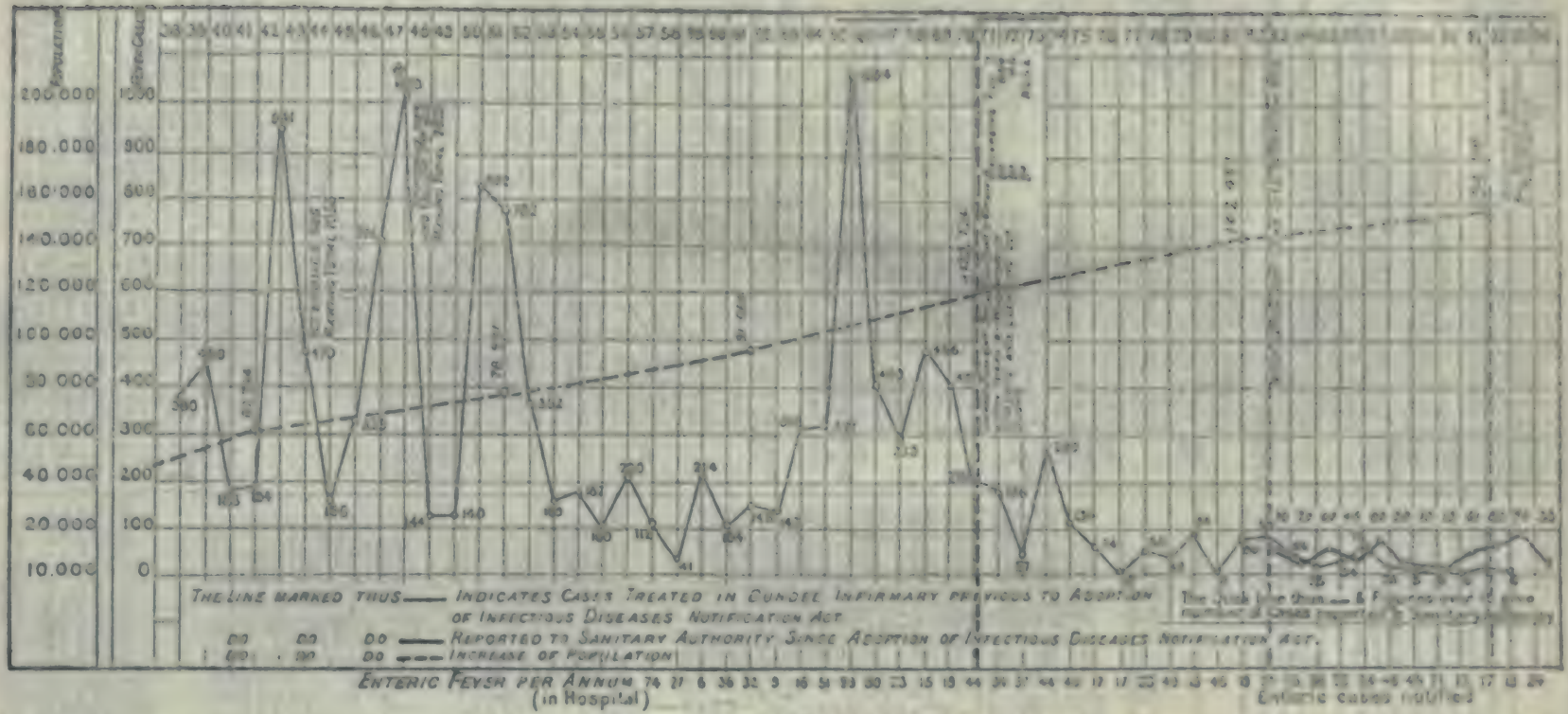
Dr. Waldo visited the shelter on June [illegible], but was refused admission. A justice's warrant was then obtained, and on July [illegible] a second visit was paid to the shelter, and conditions of overcrowding and inadequate ventilation were found to exist there. The vestry have served notice on the occupier of the shelter, and have directed that proceedings be taken to prevent a recurrence of nuisance.

The need of systematic inspection of these shelters has from time to time been made apparent. Occurrences of the kind referred to in Dr. Waldo's report serve to emphasise the necessity of placing such places under a control similar to that which is already exercised in the case of common lodging houses.

CHART OF TYPHUS IN DUNDEE SINCE 1838.

By J. W. MILLER, M.D.,

Consulting Physician Dundee Royal Infirmary.



This chart, which shows the variations from year to year of typhus fever in Dundee since 1838, illustrates in a striking manner what can be done for a community by putting in operation measures of public health. For the period antecedent to the adoption of the Notification Act (1883), the numbers represent only the cases treated in hospital, and therefore fall considerably short of the actual number of cases in the town. Subsequent to that date we get the full number.

The great and continued diminution of the disease after the local authority put its powers in operation is especially remarkable when taken along with the large increase of population and with the fact that repeated outbreaks have occurred presenting all the appearance of a threatened epidemic. I have no doubt that other cities which have adopted similar public health measures could tell the same story.

In the Infirmary Report (1843-44), under the old name "Ieterodes," 585 cases are recorded. There can be little doubt that this was relapsing fever. Watson writes (vol. ii. p. 745): "There was prevalent in Scotland (1843-44) an epidemic fever characterised by wide diffusion, small mortality, short duration, proneness to relapses, frequently-occurring petechiæ, yellowness of skin, something like black vomit, absence of intestinal ulcers, and by profuse sweatings whereby fever seemed often to be solved." Probably the cases named "yellow fever" (1847-48) were likewise relapsing fever. "Synochus" (the same year) was Cullen's name for a fever "combining inflammatory and putrid type intermediate between synocha and typhus."

I was asked if I could say to what extent enteric fever previous to its differentiation from typhus might have fallaciously raised the numbers stated for the latter. I have, therefore, noted at bottom of chart the enteric cases for each year since 1857, when this disease first makes its appearance in the Infirmary Register, and it is evident that any disturbing effect in the way suggested would be of no importance.

The meeting of the German Biological and Medical Association will be held at Lübeck on September 16th and five following days. Among the addresses to be delivered is one by Professor Behring on Antitoxic Serum. Professor Riedel, of Jena, will give an address on Brain Surgery. Altogether there will be 33 sections, and 242 papers are announced to be read in them. The Presidents of the Congress are Professors Wiedemann (Leipzig), v. Ziemssen (Munich), and v. Lang (Vienna). The recreations provided are as numerous as usual, and include a garden *fête* given by the Senate of Lübeck.

ZYMOTIC MORTALITY IN LONDON.

THE accompanying diagram shows the prevalence of the principal zymotic diseases in London during each week of the second quarter of the current year. The fluctuations of each disease and its fatal prevalence as compared with that recorded in the corresponding weeks of recent years, can thus be readily seen.

Small-Pox.—The deaths referred to small-pox, which had been 43, 5, and 14 in the three preceding quarters, declined again to 3 during the three months ending June last, and were [illegible] below the corrected average number in the corresponding periods of the ten preceding years, 1885-94. Of these 3 deaths, 1 belonged to Hammersmith, 1 to St. Giles, and 1 to Rotherhithe sanitary areas. The number of small-pox patients in the Metropolitan Asylums Hospitals, which had been 93, 16, and 54 at the end of the three preceding quarters, had declined to 33 at the end of June last; [illegible] new cases were admitted during last quarter, against 427, 79, and 165 in the three preceding quarters.

Measles.—The fatal cases of measles, which had been 300 in each of the two preceding quarters, rose to 564 during the three months under notice, but were 319 below the corrected average number. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in St. Luke, Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and Battersea.

Scarlet Fever.—The deaths referred to this disease, which had declined from 396 to 141 in the four preceding quarters, rose again to 164 during the three months ending June last, but were 44 below the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas this disease showed the highest proportional fatality in Hackney, St. George-in-the-East, and Rotherhithe. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been [illegible], [illegible], and [illegible] at the end of the three preceding quarters, had risen again to 1,845 at the end of June last. The number of cases admitted into these hospitals, which had been 3,075, [illegible], and [illegible] in the three preceding quarters, increased to [illegible] during the three months ending June last.

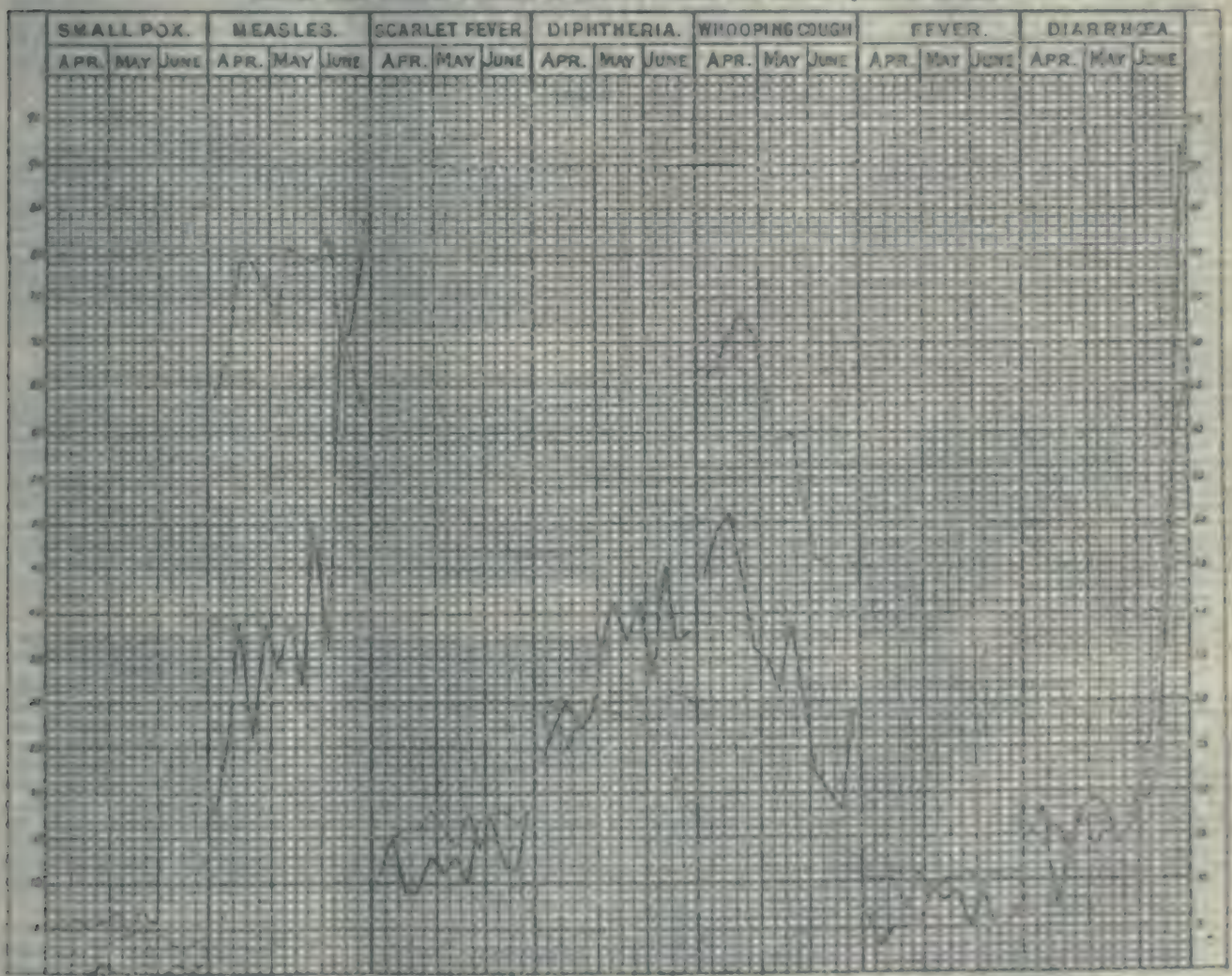
Diphtheria.—The fatal cases of diphtheria in London, which had been 611, 653, and 426 in the three preceding quarters, were 448 during the three months under notice, and were [illegible] above the corrected average. Among the various sanitary areas this disease showed the highest proportional fatality in St. Giles, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Camberwell, and Greenwich. The cases of diphtheria admitted into the Metropolitan Asylums Hospitals, which had been 1,143, 1,229, and 894 in the three preceding quarters, rose to 1,117 during the three months ending June last, and 623 patients remained under treatment at the end of the quarter.

Whooping-cough.—The fatal cases of this disease, which had been 316 and 511 in the two preceding quarters, declined to 448 during the three months ending June last, and were as many as 319 below the corrected average number; among the various sanitary areas whooping-cough showed the highest proportional fatality in Clerkenwell, Shoreditch, St. George-in-the-East, Limehouse, St. Saviour Southwark, St. George Southwark, and Newington.

Fever.—Under this heading are included deaths from typhus, enteric fever, and simple and ill defined forms of fever. The deaths referred to these different forms of "fever," which had been 111, 264, and 135 in the three preceding quarters, further declined to 81 during the three months ending June last, and were 47 below the corrected average number. Of these 81 deaths from "fever," 1 was certified as typhus, 78 as enteric fever, and 2 as ill-defined fever. Among the various sanitary areas the highest proportional fatality of "fever" was recorded in London City and Plumstead. The Metropolitan Asylums Hospitals contained [illegible] enteric fever patients at the end of June last, against 99, 104, and 73 at the end of the three preceding quarters; 202 new cases were admitted into these hospitals during last quarter, against 172, 183, and 168 in the three preceding quarters.

Diarrhoea.—The [illegible] fatal cases of diarrhoea registered in London during

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE SECOND QUARTER OF 1895.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding week of the preceding ten years 1885-94.

the three months ending June last very slightly exceeded the corrected average; this disease showed no marked excess in any of the sanitary areas.

In conclusion, it may be stated that the 2,021 deaths referred to the principal zymotic diseases in London during the second quarter of this year were 7[illegible], or more than 28 per cent. below the average number in the [illegible] [illegible] [illegible] [illegible] years, [illegible] [illegible] principally [illegible] [illegible] low mortality from measles, whooping-cough, and "fever." [illegible] the [illegible] sanitary areas the lowest [illegible] death-rates were recorded in [illegible], St. [illegible] [illegible], Hampstead, Strand, St. Olave Southwark, Wandsworth, Lee and Lewisham; and the highest rates in St. Luke, Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and Rotherhithe.

WATERBORNE TYPHOID AT NEWPORT.

A FURTHER interesting contribution to the literature of waterborne typhoid is furnished in the recently issued report from the pen of Dr. Theodore Thomson on an epidemic of enteric fever at Newport, in the Isle of Wight, and in certain parts of the adjoining rural district of the island.[1] Prior to 1894, the history of the invaded area was for the ten years 1884-93 not unfavourable in the matter of fever, but rather the reverse; yet in 1894 the disease was unusual in amount from May to September, with large increase in October and for some eight weeks, the epidemic being over by the end of December. There were in all 516 cases heard of, and 51 registered deaths, 436 attacks and 42 deaths taking place in the borough of Newport. There were also 43 cases of "doubtful" sort heard of, and a few "suspicious" attacks. The epidemic area may be briefly described as Newport borough, the villages of Carisbrooke and [illegible], and Parkhurst Prison and Barracks. The rates of attack per 1,000 estimated population ranged from 41.5 in the borough to 1[illegible] in the barracks; and the death-rates in the borough, villages, and prison 3.[illegible], 5.88, and 1.77 respectively. Special to the prevalence was the incidence of attack and death on the age period 10 to 15 years, namely, 1[illegible] and [illegible] per 1,000 against [illegible] and [illegible] at all ages. The case mortality at all ages was in Newport 9.6 per cent., and at ages under 10 years only 1.45, with 7.8 in the next five years, and 17.7 at greater ages. Of males, the attack and death rates were 44 and 4.5, and of females, 39 and [illegible] per 1,000 living.

We need not follow Dr. Thomson through his elaborate statements, which show the independence of the fever in regard of such matters as sewerage and drainage, general sanitary circumstances, and milk supply; water supply was the only [illegible] [illegible] [illegible] to the whole of the epidemic area, and had apparent causal relationship as follows: Of 436 cases in Newport, [illegible] were in consumers of the public water supply; of 2[illegible] cases at Carisbrooke, [illegible] were in consumers of the public service, 1 sufferer had removed, and of 2 it is not known that they drank the water; in [illegible] all 7, and in the prison and barracks all [illegible], had drunk of the Newport water. In Newport the rate per cent. on consumers of the public supply was 4.2 against 1.7 on consumers of water from private sources. On the other hand, no cases arose in the workhouse or [illegible] hill, which are supplied by the Newport service, and have an aggregate population of 816 persons; but there were 4 suspicious attacks in the workhouse and 3 in the village during the epidemic period, and also there were but 47 persons between the ages of 5 to 15 in the workhouse, the period specially hard hit in water drinkers, and with the known [illegible] [illegible] of small groups of population from participation in waterborne outbreaks, this negative evidence weakens the case against water to a very trifling degree. The origin of the infection was not ascertained.

The public service in question was derived from two wells and two springs in close proximity in the upper chalk, with only a thin layer of light soil. The reservoir in connection with the springs has an unlined bottom and unprotected sides, and the "old well" has no protective surroundings. The various supplies communicate by their distributing mains, and are not [illegible] [illegible]. The sources are so situate that the majority of Carisbrooke villagers live within a quarter of a mile of them, and, being at a lower level than leaky cesspit privies, cesspools, an [illegible] polluted stream, and a mill pond fouled by refuse from cowsheds, pigstyes, and the like, the sources are subject to risk of gross pollution by way of soakage through the chalk, and by surface drainage. Experiments with chloride of lithium demonstrated [illegible] of mill pond water to the "low level" reservoir and the "old well," and in samples from both these Dr. Klein found the bacillus [illegible] [illegible] putridus, and in tap water from the prison, the bacillus coli communis, whilst independent bacteriological examination undertaken for the town council demonstrated the bacillus of enteric fever in the water. Boiling of water and later discontinuance of the supply in prison and barracks checked the fever there, and whatever store be set by the fact, the disuse of all water except from the "new well" led to cessation of fever prevalence in the affected area.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,[illegible] births and 4,[illegible] deaths were registered during the week ending Saturday, July 20th. The annual rate of mortality in these towns, which had increased from 15.4 to 19.9 per 1,000 in the five preceding weeks, further rose last week to 21.9. The rates in the several towns ranged from 10.5 in Brighton, 10.9 in Croydon, and 11.7 in Halifax to 26.8 in Norwich, 27.5 in Salford, and 30.3 in Liverpool. In the thirty-two provincial towns the mean death rate was 20.6 per 1,000, and was 3.1 below the rate recorded in London, which was 23.7 per 1,000. The zymotic death rate in the thirty-three towns averaged 5.6 per 1,000; in London the rate was equal to 6.5 per 1,000, while it averaged 4.9 in the thirty-two provincial towns, and was highest in Leicester, Liverpool, Leeds, and Preston. Measles caused a death rate of 1.4 in Manchester, 1.5 in Newcastle-upon-Tyne, and 2.9 in West Ham; whooping-cough of 1.1 in Gateshead and 1.7 in Liverpool; and diarrhœa of 5.8 in Bradford, 6.0 in Salford, 7.3 in Leicester, [illegible] in Leeds, and 7.9 in Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 67 deaths from diphtheria in the thirty-three towns included 39 in London, 5 in West Ham, 5 in Birmingham, and 3 in Cardiff. No fatal case of small-pox was registered either in London or in any of the thirty-two large provincial towns. There were 59 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, July 20th, against 34, 42, and [illegible] at the end of the three preceding weeks; 28 new cases were admitted during the week, against 25, 17, and 36 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been [illegible], [illegible], and 2,231 at the end of the three preceding weeks, had further risen to 2,2[illegible] on Saturday last, July 20th; 320 new cases were admitted during the week, against 319, 311, and 352 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, July 20th, 914 births and 5[illegible] deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from [illegible] to 20.3 per 1,000 in the three preceding weeks, declined again to [illegible] last week, and was 3.7 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.4 in Edinburgh to 2[illegible] in Greenock. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Greenock and Paisley. The [illegible] deaths registered in Glasgow included 3[illegible] from diarrhœa, 6 from whooping-cough, 4 from measles, and 2 from scarlet fever. Two fatal cases of scarlet fever were recorded in Leith.

A VERY YOUNG NURSE.

A Local Government Board inquiry has been held in the Isle of Wight into the conduct of a master towards a nurse; the matter is still before the Board and therefore removed from the range of criticism, but in reading the evidence we note that the nurse in question states that she is [illegible] years of age, and that she has been a nurse three years. This nurse is employed on the male side, and if the result of the inquiry shows the charge to be proved, we shall hold that the guardians are contributories to the result in appointing so very young a woman for a post of responsibility and danger. To our minds there is something indecent in the fact of placing a comparative girl in the male wards of a workhouse infirmary.

THE NOTIFICATION OF DIPHTHERIA.

ANTITOXIN.—Since the bacteriological results were—very properly—accepted as sufficient evidence of infectiousness and of need for isolation, it would seem to be right to adopt the same view as regards notification. The contrary opinion, expressed in the report of the medical officer of health, appears to be based upon a misapprehension. The Notification Act suggests no limits of severity or mildness of attack as affecting the duty of notification. The object is to obtain information of all infectious cases of specified kinds; and not the least important of these, from the standpoint of the health authority, are the slight and obscure cases in which the patient is scarcely ill, and the need for precautions is not self-apparent. Whether the notified attack be mild or severe is quite a secondary consideration.

EXAMINATION OF CASES IN UNION INFIRMARY BY MEDICAL GUARDIANS.

INQUIRER writes to ask whether a medical man who is a member of a Board of Guardians has any right to examine patients in the infirmary and to take off their dressings in the absence of the medical officer, and whether it is etiquette for any such guardian to criticise the treatment which he finds has been adopted in such cases?

⁎⁎⁎ We consider that a medical member of a Board of Guardians has no right to make an examination of patients in the absence of the medical officer, and if this is done with a view to giving any opinion or information to his non-professional colleagues on the Board it would, in our opinion, constitute a grave breach of professional etiquette.

POLLUTED WELL WATER.

URGENT writes: An excellent well of water has become impregnated with bacteria—probably typhoid. Is there any means of purifying it so as to make it again fit for drinking and household purposes?

⁎⁎⁎ The question is too vague to admit of direct answer. If purification of the suspicious water be meant, it can certainly be done by boiling or by the use of certain filters, but such a supply ought to be discarded. If it is the well that is to be safeguarded by "purification," in the sense of emptying and cleansing, this again is quite possible; but in the absence of any information as to the surroundings of the well, the supposed source of pollution, and the structural alterations which may or may not be admissible in addition to the cleansing, we can only say that the result of such cleansing is not usually satisfactory in the long run. Of what date is the evidence showing the well to have been "excellent," and why are the bacteria regarded as "probably typhoid?"

BEQUESTS TO HOSPITALS.—The late Mr. Arthur Montefiore Sebag-Montefiore, who died on June 1[illegible]th, has by his will bequeathed £100 to the London Hospital and £50 to St. Mary's Hospital.

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[1] Messrs. Eyre and Spottiswoode, East Harding Street, London. No. 93, with charts, plans, maps, etc. Price 7s.

MILKBORNE DISEASE:

An Appeal to Medical Officers of Health.

Mr. Ernest Hart is engaged on a general inquiry into milk-borne disease since 1881, in continuation of his paper of that year on the Influence of Milk in Spreading Zymotic Disease, and will be much obliged if those health officers who possess notes of outbreaks of disease traceable to the agency of milk will be good enough to furnish him with a brief statement of the facts, so far as known, in the shape of answers to the questions subjoined:

1. Date.
2. Locality.
3. Reporter.
4. Total number of cases.
5. Deaths.
6. Number of cases amongst drinkers of suspected milk.
7. Number of persons supplied by milkman.
8. Number of such families invalided.
9. Sanitary circumstances of farm or dairy from which milk was obtained.
10. Exciting cause of outbreak.
11. Circumstances implicating milk.
12. Facts showing special incidence of disease.
13. Reference to report.

ROYALTY AT THE ROYAL FREE HOSPITAL.

Last Monday was a gala day at the Royal Free Hospital, for the new buildings were opened by the Prince and Princess of Wales, and the Princess undertook to accept purses of money in aid of the building fund. The ceremony was a very pretty one, and the object most successfully attained, for no less than £2,000 was raised towards paying off the debt of £5,000. The Princess, accompanied by the Prince and their two daughters, arrived at one o'clock, and were conducted to a platform in the Milne Ward, which, emptied of patients, was crowded with lady medical students, purse holders, and their friends. The Earl of Lathom, Vice-President, read an address of welcome, in which he drew attention to the fact that the Royal Free Hospital was the first hospital to admit the sick poor without letters of recommendation, and the only general hospital which had opened its doors to the women medical students, who now numbered 150, pursuing their studies at the London School of Medicine for Women. The Prince replied in a graceful little speech, in which he said that many members of his family had been interested in the welfare of the hospital. King George IV and King William IV had been patrons, and also the Duchess of Kent, and the Queen before she came to the throne, and that since 1863 he himself had been a vice-patron.

After the speeches 120 purses were presented, many of the purse holders being little children in picturesque dress. The royal party were then conducted over the surgical and accident wards on the ground floor. In the ward devoted to female surgical cases the Princess stayed a long time, and spoke to every patient, and gave each one a flower from the bouquet which had been presented to her earlier in the proceedings.

The women medical students were mustered in the new operating theatre, and it was felt by all of them that this visit of the Princess of Wales was made in sympathetic recognition of the work being done by their school and hospital.

At an examination for inspectors of nuisances, held by the Sanitary Institute on July 19 and 20, at Norwich, twenty-four candidates presented themselves, and fourteen passed.

Cholera at Singapore.—The *Times* correspondent, telegraphing from Singapore on July 20th, states: Cholera has been prevalent among the natives for the past six weeks. Lieutenant C. V. M. Sarel, of the Northumberland Fusiliers, died to-day. He is the first European to succumb.

Mr. T. J. Rees, a medical practitioner of Ystradgynlas, Breconshire, was struck dead by lightning on July 21st. He was called upon to attend a case of burning in a neighbouring village, and as he reached the top of a hill known as the Drym mountain, a thunderstorm came on. Mr. Rees and the horse he had ridden were afterwards discovered lying dead on the summit of the hill by the parent of the patient whom deceased was about to attend, the child's father having accompanied the doctor thus far, and hurried home in advance when the storm threatened.

MEDICAL NEWS.

The Society of Medical Phonographers.—The first general meeting of the Society of Medical Phonographers will be held on Tuesday, July 30th, at 4 P.M., at the house of the Royal Medical and Chirurgical Society. Dr. Gowers, the President of the Society, will deliver an inaugural address. The meeting will be open to all members of the medical profession. The Secretary of the Society is Dr. James Neil, Warneford Asylum, Oxford.

Law v. Medicine.—Medicine and law have many points of contact, but it has remained for the members of the two professions in Preston to devise a new field for friendly rivalry. A cricket match played between representative elevens has now become an annual event, and the opportunity is taken to entertain a large number of guests from the neighbourhood. This year the occasion has been, under the directing hand of Dr. George King, more successful than ever, and some thousand persons attended to see the match, which, we are glad to add, was won by Medicine by 121 to 58.

Sir Edward Lawson distributed, on July 18th, the prizes gained by the students of Charing Cross Hospital Medical School during the winter session. The Dean's report stated that in consequence of the fact that a number of students went to practise abroad at the conclusion of their course, it had been decided to establish classes for the study of diseases peculiar to tropical climates. The number of students who had entered during the year was eighty-six, and the daily attendance was 200. The Pereira Prize (certificate and £5) was won by Mr. F. P. Jones; the Governors' Clinical Gold Medal by Mr. D. C. Rees. For anatomy, Mr. W. Green was successful in the senior, and Mr. C. B. Wagstaff in the junior division, the latter also taking a prize for biology. The prize for chemistry was awarded to Mr. J. E. Humphreys, and those for physiology (senior division) to Mr. W. E. Morgan. The award for medicine fell to Mr. Bosanquet; while for surgery Mr. Hudson was successful.

Ptomaines and Veal Poisoning.—At an inquest held at Larne, co. Antrim, by Dr. Adams, J.P., coroner, the following facts were brought out in evidence: A healthy calf was castrated on May 25th; it was found to be ill on May 28th, and was killed. The carcass was removed to the house of the butcher in Larne on May 29th, and was sold in quarters to various people on June 1st. Those persons who partook of the hind quarters, whether in the form of soup or jelly, all suffered severely, while those who consumed the fore-quarters did not not suffer at all. One of the sufferers—a woman—died. She had eaten the veal fried in butter for breakfast on June 2nd, and boiled into soup for dinner on the same day, and in the form of jelly for breakfast on June 3rd. On June 4th she was seized with intense pain in the bowels, vomiting, and diarrhœa, and died on June 11th. Drs. Killen and Adrain gave it as their opinion that death was due to some irritant in the veal. The stomach and intestines were submitted to Mr. J. F. Hodges, F.I.C., for analysis. He has now succeeded in separating from the viscera and from the veal jelly substances giving similar reactions and belonging to the class of ptomaines. Besides the woman who died six other people in the same house had serious symptoms.

British Gynæcological Society.—At the meeting of this Society on July 11th the discussion on Dr. Fancourt Barnes's paper on some difficulties in the use of the curette was resumed by Mr. H. Bellamy Gardner, who said that hollow metallic dilators, wedge-shaped in longitudinal section, were the best, and that after curetting the cavity should be swabbed with iodised phenol, an iodoform pencil introduced, and the vagina plugged with iodoform gauze. Dr. Routh was glad to hear the sponge tent condemned, and thought laminaria unsafe unless properly prepared. Dr. Heywood Smith recommended Bell's "dredge" curette, or Jessett's modification of it, as by its use complete removal of the diseased tissues could be ensured. Dr. Macnaughton Jones insisted on the need for antiseptic precautions before, during, and after operation, and on the maintenance of sufficient dilatation of the cervical canal. Certain inflammatory states

of the peritoneum and annexa were contra indications. Dr. Granville Bantock considered sponge tents safe if properly applied. Dr. Fancourt Barnes replied on the discussion. Specimens were shown by Dr. Purcell and Dr. Bantock.

MEDICAL VACANCIES.

The following vacancies are announced:

CHESTER GENERAL INFIRMARY.—Visiting Surgeon, doubly qualified. Appointment for two years. Salary to commence £80 per annum, with residence and maintenance in the house. Applications to the Chairman of the Board of Management, Secretary's Office, 20, Eastgate Row North, Chester, by July 30th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £80 per annum with board, lodging, and washing. Applications to the Secretary by August 10th.

CITY OF LONDON UNION.—Assistant Medical Officer for the Infirmary at Bow Road, E., doubly qualified; single or widower without children. Not under 25 nor more than 35 years of age. Salary, £150 per annum, with furnished apartments, rations, and washing. Applications on forms provided to F. W. Crane, Clerk to the Guardians, 61, Bartholomew Close, E.C., by August 2nd.

DR. STEVENS'S HOSPITAL, Dublin.—Ophthalmic Surgeon. Applications to the Secretary before August 7th.

DURHAM COUNTY ASYLUM.—Pathologist and Junior Medical Officer. Salary, £100 per annum, with board and lodging. Applications to the Superintendent, Durham County Asylum, Winterton, Ferryhill, by August 10th.

GRAVESEND HOSPITAL.—House-Surgeon; doubly qualified. Salary, £60 per annum, with board and residence. Applications to Frederick Mitchell, Honorary Secretary, by August 5th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Junior House-Surgeon. Appointment for six months. Board, lodging, and laundry provided. Applications, on forms provided, to be sent to Lewis H. Cameron Kerr, Secretary, by July 30th.

HOSPITAL FOR WOMEN, Soho Square.—Non-Resident Assistant House-Physician. Appointment for three months. Applications to the Secretary by July 31st.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. An honorarium of £10 for each period of six months, subject to the approval of the Weekly Board, with board, residence, and washing. Applications to the Secretary by August 10th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officers at the Fever and Small-pox Hospitals. Salary and emoluments, £160 per annum, rising £20 yearly to £200 per annum, with board, lodging, attendance, and washing. Must be unmarried, not more than 35 years of age, and doubly qualified. Applications on printed forms provided to be sent at once to T. Duncombe Mann, Clerk to the Board, Norfolk House, Norfolk Street, Strand, W.C.

MORPETH DISPENSARY.—House-Surgeon, doubly qualified, unmarried. Salary, £120 per annum. Applications to N. J. Wright, Morpeth, Northumberland, by July 31st.

POPLAR UNION.—Assistant Medical Officer at the Workhouse. Salary, £100 per annum, with furnished apartments and rations in the Workhouse. Applications to G. Herbert Lough, Clerk, Guardians' Offices, Upper North Street, Poplar, E., by July 30th.

ROYAL EAR HOSPITAL, Frith Street, Soho Square, W.—Assistant Surgeon. Applications to Donald Murray, Honorary Secretary, by August 10th.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant; must be qualified and registered. Appointment for six months, with board and residence. Applications to Percy De Bathe, M.A., Secretary.

STOKE NEWINGTON, CLAPTON, WEST HACKNEY, AND DALSTON DISPENSARY, 169, High Street, Stoke Newington.—Resident Assistant House-Surgeon; doubly qualified. Salary, £60 per annum, with board and lodging. Applications to be sent in at once.

TOWNSHIP OF MANCHESTER.—Medical Officer for the No. 2 (Ancoats) District; doubly qualified. The gentleman appointed will, if duly qualified, receive the appointment of Public Vaccinator. Applications, endorsed "Medical Appointment," to George Macdonald, Clerk to the Guardians, Poor Law Offices, New Bridge Street, Manchester, by July 31st.

WALSALL AND DISTRICT HOSPITAL.—Resident House-Surgeon; doubly qualified. Salary, £100 per annum, with board, lodging, and washing. Applications to Mr. E. J. Brookes, Chairman, Leicester Street, Walsall, by July 27th.

MEDICAL APPOINTMENTS.

AARONS, S. J., M.B., C.M., appointed Resident Surgeon to the Edinburgh Royal Maternity and Simpson Hospital.

BRINDLEY, Albert E., M.D.Lond., M.B., Ch.B., B.Sc.Vict., appointed Resident Medical Officer to the Manchester Royal Infirmary, *vice* E. M. Brockbank, M.D.Vict., resigned.

CROOM, J. Halliday, M.D., F.R.C.P., F.R.C.S.Edin., appointed Physician to the Edinburgh Royal Maternity and Simpson Hospital.

DOUGHTY, William, L.R.C.S., L.R.C.P., appointed Medical Officer of Health for the Chillington District of the Kingsbridge Union, *vice* C. Eaton, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

DRAKE, Alex. Thomson, M.B.R.U.I., L.R.C.S.I., reappointed Medical Officer for the No. 4 (Deptford) District of the Greenwich Union.

EDWARDS, A. Spencer, M.B., C.M.Edin., appointed Junior Resident Assistant Physician to Smedley's Hydropathic Establishment, and Physician to Smedley Memorial Hospital, Matlock.

GOODING, Angelo, L.R.C.P., M.R.C.S., appointed House-Surgeon to the London Hospital.

HORROCKS, Herbert, M.D.Lond., appointed Resident Medical Officer to the Hospital for Consumption and Diseases of the Chest, Brompton, S.W., *vice* H. T. Ballance, M.D., resigned.

KEITH, Arthur, M.D.Aberd., F.R.C.S.Eng., appointed Senior Demonstrator of Anatomy at the London Hospital Medical School.

MACKINTOSH, Dr. Arthur Ross, appointed House-Surgeon to the Northern Infirmary, Inverness, *vice* G. A. Williamson, M.B., C.M., resigned.

M'LEAN, Charles J. R., M.D.Edin., D.P.H., reappointed Medical Officer of Health to the Yeadon Urban District Council.

MACLENNAN, Felix Prior, M.B., C.M.Aberd., appointed Medical Officer for the Parish of Assynt and the Quoad Sacra Parish of Scourie, N.B.

MUIRHEAD, Cland, M.D., F.R.C.P.Edin., appointed Consulting Physician to the Chalmers Hospital, Edinburgh, *vice* D. J. Brakenridge, M.D. Edin., deceased.

NEWETT, Alfred J., L.R.C.P., L.R.C.S.Edin., appointed Junior Assistant House-Surgeon to the Stockport Infirmary.

RUSSELL, J. L., M.B., C.M.Edin., appointed Medical Officer for the Cornholme District of the Todmorden Union.

STUART, John Erskine, L.R.C.S., L.R.C.P., appointed Medical Officer of Health for the Borough of Batley, *vice* A. Swann, M.D.Brux., M.R.C.S.Eng.

TAYLOR, W. Macrae, M.B., C.M., appointed Resident Surgeon to the Edinburgh Royal Maternity and Simpson Hospital.

DIARY FOR NEXT WEEK.

TUESDAY.

BRITISH MEDICAL ASSOCIATION.—Annual meeting. For full programme, see pp. 234-247.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

SOCIETY OF MEDICAL PHONOGRAPHERS, 20, Hanover Square, 4 P.M.—General meeting. Inaugural Address by the President, Dr. W. R. Gowers.

PRESENTATION OF TESTIMONIAL TO SIR JOSEPH LISTER by Sir John Eric Erichsen, at King's College Hospital, W.C., 4 P.M.

BRITISH ORTHOPÆDIC SOCIETY, National Orthopædic Hospital, 234, Great Portland Street, W., 4 P.M.—Cases and specimens, etc., by Mr. Newbolt, Mr. Jackson Clarke, Mr. Robert Jones, Mr. Noble Smith, Mr. Luke Fryer, Mr. N. Grattan, and Messrs. Muirhead Little and Keetley. Mr. Tubby, On Original Investigations on the Union of Tendons and its Practical Bearings. Discussion on: "The Treatment of Abscess in Pott's Disease. All visitors are welcome.

WEDNESDAY.

BRITISH MEDICAL ASSOCIATION.—Annual meeting. For full programme, see pp. 234-247.

THURSDAY.

BRITISH MEDICAL ASSOCIATION.—Annual meeting. For full programme, see pp. 234-247.

FRIDAY.

BRITISH MEDICAL ASSOCIATION.—Annual meeting. For full programme see pp. 234-247.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

FERGUSON.—On July 20th, at 26, Woodland Road, New Southgate, N., the wife of R. Bruce Ferguson, M.A., M.D.Cantab., etc., of a daughter.

TRAVERS-SMITH.—On July 21st, at Trevose, Beckenham Road, S.E., the wife of V. E. Travers-Smith, M.D., of a daughter.

MARRIAGES.

JONES—MARSH.—On July 17th, at Bangor Isycoed Church, by the Ven. Archdeacon Howell, assisted by the Rev. J. L. James, M.A., S. Edwardes Jones, L.R.C.P.Edin., L.R.C.S.Edin., etc., son of Mr. Henry Jones, formerly of Leeswood Mold, to Milly, only daughter of Captain G. M. Marsh, late 23rd R.W.F., of Pickhill, Wrexham, and granddaughter of the Rev. G. A. E. Marsh, M.A., formerly Minister of St. Mary's Chapel, Grosvenor Square, London.

PRANGLEY—DOMMETT.—On July 18th, at St. Paul's Church, Upper Norwood, by the Rev. W. H. Graham, assisted by the Rev. C. W. Prangley, cousin of the bridegroom, Henry John Prangley, L.R.C.P.Lond., M.R.C.S.Eng., of Tudor House, Anerley, only son of the late John Peard Prangley, of Heytesbury, Wiltshire, to Clara Dommett, youngest daughter of Charles William Dommett, of Moreland, Anerley. No cards. At home September 9th, 10th, 11th, and 12th, 3 to 6 P.M.

SMITH—FISHER.—On July 23rd, at Christ Church, Brondesbury, by the Rev. W. Snape Cadman, Vicar of St. Andrews, Peckham, assisted by the Rev. C. Dale Williams, Rector of the Parish, Ernest Newlyn Smith, M.D.Lond., M.R.C.S., of Forth Lodge, Willesden Green, to Charlotte, eldest daughter of Henry Fisher, Esq., of Carrick, Willesden Lane.

DEATH.

JACOBSON.—On July 17th, at Sleaford, Thomas Edmund Jacobson, M.R.C.S., L.R.C.P., L.S.A., aged 65 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the office of this Journal cannot under any Circumstances be Returned.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not to his private house.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with duplicate copies.

☞ *Queries, answers, and communications relating to subjects to which special departments of the British Medical Journal are devoted will be found under their respective headings.*

QUERIES.

Medicus wishes to hear of an effectual method of getting rid of brown house ants, which follow the course of hot water pipes.

Q.S. asks for the names of a few towns in South Africa, large enough to have established banks, suitable for the permanent residence of a young man recovering from phthisis?

Dr. Lane (Hereford) would be obliged if any member could tell him of a home for a dumb child whose parents could only afford to pay a small amount.

Member asks: What are the best works of reference on the etiology, treatment, and morbid anatomy of goitre, for the purpose of writing a thesis on that subject?

Infant Foods.

Member asks: What is the exact percentage composition of both Mellin's and Benger's infant food?

*** Mellin's food consists almost entirely of dextrin with some glucose and soluble starch. In Benger's farinaceous food the flour is partially dextrinised by dry cooking and impregnated with an extract of pancreas. We know of no published analysis of the composition of these foods.

A Warning.

Chirurgus writes: Allow me to warn your readers against an American who professes to be a nephew of Professor Sayre, of New York, and endeavours to borrow money as a temporary loan.

*** Such an individual called at the office of the British Medical Journal on July 22nd, and attempted to borrow half a sovereign to pay for a telegram to New York. He stated that he had a letter of introduction, but had forgotten it. He left rather hurriedly, and promised to return with the letter, but has not yet done so.

ANSWERS.

K.—The question is too general to admit of reply. Our correspondent might consult *Medical Partnerships, Transfers, and Assistantships*, by W. Barnard, M.A., LL.B., and G. B. Stocker. London: Stevens and Sons. 1895. 10s 6d.

Homes for Inebriates.

Gael.—There is no [illegible] retreat in [illegible]. We are unable to recommend any individual person or institution. Perhaps our advertising columns may furnish the information.

Electrolysis of Superfluous Hairs.

Dr. Geo. Steele Perkins (Wimpole Street, W.) thinks that in the electrolysis of superfluous hairs a galvanometer should be used. To destroy hair follicles about 2 to 2.5 milliampères are required. The number of cells requisite to obtain this amount is less in a recently charged battery.

"An Alternative to Contrexéville."

Dr. J. Morgan Evans (Llandrindod Wells, Radnorshire) writes to suggest to the correspondent whose inquiry was published in the British Medical Journal of July 20th to try the mineral waters and baths at Llandrindod Wells. The waters contain salts of calcium, sodium, and magnesium, and are valuable for gout, etc. The situation is elevated to [illegible] feet, and the air is dry, bracing, and pure—an excellent restorative after influenza. He will be pleased to supply further information and to be of any service.

Treatment of Chronic Constipation.

Dr. G. D. [illegible], M.D. ([illegible], Kent) writes: Let "[illegible]" try following combination: Ammonium chloride 10 grains, tincture of nux vomica 5 minims, iridin 2 grains; water 1 ounce, given at bedtime for three or four nights. My patient cannot take pills or tabloids or I should have preferred giving euonymin and iridin in pill or tabloid. I find Burroughs and Wellcome have euonymin ½ grain of resin in tabloids, but iridin is not amongst their tabloids.

NOTES, LETTERS, Etc.

Dietary at Epsom College.

Paterfamilias writes: A few years ago I saw some correspondence in the British Medical Journal upon the dietary of Epsom College, and I should like to know on reliable or competent authority if the matters then complained of have been rectified, or if there was ground for such complaint.

The education given at the College is universally agreed to be excellent, and it would be very interesting to many parents to know if the dietary is equally satisfactory, especially as "school boys' dietary" has lately been under discussion.

*** The following paragraph appears in the annual report of Epsom College for 1893: "In consequence of correspondence regarding the dietary of the College, which appeared in one of the leading medical journals, an exhaustive inquiry into the matter was held by the Treasurer, the Chairman of the Finance Committee, and a member of School Committee, and the result of their inquiries was afterwards laid before the School Committee for their consideration. The report of this Committee, with some suggestions on minor points, was received and adopted by a special meeting of the Council, and was of a very satisfactory nature. A copy was sent to the parents and guardians of all the boys in the College and to the leading medical journals. The Council wish it to be distinctly understood that the authorities of the College are at all times willing to listen to any suggestions for the benefit of the pupils, and they sincerely hope that parents will more frequently come and see how their sons are cared for. If this is impossible, written and signed communications will always receive courteous attention. With regard to beer, it is given in all public schools. The beverage provided at the College is good and wholesome; only about 40 per cent. of the boys drink it, and it is thought advisable not to withdraw it compulsorily, but to leave the question to the discretion of parents, whose directions in this matter will be strictly obeyed."

The Discussion on Midwives at the Edinburgh Obstetrical Society: A Correction.

Dr. Norman Walker (Edinburgh) writes: Allow me to correct the report of my remarks at the Edinburgh Obstetrical Society. As reported they are liable to misconception. I refer to the remarks on midwives receiving a percentage of the fee from the doctors they call in. I said that I knew this occurred in Germany, and only a few days previously had been informed that it was not unknown in England. Your reporter makes me say that it "still" existed in England, as if it had at one time been rampant there. There is a tendency to taking one up so sharply on this particular subject, that I desire to make my correction as soon as possible.

Handbills and Private Dispensaries.

A. T. B. sends us a handbill setting out the "new economic system" of a "Private Dispensary," at Leeds. It is a flagrant instance of medical advertising, of which there have been too many examples of late. That it is most derogatory to the profession will be generally admitted, and it is much to be regretted that the various licensing bodies do not make stronger efforts to prevent their licentiates from issuing such advertisements.

We would suggest that copies of this handbill should be sent to the Royal Colleges of Surgeons and Physicians of London.

The Etiology of Appendicitis.

Dr. J. Ernest Frazer (Ventnor) writes: The question of heredity in appendicitis raised by Dr. Armstrong Atkinson in the British Medical Journal of June 29th, p. 1429, is an important one in the "rheumatic" form of the disease; here the heredity lies in the tendency to the development of the predisposing condition—uricacidæmia (Haig) or urichæmia (Sir Dyce Duckworth). When there is an excess of uric acid or urates in solution in the circulating blood, it is a necessary consequence that deposition, when it occurs, should also be in excess, and this excessive deposit is more likely than a smaller one to produce excessive symptoms referred to the seat of excessive deposition. In acute rheumatism or gout the joints are the seats of this deposit, but it should be remembered that uratic deposition occurs in other persons than those of an "arthritic diathesis," as we term it for want of more definite knowledge, when it occurs in these others it has other than articular symptoms. The cases given by Dr. Atkinson seem to belong to this "uratic" group. If we follow Dr. Haig, as I have done in this communication, and accept uricacidæmia as standing in a causal relationship to and accompanying diathesic conditions we can explain the repeated attacks of appendicitis in the father as due to repeated deposition; this might follow a slight febrile attack or the use of such drugs as iodides, morphine, acids, or, in fact, anything that tends to lessen the solubility of urates and deposit them in the tissues. Laryngitis and tonsillitis are related to the condition mentioned. To put the connection shortly, I believe, with Dr. Haig, that gout and rheumatism own the same essential cause. Hereditary tendency to these throat affections generally means an inherited gouty or rheumatic diathesis; uratic appendicitis is found especially in relation with gout, rheumatism, and phthisis; phthisis is accompanied by many signs of abarticular gout. The paternal history on the mother's side is in-

teresting, and raises the question of phthisis in regard to the three children mentioned. Dr. Atkinson does not mention the existence of the disease in them, but the view is strengthened by the fact that they were "without any rheumatic tendencies," if this refers to acute rheumatism. Again, phthisical patients are, according to my experience at the Ventnor Chest Hospital, very prone to [illegible] manifestations. While there is an antagonism in the same individual between the tuberculous and arthritic diathesis, there is a close connection often in the same family. It would be irrelevant to go into the relations between phthisis and rheumatism, as it would be to discuss explanations of the existence of the uric acid diathesis, which I have tried to show is the inherited tendency in Dr. Armstrong Atkinson's cases.

The Cost of an Epidemic.

Dr. T. Archibald [illegible] ([illegible]) writes: In an editorial in the British Medical Journal of July 13th it is stated that by adding up (1) the loss of wages, (2) the estimated costs of treating and (3) burying the victims, and (4) the capitalised value of the producing power of those who died from an epidemic of enteric fever, Dr. Campbell Munro calculated that it cost the community of [illegible]shire a pecuniary loss equal to £21,4[illegible], and you recur to the same subject again in the Journal of July 20th.

Will you allow me to point out that in his zeal for a good cause the medical officer of health has fallen into the error of overestimating the loss to the community? I presume everyone will admit that an actual money tax to that extent would be much more impoverishing to that community than the burden of the epidemic was in fact. The error I take to be the assumption that the work of those who fall sick or die is left undone, and so lost to the community. Whereas in all ordinary circumstances someone else takes his place or does his work. If no work is left undone the community loses nothing from that cause. When a worker falls ill and one of the unemployed takes his place the community only exchanges the cost of keeping the invalid for the cost of keeping the unemployed one. Hence it is not fair to count the sick man's loss of wages nor his loss of ability to work as so much loss to the community. What is his loss may be another's gain.

When a man consumes as much as he produces his death is no pecuniary loss to the community. It is well known how rapidly and completely a nation recovers from the loss of men due to a great war or pestilence. Hence I submit it is wrong in calculating the cost of an epidemic to count the capitalised value of the producing power of those who die unless we subtract the value of what they may be expected to use up, waste, and destroy.

The common sense of the average citizen tells him that the pecuniary cost of an epidemic is summed up in the expenses actually incident to that calamity, and in ordinary circumstances his common sense is about right.

A Curious Poultice.

Mr. Geo. H. Bate, House-Surgeon Queen Adelaide's Dispensary, Bethnal Green, writes: A young woman recently sought advice here for "bad breast," as she termed it. On examination it appeared that she had been suffering from acute inflammation ending in abscess. She consulted a "doctor," who declined to open it, but said it was much better to let it "burst," after which she was to apply cowdung poultices; this the woman had actually been doing when I saw her. The above treatment is applied in many cases in country districts to horses with sore backs, etc., but it is the first time probably that readers of the British Medical Journal have heard of it being applied to abscess of the breast.

Prize Essay on Hygiene.

The French Société de Médecine Publique et d'Hygiène Professionnelle, owing to the generosity of an anonymous donor, offers prizes for the best memoir on Preventable Diseases: the Preventive Measures to be Taken. The first prize is £[illegible], the second £[illegible] and the third £[illegible]. The essay is not to exceed from twenty to thirty pages in 8vo. The following points must be treated: How to prevent contagious diseases during the illness and after; private sanitation of patients and those who tend and treat them; house sanitation and disinfection; and general sanitation during illness.

LETTERS, COMMUNICATIONS, Etc., have been received from:

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PRESIDENT'S ADDRESS,

DELIVERED AT THE

SIXTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

BY

SIR J. RUSSELL REYNOLDS, BART.,

M.D., F.R.C.P., F.R.S.,

President of the Royal College of Physicians.

THE POWER OF LIFE IN LIFE.

Twenty-two years ago the British Medical Association held its annual meeting in London, and last year the members of the Metropolitan Counties Branch thought there were then abundant reasons why the Association should be invited to assemble here again, and the whole meeting of the Society convened in Bristol cordially accepted the invitation.

The Meeting in London in 1873.

The Association was presided over in 1873 by the late Sir William Fergusson, the most distinguished surgeon of that day; there must be hundreds here who remember him well: his grand physique, his skilful and, indeed, artistic performances; the absolute ease with which he bore himself under the most trying circumstances of unavoidable accidents and yet not unforeseen, of events which no human knowledge could forecast, and of difficulties which needed all his resources of hand and courage to encounter.

Sir William Fergusson.

Yet, gentlemen, I venture to say that if, like a well known but not quite historic character, Sir William Fergusson could have fallen asleep about that time, and have not waked up again until now, and were capable of appearing amongst us again, absolutely unconscious of the kind of progress made in surgery during those two-and-twenty years, and of the steps by which such progress was carried to its successful ends, even that dauntless surgeon might pause to perform an operation, which either of his dressers of twenty years ago might be announced to do to-day, and would do without fear or dread.

"Experience is by industry achieved and perfected by the swift course of time." Such industry has been unsparing, I may also say relentless, not in consideration of the patient but of the worker. It has come from all sources of scientific investigation that could be focussed in the operating theatre, and it has done more than the surgeon of my student days—and Robert Liston was daring enough—could have foreseen even in his most optimistic dreams.

Dr. E. A. Parkes.

The Address in Medicine was delivered in 1873 by the late Edmund Alexander Parkes, and all of us who remember him, and all who have become acquainted with his writings, know how vast was his range of information, how keen his foresight, how subtle and yet how true his faculty as a critic; but still, if Parkes could, even after only the few years since his untimely death, revisit Netley, or his still older haunt, University College, even he would be entirely bewildered and amazed if he found his house-physician feeding a patient on sweetbreads, or injecting thyroid extract for the cure of myxœdema.

Scientific Medicine in London.

In physiology, in pathology, and in medicine advances, equally important to each, have been made during the past two-and-twenty years. It is not my intention to occupy your time with any details on these matters, but let me recall, for a moment, your attention to the vast strides that have been made in the elucidation of both structure and function—such, for example, as in the researches upon the thyroid, the adrenal bodies, the spleen, and the liver; the advance of bacteriology; the function of the axis cylinder of nerves; and the magnificent prospect before us of a new field of therapeutics in the serum-treatment of disease.

Physiologists, pathologists, and therapeutists have "seen visions" and in the past have "dreamed dreams"—as we may be dreaming now—but the facts, now well before us have certainly astonished even the expectant, have surpassed their imaginations, and opened before them, not one only, but many doors into regions crowded to the full with yet more fruitful information, waiting only to be arranged and utilised.

So much of the work that has led to this present state of science has been accomplished in the metropolis that, although we know what has been done and is still being done in the provinces, we thought it well to ask you to meet us here, tell us of your own work, and join with us in a mutual endeavour to gather more and more by combined work and earnest, honest rivalry for truth than we could do by disunited efforts. What my object in this address is mainly concerned with is to draw your attention to that which seems to me to be the most striking fact of modern physiological, pathological, and therapeutical research, namely, the power of "living," things for both good and evil—namely, in the conservation of health and in the prevention or cure of disease. The mineral and inorganic world has helped us much, but now our help and hope come mainly from organised products and still living agencies.

During the last twenty years there has been established, to the great advantage of our profession, the "Conjoint Examination" by the Royal Colleges of Physicians and Surgeons. This, while not interfering with the autonomy of either College, has raised the plane of education required of all who are candidates for entrance into the profession, and has so brought into combined action the Colleges themselves, that they have added, each to the other, authority and dignity in the recommendations they have made from time to time with regard to matters of education, Parliamentary proceedings, State medicine, and scientific research.

But the building on the Thames Embankment, which will be well seen during the next few days, is very much more than an Examination Hall: it is the centre of a very hive of industrious work. You will see there the most recondite and obscure processes of Nature under the most elaborate scrutiny and faithful record. The delicate phenomena and suggestions of "living" and "chemic" functions are under minute survey, analysis, and detail. The points where they touch, the mode in which facts of either may be rendered in terms of the other; their bearings upon the life of animals and men, both as individuals and as parts of a community; the diagnosis of the most obscure diseases, and the tentative and more than tentative endeavours to counteract poisons which can be separated but not destroyed, over-ruled but not abolished. These, and much more, you will see under the skilful and careful guidance of the able director of the laboratory, who, with his many coadjutors, will gladly welcome all those who are interested in such minute research.

This is one of the products of the last twenty years, but it does not stand alone; the Brown Institute, the Society for the Promotion of Knowledge by Research, the British Institute of Preventive Medicine, the laboratory of University College, and of the other large schools, are all doing similar work, and constitute the most promising features of the present day with regard to advance in the science and art of medicine.

The Improvement in Teaching.

In all our schools you will, I am sure, find very great improvement in the mode and scope of teaching; and this especially in its being less didactic and more practical. Much of the old-fashioned, often dreary, "lecture" of an hour's duration has passed away, and in its place is a "demonstration," an "object-lesson," a conversation, or examination. These are more useful and therefore more attractive to the students; and, at the same time, more trying, but none the less efficiently rendered by the teachers.

Again, in clinical teaching you will observe much more and closer personal relationships, not only between the physician and the student, but between the student and the patient. The latter is not a mere "dummy" in a bed, exhibited as a specimen of this disease or that, but a "human being" to be spoken to and to help you—I mean the student—to find out whether or no the card at the head of his bed,

on which the diagnosis of his malady is supposed to be written, is correct, or as full as it might be.

Then there is another point which has struck me much during the past ten years, and especially so whenever demonstrations are being given, either at the bedside or in the laboratory, namely, the far greater interest and earnestness which characterise the student of to-day as compared with his predecessor. Much of this is, I think, due to the indulgence of a larger hope. Hidden, as still are, the great mysteries of life, there yet are definite facts to be grasped by the mind, to be seen and handled, not only imagined or asserted; and the place of these facts in the economy of Nature, their bearing upon others, and their relation to work yet to follow, give a precision and confidence to study that is, comparatively speaking, of modern growth. There was plenty of assertion and show of knowledge in the past; but even the teachers did not believe the half of what they taught, nor comprehend the half of their sage pronouncings. Nature has, as it were, taken man more into her confidence, and daily reveals so much, even while concealing more, that the learner stands firmly on the ground he has gained, instead of trembling on a quagmire, the length, and breadth, and depth of which he could not see and did not care much to imagine or investigate. He felt sure of little then but of his own and his teacher's ignorance, but now he grasps much that is ascertained truth and such as can be seen, shown, measured, and recorded with perfect accuracy.

METROPOLITAN MUSEUMS.

Our metropolitan museums in Bloomsbury, South Kensington and Lincoln's Inn Fields will afford to all museum lovers an ample reward for careful examination. Two of them were splendid examples, twenty years ago, of what could be done to make "collections of material" instinct with information, and object lessons of physiological and anatomical lore; but the marvellous accumulations that have reached us during the period I have mentioned are, I think, only exceeded in marvel by the industry, high thought, and consummate skill with which these materials have been arranged, and made to tell, in their own way, the story of their being, and of their place in the great Kosmos of which they form a part.

THE WORK OF THE SECTIONS.

The JOURNAL of the Association informs us that the work of this meeting will be carried on by fifteen Sections, fully equipped with their respective officers, and each presenting subjects for discussion to be brought forward and threshed out by able hands. But let me remind you that these Sections, or at least many of them, have had now, for varying numbers of years, their counterparts in the metropolitan and provincial Branches and societies, where discussions are taking place all the year round, records of which are constantly published in magazines, proceedings, and other appropriate journals. In this manner the increase of medical literature has become enormous, and as a rule its value is very high. Of course it would be too much to suppose that, coming from so many sources and from such differently constituted minds, its merit should always be equal, or of the highest order. It cannot be expected of all who write and all who speak that one should say, as was well said of one of our late distinguished members, "he spoke because he had something to say, not because he wanted to say something." In the business of these societies it is the bringing together of recent facts or ideas, and the friction of mind with mind that is so useful, in separating the real and substantial from the imaginary or accidental; and in this work all our large towns and even country districts are assisting; and the marvel is that when we meet, even as we do now and here in the metropolis there should be such a tremendous store of material to be brought before us for discussion or reception. For example, in the Section of Medicine alone, there are three subjects for discussion, and on these fifty members have already expressed their wish to speak; there are, moreover, thirty papers promised, and it is to be expected that few of these will pass without any variety of opinion on their merits being entertained and expressed. It is not to be imagined that all that is advanced will be either new or true, but of this we may be sure—that nothing will be brought forward without duly careful consideration, and apart from the belief that it is worthy of the time and the attention which those who are present will be asked to bestow. I am induced to make these remarks by the fact that the number of members of the Association is now three times as great as it was when we last met in London, and it is one of the most important events of the last twenty years that such an organisation should have grown into being, and should have such a vast influence for good over the whole civilised world.

LOOSE PHRASEOLOGY AND EPONYMOUS TERMS.

There are some points in our present state of scientific precision in which, to my mind, it would appear we have made but little advance. We know much more about diseases, their origin, their anatomy, pathology, interrelations, modes of ending, and their treatment; but with regard to nosology and nomenclature there is little of which we have to be proud. Groups of symptoms have been described by different observers as marking some tolerably distinct departures from recognised types of malady, and, for want of any nosological position being assigned to them, they are called after their first describers' names, and so we have not only Bright's disease, Addison's, and Graves's, but a host of others, often indeterminate in character, going by the name of Friedreich, Raynaud, Hodgkin, and others, until there is a fair prospect of every distinguished pathologist or clinical investigator being handed down to posterity as a disease, the name of which conveys no semblance of a meaning as to its nature. Still further and more to be deplored, there are smaller groups of symptoms which are not honoured by receiving the names of their describers as separate diseases, but the names of the observers are tied on to the symptoms; and so Cheyne-Stokes breathing, Corrigan's pulse, von Graefe's sign, somebody else's phenomenon, and a multitude of other like phrases are used, to the great confusion of the student, and not only so, but to his real and permanent injury. For what is easier to say than that there is "Cheyne-Stokes breathing," except to feel a sense of rest in having made use of that learned phrase, and so practically to shut the door to further inquiry as to what it means and how it comes about, what its diagnostic or prognostic value may be, and how it bears on therapeutics? When quite a boy I was watching the dying bed of my maternal grandfather, aged 84, who had been afflicted with right hemiplegia and aphasia a few days previously. Of all medical terms I was absolutely ignorant, but that variety of breathing struck me much—as it was likely to do—and after observing several long pauses, I exclaimed to the nurse when he had not breathed for over a hundred seconds, "Surely he is gone now!" To my surprise, the practised old observer replied, as she looked up from her knitting, "Oh, lor', no, Sir; they never goes that way!" So far as my own experience teaches me she was right; but I have not yet met with a satisfactory and thoroughly scientific explanation of Cheyne-Stokes breathing, nor of its prognostic value.

Of course to give the proper name to a disease is to place it where it should be, nosologically, "at home," and understood; but medicine is not a science yet sufficiently "ordinated" for this thing to be done. We can, as yet, "predict" with certainty but little, and so we grope about, and "gather dust and chaff," with little chance or hope of turning them to value; and instead of making this the matter of most serious investigation, and finding the true relation between the new "group of symptoms" and those others which form the central facts, the backbone, and whole skeleton of pathology, we lay hold of the first piece of red tape ready to our hand, tie up the group of symptoms in a bundle, and label it Brown, Jones or Robinson's disease!

A suggestion was made, not long ago, by one of our most able and energetic thinkers, that some apparently new diseases might perhaps with advantage be named, provisionally, after the patients who exhibited them. This certainly had the merit of originality, as it struck me at the time I heard it, but in looking at my case-books I found that already I had several times adopted it in so far as to say "Case X Y Z resembling, in particular features, that of A B C," or some other very familiar patient. But nothing could be worse for scientific medicine than any such retrograde proceeding. If there be any danger of nomenclature resolv-

ing itself into a catalogue of the names of distinguished pathologists, as has been suggested, it would be a still more terrible disaster if a differentiation should be carried still further on this dual system of nomenclature, and that the student should have to be examined in his knowledge of the "George Brown variety of Robinson's disease," or the "Max Schott's deviation from von Hopmer's sign."

At the very time that there is this increasing use of loose phraseology, there is also—as is common enough in other departments of life—a marked tendency in the opposite direction, and that is to connote as diseases certain groups of symptoms by some short, or long, and often not very appropriate word or words, such as acromegaly, hypertrophic pulmonary osteo-arthropathy, appendicitis, pseudo-hypertrophic muscular paralysis, and others. There is abundant precedent for this; a few are time honoured and old enough to be allowed to live, such as pertussis, epilepsy, apoplexy, chorea, gout, and rheumatism, which have the merits of brevity and of meaning; but there have crept into ordinary conversation nowadays a number of expressions which aid us little or, as I think, not at all; and such words as gastro-jejunostomy and laparotomy do little more than lay us open to the satires of the playwrights of the last century in foreign countries, and its predecessors in our own.

Organic Medication.

But whatever may be our failures—and they are small compared with our enormous successes—there is nothing that has happened during the past twenty years to be compared in importance, as I have already said, with the new revelations that have been made of the potency and pre-potency of life—the power of life in life—in health, in disease, and in its treatment. I allude of course to the interpretation of much of the functions of certain organs, the existence of which had been known for many years, but the utility of which had been absolutely unknown, for example, the pituitary body, the thyroid gland, the suprarenal capsules, and others.

The knowledge of the functions of the liver and the spleen has been gradually increasing for a long time, and only by slow degrees have the metabolic properties of these organs taken the place of the older ideas of secretion of bile and balance of weight. It has been, on the other hand, although the outcome of serious investigation, but also somewhat by a fortuitous concourse of thoughts and events, that the most astounding revelations of modern physiology have been made. What we have come to know amounts to this in general terms—that the absence of certain organs, of the functions of which, until quite recently, we knew nothing definite, leads to grave and diverse diseases of the body, whether this absence be brought about by surgical operation, or by disease more or less individual or specific in its character; and that, such being the case, the supply of the material of that organ as food, or some part of it, as an extract, to be introduced into the blood, removes the symptoms, acts with great promptitude, and, I might say, almost with some violence of disturbance of the whole economy. Not only so, but these extracts seem to possess a power reaching far beyond that which was first found to be their almost anticipated result—that is, in so modifying the action of the heart and the intravascular pressure in a manner and to a degree entirely unlooked for, and requiring much further investigation, in order to unravel the true nature of the functions of these organs in health, and the value they may have, by their products, on the processes and treatment of disease. As yet we are only on the threshold of still greater discoveries in regard to life, but we see, through the portal, ranges of facts which are trustworthy guides as well as sign posts, and which will, we believe, lead us to a larger knowledge of these recondite processes of life in its most essential and characteristic features—namely, of the nutrition of all organs, of the way in which this is brought about, and of the interdependence of all tissues, so that perhaps, in a far higher sense than we have ever realised before, the truth may be revealed that "when one member suffers all the others suffer with it," and the reason of this may be explained.

A very obvious consideration which should "give us pause" in self-congratulation is this, that as in past days the functions of different parts of organs, the kidneys, for example, were more or less clearly separated by physiologists, no longer with us now; so we have seen recently, that only certain portions of other organs have the physiological effects just discovered, and thus that there may be in what we have regarded as much simpler organic components even in quite simple tissues, some unconsidered element of function, some *sine qua non* of healthy life, some missing link in the phenomena of disease, so that it behoves us to keep the mental eyes wide open, to clear away all films of prejudice or hasty complacency, to expect the unexpected, and so, without looking for it, to find our reward.

Microbiology.

Not less important than the matter I have just referred to is the recent development in "microbiology" and "all that therein is." The "germ theory" of disease is not new. When it commenced, and who has the credit of its begetting, I do not know. Probably, like ancient and modern heroes, it had many parents, and as many homesteads. It is quite clear that our own great Harvey entertained it, as may be seen by the following:

"Let physicians cease to wonder (he says) at the manner in which epidemic, contagious, and pestilential diseases scatter their seeds and are propagated to a distance through the air, or by some 'fomes' producing diseases like themselves in bodies of a different nature, and in a hidden fashion silently multiplying themselves by a kind of generation until they become so fatal, and, with the permission of the Deity, spread destruction far and wide among man and beast; since they will find far greater wonders than these taking place daily in the generation of animals."

Years later it was a hobby ridden by many but without much convincing proof. But even so late as 1892 we find that advanced pathologist Dr. Edmund Alexander Parkes saying, with regard to the etiology of influenza, "We find ourselves in the presence of the so-called fungoid theory of influenza," and after discussing this matter at length, "it seems impossible at present to come to any conclusion as to the nature of the cause."

The Beneficent Microbe.

The most important fact with regard to recent microbiological research is the gradually-increasing appreciation of the fact that these lower forms of life exist, not necessarily mischievous, but, indeed, benignant inmates on the human body, and that although the mode of their operation is not fully explained they take part in healthy processes, assisting normal functions, nay, indeed, it would seem sometimes producing them and warding off the malign effects of other influences to which we are habitually exposed. These bodies, to which we are indebted for this aid, operate partly by their chemic action and partly by what we must call a vital process, and by their cultivation outside the human body and their modification by passing through other organisms, can be made to exert a malign or a beneficial agency on man. It seems even in the range of possibility that at some time not very distant some other than "the ancient mariner" may apply to them the far-reaching words of Coleridge, and exclaim:

> O happy living things! no tongue
> Their beauty might declare;
> * * * *
> Sure my kind saint took pity on me,
> And I blessed them unaware

The third great revelation of the last twenty years is the wonderful protective and curative power of these living products. This, in a very wide sense, is not new. Of all the most powerful agents of destruction, the most violent have been derived from "living" things; they are to be found in the animal and vegetable worlds, not in the mineral. In their most terrible malignity—such as in snake-bite, glanders, or hydrophobia—these need no human skill for their development; they are prepared in the laboratory of Nature, and, alas, are only too ready to our hand. Next to these come the poisons of stinging things, and after them, the more slowly operating and less deadly animal [illegible]; some with indeed beneficial influence, as "vaccine," others with local effects on the skin, but not often great disturbance of the general health.

The vegetable kingdom can produce potent poisons, such as belladonna berries, aconite root and leaves, poppy juice,

and the Ignatian bean; but in order to render these more deadly the hand of man has to come in and prepare nicotine, strychnine, morphine, and the like; just as it may produce, from the mineral or quasi-mineral world, such potent agents as hydrocyanic acid, concentrated acids, and other dealers of destruction.

The interest in these facts lies in the modern mode for their utilisation. The great potency of living products has led to very fanciful notions in therapeutics; and there have been those who, to cure diseases of organs, have given portions of the same but healthy organs of animals or of man or other animals. Again, the idea has been pronounced that even excreta were useful drugs, and that the diseased organs of man might effect a cure of those supposed to be afflicted in like manner.

Immunisation by Serum.

Curious as some of these details are, they are of real interest to us only as they lead up, through inoculation for small-pox, to our own Edward Jenner's discovery of vaccination, and then, through the researches of Pasteur, Lister, and Brown-Séquard, to our present state and plane of knowledge. It would seem now that there is scarcely any limit to what may be expected in the cure or prevention of disease; and the most striking of all phenomena is, to my mind, the probability of rendering an animal immune by the introduction into its organism of a healthy constituent of the body of another. This, if fully confirmed, will be the greatest veritable triumph of therapeutic and preventive medicine, instituted and guided by extended inquiry into comparative anatomy, physiology, and pathology. As in the human race or species there exist, as is well known, what may be termed "idiosyncrasies"—by which is simply meant that as a matter of fact some people, and some people's families, escape epidemic diseases, whereas they are especially prone to take others to which they may be exposed—so in the great economy of Nature certain groups of animals have been shown to exhibit no capacity for "taking," or for even being "inoculated" with the poisons to which others are exposed, and from which they suffer, and that severely. It would seem, therefore, that use may be made of these animals, more or less naturally immune from certain maladies, and that their immunity may be partially conferred on man.

Quite recently a communication of the greatest importance has been made on the rendering of animals immune against the venom of the cobra and other snakes, and on the antidotal properties of blood serum of immunised animals. This subject has occupied attention during the last six years, and we must all look forward with expectancy and hope to the possible and probable diminution of a great national and imperial calamity.

Life the Protector of Man.

The outcome of all that I have been saying is this: that the scattered fragments of knowledge and "guesses at truth" of many years have been gathered into a focus during the past twenty-five years; that the vegetable life, extracting from the mineral world the materials it needs for growth and production of powerful agencies for good in the form of food and medicines, and for evil in the form of poisons, has given itself up to the growth of animal life, with its much more complex organs, and for cure of ills once thought beyond the reach of human aid; but that, thanks to man's scientific ardour and industry, it has again shown itself to be our servant, our helper, and our protector.

These are not dreams of the study, they are facts of the laboratory and of daily life; and in using that word "life" again, I must endeavour to emphasise still more forcibly upon you my urgent belief that it is to living agencies and their employment that we must look for help in the care of infancy, the conduct of education—moral, mental, and physical—the training up of character as well as of limbs; that it is the guidance of living functions, in the choice of living occupations, be they either of hard work or of amusement. It is to these we must appeal if we would see the *mens sana in corpore sano*; and then it will be to these that we may confidently look for help when the inroads of age or of disease are at hand, often to cure us of our trouble; or, if not, to give us rest and peace.

It would be absurd in me, now and here, to attempt to say in what this potency of life exists. It is enough for us to recognise its existence, rejoice in its marvellous energy, and anticipate still more from our investigations of its modes of action, but I cannot help feeling that, however far we go in our research into the arcana of Nature, one of our ablest neurologists, who has gone very far, is right when he says: "Search while you may with eyes, however aided and however earnest, that which we call 'life,' eludes our search and resists our efforts. We must be content with what knowledge we can gain, secure or insecure, and while using it as best we may, should realise in all humility how much there is we cannot know, and yet we cannot doubt."

The Life of the Professional Body.

There are three aspects of life to which I wish to make further reference, because it seems to me very important that this Association should, at some of its annual meetings, direct special attention to their consideration. And first, a few words on "professional" life. As physicians and surgeons, however numerous, we do not constitute a "body" of men unless we have some one prevailing spirit, common to us all. The profession may include its thousands and tens of thousands, but it is a crowd, a multitude, or shall I say a "mob," unless there is in it an *esprit de corps*; and, thanks to our great seats of learning, our universities and colleges, we have developed this uniting spirit, now for many years. But our own special colleges of physicians and surgeons, our medical societies, and especially this vast Association, have done more within the last fifty years to give real, unifying life to its individual members than was possible, or even expected to be possible, by our forefathers.

The British Medical Association and the British Medical Journal.

There are sixty Branch associations in direct communication with our colossal trunk, spreading themselves not only over the United Kingdom, but to the remotest parts of our dominions; and these are all equipped with efficient officers, holding meetings all over the world, discussing the really important topics of the day, and adding their contributions to the sum of knowledge through the pages of our quite remarkable Journal. Now, this is very encouraging and very hopeful; but it entails, as it is bound to do, great responsibilities. That so large a body of men should be banded together under one common name means that they have some common purpose, and some common plan of co-operation to attain it.

What that purpose is we know, namely, to render our profession of the highest service, not only to the individual but to the State, by taking our share and giving our advice in the making of our laws, so far as they affect us, as members of our profession; by the regulation of our charities; the guidance and control of labour; the care of the pauper and the pauper child; the lunatic and the quasi-lunatic, or the habitual drunkard; by the care of our poorer brethren; by the advance of scientific researches, and especially of those that require combined efforts and combined funds for their prosecution; by the promotion of useful and stable literature; and by the elevation of all that constitutes the education of the man of science, the physician, the surgeon, or the guardian of the public health.

These noble purposes cannot be achieved, nor have any of them been carried to any useful extent, without self-sacrifice, as well as the sacrifice of time; without a consideration of the views of others as well as an assertion of one's own; without respectful regard to the feelings and positions of our colleagues, as well as a due estimation of those which we may occupy; without patience as well as work; and an all-pervading sense of hope, in the midst of trying times, and in the darkest hours. One thing, in addition, we should all most strenuously try to do, and that is to avoid waste of time. We may use it, or sacrifice it freely, but we cannot afford to throw away one moment; whether it be on personal ends, forlorn hopes, foregone conclusions, or threshed out heaps of seedless faggots.

It is in this spirit, I am sure, that we begin our vast meeting in the metropolis, and if we but continue along the lines of conduct our Association dictates, and if in the control of the affairs of our daily life we always bear in mind

our belonging to a noble profession, and to a great Association of fellow workers for its benefit, and for the benefit of mankind at large, we may hope to see that—useful as it may be now—at some future assembly of our fellows, it will not be found necessary to constitute a special section for the discussion of those questions which fall under the category of ethics.

Outside our professional life, but closely mixed with our daily work is the "social" constitution or, as some would call it, the "environment" in which we have "to live and move and have our being." Certainly it has changed much within the last twenty years, and it would be impossible for me to dissect it now, and say in what ways we have advanced, and in what others we have either retrograded or gone far, far, out of the beaten track. The changes are on all hands, are pressing, importunate, and I might say overbearing. They are not seen in the assemblies of such reverend bodies as the Royal Society, the Colleges of Physicians or Surgeons, or in the higher courts of our universities; but may be met with in the courts of law, the park, the theatre, the concert room, the school, the public assembly, the drawing room, and last, and worst of all, in the home.

Sensationalism and Decadence.

It would seem as if "reverence, that angel of the world," had from some regions taken flight, and that in her place were idols, or mocking shadows, or gorgeously apparelled lay figures. This absence of reverence shows itself everywhere, but perhaps it is possible to classify even such a negative quality and put its leading features under three great categories: (*a*) reverence for all that constitutes the religious element in life; (*b*) for that which is the groundwork of "social" propriety, and I may say even of decency, as our predecessors would have thought; and (*c*) for the constituted order of relative dignity in "family" life. Thus, much that now passes for wit, humour, cleverness, or fine and advanced thought may easily be resolved into offences either against the religious sense of others, that is, trespasses in the direction of profanity; or against the long-recognised standards of propriety, in topics of conversation, in literature and art; or sins in many directions against the widest meaning of the old commandment "Honour thy father and thy mother." If all shade of profanity, impropriety, or rudeness were eliminated from what now passes current in books, in plays, and in conversation we should, I think, often find little or no humour left, but only a vapid attempt at seeming cleverness, or at best some silly pun. Even the epigrammatic style of writing and talking at which there is so much attempt, especially in the conversations detailed in the modern novel, has generally lost all real point and excellence; and in most instances has degenerated into clumsy efforts to be smart and unintelligible or to gild the refined gold of the setting of that priceless gem of humour, when natural and spontaneous, the true "Irish bull." The sparkle of the humour is lost, there is a semblance of a paradox, and wrapped up in this an obvious and often intentional untruth. If this were rare we could let it alone, least of all could we think it worthy of notice in the meeting of this Association; but it is not rare. Our literature is positively flooded with this senseless and misguiding nonsense; even science is sometimes dragged into its degrading service, and the profession of medicine has not escaped its touch.

If we ask ourselves, "What is the meaning of this and whence its origin?" I do not think we shall have very far to travel. Of late years there has been imported into our country a phrase which, in my humble opinion, is abominable in itself and in its power for evil. I will not quote it, but let me ask you if you do not think that this idea of the approximation of the "end of the nineteenth century," with the nonsense that has passed into its literature, has not had much to do with it? It may be that the notion has arisen in some minds that when its "crack of doom" has come, and they wake into a new epoch, follies will be left behind, no more records will have to be made or broken, wild oats will be trampled under foot, and no more will be sown; that there will be an end to the frivolous talk of the last decade, that a "new earth" will be here for us to tread, and that if there be any idea of a heaven lurking in such minds, there will be a "new heaven" also. It has seemed to me that something like these notions have passed current in many circles, and have been held to excuse what would otherwise be not only inexcusable but intolerable.

Now, gentlemen, it is against all this absolutely unscientific and unphilosophical verbiage that, I think, we, as members of the profession of medicine, should utter our strongest protest. Nature does not progress by leaps; the terms, limits, and boundaries of time are convenient arrangements we have made for ourselves; to pass them may make or destroy some legal powers or exemptions from responsibility; but they have, in themselves, nothing whatever to do with the essentials of our individual and domestic life. When the last stroke of the bell has knelled, in the midnight of London, the last hour of 1899, do we really think that either here, or there, or anywhere, it will carry with it any substantial meaning, or any wholesome lesson? I cannot for a moment believe it will. Old and young people will die, in the awakening as in the dying year; babes will be born in the one century and in the next; there will be bridal feasts and funeral marches; wisdom and folly; sickening accidents and more sickening crimes; there will be "new women" and "new men"; but there will also be "old women," and those of both sexes, and "old men" to tell us of the far better days when they were young and everyone was wise!

As physicians and surgeons we can, I think, do much to counteract this, as it seems to me, growing tendency of the present day. In the nursery, in the schoolroom, and yet a little later, we would give advice, and that of useful sort. Little girls and little boys may strip themselves as high as may be, and paddle on the sands of the salt-sea shore with relative impunity, for they rarely venture into water over ankle deep; but, when a few more years have passed, and, exposed as society now sanctions, they roam on another shore of that "Ocean of Time whose waves are years, treacherous in calm, and terrible in storm," they may be overtaken by the tide they have courted, and to them "Life be never the same again."

There is still the one great and greatest relationship of life to which I will address myself, but only for a brief period—I mean the conduct of our profession to the "religious" element in our nature. Here, we have nothing whatever to do with creeds, be they hoary with age or flushed with the bloom of youth; all that I mean is that we, members of the medical profession, have to deal with those to whom these creeds mean much, and are, with what they entail to many, the be-all and end-all of existence. I am not thinking for a moment of the few substitutes proposed for religious faith, but referring only to that which relates those who entertain it to the Higher Power, the source of Revelation and of good and hope, far other than is to be found in themselves or in Humanity, be it in its Future or its Past. I am sure that in giving the help we hope and ought to give to suffering and sorrowing man, we shall do nothing worthy of the name unless we realise, and that to the full, the importance of this factor in our lives and theirs; and so guide its operation as to help it to chasten, subdue, control and comfort those to whom it is the minister that they feel to be sent from God to help them in their passage through this region of passing shadows to that of realities which are abiding things.

Acting in this spirit in our professional life, and in our relation to the social and religious lives of our friends and patients, we may, I think, take courage, and, entertaining a larger hope from holding a larger view of life, adopt the words of the Laureate of the first half of this century, and exclaim:

> "Look forth, my soul!
> (Nor in this vision be thou slow to trust)
> The living waters, less and less by guilt
> Stained and polluted, brighten as they roll,
> Till they have reached the eternal city, built
> For the perfected spirits of the just!"

Firth College, Sheffield.—Considerable progress has been made recently towards carrying into effect the project for affiliating Firth College, Sheffield, with Victoria University. A sum of £50,000 will be required to carry the scheme through. The existing endowment of the College is £23,000; the Town Trustees of Sheffield have now voted a sum of £10,000, Sir Henry Stephenson has made a conditional promise of £5,000, and a public appeal will be made for the remaining £12,000.

ADDRESS IN MEDICINE

BY

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Physician in Ordinary to H.R.H. the Prince of Wales.

At the Annual Meeting of the British Medical Association at London, July-August, 1895.

THE GROWTH OF THE ART AND SCIENCE OF MEDICINE.

The heavy responsibility of delivering the Address in Medicine on the occasion of the visit of the British Medical Association to London has been placed upon me by the Council of the Association. The opportunity of addressing so many of his colleagues as are assembled here rarely happens to a medical man. The honour attending it is very great, and nothing short of his best thought and endeavour ought to satisfy his sense of what is due to the occasion. It was under the influence of this feeling that I entered upon the difficult task of deciding what I should bring before you to-day, and it seemed to me that it was better that I should resist the temptation to take up some special subject, or a topic of local or temporary interest, and once more go back to the past and see what lessons it has for us at the present day. I propose, therefore, to consider the growth of the art and science of medicine.

The Art and Science of Medicine.

I place the words "art" and "science" in this order advisedly, for the art of healing is one of the primary needs of social organisation, however rudimentary, and preceded by many ages the development of anything which could be called a science of medicine. So far, moreover, the art of healing has always been in advance of science, firmer in its basis and more secure in its principles, and, even when medicine as a science has realised our highest aspirations, the end and aim will be art, that is, skill in the recognition and treatment of disease. At the same time it is true that until science began to throw light on its path the art of healing struggled blindly on its way, and its advances were intermittent and slow, with long intervals in which there was stagnation and retrogression. All true progress in medicine has consisted in the application of the results of scientific investigation to the facts of observation.[1]

Medicine before Hippocrates.

At whatever period of the world's history and at whatever stage of civilisation we may contemplate the physician engaged in combating disease, there will be recognisable three distinct factors in his work—his power of identifying diseases, the remedies at his command, and the ideas by which he is guided in the employment of these remedies.

The first rough and imperfect identification of the more conspicuous forms of disease was scarcely worthy of the name of diagnosis. Anatomy, which is essential to the localisation of morbid conditions, was scarcely known; no shadow of comprehension of physiological or pathological processes entered into the conception—it was simply the attaching of a name to an assemblage of symptoms, the course of which, however, was watched with great sagacity.

How remedies were first discovered and how the properties and uses of so many of them as were handed down from remote antiquity were known is matter for amazement. Animals are credited with instincts which direct them to the consumption of certain herbs or mineral substances when their health is deranged; the instincts of the primitive man also must have applied to remedies as well as to food, and experience of their effects must have been accumulated and transmitted, embodied frequently in legend or superstition, as part of tribal knowledge.

Of the infancy of medicine properly speaking we know nothing. Individual acts of healing are related in the Old Testament, and the treatment of wounds is described by Homer; the Chinese from remote antiquity had a system of medicine, and medicine has a place in the *Vedas*; but in the works of Hippocrates, the earliest medical literature which has come down to us, we are at once introduced to the theory and practice of the art of healing at a considerably advanced stage of development. Already there were rival schools of thought and treatment, and disease was discussed with extraordinary acumen from opposite points of view both as regarded its nature and phenomena.

Bleeding was in every day use, not by any means as a routine fashion, but with judgment; cupping also was practised. The virtues of opium were known, and purgatives of various kinds, chiefly irritating and violent, and emetics were familiar remedies; enemata and suppositories and pessaries were employed, and fomentations and poultices in great variety were applied.

Hippocrates: the Subordination of Theory to Observation.

Hippocrates, whose writings embody all our knowledge of ancient medicine, was born about 460 B.C. He was a contemporary of Socrates, Euripides, and Aristophanes, and was a worthy representative of medicine at that brilliant period of Greek literature and intellect called the age of Pericles.

It is true that his knowledge of anatomy was rudimentary, and that his physiological ideas were totally wrong, but he has left of himself the picture of a sagacious observer and wise physician. He was the inheritor of the knowledge and traditions of the school of Cos, and another source of information by which he had profited was the training establishments of athletes, where the influence of diet, gymnastics, and baths on health and vigour was carefully watched. His attitude of mind was towards the study of disease as such, rather than the differentiation of distinct diseases. Refinement in this latter direction had obviously been carried much too far by the school of Cnidos, which he criticised and opposed, where symptoms were looked upon as separate morbid entities.

His distinguishing merit, however, was that he was guided by observation and not by theory. Hippocrates could not, any more than his contemporaries or successors, or than we ourselves, escape the dominion of theory, but his theories were generalisations from observed facts, and not deductions from preconceived ideas or so-called first principles.

The doctrine with which his name is associated, that of the coction of humours and of critical days, for example, is essentially a generalisation from the natural history of certain simple diseases. In coryza or bronchial catarrh there is a watery acrid running from the nose, or scanty viscid expectoration with obvious constitutional disturbance. A change in the character of the secretion is attended with a remission in the symptoms, and after the discharge of more or less muco-purulent matter there is a return to normal conditions. Something of a like kind is observed in the urine in fever and in the stools in diarrhœa. For the accomplishment of these changes a certain time is required, which, when ascertained in each class of disease by careful observation, gives the critical day. The facts were essentially facts of the natural history of disease. The theory evolved as an explanation of the course of events and applied in the elucida-

[1] In my first sketch of this address I was tempted to use that comfortable word "evolution," but I found this term appropriated on every side, and employed to connote such a variety of modes of progress that my poor effort would have been lost in the crowd. Besides, a very little reflection showed me that no such process as "progress from the general to the special," which is what is really implied by the term evolution, can be traced in the history of medicine, but that, as Mr. Balfour says: "Assuming, as we do, that knowledge exists, we can hardly do otherwise than make the further assumption that it has grown, and must yet further grow. In what manner, then, has that growth been accomplished? What are the external signs of its successive stages, the marks of its gradual evolution? One at least must strike all who have surveyed, even with a careless eye, the course of human speculation: I mean the recurring processes by which the explanations or explanatory formulæ, in terms of which mankind endeavours to comprehend the universe are formed, are shattered, and then in new shape are formed again. It is not, as we sometimes represent it, by the steady addition of tier to tier that the fabric of knowledge increases from its foundations. It is not by mere accumulation of material, nor even by a plant-like development, that our beliefs grow less inadequate to the truths which they survive to represent. Rather are we like one who is perpetually engaged in altering some ancient dwelling in order to satisfy newborn needs. The ground plan of it is being perpetually modified. We build here, we pull down there. One part is kept in repair, another part is suffered to decay; and even those portions of the structure which may in themselves appear to be quite permanent, stand in such new relations to the rest, and are put to such different uses, that they would scarce be recognised by their original design

tion of disease of which the processes were not patent on the surface, was that some one of the four humours, the due balance of which constituted health, had obtained predominance and set up disturbance, general or local; this was concocted or elaborated by the animal heat, increased for the purpose, and qualified by admixture of other humours, and so brought into a condition in which it could be expelled and got rid of.

Hippocrates, from this subordination of theory to observation, from his careful study of the causation of disease not less than from the lofty sentiments and clear judgments contained in his writings, remains, and must ever remain, the model physician.

During the 500 years which separated Galen from Hippocrates the centre of gravity of the civilised world had shifted. Greece, shattered by conflict between its different States, had succumbed to Macedonia. Alexander had conquered Asia and then died. On the ruins of his empire Rome had gradually risen, and when Galen lived had extended her rule over Greece, Asia Minor, Egypt, and the southern littoral of the Mediterranean as well as over Gaul, Spain, and Britain. There had been time, however, for the development of a high degree of intellectual activity and literary culture under the Ptolemies in Egypt, and Alexandria had become a great centre of learning. Here marked advances were made in anatomy, dissection was practised on human bodies as well as on animals. Herophilus, between 305 and 280 B.C., left his name to the confluence of the sinuses of the dura mater; Erasistratus, a contemporary, recognised in a crude way the motor and sensory functions of the nerves: Chrysermes, 240 B.C., wrote on the pulse, as does also Heraclides, 230 B.C.

Medical writings date from Alexandria as late as 170 A.D., but the school had long lost its authority, and Rome henceforth attracts the highest medical talent. The physicians who first made a name in Rome are Greeks—Asclepiades, the friend of Cicero, and Galen himself. Celsus, however, who comes between the two, writes in Latin.

The Reign of Galen.

Galen, who was born at Pergamos A.D. 130, as is known to all of you, dominated medical thought for 1,500 years, and if it was inevitable that authority should exercise such undisputed sway for so long a period it was perhaps fortunate that it derived from Galen. He was in spirit a follower of Hippocrates, and the basis of his ideas on disease and its treatment was observation. His keen and active intellect and fertile imagination, it is true, led him to theorise on every conceivable subject; but the impression left as to his character by reading his numerous works is that of an acute observer, of remarkable ingenuity and profound judgment, and excellent common sense.

He dissected diligently and thoroughly, but mainly monkeys rather than the human subject. Taking this into consideration, his writings on anatomy were wonderfully complete and exact. They held away till the time of Vesalius. He finds the most ingenious reasons, often far-fetched and preposterous, for the form, consistence, and relations of all the various organs.

In respect of anatomy, his knowledge was incomparably superior to that of Hippocrates. He experimented on the spinal cord and on the nerves, and knew that they subserved motion and sensation—knew even that there were motor and sensory nerves distributed to the muscles and skin respectively, discovered the part taken by the recurrent laryngeal nerve in phonation, and, although his physiology is chiefly represented by fanciful teleological explanations of the uses of the different parts and organs, he made noteworthy additions to the knowledge of functions.

Apparently Galen was the first to establish the fact that the kidneys secreted the urine and that it was conveyed by the ureters to the bladder. At any rate, this was disputed in his time, the objection being that the urine could not be forced back through the ureters, and could not, therefore, have entered by these canals. The bladder was supposed to attract the urine. He demonstrated it by tying the ureters; and in the course of his experiment he almost stumbles on the discovery of the circulation, for he maintains that blood is carried by the renal arteries to the kidneys in order that its watery part may be filtered off. The traditional ideas as to the origin of the veins and of the flux and reflux of the blood in them, however, blinded him to this and other evidence, and he believed that the arteries contained air, though he maintained that they also contained blood.

A frequent reproach brought against Galen is that he spoke of the interventricular septum as perforated, so as to allow the passage of air between the two ventricles, against the evidence of his senses; but an excuse can be found for him in the fact that invisible communications had always been supposed to exist between the trachea and the arteries by which air passed from one to the other. He can only have meant similar invisible perforations, the orifices of which he would think he saw in the depressions which the walls of the ventricles present.

To convey even the faintest idea of the additions which Galen made to medical knowledge would require more than all the time at my disposal for this address. He wrote more than a hundred treatises on various subjects, including six on the pulse, and, while giving extravagant descriptions and making fanciful comparisons, he pointed out distinctions and characters which have been verified by the sphygmograph.

His treatise on local affections is remarkably true to Nature, and no more impressive lesson on the value of observation, even when unaided by science and experiment, can be afforded than by realising how fresh and vivid and modern his descriptions of diseases and symptoms sound. His diagnosis, for example, between hæmatemesis and hæmoptysis and other forms and causes of blood spitting leaves little to be desired.

I cannot deny myself the pleasure of quoting a passage which illustrates his robust common sense. He is distinguishing between the different causes of ischuria:

"Suppose the patient to be a child who has previously presented symptoms of stone, watery urine charged with sandy deposits, the child continually squeezing the penis, which is flaccid or unaccountably erect; then sudden stoppage of urine takes place. It may be reasonably concluded that the stone is lodged in the neck of the bladder. Place the child on his back, the hips a good deal raised above the rest of the body; then shake him in different ways so as to make the stone fall out of the canal. After these proceedings, tell the child to try and pass his water. If the attempt is successful and the urine flows you will be satisfied that you possess the exact diagnosis of the cause, and that at the same time you have found the proper treatment. Should the retention persist, you will shake him again still more forcibly; if after this it still persists, then with the catheter you will push the stone from the neck of the bladder to reopen a passage for the urine." It might be my surgical colleague, Mr. Jonathan Hutchinson, who was speaking.

Polypharmacy.

Materia medica was always too multifarious, even in the earliest times, and that of Celsus and Galen was much more varied than that of Hippocrates. Theriaca, so named from containing viper's flesh, was the subject of a work by Galen. It was a complicated opiate electuary containing about 83 ingredients, among which besides poppy juice and the viper, were pepper, rose leaves, iris, liquorice, cinnamon, nardus, cassia, crocus, frankincense, balsam, gum, fennel, cardamoms. It is said to have been employed for 2,000 years. Aloes, in Galen's hands, had largely taken the place of the irritating purgatives, such as hellebore and spurge, previously employed. Dioscorides, who wrote in the first or second century, describes more than 2,000 substances, chiefly vegetable. It may be remembered, by some now present, that an attempt was made only last year to invalidate the patent for lanoline, on the strength of a process for obtaining fatty matter from wool, given by Dioscorides.

The doctrine specially associated with the name of Galen is the humoral pathology accepted by him from Hippocrates and developed. The humours are phlegm, blood, yellow bile, and black bile; and all diseases arise either from a change in the quality of these humours, or from a predominance of one or other of them, or a flux of some particular humour to a given part. But, like Hippocrates, Galen is first of all an observer and his theories, faulty as they may be, are generalisations from observations and not deductions from *a priori* assumptions as to the nature of things.

Both Hippocrates and Galen rejected the doctrine of the sect of empirics, who declared that experience alone, without reasoning as to the nature or relations of observed phenomena, and without reference to causation, or to the influence of climate, season, age, sex, character of constitution, or mode of life, was the only safe guide in the treatment of disease.

Hippocrates still more emphatically rejected the pseudo-philosophical deduction of rules of treatment from the abstract qualities, hot and cold, dry and moist, acrid and sweet; and Galen in his turn rebutted the methodic doctrine of Asclepiades and Themison, which he found prevailing in Rome, according to which all diseases were referred to constriction and relaxation and treatment consisted in relaxing and astringing.

A high standard of medical literature is maintained by Oribasius, the friend of Julian, 350 to 400, by Aetius, who wrote near the end of the fifth century; Alexander, a little later in the reign of Justinian; and Paulus, who lived about 620; and improvements in practice can be traced during this period.

Alexander treated gout by purgatives, in which a kind of colchicum was a constituent. Paulus first described the aperient action of rhubarb, and extolled steel in scirrhus of the spleen.

After this there is a long gap in the history of medicine and of the liberal arts generally, but this is not to be wondered at. The Roman system of civilisation was gradually broken up, and its warring fragments were shaped by geographical and racial conditions into States out of which modern Europe has grown.

The seat of Government was shifted from Rome to Constantinople in 330. Rome was sacked in 546 and 549; later the Church established its dominion over the ruins of the ancient city.

As countries and governments were organised and delivered from the pressure of constant war, universities were founded. At Salernum there were already professors of physic in the middle of the seventh century. Charlemagne founded a college here in 802, and the Schola Salernitana was dedicated to Duke Robert of Normandy, son of William the Conqueror. The Universities of Bologna and Paris almost rival in antiquity that of Salernum. Thus in these dark ages the revival of learning and the *renaissance* of art were being prepared.

The Arab Physicians.

Names which have remained famous began again to appear in the ninth century. The followers of Mohamed in the course of their conquests found at Alexandria the works of Hippocrates, Galen, and other early medical writers. These they translated into Arabic, and upon them was based the medical learning for which Arabian physicians became renowned. With the Moorish conquest of Spain, and the extraordinary culture and civilisation developed by the invaders, the writings of Hippocrates, Galen, and the best Greek physicians, which had almost been lost sight of, came back to Europe with practical additions and modifications of great interest. Venesection was employed with greater moderation, and milder purgatives were substituted for hellebore and the like.

Rhazes, 852 to 932 A.D., besides reproducing the most important works of Hippocrates and Galen, gave the first account of small-pox, which, like the plague and cholera, came to us from the East, where he had seen it before the Saracens brought it into Europe in the course of their invasion. His description of this disease served for 500 years, and it is perhaps worthy of remark that he compares it to a ferment in the blood, like must. He is said to have been the first to employ chemical as distinguished from Galenical remedies.

Avenzoar speaks of adherent pericardium and mediastinal abscess, and employed nutrient enemata. Albucasis appears to have been very enterprising as a surgeon. It was only at the end of the fifteenth century that, in the general revival of learning, Greek medical literature displaced the Arabian writers, and again resumed its authority.

While there is evidence that clinical medicine was seriously cultivated, such events as the visitation of the plague in 1348, which carried off one-fourth of the population of Europe, and modified profoundly social history, or the successive epidemics of the sweating sickness, which specially affected this country from 1485 to 1529, left no mark on the history of therapeutics. Syphilis, which first became prevalent and virulent in 1494, afforded better opportunities for the trial of remedies. Guaiacum obtained a reputation as a specific for this disease, which we do not now understand; but it was seen before long that mercury, which was employed in the form of inunction, was the real remedy. John of Vigo was the first to recommend mercurial inunction, but Carpus previously employed it as secret remedy, and amassed a large fortune thereby. Fumigations were also practised. The effects were attributed to the carrying off of humour by the salivation which was produced. The introduction of mercury was an important addition to the materia medica.

The Renascence.

Already in the fourteenth century *post-mortem* examinations and dissections of the human body were made. The imagination was stimulated and a material impulse was given to the energies and ambitions by the discovery of America in the fifteenth century, and the invention of printing in 1462 made general intellectual culture possible. An evidence of the revival of interest in medicine was that the practice of medicine, which had drifted into the hands of monks and priests, was reclaimed. Linacre in this country took the licensing to practise out of the hands of the bishops, and founded the Royal College of Physicians in 1518.

The prodigious mental activity of the sixteenth century took in medical matters the form of eager and close study of human anatomy. Vesalius challenged the accuracy of Galen, and was haled before the Inquisition for his pains. Other names which mark this epoch and which have been left imprinted on some part of the human frame are Fabricius, Eustachius, Fallopius, Ingrassius, Colombus, Arantius, Varolius, while Servetus, Colombus, and Cæsalpinus almost penetrated the secret of the circulation. This great discovery, however, was reserved for our own Harvey, and the publication of the *De Motu Cordis* in 1628 constituted the most important epoch in the history of medical, and indeed of biological, science. But while vindicating his undoubted claims we must not forget that he owed his early knowledge of the anatomy of the heart and vessels to Fabricius, and drew his inspiration from the teaching he found at Padua. There is no need for me to dwell on the importance of the discovery of the circulation. When completed by the demonstration of the capillaries by Malphighi and by the discovery of the lacteals already made by Aselli in 1622, and of the receptaculum chyli and thoracic duct by Pecquet in 1647, and of the lymphatics by Steno somewhat later, the foundation was laid for physiology and the first step taken towards a real comprehension of disease.

The Slow Spread of the Doctrine of the Circulation.

It was a long time, however, before the establishment of the circulation began to bear fruit. Indirectly, it is true, an end was made of various absurd discussions, as, for example, whether bleeding ought to be done on the same side as a pleurisy or on the opposite side, which was the subject of a formal enunciation by the University of Salamanca to be enforced by legal penalties, and minds were emancipated from the authority which had enslaved them for so many centuries. But the first conclusions drawn from the circulation of the blood and lymph were absurd if not mischievous; one kind of blood was supposed to be conveyed to the muscles, another to glands, and the nerves were supposed to convey nutriment to white fibrous tissues, and it will be remembered that a century after Harvey there were physicians who sat to Le Sage for the portrait of Sangrado, which he drew in *Gil Blas*, and to Molière for the character of Diafoirus.

Sydenham.

If we take Sydenham, who wrote between 1666 and 1680, and Boerhaave (1668-1738), the best and most representative physicians of their respective times, we find that while they have fully realised the fact of the circulation of the blood it had exercised remarkably little influence on the theoretical views which they entertained with regard to disease, or on their practice.

Sydenham may be called the English Hippocrates. He was the last and best of the pure Hippocratic school, unless, indeed, we include Trousseau. He was above all a careful clinical observer. If time had permitted it would have been interesting to compare his knowledge of disease, the remedies he employed, and the theories he entertained as to the causation, nature, and treatment of disease with those of Hippocrates and Galen, on the one hand, and with those of the present day on the other. With regard to remedies the great acquisition of Sydenham's time was bark, which had been brought over from America by Jesuit missionaries about the middle of the seventeenth century. After accepting it cautiously, he employed it freely but judiciously, laying down rules which have been found useful ever since. Mercury was of course in common use, and antimony was an acquisition of which he thought highly. Epidemics he attributed to influences emanating from the earth, and he considered that different years and the various seasons impressed different characters upon the prevalent diseases, in which, in fact, he followed Hippocrates. Other diseases were due to vitiation of the blood; Nature was engaged in the expulsion of the peccant substances. It was the business of the physician to co-operate with Nature, and his art consisted in recognising the indications presented by the symptoms and the direction in which he must act in order to aid in restoring the normal equilibrium. "As for the physician," he says, "all his philosophy consists in following the history of diseases and in knowing how to employ the remedies which experience has shown to be the most efficacious for their cure, and at the same time he ought to follow a method which is founded, not on chimerical speculations, but on a common and natural way of reasoning."

Again: "They deceive themselves grossly who imagine that the principal defect of medicine is that it lacks powerful and efficacious remedies which chemistry alone can furnish. On the contrary, what is most wanting to medicine is not to know the means of fulfilling such and such an indication, but to know precisely what the indication is which has to be met. The smallest apothecary's apprentice will tell me in five minutes the drugs I must employ to vomit or purge, to sweat or cool a patient; instead of which, to learn with equal certainty when and in what case I ought to employ such and such a remedy in different diseases requires one to be extremely well versed in the practice of medicine."

Boerhaave, whose principal works date from the first years of the eighteenth century, was also a great physician, and exercised by his writings and through his enthusiastic follower and commentator, van Swieten, a powerful and lasting influence on medical thought in his day. He evidently had great experience, and was successful in practice. He had the great merit, too, of teaching at the bedside. He seems to have thought that with the discovery of the circulation and the advances in botany, chemistry, physics, mechanics, and clinical experience, medicine had in his day attained to certainty and almost perfection, but his theories were drawn largely from the assumptions and imaginations of the iatro-mechanical school.

Iatro-Chemical, Mathematical, and Mechanical Theories.

Nothing could more confirm us in our respect for the genius of Hippocrates and the good sense of Galen than to attempt to follow the fanciful extravagances which from time to time partially displaced their humoral pathology, and have been known as the iatro-chemical and iatro-mathematical or mechanical theories. Every discovery in alchemy, as early attempts at chemistry were called, and every new development of mathematical or mechanical science, was in turn seized upon as affording the clue to the causation and treatment of disease. Even the circulation of the blood and the early knowledge of structural anatomy were turned to perverse theoretical use. Just as for the methodics in the time of Galen every disease was referred to constriction or relaxation of parts, and the remedy sought in relaxants or astringents, so at one time all diseases were ascribed to acidity or alkalinity of the humours or to fermentations: or again to obstruction of pores or minute vessels and inspissation of liquids. The contraction of muscles was due to a sudden swelling of their substance set up by the nervous juice or spirits conveyed by the nerves. Respiration was for the purpose of giving a due comminution to the blood by the movements of the lungs. Fever was explained by an acrid nervous juice, which excited the heart to more frequent and forcible action.

The Growth of a Science of Physiology.

Later still the physiological discoveries of Haller, the establishment of the principle of irritability as a property of living tissues, and the employment of the term "stimulus" led to another general theory of disease—the doctrine that fever and inflammation were the result of over-stimulation, which was attended by a return to extravagant and indiscriminate bleeding. From this there was the Brownonian reaction to the contra-stimulant doctrine, with equally indiscriminate if not equally mischievous, administration of stimulants. Even the revelations of morbid anatomy and pathology were at first made the basis of a general doctrine relating to disease—the organicism of Broussais; everything was referred to gastro intestinal inflammation, and again venesection was the universal remedy.

From this time the character of the work which I have set before myself changes. Up to the present we have only been able to register accretions of knowledge and follow interpretations more or less close to the truth which were advanced in the absence of science. We have now reached a point at which we are entitled to say that ultimately science is to be our guide. Therapeutics will be scientific in proportion as the operation of remedies is referred to physiological laws. Physiology, in turn, is scientific in proportion as vital actions and processes are referred to physical and chemical laws. What remains for us to do is to follow the rapidly converging lines by which this consummation is being approached.

Taking up our parable again at Harvey's great discovery we find that it remained comparatively barren until it was supplemented by Lavoisier's explanation of the process of respiration, and indeed almost until a further impulse was given to thought and experiment by a diagnosis of diseases of the heart by means of physical signs.

Then an important step was made in the elucidation of the mechanism of the circulation by the discovery of the vaso-motor nerves, and the demonstration of the contraction and dilatation of the arterioles in obedience to stimulation of these nerves, by Claude Bernard.

Almost concurrently the regulatory apparatus of the heart's action through the vagus and sympathetic was identified by the brothers Weber. These discoveries were followed out in detail by a multitude of experimenters and the adjustment of the supply of blood to local demands for the purposes of nutrition, secretion, muscular action, and the response of the heart to the general requirements of the system, to excitement, emotion, exercise, are now thoroughly understood.

It is only comparatively recently that the blood pressure in the arteries and veins, and in different parts of the arterial and venous system, first measured tentatively by Stephen Hales, has been experimentally investigated by the graphic method by Ludwig and his school and made available for clinical work through the sphygmograph by Marey and his followers.

The relative share of the heart and vessels in the production of variations in the blood pressure was thus made clear, and then for the first time the complex and multitudinous indications afforded by the pulse could be understood.

At the same time that the lacteals and lymphatics were discovered, the structure of the glands was investigated by Glisson and Wharton, and the minute anatomy of the tissues generally was initiated by Malpighi, Leyden, and Leeuwenhoek, who demonstrated the capillaries by injection and recognised the corpuscular elements of the blood by means of the first rude form of microscope.

The invention of the microscope opened another avenue to knowledge, and every improvement in this instrument and in the preparation of structures for examination has been followed by a further penetration into the secrets of organisation and a better comprehension of function. Staining for example, has not only facilitated the identification of different structures in their minutest ramifications and most intricate combinations, but has made it possible to distinguish between active protoplasm, in whatever form it may

be found, and the material formed by it, and has revealed essential differences between cells otherwise apparently alike in all respects.

Schwann and Schleiden laid the foundation of histological science by the discovery of cells as the structural unit, and when the knowledge of minute anatomy had reached a certain point the results were systematised by Bichat, who by his general anatomy prepared the way for the cellular pathology of Virchow.

Side by side with advancing knowledge of structure has come increasing comprehension of function. Physiology from first to last is based on experiment. It was by experiment that Galen proved that the kidneys secreted and the bladder retained the urine, and learnt the motor and sensory functions of nerves, and that Bell, again, nearly 1700 years later, discovered that the posterior nerve roots were sensory and the anterior roots motor. It was, of course, by experiment that the circulation of the blood was established. The advances made by Haller (1708-77), again, in the elucidation of vital action were based on experiment. It was not, however, till the example was set by Majendie that experiment was systematically employed in the investigation of all the functions. He was followed by Claude Bernard, to whom we owe our knowledge of the vasomotor apparatus and its influence on secretion and nutrition, and with whose name is associated the glycogenic function of the liver, which has been rudely questioned if not overthrown by Pavy; by Ludwig, who elucidated the dynamics of the circulation; by Marshall Hall and Brown Séquard, who led the way in the experimental investigation of the functions of the various parts of the nervous system which has now reached such a wonderful stage of development.

Next to the discovery of the circulation, and almost rivalling it in importance, was the enunciation and proof of the theory of respiration. Priestley had shortly before discovered oxygen, and combustion was just beginning to be understood, when the demonstration by Lavoisier, in 1783, that carbonic acid was exhaled and oxygen absorbed by the lungs, and the comparison of the operations which resulted in this interchange of gases with the process of combustion was not merely an increase or development of previous knowledge; it was a revelation and a revolution. Until then the lungs were supposed to be simply the great and primary instrument for giving a due comminution to the blood. For the first time chemistry was brought into relation with vital operations. The original ideas, it is true, were imperfect and in some respects erroneous; but the conception of respiration as comparable with combustion was the germ of all our present knowledge of oxidation as the source of the various forms of energy developed in the system.

The full development of these ideas, however, was only possible when the doctrine of the correlation of forces and the conservation of energy was established, and it is an interesting fact that it was originally suggested by the search for an explanation of the constancy of the temperature of the body in different climates and under varying conditions.

As the microscope has revealed the intimate structure of the tissues and the mode in which they are first developed and then maintained, so chemistry has followed step by step, interpreting the connection between structure and function. The molecular changes which constitute the science of chemistry, indeed, underlie and determine the structural changes revealed by the microscope. Chemistry it is which brings us closest to the ultimate facts of life, and gives us the deepest insight into vital operations. Every vital action is a chemical action, whether the as yet to us mysterious process by which are built up the complex chemical molecules out of which the tissues are constructed or the partially understood catabolic operations by which energy is liberated.

Profound importance attaches, therefore, to the progress of organic chemistry, and those who have prosecuted its study, from Berzelius and Liebig, who led the way by analysing the excretions and secretions and by separating and classifying the organic constituents of the various structures down to the workers of the present day, who by processes of inconceivable delicacy and refinement isolate the toxins and antitoxins which play so important a part in disease, have ministered to the progress of medicine. Chemistry must ultimately form the link between physiology, pathology, and therapeutics.

The Beginnings of a Science of Pathology.

So far we have been chiefly concerned in following the growth of knowledge relating to healthy structures and normal functions. Facts relating to the effects produced by disease on the different organs could be collected, and the symptoms attending the progress of disease and revealing its nature could be recorded, independently of any comprehension of the processes by which morbid changes were effected. Such accumulation of facts and such observation of symptoms were indeed necessary before study and experimental investigation of morbid processes could be undertaken.

Morgagni (1682-1771) may be called the founder of pathological anatomy. He was the first to describe on a large scale minutely and systematically the appearances found in *post-mortem* examinations and to connect them with the symptoms observed during life.

John Hunter, who had perhaps a deeper insight into pathological processes, may be placed side by side with him; Andral and Cruveilhier later produced magnificent treatises and atlases, and since their time an enormous accumulation of facts by pathological societies has taken place, and innumerable works on pathology have systematised the results and marked the progress made. The intent study of the changes produced by disease could not but imply a desire to understand the processes by which they were brought about. Chief among the men who have thrown new light on morbid changes and given an impulse to the study of the science of pathology must be placed the names of Virchow and Paget. With Virchow's *Cellular Pathology* published in 1858 a new conception of pathological changes was introduced. They were seen to be perversions of cell nutrition and cell activities, and diseases of the various organs were studied not as such, but as due to morbid changes in the cell elements of the different structures entering into their composition.

Inflammation, the most common and important of these processes, has naturally been the battle ground of rival theories. For a long time it was regarded as a purely vascular phenomenon, and all the changes in and around an inflamed area were studied from the point of view of contraction and dilatation of the capillaries and of acceleration or retardation of the current of blood through them. Then exudation of liquor sanguinis into the interstices of the tissues and proliferation of the tissue elements were looked upon as the essential feature of the inflammatory process and later still came Cohnheim's discovery of the migration of leucocytes. It would almost seem that every detail of the changes which take place in the course of a local inflammation is now known. With the progress of this knowledge ideas as to the nature and character of the process have completely changed. Formerly it was looked upon as destructive only; now it is recognised as primarily, at any rate, defensive—a mustering of leucocytes to oppose the invading bacillus or a preliminary to repair of damage by the removal of structures too deeply injured to be fit for further service.

While so much is definitely known of the behaviour of vessels, and blood corpuscles, and leucocytes, and tissue elements during inflammation, chemistry has not yet said the last word on the changes in the blood and structures. It is in virtue of some antecedent chemical and consequent physical change in the capillaries and tissues that the leucocytes are arrested and made to traverse the capillary wall, and it is not as an act of volition, but in virtue of some chemical affinity that the phagocyte englobes and disintegrates the bacillus.

The microscope has played the same important part in pathology as in physiology. The structure of all the forms of tumour has been minutely studied, and their relations with normal tissue and with each other ascertained. Degenerations of all kinds in glands, muscles and nerve centres have been followed from the initial departure from normal conditions to complete disintegration, and the influences under which they have taken place have been investigated.

At all periods clinical observation has been in advance of physiology and pathology, presenting problems for solution, suggesting and stimulating inquiry, and warning to turn to therapeutic uses every addition to knowledge.

Perhaps the first clinical discovery which brought physiology to bear directly on practical medicine was the introduction of physical diagnosis by means of percussion and auscultation, the former by Avenbrugger (1761) and Corvisart (1808), the latter by Laennec (1819). This not only brought the diseases of the chest within the ken of the physician, but opened out a new and wide field for observation. The effects of interference with the circulation by the various forms of valvular and structural disease of the heart could now be followed; the operation of back pressure through the lungs and systemic veins was traced, and the dependence of such symptoms as dropsy upon heart disease became manifest. A most powerful impetus was thus given to experimental research. Both physiological and pathological affections of the different valves were indeed natural experiments on the hydraulics of the circulation.

Jenner's great discovery of vaccination, unparalleled as to the direct benefit conferred by it upon the human race, was essentially a fact of clinical observation. When, however, its significance was grasped by the genius of Pasteur it became the starting point of bacteriological pathology, which gives the most far reaching insight into the causation of disease, and constitutes the most important of all the links yet made out between science and therapeutics.

The employment of the thermometer in clinical work constituted another important epoch. We should now think clinical work impossible without it, but there must be many here who, like myself, completed their studies without ever using it, and who remember its introduction by Wunderlich. The thermometer had, indeed, been employed by Coombs, but, either because medical science was not sufficiently advanced so that the profession was not ready for it, or because it was not applied extensively enough, it had not taken hold.

It is not too much to say that the clinical thermometer has revolutionised clinical observation and practical therapeutics. Before its introduction and systematised employment there could be no adequate study of pyrexia, its significance, its causation, or its effects, whether as an incident of inflammation or as the essential feature of fever, or as the fatal factor in hyperpyrexia. Till then the problem of the constant temperature of the body was not before the physiologist, and the researches as to the production and dissipation and regulation of animal heat, fruitful in so many directions, had not even been suggested. Still less had abnormally high temperatures been dealt with as such therapeutically.

Another physiological discovery of far-reaching importance to which clinical observation has led up has been the definite determination of the fact that the ductless glands and probably other glands supply to the blood some material which plays an important part in the nutrition of the tissues, stimulating or modifying the cell activities.

Few histories are more interesting than that of the successive steps by which extract of the thyroid gland was ascertained to cure myxœdema, beginning with the observation that cretinism was associated with goitre, and that the essential feature of this affection, myxœdema, could be induced by extirpation of the thyroid. Upon this, experiment showed that the cause was not the accumulation in the blood of some substance which ought to have been withdrawn from it by the gland, but the absence of some material which the gland supplied.

Older than this, and even more important, was the discovery of the part played by micro-organisms in certain diseases. Here again clinical observation and reasoning had anticipated Pasteur. The communication of disease from person to person, the incubation period which intervened between the exposure to contagion and the development of symptoms, the successive stages which these symptoms followed and the reproduction in the individual of the poison, had given rise to the zymotic theory, according to which the history and causes of these diseases were comparable to fermentation following the addition of yeast to a saccharine solution.

Experimental demonstration, however, is now demanded, and the place of theory in medicine is only to suggest and to guide investigation. It was not, therefore, until Pasteur—by the successive steps of his work on the various fermentations on putrefaction—the silk-worm disease—on malignant pustule and splenic fever—had demonstrated the powers of micro-organisms, and Lister, by that infinite capacity for taking pains, which, when combined with true insight, constitutes genius, had made the totally unexpected and unforeseen extension of the germ theory to surgical affections; until Koch again, in 1882, had identified and made visible the *corpus delicti* of phthisis in the tubercle bacillus—that the microbic origin of these diseases was fully admitted and the sweeping character of this new department of knowledge was recognised.

We may even claim for clinical observation that vaccination was a standing illustration of the attenuation of a virus, and that it anticipated and pointed the way to the processes by which Pasteur has attained such sensational results in hydrophobia and by which we hope and believe that other diseases, such as scarlatina and the fevers generally will be robbed of their terrors.

The bounds of the zymotic theory, properly speaking, have however been overpassed, and indeed swept away, and diseases such as tuberculosis are found to be caused by micro-organisms which appeared to have no analogy with those originally grouped under the name; but science has justified the analogy between disease and fermentation still further. Just as alcohol is the potent product of the torula, so it has been ascertained that the products of bacteria are the agents which give rise to the constitutional disturbance of disease, and these products have been separated and identified. Not only so, but just as alcohol, when it has reached a certain proportion, arrests further multiplication of the torula, so do the products of bacteria bring their action to an end, and advantage is taken of this in the antitoxin treatment of diphtheria, which has recently evoked the admiration and challenged the gratitude of mankind.

The Excellencies and Defects of Modern Therapeutics.

We have still to ask, What is the bearing of all these advances of knowledge on therapeutics, which, after all, is the object of our lives?

Until the last few years it has not been easy to answer this question by instances of any very extensive applications of physiology to the treatment of disease, and morbid anatomy was at one time a stumbling block in the way of therapeutic effort. The pathologist, pointing to an excavated lung or cirrhosed liver, would ask the physician what he could expect to do with drugs against such conditions. But that stage has passed away, and I will not mock your intelligence by other illustrations beyond those just given of therapeutic applications of physiological and pathological knowledge, or by arguing that all knowledge of normal processes aids in the comprehension of morbid processes, and that we are in a better position to combat disease when we thoroughly understand its causation and intrusion, and follow mentally its development, course, and tendencies.

Given the faculty of observation, the insight which penetrates the meaning of the phenomena, the analytical and synthetical powers by which a diagnosis is constructed, the ready adaptation of means to a well-defined end, and the firmness of character required to deal with the frailties of human nature, and the best physiologist will make the best pathologist and the best pathologist the best physician.

As regards the remedies at our command, they are only too numerous. Recourse to a great variety of drugs is fatal to exact knowledge of their effects and to precision in their use, but new ones are added every day for the benefit chiefly of those who do not know how to employ the old ones. There have, however, been recent acquisitions of extreme value, heavily discounted, unfortunately, in the case of some by the mischief done through their indiscriminate use: the salicylic group, the chloral sulphonal group, the salicylates and salicine, the phenacetine and antipyrin class, coca and cocaine. What makes some of these, moreover, far more important and interesting is the fact that their physiological action has been inferred from their chemical constitution.

A fact which brings practical therapeutics into near relation with physiology and pathology is that the active principles of all drugs are isolated, their chemical composition is ascertained, and their physiological action investigated. Pharmacology, in effect, has become a branch of experimental physiology, and the immediate effect of remedies is known

with a completeness and accuracy heretofore undreamt of. All this is working towards a more intelligent employment of drugs, and leads towards the goal of all the efforts to bring therapeutics within the circle of the sciences. This goal is that we should know not only the effects of remedies, but how these effects are produced. This is in the last resort a question of chemistry. As I have said before, all vital actions are attended with molecular or chemical changes; are, from one point of view, chemical actions, and come under the laws of the correlation of force and conservation of energy; so, therefore, are the physiological and therapeutical action of drugs, and obviously the key to the latter is to be found in the chemistry of vital processes. Therapeutics, to become scientific, is only waiting for answers to the questions which she puts to chemistry. Why are sodium salts so much more abundant than potassium salts in the blood, and why are the former almost confined to the liquor sanguinis, and the latter to the corpuscles? We must assume that albuminoid proteids have an affinity for sodium, and the globulins for potassium. With the answer to this is bound up the secret of the necessity of sodium, potassium, and calcium salts to anabolic and catabolic operations, in which they take no traceable part, and of the presence of iron in the blood corpuscles.

Why, again, in the case of substances apparently so similar as potassium and sodium salts will the former, if injected into a vein, even in small quantity, paralyse the heart and destroy life, while we see pints of normal saline solution thrown into the circulation with none but good results? How does prussic acid—the simplest in composition and constitution of all organic substances—prove fatal with such fearful promptitude by its presence in infinitesimal proportion in the blood? How again does morphine suspend the activity of the nerve centres? Chemists must admit that the poisonous effects of prussic acid and morphine can only be due to some molecular change in these substances; they know that if the deadly cyanogen is so tied up that its component atoms cannot fly apart it is innocuous, and that a very slight change in the chemical constitution of the morphine molecule entirely alters its effect; it is an almost irresistible inference from the doctrine of conservation of energy that the change in the molecule, say of the morphine, must be equal and opposite to the molecular change in the nerve cells which it arrests. It seems to me, therefore, that we have in the chemical constitution of the morphine molecule a clue to the character of the chemical change by which nerve action takes place and to the quantivalence of nerve energy.

What then is our position to-day in respect of the three points which we have been following—the recognition of disease, the knowledge of remedies, and the ideas which govern the employment of remedies in the treatment of disease?

The basis of therapeutics is diagnosis, the grasp of the actual condition underlying the symptoms or phenomena, and the greater our command of powerful remedies and the more precise our knowledge of their effects and of the mode in which these effects are produced, the more important does accuracy in diagnosis become.

A diagnosis, to be real, implies not only the recognition of the disease which may be present and an accurate appreciation of the morbid changes which may have taken place in various organs. It embraces a knowledge of the nature and intensity of the pathological processes which have been and are in operation, and of the causes which set them going, and also of the results to which they tend. A further element, moreover, enters into the consideration; an estimate, by the aspect of the patient, by the pulse and temperature, and by other subjective and objective indications, of the impression made on the system, and of the resistance which it is capable of to the lethal tendencies of the disease.

Year by year we see improvement in this respect; not only that hospital physicians and teachers endeavour to carry diagnosis to a greater pitch of accuracy and a higher point of refinement than ever before, but that the entire body of medical men are trained by improved education and systematic clinical teaching to appreciate and to practice careful diagnosis in their daily work.

Diagnosis, we may say, has reached an extraordinary degree of advancement. There are, no doubt, still new fields to conquer, but in the recognition of diseases, local and general, there is not much which seriously concerns the human race which remains to be done. The same degree of knowledge, however, does not extend to morbid processes. Our comprehension of the significance and essential character of inflammation is by no means complete and satisfactory. The part which fever plays and the place which it holds among the phenomena of disease is far from being fully understood. It cannot have been intended by Nature for the destruction of the subject, and we can see distinctly that in some cases it forms part of the defensive operations; possibly, indeed, its general tendency is defensive, by promoting the production of phagocytes, or possibly a certain elevation of the temperature may be fatal to maleficent organisms which have taken possession of the blood or tissues. We are not certain, indeed, whether in pyrexia the heat-producing oxidation in the structures receives its stimulus from, or takes place at the bidding of, the nervous centres, or, on the other hand, is due to enfeeblement of the restraint which they normally exercise over it, or whether it defies control by the thermotaxic nervous centres.

But here I must stop. I have said enough to show that the much-despised therapeutics, like clinical observation, suggests and stimulates scientific investigation, and I must now take up the last point; the views which guide the medical man at the present day in the employment of remedies.

Personal Experience and Personal Prejudice.

Of course our individual guide is mainly personal experience and observation of their effects. But the human mind is so constituted that it demands reasons, and even our experience finds expression in theory. There is, however, no theory which is supposed to apply to pathological processes and therapeutical in general, like the humoral doctrine of Hippocrates and Galen, the various iatro-chemical and mechanical theories, the animism of Stahl; the stimulant, contra-stimulant, or organicist ways of accounting for everything—no theory of universal application. Yes! Homœopathy still, like a belated ghost, haunts the dawn of scientific medicine, and men are still found who wear its doctrines as a cloak for ignorance, or flaunt them as an attraction for the more foolish and credulous of the old ladies of both sexes.

But while our minds are not dominated by any *a priori* conception of a vital principle governing all vital operations, we must not flatter ourselves that we cannot be carried away by fashions in treatment. In our own day, under the influence of Todd, alcohol was largely accepted as the universal panacea, and for nearly a generation mercury was almost banished from the materia medica on theoretical grounds. The last twenty or thirty years have afforded us increased opportunities for the study of syphilitic diseases of the nervous system and of hereditary syphilis because of the abandonment of mercury in the treatment of the primary disease. And if we have no comprehensive theory of disease or treatment we have our small working hypotheses. To one man gout explains everything, and the more hazy or inadequate his idea of what gout is the more satisfactory the explanation. Gout, moreover, is accepted by the public as accounting for everything. The permutations and combinations of which uric acid is capable, and its ingenuity in giving rise to the most varied forms of disease, are truly wonderful.

To another man the clue to treatment is acidity, or bile, or disease of the liver.

Names have still a great influence, and the lesson which Galen constantly enforced, that we must treat not the disease but the patient, is as necessary in our day as in his. It does not follow that because we call a pain rheumatic, the remedy is salicylate of soda.

At one time the action of quinine was supposed to be explained by calling it an antiperiodic, and any tendency to periodicity in the recurrence of symptoms of whatever kind, or at whatever intervals, was considered to be an indication for its exhibition.

It is inevitable that our imagination should be impressed by the revelation of the wonderful part which micro-organisms have been found to play in the genesis of disease, and that our thoughts should turn towards antisepsis in our treat-

ment. So far the greatest success has been in dealing with microbes outside the system, as in antiseptic surgery and preventive medicine, and further triumphs are to be hoped for in this direction, as, for example, in the prevention of tuberculosis. We have as yet little evidence of the power of antiseptics to follow and destroy the microbes when they have once got possession of the system. Quinine, however, kills the malarial plasmodium, and we have now the antitoxic serum. Apparently, too, one virus may be antagonistic to another, and an attack of small-pox has often seemed to cure phthisis. We must continue our efforts to apply antiseptic principles, but it is most important that we should not allow ourselves either to imagine that we have obtained effects which have not been realised, or to attribute results to antisepsis which may have come from other causes. It is not yet clear that any considerable impression has been made on the mortality from phthisis by guaiacol or creasote; and was not sulphuretted hydrogen, injected into the rectum, to deliver us from this scourge?

It was inevitable, again, that we should be greatly struck by the remarkable power of lowering the temperature possessed by the antipyretic class of drugs. We seem to have within our reach the means of dealing with our most formidable enemy, and it is a great triumph to be able to point out to friends the effect of our remedy on the temperature chart, especially when it has been accompanied by relief of headache and other symptoms. Here it is very important that we should maintain an attitude of cool observation, and not conclude that in bringing down the temperature we have necessarily exerted a favourable influence on the course of the disease. We may have been bringing down also the patient, and it is not so certain that Nature does not know her business when she sets up febrile reaction. I feel myself justified in re-echoing the warning given by Dr. Douglas Powell on this point.

But it is time that I should bring this long and disconnected address to a close, and in thanking you for the patient attention with which you have listened to it I congratulate you and myself that we live at a time when the art of medicine has made such progress, when science in its application to medicine has brought such marvellous and such beneficent aid to therapeutics, and when our beloved profession stands so high in the estimation of the world.

ADDRESS IN SURGERY

BY

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At the Annual Meeting of the British Medical Association at London, July-August, 1895.

The late Mr. Durham.

Mr. President and Gentlemen,—My first words must of necessity be an attempt to express the deep regret which you and I alike feel at the sad event which has been the cause of my coming before you. We had all looked forward with high anticipation to the pleasure of listening to an address on surgery from Arthur Durham. The hand of death has snatched him from us, and put a stern veto on our hopes. It is not too much to say that the whole profession deplores Mr. Durham's too early death as a heavy loss to surgical science, whilst to many of us it brings in addition deep sorrow for a much-loved friend.

The peculiar circumstances under which, at the desire of my friends and at very short notice, I have undertaken to give this address will, perhaps, plead my excuse if I avoid all attempt to bring before you anything original: I purpose rather to offer you a brief retrospective glance at the surgery of past, interspersed with a few comments as to what may be hoped for in the future.

Surgery in 1780.

In the year 1780 there was published in London by one of Mr. Durham's many distinguished predecessors, *A Critical Inquiry into the Present State of Surgery*. Samuel Sharp was not only surgeon to Guy's Hospital, he was Fellow of the Royal Society and a man of acute and original mind. He wrote good English, he saw for himself, and he travelled, not merely for self-gratification, but in search of professional knowledge. His work was to some extent the result of a visit to Paris, and he displays familiarity with the practice of all the Continental surgeons of his day. His *Critical Inquiry* was received with so much favour that it was translated into French, German, and Spanish. I may, therefore, fairly take this book as representing the opinions of the day, and as affording to us fair criteria as to the topics which most interested the surgical world in the middle of the last century.

"Dreadful in the Doing, or Melancholy in the Event."

Mr. Sharp thought well of his times and his compeers. In his preface he writes, "Perhaps there never was a period of time in which any art was more cultivated than surgery has been for these last thirty years." This, we may remember, was written when Pott was in his prime and Hunter a young man. It may perhaps not be without instruction for us if I glance for a few minutes at the topics which mainly claimed Mr. Sharp's interest. To begin with he dismissed luxations and fractures with the statement that all eminent surgeons were agreed as to the method of treating them. With an almost similar remark he put aside "tumours, wounds, abscesses, and ulcers," asserting that their treatment is "fundamentally the same in every country of Europe." His optimistic belief that finality had been attained in these large departments is to be regretted, for it much restricted the scope of his interesting *Inquiry*. His thirteen short chapters concern hernia, lithotomy, amputations, concussion of the brain, tumours of the gall bladder, extirpation of the tonsils, hydrocele, and a few other matters. A small 8vo of less than 300 pages, and in large type, suffices for what he has to say. Let me repeat that what he does say he says well, but how little there is of it, and how restricted are his topics! What a contrast is presented with the almost limitless multiplicity of the subjects which in the present day claim the attention of his successors! Mr. Sharp's chapter on the extirpation of the tonsils contains a strong recommendation of this simple measure. He remarks "there is not an operation in surgery that in my opinion ought to give an operator so much encouragement. It is neither dreadful in the doing nor melancholy in the event." From this remark we may infer much as to his general experience respecting the major operations of his day. He wrote before the days of laparotomy for intestinal obstruction, and when he gloomily hinted at procedures which were either "dreadful in the doing or melancholy in the event," his thoughts probably went no further than excisions of tumours, amputations, and cutting for stone.

Surgery in England a Century Ago.

Somewhat more than half a century later another important work appeared on the same lines, but far more thorough in character than that of Mr. Sharp. M. Roux, the distinguished surgeon of La Charité, spent a month in London engaged in the diligent investigation of English surgery. On his return to Paris he published the results of his observations. He had seen Lawrence, Brodie, and Bell operate; of the two former he speaks as young men. With Cooper, then in his prime, he had held controversy as to the possibility of bony union in fractures of the neck of the femur, and had promised to send him a specimen which should remove all doubt. Between the dates of Sharp's *Critical Inquiry* and Roux's *Relation d'un Voyage* the whole of John Hunter's career had passed. The "Father of Scientific Surgery" had now been twenty years in his grave, and the great work of his life, that triumph of genius and industry, his Museum, was already well housed under the guardianship of the College of Surgeons. Roux visited this Museum, and he notes over and over again the extraordinary love which English surgeons had for anatomical preparations.

I do not purpose now to occupy your time by any analysis of M. Roux's book, but I put it forward as a very valuable recapitulation of the surgical knowledge of the day as regards its two most important schools, Paris and London.

As my design is to make some comparison between the present and the past, I shall find occasion hereafter to recur to M. Roux's statements in reference to various special subjects. Some of his more general impressions it may, however, be suitable to briefly mention now. He held that England and France were really the only rivals in the art of surgery. Germany, Italy, and Holland had each, he admitted, produced their names, but they had been isolated and not of the first rank. It did not occur to him to even mention Austria. Russia was but just emerging from barbarism, and the United States, not yet more than twenty years independent, had given no indications of that praiseworthy activity which has been since so successfully displayed.

He found the London hospitals behindhand as regards the classification of their patients, only one of them (the London) having as yet attempted to separate medical from surgical cases. I seldom operated he thought skilful but terribly slow. One of the best of them he had seen take twenty minutes in the doing of a circular amputation which any Parisian surgeon would have finished in a quarter of the time. He thought the attention given to the management of fractures in England much inferior to that in Paris. He much regretted to observe that not only in London but in some other large cities special institutions had appeared for the treatment of diseases of the eye. These he thought to be good neither for the profession nor for the patients. Whilst I cannot agree with him in this, I venture heartily to applaud the sagacity with which he detected a weak point in the management of the Royal College of Surgeons ("*un vice essentiel de cette institution*"). He was amazed that an institution for the advancement of surgery should devote most of its lectures and the best part of its museum space to comparative anatomy. These subjects ought, he held, to find their place in a museum of natural history. Would that he could see it as it is now. The best part of the new wing, erected at vast cost, is now nothing more than a reading room or place of study for young anatomical students, and its walls are occupied by a collection of skulls and skeletons which have no connection whatever with our art. In place of a museum of clinical surgery, we have a Golgotha of anthropology.

This allusion to the present into which I have been betrayed reminds me that I must here leave M. Roux and his book, and pass on to another and more modern epoch.

Surgery in the London Hospitals Forty to Fifty Years Ago.

In the year 1854 Mr. Spencer Wells was the zealous Editor of the *Medical Times and Gazette*. I had the honour to be his junior coadjutor. He determined amongst other projects to endeavour to bring to light the real facts as regards the results of operative surgery, and a plan was devised for the systematic publication in a classified form of all operations performed in English hospitals.

The scheme was wholly Mr. Wells's, but I was entrusted to carry it out. For nearly three years brief records of all hospital operations, collected, as far as we could attain it, with scrupulous regard to accuracy, were regularly published. I hope I shall be pardoned for adverting to a topic which is to some small extent personal, but I believe that those reports were not without their influence on the development of surgical knowledge, and that they present a more accurate picture of hospital practice a quarter of a century ago than can easily be found elsewhere. As such I ask your permission to use them, together with the two books which I have mentioned as supplying material for contrast with the present. These reports were commenced in 1855, and came to an end in 1858. The task of collecting the materials was of the utmost use to my own surgical training. I was every day in the operating theatre of one or more hospitals, and in constant confidential communication with the hospital surgeons of the day. The statements published were in most instances revised by those whom they concerned. It will be easily understood that in many instances I was cognisant of details which it was not permissible to put in print. In this way I was enabled to form strong and clear opinions on various points in practice, some of which have been borne out by subsequent experience, and others not. Amongst others I well remember that there was a time when Mr. Wells, as well as myself, regarded the operation of ovariotomy as not much removed from manslaughter. We knew of fourteen cases in succession at different institutions, every one of which had ended in the death of the patient. There was a rumour (but at the same time that a well-known coroner had threatened Mr. Baker Brown that he would hold an inquest in the next case in which he did the operation. Another operation in reference to which I formed a strong prejudice was that of lithotrity. Although at this date Sir Benjamin Brodie had in private practice obtained satisfactory results, and had devoted much attention to the improvement of instruments, yet I could see nothing at the hospitals that was encouraging. A not inconsiderable number of the patients did actually die after it, and of the others it appeared to be the fact that scarcely any were really cured. They were perennial patients, and the same unfortunate man would appear over and over again to be subjected to a repetition of the same tortures. There was no single operation respecting which it was so difficult to secure trustworthy reports, and in many instances the cases which I was obliged to record as "cured" were, I strongly suspected, not really freed from stone. It was, of course, long before the days of lithotapaxy when it was the custom to break a stone into fragments and leave them to find their way out as best they could. The impression which I formed of this operation was such that I determined never to do it; and when in 1853 I was elected surgeon to the Metropolitan Free Hospital, and a good share of stone cases fell to my lot, I invariably did lithotomy. This rule was continued during my surgeoncy to the London, and in contrasting my success with that of some of my colleagues who frequently used the lithotrite, I found nothing to regret. When, however, Bigelow taught us how to complete the operation at one sitting and to remove all fragments, I saw, almost with regret, that lithotomy must henceforth give place. My fingers, however, needed practice in the new operation, and I found to my chagrin that I could not do it so quickly and neatly as those could who made it a special pursuit. One patient unfortunately died, and I felt very sorry that I had not cut him. I determined that I would not do lithotapaxy *propria manu* again, but that I would watch its results in the hands of a specialist friend. From that date onwards I have always on discovering the presence of a stone of a size not demanding lithotomy transferred the patient to my friend. The result has been that during a long series of years we have had not a single death, and, what is almost of equal importance, not a single case needing a second operation. All the cases have been adult, if not aged, men, and my list has included two near relatives, two ex-hospital colleagues, two other medical friends, and many strangers. In every instance the recovery has been *cito et jucunde* and the relief permanent. During the same period I have done lithotomy in a few exceptional cases but they have been only a very few, and in other respects there has been no selection and no case has been declined. Lithotrity as practised in our hospitals forty years ago was for the most part a miserable failure; lithotapaxy in the present day is, in the hands of our specialists, a joyful triumph. I assure you that I regard the results of my practice in this department ever since I ceased to operate with my own hands with the utmost satisfaction and pride.

Ovariotomy and the Use of the Clamp.

If, however, the triumph of lithotrity has been pronounced, that of ovariotomy may yet be held to surpass it. This is in part because at one time it seemed yet more hopeless. It needs some courage to attempt, even in the briefest manner, to sketch the history of this victory, so many are the points in dispute and doubt and so much of personal feeling is involved. Let me say then in beginning, what none but a churl will dispute, that to the operative skill, the patient attention to detail, the indomitable determination to go on from good to better, which through a long series of years were displayed by him whom we now honour as Sir Spencer Wells, the credit is mainly due. Yet Mr. Wells was by no means the first in the field, even in what we may consider the modern revival. Mr. Wells and myself did our first operations within two months of each other—he in February, 1858, I in May of the same year. But Mr. Baker Brown had been doing it for several years before, and he was present at both Mr. Wells's first operation and my own. From this date

ovariotomy took a new start. Successes were obtained, the cases were brought before our societies, and surgeons began to be hopeful. For many subsequent years it appeared as if the principle of keeping the end of the pedicle outside the abdomen was the main improvement. This plan I had practised and advocated from the first, and I had devised for its better accomplishment a clamp, which came into general use and held its ground for a decade or so. Mr. Wells had in the first instance dropped the pedicle into the abdomen, bringing its ends out at the wound, and he considered the latter point an advantage, as keeping open a track for the escape of matter. His first cases and mine alike recovered, but his after much "blood discharge" from the abdomen, and more with primary closure of the wound. He subsequently used my clamp, and in a letter published many years afterwards very generously acknowledged his indebtedness to it. Mr. Peter Brown also very promptly adopted the clamp. Such having been the circumstances, I may, perhaps, be pardoned if I confess that there was a time when I allowed myself some gratification in the thought that I had myself taken some share in furthering the success of this important and life saving operation. I bore with such equanimity as I could the discovery that I could not compete with my friend in the ratio of successes obtained, and acting on the rule of conduct that I would never keep a patient in my own hands if I believed that someone else could do what was needed with greater prospect of success, I gave up doing ovariotomies both in public and in private, and used to transfer my patients from the London to the Samaritan Hospital. As to the explanation of my comparative want of success I always felt in some doubt. That I could not keep my experience of the operation on a level with that of Mr. Wells was certain, for he had a special hospital and I only a general one. That lack of the skill which comes only from constant practice was not the only explanation, if indeed the chief, seemed proven by the fact that I had lost some of the very easiest cases which had made no demands on special skill. I was driven to the conclusion that as surgeon to a large general hospital, and in attendance upon all sorts of cases, and erysipelas amongst the rest, I could not keep myself from risks of contagion so completely as was accomplished by the precautions which were at that time enforced at the Samaritan. Another disappointment, however, awaited me. The time came that the clamp was discarded, and with it the principle which I had cherished of extraperitoneal treatment of the pedicle. Operators fell back on the old practice which had apparently been a great failure of cutting off the ligatures short and dropping the pedicle into the abdomen. This plan had been tried in a few cases during the reign of the clamp by Dr. Tyler Smith, and with much success. Mr. Wells was inclined to resort to it, but soon returned to the clamp. Finally, however, it has gained the day. No one now practises any other method, and the clamp has even been denounced as unsurgical. It is one of the many difficult problems which changes in surgical practice offer for our investigation to explain why a method of practice which seemed so fatal formerly should be so successful now. In part it may have been that we did not try it fairly, and that the assumption that the tied end of the pedicle must necessarily slough and infect the peritoneum prevented us from giving the method an adequate trial. It may have been that we did not in former times attend sufficiently to the various details included in the expression "toilet of the peritoneum," and it is quite certain that we were at time ignorant of the use of antiseptics. Probably the truth is that the latter have made safe what was dangerous formerly, and thus it possibly remains to be the fact that the clamp and the extraperitoneal method which it emphasised did really win the day for ovariotomy at a time when no other tactics would have succeeded.

Specialists and Personal Specialism.

I must hasten to other and yet wider topics. M. Roux, as I have told you, saw with much disapprobation the beginnings of specialism in London. He found new hospitals for diseases of the eye, which he thought likely to prove injurious to the interests both of the profession and the public. Many years after the date of his visit to our metropolis I had myself opportunities of witnessing the results of this prejudice in the wards of M. Roux's own hospital. I then saw cases of extraction of cataract treated in the open ward, and by the hand of the general surgeon. I saw eye after eye lost by suppuration. The same might, I admit, have been witnessed in some of our London hospitals, but not so frequently nor at so late a date. Common sense won the day somewhat sooner amongst us. The victory of specialism in diseases of the eye is now acknowledged by all, even by many who still echo M. Roux's prejudices in reference to specialities in many other departments of our art.

Can we, however, refuse to recognise the lesson which the modern practice of such operations as lithotrity and ovariotomy teach us? Are there not also many other procedures which stand on precisely the same footing? Would anyone allow an inexperienced surgeon to extract a gall stone when the services of one who had done many such operations were at hand, or entrust the removal of laryngeal growths to any surgeon, however skilled, who was not specially trained as regards that operation? If we could get the gross statistics of ovariotomy and lithotrity for the whole kingdom, I much fear that the ratio of success would be found to fall lamentably short of that habitually secured by our best specialists. I designedly speak of specialities rather than of special hospitals, for it is quite possible that the latter may, when the staff is large in proportion to the number of beds, cease to afford the advantages as regards individual experience which they are designed to do. Good specialities are, besides, sometimes developed quite independently of special institutions. The late Mr. Cutteridge of Birmingham, is reported to have made a proposal that he should be appointed lithotomist to the United Kingdom, for the reason—almost sublime in its simplicity—that he could do the operation better than anyone else. He had never had any hospital appointment, yet I have been told by those who knew him well that his allegation was no mere empty boast. The remarkable results in lithotapaxy in children obtained by Dr. Keegan in India, those of Sir Henry Thompson in lithotrity in adults, those of Mr. Macewen in brain surgery, and those of Mr. Mayo Robson in operations on the gall bladder are all of them, I think, good examples of what we may call personal specialism. Of these personal specialists it may further be alleged that not only do they develop remarkable skill themselves, but they almost invariably succeed as teachers in imparting their skill to others. Most of those whom I have named have in this direction had a wide influence, and there was a time when surgeons flocked from all parts of Europe to learn from Mr. Spencer Wells how to do ovariotomy with success. A man who thoroughly understands his subject in all its details can treat it with an efficiency and ease which are wholly unattainable by others. To encourage specialism in many branches of operative surgery is, then, I cannot but think, in consonance with common sense and common humanity.

The Increase of Operative Surgery.

If any enterprising journal of the present day should undertake the publication of operation-statistics on the plan which I have described as devised by Mr. Spencer Wells thirty years ago, we should soon have before us materials for a most interesting comparison with the past. In the first place I do not doubt that we should be astonished at the enormous increase in the number of operations. Formerly one "operation day" a week was thought sufficient for most hospitals, then it increased to two, and now I suppose there are a few institutions in which every day is not so regarded. Nor is this only in hospital practice. Operations in private practice have probably increased in still greater ratio. I well remember the institution of the first nursing home in London, and a very modest one it was. Before that we had to take our patients into hotels or private lodgings. Now, in addition to such luxurious establishments as Fitzroy House, we have Homes and Hostels for the sick without number. There are West end streets in which every other house is so occupied. The patients are, I believe, in great majority surgical cases, though by no means exclusively. These institutions are, without exception, managed, if not to perfection, at any rate with a degree of excellence above what was dreamed of half a century ago. If I praise the nursing homes what shall I say

of the nurses? Not a home is opened but it becomes provided at once with a troop of beings who, fair, intelligent, gentle, and indefatigable, would seem to have been created for their special work. What this class of young women did before nursing was invented is a constant puzzle to me. Its difficulty is equalled only by the question as to what becomes of them, for I never have yet seen one who was even approaching middle age.

If it be asked what are the special operations which have thus increased, the reply must be that they are most various, and that on the whole they are such as conduce most definitely to mitigate suffering and to prolong life. Permit me to take one as an example. It shall be one in which the development of sound doctrine as to pathogenesis, rather than augmented surgical daring, has gained the triumph. No one ought now to die of cancer of the tongue, for nothing except neglect of the early stage can bring about such a result. It is the doctrine of "the local origin of cancer" and of "a precancerous stage" which has placed us in this position. In former days no operations were, with the rarest exceptions, performed for this disease; and if they were, it was in the late stage, when, to use the forcible expression which I have quoted from Mr. Sharp, the procedure was both "dreadful in the doing and melancholy in the event." Cancer of the tongue was, in fact, hardly ever diagnosed until it was too late to operate. One of our most popular surgical manuals taught that enlargement of the lymphatic glands in the latter afforded one of the best means of distinguishing between syphilitic and cancerous disease. We should now regard it as evidence of almost culpable delay, and as implying that the case had advanced too far for surgical aid. That distinguished surgeon Mr. Syme was a pioneer in this branch of operative surgery as in many others. I well remember to have been one of a crowded audience in the theatre of the Edinburgh Royal Infirmary, assembled to witness what I had never seen before—an excision of the tongue. The symphysis of the jaw was sawn through, and its halves dragged apart. The operation was most dexterously done; it was most complete, but at the same time it was most formidable. The patient died a few days afterwards. This case was, I believe, the third in succession that Mr Syme had lost, and he as a conscientious man determined never to attempt it again. There are surgeons now living—more than one—who can boast of their operations for cancer of the tongue by the score, if not by the hundred, and with no appreciable mortality. These are not, however, cases such as those which alone Mr. Syme attempted; a majority of them are cases in which the operation is in itself a mere trifle—the excision, it may be, of only a very small part of the organ. Year by year the number of cases in this category increases, and that of those in advanced stages diminishes. What hinders that all cases of cancer of the tongue should be submitted to operation in the earliest stage? Nothing excepting defective diagnostic capacity on the part of members of our own profession. The fault is but rarely on the part of the patient. I never yet met with a patient to whom it was kindly yet confidently told "You have got cancer" who did not gladly and without delay assent to what was recommended.

The Advantages of Early Operation.

In another department of surgery our work has also enormously increased, partly in connection with improved methods and partly from sounder principles of diagnosis. In the case of the tongue it is improved diagnosis only whilst in that of the female breast it is that in large part, but in still larger the modern methods of dressing which now enable us to promise to the patient a painless operation and a speedy convalescence. There never was anything formidable in the performance of an excision of the breast, but I well remember the time when the prospect of a febrile illness with troublesome suppuration and a succession of dressings scarcely less distressing to the patient than the operation itself, acted as a very powerful motive to the surgeon for delays which were very dangerous. No case was ever operated upon until the diagnosis was as clear as daylight, and until in but too many instances the disease was far advanced.

The class of symptoms by which our textbooks taught us as students to recognise cancer of the breast were for the most part, as in the case of the tongue, those present only in the late stage. Those which we now teach to our students are of a wholly different class. What would be thought of the surgeon in the present day who should inculcate reliance upon such matters as the retraction of the nipple, the "saddle-leather" state of the overlying skin, or the unhealthy condition of the ulcer. We now trust solely to the trained finger to recognise the character of the induration, and we lay down an inexorable precept that if there be any reasonable doubt the breast should be removed. Our patients as a rule accede without much reluctance to our recommendations, for they know from general report that the modern operation is a mere trifle. The result of this change of practice is that the statistics of cancer of the breast must be rewritten. Those collected so laboriously three or four decades ago are no longer in the least applicable to our present results. Permanent recoveries after removal of the breast for scirrhus as after those of part of the tongue for epithelioma are now common in the practice of all operators.

The Education of the Surgeon.

So much has been said or implied in the discussion of the last two topics that the present becomes a suitable place to introduce a few remarks upon the all-important topic of the educational training of the surgeon of to-day. The great examining bodies which exercise such a large influence over the destinies of our profession in presiding at its admission-portals have recently decreed that the education of the medical student shall be extended over five years. For myself I may say that, although in committees and council-rooms I have always consistently given my vote in favour of this addition of a year, I have never been a warm advocate of the measure. It has always appeared to partake too much of the faith that if you only keep a horse long enough at the water you can make him drink. The additional year must make medical education more expensive and may possibly hinder some of precisely the class which we wish to attract.

The suggestion which I have made as to lithotrity—that it is a very successful and happy procedure in the hands of a man well practised in its performance, but much the reverse in those of a novice—leads on to the remark that there are many others in the same position. There are operations which are good in themselves, and based on sound rules of surgery, but which are yet not for every surgeon's knife. Concerning many it is true that anyone decently trained on the dead body, and clever with his hands, can do them just as well as the experienced operator. Amputations, excision of tumours, resection of joints, ligature of arteries, and many others come into this category. Respecting these the old adage which declares that a barber learns his trade by practising on fools does not apply. Some of them are besides of such a nature and so rarely required that no one can possibly obtain much personal experience. Others there are, however, respecting which I cannot but think that the canon of surgery should be that unless the skilled diagnostician and the skilled manipulator are at hand it is to the patient's advantage that they should be avoided altogether. In that category I place with many others operations on the gall bladder and kidney, those for cancer of the bowel, laparotomies for obstructions, and trephining for abscess or tumours of the brain. In most of these the patient has some chance of recovery if he be left alone, whereas he has almost none if an unskilled operator take the knife in hand.

The estimate of the patient's chance of recovery and prospects of life without operation have been strangely neglected by some zealous operators of the present day. To put it in other words, in order to justify the plans which they recommend, they have, as it seems to me, drawn far too black a picture of the alternative probabilities. When Sir Everard Home's big silver catheter for enlarged prostate was laid aside, and we found that a soft rubber or gum flexible tube could be got in just as easily, and that the patient could be easily taught to use it, we were some of us sanguine enough to believe that the horrors of the senile prostate were pretty much at an end. For myself I may confess that I think so still.

Few, indeed, have been the cases in which of recent years conditions have presented themselves in connection with enlarged prostate which have seemed to require any other measures than the flexible catheter and the irrigator, and many are those which I could quote in which patients who

for a time suffered severely are now leading comfortable lives. Yet we are gravely asked to believe that when a man has had his testes removed, and subsequently passes his water better than he did, the improvement is consequent on the operation. We might as logically attribute it to his having had his hair cut. Operations upon the prostate itself stand on a different footing, for it is obvious that, if the patient survives the excision of the middle lobe, he is as a matter of mechanism in a better position than he was. These procedures are, however, in themselves dangerous, and I submit that the nature of the disease is not such as to demand them.

Many years ago I was the consultant in a case in which a lady had a cicatricial stricture of the œsophagus. We had tried bougies most carefully without success. She could swallow nothing, and death by starvation seemed imminent. The hour for the operation of gastrostomy was accordingly fixed and all preparations made. On the preceding evening I made, under an anæsthetic, a last attempt to get a small instrument through the stricture. I did not succeed, but very shortly afterwards the patient drank some milk. Next morning she could drink better, and I gladly agreed to defer the operation. She subsequently got well without it, and lived in comfort, on fluids, for some years.

About the same time I had in the presence of all my hospital colleagues a patient on the operating table in whom I purposed to open the abdomen for the relief of abdominal obstruction. It was a rare procedure in those days, but I was then an eager operator, and it was with much reluctance that I yielded to the representations of my colleagues, who urged that the case was too far advanced, and that if I proceeded the patient would probably die on the table. This patient recovered, the bowels acted the same day, and she regained good health. These two cases made a great impression upon my mind as to the possibilities in apparently hopeless conditions, and that impression has been deepened by many others which have occurred. Respecting laparotomy for intestinal obstruction of unknown causation, whilst I feel very certain that it should be shunned by all excepting the specialist, I do not feel sure that it is legitimate even to him. Here and there I admit a patient has recovered—a band has been divided, or a gallstone excised, or a kink untwisted. As to the ratio which exists between the survivals and the deaths, we have, however, no statistics whatever. It is a subject in which I have through all my professional life taken a keen interest. These operations were done in my youth. Although more frequent now than formerly, they are no novelties. As a student, I collected such facts respecting them as I could get, and I collect them still.

Conclusion.

I have touched, Mr. President and Gentlemen, in, I fear, a very fragmentary manner upon a great variety of topics, and there still remain many upon which I should have liked, did time permit, to have said a few words. I must, however, conclude. If there has been any one connecting thread running through the discourse to which you have so patiently listened it has, I think, been this—the desire to enable you to grasp with clearness and without prejudice the tendencies of modern surgery. In attempting this I have done my best to look at our profession as an organic part of our social polity, and to regard it solely in reference to the public good. The profession of surgery exists not for the enriching or ennoblement of individuals. The operator must not seek to display his own skill or to gratify his own predilections; and the student of physiology, if he be also a surgeon, must always remember that there are other claims upon him than those of devotion to pure science. As practitioners and as teachers we must always keep in mind that our first and foremost duty is to make our knowledge available to those around us. Regarded from this point, it is a source of the keenest pleasure to believe that those engaged during the last half-century in the cultivation of our art of surgery have done their work with honesty and zeal, and with very remarkable success. It has been the work not of few but of many, and not of one or two nations, but has been shared in by the whole civilised world.

The surgical skill now at the command of the community is of a far higher class than it was when Sharp wrote his *Inquiry* or when Roux visited our island. All maladies which were then wholly outside its scope have been brought easily within its grasp. Nor is it otherwise than a source of satisfaction that, whilst this has been effected, it is probable also that surgical services have been made less costly. In our art, if in anything, it is true that the best things are in the end the cheapest. That which is to the pecuniary advantage of the patient is far from being always the same to the surgeon. The man who improves the art of healing and renders cures more rapid does so very often greatly to his own disadvantage so far as emolument is concerned. This is, I think, an aspect of the case which we may very fairly offer to the attention of the public when we ask it to find material support, not alone for our hospitals, but for the schools of medical teaching which are associated with them. The effort of the profession to improve the standard of knowledge is one in which we all take pride and pleasure, but it is far from being conducive to pecuniary gain.

Mr. President and Gentlemen, I thank you for the patience with which you have listened to my address: I conclude with an expression of faith, in which I feel sure we shall all agree, that we have reason to be very thankful for the progress of the past and very hopeful for that of the future.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF MEDICINE,

At the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

By F. W. PAVY, M.D., LL.D., F.R.S.,

Consulting Physician to Guy's Hospital.

MICROBES, TOXINS, AND IMMUNITY: A PRELUDE TO THE DISCUSSIONS TO TAKE PLACE AT THE MEETING.

Division of labour constitutes one of the results of civilisation. In our calling as members of the medical profession our province is to combat disease. It is through the medium of knowledge that we perform our part. One of the primary objects of the British Medical Association is "the promotion of medical and the allied sciences," and we meet here to-day to further this object. Science expounds and art applies. Through science the knowledge is attained. Art then steps in and is associated with the application of the knowledge to a practical end—in other words, with the exercise of our calling as medical practitioners. Upon knowledge our usefulness depends. It is knowledge which gives us the power to shape conditions in such a way as to produce a desired effect. We command the attainment of results by the knowledge of how to provide the conditions for bringing them about. Under the ideas entertained previous to the discovery of the circulation that a vital spirit from the air existed in the arteries, and that the blood ebbed and flowed in the veins, how was it possible for practice to be based upon anything sound? From this time our position has advanced first in one direction and then in another until now, when it may be considered that our art is based upon exact science. Anatomy, minute anatomy, physiology, pathology, and the study of the precise action of drugs have all contributed their share to placing us in the position we now occupy. A new line of study, however, has recently sprung up which has opened out an entirely fresh view before us. But a few years ago bacteriology was unheard of, and look at the important information it now gives us. A new departure has been created by it in both medicine and surgery. In relation to operative surgery it has laid the foundation for success which was previously thought to be quite unattainable, and in that branch of practice it has led to the production of greater surprise than in our branch, as the now known effect upon the healing process of the exclusion of micro-organisms had not hitherto entered the mind. In medicine, on the other hand, suspicion has for a considerable time existed that certain diseases might be attributable to the invasion of the system by micro-organisms. Our countryman Dr. William Budd, in 1849, urged that cholera and typhoid fever were due

to a microscopic living organism. I remember accounts given of attempts having been made to capture the organism in cones placed above the head of the patient. Nothing for a long while resulted towards bringing home the connection of disease with micro-organisms. Fever germs were talked about without anything definite being established.

The discussion at the Pathological Society in 1875, on the germ theory of disease, marks an epoch in the history of the subject, and shows that up to that time no decided progress had been made towards settling the question; for whilst some spoke in favour of the theory, no less an authority upon fevers than the late Dr. Murchison expressed himself strongly against it. Since then, however, knowledge upon the point has advanced in great strides; and, as we are all now aware, not only has it been clearly ascertained that different organisms are productive of different diseases, but the distinguishing form and life-history of many of these organisms have been definitely made out. To Pasteur we owe the initiative in this matter. Once the discovery made that a micro-organism was to be found in the body in association with a particular form of infectious disease, the foundation was laid for further research, and it soon became known that the organism could be cultivated outside the body, and, thus cultivated, was capable by inoculation of producing the disease. The start was now given, and bacteriology has since grown into an important science belonging to medicine, which has already much advanced our position, and promises to do so much more. Bacteriology is no mere abstract science, devoid of useful application. It gives us knowledge which enables us to control disease in a manner that could not be accomplished before. Knowing irrevocably that a particular disease is due to the invasion of the system by a specific living organism, we are taught that our first efforts should be directed to preventing the dispersion of the organism from an infected person to those around. To what extent we have the power of doing this is shown by the successful manner in which a disease that may have intruded itself amongst us may be stamped out. See how the spread of cholera has been barred in this country by the measures employed to restrain the dispersion of the bacillus. Truly through the knowledge that has been acquired during the last few years an immense power has been placed in our hands for doing good to our fellow-creatures. But the prevention of the spread of disease, the lines of procedure for effecting which we have been taught, is only one of the services rendered to us by bacteriological science. In the early days of bacteriology it was found that the bacillus might be brought into a weakened state, and that if introduced into the system by inoculation in this state it only produced a mild form of affection unattended with danger to life instead of the ordinary form of disease. Common experience has long made us aware that a person who has passed through an attack of an infectious disorder is not liable to the same extent as before to contract the disease on exposure to contagion, and that should he contract it the course run will assume a mild character. Out of these two factors we get command of some moment in the direction of providing escape from serious effects arising from the disease. Two modes of bringing the bacillus into an attenuated state are open for employment: one by conducting its artificial cultivation in a particular way, the other by transmission through the system of an animal differing in nature from that in which the disease naturally occurs. The latter is represented by the system of dealing with small-pox, which started with Jenner at the close of the last century. Jenner's discovery consisted in showing that vaccination with the lymph of cow-pox affords as much protection against small-pox as an attack of small-pox itself. He knew nothing about the virus of small-pox being attenuated by passage through the system of the cow.

Another method of combating disease, more recently revealed by the teachings of bacteriology, is by availing ourselves of the efforts of Nature to counteract the effects of the bacillus. In the case of some affections it has been made out that the pernicious results are due not to the direct action of the bacillus, but to the development during its growth of an agent which acts in the manner of a poison to the system. This material, known as the toxin, on being produced leads to the generation in the system, by as it were a conservative effort of Nature, of a counteracting principle which has received the name of antitoxin. We have the poison and its antidote to deal with, and the result may be considered to be dependent upon which is the stronger of the two. This is valuable information to have obtained, and no one can conjecture how much more remains to be disclosed by the further prosecution of research. It follows that what is wanted for subduing the disease is a supply of antitoxin, and this it has been found may be obtained from the lower animals. It is the toxin which leads to the generation of antitoxin, and toxin is produced by the bacillus no matter whether it exists inside the system or is cultivated in a medium outside the body. Produced as the result of cultivation outside the body it is susceptible of separation by filtration from the bacillus, and in this state the effect of its introduction into the system of one of the lower animals is to kill if used in sufficient quantity, and in smaller quantity to give rise to the production of antitoxin which, with suitable arrangements, may be procured in a form to be susceptible of employment as a therapeutic agent.

Here lies the principle of the modern treatment of diphtheria by the serum of the blood of the horse which has gained certain remarkable therapeutic properties by being charged with antitoxin by the repeated introduction of a suitable quantity of diphtheria toxin into the system. In the discussion about to take place on diphtheria we shall all look with deep interest for information regarding the practical value of the treatment. Those to whom we are to listen are qualified to speak authoritatively on the matter, and the prospect is presented of a useful addition being made to our stock of knowledge as a result of the proceedings here to-day. In connection with the subjects for discussion both to-morrow and on Friday the view is broached that a microbe plays a part, and it remains for us to see what the speakers will tell us upon the point. Without further prelude, I will now call upon Dr. Martin to open the discussion on diphtheria.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY

At the Annual Meeting of the British Medical Association at London, July-August, 1895.

By Sir WILLIAM MACCORMAC, F.R.C.S.
Surgeon to St. Thomas's Hospital.

SOME POINTS OF INTEREST IN CONNECTION WITH THE SURGERY OF WAR.[1]

GENTLEMEN,—In taking the chair, I desire to express my great appreciation of the compliment paid me by being selected to preside over the Surgical Section of our Association at its meeting in London.

I believe we shall do important work and learn much to further the progress both of our science and our art from the eminent surgeons who will take part in the discussions, and favour us with communications.

On behalf of the officers of the Section as well as myself I have to extend a hearty welcome to all the surgical members of our Association present with us to-day, and most especially to those foreign surgeons who, at much inconvenience to themselves, have come to take part in our proceedings.

It has occurred to me that it might be interesting were I to begin the business of the Section by a few remarks on some of the many points of moment in connection with the surgery of war. For forty years we have not been engaged in European war, fortunately for ourselves. Yet since upon our effective preparation for time of war our predominating position, indeed, our existence as a nation, depends, all must take an interest in these matters.

As the chief duty of a general is to bring his men into the

[1] The address was illustrated by a large number of wet and dry preparations of gunshot injury, by a series of bullets fired at various ranges many showing deformity, as well as by photographic lantern slides of the effects produced by the new projectile upon the human cadaver.

fighting line as physically fit as possible, and to be as little hampered as may be by sick and wounded, it is hardly possible to overestimate the value of a carefully prepared military medical organisation, or to lay too great stress on the responsibilities which devolve upon the medical officers in the field. The chief surgeon of the army should not only possess the willing support of his executive staff, but he should be, and generally is, the right hand man of the general commanding, enjoying his full confidence and active sympathy, else the disasters which have occurred before may occur again. This unfortunately is not his position in our army, for in spite of strenuous opposition from the Medical Department he is placed on the staff of the officer commanding the lines of communication, and not, as in most other armies, on the staff of the commander-in-chief.

The modern rifle has introduced changes which have excited universal attention. This weapon sends a small hard projectile with enormously increased velocity to a much greater distance, and with greater precision, than was previously possible. The cylindro-conoidal projectiles of the Minié rifle and the Chassepôt and the ovoid bullet of the needle gun were an immense advance upon the round bullets of Brown Bess, but the new projectile possesses even greater advantages. Our troops used the Lee-Metford rifle in the recent Waziristan expedition and later in Chitral. In storming the Malakand Pass during the advance to Chitral an immense quantity of ammunition per man was used. The Lee-Metford with cordite powder worked very successfully. The volleys even were almost smokeless and noiseless, and wrought great havoc in the enemy's ranks. Examples of gunshot injury from this source have not yet come to hand.

Here are a number of fractures produced by the needle gun and Chassepôt rifle bullets comparatively large masses of lead weighing respectively 500 grs. and 380 grs. Some of the specimens show the great shattering effect produced, others guttering of the bone, and some present a characteristic key-hole aperture with long fissures radiating from it.

Except cases of accident and suicide there are as yet but few specimens obtainable of the effects of the modern bullet on living persons, but we have a large experimental record from various countries of the effects produced both on the human cadaver and on animals.

The experimental results are not exactly similar to those obtained in actual warfare, as the effect of a bullet striking a dead body is necessarily different from that it would have on a living person. Many experiments have been made at short ranges with reduced charges of powder to diminish the uncertainty of striking the part aimed at, but the results obtained by this method differ materially from those obtained with actual charges.

Experiments as to the manner in which the projectile acts upon the human body at different distances are of great practical value. They enable the surgeon to obtain beforehand a of the probable character of similar injuries inflicted knowledge during actual warfare and the best way of dealing with them.

During the last twenty years there has been a gradual diminution of the calibre of the rifle and in the weight of the projectile, while its hardness has been greatly increased.

The accompanying table gives the more important particulars concerning the rifles and projectiles adopted in different countries.

From this table it will be seen that the modern weapon very slightly differs in calibre in different European armies, the bore varying from 7 millimetres (0·280 in.) to 8 millimetres (0·315 in.) in diameter, and, except in Roumania and Spain, the difference in weight of the projectiles is so slight that for practical purposes it may be disregarded. They vary from 215 to 226 grains, and their greater density and increased length render them, weight for weight, smaller in proportion than the soft leaden bullet.

The form is an elongated cylinder with a rounded extremity composed of a hardened leaden core surrounded by a jacket of either steel, copper, nickel, or German silver. Its length is about four times its width, and it receives from the rifling a rotatory movement of about 2,500 revolutions per second, and an initial or muzzle velocity of 1,800 to 2,500 feet per second.

The projectile now adopted in our army has a central core of lead hardened with antimony, surrounded by a nickel jacket hardened with a small alloy of copper. It weighs 215 grains, and resists to a remarkable degree the tendency to change the shape on impact which was so noticeable in the old bullet; and this fact, together with its small diameter, enormously increased velocity and penetrating power, causes it to produce very remarkable wounds.

The range is about 3,500 yards, a little over two English miles, the trajectory is flatter and the direction more true, results attributable to the diminished resistance of the air to the projectile and the greater driving power of the new powder.

The factors which determine the amount of damage inflicted by a gunshot wound are the unalterable form of the projectile, as well, of course, as its size, the velocity on impact, and the resistance of the tissues struck. Hitherto about nine-tenths of the wounded on a modern battlefield were disabled by rifle bullets, and the proportion will not diminish with the use of magazine rifles capable of firing some sixty shots a minute and carrying immense distances.

I have already said that the experiments made have given somewhat conflicting results. One series conducted by

Small Calibre Magazine Rifles and Bullets.

Country.	Pattern of Rifle.	Year.	Calibre. Millimetres.	Calibre. Inches.	Bullet.	Length in Inches of Barrel.	Diameter of Bullet in Inches.	Weight in Grains.	Muzzle Velocity in Feet per Second.	Sighted to Yards.	Range in Yards.
England	Lee Metford	[illegible]	7·7	0·303	Cupro-nickel jacket	1·25	0·311	215 to 217	2,000	[illegible]	[illegible]
France	Lebel	1886	8·0	0·315	Cupro-nickel jacket	1·26	0·329	256	2,013	—	—
Germany	88	1888	7·9	0·311	Nickel-plated steel jacket	1·22	0·314	237	2,034	—	4,373
Austria	Mann-licher	[illegible]	8·0	0·315	Steel jacket	1·26	0·325	244	2,000	—	—
Roumania	Mann-licher	1892	6·5	0·256	Steel jacket, nickel plated	1·22	0·263	160	2,000	—	—
Russia	"Liné" pattern	1891	7·62	0·300	Cupro-nickel jacket	1·19	0·307	214	2,000	—	—
Spain	Mauser	1892	7·0	0·276	Steel jacket, nickel plated	1·20	0·284	172·8	2,000	[illegible]	—
[illegible]	[illegible]	[illegible]	[illegible]	0·423	Conical soft lead	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Prussian	1841	18·0	—	Ovoid soft lead	1·09	0·550	476	1,000	—	—
[illegible]	[illegible]	[illegible]	—	—	Spherical soft lead	—	0·607	480	1,000	[illegible]	—
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Soft lead	1·24	0·577	480	1,000	[illegible]	[illegible]
[illegible]	Martini-Henri	1871	—	0·45	Hardened lead	1·21	0·45	480 to 485	—	—	—

Bruns, Delorme, Habart, Lagarde and others were made at fixed ranges with reduced charges of powder, the initial velocity being thus reduced to that the projectile would have at given distances of 100, 500, 1,000 yards, and so on.

Speaking generally, wounds inflicted in this way appear to produce a less serious injury than the old leaden rifle bullet caused. The experimenters found that at what corresponded to short ranges up to 400 yards, explosive effects were produced by both, and the injury caused by the projectile of hardened lead covered with a German silver jacket did not materially differ from that produced by the old leaden ball. The old bullet ceases to cause these results at 250 or 300 yards, although up to this distance it is capable of producing them in a marked degree. The explosive effects of the new projectile are found up to 350 or 400 yards, and often much farther.

EXPLOSIVE EFFECTS.

The degree of explosive effect depends on the high velocity, as well as the size and hardness, of the projectile, and the resistance of the part struck. Vascular tissues, cavities like the skull filled with semi-fluid matter, and organs like the liver or spleen, are liable to suffer most from the so-called explosive influence. By this term is not meant the injury caused by the forbidden explosive bullet which the terrible appearance of the wound so strongly suggests that in war time allegations are constantly made that these prohibited missiles are employed. The entrance wound may present nothing peculiar, but the soft parts within are pulpified, and the destruction of tissue extends for a considerable distance around the bullet track. The exit wound is large and lacerated, as if the soft parts had been burst outwards. When the bone is struck it is extensively comminuted, pulverised, and driven in all directions into the tissues. The wound beyond the bone is conical, the apex at the bone and the base at the surface.

When an empty leaden box or tin, or an empty skull, is traversed by a bullet, the openings of entrance and exit will closely correspond to the size of the projectile, but if a closed or partially closed vessel of this kind be filled with wet sawdust, water, jelly, or damp clay, and a similar projectile is fired at it from the same distance, it bursts and the contents escape.

William Busch was the first to suggest that these effects were the result of the sudden increase of hydraulic pressure in the part struck. This explanation is not strictly accurate. The pressure is not truly hydraulic, as it is not exerted equally in all directions, but chiefly in the direction of the flight of the projectile, and it occurs in almost equal degree in both closed and entirely open leaden vessels filled with fluid or jelly. The cubic capacity of a closed vessel is in many instances increased nearly by a third, and in the open vessel the increase is one fourth or fifth. The increase in volume is as much as 300 times the bulk of the projectile. The bullet also appears to have already traversed the vessel before this hydraulic influence has had time to take effect, for in many instances the displaced leaden tags at the exit wound can be restored to their original position, and the completely circular opening by which the bullet emerged reproduced. Water has, in fact, an astonishing power of resisting the progress of a bullet which, although capable of travelling perhaps 4,000 yards through the air will be arrested altogether after traversing three or four yards of water.

Within the short time at my disposal it is impossible to discuss this difficult subject, but the explanation of the extraordinary development of explosive effect seems to depend on the rapid arrest of the flight of the bullet on piercing fluid matter, and its motion being transferred to the parts immediately surrounding it, and these again transmitting it to parts further removed, somewhat as wave circles are produced by a stone dropped into the smooth water of a pond.

EXPERIMENTS WITH REDUCED CHARGES.

Bruns's experiments may be taken as a type of those made with reduced charges. He found intense explosive effects up to 400 yards. These attained their maximum in the skull, the bone being fractured in all directions, and upon semi-fluid organs like the liver, spleen, a full stomach, or intestine, terrible damage was inflicted. In the elastic lung tissue, however, or upon empty viscera, no effects of this kind followed. When the bone was implicated the track as far as the bone was usually no larger than the ball, but the tissues beyond were always extensively damaged, and the exit wound was very large.

At a distance of 400 to 800 yards explosive effects were only witnessed in the skull. Soft parts were traversed by a narrow channel no larger than the bullet itself, and with but little damage to surrounding tissues. The joint ends of the long bones presented keyhole openings accompanied by much less extensive fissuring than was formerly the case. When the shaft was implicated the comminution was not extensive, the fragments were large, not detached from one another, and the exit wound small. At a range of 800 to 1,200 yards explosive effects were only occasionally produced in the skull, and in a much diminished degree. In soft parts a narrow channel was made with little surrounding damage. In the spongy bones perforations occurred with but little fissuring, and in the compact tissue of the shaft there was comparatively little comminution.

These favourable effects were produced although the projectile still retained its high velocity and straight direction. In the soft parts the narrow tract was smaller than the diameter of the bullet, the entrance opening was about 5 millimetres (0.20 in.) and the exit 6 millimetres (0.24 in.) to 7 millimetres (0.28 in.). In the expanded joint ends of the bones the fissures were short or altogether absent, which was never the case with the leaden bullet. In the skull there were simple perforations and little damage to the brain tissue, and the same could be said of the lungs and other viscera. Beyond this distance, at a range of 1,200 to 2,000 yards or upwards, Bruns, Delorme, Habart, and Lagarde found that the damage to bone and other parts became again extensive. The projectile had probably lost its accurate sagittal flight, began to wobble, and strike sideways, and similar effects were produced by ricochet shots.

EXPERIMENTAL EFFECTS OF FULL CHARGES.

Finding that the experiments of Reger, Beck, and Bruns in Germany, and those of Delorme, Chavasse, Chauvel, and Nimier in France, and the conclusions derived from them materially differed, the Prussian Kriegs-Ministerium recently undertook a series of experiments, conducted so as to exclude sources of error as far as possible, and thus obtain for military surgeons trustworthy information as to the character of the injuries which the new weapon would produce in time of war.

In the first place, full charges of powder were employed, and as the range varied from twenty-five to 2,000 yards, wounds of every description were obtained. These are represented by 1,000 preparations preserved in the Friedrich Wilhelm Institute in Berlin, and the more important are given as full size illustrations in an atlas of plates issued by the War Ministry.

The results obtained in this way were compared with the injuries inflicted on living persons by the same weapon either accidentally or in cases of suicide, and were found to closely correspond. The weapon employed was the German model 88. Its calibre is 7.9 millimetres (0.311 in.), and the projectile has a diameter of 8.1 millimetres (0.318 in.), so that it is firmly pressed into the rifle grooves, and leaves the muzzle with a movement of 2,500 rotations in the second, and a velocity of 2,100 foot seconds (*vide* Table).

The bodies fired at were covered with shirting to estimate the frequency with which portions of clothing are carried in, and to give the tissues the normal amount of fluidity Wickersheimer's solution was injected, the tension of the blood vessels being approximately maintained by injecting animal blood serum into the arteries immediately before the experiment. Up to 1,200 yards single shots were discharged, and beyond this volley firing was resorted to. The bullets were collected in bags of sawdust, and in the case of each separate shot the bullet was examined in relation to the wound it had produced; after volley firing this, of course, could not be done.

Two methods were adopted in the estimation of the results. One was to freeze the part and make a section of the bullet track, and the other was to measure the extent of damage by taking a cast in fusible metal of the interior of the wound, which afforded an accurate model of the destructive effects produced.

The 900 experiments made by the German War Office do not justify Brans's classification of gunshot injuries into groups according to range. As the range increases there is a gradual diminution in the velocity and energy of the projectile, and a corresponding diminution was observed in the extent of the injury.

It must be remembered, however, that the projectile produces different effects on different organs and different parts of the body, according to their density or fluidity, and even the same part or organ in different individuals will present differences which materially affect the extent of the damage done by bullets fired from equal distances, so that the range of fire cannot be determined with precision from the extent of the injury inflicted. Nor does the size of the entrance wound enable one to draw any definite conclusion. It is larger at short ranges than at longer ones, varying from 7.6 millimetres (0.3 in.) at 100 yards to 5.0 millimetres (0.2 in.) at 2,000 yards range. When the bullet strikes perpendicularly to the surface the opening will be circular with smooth edges, which after an interval become dry and brown. If the skin be wrinkled or loose the wound will be stellate, and when the bullet strikes obliquely or transversely it may be large and ragged. The exit wound is larger and more variable in shape than the wound of entrance. When the projectile emerges perpendicularly to the tissues traversed, the exit wound is circular in about 20 per cent. of the injuries, while a circular shape in the wound of entrance is twice as frequent.

The bullet in nearly every case was found to go straight through the part struck, and the old-fashioned contour shot was never met with. The human body is traversed with ease at 2,000 yards, and the skull, thorax, and abdomen will suffer alike. At less than half this distance the old bullet has lost most of its momentum, and becomes flattened out or impacted when it strikes a bone without penetrating deeply.

Portions of clothing were found in the wound in only two cases up to 600 metres range, but they appear to have been carried in in about 12 per cent. of the total number.

Wounds of Abdomen.

In these injuries the liver showed the largest amount of damage, and in some cases of suicide large portions of it were reduced to pulp. Up to 1,200 yards the entrance wound was usually large and stellate and the exit track funnel shaped, with lateral rents extending from it.

In the spleen and kidneys similar injuries were produced. In the intestine each bullet produced on an average three openings, and in some cases as many as eight, and the extent of the damage seemed to bear no defined relation to the length of range. It was more extensive when the intestine was full. At the entrance wound, and, to a lesser extent, at the wound of exit, the bullet caused more damage to the serous coat of the intestine than to the mucous, while in the stomach the converse obtained, and the mucous coat was more extensively injured than the serous.

Injury of the Head.

Fearful destruction of skull is produced by a small 5 mm. (0.2 inch) bullet at 50 yards range. The vault is completely shattered, the base extensively split open, and the brain destroyed. The 8 mm. bullet produces similar results, but as a rule the fragments hold together. At 100 yards the entire vault is shattered, fissures extend from both entrance and exit wounds, and a gaping line of fracture was constantly found extending between them. The fissuring around the wounds of exit and entrance shows two different types, one circular the other radiating, and the base is also traversed by fissures. Up to 1,600 yards the fissures gradually diminish or disappear, with the exception of the one connecting the entrance and exit wounds, and sometimes a clean perforation occurs, which becomes frequent at 2,000 yards. The skull when emptied of the brain shows a round keyhole perforation at all distances, but if it be filled with jelly the amount and character of injury are the same as when it is occupied by brain substance. The dura is lacerated to an extent corresponding to the injury to the bone. At short range the brain is pulpified and numerous blood extravasations are found in its substance and beneath the meninges. At long range the bullet track through the brain tissue is cylindrical, the walls are moderately contused, and the calibre of the channel is always less than that of the bullet. Portions of the skull may be carried in at the entrance wound for some distance by the bullet, so that there the injury as a rule will be most severe.

Injury to the Long Bones.

Gunshot fractures are very frequent and possess great interest. They vary according to which bone, or part of the bone is struck. The effect upon the spongy extremities and upon the compact tissue is very different. From 100 to 200 yards the shaft of the femur is broken up into small pieces for an extent of from 3 to 5 inches, and the humerus from 2 to 6 inches. At the entrance wound in the bone the fragments remain in part attached to the soft parts but at the wound of exit they are completely separated. The adjacent muscles are filled with bone *débris* and detached fragments of bone, the muscles and tendons are torn and the exit wound in the soft parts is large and ragged. In the spongy bones and spongy extremities of the long bones the crushing and fissuring at short range are also great, but the fissures are often concealed by untorn periosteum, and there is less damage to the soft parts at the wound of exit.

At a range of 600 yards there are occasionally keyhole shots, with radiating fissures in the spongy tissue, and at 800 yards the keyhole channels become frequent, but even up to 1,600 yards or more the compact tissue is extensively fractured. At 1,200 yards the fragments of bone as a rule are no longer driven into the soft parts beyond; but this happens occasionally even up to 2,000 yards.

The conclusion to be drawn from the German experiments is that the damage to the shaft of a long bone is very extensive for all ranges up to 2,000 yards, the main difference being that at short ranges of 200 or 300 yards—for example, the fragments are more numerous, smaller, and more stripped of periosteum, while the converse obtains at longer ranges.

The damage done to the soft parts lying between the fractured bone and the wound of exit is enormous at short distances. Above 700 yards the exit wound becomes smaller and the internal damage begins to diminish.

The experiments also show that the minute external openings these bullets make often bear an inverse proportion to the amount of internal damage. Very small openings of entrance and exit are compatible with enormous destruction of the compact bone tissue traversed by the ball between. The current opinion that the new bullet causes on the whole less serious damage than the old seems scarcely well founded. It was devised certainly with no humane intention, but in order to incapacitate by killing and wounding as many men as possible in the shortest possible time, and it seems admirably devised to ensure this result.

Deformation of the Projectile.

The liability to change in form is a very important element in the amount of damage caused by a bullet. A leaden ball is flattened or spread out on striking a bone; it may be grooved by a tendon or fascia or split into several pieces. The amount of deformity depends on the momentum of the bullet, the result of its weight and velocity combined, as well as the resistance of the part of the body struck. The new bullet may traverse the body with little or no alteration in shape, or the resistance may be great enough to crush or split it with a corresponding increment of developed heat. The tip only may be flattened, or the whole bullet converted into mushroom form, with separation of the jacket. The harder the bullet, the less, other things being alike, is the tendency to deformation and the greater the penetrating power. The total number of altered bullets amounted to 4.5 per cent., but if only cases in which the bone is implicated be taken the proportion is considerably increased. In the hard bones of the horse it amounts to as much as 14 per cent.

Wounds involving the soft parts only never produce any alteration of shape, while the compact tissue of the long bones causes the maximum amount of deformity. The jacketed projectile passes through spongy bones and soft parts without change. Even at short ranges and after striking compact bone, its tip may be only slightly flattened or bent.

A portion of the jacket is sometimes stripped off, and this accident is most frequent with the nickel envelope used for the American rifle bullet, the French Lebel rifle, and in our own army.

It may be affirmed that the extent of the damage inflicted increases proportionately with the amount of deformation in the bullet. The separation of the jacket and dislodgment of the leaden core occasion injury which often exceeds in degree that of the old leaden bullet, and this was observed at even so long a range as 1 000 yards. A bullet deformed by ricochet will also cause extensive damage, but somewhat differently, as the entrance track will be implicated as well as the channel beyond the bone.

Penetrating Power of the Bullet; Arrest of the Bullet in the Body.

The penetrating power of a bullet is in proportion to the square of its striking velocity, and also depends on its form, density, and unchangeable shape.

The great velocity, comparatively small size, and hardness of the modern projectile render it much less liable to lodge in the body. It nearly always traverses the part struck, and is seldom arrested in the tissues, thus avoiding a source of much after-trouble and suffering.

In the German experiments an unaltered bullet lodged in only three or four instances at ranges of 1,600 to 2,000 yards, and in one case of accidental injury at 2,700 yards the bullet was found in the interior of the skull. The altered bullet is much more likely to lodge, and especially in the shape of detached fragments, such as portions of the jacket or core. The sharp edges of the rent jacket penetrate the soft parts deeply, and readily injure blood vessels.

Hubert and Chanvel found that up to 1,500 and 2,000 yards the hard bullets went clean through the human body unchecked even by the hardest bone, and as far as 1,200 yards Bruns never found the projectile lodge. On the other hand, Delorme's experiments and those of Démosthene prove that the projectile may lodge in some cases even at short range. These may, however, be considered exceptional, while at moderate ranges it was the rule for a leaden bullet to be arrested in the soft tissues and the bone.

The disastrous searching for lodged bullets, and repeated attempts to extract them which formed so considerable a part of the older military surgery will now be largely done away with. Most surgeons of experience have arrived at the conclusion that the wounded often incur greater risks from the protracted search made for the foreign body than any the bullet itself would cause if left alone, a remark which does not apply to the necessity for removing particles of clothing which may be carried in, which are of course septic. Fortunately this is much less frequent now than was the case when larger bullets were used, although it still obtains in about 12 per cent. of the cases.

In time of war also there will be many irregular kinds of injury—those, for instance, produced by ricochet shots. The bullet in these cases will have first struck a wall or the ground, thus altering both its shape and direction, and rendering it capable of inflicting terrible injury, and the long range increases the liability to this occurrence.

Hæmorrhage.

The infrequency of serious primary hæmorrhage from wounds produced by the old leaden bullet was quite surprising. Unless some large artery were torn across these wounds seldom caused much hæmorrhage. Of course the contusion of the tissues, while it diminished primary hæmorrhage, was, with the frequent septic changes in the wound, a fertile cause of secondary bleeding. The new projectile does not contuse an artery or push it aside. There is no evidence that an artery is ever deflected and thus escapes injury, and, except at short range, the bullet never wholly divides one of considerable size. A large vessel in the course of the exit wound is usually extensively lacerated if the bullet has previously traversed the bone. The wounds otherwise present an incised appearance; frequently the bullet cuts out a piece of the vessel wall, and the opening seems punched out with sharply-cut margins, like an incised wound. The incomplete division of the vessel prevents retraction, the conditions are less favourable for a spontaneous arrest of bleeding, and fatal primary hæmorrhage will probably be much more frequent. Cases where a large artery is wounded generally die before help arrives, and it is interesting to know that in the late war in China the Japanese surgeons had such perfect arrangements that in two cases—one a wound of the brachial, the other of the femoral artery—the vessels were tied and the patients saved in the fighting line itself.

Treatment.

Perhaps the most important matter to consider is how far the injuries inflicted by the new projectile will be more amenable to successful treatment. In a memorable paper communicated to the first Congress of German Surgeons Volkmann pointed out that the subcutaneous character of gunshot injuries of bones and joints made them less dangerous than compound fractures with more extensive damage to the soft structures produced by other causes.

Subsequent experience has helped to confirm this view. Pirogoff has told us how astonished he was at the easy manner the wounds produced by the small Circassian copper bullet healed during the Russian war in the Caucasus. Not only flesh wounds, but often penetrating injuries of the chest and of the joints were readily recovered from with scarcely any suppuration.

During the recent war in Chili it is reported by Dr. Stitt that flesh wounds which had not been probed and thus infected readily healed under a scab, and that the favourable character of lung wounds was especially noticeable. The bones were less comminuted and united in about half the time formerly required.

Dr. Rivero of Valparaiso has made similar observations. He noticed especially the smallness of the apertures caused by the Mannlicher rifle bullet, and that the injuries generally were less dangerous to life.

I have received a very favourable account of the character of the wounds caused by the Lee-Metford bullet from Surgeon-Lt. Burden, who was present at three actions during the Chitral expedition. He reports that so far as he has seen, or heard from others, the wounds through the soft tissues at both short and long ranges were clean and incised with very little or no bruising, and that they quickly healed. Through the bones clean punched out holes were made with little splintering, and he said in no case was there any explosive action. The damage caused by the large bore bullets of the enemy was much more severe.

In the British Medical Journal, July 25th, Surgeon-Lieutenant Jay Gould gives an interesting account of twenty cases of the native Swatis wounded in Chitral, in whom the moderate amount of injury inflicted and rapid subsequent recovery are conspicuous.

It appears to me difficult to estimate the extent of gunshot damage to the bone when covered by the soft parts, and Surgeon Gould was not able to examine any instance of fatal injury. He considers the enormous velocity and spin of the bullet cause it to bore a hole through the bone like a rapidly worked drill. But it must be remembered that the bullet has not time to make even one complete revolution on its axis while passing through the body, and only a small fraction of one while traversing the bone. His conclusion that the Lee-Metford rifle is "a perfect weapon from a humanitarian point of view" is, I consider, based upon insufficient premisses.

Another interesting report from Chitral has been received in a private letter from Surgeon-Lieutenant Evans, I.M.S. The seriously wounded and dead, he writes, were all carried off the field, but later on many of the Swatis, with uncomplicated wounds of the soft parts, came in to be dressed and were treated by Surgeon-Lieutenant Evans, who reports that these cases healed rapidly and well, notwithstanding the use of dressings very far from aseptic applied by the men themselves. In reply to questions, these patients informed Surgeon-Lieutenant Evans that the reason why none of the more serious cases had come for treatment was that "all the men who had suffered fracture of long bones were dead;" these people knew what they were talking about, because the cases referred to were those of their own relatives and comrades. As regards the Lee-Metford not being capable of stopping "a rush," it seems to me impossible that an enemy exposed to the shower of bullets the new rifle can concentrate upon an

advancing mass of men could carry "a rush," and men hit through the long bones of the lower extremity or the abdomen could certainly not advance after the receipt of the injury.

During the French war I have often seen Chassepôt bullet wounds heal without suppuration. Long more never saw a gunshot wound heal in this way, and indeed considered suppuration inevitable.

Bones and Joints.

In the Russo-Turkish war v. Bergmann obtained some astonishing results. He treated severe gunshot injuries of the knee not only with success as regards preservation of the limb, but also in respect of restoration of function, and this even when the bones were extensively implicated. Of 15 cases only 1 died. In 8 there was no suppuration, although in 5 of these the projectile had lodged. Reyher had 28 similar cases without a death. Two instances are reported by the Prussian Surgeon-General of gunshot through the knee at a distance of only 100 yards treated by occlusion which recovered with a movable joint.

Conservation of the limb in gunshot of a diaphysis will in the future be the rule of practice. If the exit wound be large and ragged, and important vessels and nerves are damaged, amputation becomes necessary, but this necessity will depend on the associated injury to nerves and vessels, and not on the extent of the fracture of the bone. When the epiphysial extremity is the part injured the conditions are also favourable, even when the adjacent joint is involved. In future campaigns, therefore, good hope of success may be entertained of saving life and limb without operative interference in these and similar cases.

Lungs.

When the new projectile traverses the lung the track is uniformly cylindrical, smaller than the bullet, and smooth walled with little contusion of the surrounding tissue, and splinters from injured ribs are but seldom driven in. Severe damage was found only where the bullet had struck transversely and carried in fragments of rib, or wounded a large vessel or bronchus. In many cases no serious symptoms were produced, and a diagnosis was only arrived at by the position of the wounds of entrance and exit. In others there was cutaneous emphysema, hæmoptysis, difficult respiration, and pneumo- or hæmothorax. Death in every instance was due to injury to the great vessels or bronchi at the root of the lung, and, excluding cases of suicide, the mortality in the cases recorded was only 12.5 per cent.

The wounds healed in most cases without trouble in three weeks' time on an average. Only once did empyema occur, showing the generally aseptic nature of the wound, and the subcutaneous character of the small openings produced by the bullet. The treatment therefore will be mainly directed to sealing the wounds of entrance and exit, and operative interference will be rarely required except for serious hæmorrhage.

Brain.

Unfortunately gunshot wounds involving the brain and the abdominal cavity remain as fatal as before. In the war of 1870-71 about 10 per cent. of the total number of gunshot wounds were of the head, but only about half of these were perforating. In future wars every bullet which touches the skull, even up to 2,000 yards and more, will probably fracture it extensively, and at 3,000 yards the bullet may perforate and lodge. These cases, almost without exception, die either immediately from the injury to brain tissue and shock, or by hæmorrhage and subsequent inflammation. Very few indeed suggest operative interference or any hope of a favourable issue, but to these the ordinary rules of practice would apply.

Abdomen.

In 1870-71 a large proportion of the wounds of the abdomen did not perforate the cavity, but in future this will not be the case, as even at the longest ranges the new projectile will traverse the abdomen and wound its contents. In perforating wounds we may assume that some viscus, either the intestine, bladder, or solid organs, has been perforated as well. No probing should be attempted, and Senn's inflation method is likely to do harm by forcing fæces through the wounds in the intestine into the abdominal cavity. Hitherto cases of this kind have ended fatally, and in the next war it is to be anticipated that the mortality will also be very great. As a rule those injured in this way do not die immediately unless a trunk vessel be divided, but will be carried to the dressing stations and shortly succumb to hæmorrhage, or infective peritonitis, the result of fæcal extravasation, or of matter carried in by the bullet.

Nothing is of avail in these cases but very early laparotomy, for when peritonitis has set in operation will come too late. In civil practice many recoveries take place where the operation has been performed within the first twelve hours, and very few when it is done after a longer interval. It has been proposed to introduce laparotomy as a routine treatment for internal hæmorrhage and visceral wounds of the abdomen. The German Surgeon-General, Professor Senn of Chicago, and others have suggested that the field hospitals should possess an outfit for the operative treatment of gunshot injuries of the abdomen, and that wounds of the viscera should be dealt with by suture, aseptic tamponade, or, in some instances, by partial or complete removal of the injured organ.

Injuries of the liver, spleen, or kidney offer but small prospect of successful treatment, as the damage the new projectile causes in these viscera is usually very extensive. The small apertures made in the intestine will, however, be easy to suture in suitable cases. The frequency of penetrating wounds of the abdomen is so great and the mortality so excessive that any means affording a fair prospect of lessening it should be tried. The field hospital should therefore be provided with all that may be required for operations of this kind.

But I fear that anyone who has seen the confusion of battle, the sudden and overwhelming amount of work and strain thrown upon everyone concerned, and the impossibility of adequately meeting the great emergency will regard proposals such as these as scarcely practicable. In order to perform an abdominal section sufficiently early to be successful it must be done at the first dressing station or field hospital if near enough. There will be hundreds of more or less seriously wounded men awaiting help and it may be impossible to devote the time needful for the diagnosis and immediate operative treatment of such cases. It is very likely, too, that there will be scant assistance obtainable, and the conditions are anything but favourable for perfect asepsis. By all means, however, let a trial be made should the opportunity occur.

Conclusions.

It would appear probable that in a future war many of the wounds produced by the new projectile will be surgically less severe and prove amenable to effective surgical treatment. Probably also the number of severe injuries will be very great when we consider the enormous range of the new weapon and the penetrating power of the projectile, which enables it to traverse the bodies of two or three individuals in line, including bones, and to inflict serious or fatal wounds at a distance of 3,000 or 4,000 yards. It is impossible to say what the proportion between these two is likely to be. At near ranges the explosive effects will be much the same as before, but at long range the narrow bullet track, the small external wounds, which often approach the subcutaneous in character, and the moderate degree of comminution and fissuring of the bone will be surgically advantageous. These will form the bulk of the gunshot injuries of the future for it would seem impossible with magazine quick-firing rifles to maintain a contest at close quarters without speedy mutual annihilation.

We may take it for granted that the number of wounded in proportion to the numbers engaged and actually under fire will be greater than before. The supply of ammunition will be larger, the facility for its discharge greater, and smokeless powder will increase accuracy of aim.

I think we are justified in believing, although there is high authority for a contrary opinion, that the next great war will be more destructive to human life, "bloodier," in fact, than any of its predecessors, and that the number of injuries, and in many cases the severity of the injury, will be largely increased. But very many cases will remain less severe in character, more capable of successful treatment, and less

likely to entail future disablement, while improved sanitation and antiseptic methods will enormously increase the proportion of recoveries.

It is the unceasing effort of modern surgery to provide antiseptic protection in an effective form in time of war; and I may be permitted to recall that the medical organisation during our last war in Egypt was so complete in this respect that not a single case of infective wound disease occurred during the whole campaign.

As a temporary dressing some form of antiseptic occlusion will prove most generally applicable. The small wounds of entrance and exit render this plan comparatively easy of application, and the chances of septic infection will be diminished by the less frequent necessity for probing or searching for a lodged projectile, and indeed the ascertained presence of the bullet is no sufficient indication *per se* to attempt its removal. The eye rather than the hand is the best thing to employ at a first dressing station, as Fischer has well said.

If only asepticity can be ensured—and this is the great difficulty—we may expect a large measure of success to follow the treatment of wounds of the soft parts, many forms of fracture—notably also wounds of the joints, and very especially wounds of the lung.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OBSTETRIC MEDICINE AND GYNÆCOLOGY.

At the Annual Meeting of the British Medical Association at London, July-August, 1895.

By Sir WILLIAM O. PRIESTLEY, M.D., LL.D., etc.

ON OVER-OPERATING IN GYNÆCOLOGY.

In opening the Section of Obstetric Medicine and Gynæcology it may be appropriate that I should say a few words as to the present position of this important department of medical science and art. Thanks to many workers, the progress has been so great as almost to merit the appellation of the word marvellous. To take the single subject of the application of the antiseptic system to midwifery: the gain has been enormous, and I know no instance within recent days where the triumph of preventive medicine has been so signally marked. The advantages gained have not only been to the public in the saving of precious lives, but also to the profession by enhancing the esteem in which it must be held as a benefactor of the species and in lessening the anxiety and consequent wear and tear of professional life. The benefit to the public and the profession thus go hand in hand.

It is well known that as the result of antiseptics puerperal fever has been practically annihilated in lying-in hospitals. I took the trouble during the International Congress of Hygiene to collect the statistics of all the lying-in hospitals at that time accessible, and I was able to show that, as before the introduction of antiseptics, according to the figures of Le Fort, the deaths were then more than 34 per 1,000, they have been reduced since their careful employment to fewer than 5 per 1,000. In other words, there has been an actual saving of more than 3,000 maternal lives which would otherwise have been sacrificed.

This is no mean achievement for a comparatively short time, which is within the memory of most of us, and the statement by no means exhausts the advantages gained, for the lessened morbility as contradistinguished from the mortality represents not only so much anxiety saved to the medical attendant and to the friends, but also a shorter convalescence for patients, a less chance of being crippled in the future, and a more speedy resumption of life's important duties.

While the great advance has been made, however, in public institutions, I regret to say that progress of a like kind has not taken place in private practice. The later researches of Dr. Boxall have made it clear that there is a large preventable mortality among puerperal patients attended at their own homes, and, if this continues, it may become a standing reproach to us that women delivered in lying-in hospitals are actually safer than those confined in their own homes, which at one time was quite the reverse.

In view of this state of things it has been determined to have a discussion in this Section on the precautions to be observed in private midwifery practice, and I am sure you will agree with me that its initiation could not be placed in better hands than Dr. Herman's.

While the improvements arising from the use of antiseptics is, perhaps, the most striking recent gain in the practice of obstetrics, and, in importance, takes its place beside the introduction of anæsthesia in midwifery, it is by no means the only one. We can with great satisfaction look upon other advances in our art. One of the most notable is the improvement in the structure of forceps, more particularly the axis-traction forceps of M. Tarnier. The invention of this instrument marked a new era in obstetric practice. It has produced a precision in its application, which, while affording greater security to the mother and child, tends also to extend the sphere of its usefulness, and thus lessens the necessity for operations which imperil maternal or infantile lives—perhaps both.

Modifications of instruments used for craniotomy and other like operations have made them, when actually necessary, easier in performance and safer for the mother, while the general adoption of antiseptics has greatly widened the field for such proceedings as Cæsarean section, Porro's operation, and symphysiotomy, in cases of extreme deformity.

But it is in the department of so-called gynæcology that in later days the greatest activity is to be noted. A more exact knowledge of the pathological changes which take place in the pelvic organs—the results of experience as to the tolerance of the peritoneum if not tainted by infective organisms—the help of anæsthesia, asepsis, and antiseptics, have brought about a revolution in the treatment of the surgical diseases of women, and greatly multiplied the number of possible operations. I can recollect a time when tapping was regarded as the only legitimate operation for ovarian tumours, and as this was only palliative, and available exclusively for cysts containing fluid, the life of the woman, after the disease was established, was computed as worth at most but a five years' purchase from an actuarial point of view. In those days a great surgeon expressed the opinion that he who attempted the entire removal of an ovarian tumour ought to be indicted for manslaughter! Now, thanks to the introduction of anæsthetics and the careful observance of aseptic or antiseptic precautions, ovariotomy is not only sanctioned by the most conservative of minds, but it has had a success in many hands which evokes unqualified admiration. To hear of seventy or more cases in the hands of one operator without a single death, and results almost equally favourable with others, seems to have been enough to persuade some persons that the millennium in this field of operations has arrived, and that henceforth there need be no limits prescribed to exploits in abdominal surgery. Certainly experience has taught much hitherto unsuspected as to what may be accomplished by skilful procedure and scrupulous antiseptic precautions, but the enthusiasm aroused, not without good reason, may readily be carried too far. I have lived long enough to have seen the evil of rushing on too impetuously, and in watching the progress of gynæcology during long periods of time, have witnessed the wax and wane of many enthusiasms which have had their day, and have had a share in bringing something like discredit on a department of practice which, rightly exercised, is productive of great good, but, exercised unwisely, is capable of producing infinite harm.

Looking back on forty years of gynæcological practice, I can recollect what has been termed a craze for inflammation and ulceration of the os and cervix uteri. During its prevalence it was said of some devotees that every woman of a household was apt to be regarded as suffering from these affections, and locally treated accordingly. Shortly afterwards came a brief and not very creditable period when "clitoridectomy" was strongly advocated as a remedy for numerous ills. This fortunately had a very limited currency, and was speedily abandoned. Then followed a time in which displacement of the uterus held the field, and every backache,

every pelvic discomfort, every general neurosis was attributed to mechanical causes, and must needs be treated by uterine pessaries. Again, we had an epoch when oöphorectomy or castration of women was not only recommended and largely practised as a means of restraining hæmorrhage in bleeding fibroids, but also as a remedy for certain forms of neurosis even when the ovaries were healthy or not seriously diseased. Ere long it was discovered that removing the ovaries for neurosis, even if safely accomplished so far as life was concerned, besides unsexing the woman, was frequently followed by more severe nervous penalties than those for which it had been used as a remedy; that, in fact, it often entailed a loss of mental equilibrium, and sometimes ended in insanity.

Close upon this, again, came an ardour for stitching up rents in the cervix uteri following childbirth, rents which were described as producing many hitherto unknown evils, and frequently conducing to the establishment of malignant disease. One votary of this practice boasted of having detected and operated on in a short period no fewer than 300 or 400 cases which he had found in examining 900 women. Surely here was a marked illustration of the *nimia diligentia*. No such experience, so far as I know, has been chronicled by any other author.

Lastly, we have had what has been described as an epidemic of operations for excision of the uterine appendages; and even now, although this operation has but recently come into vogue, I see there is a reaction against its too frequent performance, and a demand in its place for more conservative methods which shall leave these parts of the generative system a chance of still performing their important functions. These reclamations come especially from across the Atlantic, where one of their most sagacious writers characterised the ardour for operations as akin to the excitement of fox hunting, and has implored his brethren in treating diseases of women to recollect that their patients have other organs than those in the pelvis.

In most or all the modes of treatment which I have indicated there is probably some utility, if properly limited and applied in well-selected cases, but the germ of truth has been so obscured by inappropriate use that each one in turn has been pushed aside by fresh innovations.

I suppose it is inevitable that with an army of workers, each component unit anxious to make a mark in his department, a somewhat undue enthusiasm should be engendered; but I believe we should get greater credit with other sections of our profession if that laudable zeal, without which no great results can be achieved, were a little more tempered by discretion and we were to proceed so cautiously that there should be less need to draw back and limit or even abandon methods which at one time were so popular. It seems to me just now that the tendency is to impart a too large surgical element into the treatment of diseases of women and comparatively to neglect their medical side. I am especially anxious to point out that, although a just equilibrium will no doubt be attained as to what is right and proper, so far as operations are concerned, by the usual process of evolution, a too reckless attempt at progress not only impairs the reputation of gynæcology, but the experience and recognition of faults must be gained at the expense of much suffering to many patients—patients of the gentler sex, on whom no man with a spark of chivalrous feeling would desire to inflict unnecessary pain. They are absolutely at the mercy of the medical man, and submit in blind faith to what he recommends as the best to be done under the circumstances. It should never for a moment be lost sight of that the profession exists for the good of the public, not the public for the profession. The spirit of true ethics teaches that we must consider first and foremost the welfare of the patient and secondly the credit of surgery. The great field of patients is not a forest or a prairie, where the credit is the greater to him who is the most daring or who brings the largest number of trophies in the way of operations. The records of 1,000 operations have no intrinsic value unless they are accompanied by proof that the operations were absolutely needful, and the fact that recovery took place does not necessarily justify them. The first instinct should be to try if an operation can be avoided, not to seek reasons for performing it. I am sure the main object of those who devote themselves to surgical work is a desire to do good; but a great temptation exists to build up a reputation by publishing extensive statistics of operations, and, were it unduly yielded to, would really amount to a sort of gambling—only in this case the counters would be the lives and liberties of human beings. We need to be especially on our guard in gynæcology, as unfortunately this department of practice affords an excellent field for the charlatan, who may pretend to cure incurable complaints or persuade helpless patients to submit to unnecessary operations, all for large fees. Such proceedings are sure to be exposed in the end, and are repudiated by all right-minded practitioners.

It is an accepted canon of our profession that neither the promptings of ambition nor the desire for rewards should be allowed a preponderating influence in determining the propriety of performing an operation. Nor should the urgent wishes of a patient be allowed to outweigh the counsels of prudence against it. Caution in this respect is the more necessary because there are always discontented women who magnify their sufferings, and some neurotic patients will submit to any martyrdom for the sake of evoking sympathy. They much prefer an active and energetic doctor, however unwise, to one who knows his pathology, and in that knowledge is content quietly to wait. As an extreme example of what neurotic women will endure and even crave for in the way of operation I may mention the case of a woman who suffered several successive amputations, beginning with the finger and ending with the removal of the shoulder joint, for injuries which were self-inflicted.

It may be laid down as an axiom that serious and dangerous ailments justify serious remedies, and that even grave incapacitating complaints like fistula, etc., may claim the active intervention of the surgeon.

Cancer, for instance, is a grave and fatal malady, and may in truth demand capital remedies. On this subject we shall have the advantage of a discussion in this Section raised by so competent an authority as Mr. Knowsley Thornton. Here there is no question likely to be raised of expediency or justification, always supposing there is a reasonable chance of cure, or at least of immunity from return for a considerable time afterwards.

It is quite a different matter to submit poor women to capital operations for small or large uterine fibroids without symptoms, or symptoms not of an urgent character, to open the abdomen for the cure of uterine displacements attended only by discomfort, or to remove the ovaries for indefinite nerve pains or other subjective symptoms. In my opinion such proceedings are absolutely unjustifiable.

In speaking of operations on uterine fibroids I specially guard myself as objecting to those performed on tumours without grave symptoms and which may possibly have been detected by accident. Fibroids are very common, and in the majority of instances no more affect the well being of a woman than the knot in the trunk of a tree affects the tree. Even when large they may produce no more inconvenience than can be borne with average patience. When in the United States I learned that few coloured women are without them. They were described as like the tubers of a potato, bound to shoot out, and the subjects of them generally performed all the duties and functions of life without much hindrance. I am constrained, nevertheless, to say there are exceptions to this general rule. I have heard it affirmed that a uterine fibroid never killed a woman. This may in a sense be true, but nevertheless I have seen poor women so reduced by hæmorrhage or so suffering in other ways from them that in their cases I should look with much less disfavour on any surgical interference which promised relief with even comparative safety.

In weighing the *pros* and *cons* of an operation, some general considerations, apt to be lost sight of, should not be overlooked. The pain inflicted at the time of an operation, when anæsthesia is employed, may be insignificant, but there is also the agony of expectation, and the probable pain and prostration afterwards, while the heart-rending anxiety of a husband or other relations are factors which cannot be left out of account by the conscientious surgeon. Besides, there is the question of expense to a private patient, which may be a serious drain on slender resources, and which ought not to be disregarded by the right-minded medical man. I know it

has been urged that an operation is often the quickest and most economical way of ending an illness otherwise tedious; but this is an argument which may readily be abused, and requires very careful safeguarding. I doubt the ethical morality of performing an operation which may entail the loss of life or permanent mutilation for the mere economy of time or to suit convenience.

The cry for a more conservative feeling in reference to the multiplicity of operations, not only in gynæcology, but also in general surgery, was raised some time ago in France, by the celebrated Verneuil, who has recently died. He says: "I have followed with lively interest the attempts at radical cure of uterine tumours, and have convinced myself that certain operations have been performed without being preceded by serious attempts at medical treatment, without absolute necessity, and indeed without sufficient regard for the opportuneness of the proceeding. To indifference or discouragement in the matter of chronic ailments of this sort has succeeded a violent access of *prurigo secandi*, a sort of *délire opératoire*, carried so far that one is sure to see one day or other the application to the living subject of every operation which is practicable on the dead body. Thus women are castrated when from the ovaries, which are otherwise healthy, certain nervous disorders arise, while others resect a slice of the œsophagus or a piece of the stomach. Unfortunately women are particularly the victims of this carnage. While one would relieve sterility by a grave operation, another would create it for the convenience of patients by a different proceeding. Oh, the thing is very simple. I expect every day to see in the journals the solemn description of a methodical proceeding for removal of the vulva or of the liver in cases of asthma or jaundice. I am willing to believe that the intentions are the purest, and that the boundless love of humanity is the sole factor of these pioneers of surgery, but I do absolutely refuse to see in this sanguinary debauch the characters of veritable therapeutic progress."

So far as this country is concerned this picture is no doubt overdrawn, but nevertheless we have had even within the last twelve months two hospital scandals arising out of alleged over-operating. In view of this and of the various phases which we have gone through; of the number of methods which have had their day, and then, too, been discarded, a warning note may not be unnecessary. Over-zeal in gynæcology is not so innocuous as the change in the fashions of medicines, frequently introduced, and then left on the hands of the hapless druggist. Operations may end life, or leave the patient crippled so far as some of the highest functions of life are concerned, and if they do not physically injure, they may at least leave her demoralised and mentally worse.

One of the untoward results of spurious attempts at progress is that the announcement of some new proceeding or operation issued before its value is proved is apt to be taken up as the last new thing in science by many imitators, who, unwilling to be left behind, at once adopt it, and use it, perhaps, in most inappropriate cases. Thus I have known the uterine appendages removed for matting together of parts by pelvic cellulitis and peritonitis after delivery, because the patient was too impatient to wait for the slow recovery which would have taken place in due course. In like manner I have heard of the ovaries being removed for chronic metrorrhagia after abortion. Curetting, useful though it be in suitable cases, because it is new in fashion, has been proposed to cure a somewhat copious loss of blood, due to the approach of the climacteric, which after a time disappeared spontaneously. The same treatment has within my experience been recommended for sterility in a young wife recently married, and who had no symptoms beyond her impatience to have children. Something operative must be done, and in lack of indication for anything else, this was proposed in all good faith.

I venture to speak strongly on these matters not because I am emotionally or opposed to real progress in our art: I render all honour to the pioneers of true progress, and every useful and proved innovation will always find in me an ardent supporter. As I now, in some sort from seniority, stand outside the circle of strife, I can calmly survey the whole horizon of work, and feel a desire to assist my *confrères* in attaining a judicial standard of what is right to be done, and what is best left undone, without all those violent fluctuations of opinion which have been before experienced. No progress can be made without a certain amount of imagination, as in other branches of science, and there must be some adventure allowed. I admire the man who when the right occasion arises can act promptly and courageously. It is the undue haste and disregard of consequences in pushing forward which ought to be restrained, and the motto of all should be, *Primo non nocere*—at least do no harm.

And now in conclusion I desire to say a few words on a subject concerning which I may not be in unison with many of the members of the Section, probably not even with some of its officers, but I am sure they will forgive me when I take the entire responsibility upon myself.

The subject I allude to is the tendency in the present day of the obstetric physician to invade the domain of the surgeon in reference to what may be called external operations. In this country at least the departure is comparatively a new one. It may be that I have been brought up in a different and more exclusive school, and that the advance of age makes me unwilling to extend the boundaries of the work formerly allotted to the physician-accoucheur in hospital and private practice, but I must confess I have my doubts whether we are right in throwing aside the old restriction, and whether we shall enhance our position in the profession by doing so. I take it as quite certain that the College of Physicians, which has gradually been putting aside its prejudices and electing some physicians practising midwifery to its highest offices, is likely—covertly at first, and later perhaps more openly—to look askance at the claims for the Fellowship of those of its members whose chief work is avowedly surgical. The obvious suggestion to such members will be, why not seek the Fellowship of the Royal College of Surgeons? And so gradually a divorce may be brought about between midwifery and the Royal College of Physicians. It is true this may be unjust—surgery has been determined by the courts of law to be an important branch of medicine, but, this notwithstanding, tradition and prejudice are apt to rule the day.

Whether it is judicious for the obstetric physician to extend his work into the domain of external surgery—other conditions than usage being put aside—time alone can show. It is sure to be contested by surgeons generally, and may lead to less amicable relations with them. No doubt the tendency of the age is to break down all lines of demarcation between the varieties of practice—even between the physician and the general practitioner—but this may not be in the best interests of the profession or for the good of the public. To my mind, however, more important than obliterating the distinctions between the physician and surgeon is the danger that by undertaking extensive surgical work the position of the obstetric physician in the estimation of the public may suffer. Hitherto those who are rich enough among the intelligent public have engaged the services of distinguished physicians-accoucheur, and have paid them large fees, not only because they were regarded as experts in their art, but also because they regarded them as a class apart, not likely to be tainted by the infective organisms met with in surgical practice nor obliged to attend infectious cases in general practice. It is true the introduction of antiseptics has done much to minimise the dangers occurring in former days, but still the question we shall have to answer—and answer explicitly—is, Are our antiseptic methods a sufficient safeguard against the possible contamination of lying-in patients by one who undertakes extensive surgical work in addition to obstetric practice?

I have been reading a recent contribution on ovariotomy by a careful surgeon, Mr. Malcolm, and I learn from him that notwithstanding all aseptic or antiseptic precautions, one of the chief dangers to the patient is still septic infection, and it was this chiefly which carried off his fatal cases. If this be so, careful as he may be, the medical attendant who goes to a midwifery case, after operating on an inflamed or suppurating ovarian tumour, or its subsequent dressing, or after removing a pyosalpinx, with its sometimes foetid and infective contents, incurs a grave responsibility. Puerperal patients are much more susceptible of septic infection than the ordinary run of surgical patients. With the most careful antiseptic precautions at our command, the conscientious accoucheur must always feel a certain anxiety in attending

fresh lying-in cases, if he has a patient suffering from puerperal fever, or if he has recently made an offensive vaginal examination. We all know how the odour clings persistently to the hands, even after washing in antiseptic solutions. These contingencies in practice may be unavoidable, but for the accoucheur deliberately to undertake a large amount of surgical work, with all its complications, is surely still further to add to his responsibilities, and perhaps imperil the safety of his obstetric patients. With careful antiseptic precautions there may be a relative safety, but who can say there is absolute safety, more particularly if a busy man has to go hurriedly to a midwifery case after operating on tumours inflamed and suppurating, or after dressing wounds in an unhealthy condition? I take it it would be difficult to assert that our defences are so complete and perfect as to leave no loophole for the insidious enemy to creep in. I know one authority at least, who, in his belief that he could render himself perfectly safe, was unhappy enough to give puerperal fever to three successive patients.

I sometimes wonder what can be the reason why obstetric physicians wish to become surgeons. Knowing as I do the good motives which habitually influence members of our profession, I decline to believe that personal advantages and large emoluments are the sole or even the predominant factors.

I presume one of their chief reasons is the desire to widen their sphere of usefulness. They find operations interesting as a new field for work, while they afford scope for that activity which must find an outlet in some direction. But surely the field of work in obstetric medicine is equally interesting, and it is certainly large enough and wide enough to satisfy the most ambitious. A multiplicity of problems are waiting solution, and I lament the diversion of our efficient men into devious paths which do not belong to them.

I may point out that, although operations bring increased emoluments, a mere facility in operating brings no abiding reputation unless conjoined with prudence and with the pursuit of science, which is equally open to the physician as to the surgeon. Without this conjunction surgery becomes a mere handicraft.

No one would pretend that the work done by Sir James Paget in the operating theatre was likely to enhance his reputation as much as his researches in pathology, nor that the operative work of Sir Joseph Lister distinguished him in anything like the amount that his discoveries in antiseptics have done. The truth is that a mere skilful pair of hands, unless dominated by intellectual capacity and a high sense of responsibility, may become potential of more harm than good.

But it may be asked what solution can be offered for the difficulty suggested. The answer would be, by appointing a gynæcological surgeon in every general hospital, who shall work in conjunction with the obstetric physician; and in all special hospitals for women, have some physicians who do not operate, and who would advise with the surgeons. In this way cases would not be viewed alone from their surgical side, and every patient would have the opportunity of getting medical as well as surgical treatment. By way of showing the incompetence of general surgeons for gynæcological work, graphic pictures have been drawn of their ignorance concerning the anatomy and relations of the pelvic organs in women, it has been said this ignorance was so complete that on one occasion an obstetric physician had to direct the point of a trocar through the vagina to a pelvic abscess, while the surgeon used the force to push it on. This, of course, is a caricature, for whatever may have been the case forty or fifty years ago, it must be conceded that Spencer Wells, Thomas Keith, Knowsley Thornton, Meredith, and others, who have never practised midwifery, are not quite ignorant of the anatomy and pathology of the female generative organs, and excellent work has been done by such general surgeons as Mr. Cripps and others at St. Bartholomew's Hospital, and indeed elsewhere, where such cases are allotted to one of the surgeons. Such men as these, from their familiarity with surgical proceedings, would in truth probably be the best operators, and the field of obstetrics and gynæcology on its medical side, if properly explored, is, as I have said before, wide enough for anybody. There is no lack of competent gynæcological surgeons now in this country; and in Paris, which I visited recently, I found a line of demarcation between obstetric medicine and operative gynæcology tacitly assumed. Each man, therefore, should take his choice, but not wish to be both physician and surgeon.

I again ask you to pardon me if I have broached a subject in which I may not be in accord with many present. Some may think my views antiquated, but they must admit that they are at least in consonance with tradition; and I venture to think they deserve some consideration, since they are not out of harmony with our present knowledge and the advances of modern science. The question has been a burning one for years, and I have thought this one of the rare occasions when it might be fitly broached. Whether you agree with me or not, you may be assured that in conducting the business of this Section I shall show no partiality for any set of opinions, but shall do my best to obtain for all an impartial hearing.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE.

At the Annual Meeting of the British Medical Association at London, July-August, 1895.

By ERNEST HART, D.C.L.

PUBLIC HEALTH LEGISLATION AND THE NEEDS OF INDIA.

This is probably the most representative and influential meeting of medical officers of health that has ever assembled in Great Britain. I appreciate the high honour of presiding over it. Two things add to its importance: first, that it meets, not as an isolated or powerless body, but as an integral part of that British Medical Association which includes practically nearly the whole of the authorised members of the medical profession in these kingdoms, and certainly all its most authoritative and highly-informed members, both in this country and throughout the British dominions and possessions; and, secondly, that thus meeting it will have the power of sending up its final recommendations and decisions to the central executive Council and to the Parliamentary Bills Committee of that Association, and through its machinery of transforming them in due time into the basis of legislative action by bringing them within the sphere of the Government departments, and, if necessary, of securing legislative action. What we do and say here, therefore, will, according to its intrinsic merit, be likely permanently to affect public opinion, and ultimately the municipal and legislative proceedings of the Empire.

The Healthiest City in the World.

Let me offer you welcome and congratulation at meeting here in the metropolis of the world at once the greatest and the most healthy of cities. Since last the British Medical Association met here, progress has been made in the science and practice of public health administration and the prevention of disease which has amounted almost to a revolution. There was then no Section of Public Medicine such as that over which I have now the honour to preside, and the public health service throughout the country was almost in its infancy. The results of the good work done and its great effects on the health and happiness, and therefore on the material prosperity of this great community, as of the country at large, are sufficiently shown in the bare fact that the mortality of this city has fallen from 22 per 1,000 to 18, whereas but for improved sanitation, due to the advancing knowledge of the methods and principles of preserving the public health, achieved and demonstrated by the medical profession, it would have risen inevitably in proportion to the increasing density of population to at least 24 per 1,000. The science, art, and practice of public health administration are, I am proud to say, almost wholly British; the other nations of the world have, some with vigour and activity, and others slowly and imperfectly, accepted our demonstrations and followed our practice, but for the most part all of them still lag in the rear of British sanitary legislation and administrative

practice. In that great advance I am happy to be able to affirm—and we may all take pride and gather encouragement from the fact—that a main part has been played by the British Medical Association, its committees and its members.

The Conception of our Sanitary Law.

The first great conception of the existing system of sanitary law was due to our much lamented member, Rumsey, of Cheltenham, a general practitioner of the highest order of administrative genius, who laid down principles and methods, which were partly, but by no means perfectly, brought into play by the Public Health Act of 1875. To him and to a small active band of far seeing workers, prominent amongst whom were Sir Henry Acland, Dr. William Farr, and Mr. W. H. Michael, Q.C., and with whom I had the honour of being an active co-worker, was wholly due that great report of the Royal Sanitary Commission, which laid down the basis and prescribed the methods of the legislation which has proved so beneficial and life-saving to the millions of this country. If it be true, as it is true, that by the effects of that legislation every man in this country enjoys two and a-half years' more of active healthy life than he could have anticipated thirty years ago, and every woman three and a half years, the debt of gratitude for this great boon is mainly due to the men whose names I have mentioned. Alas, only Acland and myself survive out of this devoted band, to watch and to rejoice over the results achieved and the progress still in course. Rumsey, Farr, Michael, Stewart have gone over to the majority, undistinguished and unhonoured by their country, and without any of those marks of distinction from the Crown which would undoubtedly have fallen to their lot had the destruction of life in lieu of the saving of life been their occupation. Yet I venture to hope that some day their names may be distinguished in the roll of honour—comparatively barren although such posthumous honour may be—and at any rate in our memory and in the records of the profession they will always hold a high place among the benefactors of mankind, among the great worthies of our age. For theirs was good and great work, nobly and well done, for the pure love of mankind, in utter disinterestedness and often to their great loss. Perhaps I alone, who worked day by day alongside of them, can tell how incessant was their labour, how little it was known or regarded, how frequent their baffling disappointments, and how readily they gave way to the statesmen and legislators who finally took up their work and assumed its public sponsorship.

The Blunders of Mr. Stansfeld.

The Public Health Acts, to which were attached the names of Mr. Stansfeld, of Mr. Sclater-Booth, of Mr. Dodson, and Mr. Gathorne Hardy, are very largely only the public formal expression and outcome of our work. It is only true to add that so far as our ideals and perfected schemes were departed from, health legislation and our present sanitary system have been maimed and are rendered imperfect. To mention only one instance, our system, carefully drawn in all its details, included the creation of large sanitary areas, whose boundaries should be established with a due relation to the watershed, the creation of boards corresponding to the existing county councils for joint combined sanitary administration, and the appointment in these areas of medical officers of health over adequate areas to have the sole duty of sanitation, fairly paid, free from the temptations and distractions of private medical practice, and having fixity of tenure. Mr. Stansfeld in his Bill recognised these principles, but acted upon them only in a maimed and incomplete manner, actuated by the doctrinaire spirit which has so largely interfered with his usefulness as a statesman throughout his career. He insisted on making these arrangements depend upon the intelligence, the generosity, and the far-seeing spirit of an infinite number of small local bodies. It was in vain that as Chairman of the Parliamentary Bills Committee of our Association I urged upon him with incessant and obtrusive energy the necessity of making these broad general principles compulsory instead of voluntary. To all remonstrances he answered that "you must trust the people," that his "Bill was intended to be educational and not coercive," and "the authorities must learn by their errors as well as by their achievements." "Besides," he pointed out, "you must read between the lines of my Bill. I am offering them all a bribe to do the right thing, and this they will readily accept. We offer to pay one-half of the salaries of the medical officers." I am sorry to say that he was quite obdurate under the sharpness of my remonstrances, and I fear finally the somewhat contemptuous tones in which they were sometimes couched led to a personal coolness which subsequent differences of opinion did not mend.

Mr. Ritchie's County Council Bill.

Mr. Ritchie's County Councils Bill did something to repair the blunders of Mr. Stansfeld, but omitted to appoint medical officers to make the work of the county councils effective. We had recourse to the good offices of Mr. Stansfeld to introduce provision for county medical officers which we understood that the Government would be quite willing to accept; but here again Mr. Stansfeld's doctrinaire views intervened, and I was unable to induce him to word the amending clause so as to make such appointments compulsory. Thus this Bill also was maimed in its usefulness. Only a few of the English county councils have appointed medical officers to assist them in their duties, and, notwithstanding the conspicuous usefulness of the work of such men as Mr. Shirley Murphy, Dr. Reid, Dr. Whitelegge, and their colleagues, these most important appointments have only been made in a few cases. Happily I was more successful in dealing with the County Councils Act of Scotland. There, with the help of Dr. Farquharson, Sir Charles Cameron, and co-operating with the Scottish Medical Officers Association, we were able to obtain a compulsory clause, and every county in Scotland now has a county medical officer. It is universally recognised that this arrangement is conferring untold benefits upon the sister kingdom. In many other respects, and especially in relation to a combination of sanitary districts, the provision of adequately paid and skilled medical officers over adequate areas, much still remains to be done to complete and carry out the health arrangements of this country as we originally devised them.

The Relation of Health to Water Supplies.

The few further words which I have the duty to address to you as utterances from this chair must necessarily be limited to one or two selected subjects from the wide range over which our programme will extend. You will not be surprised if I deal especially with the subject which has so largely occupied my attention for the last thirty years—that of the relation of preventable disease to our water supplies; and if, coming as I do fresh from a study of the health conditions of India, I lay some stress upon the sanitary needs of that great empire, and some of the means of dealing with the most pressing of those requirements. It is now exactly thirty years since I succeeded in demonstrating, to the satisfaction of all authorised sanitarians, that the cause of the great epidemic of cholera of 1866 in the East End of London was the temporary breaking down of a single pump in the works of the East London Water Company and the temporary disuse of one filter bed. This breakdown led to the distribution throughout the East End of London of water from the river Lee, which had been for a few days polluted by the discharge from the sewers of the house of a family suffering from relaxing cholera, brought from Egypt to this country. That one strange concurrence of river pollution and inadequate filtering, produced, within a few weeks and within a limited area 16,000 cases of cholera and 6,000 deaths. It cost no small trouble to prove indubitably the striking series of facts which were necessary to establish this conclusion on an unassailable basis of evidence. From that time forward however I have spared no pains or expenditure necessary to track the various epidemics of cholera throughout the world due to sewage-tainted water.

Cholera a Purely Waterborne Disease.

Thus in 1883 I traced the cholera epidemics of Toulon and Marseilles to the pestilential state of the water supply, a cause which was not then widely accepted, but has now been so, so that Dr. Brouardel, one of our most distinguished converts, has acknowledged that the outbreak of cholera in Marseilles in October, 1892, was principally due to contamination of the drinking water by sewage. The same cause is now

acknowledged by M. Monod, by Dr. Shakespeare, and by Dr. Proust to have been operative in the widespread epidemics in Finistere in 1885 and 1886. The sudden outbreak of cholera in Paris in 1892 was undoubtedly due to the consumption of Seine water. Happily the French have now recognised this lesson, and Paris has a water supply which is mainly independent of the Seine, so that no future cholera epidemic is likely to occur there. I have already written the history of the great cholera outbreak at Naples in 1884, and at Genoa in the same year. By a telegram to Bertani warning him to investigate the pollution of the water supplied by the Nicolay aqueduct I was able summarily to stop that epidemic.

In the excellent description of the Spanish outbreaks of cholera in 1885 by Mr. George Higgin, the dependence of cholera outbreaks and of the enormous mortalities attending them in that year upon sewage-tainted water was most conclusively proved. The outbreaks in Russia in 1892, and of the cholera in Hamburg in the same year owned no other cause and Koch has fully recognised this, so that the improved water supply that Hamburg now enjoys may be counted upon as rendering it immune from future cholera outbreaks. I ventured to predict during 1892 that, however often cholera should be landed in this country, it could never become epidemic, owing to the improvements in our water supply, but that it must be limited to sporadic outbreaks in towns, ports, and rural districts into which it might be imported, and where the water supply is impure or inadequately protected. This prediction was verified to the letter. I by no means claim the exclusive credit of having preached and proved the doctrine that cholera is a waterborne disease, due to the tainting of our water supplies with sewage; that doctrine was first laid down by Snow, of whom I was the convinced apostle. It was illustrated by Simon with all his wealth of cogent eloquence, but even until a late date it was doubted and denied by some of the most eminent authorities, and the official utterances of the College of Physicians at no distant date were to the effect that it was not probable that in the case of cholera the influence of water would ever be shown to consist in its serving as a vehicle for the poison generated in the bodies of those who had suffered from the disease. So late as 1866, immediately prior to my assuming the editorship of the BRITISH MEDICAL JOURNAL, that journal declared that "we do not believe a single case on record either proves or justifies the fact that cholera poison has passed bodily as such through water into a man's stomach, and then and there produced cholera in him." The theory that cholera is wholly, essentially, and universally a waterborne disease is wholly mine; and if it is, as I believe it to be, now universally accepted, I venture to say that this acceptance is due to the laborious persistence with which I have accumulated the proofs of it from every part of the world, and have repeated them in my addresses to the profession on this subject, in America, in India, as well as in this country. That doctrine is now becoming a commonplace in Europe at least; although, as I shall presently have to state, it is still ignorantly resisted in India, to the great peril and sacrifice of hundreds of thousands of lives of our fellow-subjects. But even in England our water supplies are still in too many places scandalously and dangerously tainted, and the result is shown in that prevalence of typhoid which is, as I contend, not less surely and inevitably traceable to a polluted water supply than is cholera itself. All that has been done and is being done to ward off cholera is in like measure operative in my view of the facts to prevent typhoid.

WATERBORNE TYPHOID.

In the reports on waterborne typhoid which I am now publishing in the BRITISH MEDICAL JOURNAL I have investigated the data in respect to 206 distinct outbreaks of typhoid fever in this country, from 1871 to 1890, and from these reports it will be seen that they are all of them due to neglects of the water supply. In that period upwards of a hundred millions have been spent in improving our water supplies, and with this result: that whereas the mean annual death-rate per million living from these two diseases was, as stated by Dr. Thorne Thorne, 397 in the five years 1869-73, it was only 179 in the five years 1888-92, so that during the year 1892 alone no fewer than 14,000 persons escaped death from such fever who would have died if they had been living under the *régime* of 1869. Over a million lives have been saved during the period in question by the improvement mainly of our water supplies. To take a few examples only: At Merthyr Tydvil the annual death rate from enteric fever, which was 21½ per 10,000 prior to the improvement of its water supply, fell afterwards to 8½. At Croydon the fall from the same cause was from 15 to 5½, at Ely from 10½ to 4½, at Penrith from 10 to 4½, and at Stratford from 12½ to 4. To what an enormous extent neglect still prevails my report, to which I venture to refer you, gives abundant and astounding evidence, and it is still further emphasised by the continued prevalence of typhoid fever in this country, which, however diminished, is still disgraceful and discreditable to our sanitary authorities. London itself is continually in danger, and will remain so, so long as we continue to draw our water supplies from the Thames, which is subject to enormous and dangerous, though variable, pollution with sewage. No sewage-tainted water can ever be employed with safety for the supply of any community, great or small, although of course the variability of the extent and the specific character of the pollution lead, together with seasonal influences and changes of temperature, to fluctuation in the number of typhoid poisonings which the water effects. Every case of typhoid is, in fact, a violent death, an example of water poisoning, and should be the subject of sanitary inquest.

INDIAN SANITARY NEEDS.

If we turn to India, that great empire in respect to which we have such immense Imperial responsibilities, the case is still stronger, and naturally the needs are far greater. Unhappily there has been and there is still the most ignorant and monstrous opposition to the diffusion of our modern knowledge on this matter, and to its application to Indian sanitation. A stolid resistance—to use the appropriate words of Mr. Macnamara—of the water theory of cholera was long offered by those in authority. Surgeon-General Cunningham, Sanitary Commissioner to the Government of India, in his report for 1872, said: "That it would be a gross exaggeration, as it would be pure assumption, to affirm that the troops and other communities who were attacked suffered because they drank water which had been contaminated with cholera discharges." And again: "The belief in the dissemination of cholera through water is founded on bare assertions altogether unsubstantiated by details—bare assertions such as would not be received by any judicial court, even in the pettiest case that could be brought before it." Unhappily such were views of this obstinate and tyrannical "Sanitary Commissioner" who enjoyed a long lease of official power have swayed official opinion.

STOLID RESISTANCE AND ANTIQUATED PREPOSSESSIONS.

Unhappily "stolid resistance" and antiquated prepossessions such as this are far more seriously important in India than they are or ever could be here; for under the system of medical organisation which exists in India, one man in high place, such as Surgeon-General Cunningham, may dominate and intimidate the whole system. Indian sanitation is not a scientific but an official system. There does not exist there any independent medical opinion. All are in the employ and under the thumb of official authority. The oldest men in the service are the highest in official position. Their ignorance is often the standard by which their juniors are bound, their prejudices become a despotism and their follies a tyranny. It was for a long series of years as much as a man's promotion was worth to dare to avow the opinion that cholera was a waterborne disease, and that it was carried from place to place along the lines of human communication. The idea that it was spread and diffused by great concourses of people becoming infected by the sewage-tainted water of religious festivals was treated as not only a folly, but an offence. The two things may be concurrent, said an eminent official wiseacre, but it is a wild absurdity to treat them as cause and effect. Unhappily this gentleman still holds high office at an advanced age.

A DISGRACEFUL PUBLIC DOCUMENT.

And so it is that until lately Indian medical officers who dared to accept the patent facts and to aver that particular outbreaks of cholera, of typhoid fever, and of dysentery, were due to contamination of the drinking water, were subject to persecution. Medical officers of all grades were expected to

show respect to their seniors by invoking as the efficient causes of cholera outbreak, telluric influences, pandemic waves, epidemic constitution, cholera mists, blue clouds, cholera blasts, the influence of trees, and such like bogies. Nor is this influence yet extinct. Shameful to say, the Army Medical Regulations for the management of cholera are still produced and reprinted under the same death-dealing and ignorant superstition. All the most patent facts of our knowledge concerning cholera are still ignored, and in that scandalous public document, which is still supposed to be the handbook of our medical officers, cholera is treated as a contagious and mysterious disease, of which the origin is unknown, of which the very advent is to be the signal for panic and scare. On the appearance of cholera the hospital or the barrack is to be evacuated, troops are to be marched away to a distant cantonment, at right angles to the wind, they are to be collected together and amused by games and entertainments, daily reports are to be telegraphed hither and thither to distant high officials, while the most obvious precautions as to boiling the water, quarantining and examining the native servants, the cooks, and the food supplies, are omitted altogether or only cursorily alluded to. I cannot weary your patience by criticising in detail this most disgraceful document, but I may in passing appeal to the heads of the Indian Medical Service and of the Army Medical Service here to withdraw so discreditable a document, and one so dangerous, not only by its direct teaching but by its indirect influence.

Appalling and Ill-digested Reports.

I am ashamed to say that until my recent visit to India I was so repelled by the appalling mass and ill-digested and uninstructive arrangement of the sanitary reports of the Commissioner to the Government of India and of the Indian and British Army Medical Service, that I could never even bring myself to read them, and I doubt whether anyone in this country has read them, with any care or attention. Their arrangement alone is a very height of absurdity. They are so artificially divided, and so ill arranged, that it is almost impossible to trace the sanitary history of any body of troops or of any regiment, and when one comes to read the comments and reports upon them of the sanitary officers of provinces, or of army medical officers, one can read in every line intense discouragement, a mere weary compliance with the duty of filling in innumerable foolish returns, and a disgust with a system which has apparently been dictated in the pure spirit of what may be called book keeping, and without any knowledge or regard to the needs of sanitary science and practice. The last vast and bulky Blue Book issued by Surgeon-General Rice, who has just vacated the office of Sanitary Commissioner to the Governor-General of India, is a good example of the costliness, the futility, and the impotence of the present system. I defy anyone to extract from it any useful information as to the origin, diffusion, and means of extinction of any single epidemic of cholera or typhoid during the year in India. There is no mention of filtration of water or of boiling of water, or of the examination of food supplies, or of anything which one wants to know. There is an utter absence of the scientific spirit, and a still more complete absence of any practical proceedings. I was only, when in India, able to find evidence of the adequate investigation, and of adequate means of extinction, of any single cholera or typhoid outbreak amongst the troops in three reports, and they were all the reports of one man—Professor Hankin, of Agra. In each case they distinctly showed the outbreak of typhoid or of cholera, at Lucknow, Cawnpore, and Agra respectively, to be due to infected water, to milk poisoned by infected water, or to infected food supplies, and they pointed conclusively to the simple and easy means of extinction. One looks in vain in the vast Blue Book of Dr. Rice for any such intelligent appreciation of the causation of cholera and of typhoid, and in his comments that highly placed and distinguished officer passes over the work of the investigation of Professor Hankin with a cursory, depreciating, and misleading allusion to it. There is in the whole of India, with the single exception of Professor Hankin's laboratory at Agra and of the municipal laboratory of Dr. Simpson at Calcutta, no provision for that bacteriological study which is now the first element in sanitary efficiency. In the whole of the Bombay, Madras, and Burmah presidencies there is no skilled water examiner and no bacteriological laboratory. This seems incredible, but it is literally true.

The Discouragement of Sanitary Studies by the Government of India.

Medical officers are not even allowed microscopes, and if when they supply them at their own cost they apply for the necessary and inexpensive stains and other minor apparatus necessary for their efficient use they are told that these are no part of a medical officer's equipment or duty. The sanitary commissioners and assistant commissioners of India are for the most part army medical officers who have had no special training, who are liable to frequent removal and diversion to other duties, and the sanitary officers of great districts are habitually overloaded with an immense category of duties which would make it impossible for them to fulfil their duties of health officers even if they were angels from heaven, and even if they were not subordinate to superior officers, who, in their ignorance, scoff at modern scientific science and methods, and to secretaries and other officials who not uncommonly write to them imploring them not to suggest anything new, to keep their reports as short as possible, to avoid complaining, and by no means to suggest anything which will involve expense. I met with half a dozen such instances.

The Overloading with Inconsistent Duties.

I will quote only one typical case, of which I might give you a dozen, of a gentleman whose first duty was that of sanitary officer over a district with a million inhabitants; who was forbidden to leave his station for more than seventy-two hours at a time; who was in charge of a gaol with about 500 prisoners always under his care, of a large civil hospital, with some 300 to 2,000 operations in the year—far more than would fall to the lot of a surgeon at St. Bartholomew's or any of our great hospitals; who had further the personal superintendence of the whole vaccination system of this vast province of a million and a-half of persons; on whom was laid, in addition, the duty of the annual performance of 200 to 300 *post-mortems*, the superintendence of a great lunatic asylum with its subsidiary workshops, trades, and occupations, the management of a medical school, the service of a body of police and also of a large staff of railway men. Astounding and ludicrous as it is, that is not an uncommon case. What wonder then that the water supplies of India are such that upwards of a million and a-quarter of deaths occur there annually from malarial infection—chiefly waterborne—nearly three-quarters of a million of deaths from cholera—wholly waterborne—and that our European troops are decimated by typhoid fever wholly waterborne. In respect to this latter, Professor Hankin has shown that a most recent and serious outbreak of typhoid fever among the British troops of India was directly due to the infection of the water supply, and that that infection was largely due to the badness of the filters in use in our barracks, so that filters themselves became the chief source of infection.

The Worst Filters in the World.

For of course, as might be expected under such a system, the filters in use in the Indian army and the Indian gaols are the worst in the world, and as bad as human ingenuity could devise. In the French army, where local water supplies are often bad and where typhoid till lately severely raged, its incidence has been almost wholly destroyed, and the army kept free from typhoid by the use of the Pasteur filters. I am not without hope that the use of that simple means may in time come to the knowledge of our Indian army and Civil Service medical chiefs. I was told by several officers whom I met at the Army Medical dinner recently, that they had more than once applied to the authorities, home and Indian, and indented for this simple protection of the life of the troops, but hitherto ineffectually.

The Much-needed Recasting of the Indian Medical Services.

The fact is that the whole system of the sanitary service and the civil medical service of India needs recasting. It is

monstrous that it should now form only a part of an ill-constructed military hierarchy in which mere age and seniority and the exigencies of a purely military organisation override, dislocate, and discourage all scientific advance or medical efficiency. The very knowledge of Laveran's bodies, and of the etiology of malaria from waterborne organisms, had filtered into the minds of only a very few when I was last in India, and the notion that the boiling of water or its efficient filtration were the earliest and most peremptorily demanded measures of prevention were in some places scouted and in most looked at askance. Since I have left India I have heard of one or two outbreaks, one quite recently at Bangalore where my policy of the tea kettle, as it was nicknamed, was adopted, and, as I hear with satisfaction, with the result of immediately extinguishing the outbreak. But of course this is only a part of what was necessary, and a temporary doctrine of expediency. The whole of the Indian Medical Service needs to be overhauled and reconstituted. So far as considerations of policy permit, the system of loaning army medical officers temporarily and untruly calling them a civil medical service should be discontinued, or at least most seriously modified. This has been demanded on other grounds for a long period by eminent Indian administrators; it has become now a most urgent necessity. There is no civil medical service in India; it is a military service dislocated and called civil to hide its defects.

Appeal for a Royal Commission.

Two things struck me in India—the remarkable ability, the enormous power of work, and the excessive overwork of the Indian medical officers, the terrible servitude which enforces on them the attempt to perform a vast mass of duties which cannot be performed, and the lamentable results of the domination of really able young officers by superiors who have risen by mere seniority to positions which scientifically and administratively they are quite incapable of fulfilling, by reason of their age and of the antiquated state of their information, if even many of them had ever possessed at any time the qualities or the inclination necessary for such posts. Worst of all, perhaps, is the elevation to the very highest offices, by mere lapse of time and military rules of promotion, of men who are at most capable of fulfilling routine duties, but are wholly unfitted to be trusted with the administration of the health and lives of the vast population depending on us in India. What is urgently needed is a Royal Commission, or strong Departmental Committee, to inquire into this whole matter, and to institute a radical change. For at present India is decimated by preventable diseases; the health of our troops is ruined by the same causes. With us lies the reproach of nursing and fostering cholera in what is called its endemic home—a purely ignorant and silly phrase. Until some great change is made in the whole system and of the administration, the great sanitary needs of India will never be met. You will pardon me for occupying you with a subject which may seem to be in part foreign to our immediate work, but which is of vast moment to the health of a great population in our Indian dominions.

PATHOLOGICAL MUSEUM.

The temporary Museum of Pathological Specimens collected together in connection with this year's meeting of the British Medical Association has been formed to illustrate points of general pathological interest, preference being given to recent advances in medicine and surgery, to which have been added a few specimens of extreme rarity. The collection, while not pretending to be representative of all branches of pathology, is yet in the particular branches which it does deal with, perhaps the most complete that has yet been brought together. Some of the series exhibited are unique in their completeness, and too great credit cannot be given to Mr. Edgar Willett for the able way in which he has managed to collect together so many rare and interesting series. The specimens have been collected from a very large number of hospitals and museums, who deserve warm thanks for their kindness.

Some of the most interesting exhibits in the department of morbid anatomy are:

A series exhibiting the results of operations in the small intestine, Nos. 28 to 81. Among the more specially interesting of this series, as perhaps throwing some light on the cause of failure in the recently introduced operation of suture by Murphy's button is No. 70, a portion of the small intestine in which is impacted a button. The walls are thickened, and the mucous membrane shows two or three linear ulcers, possibly caused by a rasping or tearing action of the button during its passage.

Series (*c*). Results of operations on the vermiform appendix. No. 91 is an interesting specimen, being a concretion from the extremity of which protrudes a pin nearly an inch long. It was removed by operation from the vermiform appendix of a patient 24 years of age, who made a good recovery.

Series 2, illustrating gall stones, with especial reference to their escape into the intestine, and the morbid conditions of the gall bladder, is too long to notice in full. The most remarkable specimens are No. 130, a very large gall stone weighing 1¼ oz., and measuring 4½ inches in circumference, which was removed by operation from the lower part of the ileum of a woman, aged 56, who made a good recovery; and No. 145, four gall stones, which, when articulated, measure 6¼ inches and weigh nearly 2¾ oz., from a man, aged 65, who had suffered from obscure intestinal symptoms for two years, and who had been seriously ill only for six weeks. The three portions were found in two large pouches of the duodenum into which they had ulcerated from the gall bladder.

Series 5, illustrating syphilitic diseases of joints, is perhaps one of the most interesting of all the series exhibited, and description can give no adequate idea of the appearance of these rare affections.

The same remark applies to Series 8, illustrating actinomycosis and madura foot.

In the series illustrating leprosy, Nos. 322 to 333 are remarkable, showing a possible gradation from anæsthesia to leprosy, at least as regards their external appearance.

Series 10 is a very unique series of rare tuberculous affections, among which Nos. 373 *et seq.*, illustrating tuberculous ulcers of the tongue, are perhaps the most valuable.

Series 13 comprises all the specimens of infantile scurvy that are at present in London; they are extremely rare, and another opportunity may not occur of their being studied simultaneously and comparatively.

A most curious series is No. 14, illustrating senile depression in the parietal bones, the phenomena of which have hitherto been unexplained, all explanations that have hitherto been offered having been upset by the occurrence of the same thing in the skull of an orang.

Amongst the rare exhibits is No. 431, the famous specimen of a renal calculus from St. Bartholomew's Hospital Museum, and No. 437, of transverse hermaphroditism from the same source.

The fifteen cards and the five coloured sketches exhibited by Dr. Savill illustrate an epidemic skin disease which prevailed in London in 1891. The malady arose chiefly in the workhouse infirmaries in the metropolis, though it was not confined to them. Altogether 424 cases arose in six institutions (infirmaries and lunatic asylums), besides sporadic cases, during that year. The thirty-seven photographs and five coloured sketches shown are some of the 168 cases which occurred in the Paddington Infirmary and Workhouse, under the care of Dr. T. D. Savill, from whose negatives these platinotypes have been taken and presented to the Hunterian Museum. The photos are arranged in order to illustrate the successive stages of the disorder. The affection is fully described in Dr. Savill's monograph a copy of which is in the library of the College of Surgeons of England. The eruption starts usually with discrete papules, often in stellate groups, and generally arranged symmetrically when on the limbs. These groups become fused into crimson slightly raised macules, which, in severe cases, become further fused into red thickened patches, in which papules can still be felt and sometimes seen. Vesicles form and exudation occurs only in about one-third of the cases. Desquamation of the epidermis is the invariable feature of all cases, and it usually commences between the fourth and eighth days. In severe cases successive layers of the epidermis are shed, in larger or smaller scales, throughout the whole course of the malady.

In the Bacteriological Section, Dr. Cautley's exhibit con-

sists of cultures and coverglass preparations of an organism found in seven out of eight cases of the affection usually termed influenza cold. It is of special interest and importance as showing, first, that the disease in question is microbial in origin, thus explaining the frequency with which such colds affect all the members of a household; secondly, that it possesses a certain relationship to epidemic influenza. The biological characteristics indicate that the organism is allied to the organism of epidemic influenza. Morphologically the organism presents a further point of interest, many club-shaped forms, similar to those of the diphtheria bacillus, appearing in the specimens. Some excellent photographs of the specimens accompany the exhibit, and were taken by Mr. E. C. Bousfield. The organism is well named the bacillus coryzæ segmentosus.

The cultivations from the laboratories of the Conjoint Board of the Royal College of Physicians, London, and of the Royal College of Surgeons, England, are permanently fixed by formic aldehyde. This substance arrests the growth almost at once, and after the lapse of two or three days kills the bacilli. Various organisms in culture, illustrating this method, show its applicability to museum and other specimens.

The exhibit is designed to illustrate a day's work in the laboratories in connection with the Metropolitan Asylums Board in identifying bacteriologically cases of diphtheria. A series of micro-photos by the different workers in the Board's laboratories is of great beauty, bearing ample testimony to the excellence of the work carried on in these laboratories.

Drs. MacFadyen and Hewlett exhibit from the Bacteriological Department of the British Institute of Preventive Medicine a complete series of cultures of the most important micro-organisms, and Mr. Joseph Lunt of the water laboratory of the same institution exhibits living cultures of various water organisms isolated from drinking water, sewage, air, etc., together with some interesting instances of enzymes filtered from both cultures of various organisms, possessing liquefying and other properties similar to those possessed by the parent organisms.

Of the photographic exhibits, Dr. Klein's was undoubtedly the largest, and in many respects the finest. In it were a large number of photographic lantern slides representing nearly all known pathogenic bacteria, and, amongst others, duplicates of Mr. Bousfield's work for the influenza and cholera reports, the latter especially showing vibrios with their flagella with wonderful clearness. The photographs of tube and plate cultivations by the latter gentleman showed very strikingly the characteristic appearances of the living organisms under cultivation. Mr. Pringle's well-known work too was present in very considerable amount, his photographs of impression preparations of fowl enteritis and proteus vulgaris being especially clear and beautiful, and his photographs of actinomycosis and bovine tubercle being splendid pictures of perfect preparations. It is abundantly clear from this, as from the photographic exhibits in general, that perfect photographs can only be got from perfect preparations, and in view of the share which this method of reproduction is likely to play in the future, we recommend pathologists and bacteriologists to closely inspect this exhibit. We notice that both Mr. Bousfield and Mr. Pringle are represented by photographs of their own preparations, in the former case of thrush fungus, gonorrhœa, etc., and in the latter of the beautiful pictures of giant cells already referred to. Altogether, Dr. Klein is greatly to be congratulated upon his exhibit.

The Suicide Epidemic.—During the last few days notes have appeared in several of the daily papers under the above heading. We think there is no ground for making use of this term. In some conditions suicide spreads as an epidemic, but these are fortunately rare, and are historical curiosities more than anything else. If we look to the authorities on the subject of suicide, we find that in England and in most temperate countries the maximum of suicides are committed in either May, June, and July, and as yet no one has been able to settle why these should be months of greatest danger, but this is a fact, and therefore that an excess of suicides appear just now is only the evidence that this year the maximum is reached in July.

ANNUAL MUSEUM.

[First Notice.]

Messrs. Allen and Hanburys, Limited, occupy spaces immediately to the right and left of the centre space; that to the right is occupied with all their well-known Pharmaceutical Specialities, whilst that on the left hand is an exhibition of all the latest and most approved Surgical Instruments, chiefly of their own manufacture. They had an attractive display of Tabellæ. These compressed drugs continue to become more and more popular with the profession and public alike, and Messrs. Allen and Hanburys' products in this line present many bitter and nauseous remedies in a very tempting form. Malt Extract and its combinations are staple articles of this firm, and it was to the late Mr. John Barry, a former partner, that we owe the adaptation of the vacuum pan to pharmaceutical uses. Amongst a large number of malt preparations, digestive ferments, nutrients, laxatives, etc., was the well-known preparation of malt and the hypophosphites and the alkaloids of cinchona and nux vomica—Byno-Hypophosphites—which has become one of the most popular tonics of the day. They showed three kinds of Infants' Foods adapted to the age of the child—an original idea. Since the introduction of Nos. 1 and 2 foods have been greatly improved. These are complete foods, containing the correct proportions of human milk, that is, fat, casein, and sugar, etc., the whole series being in the form of powder. Chrismoids are a useful and striking novelty, and consist of boxes of round gelatine capsules about the size of a marble, containing six different kinds of antiseptics, among which are carbolic acid, izal, boracic acid, etc. The idea is that medical men can carry these in the midwifery bag, and before performing gynæcological or midwifery operations have a ready and effective means of sterilising the hands and instruments by simply breaking a capsule and squeezing out the contents. Of the remainder of the exhibits but little remains to be said. There are tall flagons of the "Perfected" Cod-liver Oil and Castor Oil, both specimens of the high-class products; Capsuled medicines in glass and gelatine, Medicated Throat Pastilles, and a host of Fluid Extracts, Fine Chemicals, and other standard products of their laboratory. Allen and Hanburys are the special agents for the Antitoxic Serums made by the British Institute of Preventive Medicine, and show the style of sending out the antidiphtheritic, antitetanic serums, also tuberculin and mallein; the special syringes for use with the same are exhibited in their instrument section. There was also exhibited a new feeding bottle, the "Allenbury" Feeder, which they have introduced to be used with their infants' foods, and which appears to be without the manifold defects of the old fashioned "tube" feeder; it is simply a boat-shaped feeder with a teat, but there is a valve inlet in the bottom of the bottle, so that as fast as the child sucks out food air finds its way into the bottle, which causes an even flow of the food, and the child is consequently free from wind colic and other distressing forms of flatulence brought about by sucking air instead of food into its stomach. It is also most easily cleansed—a most desirable thing in a feeding bottle. The surgical instrument installation of Messrs. Allen and Hanburys contains a large number of newly-introduced instruments and appliances. The old-fashioned midwifery forceps with wooden handles are giving place to the modern metal handled instruments. These present many advantages—strength, lightness; when made of such metal as aluminium they are easily sterilised, and if made with detachable handles no accumulation of verdigris or other septic material can possibly occur, as is sometimes the case where the handles are brazed at the seams. Although greatly improved, these are sold at the prices of ordinary forceps and any pattern supplied. A good idea, too, is embodied in their Midwifery Bag, which has a movable lining; this, being taken out and washed when soiled, is much cheaper and cleaner than having it relined with leather. Amongst the large and assorted stock of Forceps, Scalpels, Amputation Cases, and Sterilisers was noticed Ryall's new Rectal Forceps, recently noticed in the British Medical Journal; also Mr. Ellis's modification of Sir Spencer Wells's and Lawson Tait's Clamp for the Compression of Uterine Fibroids; a modification of Champetier de Ribes's Bag for the Induction of Premature Labour by the same surgeon.

Amongst apparatus was noticed Sir George Johnson's Picro-Saccharometer, a complete testing cabinet for the estimation of urea and albumen and sugar in urine; some excellent Powder Insufflators and Atomisers, called the "Allenburys's." Messrs. Allen and Hanburys also fitted up Room No. 29, King's College, as a Model Operating Theatre, where, in addition to the operation tables which they have made a leading speciality of, they also exhibit glass instrument cases, dressing waggons, movable washstands, and pedal washstands for using antiseptic solutions of various strengths. In the latter case the operater when washing his hands simply presses the pedal with the foot and the solution flows into the basin; all contact of the hands with taps, etc., is therefore obviated. The operation tables above referred to are made of enamelled iron and fitted with a series of hot water pipes for the circulation of hot water so that the temperature of the patient may be maintained. The surface frame is movable and may be adapted to the Trendelenburg or other positions. They showed also a Light Operating Table of wood, constructed to fold up in a small compass, and suitable for private use; various patterns of Operating Cushion—the pad with india-rubber rim is inserted beneath the patient's buttock in operations on the perineum, to carry off lotions, etc., useful in operations on the loins and trunk; a Consulting-room Couch, designed by Mr. W. H. Marriner, M.B.; a Consulting-room Couch, designed by Dr. J. R. Whait, which can be converted into a gynæcological or surgical couch; Glass Instrument Cabinets with brass frames—the instruments can be seen from all sides and are readily removed, they can be washed down with a hose or with antiseptic solutions; a white Berkefeld Aseptic Irrigator, as used at St. Thomas's Hospital and the London Hospital, were shown in use.

Messrs. Armour and Co. (Chicago, U.S.A., and London) showed Pure High-testing Digestive Ferments, Extracts of Beef, Peptones, etc. Digestive Ferments: These are prepared in the Armour Laboratory in Chicago. Pepsin (1) Insoluble Powder; (2) Granular; (3) Soluble Powder. Standard strength 1.3000 *United States Pharmacopœia* guaranteed five times *British Pharmacopœia* strength. These pepsins are said to be permanent in strength, odourless, non-hygroscopic, and free from peptone. Glycerole Pepsin: A concentrated Solution of Pepsin in Glycerine; 10 minims represent 1 grain of Armour's Pepsin, or 5 grains of Pepsin *B.P.* Pancreatic Powder: A concentrated product prepared from fresh material, and containing in an active form all the ferments of the pancreas. Partially soluble in water, and guaranteed to answer the tests of the *U.S.P.* Glycerole Pancreatin: A concentrated solution of Armour's Pancreatin in Glycerine. Ten minims represents 1 grain of Pancreatin. Lactated Pepsin: A combination of the various digestive ferments in their natural proportions. Pepsin Tablets (3 grains, plain or sugar-coated): In bottles containing 20 or 75 tablets. These consist entirely of Armour's standard pepsin, each tablet being equivalent to 15 grains pepsin *B.P.* Peptonising Tablets (in tubes containing 15 tablets): Pancreatin 2½ grains, bicarbonate of sodium 8 grains. A list of recipes supplied for predigesting infants' and invalids' foods. Nutrient Wine of Beef Peptone: A solution of pure peptonised beef in high-class sherry. Each fluid ounce represents 1 ounce of predigested prime lean beef. Essence of Pepsin: A delicately flavoured solution of pepsin of great activity. Desiccated Ox Gall: Prescribed with pepsin in the form of pills. Inspissated Ox Gall: 15 volumes equal 100 volumes of fresh ox gall. Desiccated Blood. Beef Peptone Paste: This is prepared by digesting lean beef with the natural digestive ferment, and is one of the constituents of Armour's Nutrient Wine of Beef Peptone. Beef Peptone Powder: The same as the beef peptone paste, but in powdered form. Desiccated Glands: Prepared in a sterilised laboratory from fresh, healthy glands, which are carefully dried and degreased. Twelve grains equal one gland. Desiccated Thyroid Tablets: Five grains. In bottles containing 100 tablets; each tablet is equivalent to one-third of an entire healthy gland. Armour's Extract of Beef: A concentrated extract of beef, prepared by a new process, which consists in the reduction of 45 lbs. of prime lean beef to 1 lb. in vacuo by slow heat. By this process the extract is not burnt, and therefore contains the true life and flavour of prime beef. It is especially suitable for the preparation of beef tea for invalids, as it is retained by the most delicate stomach. Supplied to H.M. and U.S. army and navy, and to Dr. Nansen, the Arctic explorer. Armour's Vigoral: A combination of Armour's extract of beef and powdered beef fibre, suitably seasoned. Useful for domestic use as a bouillon, and also to all athletes and cyclists.

Messrs. Arnold and Sons (West Smithfield, London) showed life-sized Moulds, fitted with new patent mechanical arm, for amputations above the elbow, below the elbow, and for partial amputation of hands and fingers. These mechanical arms are so constructed that the patient can, without the least difficulty, grasp anything with the hand and release the same at pleasure. The rotation of wrist movement and the grasping and releasing of the fingers is novel, and possesses many advantages over all arms hitherto constructed. Dr. Rain's Improved Vaginal Douche: This is very effective, and should prove a most useful adjunct to the accoucheur. Dr. Garrat's new apparatus for exploring and drainage purposes: This is now in general use at St. Bartholomew's Hospital; likewise Dr. Garrat's new form of Syringe for the Antrum Treatment. A Compactum Midwifery Set, which will be found very complete, and contains almost every instrument, etc., that is likely to be wanted, in a very small compass. Dr. Ormsby's new form of Hæmorrhoidal Clamp. Dr. Macnaughton Jones's new Nasal Guillotine or Turbinotome. Dr. Bowen's Barbadoes Hypodermic Syringe. Mr. Bruce Clarke's Needle Holder and Pressure Forceps combined: this is a very simple and useful instrument. Mr. Ackland's new Adjustable Mouth Gag; the Reliance Binaural Stethoscope. Cases for General Operations: These are shown in a large variety, with aseptic metal handles, metal lined so that the lining may be useful for the purpose of sterilisation, etc.

In addition to their well-known preparations of Milk for Infants and Invalids, the Aylesbury Dairy Company exhibited a Laboratory in full working order for the examination (chemical, bacteriological, and microscopical) of Milk, Milk Products, and Water as carried out by their analysts in their chief laboratory in St. Petersburgh Place. Judging from the records which are annually published of the work done in, and the researches emanating from, this laboratory, it appears to be a long way in advance of the two or three other laboratories which have been since fitted up by other firms in the same line of business, the work comprising (1) the periodical analyses of the waters used on the various farms supplying the Company with milk; (2) the daily analysis of samples of milk, cream, butter, etc., and (3) the bacteriological examination of all products. No better proof of the reality of the work done by this laboratory can be adduced than the fact that much of the apparatus, and many of the methods used for detecting the adulteration of milk, butter, etc., have been devised or exhaustively studied, proved, and improved by the Company's analytical staff. We noticed several tests which were absolutely new—for instance, the detection of formalin (formaldehyde), the new preservative. After seeing the scientific control employed by the Aylesbury Dairy Company, Limited, the excellence of their Humanised Milk is not a matter of surprise; it is made to correspond as nearly as possible in composition with mother's milk. It is a well-known fact that milk is naturally variable in composition, and mother's milk especially so, and the Aylesbury Dairy Company, Limited, have realised this fact, and prepare two qualities of Humanised Milk, one, No. 1, containing a minimum of casein, and suitable for infants of tender years or of delicate digestion, and the other, No. 2, with a full percentage of albuminoids and suitable for the more robust children. Their being perfectly sterilised renders them absolutely safe, and nothing such as water, which may be contaminated, need be added. The Company's other preparations are Special Milk Food for exceptionally delicate infants and invalids, Peptonised Milk, Specially-Prepared Whey, and last, not least, Koumiss. All these preparations, with the exception of Koumiss, are supplied in the patent vacuum stoppered bottle. In this bottle the contents are sterilised *in vacuo*, thereby insuring not only a less pronounced scalded taste, but also the complete destruction of all germs.

The Bovril Company exhibited their Bovril, a fluid beef, containing a high percentage of the nutritious constituents of

prime ox beef in a form easy of digestion and assimilation. Beef Jelly. This preparation is prepared from the finest matured ox beef; it is extracted by gentle heat, without added water, and is guaranteed absolutely pure. Special attention is claimed for this preparation on account of the unique method adopted for packing the jelly. It is put up in hermetically-sealed glass jars, and all injurious contact with metal is thus avoided. Albumen Flakes. This preparation is a desiccated, uncongulated, albumen of meat. The recent discussions as to the apparent impossibility of furnishing a meat juice without some chemical or antiseptic treatment made the Company turn their attention to the subject, and their experiments have led to this new result. This meat juice is desiccated by special appliances at a low temperature, and may be kept indefinitely in any climate without detriment, and when dissolved in water will possess the precise quality of new expressed juice in an absolutely pure and natural condition. Ordinary meat juices contain 2 per cent. of albumen; these flakes contain 85 per cent. and thus constitute a most nourishing, easily digested invalid's diet. Emergency Foods. These are preparations prepared for any purposes, and contain the maximum amount of substantial nourishment in the minimum bulk. In this class of foods were shown samples of those foods supplied to the Nansen, Jackson, and Wellman Arctic expeditions. Horsford's Acid Phosphate, a preparation manufactured under the direction of Professor E. N. Horsford, of Cambridge, Mass.

Messrs. Brand and Co. (11, Little Stanhope Street, Mayfair, W.) showed at their stall their Essences of Beef, of Mutton, and Chicken, which have a sixty years' reputation: Albuminous Essence of Beef, containing the albumen unseparated from the essence, and is of great value as an albuminous preparation; Meat Juice, which is valuable on account of its being extracted by pressure from raw English beef of finest quality, the juice being concentrated *in vacuo*, which produces a strong and nutritious food in liquid form by adding a wineglassful of cold water to a teaspoonful of the meat juice; Beef Bouillon and Extractum Carnis. Concentrated Beef-tea, Mutton, and Chicken Broths are preparations which contain the nutritive and stimulative constituents of the choicest meats, and are useful in the sick room; as also their Real Turtle Soup (specially prepared for invalids), Ox Tail, and Mock Turtle. Beef, Mutton, and Chicken Peptones are of the same consistence as the essences above mentioned, after undergoing Messrs. Brand's process of peptonisation. Meat Lozenges are exceedingly valuable to convalescents and travellers, being done up in compact little boxes, handy for carrying in the pocket, and contain the nourishment of highly-concentrated beef tea.

Messrs. Burroughs, Wellcome, and Co.'s display in the museum of the British Medical Association meeting occupied a most prominent position there, and claimed the immediate attention of the visitor. A careful examination of their effective and interesting display will make the worker in the field of medicine acquainted with many things designed to lighten his labours and strengthen his hands in the never-ceasing conflict against disease and death. In this direction portable Tabloid Medicine Cases and Chests go a very long way. They are of various sizes and capacities, some so small and compact that they can be carried in the pocket without discomfort, others containing a perfect dispensary of drugs as well as compartments for surgical instruments and accessories. Special attention has been paid to the needs of explorers, missionaries, colonists, and travellers generally. We are told that they have equipped every commercial, military, mining, exploring, or other expedition of importance which has left these shores for many years past, including Mr. Stanley's Emin Pasha Relief Expedition. Of the last-named they exhibit an interesting memento in the shape of some of the cases carried by that expedition. They are in a battered condition, but their remaining contents are none the worse for the varying climatic conditions through which they have passed. Tabloids of Compressed Drugs.—It is not needful for us to dilate upon the advantages of tabloids generally. Mention must, however, be made of a few recent additions to the list. The tabloids of organic principles of animal origin have a particular interest at the present time when so much attention is being paid to the treatment of certain diseases by physiological substances. It is claimed by Messrs. Burroughs, Wellcome, and Co. that since tabloids contain the whole substance of the particular body they must necessarily include all the active principles. A few well-known varieties of tabloids may be mentioned in passing. Hypodermic Tabloids with which accurate and reliable solutions may be made in a moment. A large selection of these occupies a very small space, so that practitioners may carry them about with ease. They are an improvement upon the old-fashioned hypodermic solution. The cases for holding a selection of these, with syringe, needles, etc., are models of compactness and convenience. Ophthalmic Tabloids. These are very tiny discs, extremely thin, and are intended to be inserted within the conjunctiva without being previously made into a solution. They dissolve immediately in the lachrymal secretion, and act most promptly and effectually. Tincture Tabloids are designed to get rid of the uncertain nature, that is, uncertain as to strength and reliability, of tinctures themselves by eliminating the alcoholic menstruum and compressing the active principles into small space. Soloids are for quickly and promptly making antiseptic solutions for use in surgical and gynæcological practice. They are of a characteristic size and shape, so as to avoid confusion with tabloids, and they dissolve very readily. Soloids of Mercuric Chloride are coloured blue, by that means avoiding mistakes and accidents. The colouring, however, does not stain linen. Soloids of Iodic Hydrarg. (Mercuric Potassio-mercuric Iodide) possess a very high degree of antiseptic strength, and are not nearly so poisonous as the mercuric chloride. The use of iodic hydrarg. as an antiseptic appears to be becoming very general. Photographic Tabloids appeal, not only to the medical profession, but to a much wider circle; at the same time they are likely to be useful when records of specially interesting cases are desired to be kept by means of photographs. Tea Tabloids commend themselves to travellers and tourists more than to any class of the community. Tabloids are always the same in weight and quality, so that the particular strength desired may be regulated and kept uniform with perfect nicety. They also showed Anti-Diphtheritic Serum prepared by themselves. They have now, they tell us, a laboratory most completely equipped, and under the charge of a well-known physiologist and bacteriologist. Most elaborate precautions are taken to ensure that the serum is in perfect condition before it is sent out, and the reports of cases treated by it have been very satisfactory and encouraging. The liquid Serum is supplied in bottles of 20 c.cm. The dried Serum is in lamine or scales, and presents the great advantage of perfect keeping qualities. A tube contains one gramme, which is equal to 10 c.cm. of the liquid Serum, and may be administered with less trouble and discomfort to the patient than the ordinary liquid Serum. Kmol-Kelect is an impalpable, natural dusting powder. It contains a phenomenal percentage of steatite and a small quantity of ferrous oxide; in other respects its composition is similar to that of superior qualities of fuller's earth. Hazeline (Witch Hazel) preparations are numerous, but they are by no means uniformly valuable. In order to obtain all the valuable and varied medicinal principles, it appears to be essential that the fresh inner bark should be used, and that the process of extracting the active principles should be one of distillation. Hazeline preparations include Hazeline Cream, Hazeline Snow, and Hazeline and Compound Hazeline Suppositories. Lanoline is a perfect basis for ointments; first, because it cannot turn rancid; secondly, because it is so readily and completely absorbed by the skin. The various toilet preparations having Lanoline for base include Pomade, Cold Cream, Shaving Cream, Soap, etc. Beef and Iron Wine is excellent for its tonic and stimulant properties, the constituents being readily absorbed by the system. Each tablespoonful contains the essence of an ounce of beef with 2 grains of citrate of iron dissolved in good sound-bodied sherry. The number of Instruments shown by Messrs. Burroughs, Wellcome, and Co. is not large. The Powder Insufflator, unique of its kind, with interchangeable powder cylinders, is neat and handy to a degree. The Naso-pharyngeal and Post-nasal Ointment Atomisers are well known, as are Artificial Ear Drums, Chloride of Ammon. (Vereker) Inhalers, Pinol Dry Inhalers and Thermo-safeguard Feeding Bottles. The Patent Aluminium Syringe is neat,

light, but withal strongly made, and is suitable for the hypodermic injection of all substances so administered. It is not affected by change of climate. Wyeth's Beef Juice, for which Messrs. Burroughs, Wellcome, and Co. are now sole agents in Europe, Asia, Africa, and Australia contains the nutritious albuminous qualities of beef in an unaltered and soluble form. It is a most valuable invalid diet, deriving its albuminous principles entirely from beef, and not, as is sometimes the case, from added egg albumen. The Synthetic Products of Meister, Lucius, and Bruning, including Antipyrin, Agathin, Dermatol, Alumnol, Diaptherin, Loretin, Phenosalyl, Hypnal, Benzosol, are shown. Each of these has its sphere of usefulness, and many have already found high places in the favour of the medical profession. Messrs. Burroughs, Wellcome, and Co. also showed some Silver, Ivory, and Tortoiseshell, and richly ornate Leather Medicine Cases, and also the Silver Hypodermic Cases in which the fittings are held by springs, there being no velvet or leather to harbour microbes or septic matter of any kind. The Gold Hypodermic Cases, elaborately chased and fitted throughout with gold instruments, should also be seen.

Messrs. Callard and Co. showed their Bran and Almond Biscuits, Almond Biscuits, Almond Meal Biscuits; these are unsweetened and perfectly free from starch and sugar. Meat Biscuits, Parmesan Cheese Straws; these are free from starch and sugar, well seasoned, and very palatable. Dr. Williamson Aleuronat Biscuit; this biscuit is pure and much resembles ordinary oatcake. Cocoanut, Almond, Walnut, Hazelnut, Pinenut Biscuits; Almond Shortbreads, Almond Sponge Cakes, Almond Pound Cake, which are perfectly free from starch and sugar, and sweetened with saccharine and and glycerine, and make good dessert and afternoon-tea biscuits. Gluten Bread, Dinner Rolls, Cracknels, Lunch, Almond, Cheese, and Finger Biscuits, containing no sugar and only a slight minimum of starch. Callard's Ivory Jelly, which contains phosphates in large quantity, and in an assimilable form. Callard's Callisba Biscuit contains neither butter, sugar, nor starch, and is therefore a good food for reducing weight. Callard's Saccharin Chocolate is a pleasant sweetmeat, and also makes a delicious cup of chocolate. Callard's Cocoa, a special preparation, perfectly pure, and contains no added matter. Gluten, Almond, Soy, Aleuronat, Cocoanut, and Bran Flours for home use.

The Cerebos Salt Company (Newcastle-on-Tyne) showed their Cerebos Salt, an article to be used instead of common salt for all household purposes. In appearance and taste it is like the finest table salt, except that it does not become moist or lumpy. Analysis reveals the presence of mixed phosphates, such as exist in wheaten bran. It is intended by the use of Cerebos instead of common salt to obviate the necessity for dosing children periodically with chemical food, a proceeding rendered necessary at present by the exclusion of the bran from bread, that portion of the grain being much richer in phosphates than the kernel from which white flour is manufactured. The Company are also manufacturers of Baking Powder having the same nutritious properties as the salt.

Messrs. Dahlgreen and Co. showed lantern slides of Bacteriological Subjects executed from selected microscopical sections and micro-photographed, thus absolutely true to Nature and a boon to lecturers; engraved life-size diagrams of Brain on slates extremely useful in the *post-mortem* and dissecting rooms for taking notes of lesions, etc. Malaria Chart with over 200 different forms of parasites and pigmented leucocytes, represented in their natural colours, absolutely indispensable to the study of this fever and specimens of their high-class medical illustrations and their unique publication of clinical figures, now in use all over the world.

J. Defries and Sons, Limited (Sanitary Department) exhibited the Pasteur (Chamberland) Filters. No claims are made for these filters further than that which has been stated on the one hand as the result of the investigations of Drs. Sims Woodhead and Wood, Johnston, Netter, and other observers who have investigated its action, and on the other hand which have been verified by the experience of the French army as recorded in the annual reports on its health issued by the War Office. This result is that, as stated by Drs. Sims Woodhead and Wood, it prevents the communication of infective disease; or, as stated by M. de Freycinet and General Zurlinden, whose experience is based on their application to 245,000 quarters in all parts of France, Algeria, Tunis, etc., for a series of years, that wherever these filters have been applied typhoid fever and waterborne disease have disappeared, even in the midst of a civil population supplied from the same water service and ravaged by the disease. The exhibit also shows filters of carbon in all forms granulated, block, powdered, and moulded into either bougies or tubes, plain, manganous, silicated, and otherwise prepared, asbestos cloth and films, natural stone, spongy and magnetic iron in various combinations representing the whole of the most popular and most widely used filters of other kinds. Filters in candle form made of infusorial earth and in porous porcelain to imitate the Pasteur filter, and unwarrantably sold under its name are also shown. All these have been treated with water containing various organisms washed off agar cultures, so as to avoid inoculating sensible added quantities of nutrient matter. The water used for these experiments was the same for all. The organisms consist of typhoid, blue pus (pyocyaneus), and others. In every case the test organisms passed through each of these filters and in no case through a Pasteur filter simultaneously and similarly inoculated. These results are, of course, well known, but they are exhibited to draw attention to the grave danger to the public involved in the sale of such filters as are capable of preventing disease. The names of the makers of the respective filters are purposely suppressed, but the collection may be taken as typical of a great number of filters at present on the British market. In order to indicate that the chemical action claimed for these filters is merely transient, a dilute lead acetate solution is passed through them, and the presence of lead is shown in the filtrate. Equifex Disinfection: The Equifex Disinfection Appliances are based on the work of the late M. Charles Herscher. They have been investigated by the leading French, German, Danish, and other authorities, and are recognised throughout all countries as the standard appliances for their respective purposes. The Stoves for Saturated Steam under pressure give a uniform temperature of absolute or limited disinfection, as may be desired. The time involved is considerably less, and the temperature necessary is lower, than are required in superheated steam stoves. The Valveless Equifex Stove works at 104° C. to 105° C., and gives reliable disinfection of all contagia perishing at that temperature. Its pressure is limited without the use of any pressure or safety valve or other mechanical contrivance of which the failure can impose any strain on the stove. It is self-contained and can be worked with safety and reliably by a person without previous experience. It can be fitted with a recording gauge, giving a graphic account of the successive disinfections. The Equifex Sprayer has for some years been used throughout Paris and most French towns for all purposes for which sulphurous acid was previously used. It has been found by the various authorities who have adopted it to be absolutely reliable, enabling a suitable disinfectant to be applied in such form as will prevent it from drying off too quickly or injuring the material to which it is applied. It saves a very large amount of time and expense, as compared with sulphurous acid, and does not involve the eviction of the inhabitants. Dr. Scarfield's Air-testing Apparatus is a portable cylinder fitted so as to permit the aspiration of air through tubes containing a solution which is decolorised by carbonic acid. The quantities of air from outside the room of which the ventilation is to be tested and that from inside which are respectively necessary to decolorise separate tubes in the apparatus containing the same solution are shown on the apparatus; and in this way a person can in two or three minutes, without any analysis whatever, make a reliable approximate estimate of the extent to which ventilation is sufficient. It is believed that this will be found of great convenience in sanitary inspections.

The Domus Belts Company (61, Moor Lane, E.C.) again exhibited several of their well-known Belts and appliances for wearing during pregnancy and after accouchement. Their Hypogastric Belt with the cushioned pad, and the Support for Umbilical Hernia, find great favour, and afford much comfort and relief to the wearers. This Company also showed

a new Pregnancy Corset to be worn during that period, the lower part of which is composed entirely of silk elastic, allowing of easy expansion where necessary, and preventing undue pressure. Their Belt Corset is a well-shaped corset with belt combined, having all the advantages of each without the inconvenience of wearing the separate articles. It is made in pure wool, and various materials with an elastic insertion at each side, preventing tight lacing.

Messrs. Dowie and Marshall's exhibits included Dowie and Marshall's Patented Bandage Boot for Weak Ankles and Flat Feet. The object of Dowie and Marshall's patent is to obtain the necessary assistance by a support which clings all round the bones, and adapts itself as far as possible into and around the various curves. It is a somewhat supple bandage, which derives its necessary resistance from the sole of the boot. For flat feet a pad of yielding rubber or horsehair, according to the amount of pressure required under the arch, is fastened round with chamois leather and held up, and tightened as required by chamois straps. For weak ankles the bandage is carried higher, and the required support is continued by straps fastened inside the leg part of the boot. Mechanical arrangement of a division in the sole of the boot for the straightening of a diverted great toe. Arrangement for the strapping down of contracted and hammer toes. Various wood designs and lasts showing the different methods they adopt for fitting feet, whether normal, contracted, flat, or whatever the characteristic may be. A variety of boots and shoes adapted for different purposes, some for rheumatism, gout, cold feet, etc. Specimens of easy boots and shoes for normal feet of medical gentlemen and the general public, made with Dowie and Marshall's elastic waists. Boots straight at the inner side for great toe, as well as moveable diagrams showing how boots which are made on lasts wrongly shaped may be quite straight inside and yet not allow the great toes to set at the straight inner line.

Messrs. Duncan, Flockhart and Co. (Edinburgh), showed Blaud's Pill; 1, 2, and 3 pill of guaranteed strength. Varieties of Blaud Capsules; combination with arsenic, aloes, nux vomica, cascara, etc. Easton Capsules, equivalent to 20, 30, and 60 minims of syrup. Cascara Capsules, of which they were the original makers. Their cascara preparations are all made from directly imported and selected bark. Bichromate of Potash Capsules, $\frac{1}{12}$ grain, for use in all cases of indigestion associated with ulceration, etc. Gregory's Powder Capsules, each equivalent to one teaspoonful of the powder. Keratinoids, or Intestinal Capsules, which are insoluble in the gastric juice, but dissolve in the alkaline contents of the duodenum, for example, carbolic acid, creasote, etc. Plastic Pills or Gelatine Coated Pills, which are soft and plastic, and which return to the spherical state, even when pressed flat between the fingers. Perles of Turpentine, Terebene, Nitroglycerine, Creasote, etc. Coated Pills of all kinds. Compressed Tablets of all kinds, including Thyroid and Orchitic Tablets. Chloroform in original bottles, showing hermetically sealed flasks used for export. Also Chloroform sp. gr. 1490, found to be practically non-decomposable, and containing about 1 per cent. of absolute alcohol. Pharmaceutical Preparations. Concentrated Infusions, prepared without evaporation, and retaining full aroma, etc.; a special feature in inf. gent. co., inf. senegæ co., etc. Syr. Hypophos. Co. Baumol Soap. Also Antiseptic Dusting Powder, Jelly, Dermolia.

Messrs. Fairchild Brothers and Foster (New York; London agents, Burroughs, Wellcome and Co., Snow Hill Buildings, London, E.C.) showed their Pepsin (Fairchild). It is absolutely pure, and will, it is claimed, digest no less than 3 000 times its weight of egg albumen according to the standard test. In order to get the full benefit of pepsin it is necessary to administer it in combination with a slight quantity of acid. This is because it happens sometimes that the stomach secretes an insufficient quantity of acid. In Pepsin Tabloids (Fairchild) this has been done, the ferment being combined with an appropriate quantity of acid accompanied by appropriate adjuvant aromatics. Glycerinum Pepticum (Fairchild), a glycerine extract of the peptic ferments possessing all the characteristics of a concentrated and very active solution of pepsin. It has no objectionable odour or taste, keeps well, is uniform in action and free from peptone. Zymine (Fairchild). This pancreatic extract contains all the digestive principles of that organ; trypsin converting albumens into peptones, diastase converting starches into dextrines and sugar, the emulsive ferment essential to the assimilation of fats and oils, and the milk-curdling ferment are all present in an active and permanent form. Zymine, when required for the peptonisation of food, may be used in the form of powder, in 3 to 5 gr. doses, mixed with food, or, better still, in Tabloids, which may be swallowed whole. They are prepared coated either with sugar or keratin. For the peptonisation of milk and other predigested foods for the sick, Zymine Peptonising Tubes are well adapted. Each tube contains 5 grains of zymine and 15 grains of bicarbonate of sodium, just sufficient for one pint of milk. By this means the peptonising powder is supplied in an accurate and portable form, secured from deterioration and extremely convenient in use. Pepsencia (Fairchild) is a liquid preparation prepared by maceration of the stomach of the pig and calf. It contains, therefore, the ferments of both organs, and is used principally for the preparation of easily digested jellies. Peptogenic Milk Powder (Fairchild) added to diluted cow's milk modifies its chemical composition to that of human milk. Panopepton (Fairchild) is a preparation of bread and beef peptone made from cooked and predigested beef and entire wheat. It is finally condensed and sterilised and thus forms a valuable diet after surgical operations and for general purposes.

Messrs. Fenwis and Co. (Bristol) exhibited their Aseptic Surgical Instruments. These were displayed separately, also in aseptic cases, comprising amongst others the following useful sets: Minor Operating Eye, Dissecting, Pocket Dressing (various patterns), Scapels in sets of six and twelve, also twelve assorted Knives fitting one handle, together with Flushing Curettes, similarly arranged; a specially aseptic form of Cooper Rose's Vaccinator was also shown in this section, together with their Napier's pattern. With the Hypodermic Syringes they showed a specially antiseptic pattern made with a solid metal piston; they also showed the original "De Bove" pattern, for which they hold the sole English agency. A collection of Mr. J. Greig Smith's Special Instruments used by him in abdominal surgery was displayed on one stand. The flat leather pocket cases are worthy of notice as being a convenient shape for the pocket, easily opened to the full extent, and showing at a glance the whole contents. Amongst the drugs and sundries "Sascol" calls for attention; a neutral Hydrocarbon, used as a vehicle for the administration of various drugs in the form of spray to the throat and nose; two forms of Atomisers were shown with it, one for the postnasal and the other for antral use. Their "Ever Ready" Caddies are useful and economical, giving every facility for use in emergency, at the same time affording means of keeping the plasters and dressings clean and tidy, and thus saving time and waste. The cabinets constructed to hold the caddies present a neat appearance, and insure all dressings being close at hand when needed. The Urinary Cabinet shown on the same stand presents a neat compact form, the slope at the back arranged to carry off the water adding much to the cleanliness of the stand. They showed also Thyroid Preparations, which are worthy of note.

Messrs. J. S. Fry and Sons (Bristol and London) had an attractive exhibit, where samples of their Pure Concentrated Cocoa could be obtained. This article is manufactured by a new and special scientific process, securing extreme solubility and developing the finest flavour of the cocoa, and is recommended for the use of persons having weak digestive organs.

Messrs. C. J. Hewlett and Son (40, 41, and 42, Charlotte Street, London, E.C.) exhibited a number of new drugs and fine chemicals, such as Alphol, Arecoline Hydrobromate, Ferratin, Thioform, etc. Amongst their improved pharmaceutical preparations were Mist. Pepsinæ Co. c. Essentia, Liquor Santal Flav., etc., whilst of more recent introduction were Mist. Damianæ Co., Mist. Hepatica Conc., and Mist. Hæmatoxyli Co. A very complete series of Fluid Extracts were shown, and a large variety of Medicinal Elastic Capsules. Antiseptic preparations, such as Antiseptic Powder, Jellies, Cream, etc., occupied a prominent place, and included Messrs. Hewlett's Disinfectant Liquid, a preparation consisting of the chief constituents of cresylic acid, miscible with water. Clinical tests for urine analysis have lately been

a feature in Messrs. Hewlett and Son's exhibits, and an improved Esbach's Albuminometer was shown. There were also cabinets of histological and pathological specimens for microscopic examination. An improved Needle Holder with an entirely new principle in the rack catch was shown; also improved Bone Forceps, manufactured at the suggestion of Dr. Thomas H. Morton, of Brightside, Sheffield, with serrated edge and closing screw for dividing metacarpals, phalanges, etc.

Mr. E. Kühn (St. Mary-at-Hill, Eastcheap) showed Dr. Balmer's Sublimated Paper which is prepared by a special process, by which sublimate is kept in a soluble form in the paper and each paper is accurately dosed. The papers are put up in envelopes containing 10 leaves each, which is the most convenient form in which sublimate can be carried about for immediate use; these papers on account of their shape and having the nature and dose of the preparation printed on them, make accidents such as have lately occurred with sublimate tablets quite impossible; there is no objectionable smell. Great improvement has of late been introduced in the ethyl chloride bulbs. The anæsthetic cylinders have been improved by introducing a screw cock and two interchangeable patent sprays (one coarse and one fine). By two turns of the screw cock the jet of anæsthetic issues, and by two reverse turns the jet is stopped. This arrangement is far simpler than the present one of unscrewing and rescrewing the top cap.

Dr. R. J. Lee exhibited the Fumerette. The chief purpose for which this instrument is intended is to provide an easy method of burning opium, stramonium, and similar agents, for inhalation. It appears that there is no difficulty in obtaining vapours from any medicinal agents without smoking the substances, and this is effected by a small jet of air, which draws the vapour from the bowl, in which the opium or other agent is lighted by means of a small elastic air ball. The inhalation of the substance is administered by a nurse or attendant, if necessary, and no smoking is necessary. The Fumerette is introduced by the Apothecaries Society, Blackfriars, as well as some preparations suitable for inhalation as opium, lobelia, etc. The preparations of Messrs. Savory and Moore from the leaves of stramonium can be used for asthma.

Leslie and Co., (Walbrook), had an exhibit of Surgical Plasters and Surgical Dressings. Their Tape Plaster, which is perfectly self-adhesive, is well known, but they have lately introduced plasters in rubber combination. Following the lead of the Americans, they retain in all their new manufactures pliability, which has been their aim from the first. They are, we believe, the first in the field to spread this rubber combination on brown holland. As they were the first to use that material for surgical strapping, their powerful machinery easily perforates this difficult fabric, the longer threads of which have hitherto proved unsurmountable. Their Antiseptic Preparations are very nicely put up in cartons, and will, in all instances, be found perfectly reliable. They claim that their Clinical Thermometers, manufactured specially by a London expert, are in every instance reliable. The fact that they supply the principal hospitals in the United Kingdom and all departments of the Government services and the principal hospitals in the Colonies with their plasters and surgical dressings is a guarantee of their value.

Mr. H. K. Lewis (Gower Street) exhibited an important selection of his well known Publications in the various branches of medicine and surgery. Among the more recent books we notice a new and revised edition of Dr. F. T. Roberts' standard work *The Practice of Medicine*, which well sustains its established reputation. To his practical series Mr. Lewis has just added a new book by Mr. D'Arcy Power on *The Surgical Diseases of Children* and new editions of Dr. Lewis Jones's *Medical Electricity* and Dr. L. C. Parkes's *Hygiene and Public Health*. Two important translations from the German may be noticed—Schimmelbusch's *Aseptic Treatment of Wounds* and Dahrssen's *Gynæcological Practice*—both of which are well worth perusal. Onodi's *Atlas of the Nasal Cavities* and Shuttleworth's *Mentally-deficient Children* are other novelties.

Next to the foregoing that most useful institution the New Sydenham Society shows some of its attractive Publications which should, we think, recommend this Society to the favourable notice of the profession. For its modest subscription of one guinea the Society last year gave its members two handsome volumes, one on *Malaria*, by Bignami, Mannaberg, and Marchiafava, and the other on the *Spinal Cord*, by Pierre Marie, as well as a fasciculus of the *Atlas of Pathology*, containing coloured plates illustrative of diseases of the testes.

The Liverpool Lint Company showed their Splint Padding, a dressing composed of absorbent wool and carbolised tow laid between layers of gauze; it is soft, springy, absorbent, and antiseptic, and on these points it is claimed to be one of the most useful dressings manufactured. Protective Lint: Ordinary lint of specially good quality, having on the back or smooth side an impermeable material, rendering unnecessary the use of silk protective, gutta percha tissue, etc. First Aid Dressings: These comprise in a small packet all the materials necessary for the first dressing of wounds. In addition they showed a general assortment of Lints, Cotton Wools, Bandages, Tows, etc.

Mr. W. Martindale (10, New Cavendish Street, London) exhibited a series of new Medicinal Chemicals and Pharmaceutical Preparations, principally of the unofficial character described in the *Extra Pharmacopœia*. Among the former was included a series of the Organic Compounds illustrating the recent introductions into modern Materia Medica; these included beautiful specimens, well displayed, of Camphoric Acid, Sulphanilic Acid, and Sulphanilate of Sodium; the Guaiacol Compounds used for phthisis, Guaiacol Crystals, Guaiacol Carbonate, and Benzosol; the Naphthol Compounds which have been used for intestinal antiseptis, Naphthalene, β-Napthol, Benzo-naphthol, and Betol; as hypnotics, Chloralamide, Chloralose, Metaldehyde, Urethane, and the three allied Sulphonated Methanes—Sulphonal, Tetronal, and Trional; as antipyretics and antiarthritics, Salacetol, Salol, Phenocol, Hydrochlorate and Lactophenin, also Piperazine in tablets and in granular effervescent form. A series of Quinine Salts included some beautiful crystals of the Acid Hydrobromate and Valerianate, and the very soluble Hydrochloro-sulphate. Of Cocaine, some Crystals of the pure Alkaloid and Hydrochlorate, as well as some large Crystals of the Nitrate. Also of Scopolamine, some beautiful large crystals of the Hydrobromate, which is made official in the German Pharmacopœia; this is the salt of the pure form of the base formerly known as hyoscine; it is a powerful mydriatic, and has the advantage of not causing dryness of the throat. It is used, like hyoscine, also for acute mania. Among pharmaceutical preparations Mr. Martindale exhibited Arsenical Paste for dental use; several varieties of Nasal and Urethral Bougies, as well as of Cachets, which now form a favourite method of dispensing insoluble and nauseous medicines; Camphoid, a substitute for collodion, containing the pyroxylin in camphor solution, which may be used as a vehicle for chrysarobin and other medicaments; Epidermin, another basis for skin medication, was also shown; Flexible Capsules, containing various medicaments, and Glass Capsules, containing volatile liquids for inhalation—nitrite of amyl, iodide of ethyl, and chloroform—which are special preparations of Mr. Martindale. Two dentifrices, Salicifrice and Chloratifrice, whose composition is indicated by their names; the latter appears to be a useful detergent in septic conditions of the mouth and gums. Besides Cocaine, he exhibited several Galenical preparations of Coca, including an Elixir; also an Elixir of Cascara, and one representing Easton's Syrup, which is very palatable. An Ammoniated Liquor of Ergot claims to be an active and reliable preparation. He also exhibited a series of Granular Effervescent Preparations which he has introduced—Effervescent Sulphate of Sodium, Sodio-Magnesian Aperient, and Piperazine. Inhalers—the Portable Inhaler and Poor Man's Inhaler for hot medicated moist air, and Ozonic and Nasal Ozonic Inhalers for dry inhalation, are simple and useful appliances for throat and lung medication. A series of Suppositories, including Glycerine and Peptonised Beef, were attractive in appearance. Medicated Chocolate Tablets, including Nitroglycerine, Strophanthus, and Cocaine, of which Mr. Martindale was the originator, form active preparations. Ceratum Petrolei and Ointments of Boracic Acid, etc.; also Unna's ointments with Casein bases in tubes. A series of small tubes were shown containing ointments of Atropine, and Atropine with Cocaine, for oph-

thalmic use; Sublimate Pastils, coloured blue, for making antiseptic lotions, and of Sulphate of Zinc, coloured red, for Red Lotion. Pastils of glycogelatine basis as well as Pastoids, which Mr. Martindale has introduced, containing Guimauve paste as a basis, for throat medication. Silicate of Potassium Solution, nearly neutral, recommended for impregnating bandages. Petroleum Emulsion with Hypophosphites as a substitute for Cod-Liver Oil. Concentrated Saline Solution in sealed tubes for intravenous injection. Preparations of Senecio for amenorrhœa and dysmenorrhœa. A Wine of pure Emetine, equal to Ipecacuanha Wine. A strong Blistering Collodion and a similar preparation of Belladonna. A series of Histological Preparations was illustrated by the microscope; and, lastly, a beautiful series of pills, pilules, and granules, at which the author of the *Extra Pharmacopœia* is an adept, proved not the least attractive part of his exhibit; some of them with their elegant translucent coating resembled pearls in their lustre. These he undertakes to dispense extemporaneously according to recipe when required.

Mr. J. H. Montague (New Bond Street, W.) showed Carter Braine's Improved Chloroform Inhaler, which may be placed in any position without fear of forcing pure chloroform instead of chloroform vapour; this is a most valuable improvement. Hugh Fenton's improved set of Uterine Dilators in case; these are made with one size at each end, the middle of the dilator being small so as easily to admit of fingers in assisting introduction, and the other end answering as a handle. Improved Serre-Nœud in Delta Metal. Morrison's Improved Tonsil Guillotine, the cutting blade being crescent-shape. Set of Nasal Retractors, six different sizes in case. Eric France's Phimosis Scissors, combining forceps, probe, and scissors. Set of three different sizes improved Aseptic Trephines fitting one handle, taking entirely to pieces and admitting of being boiled or sterilised separately. Back Rest for placing under patients when being bandaged. Barker's Flushing Curette, with four sizes of scoops. Improved Ophthalmoscopes. Aluminium Splint for Curved Tibia, for young children, where extreme lightness is most essential; this splint is made to extend from just above the knee to below the ankle, and has been found most efficient in curing bow-leg. Patent Ear Syringe, for the use of patients and nurses; the syringe to be gently placed in the ear as far as convenient, the point of the nozzle to be kept uppermost; no further directions are necessary, as the stream of water must pass along the roof of the passage, consequently the ear is completely cleansed; the point of the nozzle cannot pass too far, so this syringe is perfectly harmless in the hands of anyone. Carter Braine's Improved Ormsby's Inhaler, with celluloid facepiece and extra large bag. Rendle's Mask in Celluloid. Dr. Carré's Transfusion Apparatus; this is an emergency case, containing everything necessary for transfusion, is very compact—it can be put into the pocket, it is so compact. Marmaduke Sheild's Combination Instrument, containing as one separator, probe, director, and aneurysm needle, and is made in size to fit an ordinary pocket case. Accumulator for Cautery and Light; it is specially designed for portability and utility for several purposes; it consists of four cells, each in a separate ebonite box, and the whole contained in a polished teak outer case; these cells can be joined together to work as two large cells for the cautery (4 volts), or as four small cells, giving 8 volts, for lighting a lamp; there is a separate regulating resistance for each, so that the required degree of heat or brightness of light can be accurately obtained; the weight complete is 15½ lbs., and the dimensions 7 in. by 5 in. by 7 in. high; all the fittings are nickel plated. Slatter's Post-partum Uterine Compress; this consists of a concavo-convex pad covered and padded with thick white kid; it is kept in position by an abdominal band of 3 inch webbing, connected to and buckling over the pad; attached to the lower edge is a steel loop through which one attaches the sanitary towel or diaper. Catgut Ligatures on glass reels in carbolic solution, on quite an improved principle, whereby the surgeon can easily refill the glass reels without the great inconvenience found with those with india rubber cap or stopper. Drainage Tubes of different sizes, of india-rubber, in celluloid phials in carbolic solution. A large assortment of the latest Aseptic Instruments.

Messrs. Lorimer and Co. exhibited Lac Magnesia (Mistura Magnesia c. Saccharo). Each ounce contains the equivalent of 10 grains of pure calcined magnesia oxide in the form of freshly precipitated hydrate. It has the same advantage over the fluid magnesia as the oxide has over the carbonate, while it will keep indefinitely without change. The magnesia will not sink to the bottom, but will continue diffused throughout the liquid as when freshly prepared. It is pleasantly sweetened and very palatable. Dermoplastin or Eczema Cream, an emulsion of vaseline with boric acid, zinc, and bismuth. In addition to the well-known cooling properties of the other ingredients, the slow evaporation of the water, as contained in this preparation, quickly lowers the temperature of the skin, giving speedy and permanent relief to the irritable surface. Its use is indicated in all cases of skin irritation from whatever cause arising, such as eczema, burns, acne, itching, etc. Vin Coca (Lorimer's), in imperial pint bottles only. The most elegant form in which erythroxylon coca can be prescribed. It is said to be prepared from the finest parcels of leaves obtainable in London; each bale is carefully analysed, consequently its alkaloidal value never varies. Syr. Hypophos. Co., in ½ and 1 lb. bottles. Each fluid drachm contains lime hypophosphite, 2 grains; sodium hypophosphite, 1½ grain; potassium hypophosphite, 1 grain; iron hypophosphite, ¾ grain; manganese hypophosphite, ¼ grain; quinine hypophosphite, ½ grain; strychnine hypophosphite, ¼ grain. The formula is original, founded on scientific principles, and has stood the test of practical experience. It is neutral, or very slightly alkaline. Ol. Iodi (Lorimer's) for outward application only. Each fluid ounce represents 10 grains of iodine. When necessary the strength can be increased by the addition of tinct. iodi, or diminished by the addition of water. It is readily absorbed, and does not stain the skin. The iodine very soon after application is absorbed, and can be detected in the secretions—urine, sweat, saliva, and milk. This absorbent action is continued so long as the oil is used. Ext. Hamamelis Dist. (Lorimer's): In 4oz. and 12oz. bottles. Distilled extract of witch hazel is a clear, aqueous liquid, obtained by distilling the fresh green bark of the hamamelis virginica. It is non-poisonous, of sweetish taste, and pleasant odour, it does not stain linen, nor cause irritation. Its uses are very numerous. Capsules (hard or soft) of all important drugs. Coated Pills and Pilules: Soluble coating, warranted in all climates; all new and improved formulæ. Compressed Tablets: Plain and sugar-coated, of simple drugs, and all combination Suppositories in convenient form with tubes of vaseline in each box. The Perfect Castor Oil, Tasteless. Infants' Food, free from starch, fully digested. Chocolate Aperiens: Ordinary chocolates containing 1 grain calomel in each. Effervescing Salts, Caffein Hydrobrom, Piperazine, Piperazine et Phenocoll Hydrochlor., Antipyrin, Bromo-Caffein, etc. Cachets of all nauseous drugs. Extract of Malt and Cream, that is, new milk evaporated to consistence of and combined in equal parts with malt extract. Pepsine Sauce. Medicated Lozenges, all sorts. Capsuled Horse Balls. Patent Flesh Rubbers. Hygienic Towels.

G. Van Abbott and Sons (6, Duke Street Mansions, Grosvenor Square, London) had on view a large selection of Diabetic Foods, consisting of Gluten Bread, Biscottes, Flour, Semola, Macaroni, Vermicelli and Chocolate, Saccharin, Chocolate, Soya Bread and Biscuits, Soya and Carraway Biscuits, Gluten and Ginger Biscuits, Almond Cakes and Biscuits, Coconut Biscuits, Euthenia Biscuits, Gluten and Meat Biscuits, Diabetic Rusks, and Bran Biscuits; Almond Flour, Bean Powder, Coconut Flour, Gluten Flour, and Soya Flour for cooking purposes; Calf's Foot Jelly, sweetened with Saccharin; Ivory Jelly, Real Turtle and other Soups, Meat Lozenges, Concentrated Beef-tea. The Foods for Obesity consist of Kalos Biscuits, Soya and Cheese Straw and Special Diet Rolls, and a variety of Soft Loaves and Cakes. For Constipation, Bran Biscuits specially prepared free from drugs. Delicate Children: Hypophosphite of Lime Biscuits, especially for those suffering from deficiency of bone, weak joints, or debility, one biscuit to be taken three times a day directly after meals. The above were suggested by Mr. Wm. Adams, F.R.C.S. Their new manufactory is fitted with patent ovens and all the latest sanitary improvements. The bakehouse is entirely above ground.

CORRESPONDENCE.

WILHELM MEYER MEMORIAL.

SIR,—With your permission, we wish to enlist the interest of your readers in a movement of a somewhat unusual character. Twenty-seven years ago, Dr. Hans Wilhelm Meyer, of Copenhagen, recognised that an enlargement of the glands situated between the nose and the throat, to which he gave the name of "adenoid vegetations," was the most fertile cause of deafness and imperfect nasal respiration in children. This discovery represents one of the most important practical advances of modern medicine.

Already many thousand persons, through the timely removal of the enlarged glands, have been saved from lifelong deafness or from the lasting consequences of obstructed respiration; and it may be safely said that to no one of our contemporaries are we more deeply indebted for the development of a healthy mind in a healthy body of the rising generation than to Hans Wilhelm Meyer.

On the recent death of this eminent man it was felt that his unusual merits deserved unusual recognition, and the proposal to erect a statue to him at Copenhagen has met with a most sympathetic reception, not only by his fellow-countrymen, but also by the medical profession of other countries.

H.R.H. the Princess of Wales has most graciously consented to give her patronage to the scheme, and has expressed her sincere gratification at the idea that so eminent a fellow-countryman of Her Royal Highness should be thus honoured.

The Municipality of Copenhagen have promised to grant a suitable site for the statue, and at this moment in almost every country committees are being formed for the furtherance of this object.

Whilst as a rule the medical profession, when they wish to do honour to their great living or dead, confine their appeals to the ranks of the profession itself, in the present instance it is thought that an opportunity should be given to the numberless parents of children, whose sound development and the preservation of whose hearing have been rendered possible by Dr. Meyer's discovery, to show their gratitude by contributing toward a memorial in appreciation of his great services.

We therefore, through the medium of your columns, venture to invite subscriptions, which may be sent to our Hon. Treasurer, Mr. A. E. Cumberbatch, F.R.C.S., 80, Portland Place, London, W., and will be duly acknowledged in the Journals.—We are, etc.,

FELIX SEMON, M.D.,
Chairman of the Committee.
J. RUSSELL REYNOLDS, M.D., F.R.S.,
President of the Royal College of Physicians.
CHRISTOPHER HEATH, F.R.C.S.,
President of the Royal College of Surgeons.
THOMAS BARR, M.D.
HENRY T. BUTLIN, F.R.C.S.
W. E. CHEADLE, M.D.
A. E. CUMBERBATCH, F.R.C.S.,
Hon. Treasurer.
W. B. DALBY, F.R.C.S.
GEORGE P. FIELD, M.R.C.S.
C. E. FITZGERALD, M.D.
DUNDAS GRANT, M.D.
F. DE HAVILLAND HALL, M.D.
GRENVILLE MACDONALD, M.D.
URBAN PRITCHARD, M.D.
EUSTACE SMITH, M.D.
PHILIP SMYLY, M.D.
W. M'NEILL WHISTLER, M.D.
WATSON WILLIAMS, M.D.
E. CRESSWELL BAKER, M.B., 97, Western Road, Brighton,
CH. A. BALLANCE, F.R.C.S., 108, Harley Street, W.,
Honorary Secretaries.

THE *INDEX MEDICUS*.

SIR,—Many, like myself, will welcome the prospect there still appears to be of that most invaluable reference book, the *Index Medicus*, being continued. I speak as a younger member of the profession, and doubt not I reflect the opinion of numerous others of a like standing that the *Index* has been a source of incalculable value to us in the special way such works alone can be. The librarian of any medical library, and I am sure the estimable Librarian of the Faculty of Physicians and Surgeons, Glasgow, would support me in the statement that no work of reference is so frequently consulted as this excellent and exhaustive one.

When Mr. MacAlister's letter appeared in the BRITISH MEDICAL JOURNAL one method occurred to me by which it might prove possible to raise the necessary funds, and so maintain the issue of the work without fear of future financial difficulties. Seeing that the publishers require a certain sum from Great Britain, I would propose that the various universities, medical corporations, medical societies, and other scientific bodies in the country be asked to subscribe an amount which collectively would cover the requisite sum. A work of such universal importance to the profession should receive the unbroken and guarded support of corporate bodies, and not be left to depend upon the intermittent and uncertain efforts of individuals. May I also venture to suggest that a continuance of the work issued monthly would be preferable to a quarterly issue?—I am, etc.,

A. ERNEST MAYLARD, B.S.Lond.,
Surgeon to the Victoria Infirmary.

Glasgow, July 27th.

THE THROAT HOSPITAL, GOLDEN SQUARE.

SIR,—We shall be obliged if you will kindly allow us to state in the BRITISH MEDICAL JOURNAL that we have now entirely severed our connection with the Throat Hospital in Golden Square.—We are, etc.,

SUTHERLAND,
Lately President of the Throat Hospital, Golden Square, London.
R. COURTENAY WELCH,
Lately a member, and for nearly twelve years Chairman of the Committee of Management of the Throat Hospital.
GRENVILLE MACDONALD,
Lately Dean of the Medical School, and for eight years Physician to the Throat Hospital.

Stafford House, St. James's, July 31st.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH.—The annual meeting, which was unavoidably postponed, will be held at Dumfries in the third week of August. Due notice will be given by circular.—J. ALTHAM, Honorary Secretary, Penrith.

MIDLAND BRANCH: DERBYSHIRE DIVISION.—There will be a meeting at the Whitworth Institute, Darley Dale, on Thursday, September 5th. The President, Dr. Mason, kindly invites the members to afternoon tea, and Lady Whitworth will throw open her gardens and grounds. Afterwards it is proposed to drive to Matlock Bath to dine at the New Bath Hotel. Members are requested to give notice of communications to be brought before the meeting before August 20th to J. A. SOUTHAM, Honorary Secretary, Friar Gate, Derby.

NORTH OF ENGLAND BRANCH.

THE thirty-first annual meeting was held at the Royal Hotel, South Shields, on Thursday, July 25th, at 5 P.M.

Presidential Address.—The retiring President (Dr. OLIVER) vacated the chair in favour of Dr. CRISP (President-elect), who delivered the annual address.

Reports.—The report of the Council of Management and the Treasurer's accounts were read and approved.

Election of Officers.—Dr. Davis, of West Hartlepool, was unanimously chosen as President-elect. The representatives on the Council of the Association were then re-elected, as also was the representative on the Parliamentary Bills Committee.

Dinner.—The dinner, after the meeting, took place at the Royal Hotel, South Shields.

NOTICE TO OUR READERS.—Owing to very great pressure on our space due to the reports of the proceedings at the annual meeting a large number of letters and other matter is unavoidably held over.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The summer general meeting of this Association was held on Wednesday, July 31st, at King's College. The chair was occupied by the President, Dr. Phillips-Conn, of Reading. There was a large attendance of members, including Sir Thomas Crawford, K.C.B. (Chairman of Council), Mr. W. Thomson (Vice-President R.C.S.I.), Surgeon-Major U. J. Bourke, Drs. E. D. Mapother, Abraham, Arthur H. Benson (Dublin), James Davison (Bournemouth), Richard Fegan, R. Heath (St. Leonard's), Robert O'Callaghan, S. A. K. Strahan, George Stoker, W. H. White, the Honorary Provincial Secretary (Dr. Stewart), and several visitors.

The Honorary Provincial Secretary having given a summary of the past action of the Council in reference to the disabilities of Irish diplomates in connection with honorary appointments in English public hospitals, Mr. Thomson, V.-P.R.S.C.I., moved, Dr. Abraham seconded, and it was carried unanimously:

That a further effort be made, on the first opportunity, to reduce the number of English public hospitals in which honorary appointments on the staff are restricted to those holding English diplomas.

Mr. Arthur Benson, F.R.C.S.I., proposed, Mr. Robert O'Callaghan, F.R.C.S.I., seconded, and it was carried unanimously:

That a special fund (to be called the Hospital Appointments Fund) be raised forthwith to cover expenses connected with the abolition of hospital monopolies.

After several remarks by various speakers, the meeting adjourned.

Nearly £50 was subscribed in the room to the Hospital Appointments Fund.

ROYAL COLLEGE OF PHYSICIANS.

The ordinary quarterly comitia of the College was held on Thursday, July 25th, Sir J. Russell Reynolds, Bart., President, in the chair.

The President announced that Dr. Patrick Manson had been appointed Goulstonian Lecturer, Sir Dyce Duckworth Lumleian Lecturer, and Dr. George Oliver Croonian Lecturer for next year, and Dr. Greenfield Croonian Lecturer for 1897. He further announced that Dr. Bradbury's Bradshawe Lecture would be delivered on November 7th, the subject being "On some Vaso-dilators."

Sir Henry Pitman moved:

That the best thanks of the College be given to the Pharmacopœia Committee, whose report had been received at the last comitia for their valuable labours.

This was seconded by Dr. Latham, and carried with acclamation, and Sir Alfred Garrod, the Chairman of the Committee, briefly thanked the Fellows for their vote.

Drs. C. S. Jaffé and H. Oppenheimer were admitted Members.

The Licence of the College was granted to 133 gentlemen, of whom all but one had come before the Conjoint Board.

Communications were received from the Royal College of Surgeons reporting certain proceeding of the Council of that body; from the Colonial Office, enclosing a Blue Book on the disease called yaws; from the Local Government Board containing a new order respecting Poor-law dispensers; and from the Rector of Dymchurch thanking the College for its annual gift of three guineas to the schools of the parish.

A letter was read from Mrs. Hunter inviting the College to purchase an armchair formerly belonging to Dr. Ed. Jenner; it was decided not to take any steps in the matter.

On the recommendation of the Council of the College, the Baly Medal was awarded to Dr. W. H. Gaskell, F.R.S.

A report was received from the Council recommending the College to nominate a representative on the Council of the British Institute of Preventive Medicine, but, as it was ascertained that that body had already for the second time taken the initiative and made the nomination, the subject was allowed to drop.

The following officers were then elected for the ensuing year:

Censors: Sir W. H. Broadbent, M.D., Dr. P. H. Pye-Smith, Dr. T. Tillyer Whipham, and Dr. W. Cayley. Treasurer: Sir Dyce Duckworth, M.D. Emeritus Registrar: Sir H. Pitman, M.D. Registrar: Dr. E. Liveing. Librarian: Dr. W. Munk. Examiners: Chemistry and Chemical Physics—Mr. C. E. Groves, F.R.S., Mr. W. R. Dunstan, F.C.S., Mr. J. M. Thomsen, F.C.S., Mr. S. Rideal, D.Sc., Mr. R. Taylor Plimpton, Ph.D.; Materia Medica and Pharmacy—Dr. T. L. Brunton, Dr. D. J. Leech, Dr. S. P. Phillips, Dr. F. Willcocks, and Dr. F. G. Penrose. Elementary Biology—Mr. F. G. Parsons, F.R.C.S., and Mr. P. C. Mitchell. Elementary Physiology—Dr. H. L. Jones. Physiology—Dr. V. D. Harris, Dr. T. Oliver, and Dr. F. W. Mott. Anatomy—Mr. C. Stonham, F.R.C.S., and Mr. G. D. Thane. Medical Anatomy and Principles and Practice of Medicine—Dr. P. J. Hensley, Dr. I. B. Yeo, Dr. G. V. Poore, Dr. J. M. Purser, Dr. F. Taylor, Dr. S. Mackenzie, Dr. W. Ewart, Dr. S. J. Sharkey, Dr. J. K. Fowler, and Dr. R. Saundby. Midwifery—Dr. J. B. Potter, Dr. J. W. Black, Dr. F. Horrocks, and Dr. W. S. A. Griffiths. Surgical Anatomy and Principles and Practice of Surgery—Mr. J. Langton, F.R.C.S., and Mr. J. N. C. Lawson-Colley, F.R.C.S. Public Health—Dr. C. H. Ralfe and Dr. W. Foster. Murchison Scholarship—Dr. F. C. Turner and Dr. S. H. West.

Sir Dyce Duckworth reported the proceedings of the General Medical Council last May, he being the representative of the College in that body.

Dr. Pollock brought up a report from the Weber-Parkes Prize Committee, announcing that Dr. Weber had most generously contributed a further sum of £500 to defray the cost of the dies for the medals and for providing a remuneration for the judges, and proposing that the number of judges should be limited to three, and that their remuneration should be ten guineas each. It was announced that the first award would be made in October, 1897, and that the judges would be Drs. Pollock, Thorne Thorne, and Greenfield; details as to the subject chosen will be found in the British Medical Journal for July 20th, p. 174. The report was unanimously adopted, and a cordial vote of thanks passed to Dr. Weber for his munificent addition to the prize.

Two reports from the Committee of Management, the quarterly reports of the Laboratories Committee, the Finance Committee, and the examiners for the licence, and the annual reports of the Library Committee and the Curators of the Museum, were received and adopted, and thanks were returned to the donors of books during the past quarter.

THE GRACE TESTIMONIAL.

The following subscriptions have been received on behalf of this fund:

	Shillings.		Shillings.
Amount already acknowledged..	816	Mrs. Wilson, jun. (Wallsend-on-Tyne)	1
J. H. Norman (Winkleigh) ...	1	Dr. Jukes de Styrap (Shrewsbury)	1
A. C. Kemble (Poole)	1	Professor Osler (Baltimore) ...	21
F. W. F.	2	C.	1
Dr. Putsey (Bournemouth) ...	5	S. F. Holloway (Devizes) ...	1
Rev. W. S. Wrenford (Wallsend-on-Tyne)	1		
Mrs. Wilson, sen. (Wallsend-on-Tyne)	1		

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF GLASGOW.

List of Degrees conferred on July 25th, 1895.

Doctors of Medicine (M.D.).

I. *With Honours.*—T. K. Monro, M.A., M.B., C.M.

II. *With Commendation.*—C. Banks, M.B., C.M.; A. L. Bell, M.B., C.M.; F. S. Campbell, M.B., C.M.; J. Charles, M.B., C.M.; J. M'Gregor, M.B., C.M.

III. *Ordinary Degree.*—P. Gardiner, M.B., C.M.; A. G. Hay, M.A., M.B., C.M.; T. T. Macklin, M.B.; J. M. Macphail, M.A., M.B., C.M.; J. J. Robb, M.B., C.M.; J. Smith, M.B., C.M.; J. A. Wilson, M.B., C.M.

Bachelors of Medicine and Masters in Surgery (M.B., C.M.).

I. *Honours.*—*J. Ferguson, M.A., H. A. Pattullo, E. A. Walker, M.A.

II. *High Commendation.*—W. Scothe, B.D., A. H. Stewart, R. Howie, H. A. Watson, M.A., W. H. Lang, B.Sc., A. Young, B.Sc.

III. *Commendation.*—R. B. Barr, A. Stevenson, S. D. Cowan, M.A., W. Lawson, F. Macrae, R. M. Fraser, M.A., Emmeline Marie Stuart, R. K. Miller, M. Watson, J. L. Anderson, A. C. Muir, T. Bell, F.B. Cormick, G. Mowat, W. D. Miller, W. Alexander, and J. M'Cash.

IV. *Ordinary Degree.*—J. C. Abbott, J. Adam, W. Allan, A. R. Anderson, J. Anderson, J. S. Anderson, T. Armstrong, W. S. Baird, F. J. Barker, M.A., A. Blair, H. A. Boedeker, W. Burns, T. Campbell, V. E. Chang, W. Clow, M.A., B.Sc., J. Cumming, H. Davies, J. Devine, W. Donaldson, M. Dunning, R. J. Edwards, S. English, J. Findlay, W. D. Findlay, A. A. Finkelstein, J. L. Forrest, J. Forster, J. R. Foulds, A. F. Galloway, T. C. Garrett, J. Gillan, M.A., W. Graham, W. Grove, W. Hay, B.D., A. Holt, A. B. Hughes, J. Jack, J. W. Jackson, G. Jubb, D. Kerr, W. J. Kerr, D. C. Kirkhope, J. Kirkwood, D. Lewis, J. D. Loutitt, J. A. D. Mulholland, D. Munro, D. M'Cormick, D. M'Donald, W. J. Mackinnon, L. Macfadyan, H. M'Laren, M. N. MacLay, W. Macleod, G. M'Pherson, M.A., A. R. Oliver, E. J. Primrose, M.A., J. R. Rae, J. Rankin, J. N. Robertson, J. Sandilands, J. Smith, J. Sproull, H. Stevenson, A. Stewart, J. Stewart, J. Stirling, H. W. Thomson, C. K. Toland, F. Wolverson.

*Mr. Ferguson gains the Brunton Memorial Prize of £10, awarded to the most distinguished Graduate of Medicine of the year.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 3RD, 1895.

THE PRESIDENT'S ADDRESS.

The President of the British Medical Association on the occasion of the London meeting of the year of our Lord 1895 occupied a unique position. We run no risk of offence when we say that Sir John Russell Reynolds has presided at the greatest assembly that our profession has ever known. In saying this we do not forget the great International Congress either in our own country or abroad; in mere numbers, for aught we know, some of these meetings may have surpassed the Association meeting of this week. English medicine has, however, this week shown itself in numbers vast enough to fire the most sluggish imagination; while, on the other hand, the age, standing, and prosperity of our Association give a unity, a dignity, and an impressiveness to its chief assemblies which are wanting to the more or less motley and fortuitous gatherings which have not a national character. Moreover, the Association has now lived long enough to have assimilated all that is characteristic of maturity; it has integrated into itself all those forces of tradition and prescription which command respect, and exercise a shaping influence upon rising generations.

In the person of the President of the College of Physicians the Association found also a President in whose person these qualities and endowments are characteristically expressed. On the other hand the President derived a force and an ascendency from the solid phalanx of the profession behind him that no section of it, however honourable, could impart.

Great as was the occasion, the President was in no whit behind the claims of his office. Although in his gracious hospitality, his prudent counsels, and persuasive influence the President made himself felt rather than seen by many of his guests, yet in his wise and eloquent address his personality was made manifest to the whole body. To enter into a critical examination of the high arguments and earnest exhortations of this address would be no unpleasant duty at a more appropriate time; now we can do little more than express to the President our cordial congratulations, and our appreciation of the scientific insight and the moral weight which pervaded his impressive discourse—a discourse worthy of the speaker and of the occasion.

In his survey of the present place of medicine, the President pointed out to us the striking fact that therapeutics, without forgetting the valuable means derived from the inorganic world, had newly armed herself with weapons derived from life itself. He went on to point out farther that this is not to be regarded as a mere addition of materials to our stores, but as a new attitude of thought, and a nearer approach to a control of vital function in its own laboratory. In the use of glandular extracts, defensive proteids and the like, "Nature has, as it were, taken man more into her confidence." We do not think that the speaker strengthened his own case in the demurrer that "Search while we may, 'life' eludes our search and resists our efforts." These words, quoted by the President from another physician, seem to us to be either an untruth or a truism. Of "life in itself" we know as much or as little as of a humming-top "in itself;" of "things in themselves" no thoughtful man expects in this world to know anything, and does not, if he is wise, try to know it. We can never know more of "life" than as a certain series of phenomena, and to say that we know no more of this series than our fathers knew is too gloomy a view of modern labours.

In another section of his subject the President seemed to us, on the other hand, too sanguine. To a cultivated and philosophical observer no doubt the custom of naming newly-described symptom groups after "Brown, Jones, and Robinson" is clumsy, and even rather grotesque; but something can be said, in our opinion, for this custom. In the President's own words, we have to deal with "a tremendous store of material"—tremendous indeed! And are we not in the position of a curator of a museum upon whom enthusiastic friends are every hour shovelling fresh quantities of such stores? To pronounce anything like a definite opinion on any large part of these stores, to penetrate to the secret of their underlying genetic affinities is a very slow and tortuous process; meanwhile, to attach scientific names to each new thing as it comes is not only premature, but does harm, in that it attaches a name, more or less false, which is hard to get rid of when discredited by later researches. Are we not thankful, for instance, amid the imperfect distinctions of the various alleged forms of nephritis, to affix a mere ticket like "Bright's disease," which deceives no one and is, on the face of it, provisional? The President, indeed, warns us very clearly of the unfitness and deceptiveness of certain pretentious pathological names, which he illustrated by apt instances. The truth is nosology is not in the nature of things a science in which nomenclature finds its best application.

One shrewd sensible passage of this able address we have read with especial joy, because of its pregnant truth and, we will add, of its originality, namely, that in which the President attacks the "old-fashioned dreary lectures of an hour's duration, which have passed away." We are glad to hear that they have gone. Not only dreary, but mischievous would be our verdict upon those formal courses of "systematic lectures" which not only competed unfairly with practical work, but also kept up that very habit of regarding medicine as a sort of contemplative philosophic study which was impressed upon physicians by Galen to the destruction of medical progress for more than ten centuries. When Harvey pushed his books on one side, and said, "Here is a little bit of practical mechanics, let me see how it works," then it was that the new career of medicine began.

The President well observed that, since teaching had become more personal, and closer to realities, both teacher and

student had shown far more interest and earnestness in their work. In the formal and didactic utterances of the past there was plenty of assertion and show of knowledge, but the teachers neither believed nor comprehended half of their "sage pronouncings." These are words as true as they are brave and inspiring.

We trust that the grave and eloquent warnings of the latter part of this weighty address may reach a far wider audience than our own. The speaker, witnessing in sadness that "decay of reverence" which is the cause of the frivolity, flippancy, and intolerance of restraint in the life of the modern world and in its literature, laments the loss of that discipline by which, as he so well knows, a healthy and capable nervous system is to be built up. That which moralists call reverence physiologists recognise as "control." "Control" means the constructing of centre upon centre, the governance of the lower and more elemental parts of man by the continual superposition of more perfect mental instruments which raise him out of automatism, and enable him to see further and wider, to attain the knowledge of good and evil, and to choose between immediate and fleeting gratifications and those which, if more remote, are abiding.

In this growth of our highest centres lies "edification" in its real and practical sense. There is something more than an analogy, as the President pointed out, between weaknesses and vices of the body and those of the mind; and in his earnest and hopeful words he taught us how powerful is our office beyond its carnal aspects; and that the faithful physician will find the fruits of his labours not only in a healthier but also in a nobler people.

THE ADDRESS IN MEDICINE.

The careful and painstaking history of the growth of our art, and of the science with which in these latter days it is correlated, and by which its application is guided, will be read with great interest by all who recognise that, however great are the advances of our knowledge in recent times, the foundations on which they rest go deep down to that great capital of gradually accumulated experience which dates back to long before the era of written records.

The tale told by Sir William Broadbent, far back as it goes, is in fact but a fragment of history, a story without a beginning and without an end. "In the works of Hippocrates, the earliest medical literature which has come down to us, we are at once introduced to the theory and practice of the art of healing at a considerably advanced stage of development. Already there were rival schools of thought and treatment, and disease was discussed with extraordinary acumen from opposite points of view." The origin of medicine was far anterior to all history, and as to its end who shall ever guess it?

When we are told that "the instincts of the primitive man must have applied to remedies as well as food, and experience of their effects must have been accumulated and transmitted, embodied frequently in legend or superstition, as part of tribal knowledge," and when we bear in mind what instinct means, we see not only how early in man's history did he seek aid from medicine, but that then, as now, the art of medicine was founded on experience and observation. To turn now towards what to many will prove the more interesting part of the address, we cannot but see how, by aid of that hastened experience which is founded on experiment, two distinct lines of investigation are converging the one upon the other; and how by the advances of organic and physiological chemistry on the one hand, and the intrusion of chemistry into pathology on the other, as illustrated by the isolation of the toxic substances on which, in some cases at least, the symptoms of disease depend, ground is given for the hope that sooner or later the disturbances of function caused both by diseases and by drugs may be capable of expression in chemical terms, that an era of antidotes may arise of which our present use of antitoxins gives but a dim forecast. Again and again Sir William Broadbent rings this note, that the influence of both disease and therapeutics on the environment of the cell is a matter of chemistry. "Chemistry must ultimately form the link between physiology, pathology, and therapeutics;" and he points out that while all vital actions are attended with molecular or chemical actions, and are, in fact, chemical actions coming under the laws of the correlation of force and the conservation of energy, so, also, are the therapeutical actions of drugs. The key then to therapeutics is to be found in the chemistry of vital processes, whether they be normal or pathological; and by so prominently associating the treatment of disease—so often looked on as a mere art—with chemistry, one of the most exact and progressive of the sciences, Sir William Broadbent has done well.

THE ADDRESS IN SURGERY.

Those who heard Mr. Hutchinson's Address in Surgery—and it is not the only thing that he has done for the success and distinction of this memorable meeting of our Association—had good measure served out to them, and were called to consider some very hard questions. In the first place, he asked them to look back at some aspects of the surgery of the past. Now, as a rule it is a waste of time for surgeons to consider carefully the work of their predecessors. There are, for example, the German monographs, that begin with Hippocrates, and would begin earlier if they could, refusing to let the dead bury their dead; this way of recalling the past is almost useless. And there are the innumerable Harveian and Hunterian orations, some of them so silent about Harvey or Hunter, and so full of things that Harvey and Hunter never knew, that they are like the wreaths of primroses hung anyhow on or near the statue of Lord Beaconsfield, hiding but not adorning it.

But it is possible to review the surgery of the past by a more profitable method than these. We may look at those stars only that are of the first magnitude; those "one or two immortal names," who in each age "rise slowly up into the sky, To shine there everlastingly." This, for example, is what Mr. Godlee did in his charming account of Ambroise Paré. Or we may take this or that special subject in medicine or surgery, and seek it in a past not too remote, so that we may mark the mistakes of our predecessors, and confess our own (the latter act is of great importance), and thus bridge the gap between them and us, and deal with ourselves as strictly as we deal with them. This is the way that Mr. Hutchinson has followed, and it is, for practice, the best way of all.

But (if such a phrase may be forgiven) he starts with a

digression. His account of Sharp's *Critical Inquiry into the Present State of Surgery*, and of Roux's observations, half a century later, on the schools of London and Paris, have no close connection with that later past of which he was himself witness. Assuredly Samuel Sharp is not "shining everlastingly;" he seems to have contemplated his art without advancing it, and to have believed, in 1750, that since the treatment of "tumours, wounds, abscesses, and ulcers" was the same everywhere, therefore it was in no need of improvement. M. Roux's name is better known to English surgeons, nor will it soon be forgotten now that his grandnephew has added yet greater honour to it; but his estimate of English surgery about 1800, though of great interest, is nevertheless too remote to advance Mr. Hutchinson's argument, or to help him to get M. Roux into touch with his successors.

Thus Mr. Hutchinson is not at his best till he leaves the eighteenth century behind him, and considers the time when his own work began; and his address, from this point onward, has two aspects—surgical and ethical, and inasmuch as "conduct is nine-tenths of life," it is the ethical aspect of the address that gives it an especial value, and raises questions of especial difficulty; but if we are to get the full good of his thoughts, we must claim the right to rearrange his words. He has taken no care to give us an oration; he permits his criticism of the present arrangement of the College of Surgeons Museum, and of the five years curriculum, to interrupt a line of thought wholly foreign to these subjects.

Let us, therefore, take first the two great operations whose rise and zenith he has watched: ovariotomy and lithotrity. To him, as to all of us, there is but one surgeon—Sir Spencer Wells—to whom every history of ovariotomy must be dedicated. It is a wonderful story; Mr. Knowsley Thornton, some years ago, told it better than it had ever yet been told; but in Mr. Hutchinson's account there are his own recollections, and his own hard fight for the operation; his own first cases, his zeal in getting reports of the operation from every hospital in London, his courage in defying the verdict of his own reports—"We knew of fourteen cases in succession at different institutions, every one of which had ended in the death of the patient"—his early belief in the clamp, that evil invention that was perhaps, as he says, a necessary evil at one stage of development of the operation, but has now, happily, gone for all time, ever since Lister came and laid his hand on surgery, and created it all anew; and last, but not least, the fine honour which made him, in a later period of his career, transfer to other surgeons the very cases for whose cure he had thought and worked so hard.

The history of lithotrity is less known, and we wish Mr. Hutchinson had given more time to it. In the days before Sir Henry Thompson and Bigelow, it must, in spite of Brodie's teaching, have been a dreadful affair; and the success which Mr. Hutchinson gained by doing lithotomy in every case was, at that time, one of the best of the many good things that he has done for surgery. And on this field, also, in later years, as on the field of ovariotomy, he put surgery before self, the patient before the surgeon, and sent to "a specialist friend" every patient that was in need of Bigelow's operation.

And thus at last we come to what we may be sure was most in Mr. Hutchinson's mind when he prepared his address: we come to see the ethical aspect of these two old stories re-told. Let us hear the conclusion of the whole matter. What guidance for our own daily work can we find in them?

We get a good example, hard to follow, a very counsel of perfection, in his rule of transferring his own patients to this or that special surgeon or hospital when once he felt that the other surgeon had got a little ahead of him. "I gave up doing ovariotomies, both in public and private, and used to transfer my patients from the London to the Samaritan Hospital." And again: "I determined that I would not do litholapaxy *propriâ manu* again, but that I would watch its results in the hands of a specialist friend. From that date onwards I have always transferred the patient to my friend."

How many surgeons do this? What young surgeon nowadays sends away his private patients when he has any? It is true that as a rule they are gone to the specialist already, without giving him even the melancholy pleasure of sending them. But how should he learn his business or earn his living at this rate? And, as regards the transference of hospital patients, this, now that every hospital has its own special departments, is no longer possible save in secresy and at the risk of the condemnation of his colleagues; and in country practice it is by no means always the best thing that the patient should be sent up to town.

Mr. Hutchinson claims too much for specialism. He attributes the abolition of suppuration after extraction of a cataract to the establishment of ophthalmic surgery as a speciality, but now, since Lister came, we can all of us abolish suppuration. He speaks of "personal specialists," but one or two of those eminent surgeons whom he names would be very unwilling to be considered as specialists.

But, having ventured to make these criticisms, we have nothing left but sincere gratitude to Mr. Hutchinson for his address. Though it may have seemed at first hearing mostly a retrospect and an estimate of things surgical only, yet it was really an earnest—even a passionate—appeal to his hearers to undertake no case beyond their experience; to put the patient before the surgeon; to put surgery before self. And, whatever we may think about specialism, to such precepts, illuminated by the good example of a great surgeon who did thus honour his art, and sacrifice his own gain for the good of his patients, we say Amen! with our whole heart.

THE ANNUAL MEETING.

On Monday evening Sir Russell Reynolds entertained at a private dinner at the Buckingham Palace Hotel about a hundred guests, including many members of the Council of the British Medical Association, the Presidents of Sections of the annual meeting, and, among others, Sir Richard Quain, Sir William Broadbent, Sir George Humphry, Sir Alfred Garrod, Sir Henry Thompson, Mr. Christopher Heath, Professor Philipson (Newcastle), Mr. Ernest Hart, Dr. W. M. Ord, and Professor E. A. Schäfer.

On Tuesday afternoon a service was held at St. Paul's Cathedral, which was attended by a very large number of members and their friends. The sermon was preached by the Archbishop of Canterbury, who chose his text from Revelations xxii. 1: "He showed me a pure river of water of life, clear as crystal, proceeding out of the throne of God and of the Lamb." Referring to the meeting of the Asso-

ciation, the reverend prelate said that assemblies of that kind were not mere compliances with the use and vogue of the day, but were practical instruments for the extension and expansion of ideas, and the mutual consultation was good both for the physician and for the patient. The doctor was a watcher of the river of life from the time that it burst forth up to where it plunged underground, and was lost to sight in the dread caverns, which swallowed, but destroyed not. Every drop or particle of the river of life apparently lived by itself, and every individual life had perplexities, disquietudes, restlessness, and forebodings, of which the physician had no cognisance, troubles unrevealable and inexplicable to others that perhaps affected all his energies, life, and being. All these nervous troubles tended very strongly to point out the oneness and the loneliness of life. Disease was not born of life, and was not essential to it; it was an accident of it, but it was an accident that was always present. It was an impressive fact that the most immediate cause of the largest portion of disease was traceable to morals, and that the worst and most grievous sufferings were those which sprang from mental and moral anguish. Referring to the objection that had hitherto been held to some extent, and which was even now held by some people, against the adoption of secular remedies for the prevention and cure of epidemics and the results of immorality, the reverend prelate said that it had long been a conviction of the Church that there was no spiritual doctrine which had not its counterpart in human life. Some people even now held that anæsthetics were contrary to Divine law, but all those things were truly in accordance with it. The physician had a great responsibility as the watcher of life. Sympathy and reverence were the attributes of the watcher, and the influence of the profession was unbounded.

On Wednesday morning at King's College the staff of the West London Hospital gave a demonstration of clinical cases of interest. Mr. Keetley showed a number of cases in which operations had been performed to rectify bony deformities, including a case in which excision of the knee had been performed twelve years ago, the first in which the operation was performed by a perpendicular incision dividing the patella, a case of open division of the sterno-mastoid for torticollis, a case of section and exclusion of a coil of small intestine without removing it from the abdomen, and a case under treatment for restoration of the nose. Dr. Dawtrey Drewitt showed an example of disease of the lateral columns of the cord, and Dr. W. A. Turner a striking case of Brown-Séquard's paralysis. Mr. Bidwell showed a patient who had undergone resection of the ilium by Maunsell's method, and a case of lupus treated by excision and Thiersch's skin grafting. Mr. McAdam Eccles demonstrated some interesting cases of hernia, and Mr. H. Lloyd-Williams some models illustrating the treatment of fracture near the angle of the lower jaw. Mr. Swinford Edwards also exhibited some cases, and Dr. Phineas Abraham exhibited a number of interesting cases of skin disease, including an instance of good result following tuberculin treatment, as well as an example of Raynaud's disease with mitral stenosis, and a patient of feeble development benefited by thyroid treatment.

During the meeting most of the hospitals in London have offered special opportunities for visits of inspection by members attending the annual meeting. Thus at St. Bartholomew's Hospital, at King's College Hospital, the London Hospital, St. George's Hospital, St. Mary's Hospital, the Royal Free Hospital, the Great Northern Hospital, the West London Hospital, the Victoria Hospital for Children, St. Peter's Hospital, the National Hospital for the Paralysed and Epileptic (Queen Square), Queen Charlotte's Lying-in Hospital, the General Lying-in Hospital, and the Royal Hospital for Diseases of the Chest, members of the Association have been admitted to attend the practice of the hospital, and to see the wards, laboratories, and museums on each day. The Mile End Infirmary and the Shoreditch Infirmary were also open for inspection. On Thursday afternoon a large number of cases of interest were demonstrated by the medical and surgical staff of Charing Cross Hospital. On Wednesday afternoon the Middlesex Hospital received members wishing to inspect it, and on Thursday morning Dr. Pringle gave a demonstration of rare diseases of the skin. On Thursday afternoon the treasurer and staff of St. Thomas's Hospital gave a garden party, and many cases and objects of interest were shown to members of the Association. On Wednesday morning Mr. Malcolm McHardy explained his method of artificially maturing immature senile cataract by trituration, at the Royal Eye Hospital, Southwark. The members of the medical staff of the City of London Hospital for Diseases of the Chest, Victoria Park, received the visits of members of the Association on Wednesday afternoon. Clinical demonstrations were given on Tuesday and Thursday morning, at Bethlem Hospital, and on Thursday afternoon at the Lock Hospital. Members were admitted to see operations at the City Orthopædic Hospital on Tuesday, and on Wednesday afternoon a special demonstration was given by members of the staff of the Hospital for Diseases of the Throat. On Wednesday afternoon Dr. Koch was in attendance at the Hampstead Union Infirmary, to show the new circular wards and other objects of interest. On Thursday afternoon, at the Kensington Infirmary, Dr. Potter showed the maternity department, the new buildings, and the nurses' home, and demonstrated some cases of interest. On Thursday afternoon, an At Home to 100 visitors was given at the New Hospital for Women.

In the Great Hall of St. Bartholomew's Hospital on Wednesday, July 31st, after the rising of the Sections, the medical and surgical staff of the hospital entertained upwards of 200 members and distinguished guests of the Association at luncheon. This, one of the most agreeable of the subsidiary functions of this annual meeting, was presided over by Mr. Thomas Smith, the senior member of the staff of the hospital, who was supported by the majority of his colleagues, including Dr. Andrewes, Sir Dyce Duckworth, Dr. Gee, Mr. Willett, Mr. Langton, Mr. Butlin, and Dr. Hensley, and by the Treasurer, Sir Trevor Lawrence, F.R.C.S. Mr. Thomas Smith, after the usual loyal toasts had been suitably honoured, proposed "The Health of the Guests," and recalled to them that for eight centuries St. Bartholomew's Hospital had occupied its present site, and that it had always been, from its first foundation, a hospital dedicated to the cure of disease and the relief of suffering. He recalled some of the great names which had been associated with the medical and surgical work of the hospital in the past, and pointed out the portraits of many of them on the walls of the Great Hall of the hospital in which the luncheon was given. He expressed his regret, which was shared by all present, that Sir James Paget had found himself unable to be present, and read the following sympathetic letter from Sir James Paget:

> I am very sorry that I cannot be at the luncheon at St. Bartholomew's with you and all who will be there, including many of my oldest and most esteemed friends and pupils. But the great sorrow in which this year began, and the rather heavy work that in its course I have had to do, have made me quite unfit for either the pleasures or the business of the meeting of the British Medical Association, and have obliged me to take my summer holiday earlier than usual. I must have rest; but I will make a guess at your luncheon time on the 31st, and will set my mind to think of St. Bartholomew's, and all the happiness that I owe to it, and will wish health and true happiness to you and all with you.

The toast was acknowledged by Professor Clifford Allbutt (Cambridge), who expressed the thanks of the guests for the generous hospitality extended to them in the historic building in which they were assembled, and by Professor Stokvis (Amsterdam), who, in the name of the foreign

guests, expressed a similar sentiment, and, speaking in excellent English, added some observations on the history of St. Bartholomew's, which he said reflected the evolution of medical science. He recalled the fact that the great Harvey had served within its walls, and dwelt on the debt which medicine owed to England for the establishment of the system of trained nurses. Mr. Christopher Heath, the President of the College of Surgeons, also responded, and recalled the fact that St. Bartholomew's Hospital had given many Presidents to the College of Surgeons, and the farther fact that at the present time its five surgeons were all members of the Council. Mr. Thomas Smith then called upon Surgeon-Captain Whitchurch, who, with his Chitral honours fresh upon him, received a splendid ovation from the company. Surgeon-Captain Whitchurch responded very modestly, saying that, next to the honour of receiving the Victoria Cross, he esteemed that which he had received that day. Professor Macewen (Glasgow) then in the name of the Guests proposed the toast of "St. Bartholomew's Hospital," coupled with the name of Mr. Thomas Smith, who, in a brief reply, referred to the pains at which Dr. Norman Moore had been to prepare a historical account of the hospital, a bound copy of which was presented to each guest. He expressed his regret at the absence of Sir Joseph Lister, who, he said, had requested him to state that he had been prevented from taking part in the proceedings of the annual meeting of the British Medical Association, and from being present at St. Bartholomew's only by his recent domestic bereavement. In addition to those whose names have already been mentioned, there were present Sir Spencer Wells, Sir Trevor Lawrence, Sir Alfred Garrod, Dr. Ward Cousins, Sir F. Abel, Dr. Smyly, Dr. Bowditch, Mr. Mitchell Banks, Sir George Humphry, Professor Michael Foster, Dr. Donald MacAlister, the Presidents of Sections, and other officers of the Association. As the guests were separating, Surgeon-Captain Whitchurch was seized upon by the students, and chaired round the quadrangle, amid the cheers of a large number of students, nurses, and patients.

The little book which Dr. Norman Moore had written as a gift to those who attended the luncheon at St. Bartholomew's Hospital is entitled, *A Brief Relation of the Past and Present State of the Royal and Religious Foundation of St. Bartholomew's Hospital.* It is a small octavo of 60 pages, opening with a very appropriate argument quoted from *Utopia*. The first chapter deals with the patron of the hospital, St. Bartholomew; the second with the founder, Rahere, who made his resolution in Rome in 1120, and carried it out at Smithfield in 1123. The third chapter relates the history of the hospital and its constitution; the fourth recalls some memories of its physicians and surgeons, while the fifth and last describes the present aspect of the hospital, and some of the interesting historical objects within its walls.

On Monday evening Sir William and Lady Mac Cormac received a large number of members attending the annual meeting and ladies at the Royal Institute of Painters in Water Colours, Piccadilly. On the same evening Mr. and Mrs. Ernest Hart gave an "at home," chiefly to foreign and provincial members, at which Mr. Mercer Adam, who was a member of the medical before he joined the dramatic profession, gave a musical recital, which recalled the manner of the late Mr. Corney Grain; and among the interests provided for the numerous guests was the electrophone, which was in communication with the opera, and with various theatres in London, and a series of medical portraits which are being painted for Mr. Hart of his most eminent contemporaries and friends by Mr. Solomon J. Solomon. On Thursday evening Dr. and Mrs. Stephen Mackenzie gave an evening party, which was very largely attended; but to enumerate all the hosts who offered liberal hospitality would be impossible, but we believe that London has lived up to its reputation, and has done something to show its grateful appreciation of the great kindness shown at the provincial and other centre visited by the Association in former years.

Among the various pleasant reunions which have characterised the London meeting of the British Medical Association, one of the most delightful was the illuminated evening *fête* at the Gardens at the Royal Botanic Society. The beautiful gardens in Regent's Park were brilliantly illuminated, there was music everywhere, and the weather was perfect. In the large conservatories and on the extensive lawns there was ample space for promenading, and although the *fête* was attended by a large number of members, both of the British Medical Association and of the Geographical Congress now in progress, there was no overcrowding. The Duke and Duchess of Teck arrived about 10 o'clock, and were conducted to a reserved enclosure in front of the great conservatory. The bands of the 1st Life Guards and Royal Horse Guards performed on either side of the Gardens, and the Ladies' Pompadour Band in the conservatory.

On Tuesday evening, after the delivery of the Presidential Address, the members and their lady friends were entertained by the Metropolitan Counties Branch at a *soirée* in the Imperial Institute. The reception commenced at 8.30, and at 9 the President delivered his address, after which there was a *conversazione* in the gardens of the Institute. The night was fine and warm, so that members and guests could move about with perfect freedom in the grounds. To those who had never seen the grounds illuminated as they were on this occasion the scene was gay and attractive and most enjoyable. Excellent music was provided, both the Strauss Orchestra, under the conductorship of Herr Strauss himself, and the band of the West London Rifles being present. The refreshments were admirably arranged, and indeed the comfort of guests was most carefully attended to in every way. Altogether the metropolitan members may be congratulated on the success and brilliance of their entertainment, and it will be satisfactory to them to know that we have been assured by many of their guests that it was much appreciated and admired.

A small party, including Dr. Pistor of Berlin, and the medical officers of health for Leeds, Salford, Blackburn, and Crewe, paid a visit on Wednesday afternoon to the model lodging house erected by Lord Rowton nearly three years ago. The party were met by Lord Rowton, who personally explained the causes which led to the building of Rowton House, and subsequently conducted the party throughout the whole of the premises. All were very much impressed by the cleanliness and order of the house and the excellent arrangements made for the comfort of the inmates. Lord Rowton's kindness was very heartily appreciated by every member of the party.

The Director of the British Institute of Preventive Medicine, Dr. M. Armand Ruffer, gave a demonstration, on Wednesday, of the methods used for the preparation of curative serums, at the Institute's farm at Harrow; and on Thursday a special demonstration was given to the members of the Public Health Section. He began by saying that the history of bacteriology might be divided into three periods: The first period was that of Pasteur and Lister, in which the importance of bacteria as disease-producing agents was first ascertained, and included the discovery of the antiseptic treatment of wounds by Lister, and the methods of prophylactic inoculations by Pasteur. The second period was characterised by the work of Koch on the isolation of specific microbes producing disease; and the third period was remarkable for the discovery by Behring of the wonderful therapeutic properties of the blood of immune animals. His remarks would be limited on this occasion to the technique of the preparation of the serums used in therapeutics without entering into theoretical considerations or

into the question of their practical utility. This last part of the subject he must leave entirely in the hands of clinicians, who alone could give an answer. He would begin by the preparation of the serum for the cure of diphtheria. Dr. Ruffer then showed the methods for the preparation of toxins and various kinds of flasks for the production of powerful toxins. The mode of sterilising cultures by filtration was fully entered into, as also the mode of inoculating horses. Three horses were shown: the first was inoculated before the audience, the second was at the height of the reaction six hours after the inoculation, and the third had been inoculated the day before. Dr. Ruffer pointed out that although these three horses had been repeatedly inoculated and bled, they showed no signs of fear or pain, and contentedly munched whatever titbit was offered them. The method of bleeding aseptically was then demonstrated, together with the way of filtering, bottling, and packing the serum. It was pointed out that by improved apparatus the serum only once came into contact with unfiltered air, and only for a very short period of time. An apparatus was shortly to be constructed, by means of which the serum would not come into contact with air at any time, that is, from the time it left the horse's vein until the bottle was opened for the treatment of the patient. The method of ascertaining the strength of the serum was explained, and the discrepancies noticed by various observers were fully entered into. Dr. Ruffer further pointed out that horses sometimes lost their antitoxic powers, so that it was necessary to test their serum from time to time. Passing to tetanus, the lecturer said that the method of immunisation of horses against that disease was practically the same as that against diphtheria. He demonstrated incidentally the excellent apparatus used by Dr. Hewlett for the culture of anaerobic micro-organisms. Two horses immunised against tetanus and yielding serum of high therapeutical properties were exhibited. Reverting to diphtheria, Dr. Ruffer pointed out that many observers had noted the extreme gravity of the cases in which the diphtheria bacillus was associated with the streptococcus pyogenes. It had struck him that were it possible to immunise horses against both diseases, the serum would possess much higher curative properties, as it would be active against both pathogenic organisms. With the assistance of Mr. Robertson, he had therefore immunised two horses against diphtheria, and then immunised them against the streptococcus pyogenes as well. Moreover, he had immunised another horse against the streptococcus pyogenes alone by the following method: It was known that the streptococcus pyogenes did not form strong toxins in the media in which it grew, and hence it was necessary to use living cultures. The difficulty connected with this method, however, consisted in the fact that streptococci soon died out in artificial culture media, and soon lost their virulence. But, by using appropriate media and making fresh cultures every twenty-four hours at least, good cultures could be obtained. The horses were first inoculated with ½ c.cm. of a culture twenty-four hours old. A slight swelling arose which disappeared in a few days, and the accompanying fever lasted a short time only. After a week or so 1 c.cm. of culture was injected, and week by week the dose was increased until a horse could stand 100 c.cm. without any more discomfort than a local swelling and rise of temperature. In no case had they ever produced an abscess, but large doses, even when frequently repeated, always produced a local reaction and fever, the difference from what was the case in diphtheria being most striking. He would leave the discussion of the therapeutic value of this serum until it had been tried in appropriate cases by distinguished clinical observers. He would point out, however, that on the Continent Roger had cured seven out of eight cases of severe puerperal fever by means of serum prepared in Bouchard's laboratory. Without wishing to claim any priority in the matter, Dr. Ruffer pointed out that Roger's method had not, as far as he was aware, ever been published. Another horse had been immunised by the same method against streptococci isolated from cases of erysipelas, and, as those present could observe, the animal was in perfect condition. It was probable, moreover, that horses immunised against the streptococcus pyogenes were also immune against the streptococcus erysipelatis, as he believed that the two organisms were identical for all practical purposes. Finally, Dr. Ruffer referred to recent work which had been done at home and abroad on the same lines against cholera, tubercle, and pus organisms. The visitors then went into the laboratories, stables, animal houses, etc., and had every opportunity of seeing that the horses and other animals were carefully attended to and in perfect condition.

Among the many festivities and hospitalities which have taken place during the meeting of the British Medical Association mention should be made of the dinner of the British Gynæcological Society, which took place in the Whitehall Rooms at the Hôtel Métropole on Wednesday, July 31st. The chair was occupied by the President (Dr. Clement Godson), and many eminent foreign and provincial guests were hospitably entertained.

The number of members who, up to 1 P.M. on Thursday, August 1st, had entered their names on the register as attending the meeting was 2,750. The number of visitors is 180, so that the total attendance is 2,930.

A small party of members, including Dr. Alfred Hill (medical officer of health to Birmingham), Dr. Oldright (Canada), Dr. Groves (Isle of Wight), and others accepted the invitation of the Corporation of London to inspect the markets and abattoirs at Deptford. The party was met by the market superintendent (Mr. Philcox), who spared no pains to explain the methods followed to protect the enormous meat supply which passes through this market. The visit was to the landing stages, of which there are three. It is possible to empty a ship of upwards 600 beasts in twenty minutes. The cattle, which have already undergone inspection at port of loading, are penned for preliminary inspection by an officer from the Board of Agriculture; after this they are penned in sale sheds and examined more carefully. In case of any doubt the beast is slaughtered specially, and more completely examined. After sale the beasts are slaughtered, and the carcass and organs examined. No animal is allowed to leave the yard alive, and no dead meat can be removed until certified sound. Tubercle to a slight amount does not involve destruction of the whole carcass. The two inspectors of the Board of Agriculture are veterinary surgeons. There are gut-cleaning works on the premises, and tripe dressing is done here also. New works are in progress to erect hanging rooms where dressed carcasses may be stored after killing, in lieu of hanging them in the slaughter house.

Mr. Sidney Young, F.S.A., Master of the Barber-Surgeons Company, received upwards of one hundred visitors interested in medical antiquities at the Barber-Surgeons' Hall on Wednesday. The company was received in the drawing-room of the Hall, and afterwards adjourned to the Court room, where Mr. Young had caused the numerous objects of interest possessed by the Company to be displayed to the best advantage. Mr. Young explained in the most interesting and impressive manner the relationship of the barbers to the surgeons, and pointed out that the Company which he then represented were really the pioneers in England of technical education. At the conclusion of his address a vote of thanks was proposed by Dr. Norman Moore and seconded by Mr. Henry Power, as representatives of the two sides of the medical profession. It was carried by acclamation, and a most interesting meeting thus terminated.

A large number of ladies and gentlemen, members of the Association, were received by the Chairman of the Council of the Sanitary Institute (Mr. A. Wynter Blyth) on Wednesday. Among the members of the Council present were Sir Douglas Galton, Mr. Rogers Field, Mr. Cutler, Dr. Newsholme, and Mr. White Wallis, secretary. The veteran sanitary engineer, Sir Robert Rawlinson, was also present. Mr. Wynter Blyth opened a discussion on The Teaching of Hygiene as illustrated by the Parkes Museum. He stated that it was founded in 1876 in memory of Professor E. A. Parkes, at first a separate institution, it found a temporary home at University College, but was removed to the present quarters in 1882. Four years afterwards it was incorporated with the Sanitary Institute. The purpose of the museum is to form a collection of object lessons, illustrating the development and recording the progress of sanitary science. No fewer than 20,000 persons annually visit this collection. During the last nine years systematic instruction has been carried on within its walls; besides the elaborate courses of lectures given under the auspices of the Institute, no fewer than forty-eight different colleges, medical schools, or societies have during the present year sent their students, the number of students reaching not far short of 1,000. Mr. Wynter Blyth then detailed the classification of the museum, and showed one or more specimens from each class. He called particular attention to a new model illustrating the flow of subsoil water presented and designed by Mr. Wallace Peggs. A series of wells are in line in a large tank filled with sand. The sand being saturated with water, a pump fixed to the centre well and put in action causes the water to sink in the wells right and left of the centre in a more or less mathematically accurate curve. Mr. Wynter Blyth concluded his address by laying stress on the technical utility of such a museum and the real use it was to architects, builders, and plumbers, besides mere students. He had shown how with inadequate resources in a modest building far too restricted in size to do justice to the subject, the Institute had maintained without any State assistance this museum and that it had proved to be of the utmost assistance in the diffusion of theoretical and practical knowledge of hygiene. The audience afterwards minutely inspected the objects in the museum, the Curator and members of Council demonstrating the use and purpose of the various exhibits.

The Honorary Librarian has much pleasure in acknowledging from Sir Joseph Fayrer, K.C.S.I., a collection of reports, transactions, and papers, which he has kindly sent as a gift to the Library.

The new Home—the Passmore Edwards House—of the National Society for the Employment of Epileptics, at the Colony, Chalfont St. Peter, Bucks, will be opened by the Duke of Devonshire on Wednesday, August 7th, at 4.45 P.M.

We regret to announce the death of Sir John Tomes, F.R.S., F.R.C.S., the well-known dental surgeon, who passed away on July 25th at the age of 80. A fuller notice of his distinguished career is unavoidably held over till next week owing to the exceptional pressure on our space caused by the meeting of the British Medical Association.

TESTIMONIAL TO SIR JOSEPH LISTER.

On July 31st Sir Joseph Lister was presented on his retirement from King's College Hospital with a portrait of himself painted by Mr. J. H. Lorrimer. The presentation was made by his past colleagues and pupils as a mark of the esteem in which he is held. The chair was occupied by Dr. W. S. Playfair, and among those present were Sir John Erichsen, Sir George Humphry, Sir George Johnson, Sir Grainger Stewart, Sir William Stokes, Professor Gairdner, Professor Macewen, and Professor Finlayson, of Glasgow; Professor Chiene, of Edinburgh; many members of the staff of King's College Hospital, and many former pupils. The Chairman said that that presentation must not be considered as a recognition of the great work accomplished by Sir Joseph Lister for humanity, a work which at some, he hoped, no distant date would call not indeed for national but for international recognition. The presentation was made merely as a small personal recognition of the affection and esteem entertained for him by his old friends, colleagues, and pupils. Sir John Erichsen, in making the presentation, referred to the enormous progress which had been made in surgery, mainly owing to the introduction, and appreciation by the profession generally, of antiseptic surgery, a boon which had made Sir Joseph Lister one of the greatest benefactors of mankind. Through it the after-treatment of wounds had been rendered so simple as to be almost painless, and so safe that the mortality from septic disease had been almost extinguished. It was not unfitting, Sir John Erichsen added, that he should have been selected to make the presentation, for Sir Joseph Lister had formerly been his pupil. That relationship had now, indeed, for twenty years been reversed, and the master had been content to sit at the feet of his former pupil. Sir Joseph Lister, who was very warmly received, sketched the steps which had led him to enunciate the theory of the antiseptic treatment of wounds. He had suspected that the septic diseases to which patients were liable after operations were due to some kind of fungus, and Pasteur had demonstrated that they were due to microbes. The success which had attended the early application of the theory to practice had been such that he had been able to convert certain surgical wards, previously notorious for the amount of disease which prevailed in them, into the healthiest in the world. He hoped that surgeons in this country would not be misled by the somewhat fascinating idea of aseptic dressings, for the very nature of some cases rendered it impossible that these should replace antiseptic dressings. It had been to him one of the chief joys of life to impart to students the principle of the noble and beneficent art of surgery, and he was extremely gratified by the testimonial which had been presented to him that day, proving, as it did, that his efforts had not been altogether in vain.

PASTEUR FILTERS AT DARJEELING.

The absolutely dependable filtration of water in India is a matter of vital importance, for the investigations of bacteriologists have proved beyond a doubt that cholera and typhoid, and most probably dysentery and malaria, are due to specifically contaminated water. There is an overwhelming body of evidence, scientific and official, that the Pasteur-Chamberland filter successfully filters off the germs. To introduce its use universally into India would be markedly to lessen the mortality from waterborne diseases. It is, therefore, very interesting to learn that the Commissioners of Darjeeling have arranged to introduce these Pasteur filters into their water mains. This, it is stated, is the largest single installation and the first application of the filter system to a town supply; and it will be a great and life-saving measure if the enlightened example of the Darjeeling Commissioners be followed all over India and in the barrack hospital establishments and gaols of that empire. These filters have stamped out typhoid in the French army.

OPHTHALMIA AT CHESTER WORKHOUSE.

For some months past this disease has been prevailing among the children at Chester Workhouse, and the guardians decided to communicate with the Local Government Board, which body sent one of their medical officers to examine and advise. On July 23rd, at the Board of Guardians, Dr. Fuller reported that it was necessary to have better accommodation for the children, and that they needed other open air exercise than that to be obtained in the workhouse yard

where the dust only added to the irritation of the eyes. He mentioned a case in London in which it cost a Board of Guardians £7,000 to stamp out an epidemic of ophthalmia through not taking proper precautionary measures at the outset. It was decided to carry out Dr. Fuller's recommendations forthwith. These included the hire of a playfield for the children, the employment of a separate nurse for the ophthalmic patients, the provision of well-ventilated wards for them, and a stimulating diet for the whole of the children in the house during the continuance of the disease.

FRENCH PEAS À L'ANGLAISE.

Some years ago we gave notes of the proceedings of a Committee appointed by the National Health Society, primarily in connection with the use of arsenical colours in wall papers, but which soon extended its scope so as to include the employment of poisonous pigments generally under all circumstances in which they constitute a source of danger to health, and drafted a Bill for regulating their use. For this purpose Mr. Ernest Hart obtained, through the courtesy of the Foreign Office and its consular agents copies of the laws in force in Germany, Austria-Hungary, Sweden and Norway, Denmark, Holland, Belgium, Italy, and Switzerland bearing on the subject, which, translated by Dr. E. F. Willoughby, the Secretary of the Committee, were published as a Parliamentary paper. The Bill shared the fate of most of those introduced by private members—it was read a first time and shelved. Ten years have since passed by and nothing has been done, Great Britain still maintaining the same attitude of indifference as Spain, Portugal, Russia, and Greece, since even the Danubian States have adopted the German or Austrian regulations. France, however, held, and still holds, the unique position of a Government, which, while exercising a certain care over the health of its own people cynically ignores or exempts from interference the employment of poisonous pigments in articles of food or domestic use intended for exportation, that is to countries which, like ours, are willing to accept them. Foods alone are subjects of legislative control among ourselves, if, indeed, the occasional seizure of a sample and the infliction, still more occasionally, of a paltry and quite insufficient fine merits such a description. It is notorious that the preserved peas and other green vegetables so largely imported from France are coloured with copper salts, but it has been constantly urged in extenuation that the quantity employed is too small to exert any toxic or injurious action. But since it has been shown in a report of a subcommittee of the Glasgow Corporation that some samples of peas examined contained no less than 15 grains of copper sulphate in the pound this position cannot seriously be maintained. Indeed the dangerous character of such admixture is admitted by the French Government and manufacturers, since they are illegal in that country and are designated in the trade as *petits pois à l'Anglaise*. May we be so sanguine as to entertain the hope that the present Government may be induced to take up a question of such importance as one of the social reforms which will engage its attention?

MEDICAL MEN IN THE NEW PARLIAMENT.

The returns of the elections show that there are but few members of the medical profession in the new Parliament. Sir Walter Foster, so long a warm champion of medical interests in the House, has again been returned for the Ilkeston division of Derbyshire; and the electors of East Norfolk, despite that their suffrages were ardently wooed by Mr. Rider Haggard, have again returned Mr. R. J. Price. As, however, Mr. Price is a barrister and does not practise as a surgeon, he can only count as half a representative of the profession, unless, indeed, the eloquence acquired by practice at the bar entitles him to be considered as the more qualified to speak on behalf of his earlier love. Scotland again gives us two representatives in Dr. Farquharson, the Liberal member for West Aberdeenshire; and Dr. Clark, the member for Caithness-shire, who, though opposed by "a Crofter candidate," has had as good crofter support as ever, and should, politics apart, continue to be a guardian of medical interests, which, like Dr. Farquharson, he so well understands. Ireland contributes relatively the largest contingent of medical members. She again sends Dr. J. F. Fox as the Nationalist representative of the Tullamore Division of King's County; Dr. Tanner, as the Nationalist member for the mid division of Cork County; Mr. M. A. MacDonnell (formerly surgeon to the Liverpool Cancer and Skin Hospital, and consulting medical officer to the Toxteth Infirmary) as member for Queen's County (Leix Division); and Mr. R. Ambrose, this time as member for West Mayo.

THE DANGEROUS CONTAMINATION OF OUR EVERY-DAY MILK SUPPLY.

The third of the series of special reports on the London Milk Supply, which appears in the current number of the British Medical Journal, contains some very valuable and interesting material, of importance not only to those engaged in catering for our daily supply, but also to every one of us who daily consumes this important article of food. In the course of a bacteriological examination, which has been made at the request of the Editor, by Mr. Sydney Rowland, it appears that the dangers to be feared from milk are not so much the graver one of epidemic disease, although this is a frequent and serious danger, as the daily risk all milk drinkers run from the large number of micro-organisms found. These are for the most part such as would be derived from the use of dirty utensils and unclean surroundings. Thus the particular organism which is found in greatest abundance is the bacillus coli communis—the common inhabitant of all sewage matter. The average number of micro-organisms found rises as high as 500,000 per cubic centimetre, of which 90 per cent. consist of this variety. There can be no doubt that this form finds its way into the milk from the unclean bodies of the cows, and from the polluted air of the stables and stalls in which the milking is too often carried on. In addition have been found many organisms which, although of wide distribution, nevertheless have no right to exist in milk as used for food. Such are the common varieties that cause putrefaction. The significance of the bacillus coli communis is daily becoming more important, and its determining action in many cases of infantile diarrhœa is now certain, not to mention many intestinal diseases and summer complaints which are of frequent occurrence. The suggested reform, which it is thought would largely if not altogether safeguard against these everyday dangers, would not be difficult to put into practice, and ought to be enforced by legislation. Thus it is suggested that milking should be carried on in the open air, a precaution which every dairy farmer could easily carry out. In fact, all the suggested remedies point in the direction of absolute cleanliness, not only in the milking, but also in the subsequent conveyance to and sojourn in the shop of the retail vendor. It is not too much to expect such very easily adopted means to be carried out, or if necessary enforced, more especially, as the author points out, such precautions would have an equally salutary effect in times of epidemic disease of serious gravity.

Cholera.—The Turkish pilgrims have just left Tor after having been disinfected and having undergone fifteen days' quarantine. A necropsy on two pilgrims who died during the passage from Jeddah to Tor showed anatomical lesions of true cholera, and bacteriological examination showed that these were authentic cases. These are the only cases reported, but have resulted in the enforcement of the quarantine regulations in all their severity, including the disinfection of all baggage. As the present state of Medina is satisfactory, pilgrims travelling from Medina to Yambo will only have to undergo four days' observation.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING.

THE SECTIONS.

BRIEF SUMMARY OF PROCEEDINGS.

Wednesday, July 31st.

In the following pages we present a series of brief notes indicating the general character of the proceedings in the Sections. These have been furnished to us by our reporters in the various Sections, with the kind co-operation of the Honorary Secretaries of Sections. Fuller reports of the proceedings, together with the original papers read, will be published in later issues of the JOURNAL.

SECTION OF MEDICINE.

THE President, Dr. Pavy, opened the proceedings in this Section by an address, in which he described the progress in medicine due to the discovery of the causal relationship existing between micro-organisms and certain diseases, enlarging upon the immense effect that this had had upon the question of treatment, and upon the control that could be exercised upon the spread of infectious diseases. He briefly touched upon the serum treatment of diphtheria. The theatre rapidly filled whilst the President was speaking, and by the time Dr. Sidney Martin rose to introduce the discussion on Diphtheria and its Treatment by the Antitoxin the place was crowded with an audience which, throughout the subsequent debate, showed the keenest interest in the proceedings. Dr. Martin commenced by stating that there had always been two schools of therapeutists with regard to the treatment of diphtheria, the one trying to discover some local application which would loosen or remove membrane in the throat, and the other to provide a remedy that would act upon the general symptoms of the disease. The want of success in the past made it essential, in his opinion, to examine most carefully into any new method of treatment suggested, and to submit it to a most rigid scientific inquiry before accepting it. The antitoxin treatment, he stated, had been studied with the greatest care, and its recommendation was based upon the results of a consideration of the pathology of the disease. He showed a series of charts which brought out the following facts in the most striking manner. Intravenous injection of toxin of diphtheria in successive doses into rabbits caused the temperature to become irregular, with wasting, paralysis, and finally death of the animal: the intravenous injection of antitoxin alone caused but little result upon the body temperature, and no loss of weight—in fact, seemed to be innocuous; the intravenous injection, however, of toxin and antitoxin at the same time resulted in the almost complete absence of the symptoms set up by the toxin alone, the only harmful effect being slight nerve degeneration. Dr. Martin next described the effect of the intravenous injection of albumoses obtained from the spleens of patients dying of diphtheria alone, and of these albumoses together with antitoxin. Finally he emphasised the very great importance of the fact that in animals subjected to the antitoxin treatment there was absolutely no sign of fatty degeneration of the heart, and that hence it might be expected that in the future there would be fewer diphtheria patients dying from heart failure. Dr. E. W. Goodall spoke on the clinical aspects of the serum treatment, and expressed himself as of opinion that it is the best form of treatment we have. The discussion was continued by Dr. Johnston (Glasgow), who gave some interesting statistics; but by this time the meeting was beginning to become less enthusiastic than it had been. However, the next speaker, Professor von Ranke (Munich) quite galvanised his audience into new life by the fervid support he gave to the serum treatment. He stated that whilst in 1892 he had in his hospital a mortality of 56·2 per cent., in 1893 of 46 per cent., and in 1894 up to September 24th, when he had commenced the serum treatment, one of 57 per cent., since that time his death-rate had been reduced to 17·7 per cent. He further considered that not only was the reduced death-rate due to the injection of antitoxin, but that the course of the disease was favourably influenced in the most striking manner. Dr. Ranke was followed by Mr. Lennox Browne, who traversed some of the statements made by previous speakers, but did not add much to what he has already published upon the subject. Professor Baginsky, of the Empress Frederick Hospital, Berlin, though not speaking with the high enthusiasm of Dr. Ranke, yet gave equally startling figures, stating that whilst the mortality in the four years previous to 1895, had been on the average 41 per cent. under the old system of treatment, during the last year, under the serum treatment it had been reduced to 15.6 per cent. Dr. Sims Woodhead spoke briefly upon the importance of using large doses of serum, and concluded by quoting some Paris statistics which were highly favourable. Dr. Hermann Biggs (New York) then gave a most interesting account of the immunising effect of the serum, quoting figures to show that in almost all cases the immunising power of the serum extends to a period of thirty days. He further stated that out of 800 healthy children who had received injections, he had not seen a single case in which any harm had resulted from the treatment. The discussion, which had been marked by the extreme interest manifested in the subject by the members present, was brought to a close by Mr. Campbell Hall, who as the result of his experience stated that he would not feel justified in treating a diphtheria patient in any other way than by the serum method as long as serum could be procured. Dr. Dreschfeld next read his paper upon Ataxic Paraplegia. This and the following paper by Dr. Beevor and Professor Horsley did not give rise to any discussion. Dr. George Murray then read a paper on Myxœdema and Thyroid Extract, which gave rise to some remarks. This was followed by a paper by Dr. Samuel West, in which the value of uranium nitrate as a drug for the treatment of diabetes was considered with great care, and the conclusion arrived at that it is the most powerful drug we possess in this disease. Professor Hanot read a most interesting paper upon *Diabète Bronzé*, in which he described a condition that as far as we know has not been previously mentioned in this country. Mr. Colin Campbell spoke briefly upon the value of Intrapulmonary Medication, his remarks giving rise to a discussion in which Mr. Hollwright, Dr. Murray Leslie, and Dr. Wilberforce Smith joined.

SECTION OF SURGERY.

THE first day's proceedings in the Section of Surgery were of unusual interest. The three addresses treated of widely removed subjects, each essentially modern in its development; the discussion, on the other hand, reopened a question of very long standing, and was worthily introduced by the greatest representative of the school which has made its theme classical. Sir William Mac Cormac's Presidential address, with which the meeting opened, was a model of terse and lucid exposition, charged with the weight of authority and yet balanced with the nicest discrimination. It is published on p. 278. Sir William Stokes introduced a discussion on the Diagnosis and Treatment of Fractures of the Upper Third of the Femur. After insisting on the importance of the fibro-synovial envelope of the neck, brought forward a classification of fractures through and in the neighbourhood of the neck, based on the presence or absence of penetration or impaction. He endorsed Sir George Humphry's view that the angle between the neck and the

shaft was normally unaffected by age, and held that osseous union might normally take place in four out of the five forms of fracture of the cervix femoris. The principles of treatment which he laid down were fixation, rest, and moderate extension. A most interesting debate followed. Sir George Humphry stated his belief that a fracture in any part of the skeleton at any time of life will unite if the parts are kept in apposition. The general opinion, as expressed by Mr. Bryant, Dr. Greig Smith, Mr. Mayo Robson, and others, was that the treatment in young patients should be modified by reducing the impaction so as to obviate the deformity. Sir William Hingston (Montreal) stated that the results as regards union and absence of shortening mentioned by Sir William Stokes were much better than he was accustomed to find, and Mr. Gant said a few words on the difficulties of diagnosis. Surgeon-Colonel Keegan's demonstration on Rhinoplasty in India illustrated the excellent results which the operation he has devised gives, even in long-standing cases, when the lesion is traumatic and not the result of disease. The meeting concluded with an extremely original paper by Dr. Kendal Franks on Movable Kidney. He contends that the normal kidney is wedged in between the liver above and the intestines below, and that any disturbance of the balance between the two will, especially if repeated, draw the organ out of place. The symptoms he considers to be due mainly to the kinking of the duodenum on the right side or the colon on the left resulting from the renal displacement.

SECTION OF OBSTETRIC MEDICINE AND GYNÆCOLOGY.

THERE was a large and representative attendance at the meeting of the Section of Obstetrics and Gynæcology, held in the Large Theatre at King's College, when the proceedings commenced at 10 A.M. Sir William Priestley's address, which is published at p. 284, was well received. A cordial vote of thanks to the President was moved by Professor Lusk (New York), seconded by Professor Martin (Berlin), and carried by acclamation. A discussion on the Aseptic and Antiseptic Precautions to be observed in Private Midwifery Practice was then introduced by Dr. Herman. A very interesting and full discussion followed, in which Dr. Stuart (Brooklyn), Professor Lusk, Dr. Smyly, Dr. Swayne, Dr. Playfair, Professor Byers, Professor Murdoch Cameron, Dr. More Madden, and others took part. A paper by Dr. Apostoli (Paris) on Electro-therapeutics as a Means of Diagnosis in Gynæcology was read by the Honorary Secretary. This was discussed by Dr. Franklin Martin (Chicago). Papers by Dr. More Madden on Gonorrhœal Infection in some of its Gynæcological Aspects, and by Dr. Murphy (Sunderland) on The Surgical Treatment of so-called Puerperal Fever followed, and both of these excited a very full and complete discussion.

SECTION OF PUBLIC MEDICINE.

THE proceedings in this Section, which was attended by a large number of medical men in public offices, most of them holding appointments as medical officers of health over large districts, were opened by Mr. Ernest Hart, who delivered the address, which is printed at page 287. The following resolution, proposed by Dr. Grove, M.O.H. (Newport, Isle of Wight), and seconded by Brigade-Surgeon Pringle, was carried unanimously: "The Public Health Section of the meeting of the British Medical Association begs to recommend that representations be made to the Secretary of State for India as to the utter inadequacy of the present sanitary administration of the Government of India to give the most elementary protection to the public health of the inhabitants of Her Majesty's Indian Empire, and that a copy of Mr. Hart's address be forwarded to the official authorities at home and in India, requesting their attention to the points urged therein, and the appointment of a Royal Commission or of a Departmental Committee." Dr. Legg opened a discussion on the Regulation of the Slaughter of Animals for Human Food, in which he emphasised the evils apparent in the present system. In reply to many speakers, he pointed out that there was no power at present to close private slaughterhouses wholesale either in London or provincial cities and towns. London, however, had it in its power to close any private slaughterhouses whose use was objectionable or undesirable by the non-renewal of licence. Provincial cities and towns could acquire the same powers by the adoption of the Public Health Amendment Act. In both cases the circumstances of each individual slaughterhouse had to be considered separately. In rural districts, unless the sanitary authority had obtained urban powers, there was entire absence of control over private slaughterhouses. Provincial cities and towns had, but London appeared not to have, power to erect abbatoirs. On the motion of Dr. Newsholme (Brighton), a resolution was passed urging the Government to appoint a Commission to inquire into the whole question of meat supply and inspection. Papers on the same subject were read by Dr. R. S. Marsden (Birkenhead) and Dr. Sykes (St. Pancras). A discussion on Sewer Ventilation was initiated by Mr. J. Parry Laws, F.I.C., who maintained that instead of sewage being a favourable soil for the growth of typhoid bacilli, it gradually but surely exterminated them. Dr. Neech (Atherton) followed with a series of interesting experiments to show the movements of air in sewers. The subject was continued by Dr. Oldright, Dr. Davis, Dr. Haughton, Dr. Bond, Dr. Groves, and Dr. Hill. A paper by Dr. Waldo and an interesting account of Urine Experiments by Dr. G. V. Poore brought to a close a most interesting morning's work.

PSYCHOLOGICAL SECTION.

THE meeting of this Section on Wednesday was well attended. The President, Dr. Mackle, opened the proceedings with a few remarks welcoming those present, and then read his address on Abnormal Forms and Arrangement of Brain Convolutions, which was received with much applause. Dr. Rayner next opened a discussion on the Treatment of Melancholia, dwelling especially on rest, outdoor exercise, feeding, and hypnotics. He said that rest was indicated where there was loss of nutrition, but that it was harmful in many cases when combined with isolation, as in the Weir-Mitchell treatment. In other cases outdoor life, light clothing, cold baths, and regularity of meals proved most beneficial. A sea voyage or travelling was often now-a-days resorted to, but it must be remembered that there is an element of danger in a long voyage, both from the fact that the result of a change to the patient is unknown, and that there is a constant danger of suicide in melancholics. Some cases, he said, were best treated at home, but each case must be decided on its own merits. Some had said that forcible feeding need never be resorted to, but he considered it better to err on the side of over- rather than under-feeding. In his experience he seldom found it necessary to treat the insomnia of melancholics with hypnotics, and he mentioned that the experiments of Binz, of Bonn, rather tended to show that such drugs were injurious to the brain cells. With regard to other treatment, he laid great stress on close attention to all parts of the alimentary tract. In the discussion which followed, Dr. Fielding Blandford entered chiefly into the question of change of scene. He was sceptical about the advantage of a sea voyage, and thought that hypnotics were often very beneficial. Professor von Benedikt thought that often the use of narcotics made patients much worse and prolonged the disease. He also spoke in favour of the use of the galvanic and faradic currents applied to the spine in cases of melancholia, especially cataleptics. Dr. Norman Kerr thought a sea voyage with suitable companionship often beneficial. For sleeplessness he often had recourse to the hot and cold wet pack, and thought the best drug perhaps was phenacetin. The following gentlemen also spoke, and will be more fully reported later: Dr. Clouston,

Dr. Nicolson, Dr. Weatherly, Dr. Batty Tuke, and Dr. Eliza Dunbar. Dr. Rayner briefly replied. Dr. H. Head next read a paper on Mental Symptoms in relation to Bodily Disease in the Sane, in which he pointed out the results from a large number of observations on cases of visceral disease, in regard to associated mental change. With visceral disease is associated scalp tenderness, and according to the area of scalp tenderness the mental change varies more or less. Dr. E. S. Reynolds then read a paper on Mental Symptoms of Bodily Disease, which consisted of the enumeration of the different mental conditions associated with various diseases. His facts seemed to show that the mental change varied with the morbid condition, according as the disease was one of the lung or other viscera, or as it depended on the presence of an organic or inorganic poison. Mr. A. Maude also read a paper on Mental Symptoms in relation to Exophthalmic Goitre. These three papers were then discussed briefly by the following gentlemen: Dr. Urquhart, Dr. Harry Campbell, Dr. Mickle, Dr. Clouston, and Dr. Rayner.

Section of Physiology.

The Section of Physiology was opened by Dr. Ferrier with an Introductory Address given in the Physiological Laboratory of King's College. The Section was well attended, for in addition to many English physiologists several visitors from abroad were present, notably Professor Hamburger, Professor Stokvis, Professor Heymans, Dr. Mellus, and others. Taking as the subject of his address the relationship in which physiological and clinical work stand to one another in a general advance of either subject, Dr. Ferrier pointed out, by taking specific examples, how largely recent progress had been effected by a thorough and accurate combination of results attained by the two methods. Thus he mentioned how experimenting on animals, and from a physiological standpoint, Professor Sherrington had succeeded in mapping out a whole series of skin areas in relation to segmental regions of the spinal cord. Further, from the clinical side Dr. Head had attained great success by a thorough study of herpetic areas and areas of referred pain in showing the relationship of thoracic and abdominal viscera to spinal segments. Dr. Ferrier pointed out how great were the difficulties encountered by the clinical worker, as the cases he had to unravel were so complex and at first sight contradictory; yet in so many instances, so soon as physiological work could be brought to bear upon them, order soon appeared among the mass of facts which had been accumulated. Moreover, that working under the comparatively simple conditions produced by experiment, physiologists were in a far better position to criticise and throw light upon the obscurer facts of clinical work. To many physiological problems, however, an answer could only be finally obtained as a result of clinical study, and he therefore particularly emphasised the necessity of a worker in either branch being at the same time thoroughly trained in the other. Before the work of the Section was continued, Professor Michael Foster thought it would be fitting that the Section should express the pleasure they had experienced in listening to the address, and a resolution to this effect, seconded by Dr. Lauder Brunton, was carried with applause. Dr. W. H. R. Rivers then demonstrated two pieces of reaction-time apparatus for studying "choice-time" and "association-time." These times were measured by a chronoscope, so arranged as to be started by the closing of a current by the experimenter, and stopped by the opening of that current by the one experimented upon. In the first case the choice lay between the opening of one of the electrical keys. The second form of apparatus consisted in suddenly presenting a written word which was to call up some associated word, the time interval between the two being measured. Professor de Burgh Birch next showed some new forms of physiological apparatus which he had designed for the new laboratory at the Yorkshire College, Leeds. These were illustrated by pieces of apparatus and by lantern slides showing the arrangement of the working tables and apparatus in the laboratory. Dr. Edridge-Green brought forward some experiments from which he argued that the yellow spot was not the most sensitive portion of the retina. Professor Bowditch, in some remarks made upon this communication, said that it seemed that most of these experiments appeared to be explained on the old view that the yellow spot was the most sensitive for form or outline, but the more lateral portions of the retina possessed a higher sensitiveness to luminosity. Dr. Marinesco next read a paper upon Tertiary Atrophy and Degeneration of the Central Nervous System. Foul, v. Mansakoff, Darkewitch, and the author have brought forward facts which indicate that when the continuity of a nerve is broken, not only the central end undergoes a process of atrophic degeneration, but that this even oversteps the first neurose, and even in some cases the second, or a third. He considers the mechanism which determines the lesions of these neuroses to be of a reflex nature, and that, therefore, the Wallerian law should be altered, and for it "the trophic theory of functional afferent and efferent excitation," first put forward by the author in 1892, should be substituted. Dr. W. A. Turner read two papers, the first showing the Absence of Trophic Influences exerted by the Fifth Nerve upon the Cornea, and a second giving a short account of the Results of Lesions of Tuberculum Rolandi. Dr. William Hunter believed that he had, as a result of comparative experiments showing the action of toluylene-diamide upon intact animals and animals in which the spleen had been removed, been able to show that the spleen had a great influence as a blood-destroying organ. Dr. E. C. Mellus then showed some lantern slides illustrating Degenerations following Minute Lesions of the Cortex Cerebri, and the meeting then adjourned till the following morning.

Section of Anatomy and Histology.

The Section of Anatomy and Histology was opened by an address by the President, Henry Morris, M.A., F.R.C.S. The President stated that this was the first time that a separate section had been made for anatomy at the meetings of the Association, and on this account he thought that it would have been better if the chair had been taken by a professor of anatomy. Formerly when papers on anatomy were given they were included in the Section of Physiology. Anatomy was not to be considered as a limited science which could advance no further. In its wider sense anatomy included histology, embryology, and morphology, and when thus understood it was comprehensive enough to occupy much of the daily life of many different sets of workers. The anatomy of the brain and nervous system had been almost rewritten during the past eight or ten years. The amount of knowledge which the student of medicine had to acquire in order to gain a diploma is at the present time enormous, and on this account the President agreed with Huxley's saying that "whoever adds one tittle that is unnecessary to medical education is guilty of a very grave offence." Professor W. Anderson, in opening a discussion in Art, its Relations to Anatomy, laid three considerations before the meeting: First, the debt that anatomy owes to art; secondly, the advantages that artists may derive from a scientific knowledge of anatomy; and thirdly, the extent to which artistic methods of observation may profit ourselves in the medical study of anatomy. A brief history of the rise of artistic illustration in its relation to anatomical teaching was given, and was illustrated by lantern pictures, which were taken from anatomical treatises from the time of Berengarii da Carpi to the present day. The great artists of various periods were discussed and compared, and the anatomical details which were apparent in their works criticised. The comparative value of the different methods which have been adopted in various ages in the reproduc-

tion of anatomical pictures was considered. In the latter part of the paper the methods of teaching anatomy, and its importance in the education of the medical student, were fully dealt with. Professor Anderson advocated the use of dissected specimens by students of anatomy, and said that much valuable time was wasted by the student in dissecting parts of the human body, from which he was expected to acquire a good knowledge of the science of anatomy. In many cases these dissections were badly done, and as a result the student was induced to learn exact anatomical details by committing to memory statements in textbooks. A long discussion followed, in which Mr. Ellis, Dr. M. Griffith, Dr. Payne, Professors Keen, Thane, and Thomson, Mr. Cooke, Mr. Black, and the President took part, after which Mr. Anderson replied. Dr. J. F. Payne read a paper on an unpublished English Anatomical Treatise of the Fourteenth Century, and its Relation to the Anatomy of Thomas Vicary. The manuscript contained an incomplete treatise of anatomy, and a short treatise on the anatomy of the human body. The work was said to be by an English surgeon, whose name is not given in the work, which was dated 1392. Dr. Payne said that from the writing, the substance, and the language of the work that it clearly had been written during the latter part of the fourteenth century. Professor Anderson and Dr. Payne exhibited a collection of old Anatomical Treatises among which were examples of Bidloo, Browne, Remmelin, Vesalius, Duval, Vicat, Cowper, Cotter, Mundini, Highmore, Duverney, Godifridi, Camper, Eustachius, Spigelius, and Cheselden.

Section of Pathology and Bacteriology.

The Presidential Address was delivered by Dr. Samuel Wilks, F.R.S. In the course of his remarks he drew attention to the fact that every pathological process is accompanied by a corresponding reparative process, and lamented that as a teacher of pathological anatomy he had not paid sufficient regard to the distinction between these constructive and destructive processes. To study these for the sake of discovering the several influences exerted in the production of each is of great practical import; and a consideration of them also shows that pathology is governed by the same laws as those which exist in every other department of Nature, and therefore must take its place on an equivalent footing with the other sciences. Dr. P. Manson opened the proceedings proper by a demonstration of the Malaria Parasite accompanied by a paper dealing more especially with the life history of the parasite outside the human body. Having just pointed out the analogy between the filaria and the parasite he proceeded to show how it was probable that the intermediate host was the mosquito. This subject had been investigated at his suggestion by Surgeon-Major Ross, of Secunderabad, and with striking results, which made it extremely probable that the mosquito, as suggested by the author, is the intermediate host in question. Dr. Thin opened the discussion on this very interesting paper by offering some objection to Dr. Manson's hypothesis, and after some remarks by the President and a question on the presence of the organism in *post-mortem* conditions, Dr. Manson replied. In the course of his reply, he remarked that while there were undoubtedly many objections to his theory, yet he hoped that with the more complete investigation of what was as yet an entirely new field, these could be removed. Dr. Risien Russell then read a paper on Some Congenital Defects of the Cerebellum, and was followed by Dr. Foxwell's account of an acute case of exophthalmic goitre which had recently come under his care. Dr. George Murray, in his communication on the Effects of Thyroidectomy in the lower animals, drew attention to the similarity of the effects observed in rabbits after this operation to the symptoms of myxœdema in man. His paper was illustrated by lantern photographs showing the apathetic condition of the animals operated upon, and the swelling of the neck and skin lesions, all of which he remarked were analogous to the similar effects observed in man. After the paper Drs. Lorrain Smith and Auld put questions relating to the details of his experiments, which were replied to by the author. Dr. Robertson's paper was at this point handed in and taken as read. It dealt with the Pathology of the Subdural Membrane, and will be more fully reported later. Mr. Targett next proceeded to give an account of some cases of syringomyelia recently under his care, and pointed out the similarity of the joint lesions met with in this disease to those so characteristic of locomotor ataxy. He also drew attention to the other lesions met with, namely, trophic skin changes, muscular atrophy, and the curious nervous disorders, among which the condition of insensibility to pain and sensations of heat, with the persistence of commoner sensations, are the most remarkable. After a short paper by Dr. Robertson on Arachnoid Hæmorrhage, the Section proceeded to the consideration of the long list of papers dealing with Cancer. Dr. Braithwaite opened the discussion by giving at length an account of his discovery of a mould as the exciting cause of this disease. His histological observations were stated by Mr. Shattock, Mr. D'Arcy Power, Dr. Russell Wells, and Dr. Bousfield to have been entirely based on misconception. Dr. Hewlett read his paper on Ehrlich's Diazo Reaction. He finds that the micro-chemical reactions of the so-called cancer parasites are wholly unlike those of the eosinophilia with which they are usually associated. Mr. Blake then read his paper on the Occurrence of Cancer in Chalk Valleys, and was followed by Dr. Herbert Snow on the Insidious Marrow Infection of Mammary Carcinoma. Dr. Snow drew attention to the danger of such infection being passed over undiagnosed, as it might very easily do, the symptoms being ill defined. Dr. Braithwaite here replied to the criticisms which had been brought against his paper, and concluded by explaining Dr. Snow's cases as bearing out the hypothesis of cancer being a waterborne disease. Dr. Kelynack's paper on the Occurrence of Cancerous Change in Simple Ulcer of the Stomach was here handed in and taken as read, and the proceedings terminated with the exhibition of a Larynx from a Case of Typhoid Fever and a short summary of Dr. Bousfield's work on the Cancer Process, illustrated by some very beautiful microphotographs of his specimens, taken by the author, and projected on the screen.

Section of Ophthalmology.

In welcoming the members of this Section, the President remarked on the work that had been done by the founders of ophthalmology in the past, and the gradual formation of a scientific branch of medicine, whose methods of diagnosis and treatment were fortunate in being founded on pure science. Owing to its intimate relations with the other branches of medicine and surgery there was no danger of its separating from the parent stem and becoming barren; at the same time he advocated a sounder education in the sciences on which ophthalmology was established, such as mathematics and physics, being required of all candidates for ophthalmic posts in hospitals. Dr. Benson (Dublin) read a paper on Acromegaly with Ocular Complications, which presented some peculiarities; it was discussed by Drs. Meyer and Panas (Paris), Dr. Little, Mr. Swanzy, Professor Fuchs (Vienna), Dr. Hill Griffith, and Mr. Snell. The discussion of the day was opened by Professor Fuchs (Vienna) on a recurrent form of ophthalmia, for which he proposed the name "episcleritis periodica fugax," which occurred chiefly in males, ran a course extending over many years, rarely became serious, and which was scarcely at all benefited by treatment. The discussion was continued by Messrs. Berry, Emrys-Jones, John Griffith, Hern, and Walker. A paper on the Injection of Chlorine Water into the Vitreous followed, in which Dr. Berry advocated this form of treatment in cases of threatening suppuration of the

globe; remarks were made by Dr. Argyll-Robertson and Mr. Nettleship. Dr. Ball (Paris) next read a paper on Optometry by the Subjective method, and Dr. MacGillivray a paper on Hereditary Congenital Nystagmus associated with Head Movements, which was discussed by Dr. Lloyd Owen, Messrs. Snell, and G. Walker. A new form of tonometer was described and demonstrated by its inventor, Dr. Koster (Utrecht). Mr. Lee then read a paper on a case of Pemphigus of the Conjunctiva; Professor Gayet (Lyons) showed a series of photographs of cases of Strabismus, before, during, and after treatment, and advocated the use of such records as valuable in determining the effect brought about by the treatment. The business of the day was terminated by a paper on Choroidal Sarcoma in Children by Mr. John Griffith.

Section of Diseases of Children.

The Section for the Diseases of Children met at King's College. The subjects for discussion included Congenital Syphilitic Manifestations in Bones and Joints, introduced by the President of the Section, and the Treatment of Hernia in Children. There was a very good attendance of members, and, the subjects being mainly of a surgical nature, many well-known surgeons contributed to the discussion. The President, in opening the proceedings, gave a short review of the work done by the Section in past years, which, though including a very wide range of subjects, had still left undiscussed a large number of most important questions of disease as occurring in children. He was in hopes that a Section of such importance as this had established a permanent place in the proceedings of the Association. The President then opened the discussion on Congenital Syphilis of Bones and Joints with a highly interesting paper in which, after alluding to the researches already made in this country, he proceeded to discuss the pathology and clinical features of the atrophic and osteophytic varieties of the disease. The relation of rickets to congenital syphilis was also very fully discussed, especially with reference to the causation of cranial bosses and cranio-tabes, and to the occurrence of chronic effusion into joints. Other speakers were Mr. Frederic Eve, who continued the discussion of these last-mentioned points; Mr. D'Arcy Power, who quoted instances showing the difficulty of diagnosis between syphilitic and tuberculous joint disease; Mr. H. B. Robinson, who discussed the order in which changes in the bones begin to appear; Dr. Thomas Barlow, who laid stress on the modification effected in cases of rickets by the existence of congenital syphilis; and Mr. H. Stansfield Collier, who described three cases of syphilitic effusion into joints unaccompanied by any previous bone disease. Mr. Rushton Parker (Liverpool) read an interesting paper on the Treatment of Hernia in Children. During the last four years he had operated on 40 cases, all males, and all for inguinal hernia, in some cases double; out of these he had had two fatalities. He preferred not to operate if the patient was under 6 months except in urgent cases. He considered the chances of recurrence in children very small. He advocated Macewen's operation as the most secure if not the easiest method. He laid great stress on prolonged rest in the recumbent position after operation—in children over 6 years, six weeks. Mr. C. B. Lockwood emphasised the difficulty of completely separating the sac from the spermatic cord in young children. Mr. John Langton advocated treatment by truss only in a large majority of cases. Professor William Macewen spoke of the impossibility of dealing effectively with hernia in hospital practice by means of a truss—an opinion which was endorsed by every speaker present. He considered the delicate tissues of children were quite reliable for this operation, and in about thirty cases operated on by him had met with perfect success. Dr. Ward Cousins considered the operation in children over 12 months old eminently satisfactory, and gave an interesting account of his own method of procedure. Mr. J. Maccready, Mr. F. A. Southam (Manchester), Mr. H. P. Symonds, Mr. Reginald Lucy (Plymouth), Mr. Damer Harrisson (Liverpool), and Mr. H. Waterhouse all contributed to a highly interesting discussion, which included methods of operation, kind of sutures, dressings, etc., advocated by each speaker. The President referred to the frequent occurrence of strangulated hernia in young children. A case of congenital syphilis of the tongue was shown at the conclusion of the meeting by Mr. Jackson Clarke. The speeches were throughout followed with the greatest interest by those who attended the Section, and it was agreed that the meeting was one of the best that has so far been held.

Section of Otology.

Sir William Dalby, in opening the Section, referred to progress made in otology since the last meeting, and spoke hopefully of the future for aural surgery. He showed a case of Objective Tinnitus in a young lady, where a grating sound synchronous with the pulse could be very distinctly heard by direct auscultation. Mr. Cresswell Baber mentioned a similar case where he thought the sound was probably muscular. A discussion on the Treatment of the Various Forms of Nerve Deafness, was opened by Dr. Dundas Grant. He rapidly enumerated the various forms of disease of the labyrinth, the auditory nerve, and the auditory centres, and insisted on greater precision in their diagnosis. The means of treatment at our disposal were reviewed, and their indications explained. He concluded with regard to pilocarpin, that it was of benefit in recent exudations into the labyrinth, but comparatively useless in those of old standing. He had only once seen any improvement in hereditary syphilis from its administration. Galvanism was found beneficial in functional deafness, and in uncomplicated nerve deafness from habitual exposure to noises. Dr. Lewis Jones, in reference to the Treatment of Nerve Deafness by Electricity mentioned by Dr. Grant, pointed out that it is difficult to say at present how far we can vary the nutrition in sensory end organs by electricity; but, on the other hand, the nerve trunks appeared to respond well to this treatment, some cases of neuritis being distinctly improved. With a more perfect knowledge of nerve deafness we shall probably be able to sort out favourable and unfavourable cases for electrical treatment. Dr. Macnaughton Jones, in a paper on Some Etiological Considerations on the Treatment of Nerve Deafness, pointed out the frequency of middle ear disease complicating disease of the internal ear, and raised the question how far we are justified in classifying a case as nerve deafness. He had not found any good result from pilocarpin or electricity. Dr. Thomas Barr pointed out the importance of the question of middle-ear disease in nerve deafness; he agreed with Dr. Macnaughton Jones in his experience of pilocarpin. Dr. Edward Law raised the question as to the advantage of Mercury in Cases of Old-Standing Syphilitic Deafness; he had found little improvement as far as the deafness was concerned from either it or pilocarpin. Dr. Milligan had found little result from any form of treatment when the auditory nerve was really involved. Mr. E. H. Bennett mentioned three cases of improvement under pilocarpin. Dr. Waren (Birmingham) stated that he had used pilocarpin with little result in some cases. Dr. Macnaughton Jones agreed with Dr. Grant that pilocarpin might be of use in some cases of recent labyrinthine effusion. Mr. G. W. Field, continuing the discussion, believed that if suitable cases are chosen good results will be obtained from pilocarpin. Sir William Dalby mentioned, with regard to the treatment by quinine, that care should be exercised in its administration, in some cases the deafness being increased. Dr. Milligan (Manchester) read a paper on Tuberculous Disease of the Middle Ear, pointing out that most probably primary tuberculosis of the middle ear was more frequent than had hitherto been supposed. Cases of painless perforation of the membrane with discharge, and especially

if complicated with facial paralysis, were usually tuberculous. He made inoculation experiments on guinea-pigs with the pus from a series of mastoid operations, and found evidence of tubercle in eight out of ten (80 per cent.) The paper was illustrated with drawings, dissections, and microscopical preparations. Dr. T. Barr (Glasgow) followed with a paper on the Treatment of Intractable Suppuration of the Middle Ear by Operation through the Mastoid. He strongly advocated the use of the globular dental burr in the operation, followed by the gouge, the clean surface left by the burr being of great advantage in estimating the depth and direction. He had generally found that the time from the operation to the total cessation of discharge was from two to eighteen months. Dr. Bronner (Bradford), in a paper on Five Cases of Attic Disease Treated by Modified Stacke's Operation, advocated the thorough exploration of the attic and mastoid cells in cases not yielding to ordinary treatment. Dr. Urban Pritchard recommended the sharp spoon in cases where the bone is soft, as in tuberculous cases in young children; the burr, however, might be better in cases of adults where the bone is sclerosed.

Section of Pharmacology and Therapeutics.

The meeting of this Section, under the presidency of Sir William Roberts, was from the very commencement extremely well attended. This was no doubt due to the attraction offered in the shape of a discussion on Sero-Therapeutics, embracing the application of serum treatment, not only to the acute infective disorders, but also to the cure of bites from venomous serpents. In his introductory remarks the President drew attention to a hitherto much neglected alkaloid of opium, generally known as "narcotine," but more properly termed "anarcotine," from the complete absence of narcotic properties. A large amount of evidence was available which seemed to show that this alkaloid has very valuable antiperiodic powers, which, should further investigation corroborate, will render it a valuable remedy in certain cases of malaria in which quinine entirely fails. The discussion on Sero-therapeutics was opened by Dr. Klein in a paper on the Nature of Antitoxin. He drew attention particularly to the differences in action between a protective serum obtained from animals immunised by injections of filtered diphtheria toxin, and by those treated with living cultures of the diphtheria bacillus. He had found that while the first had an extremely high neutralising power on the chemical poison separated from the bacilli, it had not nearly so marked an immunising power. On the other hand, an antitoxin prepared with the aid of living cultures, while it was less active than the other in neutralising toxins, was far more efficacious as an immunising agent. He also gave brief hints on the advantage of using a dried serum in place of the usual liquid form, and stated that the use of the former was far less likely to be followed by the appearance of rashes and other complications. Dr. Washbourne next spoke as to the clinical uses of antitoxins. The evidence available in the case of tetanus antitoxin was at present hardly sufficient to dogmatise from, as tetanus is very rare in this country. Such evidence as we do possess is, however, highly encouraging. In the case of antidiphtheritic serum there is now so much evidence in its favour as to allow little room for doubt as to the benefits derivable from its application. Dealing with the complications attending this mode of treatment, he was of opinion that there were not sufficient grounds for supposing that serum injections were directly provocative of albuminuria or of anuria, as had been stated by some. These were both common complications of severe cases before serum therapeutics were even thought of. Eruptions and joint pains were, however, undoubted sequelæ, but they were not of great clinical significance. Of the use of serum as a prophylactic hardly enough experience had as yet been acquired to allow one to form an opinion as to its value. Dr. Hewlett next read a paper on Tetanus Antitoxin, describing the difficulties surrounding its preparation. He had been unable, even with the greatest care, to produce a sufficient degree of immunity in a horse for therapeutic purposes in less than five months, although French observers had done so in a shorter time. He prophesied a sure future for this antitoxin in countries where tetanus was largely prevalent. Dr. Tirard gave his experience of serum treatment in cases of diphtheria at the Evelina Hospital, where he had obtained very satisfactory results from it. Mr. Bokenham described a method by which he had succeeded in getting the diphtheria serum in a dry state—a great advantage, in that it offered a means of reducing the dose necessary in any given case. He had been able to show that a great deal, if not most, of the efficacy of such a serum resided in a constituent other than the albuminous portion. Dr. Gayton spoke of his experience of serum treatment of diphtheria at the North-Western Fever Hospital. It was hardly as satisfactory as that of most other observers. Dr. Caiger, of the South-Eastern Fever Hospital, testified to the efficacy of the treatment, but he had found it desirable to use far larger doses than those usually recommended. In spite of this he had met with but few complications. Professor Fraser drew attention to the great care needed in testing the activity of serum before its issue for use. The consideration of papers other than those bearing on sero-therapeutics had, for want of time, to be very briefly taken. The chief of these was one by Professor Fraser on Antivenene, but more than a few words are needed to do justice to this most important subject.

Section of Laryngology.

The first paper in this Section was on the Etiology of Mucous Polypi of the Nose, by Professor Guye, of Amsterdam. He discussed Woakes's theory of necrosing ethmoiditis, and that of Grünwald of empyema of the accessory cavities of the nose as the cause of polypi; and quoted the criticisms of Zuckerkandl. His own experience was in accordance with Zuckerkandl's criticism, and he brought forward clinical evidence of cases of polypi due to ozæna, rhinoliths, etc., but emphasised the fact that in the large majority of cases the etiology remains undetected. Dr. Luc (Paris) maintained that the causation of polypi by empyema of the antrum was far from being a frequent one. He criticised the work of Woakes inasmuch as clinical description of cases is not introduced. He considered that myxomatous degeneration represented the mode of reaction of the middle meatus mucous membrane to noxious influences, and that polypi are perhaps confined to this region by reason of the presence of folds of the mucous membrane. The exciting cause of the polypi may be catarrh or rarely bone lesion, and in most examples their origin appears to be spontaneous. Professor Zuckerkandl considered that the inflammatory origin of polypi is evidenced by the presence of round-celled infiltration and by the changes in the underlying bone. No line of demarcation can be made out between these formations and surrounding hypertrophied mucous membrane. In contradistinction to actual new growths, mucous nasal polypi are never congenital. The dissimilarity between the middle and inferior turbinates as seats of polypi is due to physical and dynamic causes. These polypi are essentially inflammatory in nature. Osteophytic changes in the bone are testimony in the same direction. Dr. McBride (Edinburgh) divided polypi into those of the upper and middle and lower passages of the nose, the lower being that variety of mucosal hypertrophy which was known as papilloma of the turbinate, the upper being similar to them but developing into polypi, which he described as o-lematous fibromata. He further said that inflammation was not enough to account for cases of polypi, nor did empyemata suffice, but the force of gravity must be considered; another explanation would probably be found in some irregularity in the structure of the nasal mucosa in those who suffer

from nasal polypi. He drew particular attention to the redness of the polypi springing from the ostium maxillæ. Dr. Hodgkinson said empyema was not necessary for polypus formation. A pendulous condition, though not necessary, might be so at the commencement of the disease. He had not observed necrosis. Dr. Scanes Spicer quite agreed with Dr. Luc. He considered necrosing ethmoiditis a bad term. Necrosis was extremely rare in connection with ethmoiditis. Dr. William Hill said myxomata of the ear and nose were much alike, both in structure and also in similarity of environment. He considered that the easiest form of nasal polypi to cure was that associated with purulent affection of the nose. He thought Dr. Woakes was not altogether wrong in his opinion. Dr. Bosworth (New York) was surprised that the late speakers took Dr. Woakes's necrosing ethmoiditis seriously. The mucous membrane was less thick in the accessory cavities than in the nasal cavities, the ethmoid and small cavities especially. He did not believe in dry necrosis. Dr. Moriz Schmit (Frankfort) maintained that polypi were due to inflammatory swelling of mucous membrane and muco-periosteum. Dr. J. N. Mackenzie (Baltimore) said he believed in the inflammatory origin of polypi. He preferred the term endorhinitis to rhinitis. He thought Dr. Woakes was not correct; caries might occur, but not necrosis. Dr. Daly said he believed in the suction influence in inflammatory conditions. He had never seen a case of antral disease due or subsequent to nasal polypi. Dr. Newman (Glasgow) said œdema of the mucosa and hypertrophy acted as causes in formation of polypi. They were never myxomatous and contained water and serum albumen. There was a predisposition in the mucosa in certain people, due to fibrosis of the submucous tissue. Mr. Lake said he had never seen a myoma, and none that could be called œdematous fibromata. In children with hypertrophic rhinitis the absence of polypi was due to absence of suction due to obstruction of the nares by adenoids. Dr. Watson Williams quoted evidence in his possession of bone changes in this disease, shown by spicules of bone. Dr. de Roaldes said nasal polypi were less common in blacks, as also was empyema of accessory sinuses. Catarrh was commoner in whites, who strained more in blowing the nose. Drs. Guye, Luc, and McBride briefly replied.

Dr. Risien Russell read a paper on the Representation of Abduction of the Vocal Cords in the Cerebral Cortex. He referred to the failure of previous experimenters to obtain this by severing the adductor fibres of the recurrent on one side, leaving the abductor fibres intact. Stimulation of certain parts of the cortex elicited abduction of the vocal cord on that side. Previous failures were due to preponderance of adduction. Dr. Felix Semon congratulated the author on his ingenuity and success, and asked, amongst other things, whether Dr. Russell had ever found any evidence of unilaterality in the cortex. Dr. Bryson Delavan (New York) mentioned a case of his bearing on the point; and Dr. Watson Williams mentioned a case of Jacksonian epilepsy, with motor aphasia, with good movement of cords. Dr. Russell replied to the President's question in the negative.

Dr. A. Hodgkinson (Manchester) presented a communication on Vibrations of the Vocal Cords. After a reference to sound pictures, he said indigo blown into the larynx acted similarly. Coughing should be avoided; a sound should be made and the effect on the indigo on the cords observed. In deep notes there could be seen a dark line parallel to the edge of the cords, becoming convex towards the ventricle from the anterior commissure to the posterior vocal process. The deeper the note the farther back the line went, showing that the vocal processes vibrate in low notes. The whole vocal cords vibrate in low notes, the movement being greatest at the central free edge. In falsetto notes the line was parallel with the free edge. Dr. Illingworth read a paper on Some Points in the Anatomy and Physiology of the Larynx. He said the larynx was not a stringed instrument; it was like a cornet; and that the falsetto voice was produced in the larynx.

Section of Dermatology.

Dr. Radcliffe Crocker, President of the Section, in his opening address, laid especial stress on the great advances that had been made in dermatology during the last twenty years. Dermatology was first represented at the Dublin meeting some sixteen years ago. Since then the Section has firmly established itself as one of the most important. After referring to the great clinical opportunities existing in London for the study of diseases of the skin, he expressed regret that owing to the decentralisation system obtaining in the metropolis visitors from the Continent were not as much impressed as they might be with the enormous amount of material available. The first paper taken was that of Dr. John Liddell (Harrogate), giving the details of a case of Pityriasis Rubra Pilaris in a girl. After describing the clinical features of the case Dr. Liddell gave an exhaustive account of the minute anatomy, and subsequently demonstrated the histological appearances with microscopic sections. Dr. McCall Anderson (Glasgow), then opened the discussion on the Pathology and Treatment of Pruritus, addressing himself to the condition of pruritus when no other cutaneous lesion existed. He also examined those forms of pruritus present in jaundice and diabetes, and the itching due to cold. With regard to the treatment, the cause must be removed where possible. He had found the coal-tar derivatives, such as antipyrin and phenacetin, very useful in combination with electricity: but the latter agent used alone also proved advantageous. Dr. H. A. G. Brooke (Manchester) followed with a paper on the same subject. He proposed, for working purposes, a classification, consisting of two chief groups, based on the origin of the condition, whether external or internal. He reviewed at some length the various causes which led to itching, insisting specially on the nervous conditions. In the subsequent discussion, Drs. Myrtle (Harrogate), Waldo (Clifton), Stopford Taylor and Barendt (Liverpool), and Mrs. Garrett Anderson gave their experience of the treatment of this troublesome symptom. In the discussion which followed Dr. P. H. Pye-Smith's interesting paper on Affections of the Skin occurring in the course of Bright's Disease, the President, Drs. Savill, Bradbury (Cambridge), Waldo, and Grange took part. The curious life-history of the Guinea-Worm was fully described by Dr. Patrick Manson. Various phases in the evolution of the embryo were illustrated by microphotographs. Dr. Harrison made some remarks on this paper. Dr. Galloway then gave a lantern demonstration of certain nervous lesions of the skin. The meeting concluded with the clinical notes on Two Cases of unusual Verruca Necrogenica which had come under the observation of Dr. A. J. Harrison (Clifton), who showed illustrative photographs. Among the foreign visitors present were Drs. L. A. Nékám (Buda-Pesth), A. Jordan (Washington, D.C., U.S.A.), and Adalbert Frickenhaus (Stuttgart).

Section of Ethics

The meeting of this Section was well attended. All the officers were present, and Dr. Cleveland delivered his opening address to a very fair audience. Dr. T. Garrett Horder then began the discussion on Intraprofessional etiquette. He divided his subject into three heads: (1) Between medical men themselves; (2) in relation to professional appointments; (3) between consultants and general practitioners. He briefly commented on these three subdivisions, pointing out the numerous difficulties that were apt to arise in each, and gave examples of what he considered very improper conduct of medical practitioners in their dealings with professional brethren. Drs. Lee, Pearce, Hemming, Harris, Woods, Greenwood, McNeil, Bridley James, Young, Lailey, Dickinson, Rice, and Parsons took part in the discussion.

Dr. Lea (Cork) wished to propose a resolution: "That in the opinion of this Section any practitioner who wilfully violates the generally received rules of professional ethics be not met in any professional intercourse whatever, save in a case of very urgent danger to an individual patient." The Chairman ruled that this resolution should be deferred till Friday. Dr. Potter then introduced the subject of Advertising, in which he very ably pointed the very numerous ways in which medical men brought discredit on their profession in this way, and especially insisted that when the advertising in the lower branches of the profession was condemned, practices differing very little in principle perpetrated by practitioners of a higher standing ought not to be condoned. Drs. John Brown, Brindley James, Greenwood, Norris, Nelson Hardy, Eyre, and Pearce took part in the discussion which followed. Dr. Potter proposed a resolution: "That advertising in every shape is highly derogatory to the profession, and that the Council be requested to use every effort to suppress it." This resolution was likewise deferred till Friday. Dr. Bridgwater brought before the Section a resolution just passed by the Council: "That in the opinion of this Council the granting of testimonials, which are used for the purpose of advertising proprietary drugs and similar articles is inconsistent with the dignity of the profession and opposed to its best interests." This was highly approved of by the Section. Mr. George Brown introduced a discussion on Unqualified Assistants. He said that the practice was to be condemned from three points of view: (1) Personal, (2) professional, (3) public. As to the first, great danger was incurred by the practitioner, who made use of them; as to the second, it was wrong to employ unqualified men when there were many qualified men ready to do the work, the non-employment of whom frequently compelled them to open cheap dispensaries and to become medical officers of medical aid societies; as to the third point, it was a direct fraud on the public and highly immoral from that point of view. In the discussion which followed Mr. Brindley James and Drs. Lattey, John Brown (Bacup), Greenwood, and Bridgwater took part. Mr. George Brown, in answering, said he should move a resolution on the subject on Friday.

Thursday, August 1st.

Section of Medicine.

The practical nature of the subject attracted a large audience to the Section of Medicine on Thursday. The President opened the meeting with a few remarks upon the importance of Acute Pneumonia, and called upon Dr. Douglas Powell to open the discussion on the subject. Dr. Douglas Powell, who was very warmly received, expressed his regret at being unable to record any practical abatement of the mortality from pneumonia, notwithstanding improved public health with regard to other diseases, and especially those of the zymotic class. He then briefly described the relationship of pneumonia to severity of climate as dependent upon latitude, pointing out that it was directly influenced by seasonal lowness and by changeableness of temperature. In discussing the etiology of the disease, he insisted upon the importance of remembering that other factors are necessary for the development of pneumonia in addition to the micro-organisms. He rapidly reviewed the evidence in favour of the microbic origin and against it, laying special stress upon the fact that Fraenkel's pneumococcus had been found in healthy saliva, in the exudation in meningitis, in ulcerative endocarditis, and in otitis media which had little pathological resemblance to pneumonia, and with which pneumonia was not commonly associated. After describing the varieties of the disease, and reviewing the different modes of treatment in vogue, he came to the conclusion that the ordinary saline drug treatment was based upon sound principles in uncomplicated cases, whilst when these special indications or heart-strychnine, calomel, digitalis, and morphine were most valuable remedies. Finally, as to the antitoxin treatment of pneumonia, Dr. Powell stated that he was still of an open mind; that he had not had an opportunity of trying it, but that he thought that it would probably be along these lines that progress would be made in the future. Dr. Washbourn continued the discussion, confining his remarks to the microbic theory of the disease and to its treatment by means of antitoxin. He insisted upon the great importance of revising our nomenclature of the subject, and, speaking of pneumococcal meningitis, pleurisy, etc., in all those cases in which Fraenkel's coccus could be demonstrated. Dr. Auld (Glasgow) followed on somewhat the same lines. Dr. Dreschfeld then referred to the importance of the clinical varieties of the disease. Dr. Pollock considered that bacteriological diagnosis was overrated in importance. Dr. Foxwell was glad that Dr. Powell recognised pneumonia as a specific infectious disease; Dr. Tyson considered that the bacteriological examination into the subject had explained the great differences clinically met with in various cases; Dr. Balfour (Edinburgh) spoke upon treatment generally, and Professor Bäumler (Freiburg) insisted upon the importance of the treatment of pneumonia by cold bathing; Professor Clifford Allbutt, and Drs Gibson, Coghill, Hawkins, Lees, Pope, and Squire continued the discussion, and Dr. Douglas Powell briefly replied. The papers advertised were then read by their authors and briefly discussed, the proceedings being somewhat hurried owing to the undue length of the discussion upon pneumonia.

Section of Surgery.

The second day's proceedings in the Section of Surgery fully maintained the high standard which the first had reached. The meeting opened with a paper by Mr. Howard Marsh, on some rare forms of Bony Ankylosis. He began by referring to the teaching, till lately almost universal, that bony ankylosis never occurred but as the result of suppuration, and that joint suppuration invariably led to bony ankylosis if recovery took place. Neither of these doctrines is true. Instances of recovery from suppuration without the supervention of bony ankylosis may be seen in pyæmia, in acute suppurative arthritis following wounds, in the acute arthritis of infants, and in many cases of chronic tuberculous diseases of joints. It was, however, with the occurrence of bony ankylosis without antecedent suppuration that the paper mainly dealt. Mr. Marsh enumerated eight classes of cases in which this takes place. Some of these are comparatively common; such are osteo-arthritis, tuberculous joint-disease, and gout. Among the rarer forms must be mentioned an exceptional case under the care of Mr. Bowlby, in which bony ankylosis of one of the interphalangeal joints followed an injury to the median nerve in the forearm, and some instances of ossification of the intervertebral discs throughout the whole spinal column. The changes in the latter form of ankylosis are essentially different from those in osteo-arthritis, where the ossification occurs in the ligaments, particularly in the anterior common and the ligamenta subflava. Mr. Marsh expressed his conviction that bony ankylosis was always either reparative or degenerative, that no known means would avert it, but that the deformities resulting from it might be relieved by osteotomy or excision. An animated discussion followed this extremely suggestive paper. Mr. Targett doubted the occurrence of bony ankylosis in Charcot's disease, to which Mr. Marsh had referred, without the previous occurrence of suppuration, as from perforating ulcer. Mr. Bowlby stated that the joints in most cases of nerve injury exhibited changes like those in acute rheumatism, which usually subsided, but sometimes became permanent. He expressed his opinion that many joint lesions were due to affections of the central and peripheral nervous system, and hoped that the nervous origin of rheumatoid arthritis would be speedily established. Mr. Bland Sutton gave examples of ankylosis from pressure—for example, between the cervical vertebræ of persons habitually

carrying weights on the head—and compared them with similar conditions in the lower animals, particularly oxen and horses. Mr. Buckston Browne then read a paper in which he described the occasional impaction of vesical calculi between the lateral lobes of an enlarged prostate and the wall of the bladder. In this position they can neither be reached by the sound nor crushed by the lithotrite, and require to be removed through a suprapubic incision. Mr. Mayo Robson described a unique case in which the stone was embedded in front of the prostate. Dr. W. Newman then described a case of symmetrical necrosis of the lower third of both femoral shafts; and Sir W. Mac Cormac having said a few words with reference to the proposed national memorial to Professor Huxley, the meeting proceeded to discuss the Surgery of Tumours of the Thyroid Gland. Mr. Butlin stated his belief that very few malignant tumours of the gland were suited to surgical interference, and that cysts and adenomata should usually be treated by enucleation or extirpation except when it was necessary to avoid an unsightly scar, when injection should be practised. The general opinion of the subsequent speakers was adverse to injection. Professor Keen (Philadelphia) gave an interesting account of Professor Kocher's method of operating, the main features of which were non-use of anæsthetics except in special cases, a transverse incision and elaborate precautions to preclude hæmorrhage. Other surgeons, particularly Mr. Charters Symonds and Mr. James Berry, gave operative details based on their personal experience, and Mr. Butlin concluded by summing up the results and methods as comparing most favourably with those of Continental surgeons.

Section of Obstetrics and Gynæcology.

Professor Martin (Berlin) read a paper on Anterior Colpotomy, based upon his experience of 109 cases. He especially pleaded for conservancy in the treatment of the various diseases of the adnexa, and considered that the possibility of preserving the appendages in hydro- and hæmatosalpinx, and such conditions, was greatly increased by the performance of this simple and safe operation. Dr. Taylor (Birmingham) followed with a paper upon the same subject, and Dr. Donald (Manchester) read a paper on a case of tubal gestation treated by vaginal colpotomy. A very interesting discussion followed, in which Dr. Cushine (Berlin), Dr. Smyly (Dublin), Dr. Walter (Manchester), Dr. Amand Routh and Dr. Smith (Dublin) took part. Dr. Playfair then read a paper on the Education and Training of Girls at and about the Age of Puberty. This excited a very interesting discussion, especially amongst the lady members of the Section, in which Mrs. Scharlieb, M.D., (London), Miss Gray, Miss Winifred Dickson, Dr. Miller, and Dr. Stallwright took part. Dr. Swayne followed with a paper on the Treatment of Eclampsia occurring during Pregnancy, and Presenting no Signs of Labour. In the discussion following, Surgeon-General Harvey (Calcutta), Dr. Rowley (Barnsley), Professor Cordès (Geneva) Dr. Cowley (Melrose), Dr. Games (Preston), Mrs. Scharlieb, Dr. Smyly, Dr. Griffiths, and Dr. Barbour took part. Mr. Stanmore Bishop (Manchester) showed a new form of Ovariotomy Trocher with Expanding Side Wings, intended to prevent the slipping of the instrument after penetration of the cyst wall. Dr. Muret (Lausanne) showed a Placenta from one half of a Uterus Bicornis, and a specimen of Tubal Pregnancy with a very beautiful Decidual Cast. Dr. Birmingham showed a Waterproof Apron with an Air Cushion round, to be used at confinements, and for giving vaginal douches.

Section of Public Medicine.

The work of the second day began with the reading of a paper on Smoke Abatement, by Brigade-Surgeon-Lieutenant-Colonel R. Pringle, M.D. This was followed by a paper by Dr. Boobbyer (Nottingham) on Hospital Isolation and the Disinfection of Patients. He thought more stress should be laid upon the treatment of enteric disease more on the lines of epidemics of infectious diseases. Dr. J. Spottiswoode Cameron (Leeds) deprecated any interference on the part of local authorities, and agreed with Dr. Boobbyer regarding the necessity of isolating typhoid fever. He regarded the comparative immunity of Huddersfield from typhoid fever as due to the free use of the infectious diseases hospital. Dr. Barwise agreed in the main with the foregoing speakers, and declared himself emphatically on the side of large central hospitals as being cheaper both to administer and to build. Dr. Pringle, Dr. Richards, Dr. Fraser, and Dr. Berthon joined in the discussion. Dr. Caverhill (Edinburgh) spoke of the use of the tortoise tent. He was against such a structure for the acute stages of infectious disease. These hospitals should only be supplementary to more stable buildings. Dr. Fosbrooke (Worcester) traversed the statement that patients could not be removed with safety a larger distance than five miles. His experience was endorsed by Dr. Ogilvie Grant (Inverness), who urged the Section to help in bringing about the amendment of the Public Health Act, so as to enable authorities to obtain suitable sites for infectious hospitals by compulsion. Dr. Bond (Gloucester) emphasised the difficulty of obtaining initial force for carrying on sanitary improvements. Little progress would be made unless the bodies could be induced to take a more serious view of of their responsibilities. In his reply Dr. Boobbyer mentioned cases where great difficulties would be experienced in removing great numbers of patients great distances. Under such circumstances extreme centralisation would be found to be a mistaken policy. It was extremely fatal to remove typhoid cases after the second week. Dr. Klein then introduced the subject of the Diagnostic Value of the Diphtheria Bacillus. He described the difficulties which existed in working out the diagnosis of diphtheria even by the bacillary test. His experience had shown him that there was no definite relation between the virulence of the culture and the severity of the case from which the culture was derived. His conclusion was that morphologically, culturally, experimentally, and chemically sufficient data existed which enabled them to say that the Klebs-Loeffler bacillus was the true cause of diphtheria, and to give in most cases a definite positive or negative opinion according to the presence or absence of this bacillus in the exudations. Dr. Hermann Biggs (New York) followed with a paper on the same subject.

Section of Physiology.

The proceedings of the Section commenced with a discussion upon the Mechanics of the Cardiac Cycle, which was introduced by Professor J. Berry Haycraft and Dr. D. Paterson. Professor Haycraft showed by three different methods that the ordinarily accepted view that the antero-posterior diameter of the heart increased during systole was incorrect, and that the explanation of these results was to be found in the fact that the experiments were conducted upon animals in which the heart was exposed, and therefore unsupported by surrounding parts, as under normal conditions. He argued that the generally accepted change of position of the heart within the chest during systole was also incorrect. These changes are brought about by the effect of gravity acting upon the flaccid muscular wall of the heart in diastole, and he showed that by varying the position of the animal and therefore of the heart, and by supporting the heart, many other alterations of position could be effected which were all capable of explanation as effects due to gravity. He next entered into the question of the time of contraction of the papillary muscles. Working upon an excised heart of the rabbit and carrying out the experiments rapidly they were able to show that the muscle and the general wall of the heart near to its base of attachment contracted synchronously. Professor Michael Foster criticised the paper, and Dr. Gibson (Edinburgh) showed tracings he had taken in a case of fissura sterni, and thought they showed a distinct change of posi-

tion of the heart within the thoracic cavity during systole. Dr. Paterson in replying to some of the criticisms advanced, believed that for the mitral valve to act satisfactorily, on theoretical grounds, the papillary muscle must contract synchronously with the general ventricular wall. Professor Purser did not consider the explanation given of the observed movements of the heart could account for the fact that the apex beat was more forcible in the prone position. Professor Heymans (Ghent) next read a paper upon the Innervation of the Heart. He showed many photographs and microscopic sections of preparations he had made from hearts of various animals in which he had used Golgi's method to demonstrate the small nerve fibres present. As a result of this research he was able to show three main plexuses of nerve fibres. The first are placed throughout the muscle tissue of the whole heart, and contain nerve cells as well as numerous meshes of nerve fibres; from their number he concludes that each muscle fibre has a separate nerve fibre going to it. A second plexus is found around the vessels, and is vasomotor in function. The third is placed under the endocardium, removed completely from the muscular tissue, and is sensitive in function. Dr. Lauder Brunton pointed out of what great value these researches are in enabling us to understand the action of many drugs upon the heart for example, the difference of action of laudanum when brought in contact with the endocardium and when painted on the outer surface, when it practically produces no change. Messrs. Bayliss and Starling demonstrated a method of studying local vasomotor changes. A tube is inserted in the course of the artery supplying the organ whose vascular changes are the subject of investigation, and two points of this tube are connected with a differential manometer. The excursions of the lever of the manometer are proportional to the velocity of blood flow through the tube, so that they are diminished by local constriction, and increased by local vascular dilatation. It is necessary to defibrinate the blood of the animal before the experiment, in order to avoid clotting of blood in its passages through the tube. Professor Stuart gave an account of some of his work on the measurement of circulation time through various organs. He believed by this method he could obtain a general indication of the circulation time in man—namely, about 15 seconds for the lung, and about 70 seconds for the general system. Professor Hamburgher (Utrecht) read a paper upon the Physical Factors of Absorption. He has studied the manner of resorption into the blood vessels, and concludes that this occurs not through osmosis, nor through the vital activity of the capillary wall, but through imbibition. He described a new instrument he had devised to prove his views, in which a small tube with meshes coated thinly with gelatine represented a capillary vessel. Mr. T. B. Leathes described experiments illustrating the rapidity with which the blood returned to its original volume after the injection of salt solutions. These showed too, that the changes were not to be accounted for by alterations of the quantity of lymph secreted, but rather by the gain or loss of water, etc., the tissue cells undergo in accordance with the variations in composition of the fluids which bathe them. Dr. Harry Campbell read a paper in which he contended from *a priori* reasons that the resistance to the blood flow due to the capillaries was practically negligible.

Section of Anatomy and Histology.

Professor A. H. Young (Owens College, Manchester) opened a discussion on the Development and Structure of the Placenta. He said that our knowledge of the development and structure of the placenta was very incomplete. He exhibited and described a very complete series of sections of embryos of the ferret, etc., and from them he drew the following conclusions: (1) That fœtal tissues play a most important part in placental development: they invade, destroy, and devour maternal substance. (2) The maternal tissues pass through three phases: they exhibit a remarkable activity before the fixation of the ovum; this is succeeded by what may be looked upon as an irritative proliferation, due to the invasion of fœtal mesoblast; and finally they disappear in great part coincidently with the epiblastic advance. (3) The relationship between the fœtal and the maternal blood streams may be much more intimate than has usually been believed; and, in any case the intervening structures are chiefly fœtal. (4) The uterine glands and crypts play a comparatively unimportant part in the placental area. They are not penetrated to any great extent by fœtal villi, but their epithelium degenerates and disappears, and is utilised as fœtal pabulum, except at their terminal extremities, where it remains almost unchanged, to serve for the regeneration of the surface after parturition. Messrs. Robinson, Lockwood, and Professor Cunningham took part in the discussion. Mr. T. Manners Smith read a paper on the Anatomy of Three Symmelian Monsters. Dr. Joseph Griffiths read a paper on the Anatomy of the Genito-urinary Apparatus of the Pig and Bear. He said that a contrast between the accessory sexual glands of the boar and the same glands of the pig castrated when young clearly showed that the testes exert an all-important influence upon the growth and development of the accessory sexual glands, and that the full development of the striped muscle, the urethra, is dependent upon the existence and full development of the testes.

Section of Ophthalmology.

A discussion on the Diagnosis of Orbital Growths was opened by Mr. Swanzy (Dublin). Professor Panas (Paris) continued with a paper on Pseudo-Malignant Tumours of the Orbit, in which he advocated in the case of reputed sarcomata of the orbit previous to operation treatment by mercury, iodine, arsenic, and toxin-therapy, such as erysipelas or streptococcus cultures. Mr. Juler mentioned two cases, one of Carcinomatous Tumour of the Body of the Sphenoid causing Blindness of Both Eyes, and a Case of Acute Orbital Cellulitis following Dental Abscess. Dr. Hill Griffith, Dr. Argyll Robertson, Professor Fuchs, Messrs. Adams Frost, Power, Nettleship, and Spencer Watson took part in the discussion. A paper by Mr. Kenneth Scott on the Radical Operative Treatment of Trichiasis was next read. Mr. Spencer Watson described his operation for trichiasis. Mr. Nettleship asked if the growth of hairs on the transplanted button was a trouble subsequent to Mr. Spencer Watson's operation; he had found it so. Mr. MacGillivray described the operation he performed. A paper was read on Spontaneous Dislocation of the Lens into the Anterior Chamber, by Dr. G. Mackay. Mr. Beaumont read a paper on the Question of Latent Hypermetropia in the Examination of Candidates for the Public Services. After a short adjournment for the examination of cases Dr. Risien Russell gave a demonstration of the results of his experiments on monkeys as to the Influence of the Cerebrum and Cerebellum on Eye Movements. Mr. Adams Frost demonstrated a large series of lantern slides illustrating Ophthalmoscopic Pictures of Various Diseases of the Fundus. Dr. Macnaughton Jones concluded the business of the day by a paper on the Importance of Correcting Errors of Refraction in Neurasthenic Women. Messrs. Ernest Clarke and Johnson Taylor made some remarks.

Section of Diseases of Children.

There was again a very large attendance of members, the Theological Lecture Hall of King's College being over two-thirds filled. Dr. H. Handford (Nottingham) read a comprehensive paper on the Nervous Sequelæ of Acute Infectious Disease in Children. In reviewing the subject he pointed out that it had hitherto been treated mainly by neurologists, and that a book on the nervous diseases of convalescents was much needed. He classified nervous sequelæ according as they affected (1) the brain and

its membranes, (2) the spinal cord and its membranes, (3) the nerves; and also according to the frequency of these varieties in relation to the various specific fevers. He inclined to think not so much that each fever was followed by its own peculiar sequelæ, as that the organ affected by the virus, and the distribution of the lesions, accounted for the nature of the manifestations under discussion. At the same time there was some evidence of selection of various points of attack by various fevers. An exceptionally good discussion followed, in which Dr. Barlow drew attention to the different periods after or during the fever, when the nervous symptoms appeared. Dr. W. B. Cheadle remarked on the extreme rarity of nervous sequelæ in children. Professor von Ranke said he had an impression that nervous symptoms had become more common since the introduction of the serum treatment, probably because the mortality was smaller. Dr. Fletcher Beach considered that there must be some hereditary enfeeblement as predisposing cause. Dr. Mackey (Brighton), Dr. W. S. Coleman, Dr. Bevor, Dr. J. S. Berry (Manchester), and Dr. Massop, took part in the discussion. Professor A. Baginsky (Berlin) described two cases of Pernicious Anæmia in children. Dr. Archibald E. Garrod and Dr. Fletcher Morley read a paper on the Maternal Factor in Rickets, dwelling especially on errors of lactation as a cause. Dr. J. Kingston Barton read a paper on the Relation between the Foods of Early Life and the Condition of the Teeth. Mr. Sydney Spokes continued the discussion. Mr. D'Arcy Power and Mr. Frederic Eve showed three cases of very great interest. Dr. Thomson (Edinburgh) contributed a rare case of Congenital Hypertrophy of the Pylorus and Stomach Wall. The proceedings terminated by a paper by Professor Comby on the Non-Pathogenic Streptococci and Staphylococci of the Throat of Children. The communications were throughout of great value and interest, and it was a matter of much regret that the time at the disposal of the Section for their discussion was so short.

Section of Pathology and Bacteriology.

The proceedings were opened by Dr. Sharkey's paper on Peripheral Neuritis. He suggested that as it had been shown that few, if any, of the cerebrospinal nerves were exempt from morbid changes resulting in sensory and motor disturbance, was it not probable that the sympathetic nerves might be equally vulnerable? Might not many of the so-called functional disturbances of the viscera with their neuralgias, and disorders of secretion and metabolism owe their existence to temporary nerve intoxication, to nerve degeneration and to nerve inflammation, the processes which he considered had a share in the production of what was called clinically neuritis. In discussing the paper Dr. Ord commenced by referring to the association often observed by him of cardiac disorder and gastric ulcer, and suggested that some connection might be found between them in a neuritic or nutritional affection of the vagus. Dr. Russell Wells pointed out the importance of excluding changes in nerves that might possibly be *post mortem* from consideration on the pathology of neuritis; he was followed by Dr. Mott, who maintained that many neuritic affections were toxin effects of the ganglia cells, the peripheral distribution being explained by something analogous to the known laws of nerve degeneration after section of the spinal roots. Professor G. Marinesco (Paris), who happened to be in the room, on being called upon by the President to speak, gave it as his opinion that most cases of neuritis might be referred to an infection or intoxication by ptomaine bodies. Dr. Ormerod having made a few remarks as to the peripheral distribution of neuritis, which he explained on the fact of the peripheral fibres being smaller, and so more susceptible, Sir T. Grainger Stewart from a consideration of some clinical facts made several suggestions as to pathology. Professor Hamilton said he considered that neuritis had nothing to do with inflammation, but was a degeneration due to the action of a poison similar in its action to phosphorus poisoning. Dr. Eliza W. Dunbar, having borne out the remarks of the last speaker, Dr. Saundby combated the same, and stated that in his opinion many cases were purely inflammatory. Dr. Sharkey replied. Dr. Copeman opened a discussion on Vaccinia and Variola with a paper on the Pathology of Vaccinia and Variola. He had found it possible to transfer to calves, by inoculating them with the contents of an egg previously inoculated with small-pox crusts, a disease indistinguishable from vaccinia. From the vesicles thus formed other calves were vaccinated, and, finally, some children—all with excellent results, in all cases "taking well." Dr. Sidney Coupland then announced that a series of sections of vesicles were on view in the adjoining room, in which might be seen inside the cells the same organism that was found in the vesicles. The vesicles were both artificially and naturally produced. Dr. Haughton wished to know the cause of variola. He suggested as possible causes of the disease various meteorological and hygienic circumstances, and finally stated that inoculation with vaccine lymph is nothing but a species of "septical poisoning." Dr. Denham pointed out the importance of using young calves in all such experiments, and Dr. Renan having spoken of the possible transmutation of vaccinia to variola, Dr. Drysdale stated that he believed vaccinia and variola to be but different phases of the same disease. After the exhibition of some photographs on the screen of typical vesicles from inoculation, Dr. Copeman replied. Dr. Hunter opened a discussion on Pernicious Anæmia. He said he believed the disease to be due to an active destruction of blood corpuscles in the portal area by the action of a toxin absorbed from the intestine. He laid great stress on the frequency of the extravasation observed in cases of this disease. Dr. Copeman thought the correct view was one intermediate between those of Drs. Stockman and Hunter. Dr. Gibson laid stress on the importance of intestinal antisepsis in treatment. After some remarks by Dr. Stockman, Dr. Hunter replied. The papers of Drs. Macfadyen, Auld, and Furnival were at this point handed in and taken as read.

Section of Otology.

Professor Macewen (Glasgow) opened a discussion on Cerebral Complications in Relation to Middle-Ear Disease. He drew attention to the fallacies and difficulties of localisation, to the importance of the early diagnosis of tubercle in middle-ear disease, and to the necessity of efficient bacteriological examination. He doubted the advisability of depending on the absence of bone conduction in differentiating between cerebral and cerebellar abscess, and insisted on the great importance of absolute removal of all foci of pyogenic infection. He drew attention to the necessity of most careful antiseptic precautions in aural surgery, and concluded by bringing forward the following propositions: (1) That the extension of infective disease from the middle ear to the brain and its membranes was preventable; (2) that when disease was established in the middle ear it should be thoroughly eradicated; (3) that when brain trouble had been set up, it was necessary to remove not alone the affected part, but also the path by which infection had travelled. Dr. Luc (Paris) mentioned a case of cerebellar abscess with destruction of the petrous portion of the temporal bone and large cholesteatoma in the mastoid antrum. Mr. Marmaduke Sheild pointed out the importance of the early diagnosis of tubercle in middle ear disease, the importance of the removal of all foci of infection, and the necessity of careful antiseptic precautions in the treatment of granulations. Drs. Milligan, McBride, T. Barr, and Mr. Ballance also spoke as to the importance of early treatment of tuberculosis of the middle ear and the necessity of anti-

septic precautions in operating. Mr. Pritchard pointed out that the patients themselves should be impressed with the necessity of carrying out the antiseptic measures prescribed. Drs. Dundas Grant, T. Barr, and Mr. Wood mentioned some cases of cerebral abscess having points of interest, and referred to the alcohol treatment in aural disease. Professor Macewen, in replying, pointed out that it was absolutely the duty of the surgeon to operate in cases of chronic aural discharge, that even in the most advanced cases complicated with serious cerebral mischief there was a chance of success, and that one was not justified in depriving the patient of that chance, however slight it might be, knowing the hopeless nature of the disease.

Section of Pharmacology and Therapeutics

The major part of the business of this Section was devoted to a consideration of the views of the profession with regard to the modifications which would be most acceptable to them in the revision of the *British Pharmacopœia* which is now under discussion. Considering the very academic nature of the subject there was a good attendance of members, and as the views expressed by the speakers all tended to advocate the simplification of the work in question, it is to be hoped that the Committee of Revision will be able to avail themselves of, at any rate, some of the suggestions made to them. Professor Leech, in opening the discussion, suggested that remarks might profitably be confined to a consideration of (1) the nature and extent of the list of remedies; (2) the mode of preparation of compounds, so far as concerned their medical use; (3) weights and measures; and (4) the amount and extent of accessory information to be given. As regards the first point, much information had been gained from the circular recently issued by the Therapeutic Committee of the Association, and there seemed to be a general consensus of opinion in favour of omitting several of the preparations which appear in the present official work. It was pointed out, however, that the omission of any drug, should it be finally decided to omit it, will in no case prevent a man from prescribing it should he see fit to do so. As to the introduction of new remedies, it must be borne in mind that nothing should receive official recognition unless it be proved to be really useful; and it is this principle which has in the past guided the Committee of Selection, and will still continue to do so. As to the tests for detection of impurities, it would probably be well to indicate the exact impurities which the tests were designed to disclose, as is already the case in the American *Pharmacopœia*. In the new edition it would probably also be found expedient to introduce the metric system of weights and measures alongside of the English system. Dr. Donald MacAlister was strongly in favour of simplification, and would advocate any measures calculated to assist practitioners in remembering such vital questions as dosage, etc. He would exclude all such information as is not generally useful, and would rather see the *Pharmacopœia* a work of reference than a textbook of pharmacology and therapeutics. Professor Bradbury thought that in the new edition the question of doses should be very carefully revised, and that the pruning knife might be with advantage used freely in eliminating many little-used substances. Dr. Mahomed thought that the work might be rendered more useful were the number of preparations of a given substance considerably reduced. Dr. Talfourd Jones thought that the present selection of suppositories was a bad one. Some were not needed, and others were not inserted, although often required. Medicated pessaries and bougies might with advantage be included. He also thought that the dose of drugs to be administered by the bowel should be carefully considered. His own opinion was that a smaller dose was often required when administered in this way than when given by the mouth, and drew attention to the risk of administering ordinary doses of a powerful drug like morphine by the rectum. Dr. Charteris regarded the present edition of the *Pharmacopœia* as antiquated, and requiring very careful revision. The tests for impurities and the official dosage are in many cases incorrect, and introduction of the metric system is highly desirable. The discussion was continued by Drs. Carter, Neville Wood, Maybury, Frazer (Dublin), and Ralph Stockman, whose views were generally in favour of simplification; and Professor Leech briefly replied. Interesting papers were then read by Drs. Apostoli, Balfour, C. D. F. Phillips, Surveyor, and Vaughan Harley, but owing to the lateness of the hour there was but little opportunity for discussion of the matters dealt with.

Section of Dermatology.

After a sympathetic reference to the Huxley memorial by the President of the Section, Dr. Colcott Fox read an interesting paper on some cases of peculiar Papulo-pustular Eruption in Infants, illustrated by drawings. Dr. Gilbert Smith (Birmingham) followed with the details of a case of Lichen Planus Verrucosus. The discussion on Diet in the Etiology and Treatment of Diseases of the Skin was introduced by Dr. W. Allan Jamieson (Edinburgh), who said that dietetic errors, such as the intemperate use of alcohol and tea, the omission of properly prepared vegetables, etc., could be traced in cases of eczema. He thought, too, that the same factors were at work in alopecia areata. He also examined the influence of diet in the production of other skin conditions, such as boils, etc. He insisted on the importance of feeding girls properly, as there was an idea that they required less food than boys. He strongly held the opinion that the great abuse of tea at the present time was one of the factors in the development of cancer in those predisposed to that disease. Dr. Walter G. Smith (Dublin) read a paper on the Relations of Diet to diseases of the skin. He considered that the importance of food as a factor was exaggerated. He did not think that diet had anything to do with eczema in children. He also objected to such expressions as gouty eczema, gouty psoriasis, etc. Neither did he take such a gloomy view as Dr. Jamieson with regard to the bad effects of tea and alcohol in moderation. He insisted on the importance of idiosyncrasy in giving dietetic directions to patients. In conclusion, he considered very few skin diseases were due to errors of diet; and, further, that hard-and-fast rules of diet were of little value in treatment. These two papers gave rise to a good discussion, in which the President, Drs. Harrison of Clifton, Myrtle of Harrogate, G. Thin, Dockrell, McCall Anderson of Glasgow, Savill, Buchanan, and Stopford Taylor of Liverpool took part. There was a great difference of opinion with regard to the influence of various articles of diet on cutaneous affections. The next paper was that of Dr. Leslie Roberts on the Treatment and Prognosis of Trichophytosis, based on the physiology of the trichophyton. Mr. William Anderson read notes of a case of Adenoma Sebaceum, and described the surgical treatment he had employed. The results were very favourable, the operation having greatly improved the appearance of the patient, in this case a man. Drs. Crocker, Brooke, Waldo, and S. Taylor discussed the subject, and Mr. W. Anderson replied. Alopecia Areata formed the subject of a communication from Dr. Waldo, of Clifton. The President, Drs. Barendt, Brooke, and Harrison took part in the discussion which followed, especially as regards the origin of the condition. Dr. J. H. Stowers read the clinical notes of a case of Dermatitis Repens in a woman, and illustrated his remarks by drawings. Treatment had proved ineffectual. The patient ultimately died of cancer of the stomach. The meeting, which was well attended, was brought to a conclusion by papers on the Etiology of Acute Pemphigus, by Mr. George Pernet; on Cheiro-pompholyx in association with Eczema, by Dr. Edward Mackey, of London; and on a case of Cheiro-pompholyx, by Dr. Barendt, of Liverpool. Preparations

showing the diplococcus found by Dr. W. Bullock in Mr. Pernet's case of acute pemphigus, were shown.

Section of Ethics.

Dr. R. W. Doyne introduced a discussion on Clubs, Medical Aid Societies, and Contract Practice. Dr. Dickinson afterwards read a paper on the Provident Principle in Sickness Attendance, and Dr. Pearce on the Sweating of the Profession by various Friendly Societies. In the discussion that followed, Mr. Hemming, Mr. Goss, and Dr. Elliston took part, and a very strong opinion was elicited from the members present against medical aid societies, which were universally condemned. It being reported that Dr. Raye (Banbury), who held one of these appointments, was present at the request of the Section, the President invited him to address the members. He did so at some length, pointing out the conditions under which he held his appointment, showing clearly that, although it had objectionable features, it did not properly come under the category of the associations which were specially condemned. Dr. Philip Lee then gave details of the struggle at Cork between the profession and the amalgamated clubs, stating that over £600 had been subscribed to assist the men of Cork, but so strong was the feeling there, that the profession as a whole should move in this matter, that they were willing to give nearly the whole of this sum to assist medical men fighting the same battle in other parts of the United Kingdom. Dr. M. Greenwood then moved: "That the Council be requested to take steps to prevent members of the British Medical Association accepting posts in medical aid societies, and that in the opinion of the Section no practitioner who accepts office in any society of this kind be eligible for membership of the Association. That medical aid societies be defined to be 'any lay association which endeavours to obtain pecuniary profit for its members solely out of the labour of salaried medical officers.'" It was also moved by Dr. John P. Henry, and seconded by Dr. George H. Broadbent: "That the Council be requested to communicate with the universities and medical corporations, with a view to induce them to insert a clause in their diplomas forbidding, under pain of forfeiture, the taking of offices in medical aid associations, or the taking of clubs without a wage limit or at unremunerative rates, or undertaking any appointment or engagement calculated to degrade the profession." These resolutions were deferred with the others till Friday. Dr. Lattey and Dr. Henry further continued the discussion. Dr. Hugh Woods then introduced the discussion on Hospitals and Dispensaries, and was followed by Mr. F. Greaves and Mr. Nelson Hardy, the latter of whom condemned the use of unqualified practice at hospitals. A strong opinion was expressed by all the speakers against the gratuitous attendance by physicians and surgeons of the patients in the pay wards of hospitals. Dr. Campbell Black read his paper on Hospital Advertising and Medical Etiquette, and Dr. Draper took part in the discussion that followed.

THE HUXLEY MEMORIAL.

At the conclusion of the general meeting of the British Medical Association held at Exeter Hall on Thursday afternoon, the President desired the attendance of the members for the consideration of the proposed memorial to the late Professor Huxley, and introduced Professor Michael Foster, Secretary of the Royal Society, who stated that steps were being taken to raise a memorial to the late Professor Huxley on as broad a basis as possible, but that, owing to the lateness of the season, it had been thought desirable to defer active steps until after the autumn recess. No attempt had been made to determine in any way the nature of the memorial, which must depend upon the amount received, but a Provisional Committee had been formed, and he trusted that the medical profession, of which the late Professor Huxley was a member, and which he loved, and which whenever possible he helped, would desire to join in this effort to perpetuate the memory of so great a man. Sir John Lubbock had consented to act as Treasurer to the Committee, to whom subscriptions might be paid, and Professor G. B. Howes, of the Royal College of Science, South Kensington, was one of the Secretaries, and would receive names and answer inquiries.

Dr. Ward Cousins, the President of Council, desired to say he felt sure that the whole profession would respond warmly to the effort to produce an adequate memorial of so great and good a man.

A REPORT
on the
MILK SUPPLY OF LONDON
by a
SPECIAL ANALYTICAL AND BIOLOGICAL COMMISSION.

III.

REPORT OF TWENTY-FIVE SAMPLES OF MILK, EXAMINED AS TO THEIR BACTERIAL FLORA.

By SIDNEY D. ROWLAND, B.A.

The present research, undertaken at the request of the Editor of the British Medical Journal, and carried out by the kindness of Dr. Klein in his laboratory at St. Bartholomew's Hospital, does not pretend to be anything like a complete investigation into the bacteriology of the London milk supply. Such an account has yet to be written; it would involve, perhaps, years of laborious work, and would of its very nature never be a complete and definite statement, for at the outset we are confronted with this difficulty—physiologically milk is recognised as the ideal food stuff; it is the pabulum on which all mammiferous animals are nourished in their most tender and susceptible years. This is a fact that is well known to everyone. And it seems that in a similar way it is equally well fitted as the nutrient medium in which bacteria—pathogenic as well as non-pathogenic—can grow and multiply to their best advantage. Accordingly it is impossible to speak of a normal milk bacterial flora, for exposed, as it always must be, to many and various sources of infection, there will continually be the possibility of new forms finding in milk a convenient and suitable nidus, and thus, with the evolution or importation of new diseases, there will exist a corresponding chance of their being found in milk. In fact, we might as well speak of the normal population (bacterial) of gelatine, agar-agar, or any other common nutrient medium. Milk does not possess, or ought not to possess, any population at all; it just depends upon what chances of infection it is exposed to, and on the power infecting organisms have of thriving in it—a power which we have already said is possessed by a very large number of forms.

Consequently it was necessary to restrict the examination to the detection of particular organisms which might be found in any great abundance, or which by their properties might be particularly injurious in their action. Normal milk as it exists in the udder of the healthy cow is perfectly sterile, and cocci have been found in milk ducts, and any microbe that may be found in it must have been introduced from without during the period that elapses from the time of milking to that of consumption by the purchaser. A searching examination has therefore been made for the presence of micro organisms that are either distinctly harmful in themselves or indicative of contamination from impure sources. It is, of course, not to be assumed that because a particular organism was not found that therefore it was absent. In work of this nature, as indeed in all scientific work, it is impossible to prove the proverbial nega-

tive. Any evidence as to purity, therefore, that this report may furnish depends entirely on the use of approved methods and on the individual care of the workers. All that can be said is that certain micro-organisms were found, and from a consideration of these it may be possible to furnish evidence of a more or less conclusive nature as to the purity of any particular sample. More than this it cannot claim, therefore it is well to be careful in drawing any conclusion on a collateral subject towards which the work was not definitely directed.

It is also well to add a word or two on the impression that may be produced on other than medical readers. When a subject of this kind is discussed, the technically uninformed mind (struck, maybe, for the first time with the fact that bacilli exist, and having heard that certain of them possess at least a doubtful reputation) is apt to come at once to one of two conclusions—either that we are all on the verge of being poisoned, or that for purposes of their own the medical world is bringing a scare on the public. It is, of course, needless to say that either of these conclusions is, on the face of it, absurd. What we wish to call attention to is not that our milk supply is not perhaps as good as it might be, but that it is not the best possible.

In dealing with our minute and ubiquitous foes, absolute measures are alone of any value, and the smallest breach in any system of prophylaxis is sufficient to admit whole armies of the enemy. What we require, therefore, is to be in a position of absolute security, and to be ready to meet all and every emergency. To do this our safeguards must be of the most accurate description, not admitting the smallest deviation from perfection. Anything less is of so little value that it may be almost said to be useless.

Sources of Contamination.

The risks to which milk is exposed in the way of microbial contamination are very numerous. Perhaps the largest number are introduced at the time of milking, which is what might be expected considering the way in which this operation is usually carried out. Sedgwick and Batchelder, who investigated the Boston milk supply in 1892, found that when the milking was done in a clean stable, and received into a sterilised bottle, the average number of micro-organisms present was 590 per cubic centimetre; but if no special precautions were taken it rose to the astonishing number of 38,500 per cubic centimetre. Whence come this extraordinary number of bacteria? It is not difficult to imagine their source if for a moment one recalls the usual conditions of the cows, in even the cleanest and most hygienically managed of our dairies. The stable or cowshed in which the milking is usually carried on is itself saturated with excremental matter, the very straw the animals stand upon is too often but an incubating ground for micro-organisms; for warmed by fermentation, and saturated with fæcal matter, it offers all the conditions of warmth and nutriment material for their best growth. The restlessness of the animals and the walking of the milkman disturb at each moment myriads of these micro-organisms, some of which passing into the open pail, find in the warm milk all the conditions for life and active multiplication. That this is not an exaggerated picture will be evident when we state that fully 90 per cent. of the organisms found are the bacillus coli communis, the common inhabitant of all excremental matter.

Other sources of infection are to be found in the dirty hands of the milker, unclean dairy utensils, and in the insecurity and carelessness commonly employed for the transit of the milk from the dairy to the consumer. In the case of London milk at least, this always involves a railway journey, with sojourns on crowded platforms and ill ventilated goods-sheds and vans, so that it is not difficult to imagine that means of infection are neither infrequent nor inconsiderable. Indeed, it may even be remarked that with such a unique medium and so many roads of access it is remarkable that there are not more epidemics traced to milk than those hitherto recorded; and it is only just to say that, considering the difficulties in the way, it is remarkable that our daily supply is as good as it is.

Methods of Inquiry.

In all cases the milk was bought over the counter in the usual manner, the collector being furnished with sterilised bottles. It was brought back to the laboratory at once, and an examination made as soon as possible, it being kept during any unavoidable interim in an ice chest to avoid the possibility of incubation at a living temperature.

Examination.

A drop of milk removed by a sterilised platinum loop was introduced into nutrient gelatine. This was then liquefied, and poured out into a plate after the usual method. The plates were then incubated at 21-22° C., and examined as soon as copious growth had taken place.

Phenol Methods.

It was soon found that many of the plates were spoiled by the rapid liquefaction of the gelatine. It was consequently necessary to avoid this if any but liquefying organisms were to be looked for, and as many cases were suspected and found, these methods were subsequently adopted.

Examination of Plates.

The plates as thus prepared were carefully searched under a low magnifying power. Subcultures were made from any suspicious colonies, and subsequently identified, if necessary, by further subcultures.

Average Number of Bacilli Found.

The average number of bacilli found in the samples examined was 500 000 per cubic centimetre. Previous researchers have put the number found in other milk supplies at somewhat higher figures, but it must be remembered that in any numerical examination the sources of error are very numerous. Among such sources the following is perhaps the most important. As already stated, bacteria find in milk all the conditions necessary for rapid multiplication. The rate at which bacteria can multiply is hardly conceivable. Kohn calculated that a single germ could produce by simple fission two of its kind in one hour, in the second these would have multiplied to four, and in three days they would form a mass that can scarcely be reckoned in numbers—or if reckoned scarcely imagined—4,772,000,000,000,000,000 (Woodhead). Hence it is readily understood that the numbers found in any given sample of milk must vary enormously, according as the sample was examined soon or late after its being drawn from the cow, and according as it had been kept at an incubation temperature (that is, at such a temperature as is most favourable to multiplication, namely, 37° C. for most forms) or not. Hence the number found may only afford evidence of its having been kept carelessly by the vendor; but still such evidence is hygienically useful. We put the number, then, at 500 000 per c.cm., and when it is remembered that the number found by Sedgwick and Batchelder in freshly drawn milk was 30,000 per c.cm., it will be seen that considering the vast possibilities of multiplication our milk compares very favourably with other samples in this respect. Indeed, all the evidence we have goes to show that the faults of the London milk supply lie chiefly with the careless hygienic arrangements which obtain in farms, railways, and dairies, and which allow the entrance of the various forms which we have found.

The most important Micro-organisms Found.

The Bacillus Coli Communis.—This was the form that was found in the greatest abundance, it constituting fully 90 per cent. of all the forms found. Its presence is not difficult to account for when we remember that this organism is the one which is *par excellence* diagnostic of fæcal contamination, and when we recall the picture above given of the conditions attending an ordinary milking operation. Its presence in milk is thus easily accounted for, and the question arises, What does its presence signify? Now, the colon bacillus if found in potable water is usually taken as diagnostic of sewage contamination, but its presence in milk cannot thus be summarily dealt with, it having such ready access directly from the soiled cow and its surroundings. Its presence, then, means for the most part that adequate care is not taken of the cows and cowhouses in the dairy from which the sample in which it was found came. It may be objected that it is practically impossible to take such care that the

colon bacillus can be absolutely excluded; undoubtedly it is, still it is an imperative duty which must be carried out if we are to have anything like a sterile milk supply. It may again be objected that a bacillus which is present normally in the intestines of the most healthy of us can do no possible harm if introduced from without. Such a contention would not for a moment hold good. It is a very different thing to possess a normal quantity of a certain constituent, and to possess a quantity that is abnormally large. It might with equal justice be argued that, because we already possess indol in our intestines, that this is a desirable article of food, or that because we possess blood corpuscles therefore it is a good thing to have our vascular system crowded with them; but we all know that too many corpuscles are just as injurious as too few; and the same applies to the colon bacillus. Besides it has been clearly shown that many of the milder forms of disease are closely dependent on the presence of abnormal quantities of the bacillus coli communis. It will be sufficient to mention, among many others, its determining action in many cases of cholera nostras (Gilbert and Girode), cholera infantum (Lesage), cholecystitis (Charrin and Roger), etc.[1] In fact its *rôle* in abnormal quantities is by no means a small one, and its presence in milk, especially in such milks as might possibly be used for infant feeding, cannot but be a grave source of danger. We therefore insist that the quantity of bacillus coli communis present in London is dangerously large, both in itself and for that which it represents and portends, and that means ought to be taken to reduce the same.

Liquefying Organisms.—These were similarly present in every sample examined. The extent to which they were present varied in each sample, and such an extent, we think, can be taken as a very fair criterion of the purity of any given sample. The commonest species were varieties of proteus. The significance of these forms is not hard to see. The forms now known as proteus embrace many of those formerly collectively known as bacterium termo; they are found in putrefying organic matter of all descriptions, and their distribution is very wide. Their presence in milk must mean one of two things: either direct contamination with putrefying matter (stale milk such as might occur in improperly washed dairy utensils, etc.), or needless exposure to an atmosphere containing particles of decomposing matter. Both of these possible channels of infection are such as might, and most certainly ought to be, successfully guarded against; and it is not possible to find the same excuses for the presence of liquefying forms as in the cases of the colon bacillus.

Bacillus Fluorescens.—This form was similarly present in all the samples examined, and its significance, while not so conclusive as that of the two previous forms, is yet worthy of note. Bacillus fluorescens is an aërobic form, distinguished by a particular sensitiveness to want of oxygen. It is frequently present in potable water; hence its presence may be taken as presumptive evidence of added water—but as presumptive evidence only, as its distribution is far too wide to allow of any such definite statement.

Pathogenic Forms.

In two of the samples was found oïdium albicans, the exciting cause of thrush. It is not possible to say whence this organism found entrance, as so little is known of its life-history, but its presence calls forth the same remark and teaches the same lesson as the presence of the other forms. Its pathogenic properties give to it special significance.

The conclusion of the whole matter is this: Not even the smallest of the dangers we have pointed out can be considered trivial; parliamentary precautions are futile, and we would again insist that the same weak spots in our system of defence, which in times of microbial peace admit but comparatively harmless varieties, may in times of microbial war and epidemic disease allow the entrance of forms which in their life-action may be the cause of large disease diffusion and of frequent sporadic outbreaks.

Suggested Reforms.

1. That all milking be carried on in the open air, the animals and operators standing on a material which is capable of being thoroughly washed, such as a floor of concrete or cement. Such a floor could be easily laid down in any convenient place which can be found. The site chosen should be removed from inhabited parts as far as possible and should be provided with a plentiful water supply. Only in this way does it seem possible to avoid the initial contamination with the colon bacillus.

2. That greater care be expended on the personal cleanliness of the cows. The only too familiar picture of the animal's hindquarters, flanks, and side being thickly plastered with mud and fæces is one that should be common no longer. It would not be difficult to carry out this change; indeed, in the better managed of our large dairy companies' farms such a condition no longer prevails, but in the smaller farms it is but too frequently met with.

3. That the hands of the milker be thoroughly washed before the operation of milking is commenced, and that after once being washed they be not again employed in handling the cow otherwise than in the necessary operation of milking. Any such handling should be succeeded by another washing in fresh water before again commencing to milk.

4. That all milk vendors' shops should be kept far cleaner than is often the case at present. That all milk retailing shops should be compelled to provide proper storage accommodation, and that the counters, etc., should be tiled.

[1] Brouardel, *Trans. A. Med. Cong.*, p. 67, vol. i.

SKIMMED MILK IN WORKHOUSE INFIRMARIES.

A correspondent writes to us: Knowing the deep and practical interest you take in the reform of our workhouse infirmaries, I know I need offer no apology for troubling you. For many years, nothing but skimmed milk has been supplied to the inmates of our workhouse infirmary. The cream is taken off and used by the officers of the house, either as cream or after being converted into butter. As a member of the Board, I am anxious to have this state of things altered, but I am at once told that skimmed milk furnishes all the nutriment required. Further, I may say that the milk is sometimes twenty-four hours old when used in the infirmary and is at times sour, but the inmates must either consume it or have nothing. May I venture to ask, as the result of your large experience, whether you know of any other workhouse infirmary where skimmed milk only is supplied, and whether you consider this is a proper state of things to exist, and one that the medical inspector of the Local Government Board would approve of?

MILKBORNE DISEASE:

An Appeal to Medical Officers of Health.

Mr. Ernest Hart is engaged on a general inquiry into milkborne disease since 1881, in continuation of his paper of that year on the Influence of Milk in Spreading Zymotic Disease, and will be much obliged if those health officers who possess notes of outbreaks of disease traceable to the agency of milk will be good enough to furnish him with a brief statement of the facts, so far as known, in the shape of answers to the questions subjoined:

1. Date.
2. Locality.
3. Reporter.
4. Total number of cases.
5. Deaths.
6. Number of cases amongst drinkers of suspected milk.
7. Number of persons supplied by milkman.
8. Number of such families invaded.
9. Sanitary circumstances of farm or dairy from which milk was obtained.
10. Presuming cause of outbreak.
11. Circumstances connecting milk.
12. Facts showing special incidence of disease.
13. Reference to report.

THE STEWART PRIZE.

The Stewart Prize for 1885, consisting of an illuminated address and a cheque for £50, was awarded to Brigade Surgeon-Lieutenant-Colonel D. Douglas Cunningham, M.B., C.I.E., F.R.S., for his bacteriological work in India, especially in the investigation of the bacillus of cholera. In the absence of the recipient the prize was received on his behalf by Surgeon-General Cornish.

SIXTY-THIRD ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in London, July 30th and 31st, and August 1st, 2nd, and 3rd.

FIRST GENERAL MEETING OF MEMBERS—TUESDAY, JULY 30TH.

THE first general meeting was held on Tuesday afternoon, July 30th, at Exeter Hall, Strand, the PRESIDENT (Dr. LONG FOX, M.D., F.R.C.P.) in the Chair.

The minutes of the last general meeting were taken as read and confirmed.

Retirement of President.—Dr. EDWARD LONG FOX, in thanking the members of the Association for the great honour done him during the past year, expressed his deep appreciation of the kindness shown to him by the Council, Treasurer, and General Secretary and Editor of the JOURNAL, and of the pleasant way in which they had condoned his many shortcomings. Sir Russell Reynolds, who was about to succeed him in the Presidential Chair, was known wherever the English tongue was spoken, and his name and life work throughout the whole medical world were household words. He was sure that the meeting, which was by far the largest ever held in the history of the Association, would manifest in no measured way the delight they all felt in having so great a man as its President.

Installation of New President.—Dr. LONG FOX then vacated the Presidential chair, which was taken by Sir Russell Reynolds amid the applause of the assembly.

The PRESIDENT (Sir Russell Reynolds), in acknowledging the compliment just accorded to him, said he felt it was a high honour to be called upon to occupy the chair of the Association, and one which he was delighted to accept when it was offered to him last year.

Sir WILLIAM HINGSTON (Montreal), in proposing a vote of thanks to the ex-President, said that Dr. Edward Long Fox was one of the oldest members of the Association. He had been an active member of the Council, and by his exertions had added much to the success of the Bristol meeting last year. He begged to move:

That the cordial thanks of this Association be given to Dr. Edward Long Fox for his services so ably and courteously rendered, and that he be and is hereby elected a Vice-President for life.

[Applause.]

Mr. HEMMING, in seconding the motion, said that those who attended the meetings at Clifton must have been struck by the extraordinary courtesy, hospitality, kindness, and yet firmness which Dr. Long Fox displayed both at home and in the chair. Dr. Fox's reputation as a physician was too well known to need his passing any encomiums upon it, and he was sure everyone would most cordially unite in wishing to bestow the highest honours that could be conferred by the Association upon that gentleman.

The motion was carried by acclamation.

Dr. LONG FOX said it was one of the most difficult things in the world to return thanks gracefully, but he assured the members that he was most grateful for the kind manner in which the resolution had been received, and of course it would be an honour for the rest of his life to be a Vice-President. He was deeply pleased that the motion should have been proposed at that meeting of the Association, which was far and away the most important that had ever been held.

The Report of Council.—Dr. WARD COUSINS (President of Council), in moving the adoption of the report and financial sheet, said he was glad to report that the British Medical Association had made great progress during the past year; they had extended their boundaries, and never at any moment of their existence were so firm and united and compact in their union. There were now, he was proud to say, 16,000 members scattered over the world. [Applause.] The Association was now the largest and strongest medical organisation in the world. [Applause.] When they met in London in the year 1862, with the late Sir George Burrows as President, the Association numbered 1,500; in 1873, when the late lamented Sir William Fergusson was President, 5,400; and now they met with the grand total he had mentioned. The JOURNAL also had made progress during the past year. It had increased in vitality, and it had increased in every sense of the word, by its appreciation throughout the whole of the Association. The members had no doubt read with great interest the reports in reference to many interesting investigations, but he would only mention one—the very important report upon the condition of the provincial workhouses. He was confident that there were thousands of the sick and the aged who, in their loneliness, had been benefited by the report. [Applause.] The report called forth, also, the activity of the local authorities towards modern improvements. The JOURNAL contained a brilliant line of transactions; there were discussions on every medical and surgical topic of the day; there were opinions from the very best authorities, and the members could see the progress of those splendid sciences which now throughout the world were moral forces as well as infinite benefits to all mankind. [Applause.] The Parliamentary Bills Committee had considered many important questions, but he was inclined to think that the dissolution of Parliament, postponing many of those important questions at present, was a great relief to many of them. [Laughter.] One matter, at all events, had been most carefully considered by the Committee, a matter near to the heart of all, and that was the amendment of the Medical Acts. It was certain that when the right time came the whole force of the Association must be in the direction of modifying those Acts. Nothing was more distressing than to see the sick and the suffering under the influence of fraud and injustice, and it was on public grounds, not merely as a matter of professional protection, but on general, broad, public grounds that they wanted the Medical Acts amended and reformed. [Hear, hear.] There was another most important matter which the Inebriates Legislation Committee had had to deal with. The late Lord Chancellor promised to introduce the Bill of the Committee into the House of Lords, but unfortunately it was now postponed. He was quite sure that all the members of the Association would rejoice when the detention of habitual inebriates became adopted by the Legislature—[applause]; he was confident the members would be glad when it was in the power of the County Council to provide retreats for that unfortunate class, and when by magisterial decision, and by judicial decision likewise, the poor might be sent to places where they might be submitted to therapeutic treatment, instead of being sent to gaol. [Applause.] No doubt 80 per cent. of the cases that appeared in the police courts were associated with drunkenness, and a thousand times over that class came before the police courts and were sent to prison. Prison was neither deterring nor reforming. And why? Because in this land of Christian light and Christian sympathy there was no place and no power to help them. [Hear, hear.] He was confident that the British Medical Association would never cease its voice; he was confident that they would ever do their utmost to promote that righteous cause. He sincerely hoped that their old friend Dr. Norman Kerr—[applause]—would in a few years be successful in the great work to which he had devoted his life. [Applause.] Excellent results had been also obtained by the Committee for the Examination of School Children. He sincerely hoped the members had looked at that report; 100,000 school children had been examined with regard to their peculiarities of mind and body, their deficiencies, their deformities, their constitutional tendencies, and the report was full of the most interesting matter and interesting recommendations. The report had been sent to the Local Government Board and to the London County Council. Children were not all cast in the same mould, and those who were unfortunately labouring under these deficiencies required special care and training. The Council received during the early part of January a deputation from the South of Ireland respecting the unfortunate matter of benefit clubs, and he need not say that the Council received the deputation with the greatest cordiality, and expressed sincere sympathy with those who had been compelled to resign their appointments. The assistance the members had given to its members in the South of Ireland had had a most excellent result. It had sustained and helped

them to fight the question shoulder to shoulder as an example to the associates in all parts of the kingdom. From communications he had received during the last few days he thought they had every reason to believe that in the long run the Association at Cork would gain the victory. [Applause.] It was time that the British Medical Association and the Council should take into consideration all the questions which agitated the profession for medical reform and benefit societies, because it was only in that way, by combined action and by united voice that they could help to protect the interests of their associates, and help them in time of need. The Council thanked most heartily the officers of the Branches in all parts of the world for the assistance they had given them during the past year, and he need hardly say that without their assistance and help it would be impossible to manage so large an administration as the British Medical Association had grown to. Their grand purpose would be to unite still more and more by common sympathy and mutual confidence, and then they hoped that in a very short time every qualified practitioner in the British Islands would be a member of the Association. [Applause.] It was their desire to absorb them all, and they would make them also, if possible, special practitioners in that simplest of all the branches, a branch which on the present occasion was honoured with a section, a branch of which the top and the bottom, the length and the breadth, the centre and the circumference, and the very kernel was simply "to do to others as we would they should do unto us." [Applause.] The members had to lament the loss of 200 of their associates during the past year. In that number their old friend and colleague, dear to many of the members of the Association, Mr. Arthur Durham—[applause]—was included, and also their lamented colleague, Dr. Withers Moore. [Applause.] Dr. Withers Moore was President of the Association in 1886, at Brighton, and was also Vice President of the Council. Dr. Withers Moore's successful career was known to all the members. He was devoted to the interests of the Association, and he (Dr. Ward Cousins) had often heard him say, "Our profession is a noble calling, and worthy of the devotion of a lifetime; but you know it has its vexations, it has its troubles, and it has its disappointments." Yes, but still, after all, they might have more mutual confidence, they might grow firmer in their union; and although, perhaps, they might not be able individually to help on the great march of science, or command extraordinary success, they could have the highest of all professional aspirations, and that was to obtain the confidence of their brethren. [Applause.]

Mr. Butlin (Treasurer) in seconding the motion, said it would be seen from the financial statement that if any misfortune should happen which caused the Association to be wound up, they would wind up with about £60 000 of assets above their liabilities. Something under £50,000 of that only, however, was available for purposes of the Association. At the present moment the Association was not only in a condition of comfort but was approaching a condition of prosperity, but not such great prosperity as some members of the Association imagined. The profit during the year carried to the balance sheet was between £4,000 and £5,000—less than in the previous year.

Dr. Douglas asked when the reports now before the meeting first appeared in the Journal of the Association.

Dr. Ward Cousins said that they were published last Saturday.

Dr. Douglas said that a great many members of the Association who took an interest in the general business of the Association frequently found it impossible to read the reports before coming to the meeting. He trusted that the Council would take the matter into their consideration, and that the various reports would in future be published earlier, so that intelligent medical practitioners having read and digested them, could say "Aye" or "No" as they might feel right and proper.

Dr. Ward Cousins assured Dr. Douglas that the matter would receive the attention of the Council.

Dr. Colin Campbell, in calling attention to the non-publication of letters in the Journal, particularly with reference to the question of the registration of midwives, said that the complaint was in no way a personal one, for he had been treated with the utmost courtesy. One document, however, of vital importance had been suppressed. A Committee of the Lancashire and Cheshire Branch, numbering 100 members, called the attention of the Branches at large to the very important omission which occurred in the draft Bill for the amendment of the Medical Acts. That draft Bill, which was prepared by the Parliamentary Bills Committee, at once rendered legal the assumption of medical titles. The Committee of the Lancashire and Cheshire Branch were the first to call attention to the fact that what was wanted was not the penalisation of titles, but the penalisation of practice. They did not care what a man called himself, but as soon as he proceeded to practise illegally, without examination and registration, then the common law of the land should make him liable. A motion was proposed by Mr. Walter Whitehead at a meeting at Liverpool, but prior to Mr. Whitehead putting it to the vote, he (Mr. Colin Campbell) as Secretary to the Committee, sent a whole series of improvements upon, and amendments to, the Parliamentary Bills Committee's draft Bill, and they were entirely suppressed, while the actions of a society called the Midwives Registration Association appeared prominently week by week. Another matter to which he wished to call attention to was the fact that for several weeks past an advertisement had appeared in the Journal from a gentleman whose name had been removed from the *Register*.

Dr. Ward Cousins said that the greatest care was taken by the management and Reference Committee with regard to the insertion of advertisements, and the matter referred to by Mr. Colin Campbell would be duly investigated.

Dr. R. R. Rentoul said he was strongly opposed to the appointment of the Reference Committee, because if any complaint were made it enabled the Editor to go behind it, and say, "You must blame the Reference Committee" They had an editor who was paid £1,500 a year—[No, no]—and he ought to be held responsible. He thought the meeting would be in order if it recommended to the Council that either the Reference Committee should be entirely abolished, so holding the Editor entirely responsible, or that some one more in harmony with the body of the profession should be appointed. Another point to which he wished to call attention was the large sum for editorial expenses. In 1884 the editorial expenses were £2,664, last year they had amounted to no less a sum than £5,948. He hoped, too, that the Council would take some steps to see if it could not vote £500 or £1,000 to help Dr. Anderson to fight their battles.

Dr. Ward Cousins explained that Dr. Anderson's case had on many occasions come before the Council; the best legal opinions had been taken, but by the present Memorandum of Association they were unable as a body to give Dr. Anderson any pecuniary support.

Dr. Horder asked what was the length of the lease of the premises in the Strand.

Surgeon-Major Ince said he should like to know what was the exact salary of the Editor.

Mr. Butlin said that the lease of the premises in the Strand had something under ten years to run. There were two or three reasons why the expenses of the editorial department had increased during the last ten years or so. In the first place, the number of pages in the Journal had been increased, and an enormously increasing quantity of material was sent in for publication, and a great part of the duty of the editorial staff was to prepare that material for publication in the Journal. Mr. Ernest Hart's present salary was but £750, and with contributions amounted to, perhaps, about £1,000 a year; but it must not be forgotten that for many years Mr. Ernest Hart had worked up the Journal on the very smallest possible salary, very much below his merits as an editor, and very much below what he ought to have received. It seemed only reasonable that now they could afford to pay him they should do so. [Applause.] Under the head of editorial expenses were included all the expenses of contributors, and such matters as clerk's salary, reporting, engraving, woodcuts, stationery, postage, and the like; £1,900 or £2,000 a year were paid to a large number of persons who contributed not only from all parts of the country but from all parts of the world.

He admitted that the JOURNAL cost a good deal of money; but he did think, considering the enormous value it had been to the Association, and its admitted excellence as a medical journal in every part of the world, they were not extravagant.

The motion for the adoption of the report was then put to the meeting and declared by the President to be carried.

General Practitioners Committee.—Dr. WARD COUSINS, in moving the adoption of the interim report, said that he might fairly divide it into two parts: first, the opinion of the Council upon the registration of midwives, and, secondly, their opinion on the prosecution of quacks—what was called medical defence. There had been a Midwives Registration Bill before Parliament, but Parliament was dissolved, and therefore there was no such Bill before Parliament or before the Association. Many members were in favour of the registration of midwives—and a very large number were opposed to it. The Council had given days' and nights' consideration to the topic, and their first conclusion was that the present state of things was intolerable and that a change was absolutely necessary. The next clause of their opinion was that a scheme might be developed by the Association, or the Council, or the Parliamentary Bills Committee, which would include the registration and education of all classes of nurses—medical, surgical, and midwifery. [Hear, hear.] The Council recommended the title "midwifery nurse" and excluded altogether the title "midwife." The third clause was a very important one—that the Council thought that the care of parturient women should not be in the hands of any intermediate class of practitioners—[cheers]—but they ought to be committed to the care of properly qualified medical men and ladies. [Hear, hear.] The Council did not expect that every case of midwifery would be attended by qualified practitioners, but they wished that every registered nurse should be in touch with a qualified practitioner. Upon these three clauses the force of the Association might be brought to bear, when the right moment came, to modify a scheme which would be satisfactory to all members. They were all agreed that the profession of medicine was unprotected—quacks had pretty much their own way—and, until there was a modification of the Medical Acts, quackery would still have its own way. No power whatever could control quackery in this country as it ought to be controlled, not for the sake of the profession, but for the sake of the public. All their claims for the suppression of quackery were simply claims for the suppression of injustice to the sick, and on public grounds they earnestly desired an amendment of the Medical Acts so that prosecutions could be satisfactorily carried out. There was a great difference of opinion in the Association as to what authority should prosecute quacks. Where was the power to come from? Was it the General Medical Council? The General Medical Council had no statutory powers at all to deal with quackery, and he did not suppose they wanted them. The question was a very old one, which came up in waves. The wave which had recently started came directly from the Branches. Many members said the right body to prosecute was the British Medical Association. The Council had taken the very best legal opinions upon the course they should take. Under the present Memorandum it was absolutely impossible to spend one farthing in that direction. For sixty-three years the high and honourable purposes for which the Association was established had been successfully carried out; it was now the largest Association in the world, and they ought to be careful to consider the question in all its bearings. It was not impossible to alter the Memorandum; there were legal formalities to be gone through, but he did not press the question of difficulty in such alteration but the great necessity for caution in that direction.

Mr. COLIN CAMPBELL asked why they did not go in for a charter.

Dr. WARD COUSINS said he had received communications on the subject, stating that the Association was to maintain the honour and interests of the profession, and surely if that were so, would not an amendment of the Medical Acts tend to that end? The Council had had the best legal opinion upon that, and altering one word of the Memorandum for the purposes of spending any moneys in the direction of the suppression of quackery would be just as difficult and just as complete as if the whole of the purposes of the Association were changed. [No, no.] That was the legal opinion. Nothing but complete and entire alteration of the Memorandum could possibly be done if the question were entertained for a moment. It might be said, Why did not the Council appoint a subcommittee to undertake medical defence? Supposing their organisation extended only to the British Isles, it would be a different matter, but it extended over the British Empire, and over the British Empire they found quacks. They had branches in Europe, Asia, Africa, and America, and survey the question of the prosecution of quacks all over the world would at once suggest to members the necessity for caution. The Council did not consider it would be their duty to entertain that question unless it came from one general and practically unanimous expression of the Association—["So it has"]—from all parts of the great organisation, for they could never expend their money for prosecution in a part of the area. The Council would never recommend the alteration of the Memorandum if it in any way endangered the high and noble objects for which the Association was originally developed. Very few members throughout the length and breadth of the organisation had yet shown any interest in the administration. When the Council had resolutions sent up from Branches, they were not the expression of the whole of members of the Branches, and they had abundant evidence to show that there was no unanimity of opinion upon the question of the prosecution of quacks. He could speak for his own Branch. When those resolutions had been passed there were only a little handful of men present. At the annual meeting they listened to the eloquence of those who delivered discourses, and then when the administration came on there was a regular stampede, and the Council was left with a handful of old friends, with whom they kindly wrestled every year or two. That was the way in which the administration had been carried on for years at the annual meeting, and he had never yet had the honour of addressing so large a body of members as on that day. The Council felt that the time had come when the strength of the Association should be drawn into the necessity of modifying the existing Medical Acts. But until they had done that as an Association by putting pressure upon the Legislature, they would never get the modification. In the meantime he hoped that members would join the defence unions already doing excellent work. [Cheers.] They stated in their report that the General Medical Council was made up of the privileged classes of the profession, and so it was. The Association had been nobly represented by Sir Walter Foster and Mr. Wheelhouse. [Cheers.] In British Columbia the Medical Council not only managed the examinations of the district, but not only kept the register of the qualified practitioners, but enacted a small tax which was utilised for the suppression of quackery. Happy the practitioners who practised in British Columbia! The Council was deeply interested in the question, which affected the bulk of the general practitioners, and he was quite confident that they would do their utmost to give every consideration to it, and that the vexations which attacked many members in all parts of the kingdom would receive their earnest investigation, and he sincerely hoped they would ultimately hit upon some most safe and specific remedies. [Cheers.]

Dr. SALAMAN, in seconding the motion, said he did so with much pleasure, as he had worked upon the Committee very steadily from its beginning, and had every reason to believe that the report would be accepted, and would be regarded as really a worthy interim report. They had given to them a list of something like fifteen or sixteen subjects, which were said to be the grievances of general practitioners, and the Committee—a body of men living in various parts of the country—had to go up to London at various times and discuss those questions. They found that those questions presented extraordinary difficulties; many of the members looked at them from entirely opposite points of view, and it was not until they had had four or five meetings that they came to something like a common standpoint, and therefore he thought they ought rather to be congratulated upon having got so far on with the report. He sympathised very much with Dr. Douglas, because he himself regretted that the report had

not been placed in the hands of members earlier. It was a great grievance to the Committee, who had worked so hard, that the report should not have been put in the hands of members before. Although they sat on the opposite side of the platform, they agreed with a great deal of what the members said, and it was not their fault things were not altered. The two most important things they had dealt with were the midwifery question and the prosecution of quacks. They had dealt with the midwifery question tentatively: there was a great difference of opinion about it. He believed that their proposal that midwives should be put on a register together with all other kinds of nurses was the best solution of the difficulty; at any rate, it was a reasonable one for the present. The other question was as to the prosecution of quacks, and whether the funds of the Association should be devoted to that. He was in favour of medical defence—he had been a member of medical defence societies since their start—and was very anxious, if he could, to find some means of doing what was wanted, but after due consideration he found the practical difficulties became greater and greater. He was willing to vote for any resolution which said it was desirable that the British Medical Association should undertake those duties, but when he said they *were* to do so, he saw grave difficulties. It was not a question of desirability, but of practicability. No one knew better than Mr. Lawson Tait the great difficulty there was in the prosecution of quacks. Another great practical difficulty was the want of local knowledge in questions of medical defence.

Mr. LAWSON TAIT said that Dr. Saundby, in speaking on midwives registration, defended the Council against a charge that was made by a voice from the audience, that their position now had been arrived at under pressure. Whether it were or were not the fact that the phrasing of the Council did appear before pressure was put upon them by the wording of the resolution, yet the dates of the origin of the pressure would not justify Dr. Saundby's conclusion, because there was evidence in the management of the Association that pressure was being exercised pretty actively on the other side. [Cheers.] He saw a paragraph from some unknown but experienced coroner, and he put the appearance of the paragraph as a very striking corroboration of the charge which Dr. Rentoul made of the suppression of pressure from their side of the question. It was the kind of argument which appealed to a child, not to a grown person. They were told that a number of babies were found distributed in conditions more or less of maturity over the area of the metropolis, and the conclusion was that because those babies were so distributed there was reason to believe that the law regarding the registration of the births of children should be more strengthened, so that all births, including stillbirth, should be registered; further, that midwives should be registered, under proper examination, and should be compelled to notify the births of all children. The next paragraph his eye rested upon was one stating that a box containing the body of a child was found in the garden of a cottage in Monmouthshire, formerly occupied by the sexton of a Baptist church. That was the third body unearthed during the week in the same garden and excavations were still proceeding. An inquest was held on the first body discovered, and the sexton in question was present and calmly admitted that he had buried scores of bodies in that manner. Would he be thought a reasonable person if he said that on account of that the sextons were to be turned into a low grade of medical practitioners? Yet that was the kind of argument that was being used, and, although the position now occupied by the Council might be that of genuine conviction and conversion, he regretted to say that that conviction had been but scantily evident in its growth, and the conversion was somewhat tardy. It was on record in the minutes of the Clifton meeting that a resolution was passed by a general meeting condemning the principle of the registration of midwives, and it seemed a most extraordinary thing that the conviction of the Council should be perfectly genuine—which he assumed it must be—when they allowed the Parliamentary Bills Committee, after that resolution was passed, to draft a Bill of its own. They were told that these resolutions were binding not only upon the authorities of the Association but upon their members. If so, why was the resolution passed last year not binding upon the Parliamentary Bills Committee? The action of that Committee ought to have been at least to have consulted further the general voice of the Association before it gave cognisance to any shape or form of a Midwives Bill. He asked the ruling of the President as to whether or not his resolution, or rather a part of it, should not come on then as an amendment to the Council's report. [Hear, hear.] The President bowed his acquiescence, and therefore he moved:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical, or surgical, or midwifery practitioners other than those recognised under the Medical Act, 1858, as now existing.

They had been told that no Midwifery Bill was now before the Association or before the country, and that of necessity took the middle part out of his resolution. They had heard much of the technical difficulties of the Council, who, when the members wanted them particularly to do anything, always assumed a *non possumus* position, and sheltered themselves behind the opinion of counsel. If their conversion to the views of the members became a genuine one, they would very soon find a way out of the condition of impossibility. [Cheers.] He asked permission to withdraw the third part of his resolution rather because it involved simply a recurrence of that difficulty. He hoped they would emphasise by a tolerably unanimous vote the fact that they objected to the principle of registration of midwives, and objected to the manufacture out of them of a new order of medical practitioners—[Applause]—and thereby confirm the decision of the Clifton meeting, and then those who were concerned in the matter would be completely satisfied. The arguments which had been advanced on the other side were arguments for the improvement of the present condition of affairs. He would not contravene them, because he agreed with the statement that an improvement was necessary. It was to the advantage of the public, and it would be to the advantage of the profession, that there should be an increase in the quality of the attendance in midwifery cases amongst the poor. But the question arose. Was the principle of registration of midwifery practitioners the right way to relieve the difficulty? He said under all circumstances No. They were told it was inevitable from the force of public opinion. Well, public opinion was fomented by a number of people who had not given any real study to the subject. From an outside point of view altogether he had arrived at the opinion that those who advocated the principle of registration had the right and proper policy in view, for the reason that if they went back in the history of medical legislation, everything had been in a forward and upward direction, but that could be regarded as nothing but a backward and downward direction. [Applause.] They had now a number of women properly entered and employed in the profession; that number was year by year increasing. The day was when the movement was an unpopular one, but now the presence of ladies among them showed that opinion on that particular was altered. [Applause.] These women would be handicapped in general practice, perhaps more even than the men, by the proposed new institution of midwives. There were hundreds and thousands of unqualified male assistants who would be glad to give themselves a position by registering themselves under the new Act. They could not have registration without responsibility nor responsibility without control, and how was that control to be carried into effect? If there was to be benefit in the matter of midwifery practice it was to be done in another way altogether, namely, by removing the stigma of pauperism where poor women had to be confined and had to apply for State paid medical relief. [Applause.] He begged to move the first clause of the resolution which stood in his name.

The PRESIDENT OF COUNCIL: Is this a rider, because it is expressing the same opinion?

Mr. TAIT: I will take it as a rider or whichever way you like.

Mr. COLIN CAMPBELL agreed with Dr. Ward Cousins that the present condition of things with reference to midwifery practice was intolerable, but he thought it would be well if

every member would think for a moment what was the present condition of things which was intolerable. It was usually asserted that the condition was the continued existence of their old friend Sairey Gamp. If that were so it was a very remarkable circumstance. For twenty years the Obstetrical Society of London had been selling diplomas to women of three months' education. The condition of things which was intolerable was not the presence of the old Sairey but of the new Sairey. He had had experience of twenty-five years' practice, mostly in connection with the old Sairey, and he had seen nothing of the horrors which had been so frequently depicted as the result. [Hear, hear.] Lately he had been brought in contact with one or two of the superior class, armed with a diploma to be measured by the yard, signed with the names of eminent gynæcologists, with very large letters usually, and with a picture of very remarkable dimensions at the top, and that was the woman who made the present condition of things intolerable. [Hear, hear.] She was told by her learned and honourable instructors, "My dear Mary Jane, you are better than the ordinary practitioner; you have been taught—I have taught you." [Laughter and applause.] The admiration was reciprocal, and Mary Jane went about singing the praises of her teacher, and the teacher sang the praises of his pupil. It has been asserted in the report of the Council that the General Medical Council had put down their foot upon that. The General Medical Council did put their foot upon it in a very determined manner last November; they declared that the conduct of those gentlemen who issued the diplomas was infamous, but like a timid child who put his foot into the water, they had drawn it out. [Laughter.] He thought they had very materially increased the difficulties of the position by sanctioning a certificate in midwifery. What did a certificate in midwifery mean but a certificate in the science and art of midwifery? [No.] He sincerely trusted not, but there was the position. Bogus bank notes had been issued, and now the legalisation of that which was illegal was required.

Surgeon-Major Ince called upon the members to pause most seriously before committing themselves to the resolution proposed. What was the motive which was leading them to make that alteration? Was it really philanthropy? Was it really a feeling of regard for the poor mothers? [Long and continued cries of "Yes!"] There might be some spark of philanthropy in it, but it was most discreditable for that public meeting to pass a proposal of that kind, and ignore the existence of thousands of ordinary midwives. ["Vote, vote!"] They seemed very impatient to come to a wrong conclusion, and as he found his efforts to act the part of a midwife by delivering them from the prospective danger into which they seemed determined to rush were unavailing, he would withdraw from the case. [Laughter.]

Mr. Victor Horsley said he had no special competency to address the meeting on the subject of obstetrics or gynæcology, and he did not propose to occupy their time for a single moment or to question from any but the most special point of view of the Parliamentary Bills Committee. He noticed that the proposer and seconder of the amendment continually used the expression, "The registration of midwives." He ventured to protest against such language, because no registration of midwives was before the Association at all. The only thing that was before them was the registration of midwifery nurses. He was quite prepared to be corrected, and to hear the significations of dissent, meaning that what has been understood by the Parliamentary Bills Committee to be a midwifery nurse was something more than a midwifery nurse. That being so, that was the matter for discussion, not the question as to whether they were going to perpetuate a set of practitioners who at present were in actual existence. If that question was raised, they at once split the profession and the Association. Moreover, they had actually on the paper for production before that great meeting another motion on that very subject, proposing not merely the registration of midwifery nurses, but the registration of other nurses. He ventured to say that their time had been to a certain degree wasted, for this reason: as a matter of fact, the Bill for the registration of midwifery nurses, which was drafted by a subcommittee, of which he had the fortune or misfortune to be chairman, was published in the Journal only the other day. It was sent, by reason of the exigencies of time, to the Branches only, and the Branches had not yet had the opportunity of expressing their opinion upon the subject at all. From the constitutional point of view, from the construction of the Association as a whole he did think it was a waste of time for the meeting to express its opinion on the subject before the Branches had done so. He was only referring to the constitution of the Association. According to that constitution everything had to be done by the Branches and then brought before the Council at the General Meeting. The discussion on the registration of midwifery nurses was in no wise affected by the amendment before the meeting.

The President of the Council: It was not an amendment; it was a rider to the resolution.

Mr. Victor Horsley said the rider to the resolution had really no bearing upon the question before the Association. It was, as a matter of fact, a statement of opinion with which they would all agree. They all agreed that there should be no class of imperfectly trained practitioners existing. [Hear, hear.] That was a very different thing to the class of trained nurses. He rose for the simple point of putting the Committee, for which he was partly responsible, right before that great meeting. He believed that if the discussion proceeded on its present lines that Committee would be to a certain degree stultified in the actions which it had seen fit to lay before the Association.

Professor Murdoch Cameron said that for many years he had been engaged in the education of the despised midwife, and he had never used the term "my dear" to a single nurse yet. [Laughter and applause.] A large number of his students were ladies who had been engaged in hospital practice as trained nurses, surgical and medical, for many years before they came to be trained as midwifery nurses, and he thought in training such women and putting them in a position to attend poor women they were doing a greater kindness than going on on the lines that were at present adopting in allowing them to call upon Sairey Gamp. It was a matter of pounds, shillings, and pence. [No, no, and Yes, yes.] He knew it was a fact that when a poor woman was about to be confined and went to a doctor he demanded his fee, and would not go until he obtained his money. [Denials.] He knew well enough in cities—he did not speak about the country practitioner—that there were thousands of poor women who were not able to pay beyond three, four, or five shillings to a midwife for a confinement. Where were the medical men that would go to a case on such terms? [I go for nothing.] He begged to move as an amendment:

That legislation on the subject of the registration and training of midwives should receive the support of the British Medical Association.

Dr. Hayward said that for the last fifteen years he had been one of that array of general practitioners who in districts more or less remote had attended to all the emergencies that could fall to a professional man. In the district in which he practised, at least three-fourths of the midwifery cases were attended by ignorant, untrained women, and he had found, unfortunately, repeatedly that very disastrous consequences occurred both to mothers and to children. There was a most appalling ignorance of the danger of hæmorrhage, and a lack of even ordinary cleanliness. He need not say that the mortality in the district in which he practised was enormous. He appealed to them as members of a profession which was usually considered to be great and noble not to be guided by too narrow and selfish motives in their views on the matter, and remember that this great question was not to be decided even by that meeting; and even if the voice of the medical profession was unanimous, that would not settle the question. The matter was to be settled by the voice of Parliament, and if they as a profession simply put themselves to obstruct and hinder, the matter would be decided without them. He had great pleasure in seconding the amendment.

Sir Walter Foster said that had not the last speaker tried to throw dust in the eyes of some of the least instructed among them by saying that the question would be settled by Parliament, he would not have spoken. Parliament settled those questions according to the will of the people of the country. [Applause.] Surely Parliament in this matter was

especially in need of guidance—[hear, hear]—and he felt certain they would receive it from that meeting. They as an association of medical men were in no sense opposed to the improvement of the condition of these women who attended on their sisters; they wanted them improved in education and in training, and above all they wanted them improved in the various little matters of cleanliness that went so much into questions of midwifery success. When anybody got up and said they were obstructing anything of that kind it was a false statement which reflected on the profession, and he felt personally upon himself, because he had had to bear some of the brunt of the battle. When the General Medical Council had this matter in consideration—and their experience ought to be a fruitful source of information to them—there was a Bill brought forward for the registration of midwives. He, as one of their direct representatives, pointed out the danger of registering midwives, and pleaded for the registration of midwifery nurses, because all that was wanted in the improved training, the improved education, and the improved knowledge of parturient cases could be obtained through the improved training of midwifery nurses, but if they forced upon the public, through any resolution of the Association or any Act of Parliament—which God forbid in the interests of the women—the class of persons who were only trained for three or four months at a midwifery hospital, and then sent out with legal sanction to become practitioners, there would be disasters infinitely worse than before. When any one asked them as a body of intelligent men to vote for a system of registering midwives, he asked them to break down some of the best work that had been done in the profession for the last fifty years—[applause]—because it opened the door at once to a lower grade of medical practitioners, limited at first to midwifery, but leading up to a further encroachment on the medical domain by suggesting licensing of other persons for the other branches of medicine and surgery. When the Bill for the registration of midwives came before the General Medical Council, it defined the midwife as a person who could only attend cases of natural labour, and when it went through Committee, and was reported, all definition and limitation of function was gone. Thus they saw the danger which lurked in Bills like those. If they put on the face of these Bills that they were to be for the registration of midwifery nurses, they then took the first step for the organisation of the nursing profession, which would become like the organisation of the medical profession, and would give to all these women so registered a proper training before they were entered on the register, and enabled them to give to their sisters in trouble adequate help, and at the same time would not encroach on the Medical Act of 1886 or create a danger to the whole medical profession. [Applause.] He therefore hoped that the gentlemen present—and the ladies, too, who were members of the profession—would join with him in heartily supporting the motion. [Applause.]

Dr. CULLINGWORTH said he thought it would be an act of cowardice if those gentlemen who held the opinion that the registration of midwives was desirable did not stand up and say so. The question was one that he, in common with most of his colleagues, the obstetric physicians of the hospitals of London, had had occasion to think out and to decide upon, and they had certainly come to the conclusion that the registration of midwives was a crying necessity. The statement that a new order of practitioners would be established by the registration of midwives was a statement that was not borne out by the facts. At the present time there already existed a very large number of midwives in this country, and all that they desired was that those midwives practising among the poor people who insisted upon having a woman and not a man should be so far competent at any rate as to know the elements of their work, and to know when to send for medical assistance. That was all that they wanted. It was no doubt very desirable in the abstract that a midwife should receive a long training, and that she should know something of medicine and surgery if she practised midwifery—[No, no]—but it was a question of money. These women could not afford a long training, and was it not better that they should have a little training rather than none at all? [No, no.] He very heartily supported Professor Cameron's amendment, and he should be exceedingly sorry if that meeting, representing a great association of medical men, the traditions of whose profession were all on the side of unselfishness, a profession that gloried in its unselfishness, should pass a vote which would in any way soil those traditions.

Dr. WOODCOCK said he would not have risen to speak if Dr. Cullingworth had not indicated in the closing remarks of his speech that they on the side opposed to him were pursuing a selfish and unpatriotic course. [Hear, hear.] The whole cause of the division that existed in the profession was that a few gentlemen had arrogated to themselves the right to speak in the name of the profession and argued that all the dignity, the self-sacrifice, the wisdom, and the patriotism had been crystallised in the Midwives Institute. [Applause.] He entirely protested against that statement. They were not there to do anything which was inimical to the dignity of the profession, or in any way to soil its traditions, and nobody could say that the general practitioner of this country were not an unselfish class of men. He wished to know whether they were to be lectured by a supercilious class of specialists. [Applause.] He wished to know whether it was to be constantly indicated, as he had found it had been in coming in contact with members of the House of Lords and of the House of Commons, that the whole of the benevolent schemes which were proposed by those philanthropic people were proposed, because they were a selfish class of people, and because they were the residuum of the profession. He (Dr. Woodcock) had been engaged with Mr. Victor Horsley and other members of the Parliamentary Bills Committee in endeavouring to come to a solution of the question which should do no injustice to the profession or to the community. The existing midwife was simply a woman dressed in a little brief authority, in addition to which she was clothed with the praises of the teachers at whose feet she knelt; it was a sort of mutual admiration society. [Laughter.] Those women who were being certified were an ignorant class of people, and yet it was being sought to get them hall-marked by the Government as being solid metal when they were only spurious. He admitted that something was needed to be done, and that nothing could be worse than the existing state of things, but he suggested that the right direction in which to bring about a remedy was that indicated by Mr. Victor Horsley. There was all the difference in the world between a woman who was designated by a title which meant an individual and responsible practitioner and a woman who received the name of "nurse," which indicated that she should be acting under some sort of control. [Applause.] He hoped that the Association would come to something like a unanimous conclusion in the matter, because if they did not he felt sure the Legislature would take the matter in their own hands. He did protest strongly against gentlemen who represented perhaps four or five hundred of a special class standing by and talking as if they alone were concerned for the public benefit and as if all the other members of the profession were a lot of vulgar, selfish people who might be ignored in a matter which really concerned them infinitely more than it did the special class he had referred to. [Applause.]

Mr. WHEELHOUSE said that as one of the direct representatives of the Association on the General Medical Council and as one who had closely followed the question, he would like to mention the course of action which he had pursued. He was one of those who had settled it in his mind that to register any number of women upon a three months' education in one branch of the profession alone, and then to hall-mark them as midwifery practitioners would mean the ruin of the younger members of the profession, would be placing the women themselves in an utterly false position, and would be shutting the gate by which young men entered the profession and by which young practitioners hoped in the first instance to live. [Applause.] They were not asking either the Government or anybody else to sanction the right of any person to practise midwifery. What they were asking for was that they should bring nurses trained in a third branch of the profession in exactly the same manner as they had trained nurses in the other two branches. At the present time there were also medical nurses, but they were not called nurse-physicians. Why, then, should they not have obstetrical nurses or midwifery nurses, and why in their case alone should they be stamped as practi-

tioners, and, as would have been done under the late proposed Bill, have them entirely removed from the authority of any medical man or anybody else? [Applause.] He defied any gentleman present to state what was a natural labour until the labour was over. Cases might appear all right for some time, but there were circumstances which might spring up which would render the case one of infinite danger, and which an ignorant woman would not be able to perceive. [Hear, hear.] He asked them therefore to open their eyes to their own interests, to the interests of their sons who were being received in the profession, and to the interests of the profession itself, and, whilst they admitted that the midwifery nurses should receive as full an education as possible, not to stamp them as midwifery practitioners independent of the medical profession, and as capable of managing that of which they knew just what three months' education had taught them.

Mrs. SCHARLIEB said she had been asked to speak upon the question because she had seen a great deal of midwifery practice both in England and in India. In India they had very carefully trained women sent out as midwives, who worked under the doctors, but it not infrequently happened that the nurses had to go far up country, where there were no medical practitioners either male or female to whom they could apply. It was a most undesirable state of things, but it was a fact. She was told that sometimes it was impossible even in England to get a qualified practitioner to go to every case of midwifery that occurred. Nobody regretted more than she did that there should be anything but a thoroughly qualified set of practitioners to attend all cases of midwifery, but it would be admitted that the women who had received a proper training in midwifery were more likely to recognise beforehand the difficulties, the dangers, and the accidents that were constantly occurring in midwifery practice. It would also be admitted that qualified practitioners were more likely to be called upon by a midwifery nurse or a midwife, who could recognise danger, than by one of those ignorant women who let things drift to such an extent that no human agency could avail to save the patient. [No, no.] On behalf of the lady practitioners she should like to say that they were not prepared to take the minimum fee of 10s. 6d. or 15s. which had been referred to, whilst they would all deprecate the formation of an independent class of practitioners; and whilst they would shudder to see the difficulties and dangers of midwifery in the hands of incompetent persons, they would like to see a band of women who could recognise the danger, and know when to send for a medical practitioner.

Professor Murdoch Cameron's amendment, as follows:

That legislation on the subject of registration and training of midwives should receive the support of the British Medical Association,

was then put to the meeting, and declared by the President of Council to be lost by a large majority.

Dr. LEITH NAPIER rose to address the meeting, but was met with cries of "Vote, vote," and he was eventually ruled out of order by the President of Council.

Mr. Tait's rider, as follows:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support, a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1886, as now existing,

was then put to the meeting, and declared by the President of Council to be carried by a large majority.

Dr. LEITH NAPIER said he wished to enter a personal protest against not being allowed to move his amendment.

Dr. ARTHUR WELLFORD, in moving the resolution standing in his name, said that they had been told that afternoon that the question of medical defence had been for twenty years before the British Medical Association, and he thought it was now about time that it was taken seriously into consideration. The Committee had reported on the matter, and they had stated that it was impossible to alter the Memorandum of Association. According to Clause 3 of the Memorandum the objects for which the Association was founded were stated to be two in number: (1) For the promotion of medicine and allied sciences; and (2) for the maintenance of the honour and interests of the medical profession. His point was that the British Medical Association was intended to be not only a scientific society, but also a body to represent the medical profession, to maintain their honour, and look after their interests, and to unite them into a compact whole. Clause 3 of the Memorandum provided by the holding of meetings, the reading of papers, etc., for the first object, and for the first object alone, leaving no provision for the second great object for which the Association was created. If, therefore, they were going to remedy that unfortunate oversight, which rendered the work of the Association practically of no avail, and which had practically made it a failure, they must consent to alter the Articles of Association so that both the income and the funds of the Association could be utilised for the purposes of medical defence. [Applause.] It had been stated that the alteration of the Memorandum of Association was a difficult matter, but he ventured to state with confidence that since the passing of the Companies Acts there was no real practical difficulty in the way. It would be seen from a perusal of the Companies Acts that they had only to be in agreement on the point, and they could then go before a judge and alter the Memorandum as far as it was desirable. With regard to the *non possumus* attitude which had always been adopted with regard to the question under discussion both the British Medical Association and the General Medical Council disowned all responsibility, and allowed evils to continue which, if they tried to, they could check. That cry of *non possumus* was always raised to every proposal and suggestion for the defence of the medical profession. In the report of the General Practitioners Committee *non possumus* was written in big letters, and it was a curious thing that the view of the Committee with regard to medical defence was an exact reflection of the view of the General Medical Council, for whilst both bodies considered that medical defence was a duty, neither of them considered itself able to undertake it. The British Medical Association asserted that the General Medical Council should undertake the duty, and *vice versâ*. The action of those two bodies reminded him of the lines written about Lord Chatham and Sir Richard Strachan—

> The Earl of Chatham with his sword drawn,
> Stood waiting for Sir Richard Strachan;
> Whilst Strachan, eager to be at 'em,
> Stood waiting for the Earl of Chatham.

[Laughter and applause.] It was obvious to his mind, that the British Medical Association was the only body that could adequately undertake those duties. [Hear, hear.] Whilst they boasted of the large membership very little more than half belonged to the Branches, and the other half could not really be reckoned as members but only as subscribers to the JOURNAL. Even very few of that half attended the Branch meetings. His experience was that Branch meetings all over the country were very inadequately attended, and no interest whatever was taken in the business part of the meetings. A large section of the members were very dissatisfied with that state of things and the more active members wished to see the Association take an active place in the medical world. He wished to state that in answer to private requests 19 of the 40 Branches had passed the resolution he had proposed, and of the others not one had voted against it. He believed that only one Branch had found itself unequal to vote on the subject. It was not for them to discuss how that medical defence was to be undertaken, but whether it should be undertaken by the whole Association, and whether the second great object for which the Association was founded was to be made a real object of the Association's activity. They need not trouble at all about the financial question. Let the Council come forward with a practical working scheme of defence, and the members would not grudge to bear their share of the expense. [Applause.] He trusted that the resolution he had proposed would be unanimously passed. He believed that it contained the germ of a great reform that would be of inestimable value, and he hoped that the members present would not be dismayed by difficulties which could be overcome, and would not be discouraged by the *non possumus* attitude which had been taken by some of the speakers, especially by the Council, that afternoon. No

difficulties had ever been met by sitting in the mud, and if they were going to wait until the *deus ex machina* was to extricate them, they would remain in the mud for ever. [Applause.] He begged to propose the resolution as follows:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties, and to devote a portion of the income and funds of the Association for these purposes.

Mr. G. F. Bullar said there was very little to add to the statement which had just been made. Several of the speakers had referred to the great difficulties in the way, but he thought they had to consider whether if they did nothing at all they would avoid difficulties, whether there were no difficulties surrounding them at the present moment. The object for which the profession existed—the cure of disease—could not be obtained solely by endowing research, by educating students highly and turning them out to waste their talent in treating medical aid association patients whom they had not time to examine. It was of the greatest public and professional importance that the profession should be recruited from men of ability and honour. The treatment of the poorer classes, if things went on as they were, would fall into the hands of an inferior class of men, and it was therefore very important that some steps should be taken to improve the present state of affairs, and to put down quackery not only outside the profession but inside. It was said that the General Medical Council ought to do that, but the General Medical Council were simply a judicial body, and had no power to act as prosecutors. The profession had no prosecutor, and he thought it was a duty that might very well be undertaken by the Association. He had very great pleasure in seconding the motion.

Dr. Downe said he desired to support the resolution from an aspect that had not so far been accentuated. He wished to point out the great power it would give to the British Medical Association to deal with the subject of proper remuneration for the services of medical men. [Applause.] It would give them power to deal with the medical aid associations, it would give them power to deal with the so-called medical charities, which were a mere prostitution of the term, and it would give them power to deal with those trading societies that treated their medical officers in a manner that was only equalled in the sweating dens of the East End of London. [Applause.] The working classes had organised themselves, and combined to get higher wages and shorter hours, but they had also combined to pay their doctors less and give them longer hours. [Applause.] On behalf of the medical men themselves he hoped the Council would give the subject their attention, not only for the honour of the profession, but in the interests of the poorer working classes also. He asked the meeting to pass the motion, and if the Association would not stir a finger to help the most deserving class of practitioners, those who laboured among the working classes, it was nothing short of a disgrace. He knew the Council had thrown it out, but he asked the members not to take any notice of that. The Council was their House of Lords—[laughter]—but if the members showed their wishes he was quite sure the Council would be only too ready to carry them out.

Mr. Gronow Brown said that as one of those who had wrestled with the Council for twenty years upon the subject, he would like to say that though he had had many a severe tussle with the Council, and had been worsted on many occasions, he could still come up smiling and ask the members to support him on the question. He did so with the more confidence because they had got an admission that day from the President of Council that they were seriously considering the matter. Having succeeded after twenty years in getting to the stage of "considering," he hoped that it only required a little more pushing to get the Council to act. If the resolution was passed unanimously he thought the Council would act, and if they made up their minds to act the difficulties would vanish like mist in thin air. As to the legal difficulties, if they went before the legal profession and asked them to remove these difficulties it would be done. [Applause.] There was no difficulty whatever in altering the Articles of Association. With regard to the expense, a very great difficulty was raised—that it would be necessary to defend the profession all over the world. He thought there was a way out of that difficulty. If the Council would take to themselves the power to act in the matter, all they would have to do to prevent being called upon to defend medical men in China, India, Japan, New Zealand, etc., would be to delegate the defence work to the Branches. By doing that the Council would give it into the hands of men who were acquainted with the local requirements. In that way it would not be compulsory for any Branch that did not wish to take up the work of medical defence to expend the money. In large towns, such as Manchester, Birmingham, Liverpool, etc., and especially in colliery districts, the question was really of a serious character. The interests of the profession were very seriously damaged, but it was the interests of the public which were being injured and valuable lives sacrificed through no adequate measures being taken to prevent the practice of inferior practitioners in the poorer districts.

Dr. J. McCarthy said that the matter was one in which he had been interested for some years, and one on which the Branch over which he presided had passed a resolution in much the same terms as that which they were now asked to pass. What was the reason which had led up to such a resolution as was now being asked for? It was not that the members were weary of well doing, it was not from any mercenary point of view—the profession showed its charity in the amount of work it did through hospitals, dispensaries, and the Poor Law—but it had been brought about by the changing of their surroundings. The medical aid associations had been referred to; and there was another point he would call their attention to, and that was that the chemists, who had had an inch given them, had taken an ell, and lately were getting more impudent and taking to visiting. The profession was harmed every day and dishonoured by having to come into contact with a large number of chemists that were doing rattling practices. As an illustration he might mention what had occurred to him within the last three weeks. A patient had a rigor, and sent to a chemist, and the chemist, without seeing the patient, supplied medicine and left the patient suffering from pneumonia unattended by a medical practitioner until the fourth day. The best time for treatment had then gone by, and he (Dr. McCarthy) had to fill in the certificate. That was more or less covering, against his will, the chemist in his practice. With regard to the report, the members would express great gratification that the Council had endorsed their complaints. They had admitted that they had not exaggerated the evils, and they said the remedy was not easy. That the members admitted, but that was the greater reason why they should come to the most magnificent and largest organisation in the medical profession to get the difficulty solved. The members also felt thankful for the sympathy which had been expressed towards them, but they did not see the relief—"Sympathy without relief is like mustard without beef." The Council had given them the mustard, and they asked for the beef. [Applause.]

Mr. Butlin said he was very loath to speak on the subject at all, but if no member of the Council were to speak, and especially if he as Treasurer were not to speak, on a matter which so much concerned the finances of the Association, naturally everybody would conclude there was nothing to be said on the other side. He had read an article by Dr. Welsford in the *Medical Magazine* some time ago, which he considered to be a very able article, drawing attention to what had been achieved for the legal profession by the Incorporated Law Society, and drawing a comparison between the Law Society and the Association, not very much to the credit of the Association, and since then further articles and letters had appeared. When he first read Dr. Welsford's article he was decidedly impressed by it, and it was not until he had looked very carefully into the question that he discovered what very great difficulties there were, and that a great deal more could be said for the Association than for the Incorporated Law Society. To begin with he would draw their attention to two very great differences between the legal profession and their own. In the first place there were practically no quacks in the legal profession and very little illegal practice; and in the second

place there was not the same tendency among lawyers to work on reduced fees. He had been told by a gentleman in the legal profession that they never reduced their fees and no complaint of the kind had ever been brought before the Incorporated Law Society. It must be remembered that the Incorporated Law Society was incorporated by Royal Charter, and it was to examine men for admission to the legal profession, that it kept the roll, and that it had to deal with offenders, and brought the greater offenders before the judges, when they were liable to be, and often were, struck off the rolls. The Association was a mere company incorporated under the Companies Acts. The Incorporated Law Society had some of the duties of the General Medical Council, and some of those such as were performed by the Royal College of Physicians and the Royal College of Surgeons. The British Medical Association was a body formed for certain purposes, and they fulfilled as many of those purposes as they could, and hoped to fulfil others of them better in the future. As to the funds of the two Associations, their own subscription was one guinea, and for it they gave an excellent journal which cost more than the subscription. The Incorporated Law Society charged £2 for London members and £1 for country members, very much larger than their own compared with the advantages that were received. The Incorporated Law Society valued its premises in Chancery Lane at £135,000, and the Association at the present time had something under £50,000, so that if they were to buy freehold premises and build such premises as the Law Society had, they would have to lay up another £50,000 or £60,000, or as it might be. The law expenses of the Incorporated Law Society were about £5,000 a year, and yet they had no quacks to deal with and no defence practically of their members, which was a very important point indeed. As to the objects which the members were asking the Council to deal with, the two great objects were the suppression of quackery and the defence of the members. Several of those who sat on the General Practitioners Committee were favourably inclined towards granting money for the defence of members, and were inclined to give money to certain of the societies which had been formed for that purpose, and were very disappointed to find that they could not deal with the funds in that way, that legally they had no right to do so. When they came to consider the matter a little more closely they found it would be a manifest injustice to the majority of the members of the profession if they granted the funds to the society which had for its duty only to protect the members. Some of the gentlemen who had spoken said it was for the Council to draw up a scheme, but the difficulty was to draw up any scheme which would be applicable to all the members of the British Medical Association in all parts of the world. What had been said by Mr. Brown was perfectly true, that if the Branches liked to take up the matter on their own account, and use their own organisation, they could do so with considerable effect, and he (Mr. Butlin) believed that was the proper way of meeting those questions of etiquette, of cutting down fees, and of the defence of members, or prosecution of quacks in different parts of the country. He believed that was the line which should be taken, but they would have to exercise those powers under a different name, as it was impossible to use the general funds of the Association for the purposes which had been put forward. [Applause.]

A MEMBER: Will the Council subsidise the Branches for such objects?

Mr. BUTLIN: No, they cannot do that.

A MEMBER: Will they get the powers?

Mr. BUTLIN: I do not think so. We cannot do it.

Mr. VICTOR HORSLEY said that what they had just heard had been interesting, but really hardly touched on the great questions at issue. Their great desire was to ask the Council to take it into consideration for the purposes of action. [Applause.]

Dr. SAUNDBY said the Council were quite willing to do that. Mr. Horsley had simply asked them to consider it, and they were perfectly willing to do so.

Dr. MACKENZIE said he represented two counties, Devon and Somerset, and the question had been discussed in the Branch and a resolution similar to the present passed. The question was one of broad principle—whether the Association was to be carried on as it had been with one object, or whether it was to be generally useful. The practitioners in the country were apt to ask, What was the good of joining the British Medical Association? Only one-third of the practitioners in Devon and Somerset were members of the Association, because they felt the Association gave them nothing but a JOURNAL for their money. They wanted the Association to do much more, to mother them in every respect and to advance the profession in every right way. [Applause.] Were the Branches going to govern the Council, or the Council the Branches? The general practitioners of the country were feeling very warm on the subject. They were perfectly ready to pay an extra guinea.

Dr. HORDER said he came from "gallant little Wales," and as the President of the Council referred to the manner in which those resolutions had been passed at some of the Branches, he should like to deny that that was the way in his Branch. The matter was brought before not only the annual meeting, but was also discussed at other meetings, and the members were unanimous on both occasions. The question was, if the Council would not take up the question whether the members must not take it up for themselves. [Applause.] It was a very simple affair, and if the Council had not men able and willing enough to find a solution of the difficulty, they must send men down who were willing and who were able. The question of altering the Articles of Association was a simple affair, and did not take long. In a leading article in the JOURNAL of May 5th of last year, the Editor had said that if the question was to be taken up, the members must show by their expression of feeling at the Branches they wanted it taken up. They must bring those resolutions up to the general meeting, and the general meeting would then say that the question must be taken up. [Applause.]

Dr. RENTOUL said that Mr. Hart stated in 1887, referring to the paying of members of Council, that they should do their best to provide the funds of the Association, so that they might be taken for medical defence purposes.

Dr. Welsford's resolution was then put, and carried by a very large majority.

Dr. BEDFORD FENWICK then moved:

That in the opinion of this meeting it is expedient that an Act of Parliament should, as soon as possible, be passed providing for the registration and education of medical, surgical, and obstetric nurses; and the Council of this Association are therefore requested to consider this matter, and to take such measures as may seem to them advisable to obtain such legislation.

He said he proposed it on the broad ground that it was important for the Association to show that it was not biassed by any of the sordid and unworthy motives that had been ascribed to those who opposed the registration of midwives.

Mr. JOHN BROWN seconded the resolution, which was carried with only only one dissentient.

The motion for the adoption of the General Practitioners Report, with the addition of the three riders, was then put, and unanimously carried.

The meeting then adjourned.

ADJOURNED GENERAL MEETING.

THE adjourned General Meeting was held on Tuesday evening at the Imperial Institute, Kensington, and took the form of a *soirée* given by the members of the Metropolitan Counties Branch. It was attended by a very large number of members of the Association, accompanied by ladies. Previous to the general meeting, the members were received in the Entrance Hall by the President and officers of the Metropolitan Counties Branch.

President's Address.—The President's address was delivered in the Large Hall of the Institute, which, at the commencement of the proceedings, was densely crowded. [The address is published at p. 261.]

Professor CLIFFORD ALLBUTT said a great honour and privilege had fallen to his lot that evening, namely, to try as their spokesman so far as he could in his imperfect way to express their gratitude and thanks to the President for the remarkable and admirable address to which they had listened. That vast hall was built apparently for any other purpose than for acoustic properties, but those who had been upon the front benches and within a short distance of the President would,

he was sure, bear him out in saying that the address was one which appealed most forcibly to their understanding, and was marked by a noble ethical tone. [Applause.] The whole of the address was also pervaded with the literary charm and amenity which they expected from one so well known to the profession as Sir John Russell Reynolds. Those who had heard the address would agree in saying that his (Professor Allbutt's) words quite imperfectly expressed the feelings which the delivery of the extraordinary address had evoked. The customs of society had impressed upon individuals, to some extent, a degree of reticence in the presence of those of whom they would speak with more cordiality than perhaps the recipients of their eulogy would quite wish them to do on a public occasion of that kind. He might in what he was saying be carried away by the enthusiasm of so great a meeting, and also by the remembrances of thirty years' friendship with their President, to express even in stronger language the cordial feelings which were in his mind at that moment in respect both to him and to his presidency, and to the address which he ventured to think had struck a keynote, which, at the commencement of the great meeting, could not be without its influence upon every section and every part of it. He earnestly hoped that the spirit of the address, not merely its intellectual power, but also its great ethical elevation, might be carried through all the sections, and felt even beyond the present occasion and beyond even the present meeting of the Association. [Applause.] They knew that their President not merely graced the chair at that great meeting when he had the enthusiasm of the whole of the profession at his back, but that he in another place had filled a chair which also had its great responsibilities, and it might safely be said that they would judge from that occasion as in that other place that he had not filled these offices without both strengthening and adorning them. [Applause.] It was not given to all present to know how much the President had done by his urbanity, his courtesy, and business-like habits to get that vast meeting into the order and perfection it had attained; but they had had an opportunity of hearing from what kind of mind an address of that kind must come—from a mind of cultivation and of singular elevation and of great intellectual energy, which must set an example to their great profession, and which he was sure the President would allow him to say was characteristic not simply of himself, but of his great predecessors. [Cheers.] He asked them

To return the warm thanks of the Association to Sir Russell Reynolds, Bart., M.D., F.R.S., for his able and interesting address.

[Cheers.]

Professor Gairdner said he had the very easy duty of seconding the motion so admirably proposed by Professor Clifford Allbutt. He would not attempt to go over the ground again, or to expend language upon what was not necessary—namely, the eulogising of his old friend Sir Russell Reynolds. He wished to single out one point in the admirable address to which they had listened, because it permitted him to illustrate it by an anecdote. He referred to the allusion to the great advance that had been made of recent years and to the illustration given of that remarkable disease myxœdema and the application of the thyroid treatment. It was now about thirty years since a lady had consulted him in Glasgow whose case puzzled him extremely. He was not ashamed to say that he did not know much about myxœdema at that time, but had he known what he knew a few years later it was a case that would have just explained itself. He lost sight of his patient, but some years afterwards he received a letter from a gentleman now on the platform introducing a patient who turned out to be his friend the lady of thirty years ago. When she came he questioned her as to what had happened in the long interval, and it appeared that she had been to almost every Continental spa and every place where medical skill was supposed to be at the highest pitch, but had never got the slightest enlightenment as to the name and nature of her disease until one day, sitting at a *table d'hôte*, the lady who was sitting opposite to her said: "Madam, I think you have got the same disease that I have got, and if I were you I should go to London and consult my physician." She did so, and the result was she was again sent to him (Dr. Gairdner) without the slightest idea that he knew anything about her previously. That showed how the diagnosis of the disease was the first step towards any scientific cure. At the time, however, nothing was known about thyroid extract, which was a new development of the most astonishing kind. The development had been made because, in the first instance, some cases where the thyroid gland had been excised for goitre, exhibited ultimately symptoms something like myxœdema, and in the second place it was found that the excision of the thyroid gland in monkeys caused in them symptoms something like myxœdema, from which it got to be inferred that the administration of the juice of the thyroid gland would do something towards the cure. He thought that Sir Russell Reynolds certainly did not exaggerate in the remarks that he made upon the enormous progress of medicine.

The resolution was carried by acclamation.

At the conclusion of the address the company adjourned to the gardens, which were brilliantly illuminated, and presented a charming spectacle. Here also the Strauss Orchestra, conducted by Herr Edouard Strauss, played delightful waltz music. At an earlier period in the evening the band of the 4th Middlesex Rifle Volunteers gave a selection of music. Ample accommodation for refreshments was provided, and promenading to the delicious strains of the waltz music was kept up till a late hour. Altogether the function was most brilliant and successful.

Second General Meeting of Members—Wednesday, August 30th.

The President (Sir J. Russell Reynolds) in the Chair.

The second general meeting of the Association was held on Wednesday afternoon.

Place of Meeting for 1896.—At the request of the President, Dr. Ward Cousins (President of the Council) announced the following resolution which had been passed by the Council at their morning meeting:

That it be recommended to the general meeting of to-day that the Council be empowered to arrange a place for the annual meeting of 1896; and, further, the appointment of a President elect.

Dr. Cousins said that it sometimes happened that they had not a place of meeting, and they found that very many localities were unwilling to follow London. He hoped, however, that before the next quarterly meeting of the Council they would have decided upon a place where the Association might meet next year. He trusted that the announcement he had made would cause the members no uneasiness, because they might rest assured that the gap would be filled up. He wished further to announce that the new Council of 1895-96 had entered upon their duties that morning, and that the following changes had taken place: Barbadoes Branch, Surgeon-Major Thomson; British Columbia, Mr. E. Hassell; Gibraltar, Dr. Wm. Turner; Grahamstown, Dr. E. Atherstone; Halifax and Nova Scotia, Dr. D. A. Campbell; Lancashire and Cheshire, Dr. S. Woodcock; Metropolitan Counties, Dr. J. W. J. Oswald and Mr. Henry Power, and in the South Western Branch, Mr. L. Mackenzie.

Address in Medicine.—The President then called upon Sir William Broadbent to deliver his address, which will be found on page 266.

Dr. Pavy said he felt it a pleasurable privilege to have been called upon to propose the resolution which he was about to put before the meeting. It was a privilege which had doubtless been accorded to him from the position which he occupied in relation to the Section of Medicine. The deliverer of the address to which they had just listened with the greatest pleasure spoke at the beginning about the position of the words "Art" and "Science" in relation to Medicine. There was no doubt that Science should precede Art, that Science should stand as the foundation and as the basis of Art, but as the deliverer of the address correctly said, here Art had preceded Science. In the dark ages of the past it was simply Art which constituted the guide, but with the advance of knowledge they were putting aside Art and finding that they could bring to bear Science as constituting the basis of their procedure. By Science they were put in possession of the knowledge of the whole procedure of the thing—the processes that were taking place; and with a knowledge of those processes they could so command the supply of conditions as to bring about the results which they desired to be

attained. It was that which gave the power to the human mind of accomplishing what they found to be attainable. No doubt they all sympathised with the deliverer of the address in the difficulty in which he was placed under in selecting a theme for his address, but he was sure that they must all admit that the deliverer of the address that day had been most wise and most happy in the subject which he had selected. [Applause.] They must all admit that they had listened to a learned address, an address which could only come from a mind of a high order—[applause]—and when he (Dr. Pavy) said that the address to which they had listened was worthy of the man who had delivered it, he considered it was not necessary to say anything more than simply to propose:

That the cordial thanks of the Association be given to Sir William Broadbent, Bart., M.D., F.R.C.P., for his admirable address in medicine.

[Applause.]

Professor J. Cuming said it was a great pleasure and satisfaction to him to have the opportunity of seconding the vote of thanks to Sir William Broadbent. He had been a long and attentive student of Sir William Broadbent's contributions to literature, and, like every one who had studied those contributions, he was quite prepared to find that the address bore the stamp of originality, of great precision of thought, and of great lucidity of expression, and he thought it was a wise thing now and again to go back on the past and to consider what manner of men their predecessors were—how the student stood in relation to the great body of men around them, how the student stood in relation to the age in which they lived. There was one thing that a study of literature impressed on one, and that was that the great leaders of medical thought were not merely great physicians or great surgeons, but they were great men. [Applause.] They were men who held a high place in comparison with those who surrounded them. It would be quite easy to give a number of examples from Hippocrates downwards bearing on that, but it was unnecessary for him to add anything to the luminous sketch that Sir William Broadbent had drawn. He might say, however, that the very eminence of their leaders in the past was a source of danger, that they stood out so prominently that their successors were afraid to differ from them. One point that the study of the history of medicine brought clearly forward was that the reproach often addressed to their profession of not being sufficiently progressive, and of being non-receptive of new ideas, was most singularly ill-founded. A study of the history of medicine led rather to the opposite conclusion—that they were too ready to take up new ideas, that whenever a chemical discovery was made, or a mechanical discovery was brought forward, it was eagerly seized upon by the medical profession, so that it was at one time almost thought that the whole of the vital processes were to be settled by the reactions in a test tube, and that the whole animal economy was to be resolved into a bundle of levers, or something of that kind. The fact was they were almost too ready to take up these new ideas. They had got completely clear of any undue respect for authority; they were inclined to criticise everything on its own merits, and would not follow any leader however eminent. Even the germ theory, which had done so much to revolutionise medicine, was being scrutinised with regard to its minutest applications with a care which was not by any means excessive, but was certainly very considerable. He had very great pleasure in seconding the vote of thanks.

The President said it would give him very great pleasure if he thought there was the smallest necessity to add some accentuation to the remarks that had been made in proposing this vote of thanks for the admirable, interesting, learned, and most instructive address which had been delivered. He would not, however, occupy their time by so doing, as it had been so exceedingly well done by Dr. Pavy and Professor Cuming.

The resolution was carried by acclamation.

Sir William Broadbent said he would not further occupy the time of the meeting by any elaborate expression of thanks. To attempt to reply in fitting terms to the eulogies and encomiums that had been passed upon him would exceed his utmost endeavour. He could only thank his audience for the great patience and kindness with which they had listened to his address.

Greetings from Canada.—Professor Geikie (Toronto) said that, as an old member of the Medical Council of the Province of Ontario, he had been deputed by that body in session in June last to convey to the British Medical Association its cordial greetings. Perhaps it might be thought that the Association was too vast and successful to require any greetings from any source whatsoever, and that their time was too limited to be troubled with greetings, come from whence they might; but what could be more natural than that the Medical Council in Canada, when it had the opportunity, should send the best of kind wishes to the British Medical Association? No body in Canada was more loyal to this country or the British medical profession, of which they considered themselves a part, than the medical men, all of whom took a most lively in the British Medical Association.

The President said he was sure the Association was exceedingly obliged for the kind message they had received from Toronto.

Parliamentary Bills Committee.—Mr. Victor Horsley said he felt it was a great honour that the motion for the adoption of the report of the Parliamentary Bills Committee had been placed in his hands. He was also aware that it was unfortunately owing to the fact that the Chairman was unable to be present. He would endeavour to explain so far as he could the lines on which the work that had been done by the Parliamentary Bills Committee during the last year had been carried out. Their work had been chiefly directed to the point which was mentioned yesterday, namely, the amendment of the Medical Acts, and also the question of the registration of so-called midwives. Upon the latter point they would hardly expect him to say anything. He explained yesterday that the Parliamentary Bills Committee had referred the matter to a subcommittee, and in accordance with custom that subcommittee had duly reported, and had circulated its report to the Branches for their opinion, but sufficient time had not elapsed within which those Branches could forward their opinions to the Council. That was the constitutional method which he had mentioned yesterday and to which exception was taken. He would be very happy, if that exception were renewed, to justify what he had said. The amendment of the Medical Acts was surely the largest question that the Parliamentary Bills Committee could possibly deal with. On all sides they had heard that it was too complex a question for that Committee. He thought himself that after all that was only another aspect of their old friend the *non possumus* argument. He had the honour of bringing before the Metropolitan Counties Branch a scheme for the amendment of the Medical Acts, which was, after many modifications, adopted by that Branch and forwarded to the Parliamentary Bills Committee. That Committee, however, at that time did not approve of anything more than a Bill involving amendments to the penal clauses of the Acts, and that was the position taken by the Association up till the commencement of the spring of the present year. When, however, the Bill which had been drafted by Mr. Muir Mackenzie and Mr. Costelloe, with the assistance of Mr. Upton, had been circulated in the proper form, namely, to the Branches, they very soon had the constitutional opinion of the Branches expressed, and that was to the same effect as the opinion already given by the Metropolitan Counties Branch, that that Bill was far too narrow in its application, and that what was wanted was a Bill which would deal not merely with the penal clauses but with the far more important professional question—the consideration of the construction and the procedure of the General Medical Council. Those who had some knowledge of the working of medical defence and of endeavouring to get the General Medical Council to administer the Act of 1858 in accordance with what they believed to be the literal as well as the spiritual meaning of the Act, were aware, that without the alteration of at least the method of procedure of the General Medical Council they could not get very much further, and at the same time they were aware that the profession was powerless without amendment of the Medical Act. The Parliamentary Bills Committee referred the question, with the opinion of the Branches upon the draft Bill, to the subcommittee, the appointment of which was already stated in the report of the Council. That subcommittee had

only had a few months to commence its work. At its first meeting it had placed before it by order of the Chairman the midwives question, and they found that the whole time would be occupied in dealing with that question; therefore, he had nothing to present to them as work done upon the great question of Medical Acts amendment. The subcommittee asked to be reappointed in order that it might deal with the subject, and it hoped that it would be able to present a report at the commencement of the following year. Any criticisms or opinions upon the question of amendment to the Medical Act should be forwarded to the Parliamentary Bills Committee or to the subcommittee for their guidance.

Dr. Woodcock, in seconding the motion, said he thought the Parliamentary Bills Committee had been more than ordinarily active during the past year; at any rate, it had necessitated a great many journeys from Manchester to London on his part. He had found it most agreeable to work with his colleagues, and he hoped the Parliamentary Bills Committee would justify the confidence that had been placed in them by the Association.

Dr. Lovell Drage said he rose to move as a rider to the report the resolution of which he had given notice, which really was a corollary to the motion passed at the last meeting, and which was adverse to the registration of midwives. It had been supposed that those who opposed the registration of midwives had no alternative policy; but they had, on the contrary, a very decided alternative policy, which was first to get the alterations which were necessary passed in the Poor Law. He was glad to hear that method of procedure was receiving attention, and that Dr. Campbell had called attention to it at the last meeting. Anybody who had practical knowledge of the working of the Poor Law must be aware of the fact that it required only a very small alteration in the Poor Law to provide very considerable relief to the lying-in women of the country. What he asked the Association to do was to pass a resolution not dealing with that part of the policy, but with the part which related to the improvement of the training of medical students in midwifery. He thought the resolution he was about to move would appeal to all and would be passed unanimously. The proposers of the registration of midwives had always put it forward that it was puerperal fever which was carried about by ignorant women. If, however, they would take the trouble to look over the reports of the medical officers of health they would find that it was not puerperal fever which was in greatest excess amongst puerperal deaths but that it was accidents of childbirth. If they took Salford, which had one of the highest death-rates of the thirty-three great towns, it would be found that while there were only 11 deaths from puerperal fever during the past year there were no fewer than 30 from accidents of childbirth. If they took Derby, which had a very small death rate, it would be found that while there were only 3 deaths from puerperal fever there were no fewer than 8 from accidents of childbirth. He thought that facts such as these tended to show that at all events anybody should not be allowed to practise midwifery as a doctor who had not attended a very considerable number of labours under proper supervision. He begged to move:

That we view with deep concern and regret the recommendation of the General Medical Council to the medical examining bodies that they should admit students to their final examination who present a certificate stating that they have "conducted personally" only three, and "been present at" only nine confinements; and as the General Medical Council has refused on November, 1892, to alter this recommendation, we instruct our Council to petition the General Medical Council to recommend that no student be admitted to his final medical examination until he presents a certificate showing that he has personally conducted at least thirty confinements under the direct supervision of a registered medical practitioner. We also instruct the Council to take immediate steps to have Section 20 of the Metropolitan Poor Act, 1867 repealed, which prevents workhouse infirmaries from being used for the clinical instruction of medical students in practical midwifery while pupil midwives are now admitted; and also to petition the committees, medical staffs, and, if need be, the subscribers to the City of London Lying-in, the British Lying-in, and the Clapham Maternity to withdraw their rule which excludes male medical students from clinical instruction at these hospitals, seeing that these are now used by pupil midwives.

Dr. Rentoul, in seconding the resolution, said he wished to refer to the Metropolitan Poor Act, 1867, Section 20, which was as follows: "Where the asylum is provided for reception and relief of the sick or insane it may be used for purposes of medical instruction and for the training of nurses, in such cases and manner and subject to such regulations as the Poor Law Board from time to time by order direct." That was Mr. Gathorne Hardy's Act. Unfortunately the Poor Law Amendment Act of 1869 came in, and by Section 20 it was enacted, "So much of the twenty-ninth Section of 'The Metropolitan Poor Act, 1867' as authorises the use of any asylum for the sick or insane for the purposes of a medical school is hereby repealed." They wished the Parliamentary Bills Committee to have that Section 20 of the Metropolitan Poor Act of 1867 repealed, so that medical students might be instructed in practical midwifery. Dr. Drage had referred to the infamous fact that the ordinary man could now be turned out as a duly qualified medical practitioner to practise midwifery on his having a certificate that he had personally conducted only three cases of labour. He considered that—and there were two members of the General Medical Council present—a disgrace to the General Medical Council. As regarded the opening up of the infirmaries for clinical instruction, by the Poor Law Act, 1889, Section 4, the Metropolitan Asylums Board had now the power of opening their fever hospitals for the clinical instruction of medical students. Also by the Galway Hospital Act of 1892 the County Infirmary had been opened lately for the instruction of medical students. He further wished to refer to the report of the Select Committee of the House of Lords on Poor-law Relief in 1888, which backed up the motion of Dr. Drage. The House of Lords reported as follows: "We are disposed to agree with Dr. Bridges, the Local Government Board Medical Inspector for London, that with proper precautions clinical teaching should be allowed in the interests of the patients of the infirmary, and also in the interests of the public. The infirmaries are now very large and important establishments. At the Kensington Infirmary there are over 600 patients, and there seems to be no reason why, since large numbers of poor patients are treated in hospitals without any objection on their part to clinical teaching, the poor should feel repugnance to such teaching in infirmaries. Dr. Bridges pointed out that a special ground for giving the medical profession access to the infirmaries is that many patients suffering from obscure and chronic disease are treated in the infirmaries who cannot be admitted into hospitals." Then the Select Committee of the House of Lords on Metropolitan Hospitals in 1892 reported in the same way. Those were the Acts of Parliament and reports of Select Committees of the House of Lords who had considered this matter. He asked the Parliamentary Bills Committee to take that matter up, and say that the large field of clinical material which existed in their Poor-law infirmaries at present might be opened for the clinical instruction of ordinary students in practical midwifery. [Applause.]

The President said that he would first put the motion for the adoption of the report, and if that was passed Dr. Drage's resolution could then be submitted to the meeting as a rider.

The motion for the adoption of the report was put and carried by a large majority.

Mr. Ritchie, in supporting Dr. Drage's rider, said that in Manchester the midwifery cases were taken up by the midwives, and the students had to get their instruction in practical midwifery from the midwives. The certificates of attendance on midwifery cases by midwives were accepted, and he suggested that that was a question to which the attention of the General Medical Council should be drawn.

Dr. Drapan added that the midwives had to be tipped.

Dr. Lovell Drage's rider was then put to the meeting and carried.

Direct Representatives on the General Medical Council.—Dr. Rentoul then moved:

That as Sections 7 and 8 of the Medical Act, 1886, provide for the election of only five direct representatives to the General Medical Council by the registered medical practitioners resident in the United Kingdom; and as Section 10, Subsection 1, Paragraph c of this Act provides that the General Medical Council may represent to the Privy Council that it is expedient to confer upon the registered medical practitioners resident in any part of the United Kingdom the power of returning an additional number of direct representatives to the General Medical Council; and

as the General Medical Council has, on November, 1890, on November, 1891, and on November, 1892, refused absolutely to make such representation; and as the number of registered medical practitioners has increased from 22,718 in 1876 to 32,634 in 1894; and as we medical practitioners were not given our due and proper number of direct representatives in 1886; and as the registered practitioners contribute all the income of the General Medical Council, by which the Medical Acts are administered, while the twenty universities and colleges represented on the General Medical Council do not contribute any income to it; and as the representatives of the universities and colleges are elected to the General Medical Council by their small Convocations, Senates, and Councils, and not by open vote of all their medical graduates only; and as other important councils, having similar but larger duties to the General Medical Council (such as the Councils of the Incorporated Law Societies of England and of Ireland, the Councils of the Pharmaceutical Societies of Great Britain and of Ireland, and the Council of Veterinary Surgeons) consist of direct representatives only, this Association instructs its Council to take immediate steps to have a Bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one additional direct representative to the General Medical Council.

He said that according to the Medical Act of 1858 they were given no direct representatives whatsoever on the General Medical Council, although they had made that request as early as 1843 by the Bill then introduced into the House of Commons. But from 1858 onwards Mr. Wheelhouse, Sir Walter Foster, Dr. Leech, and others, more especially Dr. Waters of Chester, worked hard in favour of the proposal of the Association having direct representation on the General Medical Council, and when the Medical Act of 1886 was passed they were given direct representation, but on a very small scale indeed. England was given three members, Ireland one, and Scotland one, so that at present they only had five direct representatives. Since then they had been pretty busy trying to gain increased representation. In 1890 he (Dr. Rentoul) had brought up a notice of motion at the annual meeting, and as usual it was referred to the Council of the Association, and nothing whatever was done. At the annual meeting in 1891 he had again brought up the notice of motion, and again nothing whatsoever was done. In 1892 they sent a petition to the Council to increase their direct representation. With regard to what had been done by the General Medical Council, in 1890 Sir Walter Foster brought up a notice of motion to give the Association increased direct representation, but so determined was the General Medical Council not to give Sir Walter Foster even an opportunity of taking a vote upon the subject that the "previous question" was moved and carried by a majority of 20 to 5. In 1891 Sir Walter Foster again brought up the subject before the General Medical Council, and on that occasion, although they allowed him to debate the subject, he was defeated by 21 to 5. Again in 1892 Sir Walter brought it up, but discussion was smothered, and the result was that the "previous question" was again carried by 16 votes to 9. He brought those facts before them to show that there was no good whatever in losing any more time in appealing to the General Medical Council or to the Privy Council. No doubt Section 10 of the Medical Act of 1886 gave the General Medical Council the power to recommend to the Privy Council that an increased number might be granted, but the word "may" frequently occurred in that section, and his experience of that word in an Act of Parliament was that it should always be read "shall not." A very important question was, Had the growth of the medical profession been such as to justify an increase in direct representation? In 1886, when direct representation was first granted, England had 16,978 registered medical practitioners, Scotland 2,372, and Ireland 2,501. Those figures showed that when direct representation was granted, in 1886 the practitioners resident in England and Wales had only 1 direct representative to every 5,659 practitioners, while the practitioners in Ireland had 1 to 2,501, and in Scotland 1 to 2,372. It would be seen that the proportion of direct representatives given to the practitioners resident in England was altogether out of harmony with the number given to those in Scotland or in Ireland. Comparing those figures of 1886 with those of 1894, in 1894 there were 20,487 practitioners resident in England, 3,107 in Scotland, and 2,485 in Ireland. Those figures showed that the number of practitioners resident in England and Wales had increased from 16,978 to 20,487, in Scotland from 2,372 to 3,107, and in Ireland they had decreased from 2,501 to 2,485. The fact, also, that the number of practitioners on the *Medical Register* in residence in England, Ireland, and Scotland had increased from 22,718 in 1876 to 32,634 was an additional argument in favour of increased direct representation. Another point to be discussed was, should the General Medical Council be composed entirely of direct representatives? [Yes.] At present the universities and colleges had 25 representatives on the General Medical Council, while medical practitioners had only 5. He had taken the trouble to refer to the positions of the councils of other bodies, and found that the Council of the Incorporated Law Society of England and Wales had 40 direct representatives only, and no other representatives whatsoever, the Council of the Incorporated Law Society of Ireland had 43 direct representatives and no other, the Council of the Pharmaceutical Society of Great Britain had 21 direct representatives and no other, the Pharmaceutical Society of Ireland had 21 direct representatives, and the Council of the College of Veterinary Surgeons, England, had 32 direct representatives, so that those councils of solicitors, chemists, and veterinary surgeons had none but direct representatives on their council. [Applause.] Those councils had equally important duties to perform as the General Medical Council; they had to administer the Solicitors', the Veterinary Surgeons', and the Chemists' Acts, they had to keep a Register, and deal with certain penal cases. But they had a much higher duty to perform, because they had the one-portal system, and they conducted the examinations themselves. If those councils were able to do all that, he thought the practitioners were at least entitled to an increase in the number of their representatives on the General Medical Council. Other medical councils in other countries had a large number of direct representatives. In the Cape of Good Hope the Medical Council, with a total number of 4 members, had 4 direct representatives; Ontario, Canada, 17 out of 27; Quebec 40 out of 40; New Brunswick 5 out of 9; and the North-Western States, Manitoba, and British Columbia, 5 out of 5. They had been told by their opponents that the representatives of the universities and colleges and the Privy Council represented the medical practitioners. [No.] Dr. MacAlister some time ago, when Sir Walter Foster brought the question up before the General Medical Council, had said he represented the medical practitioners in England. He had looked into the matter, and found that, although Dr. MacAlister had a constituency of about 5,000 voters, there were only about 270 medical practitioners in that constituency, and Dr. MacAlister was therefore elected to the General Medical Council largely by Doctors of Music, Doctors of Theology, and Doctors of Law. [Laughter and applause.] The same was true with regard to the representative of the Royal College of Surgeons of England on the General Medical Council. He was elected by 24 Fellows, and opposite that there were 16,733 Members of the College of Surgeons who could not say a single word with regard to the election of College representatives on the General Medical Council. [Shame.] Those facts showed that it was absurd for anyone to say that the representatives of the universities and colleges represented the medical practitioners. Another very important point was that if representation and taxation went together, the medical practitioners contributed all the funds which administered the Medical Acts. [Applause.] From 1859 up to 1889 the medical practitioners had paid no less a sum than £135,985 in registration fees. It was said that the General Medical Council was too large. He did not think so, but he would suggest that the five nominees of the Privy Council should be done away with. He had looked into the councils of other bodies, and had never been able to find that the Government had so much distrust in any of them as to say, "We must place five Crown nominees to see whether you perform your duties properly." He thought, therefore, the five nominees of the Privy Council should be done away with and given to medical practitioners. The Medical Act of 1886 allowed the General Medical Council to make a recommendation to the Privy Council when an examining body had

sunk in importance. There were some examining bodies out of the twenty-one which had sunk considerably in importance, such as the Apothecaries' Hall, Ireland, which granted from fifteen to twenty diplomas every year, and therefore he proposed that if the General Medical Council really wished to lessen their number, the Apothecaries' Hall should combine with the College of Surgeons, Ireland, to elect one representative; the Apothecaries' Society, England, with the College of Surgeons, England; and the University of St. Andrews with Aberdeen, to collectively put one member into the General Medical Council. If that were done it would reduce the General Medical Council from thirty to twenty-one, and if they would give the practitioners that increase of direct representatives which they asked for, it would still keep the Council to twenty-eight. He thought their request was very small indeed. [A Voice: "Too small."] Most members of the Association thought that the Council should be composed entirely of direct representatives. [Applause.] He would would suggest that they should give the General Medical Council no chance whatever of refusing that very mild request, and had great pleasure in proposing the motion which he had read.

Dr. Hugh Woods, in seconding the proposition, said the only fault he found with it was that it did not go far enough. [Hear, hear.] He should have been much better pleased to have seconded a proposal to the effect that the medical profession was now at last capable of governing itself. [Applause.] When they considered that the governing body of the medical profession was elected chiefly by persons utterly ignorant of medical matters, he thought it was simply disgraceful. When they considered that that body had the power of life and death over them, professionally, it seemed to him they had no sort of self-respect to allow themselves to be placed under such a government, over which they had no control. Everyone knew about the General Medical Council's life. He did not wish to say anything disrespectful about so august a body, but it was obvious that the decay of old age was present. It passed a resolution and then could not act upon it, and the next time it met thought it had gone too far, and went back. There was nothing but feebleness from beginning to end in the whole of its deliberations. It could hardly be expected that the General Medical Council would deal with the matters concerning the profession, because it was ignorant of them. The majority of the members of the General Medical Council knew absolutely nothing whatever of the conditions of general practice. They had had before them recently such a question as the Midwives Bill. Except Dr. Glover, was there anyone there who knew anything about midwifery practice? There might be one or two others, but hardly any of them knew anything about it, but they had to deal with it. They had to deal with medical education, whereas a great many of them knew remarkably little about the conditions under which the doctors would have to practise when they went out into the world. The consequence was that their recommendations became as ridiculous as that a man should be turned out to practise midwifery after having attended three cases. That of itself was enough to show the way in which they conducted their deliberations and their competence for doing it. He did not think that the resolution went half far enough, but inasmuch as it would to some extent go towards making the medical profession have almost an even voice in the election of the governing body of the medical profession he thought it deserved their hearty support. He hoped that at no very distant date they would find the medical profession electing its own governing body. [Applause.]

Sir Walter Foster said it was refreshing to him to hear the General Medical Council abused in the good wholesome style which had been adopted by the last speaker. It took him back ten or fifteen years to the time when they were struggling to obtain the Act of 1886. That Act did give them representation, and it certainly was not his fault nor that of Mr. Wheelhouse, his colleague, if that representation had not been increased. He wished to say a few plain words to the members of the Association, words which he thought they deserved. Their representatives had fought their battle in the Council, as Dr. Rentoul had told them. On three separate occasions they brought the matter forward, pressing upon the General Medical Council the urgent necessity of giving the profession proper representation on its own body, and taking steps to get it. On each occasion in his speeches which had been published, he (Sir Walter Foster) had appealed to the medical profession for support, and had had no support whatever from the great body of the profession. He did not think it was right. [Applause.] If he was sent to the Council to fight the battles of the profession they ought to support him. [Applause.] The last time he brought up the motion he obtained statistics similar to those brought forward by Dr. Rentoul, and he told the Council that he was prepared to bring the resolution forward every year, and that they could, if they chose, pass the previous question and have the names taken down so that the profession might see who voted one way or the other. He was prepared to do it every year, and he would do it every year, but he asked the medical profession to show in the meantime their opinion of the course of the General Medical Council's procedure. What answer did he get? There had not been a single petition sent up to the Council nor any steps taken by the profession at large to bring the General Medical Council to its proper senses. He was glad that they were going to take a step that day, because it would at all events show the General Medical Council that the profession was feeling in earnest about the matter, and if they were in earnest they could carry it sooner or later. [Applause.] He had been particularly disappointed that the medical profession had not taken any step for the last three years. During the last three years there was a Government in power in which he had some little influence, and he could have got a certain access to the Privy Council at all events, and could have laid their representations before the Privy Council and obtained for them a consideration which he could not hope to obtain under the existing Government. The majority, however, of the gentlemen present might have more influence with the existing Government than he had. [Laughter and applause.] He wished them to use their influence. [Laughter.] He gratefully had failed to use his during the three years that he had an opportunity, and he wished them now to set their hearts to this work, and determine to use their influence with the present Government, in order to get the matter looked into. There were ways in which it could be done. First of all, when they had passed this resolution they should make up their minds that the profession at large should send up petitions from every Branch of the Association to the General Medical Council, pressing this upon their notice, and demanding that the Council should of its own accord take steps to increase their representation. At the same time every petition of that kind should be sent in duplicate to the Privy Council, and possibly a third to the House of Commons, so as to show the legislative body of the country that they were determined to do something in the direction of getting a just share of representation on the General Medical Council. [Applause.] Over and above that, it would be a wise plan for the Parliamentary Bills Committee, when that resolution was passed, as he hoped it would pass, to draw up a short Bill—not a general amendment of the Medical Acts, but a short Bill directed to this specific point of increasing the direct representation of the profession on the General Medical Council. He was anxious that should be done for several reasons. In the first place, England and Wales had not its proper proportion of the representation under the present system; secondly, he believed they would never do as much good as they ought to be able to do through the General Medical Council till they had the more wholesome element of direct representation largely increased. He had spent about nine years in their service at the General Medical Council, and he had never sat on any body that were so absolutely beyond the reach of argument as they were. [Applause.] There was no harder task that could be given to any man—and he had had some experience of hardship in his life—than to go to the General Medical Council to fight the battle of the general representatives. The profession had the matter in its own hands, and he hoped from that day forward it would not rest until by some method or other an increase in the direct representation on the General Medical Council had been achieved. If they did that they would add one of the greatest forces to the ennobling

of the medical profession, the improving its discipline, and the preventing of any encroachments upon their rights which from time to time they were obliged to resist. [Applause.]

Mr. WHEELHOUSE (in response to repeated calls) said they knew perfectly well from what had been published that Sir Walter Foster had, as he had said, done his utmost to bring this matter before the General Medical Council. He (Mr. Wheelhouse) and the other representatives had done their best also, but what could they do when they were 5 to 25, and when they knew that those 25 believed that the Council was already too large and believed that no further direct representation was necessary? They had fought the fight, and had done so as earnestly and as stoutly as they could, and, as Sir Walter Foster told them, they had looked for support to the outside world and had got absolutely none. They had not had a petition sent; they had not had any backing sent to them in any shape or way whatever. He therefore agreed with Sir Walter Foster that it was an absolutely hopeless fight so far as they were concerned. If the profession would be true to itself and would join shoulder to shoulder to advance its own interests, then they would have some chance of doing good, but until then he felt that they might bring this resolution before the Council year after year, well knowing that it would be simply so much time wasted. He wished to add one word as a matter of justice with regard to what Dr. Rentoul had said on the midwifery question. They must not suppose for a moment that the General Medical Council had never discussed this question of three labours being sufficient medical education. But that was a Scotch question, and when they came to consider a number of students in the Scotch schools, and to consider where they were to find this material for their instruction, say, supposing there were a thousand students in the schools, and each student was to have 30 cases, where were they to find the 30,000 women to provide them with the necessary practice? The Scotch people said they could not do it, and that there was not the material, and it could not be got. [Laughter.] They had to go to Ireland to get it. [Laughter.] They seemed therefore to pin their faith to the fact that a man clinically and carefully instructed by the midwifery professor through three cases had learned as much as a man who upon his own instigation went to and attended 30 cases—that was to say, rush to a house when he was told there was a woman in labour, put his hand on the bedpost, and then considered that he had attended a labour perfectly. [Applause.]

Mr. TAIT said they had been told by Dr. Rentoul that resolutions similar to those had been passed not once or twice but three times at general meetings of the Association. What had become of those resolutions? Were they to understand that upon a serious matter of that kind the members were to pass resolutions year after year, asking the Council to do something, and were those resolutions to be buried?

Sir WALTER FOSTER said whenever he had brought the matter before the General Medical Council he had quoted the resolutions passed at those meetings.

Dr. WARD COUSINS: I may say on behalf of the Council that the recommendations of the annual meeting to the Council have been carried out. The resolutions were to be sent on to the Privy Council, and the wishes of the meeting were carried out on both occasions. [Applause.]

Dr. DOUGLAS asked whether the meeting was to understand by the statement made by Mr. Wheelhouse that the necessities of the Scotch schools made three labours sufficient for each student to pass in midwifery.

Mr. WHEELHOUSE explained that the Scotch representative, Dr. Leishman, always went upon the argument that careful personal instruction in three cases of natural labour was better than more attendance without personal instruction on a greater number.

Dr. DOUGLAS said he was sure there was no general practitioner present who knew anything about midwifery that would not give a flat denial to the assertion that three labours were sufficient. [Applause.] They all had the greatest respect for all that Mr. Wheelhouse had done, but he thought it would be a very bad thing if the statement was allowed to go forth from the meeting without some notice being taken of it.

Dr. RENTOUL said the Scotch schools were so busy training pupil midwives, that they found when they came to train medical students in practical midwifery they had not sufficient cases for them. He was told that in Liverpool the medical students had to be taught by the midwives and he and she, and perhaps a pupil midwife, went to conduct a case and there was no doctor whatsoever. He was told that in Scotland, and more especially Glasgow, it was very much worse.

Dr. HOLMES said he could contradict Dr. Rentoul with regard to Edinburgh; the students were under the care of a fully qualified medical man.

The resolution was then unanimously adopted.

Procedure and Constitution of the Association.—Dr. DOUGLAS said that Mr. Victor Horsley had made a statement on the previous day and had repeated it again at that meeting that the constitutional mode of procedure or constitution of the Association required that matters should be referred to the Branches, and by the Branches to the Council, and then brought before the general meeting. He did not think that that was correct, for he understood that the Association was constituted as a limited liability company under certain special provisions, and that a resolution of which proper notice had been given, having been brought before the general meeting and passed, was binding upon the Association.

Dr. WARD COUSINS read the by-law relating to the matter and stated that any notice could be given by any member and the business would then come on exactly in the same way at the annual meeting as had been done on the present occasion.

Mr. BUTLIN said that Mr. Victor Horsley's statement was not authoritative; he was not a member of Council and it was a question that must be decided between them: it was not for the Association.

Mr. VICTOR HORSLEY said that exception had been taken to his use of the word "constitution." It was perfectly correct to state that they were more or less a limited liability company, and he held that after general politics the persons who had the power were those who elected their representatives.

Scientific Grants Committee.—Dr. WARD COUSINS moved:

That the report of the Scientific Grants Committee for the year ending December 31st, 1894, be received and adopted.

Sir T. GRAINGER STEWART, in seconding the motion, said that though the progress made by the Committee might appear to be slow, they were working hard in the accumulation of facts. They were doing their work well, and as far as he knew the results obtained had been of great importance.

The resolution was agreed to.

Legislation for Inebriates.—Dr. NORMAN KERR, in moving the adoption of the report of the Committee on Legislation for Inebriates, proposed that the name of Sir Walter Foster should be added to those members who were proposed to be reappointed. He had been a member before his appointment at the Local Government Board, and now that he was free the Committee would be very glad to welcome him back again. [Applause.] Dr. Kerr called attention to the fact that within two years three Departmental Committees had arrived at conclusions endorsing the position taken up by the Association for so many years, that a different procedure was necessary with inebriates, especially criminal inebriates—namely, that they should be treated therapeutically, and not as criminals. The greatest feature of last year was that after a long struggle of a quarter of a century or more they had seen the Government of this country bring forward a Bill not only embodying all the propositions which they had been endeavouring to advocate, but going further—in fact, too far, as some thought—embodying all that they had asked or hoped to get in the way of legislation. That Bill had passed a second reading in the House of Lords notwithstanding some opposition. It gave a power of compulsion in the case of both criminal and non-criminal inebriates: it provided for the treatment of the poorest of the land, and dealt with all forms of intoxication, whether by morphine or alcohol. He was glad to say that the Lords did not seem to object to that part of the Bill having reference to criminal drunkards, and there was very great hope that the present Government, or the Government

which succeeded it would take up that part of the Bill, as had been done by the late Government. Some objection was made by Lord Salisbury and others to the provisions affecting the non-criminal habitual drunkards and the ground of the liberty of the subject being interfered with. He wished to point out that such interference was not new, but had already existed in the case of lunacy, and unless noble lords were prepared to go back and undo all that had been done in the way of legislation with regard to lunacy, the objection was entirely out of court. He claimed that under the proposed system there would be no danger of any person being wrongfully treated, and was sure that those who had any knowledge of the condition of inebriates would see that any such idea was entirely a bugbear. Restrictions could be made so as to prevent any possible abuse of the liberty of the subject. He said that in one province in France, the Department of the Seine, an asylum was being built by the Government for 500 drunkards. He claimed that this question was one that should be outside of party politics, and he believed that if such a scheme as that contained in the Bill was carried out it would be one of the greatest things that had ever been done in England in order to secure the freedom of the whole community.

Dr. WARD COUSINS seconded the resolution.

The resolution was carried unanimously.

Therapeutic Committee.—Dr. CROCKER in moving that the report of the Therapeutic Committee for the year ending December 31st, 1894, be received and adopted, said that the committee had never done better work than during the past year. The revision of the *Pharmacopœia* was in in progress, and over 12,000 circulars had been sent out asking what drugs might be done away with, and for the opinions of different members. Over 6,000 replies had been received, and the report they were able to give to the Pharmacopœia Committee was so valuable that Dr. Tirard, the Chairman of the Therapeutic Committee, was unanimously put upon the Pharmacopœia Committee.

Mr. JONES MORRIS seconded the motion, which was agreed to.

Medical Charities Committee.—Dr. BRIDGWATER, in moving the report of the Medical Charities Committee, said that it had done a great deal of work all through London. It was now making inquiries in the provinces, and they hoped by the end of next year to have something tangible and suggestive to lay before the Association.

Mr. GEORGE BROWN seconded the motion, which was agreed to.

Railway Servants' and Mariners' Eyesight Committee.—Dr. BRUCE GOFF, in moving the adoption of this report, stated that the Committee was an important one, and had done a great deal of good work. They had received a great deal of support in the recommendations which had been made to the authorities.

Dr. CAMPBELL seconded the motion, which was agreed to.

Mental and Physical Conditions of Children Committee.—Dr. BRIDGWATER moved:

That the report of the Committee on the Mental and Physical Conditions of Children for the year ending December 31st, 1894, be received and adopted.

It deserved a great deal to be said about it, and he only refrained from doing so owing to the lateness of the hour. It was a report dealing with 100,000 children, who had each been examined carefully as to all its peculiarities and defects, and when it was published, as they hoped it would be during next year, it would be highly valued by the profession at large.

Dr. RENTOUL seconded the motion, which was agreed to.

Anæsthetics Committee.—Mr. EASTES, in moving the adoption of the report of this committee, stated that they had already held 67 meetings, lasting two hours each, so that he thought they would agree the Committee had not been idle.

Mr. JESSOP seconded the motion, which was agreed to.

Dr. WARD COUSINS stated that the thanks of the members were due to Dr. Rentoul and to Dr. Penwick for having shortened the business considerably by withdrawing the resolutions which stood in their names.

That concluded the proceedings.

THIRD GENERAL MEETING OF MEMBERS—THURSDAY, AUGUST 1st.

The PRESIDENT (Sir J. RUSSELL REYNOLDS) in the Chair.

THE third general meeting of members was held on Thursday afternoon in Exeter Hall, when the address in Surgery was delivered by Mr. Jonathan Hutchinson. (See page 273.)

Dr. WARD COUSINS said that Mr. Jonathan Hutchinson had begun by stating that there was nothing very original in his address, but they all knew that no one had contributed more to the progress of surgery during the last thirty years than he had done. The evolution that he had given of some of the major operations of surgery, such as lithotrity and ovariotomy, undoubtedly came with a master touch. He had told them how by slow and steady stages, one little detail being added to another, they had now reached their grand maturity. Mr. Hutchinson had hinted at the absolute necessity, with a skilled hand, of early diagnosis in cancer, and he felt confident that the reference in the address to that important topic would be read by the whole Association with the very greatest satisfaction. [Applause.] Mr. Hutchinson's remarks with reference to the necessity of every medical man, when he became a Member of the College, feeling then that his professional career was really commencing, that he had to learn the whole of the art both of medicine and surgery, he hoped would be remembered by those who were now getting their diplomas from the corporations and universities. They might depend upon it that they could not do better than imitate the master who had addressed them, and feel every day of their lives that they must be students. Although it was not likely that many of them would be able to follow Mr. Hutchinson in daily accumulating clinical materials and utilising them for the benefit of the world, yet let them imitate him; and he was sure they would all join in the hope that his valuable life by the blessing of Providence might long be spared, and that he might long continue to prosecute those studies, and to accumulate those materials which he had utilised so grandly for the benefit of mankind. He had the greatest pleasure in proposing that the best thanks of the Association be presented to Mr. Jonathan Hutchinson for his able address.

Mr. MACNAMARA, in seconding the vote said the impression made upon his mind by the address they had just heard might be summarised almost in one word, namely, that it was thoroughly English and thoroughly practical. [Applause.] It was also thoroughly honest. Mr. Hutchinson came before them and said that after he tried lithotrity and found he was not able to succeed as well as some of his colleagues he at once made over his patients to those colleagues. In ovariotomy also when he found that his ovarian cases were not doing so well in the large hospital to which he was attached as they might have done in a special hospital, he at once sent the patient to that particular hospital. That was an example to them all as showing that the first thing they had to consider was the good of their patient. [Applause.] The address was practical from beginning to end, as the whole of Mr. Hutchinson's life had been. [Applause.] His mind was one of those that ran on observation. His conclusions were all drawn from facts which he had himself observed and collected year after year, bringing them together and showing by the results obtained the great advantage this mode of study had been to the profession and, he might almost say, to the human family.

The PRESIDENT said he felt, as he did yesterday after the address of Sir William Broadbent, that it was almost a matter of absurdity to put a vote of thanks to the meeting, for he felt absolutely certain that their thanks were already granted to Mr. Jonathan Hutchinson for his wonderful address. [Cheers.] He (the President) was no surgeon, but he was very much interested in the history of surgery, and during the whole address he had felt that he was listening to a master. [Cheers.] He was perfectly certain the members would all agree with him, and he would not put it to the vote, but ask them to render thanks to Mr. Jonathan Hutchinson. [Cheers.]

Mr. JONATHAN HUTCHINSON, in reply, said: I will not detain you with any long speech, but just simply say that from my heart I thank you. [Loud cheers.]

[To be concluded.]

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 6s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A SURGEON LIEUTENANT-COLONEL, expecting to be ordered abroad late this [illegible] season, wants to exchange with an officer lately home, or would exchange to a Mediterranean station or colony for part expired tour. Address, MANXMAN, office of BRITISH MEDICAL JOURNAL.

MEDICAL VACANCIES.

The following vacancies are announced:

ANCOATS HOSPITAL, Manchester.—Junior House-Surgeon. Salary, £50 per annum, with board and washing. Must be qualified and on the *Medical Register*. Applications at once to Alex. Forrest, Honorary Secretary.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Lecturer on Physiology. A minimum of £300 a year guaranteed, together with a grant for working expenses. Applications to the Dean, 62, Chandos Street, W.C.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Appointment for one year. Applications to the Secretary by August 24th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £80 per annum with board, lodging, and washing. Applications to the Secretary by August 12th.

DR. STEEVENS'S HOSPITAL, Dublin.—Ophthalmic Surgeon. Applications to the Secretary before August 7th.

DURHAM COUNTY ASYLUM.—Pathologist and Junior Medical Officer. Salary, £100 per annum, with board and lodging. Applications to the Superintendent, Durham County Asylum, Winterton, Ferryhill, by August 10th.

DEVON AND EXETER HOSPITAL, Exeter.—Assistant House-Surgeon; doubly qualified and unmarried. Salary, £40 per annum, with board and lodging, not including alcoholic liquors and aërated waters. Applications to Albert E. Boyce, Secretary, by August 12th.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thoro'fare, Ipswich.—Second House-Surgeon; unmarried; doubly qualified. Salary, £70 per annum, with board, lodging, and washing. Applications to the Secretary by August 13th.

GRAVESEND HOSPITAL.—House-Surgeon; doubly qualified. Salary, £60 per annum, with board and residence. Applications to Frederick Mitchell, Honorary Secretary, by August 8th.

HULME DISPENSARY, Dale Street, Stretford Road, Manchester.—House Surgeon; doubly qualified. Salary, £130 per annum, with apartments, attendance, coal, and gas. Applications to the Honorary Secretary Medical Committee by August 14th.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Appointment for six months. Board and lodging provided but no salary. Applications to C. W. Carver, Honorary Secretary, by August 10th.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. An honorarium of £25 for each period of six months, subject to the approval of the Weekly Board, with board, residence, and washing. Applications to the Secretary by August 10th.

ROYAL EAR HOSPITAL, Frith Street, Soho Square, W.—Assistant Surgeon. Applications to Donald Murray, Honorary Secretary, by August 10th.

PARISH COUNCIL OF NORTHMAVINE, Shetland.—Medical Officer. Salary, £40. Applications to the Clerk, Parish Council, Northmavine.

ST. BARTHOLOMEW'S HOSPITAL.—Physician and Assistant Physician. Applications to Wm. Henry Cross, Clerk, by August 5th.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS

MACEVOY.—On July 24th, at 41, Buckley Road, Brondesbury, London, N.W., the wife of H. J. Macevoy, M.D., B.Sc.Lond., of a daughter.

MACKINTOSH.—At 13, Abercromby Place, Stirling, on July 7th, the wife of William A. Mackintosh, M.B.Edin. and C.M., of a son.

GORDON.—The wife of Surgeon-Captain P. C. H. Gordon, A.M.S., at Mussoorie, India, of a daughter, on July 5th, 1895.

MARRIAGES.

SPEECHLY—BARRETT.—On Tuesday, July 30th, in the Parish Church, Neston, Cheshire, by the Rev. A. W. Humphreys, assisted by Canon Turner, the Vicar, Harry Martindale Speechly, M.R.C.S.Eng., L.R.C.P. Lond., of Parkgate, Cheshire, eldest son of the Right Rev. Bishop Speechly, to Mary Barrett, B.A.Vict. Univ., eldest daughter of the late Rev. W. F. Barrett, formerly Head Master of Mostyn House School and Senior Curate of Neston.

PRANGLEY—DOMMETT.—On July 18th, at St. Paul's Church, Upper Norwood, by the Rev. W. H. Graham, assisted by the Rev. C. W. Prangley, cousin of the bridegroom, Henry John Prangley, L.R.C.P.Lond., M.R.C.S.Eng., of Tudor House, Anerley, only son of the late John Feard Prangley, of Hertesbury, Wiltshire, to Clara Elizabeth, youngest daughter of Charles William Dommett, of Moorfield, Anerley. No cards. At home September 9th, 10th, 11th, and 12th, 3 to 6 P.M.

DEATH.

MARSHALL.—On July 28th, at his residence, 13, Liverpool Street, Dover, Dr. John Marshall, J.P., aged 64 years. No flowers.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) D. W. Aitken, M.B., Edinburgh; Mr. F. Addiscott, London. (B) W. T. Brooks, M.B., Oxford; Mr. A. E. Boyce, Exeter; Messrs. J. Bale and Sons, London; Mrs. A. S. Ballin, London; British Laryngological and Rhinological Association, London; Mr. W. L'H. Blenkarne, Leicester. (C) Mr. W. S. Coleman, London; Dr. C. Coppinger, Dublin; D. E. Cantillon, M.B., Little Island, co. Cork; Continental; C.; W. J. Cullen, M.B., St. Boswells; Mr. F. E. Clarke, Bains-de-Bormio. (D) Messrs. Dowden and Co., Bournemouth; Messrs. Danielsson and Co., London; Dental Hospital of London, The Secretary of, London; Mr. W. J. Duff, London, Mr. J. V. Davy, London; Dr. C. R. Drysdale, London. (F) Fairplay; Mr. T. E. H. Fisher, London; Mr. S. Forrest, Tunbridge Wells. (G) Dr. H. R. Greene, Woking; C. H. Golding Bird, M.B., London; Dr. E. W. Goodall, London; Messrs. G. Gale and sons, London. (H) D. J. Hamilton, M.B., Aberdeen; Dr. J. O. Horden, London; Dr. W. A. Hardaway, Saint Louis; H. E. W.; Dr. W. M. Hutton, Edinburgh; F. P. Hearder, M.B., Wakefield; Hon. Secretary; Mr. W. Hayle, Halifax. (I) Dr. H. J. Hott, Bromley; Inquirer; Mr. W. Iliffe, Derby. (J) Dr. W. Jones, Ruabon; Mr. G. A. Jones, London. (K) Mr. R. T. Kent, Glasgow; Miss M. King, Kirkby Stephen; Mr. C. T. Kingzett, London. (M) Mr. C. D. Marshall, London; A Medical Student; Dr. H. Malet, Wolverhampton; A. E. Maylard, M.B., Glasgow; Mr. H. J. W. Martin, London; Mr. M. Maillor Kendal, Sydney, N.S.W.; Mr. R. Martin, Gilford, co. Down; Dr. R. Mapler, Newbury. (N) Mr. J. H. Norman, Winkleigh; National Society for the Employment of Epileptics, The Secretary of, London; Mr. P. Newell, Crowborough. (P) Mr. W. H. Pearce, London; Mr. A. Paterson, Liverpool; Mr. S. Paget, Bude; Mr. W. H. Paine, London; Mr. A. Powell, Cachar, E. Bengal; Dr. W. H. Putsey, Bournemouth; Mr. H. A. Powell, Folkestone; Progress; Mr. H. N. Penny, Hong Kong; Mr. W. Porritt, Orange Free State; G. S. Perkins, M.B. London. (R) Professor R. T. Roussel, Geneva. (S) Mr. J. H. Smith, London; Mr. J. A. Southern, Derby; Mr. S. Simmonds, London; Dr. A. T. Schofield, London; A. M. Sheild, M.B., London; Mr. R. V. Sutton, Newport; Mr. H. T. Sells, Northfleet; Dr. F. Semon, London; Mr. W. Shepperson, Tring; R. W. Smith, M.B., Sheffield. (T) Mr. G. H. Turner, Derby; Mr. J. Tomes, Caterham, Valley; Mr. M. Townsend, London; Mr. A. Thorne, London. (V) Miss Valentine, Ramsey. (W) D. Walsh, M.B., London; Mr. Julian Willis, London; Mr. T. Wilmot, Bradford; Mr. B. Wainman, Ryhill; Rev. W. S. Wrenford, Wallsend on Tyne; Dr. E. F. Willoughby, London; G. E. Williamson, M.B., Newcastle-on-Tyne; Mr. A. Winkfield, Oxford; Mr. H. T. Wood, London; Mr. T. E. Williams, Talgarth; Mr. H. Webber, Rickmansworth; Dr. F. R. Walters, London W.M.; Wilhelm Meyer Memorial Committee, The Chairman of, London; Mr. J. P. Wilton, Weymouth; Mr. W. P. Warner, Nevin. ( ) Mr. A. F. Yarrow, London; etc.

BOOKS, Etc., RECEIVED.

Margate as a Health Resort. By Dr. H. E. Crook. Fourth Edition. Margate: H. Keble. 1895.

Educational Handwork. By Dr. W. Götze. London: O. Newmann and Co.

Gunshot Injuries; their History, Characteristic Features, Complications, and General Treatment. By Surgeon-General Sir T. Longmore, C.B. Second Edition. London: Longmans, Green and Co. 1895.

ADDRESS IN PHYSIOLOGY

BY

EDWARD A. SCHÄFER, F.R.S.,

Jodrell Professor of Physiology in University College, London.

At the Annual Meeting of the British Medical Association at London, July-August, 1895.

ON INTERNAL SECRETION.

I PROPOSE to invite you to-day to consider a definite subject in physiology—the subject of internal secretion—one of far-reaching interest, although its full importance has only lately come to be recognised. A secreting organ separates certain materials from the blood, and pours them out again—usually after effecting a change of some sort in them—upon external surfaces, or at least upon surfaces which are connected with the exterior. These form the secretions which are most commonly known under that name. On the other hand, some secreted materials are not poured out upon an external surface at all, but are returned to the blood. These may be termed internal secretions, and they may be and are of no less importance than the better known and more fully studied ordinary or external secretions. The name of gland is the one which is usually applied to a secreting organ; and to those which furnish only internal secretions the name "ductless gland" has been applied. It is not, however, the ductless glands alone which possess the property of furnishing internal secretions. Every part of the body does, in fact, take up materials from the blood, and does transform these into other materials. Having thus transformed them they are ultimately returned into the circulating fluid, and in that sense every tissue and organ of the body furnishes an internal secretion. Moreover, certain important glands which are provided with ducts possess not only the faculty of yielding an external secretion, but have equally important, if not even more important, functions in connection with internal secretion. Thus both the liver and the pancreas are more essential to life, by virtue of the internal secretions which they furnish to the blood, than by their better known external secretions. The evidence of this is complete. The entire removal of either of these organs causes death, and this is due to the removal of the influence which they exert on the metabolism of the body by the loss of their internal secretions, not to the cutting off of their external secretions. For in the case of the liver it is well known that the bile may be diverted by a fistulous opening without any serious interference with the vital functions; and the same is the case for pancreatic juice. The kidney is another instance. It might, indeed, at first appear that a similar statement will not apply so well here; but it has been rendered evident by the researches of Dr. Rose Bradford that the kidney is not a real exception to the rule laid down, for enough of the kidney substance may be left to carry off the excretory products of the body, and yet the removal of the remainder of the organ may cause such disorganisation of the nitrogenous metabolism of the body as to lead speedily to wasting and death.

The same result is not obtained with all glands. The salivary glands may be entirely removed without any marked symptom supervening. And this is also well known to be the case with the mammary glands. On the other hand, removal of the generative glands leads to marked alterations in the development of other parts of the body. In the last-mentioned case the changes are probably produced through the nervous system, and are not connected with the internal secretion of the glands; and with respect to the salivary and mammary glands, we may assume that although they yield an internal secretion of some sort to the blood, it is of the same nature as that yielded by other organs, and that such other organs may act vicariously for those removed. This is, however, inapplicable to the liver, the kidney, or the pancreas; removal of which or restriction of their internal secretions is inevitably followed by a fatal result.

I do not propose to dwell further upon the internal secretions of the liver and kidney, and for contrary reasons—namely, that in the one case the subject has become too large for the limits of a short address; and in the other, because the subject is one with regard to which we have at present too little information. But before leaving the liver I would point out that it affords an excellent illustration of the fact that internal secretions may, like ordinary or external secretions, either serve some useful purposes in the body (secretions proper) or may be formed only to be got rid of (excretions). The formation of sugar is an example of a useful internal secretion; that of urea of what would be termed in the ordinary sense an excretion, although urea is not actually got rid of by the liver, but is produced by that organ to be got rid of by the kidney.

The internal secretion of the pancreas may detain us somewhat longer. Among the racemose secreting glands the pancreas offers a peculiarity of structure which in the first instance it may be well to note. For we meet here, besides the secreting alveoli and ducts, a peculiar epithelium-like tissue which occurs in isolated patches throughout the organ and which is characterised by its extreme vascularity. These islands of epithelioid tissue are quite characteristic of the pancreas. We know of no other externally secreting gland which contains them.

Now it was formerly believed that the sole function of the pancreas was to yield pancreatic juice, and this, it must be confessed, is in itself a sufficiently important function, seeing that this fluid contains ferments which act on all the principal organic constituents of the food. It had indeed been remarked that cases of glycosuria occurring in the human subject were frequently associated with disease of some kind of the pancreas. Frerichs found that 20 per cent. of the total number of cases of diabetes which came under his notice were accompanied by obvious changes in the pancreas. Rokitansky found in 13 out of 30 cases that the pancreas "was strikingly small, hard and bloodless; and in many cases it has been found so shrunken and altered as to be hardly recognisable save by its connections" (Silver). Claude Bernard had attempted as long ago as 1855 to entirely remove the pancreas, but all his attempts were unsuccessful, in so far that the animals speedily succumbed. In 1889, however, the operation was successfully performed by von Mering and Minkowski. They found that in all cases in which the entire pancreas was removed the operation was followed within the space of a very few hours by the appearance of sugar in the urine, and this to a great extent—as much as 5 to 10 per cent. being found even in fasting animals.

Accompanying the condition of glycosuria there is also produced polyuria; and these conditions occur even under a purely flesh diet, and are accompanied, as might be supposed, by rapid wasting, and followed within the space of 15 days or less by death. This result is not due to the loss of the pancreatic secretion, for, as we have already seen, the pancreatic juice may be diverted by a fistula, and the animal may remain in perfect health. Nor is it due to the loss of the secreting structure; for it has been found possible to destroy the secreting structure of the organ without the supervention of diabetes. This was done successfully by Schiff in 1873. Schiff's method, which was a repetition of experiments by Bernhard, was the injection of paraffin into the duct of Wirsung. In Bernhard's original experiments all the dogs operated upon speedily died; but this was probably due to accidental causes and not to the actual destruction of the pancreatic tissue, for in Schiff's experiments the dogs survived, and remained in perfect health. The fact that removal of the pancreas is followed by glycosuria was not at that time known, and the appearance of sugar in the urine was not therefore looked for by Schiff. But there can be no doubt of the absence of any severe form of diabetes, because the animals underwent no wasting.

Recently the experiment has been repeated by Hédon and by Thiroloix. Thiroloix found that, although the gland was reduced by the process of atrophy supervening on the injection to a mere rudiment, symptoms of diabetes do not occur as when the whole gland is removed. It is well known that if a portion of the pancreas be left—about one-quarter or rather more—no glycosuria appears. In the great majority of these cases the animals remain healthy, so that it is clear that a portion only of the gland can prevent the diabetic symptoms. Nor need the portion of gland which is left remain in its ordinary situation. A fragment of the gland either from the same or from another animal may, in fact, be

grafted elsewhere into the peritoneal cavity or under the skin. Provided the grafting be successful, and the portion of the gland employed of sufficient size, removal of the pancreas is now no longer followed by the usual symptoms. The animal may remain, in fact, in perfect health. But if at any subsequent time the grafted portion of pancreas is removed, diabetes supervenes, and the animal dies within a short time, as after a primary removal. Now it has been shown by Thiroloix that the grafting of a portion of pancreas, the secreting part of which had been destroyed by injection of paraffin along the ducts, is also efficacious in preventing the advent of diabetes after removal of the pancreas. We must therefore assume that the material, whatever it may be, which is furnished by the pancreas to the blood, and which prevents excessive formation of sugar in the blood and in the urine, must be formed by some other constituents of the gland than the secreting cells; for there is every reason to believe that these cells are eventually completely destroyed after the ducts have been blocked in the manner described.

I am not aware whether the gland which has been thus caused to atrophy still shows the interstitial vascular epithelium-like tissue to which I have directed your attention; but it is extremely probable, in fact almost certain, that this tissue does not participate in the atrophy of the secreting part of the gland, and it is therefore, I think, fair to assume that the pancreas mainly owes its function as an internally secreting organ, at least so far as regards the prevention of diabetes, to this tissue, which is apparently peculiar to it amongst secreting glands. Various theories have been put forward to account for the effect upon carbohydrate metabolism of removing the pancreas. It is, however, still entirely unknown how the pancreas does actually act. The effects of grafting which have just been described entirely negative the view that the result is due to interference with the ganglia and sympathetic nerves at the back of the abdomen, a supposition which was at one time brought forward to explain the diabetes resulting from removal. It has been stated by Valli that in dogs which have been rendered diabetic by removal of the pancreas, injection of pancreatic emulsion into the blood causes a disappearance of the diabetic symptoms, and many instances have been recorded of diabetes in man, which, it is stated, have been benefited by the exhibition by the mouth of raw pancreas. With regard, however, to these statements, it may be remarked that the danger of injecting emulsion of raw pancreas into the blood would be great, on account of the tendency which extracts of gland cells have to produce intravascular clotting; and, so far as the treatment by feeding with raw pancreas goes, it has been found by Sandmeyer that in dogs with pancreatic diabetes the excretion of sugar is not decreased, but increased, by giving raw pancreas with the food, even although this be of an entirely proteid nature. The only fact that appears certain in connection with the manner in which the pancreas prevents excessive production of sugar within the body is that this effect must be produced by the formation of some material secreted internally by the gland, and probably by the interstitial vascular islets, and that this internally secreted material profoundly modifies the carbohydrate metabolism of the tissues. That it does so by influencing hypothetical "sugar centres" in the bulb, as has been conjectured by Chauveau and Kauffmann, is for various reasons improbable.

The next internal secretion which I propose to consider is that of the thyroid gland. The process of study is in one sense simpler in this case, since there is no external secretion. That the thyroid gland is a secreting gland no one who studies its structure and its mode of development can well doubt; except that it is unprovided in the adult state with a duct, it has all the features of structure of secreting glands. It is formed of alveoli which are lined by epithelial cells, and these cells have been observed to exhibit changes after treatment with pilocarpin in no way dissimilar to those changes which have been noticed under like circumstances in the cells of true secreting glands. Farther, we can observe the secreted material within the vesicles of the thyroid, in the form of the substance known as "colloid."

The gland is extremely vascular and very richly provided with nerves, and both blood vessels and nerves come into very close relationship with the secreting epithelium. The glandular structure of the thyroid is more obvious in young than in old animals, and as age advances, as has been shown by Hale White and others, the organ undergoes a gradual process of degeneration, so that in advanced age its normal glandular structure can only with difficulty be recognised. As long ago as 1856 Schiff showed that extirpation of the thyroid in dogs is invariably followed by a fatal result. This observation, important as it now seems, fell for many years into oblivion, and it was not until clinical observations had again pointed to the importance of the gland that Schiff's experiments were remembered. These observations may be said to have commenced with the discovery of the disease known as myxœdema by Gull in 1874, although the connection of that disease with affections of the thyroid was first recognised by Ord in 1878—an observation which has since been abundantly confirmed. In 1882 J. and A. Reverdin described the symptoms following upon complete removal of the thyroid body for goitre, and they recognised these symptoms as identical with those of the disease which had been described under the name of myxœdema; they accordingly termed the collection of symptoms "operative myxœdema." The results of the Reverdins were speedily followed by those of Kocher, who described, in a large number of cases, similar symptoms as following entire removal of the thyroid in man. Kocher pointed out that the effects are most marked in young subjects, and that they may not occur at all or be little manifest as age advances. These observations of the Reverdins and Kocher led to a renewal of his former experiments by Schiff, who, in 1884, published the results of sixty thyroidectomies upon dogs, in all of which the result was speedily fatal, the operation being quickly followed by the supervention of symptoms—tremors, spasms, and convulsions—which seemed to point to a serious disarrangement in the nutrition of the central nervous system. Schiff also discovered the fact that the symptoms are prevented by a previous graft of a portion of the gland beneath the skin or into the peritoneal cavity.

The subject now became one of general interest, and was taken up actively by many experimenters. In this country Horsley, by employing monkeys—which survive the operation as a rule considerably longer than dogs—discovered that the myxœdematous condition which is so characteristic of the removal of the thyroid in man is also produced in animals.

It was further found by Allard and by Ewald that no results are obtainable by thyroidectomy in birds, and most observers state that the same is the case with rodents and herbivora generally. The absence of the result in birds has never yet been satisfactorily explained; but various attempts have been made to explain the frequent absence of result in herbivora. It may be either that a portion of the gland has been left behind, or that there existed in the particular cases in question accessory thyroids and parathyroids separated from the main body, and not removed in the operation. This is the explanation which is given by Gley of the negative results which usually attend thyroidectomy in rabbits. Gley states that if in these animals care be taken to remove the accessory structures as well, the usual symptoms supervene. Whether this is a sufficient explanation of the lack of result obtained by other observers remains yet to be proved.

The symptoms which follow thyroidectomy are of two classes—nervous and metabolic, although we are not able to say that the nervous symptoms are not produced by metabolic changes in the tissues of the nervous system; nor is it certain that the metabolic changes in the tissues are not consequent on alterations in the nervous system. The most characteristic nervous symptoms are those which have been already mentioned—muscular tremors, passing gradually into spasms, and finally into convulsive attacks. These cease on section of the nerves passing to the muscles. They are, therefore, of central origin; indeed, it has been shown that the excitability of the cortex of the brain, and even of the lower centres, is materially modified in animals which have suffered thyroidectomy. The metabolic changes which occur are most obvious in the connective tissues, and especially in the integument. These tissues become œdematous, but the œdema is not of the ordinary character. The fluid contains a superabundance of

mucin; the integument swells, but at the same time the surface becomes dry, and there is a tendency to the shedding of hairs and of the superficial epithelium. This mucinous change is followed, if the animal remains alive for a sufficient time, by atrophic changes.[1] The nervous affection which primarily results is usually accompanied by slight fever. Later on this passes off, and the temperature becomes reduced even to some degrees below the normal. These effects of thyroidectomy can be entirely prevented by thyroid grafts, and can be temporarily prevented either by injection of thyroid juice under the skin or even by taking thyroid juice or raw thyroid by the mouth. Dr. G. R. Murray has described the case of one monkey in which, in consequence of the removal of the thyroid, all the symptoms of myxœdema had appeared, which was completely cured by repeated subcutaneous doses of thyroid juice. He does not, however, state how long the animal was kept under observation after treatment, and whether the cure was permanent. It is, indeed, scarcely probable that the subcutaneous injection or the taking by the mouth of thyroid juice would be followed by more than a temporary removal of the symptoms. The effects of grafts, however, are to all intents and purposes permanent, and it has been found, as in the case of the pancreas, that removal of the graft which has maintained the health of the animal after extirpation of its own thyroid is speedily followed—as with primary removal of the organ—by the usual symptoms of thyroidectomy.

Various theories have been advanced to account for the effects of removal of the gland. H. Munk holds, or until lately held, that the effects of removal are entirely due to interference with adjoining nervous structures in the neck. But this, as in the similar theory propounded to account for the effects of extirpation of the pancreas, is absolutely negatived by the results of thyroid grafting. Besides this theory, which must, it seems to me, at once be dismissed, there are two others which may be regarded as disputing the ground between them. Of these the one may be called the theory of "autotoxication" and the other that of "internal secretion." The autotoxication theory assumes that there is a certain toxic substance which is constantly tending to accumulate in the blood, and which it is the duty of the thyroid gland to render innocuous and to remove. According to this, the function of the thyroid would be primarily excretory. This view is supposed to be supported by the statement that in animals which are dying after removal of the thyroid the blood is toxic for other animals, and especially for those which have already had the thyroid removed, although this operation may have been performed only a short time previously, and before the symptoms of thyroidectomy have had time to develop. It is not stated what the probable nature of this substance is, or by what tissues it may be formed. The "internal secretion" theory would explain the phenomena of extirpation as due to the absence of a secretion which is formed within the thyroid, and which is passed into the blood, possibly through the medium of the lymphatics: a secretion which is necessary for certain of the metabolic processes within the body, and especially for those connected with the nutrition of the central nervous system and of the connective tissues. For in the first place, beneficial and not toxic effects follow the exhibition of thyroid juice both in cases of thyroidectomy in animals and in myxœdema and other affections in man. And secondly if we investigate the physiological effects of extract of thyroid gland whether prepared with water or glycerine, and whether previously boiled or not, we find that it produces a distinct action upon the blood vessels, so that the blood pressure markedly falls (Fig. 1), although the beats of the heart remain at about the same rate and of the same strength. This lowering of the blood pressure without influencing the action of the heart can only be produced in one way, namely, by increasing the calibre of the arterioles. Before this effect upon the blood pressure was discovered by us, it had been shown by my co-worker, Dr. George Oliver, that the exhibition of thyroid juice or other preparations of

[1] Semon has enunciated a theory which deserves consideration here, to the effect that removal of the thyroid produces an interference with the full chemical development of the constituents of the connective tissues, so that these tend to take on an embryonic character, and it is well known that excess of mucin is characteristic of embryonic connective tissue.

Fig. 1. Effect in the dog upon the blood pressure of intravenous injection of decoction of thyroid. Time in seconds: some are imperfectly marked. The line above is the abscissa of blood pressure.

thyroid in the human subject has a tendency to increase the calibre of the radial artery. It would seem, therefore, that the juice of the thyroid and extracts which are obtained from the gland have a distinct action upon the vascular system. In connection with this it is of interest to recall the observations of Lorrain Smith upon the effects of thyroidectomy in altering the gaseous exchanges within the tissues of animals. Lorrain Smith found that in animals which have been deprived of the thyroid body the reaction to changes of temperature was abnormally rapid. When normal animals are exposed to a cold atmosphere the production of carbonic acid becomes increased consistently with the increased oxidation which is necessary to cause an increased production of heat, but this increase of carbonic acid does not take place immediately, but only comes on after a certain period of time, the temperature of the body being in the meantime maintained normal by those physical changes which occur in the circulation, and which allow the quantity of blood brought to the skin, and the amount of heat thereby lost from the general surface of the body to be varied. Now it is precisely these vasomotor changes which appear to be lacking after removal of the thyroid; for the production of carbonic acid becomes almost immediately increased by exposing thyroidectomized animals to a low temperature. That the thyroid gland yields an internal secretion which effects a useful purpose within the body appears to result conclusively from these facts, and the effects which follow thyroidectomy are probably due to the loss of that secretion. Whether the gland also possesses the function of destroying toxic pro-

ducts of metabolism which would otherwise tend to accumulate in the blood is a point which requires the production of more conclusive evidence before it can be regarded as established.

The next organ the internal secretion of which we may shortly consider is the pituitary body. It is well known that the anterior lobe of the pituitary body is a structure which may in general terms be described as glandular, and although not in all respects resembling the thyroid there are nevertheless certain points both in connection with its mode of development and in the structure of the fully formed organ which might lead to the supposition that there is something functionally common to the two organs. So far as destruction of the pituitary body is concerned, experiments have given interesting results. The organ has been removed successfully in a number of cases in cats by Marinesco and in dogs by Vassale and Sacchi. In all instances of complete removal death results: usually within a fortnight of the operation. The symptoms observed are (1) a diminution of the body temperature, (2) anorexia and lassitude, (3) muscular twitchings and tremors, developing later into spasms, (4) dyspnœa. Many of the symptoms show abatement after injection of pituitary extract. Vassale and Sacchi conclude that the pituitary must furnish an internal secretion which is useful in maintaining the nutrition of the nervous and muscular systems. Some of these symptoms, especially the muscular twitchings, are similar to those seen on removal of the thyroid. Moreover, it has been stated that after thyroidectomy the pituitary body becomes enlarged; and Rogowitsch has supposed that the fact that in rabbits a thyroidectomy commonly fails to produce the usual results is due to the pituitary taking on a vicarious action, the pituitary being larger in proportion in the rabbit than in most animals.

Similar statements with regard to its enlargement have been made in cases of myxœdema in which the pituitary has been examined. But, on the other hand, Schönemann, who examined the pituitary in a large number of cases of goitre, got no distinct evidence of its enlargement in that disease nor of any other marked change. And whereas enlargement and degeneration of the thyroid is accompanied by cretinism and myxœdema, there appears to be a close connection between enlargement and degeneration of the pituitary body and an entirely different disease first described by Marie, namely, acromegaly, the most obvious symptoms of which are hypertrophy of the bones of the extremities and of the face with some hypertrophy of the skin and mucous membranes, but without mucinoid degeneration. Moreover, the theory that the thyroid and pituitary may act vicariously appears to be entirely negatived by the physiological effects which are produced by extract of the last-named gland. These effects are exemplified in tracings of the blood pressure and heart beats (Figs. 1 and 2), which show that, whereas thyroid extract produces no obvious effect upon the contractions of the heart, decoction of the pituitary body causes great augmentation in the force of the heart's beat without, however, any accompanying acceleration of the rate. Further, the effect upon the arteries is precisely the reverse of that which is obtained by extract of thyroid. The blood pressure rapidly rises, and that this rise is not due simply to augmentation of the heart's beats, but that it is also due to contraction of the arterioles, is sufficiently shown by the fact that if salt solution containing pituitary extract be passed through the blood vessels of a frog, the entire nervous system of which has been destroyed, the vessels markedly contract. This experiment conclusively shows that the effect upon the arteries is unquestionably a direct one, and in all probability this is the case also with the heart.

We may fairly suppose, then, that the pituitary body also furnishes to the blood an internal secretion, and it would appear that this internal secretion tends to increase the contraction of the heart and arteries, and to influence the nutrition of some of the tissues.

Lastly, we may proceed to consider the internal secretion of the suprarenal bodies. The immense importance of these glands in nutrition was indicated by Addison, who, in

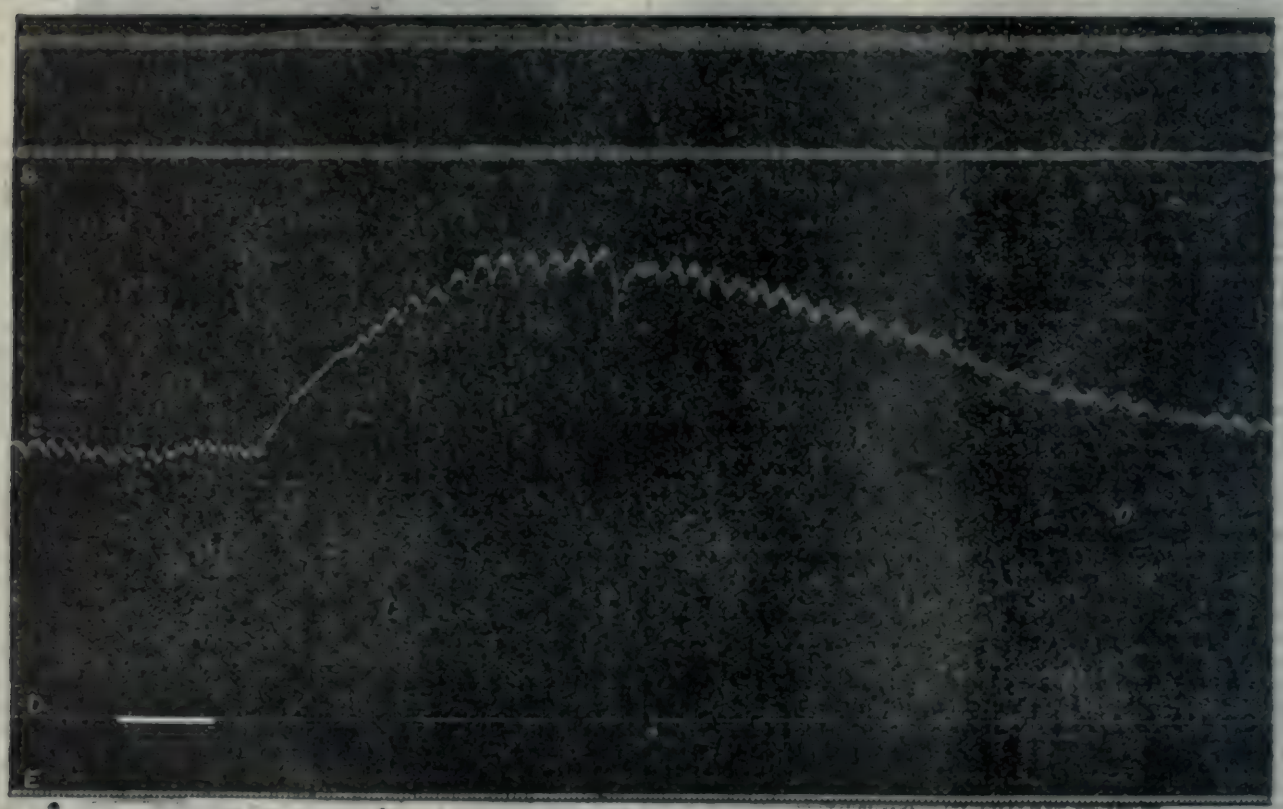


Fig. 2.—Dog, 7 kilos., morphine, atropine. A, auricle; B, ventricle; C, blood pressure (femoral artery); D, zero-pressure and signal; E, time in seconds. Effect of intravenous injection of boiled extract equivalent to 0.07 gramme dry pituitary (reduced by one-half).

1855, pointed out that the symptoms of the disease now known by his name are associated with pathological alterations of the suprarenal capsules. This observation was tested experimentally by Brown-Séquard, who found (in 1856) that removal of the suprarenal bodies was rapidly and unfailingly fatal in all animals. The symptoms following the removal are practically those of Addison's disease, although much more acute. There is extreme muscular weakness, and great loss of tone of the vascular system, with ultimately nervous symptoms, loss of appetite, and other signs of general prostration. But the pigmentation which usually accompanies disease of those organs was not noticed by Brown-Séquard, and he inferred that this absence of pigmentation was probably due to the fact that a fatal result appears so rapidly after the complete removal of the capsules in animals that time is not afforded for the development of this symptom. This conjecture appears to have been confirmed by an experiment of F. and S. Marino-Zucco, who state that by inoculating the suprarenals of rabbits with pseudo-tubercle bacillus they have succeeded in obtaining not only the slow development of the ordinary symptoms of suprarenal removal, but also an augmentation in the pigmentation of the skin and hair. The experiment, however, requires confirmation.

It is needless to state that Brown-Séquard's results, following as they did upon Addison's observations, attracted much attention, and numerous investigators set to work to verify them. But many of these failed to confirm the results which were obtained by Brown-Séquard, probably by reason of the removal being incomplete or of the existence of accessory capsules; and after a few months of controversy the subject gradually dropped, and became for a long time almost forgotten. The interest in this subject has been, however, recently revived, and the experiments of Brown-Séquard have been repeated by various observers, including Brown-Séquard himself, Abelous and Langlois, Tizzoni and many others. I have myself made several experiments of the same kind on various animals (monkeys, dogs, cats, and guinea-pigs). All these observations have tended to confirm the original statements of Brown-Séquard. They show that animals deprived of their suprarenal capsules die rapidly, usually in the course of two or three days with the symptoms above noted, and the further fact is mentioned by Abelous and Langlois, and this is also confirmatory of a statement of Brown-Séquard, that the blood of animals dying in consequence of the removal of the suprarenal capsules is toxic for other animals which have recently been deprived of their capsules, although it causes no toxic results in normal animals.[3]

The symptoms caused by this blood are said by Abelous and Langlois to be those of curare poisoning—paralysis, that is to say of the intramuscular nerve endings; and since the most marked phenomena resulting from removal of the capsules is extreme muscular weakness it has been concluded by them that after removal of these glands a certain toxic product of muscular metabolism accumulates in the blood, and that the function of the glands is to remove or destroy this toxic principle.

This is the "autotoxication" theory of the suprarenal capsules, and is similar to that which has been applied to the thyroid body. Like the other autotoxication theories it is chiefly founded upon the fact that the blood of animals which are moribund in consequence of the particular extirpation is toxic, especially for other animals which have been submitted to the operation. But is it not probable that the blood of an animal dying slowly as the result of any disease would be toxic to some extent, and that the toxic principles would more powerfully affect animals whose resisting power has been lessened by a recent severe operation? However this may be, whether the suprarenal capsules do or do not destroy a toxic principle which is formed elsewhere, and which would otherwise accumulate in the blood, they unquestionably produce a material which has entirely different properties from those stated to be possessed by the blood of animals deprived of their capsules. This material, which is probably the basis of the internal secretion of the glands, has most active physiological properties, and it is to these that I will now direct your attention.

Experiments upon normal animals with extracts of suprarenal have been performed by a number of observers, but by all in a very incomplete manner. For the most part they have been satisfied to subcutaneously inject extracts made with water and other menstrua, and to observe the symptoms, if any, which result. As a matter of fact, in some animals which are so treated there are no obvious symptoms. The guinea-pig will stand a large subcutaneous dose of suprarenal extract without showing any symptoms at all, or with, perhaps, only a slight acceleration and increase of the force of the pulse. The same appears to be the case with the cat and with the dog, unless a very large dose be injected. Rabbits, on the other hand, are extremely susceptible to the influence of suprarenal extracts. If a large dose be given, the animal may succumb within half an hour. If, on the other hand, the dose be only moderate in quantity, it may not show any symptoms at all for some hours, and then it may suddenly succumb. This primary absence of symptoms has been also noted by Foà and Pellacani in dogs, who state that in many of the animals which they experimented upon in this way there were no symptoms at all apparent upon the day upon which the injection was given, but that the next morning the animal was usually found dead.

The cause of death, it may be added, in this case is not by any means clear. Foà and Pellacani have supposed that it may be due to paralysis of the respiratory centre, but the slight effect which intravenous injection of suprarenal extract produces upon this centre does not lend support to this conjecture.

The physiological effects of intravenous injection of suprarenal extract are far more striking. The facts which I am about to put before you are new; they are the result of experiments by Dr. George Oliver and myself, performed during the last two years.[4] They show conclusively that the medulla of the suprarenal capsule contains a dialysable organic principle, soluble in water, and not destroyed by boiling for a short time, which produces a powerful physiological action upon the muscular system in general, but especially upon the skeletal muscles, the muscular walls of the blood vessels, and the muscular wall of the heart. A certain amount of action is also manifested upon some of the nerve centres in the bulb, especially the cardio-inhibitory centre, and to a small extent upon the respiratory centre.

The effect upon the skeletal muscles is well shown in the frog (Fig. 3), and can also be seen in mammals. The contraction

Fig. 3.—Effect of suprarenal extract upon muscle contraction in the frog. A. Normal muscle curve of gastrocnemius. B. Curve taken during suprarenal poisoning, but otherwise under the same conditions as A. Time in [illegible]

[3] It is stated by Brown-Séquard that injection of extract of suprarenal under the skin of animals, the suprarenal capsules of which have been removed, has a partial success in prolonging life. I myself know of no cases in which animals in this condition have been kept alive for any length of time, either by injection in this way or by the taking of suprarenal by the mouth. Nor am I aware of any successful attempts which have as yet been made to effect a graft of the organ into another place, although there can, I imagine, be little doubt that if such a graft were to become successfully rooted, the result would be similar to that which is got with grafts of pancreas and of thyroid. It appears, moreover, to be true that some cases of Addison's disease are distinctly benefited by extract of suprarenal capsule, taken by the mouth.

[4] The chemical work in connection with these experiments has been carried out by Mr. B. Moore.

[4] Figs. 3, 4, 5, 6, and 7 are taken from the *Journal of Physiology*, vol. xviii, No. 3, 1895.

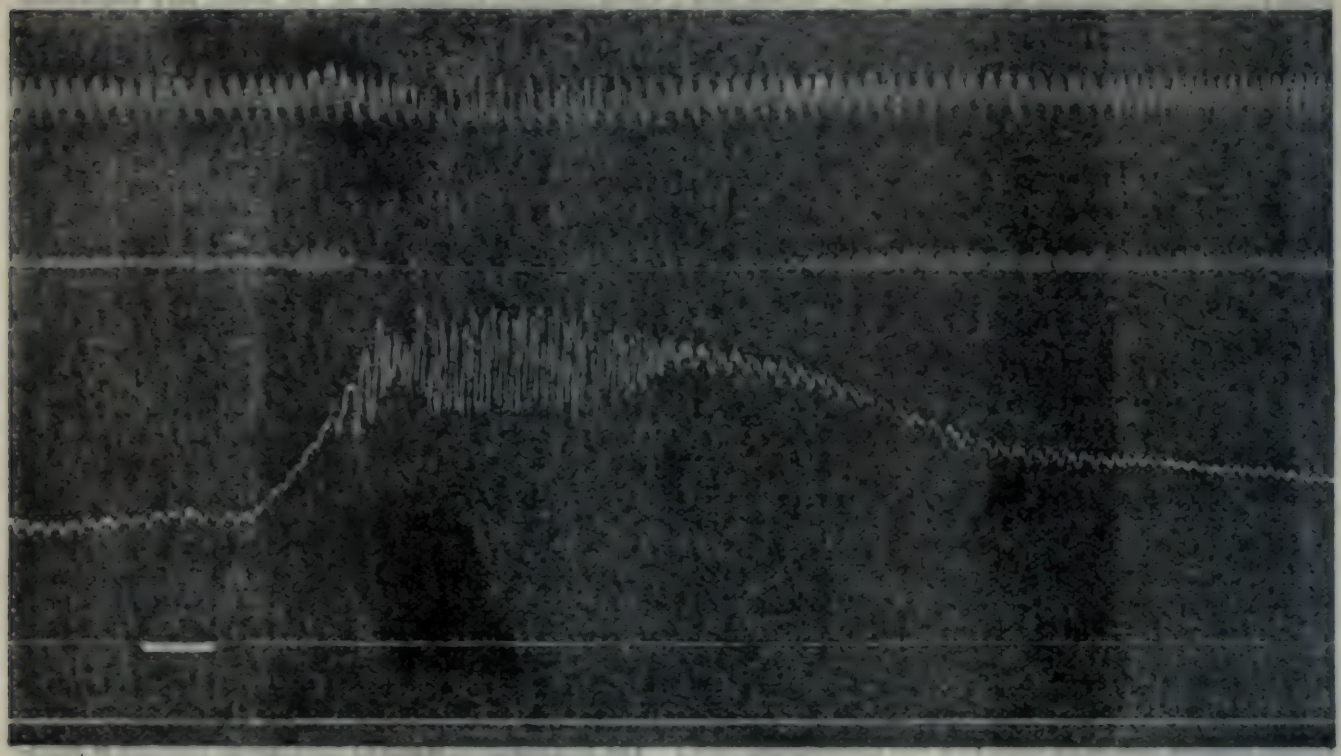


Fig. 4.—Dog of 9 kilos; morphine, artificial respiration; one vagus only cut. Intravenous injection of 0.2 g. dog suprarenal. A, ventricle; B, auricle, C, femoral; D, abscissa of blood pressure; M, time, 0.5". (Reduced to one half.)

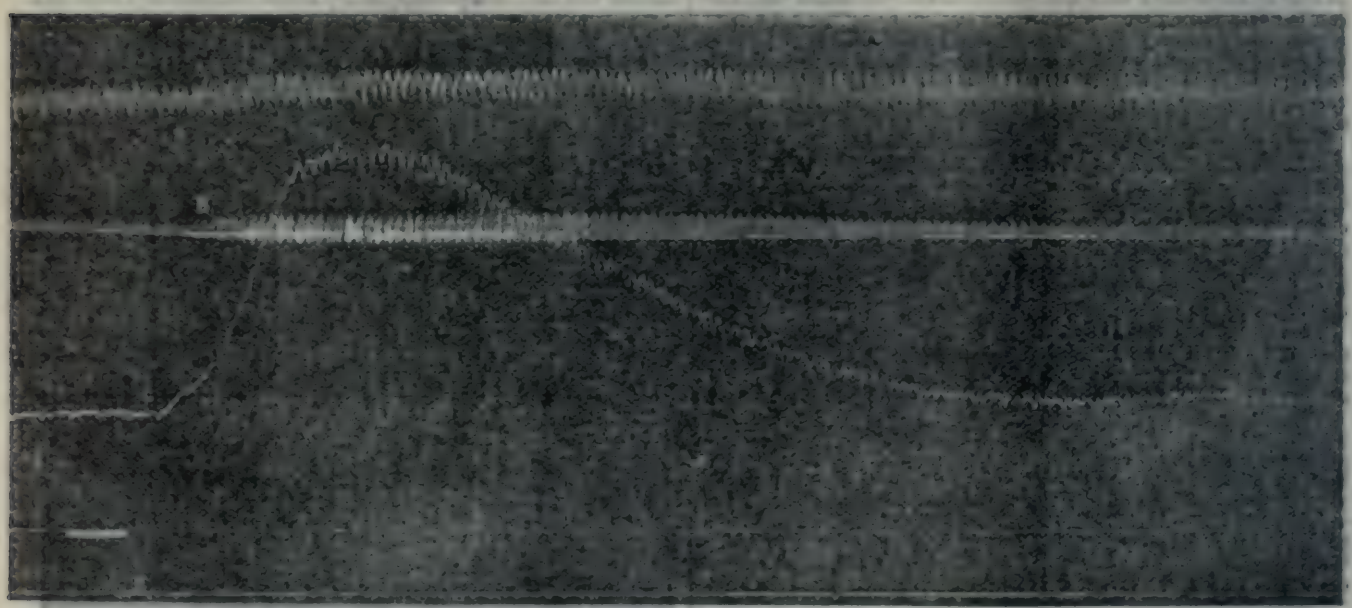


Fig. 5.—Dog of 9 kilos; morphine; artificial respiration; vagi cut. A, ventricle; B, auricle; C, carotid pressure; D, abscissa and signal; M, time, 0.5". Effect of intravenous injection of extract of about 0.2 g. suprarenal. (Reduced to one-half.)

of the muscle in response to a single excitation of its nerve is as ready as in the normal animal; but it is greatly prolonged, so that the result is comparable to that produced by a small dose of veratria, which, as is well known, has the effect of enormously increasing the contraction resulting from a single stimulation of the muscle or its nerve. It is in no way comparable to a curare effect, for the muscles remain as excitable through their nerves as before. It is therefore an effect entirely different from the so-called autotoxication paralysis which is stated to result after removal of the suprarenal capsules in animals, and the material which is extracted by water, therefore, from the suprarenal capsules is certainly

not the same material that is said to accumulate in the blood after the removal of these organs.

The action upon the circulatory system may be divided into the action upon the heart and the action upon the arterial system. Upon the heart the effect differs according as the vagi are cut or uncut. When the vagi are uncut, and the heart is therefore still in connection with the cardio-inhibitory centre in the medulla oblongata, the action of suprarenal extract is to slow and even to entirely stop the contraction of the auricle. Under these circumstances the ventricle continues beating with an independent slow rhythm (Fig. 4). The result is to cause the pulse to be very slow. On the other hand, when the vagi are cut or their cardiac ends paralysed by atropine, the effect upon the heart is precisely the reverse. The strength and frequency of the auricular contractions are markedly increased, and those of the ventricle are correspondingly augmented. This naturally has the effect of sending a vastly greater amount of blood into the arteries, which by itself would alone produce a great rise in the arterial pressure. The direct action upon the arteries is, however, quite as marked as that upon the heart. If the blood pressure be taken in a dog in the usual way by connecting a mercurial manometer with the femoral artery, and if a minute dose of suprarenal extract be now injected into a vein it is found that even with the vagi uncut and the heart therefore slowed by the action of the extract the blood pressure rises considerably (Fig. 4). But with the vagi cut or paralysed by atropine the rise can only be characterised as enormous (Fig. 5).

The contraction of the arteries is further exemplified by the fact that if an organ such as a limb or the kidney or the spleen be enclosed within a plethysmograph, or oncometer, the instrument indicates an enormous diminution in volume of the organ, which can only be accounted for by a contraction of its arterioles.[4] This contraction is produced by the direct action of the drug upon the muscular tissue of the smaller arteries and not indirectly through the vasomotor centre, for it obtains in the mammal equally well with the spinal cord cut or the brain destroyed (Fig. 6), or even in the case of the arm after the brachial plexus has been severed (Fig. 7). In the frog it is produced also with the brain and spinal cord completely destroyed and salt solution containing suprarenal extract allowed to flow through the arteries.

Under these circumstances the flow of fluid, which without the suprarenal extract may have been comparatively rapid, becomes almost completely stopped, and this can only be due to the direct action of the extractive substance upon the muscular tissue of the smaller arteries. The enormous rise of blood pressure which is set up after the vagi have been cut is shown in the tracings. The pressure may rise to four or five times its original height; I know, in fact, of no other agent which will produce such an enormous increase of pressure except direct stimulation of the vasomotor centre. It is not the case, however, that this centre is stimulated by the drug as has been erroneously supposed by Cybulsky, for, as we have seen, the action is essentially a peripheral one.

The effect passes off in the course of a few minutes. After a dose, no matter whether small or large, has been injected into a vein, and has produced the results which we have seen, the blood vessels slowly resume their ordinary calibre, the augmentation and increased frequency of the heart's beats become gradually lessened, and the blood pressure recovers its normal condition. Whilst the pressure is raised under the action of suprarenal extract, there is apparently no possibility of inhibiting the arterial contraction; even the strongest stimulation of the depressor nerve, which under ordinary circumstances produces through the vasomotor centre a marked dilatation of the arterioles, is without result during the activity of this extract. The question naturally arises, How is it that the effect so soon disappears? In what manner is the active principle eliminated? It is not eliminated by the kidneys, for the effect passes off just as quickly, even although the renal arteries are clamped. It is not eliminated by the suprarenals themselves, for the same fact holds good for the suprarenals. It passes off almost equally quickly if the aorta and vena cava are tied in the upper part of the abdomen, so that there is no circulation of blood whatever in the abdominal organs. It is not oxidised or otherwise destroyed by the blood, for it retains its full potency even after it has been twenty-four hours in contact with that fluid. The most probable explanation of the disappearance of the effect seems to be that the active principle becomes packed away, and eventually rendered innocuous in certain organs. That the muscles take most part in this storage is probable from the fact that the physiological effects upon the skeletal muscles are manifested for a long time after the effects upon the heart and arteries have disappeared.

One of the most interesting and important facts regarding the material which is yielded by the suprarenals is the minuteness of the dose which is necessary to produce these results. As little as 0·0005 g. (½ mil grammes) of dried suprarenal is sufficient to obtain a maximal effect upon the heart and arteries in a dog weighing 10 kilogrammes. For each kilogramme of body weight, therefore, all that is necessary to produce a maximal effect is 0·00005 g., or little more than half a milligramme.

Now we have shown that the active principle is contained only in the medulla of the gland, not in the cortex, and the medulla in all probability does not form more than one-fourth of the organ by weight, of the dried medulla certainly not less than nine-tenths is composed of proteid and other material which

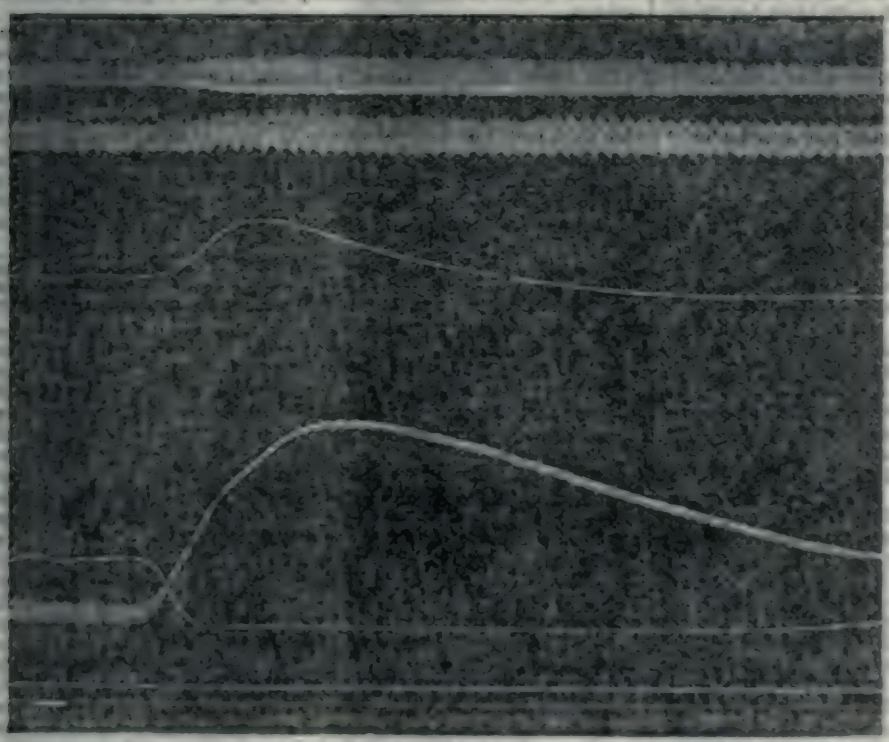


Fig. 6.—Effect of suprarenal extract upon heart, limb, spleen, and blood pressure after section of cord. The forearm in this experiment was at first passively expanded but its contraction is afterwards manifest. (Reduced to one half.)

[4] In man the effect of taking suprarenal extract by the mouth is to produce a general diminution in calibre of the arteries as measured by the arteriometer (Oliver).

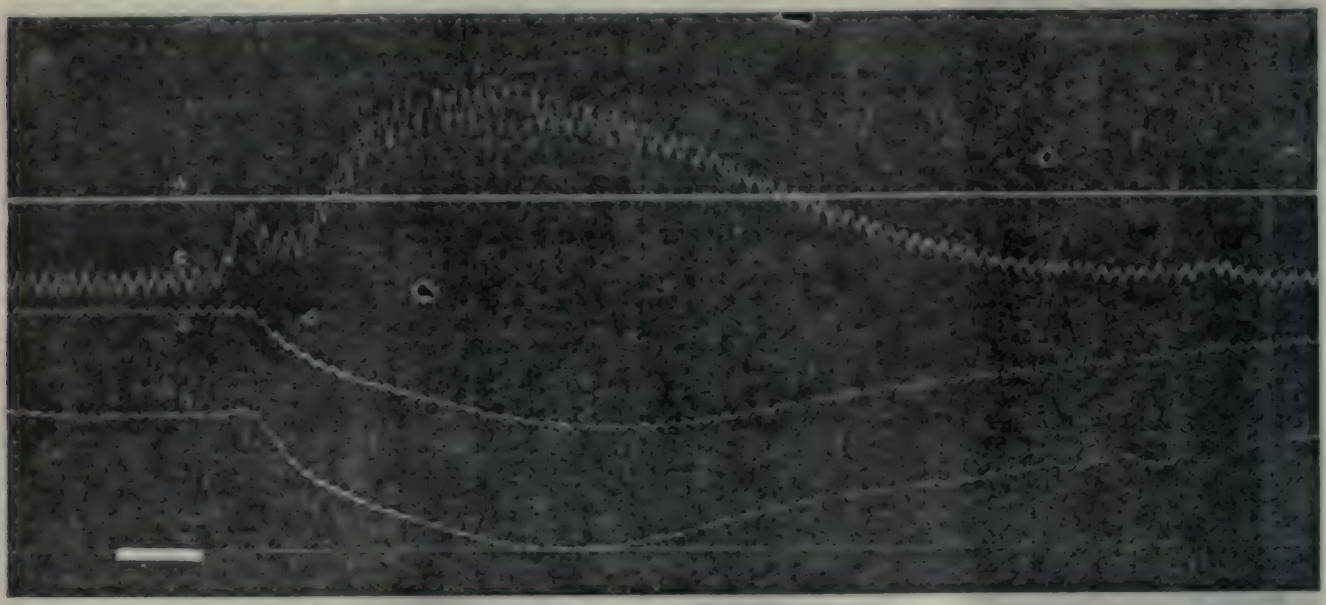


Fig 7.—Dog of 20 kilos; morphine, curare; vagi cut; artificial respiration. A time in 0.5"; B, plethysmographic tracing of right forearm (brachial plexus cut), b, ditto of left forearm (plexus uncut); C, blood pressure in femoral; K, abscissa of blood pressure and signal of injection. Effect of intravenous injection of extract of 0.2 g. calf suprarenal. (Reduced to one-half.)

is not dialysable, and which otherwise does not conform to the chemical properties which have been ascertained to belong to the active substance of the gland. So that, if we take these facts into consideration, we find that in order to produce a maximal effect a dose of not more than fourteen-millionths of a gramme per kilogramme of body weight is all that is necessary. Now it is certainly true to say that one-fourteenth of this dose will produce some effect, although not perhaps a very large one. We thus arrive at the astounding conclusion that the active principle of the suprarenal capsules, taken in the proportion of not more than one-millionth part of a gramme per kilogramme of body weight, which would be equivalent to $\frac{1}{17,000}$ g., or less than $\frac{1}{250}$ grain, for an adult man, is still sufficient to produce distinct physiological results upon the heart and arteries.

It may be considered probable that the suprarenal capsules are continually secreting into the blood this active material which, although present in that fluid only in minute quantities, may yet be sufficient to produce an effect which is beneficial for the performance of the functions of muscular tissue, and especially the muscular tissues of the vascular system. It has, in fact, been stated by Cybulsky that the blood of the suprarenal vein contains a sufficient amount of the active principle of suprarenal extract to produce marked physiological effects. I have made three very careful experiments in an endeavour to confirm this statement, but I have not been able to find that the blood of the suprarenal vein does actually contain a sufficient amount of this material to produce, even in doses of as much as 10 c.cm., any more result than venous blood generally. But whether we are able to show it experimentally or not, there is, I suppose, very little doubt of the fact that the materials formed pass somehow or other into the blood; and, when we compare the results of suprarenal injection with the converse effects obtained from the removal of suprarenals and from disease of those organs, we can come to no other conclusion than that we have before us a notable instance of internal secretion.

The general results to which we are led from a consideration of these facts point very strongly in favour of the notion that internal secretions are yielded both by the ductless glands and by what are usually known as the true secreting glands, and that such internal secretions may be of no less importance than the better recognised functions of the external secreting glands. That failure of one or other of these internal secretions may occasionally have to be reckoned with by the physician there can be no doubt, while on the other hand the therapeutist will be able to avail himself of the active principles which the internally secreting organs afford, and in certain cases to use their extracts in place of the hitherto more commonly employed vegetable medicaments.

That the subject has a vast future there can be little hesitation in predicting, for, in spite of the advances which have been made in elucidating it during the last few years, very many points still remain obscure. Nevertheless, the way which the physiologist has attempted to show may now safely be followed by the practitioner, and the results of these physiological experiments as well as clinical and pathological observations in the same direction which are steadily accumulating, cannot fail to throw light upon and to assist in the diagnosis and treatment of many ill-understood symptoms of disease.[a]

[a] Most of the experiments with gland extracts which are referred to in this address have been made in conjunction with Dr. George Oliver, and are published in detail in the current number of the *Journal of Physiology*.

White Races in Tropical Africa.—At the meeting of the Geographical Congress on Wednesday, July 31st, Sir John Kirk read a paper, prepared by Captain Lugard and himself, on the Suitability of Tropical Africa for Development by White Races, or under their Superintendence. He assumed, in common with all who spoke afterwards, that the time has come for Europe to open up the continent of Africa; stated that though we know much about its interior, we lack precise information about its climate; and elaborated the conditions necessary for successful European colonisation. Climate is a most important consideration, and all maritime zones and districts below 5,000 feet elevation must be dismissed as useless. Yet there are districts in tropical Africa in which climate alone will not interfere with European colonisation. In his treatment of such matters as malaria and fever, the speaker said that canoe voyages along rivers are especially dangerous to health, but steamers and railways will give rapid access to the healthy areas. It was made clear that the localities which fulfil the favourable condition of colonisation are few. West Africa is out of the question, with the possible exception of German South West Africa, which lacks harbours, and its development will never precede the better areas of the same latitude in East Africa.

The French Hospital and Dispensary, Shaftesbury Avenue, has received from M. Robert Lebaudy £1,000 as part of the prize won lately by his horse Styrax at Auteuil.

BRITISH MEDICAL ASSOCIATION.

ANNUAL MEETING, LONDON, 1895.

PROCEEDINGS OF SECTIONS.

SECTION OF ANATOMY AND HISTOLOGY.

Henry Morris, F.R.C.S., President.

A DISCUSSION ON ART IN ITS RELATION TO ANATOMY.

Opened by WILLIAM ANDERSON, F.R.C.S.,

Professor of Anatomy in the Royal Academy of Arts, Joint Lecturer on Anatomy at St. Thomas's Hospital.

The object of the paper I have the honour to read to-day is mainly demonstrative and only in a minor degree argumentative. The three considerations I propose to lay before the Section are, first, the Debt that Anatomy owes to Art; secondly, the Advantages that Artists may derive from a Scientific Knowledge of Anatomy; and, lastly, the Extent to which Artistic Methods of Observation may Profit Ourselves in the Medical Study of Anatomy.

I. The consideration of the debt that anatomy owes to art will occupy the greater part of the time at our disposal, for I shall venture to give a brief history of the rise of artistic illustration in its application to anatomical teaching, in order to bring under the notice of those of our body who have had no leisure to devote to the subject a collection of illustrated anatomical treatises from the time of Berengario da Carpi to the present day, and to say a few words concerning the evidences of anatomical observation by artists in the period antecedent to what we should now term "anatomical illustration."

Early Anatomy and Early Art.

Anatomical knowledge of a certain kind is as old as art itself, but the early knowledge was vitiated by imperfect observation and blind reverence for misleading traditions. Anatomical illustration, too, was employed wherever the name of anatomy was held in respect, as in Egypt, in Greece, in India, and even in China; and models, showing more or less inaccurately the relative positions of the heart and lungs and other large organs, were used for purposes of demonstration by orthodoxy and quackery alike. These crude efforts, however, may be passed over, for it is not to mere caricatures of visceral anatomy that we must turn for examples of art, but to something that was pure art without scientific aim, art that showed in the highest degree two of the qualities upon which scientific progress must depend, accurate observation, and exact record of the thing observed.

The history of art and that of anatomy are by no means contemporary. While the art of the sculptor was producing its grandest masterpieces, medicine remained mystical, empirical, and, perhaps worst of all, dogmatic; and anatomy, the basis of all true medical science, was, even for a mind like that of Hippocrates, a collection of imperfectly-noted facts tempered with time-honoured fictions. In the midst of all the medical darkness, it was the artist alone who found light to study the anatomy of man. More than a century before the school of Alexandria had, under Herophilus and Erasistratus, inaugurated the study of human anatomy by dissection, the dissection, it is said, not only of the dead subject but even of living men, Pheidias, the great master of the age of Pericles, and a contemporary of Hippocrates himself, had achieved what appears to us now the very consummation of truth and beauty in the representation of the human figure.

The Greek Sculptor as Anatomist.

Let us look at the noble figures of the Theseus and of the Ilyssus (to take the most familiar of the many names given to the masterpieces of the Parthenon), and we shall see a very triumph of truth, expressed with ineffable nobility by the mind and hand of genius. It is not enough to merely represent Nature as we may chance to find her in any given subject. Nature is full of imperfections, but all that is beautiful is there for him who has the eye to distinguish perfection in the midst of faults, and the skill to record it in such a way as to teach the rest of the world. This is what Pheidias did, what some of his predecessors and contemporaries aimed at, and what Michael Angelo with all his power and all his science failed to do.

Let the most profound anatomist of our day examine these magnificent fragments and try to discover an error in science, or let the greatest artist try to point out a line or a contour that could be altered without loss, if he can. Here is an anatomy, not studied in the dissecting-room, as was that of Michael Angelo, but instinct with life and as free from omission as from error. There is no impressionistic scamping here; every touch is workmanlike and thorough, but it is from the hand of a workman who knew that all dignity and beauty lay in Nature, and who found them. No photograph of the finest living model could give us what we see here, for no model is perfect; but the artist has created grand types by virtue of a wide and discriminating research of Nature—by what may be termed "artistic selection" in opposition to "natural selection." The Discobolus of Myron, which preceded the Theseus and Ilyssus, is almost as accurate in anatomical forms but infinitely inferior in genius, for it is realism without soul. The same may be said of a higher work, the Borghese warrior (Fighting Gladiator) of Agasias (400 B.C.), which is the very idealisation of animal strength in action, and the Farnese Hercules, which shows the huge brawn of the athlete in repose. But a more difficult task has been achieved by the sculptor, probably Cresilas, a contemporary of Pheidias, who has caught the last effort of the fainting or dying man in the figure commonly known as the "Dying Gladiator." In all of these, and in many others that might be named, art was wedded to Nature; but later on two meretricious rivals, convention and drama, were admitted into the atelier, and the decadence of art began. Take the vaunted group of the Laocoön, attributed to the Rhodian sculptors, Agesandros and his two sons, in the first or second century A.D. Grand and beautiful as it is, its perfection is marred by dramatic posing, faults of observation, and artificial laws of composition. Again, the figure of the standing Discobolus, attributed to Naucides—which for our æsthetic sins is made a canon in nearly all our art schools—is full of weak conventions and faults of form, redeemed only by a certain nobility of pose and grace of action that hint at what the artist might have done had he followed the teachings of the great Nature that was at his doors.

The Decadence.

The establishment of the school of Alexandria less than a century after the death of Pheidias, should have done much to advance the knowledge of anatomy, and we know that under Erasistratus and Herophilus the dissection of the dead body was practised openly, but there was marvellously little harvest from such a broad and fertile field, and the culture of original observation in human anatomy rapidly declined, until in the second century of our era, when Galen, strongly imbued as he was with the spirit of research, was compelled to base his anatomical writings on the dissection of the lower animals, and taught nothing that could serve the cause of art. And down to the seventh century, although the Greek surgeons in Asia Minor had done something for surgery, anatomy remained at a standstill. Even the works of Galen were neglected from the end of the fifth century, and we come to that most dismal of all periods—the Middle Ages—when art was at its lowest ebb, when learning, represented chiefly by Jews and Arabs and a bigoted clergy, was opposed alike to scientific investigation and artistic culture. The magnificent toreutic art of Greece and its pale reflex in Rome dwindled away through the Byzantine period to be revived only with the advent of Cimabue and Giotto. In all this long and dreary period there was scarcely a ray of light, artistic or anatomical, and it was not until the thirteenth century that Frederick, the second Emperor of Germany, and King of the Two Sicilies, revived the study of anatomy by dissection. The first outcome of the new departure was the publication in 1316 of the first treatise on human anatomy, that of Mondino, better known by his Latinised name Mundinus.

The Revival of Anatomy.

Dissection was introduced into France at Montpelier in 1376, and it was by a French surgeon, Henri de Mondeville, who lived at the beginning of the fourteenth century, that anatomical diagrams were first used in Europe as a means of instruction. The drawings were probably traditional, and dealt only with anatomy from the Galenic standpoint, for Guy de Chauliac, the pupil of De Mondeville, who records their use, knew only the antique lore handed down by the Arab writers.

It was not, however, till the latter part of the fifteenth century that the initial stage of the anatomical revival was past, and then for the first time in history art and scientific anatomy went hand in hand. From this time we may formulate four periods of art in its relation to anatomy:—

1. The period of early association between artists and anatomists anterior to the publication of illustrated anatomical treatises: from the early part of the fifteenth century.

2. A period of accurate and artistic illustration of anatomy by wood engraving, covering the second quarter of the sixteenth century.

3. A period of artistic illustration by engravings in copper, terminating in the second decade of the present century.

4. The modern period of multiplied technical resources in reproduction, with painstaking efforts to secure clearness of representation.

The Early Association of Artists and Anatomists

The first really important application of art to medicine belongs to a period no earlier than the fifteenth century, and brings us into contact with one of the most versatile figures in history—Lionardo da Vinci, painter, sculptor, architect, scientist, poet, and musician. It was he who, first among artists, judged it profitable to place himself *en rapport* with the representatives of medical science. It is known that he became intimately associated with the physician Marcantonio della Torre, of Ferrara and Padua, and that he made for him numerous drawings to illustrate an anatomical treatise, but the untimely death of Marcantonio in 1505 or 1512 dissolved a connection which under better auspices might have raised the anatomist to the eminence afterwards occupied by Vesalius. As it was, the great work remained unfinished, all that had been written was lost, and with it disappeared the drawings of Lionardo. Nearly all that we now possess of the anatomical work of the painter is a small series of representations of the bones and muscles, but these, if not

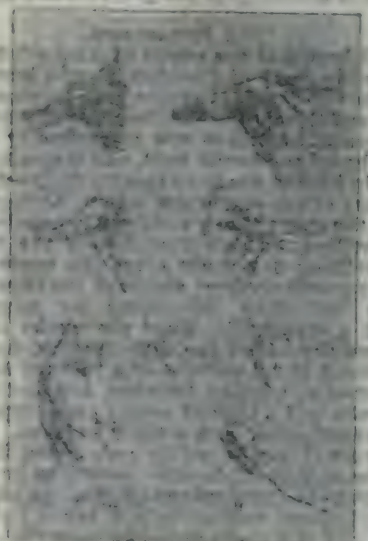


Fig. 1.—From sketches by Lionardo da Vinci.

scrupulously exact, yet stand unrivalled in vigour and expressiveness, and the scientific spirit of the design is manifested by the addition of analytical diagrams framed for the demonstration of muscular action—a subject on which the artist is said to have written a special treatise, another lost treasure. It may be worth while to call attention to a curious outline forming suite with these, a vertical section of two figures in the act of sexual congress. The aim of the sketch was purely physiological, and the chief interest of the drawing lies in the fact that, unlike in the companion pictures, which were undoubtedly taken from actual dissections, the structural features were derived from the Galenic descriptions—a fault compromising to the reputation of Marcantonio, if he is to be held responsible for the scientific errors of his pupil or associate.

The period of Lionardo and of the succeeding generation was a glorious one in the history of art, for while the great Tuscan was yet in the vigour of his age, a reflex of his many-sided genius appeared in Michael Angelo Buonarotti, at once painter, sculptor, architect, engineer, and poet. The younger man had reached the zenith of his fame when his predecessor, full of years and honours, expired in the arms of the monarch whose graceful tribute to genius did more to immortalise his royal memory than the Field of the Cloth of Gold or all the prodigal magnificence of a long unlucky reign.

Michael Angelo, like Lionardo, perceived at once the advantages to be derived from the association of art with anatomy. Realdo Colombo became his Marcantonio; and for twelve years, first in Florence, then in Rome, he devoted himself to the study of the human body. The results are manifest, and perhaps too plainly, in all his works. His statues of David, the Captives, and many others, are wonderful evidence of anatomical knowledge, though often defective in proportion and too suggestive of the dissecting room, but the sculptor and painter gave nothing to medical science. The work of his friend Colombo appeared in 1559, without a single illustration beyond a woodcut frontispiece of a dissecting-room scene, and there is no record of any drawings by Michael Angelo like those which Lionardo is said to have executed for Marcantonio.

The third great star of the Renaissance, Rafaelo Santi, again painter, sculptor, and architect, won triumphs as enduring as those which fell to the lot of his rival and contemporary, but they were of a somewhat different nature. He was, perhaps, less an anatomist than either Lionardo or Michael Angelo, but fewer years were allotted to him for the consummation of his studies, for he passed away before he had ended the fourth decade of his brilliant career. It is nevertheless proved by some of his sketches not only that he comprehended the importance of the science, but that he was no mean proficient in those portions of it which are most essential to the painter.

To this constellation may be added the names of Pollajuolo, Baccio Bandinelli, Rosso de'Rossi, and Benvenuto Cellini. Of the first two we know little, except that they practised dissection, and some repulsively realistic anatomical sketches by Bandinelli have been preserved. Rosso de'Rossi, a late contemporary of Rafael, was the first artist who attempted to prepare a volume upon anatomy for the use of painters, but unfortunately he did not live to carry out his design. The one plate, containing representations of the bones and muscles, given to the world as an earnest of his good intentions, is, however, so rich in strength and fidelity that it has been mistaken for the work of Michael Angelo himself. Benvenuto Cellini attached himself to Guido Guidi (Vidus Vidius), whose book on anatomy was not published till long after his death, and to Berengario da Carpi, but it is uncertain whether he gave any assistance to either author.

So far the art of the fifteenth and the first half of the sixteenth centuries bore little relation to medicine, if we omit from consideration the drawings said to have been made by Lionardo. Whilst great painters left accurate record of all that their dissecting-room experiences had revealed, two of the most celebrated physicians of the age, Magnus Hundt, of Leipzig, and Lorenz Phryesen, of Colmar, found nothing better to illustrate their treatises than the anatomy of Galen. Phryesen, in a pretentious tome entitled *Spiegel der Artzney* (1518) gives us only a wretched caricature of the skeleton, a view of the abdominal and thoracic viscera that was probably a reminiscence of some half-hearted necropsy of a dog, one or two confused sketches of the brain, and a carefully executed picture of the august teacher seated in academical

dignity before a meek disciple, who cringes bareheaded to receive with unfathomable faith and patience the flatulent pedantry enunciated from the magisterial chair.

Illustration of Anatomical Books by Wood Engraving.

The second period, that of artistic illustration of anatomical, medical, and surgical works by wood engravings, began in the third decade of the sixteenth century with the appearance of a commentary upon the anatomical works of Mondino by Berengario da Carpi (1521), which was followed in the next year by a compendium by the latter author, who therein corrected many errors of his predecessor, and added much new material. Both of these books were embellished with woodcuts, a few of which, chiefly myological, were of much artistic beauty and moderate accuracy, while others were of a traditional character, and in accordance with the description of Galen and the Arab school. It is possible that Berengario received some artistic aid from Benvenuto Cellini, then in his early manhood. Nearly twenty years later further contributions of a very similar kind were made by Johann Eichmann or Dryander, a professor at Marburg, who issued an original composition upon the dissection of the body in 1537, with wood engravings not unlike those of Berengario; and in 1541 an edition of Mondino, in which many of the illustrations executed for the previous volume were utilised a second time.

Berengario and Eichmann did good service in the cause of anatomy, and prepared the way for a higher school that was destined to relegate that of Mondino to the Araf of the imperfect sciences. Berengario had half caught the idea of a genuine treatise upon the anatomy of man, based upon direct investigation, but the consummation of such a work was reserved for a far greater mind—that of the Belgian, Andreas Vesal.

Vesalius.

The student of medicine of the present day, who recognises the name of Vesalius only in association with an unimportant little foramen in the base of the skull, is scarcely aware that it is to his precocious genius we owe the entire scheme of human anatomy, as a study involving precision of observation and description. Yet so it is, for to turn from the pages of his predecessors to the *De Humani Corporis Fabrica* of Vesal, is to step from the confusing glimmer of conjecture

Fig. 2.—From Vesalius, *De Humani Corporis Fabrica*.

and tradition into light and order. Much, indeed, is here left incomplete, but all is prepared for completion; and it is to be especially remarked that, from the first, the great teacher availed himself of the assistance of the painter and engraver, and directed their interpretations of the subject at every step. It is possible that he himself learned much in teaching his coadjutors, and it is certain that the value of his own labours was doubled by the aid derived from the skilled pencil which wrote his story in characters that all men could understand; it was, indeed, by means of pictorial broad sheets—a form of publication that appears to have been very prevalent in the sixteenth century, and perhaps earlier—that his work first became known, for six large plates engraved on wood, after the drawings of a pupil of Titian named Johannes Stephen van Calcar, appeared in 1538, in the form of *Fliegende Blätter*, before the author had completed his twenty-fourth year.

The Magnum Opus was published at Basle in 1543. To men of science it was a revelation, as an example of anatomical research upon a scale unprecedented both in magnitude and in minuteness; and to amateurs of art the volume has always been precious on account of the happy union of power and veracity in the designs, and the skill with which they have been transferred to wood by the unknown engraver. The drawings, with a few exceptions, convey the essential features of the subject with the smallest amount of apparent labour, and, unlike many of the illustrations of later works, they never digress from the object they were intended to serve, for although a little artistic fancy appears in the attitudes and attributes of some of the full-length figures, the cuts are in other respects as sober and practical as those which appear in the pages of Gray or Quain. In point of accuracy of detail there was considerable diversity in the various sections of the work. The most satisfactory presentments, as might have been conjectured, were those of the undissected body and of the bones and muscles. The nude forms which display the surface markings and proportions are strikingly noble, and expressive, and leave nothing to be desired in correctness of outline.

Fig. 3.—From Vesalius.

The skeletons and myological figures, inspired with life by the fancy of the artist, were freed from repulsiveness without sacrifice of the essential truths; but the drawings illustrative of the nervous system are amongst the least successful, although the dissector had prepared his material with skill and care.

It is not indeed to be expected that many of the cuts would display the minute indications of detail that are looked for in even the least ambitious manual of our day, but the main features were faithfully described and portrayed, and the work as a whole was a miracle of wide and original research, adorned with the best artistic judgment. It is difficult to say whether it was the illustrations or the text that exercised the stronger influence over the contemporaries and followers of the author, but for a century afterwards the anatomists of Europe did little more than compose variations upon the conjoint triumphs of Vesal and Calcar. An "epitome" with enlarged cuts was published in the same year, and a second edition of the entire work appeared in 1555, nine years before the death of the writer. This revised edition is printed on better paper, and is preferred by collectors to the first.

A complete list of the works in which Vesal's illustrations were imitated, would be too long to offer in this place, but a

few deserve a passing allusion. The first systematic treatise upon anatomy in England was a compendium by Thomas Geminus in 1545, in which the designs of Caicar were translated upon copper plates, losing nearly all their strength and beauty in the process. A smaller and later volume by John Bannister, entitled "The Historie of Man, sucked from the sappe of the most approved Anathomists, and published for the Utilitie of all Godly Chirurgians within this Realme" (1578), borrowed a few woodcuts from the same source. The well-known *Description of the Body of Man*, by Helkiah Crooke, published in 1616, had also sucked a good deal of its "sappe" from the great Vesalian tree of knowledge; and lastly, in France, the works of Ambroise Paré (1550) were illustrated largely by copies from Vesal, but included many other wood engravings of great interest for the student of the early history of surgery.

Carolus Stephanus.

Vesal was not without rivalry in the field of anatomical investigation. In 1545, two years after the appearance of the *De Humani Corporis Fabrica*, a French physician, named Charles Estienne (Carolus Stephanus), published a book descriptive of the dissection of the various parts of the human body, embellished with woodcuts of a curious character. The author, whose work was commenced before the appearance of that of Vesalius, was a practical anatomist, but, although an original worker, he was immeasurably inferior to Vesal, and he employed the assistance of art in a less intelligent manner. In Vesalius the illustration, while of the highest merit, was always secondary to the subject of the text; but in Estienne's cuts the anatomy often appeared to be little more than a vehicle for the fanciful designs of the draughtsman, who is said to have been Rosso de' Rossi. Some of the drawings were, indeed, rather striking as artistic compositions, but they were unskilfully engraved, and included an exuberance of extra-anatomical detail and a misplaced affectation of sculpturesque effect that are often grotesque in their disproportion to the real object of the illustration. In the plate now shown, for example, we see the entire form of a man

Fig. 4.—Carolus Stephanus, *De Dissectione Partium Corporis Humani.*

in the foreground of a pastoral landscape, his calvaria hanging upon a withered branch above his head while his denuded dura mater turned towards the spectator constitutes the square inch of anatomy in the quarto page of engraving; and in another, a nude full length figure of a woman seated in a chamber of severely classical architecture, has no further object than to display the contour of the external genitals. Nevertheless except in the case of the muscles, which were execrably caricatured, the anatomy was for the most part fairly truthful, and it was evident that the author had carefully supervised the work of the engraver, for in many plates it may be seen that a portion of the block, probably where the first interpretation was unsatisfactory, has been cut out and replaced by a new and presumably better rendering.[1]

Eustachius.

A far more serious competitor, however, of Vesal was the Italian physician Bartolomeo Eustachi, whose published work on the anatomy of the kidneys was an admirably thorough piece of original investigation. He, also, had many plates engraved to illustrate his anatomical writings, but only eight of these appeared during his life, in association with his *Opuscula Anatomica* in 1564. Thirty-nine other engravings, executed under his directions not later than 1552, remained unutilised until a hundred and forty years after his death, when they were at length published by Lancisi in 1714, together with the original descriptions, under the title of *Tabulæ Anatomicæ Bart. Eustachii*. Despite their prolonged repose in the Sleepy Hollow of the lumber rooms of Eustachi's unappreciative heirs, the pictures were so little behind the age when they were introduced to the world that edition after edition was called for, the demand ceasing only at the beginning of the present century. The representations

Fig. 5.—Eustachius, *Tabulæ Anatomicæ Bart. Eustachii.*

were indeed in some respects even richer and more trustworthy in detail than those of Vesal; and although both drawing and engraving were feeble and unattractive, the scientific value of the plates was more than sufficient to compensate for their æsthetic defects.

Illustrations of Anatomical Books by Copperplates.

The third period, extending from the middle of the sixteenth to the early part of the nineteenth century, may be termed that of artistic engraving on copper. It is, of course, well known that chalcography had been practised long anterior to this time—at least as early as 1461—and was employed with admirable effect by Mantegna before the end of the fifteenth century; but the few examples of the process that had appeared in medical books before the seventeenth century were of small artistic importance when compared with the contemporary work of the wood engraver.

Amongst the first of the new series stands the *Historia de la Composicion del Cuerpo Humano* (1556,) by Joan Valverde de Hamusco, a Spaniard, who had studied anatomy under Colombo and Eustachi. The illustrations to this work, attributed to a Spanish painter named Becerra, are mostly adaptations of the pictures of Vesalius, and are skilfully engraved on copper. One, however, is entirely new, and represents the figure of a man who, having just succeeded

[1] It has been supposed that as the anatomical details in a few of these plates were confined to those portions of the block which had obviously been let in after the completion of the rest of the engraving, the woodcuts had originally been executed for a different purpose, and were merely adapted by Estienne. A careful examination of the series will, however, disprove this view.

in divesting himself of his skin, stands in an attitude of disgusted self-appreciation, grasping the bloody knife in one hand whilst with the other he holds up to view his detached integuments from the midst of which the flaccid cortex of his face gazes in feeble deprecation at the spectator. This offers a curious instance of the tendency manifested by the old anatomical artists to make the most of the subject from their own point of view.

The use of the wood engraving in the embellishment of anatomical works did not end during this latter half of the sixteenth century or afterwards, but it ceased to hold an important place in the illustration of the more ambitious works of our professional ancestors. Many writings, however, of great value, such as the contribution of Constantio Varoli to the anatomy of the brain (*De Nervis Opticis*, etc., 1573), the *Historia pleraeumque partium Humani Corporis* (1585) of Salomon Alberti, and the artistic treatise *Varia Commensuracion para la Escultura y Arquitectura* (1585) of Juan de Arphe were illustrated by woodcuts; but the power that stamped the cuts in Vesal had vanished.

In the seventeenth century copperplate engravings, which had been applied to anatomical illustrations in the previous century by Eustachi, held undisputed sway. The anatomical works of Giulio Casserio (1627), and those of his successor in the chair of Padua, Adrian van der Spieghel (Spigelius), were abundantly and artistically illustrated by

Fig. 6.—Casserius, *Tabulæ Anatomicæ*.

this process, after the designs of Fialetti, a pupil of Cremonini and Robusti. Another precious set of drawings were made a little later by the famous painter Pietro Berrettini or Pietro da Cortona, for the anatomist Johannes Maria Castellanus, and skilfully transferred to copper; but these plates, like those of Eustachi, were allowed to remain buried, and it was not until a century later—in 1741—that they were discovered and published; a lapse that was the more to be regretted on account of the spirit and accuracy of the representations. In the sketches of Fialetti and Berrettini, as in most instances where painters have interested themselves to work for the anatomist, the grimness of the motive disappears under the artistic glamour of vitality, or even of humour.

"Dissected" Plates.

A noteworthy feature of the same period was the invention of dissected plates of anatomy, in which the various structures of the body were displayed as far as possible in their natural interrelations by means of overlapping segments of paper, each bearing the outlines of a portion of the surface, or of an organ or set of organs, and so attached that it might be reflected in the natural order of superposition of the parts represented. The idea has been attributed to Johann Remmelin, of Ulm, whose tables first appeared, without his permission, in 1613, under the title of "Catoptrum Microcosmicum." The plan, which was undoubtedly older than Remmelin, was not without merits, and has been utilised, with various modifications, by many authors of later times, but the pictures have generally been lacking in originality and artistic interest. Those of Remmelin offered nothing remarkable in this respect, but his book is of value to the curious on account of the ingenious way in which the draughtsman by masking the female genitals with the warning face of a demon, and preparing the way for the exposure of the womb by a veil of smoke and flame, from the ashes of an expiring phœnix, has imparted a metaphorical flavour to the scientific details of his designs.

The great landmark of progress in the yet somewhat sterile region of medical science, the immortal *Exercitatio Anatomica de Motu Cordis et Sanguinis* of Harvey, was printed in 1628, but the work owed nothing to the quality of the copper-plates which illustrated it, nor did English art appear to advantage in any of the anatomical publications of the seventeenth century. The plates in Samuel Collins's *System of Anatomy* (1685), executed by Faithorne, displayed less excellence than might have been expected from so able an engraver, and those of a nearly contemporary treatise upon the muscular system by John Browne, a surgeon to St. Thomas's Hospital, have still smaller claims to our admiration. The pictures in the latter case were interesting from the fact that the names of the muscles were engraved upon the parts (a practice which was revived in modern English textbooks by Mr. Luther Holden), but the dissected figures, drawn with pretentious badness, are placed in the most curiously affected and self-conscious attitudes, as though proud of the parade of their anatomical details; and even the claim of originality is wanting, since many are obviously imitated from the earlier and better designs of Casserius. The work, however, ran through four editions, so that it must be supposed to have possessed qualities of more importance than those of mere attractiveness.

Bidloo and Cowper.

The palm of artistic excellence in the medical books of the seventeenth century belongs to Holland. The *Anatomia Humani Corporis* of Bidloo (1685), professor of anatomy at the Hague and Leyden, and at one time physician to William III of England, did not add largely to science, but the author took the judicious step of securing the services of an eminent painter, Gerard de Lairesse, and an en-

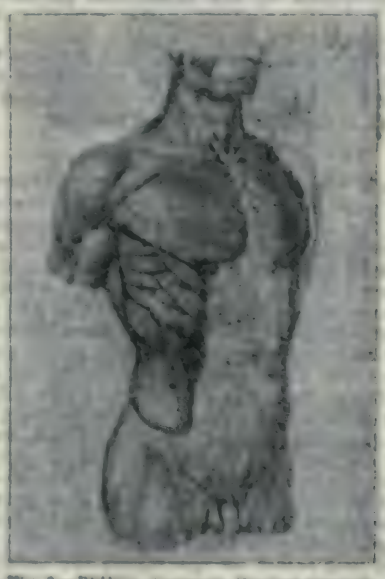


Fig. 7.—Bidloo, *Anatomia Humani Corporis*.

graver (A. Blooteling?) of almost equal talent, and to the present day his book has remained greatly prized, if little read. Many of the plates, although of astonishing vigour are too naturalistic both for art and for science, but in two of the osteological designs which are especially remarkable as works of

art, the temptation to pictorial allegory was too strong for the artistic mind to resist: in one of these, a figure standing within the entrance of a sepulchre, magnificent even in its fleshlessness, holds up an hourglass as though to warn us that our state was separated from his only by the moments of passage of a few falling grains of sand; and in the other, the animated skeleton is seen retiring into the grave, not without a certain grace and dignity, to escape from a world where the stern simplicity of the unclothed bones could find neither sympathy nor repose. These plates were annexed in 1697 by an English surgeon, William Cowper, to illustrate a work of his own. Cowper had previously published in another

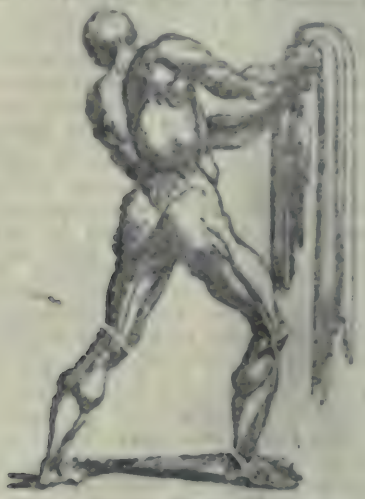


Fig. 8.—Cowper, *Myotomia Reformata*.

volume, entitled *Myotomia Reformata* (1694, reprinted in folio in 1724), a volume containing many curious and well-executed engravings of the muscles and a number of quaint initials and headpieces.

Before leaving the seventeenth century it may be noticed that the two great painters of that period, Rembrandt and Rubens, have left their mark in connection with medical science: Rembrandt in his celebrated picture of the physician Van Tulp demonstrating the muscles of the arm in the anatomical theatre of Amsterdam (painted 1632), as well as in two other works less known, and Rubens by some bold and characteristic sketches of the superficial forms of anatomy, one of which has been rather ill-produced on copper in the *Myotomia Reformata* of William Cowper.

Cheselden and Albinus.

In the next century (the eighteenth) anatomy was dignified by the publication of some splendid anatomical folios, printed in the most sumptuous style and embellished with costly plates and exquisitely-engraved vignettes and *culs de lampe*. How a sufficiency of purchasers could be found for such princely volumes it is hard to say, for the medical profession was not rich, and even the burin of Van der Gucht, of Vander Laar, and of Strange, and the harmonious colour printing of Ladmiral and the Gautiers could scarcely attract the outside world when employed to depict the details of the dissecting table, yet it is certain that the subscription list was a very substantial one. Practically there was but one method of reproduction during the period comprising the eighteenth and the first twenty years of the present century, and that an expensive one—etching on copper—for the wood block had fallen from its high estate, and gave us no more pictures like those engraved for Guidi and Vesal.

The list of notable volumes is too large even for enumeration, but we may select as specimens for beauty of illustration the *Osteographia, or Anatomy of the Bones*, by William Cheselden (1733); the *Tabulæ Sceleti et Musculorum Corporis Humani* of Bernhard Siegfried Albinus, of Leyden (1747); and the *Anatomia Uteri Humani Gravidi*, by William Hunter (1774). Cheselden's work includes, besides the representation of typical human osteology, some characteristic examples of bone diseases, and a number of beautifully etched representations of skeletons of the lower animals. The author, a man of artistic judgment, spared neither

Fig. 9.

Fig. 10.—Cheselden, *Osteographia*.

trouble nor expense to secure the most artistic reproduction of his preparations, but he was above all a man of science, and as he did not care to risk any sacrifice of truth by trusting to the unaided eye of the draughtsman, he had each specimen drawn under the camera obscura. The result, as may be seen, lost nothing in vigour, and the *Osteographia* is a volume we are proud to number amongst the medical literature of our country. The way had been prepared for this large work by the modest octavo entitled *The Anatomy of the Human Body*, first published in 1713, and which, like its successor, included morbid as well as normal anatomy. It was necessarily a mere outline, but it contained much that was of interest, and the plates, engraved by Gerard Van der Gucht from drawings made with the assistance of the camera, were novel and attractive.

The Atlas of Albinus was a far more scientific and important work than that of Cheselden. Myology had been well and broadly treated in the illustrations to many older volumes, but the minutiæ of form, origin, and insertion of each individual muscle were here represented for the first time, and the task was accomplished with so much thoroughness that little has remained for us to add. The drawings of the various figures display great skill and accuracy, and although the engraver has injured the effectiveness of the design by a mechanical hardness of style, and an inability to reproduce the textural character of the structures, he was able to preserve so well the essential truths that the noble atlas fully merits the rank it held during three generations as a standard of reference both for artist and surgeon, and the flattery of imitation that led to the incessant repetition of the plates upon almost every scale up to that of Nature. It was not until near the middle of the present century that its place was taken by other works more suit-

able to the requirements and pocket of the student. The illustrated volume issued by the same author devoted to the bones—*Tabulæ Ossium Humanorum* (1734)—is especially to be

Fig. 11.—Albinus, *Tabulæ Sceleti et Musculorum Corporis Humani.*

remembered as containing the first attempt to show the exact area of the muscular attachments upon the bones, and the only attempt to indicate in a similar way the ligamentous attachments.

William Hunter's treatise on the Gravid Uterus may rank with Cheselden's *Osteographia* as an ornament to the library, for the best art available at the time had been lavished over a subject that would appear little susceptible to æsthetic treatment. The foremost engravers of the day were employed upon the plates, and one of the number, the famous Sir Robert Strange, is said, in John Hunter's preface to the treatise, to have given "his advice and assistance in every part of the work with a steady and disinterested friendship."

Other examples of anatomical plates embraced within the same period were those illustrating the *Observationes Anatomicæ* of Santorini (1724); the beautiful etchings of the *Anatomy of the Horse* by Stubbs (1776), one of the most

Fig. 12.—Stubbs, *Anatomy of the Horse.*

painstaking examples of anatomical art in existence; the *Icones Anatomicæ* by Haller (1756); the *Demonstrationum Anatomico-pathologicarum* by Peter Camper, of Leyden, who was an accomplished artist as well as an anatomist and physician; of J. J. Sue's *Elements d'Anatomie à l'Usage des Peintres, des Sculpteurs, et des Amateurs*; Salvage's *Anatomy of the Gladiator* (1812); Van Soemerring's *Tabulæ Sceleti Feminini* (1797); Caldani's *Icones Anatomicæ* (1801-13); Mascagni's colossal volume of *Universal Anatomy* (1823-32), as well as the useful but not very pleasing pictures in his *History of the Lymphatics* (1787); the bold but coarse and not very exact engravings of the *Bones, Muscles, and Joints* by John Bell (1710); and the less inelegant but still unsatisfactory etchings of Sir Charles Bell published between 1816 and 1833. In conclusion, we may refer to the hideous anatomical plates of Lizars as a work suitable to mortify the flesh, after vain-glorious rejoicing in the splendour of the embellishments bequeathed to us by Bidloo, Cheselden, and William Hunter.

The application to medical and anatomical purposes printing in colours from engraved copperplates was originated by Le Blon as early as 1721, and further developed by Jan Ladmiral about 1736, and by J. F. Gautier d'Agoti and his son between 1745 and 1773. The process is well exemplified in Ladmiral's plates of the male genitals, and in Gautier's illustrations to Duverney's *Description of the Muscles* (1745).

Modern Period of Anatomical Illustrations.

The fourth and latest period may be dated from the close of the second decade of the present century. Art has become more and more indispensable to us as an aid both to record and to explication. The diagram, the more highly-finished drawing or engraving, the photograph, and the model serve as a new language that speaks with strength and clearness where written or spoken words would convey their meaning slowly and imperfectly. The new period has been characterised by an immense quantitative augmentation of illustrations, by the increasing preference shown for diagrammatic clearness over artistic effect in the rendering of anatomical detail, and by the multiplication of methods of pictorial reproduction. We have no Lionardo da Vinci, Calcar, Fialetti, or Berrettini, but the modern draughtsman makes up in comprehension of the needs of science, all he lacks in artistic genius. We can boast no engravings as effective as those of the epitome of Vesal, and even of the plates of Bidloo and Cheselden, or as rigidly accurate as those of Albinus, but we are able to employ new processes that reproduce the drawing or the original object without interpretation, and others that give us useful effects of colour at small expense. Our art is less picturesque but more serviceable and more easy of access.

Engraving on copper, which occupied so important a place during the last period, yielded to cheaper and more readily adaptable processes, but a few specimens of chalcography appeared even as late as the middle of the century. The steel plates, as modified by Warren in 1818, served for works in which delicacy of line was more particularly sought, but the result was not satisfactory. Wood engraving, which had fallen into decay, was revived by the teaching of Thomas Bewick, and placed once more in the forefront amongst the resources of the book illustrator. The colour-printing of Le Blon, Ladmiral, and the Gautiers was replaced by chromo-lithography, and afterwards by chromo-xylography. Lithography, invented about 1796, was destined to hold an important place in medical illustration. Photography and photographic processes of engraving were found of value where an exact transcript from Nature or from a drawing was especially desirable. Finally, drawing and painting served as before for illustration when immediate multiplication of the design was unnecessary or impracticable, and hand-colouring was employed to lend character to pictures engraved by the ordinary processes.

Lithography in Anatomical Art.

The first important medical essay in lithography appears to have been the engraved plates of the *Arteries*, published by Tiedemann, in 1822, but the result here was by no means striking. It was not long afterwards, however, in 1831, that Jacob, the father of the modern French school of anatomical drawing, threw a new light upon the possibilities of engraving on stone in the great anatomical work of Bourgery.

The less vigorous but more accurate plates executed by Leveillé, Jacob's favourite pupil for Fau's *Anatomie des formes extérieures du Corps Humain* (1845) and the nearly contemporary drawings of the bones, ligaments, and muscles for

Fig. 19.—Bourgery, *Anatomie Descriptive.*

Bonamy, by Emile Beau (1844), fully maintained the reputation of the new manner; but the highest point of excellence was reached by Leveillé's designs for Hirschfeldt's *Anatomie du Système Nerveux* (1853), which has placed France beyond rivalry in anatomical illustration. The best treatise on Artistic Anatomy, that of Dr. Paul Richer, is illustrated partly by lithographic plates, all from drawings by the gifted author, and in this country several good examples of the same method of reproduction have seen the light, some by professed draughtsmen like Ford and Cuthbert, and others by such distinguished members of our own profession as Maclise, Holden, and Godlee.

Engraving on steel, as applied to anatomical pictures, has been less successful, even where the drawings have been supplied by highly competent hands. The best specimens are perhaps to be found in the works of Bernard, in which the hand colouring is particularly delicate.

Modern Woodcut Illustrations.

Despite the great development of wood engraving during and since the time of Bewick, there is little that we can show with gratification in anatomical illustration. The work of the artist is usually translated in a more or less ignorant style by the engraver before it is presented to the public; but some exceptions should be pointed out. The cuts by William Bagge, after the drawings by his brother, which appear in Wilson's *Anatomist's Vade Mecum* (1840), are full of veracious expression and artistic feeling but here the engraver knew his subject. The drawings by H. V. Carter in Gray's *Anatomy*, engraved by Nichols, are admirable examples of clear diagrammatic work, and some of the cuts by Salle in Sappey's *Anatomy* may be noticed on account of their minuteness of detail, but in other respects are distinctly inferior to the works of Bagge. In Germany the atlas of Charles Bell (*Bildtafeln Anatomischen Atlas*, 1872) the illustrations in the *Plastische Anatomie* of Kollmann (1885), and those in the valuable work of the late Professor Braune, *Schenkeil und Fehler der menschlichen Gestalt*, may also be noted as good examples of artistic xylography. As a rule, however, the woodcuts illustrating anatomical books do not deserve a large amount of credit for artistic beauty or scrupulous accuracy. A few rise above the level of average excellence, more fall below it and it is not pleasant to confess that the lowest depths of badness seemed to have been plumbed in two or three works of the present generation published in our own country. Many good cuts—perhaps almost the last of their kind, for the wood block is doomed—appear in the latest edition of *Quain's Anatomy*, and in the large and promising anatomical baby, the *System of Anatomy*, just edited by Mr. Henry Morris.

Chromo xylography, a process of respectable antiquity—for it appeared on the frontispiece of one of the first anatomical books issued from the press—has been applied to medical illustration only within the last few years, chiefly for the purpose of accentuating the course of vessels in anatomical textbooks; but a higher promise is indicated by the pleasing and expressive cuts in Merkel's *Topographische Anatomie*, and the still more recent works of Testut, Poirier, and others.

Photographic illustrations from dissections have been employed in a few anatomical works, with results that are distinctly unpleasant to the eye, and not very profitable to the mind, but it is certain that before long the numerous modifications of photographic reproduction of drawings are likely to displace the wood block altogether, on account both of their cheapness and their unerring though unselective exactness.

Glyptic Art in Anatomy.

Glyptic art as applied to artistic anatomy probably dates from the time when Michael Angelo modelled the muscular forms of figures which he proposed to execute in marble. Becerra, the painter who illustrated Valverde's book on anatomy, is said to have made the first anatomical figure in plaster for the use of artists. Fischer, a Professor of Anatomy to the Academy of Sculpture in Vienna near the end of the last century, was the author of a striking model constructed for the same purpose; and several other more recent examples which may be seen in most of our schools of art have been provided as a guide for students of drawing. Lauth, in the present century, was the designer of a well known figure, to which he published an atlas of plates, and casts have been taken from actual dissections—one, to be seen in the Royal Academy schools, of a corpse in the position of crucifixion, but, as might be expected, the effect is repulsive, and unredeemed by useful qualities of any kind. The best and most accurate examples are, perhaps, those of the small figure known as "Ajax Defying the Gods," and the equine model of Auguste Fonbeur.

Sculpture as adapted to the illustration of medical anatomy is of greater antiquity. The figure found in Rome in the villa of Antonius Musa, the physician to the Emperor Augustus, is perhaps the earliest example in existence, but wood carvings of a similar nature have long been employed both in China and Japan. The more serious specimens, however, are of recent date. One of these, still in use, is a complicated life-size model in papier maché, made in Paris, which can be taken to pieces in such a manner as to demonstrate more or less correctly the form and relations of nearly every part of the body, but the idea has been brought into service in a far more scientific manner by Professor His, who by taking casts of organs that have been hardened *in situ* has given us a means of studying the topography of the viscera that is far superior to anything before at our disposal.

Models in wax, *à la* Tussaud, have been in use for many years, and much artistic talent has been employed in conferring upon them a realistic character, which has sometimes been greatly abused in the interest of the proprietors of quack "museums." For purposes of anatomical teaching they have fallen into disuse, although they still supply a want in pathological reproduction.

Finally, a word must be said for the votive offerings of models of affected parts of the body made to the gods in the days of ancient Rome, to accompany a prayer to the gods for aid in sickness or thanks for a recovery accomplished. An interesting account of these from the pen of Dr. Sambon has recently appeared in the British Medical Journal.

Summary.

The service that Art has rendered to anatomy is sufficiently apparent even in the collection that, chiefly through the kindness of my friend and colleague, Dr. Payne, we are able to bring forward to-day. We all know how indispensable the book illustration has become to fix and clarify our knowledge, and how grateful we are to see it like an oasis in the midst of the desert of text. It is true that pictorial anatomy, like every other good thing may be misused. It is a poor substitute

for reference to the original structures, although for many parts of the body it is a necessary one for the ordinary student, but it is always a very efficient preface and an invaluable sequence for such reference, for it shows us better than any written description what to look for, and it recalls to us what we have seen.

The service that a love of art may confer upon us personally and individually is a matter of a different kind. The study of art is a mental culture of no mean order; it affords a training for the eye that is invaluable to the surgeon, and there is no hobby that can reflect more rays of brightness athwart the dull shadow of the daily routine of our professional life. Happily there are few of us who do not cherish hobbies of some kind, for there are few of those who have them who are not wiser and better for them. Our ranks, moreover, have furnished many distinguished patrons of art, collectors who are known throughout Europe, and not a few amateurs who have displayed a power of artistic achievement that would have made them great artists had not their destiny called them to be eminent physicians and surgeons instead.

Of the use of even a moderate degree of skill in draughtmanship to the teacher of anatomy little need be said, for it is obvious that he who can flash an idea clearly and pleasantly by a stroke upon the black board will, other things being equal, best hold the attention of his audience and send them away with the best mental picture of the subject of his discourse.

Use of Anatomical Study to the Artist.

As to the use of anatomical study to the artist opinions are greatly divided. Ruskin, who has done what man may do to elevate art criticism to a science and to embellish it with golden phrases, avers that science is worse than useless to the painter or sculptor, and there is much to be said for this view. As I have endeavoured to show, the greatest and most realistic masterpieces of Greek sculpture were created before the idea of dissection, as we understand the word, was tolerated, and one of the noblest works of Michael Angelo, the "Moses," was that in which his anatomical research was least apparent. Realistic works of a remarkable kind were also done by Egyptian and Japanese wood carvers under conditions which made the practical study of anatomy well-nigh impossible. But, on the other hand, all the greatest artists of the European Renaissance were close students of anatomy, and some of the greatest living artists are as learned as they were. It is not the knowledge but the misuse of the knowledge that is dangerous, and there is no doubt that the pride of Michael Angelo in his anatomical attainments led him to neglect that close study of the living model which had given perfection to the work of Pheidias; hence it is that the critic who is dumb before the old Greek may feel compelled to temper his admiration of the Florentine with a regret that so great a mind should have stopped short of the highest goal. That Pheidias attained consummation in art without scientific education proves only that there is no law for the highest genius; the writings of Shakespeare do not tower above rivalry because he knew "small Latin and less Greek," but because, with Pheidias and, perhaps, a dozen other men in the world's history, he rose far above all theories of education. Setting apart such men as these, the greatest artist in art or litérature will always express best what he best understands. The wise man is he who knows not merely a fact, but the meaning of the fact, and Science will not fail to stimulate and guide observation when it is not weakened by admixture with an overweening pride in itself.

It may be said that scientific truth in works of art appeals to few. To please the average "man in the street" the artist must tell a story, and must show certain dramatic or sentimental effects and certain tricks of composition; and if he does this his anatomy, his botany, and his geology may caricature Nature, and the picture find admirers and purchasers. The great artist, however, does not labour for the ignorant many but for the few who know; and the greatest work will always bear the most learned criticism, and enjoy the greatest share of immortality.

Observations on Surface Forms in Anatomy.

Lastly, and here for us is the most practical part of this discourse, to which you have done me the honour to listen so patiently, let us consider whether we may not take a hint for ourselves from the artist anatomist. As a technical point, it may be observed that artists have from very early times perceived and represented phenomena in muscular action that anatomists have practically ignored. In fact, the well-trained artist knows far more of the surface forms of the living figure than we, despite the months we have expended in poring over anatomical treatises and in dissecting the dead subject in our schools. Those of us whose function it is to examine the student at the end of his four or five years' work in the dissecting room and the wards, see with sorrow how little the average pass man is able to recognise the meaning of the surface phenomena of the human body, and the sorrow should be the greater because it is the fault of the system which is created and administered by our noble selves. We devote the best hours of our pupils' early years of study to what we call anatomy. He is taught to reflect the skin, to clean the muscles, to define the vessels and nerves, and when all is done, if he has worked well, he may for a brief space be able to recognise any of these structures when they are exposed before him upon a dissection like that which he has made for himself or has seen in the dissecting room, and he will give—from his textbook usually—the main facts relating to them with fair accuracy; but if he ends here he is for ever ignorant of the knowledge that the surgeon and physician should possess, for he knows only the fully dissected anatomy of the corpse and little or nothing of the living normal anatomy of the people whose diseases it is his function in life to treat. His education has stopped short of the point when it would have become interesting and profitable. I venture to express strongly the opinion that every course of anatomy should include a careful demonstration upon the living model of the relation of every important structure to the surface, and an explanation of every eminence and depression, every ridge and sulcus that mould the elastic skin in repose and in action; that every wrinkle in the skin itself shall be noted and its meaning understood; and finally, that the relation of all these points of observation to physiology and pathology, to medicine and to surgery should be carefully elucidated. Then the student will know what he ought to know, and what he will be able to remember and apply in the practice of his profession.

To effect this reform it is necessary that the examining bodies should do at the anatomical and physiological examinations what is to some extent done in the final examination for the Membership of the College of Surgeons (but not for the Fellowship, where it is even more important)—to institute a special table upon which is a living model, and test every candidate's knowledge of surface markings thoroughly. Then, and then only, would the right anatomy be systematically taught in our schools. It may be objected that the time at the disposal of the student will not permit such an addition to his course; but, if something must be sacrificed, let it be a portion of the time spent in dissection. The ordinary student dissents too much and observes too little, and it would be far better for him to learn his anatomy, as he may profitably do, from parts that have been carefully prepared by a skilled prosector—a junior demonstrator, let us say—rather than from the sad havoc that too often represents his own dissection. He will learn far more in much less time. The candidate for university honours or for the Fellowship of the College of Surgeons may dissect as much as possible, but for the great bulk of our students, those who are to enter general practice, too much time is spent upon the so-called "practical anatomy" and too little upon the anatomy that is really practical.

This prayer for the study of living anatomy is not the first that has been offered up. At the last International Congress in London, Professor Keen, of Philadelphia, a distinguished surgeon and anatomist, on artistic anatomy, spoke eloquently and forcibly in the same direction, and I recollect that he was warmly supported by Mr. Luther Holden, who is an artist as well as an anatomist; and if my advocacy to-day aids theirs in bringing our teaching a little nearer to the goal of rational anatomy I shall be content.

Mr. T. E. Ellis (Gloucester) said he was not an artist, but

he knew something about the anatomy of the human foot. He thought that the great toe should not be shown flexed in the works of artists. The foot was not a grasping organ, but must be regarded, in his opinion, as a pressing organ intended to press upon the earth.

Mr. L. M. GRIFFITH (Bristol) said that the illustrations of the treatise of anatomy by Bidloo had been adapted by Cowper.

Professor A. THOMSON (University of Oxford) advocated the remodelling of the teaching of anatomy, and said the majority of students knew very little surface anatomy. At Oxford every student was examined in anatomy upon the living model. He thought this method of teaching was of the greatest value.

Dr. J. F. PAYNE showed an anatomical woodcut of the time of Elizabeth or Mary, which was one of the earliest English woodcuts of dissected figures.

Professor KEEN (New York) referred to the illustrations of Muybridge and Eddison. He said that the living model, the skeleton, and the dissected body should be used at every lecture on anatomy, even when the lecture dealt with osteology alone.

Professor THANE said he did not agree with the proposal that the period of time which students of anatomy devoted to this subject should be reduced. At University College students who were preparing for their final examination went through a course of anatomy on the living model. He thought that often accuracy of anatomical detail was a disadvantage for the artist, but it was most important to students of medicine. Vesalius in his anatomical figures had a small bone in the hand and foot which had not been found by any other anatomist.

Mr. THOMAS COOKE agreed with most of Professor Anderson's remarks, and thought that the present methods of dissection might be very much improved.

Dr. MUNRO SMITH began by quoting the following passage from Ruskin: "The ideas and pleasures of imitation are the most contemptible which can be received from art; they are akin to the surprise which is felt in jugglery." He went on to say that anatomical knowledge in an artist often led him astray from the idea he wished to express (fortitude, strength, patience, etc.), because his mind was bent on minute anatomical detail. The history of sculpture showed clearly that the best sculptor's art preceded any accurate anatomical knowledge. Nothing had ever rivalled the beauty of the works of Pheidias, for example, and his results were obtained (as were those of all the Greek sculptors) by combining the different beauties of different models, and by idealising. It might easily be shown that the masterpieces of sculpture were inaccurate, and that these inaccuracies were intentional, and served the purpose of revealing some idea or some beauty. In the group called the Laocoön, for example, Leesing had pointed out how unnatural the arrangement of the figures and the expressions were; how anatomy had been made subservient to the artists' idea and to their sense of beauty. It was supposed that this marvellous group was the work of three men, who were in all probability perfectly ignorant of anatomy. That famous statue the Apollo Belvedere was not correct anatomically, but the length of leg, absence of surface markings, etc., served a purpose and add to the artistic whole. One of the most striking and beautiful works of art, the "Lion of Lucerne," cut from the solid rock by Thorwaldsen to commemorate the bravery of the Swiss mercenaries who died for Louis XVI, may be mentioned. The anatomy of this figure was not accurate; it had a cow's tail, an unnatural mane, and its expression was impossible. Yet few sights were so impressive and so eminently artistic. Modern realistic sculpture, anatomically correct, was a poor thing in comparison with this. Let anatomy and art remain separate, and each would be the better for it. The attempt to bring science into art and make the two work together had given birth to the so-called realistic school, which must be earnestly condemned by all who look upon art as a most important factor in human culture and as an expression of the beautiful.

Mr. J. BLACK said much sacrifice of detail was not necessary, and advocated the use of the living model in lectures, and a study by the student of his own surface anatomy.

Professor ANDERSON thanked the various speakers for their remarks. He agreed that the plates of Bidloo's work had been annexed by Cowper. He had a good opinion of the plates of Muybridge, and thought that a study of such plates were valuable. He emphasised his opinion of the value of the practical study of anatomy, but suggested that dissections should be prepared by prosectors, and that these should be studied by students. Too much time was wasted by the ordinary student in making bad dissections.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING.

THE SECTIONS.

BRIEF SUMMARY OF PROCEEDINGS.

Friday, August 2nd, 1895.

SECTION OF MEDICINE.

AN extremely interesting and well-sustained discussion on the Causes of Acute Rheumatism and its Relation to other Affections was opened by Dr. Cheadle. In a lucid and comprehensive paper, dealing with the subject mainly from a clinical point of view, he dwelt first on the protean manifestations of the disease and its relationship with other morbid conditions, believing that these must first be grouped to throw any real light on the natural history of the disease. Rheumatism must no longer be considered a mere joint affection; arthritis was only one of its many manifestations. The other manifestations were best seen in children in whom curiously the joint affection was often trivial and even absent, but in whom endocarditis, pericarditis, chorea, etc., assumed great importance. It was pointed out that endocarditis and pericarditis were almost invariably rheumatic in origin, exception being made of such causes as pyæmia, chorea, the erythemata, purpura hæmorrhagica; many cases of tonsillitis were also classed as rheumatic. Subcutaneous tendinous nodules were exclusively due to rheumatism. The other affections named might be excited by other causes, but in the majority of cases were rheumatic, and occurred only in those with the rheumatic diathesis. As age increased it was curious how the rheumatic manifestations changed; after puberty the subcutaneous nodules were no longer seen, the tendency to heart affections was less, chorea was rarely seen, and the erythemata declined. The joint affections alone increased in frequency and severity. It was in the virgin soil of childhood it was seen what rheumatism might be. Passing on to the etiology of acute rheumatism the importance of chill was insisted on, especially if combined with physical fatigue. Hereditary tendency, especially if on both sides, was, however, the most important factor. The ultimate cause could not at present be determined. Personally the speaker inclined to the view of a toxæmia, the poison possibly being produced by a micro-organism living in the body. This possible origin was supported by analogy, by its occasional epidemic prevalence, and by the specific action of salicylates. On the other hand, no good evidence of direct personal transmission had been adduced and no organism had been discovered, but these were not fatal objections. The discussion was continued by Sir Dyce Duckworth, who agreed almost entirely with Dr. Cheadle. He expressed the opinion that there were many kinds of rheumatism; it was not at all a simple joint affection, and he laid great stress on the importance or even necessity of a predisposing diathetic condition which was undoubtedly inherited. Dr. Archibald Garrod, who followed, attempting to explain the pathology of chorea on the assumption of a microbic origin of rheumatism, drew a suggestive analogy between it and the nervous sequelæ of diphtheria. He suggested that chorea might depend on a toxin produced by the hypothetical rheumatic micro-organism. Dr. Mantle (Halifax) gave instances of the epidemic prevalence of rheumatism, but disputed the rheumatic nature of erythema nodosum. In this latter view he was later supported by Dr. Lees. The discussion was ably carried on by Dr. Haig, who ex-

pounded his well known uric acid hypothesis; Dr. Stephen Mackenzie, who severely criticised this theory; Dr. Handford, Dr. Longhurst, and others. Dr. Cheadle briefly replied. Some interesting papers, dealing chiefly with cardiac affections, were then read. Especial mention must be made of Dr. Caton's paper on the Arrest of Endocarditis in Acute Rheumatism, in which he strongly recommended the application of blisters to the præcordial area from the commencement of the affection. He supported his conclusions as to the beneficial effect of this treatment by numerous experiments and statistics extending over fourteen years. Another interesting paper was read by Dr. Parsons, on Peripheral Neuritis following the application of a Cancer "Cure," undoubtedly arsenic. The arsenic had been applied by a quack, and a severe form of the disease followed. A similar case was quoted by Dr. Ernest Reynolds. The proceedings terminated by an enthusiastic vote of thanks to the President for the able and patient manner in which he had conducted the proceedings. In Dr. Pavy's reply he stated that the thanks were really due to the Secretaries, on whom the burden of the day had fallen.

Section of Surgery.

Progress was the watchword of the third day's proceedings in the Section of Surgery. A large and representative meeting listened with interest, and often with enthusiasm, to the views of the pioneers in theory and practice from London, from the provinces, and from America on such essentially modern subjects as laminectomy, colectomy, splenectomy, and intestinal anastomosis. The first item in the programme was a Demonstration on the Cadaver, by Professor Murphy (Chicago), illustrating his own method of using his now famous button. He particularly emphasised the necessity of a special over-stitch at the mesenteric edge of the bowel to prevent its being left bare of peritoneum, and of a careful attention to the preservation, in so far as possible, of the artery which runs parallel to the edge of the gut, and is more important for its nutrition than the mesenteric. Professor Murphy concluded his admirably lucid address with an exposition of his method of resecting the rectum for malignant growths. Mr. Victor Horsley then read notes of Seven Cases of Laminectomy of the Cervical Spine for Caries and Injury. Three of the patients were present and walking about, and it was hard to believe that when they came under Mr. Horsley's care they were paralysed in all four limbs, and in some instances partially asphyxiated as well; of the 7 cases only 1 had died. This almost sensational result, after the gloomy decisions of last year's congress at Bristol, made a profound impression upon the audience. Mr. Horsley combines operation with the subsequent use of extension for a prolonged period. This he finds necessary for the complete recovery of his patients. Subsequent speakers, particularly Sir William Mac Cormac, Sir William Stokes, and Mr. Noble Smith, raised questions as to the diagnosis of the amount of injury to the cord in cases of fracture, and the proper time to operate in caries; and Mr. Horsley, in his reply, formulated the clinical rules which should guide the surgeon in these instances, but also insisted that each individual case should be judged mainly on its own merits. Mr. Mayo Robson then quoted five cases of colectomy, in one of which he used Dr. Murphy's button, in the other four the decalcified bone bobbin. His opinion was entirely favourable to the latter apparatus. One of the cases was remarkable as an example of carcinoma of the ascending colon occurring in a girl aged 14. Mr. Greig Smith, who followed, stated that he was in the habit of using the button in his enterectomies, and gave a most cogent demonstration of the advisability of doing the operation for intestinal obstruction in two stages. His remarks on this point were cordially endorsed by subsequent speakers, and eventually accepted by Mr. Robson himself. Mr. Keen related two and Mr. Harrison Cripps four cases in which the use of the Murphy button had ended fatally, and Professor Macewen stated that he had hitherto seen no reason to employ it in preference to sutures. Mr. C. A. Morton exhibited a specimen showing the junction made by the button three months after the operation, and Mr. Cripps gave a very interesting description of some of the complications met with in the operation of inguinal colotomy, referring particularly to absence of mesentery as the gravest and most difficult of treatment. Mr. William Anderson read a paper on Three Cases of Sudden Hernia of the Sigmoid Flexure through the Left Inguinal Canal, and Mr. Bidwell recounted a similar case which had strangulated. Mr. W. D. Spanton gave an account of three cases of splenectomy performed by him, one of which had recovered. Mr. Cathcart showed an ingeniously simple form of exhaust pump for use after suprapubic cystotomy, after which the proceedings terminated. The meetings of this Section have been brilliantly successful as regards attendance, papers, and discussions, and the impression left by it is that in surgery, even to its most modern developments, England still indubitably leads the way.

Section of Obstetrics and Gynæcology.

Mr. Knowsley Thornton opened a discussion upon the Early Diagnosis of Malignant Disease of the Uterus, and the Treatment by Partial or Total Excision. He laid especial stress upon the great importance of early diagnosis by practitioners. It was in their hands especially that advance in diagnosis lay. He advocated supravaginal amputation in carcinoma and epithelial cancer of the vaginal portion. Operation in hopeless cases was especially deprecated, and stress laid upon the surgical rule that operations for malignant disease should only be performed when the whole disease can be removed. In the discussion Professor Martin (Berlin), Professor Pozzi (Paris), Professor Lusk (New York), Dr. Playfair, Mrs. Scharlieb, Professor Cameron (Glasgow), Professor Sinclair, Dr. More Madden, Mr. Taylor, Dr. Campbell, Mr. Bowreman Jessett, Dr. William Duncan, Dr. Smyly, Dr. Donald, Professor Spencer, Dr. Smith, Dr. Hayes, Dr. Amand Routh, and Dr. Heywood Smith took part. The majority of the speakers favoured total extirpation of the uterus, and they all agreed as to the importance of early diagnosis. Professor Murdoch Cameron read a paper on a New Theory as to the Position of Fœtus *in Utero*, Dr. Barbour one on the Changes in the Uterus during the third stage of labour, and Dr. Fraser Notes on a Case of Uterine Cystic Fibroma. A cordial vote of thanks to Sir William Priestley for presiding was moved by Professor Lazarewitch (St. Petersburg), and seconded by Professor Cordes (Geneva).

Section of Physiology.

On Friday many foreign and English physiologists attended to hear the discussion upon the Influence of Food upon Muscular Work. It was opened by a paper read by Professor Stokvis (Amsterdam), who related many experiments performed by himself to determine the influence of sugar on the production of muscular energy in the form of work. His experiments had led him to the conclusion that an increase of a sugar to a dietary or when given to a fasting individual did not increase that individual's power of performing work. He criticised Vaughan Harley's published papers, arguing that it was a mistake for him to have carried out all the experiments upon his own body, for by practice the muscles used became so trained as to perform a greater amount of work under similar conditions as before. This paper was followed by one by Professor U. Mosso, in which he stated that, working as Harley had done with an ergograph, he too had found that an increase of sugar to the dietary considerably augmented the amount of work done. Dr. Vaughan Harley then read his paper. Replying to Professor Stokvis's criticisms, he drew attention to the rapidity of the contraction which had been employed in his experiments. This, he stated, was much too rapid and liable to introduce error and irregularity. Further he did not think the experiments he mentioned, in which fasting was involved, were of much value for experimenting upon himself. Dr. Harley found that fasting 24 hours very considerably decreased the amount of the work performed. Dr. Harley found that 500 grammes of sugar added to a dietary increased in some cases the amount of work performed as much as 50 per cent. Dr. M. S. Pembrey pointed out that according to Lehmann's work with the ergograph psychical states had a very great effect upon the results obtained, but that Harley had carried out these experiments upon himself and had commenced them with a strong bias in the one direction, and

that therefore, though working in perfectly good faith, he would be very liable to reach a result in accordance with his predilections. He ought to have experimented not upon himself but upon some one who in no way understood the apparatus or the objects of the experiments. Professor Halliburton considered that not enough stress had been laid upon the proteid-sparing action of carbohydrates. Moreover, he thought that much value was to be attached in arguments of this nature to results learnt empirically. By common consent, athletes agreed that the best result in endurance and possibility of great production of work for short periods was best attained upon a diet consisting chiefly of proteids, and containing but little carbohydrates. Professor G. N. Stewart considered that too much stress must not be laid upon arguments derived from a study of production of work by various sets of men, for most of the hardest workers do well on a diet containing less than the 100 grammes per day of proteid usually considered as essential. Professor Bowditch (Boston, U.S.A.) considered that in the activity of muscle we should consider the nitrogenous molecule as essential for that work, but that in actual activity the carbon-containing portion was the part actually used up. The greater, then, the nitrogenous interchange and renewal the better the condition for work production, but the carbon-containing required frequent renewal. Professor Stokvis, in reply, pointed out that the daily variations in amount of work done in many previous researches were quite as great as the differences observed in Harley's researches. He mentioned that at his request the crew of rowing men representing Amsterdam this year at Henley had been trained very largely on proteid, and had proved most successful. But in the previous year they had been trained upon a large carbohydrate diet, and had also achieved good success. Dr. T. Gregor Brodie stated that he had been studying by measurements of certain areas the curves of extensibility and retraction, the amount of work performed by a gradually increasing load upon a muscle, and the amount produced by the muscle in raising a gradually decreasing load. He found that the latter varied between one-half to one-third the amount of the former. He further showed how he obtained a graphic representation of the amounts of work done by successive contractions raising increasing amounts of load. He found that with indirect excitation the maximum amount of work was greater, and occurred with a smaller load than in the case of direct stimulation. Dr. M. S. Pembrey gave an account of some experiments he had been carrying out on heat regulation. He concludes that the main heat regulation is carried out by variation in the production of heat from the muscles. He has further studied the gradual development after birth of the power of heat regulation in guinea-pig, chick, mouse, etc. Professor W. D. Halliburton read a paper on Nucleo-albumins. For these he prefers the rather vaguer term "nucleo-proteids," as more fitting to our present knowledge. The substance previously termed by him a cell globulin is a nucleo-proteid. He also stated that working separately from Pekelharing he has arrived at the same conclusion, namely, that fibrin ferment is a nucleo-proteid. Dr. J. W. Pickering showed some of the Reactions of Colloid Substances with which he had been working. The colloid made from aspartic anhydride gave many of the proteid reactions, and when injected into the veins of a rabbit causes intravascular coagulation. It further shows almost exactly the same variations in action as are found when working with nucleo-proteids in the same manner. Mr. Ramsden gave a short account of the preparation of Fibrin-like Coagula of Solutions of Egg White and many other Proteids by Shaking. Serum albumen, he stated, was only with difficulty precipitated. Some or part of these coagula redissolve, sometimes very rapidly, on standing. Professor Halliburton proposed, and Professor Stewart seconded, a vote of thanks to the President, which was carried with applause, and the Section then terminated its meeting.

Section of Anatomy and Histology.

Professor Arthur Thomson (University of Oxford) opened a discussion on the Topographical Anatomy of the Abdomen. He criticised the generally accepted system as described in *Quain*. He took exception to it as only two of the nine regions described correctly apply, namely, the umbilical and hypogastric areas. He proposed for adoption a new system, in which he made use of the articulation of the xiphisternum with the part above; the anterior superior iliac spine, the symphysis pubis, and the most dependent part of the tenth costal arch were taken as fixed points. He thought that the lines drawn between these points should be straight and not curved. By these lines the abdomen can be divided into the following regions: Regio hypochondriaca dextra and sinistra, regio epigastrica dextra and sinistra, regio abdominalis lateralis dextra and sinistra, regio umbilicalis dextra and sinistra, and regio inguinalis dextra and sinistra. In the discussion which followed Professors Thom and Anderson, and Messrs. Lockwood, Wilberforce Smith, Parsons, and Black took part. Dr. Arthur Keith read a paper on the Synostosis of the First Piece of the Sternum to the Fourth Sternum on Man and Anthropoids, considered as to its prevalence among them and its value as evidence of their genetic relationship. Mr. Graves Stoker exhibited a specimen of a Floating Liver which he had discovered in a body which was being made use of for operative surgery. The liver had been dislocated downwards, and its lower border extended almost to the level of the umbilicus. Mr. Staveley Kent showed a number of specimens which illustrated the Histology of the Genital Organs of a Hermaphrodite Dog. No ova could be found, and in structure it somewhat resembled a testis, but no spermatozoa could be found. A distinct uterus was present. Mr. H. Higgins read a paper on the Mechanics of the Knee-joints of Man.

Section of Pathology and Bacteriology.

The proceedings on Friday opened with a discussion on Lymphadenoma, introduced by a paper by Mr. W. G. Spencer on Lymphadenoma and its relation to other Morbid Growths. He drew attention to its causation, and in the absence of experimental data brought forward clinical observations. These were grouped according to the mode of entry of the presumed virus. Objection was raised to the number of names used, varieties being probably due to differences in resistance on the part of the individual. The relation to other affections causing general enlargement of the glands such as syphilis and tubercle, and the experimental work now being carried on was pointed out. Mr. Jackson Clarke did not think it possible to distinguish objectively between lymphosarcoma and lymphadenoma, the effects of arsenic on the latter often being to cause still greater resemblance to the former. Dr. Leslie thought that when the true pathology of lymphadenoma came to be written, it would be classed among organismal diseases, and stated that the study of aberrant cases tended greatly to support this view. Dr. Pitt gave the results of the examination of a large number of cases, and inclined to the view that all typical cases came under the sequelæ of chronic irritation and inflammation. Dr. Snow having emphasised the importance of defining terms to begin with, Dr. Claud Wilson insisted on differentiating more exactly the various members of this group of diseases. Mr. Shattock pointed out that the same reasons that had been alleged in favour of lymphadenoma being analogous with tubercle might with equal justice be applied to sarcoma or other malignant growth. He pointed out that the true nature of the growth was lymphatic in all cases, not granulation tissue; nor was it sarcomatous in the usual sense; it was an example of a normal tissue in kind that might become disseminated. The President thought lymphadenoma might be grouped between tubercle and malignant disease proper. After Mr. Spencer had replied, the Section proceeded to the consideration of Dr. Auld's paper on Hæmatogenous Jaundice. Having referred to the work of Minkowski and Naunyn, he gave it as his opinion that as far as they went these authors were right, but he found that a further stage might be arrived at in which a new factor came into play, and the products of the blood destruction coming from the spleen, failed of excretion by the liver, and, passing into the tubal circulation, produced a hæmatogenous jaundice. Dr. Hunter expressed his agreement with the author on many points, more especially as to his idea of the *rôle* of the spleen, which he had experimentally recognised. Professor Babes (Bucharest) communicated the result of his researches into the Morphology of Pathogenic Bacteria. The

paper was of a highly original and technical character, and it would be impossible to do it justice in an abstract. There being no discussion on this paper, Dr. Hewlett read his note on Ehrlich's Diazo Reaction, and demonstrated some of the reactions in question, pointing out the impossibility of using this test to recognise morphine in as small quantities as 1 part in 10,000. The meeting next proceeded to consider the Fate of Micro-organisms in Inspired Air, communicated by Drs. Hewlett and St. Clair Thomson. The authors insisted that the number of micro-organisms entering the nose was much smaller than was previously thought, and, of those that did enter, the fate was not quite certain in all cases. After a few remarks by various speakers, and the authors having replied, Drs. Danett and Surveyor read a paper on Psorospermosis, in which they contended that there was great difficulty in accepting first the sporozoic theory of their nature, and secondly the production of the immature forms by endogenous cell division. Dr. Washbrook read a paper on the Growth of the Choleraic Vibrio and other Bacilli in Sunlight, in which he found that as a continuation of the well-known results of Roux and others the vibrios varied in their reaction according as to whether they were exposed to air or not. Thus he found that the destructive action of sunlight was confined to those cases in which air was freely present, and that whereas in those cases in which air was excluded the effect of sunlight was to stimulate the organisms and growth by its heat, the virulence was not affected. A paper by Dr. Walters on Pulmonary Hypertrophic Osteo-arthropathy, and a hearty vote of thanks to the President brought the meeting to a close.

Section of Ophthalmology.

A discussion on the operative Treatment of Chronic Glaucoma was opened by Mr. Nettleship. He submitted that it was undesirable to maintain the distinction between typical chronic glaucoma and atrophy with cupping of the optic disc: that the risks of iridectomy in producing rapid deterioration of vision were less than has been supposed; that retarded progress of the disease is often, and permanent arrest not rarely, secured by iridectomy performed early; that it is often right to operate in the premonitory stage of glaucoma; and that iridectomy is nearly always to be preferred to sclerotomy for chronic glaucoma. The discussion was carried on by Professor Fuchs, Dr. Meyer, Dr. Cayet, Professor Panas, Messrs Critchett, Priestley Smith, Swanzy, Little, Adams Frost, Juler, Lee, Williams, Griffith, G. Walker, Treacher Collins, McHardy, and Power. A large majority of the members who spoke were in favour of early operating in cases of chronic glaucoma. Professor Fuchs read a paper on a New Theory of Erythropsia, in which he gave the result of his observations carried on at a high altitude in the Alps. Messrs. Drake-Brockman, Doyne, and Macnaughton made remarks. Mr. Bickerton read a paper on The Utter Neglect of the Eyesight Question in Board of Trade Inquiries into Shipping Disasters, a criticism of Mr. Boyce's reply of February 19th to the deputation of ophthalmic surgeons. It was discussed by Mr. Caldwell, Dr. Farquharson, M.P., Dr. Edridge-Green, Messrs. Power and McHardy. The following resolution was proposed by Dr. Farquharson, M.P., and seconded by Mr. McHardy: "That effect should be given by the Board of Trade to the recommendations contained in the report of the Committee of the Royal Society on Colour Vision." Dr. Edridge-Green read a paper on Tests for Colour Vision. A vote of thanks to the President was proposed by Mr. McHardy, seconded by Mr. Ernest Clarke, and carried unanimously.

Section of Diseases of Children.

On Friday Dr. J. Kingston Barton introduced a discussion on the Doses of Various Remedies suitable for Children at the Several Ages, urging that sufficient indication was not given in the *British Pharmacopœia* of the various drugs to which children were peculiarly susceptible, and that an additional list of doses suitable for children should be given having special reference to age. Mr. Barton proceeded to give a list of twenty-seven drugs, which in his personal experience had required either to be increased or decreased much beyond the limits usually recommended. In his experience belladonna was an overrated drug, and its ill-effects were often more marked than the good it did. He advocated a smaller dose. With regard to a general rule of dosage, he recommended one-twelfth of an ordinary dose for a child 1 year old, and for under that age a reduction reckoned by the months of the child's life. The President, in commenting on the use of chloroform as an anæsthetic for young children, expressed his preference for ether whenever possible. Dr. A. Foxwell said that he agreed with Mr. Barton in advocating small and frequent doses as a rule. Dr. Dawson Williams said that he altogether doubted the age limit in the administration of drugs. In his experience it was useless to give too minute doses; especially in the administration of antiseptics and of mercury he believed in large doses. Dr. Leech (Manchester) pointed out that the doses in the *Pharmacopœia* represented average doses. Arithmetical calculations were of very little value; physiological considerations were more important. Dr. N. J. Tirard said that the main considerations should be the nature of the patient and of the disease, as well as the purpose for which the drug was employed. After some discussion, the following resolution was carried: "That this Section thinks it desirable that in the new edition of the *British Pharmacopœia* the maximum doses of powerful drugs suitable for children at various ages should be indicated." Mr. E. Cautley read a paper on the Value of Trephining in Tuberculous Meningitis. Mr. Herbert Waterhouse and Mr. D'Arcy Power continued the discussion. Mr. Nicholas Grattan (Cork) showed an apparatus for Osteoclasis, and Mr. C. W. Cathcart (Edinburgh) showed a simple form of Milk Steriliser. Mr. C. B. Lockwood reported a case of Hernia of the Ovary in an Infant with Torsion of the Pedicle. Dr. J. Walter Carr read a protest against the use of the term "Consumptive Bowels," and Mr. Telford Smith communicated the After-History of Two Cases of Craniectomy. A vote of thanks to the President, proposed by Mr. D'Arcy Power and seconded by Mr. C. W. Cathcart, ended the proceedings.

Section of Otology.

The first paper on Friday was one by Mr. Carmalt Jones on Turbinotomy in connection with Tinnitus Aurium. He had found good results in some cases of tinnitus from removal of the inferior turbinate bone, which he believed acted as a foreign body and kept up Eustachian catarrh. In some cases the deafness was relieved as well as the tinnitus. At times there was troublesome hæmorrhage, but as a rule they did well. Any headache could generally be checked by the bromides. Dr. Bronner said he believed the obstruction was due principally to the hypertrophied mucous membrane, which could be very satisfactorily treated by more simple means; he doubted the necessity of turbinotomy. Dr. Macnaughton Jones said that after careful inquiry from numerous aurists, he had failed to obtain satisfactory evidence of the value of turbinotomy in aural disease, and he certainly considered there was considerable risk from hæmorrhage in the operation. He generally found in these cases some obstruction in the nose, such as deviation of the septum, on relieving which there was generally distinct improvement in the patient. Dr. Fred. Spicer had seen some satisfactory results in these cases, especially as regards persistent tinnitus. Dr. Warden (Birmingham) and Mr. Pritchard considered that the operation was one requiring serious consideration, and inquired as to the after-treatment of the cases. Dr. Pegler showed a large number of microscopical specimens of hypertrophy of the turbinate bones, showing vascular dilatation and mucoid hypertrophy. Professor Guye (Amsterdam) read a paper on a not yet described form of Rotatory sensation in Patients Suffering from Labyrinthine Disease. In the case mentioned, the patient was suddenly attacked with giddiness and vomiting, followed by deafness in the left ear, rotatory sensations were observed in the direction of the diseased ear, objects appearing to turn like a wheel of the hands of a clock. When the rotatory sensation was slight there was an involuntary movement in the same direction, but when severe the movement was in the opposite direction. Mr. Pritchard and Dr. Thomas Barr (Manchester) agreed with Professor Guye in the great interest attached to these cases of rotatory sensation. Dr. Bronner believed that the vertigo was of vascular origin.

Dr. Edward Law, in the absence of the President, Sir. William Dalby, wished to thank Professor Guye in the name of the Section for the very interesting paper he had read. Dr Macnaughton Jones read a paper on the Various Forms of Menière's Disease. He believed it was one of the few forms of aural disease in which pilocarpin was of use. Professor Guye pointed out that in many cases there was a local cause for the symptoms, which should if possible be removed. Drs. Norris, T. Barr, Macnaughton Jones, and Mr. Cresswell Baber joined in the discussion. Mr. Pritchard insisted on the proper differentiation of Menière's disease. Mr. Cresswell Baber showed a Dummy for Illustrating Disease of the Nasopharynx and a case of Objective Pulsating Tinnitus audible to auscultation, and varying in movements of the ear and pressure on the carotid artery. Mr. Lake read a paper on the Anatomical Relations of the Tympanic Membrane and their Pathological Importance. He showed a large number of specimens proving the connection of the tympanic membrane with the surrounding fibrous structures and the periosteum. Dr. Ward Cousins showed some Improvements in Artificial Drums, which were discussed by Drs. Warden, Edward Law, Macnaughton Jones, Mr. Cresswell Baber, and Mr. St. George Reid; the general opinion was that the cotton wool drum was more satisfactory in practice. Professor Guye (Amsterdam) mentioned a case in which the cotton wool drum had proved most efficacious, the hearing being greatly improved. Sir William Dalby pointed out that in some cases the membrane was reproduced, and quoted one in particular where it had been reproduced three times. A hearty vote of thanks to Sir William Dalby and the Honorary Secretaries closed the meeting of this Section.

Section of Pharmacology and Therapeutics.

The attendance on Friday was during the early part of the morning rather scanty, and this is hardly to be wondered at, when one takes into consideration the claims made each evening on the members by the various social functions which have formed so prominent a part of the arrangements of this annual meeting. At 10.30 however, a discussion was opened on the Treatment of Various Affections by Natural Mineral Waters, and by 11 o'clock the attendance was distinctly satisfactory. After a few words from the Chairman, Dr. Mitchell Bruce, a paper was read by Dr. Coffe, on the Waters of Woodhall Spa. This spring is very rich, both in bromine and iodine, these elements being in the form of bromides and iodides, with also a small proportion of iodates. Patients are subjected at Woodhall to treatment both by baths and by internal administration of the waters, such treatment being supplemented, where indicated, by massage and other mechanical measures. Brief notes of several cases were presented, which clearly showed that the waters were powerful therapeutic agents, and required to be used under careful supervision. The next paper was read by Dr. Fox, on the waters of Strathpeffer, a spa rich in sulphuretted hydrogen, and found to be especially useful in cases of rheumatism and similar affections. It is one of the richest springs known in this gas. The Waters of Buxton were then treated of by Dr. Hyde. These waters, which are classed among the indifferent earthy thermal springs, have always held a high place among the British spas. They appear to be useful in a great variety of conditions, and the patients frequenting Buxton are principally of the rheumatic, gouty, and neuralgic classes. A certain proportion of skin affections also appear to be benefited by a course of the baths and waters. Dr. Myrtle next read a paper on Harrogate Waters. There are over sixty springs, of various composition, in this district, and the paper was a valuable addition to our knowledge of some of them and of their therapeutic effects. The list of papers was concluded by an account, from Dr. Tomlins, of the Brine Baths of Droitwich. Most of the above authors took part in the discussion which followed, and observations were also made by Dr. Parsons (Engadine), Drs. Gilchrist, Solly, Hobson (Harrogate), and Gibson. Papers on other subjects of therapeutic interest were then read by the following: Dr. Walters, On the Subcutaneous Uses of Guaiacol; Dr. Snow, On a New Antiseptic named Loretin; Dr. Illingworth, On Tablonds and Tabellæ: their advantages and disadvantages; and Dr. de Backer, On the Treatment of Tuberculosis by Living Ferments. Time did not allow these to be fully discussed, and at about this period members appeared anxious rather to participate in the social than the scientific part of the proceedings. The meeting was therefore declared by the President (Sir William Roberts), who was then occupying the chair, to be at an end.

Section of Dermatology.

The meeting this day was devoted to the exhibition of living cases and the demonstration of microscopical specimens and drawings. Mr. Malcolm Morris showed an interesting example of Sclerodermia with trophic ulcers in an elderly woman: he also exhibited cases of Leprosy, and an unusual one of Tuberculosis of the Skin, which has been described as Lupus Vulgaris Erythematodes. Dr. Crocker showed a case of Morphœa of the Fifth Nerve in a girl; also a good example of Urticaria Pigmentosa. The other cases exhibited by the President were General Sclerodermia, Xeroderma Pigmentosum, Alopecia Areata treated by the Oxygen Bath, etc. Mr. George Stoker demonstrated the treatment of Alopecia Areata by Oxygen in the aforementioned case, and in another of his own. To show the effects of the salicylate treatment of Psoriasis Dr. Crocker presented an example in a young man. Among the other cases were the following: Dr. Colcott Fox's cases of Rodent Ulcer of Chest, etc.; and many other examples of rare or unusual conditions were also brought forward by Drs. Eddowes, Stowers, Mackey, etc. Among the drawings and specimens were a series of photographs and sketches of Pellagra, exhibited by Dr. Sandwith (Cairo); Dr. Leslie Roberts (Liverpool) demonstrated sections of Angioma Serpiginosum and of Mycosis Fungoides, the latter in the pre-tumour and tumour stages. Mr. Jonathan Hutchinson showed drawings of various conditions, such as Onychia Maligna, Peri ungual Chancre, Tinea of the Nails, etc.; and Mr. Jonathan Hutchinson, jun., exhibited sections from a case of Rodent Ulcer, together with drawings of the microscopical appearances of Epithelioma of the Thumb Nail—an extremely rare condition. Specimens illustrating the paper on Pityriasis Rubra Pilaris by Dr. Liddell (Harrogate) were also shown. The Diplococcus of Acute Pemphigus (Beck's $\frac{1}{12}$ inch oil immersion) from Mr. Pernet's case and a section of a Bulla were shown by Dr. W. Bullock. Dr. H. Stowers had a series of interesting drawings representing Melanotic Sarcoma of the Ear, Paget's Disease of the Nipple, Chancre of the Lip, etc. The demonstration of cases brought together a numerous audience, and proved highly successful.

Section of Ethics.

Dr. Knowsley Sibley read a paper On State-aided v. Voluntary Hospitals, and Dr. A. D. Williams followed with a paper on the Changing Relations of the Profession and the Public. Dr. Lea then received permission from the President to read a letter received that morning from Cork, which reported further success on the part of the profession in their struggle at Cork. Dr. Bridgwater next drew attention to the numerous resolutions before the Section which required consideration, and said that there was no doubt that the Section had been most harmonious in its views and temperate in its language. Dr. Cleveland read the rules as to resolutions being sent up to the Council, and then proposed the first resolution: "That it be a recommendation to the Council: (1) To include an Ethical Section in the Annual Programme. (2) To recommend to each Branch the expediency of constituting its Executive Council an Ethical Committee to consider all ethical matters arising within its area, and settle them if possible; or, failing this, to refer them to the General Council of the Association. (3) And it is further suggested to the Council the expediency of their forming an Ethical Committee to receive and report upon such matters as may be referred from the Branches, or otherwise arising." This was seconded by Dr. Broadbent and carried unanimously. The President then proposed: "That in the opinion of this meeting the employment of unqualified assistants in visiting patients is injurious to the interests of the public as well as those of the profession." This was seconded by Mr. George Brown, and carried unanimously. It was next proposed by Dr. Lea, and seconded by Dr. Major Greenwood: "That in the opinion of this Section that any practitioner who wilfully violates generally received rules of

professional ethics should not be met in any professional intercourse whatever, save in a case of urgent danger to an individual patient." This was carried unanimously. It was next proposed by Dr. Potter, and seconded by Dr. Major Greenwood: "That advertising in every shape is highly derogatory to the profession, and that the Council be requested to use every effort to suppress it." Following this Dr. Major Greenwood proposed: "That the Council be requested to take steps to prevent members of the British Medical Association accepting posts in medical aid or other kindred societies, and that in the opinion of the Section no practitioner who accepts office in any society of this kind ought to be eligible for membership of the Association." Dr. Brown (Bacup) and Mr. Hemmings spoke on this; also Dr. Barnes (Eye) and Dr. Bousfield. This was seconded by Dr. Bridgwater and carried unanimously. It was then proposed by Dr. Pearse and seconded by Dr. Lea: "That it be suggested to the Council to open a fund, to be subscribed to by members of the Association, to assist to indemnify bodies of medical men practising in the United Kingdom in their contests against the combined action of the friendly and other benefit societies." This was carried with two dissentients. It was next proposed by Dr. J. P. Henry and seconded by Dr. G. H. Broadbent: "That the Council be requested to communicate with the universities and medical corporations with a view of discouraging their graduates and diplomates from taking office under medical aid associations or undertaking any appointment or engagement calculated to degrade the profession." This resolution was carried *nem. con.* It was then proposed by Dr. Bousfield, seconded by Dr. Broadbent: "That this meeting is unanimously of opinion that a suitable authority should have powers of control over irregular practice of the same kind as those exercised by the Incorporate Law Society and the Inns of Court respectively, and urge the Council to approach the Government with this view, with a preference for this Association as the controlling body." This resolution, after some discussion, was carried. Dr. McNeil next proposed and Dr. Lattey seconded: "That the Ethical Section of the British Medical Association has revealed the urgent need of some practical steps being taken to deal effectively with the present deplorable lack of *esprit de corps* and want of co-operation in the profession generally, of which so much undue advantage is taken by the public. As it is to be hoped that much of the existing undesirable state of affairs arises more from ignorance than deliberate intention on the part of those concerned, we respectfully urge on the Council to take such steps as may direct the attention of professors and teachers in the various colleges and medical schools to the advisability of pressing on their pupils on every suitable occasion the importance of the subject, not only as regards their own, but their future patients' interests. We also strongly suggest that special provision should be made in every medical teaching centre for inculcating this most important part of the duties of the medical practitioner or otherwise to do as they in their wisdom may think fit." This resolution was carried after a good deal of discussion. It was then moved by Dr. Knowsley Sibley and seconded by Dr. Woods: "That the Ethical Section of the British Medical Association considers that medical officers connected with hospitals should be paid by the State." This resolution, after some discussion, was lost. It was then proposed by Mr. Nelson Hardy and seconded by Dr. Hugh Woods: "That, in the opinion of this Section, members of the British Medical Association should not hold office in any hospital which is not really, as well as ostensibly, a public institution; and members of the medical staff at a hospital having pay wards should not gratuitously attend the inmates of such wards." This resolution was unanimously carried, but a further one, attempting to limit out-patients of hospitals to such only as had recommendations from medical practitioners, was declared to be lost.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Meos, Professor of Otology in the University of Heidelberg, aged 64; and Dr. Nagel, Professor of Diseases of the Eye in the University of Tubingen.

SIXTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in London, July 30th and 31st, and August 1st, 2nd, and 3rd.

THIRD GENERAL MEETING OF MEMBERS—THURSDAY, AUGUST 1ST.

THE PRESIDENT IN THE CHAIR.

THE next business after the proceedings which appeared in the BRITISH MEDICAL JOURNAL of August 3rd was the presentation of the Stewart Prize.

The PRESIDENT said that the Stewart Prize had been founded many years ago by Dr. Alexander Patrick Stewart, one of the most active members of the Association. [Applause.] It was at least thirty years since Dr. Alexander Stewart was President of the Metropolitan Counties Branch. The prize had been awarded to Brigade-Surgeon-Lieutenant-Colonel D. Douglas Cunningham, M.B., C.I.E., F.R.S., for his work in India. A great deal of that work was very well known to many of the members, especially to those who were interested in bacteriology. In some of the earlier researches on the comma bacillus, Dr. Cunningham had been very active in assisting others to discover some of the pathogenic properties of that organism. He had also made some other very important observations in India with reference to the diffusion of some of the elements of the causation of disease in relation to the temperature of the soil. Altogether he had brought their knowledge of the subject to a higher point than had ever been previously attained. His works really adorned the scientific memoirs not only of India but of their own country. He regretted that Dr. Cunningham was unable to be present, and therefore the Stewart Prize, consisting of an illuminated scroll and a cheque for £50, would be handed to Surgeon-General Cornish on his behalf. He (the President) reminded the meeting that that was the fourth time that the Stewart Prize had been awarded.

Surgeon-General CORNISH said he was very glad to be able to receive this testimony of the appreciation of that great Association on behalf of his friend Dr. David Cunningham, and would have great pleasure in forwarding it to him. [Applause.]

MOTION BY DR. WRIGHT.

Brigade Surgeon-Lieutenant-Colonel TEMPLE WRIGHT said he had the honour of asking permission to move the following resolution:

That this meeting desires to submit a respectful suggestion to the General Medical Council that every medical officer whose name appears in the *Navy List*, the *Army List*, and the *Indian Army List* shall be considered to be still alive and at the post opposite his name.

He wished to take that opportunity of thanking their civil brethren for the cordial, persevering, and unflinching assistance they had extended to the members of the army, and especially for sending a deputation in the shape of their Editor to Calcutta, so that he might have the opportunity of saying to the Government what they were not able to say for themselves. When they came home—he was sorry to say sometimes on sick leave—they sometimes spent a good deal of time in reading for the higher diplomas, and when they attained them they sent them to the General Medical Council to be registered. To their great astonishment it was found perhaps that their names had been removed from the *Register*. They were told that it was their own fault, that letters had been sent asking if they were still at the same address and as no reply had been received within six months they were assumed to be dead and their names were struck off the *Register*. That, they thought, was a great hardship. To remove a man's name from the *Register* was the most severe punishment that the General Medical Council could inflict upon a practitioner. When sending the resolution to the Editor for publication in the JOURNAL he thought it was only reasonable to send a copy of it to Sir Richard Quain, the President of the General Medical Council. On receipt of his communication Sir Richard Quain had sent for him, and said he hoped that the ensuing meeting of the Association would support and pass the resolution, because

he considered it would materially facilitate the conduct of business in his office. If the meeting passed the resolution he (Dr. Wright) thought that it would effectually put an end to the slur which had been cast upon those gentlemen whose names, through no fault of their own, had been removed from the *Register*. Not only was it an indignity to each individual member of the profession, but it was a source of public danger. In India the appearance of a man's name on the *Register* was the only official evidence that he was a practitioner. Supposing a sharp pleader were to find out that a medical officer had been removed from the *Register* he might object to his evidence being taken; he would say that he knew nothing whatever about his being a qualified man and that his evidence was not admissible. He (Dr. Wright) saw before him many of his friends whom he knew in India, and he was sure they would all bear him out when he said that every judge and every magistrate in India had always said that the medical testimony in criminal cases was the only evidence they would accept as trustworthy.

Dr. MACNAMARA here intimated that the resolution seemed to be thoroughly reasonable, and he thought the President would be glad to see that it was forwarded to the Council, who would take the matter up and do what they possibly could.

The resolution was then put to the meeting and carried *nem. con.*

Communication from Mr. Victor Horsley.—Dr. WARD COUSINS said he had received a letter that morning from Mr. Victor Horsley with reference to a question which had been raised on the previous day, in which he stated; "You conveyed to the meeting that resolutions passed by them were by the Articles binding on the Council. As this is a novel constitutional change in the Association, though a very desirable one, I think that a precise statement on the question is called for. Under these circumstances I beg to ask, first, whether in the past the Council have acted on the assumption that under the present Articles they were in fact so bound? and, secondly, whether they will continue to act in the future in accordance with that view?" He (Dr. Ward Cousins) now begged to give the reply of the Council to those questions. In answer to the first question, the Council had always acted on the principle that the resolutions passed at the annual meeting were in the nature of an instruction to them to carry out the policy indicated by those resolutions, subject to the question whether any such resolutions were in contravention of the terms of the Memorandum of Association, and which would certainly involve personal liability or risk to the individual members of the Council. In answer to the second question, whether they would continue to act in future in accordance with that view, the reply of the Council was, "Yes, they will continue the policy as stated in answer to question 1."

Mr. VICTOR HORSLEY, with all due respect, submitted that those answers were not direct answers to his questions.

Dr. WARD COUSINS said that he could not reply in any other words than in the words of the Council.

Mr. VICTOR HORSLEY said he should like to add a few words of explanation. Those who were present at the meeting yesterday would remember that the President of Council read from the Articles of Association, and he had therefore purposely worded his question, "Whether in the past the Council have acted on the assumption that under the present Articles they were in fact so bound?" If there was any doubt on the point as to whether that ruling was given under the Articles, then he submitted that they ought to have a plain and categorical answer, stating that not only the policy of the Council, but the actions of the Council were wholly conducted under the Articles. This conveyed with it rather more than was supposed. It had been put to him on the previous day that they in annual meeting assembled were like the general meeting of a limited liability company. That was an error; they were not. The power of electing representatives of Council was in the hands of the Branches, and had been given to the Branches when the annual meeting duly assembled constituted the by-laws. Under those circumstances the parallel did not hold. To justify the position he had taken upon the previous day he had consulted an eminent solicitor, and learned from him that as a matter of fact Article 25, although it might be construed very broadly and very liberally in the manner indicated, nevertheless it did not specifically state the position, and moreover it could not be brought forward in support of that position in a court of law. Again, it was within their own knowledge—and he had asked many senior members of the Association whether it was not the case—that it was the feeling of the members that the Council which managed the affairs of the Association, though they were ready as they had been in the past to hear the resolutions which had been carried by the general meetings, were nevertheless not absolutely bound to carry them out. It was really an answer to that question which he wished to hear, and he ventured with all respect to submit that the plain procedure would have been simply to tell them whether or no the resolutions which were passed at the general meetings were absolutely binding on the Council. It was a simple question of "Yes" or "No."

Dr. WARD COUSINS said he hoped the meeting would support the action of the Council in agreeing that the answer given by the Council was certainly sufficient, and involved every reply which Mr. Victor Horsley had requested. Surely the annual meeting would never expect the Council to act contrary to the Memorandum of Association; and he felt sure the members would agree with the Council in the answer that had been given. Every member of the Council desired in the strictest sense of the word to carry out the directions, suggestions, and recommendations of the annual meeting; they had always done so in the past, and they would continue to do so in the future.

Dr. DOUGLAS said he had always taken a great interest in the annual meetings, and had often attended at great personal inconvenience, because he believed that these meetings were of the utmost importance, and helped to remove the apathy which unfortunately existed in a great measure in the profession outside purely professional subjects. Mr. Victor Horsley's argument was that the Association were not acting as a limited liability company, and for this reason, that a limited liability company at its annual meeting elected its directors, who, if they did not act in accordance with the wish of their members, could be turned out. But Mr. Victor Horsley had very rightly pointed out that the annual meeting of the Association had no power to turn out its Council. That could only be done by the Branches; therefore it was the action of the Branches which was binding on the Council, and not the action of the general meeting. Considering the many thousands in the profession, it was impossible for them to come to the annual meetings in numbers approximating to the number of members of the Association, and it was therefore felt years ago that it would be unfair that they should elect the Council. The question of electing the Council had been settled in the way it had been as a matter of convenience to the profession throughout the whole country and in the colonies who could not come to the annual meetings. But notwithstanding that, the law, namely, the Companies Acts under which the Association acted—for it acted in nearly every respect as a limited liability company—said that if a resolution of which proper notice had been given were brought before an annual meeting and passed, it was binding upon the Council to carry it out as far as it could. [A voice: "As far as the Council can."] He accepted that—as far as the Council could—because the Council might find it impossible to do so. The reason why the word "Limited" did not appear at the end of the title of the Association was because certain associations or societies which were formed not for profit had the privilege under the Act of leaving out that word. But with that exception they acted under the Act and under the Memorandum of Association, and of course the one could not be antagonistic to the other.

Mr. VICTOR HORSLEY, in accepting the answer that had been given to his questions, said that he should have been better pleased if that answer had been "Yes" or "No," because, he submitted, to refer to the fact that the Council could only act according to the Memorandum of Association was merely to express a truism. He submitted further that the phrase "to carry out the policy" was different from that used in his question. It was the saving clause, because it meant that the Council was not absolutely bound by the wishes of the meeting.

The proceedings then terminated.

Concluding General Meeting—Friday, August 2nd, 1895.

The President (Sir Russell Reynolds) in the Chair.

The Address in Physiology was delivered by Edward Albert Schäfer, F.R.S., Jodrell Professor of Physiology, University College (see page 361).

Professor Bowditch (Boston, U.S.A.) said that if it were allowable for an invited guest of the Association to move a vote of thanks—[applause]—he esteemed it a very great privilege to move:

That the best thanks of this Association be accorded to Professor Schäfer for his able address in Physiology.

The occasions upon which a busy investigator of natural science turned aside from his chosen work to let his colleagues in the profession know whither his work was tending were not so common that they could afford to pass over in silence, and he knew of no direction in which physiological work had at present been carried on which was of more value to the profession generally. Professor Schäfer had chosen wisely in bringing that matter before the profession; he knew of no branch of physiology in which the field was wider and brighter for new therapeutics. The idea of employing animal extracts as therapeutic agents had not perhaps been received by the profession with quite as much favour as it deserved. That was perhaps reasonable, for it reminded them almost unconsciously of mediæval medicine, when every kind of organ and gland was mixed up in a hotch-potch, and applied to the treatment of every conceivable disease. But the scientific study of the active principles of the glands was certainly no less worthy to be taken up by scientific men than the operations of extracting the active principles of bulbs, and roots, and seeds. They had no hesitation in using vegetable medicaments, and there seemed no reason why animal medicaments should not be even more important.

Dr. Lauder Brunton, in seconding the motion, said that Professor Schäfer had chosen a subject for his address which appealed very strongly to everyone, because he had pointed out that in the subject of animal extracts and in the subject of animal internal secretion lay the clue to the treatment of many diseases, some of which they knew and some which were perhaps still unknown. It was all the more interesting to him because he had come straight from the hospital where he had just been prescribing some thyroid extract for a patient whom he had had under observation for several months, and it was most remarkable to see under the influence of the thyroid tabloids the thick heavy lips, the dull appearance and swollen features of the patient resume the aspect of health. There seemed little doubt, however, that the administration of thyroid juice or thyroid in bulk would not replace the action of the normally acting gland, because those patients to whom the thyroid had been administered medicinally fell back again into their former condition, or nearly so, after the administration of the medicine was stopped. They had all been accustomed to look to a great extent to glands as one-sided things, and to have forgotten that the secretion had two sides to it: that it was not only material poured out from the blood into the ducts of the gland, but material was poured back again from the gland into the lymphatics and the blood. What was true of the so-called external glands was probably true of the internal glands, and in all probability the subject which Professor Schäfer had brought before them explained the action of the drugs which many of them had been accustomed to use. When they had administered, for example, a dose of sulphate of magnesia, they had been quite satisfied with explaining the benefit resulting therefrom by the copious flow from the intestine which had succeeded the administration of the dose, and yet in all probability, viewed in the light of the researches which Professor Schäfer had so ably brought them, they had been quite mistaken, and the good resulting from their purgative had been due probably in a much greater measure to the changes in the blood which returned from the secreting glands than to the elimination from the intestine itself. The whole future, both in regard to the administration of new medicines and in the explanation of the action of old, was so enormous that they could hardly guess even now where it would lead them, but they could see how Professor Schäfer's address pointed the way to a quite new field of medicine, affording them the greatest hopes for the advantage of their patients in the future, and he was sure they would all cordially agree with the motion which had been proposed. [Applause.]

The President, in putting the motion to the meeting, said he was perfectly certain they would all agree with him in thinking that the address was one of the most interesting to which they had ever listened. [Applause.] It showed the real point where the past and the future in therapeutics to a certain extent separated. They had a new sphere before them, not only in physiology, but the application of physiological knowledge to practical and scientific therapeutics.

The motion was carried by acclamation.

Professor Schäfer, in reply, said that, in thanking the members for the kindness and attention with which they had listened to his somewhat prolonged address and for the manner in which they had received the motion, he desired to make only two remarks. One was that he felt it to be a high honour to have been asked to address them in physiology, and especially a high honour at that meeting, by reason of the fact that his two predecessors in the Chair of Physiology at University College—William Sharpey and Burdon Sanderson—[Applause]—on the two previous occasions of the meeting of the Association in London were also the givers of addresses in physiology; and, in the second place, he felt it to have been an especial pleasure that the vote of thanks had been proposed and seconded by two gentlemen so distinguished in the sciences of physiology as Professor Bowditch, of Boston, and Dr. Lauder Brunton, belonging to themselves—[Applause]—and more particularly from the fact that, scientifically speaking, they had been life-long friends of his own [Applause].

Reports from the Ethical Section.—The General Secretary reported certain resolutions from the Ethical Section.

[The text of these resolutions will be found at pp. 362 and 363.]

Votes of Thanks.—On motion from the chair, the following votes of thanks were unanimously passed:

That the thanks of the British Medical Association be respectfully offered to her Most Gracious Majesty the Queen for permission to visit her Royal Palaces.

That the thanks of the Association be offered to her Royal Highness the Princess Christian for the interest and sympathy that she has shown with the Association in its sixty-third annual meeting; to his Serene Highness the Duke of Teck, and the Committee of the Botanic Gardens, and the Committee of the Zoological Gardens for their kindness in throwing open their grounds to members.

That the thanks of the Association be given to his Grace the Archbishop of Canterbury for his sermon in St. Paul's Cathedral; to the Dean and Chapter of St. Paul's for permission to hold Divine service in the Cathedral; to the Right Rev. the Bishop of Stepney, the Ven. the Archdeacon of London, and to the Rev. Lewis Gilbertson for their assistance in connection therewith; to his Grace the Archbishop of Canterbury, his Grace the Duke of Wellington, his Grace the Duke of Somerset, his Grace the Duke of Westminster, and to the Most Hon. the Marquis of Salisbury, to the Right Hon. the Earl of Rohester, and to Lady Wallace for permission to view their houses and art treasures; to the Council of the King's College and the Committee of Management of the Conjoint Examination Hall for their Governors' permission to use their respective buildings for the purposes of the meeting, and also to the Committee of Exeter Hall; to the Royal College of Physicians and the Royal College of Surgeons for their hospitality; to the Baroness and Mr. Burdett Coutts, to Sir Spencer Wells, and the numerous ladies and gentlemen and others who have generously entertained members of the Association; to Lady Priestley and the Ladies' Committee for the kindly interest they have shown in providing for the comfort and entertainment of ladies and members attending the meeting; to the Staff of St. Bartholomew's and St. Thomas's Hospital for their hospitality, and the Governors and staff of the various hospitals and infirmaries who have so kindly entertained the members of the Association; to the County Council, the authorities of the Custom House and the Royal Mint, for the trouble they have taken in showing matters of great interest to the members; to the various firms who have thrown open their establishments for inspection by members; to the Committee of St. George's Club, Hanover Square, for opening their club to the use of the members of the Association during the meeting; to Mr. Andrew

Clark and Dr. Isambard Owen, Honorary Local Secretaries, and Mr. George Eastes, Honorary Treasurer, for their successful labours in connection with the organisation of this meeting; to the President and members of the Metropolitan Counties Branch, and to the members of the Association in the Metropolitan District generally, for their hospitable reception.

That this meeting, cordially recognising the distinguished position of the illustrious visitors in their respective countries, begs now to tender them the warmest thanks of the Association for their presence, and for the additional interest thus given to the annual meeting; to the Chairmen and Honorary Secretaries of the various Committees for the able and willing help which they have given in rendering the meeting successful.

The President then left the chair, which was taken by Dr. Ward Cousins, President of Council.

Dr. Ward Cousins, in proposing:

That the thanks of the Association be given to Sir Russell Reynolds, Bart., F.R.S., for his able and courteous conduct in the chair on the occasion of the sixty-third annual meeting,

—[applause]—said it required no words from him to recommend the resolution to their notice. They had concluded a most successful meeting, and he had no doubt that the effects, both socially and scientifically, would have very far-reaching results. They all felt that the success of that, the largest annual meeting which had ever been held in connection with the British Medical Association, had been greatly due to the kind and courteous way in which Sir Russell Reynolds had conducted all its proceedings. [Applause.]

Sir W. Priestley, in seconding the vote of thanks, said that it ought not to be given as a mere matter of form, but the members ought to show that it was most sincere and enthusiastic.

The motion was carried with the utmost enthusiasm, the audience rising to their feet and heartily cheering the President.

Dr. Ward Cousins: Sir Russell Reynolds, will you allow me, on behalf of the British Medical Association, to present you their most grateful thanks for the courteous, kind, and able way in which you have discharged the duties of President. [Applause.]

The President, in reply, said that nothing could exceed the kindness of his friend Dr. Ward Cousins or of Sir Wm. Priestley in the terms in which they had expressed their feelings with regard to himself, and nothing could exceed the kind way in which the members had responded to the motion. He thanked them all heartily for their great kindness and courtesy. [Applause.]

Dr. Ward Cousins: It is now my duty to tell you that this most successful session, the 63rd of the British Medical Association, has now terminated.

The Annual Dinner.

The annual dinner of the Association, which was attended by about 700 gentlemen and a few ladies, was held on Thursday, August 1st, at the Queen's Hall, Langham Place. The President, Sir J. Russell Reynolds, Bart., was in the chair, and was supported by the Lord Chancellor, the Lord Chief Justice, Lord Herschell, Sir William Flower, Sir William Mac Cormac, Sir William Dalby, Sir George Young, Sir William Roberts, Dr. Ward Cousins, Dr. Ferrier, Dr. Bridgwater Mr. Christopher Heath, Mr. Butlin, Sir W. Priestley, Mr. Ernest Hart, Dr. Cleveland, Dr. Pavy, Dr. W. J. Mickle, Mr. Henry Morris, Dr. S. Wilks, Mr. H. Power, Mr. J. H. Morgan, Dr. Felix Semon, Dr. Radcliffe Crocker, etc.

The loyal toasts having been duly honoured,

The President in proposing "Our Guests," said they were honoured on that occasion by the presence of gentlemen who did not belong to the medical profession, but who had occupied the very highest position in their own. On his right was the present Lord Chancellor. [Cheers.] On his left a few moments ago, but who was obliged to leave, was his old friend, Lord Herschell, late Lord Chancellor. [Cheers.] They also had had present the Lord Chief Justice, and they still had with them Professor Stokvis, of Amsterdam—[cheers]—Dr. W. W. Keen, of Philadelphia—[cheers]—and his old friend and colleague, Mr. Christopher Heath, President of the Royal College of Surgeons. [Cheers.] They were all exceedingly delighted to see those gentlemen, and would join in most cordially drinking their health, and thanking them for being present on that occasion. [Cheers.]

The toast was duly honoured.

The Lord Chancellor (Lord Halsbury) who had a very hearty reception, said: Mr. President, ladies, and gentlemen, conscious as I am of my own weakness I am more deeply impressed with it on the present occasion than perhaps is common to me. I find myself called upon to return thanks for the "Guests," which is in itself perhaps if one is only expected to say we are very much obliged to you, not a very difficult thing to say, though I have observed in the course of my experience that the most difficult thing that an orator can ever accomplish is to sit down. [Laughter.] But my difficulty arises in this way: I find myself associated with four other distinguished persons. [Laughter and cheers.] My excellent and distinguished friend, the Lord Chief Justice, is conspicuous by his absence. My excellent friend, Lord Herschell, appears equally to have disappeared, and then I am encountered by names from the east and from the west, not to mention the most distinguished of all, the centre of what I might call scientific life, the gentleman who represents the central office of this great—what shall I call it?—pursuit of humanity?—[laughter]—investigation of science? [Laughter.] I leave it to the intelligent auditor to choose. I can only say that we are deeply indebted to the kindness which brought us here. I see on your artistic card that there are offerings being made to Æsculapius. I rather think Æsculapius is making offerings to us on this occasion, and we are very glad to receive what you have been kind enough to bestow. There are other speakers who are to follow me. When we have an important case in a court of justice a gentleman gets up and tells you what the case is about. If you have ever heard it, and have not been instructed in the mysteries of the profession, I will undertake to say you have not the least notion what it is all about when he has sat down. [Laughter.] Then those who are charged with the more important function of persuading their fellow creatures, and telling them not only what it is about but which way they ought to decide it, get up and explain more distinctly the question that is about to be entered upon. Now I have performed the first part of my function. [Laughter.] I will undertake to say that no one will give an intelligible opinion of what I have been talking about. [Laughter.] I leave to my excellent friends who are to follow me to give you a more distinct idea than I can beyond this, while I do heartily and sincerely tender my gratitude to you for the kindness of your President and those who have been good enough to give me an invitation. I have enjoyed your company, I have enjoyed your banquet, and hope I may enjoy it again. [Cheers.] I think when I have sat down that is the one intelligible sentiment that I expect or wish you to carry in your minds. [Laughter and cheers.]

Professor Stokvis (Amsterdam) said it was with the greatest pleasure that he rose to fulfil the duty which was laid upon his shoulders by the Lord Chancellor of speaking a few words in the name of the foreign medical men who were attending on that brilliant occasion. He was sure they would scout him if he did not do what they all expected he would do, that was to express their best and heartiest thanks, not only for the kind invitation sent them, but especially for the splendid reception which had been given them. [Cheers.] Of course, their expectations were rather high—[laughter],—but he might say that their highest expectations had been surpassed by the hospitality which had been shown to them in London. He could assure the Association that their foreign guests were very glad to have the opportunity of being present, not only at their general and sectional meetings, their dinners and garden parties, but also of learning that great practical science and indefatigable application which had made so great and had done so much to promote the progress of medicine throughout the present century. If he was asked to which nation the palm should be given for most promoting medical art in the last century he would give it without any doubt to the Anglo-Saxon nation. [Cheers.] In the great work of mitigating suffering from disease and the sparing of human life England was at the head of all nations, and Jenner, Simpson, and Lister were their eternal glories. [Cheers.] By gathering all the professional medical men in Great Britain and the Colonies into

one great Association, one great brotherhood having the same interests, the same difficulties, the same aspirations, a brilliant example had been set, which he hoped would be followed by medical men throughout the world, seeing that it offered one of the most important levers for the elevation of their profession and the advancement of medical science. On behalf of the foreign guests he begged to thank most heartily their good hosts. [Cheers.]

Dr. W. W. KEEN (New York) said they had been told by the Lord Chancellor that the most difficult thing for a speaker to do was to sit down. He found most certainly that the next most difficult thing for a speaker to do was to get up. [Laughter.] It was bad enough to make an after dinner speech in his own country, but in England and with that distinguished assembly before him, he could assure them that it was with great trepidation that he rose to his feet. He felt very much like the Irishman who during the American war was wounded and came before the Pension Board to apply for a pension. The surgeon asked him where he was wounded, and he placed his hand directly over his heart. "No, no," said the doctor, "it is not possible, Pat, that you were hit there; it would have gone through your heart." "Faith, sir," says he "and when I was hit me heart was in me mouth." [Laughter.] They had heard the thanks presented to this noble Association by their distinguished guest Professor Stokvis, as representing the Eastern Hemisphere; it was his (Dr. Keen's) pleasant duty to return thanks for his brethren of the Western Hemisphere. Only the other day he met an American friend at dinner at the hospitable table of the President of their Surgical Section—[cheers]—who said to him, "I think I dine with you more frequently in London than I do in New York." [Laughter]. This brought forth a remark from an English friend that the Americans seemed to think nothing of crossing the big pond, to which he (Dr. Keen) replied, as he justly might, "It is no wonder that we can come over here, and do so so frequently, when we have such attractions upon this side." [Cheers.] Though Americans were "prodigal sons"—a good many of them—somewhat over a hundred years ago, yet whenever they did come home he noticed that Englishmen were always ready to kill the fatted calf—[laughter and cheers]—and by reason of it there was great danger—and he had found it so—to their digestion. He could assure them that nothing pleased an American so much as to come to the old home, Old England—[cheers]—to be welcomed by its capacious heart, big enough to hold all of them—yea, and all the world beside. The "Roast Beef of Old England" had been celebrated, but it had given way, with Americans at least, to their appreciation of the old and great English heart. [Cheers.] In saying "English," he meant not only England, but Scotland and Wales and Ireland, and the Colonies as well. [Cheers.] It was very much on the principle of the commencement of the Church Service, which said "Dearly beloved brethren," on the ground that it was not necessary to mention the sisters because the brethren embraced the sisters. [Laughter and cheers.] Another reason why they would come over was because they had all been taught in the English school. [Hear, hear.] When he was a student of medicine he was cradled in Gray's *Anatomy*, he hardened his gums on Watson's *Practice*—that admirable book by the Addison of modern English medicine. [Cheers.] He was guided in his first obstetric case by the light of Ramsbotham's *Obstetrics*, whilst his surgical patron saint was Sir James Paget. [Cheers.] He wished that the members of the Association could come to America, where they would receive as hearty a welcome as the descendants of the old English stock could show them. [Cheers.] He was glad to know that there were many American physicians who were held in just as great esteem on this side of the water as distinguished English physicians were on their side. [Cheers.] They all knew Gross, Da Costa, and others. Only the other day Mr. Heath said of one of their Americans at least that his name was in all their mouths and his button in all their bowels. [Laughter.] Only the other day he saw in the *Boston Medical and Surgical Journal* a proposal which out Murphied Murphy by far. It was written under the name of Paul Pry, Junior, and was dated in 1865. It related the fact that his ancestor had introduced into American practice, and from that it had spread all over the world, an immense improvement especially in colliotomy—that it was not uncommonly necessary after having made an abdominal section when the bowels got entangled to make another in order to disentangle them. [Laughter.] He had taken a hint from Nature, and had improved the common practice greatly. His hint was a very simple one. There was the belly button, doubtless, he said, the remnant of a row of buttons that ran up and down—[much laughter]—and in order to induce a return to atavism whenever he had a colliotomy, he made a row of buttons and button holes and simply closed it in that way; so that if the bowels got entangled and twisted up he could readily reopen and disentangle them. [Laughter.] In fact, he narrated as a remarkable proof at that time existing of the truth of Darwinism, that a number of children already had been born of such parents with a row of brass buttons all the way down. [Laughter.] He (Dr. Keen) could assure them, speaking seriously, that he brought to them most hearty thanks for the welcome that had been given them, and that had been as cordial, as widespread, and as universal as the members of the British Medical Association. [Cheers.]

Mr. CHRISTOPHER HEATH said the President of the Royal College of Physicians, who occupied the chair that evening, had been good enough to couple his name with this toast as the President of the sister corporation. The bond between these two corporations had become closer and closer of late years. Standing there as the representative of the College of Surgeons, to which he presumed most of the male members of the Association present belonged, he could only thank them for their hospitality. With regard to the ladies he was in a somewhat awkward position, because he knew for a certainty that not one of them could be at present a member of his corporation. He begged, however, to say as a makeweight, that on the following evening he should have the honour of receiving, he hoped, the bulk of the members of the British Medical Association, and that every gentleman who came was entitled to bring with him a lady. He would go further, and say that to any lady who was a qualified practitioner who would apply to him he would gladly send a ticket so that she might take a gentleman. [Laughter and applause.] He was delighted to hear that sentiment received with so much applause. He would see that tickets were ready, and he should hope to see gentlemen led in by the ladies as well as ladies led in by the gentlemen. He thanked the Association heartily for the way in which the guests had been entertained on that occasion. (Cheers.)

Sir GEORGE YOUNG said the season of congresses was also the season of holidays, and the approach of the holidays had deprived them of the pleasure of listening to Lord Herschell, who had charged him to say, when he was obliged to leave, that if he had known he was to make a speech he would on no account have failed in his duty, but that he had made an engagement, which he was obliged to keep. The disappointment was theirs, and the difficulty was his (Sir G. Young's), and he would not have ventured to address them in the place of Lord Herschell, but for the orders of their President, whose behests they were all bound to obey. In Lord Herschell's absence he did not mean to make a speech, but he had to propose that which would be considered to be the toast of the evening, "Success to the British Medical Association," and in trying to execute that duty he hoped he should be met with as much indulgence as he required. The British Medical Association was not only a congress, it was much more than a meeting to discuss medical matters, but it was in the light of a congress that they were now called to consider it. It was sometimes asked, What is the justification of these congresses? They, the members of that great profession—the ministers and interpreters of Nature—had to remember from time to time that there was an outside world interested in these matters, but requiring to be specially addressed in popular language, to have their attention called to what was being done and to be told what were the successes of medicine in language which they could understand and was suited to the occasion. By saying "suited to the occasion," he did not mean to refer to the speech of his friend, Dr. Keen, for he did think that so serious a speech about their insides came very badly after dinner. [Laughter.] The use of a congress was this: there were in all professions the seekers and the thinkers, those who discovered new secrets for the benefit of humanity;

there were also the interpreters; and it was as an interpreter that the congress found its place and explained to the world at large what was going on, enabling outsiders who knew nothing of medicine to appreciate what was being done and to admire the success of this great science, this great service to mankind. The British Medical Association was an institution with which he had been familiar for many years; he had been often associated with many members in promoting the reforms which were necessary in medical education in that great metropolis, and he bore testimony to the fact that the influence of the British Medical Association upon the great question of university reform had been beneficial, and had mainly assisted those engaged in endeavouring to promote these reforms, and had been upon the right side throughout. He would recommend his foreign friends, if they had no medical associations in their countries, to go back and found them, for nothing could be better for a great profession than an organisation of that kind, which brought its distinguished members together, enabling them to confer and to set before the world that which they had done for the benefit of the world. Though utterly unable to do justice to the claims of the British Medical Association, he still desired to bear his testimony to its usefulness and to the fact that it had done great things for the promotion of medicine. He gave the toast of "The British Medical Association," associated with the name of its President of Council, Dr. Ward Cousins.

The toast was drunk with enthusiasm.

Dr. Ward Cousins in responding, said that during the reign of Her Gracious Majesty the Queen all arts and sciences had progressed, but none had done so with greater rapidity than those splendid sciences which they as individuals practised. [Hear, hear.] The Association was holding its annual meeting in the great metropolis of the country and in the centre of their largest Branch, a Branch which numbered some of the most eminent men in the medical profession in the world, and had been presided over by one of the most eminent physicians of the day, the President of the Royal College of Physicians. [Cheers.] He was glad to think that they numbered within their ranks many eminent ladies, some of whom were present with them that evening. [Cheers.] Twenty-five years ago the organ of the Association sent forth weekly 2 000 copies. He was glad to state that their weekly issue now amounted to 19 000, and that to the genius and to the energy and the long life-work of Mr. Ernest Hart was owing greatly the prosperity of the Association. [Cheers.] The Journal went forth throughout all lands, and was the recognised record of the progress of the arts of medicine and surgery. Beyond that it was received with a great relish by all the individual members of the Association, and poured upon them like a weekly blessing. [Laughter.] In the midst of their arduous labours, worn by the anxieties of practice, they rejoiced to turn to its pages and watch something of the progress of the healing art. He was not going to say that they were carried away by a burst of violent emotion every week over the pages of the Journal, but he could well conceive that many of their associates in all parts of England would laugh at their night bell if they had a copy of the Journal in their pockets. [Laughter.] And then, looking at it from another point of view, he would ask what would become of the experience and research coming from a thousand sources within their ranks? Would it not be lost to posterity if it were not committed to the immortal custody of their colleague, Mr. Ernest Hart? [Hear, hear.] The British Medical Association was once a flickering light; it was now a great illumination; it spoke with an authority that commanded an attentive hearing. Speaking of the Association, it was a grand thing to be able to say to the world that doctors were increasing on every side, for depend upon it a community was blessed that was surrounded by the faculty. [Laughter and cheers.] Still they were coming! If unseen fever were lurking in their midst there was no cause for alarm; as a practitioner said to a lady patient the other day, "Thank Heaven for the progress of the noble arts of medicine and surgery; thank Heaven for the evolution of preventive medicine! There is no cause for alarm, I can assure you. The world is growing wiser every day; help is at hand, and I beseech you to send for me whenever you require my services." [Much laughter.] The British Medical Association numbered 16,000 doctors, a great army of medical men, and if they could be placed in battle array they would cover many a mile. He would ask them rather to conceive of these men as an army scattered throughout the world, fighting with human pain and human suffering. He knew there were many who said their organisation was not perfect. This might be so, but of this he was confident, that the day might not be far distant when by a superior form of courtesy and a more universal brotherhood, a medical millennium might dawn upon the world. For sixty-three years the Association had upheld the high purpose for which it was established—sustaining the honour and dignity of the profession, and tending to their consolidation and unity. They expected to fight a good many foes, but he could assure the members that the Association would ever endeavour to sustain the honour and dignity of the profession, and that its moral power would soon be universally recognised, and its voice would become the voice of a united profession. The Association brought them into closer union with the whole medical world. Let them foster the hope that the grand march of international science would help on international goodwill, a force stronger than bayonets or artillery; and while the old weapons were rusting in their scabbards and modern weapons were growing too deadly to be used, let them hope that the gentle influences of moral right and higher sympathy would at length attain a universal victory. [Cheers.]

Sir William Priestley, LL.D., M.D. (President of the Metropolitan Counties Branch), in proposing "The Health of the President," said in doing so he felt very much in the position of a manservant who was most anxious to enter his service, and began by assuring him that he (Sir William) had a very good character. [Laughter.] If anybody ought to be capable of saying anything about their worthy President it was himself, for it was only a few days ago that Sir Russell Reynolds was reminding him of their acquaintance more than forty years ago. That was a long time to look back upon, and yet he had learned in those days to esteem and regard their distinguished President, and that feeling of reverence had grown in more mature years into that of the warmest affection. They all knew that Sir Russell Reynolds was distinguished alike as a scholar, as a gentleman, and as an accomplished physician. His amiability had been such that he could not have made a single enemy, and he (Sir William Priestley) had watched his advance very much as a younger brother might watch the advance and the culmination of the great career of an elder brother, and no man deserved more the respect of his brethren than did their President. [Cheers.] The best possible tribute to his excellence was the fact that he should have been chosen by that very particular assembly, the Comitia of the College of Physicians, to be its President. [Cheers.] If anything more was required to commend the toast it would be found in the excellent opening address delivered by the President, the unbounded hospitality that he had displayed to the members, and his invariable urbanity to all who came in contact with him. He gave them the toast of the President of the Association, Sir Russell Reynolds.

The toast was drunk amidst long and continued cheering.

The President said he was exceedingly obliged to the members for the kind manner in which the toast had been proposed by his old and affectionate friend Sir William Priestley, and received by the members. He was very glad that the Association had met under such favourable circumstances. It was his pleasing duty a year ago to invite, on behalf of the Metropolitan Counties Branch, of which Sir William Priestley was the head, the Association to meet in London. It had met in London, and it was a very good thing that it had done so; for he was not quite sure that twenty-three years hence, if London grew and the medical profession grew at the same rate that it had done during the last twenty-three years, that even London would know where to put the Association. They would have to resort to open air meetings, for no building would contain them. [Laughter.] He thanked them most heartily for the reception they had given him, and for the kind way in which the toast had been proposed and responded to.

During the dinner an excellent selection of music was given by the string band of the

ANNUAL MUSEUM.

[Second Notice.]

The Angier Chemical Company (32, Snow Hill, London, E.C.) showed their Petroleum Emulsion, a preparation containing a highly purified petroleum oil combined with the hypophosphites, lime and soda. The oil used in this emulsion is taken from selected wells, and so purified by special manipulation as to be deprived of taste and odour and rendered acceptable to both palate and stomach, while retaining unimpaired and in a concentrated form all the virtues of the crude oil. It mixes readily with water, milk, wine, or other liquids. In many forms of disease it will be found an efficient substitute for cod-liver oil, while its antiseptic properties render it of even greater value in diseases of a bacterial nature.

Anglo Swiss Condensed Milk Co. (Cham, Switzerland; 10, Mark Lane, London, E.C.) exhibited their Ideal Milk, a concentrated product of pure milk, enriched 20 per cent. by the addition of pure cream, not sweetened, but preserved solely by means of sterilisation. Condensed Milk, Milkmaid Brand, prepared in Switzerland, containing all the cream of the original milk. Condensed Milk, Milkmaid Brand, prepared in England, containing all the cream of the original milk. Condensed Milk with Cocoa, Milkmaid Brand.

The Apollinaris Company showed their well known Apollinaris water, a pure, natural, mineral water springing from a deep rocky source situated in the valley of the Ahr, Rhenish Prussia, highly effervescent, and bottled only with its own natural gas. Its perfect purity was recently certified by a report of the Special Committee of the Académie de Médecine de Paris, finding it absolutely pure and free from disease germs. They showed also Friedrichshall Water. This favourite aperient mineral water was exhibited under novel circumstances, the samples being drawn from the new spring. The Friedrichshall spring had of late afforded indications that the combination of saline deposits was becoming partially exhausted. Fresh borings in the neighbourhood opened a new spring, which compares favourably with the old Friedrichshall water of the old spring. The taste of the water is singularly pleasant and wholesome, and enables it to be used either as an occasional or habitual aperient.

Messrs. Arthur and Co. (69, Berners Street, London, W.) exhibited new medicinal preparations made in accordance with suggestions and prescriptions of eminent members of the medical profession. Lime and Iron (Mist. Calcis Chlor. cum Ferro), a neutral, non-saccharine, non-astringent, and sterilised preparation, designed especially for children and patients whose digestive powers are feeble. Mist. Calcis Chlor., a neutral solution of lime of chemical purity, prepared with sterilised water. Tannopumilene, a compound of pure crystallised digallic acid with the limonene of oleum pini pumilionis dissolved in absolute alcohol. Iodoglycerol, a non-irritating solution of iodine, intended as a substitute for the *P.P.* liniment. Lin. Pinus sceticum, a strong, stimulating terebinthinate embrocation of a creamy consistency. Oleum Morrhuæ Etheris, a clear, limpid preparation of oil and ether, which is more palatable than the turbid mixtures usually made. Lotio Picis Carbonis Co., a remedy for nettle-rash, etc. Lotio Capitis, a scalp tonic for falling hair. Lotio Furfuris, a scurf lotion. Ung. Hamamelidis Co., an ointment for hæmorrhoids, put up in collapsible tubes with detachable introducing nozzle. Massage Unguent, a deodorised and softened form of ol. theobromæ, which does not require previous melting. Sedative Snuff as prescribed for influenza and catarrh. Ung. Menthol Co. Ung. Sedativum, two nasal ointments prepared with a neutral and non-irritating basis containing adeps lanæ. Tongue Cloths of Japanese paper; they are very cheap, and obviate the necessity of washing those of linen. Staining Fluids for Bacteriologists. The Antiseptic Handkerchiefs for patients with phthisis, influenza, etc., to be burnt after use and thus prevent the dissemination of tubercle bacilli, etc. Chloralose, in 3 grain cachets. Iodo-tannin Wine, a substitute for cod liver oil. Enema Nozzle, for the self administration of enemas. Liq. Auri Brom. Arsenatis. Liq. Auri Brom. Arsen. Mercuratis. Liq. Argenti Arsenatis. Liq. Podoph.

Messrs. W. Bartlett and Sons (53, Gresham Street, E.C.) exhibited Surgical Needles of all descriptions and for all purposes.

The Berthon Boat Company, Limited (Romsey, Hampshire), showed the Portable Hospitals, which are constructed like the Berthon Boats, and being collapsible they are compressed for travelling into a very small space. It is claimed for them that they have perfection of ventilation, and their double walls and roof make them cool in summer and warm in winter. About fifteen minutes is enough to erect one 18 or 20 feet in diameter.

Messrs. Leonard W. Bickle and W. Barker exhibited an Improved Bed for Medical and Surgical Cases, which in surgical cases can be raised to height of operating table, and any desirable angle obtained. It saves disturbance of patients before and after an operation, and gives great comfort in after-treatment; it also saves patient mental worry of being put on to a table: does away with all disturbance of patient's room; gives inclined plane for treatment of fractures, joint disease, dropsies, etc., and is especially useful in gynæcological cases and ordinary midwifery.

The British Castor Company, Limited (47, Victoria Street, Westminster, London, S.W.) exhibited Mitchell's Tasteless Castor Oil, guaranteed pure, cold drawn, and free from any injurious treatment, as manufactured in England.

Messrs. Burgoyne, Burbidges, and Co. (Coleman Street, E.C.) exhibited Salicylic Acid, Salols, Carbonates, Bismuth Phenols, Disinfectants soluble in water, and various preparations, as prepared by Dr. F. von Heyden's successors in Radebeul, near Dresden; Chlorobrom (Burgoyne's), Ch. Chanteaud's Sedlitz, Malto-pepsyn (Hazen Morse), Red Cross Lint, Medical Lint, Dispensary Lint, Red Cross Antiseptic Wool and Lint, Red Cross Bandages, Red Cross Antiseptic Gauze in cartoons.

Messrs. Carnrick and Co., Limited, 24 and 25, Hart Street, Bloomsbury, London, showed their Beef Peptonoids: Concentrated beef, milk and gluten, in the form of powder, sterilised and partially peptonised, constituting a most nutritious, palatable, and easily digested food-combination. Liquid Peptonoids: A solution of the beef peptonoids powder, entirely digested, with the addition of the minimum amount of alcohol necessary to make a staple compound. It is extremely palatable, and this combination of a stimulant with easily digested nutriment has been found very successful. Liquid Peptonoids with Coca: Each fluid ounce is said to contain the extract of 30 grains coca. Peptonoids, Iron, and Wine: Beef peptonoids digested and dissolved in sherry, pyrophosphate of iron. Cod Liver Oil Milk. Soluble Food: A milk-wheat food. The starch of the wheat is converted into dextrine and soluble starch. The milk is sterilised and partly digested with fresh extract of pancreas, and milk sugar is added to bring up the saccharine constituents to the equivalent in human milk. Ozol: Ozal Pocket Inhaler, etc.

Messrs. Cassell and Company, Limited (Ludgate Hill, London, E.C.) showed copies of all their Medical and Clinical Manuals for the use of practitioners and students. Besides these two well-known series of works they also had on view Mr. F. Treves's new and important work *A System of Surgery*, many monographs on special subjects; also the numbers of the new and enlarged series of *The Practitioner*, edited by Mr. Malcolm Morris.

The Catley Abbey Natural Seltzer Water Company (Digby, Lincoln) exhibited samples of their Seltzer Water.

The Cerus Automatic Letter and Card Files had on exhibition their Files for filing away letters and documents.

The Condal Water Company exhibited their Water.

The Chemists' Aerated and Mineral Waters Association, Limited ("Camwal"), showed Aërated Waters manufactured for ordinary use in siphons and bottles, Soda, Potash, Lithia Waters, etc., manufactured according to the *British Pharmacopœia* for medicinal purposes in siphons and bottles; and Syrups manufactured from pure essences of fruits.

Messrs. Thomas Christy and Co. [illegible], Lime Street, London, E.C.) showed their Adeps Lanæ N.W.K., which it is claimed consists only of the low melting soft and supple constituent parts of pure woolfat, and it melts at 96° F. Other wool fats, from which the harder constituent parts

have not been removed, melt at a higher temperature. Antrophors for the treatment of diseases of the urethra and prostate. Flexible spiral springs coated first with an insoluble rubber covering to guard against irritation to the mucous membrane, and to prevent decomposition of the medicament by the action of the metal spring. The soluble medicated mass covers the first insoluble coating, and when inserted into the urethra or prostate it gradually melts, and is absorbed by the mucous membrane. Antrophors or Coated Spring Bougies, which are supplied medicated with Argent Nit., with Cocaine, Boric Acid, Caffeine, Cocaine Hydrochl., Copper Sulph., Ichthyol, Ichthyol and Cocaine, Iodoform, Microbene, Resorcin, Resorcin and Zinc Sulphate, Resorcin and Tannin, Resorcin and Ichthyol, Sozoiodol, Tannic Acid, Thal in, Thallin and Cocaine, Thallin and Zinc Sulphate, Zinc Sulp., etc. Analgen; its chemical formula is C_6H_4—OC_2H_5,—$NHCOC_6H_5$—N, the chemical name being ortho-ethoxy-ana-monobenzoyl-amido-quinoline. Benzoinol, a pure, staple, and bland petroleum oil, medicated with benzoin, and especially adapted for use as a spray on mucous surfaces, both alone and in combination with various drugs, such as menthol, cubebs, tar, pine needle oil, carbolic acid, etc. Cachets (Morstadt): These wafer capsules have many advantages. They are very easily swallowed; the remedy rendered tasteless by their use, is easily liberated in the stomach in a pulverulent condition. The cachets consist of sunk discs of rice paper, which, when filled, are merely moistened at the rims with water, by means of a suitable damping arrangement, and closed, after which they adhere firmly together. Christia: This is a substitute for oiled silk, gutta percha tissue and similar materials; it is claimed that it does not become sticky when heated. Christia Lint is a high quality lint with an impermeable backing. It is not only impermeable to, and unaffected by, hot and cold water, but is also unaffected by oil, grease, spirits, and chloroform. Christia Lintine: This substance is quite similar to Christia Lint, but its absorbent powers are greater. Cushman's Patent Menthol Inhaler, a most convenient instrument for the application of menthol to the throat and nose. Extract Alstoniæ Constrictæ Liq., antiperiodic, and nerve stimulant, combining the properties of quinine and strychnine. Extract Aplopappus Llareta Liq., a new remedy for gonorrhœa and gleet. Extract Boldo Liq., for atony of various organs, when quinine cannot be tolerated, or in chronic hepatic torpor. Extract Buru Gookeroo Liq., diuretic, demulcent, antispasmodic in dysuria, colic, gonorrhœa, and irritation of the urinary organs. Extract Eschcholtziæ Calif. Liq., soporific, analgesic. Extract Eugenia Cheken Liq., an aromatic, astringent, expectorant and antiseptic. Extract Haplopappus Baylahuen Liq., used as an internal stimulant for weak digestions, and as an emmenagogue; also said to be a remedy for diarrhœa. Extract Kolæ Liq.: Kola contains 2.348 per cent. of caffeine, also theobromine; a powerful nerve stimulant, used for fatigue, indigestion, dipsomania, etc. Extract Kurchi, for dysentery and hæmorrhage; anthelmintic properties are also attributed to it. Extract Nardostachy's Jatamansi, used in India for epilepsy, hysteria, and convulsions. Extract Pao Pereira Liq., febrifuge and antiperiodic. Extract Pichi Liq., used in urinary and kidney troubles, in chronic catarrh of the bladder, and in stone; also in dyspepsia and dropsy. Extract Piscidiæ (Jamaica Dogwood) Liq., a calming sedative; the Fluid Extract is said to have been used with benefit in cases of phthisis, miners' bronchitis, dry catarrh, facial neuralgia, sleeplessness, and sciatica. Extract Syzygii Jambolani (Jambul), a remedy for diabetes. Kola and Kola Preparations (Kola, Prepared Pure, Kolatina, Kola Champagne (non-alcoholic), Kola Chocolate, Kola Cocoa, Kola Elixir in bulk for dispensing, Kola Tablets, Kola Tonic, Kola Wine): Kola contains 2.34 per cent. of caffeine and theobromine, as compared with 0.70 to 1.50 per cent. in coffee. Oleum Gynocardiæ (Chaulmugra) for rheumatism, rheumatic gout, psoriasis, phthisis, and various skin diseases. Oleum Jatrophæ a purgative, having a pleasant almond-like taste. Oleum Palmæ Christy—Oleum Ricini Aromaticum (Dr. Standke): This is castor oil, which, by a process of Dr. Standke, is changed in its taste, sweetened, and aromatised. Ruby Christia, for the illumination of dark-rooms for photographic purposes: it successfully cuts off the actinic rays of light. Three qualities are supplied, paper, cotton, and silk, each possessing the advantage of being transparent, flexible, and safe. Stearns's Cascara Aromatic, a fluid extract of prime cascara sagrada, from which the bitter principle has been removed and the product aromatised and sweetened. Stearns's Essence Pepsin (Dike's), a liquid digestive. Stearns's (Dike's) Pepsin, in scales of the highest digestive power (1.3000), prepared by a new and original process. Stearns's Wine of Cod-liver Oil, a new and original preparation, which is said to contain 15 per cent. of pure cod-liver oil, as represented by its active medicinal constituents, morrhuine, butylamine, amylamine, iodine, bromine, and phosphorus; each fluid ounce of the wine contains 4 grains of peptonate of iron. Succus Caricæ Papayæ, for tapeworm and for indigestion, dyspepsia, etc. Succus Cinerariæ Marit. Syrupus Buru Gookeroo, diuretic, demulcent, anti-spasmodic. Tincture Lachnanthes Tinctoria, used in pneumonia, nervous and typhus fevers, diseases of the brain, laryngeal cough, hoarseness. Tincture of Lycopodium has a special action on the urinary organs and liver, relieving spasmodic retention of urine and catarrh of the bladder; in constipation attended with flatulence, in enteritis in infants, in chronic passive bronchitis, and in chronic pneumonia. Troch. Cocaine-Christy. Troch. Euphorbiæ Pilulifera: Euphorbia was first introduced for asthma, but since its introduction it has proved of great value in cases of coughs, colds, and throat affections generally. The lozenge now presented proves a most convenient form in which to administer the drug. Troch. Kolæ: These are best taken between the meals, and not immediately afterwards. Troch. Menthol, for coughs, colds, huskiness, sore throat, and affections of the throat and chest. Troch. Papain and Cocaine. Troch. Papaw, made from the dried juice of the papaw plant. Troch. Pichi, said to have a soothing effect upon the system. Troch. Salix Nigra. Stearns's Hæmoferrum (blood iron), a natural proteid compound of iron, aseptically prepared from fresh bullock's blood; it is very soluble, of sweet odour, of pleasant taste, neutral in reaction, and is non styptic, non-irritating, and non-constipating. Hæmoferrum (Stearns') is offered only in "pilloids" (each containing 3 grains), a new form of medication of lenticular shape, being simply the powdered drug enveloped in a transparent, extremely soluble, continuous coating.

The Church Lads' Brigade exhibit consisted of Medical Officer's Equipment, the C.L.B. "Regulation" Stretcher, and Ambulance Material. The C.L.B. Medical Staff Corps has been established to teach the lads first aid and ambulance, for which certificates are given—third class first year, second class second year, and first class third year.

Messrs. Cooper and Co. (80, Gloucester Road, South Kensington) showed in Room B, Exhibit No. 10, a few of their specialities, namely: Liquor Quininæ Salicylatis: This is a very useful preparation, salicylates of quinine in this form being more readily absorbed than when administered as powders, pills, or suspended in a mixture. Cachets, which were being shown in England for the first time. Cachet Machines, an improved style, being specially adapted for their cachets. Sinapine Tissue; this is an extremely convenient form of plaster. Specimens of Pills. Pastils of Cocaine, Red Gum, Cascara Sagrada, Sulphonal, Aconite, Bismuth, Pepsin, Compound Sulphur, Phenacetin, etc.

Messrs. Curry and Paxton (195, Great Portland Street) showed Ophthalmoscopes, after Couper, Morton, Juler, Lawford, Jessop, Cross. Perimeters, after McHardy and Priestley Smith. Optometers, after Couper, Doyne, Tweedy, etc. Trial Cases, with Lenses mounted in rings and unmounted. Trial Frames as designed by Landolt, Lang, Rockliffe, Tosswill, etc. Eyeglasses for Astigmatism, after Dodd, fitted with the new system of bifocal lenses. Eyeglasses of the horizontal pattern for constant wear. Spectacles of the latest and most approved forms. Electrical Branches for Ophthalmoscopes.

Messrs. Down Bros., St. Thomas's Street, Borough, S.E., showed a selection of their instruments, including Aseptic Surgical Instruments, and Aseptic Cases of Instruments suitable for all departments of Surgery. Anastomosis Buttons in various forms designed by Dr. J. B. Murphy (Chicago). Decalcified Bone Tubes, etc., by Dr. Paul. Mr. Mayo Robson's Bobbins, and Senn's Plates. Anæsthetic Apparatus: New Inhaler, by Mr. Norman Porritt; Ether Inhaler with double

water jacket, by Mr. Tyrrell; The Rumboll-Birch Gas and Ether Inhaler; Celluloid Inhaler for Ether and A. C. E. Mixture, by Dr. Silk; Transparent Face Pieces, by Dr. Silk. Antitoxin Syringes: Various models, including Debove's and recent much improved model, by Dr. Roux. Antrectomy Instruments: Recent models, by Mr. Bark (Liverpool), Mr. Arbuthnot Lane, and Mr. Charters Symonds. Artery Forceps: Mr. Greig Smith's new model. Aseptic Furniture for the operating theatre, and the wards of hospitals, also for surgeon's consulting and private operating rooms. Cage for undescended Testicle, by Mr. Watson Cheyne. Cleft Palate Instruments: Complete aseptic cases including designs by Mr. Davies-Colley, Mr. Durham, Mr. Mason, and Mr. Smith. Craniectomy Instruments: Forceps, by Mr. Victor Horsley and Mr. Arbuthnot Lane; Trephines, by Mr. Walsham; and Trocars, by Professor Macewen; Mr. Arbuthnot Lane's V-shaped Gouges. Colotomy Truss, by Mr. Clement Lucas. Dr. Paul's Glass Tubes. Diagnostic Bag designed at the suggestion of Mr. Arbuthnot Lane. Dissector and Probe, by Mr. Watson Cheyne, for isolating nerves and veins in fine dissections. Ear Instruments: New designs, by Mr. Cresswell Baber (Brighton), and Dr. Adolph Bronner (Bradford); New Snare, by Mr. Ballance, and Osteotome for cutting through the tympanic ring, by Mr. Ballance; New Auriscope with electric light, by Dr. Hopwood; and new Polypus Forceps, by Mr. Wyatt Wingrave. Electric Light Apparatus: Latest improved models, including the Washington Isaac's Search Light and new Urethroscope, by Mr. Burghard. Exploring Syringe combined with Director, designed by Mr. Arthur Prichard (Clifton). Eye Instruments: Aseptic sets in cases; Aseptic Douche, by Mr. Lawford; Metal Frames to cover Dressings, by Dr. Adolph Bronner and Mr. Stephenson; Nasal Duct Probes, by Mr. Simeon Snell. Trachoma Forceps, by Mr. Stephenson; Mr. Simeon Snell's Platinum Cautery; Self supplying Syringe for Lachrymal Duct, by Mr. Lumley. Gall Stone Forceps, by Mr. Anderson, and Gall Stone Scoop, by Mr. Morison (Newcastle-on-Tyne). Hernia Needles, by Professor Macewen and Mr. Watson Cheyne. Hypodermic Syringes, latest improved aseptic model, including new patent made entirely of metal, with metal piston in metal case. Hysterectomy Instruments: Broad Ligament Forceps, several new models; Dr. Galabin's Needle for the broad ligaments; Elastic Ligature Instrument, by Professor Pozzi; Péan's Retractors; Jordan Lloyd's Vulsellum. Ice Cups: Sister Louise's A.N.S. Patent Ice Cups in various forms suitable for hospital wards and sick rooms. Intestinal Operation Instruments: Bowel Clamps; Dr. Murphy's Buttons for lateral and end-to-end approximation; Decalcified Bone Preparations, various; Mr. Allingham's Clamp for Inguinal Colotomy, and Mr. Morison's Clamp Forceps combined with tube; Dr. Paul's Truss for excision of rectum. Laryngeal Instruments: Dr. Adolph Bronner's Aseptic Syringes; Dr. Watson Williams's Syringe for subcutaneous injection; Forceps by Moritz Schmitz. Ligatures and Ligature Holders, aseptic, new portable model, by Mr. R. Alcock, of Burslem. Laminectomy Instruments: Dr. Arnison's Guarded Chisels; Forceps, by Mr. Victor Horsley and Mr. Arbuthnot Lane. Lithotrity and Litholapaxy Instruments: New forms of Lithotrite, by Mr. Milton, of Cairo; Mr. Golding-Bird's Evacuator. Mastoid Instruments: New models by Mr. Ballance and Mr. Arbuthnot Lane. Nephrectomy Instruments, by Mr. Clement Lucas. Nose Instruments, by Mr. Cresswell Baber, Dr. Adolph Bronner, and Mr. Charters Symonds. Oesophageal Instruments, by Mr. Charters Symonds. Operation Bag, by Mr. Greig Smith. Operation Coats and Dresses for the operating theatre capable of being sterilised. Operation Table, portable, by Mr. Jordan Lloyd. Ophthalmic Atlas, by Mr. Frank Haydon, for recording diagnoses. Ophthalmoscopes: New models, by Mr. Simeon Snell, and Down's Patent Modified Morton's, with additions by Mr. Work Dodd. Ovariotomy Instruments: Trocar with wings to open inside cyst, by Mr. Stanmore Bishop; Pressure Forceps, various forms, by Mr. Greig Smith; Abdominal Suture Needles, by Dr. Cullingworth. Peritoneum Forceps, by Mr. Greig Smith. Pocket Cases, Aseptic, by Professor Cathcart and Dr. Leeson. Post-Nasal Instruments: Curettes, by Mr. Ballance, Mr. Golding-Bird and Gottstein; Mr. Symonds's modification of Lowenburg's Forceps. Rectal Ointment Introducer, by Mr. E. C. Ryall. Retractors: Automatic, by Mr. Jordan Lloyd and Dr. Maunsell, also Mr. Watson Cheyne's Retractor for use in Intestinal Operations; Mr. Durham's and other Retractors fitted with Down Brothers' new model handles. Set of Instruments for Operating in Cases of Liver Abscess, by Mr. W. Edmunds. Scalpels in Aseptic Cases, by Professor Macewen, and Mr. Jordan Lloyd's Aseptic Scalpels combined with Raspatories. Spring Compresses for Wounds, by Mr. Lenthal Cheatle. Splints on new principle for fractures of the lower extremities, by Mr. Arbuthnot Lane. Sponge Holders: Down Brothers' new registered aseptic pattern. Sterilisers: Cathcart's and Schimmelbusch's for surgical instruments and dressings; also special forms of Sterilisers for catheters, ear instruments, eye instruments, ligatures, etc. Stethoscopes: Dr. Herschell's improved Binaural (Down Brothers' patent), various forms of new patent Chest pieces. Tonsil Guillotines: Improved model, by Mr. Ballance, and modification of Mackenzie's, by Mr. Roper, of Lewisham; Ruault's Forceps for excising the Tonsil. Tracheotomy Instruments in aseptic cases, including several new models. Tourniquets: Dr. Samway's Patent Clip and Grapnel Tourniquets. Urethral Instruments made for Mr. Hurry Fenwick for Curettage or Internal Urethrotomy under control of the electric light, as carried out in the distended urethra by means of the aëro-urethroscope; New Electric Urethroscope by Mr. Burghard; Dr. Nicoll's, of Glasgow, new Steel Dilators. Uterine Instruments: New form of Curette, by Dr. Herman; Hegar's Dilators in metal, modified by Dr. Hawkins-Ambler; Aseptic Uterine Sound, by Dr. Horrocks. Vaginal Specula: New forms, by Dr. Arnison, of Newcastle, Dr. Auvard, Mr. Spanton, of Hanley, and Dr. Galabin. They also exhibited Surgical Instruments formerly belonging to Dr. Leonard Gillespie, who served as Physician to the Fleet with Nelson in the *Victory*; lent by Mr. H. Nelson Hardy.

Mrs. A. M. Douglas, Inventor and Patentee (Dalkeith House, Leamington), exhibited the "Facile Princeps" Bed, which enables a nurse to remove the sheet on which the patient lies without disturbing or touching him. The operating table in combination with it obviates entirely the necessity of lifting or moving the patient after operating. The whole appliance is marked by simplicity, ease, and strength.

Messrs. Evans, Lescher, and Webb (60, Bartholomew Close, London, E.C.) showed Pharmaceutical Products and Specialities of the house, such as Fluid Extracts, Savaresse's Capsules, Evans's Saline, Montserrat Lime Fruit Juice, etc.

Messrs. Fassett and Johnson (32, Snow Hill, London, E.C.) showed Medicinal and Surgical, Adhesive, Isinglass, Mustard and Spread Plasters all descriptions in approved forms; Mead's Adhesive Plasters in various sizes; Absorbent Cotton, Lint, Gauze, Bandages, Wool, Jute, Oakum, Oiled Silk and Muslin, Protective Oiled Silk, Catgut and Silk Ligatures, Surgical Dressing Paper, Drainage Tubes, Hospital Oiled Paper, and every variety of Surgical and Antiseptic Dressings, also Compressed Antiseptic Tablets. Seabury's Air-tight Aseptic Container (patented) for medicated bandages, cottons, gauzes, etc., which received a special highest award at the World's Columbian Exposition, Chicago, 1893. It consists of wood fibre package into which is incorporated an antiseptic; the package is coated within with antiseptic lacquer, the joints overlap, giving great strength, and are made doubly secure by overlapping label, and further rendered perfectly airtight by lacquering its entire surface. Seabury's Standard Antiseptic Gauzes, prepared with absorbent gauze manufactured expressly for the purpose; every precaution is taken to ensure aseptic conditions throughout the process of manufacture and putting up. They are thoroughly impregnated with the percentage of medication stated upon the label, so that by taking a given weight of gauze the surgeon may know exactly the quantity of antiseptic he is using. Seabury's Sulphur Candles, for disinfective purposes.—They are sold in two forms, the larger candle, in a decorated tin container, holds 1 pound of sulphur, burns for about two hours, and is capable of yielding 354 litres, or nearly 12 cubic feet of pure sulphurous acid gas (SO_2) at normal temperature and pressure. The smaller candle, which is the subject of a recent patent, is in a porous container; the efficacy of sulphurous acid gas for disinfecting purposes is greatly intensified by being generated in a moist state, and

as the water comes into more immediate contact with the burning sulphur in this container, a better result follows.

The Flitwick Chalybeate Company (63, Borough High Street, S.E.) showed their Water from a medicinal spring discovered in Bedfordshire, which yields a chalybeate of the highest therapeutic value, and contains a large amount of iron entirely in the ferric state, with a moderate amount of alumina and small amounts of lime and magnesia, combined mainly with sulphuric acid as sulphates and very marked amounts of the organic compounds derived from peat. The water is of a sherry colour, perfectly clear and bright. The peculiar manner in which the iron is held in solution in the water renders it capable of being readily absorbed and assimilated; it does not affect the teeth nor produce constipation; for anæmia, chlorosis, and general debility it is invaluable. Wikko, a sparkling non-alcoholic pick-me-up, containing some of the natural chalybeate water of Flitwick, and forming an extremely palatable beverage, and a pleasant medium for taking iron, especially suitable for ladies and children.

Messrs. R. W. Greeff and Co. (3, Eastcheap, London, E.C.) exhibited Airol, Bismuth Subgallate, an iodoform substitute containing iodine; Gallanol, Gallic Anilide, a non-toxic substitute for pyrogallic acid, recommended in eczema, psoriasis, etc.; Gallobromol, Dibromogallic Acid, an antiseptic and sedative in hæmorrhagia; Salol, Phenyl Salicylate, free from uncombined carbolic or salicylic acid; Saccharin, Pure Orthobenzoic Sulphinide, free from impurities; Salicylic Acid and Salicylates, Phenacetin, Sulphonal; Antipyrin, Salicylate of Antipyrin, recommended in influenza and menstrual difficulties; Thiol, a substitute for ichthyol; Thioform, Dithiosalicylate of Bismuth, invaluable in the treatment of wounds and skin diseases; Liquid Pepsin (Dr. Byk), a concentrated and active dissolved pepsin.

The Harrogate Corporation had on show a collection of their Waters, and also Photographs of Baths and Buildings.

Mr. Gustav Hermanni, Jun. (Representative of Ichthyol Company, Cordes, Hermanni and Co., Hamburg, 20, High Holborn, London, W.C.), was present showing Ichthyol, which is the ammonium salt of ichthyol-sulphonic acid, obtained from a bituminous deposit containing the fossilised remains of maritime animals and rich in sulphur; it is a natural product that has undergone chemical treatment to reduce it to a practical form for employment in medicine. Besides the ammonium salt of the dibasic ichthyol-sulphonic acid, the percentage composition of which is represented by the formula $C_{11}H_{15}S_2O_8(NH_4)_2$, the preparation contains water and volatile oil, which communicates a characteristic odour, and cannot be removed without fear of decomposition and destruction of the therapeutical activity.

Messrs. Horlick and Co (39, Snow Hill, London, E.C.) showed their Malted Milk: it is a prepared food for infants and invalids, containing no starch or cane sugar, requiring no cooking or addition of milk, and will, it is claimed, keep indefinitely in any climate.

Idris and Co., Limited, exhibited their Table Waters, in the shape of a trophy of siphons and bottles, together with illustrations of their laboratory methods. One of their chemists was in attendance to show their various methods of analysis and examination. Among their other specialties is to be noticed their Patent Glass Tubing, which is invaluable for the conveyance of pure table waters. They also exhibited a Medal of their Factory.

Messrs. Ingram and Royle's show of Waters included Æsculap, Carlsbad, Vichy, Grande-Grille, and Hopital. They also showed Vichy Salts and Pastilles as extracted from the waters.

Jeyes' Sanitary Compounds Company, Limited (64, Cannon Street, E.C.), exhibited their Fluid, a sanitary coal tar disinfectant, and non-poisonous. Jeyes' Sanitary Powder, a dry disinfectant for cellars, floors, outhouses, etc. Creolin, a refined preparation of Jeyes' Fluid. Lano-Creolin Ointment, in collapsible tubes, for wounds, eczema, and skin affections, and for anointing the fingers in examinations. Creolin Surgical Powder, a substitute for iodoform. Creolin Gauze, made with the finest bleached gauze, and impregnated with 10 per cent. of creolin, and used as a substitute for iodoform gauze. Creolin Surgical Soap, for disinfecting the hands before and after operations, etc. Creolin Capsules, for internal use. Disinfectant, Household, Toilet and Fancy Soaps in all varieties. Symphorol (caffeine-sulphonic acid), a new diuretic, manufactured by Messrs. Meister, Lucius, and Bruening; increases urinary secretion without producing secondary symptoms. They also exhibited some new Medicinal Preparations for the first time: Jeyes' Soluble Fluid, an active germicide, giving with water clear solutions, and having otherwise all the properties of creolin and Jeyes' Fluid. Lano-Creolin for the toilet. Migrainine, a new double salt of antipyrin and caffeine, useful in migraine, sick headaches, and neuralgia complaints. Lysidine, a new solvent of uric acid. Carniferine, an iron salt of phospho-carnic acid, recommended in anæmic conditions, particularly owing to its non-disturbance of the digestion. The Indispensable Automatic Toilet Box and Paper, useful in the interest of hygiene and prevention of infection. Nosophen (tetra-iodo-phenolphtalein), a new iodoform substitute manufactured by the Chemische Fabrik Rhenania. Antinosine, a soluble sodium salt of nosophen, for washing wounds and cavities. Eudoxine, a bismuth salt of nosophen.

The Johannis Company had a stall for exhibiting their Water.

An excellent exhibit of Sanitary Appliances was that of Mr. John Jones (40, Sydney Street, Chelsea, S.W.). We had occasion before to call attention to the various articles manufactured by this firm, the excellence of which is well known.

Messrs. S. Kutnow and Co. (66, Holborn Viaduct, London, E.C.) showed their improved Effervescent Carlsbad Powder. This preparation is a pleasant and effective aperient; it will also be found valuable in diseases of the stomach, kidney, liver, and bladder, as well as in diabetes, gout, rheumatism, acid dyspepsia, constipation, and hæmorrhoids. Kutnow's Anti-Asthmatic Powder (Pulvis Kutnowii Anti-asthmaticus), and Kutnow's Anti-Asthmatic Cigarettes, for asthma, bronchitis, catarrh, influenza, hay fever, and ordinary colds. These preparations consist of a judicious admixture of various herbs, possessing a sedative action upon the lungs and air passages, with potassium nitrate.

The Liquor Carnis Co. (London) were showing their Virol, a preparation which has been devised by the Liquor Carnis Company to supersede cod-liver oil, and also to supplement the heat-producing capabilities of oleaginous substances by the introduction of nitrogenous and bone-forming ingredients. It consists of beef marrow fat from marrow bones which are sawn in sections, and the marrow scooped out. The marrow, when separated, is dissolved at a very low temperature, and afterwards combined with raw eggs, the shells of which are also brought into the preparation by the aid of lemon juice. To this is added the carbohydrate in the form of malt extract. Caffyn's Malto-Carnis, the formula of which is: Liquor Carnis (Caffyn), 66 parts; cocoa essence, 10 parts; ext. malt, 24 parts. Misce sec. art. (L.C.C.). Liquor Carnis Suppositories, a raw beef juice suppository. Caffyn's Liquor Carnis. Marrol: Ox-bone marrow, *plus* the carbohydrate—extract of malt—in physiological proportions. A palatable substitute for cod-liver oil. This preparation is analogous to Virol, but it is not so sweet, and the fat and proteid of eggs are replaced by ox-marrow, selected partly on account of its easy digestibility, and partly because the red portion of marrow contains hæmoglobin and organic compounds of iron and phosphorus. Meat Juice for invalids' and travellers' food. This is a preparation of meat juice, manufactured by the Company. It contains the albumins and albuminoids in their raw condition. Virol sans Sucre, a preparation of red and yellow bone marrow rich in hæmoglobin and organic compounds of iron and phosphorus. It is a substitute for cod-liver oil, and constitutes a good form of administering fat.

The Leamington Town Improvement Association showed the Leamington Spa Mineral Waters.

Hospital Sunday Fund.—A meeting of the Council of this fund was held on July 29th at the Mansion House, when, on the recommendation of the Committee of Distribution, awards were made to 179 general, special, convalescent, and other hospitals, the total amount available for distribution being £44,410.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 10TH, 1895.

THE ADDRESS IN PHYSIOLOGY.

In selecting the subject of internal secretions for his address Professor Schäfer is to be congratulated, for the study of this deeply interesting problem is not only important to the scientific physiologist, but is of the greatest practical value to the practitioner. Those in busy practice formed the great bulk of the audience, and they have often but little leisure to study the rapid advances of science; they therefore owe a deep debt of gratitude to Professor Schäfer for placing before them in a concise and lucid form the main facts relating to the subject.

The term "internal secretion" is of recent origin, though many of the main facts have long been recognised. Removal of the organs of generation markedly modifies the whole build and temperament of an animal; such an operation causes more than a mere cessation of the generative function. This, of course, has been known for centuries; the effects of the removal of the thyroid have not been known so long, but forty years ago Schiff did the experiment, and noted many of the results; his work was forgotten until it was unearthed subsequently to the important researches of Ord, Kocher, and Horsley. So, too, in the case of the pancreas, the association of pancreatic disease and diabetes was noted by clinicians long before the time of von Mering and Minkowski. Professor Schäfer points out that some glands can be removed without injury to life, such as the salivary and mammary glands. If these organs produce an internal secretion similar to that produced by other glands, the loss after removal must be repaired vicariously.

The address may be subdivided into sections, according to the different glands considered, and evidence is adduced that the liver, the kidney, the pancreas, the thyroid, the pituitary body, and the suprarenals, all produce a something which is poured into the venous blood, and is of benefit to the whole body, producing widespread effects on nutrition. In the case of the pancreas, there is also the external secretion, the pancreatic juice, to be considered, and Professor Schäfer makes a new point when he suggests that the newly discovered internal secretion of the pancreas, the removal of which produces diabetes, is connected with the epithelial islets in the organ, which have for so long puzzled histologists.

The thyroid naturally comes in for a large share of notice, for it is in relation to this organ that the best practical results have followed close on the heels of experimental investigation. Professor Schäfer is, however, careful to point out that the successful treatment of myxœdema with thyroid injection or thyroid grafting does not necessarily mean a similar success in the treatment of diseases of other organs by injections of extracts of those organs. He, however, has a small amount of evidence to show that cases of Addison's disease are benefited by the exhibition of extracts of suprarenal capsules taken by the mouth.

The section relating to the pituitary body and suprarenal capsule will be read with especial interest, because most of the facts brought forward are new. In conjunction with Dr. George Oliver, Professor Schäfer has been working at the subject for the last two years, and the result may be read *in extenso* in the current number of the *Journal of Physiology*. With regard to the pituitary body, the theory that this gland takes on a vicarious action when the thyroid is diseased or removed falls to the ground when examined by the experimental method. Extracts of thyroid produce no obvious effects on the heart and cause relaxation of the arterioles, while extracts of the pituitary body produce great augmentation of the heart's force and contraction of the small vessels, leading to a rise of blood pressure.

The suprarenal is treated at greater length; the work of Addison and of Brown-Séquard is alluded to, and then more recent observers, like Abelous and Langlois, who have taken up the subject afresh within the last few years, are considered. These French physiologists confirmed Brown-Séquard's observation that extirpation of the suprarenals is invariably fatal; the blood of such animals is, moreover, poisonous and produces effects which are stated to be similar to curare poisoning.

Schäfer and Oliver confirm the work, in so far as to show that the effects manifest themselves chiefly in the muscular system, but the toxic effects are those of veratrine rather than of curare. The effects of injecting an extract of suprarenal capsules on involuntary muscle is equally marked. The enormous rise of blood pressure which immediately follows the injection is partly due to increase of the heart's force and frequency. This is seen best when the vagi are cut; if these nerves are intact the heart is slowed; the increase of arterial pressure is, however, chiefly due to contraction of the arterioles, and this is a direct action rather than an indirect one through the vasomotor centre, as it is considered by Cybulski.

The nature of the poisonous agent is still uncertain, but the interesting facts have further been made out that it is confined to the medulla of the gland, that it is absent from the suprarenals in cases of Addison's disease, and that the physiological effects are produced by doses compared to which those of homœopaths are gigantic. One-millionth of a gramme per kilogramme of body weight is sufficient to produce physiological effects. The effect is transitory, the poison apparently being packed away and rendered innocuous in certain organs which cannot at present be satisfactorily specified.

Professor Schäfer considers in the case of the suprarenals, as in those of the other organs he discusses, that the theory of internal secretion has more to be said for it than the rival doctrine of autotoxication. To put it more specifically:

one hypothesis is that the suprarenal is excretory; it gets rid of something which accumulates when the gland is removed; this is the theory of autotoxication; the other theory, that of internal secretion, teaches that the organ forms something, in the present case something which is distributed to the muscles, and essential for their normal tone; when the gland is removed, toxic effects are the result of the absence of this internal secretion.

We think that Professor Schäfer has the best of the controversy, but the steps in the argument we must leave to our readers to unravel for themselves; the address will amply repay a full and careful perusal.

OVER-OPERATING IN GYNÆCOLOGY.

Sir William Priestley's address, delivered in the Obstetric Section, deserves more than passing notice—it should not be forgotten. The same might be said of any other good address; unfortunately, a speech full of important advice is more often applauded than remembered. The best way to utilise Sir William Priestley's address is to scrutinise closely the work not of charlatans but of enthusiasts. Among the gravest features of the question is the attitude of certain Continental schools. Verneuil, as Sir W. Priestley explained, was violently opposed to many novel radical measures. Unfortunately, several European authorities of high repute continually advocate extreme courses such as total extirpation of the uterus with the appendages in cases of chronic, or even acute, inflammatory affections of the tube and ovary.

Last June the German Gynæcological Association met at Vienna. A leading authority laid down the law that in gonorrhœal disease of the appendages it is absolutely wrong to leave the tube and ovary on one side, even if they seem healthy, and that it is much better to remove the uterus as well. Another authority supported him on the score that many "parenchymatous bleeding areas" are to be found in the uterus in these cases, so he always removes that organ. He does the same, he adds, in cases of malignant ovarian tumour—a clinical and pathological condition quite different from gonorrhœal inflammation. Veit, of Berlin, spoke in a vein of satire. The advocates of amputation of the uterus insist that when the appendages alone are removed, exudations on the two pedicles set up pain, and cause adhesions to the intestine, or else fix the uterus. Veit attributes the exudations to fresh gonorrhœal infection; therefore, says he, "castration of the husband is the best treatment for the patient." Unfortunately in France, as well as in Germany, hysterectomy is extensively carried out. It is difficult to conceive anything more unsurgical than extirpation of the internal female organs for damage done by gonorrhœa; yet foreign authorities seem to go further—they recommend radical operations for pelvic cellulitis after labour. Sir William Priestley makes a note of this great abuse, and rightly adds that the operation is sometimes undertaken because the patient is too impatient to wait for the slow recovery which would have taken place in due course. The truth is, that an operation followed by successful results is not necessarily justifiable, and impatience on the part of the patient is not by any means more absolute justification than her more tardy consent after injudicious advice.

AUTUMN HOLIDAYS IN SCOTLAND.

If the "Great Wizard of the North" had been told that it would be practicable and usual to do a morning's work in London and lunch there, and to sleep the same night in Edinburgh or even Perth, having partaken comfortably of a good dinner served on the road, he would probably have considered the statement as much of a romance as any he had ever invented. Yet Sir Walter Scott has been dead but little more than half a century, and his descendants can now leave Euston at 2 P.M., dine leisurely in the admirable corridor train that departs at that hour, and reach Edinburgh before eleven, and Perth about midnight; while those who prefer night travelling can dine in London and take an early breakfast the next morning in Perthshire. Thus, by the admirable enterprise of the Northern railway companies the Highlands of Scotland are brought, as it were, to our very doors, and we can finish our work in London in the evening of one day, and be shooting on a grouse moor or fishing in a salmon river the next morning in the very heart of Scotland.

Scotland has unsurpassed attractions as a holiday resort for many. It is the paradise of the sportsman. Its grouse moors, its deer forests, its salmon rivers and trout streams, its lochs (many of them yielding admirable sport to the fisherman, salmon, loch trout, sea trout, and in some the beautiful and daintily coloured char,) offer to the sportsman irresistible attractions.

But Scotland has charms also for others. Many distinguished members of our profession who have not been notable sportsmen have found rest and refreshment amidst its wild mountain scenery and in its invigorating, though somewhat rough, climate. The late Sir William Gull spent his autumn vacation for many years at Tulliemet, a fine residence beautifully situated in the highlands of Perthshire. We had the pleasure of finding Sir William there some years ago in his very best "form"—his remarkable conversational powers, his keen sense of humour, his wide and fruitful observation of men and things were far more notable and enjoyable after his mental energies had been recruited by a few weeks' repose in his Highland retreat than they were in the midst of the stress and strain of his London work. The same year we found the late President of the College of Physicians (then Dr. Andrew Clark) occupying that classic abode Abbotsford, a little tormented, we thought, by the constant visits of American and other tourists.

Sir William Priestley, well known as a keen and skilful fisherman, has spent many an autumn vacation on his favourite river, the Spey, and Lady Priestley has written a charming account of the trials attending the creation of a hygienic "Highland home."[1] Sir Richard Quain is proud to exhibit the many trophies of his exploits in Scotch deer forests; and others of the more highly favoured members of our profession who are able to afford the luxury of a "Highland home" think there is no place like Scotland for an "autumn holiday."

But our object now is to offer a few seasonable counsels to those who desire to make acquaintance with some of the more attractive parts of Scotland in the few weeks of an autumn vacation and who are in search of the picturesque and of good bracing air rather than sport. Now there are

[1] *Hygiene under Difficulties*, by Eliza Priestley.

certain undoubted drawbacks to touring in Scotland for those who have pleasure and the picturesque only in view. Scotland is in many parts exceptionally wild, picturesque, and beautiful if only its beauties could be seen, but, alas, too often its scenery is out of sight, enveloped in mist and cloud. Louis Stevenson has described the northern summer as a "few flaws of fine weather," and that tourist is indeed fortunate who does not find during many days of his tour some of the finest scenery "veiled in white mists." The damp misty atmosphere, the gloom of the overcast skies, the boggy ground covering the mountain slopes, and the downpouring of chill rains, especially in the Western Highlands, are apt to disappoint those travellers who are accustomed to the clear skies and dry atmosphere of the mountain districts of Italy and Switzerland.

Then the accommodation for travellers is in many parts of Scotland very primitive and rough, and in those places of considerable resort where the accommodation is somewhat better the hotel charges are very high, and the tourist is ordered about by the hotel people much like a schoolboy; he must eat his breakfast and dinner at a particular hour, and he must eat what is given him and not grumble but be thankful, or he will be told to "move on" in order that someone else may have his place. Indeed, it is a common practice in some hotels in favourite resorts in Scotland to refuse to allow guests to remain longer than three or four days at a time, as it is more lucrative to the hotel keepers to have frequent changes. The best accommodation is, moreover, often to be found in those palatial buildings which are noteworthy objects in many a fine landscape in the Highlands, and are well known by the name of "hydros"—although we are assured fluids stronger than water are liberally consumed in them. These, however, are often overcrowded in the height of the season, and visitors who wish to see Scotland in comfort and are at the same time dependent on hotel accommodation should choose the month of June or the latter half of September for their visit, "when guests are few and innkeepers are civil." The weather, too, is often better in Scotland in early summer and in late autumn than it is during the height of the touring season.

Those who enjoy a "sea blow" can hardly do better than take a berth by steamboat from London along the east coast to Leith for Edinburgh, and, if desirous of prolonging the sea trip, it can be continued further north along the east coast of Scotland to Aberdeen, and thence by Cromarty to Inverness. This is a fine sea trip, with interesting coast scenery throughout nearly the whole of the journey. Steamers sail to and from Edinburgh and London three days a week, or oftener; or a Scottish tour may be begun by taking steamer from Liverpool to Glasgow; there is a departure from Liverpool four or five times a week, and this tour may be continued through the Western Isles of Scotland.

Another attractive tour can be begun at Glasgow by taking advantage of the new West Highland Railway which, starting from Helensburgh, passes through some of the finest, most characteristic, and wildest scenery in Scotland; the grand mountain scenery on the banks of Loch Lomond, the wild Highland scenery at Crianlarich, where the railway passes between the high peaks of Ben More and Ben Lui, and then, plunging into the very heart of the Highlands, crosses the hitherto almost inaccessible Moor of Rannoch, and reaches at Roy Bridge, the Valley of the Spean and Glen Roy, with its singular parallel roads, and continues along the course of the Spean under the frowning mass of Ben Nevis to Fort William, where the tourist, going further north, can take steamer for Inverness, through the Caledonian Canal, or, turning westward, reach Oban by Loch Linnhe, stopping on the way at that beautifully situated spot, Ballachulish, on the shores of Loch Leven, whence he can visit the sombre pass of Glencoe. From Oban numerous attractive excursions can be made, and no finer centre can be chosen for exploring this perhaps the most beautiful and picturesque district in Scotland.

The climate of this side of Scotland is, it must be remembered, remarkably "soft" and damp, and less bracing than the uplands to the North and East, as it is exposed to the mists and fogs of the North Atlantic, but the coast scenery is particularly fine, sea and mountain views being beautifully blended. Oban is well suited for a prolonged stay; it possesses numerous fine hotels and abundant lodging-houses, but all these are apt to be overcrowded during the height of the season, and the wisest course is to time one's visit so as to arrive a little before or a little after this period.

The situation of Oban is itself attractive, and the possession of a fine and commodious harbour enables the visitors there to take a variety of sea-trips such as cannot be found in any other of our coast resorts. It would occupy a column of our space merely to enumerate the steamboat routes, the coaching tours, and the railway trips that can be made daily from Oban. The sea-trips to the remarkable islands of Staffa and Iona should not be missed, the circular tour to Glencoe by steamer and coach is not likely to be omitted, nor the readily accessible charms of Loch Awe. Many tourists prefer to approach Oban by steamer from Glasgow, which enables them to see the fine scenery of the Clyde and the Western Isles to much advantage.

Those who are visiting Scotland for the first time will not be willing to miss seeing Edinburgh, one of the most beautiful cities in the world. From Edinburgh the "Waverley" country can easily be visited in a long day, including Abbotsford House, Dryburgh and Melrose Abbeys, Hawthornden, and Roslin.

Another very fine excursion is from Edinburgh to Stirling, and thence by Callander through the Trossachs, steaming down Loch Katrine and Loch Lomond, and returning by train to Stirling. Close to Stirling is the celebrated field of Bannockburn; close to it, also, are the Bridge of Allan, a frequented health resort with mineral springs, and Dunblane, where a pleasant stay may be made in the fine "hydro" established there.

An hour or two by train will convey the tourist from Edinburgh or Stirling to the highlands of Perthshire, where he will find himself in the midst of true highland scenery, and enabled to breathe fine bracing highland air. Pitlochry, less than thirty miles from Perth, is an excellent centre for exploring this part of Scotland; it is beautifully situated close to Loch Tummel, the Queen's View, the Falls of Tummel, the Pass of Killiecrankie, Blair Athole, Dunkeld, Birnam, and many other attractive objects of interest. It has good hotels—Fisher's is well known—and the "Athole Hydro," here situate, is one of the best and most commodious in Scotland. Loch Tay, Loch Rannoch, Loch Erricht, can all be visited from Pitlochry by the aid of the High

land Railway and its branches. In fine weather a carriage drive (or a hardy pedestrian can accomplish it on foot) through wild and grand highland scenery from Pitlochry to the popular mountain resort, Braemar, by the highland pass known as the "Spittal of Glenshee" can be commended. Braemar is about fifteen miles from the Spittal of Glenshee, and for the pedestrian the distance between Pitlochry and Braemar is only about thirty miles. Braemar is perhaps the highest frequented highland resort for prolonged residence in Scotland, and it is within a few miles of the Queen's highland home at Balmoral, and shares its fine bracing climate. It is stated to be 1,100 feet above the sea level, and it has come to be regarded as the best representative of a high mountain climate to be obtained in Great Britain.

We have not space to dwell on the charms of the surrounding district; they are now familiar to most travellers in Scotland. A fine drive from Braemar to Ballater, passing Balmoral Castle on the road, brings us to the Deeside Railway; thence by rail to Aberdeen, skirting this fine river along a great part of the route, in about two hours. The tourist passing still northwards will take the train at Aberdeen, and passing through Keith, Elgin, Nairn Inverness, and Beauly, will reach Dingwall in five or six hours, from which place Strathpeffer is only four miles distant, and is reached by a branch of the Dingwall and Skye Railway. Strathpeffer is certainly rising in reputation as a health resort, and vigorous claims are being made on the attention of the medical profession in favour of the curative virtues of its sulphur and iron springs, its peat baths, and the invigorating influence of its mountain climate. Here the pedestrian can ascend Ben Wyvis, a not very interesting excursion; but few visitors to Strathpeffer will fail to take that most interesting and picturesque excursion by the Dingwall and Skye Railway to Auchnasheen, and thence by coach and steamer to Kinlochewe, Loch Maree, and Gairloch Head.

Few besides sportsmen are in the habit of exploring the fine scenery of Sutherlandshire. With many sportsmen, however, it is the favourite county; the numerous lochs—such as Loch Shin and Loch Inver—abound in fish, and as much of the county is beyond the reach of railways it escapes the influx of tourists—the bugbear of sportsmen.

Scotland has some fairly attractive seaside resorts on its eastern coast. The most frequented are North Berwick (near Edinburgh), St. Andrews, Stonehaven, and Nairn. North Berwick is one of the most fashionable of Scotch watering places, and its fine golf links are celebrated; it also offers great facilities for sea bathing. St. Andrews is reputed a great resort for men of letters and men of science, and it is the great centre for golf worshippers; it is crowded in the season, and accommodation there has generally to be secured some time beforehand. Stonehaven is quiet and pleasant, and might possibly be found dull by English visitors; it also has golf links. Nairn has many advocates as a bracing, dry, and pleasant seaside resort; it is said to enjoy an exceptionally equable and dry climate, and to be well suited both for summer and winter residence.

But it would be impossible to enumerate in a short article like this the many attractive resources Scotland presents to the autumn tourist. Many take up their abode in one chosen spot, generally in the neighbourhood of loch and river, and spend quietly the few weeks of their autumn holiday enjoying the calm and simple out-of-door life, even though climatic conditions may not be the most favourable. Loch Awe, Loch Lomond, Loch Tay, Loch Earn (the celebrated "hydro" at Crieff is near at hand), Loch Rannoch, Loch Laggan, Loch Maree, Loch Shin, Loch Inver, and many others are suitable resorts for this purpose.

One word of advice in conclusion. In no place of holiday resort are warm and even heavy waterproof garments so needed as in Scotland—witness the heap of heavy wraps, stout boots, etc., that form an essential part of the Scotch sportsman's outfit when he starts for the Highlands. To our tourist brethren we wish fine weather, to our sporting friends good sport.

In the Section of Pathology, on Friday, Drs. St. Clair Thomson and Hewlett made the somewhat startling announcement that each dweller in London inhales on an average 14,000 microbes per hour. All these organisms remain within the human body, for the air we breathe out is quite free from germs. It is satisfactory to hear, however, that in ordinary conditions of health these armies of intruders are speedily arrested and placed *hors de combat*.

THE WORK OF THE ANNUAL MEETING.

THE record of the brilliant meeting which closed last week would be very incomplete without some public acknowledgment of the services of the men whose devoted labours and self-sacrificing zeal contributed so largely to making the gathering one of the most successful in the annals of our Association. Where all worked so well it is almost invidious to select any for exceptional commendation, but it is only bare justice to pay a special tribute of praise to the officers of the various Committees. The success of the meeting was unquestionably in great part due to the manner in which the work was organised by the Executive Committee. The bulk of the work fell upon the Secretaries, Mr. Andrew Clark and Dr. Isambard Owen, and to both these gentlemen, but more particularly to the former, who for six months gave himself heart and soul to the heavy task of organisation, the most cordial thanks of all members of the Association are due. The Secretaries were greatly assisted in their labours by the President (Dr. Leonard Sedgwick), and Mr. George Eastes discharged the duties of Treasurer with the skill and tact born of long experience. Dr. Tirard's well-directed energy as President of the Museum Committee did much to make that department successful even beyond the standard of former years. As Secretary of the Foreign Reception Committee, Mr. Makins earned the personal gratitude and goodwill of all who came in contact with him. Great credit is also due to Dr. Ord as Chairman, and to Dr. Dundas Grant as Secretary, of the Dinner Committee; the arrangements were perfect, and the banquet was admirably managed, especially considering the difficulties caused by the very large number of persons to be accommodated. To Lady Priestley and the other members of the Ladies' Reception Committee the meeting owed the brilliant success of the social functions which relieved the austerer side of the proceedings. All who took part in the organisation of the sixty-third annual meeting of the British Medical Association may fairly feel the most lively satisfaction at the result of their labours.

THE CHOLERA.

A TELEGRAM from Cracow, dated August 1st, states that cholera is spreading in South Russia, 409 cases having already been reported. It is reported from Tarnopol (Galicia) that in the towns of Visnoviec and Vyzogrod, in Russian Podolia, near the Austrian frontier, Asiatic cholera

has broken out. In the vilayets of Asia Minor the disease had recently much increased. Between May 23rd and July 24th there were 1,134 attacks and 77 deaths officially reported. A case of Asiatic cholera has occurred at the town of Nyiregbyhaza, to the north of Debreczu, in Hungary. The official precautions for checking the epidemic in South Russia have led to a number of encounters between the authorities and the inhabitants. Directly the epidemic assumed serious proportions doctors were sent to the affected spots, and temporary hospitals for the sick were erected, but in several places the inhabitants showed themselves hostile, and force had to be employed to repress antisanitary demonstrations. Ten days' quarantine has been announced at Cyprus on arrivals from the coast between Alexandria and Beyrout, excluding the latter place, and also on arrivals from Cape Khelidonia to Beyrout exclusive.

DINNER AT THE TOYNBEE HALL, WHITECHAPEL.

On the evening of Saturday, August 3rd, Canon Barnett, Warden of Toynbee Hall, entertained at dinner a number of members of the medical profession, including many from Bristol and Manchester, who had been attending the annual meeting. The guests, most of whom were known to take an interest in what Carlyle called the "condition of the people question," especially as exemplified at the East End of London, had an opportunity of seeing the possibilities of usefulness of Toynbee Hall, as a residence for medical students who wish to see how the poor live, and of generally investigating some aspects of its social work. A very pleasant evening was passed.

THE ASSOCIATION AND THE CITY OF LONDON.

Some little criticism has been offered upon the circumstance that, though the British Medical Association held its annual meeting in the metropolis, the presence of so distinguished a body was ignored by the Corporation of the City of London. The following semi-official explanation and apology is offered in the *Daily Telegraph*: It has been pointed out that last year at Bristol, and in 1893 at Newcastle-on-Tyne, the Association received the most generous hospitality at the hands of the local municipal authorities, and that this is quite in accordance with precedent. On the other hand, it is complained that in the City of London, where the Shahzada was but recently entertained, the Association has not been officially recognised. An investigation of the facts seems, however, to entirely dispose of any suggestion of civic discourtesy. It appears that long before the visit of the Shahzada was contemplated, and that visit surely stands apart as possessing international importance, the Lord Mayor received a letter from Sir J. Russell Reynolds, the President of the British Medical Association, with reference to the meetings which are now being held. According to the records of the Court of Common Council that letter was on January 17th last referred to the City Lands Committee, of which Mr. Edward Lee is Chairman, and apparently about the same time a similar communication with regard to the meetings of the Geographical Congress, which had been received from Sir A. Fairburn, was referred to the same body. At all events on March 14th last the City Lands Committee submitted a report to the Common Council, in which they expressed regret that they could not recommend the Court to give a favourable response to these communications. Their recommendation undoubtedly was based upon the condition of the City finances, coupled with the fact that an application had also been received in respect of a third Congress, and that if one body was entertained the others must be similarly treated. Probably, indeed, the City would have been compelled to spend not much less than £10,000 upon the three Congresses, whereas the cost of the entertainment of the Shahzada, taking as it did the form of a *déjeuner*, was kept well within £1,500. In the case of the British Medical Association, application was subsequently made for the use of the Guildhall, a request which the Corporation willingly granted on the condition that the Association furnished the necessary expenses; but there was apparently some hitch in this regard, as Sir Russell Reynolds wrote at a later stage, thanking the Corporation for their courtesy, and intimating that the proposed function at the Guildhall had been abandoned. From these facts it is apparent that the British Medical Association was not only dealt with in precisely the same way as two other congressional bodies, but that it was not the fault of the City Corporation that the Guildhall was not placed at its service.

THE OFFERTORY AT ST. PAUL'S.

The offertory collected after the special service in St. Paul's Cathedral on the opening day of the meeting amounted to £42 11s. 6d., being £9 10s. in gold, £32 5s. 9d. in silver, and 15s. 9d. in copper coins. In accordance with the resolution of the Executive Committee, the offertory has been devoted in equal proportions to Epsom College and the British Medical Benevolent Fund.

ANNUAL MUSEUM.

One of the best organised departments of the meeting was the Annual Museum, which occupied the whole of the first floor of the Examination Hall, and which focussed all recent advances in pharmacy, foods for invalids and babies, sanitary specialities, surgical and electro-medical instruments, aseptic appliances, books, and the thousand and one items which form the armamentarium of the fully-equipped practioner of to-day. We elsewhere methodically describe the various exhibits, but we desire here to draw attention to the fact that the museum owed its success chiefly to the labours of the indefatigable Chairman of the Museum Committee, Dr. Nestor Tirard, and to the Secretary, Dr. J. W. J. Oswald, who were assisted by a loyal committee. The excellence of the arrangements was obvious to every member of the Association who visited the museum; whilst the exhibits both gratified and instructed all who devoted any time to their examination. It is not too much to say that the whole community is advantaged by the improvements in drugs, instruments, and appliances of all kinds which such an exhibition renders palpable to practitioners from all parts of the country.

VISIT TO THE POPLARS, SUDBURY.

By special invitation of the British Institute of Preventive Medicine a large party of members of the Association visited the Institute's farm at Sudbury on Thursday, August 1st. The guests were received by Dr. and Mrs. A. Ruffer, and, after Sir Henry Roscoe had expressed the gratification felt by the Institute at receiving so many well-known sanitarians, Dr. Ruffer gave a careful explanation of the methods used for preparation of "curative serums" for diphtheria, tetanus, puerperal fever, etc. At the close of the lecture the guests inspected the laboratories and stables, and, having partaken of refreshment, returned to town after a most enjoyable visit. It was only too manifest that Dr. Ruffer had not as yet recovered from his recent attack of diphtheria, but it is to be hoped that he will return to duty after his much-needed holiday fully restored to health. One point in connection with the above visit which appears to be specially worthy of note is the indifference of the horses. The visitors were much struck with the total absence of any manifestation of fear displayed. If the operations they are subjected to were painful, it might be reasonably expected that the animals would shrink from the hand of any person. As a matter of fact, they appear to be perfectly happy and in excellent condition. One

animal was injected with toxic serum whilst the party were present, but no sign of fear was displayed. The evidence of indifference on the part of the horses is a complete answer to the virulent attacks made on this work by certain societies which cannot be called humanitarian, as the welfare of man appears to be the last item of their programme.

OLD WORKS ON ANATOMY.

In the Section of Anatomy Dr. Payne read a paper on an Unpublished English Anatomical Treatise of the Fourteenth Century and its Relation to the Work of Thomas Vicary. The manuscript contained an incomplete treatise of surgery and a short treatise on the anatomy of the human body. The work was said to be by an English surgeon whose name is not given in the work, which was dated 1392. Dr. Payne said that from the writing, the substance, and the language of the work it had been written during the latter part of the fourteenth century. Professor Anderson and Dr. Payne also exhibited a collection of old anatomical treatises, among which were examples of Bidloo, Browne, Cowper, Colter, Chesselden, Camper, Duval, Duverney, Eustachius, Highmore, Godifredi, Mondini, Remmelin, Spigolini, Vesalius, and Vicat.

POLICE SURGEONS' ASSOCIATION.

The annual meeting of this Association was held at King's College on July 30th, when Sir H. D. Littlejohn, of Edinburgh, took the chair as President for the ensuing year. The report from the Council dealt principally with the deputation to the Home Secretary in the early part of this year, and its results. Three out of the four points asked for having been granted, it was resolved to approach the new Government on the subject of the payment of adequate fees to medical witnesses, and to ask that another deputation be received. The following officers and Council were elected:—*President:* Sir H. D. Littlejohn, M.D. *Vice-Presidents:* T. Holmes, F.R.C.S., and T. Bond, F.R.C.S. *Treasurer:* H. Nelson Hardy, F.R.C.S.Edin. *Honorary Secretaries:* F. W. Lowndes, M.R.C.S. (Liverpool), H. C. Hopkins, M.R.C.S. (Bath). *Council:* J. R. Baumgarten, M.R.C.S. (Newcastle), J. Paul Bush, M.R.C.S. (Bristol), G. Harrison, M.R.C.S. (Chester), W. J. Heslop, F.R.C.S.Edin. (Manchester), E. K. Houchin, L.R.C.P. (London), H. W. Roberts, M.R.C.S. (London), W. G. Lowe, M.D. (Burton-on-Trent), D. McDonnell, M.D. (Belfast), L. Maybury, M.D. (Portsmouth), W. M. Roocroft, L.R.C.P. (Wigan), C. Templeman, M.D. (Dundee), and S. Wolferston, L.R.C.P. (Plymouth). A vote of thanks to the Right Hon. H. H. Asquith, M.P., for his courteous reception of the deputation from the Council, and for carrying out some of their principal recommendations before leaving office, was unanimously agreed to, and has since been greatly acknowledged by the right honourable gentleman.

THE CONTINENTAL ANGLO-AMERICAN MEDICAL SOCIETY.

Advantage was taken of the presence in London at the British Medical Association's meeting of a large number of members to hold the annual meeting this year for the first time in the metropolis. A goodly sprinkling of members assembled on Friday, August 2nd, at the Savoy Hotel, under the presidency of Sir Richard Quain, M.D., F.R.S., one of the Society's Honorary Presidents. After the usual routine business had been transacted, five new members were elected, the places where they practise (Paris, Boulogne, Monte Carlo, Gibraltar, and Tangier) sufficiently illustrating the wide scope of the Society's usefulness. Dr. Barnard (Paris), the Honorary Secretary and Treasurer, stated that the total number of members of the Society now reached ninety-six, and that the cry was "still they come." In view of the difficulty of arranging a well-attended gathering in Paris, it was decided on the proposition of Dr. Barnard to hold next year's meeting at the same time and place as the British Medical Association. The meeting was followed by a luncheon at the same hotel, when fifty-four sat down, Sir Richard Quain again presided, supported by Mr. Ernest Hart, Dr. Theodore Williams, Dr. Symes Thompson, Mr. Malcolm Morris, the Hon. Alan Herbert, M.D. (Paris), Dr. Sturge (Nice), Dr. Faure Miller (Paris), the Hon. Gerard Wallop, and a great number of other leading Anglo-Continental physicians. After the toast "The Queen and the President of the United States" had been drunk, Sir Richard Quain proposed "Prosperity to the Society," expatiating in eloquent terms on the need supplied by such a body. Responding to the toast of "Our Guests," Mr. Ernest Hart expressed his pleasure at having an opportunity of meeting such a representative gathering of Continental, British, and American practitioners, whom it was most important that physicians and surgeons in the Old Country should know personally. The Society was one which had a very useful future before it, and he wished it a career of ever-growing usefulness and prosperity. Dr. Barnard (392, Rue St. Honoré, Paris) will gladly supply any information on the Society's working, together with the revised list of members, which will be ready in a few weeks.

THE EDINBURGH EXTRA ACADEMICAL SCHOOL OF MEDICINE.

For some time back it has been felt that to give cohesion and solidarity to the Edinburgh Extramural School of Medicine there ought to be a Central Board, or Court, or Committee. Time was when the school was under the *ægis* of the Royal Colleges of Physicians and Surgeons, but this arrangement had long ago fallen into abeyance, and the school now consists of a large number of independent teachers, each pursuing his own independent course. Thus organisation, representation, and discipline are lacking, and to the detriment of the School. While no definite scheme has yet received the *imprimatur* of the lecturers and schools and colleges concerned, the probability is that a Board, consisting of an equal representation of the Royal College of Physicians, the Royal College of Surgeons, and the lecturers themselves, will be formed. The matter is to come formally before the Colleges on an early day.

MEDITERRANEAN FEVER IN THE LEVANT SQUADRON.

We understand there has been an increase in the number of cases of Mediterranean fever in the squadron cruising in the Levant, due in a great measure to the exceedingly hot weather which has recently prevailed in that locality. Apart from this increase in the number of cases of fever, which is not unusual at this season of the year, the general health of the officers and crews would appear to be very good.

SMALL-POX IN WORKHOUSES: OFFICIAL CIRCULAR.

The Local Government Board have issued to all clerks to Boards of Guardians a circular letter, dated July 30th, relative to the steps requisite to check the spread of small-pox in casual wards and workhouses, the letter resulting from the occurrence therein of cases of the disease in different parts of the country. The letter reproduces the salient paragraphs of the Board's circular on the same subject of February 13th, 1893, and emphasises the need for early notification to the medical officer by the master of the workhouse or the superintendent of the casual wards of every case of small-pox or suspicious illness in paupers, as well as for great care in the discharge of those likely to be suffering from the disease or recently convalescent therefrom; also the desirability of prompt isolation of patients ill of small-pox away from the workhouse, preferably by concerted action with some adjacent sanitary authority possessing suitable hospital accommodation, the workhouse only being

used in emergent cases. All requisite vaccination and re-vaccination of inmates, nurses, etc., are pressed as important factors; and the Board desires to be kept informed of the occurrence of all dangerous infectious diseases in workhouses and casual wards, and of the measures of prevention adopted in reference thereto.

A WAR SCARE.

An official letter from the War Office was read at the last meeting of Boards of Guardians at the East End inquiring what number of beds would be available in case of war or the invasion of London for the public service. As all the East End workhouses are full, it was not easy to give a definite answer to this unexpected question, and the War Office will probably be referred to the Local Government Board for information on the subject, which can in any case only be conjectural. Much surprise and some disquietude were expressed at the receipt of this communication, which was somewhat rashly and no doubt incorrectly connected with disquieting rumours concerning the unfriendly attitude on various pending questions of a neighbouring European Power.

THE THROAT HOSPITAL, GOLDEN SQUARE.

The letter published last week in the British Medical Journal and other newspapers signed by the Duke of Sutherland, Mr. R Courtenay Welch, and Dr. Greville Macdonald intimating their entire severance of all connection with the Throat Hospital, Golden Square, has drawn attention afresh to the affairs of that institution. After looking into the matter with some care it seems clear that, whatever the final cause of diff-rence, personal matters are so far involved as to render it difficult to discuss the situation without entering upon questions regarding which there is no public advantage in expressing any opinion. The chief point of interest, we consider, so far as the profession or public is concerned lies in the illustration once more thus afforded of the facility with which, in the case of small special hospitals, a few individuals can, by concerted action, obtain large influence in the management. So long as special hospitals are conducted in the uncontrolled and unrestricted manner which now prevails, and so long as private interests, partialities, and prepossessions are permitted to hold sway, squabbles of this kind are likely to be of frequent recurrence. Sometimes they reach the character of public scandals, as in two recent notable instances—the Jubilee Hospital and the Chelsea Hospital for Women. In this case they do not show anything else than wrangling of a painful order. Something like a central control, such as Lord Sandhurst's Committee, might help to prevent these frequent disorders in the management of "special hospitals." These disorders, we may add, are by no means confined to London, but are inherent in the character of these minor institutions, most of which, while having a certain character of public usefulness, are devised, founded, and carried on with a "special" eye to private interests.

SALE OF POISONS.

The necessity of statutory regulations of the sale of poisons was manifested in a striking manner by the facts brought out in evidence at the Mansion House, when Messrs. Spiers and Pond were charged with having infringed the Pharmacy Act by selling an article described as "weed killer," and containing sufficient arsenic to kill six thousand persons. The prosecution was instituted by the Pharmaceutical Society, whose duty it is under the Act to take proceedings in such cases, and the nature of the article sold was proved by Dr. Stevenson and Mr. Eastes. The case was so clear that the possibility of defending it was scarcely conceivable, though in point of fact it was attempted to contend that the article was not a poison within the meaning of the Pharmacy Act. In face of the evidence given as to the amount of arsenic present in the "weed killer," and Dr. Stevenson's opinion that it was to be regarded as a preparation of arsenic, the contention of the counsel for the defence was too much for the Lord Mayor to accept, and he decided that the Act had been infringed, inflicting a penalty of £5, with costs. That no other result was anticipated may be gathered from the circumstance that the directors of Spiers and Pond had, previously to the hearing of the case, decided to discontinue the sale of the "weed killer." But it is none the less evident, as the Lord Mayor remarked, that it is the duty of the vendors of such proprietary articles to make inquiry as to their nature before supplying them in the ordinary course of business, and it must be added that it is equally the duty of the manufacturers of such poisonous articles to provide against their unlawful sale by labelling them in accordance with the requirements of the Pharmacy Act.

THE KENT COMBINED SANITARY DISTRICTS.

The Malling Urban District has withdrawn from the West Kent combination, and at a conference of the remaining authorities it was decided that a medical officer of health should be appointed at a salary of £700, out of which he is to pay a clerk £100. In other words, the new officer will receive £600 for his services. The salary paid to his predecessor was £800. A secession is reported in East Kent, too. Whitstable having become an urban district and decided to appoint a medical officer of health of its own. It had formerly been part of the Blean Rural District, in the East Kent combination, of which Dr. M. K. Robinson is the medical officer of health. These defections are not calculated to promote confidence in the stability of voluntary combinations.

SUCCESSFUL LIGATURE OF THE INNOMINATE ARTERY.

Mr. Coppinger's patient, whose innominate and carotid arteries were simultaneously ligatured in 1893, and whose progress towards recovery was noted in the British Medical Journal during many weeks, is now about being presented for inspection in London. The operation was performed at the Mater Misericordiæ Hospital in January, 1893. The patient was shown six weeks later at a meeting of the Royal Academy of Medicine in Dublin as a case of successful ligature of the innominate artery, and was exhibited six months afterwards at the meeting of the British Medical Association at Newcastle-on-Tyne, as an instance of cure of subclavian aneurysm by simultaneous ligature of the innominate and common carotid arteries. The patient, a man, aged 55, is now in good health—two years and a-half after operation—and is the only living example as yet exhibited in Europe of cure of subclavian aneurysm by innominate ligature.

IS BANK HOLIDAY A FAILURE?

Do bank holidays really conduce to the greatest happiness of the greatest number? In theory, the feasts of St. Lubbock are a blessing to the people and a joy to the philanthropist—little oases in the desert of workaday existence, where the burden can be laid down for a moment, and a draught of fresh strength and hope drawn from the living spring of rest. But what are they in fact? Days of feverish rushing about; of scrambling for places in overcrowded trains and omnibuses; of hustling and being hustled; of noise, horseplay, and fighting; too often of drink and dissipation. Bank holiday is a paradise for roughs, but to decent folks, and especially to women, it must often be a veritable purgatory, without the redeeming feature of purification. If there be anything more pitiable than the sight of a weary woman plodding along with a child in her arms and half a dozen others clinging to her skirts it is the spectacle of these helpless innocents themselves being dragged ruthlessly about to make a parent's

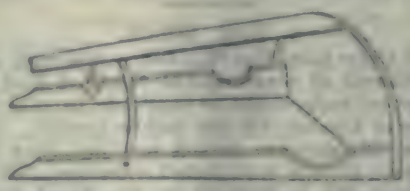
holiday. We are said to take our pleasures sadly, but if this kind of thing be pleasure, it may well be asked, What is pain? It is argued by some that these people like crowds and find a pleasure in going about together in flocks like sheep. This may be true, but it only proves that they are not always wise in their likings. To say nothing of risks from bad weather—and Jupiter Pluvius seems to feel a malicious pleasure in drenching holiday makers—bank holiday is in itself a source of not a few dangers to health. The mere fatigue of travelling must be considerable, especially in the case of children, and there is pretty sure to be excess in eating and drinking, to say nothing of various forms of unwholesome excitement. It is safe to assume that a large number of illnesses date their origin from a bank holiday. It would be going outside our province to speak of the dislocation of business and the unsettling of habits of work—in many cases for several days after the feast—which it entails. The remedy lies in a more rational arrangement of holidays. Why should we all take them at the same time? Everything that Mr. Traill has lately been saying as to the absurdity of well-to-do people all going abroad or to the seaside together applies with tenfold force to bank holidays. By all means let there be even more holidays than there are now, but let each section of the population, or, better still, each individual, make separate arrangements. There would surely be no difficulty in making the monthly "day out" demanded by servant girls a compulsory clause in every agreement between employer and employed. Some, at least, of these days should be given to complete rest, either at home or in some place "far from the madding crowd;" occasionally a holiday might with advantage be spent in bed. On the whole, we think that bank holiday, if it is intended as a period of rest, is a failure. If, on the other hand, it is meant to be a kind of national Saturnalia, the sooner it is done away with the better.

THE ARCUCCIO:

AN APPARATUS TO PREVENT THE OVERLYING OF INFANTS.

EVERY year, especially on the nights following some general holiday in the colder parts of the year, a large number of infants meet with their deaths in their mothers' beds, being "overlaid," or more probably suffocated under the bedclothes, during the sleep, sometimes, perhaps, the drunken sleep, of their mothers. Numerous cases of this kind were reported during the cold season in January and February last, and even more recently, and in many instances coroners' inquests have been held, but we are not aware that any practical means of checking this annual tribute of life has been suggested. The proposal to seek special legislation forbidding mothers to sleep in the same bed with their infants under special penalties in the event of injury has been made, but it is to be doubted whether such a proposal would meet with much support in Parliament, or indeed from public opinion.

Under these circumstances it may be interesting to call attention to an apparatus of a simple kind which is used in Italy, or in certain parts of it, designed to prevent the suffocation of infants in bed with their mothers or nurses. The apparatus is described briefly in the late Dr. Charles Clay's *Cyclopædia of Obstetrics*, which came to a premature close after reaching to "Auscultation" (Manchester, 1849). From the short article in this *Cyclopædia* we borrow the accompanying engraving. The appliance is there described under the name "Arcutio," and is said to have been "formerly used in Florence." It appears, however, that it is still well known in Florence under the name "Arcuccio."[1] At our request Dr. Stuart Tidey kindly made some inquiries for us in Florence. He applied in the first place to an old servant in his employment, who is, he states, well acquainted with the popular customs and traditions of Tuscany. In answer to his question the old woman said that it was the general rule for the infant to sleep in the same bed with the mother or nurse. When asked whether infants were not sometimes suffocated, she replied at once, "No, Signor, but then the arcuccio is always used. It is a wooden framework, with arches of iron to prevent the child being overlaid. It is placed in the bed between the husband and wife. In my country (Pistera) we call them 'arcocchi.'" In answer to the question whether they were in common use in Florence, she



replied in the affirmative, and offered to borrow one for inspection from a neighbour who had brought up a large family. Within five minutes the arcuccio arrived. It had evidently seen much hard use, but was still serviceable. It consisted of a wooden head piece, measuring 10 inches by 13 inches, two wooden sides 22 inches long and an inch or so thick, a top bar of wood of the same length, and a curved iron bar as a footpiece. The width was the same at the head and foot, but the headpiece was 3 inches higher than the footpiece. This arcuccio was said to be larger than usual, and a second arcuccio, borrowed from another neighbour, and designed for the protection of a newly-born infant, was 22 inches long, 9½ inches wide, 9 inches high at the head, and 8 inches high at the foot. The dimensions given by Dr. Charles Clay in the work cited above were 3 feet 2½ inches long, and 1 feet 1 inch broad. The framework of the arcuccio is frequently bound with flannel.

The arcuccio is also used as a protection to the infant by day. If the peasant mother go out to work she will leave her child in the bed protected by the arcuccio, over which the bedclothes are drawn, but so as to leave a space for air near the head. It would appear therefore that the arcuccio, in addition to preventing suffocation in bed, has the further virtue of diminishing the risk of falling out of bed which is a frequent accident in the homes of the poorer classes in this country, and the cause of much distress and impaired health, and sometimes of serious injury.

In the *Cyclopædia* it is stated on the authority of *The Art of Nursing* (London, 1753) "in respect of the arcutio, that every nurse in Florence is obliged to lay the child in it, under pain of excommunication."

As to this Dr. Tidey's informant stated that the country priests do exhort mothers not to leave their infants unprotected by the arcuccio; should a death occur through such neglect, the mother would incur ecclesiastical censure. There appears to be no special law upon the subject in any part of Italy, but the use of the arcuccio is enforced partly by public opinion, which would judge very severely any mother whose child lost its life owing to failure to use a well recognised precaution, and partly by the injunctions and threats of the Church.

On the whole it would seem that the use of the arcuccio is very general in Tuscany at the present day. It is used Dr. Tidey thinks "invariably when the child is left in bed in the day time, and generally at night to prevent its being overlaid." We are indebted to Professor Boncinelli, who personally investigates the causes of deaths in Florence, for the information that deaths of infants from suffocation are extremely rare. He has only met one such case in the course of the seven years he has been entrusted with the duty of making medico-legal inquiries in Florence.

Dr. Luigi Concetti, Professor of the Diseases of Children in the University of Rome, in a private letter, confirms fully the accuracy of the information obtained for us by Dr. Tidey. He states that the arcuccio is in general use in Tuscany, to prevent the suffocation of infants either by the bedclothes or by their mothers. It is placed, he says, in the middle of the bed, with the child within it. He adds that there is no special law with regard to the use of this appliance, but in the case of the suffocation of an infant in bed action would be taken for homicide by negligence. He says, also, that the statement that the Church would excommunicate the mother in the event of the death of the infant is incorrect.

[1] Diminutive from Arco, a bow, an arch.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN LONDON, 1895.

EXCURSIONS.

Windsor.—About 220 members, nearly all of them provincial, availed themselves of the excursion to Windsor and Hampton Court. Leaving Waterloo at 8.55 by special train, the party reached Windsor before 10, and spent about two hours in visiting the State apartments of the Castle, the Memorial Chapel, and St. George's Chapel. Proceeding to the river, three steam launches were found ready to convey the excursionists to Hampton Court, and a start was made punctually at 12 o'clock. The journey down the river occupied about 4½ hours, and the pleasure was somewhat marred by two or three heavy showers of rain, but thanks to the commodiousness of the boats all were able to get under cover. On arrival at Tagg's Island tea was provided, and a start was about to be made to Hampton Court Palace soon after 5, but a very heavy shower detained the party upwards of half an hour, so that there was no time to visit more than the gardens. These, however, and the large vine, which was specially kept on view, were considered well worth the visit, and the party assembled at Hampton Court station at 7 o'clock, quite satisfied with their day's outing. Waterloo terminus was reached at 7.40.

Oxford.—The party reached Oxford about 11 o'clock, and were met at the station by Dr. Dixey and Dr. Merry, who conducted them by way of the High Street and Radcliffe Square to the Sheldonian Theatre. Here they were received by Mr. H. F. Symonds, the President of the Oxford Branch of the Association, who welcomed the visitors in a short address. After inspecting the Bodleian Library and the Old Schools Quadrangle the party proceeded to Wadham College, where Dr. Dixey referred briefly to the scientific and medical traditions of that foundation, which was the cradle of the Royal Society, under Wilkins, and the scene of early chemical and physiological experiments by Christopher Wren, John Mayow, and Robert Boyle. Passing through the beautiful gardens of Wadham College the company next arrived at the University Museum, where Professor Burdon Sanderson gave an address, explaining its history, structure, and uses. Further remarks were added by Dr. T. Acland. The different departments of the museum—anatomical, physiological, zoological, chemical, and physical—were then visited, under the guidance of Professor A. Thomson, Drs. Pembrey, Turrill, Benham, Hobhouse, Freeborn, and others. The Radcliffe Library was also seen and each visitor received a paper containing a short account of the library, with regulations, etc., by the kindness of the Radcliffe Librarian, Sir Henry Acland. Luncheon was served in the Hall of Christ Church. At the conclusion Dr. Merry, the Public Orator of the University, proposed the health of the guests, to which response was made by Dr. Moore (Dublin) and Professor Tillmanns (Leipzig). Speeches were also made by Dr. Stoker, Mr. Symonds, and Viscount St. Cyres, representing the authorities of Christ Church. After lunch the company, led by Dr. Collier, Mr. Winstanley, Mr. D'Arcy Power, and others, visited various places of interest, including Magdalen College, shown by the President of Magdalen; Merton (the College presided over by Harvey), shown by the Rev. A. Johnson; and New College, shown by Mr. Bourne. After tea in the hall of Exeter College, the visitors returned to the Great Western Station, where a special train at 6 o'clock took them back to town.

Eastbourne.—A party of 180 were conveyed to Eastbourne by special train, where they became the guests of the Eastbourne Branch of the British Medical Association, and were entertained at a sumptuous lunch at the Town Hall, Dr. Ewart, the President, being in the chair. The Sussex Militia Band played during lunch. Dr. Ewart, in a brief speech, welcomed his guests, which was responded to by Mr. Robert O'Callaghan and the Mayor of Eastbourne (Mr. Shinnick), the latter giving a cordial invitation to the British Medical Association to meet at Eastbourne next year. Mr. O'Callaghan thanked the President, in the name of the Metropolitan Counties Branch, for their hospitality and courtesy in helping them to entertain the members who had visited the London meeting. After luncheon half a dozen four-in-hands were ready to convey the party, under the guidance of Dr. Ewart, to Beachy Head, the Lighthouse, Birling Gap, over the Downs to Wannock Glen, and back to Eastbourne. At Wannock Glen tea was served, with delicious peaches, fresh fruit, and cream galore. Every member enjoyed himself immensely, notwithstanding the damping effect of several showers, and returned to London greatly pleased with the hospitality so lavishly extended to them by Dr. Ewart and the members of the Eastbourne Branch.

Hastings.—Those who chose this trip left Victoria at 10 A.M. in the same special train which conveyed the party to Eastbourne. On arriving at Hastings they were met and given a hearty welcome by many of their resident *confrères*, who conducted them to the Concert Hall, where a sumptuous repast was provided. Dr. Bagshawe presided, and was supported by the Mayor (with his chain of office), Sir Alfred Garrod, Canon Jones, Major-General Sherer, and a large number of the medical profession of the town. After lunch and the usual loyal toasts Dr. Bagshawe proposed the health of "The Visitors," for whom Sir Alfred Garrod and Dr. Drysdale returned thanks. Mr. Brodribb proposed "The Mayor and Corporation," to which the Mayor replied. Dr. J. W. Hunt, who conducted the party, proposed "Our Hosts and the Chairman," and Dr. Bagshawe replied. Arrangements had been made for an excursion to Battle in the afternoon, but the unpunctuality of the train prevented this. Instead the visitors were conducted in carriages to various places of interest in the town, including the Castle and the Hospital. At 5 P.M. Mrs. Bagshawe received at "afternoon tea" all the visitors, and a most enjoyable hour was spent, which was enlivened by the performance of an excellent string band. The visitors left delighted with the courtesies which had been showered upon them by their host and hostess and the profession of the town. The arrangements were all that could be desired, and reflected the greatest possible credit on Dr. Christopherson, the Secretary of the Entertainment Committee.

Maidenhead, Marlow, and Greenlands.—This was the most popular excursion provided for members and their ladies, if one may judge by the great rapidity with which all the tickets were disposed of. Unfortunately its success was marred by many showers of rain, but with this exception everything went well, and the ninety-four guests who took part in the excursion expressed frequent satisfaction at the entertainment provided. Notwithstanding the fact that the day was one of the busiest in the whole year on the railways, the journey on the Great Western line was accomplished with punctuality, and on arrival at Maidenhead the party left the railway, and was thence conveyed by road through the pleasant uplands of Maidenhead Thicket to Cookham Dean, where Mr. and Mrs. Noble Smith entertained the members at their country house. Mr. Eastes and Mr. Parker Young escorted the party, and the former expressed the thanks of all present to the host and hostess for their generous hospitality. The carriages were again requisitioned and conveyed the party through the lovely Quarry Woods to Marlow, Hence a large steam launch carried the visitors up the Thames, through some of the best of its many lovely scenes, to "Greenlands," the seat of the Hon. W. F. D. Smith, who had provided luncheon in a large marquee at the side of his house. Mr. Parker Young proposed as a toast "The Health of Mr. Smith," and Dr. Ward Cousins (President of Council of the Association), who was of the party, added his appreciation of the hospitable entertainment provided. Unfortunately Mr. Smith, being away in Devonshire, was unable personally to meet his guests or reply to the toast. The members enjoyed a walk through the gardens and greenhouses; and, embarking again on the launch, were conveyed back to Marlow, and partook of tea at the Compleat Angler Hotel. Dr. Ward Cousins, in the name of the visitors, thanked Messrs. Eastes and Young for their efforts to render the day enjoyable. A train, somewhat delayed by the heavy traffic on the line, at length landed the visitors in safety at Paddington, and thus brought to a close this memorable and successful week of the 63rd annual meeting of the Association.

Reading.—A party of ladies and members, numbering over 100, under the guidance of Mr. Jessop, proceeded to Reading from Paddington on Saturday. They were met at Reading Station by several members of the Reading Branch, including Dr. Guilding (President) and Dr. Phillips-Conn (Secretary), and were escorted to the Town Hall. After inspecting the reproductions of the Bayeux tapestry, they were entertained at a most excellent luncheon by the Branch at the Town Hall. The company included the most prominent members of the Branch, the Mayor of Reading, and several ladies. After the loyal toasts and the health of the Mayor had been drunk, Dr. T. O. Maurice proposed "The Guests," which was responded to by Mr. Jessop. Sir Charles Cameron proposed "The Branch," coupling with it the name of the chairman, Dr. Guilding. The party then embarked at Caversham Lock on two steam launches, and went up stream to Goring. On the return journey tea was provided at Caversham Bridge Hotel, and thus was brought to a close a very enjoyable day, notwithstanding the inclement state of the weather. Everything had been most carefully arranged and provided by the Branch and Dr. Symons Eccles.

Haslemere.—The weather was not propitious on the occasion of the visit to Haslemere, on the invitation of Mr. Hutchinson: the sun hardly showed his face, and occasional furious rainstorms drifted down the valleys and drove across the moorland of Hindhead; nevertheless the air was sweet and pure, the view, a study in grey and purple, was superb, and the attentions of a genial host and charming hostesses invested with pleasant memories much that climatic influences tried to spoil. In fact, the humanising influence of muddy boots was well displayed, for with such appendages formality was impossible. On the arrival of his guests at Haslemere, Mr. Hutchinson invited them to the new museum, where a most welcome lunch was prepared for their entertainment. When this had been partaken of, he explained the leading features of the museum to which the building is to give a home—a museum in which everything is to be educational, and into which "curiosities," as such, are not to be admitted. On a dado will stand geology, the space being divided according to the estimated duration of the different epochs in geological time; within the building will be biology, specimens of plants and animals being arranged to show their various orders and relationships, the specimens being such as can be handled by the students, and the pictures being movable, so that they can be carried about for comparison with the various specimens; and then, in a separate room, will come the museum of man, displayed historically, the wall space being ruled off into centuries, the events of each of which, growing more crowded as time goes on, fall into their proper place, a plan by which it is hoped that a general view of history will be obtained which will supplement and knit together the local histories taught in books. After inspecting the museum the visitors set out for Hindhead, the beauties of which point of view are well known, and on their return were entertained again by Mr. Hutchinson, at his house at Inval, where "high tea" was provided. After Mr. T. Holmes had in suitable terms thanked Mr. Hutchinson for his hospitality, the party drove to the station well pleased with their excursions, notwithstanding what Mr. Holmes had euphemistically spoken of as the "dampness" of the afternoon.

Andover.—On Friday Dr. Poore personally conducted a large party to view the arrangements for the disposal of excreta and slops at his house at Andover, described in his work on *Rural Hygiene* and elsewhere. He had given strict orders against any preparation for the visit, except that gutters, etc., were not to be cleaned for several weeks previously; and the success of the system from the sanitary and economic standpoints alike, the utter absence of anything to offend the sight or smell, the purity of the streams and ground water, and the luxuriance of the crops of every kind could not but impress the most incredulous. The essential features are the burial of the fæcal matters collected from the earthclosets or dry catches while still fresh, and within a few inches of the surface, in different parts of the garden as each is cleared of crops, or in trenches between the rows of currant, etc., bushes, and around the roots of fruit trees. In two to four weeks, or six in wet weather, all visible traces of excrement have disappeared, but of green crops the cabbage tribe alone tolerate the raw manure; other vegetables, from roots to peas, following one another in rotation for about three years before the turn of the plot—with the available quantity of manure, the excreta of 100 persons to the acre—for manuring comes again. Household slops, together with the rain water, are conveyed by open tile gutters to a larger open rectangular channel, with a floor of perforated tiles or overlapping slates to serve as a coarse strainer, beneath which a bed of loose stones, and forms a sort of elongated sump. The fouler water from the scullery sink undergoes a preliminary filtering before joining the other slops, the filter being built up against the wall, cement lined, filled with broken limestone, and covered with perforated zinc. It is in two compartments, the waste having a reversible nozzle, so that when one has been long in use it can be emptied, and the material exposed to the purifying action of the air. The subsoil is here a sandy loam overlying the chalk, and the ground water rises to within 3 or 4 feet of the surface; yet that in a well in the centre of the garden, though rich in nitrates, contains no ammonia and not more than twenty bacteria to the cubic centimetre; and a stream crossing the garden, which was formerly a fœtid ditch, is now a rapid pellucid brook.

Epping Forest and Claybury.—The Epping Forest and Claybury excursion was in charge of Dr. Radcliffe Crocker, Dr. Baxter Forman, and Mr. Braine. The party went by special train to Woodford, where they were met by brakes which conveyed them to the Claybury Lunatic Asylum. At this model institution they were met by Dr. Jones, the superintendent, and the other officers of the asylum, by whom they were shown all over the building, and were able to see not only the latest appliances in the administration of so large a community, as the asylum accommodates some 2,500 lunatics, but also that the poorest lunatic has every possible care and comfort, and many advantages over the best managed private asylums. After lunch, which was furnished by the steward of the asylum at the expense of the metropolitan members of the Association, the party re-entered the brakes and drove through some of the most beautiful portions of the Forest to the charmingly situated hotel and Chingford, where tea awaited them, and after being photographed in commemoration of their trip, they returned to town, having had a pleasant excursion, marred only by a heavy thunderstorm just after leaving Claybury.

ENTERTAINMENTS.

The Conversazione at the Royal College of Physicians.—For the *conversazione* on Friday, August 2nd, at the Royal College of Physicians, the officers of the College had made great preparations, and the building was tastefully decorated with flowers, etc. Refreshments were provided in the Small Library, and the band of the Royal Artillery played in the hall, but the attendance of visitors was not commensurate with the preparations made for their reception, partly owing, perhaps, to the counter-attraction at the sister College and partly to the exclusion of ladies on account of the limited space at the disposal of the entertainers.

The Conversazione at the Royal College of Surgeons.—On Friday, August 2nd, the Royal College of Surgeons hospitably entertained the members of the British Medical Association. The guests were received by the President, Mr. Christopher Heath, and the Vice-Presidents, Mr. Reginald Harrison and Mr. T. Pickering Pick, in the New Large Museum, and then passed onwards through the extensive suite of rooms in which, besides the ordinary contents of the Museum, many objects of interest were displayed for their inspection. In the Western Museum the String Band of the Royal Engineers gave an admirable performance, the London Welsh Glee Singers were in the Theatre, and the Edison Kinetoscope was on view in the New Small Museum. Various objects of interest were displayed in the Council Room, and the Hunterian relics in the Library Committee Rooms attracted considerable attention. The *conversazione* was very largely attended, and the scene was brilliant; the music, the bright dresses, and the constant movement making it difficult for habitués of the place to believe that they were indeed in the same rooms to the sober and serious aspect of which they were so well accustomed. Refreshments were liberally provided, and the large library in which they were served became

a place of reunion in which many people met who, in the more scattered work of the Sections, had not had many opportunities of coming across each other. All the arrangements were most admirably planned and carried out, and everyone felt that this hospitable reception by the Royal College formed a fitting finale to the many festivities which had marked the London meeting of 1895.

Ladies' Evening Party.—This was arranged by Lady Priestley and the members of the Ladies' Reception Committee, and took place at the New Gallery, Regent Street, on Thursday evening, August 1st. The summer exhibition of pictures by many well-known artists was on view, and the Blue Zouave Ladies' Orchestra performed a fine selection of music during the evening. The extensive rooms of the Gallery were all illuminated and opened to the visitors, and a brilliant company assembled in response to the invitation. Lady Priestley and other ladies received the visitors, about a thousand in number, who were much gratified with the well-considered arrangements made for their entertainment. Altogether this was certainly one of the most pleasing functions of a week in which, from the multiplicity of such receptions, it was difficult to excel.

Reception at the Temperance Hospital.—On Thursday, August 1st, between thirty and forty members attended a reception at the London Temperance Hospital, Hampstead Road. Dr. Long Fox, a Vice-President of the British Medical Temperance Association, received the guests on behalf of the President (Sir B. W. Richardson), who was unable to be present. The hospital was inspected, and various interesting cases shown by Dr. W. J. Collins, Dr. Fletcher Little, and Dr. Ridge, members of the staff. After refreshments a short meeting was held, Dr. Long Fox presiding, who said that that hospital was a great object lesson, not only because its success would compare favourably with other hospitals, but because its experience proved the truth which all physiologists would support that alcohol was neither a food nor a tonic nor a stimulant. Preventive medicine was the great feature of modern teaching, but while we fought against micro-organisms, on the other hand we encouraged the use of alcohol which injured the system far more. Greater efforts should be made to diminish the terrific death-rate from alcohol among doctors, who were bracketed with potboys. If abstinence were general there would be an enormous diminution of misery, poverty, and disease. Medical men should stand shoulder to shoulder with the clergy against this great evil. Drs. Collins, Norman Kerr, Fletcher Little, and Ridge also spoke.

Garden Party at Normansfield.—A most enjoyable afternoon was spent at Normansfield, Hampton Wick, on August 1st by all who availed themselves of the splendid hospitality of Dr. and Mrs. Langdon Down. Arrangements had been made to entertain 1,000 guests and invitations for that number were issued, but counter attractions elsewhere kept many away. The extensive grounds around the house, the appliances for education and pastime of its youthful inmates, and the whole working of this successful establishment were on view. Military bands were stationed in the gardens, a steam launch took parties of the guests for short trips upon the adjacent Thames, and in every way the kind host and hostess had thoughtfully provided for the amusement of their visitors.

Garden Party at Golders Hill.—Many hundreds of members and their ladies accepted the tempting invitation of Sir Spencer Wells, Bart., and Miss Wells to a garden party at Sir Spencer's beautiful residence on the northern slopes of Hampstead Heath; and all who made the journey were well repaid by the scene which met their view and the hospitality offered by the host and hostess. The extensive park like grounds, studded with noble trees, were in the height of summer glory, and refreshed by the generous rains of the previous week. A military band was in attendance, and played a programme of music; and a performance on the organ in the house, at which Dr. F. T. Roberts also sang, was greatly appreciated by the guests.

Children's Hospital.—On Thursday afternoon Mr. John H. Morgan, President of the Section of Diseases of Children, entertained about 150 members of the British Medical Association in the gardens of the Hospital for Sick Children, Great Ormond Street. Owing to the large demand for invitations, the number was with much regret limited owing to the fear of overcrowding the wards. Demonstrations of interesting cases were given by members of the staff, and after inspecting the wards, which were prettily decorated with flowers, they were served with refreshments in the garden, where tables were laid out. A large number of ladies and several foreign visitors were present, and expressed their admiration of all the arrangements.

Among the other social events of the meeting must be mentioned highly successful garden parties given by the Baroness Burdett-Coutts at Holly Lodge, Highgate; by Mrs. Tuke at Chiswick House; and by Mr. and Mrs. Stacey at Elmshurst, Bruce Grove, Tottenham. Mrs. Griffith Wilkins's reception at 15, Hyde Park Street, was a brilliant affair, as was also Mrs. Stephen Mackenzie's evening party at her house in Cavendish Square; and those members who availed themselves of the facilities offered them for seeing the fireworks at the Crystal Palace on Thursday evening witnessed an effective display. Most of the Presidents of Sections entertained large parties at dinner from day to day during the meeting. Mr. Jonathan Hutchinson gave a smoking *conversazione* at the Clinical Museum, and a Masonic smoking concert was held at the Portman Rooms, Baker Street, by invitation of the Æsculapius Lodge and Chapter. Bro. Jacob Pickett, M.D., W.M., filled the chair, and many well-known artistes contributed to the entertainment of a numerous company. A supper followed by a highly successful entertainment was given on Saturday evening by the Savage Club, which extended the privileges of membership to all the foreign visitors during the week of the annual meeting.

DEMONSTRATIONS IN HOSPITALS AND INFIRMARIES.

Charing Cross.

On Thursday, August 1st, a clinical demonstration was given in the wards of Charing Cross Hospital between the hours of 2 and 4 P.M. by members of the medical and surgical staff of the hospital. It was largely attended by members of the British Medical Association, and much interest was evinced in several of the cases, which were selected with a view to demonstrate either typical examples of disease or to show the results of the more recent improvements in medical and surgical treatment. The cases were so numerous and important that it would be impossible to describe them individually. We therefore select a few examples which came more particularly under our notice.

In the medical wards Dr. T. Henry Green demonstrated a case of uncomplicated aortic obstruction in a girl, 25 years of age, the result of acute rheumatism; also a case of post-diphtheritic paralysis of the ciliary muscle and of the soft palate, accompanied by marked loss of co-ordination and delayed appreciation of sensation in the lower limbs.

Dr. Mitchell Bruce showed a case of locomotor ataxy in a woman, 42 years of age, presenting all the classical symptoms of the disease; also a case of aneurysm of the transverse part of the arch of the aorta, which had been treated by diet and rest since January 23rd, 1893. Since March 5th, 1895, this patient has taken with comfort a diet never exceeding that suggested by Tufnell. The aneurysm now shows diminution in size and very marked diminution in pulsation, the patient being in good health.

In Dr. Abercrombie's wards a most interesting case was shown. A man, aged 40, was admitted for "vomiting blood," and brought up 5½ pints of blood during one day whilst in the hospital under observation. Dr. Abercrombie regards a ruptured varicose œsophageal vein as being the source of the blood. Dr. Abercrombie demonstrated another interesting case of a male patient, aged 22, who suffers from congenital malformation of the heart, and in whom cyanosis and clubbing of the finger tips are well marked. There is a systolic murmur confined to the left infra-clavicular region.

In the surgical wards the cases demonstrated were particularly numerous. We select for special notice only a few of the more noteworthy examples.

Mr. Bloxam showed a case of excision of both condyles of the lower jaw for ankylosis following traumatism. The operation was performed six months ago. The patient now has separation of an inch and a-half, thus being able to open the mouth very satisfactorily. There is, however, very little lateral movement.

Mr. John H. Morgan showed a female patient in perfect health after enucleation of a large hydatid cyst from the

liver. Also two cases of successful wiring of the patella, and one of the olecranon. In all three cases there was free movement of the neighbouring joint. Mr. Morgan further showed a case of imperforate anus with recto-vaginal fistula, which had been greatly improved by operation, the fæces now passing almost entirely by the newly-formed anus. The child looked well, and Mr. Morgan intends to close the fistula by a further operation.

Mr. Stanley Boyd showed a series of cases of radical cure of hernia and operations for undescended testis. In all these cases the testis had been brought down to the scrotum, and had remained there for some time—in some instances three or four years. Also a case of naso-pharyngeal growth after operation, which had consisted in temporarily displacing one superior maxilla forwards and outwards, and by means of the room thus gained removing the growth from the body of the sphenoid. Further, a series of cases, among them a fractured os calcis and two excisions of the knee, in which "screwing" had been performed in place of wiring. Mr. Herbert F. Waterhouse showed a case of excision of the elbow in a girl, aged 24, for tuberculous disease of five years' duration. The movements of pronation and supination were perfect, those of extension and flexion nearly so. Also a case of orbital cellulitis, in which the protrusion of the eyeball had been extreme, the organ having been almost entirely outside the cavity of the orbit for several days. A nebula, the result of superficial corneal ulceration, somewhat impaired vision. There was no optic atrophy.

Our thanks are due to the medical and surgical registrars, Dr. H. D. Senior and Mr. Charles Gibbs, F.R.C.S., for aid in the compilation of these notes.

Guy's.

On Friday afternoon about 150 members of the British Medical Association visited Guy's Hospital, and were conducted over the wards, college, museums, and laboratories by the staff and students. A number of interesting cases had been collected from the out-patient department, and cases in the wards were demonstrated by the members of the staff. Operations were performed in the theatre and eye wards, and demonstrations in operative dental surgery were made in the conservation room. In one of the rooms a collection of drawings by the hospital artist was shown, together with microscopical preparations and museum specimens. Messrs. Down Brothers exhibited surgical instruments. Refreshments were provided in the governors' committee room and in the reading room of the College.

Demonstration of Cases of Wounds and Ulcers Treated by Exposure to Oxygen Gas.

On Thursday, August 1st, at King's College, Dr. Stoker showed an interesting series of cases, either cured or in various stages of healing. He said there were several points of importance that must be borne in mind in considering these cases: 1. They were without exception cases in which every other form of treatment had been tried and had failed—rest, grafting, antiseptic applications, etc. 2. Cases in which the healing in some cases had been much more rapid than in others; that rapidity of healing was in direct relation with the healthiness of the surrounding skin and tissue. Healthy skin would not grow from unhealthy skin, and in some instances the first effect of oxygen was to increase the size of the ulcer till a healthy area was reached and then, and then only, new and healthy skin rapidly formed. 3. The bacteriological aspect of one case was surprising and rather upset one's preconceived ideas. 4. That the new skin and tissue formed by this system seemed different from the usual cicatricial tissue. There was no contraction, and in some instances it was difficult to say where the new skin began. Among the cases shown were: 1. A man, G. L., who had had a poisoned hand, with three ulcers, which had quite healed in three weeks, and left hardly any cicatrix. His hand became covered with hair. 2. A woman, M. W., who had had thirteen ulcers on her leg for four years, the result of typhoid fever. She was quite healed in nine weeks and had now been walking about for two months without any sign of recurrence. 3. A case of a girl, D. W., aged 16, whose back had been severely burnt last November. She had been six months in hospital with very little improvement. Under oxygen the ulcer was rapidly healing, being reduced in ten weeks from 9 by 10 to 3 by 5. 4. A woman, aged 71 years, who had had an annular ulcer on her leg for thirty years. She had rest in bed for three years and nine months, with various treatments. In six weeks under oxygen treatment the upper and lower borders had joined in three places, one place being 2 inches wide. 5. A woman, M. S., who had ulcers in either leg just above the ankle. That in the right leg had been in existence for fourteen years, that in the left for four. The ulcer on the left leg was being treated by the ordinary antiseptic method, and was not healing at the edges, though the surface of the ulcer had become more healthy. The ulcer was absolutely aseptic. The ulcer on the right leg was being treated by oxygen, and was rapidly decreasing in size; the pus was full of all kinds of micrococci. 6. A girl, J. M., who had been bald for one year (from alopecia areata). In view of the remarkable growth of hair seen in case No. 1, it was decided to try oxygen to make the hair grow in this case. She was fitted with an india-rubber nightcap, which was filled with pure oxygen twice daily, with the result that in two months her hair grew 2 inches long and is now daily increasing. The hair was at first white, but was now becoming pigmented. Many other interesting cases were shown, and the various apparatus applied and explained. Dr. Stoker pointed out that in the infirmaries all over the kingdom there were hundreds of cases of chronic ulcers occurring in persons who were otherwise able and willing to work, but who by reason of these ulcers were thrown on the rates, and cost the ratepayers a large sum. He had shown that these cases were easily healed by the oxygen treatment, and commended the system to all Boards of Guardians.

Lock Hospital.

The members of the British Medical Association visited the Lock Hospital, Harrow Road, on Thursday, August 1st, where they were entertained by Mr. Buxton Shillitoe and Mr. Edward Cotterell. Mr. Shillitoe gave a short demonstration with special reference to the changes that the treatment of venereal disease has undergone in recent times. Many interesting cases of syphilis in its various stages were shown to the visitors.

St. Peter's.

Demonstrations were given on Tuesday and Wednesday. Mr. Hurry Fenwick performed suprapubic cystotomy upon a patient who had applied three years previously to him for the relief of a severe left renal pain. The patient had been then cystoscoped (1892), and the cause for the renal symptoms had been discovered to be the pressure on the lower part of the left ureter of an encysted bladder stone of very small size. The nose of the calculus was all that was then visible, and it was about the size of the point of a knitting needle. As the symptoms had vanished after the cystoscopy, the case was published in its unfinished state (*Cardinal Symptoms of Urinary Disease*, 1893, p. 218). For three years the patient had remained well. Two weeks before the meeting sudden acute obstructive pyelitis had set in, and the bladder was opened on July 31st in order to remove the pressure on the left ureter by extracting the stone from its encysted position in the left wall of the bladder. The viscus was capacious. Few of the medical men present could feel the probe-pointed opening into the sac, though the ill-defined hardness of the stone in the subjacent sac was detected by all. The posterior wall was incised through the suprapubic incision over the hardness, and a large encysted stone was with difficulty removed. Mr. Fenwick showed a stone which he had removed in a similar case (*Clinical Transactions*, vol. xxiii), the extraction having been aided by cutting it up with a chisel and mallet. Patients were then cystoscoped, and various forms of vesical papillomata were demonstrated. A series of kidney cases were also shown.

St. Thomas's.

On Thursday, August 1st, the treasurer of St. Thomas's Hospital gave a garden party to the members of the Association. As the day proved very fine, about 600 people accepted the treasurer's hospitality. All parts of the hospital and school were thrown open for the inspection of the visitors, but perhaps the larger number preferred promenading about the terraces listening to the strains of a band. To the members, the staff exhibited and demonstrated on a number of very interesting cases. Among these were cases of acrome-

galy, leucocythæmia in a child, urticaria pigmentosa, dwarf from fragilitas ossium, traumatic meningocele, a series illustrating disease of knee-joints in congenital syphilis, leontiasis ossia, symmetrical hypertrophy of breasts in a girl of 15, and others.

THROAT HOSPITAL, GOLDEN SQUARE.

On Wednesday, July 31st, Dr. J. W. Bond showed two cases of excision of larynx, both patients sufficiently well to perform their ordinary work. Also three cases of sarcoma of tonsil after operation, and a case of sarcoma of the palate operated on two years ago. Also two cases of malignant nasal polypi. Also six cases after operation for middle-ear disease, in which the antrum, attic, middle ear, and external meatus had been thrown into one cavity. Mr. Harvey showed: (1) A case of excision of larynx for epithelioma, the patient able to perform his work. (2) A case of malignant (?) disease of nose septum. (3) A case of malignant goitre, etc. Mr. Lake showed: (1) A case of successful thyrotomy for malignant disease. (2) A case of frontal sinus disease after operation, etc. Mr. Parker showed cases of lupus of larynx, sarcoma of naso-pharynx, gummata of nasal septum, double abductor paralysis, etc.

DEMONSTRATIONS IN THE PUBLIC HEALTH SECTION.

Pasteur Filters.—A number of members visited the premises of Messrs. Debenham and Freebody, and inspected their installation of Pasteur filters. By means of this an ample supply of filtered water is provided for their enormous staff, amounting to close on a thousand persons; and no trouble of any kind is found in the working. The installation was of a compact and convenient character, and should serve as an object lesson to those who are under the impression that the Pasteur filter is a laboratory apparatus capable only of yielding minute quantities of water.

Equifex Disinfectant Spray.—During the meeting Mr. Wolf Defries gave demonstrations, by request of the Committee, in regard to the Equifex disinfectant spray, which, though new to this country, has been used for some years with great success in France and elsewhere. Mr. Defries showed that by means of the arrangements for providing a minute spray and distributing it by a stream of air, of which the strength can be regulated, a dew or cloud of liquid disinfectant is produced over the whole of the surface to be disinfected, which dries off slowly in the saturated atmosphere created by the process, while not injuring even those surfaces which most readily suffer, such as either common wall papers or rich plushes, of both which samples were sprayed and exhibited.

THE PRESS AND THE ANNUAL MEETING.

In concluding the reports of the proceedings of the meeting of the British Medical Association, the *Times* says:

"The proceedings of the Association were brought to a conclusion yesterday, after a meeting which has surpassed all its predecessors in point of numbers, and by common consent has in all respects been most successful. The organisation has throughout been admirable. The comfort of the visitors was amply provided for, and the entertainments, public and private, have been so many that no one could have availed himself of more than a portion of them. Every facility was afforded to the reporters, and particular acknowledgment is due in this respect to Mr. Andrew Clark, Dr. Isambard Owen, Dr. Dawson Williams, and Mr. Francis Fowke."

The *Daily Chronicle* says:

"From every side the opinion is expressed that the London meeting of the British Medical Association has been a great and unqualified success. Not less than that it must have been, in any case, if only because the social side of the gathering was admirably organised, and the practical details of the Sectional meetings considered with due regard to the comfort and convenience of members."

The *Speaker* for August 3rd contains the following:

"Never was there a time in the history of the world when the art of medicine enjoyed so much consideration as at the present day; and the British Medical Association, which has been in congress this week, has had plenty of material wherewith to reward the public attention which it was certain to attract. The Presidential Address gave an encouraging account of the progress of medical knowledge since the Association last met in London two-and-twenty years ago. There is a marvellous improvement in teaching, an immense increase in real knowledge—indeed, the medical science of 1873 seems, from Sir Russell Reynolds's description, to have too often resembled an imperfect and unsteady bridge over a bottomless quagmire—and an extraordinary extension of the means of cure. Our physicians have now whole departments of knowledge open to them that were hidden from their predecessors; for instance, as to the functions of obscure and and minor organs in the human body, their inter-relation with the rest of the system, and the means of supplying their absence through the medium of food. But few things are more notable than the growth of the science of public health—which, as Mr. Ernest Hart reminds us, is wholly English in its inception and development—and the extraordinary extension of that other branch of preventive medicine in which, though its later accretions are due to French and German influence, the impulse was given by the work of Jenner. Sir Russell Reynolds wound up his address by some valuable words on the moral influence of the medical profession. For many a family, he might have said, the physician has taken more than the place Comte claimed for him. He is their only spiritual adviser; the only recipient of confessions and family secrets; the only outsider likely to speak with effect. It is fortunate that this year no speaker at the Association has presumed on this position of authority. For example, the treatment the higher education of women has sometimes received at these congresses is a proof that the medical calling has its mental limitations no less than the sacerdotal."

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE twelfth annual meeting of the Medical Sickness, Annuity, and Life Assurance Society was held in the Ethical Section Room, King's College, on Wednesday, July 31st; Dr. DE HAVILLAND HALL in the chair.

Among those present were: Dr. de Havilland Hall, London; Dr. J. Brindley James, London; Dr. F. Wallace, London; Dr. Walter Smith, London; Dr. P. James, London; Dr. J. Pickett, London; Dr. T. V. Jackson, Wolverhampton; Dr. R. E. Yelf, Moreton-in-Marsh; Dr. W. T. Evans, Bayswater; Dr. W. K. Sibley, London; Dr. A. R. F. Evershed, Penzance; Dr. G. St. George, Lisburn; Dr. F. D. Grayson, Raleigh; Dr. E. Bartlett, London; Dr. J. B. Ball, London; Dr. R. J. Pye-Smith, Sheffield; Dr. F. A. Purcell, London; Dr. J. K. Brigham, London; Dr. C. Porter, Stockport; Dr. N. W. Barrington, Bexley Heath; Dr. Stewart Low, London; Dr. T. Davies, Liverpool; Dr. F. J. Allan, London; Dr. Hugh Jones, Dolgelly; Mr. C. H. W. Parkinson, Wimborne Minster; Dr. W. H. Day, London; Dr. W. Bartlett, Bideford; Dr. J. W. Mason, London; Dr. C. H. Wise, Walthamstow; Dr. D. M. Wilson, Edmonton; Dr. J. Heath, Edmonton; Dr. D. de Vere Hunt, Cardiff; Dr. Costelloe, Galway; Dr. G. Stoker, Dublin; Dr. R. H. Barkwell, London; Dr. Macdonald, Bristol.

In his address, Dr. DE HAVILLAND HALL, the Chairman, said he would take the earliest opportunity of thanking the members for the honour they had done him last year in electing him Chairman. The retirement of Mr. Ernest Hart from this position was a great loss to them, for he had always brought to bear upon their interests his great business and financial knowledge. Mr. Ernest Hart had, however, occupied the position of President of the Society, so they still had the command of his services, and quite recently he had been of great use to them, and had shown that they might continue to count upon his kindly interest in their affairs. The Society having been founded in 1884 was now in the twelfth year of its existence, and he was sure that the members would agree with him that of the many benefits Mr. Ernest Hart had conferred upon the profession, there was none greater than the part he took in founding this Society. He was glad to say that there was a continued addition to the number of the members, the funds were steadily growing, and the

ever-increasing demand upon the sickness fund was good evidence of the success of the business. During the first year after the institution of the Society less than a thousand pounds was paid in sickness claims, while last year the amount was more than four times as much—namely, £4,239. The members would see that this was a very large increase in usefulness and a considerable addition to the work of management thrown upon the shoulders of the members of the Committee. That there was a very great need of such a Society as this in the profession was admitted on all sides, and although their numbers had rapidly grown, he did not think they should rest satisfied till they had within their ranks something like 5,000 members. Then, perhaps, they might be content to rest for a while. During the year £5,000, out of a surplus of £7,137 shown at the last valuation, had been distributed as bonuses to members of the sickness branch, and this distribution, he trusted, gave satisfaction to the members. The expenses of management were still kept well within 5 per cent of the premium income, which was rather less than half the amount—namely, 10 per cent.—allowed by the actuary for the working of the society. When they compared the cost with which their business had been worked with the experience of older companies, they would see how much was saved by the voluntary work of the committees. A very useful sugestion made by Mr. Ernest Hart some two years ago was the formation of what was called the "investment fluctuation reserve fund"—that was to say, all interest received over 2½ per cent., the rate assumed in the valuation, was put by in a separate fund, and that fund had now reached £1,325. As they had before them the list of sickness claims paid within the last twelve months it would be quite unnecessary to speak further on the advantages of the Society. Taking, for instance, the first on the list, a member who was suffering from locomotor ataxy. He had been on he (the Chairman) believed ten years. A year or two ago his brother (a clergyman) had told him that if it had not been for the Society he would have been in the workhouse. Such a case as that was in itself sufficient to establish the utility of the Society. There was one point in the operations of the past year which had been to him a source of gratification, and that was that the Committee had consented to vote a sum of 20 guineas a year to the Royal Medical Benevolent Fund. It was felt that with the surplus the Society possessed it was desirable to do all they could to assist their brethren in the battle of life and that they might also have a kindly thought for their children, so the Committee agreed to subscribe, and he hoped the members would endorse their action. They subscribed on the understanding that the votes should be given to the children of deceased members. At the last election the children of three deceased members came up, the votes were equally divided, and he was glad to say that one of the three was admitted into Epsom on his first application. So it would be seen that not only was the Society benefiting the members still alive, but even after their death there were still benefits which might accrue to their children. The next point was certain alterations in the rules, which the Committee recommended as essential to the welfare of the Society. The details were in the hands of the meeting. He would urge upon every member of the Society that they should do their utmost to induce their friends to join it, as the more members there were the less in proportion would be the cost of carrying on the business. He had much pleasure in moving:

That the annual report be received and adopted.

The resolution, on being put to the meeting, was carried unanimously.

Several matters relative to the bonuses of the Society being reserved, and constituting a provision for old age, and as to voting by proxy were referred to the Committee for consideration.

Mr. T. V. JACKSON moved the following resolution:

That the officers and members of the Committee as per list be and are hereby elected.

This was seconded by Mr. BRINDLEY JAMES, and carried unanimously.

Dr. EVANS proposed a vote of thanks to the officers and committee of the Society, which was carried unanimously.

Dr. BALL, in replying on behalf of the officers, said he begged to return thanks for the vote which had just been passed. The work they did was a great pleasure to them; it was a labour of love.

Dr. BOTT said he would ask the members to endorse a vote of thanks to the BRITISH MEDICAL JOURNAL for the very ample advertisement and the very useful help given to the Society by the JOURNAL. He might say that were it not for this advertisement their expenses would be much larger. He was sure that there was no occasion to say how thoroughly and earnestly Mr. Hart felt in regard to the Society, and although he was not actually at their head, he was quite certain he was thinking of them at the present time.

Dr. HUNT said he had much pleasure in seconding the resolution, as he knew the great interest Mr. Hart took in the Society.

The resolution, on being put to the meeting, was carried unanimously.

A vote of thanks to the Chairman, proposed by Mr. BRINDLEY JAMES, seconded by Dr. WISE, which was carried with acclamation, brought the meeting to a close.

ROYAL COLLEGE OF SURGEONS.

AN ordinary meeting of the Council was held at the College on Monday, July 29th. Mr. HEATH was in the chair, and the minutes of the last quarterly meeting were read and confirmed.

A report was received from the Finance Committee stating that the College accounts for the year ending Midsummer, 1895, had been duly audited and that the usual statement of receipts and expenditure had been signed by them.

The Committee on the proposed arrangements for the Third and Fourth Examinations recommended that no separate examination in Ophthalmic Surgery should be instituted, and that they should be authorised to consider and report upon the general scheme of examinations as well as upon the details, and that they should further be authorised to consult the medical schools if they should think it desirable.

A letter was read from the Royal College of Physicians, stating that the petition from the London School of Medicine for Women had not been referred to a committee for report, but that its consideration had been proposed to a special meeting of the College in the autumn. It was resolved that the resolution referring this petition to the Committee of Management of the College of Surgeons be rescinded, and that the petition be considered by the Council on November 14th.

The following motion was also carried:—

That the question of the admission of women to the Conjoint Examinations for the diploma of Membership be submitted to the next meeting of Fellows and Members on November 14th, 1895.

The Secretary reported the presentation to the College by Mr. Jabez Hogg of 16 daguerreotypes of physicians, surgeons, and others, mostly taken by himself in "the early forties," of 9 volumes of scientific pamphlets, and of a portrait in oil of a surgeon (name unknown), date, 1677. The best thanks of the Council were given to Mr. Jabez Hogg for his valuable donation.

The following resolution was received from the Association of Fellows:

That the attention of the President and Council of the Royal College of Surgeons, England, be drawn to the fact that the half-yearly meeting of the Fellows on July 4th was closed without any discussion being possible in respect to the business on the agenda; and that, in the opinion of the Committee of the Association of Fellows, such a mode of conducting these meetings would be destructive of the privileges conceded by the Council to the Fellows, and would render their meetings nugatory.

The Council resolved that, in reply to the Association, they wished to point out that the meeting of Fellows was held and conducted in strict accordance with the regulations appertaining to the meeting; and that, as there were no notices of motion on the agenda, no discussion could properly take place, the regulations of the meeting requiring previous notice of twenty-one days.

UNIVERSITY OF EDINBURGH.—The graduation ceremonial in medicine, science, and law, of the University of Edinburgh, took place on Thursday, August 1st.

BATHS AND HEALTH RESORTS OF THE UNITED KINGDOM.

The Report of the Royal Medical and Chirurgical Society.[1]

(Concluded from page 234.)

II.

Dr. Mitchell Bruce also furnishes the reports on the climate of Dorset and Hampshire. In the former he has little to say about the county as a whole, confining himself to descriptions of the principal health resorts. Of these, Shaftesbury is said to be suitable for persons in want of a bracing country holiday; it is also on its trial as a hill station for tuberculous subjects during the summer and autumn months. The climatic merits of Weymouth and Swanage are conscientiously appraised. In treating of Hampshire, Dr. Mitchell Bruce is moved to unwonted enthusiasm in speaking of the charms of the New Forest, which he describes as "peculiarly adapted as a health resort in convalescence from acute disease; as a retreat in certain nervous diseases and some forms of neurasthenia; as a place for a quiet holiday in early spring and summer for the town dweller." Bournemouth naturally receives a good deal of attention. While the great natural advantages of its situation and climate are ungrudgingly admitted, it is pointed out that, like many other prosperous health resorts, it is increasing too rapidly in area and polluting its atmosphere with smoke. This we take it is one of the chief reasons why people go abroad in search of what they might easily find near home were not the trail of the speculative builder over nearly every spot in this country which Nature had intended for a place of rest, amid pure air and beautiful scenery. The Isle of Wight receives its due meed of discriminating praise. Here, as at other seaside places, the prevalence of anæmia among young girls of the well-to-do as well as of the poorer classes seems to have struck most observers.

Dr. W. Ewart deals exhaustively with the climate of the south-eastern counties, comparing it with that of Cornwall, which, though warmer and more equable, is more relaxing. The therapeutic value of the south-eastern district is summed up in the statement that while famed for the relief of many ailments, it is not the special home of any. Again, the special virtue of its inland as compared with its marine climates is indicated epigrammatically as follows: "Inland is the place to enjoy health, the seacoast to make it." In general all conditions of delicacy, and therefore of irritability of tissues or of functions, are best suited by the south coast; whilst torpor in all its forms, and debility associated with nervous depression or loss of tone, are benefited by the quickening influence of the northern, and especially of the eastern, coast of Kent. Dr. Ewart also treats of Surrey, Sussex, and Kent separately, the geology, physical characters, and climatology of each county being described and compared with a fulness and elaboration which are likely to have a somewhat confusing effect on the mind of a hasty reader. The health resorts in each of the three counties are also described at considerable length, the local reporters in not a few instance being allowed to speak for themselves, and availing themselves freely of the privilege. Hence the reports are unequal in merit, in some cases (among which we may note the report of the Brighton and Sussex Medico-Chirurgical Society on Brighton, that of the East Sussex Medico-Chirurgical Society on Hastings and St. Leonards, and that of Dr. R. L. Bowles on Folkestone) being really instructive and helpful, while others are little above the level of the ordinary guidebook.

Only about one-sixth of the book is devoted to medicinal springs. Dr. Ord, in his "Introductory Remarks" while patriotically standing up for our British spas, has to admit that besides the general inferiority of the waters in richness of mineral constituents, such advantages as they possess are seriously handicapped by our climate. He adds that in our watering places "the resources of Nature are not on the whole sufficiently utilised"—surely a very mild way of characterising the pitiful lack of enterprise shown by the persons in whose hands is the direction of affairs at most of our spas. Bath and Buxton are described by Dr. Ord and Dr. A. E. Garrod. Dr. Garrod is also the *vates sacer* of Matlock, Bakewell, Stoney Middleton, Droitwich, Nantwich, Leamington, Cheltenham, and Tunbridge Wells. Mr. Malcolm Morris and Dr. F. Penrose treat of Harrogate and Strathpeffer, Mr. Morris adding a brief note on Moffat; Dr. Robert Barnes gives an account of Woodhall Spa; and Dr. Frederick Roberts hymns the praises of the healing springs of Wales—Llandrindod, Llanwrtyd, Llangammarch, and Builth. Brief descriptions are also given by anonymous writers of Askern Spa, Stafford and Saltburn-on-Sea, and Ashby-de-la-Zouch. The therapeutic effects of the various spas are clearly indicated, and the credulity of the reader is never taxed by exaggerated statements of the thaumaturgic virtues of any waters in all diseases.

The work contains a large number of meteorological and statistical tables, an excellent map of the South of England, with contours, winter isotherms, etc., and a very full index. The few errors which we have succeeded in discovering are quite unimportant, and Dr. Archibald Garrod deserves the greatest praise for the zeal and diligence with which he has discharged his responsible duties as editor.

To sum up: In this work the medical profession has not only a storehouse of carefully sifted information on the climate of the South of England, on the health resorts of that part of the kingdom, and on the chief medicinal springs of Great Britain, but an authoritative exposition of the therapeutic effects of these places and a trustworthy guide to their use whether in the way of treatment or for holiday purposes. The information in some parts of the work might have been conveyed in a somewhat less austere form, but perhaps the august society under whose auspices it is published may have thought that its dignity would suffer from the slightest appearance of bending the literary knee to the Baal of popularity.

[1] *The Climates and Baths of Great Britain*, being the Report of a Committee of the Royal Medical and Chirurgical Society of London. Vol. I.—The Climates of the South of England, and the Chief Medicinal Springs of Great Britain. London and New York: Macmillan and Co. 1895. Demy 8vo. 21s. nett.

SIDMOUTH.

Mr. Robert F. McArdle (Stoke-on-Trent), writes in praise of Sidmouth, on the coast of South Devon, where, after an accident, he recently spent some time. He recommends the climate as equable—cool in summer, and warm in winter. The mean temperatures of London, Bournemouth, and Sidmouth, are shown in the following table:

Winter.

—	Jan.	Feb.	March.	Oct.	Nov.	Dec.
Sidmouth	40·8	41·0	41·9	50·1	46·3	41·3
Bournemouth	39·9	40·4	41·6	49·8	45·6	40·2
London	38·4	39·2	41·4	48·7	44·3	38·3

Summer.

—	May.	June.	July.	August.	Sept.
London	53·5	59·3	62·4	61·4	57·3
Bournemouth	52·1	57·5	60·5	60·6	57·0
Sidmouth	51·5	56·7	59·4	59·3	56·5

The number of hours of sunshine in winter is high as compared with the record in other south-coast stations, while as compared with northern stations the record is (October to March): Sidmouth, 550 hours; northern stations, 340 hours. The scenery is beautiful, the red cliffs contrasting with the luxuriant vegetation. For amusements there are golf, cricket, and boating; and steamboats run to Torquay and Bournemouth.

New baths were opened in May, and are provided with sea and fresh water in any proportions and at any temperature. The baths are well fitted, and the Nauheim treatment can be applied. Massage and douche baths can also be obtained, and adjoining the baths is a comfortable club.

MOFFAT.

Dr. G. D. Mackintosh (St. Anne's-on-the-Sea), points out the advantages of Moffat, which he describes as the "Cheltenham of the Border." Moffat, like Cheltenham, lies in a hollow among hills, but is more open to the south than Cheltenham. The climate also is mild, but more bracing than Cheltenham, and thus more suitable for the invalid in the summer and autumn months, June, July, and August being the favourite months with visitors, though in the height of summer Moffat may be too warm. The Moffat well water is very similar in composition to the Montpelier spring at Cheltenham, though it is weaker and contains less sulphate of magnesium in proportion to the other ingredients. In some cases the weaker water may be more suitable, the necessity to take a larger quantity of the weaker water serving, for example, to flush out the kidneys in chronic Bright's disease, and the bowels in chronic constipation. The walk or drive of a mile and a half up hill before breakfast contributes to the production of the exhilarating effect produced by a course of the waters. The romantic glens and rugged hills of Dumfriesshire afford beautiful scenery, while the mineral bathing facilities are good for so small a place. Lodgings are cheap, and there is an excellent hydropathic establishment, as well as several hotels. Golf, tennis, and trout-fishing can all be enjoyed.

SOME BATHS OF SWITZERLAND AND GERMANY.

(Concluded from p. 325.)

Schweizerhall.[7]

These saline baths are of precisely the same character as those at Rheinfelden. Schweizerhall is situated on the left bank of the Rhine, in an agreeable position, and about twenty minutes' drive from Pratteln Station, which is only sixteen minutes by rail from Bâle. It is adapted to the same cases as Rheinfelden.

Lucerne, the Lake and its Environs.[8]

As an instance of the liberal and enterprising spirit with which the Swiss authorities act in order to promote the attractiveness of their country, we may mention that a copy of an attractive little guide-book is sent gratuitously to any part of Great Britain on written application to the Official Enquiry Office at Lucerne. It contains several valuable maps and many pleasing illustrations, and is altogether an admirable guide to the inexhaustible charms and attractions of Lucerne and its neighbourhood.

Davos.[9]

One of Woerl's convenient little guides to frequented resorts is devoted to Davos. It is published at the low price of M.0.50 (6d.), and contains in a small compass all the information required by most visitors.

Churwalden.[10]

Those who were accustomed to visit the Engadine before the fine carriage road over the Schyn Pass between Thusis and Tiefenkasten was constructed, will remember the slow up-hill drive of an hour or more after leaving Chur till the village of Churwalden was reached. It is pleasantly situated in the valley of the Rabiosa, at an elevation of 4,000 feet above the sea, and it has always been regarded as a suitable station for delicate persons who are proceeding to the Engadine to break the suddenness of the ascent to the latter. There are several hotels and pensions there, and the accommodation is fairly good. The drawback to Churwalden is its nearness to Chur, so that it is hardly a convenient stopping place for those who wish to break the long drive between Chur and the Engadine.

Kissingen.[11]

A well-got-up illustrated handbook to the use of the waters of Kissingen and to the neighbourhood, contains detailed analyses of the several springs, and a description of the methods of using them as practised there—internally and externally; for external use there are, besides the Pandur and the brine springs, bog-earth baths, vapour baths, carbonic acid baths, and the air of the graduation houses. At Kissingen they have a fine hydropathic institution, a pneumatic, and an orthopædic institution. The physiological action of the various curative agencies employed is explained, and the indications for their use are set forth. The concluding part is devoted to a description of the town, its buildings, and its surroundings.

Wildbad.[12]

Wildbad has been always considered as a type of the so-called "Wildbäder" of the Germans—that is, of indifferent thermal baths, situated amidst forest or mountain scenery. It is readily accessible by railway, the short Wildbad line branching off at Pforzheim, a town only a few miles from Carlsruhe. The hot springs arise in the narrow valley of the Enz, at an elevation of 1,400 feet above the sea, in the Würtemburg Black Forest. There are there numerous well-appointed houses, villas, and pensions, as it is a bath often resorted to by great personages from all quarters of Europe. The Princess of Wales was treated there for the affection of the knee her Royal Highness suffered from some years ago. A new bath establishment, built at great cost (King Charles Baths) was opened in 1892, and possesses, in addition to the thermal springs, electric baths, vapour baths, and a "medico-mechanical" institution on the Zander system. Chronic articular rheumatism and gout and functional disorders of the nervous system are the diseases chiefly suited to treatment there.

Rippoldsau.[13]

Rippoldsau is a bath situated in the Black Forest, at an elevation of 2,000 feet above the sea, about fifteen miles from Wolfach Station, on the celebrated Black Forest Railway. The pamphlet before us contains a brief account of the mineral springs and of the country around. Rippoldsau possesses strong chalybeate springs, and also springs in which the bicarbonate of iron occurs in association with the aperient alkaline sulphates, so that they are especially suitable to those cases in which an anæmic state is associated with hepatic and intestinal torpor. It also has mud baths prepared from moor earth obtained from Franzensbad, hydro-electric baths, and pine needle baths, as well as the ordinary mineral water baths. The whey and milk cures can also be followed there, as well as most of the modern mechanical methods of treating chronic disease. Rippoldsau has also the advantage of a fine picturesque situation, and attractive country around.

Krynica.[14]

We have here a brief account of the baths of Krynica, which are picturesquely situated on the northern slopes of the Carpathian Mountains at an elevation of about 2,000 feet above the sea, nearly 230 miles north-east of Buda-Pesth. The spring belongs to the class of gaseous chalybeate waters, and is chiefly used in the treatment of anæmia, neurasthenia, dyspepsia, and what is termed the *Englische Krankheit*, whatever that may be. The therapeutic measures in use are, besides the chalybeate spring, moor baths, carbonic acid gas baths, electrical and mechanical treatment, as well as the koumiss, kefir, and other dietetic methods. For those who wish to combine mineral water treatment with a visit to the Carpathians, this far-off health resort may have some attractions.

Acqua Rossa.[15]

The baths of Acqua Rossa, so-called on account of the red deposit the springs leave along their course, is situated amidst very grand alpine scenery in the Valley of Blenio, about eight miles from Biasca, a station on the Italian side of the St. Gothard railway. It is also within a few miles of Olivone, a village beautifully situated at the foot of the Lukmanier Pass, on the Italian side. The pamphlet before us contains an excellent and vivid description of the interesting neigh-

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[7] *The Saline Baths of Schweizerhall.*

[8] *Guide to Lucerne, the Lake, and its Environs*, by J. C. Heer. Lucerne, H. Kelliss, Foreign Printing Office; foolscap 8vo, pp. 142, gratis. 1895.

[9] *Davos and Environs*, pp. 32, with map. Leo Woerl, in Würtzburg.

[10] *Churwalden, Aufenthalt für Brustkranke*, Canton Graubünden, Schweiz. Pamphlet, pp. 8, with map.

[11] Kissingen Spa: *The International Health Resort in its Medical and Social Aspects.* Published by the "Kurverein Bad Kissingen." Munich: Melsenbach, Riffarth and Co. (Demy 8vo, pp. 66, with map and plates.)

[12] *Wildbad, in the Kingdom of Würtemberg.*

[13] *Bad Rippoldsau, in the Grand Duchy of Baden.* Pamphlet, pp. 28. Stuttgart: Greiner and Pfeiffer.

[14] *The Mineral Waters and Moor Baths and the Hydropathic Establishment of Krynica in Galicia*, by Sigmund Sokolowski. New Sandez. 1892.

[15] Les Eaux Thermales, Ferrugineuses, arsenicales avec Lithium de Acqua Rossa, Vallée de Blenio (suisse). [The Warm Springs of Acqua Rossa, Valley of Blenio, Switzerland.] By Dr. Andreossi, Bellinzona, T. Colombi. (Demy 8vo, pp. 75, with plates and a map.

bourhood surrounding this bath, as well as an account of the composition and characters of the spring itself. This mineral spring is rich in iron, and contains also small quantities of manganese, arsenic, and lithium, together with much calcium and magnesium sulphate. The water is warm, and is used—as well as the red mud it deposits—for baths, especially in skin affections, and it is drunk also in these and other maladies of a debilitating and anæmic type. An excellent map of the locality and some good plates illustrate the text.

THE CANARY ISLANDS AS AS A WINTER RESORT.

MR. C. A. GRIFFITHS, F.R.C.S., of Cardiff, sends us a few notes of a three months' residence last winter in the Canaries. Mr. Griffiths left England early in February last for Santa Cruz the chief town and harbour of Teneriffe, and travelled thence by carriage to Orotava. He found the climate remarkably equable. The days as a rule were fine and sunny, and even at the end of April, when the heat was getting more intense, they were never sultry. The nights were pleasantly cool, but not cold enough to prevent sitting out in the open air. He complains that the streets are dirty and ill-paved, and the sanitary arrangements primitive, "the porous nature of the volcanic soil being made to do duty for the drainage pipes of more modern and civilised communities." Mr. Griffiths thinks "A great point in favour of the Canaries as a winter resort is that invalids can spend the greater part of their time in the open air. The more weakly can be carried about in hammocks, go for drives, or lie about on the *patios* of their hotels, while the more robust can go in for walking, lawn tennis, riding, sea fishing, etc. He points out that in this climate sea bathing can be indulged in even in winter, and also mountain climbing, from the smaller hills to the snowclad peak. Choice of residences can also be made from the sea level to four or five thousand feet above it. The town residents retire to these mountain resorts in the summer months. He found, even in advanced cases of phthisis, the equable climate very acceptable; and for "milder cases" he thought it "little short of perfection." He estimates the cost of living at the English hotels at 10s. or 12s. a day.

SOCIETY OF MEDICAL PHONOGRAPHERS.

THE first general meeting of the members of this Society was held on July 30th at 20, Hanover Square, W., when there was a very fair attendance of members and visitors, the latter including Sir Henry Howorth, M.P., F.R.S., and Sir William Broadbent.

The chair was occupied by Dr. GOWERS, F.R.S., first president and founder, who gave an inaugural address, which will be subsequently published. Supporting him were Dr. Gray, Oxford (Treasurer, and Dr. Neil (Secretary). Letters were read from General Sir C. Wilson speaking of the recognised value of shorthand to staff officers; from Dr. J. H. Gladstone, who has used shorthand constantly in science since 1836, and invariably employs it for recording observations and preliminary writing; and from the Bishop of Hereford, who said the establishment of the Society of Medical Phonographers was an event of no small importance. It would do a great deal to popularise the study in all our higher schools, as it would help to brush away the prejudice that shorthand was chiefly useful for trade purposes, and might be neglected by the profession without loss.

Sir HENRY HOWORTH, in responding to the President's invitation, said that in writing his books his great despair and difficulty had been the copying down verbatim, in the ordinary writing, the material from a very wide field, pertinent to the subject. Had he been able to use shorthand in the process he would have spared his eyes and saved both time and temper. He felt so strongly on the matter that he was insisting on his boys learning the art. He referred to the great use made of the art by the President in the compilation of his published works, and went on to speak of the value of the phonetic principle. In conclusion, he considered the President a great evangelist in the movement, and spoke in flattering terms of the *Phonographic Quarterly Review*.

Sir WILLIAM BROADBENT said he was present to testify to his sympathy with the work of the Society, and he agreed with every word of the Presidential address. He also had to look back with regret to the fact that he did not persevere sufficiently with his shorthand to make use of it, but he recognised to the full the utility of the art for taking notes at the bedside. In some cases circumstances were such that record at the moment in the ordinary longhand was impossible, whereas with shorthand no postponement was necessary, so that both vividness and accuracy were preserved. He could only look forward to the time when it would be the rule that all men who seriously worked in the cause of hospitals would make use of that very great advantage. He wished the Society success, and felt sure it would be extremely useful to the medical profession.

Mr. THOMSON (Dublin) said he was an old shorthand writer, and could testify to the value of the art in one's work. He thought the sphere of the Society would extend from day to day. He did not agree that there was an age beyond which shorthand could not be learned, and felt sure that if the last speaker would give a daily hour to the study for a few weeks he would acquire sufficient facility to make use of it at least for private cases.

The PRESIDENT stated that Dr. Langdon, of Cincinnati, who was 45 years of age, obtained in a fortnight sufficient power to write a letter which he (Dr. Gowers) could read as swiftly as he could speak.

BRITISH PHARMACEUTICAL CONFERENCE.

THE meeting held last week at Bournemouth, under the presidency of Mr. N. H. MARTIN, of Newcastle-on-Tyne, though not so largely attended as some previous meetings, was in every respect a marked success. The arrangements made by the local Committee were thoroughly well devised and efficiently carried out. As in the previous year of Mr. Martin's presidency his address was mainly devoted to the consideration of various influences tending to promote or obstruct the development of a professional spirit among those engaged in the practice of pharmacy. Regarding that occupation as necessitating acquaintance with various branches of science and as being definable in the same manner as the practice of medicine, Mr Martin forms a high estimate of the functions and duties appertaining to it. From that point of view he considers that at the present moment the position of pharmacy in this country is most unsatisfactory, for while on the one hand pharmaceutical science is sneered at and flouted by false assumption and pretence the whirlwind of modern trade threatens to extinguish the true art of pharmacy. That there is much to justify such a view of the situation cannot be denied, and in some respects Mr. Martin's protest against exaggerated scientific pretension is no less timely than that against the practice of "the baser methods of trade." But while making that admission the fact must not be overlooked that the higher and more professional practice of the art of pharmacy is almost invariably associated with an essentially trade factor which cannot in any case be neglected and is sometimes the pharmacist's chief means of existence. The ills and hardships experienced by those engaged in the business of pharmacy are not to be remedied by decoying the trade part of their business but by convincing the public that their qualification for performing its higher duties is also essential for the proper conduct of the trade they carry on.

There is no other basis on which pharmacists can hope for protection and advancement in regard either to their trade or to their more professional work. That may be regarded as the real purport of Mr. Martin's remarks, and among the means by which the desired result is to be attained, there is none likely to be so effectual as the organised association of those engaged in the business. Since the foundation of the Pharmaceutical Society the recognition of that principle has extended, and found expression in the formation of local associations, and of the British Pharmaceutical Conference itself. Of late years further evidence of this tendency has been given by the project of federating local associations, but it is strange that the advantages offered for this purpose by the Pharmaceutical Society are still to a large extent overlooked. In referring to this point, Mr. Martin mentioned the benefits which have been derived from the British Medical Association as a general organised representative of the medical profession, and strongly urged the desirability of

a similar association for pharmacy on the basis of membership of the Pharmaceutical Society. Until such a general organisation of persons engaged in the business is affected, improvement in the position of pharmacy and of its followers cannot be looked for, and amendment of the Pharmacy Acts will be limited to matters which affect the public interest only. The great want of an adequate system of scientific education and technical training as a necessary preliminary to qualification is one which must be provided for by those engaged in the practice of pharmacy from a conviction that it is the only means of securing for themselves advancement and the protection which they find to be necessary.

The papers read at the several sections of the Conference dealt with a number of subjects of pharmaceutical interest, but they were not equal in importance to those of previous years. The remarks on the *British Pharmacopœia* by Dr. Charles Symes, of Liverpool, were directed towards securing for that work more general recognition by prescribers not only at home but also in the colonies. He advocated the introduction of the metric system of weights and measures as well as its extension to doses by giving the equivalents of the doses stated according to the present system, and suggested that new drugs under trial and old ones becoming obsolete should be included in a secondary list, so as to avoid too frequent changes in the body of the work.

The social features of the meeting were particularly agreeable, the headquarters of the Conference being the Mont Dore Hotel, where the President held a reception on Monday evening. The excursions to Swanage and to the New Forest, as well as the garden party concert in the winter garden of the hotel, and the smoking concert on Wednesday evening, afforded much enjoyment and satisfaction.

DEATH UNDER ANÆSTHETICS.

Chloroform.

We are indebted to Dr. Duff (St. John's, S.E.) for the report of a case of death under chloroform which occurred in his practice. He writes: H. W., an infant 12 days old, was brought to me on July 6th by the nurse who had been attending the mother during her confinement, to see what could be done to stop the convulsions and difficulty of micturition from which the child had been suffering. On examining the child I found the prepuce all but imperforate, hardly permitting the passage of a probe, the orifice being further closed by a flap of mucous membrane acting as a valve inside. I recommended circumcision, which was according done at the District Home of the Nursing Sisters of St. John the Divine on July 8th. Chloroform was administered, which the child took well, and was sent home to be dressed daily, and brought up again if necessary. On the 15th the child was again brought, as there had been some hæmorrhage. I found that the stitch on the dorsum had cut its way out, allowing the skin of the penis to come forward on the glands, forming extensive adhesions. I told the mother to bring up the child next day to the District Home in order that I might put this right. She accordingly did so, and I again administered chloroform, which the child took as well as on the previous occasion, I then broke down the adhesions with the probe, trimmed and stitched the skin to the corona. I had finished bandaging and was giving some directions to the mother when the sister in charge called my attention to the fact that the child, who had been coming to nicely, had ceased breathing. I found the pulse still beating, but the child never revived in spite of the application of the battery, artificial respiration, etc. After the child's death I was informed by the father that another child of his, aged 8 months, had died in hospital under chloroform after a minor operation—a fact which would, if I had known it previously, have effectually prevented me from giving chloroform at all for so slight an operation as circumcision. At the *post-mortem* examination the body was found to be emaciated, but no organic lesion present. I cannot of course vouch for the accuracy of the parent's statement with regard to the other child's death, but if true it would seem to show that undue susceptibility to chloroform may, like other idiosyncrasies, run in families. In my own case the child, though fully, was never deeply under chloroform, the total amount given being about 3 ij on a towel in a hot room.

MILKBORNE DISEASE:

An Appeal to Medical Officers of Health.

Mr. Ernest Hart is engaged on a general inquiry into milkborne disease since 1881, in continuation of his paper of that year on the Influence of Milk in Spreading Zymotic Disease, and will be much obliged if those health officers who possess notes of outbreaks of disease traceable to the agency of milk will be good enough to furnish him with a brief statement of the facts, so far as known, in the shape of answers to the questions subjoined:

1. Date.
2. Locality.
3. Reporter.
4. Total number of cases.
5. Deaths.
6. Number of cases amongst drinkers of suspected milk.
7. Number of persons supplied by milkman.
8. Number of such families invaded
9. Sanitary circumstances of farm or dairy from which milk was obtained.
10. Exciting cause of outbreak.
11. Circumstances implicating milk.
12. Facts showing special incidence of disease.
13. Reference to report.

In addition to those whose names appeared in an earlier issue of the British Medical Journal, Mr. Ernest Hart desires to express his thanks to the following medical officers of health for the reports and information which they have kindly forwarded to him relative to the outbreaks of infectious diseases traceable to the agency of milk: Dr. Wm. Brown (Carlisle), Dr. Iliffe (Derby), Dr. Harvey Littlejohn (Edinburgh), Dr. Malet (Wolverhampton), Dr. Nasmyth (co. Fife), Dr. Oliver (co. Roxburgh), Dr. Philpot (Croydon), Dr. Chas. Porter (Stockport), Dr. Sergeant (W. Lancs.), Dr. Walker (Spilsby Rural District), Dr. Whitelaw (Kirkintilloch), and Dr. Woodman (Exeter).

ASSOCIATION INTELLIGENCE.

NOTICE OF LAST QUARTERLY MEETING FOR 1895. ELECTION OF MEMBERS.

A meeting of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

Border Counties Branch.—The annual meeting, which was unavoidably postponed, will be held at Dumfries in the third week of August. Due notice will be given by circular.—J. Altham, Honorary Secretary, Penrith.

Midland Branch: Derbyshire Division.—There will be a meeting at the Whitworth Institute, Darley Dale, on Thursday, September 5th. The President, Dr Moxon, kindly invites the members to afternoon tea, and Lady Whitworth will throw open her gardens and grounds. Afterwards it is proposed to drive to Matlock Bath to dine at the New Bath Hotel. Members are requested to give notice of communications to be brought before the meeting before August 20th to J. A. Southern, Honorary Secretary, Friar Gate, Derby.

The Norwich Corporation have conferred the honorary freedom of the city upon Sir Peter Eade, M.D., who is now serving the office of Mayor for the third time.

SPECIAL CORRESPONDENCE.

ST. PETERSBURG.

A New Disease.—A Vaccination Centenary and the Russian National Health Society.

An article of considerable interest was published in the April number of the *Journal of General Hygiene* by Drs. Bielisvski and Riéshetnikof upon a hitherto little known disease, which they name *tarabagania tchuma*, that is to say, a plague or disease (*tchuma*) arising in connection with the *tarabagan*. The *tarabagan* is a rodent animal, closely allied to the marmot, and apparently of frequent occurrence in the Siberian province of Transbaikal, where all the cases of the disease in question have been met with. The authors of the article have collected twenty-six cases occurring in the Akshin *okrug* (or military district) of that province. They were distributed among six families, and occurred in the years 1888, 1889, 1891, and 1894. In addition, six corpses of Buriats (a Siberian tribe) were found in an earth hut, bearing signs of having died from this disease. That their death was so caused was confirmed by the fact that a medical man and a *feldscher*, who made necropsies on these bodies both contracted the disease and died from it. In fact, no case has yet been known of recovery from what appears to be one of the most malignant forms of disease yet observed. The symptoms are the following: The patient sickens with a feeling of heat and general feverishness; the temperature rises; there is giddiness, intense headache, flushing, restlessness, and distress. The pulse becomes rapid and weak. Some patients complain of oppression and pain in the chest, accompanied by occasional dry cough and scanty expectoration, which is sometimes tinged with blood. There is nausea, sometimes vomiting, and towards the end, which generally occurs on the second or third day, there may be diarrhœa. Weakness and general depression are marked features; consciousness remains more or less complete until death. The axillary glands may be swollen and red, but nothing is said as to the occurrence of suppuration. The incubation period seems to be from three to five days or more. As already stated, no case of recovery has yet been met with; death always occurred on the second or third day. This disease is regarded by the authors as a typical purely contagious disease. It can be contracted solely by coming into contact with the fluids escaping from the body of an animal who has died from it, or from using the flesh of such an animal in an insufficiently cooked state. In the same way it is transmitted from patient to patient only by direct contact with the fluid excreta, or with the liquids which escape from the body after death. It has never been contracted from the use of the dried skins of the *tarabagan*, nor of the melted fat of the animal. When the infectious fluids are dried, they also seem to lose their infective properties. The *tarabagan* is a hibernating animal; it sleeps from September to March. It is much hunted by the nomad Buriats and by the Cossack inhabitants of the Siberian steppes, who find its flesh a delicacy. Its fat is also greatly prized for greasing leather articles, straps, etc., and is also used for lighting purposes. In some years these animals sicken with some form of epizootic; they cease to bark, they become languid and slow in their movements; they roll about like a drunken man, or lie half asleep on their earth mounds, and thus fall an easy prey to their enemies. Any human being who should now touch them would be certain to contract the fatal *tchuma*; on the other hand, animals of prey—wolves, foxes, or dogs—may eat the flesh from the bones with no bad result to themselves. No domestic animal has been known to contract the disease either from the *tarabagan* or from any of the human patients. The extreme danger of catching this disease is well known to the Siberians, and they are accordingly very careful in their dealings with the animals in question. This and the fact that most of the dead animals are at once torn to pieces by wolves or other beasts of prey, probably accounts for the comparative rarity of the disorder in man. The only earlier reference to it in print appears to be a short article in the *Zabaikalski Oblastnoi Viestnik* (Journal of the Transbaikal Province) for 1892, in the form of an official notice from the authorities warning the inhabitants against the disease.

The Russian National Health Society has selected May 2nd (14th) of next year as the day on which to commemorate the centenary of the introduction of vaccination. The Society intends to observe the centenary by offering four prizes for the best monographs upon vaccination; by publishing a history of the practice in Russia; by translating Jenner's works into Russian; and by holding an exhibition of objects connected with vaccination. The day itself will be kept by the holding of a special meeting of the Society.

NEW YORK.

The Meaning of "Percentage" in Medicated Dressings.—The Status of a Physician called to attend a Case of Criminal Abortion.—Isolation of a Leper.—Free Public Baths.—The American Medical Association.—The Gonococcus in the Male Urethra and the Vulvo-vaginal Tract of Children.

A controversy between two prominent manufacturers of surgical dressings has directed attention to the meaning of the word "percentage" when used in reference to the proportion of a germicidal agent in such dressings. One party alleged that the strength of an antiseptic surgical dressing was measured by the strength of the solution with which the dressing was impregnated, without reference to the weight, bulk, or measure of the fabric which carried the antiseptic; in other words, a 5 per cent. carbolised gauze meant absorbent gauze impregnated with a 5 per cent. solution of carbolic acid, and a 1 in 1,000 corrosive sublimate gauze meant gauze impregnated with a 1 in 1,000 solution of corrosive sublimate. The other party held that the percentage strength of a prepared medicated dressing referred to or expressed the weight of the medicinal agent in 100 parts of the dried finished product—that is, free from alcohol, water, or any other menstruum for the antiseptic. While the majority of surgeons interviewed expressed their opinion that the latter definition was correct, there was a number of surgeons who held the contrary opinion. It would, therefore, seem to be desirable that the manufacturers of antiseptic dressings should explicitly state on the label of the package whether the percentage is that of the bulk of the dressing or of the strength of the solution with which the dressing is impregnated.

Mr. R. C. Taylor, the counsel of the Medical Society of the County of New York, has recently furnished that body with an opinion regarding the status of a physician who was called upon to attend a case of criminal miscarriage or abortion. Broadly stated, there is no definite or positive rule by which a physician may be guided in such a case, and the question is one of general good sense and prudence. Misprision or failure of an individual to report to the proper authorities any crime he has had reason to suspect, while a misdemeanour at common law, is not a crime under the penal code of New York. By no statute is it a physician's duty to report a case of illness which he suspects to involve criminal malpractice; consequently failure to make such a report does not render a medical man liable to any specific punishment. If, however, the patient should die, and the circumstance lead anyone to believe that malpractice has been committed, the physician runs a grave risk of suspicion of being accessory. The counsel advised that, as a physician cannot decline a call to attend an urgent case if there is the slightest reason to believe that a criminal act has been committed or that death might ensue, it is his imperative duty to provide himself with the services of a consultant, whose evidence, added to his own, should suffice to prove the integrity and wisdom of the treatment. Further, if the patient is transferred to another physician or to a hospital, the physician and consultant should report the details of the treatment and communicate their suspicions. While by New York law a physician is incompetent to divulge information professionally acquired, nevertheless if he believe a criminal act has been performed, he should make a privileged communication to the coroner, thus casting upon that official the duty of ascertaining whether any crime was committed.

The New York Board of Health recently learned of the presence of a mild case of leprosy in the city, and exercising, in

the name of medical science, its prerogative of isolating persons affected with infectious diseases, at once separated the poor fellow from his friends and put him in an isolated hut on the island where the small-pox and typhus hospitals are located. This is on a par with the zeal of a Kentucky mob that recently burned down a pest house erected five miles from town in order to prevent it being used by a prisoner, in gaol, affected with small-pox.

The State Legislature has enacted a law making it mandatory for cities which have a population of over 50,000 inhabitants to establish free public baths.

The recent meeting of the American Medical Association in Baltimore, Ind., was well attended, and the scientific papers were of the usual standard of merit. Dr. R. Beverly Cole, of San Francisco, was elected president, and Atlanta, Ga., was selected for the meeting in 1896.

At the meeting of the New York Academy of Medicine, on May 16th, Dr. Henry Heiman reported the results of a clinical and bacteriological study of the gonococcus in the male urethra and in the vulvo-vaginal tract of children. He concluded that Neisser's gonococcus is never present in the normal urethra; that the diplococci found in the normal urethra can be positively differentiated by the Gram stain; that the diplococcus described by Turro in connection with his acid culture media experiments is not the gonococcus; that liquid sterilised chest serum is a better culture medium in every way for the gonococcus than the placenta serum used by Wertheim; that urine agar is not an ideal culture medium as Finger claims; that Gram's is the only crucial staining test for the gonococcus; that the normal vulvo-vaginal tract is never a habitat for the gonococcus; that there is reason to believe that there is a specific micro-organism in catarrhal colpitis, which is either the diplococcus described by Bockhart, or that of E. Fraenkel; that in specific colpitis the gonococcus found is identical with that found in specific male urethritis; and, finally, that the speaker's inoculation experiments on the human urethra confirmed the belief in the specific pathogenic power of the gonococcus.

CHICAGO.

"Fake" Hospitals.

A CRUSADE has very wisely been started against the so-called "fake" hospitals which have come into existence of late years. To the end of effectually getting at the evil, the Council has had presented an ordinance, a draft of which is here submitted. Whether or not the restrictions are drawn close enough to affect the illegitimate massage establishment or not must be left to the thought of your readers.

Section 1. That it shall be unlawful for any person, firm, association, or corporation other than the regularly constituted authorities of the State of Illinois, or the county of Cook, or the city of Chicago, to open, conduct, manage, or maintain any hospital as hereinafter defined within the corporate limits of the city of Chicago without first obtaining a permit therefor, to be issued by the Commissioner of Health of the city of Chicago, upon the written application of such person, firm, association, or corporation, which application shall state the location, or proposed location, of such hospital the purposes for which it is to be opened, conducted, or maintained, the accommodations or proposed accommodations for the inmates thereof, the nature and kind of treatment given or proposed to be given therein, and the name and address of the chief surgeon, physician, or intended chief physician or surgeon attendant thereat.

Section 2. It shall be the duty of the said Commissioner of Heath, upon the presentation of such application, to make or cause to be made strict inquiry into the facts set out in such application, and if upon such inquiry he shall find that such hospital is or is intended to be constructed so as to afford proper accommodation for the care of the persons received or proposed to be received therein, and that the chief physician or surgeon, or intended chief physician or surgeon attendant thereat, gives or is under agreement to thereafter give such attendance thereat as does or will render him responsible professionally for the medical or surgical treatment given or to be given to any and all persons thereat, and that such chief physician or surgeon is regularly authorised to act as such under the laws of the State of Illinois, and upon the payment to said Commissioner of Health of a licence, permit, inspection, or examination fee of ... dollars, he shall issue a permit in the name of the City of Chicago to such applicant to open, conduct, manage, or maintain a hospital at the place and in the manner and for the purpose in such application mentioned, which said permit shall cease and be operative the 31st day of December next following the issue thereof.

Section 3. It shall be the duty of such person, firm, association, or corporation permitted as aforesaid to open, conduct, or maintain a hospital within the corporate limits of the city of Chicago to make a report to the said Commissioner of Health on or before the 5th day of each calendar month, showing a complete record of such hospital during the preceding month, including the number of inmates received, discharged, and died during the month, causes of death, and such other information as may be necessary to an intelligent sanitary supervision of the establishment; such record to be furnished on blanks prepared and supplied by the Commissioner of Health, verified by the affidavits or affirmation of the chief physician or surgeon or superintendent attendant thereat.

Section 4. Every hospital permitted as aforesaid shall at all times be open to the inspection of the said Commissioner of Health or his duly appointed assistants or inspectors.

Section 5. The Commissioner of Health of the city of Chicago is hereby authorised and empowered to inspect, or cause inspection to be made, whenever and as often as he may deem proper, of any hospital permitted as aforesaid within the corporate limits of the city of Chicago, and if, upon any such inspection, he shall find the same to be conducted, managed, or maintained in violation of the terms of the application for the permit under which the same was opened, conducted, managed, or maintained, or in violation of any of the health or sanitary ordinances, rules, or regulations of said city of Chicago, then and in that event he is hereby authorised and empowered to revoke any such licence issued for the opening, conduct, management, or maintenance of the same.

Section 6. Any person or persons, or corporation other than the regularly constituted authorities of the State of Illinois, county of Cook, or city of Chicago, opening, conducting, managing, or maintaining a hospital as hereinafter defined within the corporate limits of the city of Chicago without first having obtained a permit therefor as provided in Section 2 of this ordinance, or after a revocation of such permit under the authority conferred in Section 5 of this ordinance, or in violation of any of the provisions of this ordinance, shall be and is hereby declared to be guilty of maintaining a nuisance, and upon conviction thereof shall be fined in a sum not less than ... dollars nor more than ... dollars.

Section 7. For the purposes of this ordinance a hospital is hereby defined to mean any place or establishment used for the reception or care of the sick, injured, or dependent, including women awaiting confinement, or used for the medical or surgical treatment of mental or physical disease or injury.

Section 8. This ordinance shall take effect and be in force from and after its passage and due publication.

CORRESPONDENCE.

THE HEALING OF GUNSHOT WOUNDS.

SIR,—I see in the report of the opening address in the Section of Surgery[1] that Sir William MacCormac made the observation: "Longmore never saw a gunshot wound heal in this way," that is, without suppuration. As this is by no means true in the unrestricted way in which the statement appears, I hardly like it to remain on record without remark. I presume Sir William MacCormac has founded his statement on an observation of mine in the first edition of my book on *Gunshot Injuries*, which was published in the year 1877. At page 71 of that work I stated, with reference to John Hunter's remark that wounds by musket balls with reduced

[1] BRITISH MEDICAL JOURNAL, No. 1804, p. 393.

velocities are often healed by first intention, that "I had never seen a musket shot wound heal by first intention, nor any part of one heal by this process." This statement, and the remarks which follow, as may be seen on consulting the work itself, was entirely restricted to wounds by the spherical musket bullets alluded to by John Hunter, and to the bullets nearly similar in weight and volume, familiar to all army surgeons who were engaged in field practice during the Crimean and Indian Mutiny wars. I confess I am rather surprised that at the final action of the wars of 1870-71 Sir William MacCormac should have often seen wounds by Chassepôt bullets, though these projectiles were somewhat less in weight and size, heal without suppuration, for after the war I conversed with many French army surgeons, some of whom had been actively employed in the principal battles of the campaign, and they one and all told me that according to their experience the healing of even the most simple flesh wounds inflicted by either the Prussian needle gun or their own Chassepôt bullets without suppuration was an extremely rare occurrence. With the narrow rifle bullets of the present time, improved applications of antiseptic surgery, and better arrangements of field hospitals, all the conditions which then existed are now totally changed.—I am, etc.,

Woolston, Hants, Aug. 3rd. THOS. LONGMORE.

WATERBORNE TYPHOID.

SIR,—I have read with intense interest the able and comprehensive report prepared by Mr. Ernest Hart, D.C.L., for the Parliamentary Bills Committee of the British Medical Association, on the above subject.

The relation of the use of water in a polluted state to the manifestation of typhoid has received universal medical consent in its favour, especially when such water, after careful chemical and bacteriological examination, is found to be specifically contaminated. My apology for presuming to suggest some other probable cause for the spread of the disease must consist in the fact that here in India we witness year by year outbreaks of enteric which are most difficult, if not impossible, to trace to a waterborne cause. To offer a possible solution to this proposition is the object of my letter, and in so doing I would draw attention to the part taken by the common house fly as a carrier and disseminator of the disease. Any person who has visited Egypt or the plains of India during the earlier months of the hot weather can, I think, bear corroborative testimony as to the clouds of flies everywhere met with. Observation soon teaches us as to their disgusting habits and modes of feeding, utter disregard being shown as to whether they swarm in unenviable competition on the stools recently passed by enteric, choleraic, or dysenteric patients, etc., or choose the articles of food and drink of which we are the unhappy partakers. In their rapid movements from one sort of filth or food to another, have we not got strong presumption, if not demonstrative evidence, as to a possible manner in which the morbific material may be conveyed to the alimentary canal? Those of us who have witnessed the marvellous way in which the comma bacilli of cholera can multiply on agar jelly within twelve hours from the minutest inoculation do not wonder why other bacilli (enteric, for instance) cannot act a similar part when carried and deposited by flies, either by their limbs or dejecta, on suitable pabula.

Considering the supposed immunity (?) of the native of India from enteric fever, it is difficult to account for the present prevalence of the disease among the European troops of the Chitral relief force. Marching into a country never before occupied by Europeans, the waterborne theory will scarcely account for it. We must, I think, conclude that the disease was brought with us from India, and is not due to pathogenic origin, especially as the first half-dozen cases occurred well within the incubation period, and that from these initial cases (as far as this brigade is concerned) the specific poison has been conveyed to others, the most likely media being the myriads of flies that everywhere swarm around, and accompany us on the march from one camp to another.

Our water supply has in many instances been above suspicion, being procured from springs coming directly from the mountain side, and yielding no reaction as to oxidisable organic matter when tested with permanganate of potash solution.

The universal prevalence of enteric fever among Europeans in India has become a question of the vastest hygienic importance, and any means which will diminish the number of cases yearly admitted to our military hospitals must be hailed with satisfaction. With this object in view I would suggest the adoption of small incinerators in all hospitals in which enteric fever patients are treated to ensure the annihilation of excreta, etc., passed by such patients. Under the present system for the removal and disposal of night soil it is to be feared that in many cases the *materies morbi* of the disease finds a too suitable habitat for its propagation and continuance, where, like mushroom spawn sown on a dunghill, it will yield a heavy crop, and continue to do so, perhaps, for years.—I am, etc.,

J. C. BATTERSBY, M.B., D.P.H., etc.,
Surgeon-Major A.M.S., 2nd Brigade, Chitral Relief Force.

July 9th.

ON OVER-OPERATING IN GYNÆCOLOGY.

SIR,—As many of those who, like myself, listened with pleasure to the address with which Sir William Priestley opened the Section of Obstetric Medicine and Gynæcology must have longed to (but of course could not then) discuss the burning questions dealt with in the address, I trust you will kindly find room in the columns of the BRITISH MEDICAL JOURNAL for some remarks thereon.

In the first place let me ask, Is there, as Sir W. Priestley avers, over-operating in gynæcology? Is it not rather the fact that the surgery of diseases of the female pelvic organs has participated in the immense advance which has been made in recent years in the surgical treatment of disease in all other parts of the human frame? I feel sure the surgeons and obstetric physicians of this country will repudiate the words of Verneuil (which Sir W. Priestley quotes), in which he describes those who remove the ovaries or resect a slice of the œsophagus or stomach as indulging in a "sanguinary debauch"! Sir W. Priestley states that a demand for less operating comes from across the Atlantic, and it is right that this should be so, as in America lacerations of the cervix (no matter how slight) have so frequently been sown up and the uterine appendages removed for neuroses that discredit has been brought upon these operations; but I altogether refuse to believe that in this country such indiscriminate and unnecessary operating is ever indulged in.

Sir W. Priestley speaks "of the tendency in the present day of the obstetric physician to invade the domain of the surgeon in reference to what may be called external operations" (I presume he means operating on the uterus and its appendages *per ventrem*); and he goes on to say, "The College of Physicians will look askance at the claims for the Fellowship of those of its Members whose chief work is avowedly surgical," that is to say, that an obstetric physician may operate as much as he likes from below—remove fibroids, cure fistulæ, extirpate the uterus and ovaries *per vaginam* as hitherto—but once let his knife wander above the *mons veneris*, even though he feels convinced he can save his patient more surely than by operating *per vaginam*, he puts himself outside the pale—the Fellowship of his College is not for such as he.

This statement, Sir, is such a serious one that in the interests of many present—and of all future—obstetric physicians it surely calls for some definite ruling on the part of the authorities of the College. Of all the obstetric physicians and assistant obstetric physicians in London and the provinces, there are, I believe, only five who do not perform abdominal section. Of the five, one was a very successful ovariotomist until the claims of an extensive midwifery practice caused him to cease doing these operations; two are prevented by the rules of the hospital to which they have become attached from continuing to perform abdominal section, and the remaining two have, I believe, never so operated.

Sir W. Priestley suggests that those obstetric physicians who perform abdominal sections should take the Fellowship of the College of Surgeons; but, as one who possesses this valuable diploma, I would respectfully point out to the President and Council of the College of Physicians that if they

refuse the Fellowship to obstetric physicians who operate on the female pelvic organs *per ventrem* and give it, as has been done for many years, to those who operate *per vaginam*, a grave injustice will be inflicted on many gentlemen who, on becoming obstetric physicians, looked forward to being made Fellows of their College in due course, provided they had done nothing derogatory to the dignity of the profession. By all means, if it is thought desirable, let it be a law that in future obstetric physicians who perform abdominal sections shall not be eligible to become Fellows of the College, but, in common justice, let such law not be retrospective.

Sir W. Priestley asks, "Are our antiseptic methods a sufficient safeguard against the possible contamination of lying-in women by one who undertakes extensive surgical work in addition to obstetric practice?" I answer emphatically, Yes, and a man who has operated on a pyosalpinx or a suppurating ovarian tumour can in a quarter of an hour make it perfectly safe for him to attend a lying-in woman.

Let me ask Sir W. Priestley this question: "Which is more likely to keep himself aseptic—the obstetric physician who performs abdominal section, and who, from the very fact of doing these operations is imbued with the profound importance of keeping himself and all his paraphernalia aseptic—or he who does not so operate, but who may at any moment have to attend a midwifery case soon after examining a patient suffering from a stinking vaginal discharge? The solution of the difficulty as to the obstetric physician operating Sir W. Priestley finds in "appointing a gynæcological surgeon to every hospital who shall work in conjunction with the obstetric physician." If by this he means that every disease of the female peculiar to her sex (caruncles, polypi, vaginal cysts, uterine cancer, etc.) may be diagnosed by the physician, but must be handed over to the surgeon for operation, then I say no obstetric physician of repute will hold office under such conditions, but if he means that the obstetric physician may (as at the Samaritan Hospital) do whatsoever operation he likes *per vaginam*, but must pass on all cases requiring abdominal section to the surgeon, then I say that in my humble opinion it is a case of "straining at a gnat but swallowing a camel."

For my part I agree with what Dr. Herbert Spencer, of University College Hospital, said in a paper which he read before the Medical Society, that it would be a wise and gracious act on the part of the surgeons in every hospital to hand over to the obstetric physicians all the cases of disease of the female generative organs requiring abdominal section. This has, I believe, been done for some years at King's College Hospital without friction between Professor Playfair and his colleagues.

In conclusion, let me repeat now what I said in the debate on Dr. Spencer's paper, namely, that as the art of obstetrics is in great part surgical, those who practise that art should be called obstetric surgeons, that the qualification for holding such a post at a hospital should be the F.R.C.S. and not the F.R.C.P., and that the existing anomaly was the fault not of the College of Physicians but of the College of Surgeons, which in years gone by refused to shelter under its wing the obstetrician.

Apologising for the length of this letter, I am, etc.,

Harley Street, Aug. 3rd. WILLIAM DUNCAN.

"PUBLIC HEALTH LEGISLATION AND THE NEEDS OF INDIA."

SIR,—Will you be pleased to accord me permission to make a personal statement with reference to the address on the above subject delivered by Mr. Ernest Hart, D.C.L., at the meeting of the British Medical Association in London last week? Having served thirty-two years in the Army Medical Department, I desire to state that for the past fifteen years I have, both officially and by letters and articles in the public press, etc., advocated the view that enteric fever in India was chiefly a waterborne disease. For the proof I will just quote two paragraphs from a pamphlet I wrote in 1891 for submission to the Government of India, entitled, "The Hygienic Conditions of Indian Cantonments and the Necessity for Sanitary Legislation." One reads thus: "The water supply is generally derived from wells, and it is the burning question, because it is through the water supply that failure in the other hygienic conditions of a cantonment acts injuriously on the general health." The other is as follows: "Granted a pure water supply and it is believed that enteric fever would disappear and cease to be the chief cause of the soldier's mortality in India." I acknowledge that my voice all these years was as that of one crying in the wilderness, but now that Mr. Ernest Hart has given the weight of his great authority to the question, it cannot fail to attract the public attention, and to compel official action.

My advocacy of improved sanitation for cantonments and for regiments in India has been treated with departmental indifference and even worse, but this is not the occasion for this discussion. It has been, therefore, gratifying to find one's views obtain so powerful a support.—I am, etc.,

W. HILL CLIMO, M.D.,
Brigade-Surgeon-Lieutenant-Colonel, A.M.S. (retired).

Westfield, Aldeburgh, Aug. 3rd.

MALARIAL PARASITES IN THE BLOOD.

SIR,—An extraordinary statement, dated Haidarabad (Deccan), August 4th, from a correspondent, appears in to-day's issue of the *Times*, to the effect that Dr. Lawrie—I presume Surgeon-Colonel Lawrie—"reports as the result of an inquiry, in which he was assisted by Dr. Martyn Jordan, that there is no parasite in the blood in malaria. Through a readily-demonstrable staining error the nuclei of the white cells in the blood have been mistaken by the Italian and other investigators for parasites connected with the red blood corpuscle." I do not for a moment think that such a statement emanated from Surgeon-Colonel Lawrie, who must know very well that the malaria parasite has nothing to do with the white corpuscles; that it is for the most part located in the red blood corpuscles, and is readily seen in them without staining process of any description whatever—in fact, far more readily seen in them in fresh blood than in dried and stained preparations. If Laveran's body is not a parasite then it is most wonderfully-contrived device in Nature for deceiving the pathologist. The malaria parasite has had a hard struggle to get recognised. Want of opportunity, want of knowledge of a very simple, but very necessary technique, inaccurate and careless observation have all conspired to keep it in the background. But it is a fact all the same; and I do not know of any competent pathologist who, having once seen it, has refused to recognise its parasitic and specific nature. I trust such statements as this which appears under Dr. Lawrie's name will not be accepted or be allowed to interfere with the gradual growth and ultimate general adoption of the new pathology of malaria for which the world stands so much indebted to M. Laveran.—I am, etc.,

Queen Anne Street, W., Aug. 6th. PATRICK MANSON.

THE WEST SOMERSET BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

SIR,—In the BRITISH MEDICAL JOURNAL, at page 332, I observe that Dr. Mackenzie is reported to have said, in speaking to Dr. Welsford's resolution, that he represented Devon and Somerset, and that only one third of the practitioners in Devon and Somerset were members of the Associations for a reason which he gave. Allow me to say that Dr. Mackenzie does not represent the West Somerset Branch, and as regards the number of practitioners who are members of the Association I think it can be shown that in this district the proportion is much larger than he is represented to have stated.—I am, etc., W. M. KELLY,

Taunton, Aug. 8th. Honorary Secretary, West Somerset Branch.

FEES TO MEDICAL WITNESS.

SIR,—Medical men have the matter entirely in their own hands if they absolutely decline to attend a police-court unless served with a proper subpœna. On one occasion only did I attend at the local police-court here, on being warned by the police-sergeant to do so, to give evidence in a case of attempted suicide. I was at the court for three-quarters of an hour, when the prisoner was discharged with a lecture. I demanded my fee from the clerk, who very coolly informed me that the magistrates had no power to pay me, as I had not given evidence. The clerk further told me to apply to the prisoner's relatives for my fee. This I declined to do, and insisted upon the police obtaining the fee for me, in which

course I was successful. I then informed the magistrates that I should absolutely decline to attend on any further occasion unless subpœnaed.

I have had no difficulty since, although several times I have first been "asked" by the police to attend. This I have always declined to do unless served with a subpœna.—I am, etc.,

Northfleet, Kent, July 29th. Hubert T. Sells.

P.S.—I much question whether Mr. Scott was served with a subpœna, otherwise he could have recovered his fee.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A Surgeon Lieutenant-Colonel, expecting to be ordered abroad late this trooping season, wants to exchange with an officer lately home, or would exchange to a Mediterranean station or colony for part expired tour. Address, Manxman, office of British Medical Journal.

A medical officer of field rank going abroad this trooping season wants to exchange with an officer who will have two or three years yet to remain at home. Liberal terms will be given. Address Surgeon, care of Messrs. Holt and Co., 17, Whitehall Place, London.

THE NAVY.

The following appointments have been made at the Admiralty: John K. Conway, M.D., Fleet-Surgeon to the Royal Marine Depot, Walmer, August 2nd; John E. Penn, Staff Surgeon to the *Philomel*, August 2nd; Herbert E. Marsh, Staff-Surgeon to the *Cormorant*, for Gibraltar Hospital, August 2nd; James C. Dow, M.B., to the *Northampton*, August 2nd.

Surgeon H. E. L. Earle has been placed on the retired list of his rank, June 7th. He was appointed Surgeon, August 20th, 1885.

ARMY MEDICAL STAFF.

Surgeon-Major-General John By Cole Reade, C.B., retired pay, is appointed Honorary Surgeon to the Queen, vice Deputy Surgeon-General J. A. Bostock, C.B., half-pay, deceased, July 31st. Surgeon-Major-General Reade entered the service March 24th, 1854, and became Surgeon-Major-General from February 15th, 1882, retiring in April, 1883. He was with the 2nd Battalion Rifle Brigade throughout the Eastern Campaign in 1854-5, and was at the battles of Alma and Inkerman, and at the siege of Sebastopol. He was wounded on November 15th, 1855, at the explosion of the French siege train (medal with three clasps and Turkish medal). He was also with the battalion during the whole of its service in suppression of the Indian Mutiny, including the action at Cawnpore, the capture of Lucknow, and numerous affairs during the Oude campaign (medal with clasp). He was likewise in the Afghan war in 1878-80 with the Candahar Column under Sir Donald Stewart (mentioned in despatches, medal).

Some of our contemporaries recently announced the death of Surgeon-Colonel C. MacD. Cuffe, C.B., Principal Medical Officer at Allahabad. We are glad to be able to state that this is incorrect, and that, at the departure of the latest mail received, Surgeon-Colonel Cuffe was at Pachmahri and in excellent health.

Brigade-Surgeon-Lieutenant-Colonel J. H. Hughes, M.D., has been appointed Principal Medical Officer at Chester.

The undermentioned Surgeon-Lieutenants, having completed three years' full pay service, are promoted to be Surgeon-Captains, July 29th: Harry A. Hinge, James G. McNaught, M.D., Hubert A. Bray, Thomas McDermott, M.B., Edward W. Slayter, M.B., Hugh S. Thurston, Lancelot F. Moore, M.B., Charles O'C. Hodgens, Arthur F. Tyrrell, Theophilus P. Jones, M.B., George S. Walker, M.B., William J. Smyth, M.D., William R. Erskine, M.B., Albert G. Thompson, M.B., Alexander G. Chambers, George A. Moore, M.B., Richard C. Lewis, Reginald F. E. Austin, Henry W. H. O'Reilly, M.B., Nicholas Marder, Edgar H. Condon, M.B., Gerald S. Mansfield, M.B., Frederick G. Faichnie, Harold W. K. Read.

Surgeon-Major Robert Lewins, M.D., died at Nottingham Place, London, on July 22nd. He entered the service as Assistant-Surgeon, December [illegible], [illegible]; became Surgeon, March 3rd, [illegible]; Surgeon-Major, January 21st, [illegible], and retired April 24th, [illegible]. He served with the [illegible] Regiment in the Eastern Campaign of 1854, and up to January [illegible], [illegible], including the battles of Alma, Balaklava, and Inkerman, and siege of Sebastopol, receiving the medal with four clasps and Turkish medal. He was also in the expedition to the north of China in 1860 in charge of the hospital ship *Mauritius*, and was present at the capture of the Taku Forts, receiving the medal.

ARMY MEDICAL RESERVE.

Surgeon-Lieutenant John C. Wright, having resigned his Volunteer medical appointment, ceases to be an officer of the Army Medical Reserve, July 31st.

INDIAN MEDICAL SERVICE.

The undermentioned Surgeon-Lieutenants, having served three years in that rank, become Surgeon-Captains from July 27th:—Bengal: P. R. Main, M.B.; T. W. A. Fullerton, M.B.; R. H. Maddox, M.B.; E. V. Hugo, M.B.; H. G. Melville, M.B.; A. O. Hubbard, C. G. Robson Scott, M.B., H. A. Smith, M.B.; D. R. Green, M.B.; G. McI. C. Smith, M.B.; H. M. Earle, J. G. Hulbert, M.B. Madras: F. C. Garrett, J. L. Macrae, M.B. Bombay: F. E. Swinton, S. H. Burnett, M.B.; Thomas Jackson, M.B.

The Secretary of State for India has decided that medical and veterinary officers, whether they belong to the Military, Medical, and Veterinary Services, or are civil practitioners, who have served eighteen years on the staff of volunteer corps, and rendered substantial services, are eligible for the Volunteer Officers' Decoration.

The following rules have been laid down for the grant of pay to a brigade-surgeon-lieutenant-colonel of the Indian Medical Service during the period he is attached to the office of a principal medical officer for the purpose of acquiring a knowledge of military medical administration:—(1) In cases where it is practical to attach the officer to the office of a principal medical officer without his relinquishing his civil duties, his full civil pay will be continued to him; (2) in cases where the officer has been obliged to relinquish his civil duties, he will be allowed the grade pay of his rank, together with half the difference between that grade pay and the substantive pay of his civil appointment, the whole to be charged against the military estimates.

Surgeon-Lieutenant-Colonel J. A. Laing, M.B., Madras Establishment, has been permitted to retire from the service from September 9th. He was appointed Assistant Surgeon, April 1st, 1870, and became Surgeon-Lieutenant-Colonel twenty years therefrom.

An extra pension of £[illegible] per annum, due to the Bombay Establishment for 1895-6, is to be allotted to Brigade-Surgeon-Lieutenant-Colonel C. W. Macrury, which is announced to take place from March 31st, [illegible].

THE VOLUNTEERS.

Mr. George Arthur Tailer is appointed Surgeon-Lieutenant to the 1st Volunteer Battalion the King's Shropshire Light Infantry, August 3rd.

Surgeon-Captain H. Colgate, M.D., 2nd Sussex Artillery, is promoted to be Surgeon-Major, August 7th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps specified, dated August 7th: Alexander Butler, M.D., 1st Renfrew and Dumbarton Artillery; Alfred Duke, M.B., the Tynemouth Artillery (Western Division Royal Artillery); Edmond William St. Vincent Ryan, 16th Middlesex Rifles (London Irish).

Surgeon-Lieutenant D. Stewart, 1st Volunteer Battalion the Northumberland Fusiliers, is promoted to be Surgeon-Captain, August 7th.

Surgeon-Major C. C. Greig, 2nd Volunteer Battalion the Gordon Highlanders, is promoted to be Surgeon-Lieutenant-Colonel, August 7th.

Surgeon-Lieutenant P. M. Yearsley, 16th Middlesex (London Irish), is now appointed Second Lieutenant in the same corps, August 7th.

ARMY MEDICAL SCHOOL.

The half-yearly session of the Army Medical School, Royal Victoria Hospital, Netley, was brought to a close on July 31st, when, in the presence of a large gathering of the medical officers and others, Surgeon-General Sir Joseph Fayrer, K.C.S.I., distributed the prizes, and the results of the recent examinations were announced. The principal medical officer of the hospital, Surgeon-Major-General Giraud, presided. The following are the lists of surgeons on probation of the Medical Staff of the British Army and of the Indian Medical Service who were successful at both the London and Netley examinations, with their combined marks. The prizes are awarded for marks gained in the special subjects taught in the Army Medical School, and the final positions of the gentlemen are determined by the marks gained in London, added to those gained at Netley:—British Medical Service: L. F. Smith, 5,[illegible] marks; R. J. Blackham, [illegible]; S. H. Fairrie, [illegible]; G. T. K. Maurice, [illegible]; R. Fawcett, 4,317; J. V. Forrest, 3,[illegible]; H. W. Grattan, 3,[illegible]; F. E. Gunter, 3,541; J. H. Campbell, 3,[illegible]; J. Grech, 3,[illegible]. Mr. L. F. Smith also gained the second Montefiore prize, and the De Chaumont prize in hygiene. Indian Medical Service: J. Stephenson, 5,[illegible]; F. N. Windsor, 5,[illegible]; W. B. Turnbull, 5,088; E. E. Waters, [illegible]; A. Leventon, [illegible]; F. F. Chapman, [illegible]; A. Hooton, [illegible]; A. F. W. King, [illegible]; R. J. [illegible], [illegible]; A. A. Gibbs, [illegible]; F. L. Blenkinsop, 3,[illegible]; A. Moore, [illegible]; H. A. F. Knapton, [illegible]; E. M. Illington, 3,[illegible]; J. E. Watson, [illegible]; E. G. Webster, 3,[illegible]. Mr. J. Stephenson also gained the Herbert prize of £20, the Parkes Memorial Medal, the Martin Memorial Medal, and the prize in pathology. Mr. W. B. Turnbull secured the first Montefiore prize, [illegible] and the bronze medal, whilst Mr. E. E. Waters was awarded the Maclean prize for clinical and ward work. Sir Joseph Fayrer, in his address, congratulated the surgeons on their success, and addressed some kindly words of advice to those just starting on their career in the British Army and Indian Medical Services.

PAY OF P.M.O.'S IN INDIA.

Disgusted writes that under the new Indian Army Scheme the pay of Surgeon-Major-Generals of army corps has been fixed at 2,000 rupees per month, and contrasts this sum with the pay of Major-Generals commanding divisions, Colonels on the staff commanding brigades, and senior Lieutenant-Colonels commanding stations, all of whom are better paid.

⁂ We hear from other sources that the pay of P.M.O.'s of the new army corps is to be 2,[illegible] rupees a month, not 2,000 rupees. The difference, although a tangible one, does not, we think, bring the pay up to what it ought to be, considering the responsibilities of the position and the relative scale of pay of the combatant ranks; and in so far our correspondent is justified in his strictures.

The Health of Edinburgh.—The death rate of Edinburgh was 15 per 1,000, as against 13 per 1,000 in the previous week. Sixty cases of scarlet fever were notified during the past week, without death; as against 66 cases and 2 deaths in the preceding week.

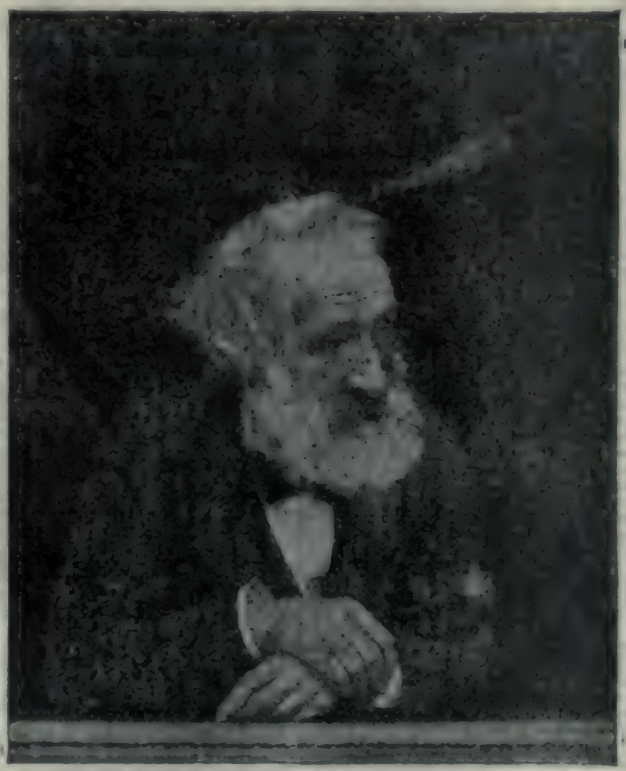
OBITUARY.

Sir JOHN TOMES, F.R.C.S., F.R.S.,

Consulting Surgeon-Dentist to the Middlesex Hospital; late Surgeon-Dentist to the Dental Hospital, London.

It is with much regret that we record the death, at his house in Caterham Valley, of Sir John Tomes, who may justly be called the father of the dental profession in this country.

John Tomes, who came of an old yeoman family, was born at Weston-on-Avon in 1815. He was apprenticed as a surgical pupil to an old-fashioned, hard-riding, hard-working general practitioner at Evesham, with whom he remained until he entered at King's College in 1836, the same year as Sir Wm. Bowman. He afterwards became house surgeon to the Middlesex Hospital, a post which he retained for two years. While holding this office he invented the tooth forceps, with jaws accurately adapted to the form of the necks of the various teeth, which were the first exemplars of the modern type of forceps. This early interest in dentistry, reinforced by the advice of the late Sir Thomas Watson and the late Mr. Arnott, who thought that there was a great opening for a man of higher attainments than had generally practised dental surgery, led him to devote himself to that branch.



His reputation as an authority was at once established by the publication of a course of lectures, delivered in 1845 at the Middlesex Hospital on dental physiology and surgery. These lectures were the first scientific treatment of the subjects, and placed him at once in the first rank; yet we read in his diary: "I am resolved not to deliver any more lectures unless I have a class of at least six." In 1840, whilst still house-surgeon at the Middlesex Hospital, he was feeding a nest of young sparrows and a sucking-pig on madder; such of these bones as he did not rub down still exist.

In 1846 Dr. Morton, a dentist of Boston, Mass., had introduced ether; in 1847 Sir John was using it at the Middlesex Hospital for tooth extraction with varying success, sometimes using a mixture of sulphuric and chloric ethers. On January 14th, 1847, he writes in his diary: "Gave ether to Arnott's case of lithotomy eight minutes and insensibility came; the operation then commenced and lasted twelve minutes." And, after notes of other administrations, February 23rd, 1847: "Gave ether to eight patients for operations with great success; Earl Cadogan (a governor of the hospital) and many others present."

Between 1849 and 1856 he contributed an important series of papers to the *Philosophical Transactions* of the Royal Society on dental tissues. He wrote, in conjunction with the late Mr. Campbell de Morgan a paper on the structure of bone, which has become classical, and communicated also to the Royal Society the paper which established the existence of the soft fibrils in denture, which have since been known by his name. In 1859 he published his *System of Dental Surgery*, which has gone through many editions and still holds its own as an admirable textbook. He received the gold medal of the Society of Arts for a machine for reproducing exactly the irregularities of a surface, intended primarily for carving bone for artificial teeth, but applicable to other purposes.

He early took a deep interest in the status of the dental profession, and was one of those who first in 1843, and again in 1855, approached the Royal College of Surgeons on this subject, though without success at that time. He, however, never allowed his interest in the subject to decline and was finally the chief actor in this successful attempt to induce the Royal College of Surgeons of England to grant (in 1858) a Licence in Dental Surgery. His intimacy with Mr. Arnott, at one time President of the College, contributed to bring about this result. He was one of the chief founders of the Odontological Society. He was also one of the founders of the Dental Hospital and the first to give systematic clinical demonstrations there.

After the Dental Licentiateship had been established for some 20 years it furnished a large body of qualified dentists, and the various schemes for obtaining parliamentary recognition were mooted and many suggestions made. Sir John Tomes threw his great influence into the movement, working with Mr. J. S. Turner as his chief lieutenant, and having secured the good offices of Sir John Lubbock the Dentists Bill was introduced in 1878, and became an Act in the same session of Parliament. The services of Mr. Tomes to science, and to the dental profession were recognised by his election as a Fellow of the Royal Society, and as a Fellow also of the Royal College of Surgeons, the latter honour falling to him at the same time as it did to the late Professor Huxley. In 1886 he received the honour of knighthood.

For many years, and down to the time of his retirement in 1876 he enjoyed a large practice. The secret of his long record of successful work was his untiring energy, the practical cast of his mind which distinguished the essential from the accidental, and the practicable from the inexpedient. He was absolutely disinterested so that he was respected by his most ardent opponents, and was moreover a very keen and accurate judge of character. He took a great interest in art, and was a good judge of art work. From his earliest boyhood he was a keen sportsman and noted as an excellent shot.

Till within a few weeks of his death he retained all his faculties undimmed, and retained also his interest in science as is shown by the fact that within the last few months he was working out some points not hitherto described in the structure of the teeth of the horse. For six months however, his strength had gradually been failing and on July 29th he passed quietly away.

Dr. Sibley writes: It may be said of Sir John Tomes that his life was a truly consistent one, and everyone who knew him alike respected and admired the man. His views were of the broadest and most charitable. It would be difficult to imagine a more ideal home than Upwood Gorse, presided over by Sir John's keen and in many respects unique intellect and Lady Tomes's courteous manner, combined with great musical talents, most fully appreciated by her husband. His was indeed a most appropriate crest and motto: "Nil sine Labore," and may be truly said to have been the keynote of his long and useful life.

On Sunday last, August 4th, one of the oldest members of the Royal College of Surgeons, Mr. C. H. Greenly, died at

Kilburn from an attack of paralysis on the preceding night. Mr. Greenly was admitted to Membership in 1827. He left Bristol, where he had practised for over half a century, about ten years ago, and migrated to London, where, however, he visited a few patients till he was about 85. Mr. Greenly's mode of life was simple and regular. He was an abstainer for nearly sixty years, and till a few years ago was in the habit of rising every morning at five o'clock to read Greek and Hebrew. His charities were numerous, and his death will be deeply lamented. He has left one son, Mr. Edward Greenly, F.G.S.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

SECOND PROFESSIONAL EXAMINATION IN MEDICINE UNDER THE OLD REGULATIONS.

Pass List.—H. Dewar, M. A. Ghany, A. Hosking, G. Liddell, B.A.; G. H. Lind, H. Nuttall, G. Sander, A. E. Scott, Alexandra Mary Campbell Geddes, W. H. Brendon, B.Sc.; G. L. Chiene, E. H. Irwin, R. Selby, R. S. Young, N. H. Ross, W. A. Skinner, G. W. Payne, J. R. Atkinson, B. M. Bone, J. H. Dorman, J. Graham, S. J. Grinsell, M. Jackson, E. H. Jones, W. M. Milne, M.A.; J. Muir, T. H. Stevenson, G. C. Thomas, R. H. Walter, J. G. Bailey, G. S. Brown, J. Stevenson, I. J. Van der Morwe, W. W. Wood, T. Johnstone, T. Y. Lockhart-Muro, J. Nicoll, A. J. Orchard, C. W. Reid, W. M. Williams, R. Bennie, M.A.; L. M. Cairns, R. Craven, T. W. A. Daman, B.A.; J. Prentice, M.A.; D. G. M. Teague, J. E. Bennett, A. W. Bowie, S. O. Browne, C. A. Brugman, C. C. Lall, A. G. Carment, J. D. Doherty, J. C. Hastings, C. H. Kruger, David M'Askie, A. L. Owen, J. F. Wilson, W. A. Young, and C. C. Forrester.

Anatomy and Physiology.—H. L. Apthorpe, A. M. Little, F. W. Price, G. F. Waterston.

SECOND PROFESSIONAL EXAMINATION IN MEDICINE UNDER THE NEW ORDINANCE.

Anatomy, Physiology, and Materia Medica and Therapeutics.—T. J. T. M'Hattie, E. F. M. Neave, C. P. B Wall, A. G. Worrall, J. Donaldson, H. F. Buland, E. P. Baumann (with distinction), R. B. Black, R. C. Cunningham, L. W. Davies, G. Gatenby, G. W. Miller, J. D. S. Milln, C. M. Robertson, J. D. Slight, M.A. (with distinction), W. R. Somerset, W. M. A. Smith, J. W. Struthers, W. M. Wilson, V. G. Alexander, L. Boyer, D. Clow, J. Forrest, G. L. Finlay, R. Hill, G. B. Hollings, A. B. MacCarthy, W. Martin, and G. A. Vincent.

FIRST PROFESSIONAL EXAMINATION UNDER THE NEW REGULATIONS.

Chemistry.—C. S. Clark, J. W. Falconer, H. Falconer, S. E. Goggin, G. D. Hamilton, W. J. Jones, P. A. Leighton, E. W. Martin, A. C. Murray, J. Orr, W. M'Kay, H. L. Clift, G. C. Ghose, M. King, G. A. Davidson, E. Loch, S. Malannah, R. M. Mitchell, B. K. Nariman, S. C. Pritchard, P. J. Rodington, A. C. Brown, F. J. Hathaway, R. Imrie, W. Park, D. Fenton, W. T. James, C. G. S. Leeds, L. W. Macpherson, A. C. Neethling, E. J. Peill, S. Southall, B. Stracey, J. R. Thorburn, A. White, W. G. Williams, A. Cartner, G. C. V. K. Davidson, J. Jeffrey, H. E. Gibbs, H. A. H. Gilmer, A. N. de Gruchy, S. H. Morris, A. W. Nankervis, T. E. Richards, E. M'K. Young, V. G. S. Adams, Mary Booth, Agnes J. S. S. Coghill, Dorothy Gilfillan, Edith Hudson, Elsie M. Inglis, Bessie G. Macdonald, Mary R. M'Dougall, Beatrice A. M'Gregor, Jessie M. MacGregor, Marion B. Marshall, Mary J. Menzies, Mary F. Nannetti, Aneesa Sayba, Ethel L. Starmer.

Botany.—T. H. W. Alexander, Tina M. Alexander, Eliza M. Anderson, J. D. Anderson, J. Anderson, R. H. S. Aylward, A. J. Baird, H. Baird, J. A. Balck, C. Balfour-Paul, S. A. Ballantyne, W. J. Barclay, M. C. Beatty, H. Bell, J. M. Benson, Harriet A. S. Bird, J. A. Black, Mary Booth, L. P. Brassey, G. Brogden, W. J. D. Bromley, A. Brown, J. M. L. Brown, W. Brown, L. Bruce, E. H. Brunt, A. Brydon, J. Buist, E. Cameron, Isabella D. Cameron, P. C. Campariole, M. Campbell, J. B. Cassels, K. Chapel, C. Chilton, W. Clegg-Newton, W. J. Collinson, Jane A. Craig, G. C. Cumming, G. A. Davidson, H. S. Dodds, S. E. Ellis, D. R. Evans, E. Ewart, E. Fasson, D. Fenton, D. J. Fergusson, R. Fernandes-Jardim, D. C. L. Fitzwilliams, A. B. Flett, A. S. Frank, Y. Fukuda, J. Fullarton, P. Gantesdme, A. B. George, H. E. Gibbs, J. C. Gilchrist, Dorothy Gilfillan, H. A. H. Gilmer, W. Girdwood, B. K. Goldsmith, T. Graham, T. G. Stewart, J. L. Green, G. Grey, A. N. de Gruchy, R. Hamilton, F. W. Hampton, G. H. Hanna, A. C. Heath, A. E. Henton, I. K. Hermon, C. H. Watson, A. M. Holmes, R. D. Hudson, Alice M. Hutchison, W. Hutchison, Elsie M. Inglis, J. G. Jack, F. F. C. Jagger, J. Jamieson, F. J. Jude, J. W. Kerr, T. C. Lander, L. Laurie, E. G. Leach, C. G. S. Leeds, J. Leggate, L. S. Lessing, E. Loch, J. L. Louis, G. Lowther, C. B. M'Conaghy, Bessie G. Macdonald, W. C. Macdonald, Mary R. M'Dougall, W. M'Farlane, Beatrice A. M'Gregor, Jessie M. Macgregor, Robina M'Gregor, A. F. Mackay, W. M'Kay, H. M. Mackenzie, T. C. Mackenzie, T. A. Mackenzie, G. Markie, H. J. M'Lean, G. MacLennan, R. A. M. Macleod, E. Macmillan, J. M. A. MacMillan, J. Macpherson, L. Macpherson, G. F. Maitland, S. Malannah, Marion B. Marshall, A. Martin, A. A. Martin, Ruth Massey, Christina A. Mayne, E. T. Melhuish, K. D. Melville, D. R. Merry, H. A. D. Moore, S. H. Morris, Janet A. S. Mouat, W. A. Murray, A. W. Nankervis, Mary F. Nannetti, B. K. Nariman, H. C. Nixon, T. S. A. Orr, A. S. M. Peebles, E. F. Peill, Faith Philpot-Crowther, A. Preston, E. N. Pringle, J. E. Ratcliffe, P. C. Rayner, W. Reid, J. L. Rentoul, O. L. Rhys, T. E. Richards, R. A. Ross, G. C. Rowley, Aneesa Sayba, F. D. Simpson, H. O. Smith, V. E. Sorapure, S. Southall, C. E. Southon, M. B. Sproat, R. Sproule, Ethel L. Starmer, B. Stracey, L. Tea Kok, W. G. Thompson, R. G. Thomson, J. B. Thorburn, J. Thornhill, R. B. Turnbull, G. R. Turner, K. H. H. Uchmann, C. Vartan, N. N. Wade, D. L. Wall, W. Wallace, R. Weatherston, A. T. White, A. Whyte, W. G. Williams, W. R. E. Williams, A. W. Wilkinson, A. W. Wilson, Ruth M. Wilson, T. J. G. Wilson, J. Wood, E. M. Young, F. Young.

Zoology.—J. D. Anderson, J. J. Anthony Bailey, A. J. Baird, J. A. Balck, S. A. Ballantyne, C. M. Beatty, F. E. Belcombe, J. A. Black, W. J. D. Bromley, A. Brown, D. M. Burden, M. Campbell, G. J. R. Carruthers, W. J. Collinson, H. C. Comber, A. D. S. Cooke, J. Cullen, G. A. Davidson, E. Ewart, D. J. Fergusson, V. G. Fergusson, D. C. L. Fitzwilliams, C. Fraser, G. C. H. Gause, H. E. Gibbs, J. C. Gilchrist, H. A. H. Gilmer, W. Girdwood, T. Graham, J. L. Green, A. N. de Gruchy, H. Harris, A. C. Heath, L. A. Holcroft, J. G. Jack, J. Jamieson, J. Jeffrey, S. H. Johnson, L. Laurie, J. Leggate, L. S. Lessing, E. Loch, C. B. M'Conaghy, W. M Farlane, D. W. Macgregor, P. A. Maclagan, H. J. M'Lean, A. G. M'Leod, J. M. A. Macmillan, S. Mallannah, A. Mann, A. Martin, M. M. Meikle, E. T. Melhuish, E. Menzies, D. B. Merry, R. M. Mitchell, M. C. Morgan, S. H. Morris, A. W. Nankervis, B. K. Nariman, A. D. Nimmo, J. H. C. Orr, T. S. A. Orr, W. Paterson, A. Preston, S. C. Pritchard, W. Purves, O. L. Rhys, J. Richardson, W. Sloss, C. E. Smith, C. Spencer, F. T. Thompson, J. A. Thompson, T. J. G. Wilson, J. Wood, E. M. Young, F. Young, Violet G. S. Adams, Tina M. Alexander, Eliza M. Anderson, Harriett A. S. Bird, Mary Booth, Isabella D. Cameron, Agnes J. S. Coghill, Jane A. Craig, Jane E. Dallas, Dorothy Gilfillan, Edith Hudson, Elsie M. Inglis, Mary R. M'Dougall, Beatrice A. M'Gregor, Jessie M. Macgregor, Robina M'Gregor, Marion B. Marshall, Ruth Massey, Christina A. Mayne, Mary J. Menzies, Janet A. S. Mouat, Faith Philpot-Crowther, Winifred J. Pierce, Aneesa Sayba, Ethel L. Starmer, Esther M. Stuart, M. Ruth Wilson.

Physics.—G. Lowther, E. J. Peill, A. Whyte, J. Buist, P. C. Campariole, J. B. Cassels, K. Chapel, H. B. Dodds, R. Fasson, Y. Fukuda, J. Fullarton, P. Gauteaume, B. K. Goldsmith, T. G. Stewart, R. Hamilton, G. H. Hanna, A. E. Henton, I. K. Hermon, A. M. Holmes, R. D. Hudson, E. F. Jardine, J. W. Kerr, R. Liddell, J. L. Louis, W. C. Macdonald, T. C. Mackenzie, T. A. MacKenzie, G. Mackie, G. M'Lennan, A. A. Martin, H. A. D Moore, W. A. Murray, A. S. M. Peebles, R. N. Pringle, P. C. Rayner, R. A. Ross, G. O. Rowley, F. D. Simpson, V. E. Sorapure, C. E. Southon, R. Sproule, K. L. Teng, R. G. Thomson, R. B. Turnbull, G. R. Turner, N. N. Wade, D. L. Wall, W. Wallace, W. R. E. Williams, J. M. Benson, A. F. Mackay, H. M. Mackenzie, L. D. H. Baugh, J. S. Bostock, R. N. Brebner, H. E. Coghlan, A. Dods, J. Inglis, Florizel Myers, T. R. Robertson, J. Small, H. E. Wareham, Dorothy Gilfillan, D. R. Evans, H. E. Gibbs, H. A. H. Gilmer, A. N. de Gruchy, W. E. Herbert, K. T. Melhuish, S. N. Morris, E. M'K. Young, G. C. V. K. Davidson, H. Dodgson, J. Jeffery, W. M'Farlan, C. H. Smith, V. G. Fergusson, W. Paterson, P. J. Bodington, A. G. Bryden, A. C. Brown, A. W. Fuller, Frank G. Hathaway, W. Park, F. G. Ralston, W. Girdwood, P. A. Maclagan, E. Menzies, D. B. Merry, W. Sloss, W. J. D. Bromley, T. H. W. Alexander, J. Anderson, J. Anderson, B. S. H. Aylward, H. Baird, W. J. Barclay, L. Bruce, A. Brydon, D. Fenton, W. T. James, C. G. S. Leeds.

UNIVERSITY OF ABERDEEN.

THE following candidates have received the Degrees in Medicine and Surgery:

Degree of M.D.—G. A. Craig, M.B., C.M.; J. Leys, M.A., M.B., C.M.; W. L. MacKenzie, M.A., M.B., C.M.; J. F. Murison, M.B., C.M.; W. Scatterty, M.A., M.B., C.M.; R. Soutar, M.B., C.M.; R. R. Sutter, M.B., C.M.

The thesis of W. L. Mackenzie was considered worthy of "highest honours."

Degrees of M.B. and C.M.—L. Adam, F. H. Bannister, F. Beelham, G. A. Bruce, C. Cameron, A. G Campbell, W. Christie, G. Cowie, W. Cowie, M.A., W. P. Crombie, D. H. Dantra, J. L. Dickie, H. Duffus, M.A., E. K. Gawn, J. A. Gibb, J. M'Culloch, A. H. Mackie, M.A., J. MacLennan, W. A. Milligan, M.A., A. G. Milne, G. A. Reid, C. Ritchie, T. M'K. Ross, A. Thomson, J. W. Thomson, M.A.

J. W. Milne has passed the Examination for the Degrees of M.B. and C.M., but will not graduate until he has attained the necessary age.

The John Murray Medal and Scholarship (to the most distinguished graduate of the year) has been awarded to A. H. Lister, B.A., M.B., C.M.

The George Thompson Fellowship has been awarded to W. G. Grant, M.B., C.M.

The following candidates have passed the First Portion of the First Professional Examination:

Old Regulations.—J. S. de Silva.

New Regulations.—E. Bisset, W. J. I. Bruce, J. Catto, R. D. Clark, W. F. Croll, A. R. Davidson, H. A. Davidson, G. G. Farquhar, K. Fraser, J. A. S. Grant, E. G. King, C. V. M. E. Le Fanu, J. Low, D. M. Macdonald, Miss Myra MacKenzie, R. McKilliam, J. McPherson, G. Moir, C. G. R. Munnik, A. M. Rose, F. Sellar, J. A. Simpson, H. T. Skae, C. L. Smith, H. E. Smith, J. A Stephen, A. W. M. Sutherland, H. B. Tawse, J. Taylor, J. A. Tolmie, J. A. Watt, A. Westerman, J. Wilson, T. H. Worgan.

The following have completed the First Professional Examination:

Old Regulations.—G. Chalmers, L. Cotterill, G. A. R. Farquharson, J. Hadfield, A. R. Laing, H. F. Mitchell, H. L. Phelps, J. A. Ross, W. M Smith, E. W. Wood-Mason.

New Regulations.—C. A. Bentley, J. G. Bruce, R. Carnegie, H. H. Cotman, R. Cranna, J. M. Duncan, *J. W. Duncan, G. A. Finlayson, A. N. Haig, F. A. Innes, J. W. Lindsay, D. M. Mackver, F. MacLennan, *J. R. MacLeod, *G. A. Mavor, A. M. Mitchell, J. B. Marshall, E. M. Nash, W. D. Ritchie, R. R. Robson, A. E. Simpson, *L. P. Stephen, W. Tuach, D. D. Whyte.

The first portion of the Second Professional Examination (*New Regulations*) has been passed by J. A. Thomson.

The following have completed the Second Professional Examination:

Old Regulations.—J. H. Abrahams, F. J. Alexander, R. J. Brown, W. J. Byres, G. Chalmers, J. G. Chalmers, M. Connon, H. Forbes, F. J.

Henderson, †W. Hunter, J. M. Keith, W. Lumsden, J. G. McWillie, W. M. Ogilvie, A. Ramsay, W. A. Salmond, A. M. Watt.

New Regulations.—D. H. Ainslie, W. Ainslie, *R. Bruce, W. H. Clark, *W. D. McDonald, J. Duff, H. W. Gardon, W. S. Hall, A. Ledingham, J. [illegible] Milne, J. [illegible], A. A. Robb, J. Roger, T. Snowball.

The Third Professional Examination (*New Regulations*) has been completed by F. [illegible].

* Indicates that the candidate has passed "with credit."
† " " " " "with much credit."

THE VICTORIA UNIVERSITY.

PASS LISTS: FACULTY OF MEDICINE: FINAL EXAMINATION.

Part I.—G. Ashton, Owens College; W. S. Badger, University College; [illegible], Owens College; F. [illegible], Owens College; H. M. [illegible], Owens College; A. H. Burgess, Owens College; [illegible], Owens College; H. [illegible], Owens College; C. [illegible], Owens College; H. M. [illegible], University College; F. H. [illegible], Yorkshire College; H. Harvey, Owens College; E. [illegible], Owens College; W. F. Jackson, Owens College; A. H. Jones, Owens College; A. J. [illegible], Owens College; J. G. Martin, University College; E. [illegible], Owens College; N. [illegible], Owens College; W. H. S. [illegible], Owens College; A. E. [illegible], Owens College; J. S. Ross, Owens College; S. T. Rowling, Yorkshire College; E. A. Smith, University College; L. Tong, Owens College; A. A. Wood, University College; J. Wood, Owens College; H. B. Woodcock, Owens College; H. C. Woodhouse, Owens College.

Part II.—A. V. Davies, Owens College; E. L. Beal, Owens College; A. Greenwood, Owens College; R. S. Hardman, Owens College; F. B. G. Holmes, Owens College; C. E. Ligertwood, Yorkshire College; J. P. Lowe, Owens College; A. McDougall, Owens College; J. T. Marsden, Owens College; T. H. Miller, Owens College; F. C. Moore, Owens College; J. H. Renshaw, Owens College; J. V. Shaw, Yorkshire College; R. H. Trotter, Yorkshire College; B. V. Watkins, Owens College.

The following have been awarded honours:

Class I.—C. E. Ligertwood, Yorkshire College; F. C. Moore, Owens College.

Class II.—R. S. Hardman, Owens College; F. B. G. Holmes, Owens College; T. H. Miller, Owens College; J. H. Renshaw, Owens College; J. V. Shaw, Yorkshire College; R. H. Trotter, Yorkshire College; B. V. Watkins, Owens College.

DIPLOMA IN SANITARY SCIENCE.

M. Parkinson, F. W. Sydenham.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the First Examination of the Board in the subjects indicated under the "Four Years'" Regulations:

Passed in Part I. *Chemistry, including Chemical Physics.*—V. S. A. Bell, University of Cambridge and St. Bartholomew's Hospital; P. M. S. Bennett, Middlesex Hospital; C. H. D. Bulteel, King's College, London; T. L. Butler, St. Mary's Hospital; E. C. Dean, University College, London; F. A. Hart, Middlesex Hospital; T. A. King, University of Cambridge; L. A. Lewis, University College, Cardiff; L. A. Nicholls, London Hospital; W. Nicholls, St. Bartholomew's Hospital; C. A. Scott, Charing Cross Hospital; E. R. L. Thomas, London Hospital; W. W. Williams, University College, London.

Passed in Part II. *Materia Medica.*—A. J. Andrew, St. Bartholomew's Hospital; A. J. Bennetts, St. Mary's Hospital; G. T. Brundrett, Owens College, Manchester; P. H. Collingwood, St. Thomas's Hospital; W. J. E. Davies, St. Thomas's Hospital; E. C. Dean, University College, London; H. G. C. Dring, St. Bartholomew's Hospital; E. P. Du Heaume, St. Bartholomew's Hospital; R. T. Ellis, Yorkshire College, Leeds; J. S. Gaymer, St. Bartholomew's Hospital; H. A. Good, King's College, London; P. O. Gribbon, St. Bartholomew's Hospital; J. R. Hatfield, Yorkshire College, Leeds; W. L. Hay, King's College, London; A. J. Hayes, Middlesex Hospital; T. F. Holman, Guy's Hospital; J. Howells, London Hospital; G. W. Iliffe, Owens College, Manchester; A. Jones, London Hospital; N. P. King, Charing Cross Hospital; A. J. Knowlton, Middlesex Hospital; E. S. Langworthy, St. George's Hospital; G. E. Leary, Mason College, Birmingham; E. T. Loughurst, St. Mary's Hospital; C. H. Maskew, Mason College, Birmingham; W. G. Mitchell, Guy's Hospital; W. Nicholls, St. Bartholomew's Hospital; F. H. Nimmo, St. Bartholomew's Hospital; E. H. Pomeroy, Guy's Hospital; H. L. Porteous, Middlesex Hospital; C. G. Pugh, Middlesex Hospital; E. A. Quicke, Mason College, Birmingham; S. T. G. Ransford, St. Mary's Hospital; J. A. A. Rouillard, St. Thomas's Hospital; C. A. Scott, Charing Cross Hospital; A. I. H. Smith, University College, London; A. P. Square, Middlesex Hospital; P. H. Stratton, Mason College, Birmingham; G. L. Thornton, St. George's Hospital; A. S. White, Ledwich School, Dublin; J. M. Wood, Middlesex Hospital; C. P. Woodstock, Anderson's College, Glasgow; A. Woollcombe, St. Bartholomew's Hospital.

Passed in Part III. *Elementary Anatomy and Elementary Physiology.*—G. T. Brundrett, Owens College, Manchester; C. H. D. Bulteel, King's College, London; E. C. Dean, University College, London; S. M. Dowling, Catholic University of Ireland, Dublin; J. Evans, St. George's Hospital; A. Hawkins, University of Cambridge and St. Bartholomew's Hospital; S. Hey, University of Cambridge and St. Bartholomew's Hospital; T. A. King, University of Cambridge and St. Thomas's Hospital; W. Marsden, Yorkshire College, Leeds; H. H. Mayor, Owens College, Manchester; J. H. Mort, University of Cambridge; G. B. Nicholson, University of Cambridge; C. H. Sanders, St. George's Hospital; F. A. Simpson, University of Cambridge and St. Mary's Hospital; G. C. Walker, University College, Liverpool.

Passed in *Physiology* only.—T. McCarthy, Queen's College, Cork.

THE following gentlemen, having passed the necessary examinations, have been admitted by the two Royal Colleges Diplomates in Public Health:

S. G. Allen, Surgeon-Captain Army, M.R.C.S.Eng., L.R.C.P.Edin., St. Mary's Hospital; C. Childs, B.A., M.D.Oxon., L.R.C.P.Lond., M.R.C.S.Eng., St. George's Hospital and Oxford and Bonn Universities; F. Chown, M.B.Lond., L.S.A.Lond., St. Mary's Hospital; H. S. Fremlin, L.R.C.P.Lond., M.R.C.S.Eng., Westminster Hospital; M. Gepp, L.R.C.P.&S.Edin., L.F.P.&S.Glasg., St. Bartholomew's Hospital; E. O. Hopwood, M.A., M.D.Oxon., University College, Owens College and Royal Infirmary, Manchester; D. O. Kerr, M.B., C.M.Edin., Edinburgh University; E. T. Larkam, L.R.C.P.Lond., M.R.C.S.Eng., Middlesex Hospital; A. Ludlow, M.R.C.S.Eng., L.S.A.Lond., King's College; W. P. Norris, M.B.Melb., Melbourne University; W. W. Pryn, Surgeon Royal Navy, M.R.C.S.Eng., L.S.A.Lond., Guy's Hospital; W. W. Shrubsall, L.R.C.P.&S.Edin., L.F.P.&S.Glasg., Edinburgh and King's College; H. Vallance, M.R.C.S.Eng., London and Guy's Hospitals; A. W. Wyndowe, L.R.C.P.Lond., St. Mary's Hospital; A. W. Williams, M.B., C.M.Edin., Edinburgh University, London, King's College, and St. Thomas's Hospitals.

Eleven gentlemen were referred for six months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Members of the College, namely:

Ashdown, W. G. G., L.R.C.P.Lond.
Atkins, G. C., L.R.C.P.Lond.
Beadnell, C. M., L.R.C.P.Lond.
Beddard, A. P., L.R.C.P.Lond.
Bekenn, G. H. E., L.R.C.P.Lond.
Belcher, J. A., L.R.C.P.Lond.
Bevan, O., L.R.C.P.Lond.
[illegible], J. F., L.R.C.P.Lond.
Blachford, J., L.S.A.Lond.
Blake, V. J., L.R.C.P.Lond.
Breton, M., L.R.C.P.Lond.
Bridger, S., L.R.C.P.Lond.
Burnett, L. B., L.R.C.P.Lond.
Burns, W. T., L.R.C.P.Lond.
Byford, W. F., L.R.C.P.Lond.
Byrne, P. K., L.R.C.P.Lond.
Caley, W. B., L.S.A.Lond.
Carson, H. W., L.R.C.P.Lond.
Carter, F. B., L.R.C.P.Lond.
Cave, F. W., L.R.C.P.Lond.
Chapple, R. L., L.R.C.P.Lond.
Chaser, J. S., L.R.C.P.Lond.
Chilcott, E. S., L.R.C.P.Lond.
Coleman, E., L.R.C.P.Lond.
Coleman, J. J., L.R.C.P.Lond.
Cook, J. H., L.R.C.P.Lond.
Cooper, T. G. D., L.R.C.P.Lond.
Crace-Calvert, G. A., L.R.C.P.Lond.
Cran, R. D., L.R.C.P.Lond.
Cribb, H. G., L.R.C.P.Lond.
Davies, J. E. P., L.R.C.P.Lond.
Daw, W. H., L.R.C.P.Lond.
Dawes, J. A., L.R.C.P.Lond.
Dawtrey, A. H. P., L.R.C.P.Lond.
Deas, F., L.R.C.P.Lond.
Denne, F. V., L.R.C.P.Lond.
Dimsey, A., L.R.C.P.Lond.
Duffield, E. A., L.R.C.P.Lond.
Eadie, E. J., L.R.C.P.Lond.
Ellis, R. M., L.R.C.P.Lond.
Erhardt, C. C. J., L.R.C.P.Lond.
Evans, A. H., L.R.C.P.Lond.
Falkener, L., L.R.C.P.Lond.
Fryer, E. H., L.R.C.P.Lond.
Gabell, D. E., L.R.C.P.Lond.
Gale, F. W., L.R.C.P.Lond.
Gerrish, D. S., L.R.C.P.Lond.
Gill, S. D., L.R.C.P.Lond.
Gillett, H. T., L.R.C.P.Lond.
Grant-Wilson, C. W., L.R.C.P.Lond.
Griffiths, J. A. K., L.R.C.P.Lond.
Guest, H. M., L.R.C.P.Lond.
Haines, E., L.R.C.P.Lond.
Hall, J. N., L.R.C.P.Lond.
Hall, J. P., L.R.C.P.Lond.
Harman, N. B., L.R.C.P.Lond.
Harness, C. J., L.R.C.P.Lond.
Hawthorn, F., L.R.C.P.Lond.
Herbert, W., L.R.C.P.Lond.
Hope, J. L. A., L.R.C.P.Lond.
Hounsfield, S. C., L.R.C.P.Lond.
Hutchinson, F. A. S., L.R.C.P.Lond.
Irving, W., L.R.C.P.Lond.
Johnson, J. R., L.R.C.P.Lond.
Johnston, R. M., L.R.C.P.Lond.
Jones, A. T., L.R.C.P.Lond.
Jones, D. L., L.R.C.P.Lond.
Jones, E. T., L.R.C.P.Lond.
Jones, G. K., L.R.C.P.Lond.
Jones, M. P., L.R.C.P.Lond.
Kenrick, W. H., L.R.C.P.Lond.
Knocker, W. D., L.R.C.P.Lond.
Lamplough, C., L.R.C.P.Lond.
Lanphier, C. W., L.R.C.P.Lond.
Lansdown, G. H., L.R.C.P.Lond.
Mann, F. R., L.R.C.P.Lond.
Mann, F. W. S., L.R.C.P.Lond.
Maxwell, E. J., L.R.C.P.Lond.
Moreton, R., L.R.C.P.Lond.
Morley, F., L.R.C.P.Lond.
Morris, C. E., L.R.C.P.Lond.
Mortimer, W. G., L.R.C.P.Lond.
Mulligan, P. W., L.R.C.P.Lond.
Myler, J. W., L.R.C.P.Lond.
Newbald, C. A., L.R.C.P.Lond.
Newton, R. E., L.R.C.P.Lond.
Nicholson, J., L.R.C.P.Lond.
O'Hea, J. P., L.R.C.P.Lond.
Pentreath, L. N., L.R.C.P.Lond.
Phillips, F. A., L.R.C.P.Lond.
Phillips, H. A., L.R.C.P.Lond.
Power, J. H., L.R.C.P.Lond.
Reynolds, G. F., L.R.C.P.Lond.
Riley, F., L.R.C.P.Lond.
Robinson, E. W., L.R.C.P.Lond.
Rodocanachi, A. J., L.R.C.P.Lond.
Rowland, W. J., L.R.C.P.Lond.
Ryan, W. B., L.R.C.P.Lond.
Sanders, A. W., L.R.C.P.Lond.
Sayers, M. J. H., L.R.C.P.Lond.
Scot-Skirving, A. A., L.R.C.P.Lond.
Scott, H. A., L.R.C.P.Lond.
Shaw, H. B., L.R.C.P.Lond.
Shepherd, E., L.R.C.P.Lond.
Sheppard, A. M., L.R.C.P.Lond.
Shorland, E. T., L.R.C.P.Lond.
Smallwood, R. P., L.R.C.P.Lond.
Smith, A. J., L.R.C.P.Lond.
Southey, H. W., L.R.C.P.Lond.
Spain, C. M., L.R.C.P.Lond.
Spillane, J. C., L.R.C.P.Lond.
Squire, M. F., L.R.C.P.Lond.
Steward, F. J., L.R.C.P.Lond.
Stoner, H. H., L.R.C.P.Lond.
Talbot, A. G., L.R.C.P.Lond.
Touch, S. E., L.R.C.P.Lond.
Thomas, K., L.R.C.P.Lond.
Thomas, N. E., L.R.C.P.Lond.
Thornely, W., L.R.C.P.Lond.
Tonks, A. E., L.R.C.P.Lond.
Towne, H. B. F., L.R.C.P.Lond.
Turner, A. C., L.R.C.P.Lond.
Turner, T. W., L.R.C.P.Lond.
Wallis, S. S., L.R.C.P.Lond.
Watson, C. R., L.R.C.P.Lond.
Wheatley, R., L.R.C.P.Lond.
White, S. H., L.R.C.P.Lond.
Wilkinson, A. N., L.R.C.P.Lond.
Williams, C. W., L.R.C.P.Lond.
Wilson, F. K., L.R.C.P.Lond.
Wise, H. M., L.R.C.P.Lond.
Woolley, F. D., L.R.C.P.Lond.
Woolley, J. M., L.R.C.P.Lond.

CONJOINT BOARD IN SCOTLAND.

AT the July sittings of the examiners of the Royal Colleges of Physicians and Surgeons of Edinburgh and Faculty of Physicians and Surgeons of Glasgow in Glasgow, the following candidates passed the respective examinations, those marked with an asterisk (*) passing with distinction.

First Examination (Five Years' Course).—*R. Staward, Northfield; A. F. Jack, Glasgow; R. J. Duff, Larne; I. R. Popham, Bantry; A. L. Johnstone, Belper; *W. Hattersby, Glasgow; A. Macgregor, Glasgow; Annie M. Watson, Edinburgh; T. D. Bird, Woodford; O. D. Bateman, Cork; R. Stewart, Hamilton; G. F. [illegible], Tipperary; W. Jordan, Cork; D. M. Macgregor, Oban; R. D. Edwards, [illegible]; D. S. Russell, Glasgow; H. J. White, Dublin; D. J. O'Connor, Mill-street; P. Coffey, Ballinahinch; W. A. Benson, Stanley, Durham; W. J. Verling, Staffordshire; D. B. Green, Antrim; E. Hill, Cork; W. W. Hibbert, Bradford; R. W. John, Lowestoft; T. R. Hunter, Sheffield; J. Moran, Limerick; J. T. K. Thomson, Glasgow; J. Dunlop, Glasgow; G. F. van Dijk, Cape Colony.

First Examination (Four Years' Course).—P. J. F. O'Sullivan, Cork; F. P. G. Laslett, Milford Haven; A. L. Brown, Tranent; I. S. Shennan, Houghton-le-Spring; C. H. Harris, Staffordshire; J. H. Stuart, co. Antrim; W. Rankin, Kilsyth; J. J. Scanlan, Cork.

Second Examination (Five Years' Course).—E. S. Milestone, Whitby; *H. Chester, Todmorden; *Hedda Alexson, Sweden; Claudia A. F. Rowse, London; S. V. Robinson, Ulverston; E. F. Lionel de Jersey, Guernsey; W. W. [illegible], Glasgow; I. A. Jackson, Burton-on-Trent.

Second Examination (Four Years' Course).—A. G. Hays, West Bromwich; R. E. Moriarty, Tralee; P. Bayley, Northampton; H. M. Burnside, Belfast; H. J. Fern, Glasgow; Rose Turner, Essex; E. J. Ling, Scarborough; J. A. Burns, Newry; J. Crowley, Cork; G. H. Williams, Scarborough; E. Walsh, Limerick; T. Hesps, Preston; J. [illegible], co. Limerick; M. Sheehy, co. Cork; S. H. Oulton, Liverpool; W. B. Thomas, Glasgow; C. Retallack, Australia.

Third Examination (Five Years' Course).—H. Macpherson, Oban; A. Ross, Glasgow; D. Macgregor, Auchtoyle.

Final Examination.—J. Graham, Workington; G. C. Murray, Birnam; Lily M. Yardley, London; May Hannah Harris, London; A. Greenwood, [illegible], Stockport; Ella C. Rawlinson, Aylsham; R. S. Martin, Great Lever, Bolton; W. L. Brown, Glasgow; F. Barker, Glasgow; Charlotte Adams, Gilford, co. Down; T. Thompson, Ballymoney; W. J. Stitt, Newry; F. H. Wolfe, Glasgow; D. Walker, Glasgow; A. H. Peters, Wallsend; F. S. Flint, London; A. A. Bradburne, Salop; J. W. Cuthbertson, Roath, Cardiff; B. B. Vora, India; J. M. Tighe, Dublin; H. O. Mather, Wigan; G. Bryce, Coatbridge; M. A. Macfarlane, Ontario, Canada; Janet M'Intyre Kay, Edinburgh; A. K. A. Cæsar, Cheshire; W. W. Ridley, Gateshead-on-Tyne; F. E. Richardson, Edinburgh; Martha Maud Stewart, Newry.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

PRIZE LIST, SUMMER SESSION, 1896.—*The Barker Anatomical Prizes.*—N. H. Alcock and C. J. Patten (equal), £26 5s. each; W. J. Sweany, special prize, £15 15s.

The Carmichael Scholarship.—F. J. Palmer, £15.

The Theory and Practice of Surgery.—L. M'Dowell, gold medal; G. A. Robinson, silver medal; Miss G. L. Williams, certificate.

Practical Histology.—D. Hadden, 1st prize; H. Hall, second prize.

Practical Chemistry.—P. A. Frazer, 1st prize; C. C. Meek and W. J. Anglim (equal), 2nd prize.

Public Health and Forensic Medicine.—A. I. Eades, 1st prize; Miss G. L. Williams, second prize.

Materia Medica.—R. H. D. Pope, 1st prize; G. R. M'Donald, 2nd prize.

Practical Pharmacy.—S. R. Godkin, 1st prize; M. Gavin, 2nd prize.

Biology.—M. Gavin, 1st prize; W. M'Lorinan and W. J. Anglim (equal), 2nd prize.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, SUMMER, 1896.

FIRST PROFESSIONAL EXAMINATION.

CANDIDATES have passed this examination as undernoted:

Five Years' Scheme.—D. Gillespie, H. F. Martyn.

Four Years' Scheme, Honours.—D. A. Fitzgerald, A. T. Thurston, S. R. Godkin, W. J. Anglim, J. Nolan, H. S. Maxwell.

All.—R. J. Cane, G. Cantlie, J. M. Crawford, T. B. Cusack, R. B. Daly, R. B. Elliott, A. Fitzgerald, C. H. Fitzgerald, J. E. Hanrahan, J. J. Houston, A. H. Jacob, A. W. A. Irwin, M. W. Kelly, T. F. Kennedy, G. W. Little, C. C. Meek, G. L. N. Miles, J. J. M'Grath, J. J. M'Inerney, W. M. Lorrinan, C. B. Pasley, L. G. de Rosario, G. J. Seaton, D. Sheehan, J. Verdon, F. S. Walker, H. J. C. Wallace, J. Whelan.

Anatomy.—J. J. Adrian, A. G. Bennett, E. Bennett, W. C. Croly, S. W. Cumming, A. D. C. Cummins, R. J. Franklin, P. A. Frazer, H. E. Hayes, J. S. B. Martin, E. R. Townsend.

Chemistry and Physics.—A. G. Bennett, E. Bennett, W. A. Cooke, S. W. Cumming, R. J. Franklin, P. A. Frazer, M. M. Goldfoot, P. J. M'Quinn.

Histology.—J. J. Adrian, E. Bennett, W. C. Croly, W. A. Cooke, A. D. C. Cummins, T. W. Dempsey, H. S. Evans, P. A. Frazer, R. J. Franklin, D. F. James, C. L. Lavan, A. L. C. Lett, J. S. B. Martin, J. L. M'Carthy, O. F. M. Ormsby, J. A. Smith, E. R. Townsend.

Biology.—J. J. Adrian, W. A. Cooke, W. C. Croly, S. W. Cumming, A. D. Dunwoody, M. M. Goldfoot, J. S. B. Martin, O. F. M. Ormsby, E. R. Townsend.

SECOND PROFESSIONAL EXAMINATION.

Candidates have passed this examination as undernoted:

Completed the Examination.—J. M. Ahern, J. M. Barry, F. A. Benson, Miss L. M. C. Cummins, A. G. Edgee, M. W. Falkner, P. H. Falkner, W. G. W. Glenny, J. O. M. Irwin, W. F. Kennedy, P. J. Long, J. A. Martin, A. M'Munn, M. F. O'Sullivan, R. H. D. Pope, E. Roberts, W. G. Ross, B. Scribner, W. Taylor, T. F. White.

Anatomy.—C. P. Brady, J. A. Byron, B. McM. Coffey, J. Conway, D. Hadden, H. Hall, S. F. Lacey, P. H. Moffit, W. O'Connor.

Histology.—G. Carroll, E. F. Conyngham, J. M. H. Conway, D. Hadden, H. Hall, A. W. A. Irwin, N. J. Keane, W. Meagher, R. H. Moffit, W. O'Connor, G. F. Sheehan, A. E. Tresston, R. J. White, T. A. J. White.

Physiology.—C. P. Ready, J. A. Byrne, D. J. Farrell, H. Hall.

Materia Medica.—W. J. [illegible], E. F. Conyngham, D. J. Farrell, D. Hadden, H. B. [illegible], G. J. O'Kelly, T. S. C. Magrath, W. Meagher, C. F. O'Connor.

THIRD PROFESSIONAL EXAMINATION.

Candidates have passed this examination as undernoted:

Completed the Examination.—G. E. Cathcart, D. F. Clarke, W. J. Healey, D. Kennedy, W. C. M'Cann, T. S. O'Connor, E. O'Flaherty, Miss M. S. P. Strangman.

Applied Anatomy.—W. J. Beveridge, H. E. V. Blake, J. G. Cashman, H. E. Eardley, W. M. Jones, J. M. Longford, T. C. MacKenzie, M. Mitchell, J. G. G. Pigott, Miss L. F. S. Strangman.

Applied Physiology.—L. E. Fannin, J. M. Longford, T. C. MacKenzie, G. G. H. Moorhead.

Applied Medicine.—W. J. Beveridge, H. E. V. Blake, H. E. Eardley, G. H. Fisher, W. Jones, J. M. Longford, M. Mitchell, G. G. H. Moorhead, W. H. Odlum, J. G. G. Pigott, Miss L. F. S. Strangman.

Applied Surgery.—W. J. Beveridge, H. E. Eardley, G. H. Fisher, E. Fitzgerald, W. H. Odlum, J. G. G. Pigott.

FINAL CONJOINT EXAMINATION.

Candidates have passed this examination as undernoted:

Completed the Examination.—1st (with Honours), D. F. O'Brien, W. Lawler; 2nd (pass), unclassed, J. A. [illegible], J. P. Cassidy, W. H. Croly, J. J. Doran, M. R. L. Moore, W. M'Grath, E. J. M'Hale, W. F. Pigott, H. S. Roberts, M. O'[illegible], J. Thompson, J. S. Watson.

Medicine.—U. J. Burke, M.A.; J. J. M'[illegible], G. Corcoran, E. Corsellis, T. J. Crean, J. C. Edge, R. Glynn, C. E. Hodgson, W. J. Keane, E. F. L'Estrange, J. Lynch, J. J. M'Donough, T. G. M'Grath, J. E. P. Sheran.

Surgery.—J. W. Benson, E. Corsellis, F. Dudley, J. C. Edge, H. Herrick, H. E. Kinsella, W. M. Macdermott, J. J. M'Donough, J. A. M'Munn, S. J. Scott, R. W. Scully, E. W. Siberry.

Midwifery.—J. W. Benson, G. E. Cathcart, F. Dudley, R. Glynn, J. Lynch, T. G. M'Grath, J. F. M'Monagle, J. A. M'Munn, R. W. Scully, E. W. Siberry.

Ophthalmology.—J. W. Benson, E. Corsellis, T. J. Crean, F. Dudley, J. C. Edge, R. Hassard, H. Herrick, H. E. Kinsella, J. J. M'Donough, J. A. M'Munn, R. W. Scully, E. W. Siberry.

Forensic Medicine, etc.—W. J. Benson, U. J. Burke, G. Corcoran, J. C. Edge, C. E. Hodgson, E. F. L'Estrange, T. G. M'Grath, J. E. P. Shera, E. W. Siberry.

MEDICO-LEGAL AND MEDICO-ETHICAL.

HOLIDAY SUBSTITUTE.

AMICUS writes: X. and Y. are good friends. Y. goes away on a trip leaving X. in charge of his patients. A newcomer, Z., is taken ill suddenly, and sends first to Y.—being the nearest assistance—then comes on to X. The following day Z. expresses a desire that X. should retain the case. What is X.'s duty, seeing that Z. has never required any attendance previously in the neighbourhood?

*** Under the circumstances related we are of opinion that X. should act purely as the locum tenens of the absent Y.

MIDWIFERY SUBSTITUTE.

BALLARAT, VICTORIA.—The following is the rule by which the case of accouchement referred to should in principle be governed: "When a practitioner is called in or otherwise requested to attend at an accouchment for another, and completes the delivery, or is detained for a considerable time, he is entitled by custom—except in the case of illness, etc., provided for by Rule 3—to one-half of the fee; but on the completion of the delivery, or on the arrival of the pre-engaged accoucheur, he should resign the further management of the case. In a case, however, which gives rise to unusual fatigue, anxiety, and responsibility it is right that the accoucheur in attendance should receive the entire fee. (Note.—In either event, when the officiating accoucheur is a stranger or a non-acquaintance of the family doctor, the full fee should be tendered to him.)"—*Code of Medical Ethics*, chap. ii, sect. 6, Rule 14.

FEES TO MEDICAL WITNESSES.

N. C.—The fees allowable to a medical witness for attending to give evidence in a criminal case are 1 guinea per diem and travelling expenses. No special allowance is made for examinations except in exceptional cases. If no order for payment has been made by the court nothing will probably be allowed.

ACCIDENTS AND THE FAMILY ATTENDANT.

MR. X. came as a newcomer with his family to a town. After a few months he brought his two sons to Dr. A. for treatment, and after a few consultations they got well. A daughter of Mr. X. was also once seen by Dr. A. A couple of months later Mr. X. himself, who had never required treatment, met with an accident, and was carried, unconscious, into the first house, and the nearest doctor, Dr. B., was fetched. Dr. B., without asking the nearest relative if Mr. X. had had any regular doctor, at once took charge of the case, and on Mr. X. reaching his own home has attended him ever since. Dr. A. has received no communication on the subject from Dr. B. Both medical men are on good and friendly terms.

1. Was Dr. A. right in assuming he was Mr. X.'s family doctor, seeing no one else had advised any of its members?

2. Was Dr. B. justified in continuing to attend the case and making no communication with Dr. A.?

*** There cannot be any reasonable doubt that, under the circumstances specified, the rule referred to by our correspondent in his private note (*Code*, chap. ii, sec. 3, rule 1) is strictly applicable to

the case above set forth; and that Mr. X. should rightly be regarded as the patient of Dr. A. as the affirmatively implied family medical adviser, and not of Dr. B., who should have retired from the case in accordance with the rule in question, and to which we would refer him (Dr. B.) in confirmation of our views.

TITLES OF "PHYSICIAN AND SURGEON."

E. H. L. P.—In reply to our correspondent's question: Has the holder of the diploma of the Society of Apothecaries a legal right to have engraved on his brass plate under his name the titles of "Physician and Surgeon"? we may state that there can be no objection to a Licentiate of the Society of Apothecaries whose diploma is dated on or after July 1st, 1886, styling himself "Surgeon," but with regard to the title "Physician" the case may be different. We mean that having regard to the not remote decision of the High Court, to which we have before referred, it would appear that Fellows or Members of a College of Physicians alone are entitled to call themselves "Physician." It is, however, doubtless the fact that many general practitioners possessing a qualification enabling them to practise medicine and surgery place "Physician and Surgeon" after their names on doorplate and card. It would be extremely desirable in the interests of the profession if the General Medical Council issued some definitive rules dealing with the vexed question of medical titles generally.

PRINCIPAL AND ASSISTANT.

FEMUR.—It is laid down in the textbooks that where a contract does not specify what notice shall be given to determine the employment, a custom prevails in the profession to the effect that an indoor assistant may be dismissed at any time by a month's notice or payment of a month's salary; and we are inclined to think, having regard to the authorities, that, assuming this custom to be established, it would be imported into the contract in question, notwithstanding the implication to which our correspondent refers. We cannot, however, say that the question is altogether free from doubt, but would recommend our correspondent to obtain legal advice before resorting to proceedings. We do not think the claim—even if the engagement were construed as a binding one for a year certain—would be for the balance of the year's salary, with or without compensation for board and lodging, but for damages for wrongful dismissal, and it would be the duty of our correspondent to use his best endeavours to procure an engagement elsewhere at the earliest opportunity.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,256 births and 4,572 deaths were registered during the week ending Saturday, July 27th. The annual rate of mortality in these towns, which had increased from 15.4 to 21.9 per 1,000 in the six preceding weeks, further rose last week to 22.5. The rates in the several towns ranged from 11.8 in Brighton, 13.6 in Huddersfield, and 13.7 in Bristol to 30.0 in Liverpool, 30.1 in West Ham, and 31.5 in Preston. In the thirty-two provincial towns the mean death rate was 22.1 per 1,000, and was 0.9 below the rate recorded in London, which was 23.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 6.2 per 1,000; in London the rate was equal to 6.9 per 1,000, while it averaged 5.6 in the thirty-two provincial towns, and was highest in West Ham, Leicester, Liverpool, and Preston. Measles caused a death-rate of 1.2 in Plymouth, Blackburn, and Liverpool; scarlet fever of 1.0 in Salford; whooping-cough of 1.0 in Cardiff; "fever" of 1.0 in Burnley; and diarrhœa of 6.4 in Bradford, 6.8 in Norwich, 7.3 in Sheffield, and 10.2 in Leicester and in Preston. The 77 deaths from diphtheria in the thirty-three towns included 48 in London, 4 in West Ham, and 4 in Wolverhampton. Two fatal cases of small-pox were registered in Oldham, and 1 in London, but not one in any other of the thirty-three large provincial towns. There were as many as 192 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, July 27th, against 42, 71, and 89 at the end of the three preceding weeks; 115 new cases were admitted during the week, against 17, 36, and 23 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,044, 2,241, and 2,267 at the end of the three preceding weeks, had further risen to 2,347 on Saturday, July 27th; 249 new cases were admitted during the week, against 311, 352, and 220 in the two preceding weeks.

In thirty-three of the largest English towns, including London, 6,663 births and 4,307 deaths were registered during the week ending Saturday, August 3rd. The annual rate of mortality in these towns, which had increased from 15.4 to 22.5 per 1,000 in the seven preceding weeks, declined to 20.7 last week. The rates in the several towns ranged from 10.0 in Halifax, 10.5 in Huddersfield, and 11.8 in Brighton to 26.8 in Norwich, 28.0 in Wolverhampton, and 30.0 in Liverpool. In the thirty-two provincial towns the mean death rate was 20.2 per 1,000, and was 1.2 below the rate recorded in London, which was 21.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 5.8 per 1,000; in London the rate was equal to 6.6 per 1,000, while it averaged 5.3 in the thirty-two provincial towns, and was highest in Wolverhampton, West Ham, and Leicester. Measles caused a death-rate of 1.4 in Manchester, 2.0 in Blackburn, and 3.3 in West Ham; scarlet fever of 1.0 in Huddersfield; whooping-cough of 1.3 in Blackburn; and diarrhœa of 5.4 in West Ham, 5.8 in Birmingham, 5.8 in Nottingham, 5.9 in Liverpool, 6.1 in Sheffield, 6.3 in Salford, 6.8 in Norwich, and 10.0 in Leicester. The mortality from "fever" showed no marked excess in any of the large towns. The 76 deaths from diphtheria in the thirty-three towns included 57 in London, 3 in West Ham, and 3 in Cardiff. Two fatal cases of small-pox were registered in Oldham, and one in London, but not one in any other of the thirty-three towns. There were 207 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, August 3rd, against 71, 89, and 192 at the end of the three preceding weeks; 60 new cases were admitted during the week, against 36, 23, and 115 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,241, 2,267, and 2,347 at the end of the three preceding weeks, had further risen to 2,423 on Saturday, August 3rd; 247 new cases were admitted during the week, against 352, 220, and 249 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, July 27th, 819 births and 527 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 20.3 and 16.2 per 1,000 in the two preceding weeks, was 18.3 in the week under notice, and was 4.2 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death rates ranged from 10.3 in Perth to 23.3 in Greenock. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Paisley and Greenock. The 219 deaths registered in Glasgow included 34 from diarrhœa, 4 from whooping-cough, and 3 from measles. Two fatal cases of diphtheria were recorded in Edinburgh.

During the week ending Saturday, August 3rd, 850 births and 520 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.3 and 18.3 per 1,000 in the two preceding weeks, declined to 18.0 last week, and was 2.7 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death rates ranged from 13.7 in Edinburgh to 28.3 in Paisley. The zymotic death rate in these towns averaged 2.9 per 1,000, the highest rates being recorded in Paisley and in Greenock. The 229 deaths registered in Glasgow included 28 from diarrhœa, 5 from whooping-cough, 2 from measles, 1 from scarlet fever, and 1 from diphtheria. Seven deaths from diarrhœa were registered in Dundee, and 6 in Greenock and in Paisley, and 4 deaths from whooping-cough occurred in Dundee.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

The Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the second, or spring, quarter of this year, and to the marriages during the three months ending March last. The marriage-rate was equal to 16.6 per 1,000 of the population, and was below the rate in the corresponding quarter of any year on record.

The births registered in England and Wales during the three months ending June last numbered 233,207, equal to an annual rate of 30.8 per 1,000 of the population, estimated by the Registrar-General to be nearly thirty and a-half millions of persons in the middle of this year. This rate was, with two exceptions, lower than in the corresponding quarter of any previous year, and was 1.2 per 1,000 below the mean rate in the second quarter of the ten preceding years. The birth-rates in the several counties during the quarter under notice ranged from 23.9 in Sussex, 25.5 in Berkshire, and 26.0 in Surrey to 36.0 in South Wales, 36.1 in Staffordshire and in Monmouthshire, and 36.5 in Durham. In thirty-three of the largest English towns the birth-rate last quarter averaged 31.5 per 1,000, and exceeded by 0.7 per 1,000 the general English rate. In London the birth-rate was 30.8 per 1,000, while it averaged 32.1 in the thirty-two provincial towns, among which it ranged from 20.3 in Huddersfield, 22.5 in Halifax, and 25.6 in Brighton to 35.2 in Salford, 36.4 in Sunderland, and 37.5 in Liverpool.

The births registered in England and Wales during the quarter ending June last exceeded the deaths by 102,795; this represents the natural increase of the population during that period. It appears from returns issued by the Board of Trade that 81,030 emigrants embarked during last quarter from the various ports of the United Kingdom at which emigration officers are stationed for places outside Europe. Of these, 28,791 were English, 4,642 Scotch, and 23,429 Irish. Compared with the averages in the corresponding periods of recent years, the proportion of English and Scotch emigrants showed a considerable decline, while that of Irish emigrants showed an increase.

During the second quarter of this year the deaths of 130,411 persons were registered in England and Wales, equal to an annual rate of 17.2 per 1,000 of the estimated population; this rate was lower than that in the corresponding quarter of any year on record, with the single exception of 1894, when the rate was only 15.8 per 1,000. The lowest county death-rates last quarter were 12.2 in Middlesex, 12.4 in Rutlandshire, 12.9 in Surrey, and 13.4 in Berkshire and in Westmorland; while the highest rates were 20.1 in Cornwall, 20.3 in Lancashire, 20.4 in South Wales and in North Wales, and 20.7 in Cumberland. In the urban population of the country, estimated at about twenty and a-half millions of persons, the rate of mortality during the quarter under notice was 17.4 per 1,000; while in the remaining and chiefly rural population of nearly ten millions it was 16.9 per 1,000. These rates were respectively 1.8 and 0.4 per 1,000 below the mean rates in the corresponding quarters of the preceding ten years. Among thirty-three of the largest English towns the mean death-rate was 17.8 per 1,000; in London the rate was 16.7 per 1,000, while it averaged 16.6 in the thirty-two large provincial towns, and ranged from 12.4 in Croydon, 14.4 in Portsmouth, 15.1 in Leicester, and 15.2 in Cardiff and in Nottingham to 22.4 in Burnley, 23.1 in Bolton, 23.9 in Manchester, and 24.4 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of about three and a-half millions the mean death-rate was 16.9 per 1,000, or 0.9 per 1,000 below the mean rate in the thirty-three large towns.

The 130,411 deaths registered in England and Wales during the three months ending June last included 2,533 which resulted from whooping-cough, 2,457 from measles, 1,926 from diarrhœa, 1,492 from diphtheria, 753 from "fever" (including typhus, enteric, and ill-defined forms of "fever"), 778 from scarlet fever, and 30 from small-pox; in all, 9,999 deaths were referred to these principal zymotic diseases, equal to

an annual rate of 1.32 per 1,000, against an average rate of 1.77 in the corresponding quarters of the ten preceding years. The mortality from diphtheria and from diarrhœa showed a slight excess, while that for each of the other principal zymotic diseases was considerably below the average. Of the 35 fatal cases of small-pox registered last quarter in England and Wales, 4 occurred in Derby, 3 in London, 3 in Liverpool, and 3 in Oldham.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under one year of age to registered births, was equal to 158 per 1,000, which corresponded with the mean proportion in the second quarters of the ten preceding years. In London the rate of infant mortality was 131 per 1,000, while it averaged 143 in the thirty-two large provincial towns, among which it ranged from 100 in Croydon, 107 in Huddersfield, and 116 in Nottingham to 171 in Manchester, 175 in Bolton, 178 in Burnley, and 199 in Preston.

The mean temperature of the air during last quarter at the Royal Observatory, Greenwich, was 55.1°, and was 2.8° above the average in the corresponding quarters of 124 years; the mean temperature showed an excess of 1.7° in April, 3.5° in May, and 3.1° in June. The rainfall during the quarter amounted to 1.91 inch, and was only about one-third of the average.

THE GRACE TESTIMONIAL.

The following subscriptions have been received on behalf of this fund:

	Shillings.		Shillings.
Amount already acknowledged..	582½	George E. Fisher (Skipton-in-Craven)	1
Somerset Butter	1		
E. G. B. (Sparkhill)...	1		

MEDICAL NEWS.

Brussels Medical Graduates' Association.—The annual meeting and dinner of this Association took place at the Café Royal, Regent Street, on July 29th. Dr. Warburton, of Liverpool, was elected President for the year 1895-96; Dr. S. Sunderland, Vice-President; and Drs. Brookhouse, Burland, Thomas, Hearnden, Gabe, Achard, Snape, Turtle, Naumann, and Wunderlich, members of Council. At the dinner which followed there were present among the guests Sir Walter Foster, Dr. Glover, Mr. John Langton, and other well-known gentlemen. Dr. Snape, in proposing the toast of "The British Medical Association," drew attention to the great desire of many of its members that that Association should undertake a wider circle of duties, more particularly alluding to the question of medical defence. Sir Walter Foster, in replying, said that he sympathised with the wishes of the speaker, but feared there were grave difficulties in the way of carrying out the desired change. He particularly complimented the Brussels graduates on their admirable organisation, and said that personally he was in favour of their being allowed to register their degrees as additional qualifications. Dr. Beresford Ryley, in proposing "The Guests," gave the history of the Brussels Medical Graduates' Association, and of their agitation in 1886 to get their degrees registered, which was so ably assisted by Sir Walter Foster; he trusted that the latter and Dr. Glover would use their best efforts on the Council to get for graduates of Brussels since 1886 the same right granted by the Medical Act of that year to graduates before that date. Dr. Glover, in his reply, expressed a very strong opinion in favour of this registration, but thought that the present inability to register was partly owing to the refusal of the Belgian Government to allow reciprocal advantages to English practitioners in Belgium. Dr. Pocock, in a subsequent toast, pointed out that Dr. Glover was under a little misapprehension as to the objects of the Brussels Medical Graduates' Association; they did not wish that any foreigner should be put on the *Register* for foreign qualifications—indeed, they would strongly object to it, unless he also held English ones; their contention only was that those who were already on the *Register* for English qualifications ought to be allowed to register, if they thought fit, any foreign degrees they might have obtained after examination from a State-recognised university. Dr. Glover acknowledged this correction, and thought that the contention of the Brussels graduates was an exceedingly reasonable one.

British Laryngological, Rhinological, and Otological Association.—The annual summer meeting was held on July 25th and 26th, Dr. W. McNeill Whistler, President, in the chair. A discussion on the Surgical Treatment of the Accessory Cavities of the Nose, was opened by Dr. J. N. Mackenzie (Baltimore), who dealt with Empyema of the Antrum of Highmore. He was in accord with Freeman, who opened below the nasal duct, but considered that the opening by an alveolus was required in all but recent cases. Dr. Luc (Paris) dealt with Disease of the Frontal Sinus. His method of operation consists in opening wide by the anterior wall of the sinus, and establishing a free communication with the nose by means of an india-rubber drain. Dr. Bryson Delavan (New York) confined his observations to Ethmoidal Disease; and Dr. F. H. Bosworth (New York) said he favourite method of gaining access to the cells after removal of the anterior end of the middle turbinal was by the use of a drill. Dr. W. H. Daly (Pittsburg), Dr. Roaldes (New Orleans), Mr. Mayo Collier, and Dr. Dundas Grant continued the discussion. The subject of the treatment of Laryngeal Stenosis was opened by Dr. Sajous (Paris), who dealt with the stenotic conditions of the infraglottic space. A paper on this subject by Professor Massei (Naples) followed. On July 26th Dr. Krause (Berlin) and Dr. Heryng (Warsaw) opened a discussion upon the Surgical Treatment of Laryngeal Tuberculosis, and described their methods of treatment by curettement and the application of lactic acid. Dr. Gleitsmann (New York) stated that he had adopted, with certain slight modifications, the methods originated by Heryng and Krause. Dr. Sims Woodhead introduced a discussion upon the Antitoxin Treatment of Diphtheria, and described his views and experiences as gained from an investigation of 2,000 cases. He supported the treatment not only for diphtheria, but also as a prophylactic against its occurrence in those exposed to infection. Mr. L. Browne, Dr. Macintyre, and Dr. Roaldes closed the discussion. The Society dined at the Langham Hotel on Friday night, and a very successful meeting was then concluded.

Hospital Saturday Fund.—A sum of nearly £10,000 has now been received at the central offices of the Hospital Saturday Fund on behalf of the present year's collection. This amount has been derived from collections in the various Metropolitan business houses and workshops, and the ladies' street collection of July 13th. In many of the industrial establishments of London weekly collections will be continued until Christmas.

MEDICAL VACANCIES.

The following vacancies are announced:

BOROUGH OF BOOTLE HOSPITAL FOR INFECTIOUS DISEASES.—Medical Superintendent, unmarried. Salary, £160 per annum, with board, washing, and apartments. Applications to the Chairman of the Health Committee, Town Hall, Bootle, by August 16th.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Appointment for one year. Applications to the Secretary by August 24th.

CHICHESTER INFIRMARY.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by August 12th.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thoroughfare, Ipswich.—Second House Surgeon; unmarried; doubly qualified. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary by August 13th.

GLAMORGAN COUNTY ASYLUM, near Bridgend.—Junior Assistant Medical Officer. Salary, £100 per annum, rising £10 yearly to £120, with board (no beer or wine), lodging, and washing. Applications to the Medical Superintendent by August 22nd.

HULME DISPENSARY, Dale Street, Stretford Road, Manchester.—House Surgeon; doubly qualified. Salary, £100 per annum, with apartments, attendance, coal, and gas. Applications to the Honorary Secretary Medical Committee by August 14th.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, Birmingham.—Resident Medical and Surgical Officer, doubly qualified. Salary, £100 per annum, with board, residence, and washing. Applications to the House Governor, General Hospital, Birmingham, by August 24th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Honorary Assistant Physician. Must be on the *Medical Register*. Applications to Charles Behrens, Honorary Secretary, before August 20th.

NEWCASTLE UPON-TYNE UNION.—Resident Assistant Medical Officer at the Workhouse, unmarried, doubly qualified. Salary, £100 per annum, with furnished apartments, rations, and washing. Applications to John W. Gibson, Clerk to the Guardians, Union Offices, Newcastle-on-Tyne, before August 14th.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant, doubly qualified. Salary, £50 for the first year, and £100 afterwards. Applications to R. W. Sisson, Honorary Secretary, by August 31st.

PARISH OF ST. LEONARD, SHOREDITCH.—Male Second Assistant Medical Officer for the Infirmary, Hoxton Street, N., doubly qualified. Salary, £[illegible] per annum, with rations, furnished apartments, and washing in the Infirmary. Applications to the Medical Officer, 204, Hoxton Street, London, N.

SALISBURY INFIRMARY.—House Surgeon, unmarried, doubly qualified. Salary, £[illegible] per annum, with board, lodging, and washing. Applications to the Secretary by August [illegible].

SHOREDITCH INFIRMARY.—Locum Tenens. Terms, £[illegible] for three weeks. Applications to Dr. Forbes, Medical Superintendent.

TEIGNMOUTH INFIRMARY, DISPENSARY, AND CONVALESCENT HOME.—House-Surgeon (to act also as Secretary), doubly qualified. Salary, £[illegible] per annum, with rooms, board, and washing. Applications to the Chairman of Committee by August 16th.

WOLVERHAMPTON UNION.—Medical Officer for the No. 1 District. Must reside within the District. Salary, including surgical and midwifery cases and other extras, £[illegible] per annum. The gentleman appointed will also be appointed Public Vaccinator for the Registration Subdistrict of Wolverhampton East. Applications to Edwin Pritchard, Clerk to the Guardians, Union Offices, St. Peter's Close, Wolverhampton, by August 13th.

MEDICAL APPOINTMENTS.

ATKINSON, Dr. J. P., appointed Medical Officer for the Northern District of the Lancaster Union.

BATE, Dr. Wm. H., appointed Medical Officer of Health for the Culmstock Rural Sanitary District, *vice* C. Randolph, L.R.C.P., M.R.C.S.

BRATLEY, John G., L.R.C.P.Edin., L.F.P.S.Glasg., appointed Medical Officer of Health to the Rowley District Council.

BRAND, A. T., M.D., C.M., appointed Certifying Factory Surgeon for the District of Driffield, East Yorks, *vice* Dr. Burgess, deceased.

BROWN, G. A., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Workhouse and Tredegar District of the Bedwellty Union.

BULLOCH, William, M.D., appointed Assistant Bacteriologist in the Antitoxin Department of the British Institute of Preventive Medicine.

BURRELL, Lionel C., M.A., M.B.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Suffolk General Hospital, *vice* G. Master, M.B.Camb., M.R.C.S.Eng., L.R.C.P.Lond., resigned.

CAMPBELL, Henry Johnstone, M.D., L.R.C.P.Lond., M.R.C.S., appointed Honorary Physician to the Bradford Infirmary, *vice* W. G. Grabham, M.D.Lond., resigned.

CARDALE, Henry J., M.B., C.M.Edin., appointed Assistant House-Surgeon to Royal Albert Hospital, Devonport, *vice* T. Oliver, resigned.

CHAPPEL, George P., M.B., B.C.Camb., appointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, Victoria Park.

COLYER, Arthur R., M.R.C.S., L.R.C.P., L.D.S., appointed Assistant Dental Surgeon to the Dental Hospital of London.

DAKEYNE, T. E., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Leek District of the Leek Union.

DORR, James, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Golborne Urban Sanitary District.

DYER, Bernard, appointed Analyst to the County of Rutland, *vice* W. L. Emmerson, M.D.Aberd., deceased.

FLETCHER, T. J., M.B., C.M.Edin., appointed Medical Officer for the Castle Donington District of the Shardlow Union.

GARDNER, Mr. H. E., jun., appointed Assistant Medical Officer at the Workhouse of the Parish of St. Matthew, Bethnal Green.

GODDARD, Charles E., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Wembley Urban District Council.

GROVE, W. R., M.B.Camb., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer to the St. Ives Union Workhouse.

HALL, G. Capel, M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Ombersley District of the Droitwich Union.

HARPER, H. C., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health for the East Stow Rural Sanitary District.

HEARDER, Frederic P., M.B., C.M.Edin., appointed Second Assistant Medical Officer to the West Riding Asylum, Wakefield, *vice* M. Craig, M.B., resigned.

HUNTER, Mr. David, appointed Fourth Assistant Medical Officer to the West Riding Asylum, Wakefield, *vice* F. O. Simpson, L.R.C.P., M.R.C.S., promoted.

JAMESON, Dr. J. S., appointed Medical Officer for the Ardleigh and Great Bromley and Wix District of the Tendring Union.

LEYS, J., M.B., C.M.Aberd., appointed Medical Officer for the Norton District of the Leek Union.

LITHGOW, T. G., F.R.C.S., L.R.C.P.Lond., D.P.H.Lond., appointed Certifying Factory Surgeon for the Farnborough District.

LYLE, H. Willoughby, M.R.C.S.Eng., L.R.C.P.Lond., appointed Lecturer in Animal Biology and Demonstrator of Physiology at King's College, London, *vice* T. G. Brodie, M.D.Lond., resigned.

MCCOULL, S., M.B., B.S.Durh., appointed Medical Officer for the Tenth District of the Hexham Union.

MORTON, S. Ernest, M.R.C.S., L.R.C.P., appointed Senior House Surgeon to Sheffield General Infirmary, *vice* W. S. Kerr, M.B., C.M., resigned.

NEECH, James Thomas, L.R.C.P.Ed., D.S.Sc.Vict., appointed Physician to and Medical Superintendent of the Fever Hospital of the Leigh Joint Hospital Board.

PALMER, M. H. C., L.R.C.P.Lond., L.R.C.S.Edin., appointed Medical Officer for the Second District of the Newbury Union.

REILLY, F. R., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Billinge Urban Sanitary District, *vice* H. J. Molyneux, L.R.C.P.Edin., M.R.C.S.Eng.

REYNOLDS, J. J., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Cheriton Fitzpaine District of the Crediton Union.

ROBERTS, F. H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health for the Llandrindod Wells Urban Sanitary District.

RUSSELL, J. L., M.B., C.M.Edin., appointed Medical Officer for the Cornholme District of the Todmorden Union.

SIMPSON, Francis O., L.R.C.P., M.R.C.S., appointed Pathologist and Third Assistant Medical Officer to the West Riding Asylum, Wakefield, *vice* W. L. Andriezen, M.D., resigned.

SMYTH, Joshua C., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health to the Wells Rural District, *vice* H. W. Livett, L.R.C.P.Edin., M.R.C.S.Eng., resigned.

SNOWDEN, Geo. H. H., M.R.C.S.Eng., reappointed Medical Officer for the Halford District of the Shipston-on-Stour Union.

STUART, J. A. E., L.R.C.S., L.R.C.P.Edin., appointed Medical Officer of Health to the Batley Urban Sanitary District, *vice* A. Swann, M.D.Brux., M.R.C.S.Eng., deceased.

TAYLOR, A. E., M.B., appointed Medical Officer for the Gislingham District of the Hartismere Union.

TAYLOR, J. W., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health for the Methley Urban Sanitary District, *vice* G. W. Wigan.

THOMSON, Frederic, M.B.Aberd., D.P.H.Lond., appointed Temporary Medical Superintendent at the Gore Farm Hospital.

VOELCKER, Arthur Francis, M.R.C.S.Eng., L.S.A., appointed Assistant Physician to the Middlesex Hospital.

WAKEHAM, Mr. E., appointed Medical Officer of Health for the Springhead Urban Sanitary District, *vice* J. L. Andrew, M.R.C.S., resigned.

WEEKES, F. H., F.R.C.S.Eng., appointed Additional Honorary Medical Officer to the York Dispensary.

WHICHELLO, Edmund, B.A., M.B., B.C.Cantab., appointed Assistant House-Surgeon to the Huddersfield Infirmary, *vice* Mr. Richard Coates, resigned.

WILLIAMS, D. C. L., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Crowland District of the Peterborough Union.

WILLIAMS, Dr. E., appointed Medical Officer of Health for the Penllyn Rural Sanitary District.

WILSON, Dr., appointed Medical Officer of Health for the Standish Urban District, *vice* J. A. Marsden, M.R.C.S.Eng., resigned.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

PENROSE.—On August 6th, at Wimbledon, the wife of F. G. Penrose, M.D., F.R.C.P., of 4, Harley Street, of a daughter.

THOMPSTONE.—On July 31st at Marsh Parade, Newcastle-under-Lyme, the wife of Sydney W. Thompstone, F.R.C.S.Edin., District Medical Officer Her Majesty's Niger Coast Protectorate, West Africa, of a son.

MARRIAGES.

ANDERSON—PETTIGREW.—At the Cockburn Hotel, Glasgow, on August 1st, by the Rev. Robert Craig, M.A., Edinburgh, Robert Yuill Anderson, M.B., C.M.Edin., to Jessie, second daughter of the late William J. Pettigrew, Ironfounder, Wishaw.

GIBBON—MOORE.—August 1st, at Burgess Hill, by the Rev. E. F. S. Body, Vicar of Eston, Middlesborough, assisted by the Rev. W. Le Mare Shallis, Vicar of the Parish, William Jeremiah Gibbon, eldest son of Dr. Septimus Gibbon, to Margaret Coope Moore, youngest daughter of the late W. Withers Moore, M.D., F.R.C.P.

MARCH—MANNING.—On July 27th, at St. Andrew's Church, Laverstock, near Salisbury, by the Rev. H. Cromwell Bush, Vicar of the Parish of Laverstock and Minor Canon of Salisbury, assisted by the Rev. J. Haslock Potter, Vicar of Holy Trinity, Upper Tooting, and Rural Dean of Streatham, Joseph Ogdin March, M.R.C.S. and L.R.C.P., of St. John's House, Lechlade, Gloucestershire, to Grace Ellen, elder daughter of Henry John Manning, of Laverstock, Salisbury.

STEPHENSON—PECK.—On July 31st, at the Parish Church, Wigan, by the Rev. John Stephenson, M.A., Vicar of Boston, and the Rev. Gerald Finch, M.A., Honorary Fellow of Queens' College, Cambs., Sydney Stephenson, M.B. (of Welbeck St. W.), only son of Appleby Stephenson, M.D. (of Nottingham), to Jane Finch, daughter of the late J. H. Peck, Esq. J.P., of Southport, and of Mrs. Peck, Gidlow Lodge, Wigan.

DEATHS.

ECCLES.—On Friday, August 2nd, after fifteen months' patient suffering, Ellen Millar (Nellie), the beloved wife of A. Symons Eccles, M.B., of 23 Hertford Street, Mayfair, W.

FALLON.—On July 7th, at 77, Northcote Road, Wandsworth Common, S.W., Robert Tucker Fallon, L.R.C.S. and L.R.C.P.Edin., L.F.P.S. Glas., of intestinal obstruction, aged 43 years.

REESE.—On July 21st, suddenly, John Thomas Reese, L.F.P.S.Glas., aged 51 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.B. asks for advice in the treatment of a child aged about 6 years who cannot be prevented from eating grass, clay, dust off the road, etc.

W. P. W. wishes to hear of a home for a lady suffering from chronic heart disease. She can afford to pay about 12s. 6d. to 15s. weekly; neighbourhood of London, Worcestershire, or Warwickshire preferred.

SCALPEL writes: A young lady of 21 years, who became hopelessly deaf five years ago, and whose voice is, I fear, degenerating, is most anxious to learn lip reading. Would any of your readers kindly tell me where it is efficiently taught in London or suburbs on reasonable terms.

F. J. D. asks to be recommended a line of treatment for a very severe case of diabetes insipidus occurring in a child 14 months old. There is great wasting, constant micturition, and insatiable thirst. The present patient had a brother who suffered from a similar affection, and finally succumbed to an attack of whooping-cough. They both developed the disease at the time of weaning.

ENQUIRER wishes to be informed what means there are available at the present time for the raising of sewage from a lower level to communicate with the main or central drain of a small town, where elevation by pumping machinery would be prohibitive on account of the cost. Are there, he adds, any publications which would give the information required?

F. V. writes: Could you give me the formula for the disinfecting spray used in France, and praised so highly by Dr. Dujardin-Beaumetz?

*** The solution used in the Paris Municipality for the disinfection of rooms by the Equifax sprayer is 1 per 1,000 perchloride of mercury, with 3 per 1,000 of sea salt. Alternatively 3 per 1,000 tartaric acid may be substituted.

INQUIRER asks how long a Pasteur Chamberland filter will continue to free water from microbes without renewing the filtering candles.

*** No limit has yet been ascertained to the time over which a Pasteur-Chamberland filter will continue to free water from microbes without renewing the filtering candles; and, judging by the experience of ten years it is probable that this capacity continues indefinitely.

ANSWERS.

M.D. writes: C.I.K. will find full instructions regarding hypodermic medication in syphilis in Cripps Will's *Lectures on Genito-Urinary Diseases*, published by the Scientific Press, Limited.

BOOKS FOR NEWLY MARRIED LADIES.

H. E. W.—Two books which have been much used for the purpose mentioned are *Advice to a Wife on the Management of Her Health*, by P. H. Chavasse (Lewis), and *Hints to Mothers for the Management of their Health during the Period of Pregnancy and in the Lying-in Room*, by Thomas Bull, revised by Robert W. Parker (Longmans, Green, and Co.).

CIRCUMCISION.

MR. GEORGE STEELE PERKINS (Wimpole Street, W.) writes: In reply to "Rap:" he will find it advantageous to attend to the following points: (1) That the mucous layer be left longer than the skin, so that the wound may not come in contact with the glans, which is frequently sore from adhesions having to be broken down; (2) that, after having cut off the elongated prepuce, the mucous layer be divided on the dorsum by a longitudinal incision: this prevents all possibility of constriction from cor traction. (3) The frænum should be cut away, the frænal artery tied, and this part allowed to granulate. (4) Stitches should be freely used to bring skin and mucous layers into apposition.

THE DENTAL HOSPITAL OF LONDON AND ARTIFICIAL TEETH.

J. J. D.—The Dental Hospital of London is not, we understand, sufficiently supported by public contributions to enable the authorities to supply patients with artificial teeth gratuitously. As soon as sufficient funds are forthcoming, the hospital will gladly abolish all payments, but with a view to obviate bankruptcy and also to be of service to the poor, a fee has been charged for artificial teeth that may in some measure meet the necessary expenditure incurred in carrying on a mechanical department.

NOTES, LETTERS, Etc.

CLAIMS FOR REFUND OF INCOME TAX.

THE INCOME TAX REPAYMENT AGENCY (6, Chichester Road, Paddington, London, W.) writes: So many erroneous statements have appeared as to the date up to which claims can be made for a refund of income tax when a loss has been incurred in trade, occupation, vocation, or farming for the year ended April 5th last or date preceding when accounts are usually made up, that we would ask your permission to state that the last day is October 5th, but it is advisable to give notice at once and to obtain acknowledgment of such notice. There will then be time to make out accounts which have only to be sent in when asked for. We would remind all persons who have made a loss that income tax can be obtained back, not only when it has been paid on estimated profits but also when it has been deducted from other income. Say that a person in business or occupied in farming has been assessed and paid on profits estimated at £250, but in reality has made a loss of £100, and that he or his wife have other income from property or investments amounting to £250, he would be entitled to a refund of income tax on £350, and this would entitle him to a further refund of income tax on exemption, and he would thus recover the whole of the income tax paid or deducted. In this case it would amount to £15. We are at all times glad to give gratuitous information as to whether a claim can be validly made, and, on receipt of stamped addressed envelope, will send a form of notice of claim. Applicants should inform us whether the claim is on account of actual loss or merely on account of decreased profits, as the notice is different.

A DISTINCTION NOT WITHOUT A DIFFERENCE.

MR. D. BIDDLE (Kingston-on-Thames) writes: It may seem ungracious to take exception to anything contained in the admirable opening address of the President of the British Medical Association as reported in the columns of the BRITISH MEDICAL JOURNAL. But I feel it my duty to point out that the last line of poetry with which he closed his remarks is a mistranslation of the passage from which it is evidently taken. For this no doubt the poet is answerable, and it is a pity, for otherwise the utterance is grand:—

"Look forth, my soul!
(Nor in this vision be thou slow to trust)
The living waters, less and less by guilt
Stained and polluted, brighten as they roll,
Till they have reached the eternal city, built
For the perfected spirits of the just!"

In both the authorised and the revised versions of Hebrews xii, 23, the rendering is ambiguous, namely, "To the spirits of just men made perfect," but on referring to the original Greek, there can be no doubt as to the meaning, for the words are πνεύμασι δικαίων τετελειωμένων, to the spirits of perfected just ones.

It is now twenty-six years since, in a small work entitled *The Spirit Controversy*, I endeavoured to show that the human spirit is not subject to the changes and fluctuations which mark the human body, but that it needs a body in order to realise a conscious existence. Of course such a view cuts at the root of the doctrine of Purgatory, and also of prayer to departed saints, and is diametrically opposed to the whole theory of Spiritualism. Hence you will not be surprised to hear that my book was assailed tooth and nail by the late Professor De Morgan in the pages of the *Athenæum*. But my confidence in the substantial truth of my argument remains unshaken, and I consider the doctrine of the resurrection of the body—in contrast to the Platonic dogma of the immortality of the soul—as testifying almost more than any other to the scientific character of Christianity. Perfected spirit is more impossible than perfected oxygen.

TWINS: BOTH BORN WITHOUT RUPTURE OF MEMBRANES.

MR. W. PETRIE SIMPSON, M.R., C.M.Edin. (Tattershall, Lincs.) writes: On the afternoon of July 11th I was called to attend Mrs. L., who lives about three miles away, in her confinement. Her age was 38, and this was her third confinement. I found that both children had been born half an hour previously. In both cases the placenta and membranes were expelled with the child, and in both the membranes were unruptured. The first child, a female, was a breech presentation, and the second (a male) a vertex. The second child was born about five minutes after the first. In both cases life was extinct. There was no abnormal appearance about either placenta, nor were the membranes specially tough. The labour was almost absolutely dry, as no waters escaped, and little or no blood. Both children were about 7½ months. The woman says she did not expect until the end of August.

TREATMENT OF FETID EXPECTORATION BY CREASOTE VAPOUR.

DR. CHARLES FURBER (London), late surgeon Wassa (gold) Mines, West Africa, etc., writes with reference to Dr. Chaplin's paper in the BRITISH MEDICAL JOURNAL, June 22nd, 1895, p. 1371: My own experience has led to much the same results in a few cases. However I differ with him on two crucial points, namely, (1) His plan could only be carried out conveniently in a hospital; (2) The creasote advised, namely, coal tar, though antiseptic, is too toxic and irritating. My own plan would

be quite as beneficial and decidedly more grateful to these patients. For the past nine months I have been using the purest beechwood obtained (after B. Robinson and Guttmann) my formula being ℞ creasoti purificati ʒiv; ol. pini sylvest. ʒj; ol. eucalypti ʒj; tr. benz. co. ad ℥iv. To apply this solution continuously for long periods to the larynx, bronchi, and lungs, I invariably make use of the globe nebuliser, devised by Dr. Dobson, as being the only spray diffuser from which vapour can be drawn through the nose into the lungs for any length of time without giving rise to a catarrhal state of the delicate mucous membrane.

Painless Slaughter of Cattle.

The Rev. F. Lawrence (Hon. Sec. Church Sanitary Association) writes: At a trial held under the auspices of the Promotion of Kindness to Animals Society, at a slaughterhouse behind the Church House, Westminster, it was conclusively proved that an animal can be slaughtered painlessly and instantaneously by means of a short rifle barrel, in a manner which is simple, easy, and practically noiseless. A question arises, Does this method leave the meat in as good condition as possible for human consumption? I have instituted inquiries in this direction, and up to to-day have not received other than confirmation of the opinion formed by a practical man at Birmingham—that this mode is in every way superior to any in use at the present time. It would be an advantage if some of your readers would give their judgment upon this important subject.

A Curious Poultice.

Mr. Hubert T. Sells, M.R.C.S.Eng., etc. (Northfleet, Kent), writes: "Cowdung poultices" are very commonly used in the country for inflamed breasts. Moreover, horses' feet are commonly "stopped" with cowdung when the frog is very dry and brittle. Strange to say I have never seen this filthy poultice do any harm in the human being.

Dr. J. Flexdell Wilton (Weymouth) writes: I saw some thirty-five years ago an old woman living in one room who had applied a cow-dung poultice to a large chronic ulcer in the calf of the leg. I remonstrated with her on this filthy proceeding, which had been in use for some weeks. I ordered a bread poultice to cleanse the wound, and saw her again in two days. Her room was very offensive, and she removed a large brown mass, which she told me was a bread poultice. On inquiring how it was made, I found that she had cut a round of bread about three-quarters of an inch thick from a loaf, toasted it to a nice brown on both sides, and then, to complete the poultice, had steeped it in her own urine.

Dr. W. J. Cullen (St. Boswells, N.B.) writes: Fully twenty years ago, in the island of Islay, Argyllshire, the cow-dung poultice was much in vogue. Wherever a "gathering" proved obdurate, either in the breast or elsewhere, a hot cow-dung poultice was frequently applied, and often with good results, the popular idea in connection with them being that the excreta of the cow contains a decoction (*sic*) of herbs, thus acting not only as a poultice but at one and the same time as a soothing application to the affected part. The poultices were applied until the abscess burst, and as long as there was any continuance of the discharge, the after-process of healing being effected by frequent bathings with whisky and water, and the wound covered with either an ivy, cabbage, or dock leaf.

W. M. (Durham) writes: I can go further than Dr. Bate in this matter. It was the case of an abscess of the cheek in a young man. When I saw the patient his cheek was entirely enveloped in a big poultice, which consisted of cow's "shearin," that is, cow's dung, I was informed. The breast might have been considered bad enough, but the idea of having the face poulticed in this fashion was revolting in the extreme. It was evidently a recognised method of curing abscesses among the laity in this county. Possibly the reason for such unsavoury methods of treatment may be the idea of impressing the senses in a vigorous manner, and thus aiding the cure—one would at any rate think so from the substances which are in daily use in this part of the world. Paraffin is another household remedy for external and internal use, and young children are frequently dosed with it when suffering from bronchitis.

A Chinese Medical Academy in Pekin.

The present month of July is, says the *Western Morning News*, to witness the inauguration of a strange experiment at Pekin, in connection with the Anting Hospital and Huiwen College there. At the latter the English language is taught, and when Chinese students have been desirous of taking up the study of Western medicine and practical surgery, it has been necessary for them to first acquire sufficient proficiency in English for them to do so. Henceforth five professors will teach special branches of these subjects in Chinese, and entrance to the academy devoted to this work will be open to those who have not learned English. As the Chinese Generalissimo of Manchuria has resorted to a foreign physician during a severe illness which Chinese pharmacy did not benefit, it is evident that the advantages of Western science are becoming better appreciated, and there is doubtless a future of wondrous usefulness before the Chinese Medical Academy which Dr. Robert Coltman is establishing at the Chinese capital.

Letters, Communications, Etc., have been received from:

(**A**) Mr. J. W. Acknill, Harrogate; A.M.S.; Mr. W. C. Aylward, Tunbridge Wells. (**B**) Dr. A. G. Bateman, London; Mr. F. Braham, Brighton; Dr. R. Broadbent, Leicester; Dr. A. T. Brand, Driffield; Mr. H. M. Biggs, London; Dr. Barnard, London; Mr. D. Biddle, Kingston-on-Thames; Dr. W. Bulloch, Harrow-on-the-Hill; J. Battersby, M.B., Chitral; Mr. G. H. Broadbent, Manchester. (**C**) Mr. J. T. Colyer, London; Dr. J. W. Carr, London; Dr. R. Corbett, Lucknow; A Country Member; Miss M. Canney, London; Mr. P. R. Cairns, Glasgow; Dr. C. J. Cullingworth, London; Dr. W. H. Chimo, Aldeburgh. (**D**) Dens; Mr. A. Duka, London; Mr. W. H. Dale, Culmstock; Mr. H. W. Davies, Bridgend; Messrs. Down Brothers, London; Dr. W. Duncan, London; Mr. H. Dickinson, Wembley. (**E**) Dr. S. Eccles, London; E.C. (**F**) Dr. F. R. Fairbank, St. Leonard's-on-Sea; Mr. G. E. France, London; Dr. H. Finlay, Townsville; F.R.C.S.; Mr. G. E. Fisher, York; Mr. A. Fournel, London. (**G**) Mr. H. C. Gullier, London; Mr. C. E. Goddard, Wembley; J. Groves, M.B., Newport; Mr. H. G. Gillies, London. (**H**) Mr. E. G. Highton, London; F. Heatherley, M.B., New Ferry; Mr. Nelson Hardy, London; Dr. J. W. Hunt, London; Mr. C. W. Hunt, Manchester. (**J**) Dr. J. Johnston, Bolton; W. Jessop, M.B., London. (**K**) Dr. S. A. Knopf, Falkenstein; Mr. W. M. Kelly, Taunton; Messrs. Keith and Co., Edinburgh; Dr. G. C. Kingsbury, Blackpool. (**L**) Mr. H. W. Lyle, London; Listerite; Mr. F. Lawrence, London; Mr. A. Liveridge, Sydney, N.S.W.; Dr. Lys, Bournemouth; Mr. W. G. Loveridge, Barton-on-Humber; Mr. G. Longbotham, Middlesborough. (**M**) Dr. R. Macdonald, Galaberry, M.D.; Dr. G. Moore, Liverpool; Dr. H. Maudsley, London; M.R.C.S.Eng.; Member; Mr. W. F. Macfarlane, Abertillery; Member of the British Medical Association; F. H. Marson, M.B., Stafford; Mr. J. N. Morris, Devonport; Mr. S. E. Morton, Sheffield; Medicus Indicus; M.B. (**N**) Dr. J. Neil, Oxford; Mr. J. T. Neech, Tyldesley. (**O**) An Old Member. (**P**) Dr. J. Priestley, Leicester; Mrs. E. M. Paget, London; Pro Bono Publico; Mr. A. G. Price, Folkestone; Dr. F. Penrose, London. (**R**) Dr. A. Ruffer, London; Mr. A. Riley, London; Mr. W. H. Radford, Manchester; Dr. H. D. Rolleston, London; Dr. J. J. Ridge, Enfield; W. F. Robertson, M.B., Edinburgh; Miss M. Reece, Swansea Valley; Mr. H. B. Robinson, London; R. N. I. (**S**) Dr. Sibley, London; Mr. R. N. Sewill, Glasgow; R. P. Smith, M.B., London; Mr. T. H. Smith, Reddish; Mr. J. C. Smyth, Glastonbury; Dr. J. Smythe, Madras; Dr. G. N. Stewart, Cambridge; Mr. W. Sedgwick, London. (**T**) Mr. A. Thorne, London; C. C. B. Tyril, M.B., Keighley; Mrs. F. A. Thompstone, Newcastle-under-Lyme; Dr. W. J. Turrell, Oxford. (**V**) Dr. G. Viceconti, Naples. (**W**) Dr. Francis Warner, London; Mr. C. A. Webb, London; Mr. H. F. Waterhouse, London; Dr. J. W. Washbourn, London; Dr. F. J. Waldo, London; Dr. R. Wood, Bromsgrove; Dr. J. Woodman, Oxford; Dr. Forbes Winslow, London. (**X**) X. Y. Z., etc.

BOOKS, Etc., RECEIVED.

Contribution à l'Étude de l'Atrophie Musculaire Progressive Type Duchenne-Aran. Par Dr. J. B. Charcot. Paris: *Progrès Médical*. 1895. Fr. 5.

Assistance Traitement et Éducation des Enfants Idiots et Dégénérés. Par Bourneville. Paris: *Progrès Médical*. 1895. Fr. 3 50.

Medical Electricity. By Dr. H. Lewis Jones. London: H. K. Lewis. 1895. 10s. 6d.

The Practice of Massage; its Physiological Effects and Therapeutic Uses. By A. Symons Eccles, M.B. London: Macmillan and Co. 1895. 7s. 6d.

Spectroscopie Biologique; Spectroscopie du Sang. Par Dr. A. Henocque. Paris: G. Masson. Fr. 2 50.

Les Poisons de l'Organisme; Poisons du Tube Digestif. Par Professor A. Charrin. Paris: G. Masson. Fr. 2 50.

Les Sanatoria; Traitement et Prophylaxie de la Phthisie Pulmonaire. Par Dr. S. A. Knopf. Paris: George Carré. 1895.

A Code of Medical Ethics; with General and Special Rules for the Guidance of the Faculty and the Public in the Complex Relations of Professional Life. By Jukes de Styrap, M.R.C.P.I. Fourth Edition. London: H. K. Lewis. 1895. 3s. 6d.

The Guide to South Africa. Edited annually by A. S. Brown and G. G. Brown. London: Sampson Low, Marston and Co. 1895. 2s. 6d.

Encyklopaedie der Therapie. Herausgegeben von Dr. Med. Oscar Liebreich. Erster Band. Berlin: A. Hirschwald. 1895. M. 8.

*** In forwarding books the publishers are requested to state the selling prices.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	£0	4	0
Each additional line	0	0	6
A whole column	1	17	6
A page	5	5	0

An average line contains six words.

Advertisements should be delivered, addressed to the Manager, at the Office, not later than noon on the Wednesday preceding publication; and if not paid for at the time, should be accompanied by a reference.

Post-Office Orders should be made payable to the British Medical Association at the General Post-Office, London. Small amounts may be paid in postage-stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING.

AN ADDRESS

DELIVERED AT THE OPENING OF THE

SECTION OF PHARMACOLOGY AND THERAPEUTICS

At the Annual Meeting of the British Medical Association at London, July-August, 1895.

By Sir Wm. ROBERTS, M.D., F.R.S.,
Formerly Professor of Medicine in Victoria University;
President of the Section.

ON ANARCOTINE—A NEGLECTED ALKALOID OF OPIUM.

My first duty is to offer, on behalf of myself and my colleagues, a hearty welcome to those who will favour the Section with their attendance. All are equally invited to take part in our discussions—not only those who are members of the Association, but also those foreign guests who honour us with their presence. The business of the Section has been carefully arranged by the Secretaries. This morning there will be a discussion on serum therapeutics. The initiation of the discussion has been entrusted to the competent hands of Dr. Klein and Dr. Washbourn, who will be followed by other experts on this subject. To-morrow we propose to discuss the requirements of the profession with regard to the impending revision of the *British Pharmacopœia*. On this topic we expect to hear not only the professors and teachers of materia medica and pharmacology who have been announced to speak, but also the voices of some who are engaged in general practice. The Committee of Revision will be glad to receive from the latter hints and information which will enable them to make the new edition as useful as possible to the mass of the profession, for the wants of whom the work is especially designed. The list of papers offered to the Section is a long one; so long that it will obviously be impossible to read them all in full within the time at our disposal. Some will have to be taken as read, or their contents will be given in brief by their authors; all the papers will, however, be submitted to the careful consideration of the officers of the Section and will, on approval, be published in the Journal of the Association.

I propose to utilise the remainder of the time allotted to me as occupant of this chair in calling attention to the properties of a neglected alkaloid of opium, namely, anarcotine. During my travels in India last year, as a member of the Royal Commission on Opium, I heard a good deal about anarcotine and its employment in years gone by as a febrifuge in the treatment of the malarial fevers which are so prevalent in that country.

By far the most abundant alkaloids of opium are morphine and anarcotine, and while morphine represents the anodyne and hypnotic qualities of the drug, anarcotine represents, as I shall presently show, its antimalarial qualities. There are considerable differences in the proportion of morphine and anarcotine in the several varieties of commercial opium. These differences are especially pronounced in the case of Smyrna opium, which is used in this country for medicinal purposes, and Bengal opium, which is popularly used in India. These differences are set forth in round numbers in the subjoined table:

	Smyrna Opium.	Bengal Opium.
Morphine	5 per cent.	4 per cent.
Anarcotine	2 per cent.	6 per cent.

It will be observed that Bengal opium is comparatively poor in morphine but very rich in anarcotine. Smyrna opium, on the other hand, is very rich in morphine and very poor in anarcotine.

Anarcotine was brought into prominent notice in India about fifty years ago. At that time quinine became very scarce and dear. The supplies of bark from South America were failing, and it had not yet been proved that the quinine-bearing cinchonas could be cultivated with success on the uplands of India. There was thus a serious prospect of a dearth of quinine in India, and the Indian medical authorities had to cast about for some cheaper and more abundant substitute. Now, opium had long been held in high repute among the natives of India as a remedy and protective against malarial fevers; and habitual opium eaters were said to enjoy a remarkable immunity from malarial infection. Attention was therefore directed to anarcotine, which is the most abundant alkaloid of Bengal opium, and trials were made of its curative power in malarial fevers. Sir William O'Shaughnessy, in 1838, brought the subject before the Calcutta Medical Society. He gave an account of 32 cases of intermittent and remittent fevers treated with anarcotine. Of these, 31 were cured. He also mentioned 100 other cases which had been treated by his pupils and colleagues with equal success.

These results, and others of a like character, induced the Indian authorities to institute further experiments, and these proving favourable, they caused anarcotine to be prepared in quantity at the laboratories of Ghazipur and Patna, and distributed to the medical depôts throughout British India.

Two important communications on the antiperiodic powers of anarcotine lie buried in the medical archives of India, and deserve resuscitation. They are based on a large experience, and they prove incontestably that anarcotine is scarcely inferior—and in some classes of cases is superior—to quinine as an antiperiodic. The first, from Dr. Palmer, is contained in a letter to the Director-General of the Indian Medical Department, and is reprinted in the *Proceedings of the Opium Commission*, vol. v. p. 78.[1] In 1857-9 Dr. Palmer treated at Ghazipur 546 cases of malarial fever with anarcotine, in doses ranging from 1 to 3 grains. Of these, 541 were cured and only 5 died. In addition to these 546 officially reported cases, he treated with anarcotine a large number of other cases of malarial fever, amounting in all to little short of 1,000 cases. Summing up his general experience, he states that in 70 per cent. the fever was arrested at the second paroxysm after the medicine was administered; in 20 per cent. the arrest was equally sure, but was not quite so quick; and in 10 per cent. the medicine did not appear to have any curative effect. He farther remarks that there are cases where anarcotine is decidedly more efficacious than quinine—namely, where there is an intolerance of quinine, and where quinine has been given without any effect for a long time.

The second communication is a "Report on Anarcotine" by Dr. Garden, which is printed in the seventh volume of the *Indian Annals of Medical Science*. Dr. Garden succeeded Dr. Palmer in civil charge of the Ghazipur Station in 1859; and at that time a severe outbreak of intermittent fever, of quotidian and tertian type, had to be dealt with. Taking advantage of the opportunity he subjected anarcotine to an extensive trial. He treated altogether 684 cases, and gives details of 194. Of these 194 cases 187 were rapidly cured by anarcotine. It only failed in 7 cases, or 3.6 per cent. It, moreover, cured some cases where quinine had failed. The doses he employed ranged from 1½ to 3 grains. He expresses his general conclusions in the following words: "That it (anarcotine) is equal in value to quinine I do not pretend to say, but that it has a claim to the next place in the ranks of antiperiodics is, I think, an undoubted fact."

Anarcotine continued in large demand in India for several years, and was regularly supplied from the Government factories, at the rate of about a hundredweight per annum. Altogether, during the years of quinine dearth, not less than a ton of anarcotine was made and consumed in India in the treat-

[1] Copies of the Proceedings and Report of the Opium Commission have been deposited in the libraries of the British Medical Association, the London College of Physicians, and the Royal Medical and Chirurgical Society.

ment of malarial fevers. The day of prosperity of anarcotine, however, proved to be brief. With the success of cinchona cultivation on the Darjeeling hills quinine became again abundant and cheap; and the older and better known febrifuge speedily displaced its younger rival. At the present day, thanks to the skill and patriotic efforts of Dr. George King, the distinguished superintendent of the Calcutta Botanical Gardens, the natives of India are better provisioned with quinine than any population in the world. Dr. King has brought into operation a scheme whereby the local post offices are supplied with sealed packets, each containing 5 grains of pure quinine. These packets are sold to all comers at the rate of about one farthing a piece of our English money. By the courtesy of Dr. King I am able to show you samples of these wonderful little packets. Some are inscribed with English characters and some with native characters. This system is being gradually extended throughout the length and breadth of British India; and you can easily realise what an incalculable boon this is likely to prove in the fever-stricken regions of that country.

But to return to anarcotine. It is to be observed that Dr. Palmer and Dr. Garden perceived a distinction between quinine and anarcotine, and recognised that there were cases of malarial fever which resisted quinine but yielded to anarcotine. Both observers also noted that in a certain percentage of the cases anarcotine proved wholly ineffective. These discrepancies are probably to be explained by the facts brought to light in recent researches on the infective organisms of paludal fevers. It has been shown that these organisms are of more than one kind, and that each kind corresponds to a particular type of malarial fever. There seems to be valid evidence that in anarcotine we possess a second antiperiodic of great power analogous to, but not identical with, quinine; and the point I wish to press upon those who have opportunities of studying malarial fevers, especially upon investigators in India, is the desirability of subjecting anarcotine to a fresh examination, with a view of ascertaining its value, as compared with quinine, in the different types of malarial infection, and in cases where quinine has proved ineffective.

I should mention that anarcotine was originally named "narcotine" by its discoverer, Derosne, and this is the name by which it is still generally known. This designation is, however, wholly inappropriate and misleading. The extensive trials made with this substance in India show that, in a pure state, it is quite devoid of narcotic properties. For this reason Dr. Palmer renamed it anarcotine. Dr. Garden adopted this suggestion, and I think it desirable to follow his example. I show you here two fine samples of anarcotine: one was manufactured in London by Hopkin and Williams, of 16, Cross Street, Hatton Garden; the other was procured by Dr. Vaughan Harley from India, where considerable unused stores of anarcotine still exist in medical depôts.

[Drs. Nusserwanji Surveyor and Vaughan Harley, who have tested anarcotine from the Government Opium Factory, Patna, find it perfectly insoluble and tasteless. Small doses produced no effect; 1 gramme caused vomiting in three out of four dogs, 0·5 gramme in 1 case out of 2. When added to diet in quantities of 0·3 to 0·5 grammes it had no effect on temperature, respiration, or pulse; there was some slight increase in the water, in the fæces, and also in nitrogen unabsorbed. This led to a loss of weight, which was immediately regained on stopping the drug. Anarcotine chloride (by dissolving anarcotine in dilute HCl, drying and redissolving the chloride in chloroform, addition of ether caused precipitation of crystals of anarcotine chloride), is very soluble, with an intensely bitter taste. One-gramme dose in 3 dogs *per os* caused no vomiting; in 5 dogs subcutaneous injection caused no vomiting or perceptible alterations in temperature. Anarcotine chloride was given subcutaneously to dogs under ether to investigate blood pressure, rate of pulse, and respiration. Repeated doses of 0·3 to 0·5 gramme in 2 dogs caused no perceptible alteration in blood pressure or respiration. In 1 dog doses up to 4 grammes subcutaneously produced no effect on blood pressure or respiration, and no signs of poisoning. The intense bitter taste would seem to indicate the drug as bitter tonic; its effects on leucocytes are now being examined.]

A DISCUSSION ON SERUM THERAPEUTICS.

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THE NATURE OF ANTITOXIN.

The results of the injection of blood serum of animals, artificially immunised against diphtheria, into human beings during an attack of diphtheria, which have been achieved by Behring and his co-workers in the hospitals of Berlin and other places in Germany, and by Roux and Martin in Paris, were brought prominently before the International Congress of Hygiene, held at Buda-Pesth in September, 1894. Those who have read the accounts on this subject by Behring and by Roux,[1] and the more recent publications in this country and abroad on the value of antitoxin therapeutics in man, must have been struck by the overwhelmingly favourable results. With your permission, I will give a brief account of the scientific basis, leaving my friend Dr. Washbourn to deal with the clinical aspects of this subject. At the outset I wish to state that from a scientific point of view the value of antitoxic serum is experimentally so well founded and so easily confirmed that it would be little short of astounding if also in the human subject it did not affirm itself satisfactorily.

One of the oldest deductions that have been made by physicians and laymen alike as to infectious diseases was this, that a first attack confers a certain immunity against a second attack. Modern pathology distinguishes the condition of insusceptibility after a first attack as acquired immunity from natural insusceptibility observed in certain individuals or in certain species of animals against any one kind of infectious disorders. But only within recent years has it become possible to discuss these various conditions by means of direct experiment, and thus to lift them out of the barren region of academical discussion—a condition such as obtained previous to experimental investigation. One series of experimental work was carried out by Metchnikoff and his school, another by a series of observers of whom Buchner may be mentioned as the chief representative. The former of these schools ascribed immunity in general to the mechanical action of the cells—the leucocytes in particular—that is to say, to the capability of leucocytes to embody, digest, destroy and neutralise the infective agent or agents, and thus to prevent infection by hindering these latter from growing and multiplying in the body. Metchnikoff, in a considerable number of papers, lectures, and books published during the last ten or twelve years, has with great perseverance and with indefatigable zeal described very minutely the details of this process of "phagocytosis" in every kind of immunity. Numerous facts and observations are recorded by him and his pupils, of which the ultimate object is to prove that in natural, as also in every kind of artificial and acquired, immunity, phagocytosis is the essential factor.

The other series of observers, however, while admitting phagocytosis, that is the presence of the bacteria in cells, do not ascribe to it, for the establishment of either natural or acquired immunity, that first place which the other school does; phagocytosis, they say, is observable in many cases and under many conditions, that is to say the presence of the infective agents (bacteria) in, and their inclusion by leucocytes is seen in cases of natural immunity, for example, at or near the seat of infection or introduction of the agents (local leucocytes), and further in the leucocytosis of the blood or spleen or other parts, but it is likewise seen in cases where there is no immunity, but on the contrary a great and rapid multiplication of the specific bacteria within the body, that is a general infection with a fatal termination. Therefore, they say, the presence of bacteria in cells does not necessarily mean an attempt at producing immunity. On the other hand it can be shown they say, that phagocytosis is not necessarily present in immunity, because the infective agents in some instances are weakened and even destroyed before any phagocytosis occurs. I do not wish to enter here into the details of the lengthy and voluminous controversy that has been carried on now for nearly ten years as to the part that the cells play in the production of immunity. The number of papers written on this subject and the number

[1] *Annales de l'Institut Pasteur*, viii, No 9, p. 663.

of observations recorded *pro* and *contra* (by both sides), are far too large to do more than merely to refer to them in a general way; besides there is no necessity of doing more for the object that we have before us as will presently appear. This much, however, may be said, that through the recent observations we have gained a better understanding of the intimate and complex processes of infection than was possible previously; further, we have learnt more accurately that natural or spontaneous immunity is most probably due to an altogether different process or processes than acquired immunity, and lastly that the condition of acquired immunity is intimately bound up with the presence in the blood and tissue juices of substances comporting themselves like chemical, that is non-organised bodies which for lack of a better name are termed "antibodies." It is with particular reference to the action of these that I propose here to say a few words, which, I hasten to add, will be chiefly concerned with the scientific aspect of the question.

The view that the condition of acquired resistance and acquired immunity is due to specific substances present in the blood and tissue juices is not quite a new one—it has been expressed in a variety of ways in former years; but what is new, however, is the experimental proof that such antibodies do exist in the blood of an animal that has been artificially immunised, as also in the blood of human beings that have acquired immunity by having passed previously through an attack of the disease.

The experimental researches of Behring and Kitasato on tetanus[1] and of Behring[2] on diphtheria leave no doubt that by repeated injections of animals with small and at first weakened but gradually increasing and non-virulent doses of either the living culture or the specific toxins (tetanus toxin or diphtheria toxin respectively) a state of gradually increasing resistance is acquired by these animals against these diseases and that this resistance is proportionate to the amount of antecedent injections; further, that as the resistance increases the blood attains an immunising power in increasing proportion, not only as regards the subject from which the blood is derived but also as regards a new subject; that is to say that the formation and presence of these antibodies become not only increasingly marked in the animal which is being immunised but if injected into a fresh animal they are capable of furnishing this latter with a proportionate degree of resistance against subsequent infection. Lastly, they have shown that the immunising power of such blood serum comes into action even after infection has already taken place, that is the blood serum has a therapeutic action. These are briefly the principal results of these researches. The large amount of work that has already been done on these lines with respect to diphtheria, tetanus, erysipelas, abrin, ricin, and snake poisoning, and the short time at my disposal do not permit of my entering as fully as I should wish into the details of this work, and at the risk of being considered fragmentary I will restrict my remarks to a brief account of the diphtheria work only, merely adding that the principles involved in this are practically the same as in the work on tetanus. Before proceeding further I will allude to a few experiments to illustrate these fundamental propositions as far as they refer to diphtheria.

Effect of Fatal Dose on Guinea-pig.

(*a*) A guinea pig is injected subcutaneously with a definite quantity of a broth culture, or an agar or gelatine culture of the typical diphtheria bacillus; the animal shows before twenty four hours are over a conspicuous swelling about the seat of inoculation, and dies in from thirty to forty-eight hours; on *post mortem* examination there is found hæmorrhagic œdema about the seat of inoculation, and the internal organs are much congested. Of a broth culture, made of the typical diphtheria bacillus, and incubated for forty-eight hours at 37° C., 0·25 to 0·3 c.cm. kills, as a rule, a guinea-pig of 300 to 400 grammes weight in thirty-six hours; of a gelatine culture eight to twelve days grown at 21° C., one eighth to one tenth of a culture is sufficient to produce the same result; of pure diphtheria toxin prepared after Roux,[4] 0·1 c.cm. does the same.

[1] *Deutsche med. Woch.*, No. 50, 1890.
[2] *Deutsche med. Woch.*, No. 49, 1890.
[4] *Annales de l'Institut Pasteur*, September, 1894.

Effect of Non-Fatal Dose.

(*b*) An animal is injected with a non-fatal dose of diphtheria culture or of diphtheria toxin. According to the different species of animals, great differences exist in respect of the reaction towards the diphtheria culture, as also the pure diphtheria toxin. A guinea-pig, being highly susceptible, lends itself less suitably to this than the less susceptible sheep or goat (Behring), and these less than the less susceptible horse (Roux). But in all these animals it is possible to so use the diphtheria culture or the diphtheria toxin that no fatal effect follows. And according to the greater or lesser initial susceptibility, both the virulence, as also the quantity of the immunising material, has to be altered.

Experience has shown that it is not difficult to so weaken, either by chemical means or by application of heat or by other methods, the diphtheria cultures or the diphtheria toxin that the first and subsequent injections do not produce more than a temporary local tumour with a temporary constitutional disturbance, and the animal recovers after the lapse of a few days. After the preliminary injections, the virulence and the dose can be increased without producing other than the temporary reaction. In this, also, differences exist as regards the different species of animals, and even between animals of the same species; suffice it to say, that after a number of injections the animal shows an increasing lack of reaction or increasing resistance to each injection, and consequently the relative and absolute amount of poison to be injected has to be gradually increased. If the blood of such animals be tested, it will be found that its power to neutralise a definite dose of diphtheria culture or diphtheria toxin for a normal control guinea-pig is proportionate, *cæteris paribus*, to the number of immunising injections that have been performed on the blood giver. In other words, the greater the degree of acquired resistance in an animal, the higher the power of its blood to neutralise the diphtheria poison; or, differently expressed, the greater the acquired resistance, the greater the amount of scientific antibodies circulating in its blood. It is further justifiable to conclude from this that it is the presence of the specific antibodies in the blood which causes the resistance.

Of the blood of an animal thus furnished with an acquired resistance against the diphtheria poison, some is then withdrawn, allowed to clot, and the serum is used for the following experiments.

Effect of Serum on Toxin.

(*c*) A series of guinea-pigs of about 300 grammes each are chosen. No. 1 receives subcutaneously a tenfold fatal dose of diphtheria toxin—that is to say, a dose sufficient to produce a marked tumour and fatal issue in thirty-six hours in ten guinea-pigs. The others each receive by subcutaneous injection a mixture of varying quantities of the serum derived from a given animal (or, as the case may be, of the same quantity of serum derived from different animals in different stages of immunisation) with the tenfold fatal dose of toxin. A serum, of which 0·1 c.cm. is capable of completely neutralising for a guinea pig of 300 grammes weight a tenfold fatal dose of pure diphtheria toxin, is possessed of 1 immunising unit—that is to say, 0·1 c.cm. of the serum mixed with the tenfold fatal toxin dose, and then injected into a guinea-pig of 300 grammes weight not only leaves the animals alive, but presents not even the appearance of a tumour about the seat of inoculation; and according to the results obtained the potency of the serum can readily be ascertained. Now Behring succeeded in immunising animals to so high a degree against diphtheria that their blood serum possessed 600, 1,000, and even 1,500 units of immunising power—that is to say, $\frac{1}{600}$ or $\frac{1}{1000}$ or $\frac{1}{1500}$ part respectively of 1 c.cm. of the serum mixed with a fatal dose of diphtheria toxin and injected into a guinea-pig leaves this perfectly unharmed, whereas the control guinea-pig develops a tumour and dies in thirty six hours after the injection of the same toxin. I venture to say that nothing can be found in the whole range of experimental pathology or pharmacology which offers clearer or more striking results than these experiments. Whether the testing of the serum on guinea-pigs is made after Behring, as above, or after Roux,[5] or after Aronson (it is not necessary to enter into these

[5] *Loc. cit.*, September, 1894.

details here), the result is always definite, namely, an antitoxic power of the serum of animals always appears with acquired immunity, and this power stands in a direct ratio to the degree of resistance produced in the serum giver. But the serum reacts not only against the injection of the diphtheria toxin itself, that is, the metabolic products of the diphtheria bacilli, but also against the infection with living culture, that is, a true immunising or germicidal action can be demonstrated in this serum.

Effect of Serum on Living Bacilli.

This has been shown by numerous experiments; I will here mention the following series:—The diphtheria bacillus can be readily grown on nutritive bouillon gelatine at 20.5° to 21.5° C.; the growth is, of course, not so rapid as on blood serum or agar at 37° C., but sufficiently pronounced after a week or ten days. In order to insure a fairly uniform result in producing infection with the bacilli of gelatine cultures, I use gelatine subcultures derived from the same stock, and removed by several generations from the original diphtheria membrane. These gelatine subcultures are made in three streaks on the sloping surface of the gelatine about 6 centimetres long; by adding to the culture a definite quantity of sterile bouillon, scraping off all the growth from the surface of the gelatine, and shaking it up so as to make a fairly uniform suspension, it is found that an amount of this suspension corresponding to $\frac{1}{2}$ of a culture is capable of producing the typical tumour and death in thirty to thirty-six hours in 1 kilogramme of guinea pigs. This result is fairly uniform; it is certainly more uniform than when ordinary broth cultures of the diphtheria bacilli are used, for in these considerable differences in virulence occur, for which no special reason can be assigned; two broth cultures derived from exactly the same stock and kept under precisely the same conditions do not possess a uniform virulence, the differences being sometimes considerable. For producing a fairly uniform infection with living bacilli, without the introduction of toxins, as is the case with broth cultures, I find gelatine subcultures, derived from the same stock and grown at 20.5° to 21.5° C. for ten to fourteen days, by far the most trustworthy.

When testing the immunising power of the serum against infection with living diphtheria bacilli, an important difference is noticed from that against pure toxin. The principle on which the antitoxic serum is prepared by Behring and by Roux is by means of the injection of animals with increasing doses of pure toxin; under these conditions of immunisation the serum attains, although slowly, to a remarkably high degree of antitoxic potency, as was mentioned above. But when testing the same serum as to its potency against the living bacilli only, without introduction of toxins, the results are somewhat different.

(*d*) A gelatine culture is used, of which $\frac{1}{2}$ injected subcutaneously produces in a control guinea-pig weighing 500 to 600 grammes a typical tumour and death in thirty to thirty-six hours; if the same amount of Behring's or Roux's or Aronson's serum—which, as stated above, is capable of completely neutralising a considerable fatal dose of pure toxin—is mixed with a fatal dose of living culture and injected into a guinea-pig of 500 grammes weight, it is found that it does not prevent the formation of the tumour and does not prevent death. The tumour contains the living bacilli, as subsequent culture of the material of the tumour proves. With this method of experimentation $\frac{1}{20}$ c.cm.—that is, 0.05 c.cm. of Behring's serum, of Aronson's, or of Roux's serum—does not prevent the formation of a tumour in a guinea pig of 500 grammes weight when a mixture of this amount of serum with a fatal dose of a living gelatine culture is injected, although the animal recovers; $\frac{1}{100}$ (0.01) c.cm. prevents neither the formation of the tumour nor the fatal end; 0.1 c.cm. practically prevents the formation of tumour and the animal remains well whereas a fatal dose of toxin can be neutralised by an infinitely smaller amount of that serum. So that we have here clear evidence of two different actions of the serum, namely, (*a*) a high antitoxic action, (*b*) a less powerful immunising or germicidal action; and it seems clear from this that, although the repeated injections of gradually-increasing amounts of pure toxin into the animals destined to be serum-providers have had the result of forming in the blood a certain amount of immunising substances, these injections have led in a far higher degree to the formation of antitoxin. From this it also follows that the two processes—namely, antitoxin formation and formation of immunising substances—are not necessarily identical or even collateral.

That this is really the case can be also shown by using for the production of immunisation and for the obtaining of serum living culture instead of pure toxin. If a horse be submitted to repeated subcutaneous injections with living diphtheria cultures, at first attenuated and in small amount, but gradually of increasing virulence and increasing in amount, it will be found that just as in the case of the toxin injections the effect of each injection is followed by temporary tumour about the seat of injection and general constitutional disturbance, also of a temporary character. After some weeks—4, 6, or 8 weeks, according to the initial less or greater resistance of the horse—a serum can be obtained which has greater antitoxic and immunising power than a horse similarly prepared for the same short time with pure toxin (Cobbett). But while a continuation of the injection of increasing amounts of pure toxin materially increases the antitoxic power of the latter, a corresponding continuation of the injection of living culture does not by any means increase to the same degree the antitoxic but only the immunising or germicidal power. A series of experiments in which a comparison is made of the serum of a horse immunised with living culture with the serum of a horse prepared with toxin only illustrates this.

Thus $\frac{1}{1,000}$ of a c.cm. of Behring's serum, $\frac{1}{2,000}$ of a c.cm. of Aronson's serum, $\frac{1}{2,000}$ of a c.cm. of Roux's serum of highest immunity is capable of completely neutralising at least a fatal dose of toxin; that is to say, if $\frac{1}{1,000}$ of a c.cm. of this serum be mixed with an otherwise fatal dose of pure toxin and injected into a guinea pig, the animal remains perfectly well, and no tumour appears; the same dose of toxin kills a control guinea-pig in 30 to 36 hours; $\frac{1}{100}$ of a c.cm. of the serum of a horse immunised for 3, 4, or 6 weeks by injection of living bacilli is capable of doing this, but not more.

But on using as a test on the guinea pig not toxin, but a fatal dose of living bacilli of a gelatine culture, I find that as a general rule, of Behring's serum $\frac{1}{5}$, of a c.cm., of Aronson's $\frac{1}{10}$ of a c.cm., of Roux's $\frac{1}{10}$ of a c.cm. of a horse immunised with living bacilli, $\frac{1}{2}$ of a c.cm. or less is required to prevent the guinea-pig from dying, although now and then a swelling is nevertheless produced; from this it follows that the same immunising or germicidal action of the serum of a horse immunised by living culture is achieved in a considerably shorter space of time than in the horse immunised by toxin; and further, that the antitoxic potency of a horse treated by toxin injection is at the same time incomparably (about 50 times) higher than its immunising potency.

The high degree of resistance produced in an animal by repeated injections of pure toxin, as shown by the previous experiments, is, then, associated with the presence in that animal of antitoxin of great potency, but it need not be, and, as has been mentioned, as a matter of fact is not, associated with a high degree of immunising potency; this would suggest that the two substances are not identical. But there is more direct evidence that they have two different actions; all that is known of the diphtheria and tetanus antitoxin points strongly to its being of the nature of a ferment. Its destruction by heat (60° C. to 70° C.), its preparation from serum by Aronson by methods employed for precipitating and extracting ferments are of this character; the observation of C. Fraenkel that from a broth culture of diphtheria bacillus the toxin can by heat be readily separated from the immunising substance belongs to the same category.

A question of considerable theoretical importance is the way in which antitoxin is formed in the body. The fact that by a variety of toxins—as diphtheria and tetanus toxins, abrin, ricin, snake venom by repeated non-fatal but gradually increasing doses, animals can be furnished with a high degree of resistance, and that the blood of such animals acquires specific antitoxic powers (the statement put forward by Roux as to the antitoxic potency of diphtheria antitoxin against snake venom has been shown to be erroneous), tend to show that in the production of these specific antitoxins in the animal that had been subjected to the process

of immunisation the toxins used must be the essential factors in the process. Again, it being established that in immunisation by injection of pure diphtheria toxin, pure tetanus toxin, abrin, ricin, or snake toxin respectively, an antitoxic condition of the blood is produced, proportionate to the amount of toxin injected, it would follow that also in immunity naturally acquired against a particular infectious disease—that is, by passing through an attack or through several attacks of the disease—the resistance or immunity thus acquired is the ultimate result of the action of the toxins elaborated in the body by the growth and multiplication of the specific bacteria during the attack. But under these latter conditions it is found that, in addition to antitoxin, also a large amount of immunising or germicidal substance is created. This is well shown in the experiments of Pfeiffer[1] on the cholera vibrio. We conclude from this, also, that the two substances, antitoxin and immunising substance, are different.

Now the question arises, Have we in the application of such serum to human diphtheria to deal with the one or the other or both actions?

Is the required Action against Toxin or Living Bacilli, or Both?

Time does not permit of my entering minutely into the question of the etiological relation of the diphtheria bacilli to true or membranous diphtheria; besides, I shall have to do so in another Section of this Congress (Section of Public Health); but I will here summarise the results of an overwhelming number of observations made by competent observers in stating that the Klebs-Loeffler bacillus is the true cause of diphtheria; that the experimental evidence of this is sufficient; and, further, that the nature and effect of the specific toxins produced by the diphtheria bacilli in the culture and in the human body are the same; that, also, the appearance of post-diphtheritic paralysis producible in animals by the toxins or by injection of living culture is the same (Sidney Martin) as that occurring in man after diphtheria. The scientific basis of the application of the serum of diphtheria immunised animals in human diphtheria would be considerably weakened (for reasons stated at the introduction of this paper) were the diphtheria bacillus not the true cause of human diphtheria, but, as just briefly mentioned, a large body of positive evidence exists which enables us to say that there exists a perfectly sufficient and reliable basis for declaring the Klebs-Loeffler bacillus to be the true cause of human diphtheria. Such being the case, the application of the serum of animals, in which a high degree of resistance against diphtheria has been artificially produced either by diphtheria toxin or by living diphtheria culture, to the treatment of human diphtheria must be obvious.

Chain of Symptoms.

The chain of symptoms constituting true diphtheria in man is primarily caused by the growth and multiplication of the diphtheria bacilli in the affected mucous membrane (fauces, nasal mucous membrane, larynx, trachea, or bronchi, as the case may be); by this growth and multiplication certain metabolic products result (diphtheria toxins) which are absorbed into the system and give rise to the constitutional changes that characterise diphtheria; therefore the local inflammation and necrosis caused by the growth and multiplication of the diphtheria bacilli is one thing, and the absorption and action of their toxins in the body generally is another thing. Now, if it can be shown—and I think this has been amply and strikingly done—that the serum of diphtheria-immunised animals is capable of neutralising the diphtheria toxins, and is also capable of counteracting the growth and multiplication of the diphtheria bacilli themselves, a firm scientific basis has been given which should, and I think does, enable and justify us to apply therapeutically such serum; the higher the antitoxic and immunising power of such serum—as tested on the animal—the more reason there is for saying that also in diphtheria in the human subject the neutralisation of the toxin already circulating in the affected body, and the further multiplication of the diphtheria bacilli in the diphtheritically affected mucous membranes will be more effectually neutralised and stopped; that is, the disease will be brought to a standstill, and a cure will be effected.

[1] *Zeitschrift f. Hygiene und Infect.*, vol. xvi.

Protective Action.

One further property that the serum of diphtheria-immunised animals possesses is that it is capable on injection into other animals of furnishing these with a resistance against a subsequent infection with the diphtheria bacilli. This protective action is, unfortunately, not of long duration, nor, for the matter of that, is the resistance produced by a first moderately severe attack. Guinea-pigs that have been injected with a non-fatal dose of living bacilli, and which developed a marked local tumour, leading in some cases to local necrosis and sloughing, after recovery can be infected again with positive result. Normal guinea-pigs which have received a dose of immunising serum prove themselves for a variable number of days resistant against subsequent infection with living bacilli, the period of immunity depending on the amount of serum injected. It ought, however, to be stated that the amount of serum required for this end is considerably greater than that which can neutralise a fatal dose of living bacilli and incomparably greater than that which can neutralise a fatal dose of pure toxin, injected at the same time with the serum. Thus, for instance, $\frac{1}{10}$ c.cm. of Behring's serum is required for a guinea-pig weighing 300 grammes, in order to protect the animal against a fatal dose of living bacilli injected three to seven days afterwards. But it is an experimentally established fact that the serum possesses protective power.

Now we have above indicated that it is highly probable that the serum possesses two different actions, namely (1) antitoxic, and (2) immunising action, which do not necessarily run on parallel lines, for we have seen that the serum prepared by Behring's or Roux's method (that is, by injection of pure toxin in the animals subject to immunisation) though possessed of a high antitoxic power, has a comparatively small immunising action, whereas with the serum obtained from animals subjected to immunisation by living culture the latter power is predominating; this would indicate that if serum is to be used for protective or immunising purposes only—for example, in the case of children, nurses, and attendants not affected with diphtheria, but who have been in contact with cases of diphtheria—a serum of high antitoxic power is not required; a serum of high immunising power will be more to the point. And in view of these considerations it might be possible to combine in the immunisation of animals both processes, namely, injection of pure toxin in order to produce a high antitoxic condition, and of living bacilli by which the immunising or germicidal action becomes also increased; in this way it is to be expected that a serum might be obtainable which has not only a high antitoxic power, but also to an equal degree a high immunising action.

A vast deal of work and continued observations will be required to enable us to say what the approximately exact dose of the serum of definite power, tested on the experimental animal, for a variety of degrees of virulence and for a variety of individuals is to be, both as regards its antitoxic as also its immunising action. These are points which cannot be settled in a month or a year; at present no other exact guide is available than that of the animal experiment, but this much can be said already, that the observations hitherto published justify the conclusion that the higher the antitoxic and immunising action of the serum, the more reasonably can we expect that it will exert its therapeutic effect, and the smaller the dose in which it will thus act.

It is not my object to enter here into the results of the observations on the therapeutic value of the serum in human

[1] Messrs. Allen and Hanburys have kindly dried for me serum, by vacuum drying or by hot air drying, or by a combination of both processes; the result was a dry material which keeps indefinitely the antitoxic and immunising action. When required a definite amount of it is extracted with a definite amount of water, and used for injection. This amount of water need be only a few c.cm. One important difference between the use of original and of dried serum extract that has hitherto been noticed in its application to cases at St. Bartholomew's Hospital is with regard to the occurrence of rash; that in a considerable percentage of cases following after some days the injection of original antitoxic serum, when using the watery extract of the dried antitoxic serum the rash is, as a rule, absent; from this I suppose that the rash-producing substance present in the original antitoxic serum is rendered insoluble, that is, not extractable by water, by the process of drying.

diphtheria.* Dr. Washbourn will deal specially with this point. The published accounts in this country and abroad are known and they point most strongly to the positive value of the treatment. What I wished to bring to your notice particularly is the experimental evidence which has led to the application of antidiphtheritic serum to human diphtheria. Although certain adverse criticisms have been brought forward against its use, one thing cannot, I think, be gainsaid, namely, that the scientific basis for the application of antitoxic serum is as firmly founded and as thoroughly established as the use and application of any known drug.

II.—J. W. Washbourn, M.D., F.R.C.P.,

Physician to the London Fever Hospital; Assistant Physician to Guy's Hospital, etc.

The discovery of serum therapeutics marks a distinct epoch in the history of medicine. During recent years rapid strides have been made in surgical therapeutics owing to the introduction of methods of treating wounds which are based upon sound scientific principles. The old empirical methods have been abandoned, and have been replaced by scientific methods, with the result that the dangers of surgical operations have been reduced to a minimum. The first step in this direction was the elucidation of the pathology of wound diseases, and, quickly following it, came the prevention of these diseases by antiseptic surgery. In medicine our knowledge of the etiology and pathology of disease has been greatly enriched during recent years by the study of physiology and bacteriology. Medical therapeutics, on the contrary, with the exception of the progress due to improved methods of diagnosis, has, until within the last year, remained almost at a standstill.

When we consider that our treatment has hitherto rested chiefly upon empiricism it is no matter for surprise that progress has been so tardy. The treatment of myxœdema must, however, be mentioned as a brilliant example of the application of scientific methods to medical therapeutics. But it was in bacterial diseases that therapeutics had made the least advance, and the introduction of tuberculin was consequently welcomed by the medical profession as likely to afford the assistance which was so much needed. The disastrous result of this treatment must be fresh in the minds of all; and it appeared to give the death blow to any hopes of curing bacterial disease in the human subject by scientific methods devised in the laboratory. It was only natural that clinical physicians should look upon further scientific methods of treatment with disfavour, and it was in a spirit of distrust and caution that the introduction of serum therapeutics was received. This, I feel, gives additional weight to the favourable opinion formed by the vast majority of clinical physicians of the value of the antitoxin treatment of diphtheria.

The failure of tuberculin was due to the fact that the experimental proof of its value rested upon insufficient evidence. The application of the treatment to the human subject was attempted before it had been proved to be efficacious in the case of animals.

The principle of serum therapeutics rests upon an entirely different basis. Careful and accurate experiments have shown that the blood serum of highly immunised animals possesses remarkable therapeutic properties. Professor Klein has already fully discussed the experimental side of the question, so that it is unnecessary for me to enter into any details. I will only say that the principle of serum therapeutics depends upon the fact that the blood serum of animals highly immunised by artificial means to any bacterial disease possesses the property of protecting other animals against the same disease, and that this protection is afforded whether the serum is administered before, simultaneously, or after the infection, provided in the latter case that the disease has not advanced too far before the protective injection is made. The principle is one that appears to be applicable to all bacterial diseases, but up to the present it has been carefully and thoroughly worked out only in the case of tetanus and diphtheria. In the human subject serum therapeutics has not received an extended trial except in these two diseases, and it is to them that I shall chiefly limit my remarks.

Tetanus.

We will consider tetanus first, because, for reasons which will soon be apparent, we can dismiss the matter in a few words. The value of the remedy is the most important point to decide, and I feel that, with the evidence at present available, we are not yet in a position to arrive at a correct conclusion. There are many difficulties in the way. The disease is a rare one; only a few cases have been treated, and extensive statistics of the mortality before and after treatment are not forthcoming. In addition, no single clinical observer has recorded many cases, and conclusions derived from isolated cases collected from the journals are liable to the objection that all cases have not been recorded.

In a recent number of the *Medical Chronicle*, Dr. Kanthack has analysed the cases hitherto published. From his figures it would appear that the treatment is useless in acute cases with a short incubation period and rapid onset of spasms, while the chronic cases, with long incubation period and slow onset of spasms, often recover; but this latter class of cases frequently do well with other methods of treatment. A definite opinion cannot be formed until a much more extensive trial has been given to the remedy. It must be remembered that in tetanus there is no characteristic lesion at the spot of infection, and a diagnosis is only arrived at when the disease has far advanced; consequently treatment is commenced at a late stage, and analogy with the experiments conducted upon animals renders the prospect of success not very hopeful.

Diphtheria.

In the case of diphtheria the conditions are quite different. The presence of a local lesion, in which diphtheria bacilli can be readily found, renders the diagnosis at an early stage an easy matter. The disease, too, is a common one, the clinical features well known, and statistics of mortality have been kept for many years past at a number of hospitals both at home and abroad. We are thus in a position to judge of the efficacy of any method of treatment which has been extensively tried.

The value of the antitoxin treatment has been tested in two ways: the one is the clinical method, the observation of the effect of antitoxin upon the course of the disease; and the other is the statistical method, the comparison of the mortality of a series of cases treated by antitoxin with that of similar series treated in other ways.

In order to arrive at a correct conclusion by either method, certain precautions must be taken, and it will be my duty to point out the fallacies that may arise.

Let us first consider the statistical method; and here I may say that I only propose to treat the matter from a general point of view, for I have been given to understand that the details of the statistics are to be discussed in another Section. We know that all statistics are open to fallacies if the number of cases is not sufficiently large, and if other precautions are not taken into account.

In diphtheria the age of the patient is a most important factor in determining the mortality. The statistics of the Metropolitan Asylums Board clearly demonstrate this point. Out of 4 435 patients under 5 years of age admitted into the Board hospitals between the years 1888 1894, the mortality was 49.9 per cent.; of 3 723 patients between 5 and 10 years it was 28 1 per cent.; of 1,330 patients between 10 and 15 years it was 10 6 per cent.; and of 1,972 patients between 15 and 40 years it was 4 6 per cent; the mortality in each quinquennium between 15 and 40 being, roughly speaking, the same. It is thus obvious that in comparing statistics of mortality the age of the patients must be stated.

New methods of diagnosis may also lead to errors in statistics. The diagnosis of the cases treated by antitoxin have been verified by a bacteriological examination, while in former times this plan has usually been omitted. We must consider what effect this has upon the statistics.

A bacteriological examination enables us now to exclude from our statistics many cases of angina and croup which

* It may not be out of place to mention here that the watery extract of the dry antitoxic serum prepared by me has been used at St Bartholomew's Hospital during June last on 10 consecutive cases of diphtheria in children, ranging in age between 2½ and 6 years. Of these 8 were tracheotomy cases and 2 were severe faucial cases. Of the 8 tracheotomy cases 4 were severe and 4 very severe, so much so that on admission they were not expected to survive the next 24 hours. All 10 cases recovered.

would formerly have been included. These cases are less severe than cases of true diphtheria, and on this account the older statistics of mortality are lower than they should be. On the other hand, a bacteriological examination sometimes enables us to recognise as diphtheria mild cases of angina which in former days would not have been included in the diphtheria statistics. I have no doubt that among hospital patients, at any rate, this class of cases is decidedly less frequent than the former class, consequently the mortality of cases in which the diagnosis has been verified by bacteriological examination should, *cæteris paribus*, be higher than that of cases in which the examination has been omitted.

Another point to consider is the varying severity of the epidemic. It is not common to meet with series of mild or severe cases occurring at irregular intervals. The only way to avoid this fallacy is to take either a large number of cases in each series, or to take a large number of series for comparison.

Since the introduction of the antitoxic treatment a large number of cases have been recorded in England, Germany, France, Austria, America, and other countries. Many of these are of but little value from the statistical point of view. Either the cases are isolated, or the age has not been noted, or previous statistics have not been recorded, or they have been rendered useless for comparison by the lack of some precaution or other. Nevertheless there remain over 3,000 cases recorded by different observers, in which the mortality has been compared with that of cases not treated, and in which careful precautions have been taken to arrive at a correct conclusion.

In every series the statistics show a lower mortality than that obtained by other methods of treatment. In many instances the decrease in mortality has been remarkable, sinking to half that which it was before.

In no instance has a physician recorded a large series of hospital patients under his own care in which a careful comparison of the statistics has been unfavourable to the antitoxic treatment.

Now, this uniform decrease of mortality, if not due to treatment, can only be explained either by the prevalence of a mild form of epidemic, or by mild cases being sent into the hospital by practitioners anxious to have the remedy tried. Neither explanation will hold water. In Roux's series, for instance, the epidemic was not a mild one, for the mortality at the Trousseau Hospital, where the remedy was not used, was up to the average. Again, in Berlin the supply of serum failed, and the mortality at once increased, again to fall when a fresh supply was obtained.

In a series of cases recorded by Drs. Goodall, Card, and myself, we did not make it known that the remedy was being used, so that no error could have arisen from mild cases being sent in. Nevertheless, the mortality sank to half the average, and to half that of a series of the same number of cases immediately preceding those under treatment.

From a careful and critical examination of the statistics hitherto published, I have no hesitation in saying that they definitely prove the vast superiority of the antitoxin treatment over any other method of treatment that has hitherto been adopted.

We will now consider what evidence is obtained by the clinical method of the efficacy of the remedy. The value of this evidence depends entirely upon the reliance we place upon the opinions formed by the individual observers. In reading the literature of the subject I have been struck by the fact that almost every observer who has had a large experience of diphtheria speaks in the highest possible terms of the value of the remedy; while criticism has come from those who have had only a slight experience of diphtheria, or little personal experience of the antitoxin treatment. I would maintain that both statistical and clinical evidence definitely prove that in antitoxin we possess the most valuable remedy that has ever been used in the treatment of diphtheria.

Having discussed the general question of the value of antitoxin, I will now speak of its effect upon the course of the disease.

Effect upon the Exudation.

The majority of observers are agreed that the exudation clears off more rapidly than with any other method of treatment. The effect upon the exudation may not be apparent for the first day or two. During the first twenty-four hours the exudation may even increase, but as a rule it soon begins to clear, and when once the process has started it rapidly terminates. When the larynx is affected, the rapid clearing of the exudation frequently prevents the necessity of performing tracheotomy.

Effect upon the Temperature.

The temperature in diphtheria, apart from complications, is not of great importance as indicating the severity of the attack; consequently the effect produced by antitoxin upon the temperature is not of great moment. My own experience would show that if the temperature is much raised the injection of antitoxin causes it to fall, but when the pyrexia is moderate no marked immediate effect is produced.

Effect upon the Heart.

Antitoxin does not appear to have any direct effect upon the heart. With the general improvement in the patient's condition the pulse slows down and becomes regular, but this is not immediately manifest. There certainly is no reason for supposing that any deleterious effects are produced upon the heart.

Effect upon the Kidneys.

The vast majority of observers give a very definite opinion that antitoxin produces no effects upon the kidneys. It has, however, been stated by some that nephritis and suppression of urine are directly caused by the remedy. This statement is so important that it requires careful consideration.

It must be remembered that death from diphtheria is often preceded by abundant albuminuria and by scantiness or suppression of urine. Other symptoms are usually present, especially those of cardiac failure; and it is extremely difficult to say whether the patient is dying through the heart or the kidneys. Both the effect upon the heart and that upon the kidneys are no doubt caused by the diphtheria toxin, and such cases should be more correctly described as deaths from the direct toxic effects of the disease.

Under the antitoxin treatment similar symptoms may precede death; but the opinion of those who have had a large experience is decidedly opposed to the view that the symptoms are in any way brought about by the treatment.

When antitoxin has been injected into healthy individuals as a preventive measure, or has been used for the treatment of non-diphtherial cases, albuminuria is not produced, showing that the remedy has no effect upon the healthy kidney. A single case of nephritis after a preventive injection has been recorded, but I cannot help thinking that this was an accidental coincidence.

Effects on Paralysis.

Before we can arrive at a conclusion as to the effect of the antitoxin treatment upon the occurrence of paralysis more extended observations are required. In this connection we must not forget that the more severe the attack of diphtheria the more likely is paralysis to supervene. Many fatal cases would probably have developed paralysis had they recovered. Consequently when the mortality is lowered by treatment the actual number of cases of paralysis may increase through this cause alone.

Associated Conditions not Affected by Antitoxin.

There are certain conditions in diphtheria which are not affected by the antitoxin treatment. In many cases the exudation is invaded by various putrefective bacteria which produce substances of a poisonous nature. The absorption of these substances increases the severity of the attack. Antitoxin has no influence upon these bacteria, and this complication can only be combated by the local application of antiseptics.

Again, a secondary invasion of the throat by streptococci not infrequently occurs, and may occasion a general septicæmia or localised inflammation in other parts of the body, especially in the lungs. This condition is also not affected by antitoxin. It is not always easy to tell from clinical observation when such a secondary invasion has taken place. According to Roux, Martin, and Chaillou, a bacteriological examination of the exudation gives valuable indications. The

observations of Drs. Goodall, Card, and myself do not support this view. The question requires careful consideration, for it is exceedingly probable that this associated condition will, in the future, be successfully treated by means of a streptococcus serum.

Antitoxin Rashes, Joint Pains, etc.

The injection of antitoxin frequently gives rise to the production of an eruption and sometimes to pain in the neighbourhood of the joints. These conditions do not make their appearance until some days after the injection. They usually occur a week after the first injection but may be delayed for as long as three weeks.

The eruption varies in its character. It is generally erythematous or urticarial and may be uniformly distributed over the body or may affect only certain parts, especially the extensor surface of the limbs. The erythema may be maculated or uniform.

Purpura has been observed in a few instances but it is possible that some of the recorded cases were those of hæmorrhagic diphtheria. The eruption is often accompanied by pyrexia, the temperature sometimes reaching as high as 104° F.

Joint pains are less common. The structures around the joints appear more affected than the joints themselves. Actual effusion into the joint may however occur. The hips, wrists, and ankles are most frequently affected. Pyrexia and the eruption above described generally accompany the joint pains.

These complications clear up after a few days and no serious result has been recorded. Nevertheless they certainly retard convalescence and an effort should be made to prepare a serum which does not produce these effects. I am the more hopeful that this object will be ultimately attained because experience has shown that certain samples of antitoxin more frequently produce these symptoms than do others. It is probable that the symptoms are caused by some other body in the serum than the specific therapeutic substance. At any rate I have seen similar symptoms produced after the injection of tetanus antitoxin.

Dosage and Administration of Antitoxin.

Antitoxin is administered by subcutaneous injection. Great care should be taken to perform the injection with strict aseptic precautions. The skin should be carefully washed with soap and water, and subsequently with 1 in 20 carbolic lotion. The syringe should be boiled immediately before use. In the choice of a syringe, it is necessary to select one which can be boiled without damage. The piston should be made of asbestos or india-rubber, and all the joints made tight by washers of the same substances; no cement of any kind should be used in the joints. If care is not taken, septic troubles may arise.

In a few instances, abscesses have been recorded after injection, and these may be due to two causes: either the injection has not been performed with proper precaution, or the serum has been previously contaminated. The latter can only be avoided by using serum from a thoroughly reliable source, and by taking care not to use serum from a bottle that has been left open, and exposed to the air.

The most suitable place for injection is the subcutaneous tissue of the flank. The injection should be made as soon as the disease is diagnosed; for the earlier the treatment is commenced, the better the chance of recovery. The quantity used must depend upon the severity of the case, the strength of the antitoxin, and the age of the patient. A severe case requires a dose larger and more frequently repeated than a mild case. Probably an adult requires a larger dose than a child, but this point does not appear to me to be definitely settled.

As far as the strength of antitoxin is concerned, we are met with the difficulty that a uniform method of standardising is not always adopted. The testing of the serum is not an easy matter, and can only be performed by a skilled bacteriologist; but until a uniform system is adopted, it will be impossible for clinical observers to agree upon the proper dose to be employed in any individual case.

I think that every bottle of serum should have the strength stamped upon it, and the bottle marked in such a way that its source can readily be traced. The dose of the serum supplied by the British Institute of Preventive Medicine is for severe cases 20 c.cm., followed by 10 c.cm. in twenty-four hours, and again by 10 c.cm. in another twenty-four hours. In mild cases, smaller doses are sufficient.

The Use of Antitoxin as a Prophylactic Measure.

With regard to the use of antitoxin as a prophylactic measure I have but little to say. The protection afforded is not likely to be of long duration, and the chances of contracting diphtheria after exposure are not great, so that it is only in exceptional cases that a preventive injection would be required.

We have hitherto only considered serum therapeutics as applied to diphtheria and tetanus, but it will be interesting to conjecture the possibilities of the method in the cure of other diseases. There is sufficient experimental evidence to suggest that serum therapeutics will eventually be applicable to all diseases of bacterial origin. Already attempts have been made to cure pneumonia, erysipelas, and puerperal fever in the human subject, but the data do not yet justify us in pronouncing an opinion.

I have no doubt that serum therapeutics will in the future prove a most valuable method of treating not only definite specific diseases, such as anthrax and glanders, but also many secondary complications occurring in the course of the affections. For instance, in scarlet fever a secondary invasion with streptococci is the most frequent cause of death, and this complication will probably in the future be successfully treated by means of a streptococcus serum. Even in such a condition as intestinal obstruction serum therapeutics will be an important aid in treatment, for it cannot be doubted that the chief danger arises from the absorption of various bacterial products.

The experiments recently made with snake poisons give every hope of a successful treatment of snake bites in the near future. In conclusion, I will say that serum therapeutics opens out an entirely new field in the treatment of disease, and I believe it will be to medicine what the antiseptic treatment has been to surgery, and that we shall soon be in a position to cure many diseases which have hitherto resisted all our methods of treatment.

III.—M. Charteris, M.D., F.F.P.S.Glasg.,

Professor of Materia Medica and Therapeutics, University of Glasgow.

I had opportunities of observing, during last winter, cases of diphtheria at Belvidere Hospital, which were treated by antitoxin. There seemed to me to be no doubt about its efficacy. The patches of membrane ceased to spread, and shrivelled up after the injections. The ashy colour of the face was replaced by a healthy hue, and the pulse became fuller and stronger.

I was so much impressed with what I had seen that I resolved to institute an experimental research with regard to the different specimens of antitoxin in the market. I obtained permission from the Home Office without any objection being raised, and subsequently received from Germany a sample of diphtheria toxin by the aid of which the antitoxin is prepared. This toxin, in a dose of 0.55 c.cm., kills a guinea-pig weighing from 250 to 300 g. in two days. I tested this sample on a guinea-pig weighing 450 g., using a dose proportionate to its weight. Death resulted in two days, being preceded by paralysis of the hind legs.

Such a toxine must be employed if one is to obtain a serum rich in antitoxin. The antitoxic serum is tested under the control of the German Government in the following manner: An official withdraws a sample from about five litres of the serum, and examines it for (1) sterility, and (2) strength.

The test of the antitoxin strength is carried out as follows: 4 c.cm. of a solution diluted to 1 to 4,000 is mixed with a dose of diphtheritic poison, which is ten times the minimum lethal dose for a guinea pig of about 250 g. weight. Into such animals the mixture is injected, and should produce neither loss in weight nor local infiltration. This method of examination when carried out under uniform conditions, gives most reliable results. One c.cm. must contain 100 immunity units.

Acting on this information I resolved:

1. To determine if the different antitoxins commonly sold in this country had any action on healthy guinea-pigs. I obtained samples of:

A. Aronson's antitoxin.
B. Behring's No. 2.
C. Burroughs and Wellcome's.
D. British Institute of Preventive Medicine.

On the same day injections were made of the different samples under strict antiseptic conditions. In each case the dose for a child of 20 pounds was divided by 20, so that of the British Institute of Preventive Medicine and of Burroughs, Wellcome and Co. 1 c.cm. in each case was injected, while of Aronson's ½ c.cm., and of Behring's ½ c.cm. were used. None of the antitoxins were found to produce ill effects, either local or general.

2. I next proceeded to test their efficacy in counteracting toxin. The four samples were diluted to 1 to 4,000 by weight.

3. The guinea-pigs experimented on weighed from 500 g. to 700 g.; 15 c.cm. of the toxin in each case were injected with the diluted antitoxin solution in the following proportions:

A. 15 c.cm. toxin plus 9 c.cm. of Aronson's antitoxin.
B. 15 c.cm. toxin plus 15 c.cm. of Behring's.
C. 15 c.cm. toxin plus 40 c.cm. of Burroughs and Wellcome's.
D. 15 c.cm. toxin plus 60 c.cm. British Institute of Preventive Medicine.

The larger dose of the two latter antitoxins necessitated injections into both sides of the abdominal walls of the two pigs employed. On the following day all the pigs were huddled together, and took no food. At the sites of the injections in the pigs 3 and 4 there was evidence of infiltration, but in pigs 1 and 2 this was not observed. Hardening followed the infiltration, and continued for thirteen days, but appeared to occasion no discomfort nor any impairment of health.

IV.—R. T. Hewlett, M.D.Lond.,

British Institute of Preventive Medicine.

Behring and Kitasato, experimenting with diphtheria and tetanus, announced at the end of 1890 that the blood of a rabbit rendered refractory to tetanus was capable of neutralising the toxins of tetanus. [The speaker then gave a brief outline of the methods employed by Behring, Roux and Vaillard, and himself in obtaining tetanus antitoxin. He pointed out that the antitoxin issued by Tizzoni differed from the others in that it was obtained by precipitation of the serum by means of alcohol; in the other cases the serum was issued either in the usual liquid form, or was reduced to a solid by being dried *in vacuo* over sulphuric acid. All these antitoxins possessed a very high immunising power; this should never be less than 1 to 1,000,000, and Roux had succeeded in getting it much more powerful still.]

Statistics.

Although relatively infrequent, tetanus causes a not inconsiderable number of deaths in the British Isles, and in some tropical countries is a serious cause of mortality, notably in some parts of India and in some of the West Indian Islands.

Mortality.

Although it is very difficult to arrive at an accurate idea of the proportion of cases which pass to a fatal issue, I have, by a careful comparison of the statistics from various sources, come to the conclusion that the mortality may be stated at somewhere about 75 per cent. Now as to the antitoxin treatment, I have collected statistics of 61 cases treated with antitoxin with 22 deaths, giving a mortality of only 36 per cent. There are, however, several fallacies to be guarded against. There is always a tendency to publish successful cases only. Although it is stated that the Italians have suppressed fatal cases I do not think this source of error would materially influence the result, for, being a new treatment, it is probable that the greater number of cases have been published. There are, however, other fallacies, notably (1) that a favourable result was independent of the antitoxin treatment, and (2) that a number of chronic cases, which tend to recover under the old treatment, make up the apparent successes. Dr. Kanthack, from a valuable critical survey of 54 of the published cases, considers that the two latter are real sources of error. He comes to the conclusion that the antitoxin is probably of little value in the acute cases with rapid progress, but that in the chronic cases it seems to be of real service, diminishing the death-rate and rendering the spasms less frequent and less severe. Vaillard, in a recent paper, comes to the same conclusion. He says that the tetanus antitoxin is powerless in the acute forms, but that it may sometimes be efficacious in chronic tetanus. Kanthack, Vaillard, and myself have advocated the employment of antitoxin as a preventive. This should be of special use in tropical countries and also in veterinary practice, where tetanus is far more common than in ordinary medical practice.

V.—Nestor Tirard, M.D., F.R.C.P.,

Professor of Materia Medica and Therapeutics in King's College; Senior Physician to the Evelina Hospital, Southwark.

The speaker gave his experience at the Evelina Hospital in the treatment of diphtheria by Behring's antitoxin. He first spoke of the high rate of mortality which had preceded his employment of antitoxin, and then reviewed the results obtained more recently. He stated that the good effects noted had reference to the pulse, temperature, nervous system, and the diphtheritic membranes. The pulse gained strength and in some cases diminished in rate; the temperature either fell or remained the same—in no case did it rise; the nervous system gained in tone, and the membrane speedily diminished and did not form again. With regard to ill-effects, it was found that albumen was found in the urine in many cases, but this was also often noticed before the antitoxin had been used at all, and it was unaccompanied by any symptoms referable to interference with renal function. A rash had been noted in three cases, and it was suggested that it might be due to some alteration in the serum employed; the rash was always of the nature of an urticaria, and gave no trouble. Post-diphtheritic forms of paralysis had been absent, although children had been seen at long intervals after leaving the hospital. While recognising that it was possible that the greatly diminished death-rate might be due to an unusually favourable epidemic, it was pointed out that the cases treated had been very severe in their clinical features.

VI.—W. Gayton, M.D.,

Medical Superintendent North-Western Fever Hospital.

Dr. Gayton quoted figures, from which he drew the following deductions:

1. That the death-rates are slightly lower, although the reduction is not uniform, as it ought to be, if a single favourable factor was at work, for indeed in the youngest ages the death-rate, as before said, has been largely increased.

2. That the reduction in the death-rate may be explained equally by the generally less virulent form of the disease, as by any assumption that it is due to a change in treatment—in a word, the death-rate does not show that large, undoubted, and regular diminution that it should do if some novel and potent means of combating the poison was at work.

3. That the remedy does not diminish the tendency to complication: thus paralysis has increased from 15.5 per cent. to 20 per cent., while nephritis has either been more looked for and seen in 1895, or was uncommon or overlooked in 1894 and preceding years. Abscess in the abdominal wall had been observed in 7 cases, 1 terminating fatally, although the most rigid antiseptic precautions were taken. Rashes of many sorts, kinds, and descriptions had been in evidence at various periods from the second to the twenty-ninth day, the majority, however, on the seventh and eighth, and although said to be innocuous, nevertheless produced very frequently marked constitutional disturbances.

His own experience and that of his colleagues might be summed up thus: Those cases that under the old treatment would probably have died, still were fatal under the new. Those which might get better recovered in about the same proportion, whilst the mild cases improved no more rapidly—indeed rather the contrary, considering the frequency of the incidence of rashes, than those without it.

In conclusion, he added a few words as to the value of the bacteriological examination of the swabbing from the throat. To the practitioner who only rarely saw a case of diphtheria the value might be a maximal one, but to those who had

clinically studied the disease for long periods, and were day by day and hour by hour engaged in its treatment, the value was a minimal one, and from extended experience very negative. In very few cases, in fact he might say hardly any, admitted to the hospital and pronounced to be diseases other than diphtheria, had bacilli been found, whereas in case after case which clinically had been decided by us to be diphtheria the bacteriological report had stated that the bacillus was absent. This only, however, meant that the bacillus was not found in that particular specimen, and not that the disease was not in existence, as was evidenced by the facts present at the time, and the results that ensued, complications and clinical facts proving incontestably that the bedside diagnosis and not the bacteriological test was the correct one. Although in the statistics submitted all the latter cases were omitted, they tended to lower the value of the remedy, instead of increasing it, as was expected and most earnestly desired.

VII.—Foord Caiger, M.D.,

Medical Superintendent South-Western Fever Hospital.

The few remarks which it is my privilege to contribute to this discussion are entirely of a clinical nature, and are concerned solely with the antitoxin treatment of diphtheria, because it is in that field alone that I can lay claim to any practical experience.

Having treated all the severe cases of diphtheria which have come under my care during the past eight months with antitoxic serum, to the number of more than 250, I am able to point in general terms to the following benefits which my experience up to the present justifies me in placing to the credit of the remedy:

1. It leads to a more rapid separation of the diphtheritic exudation. As a consequence of this not only is the patient's distress greatly lessened, but the chance of later paralysis, including that dread complication cardiac failure, which is the direct effect of the virus, is thereby considerably reduced. It has been stated by some observers that the incidence of paralysis is increased by the antitoxin treatment. In answer it may be justly contended that a certain number of those cases of paralysis which do occur are accounted for by the fact that the patients live to present the phenomena of paralysis, instead of dying at an earlier stage of their illness from cardiac failure; for if there is one clinical fact about diphtheria which is beyond dispute it is that the chance of a person developing paralysis, whether cardiac or peripheral, is in direct ratio with the extent and persistence of the exudation. If the exudation stage therefore is shortened by antitoxin, what wonder that the prognosis becomes proportionately more hopeful? The superficial extent of an exudation exerts a like influence upon the prognosis as does its duration, because a proportionately larger amount of toxin is manufactured and offered for absorption, and the spread and reformation of the membrane is in most cases curtailed by antitoxin. During the first six months of 1895—a time when all severe cases were treated with serum—the average duration of membrane in the diphtheria cases after admission into the South-Western Fever Hospital was two to six days, whereas during the corresponding period of 1894, before antitoxin was used, it was four to six days.

2. Another symptom which seems to be directly controlled by antitoxin is rhinorrhœa. That profuse, acid, sero-purulent discharge from the nose, which is such a marked feature of the naso-faucial attack, is frequently almost entirely checked after twenty-four to forty-eight hours' treatment with the serum, and the relief from distress which the patient experiences after the patency of his nasal passages has been restored to him is most striking.

3. The most marked benefit which we find to attend the use of antitoxin is seen in the relief of laryngeal obstruction. It would seem that not only does the membrane loosen more rapidly, but the swelling and secretion of the laryngeal mucous membrane quickly subside as well, and further tend to relieve the stridor. The effect of using antitoxin has been to reduce very considerably the number of tracheotomies; but here the paramount importance of commencing treatment at an early date is obvious. Many cases are admitted in which the dyspnœa is too urgent to wait for the effect of antitoxin, and the operation has to be undertaken without delay. Such cases provide a greatly improved field for the practice of intubation, if this procedure be preferred to tracheotomy. Of 117 consecutive cases of croup admitted under my care since the beginning of last year, those who came in before antitoxin was being used required tracheotomy to the number of 70 per cent., whereas only 43 per cent. required tracheotomy amongst those who were admitted after November, at which time the serum treatment was commenced.

4. The mortality of the disease is lessened. I should like to have been able to produce to-day statistical evidence dealing with the results which have been obtained in those cases of diphtheria which my colleagues and I have treated with antitoxin. However, the results obtained at the Stockwell Fever Hospital will have their place in a joint report to be drawn up by the medical superintendents of the Asylums Board Hospitals, and presented to the managers for publication after the remedy has been tried for a full year in the institutions under their control. It is in deference to the expressed wish of the Board that I have refrained from anticipating this report by the publication of any mortality statistics which might be regarded as of an incomplete or partial character. For the present, therefore, I fear that I must content myself with the simple statement that in my opinion the remedy has exerted an influence for the better upon the diphtheria mortality.

5. Not only so, but in cases which were destined to die the remedy has distinctly prolonged life, and in many cases relieved to a considerable extent the distress which so commonly obtains in a fatal attack. Of cases fatal during the first six months of 1894 the average duration of life after admission to hospital was 4.3 days, whereas during the corresponding period of 1895—the serum period—it was prolonged to 7.2 days. This at any rate would seem to indicate that antitoxic serum is not a virulent poison.

So much then for the most obvious benefits which, in the opinion of myself and colleagues, have accrued from the use of antitoxin. All the cases were treated with the serum supplied by the British Institute of Preventive Medicine, which is prepared by the method of M. Roux. Of that prepared by, or after the method of, Dr. Klein, I regret to say that I have as yet had no experience. One other case, however, was treated, with excellent results, with serum prepared by Dr. Cobbett in the Cambridge Laboratory, and which he was kind enough to send me.

There is no doubt that much depends upon the dosage employed, and it is much to be regretted that we have at present practically no knowledge of the amount which will best serve the purpose. It is easy enough to gauge with accuracy the amount of serum which is required to neutralise a known amount of virus when injected into a guinea-pig of known weight. We have no knowledge, however, of the quantity of virus which is circulating in the system of a human being suffering from diphtheria, and it is therefore quite impossible to estimate with any measure of confidence the amount of antitoxic serum required for its complete neutralisation.

At the Stockwell Hospital we originally used what may be regarded as the orthodox amount of the serum as supplied by the Institute, namely, from 40 c.cm. to 60 c.cm. per case, given in doses of 10 c.cm. to 20 c.cm. at intervals of twenty-four hours. During the last seven or eight weeks, however, we have been employing a much larger dosage in severe cases, namely, from 150 c.cm. to 200 c.cm. of serum, given in injections of 20 c.cm. frequently repeated during the first three days after the case has come under treatment. The remedy is then stopped altogether. So far the results have been more satisfactory, and no harm has resulted in other respects. Much discredit has fallen on the antitoxic treatment owing to its employment by some practitioners in totally inadequate doses.

Now as to the ill effects of the treatment, and in view of the hostile criticism to which the antitoxic method is subjected, the greatest care is necessary to record them accurately and to avoid minimising in any degree their importance. I fully recognise the following:

1. *Evanescent Rashes.*—These are often described under the generic term urticaria. Many of them are truly urticarial, but others certainly are not. They may be classified under

four heads: (1) True urticaria, consisting of raised white wheals. (2) A morbilliform eruption mostly invading the limbs, consisting of raised red spots, which often coalesce and give rise to extensive tracts of angry-looking skin. This form is more persistent than the former, and sometimes leads to purpuric staining. It rarely itches, but varies in the intensity of its colour at different times in the day. (3) Raised red spots or blotches, very like the last, but with a central white portion, which gives rise to the appearance of red rings—in reality a form of erythema circinatum. (4) A scarlatiniform flush, often extensive, and very likely to be mistaken for concurrent scarlet fever. A powdery desquamation often follows, but never shows the pinhole conformation. This form is usually seen at an earlier stage than the others. These eruptions are very frequent; they usually appear from the seventh to the tenth day after the first inoculation, and often recur.

2. *Short Spells of Pyrexia.*—In many cases the rise of temperature is associated with one of the eruptions before described. In others it is apparently dependent upon some degree of arthritis. In perhaps the majority the pyrexia is, as far as can be ascertained, unattended with any definite complication. The fever is of an irregular character, showing considerable fluctuations. It usually appears at some time during the first two weeks of convalescence, lasts from three to eight days, and disappears without leaving anything worse behind than a slight degree of pallor and debility. There is no apparent connection with albuminuria, but in some cases it coincides with the advent of some variety of diphtheritic paralysis.

3. *Abscess.*—This usually occurs at the seat of inoculation. It is very uncommon, in our experience occurring but ten times in over 1,000 inoculations. Dr. Washbourn suggests that it is always due to one of two causes, namely, a local sepsis conveyed by the syringe or a contamination of the serum after it has been bottled, possibly occurring when the bottle has been opened in the ward, and not at once used up. I would suggest a third possibility—namely, that it arises as the result of a completely aseptic operation, performed upon a person who is in a condition of septicæmia dependent upon the septic lesion in the throat. This explanation fully harmonises with the fact that it is possible to produce an abscess over the skin of an animal as the result of a simple blow, provided that that animal has previously been inoculated with some septic material. Idiosyncrasy, too, may not be without its influence, as evidenced by a special vulnerability of tissue. Anyhow, in spite of every precaution, an abscess will occasionally develop; and in view of the fact that I have observed several to occur at about the same time, I am under the impression that the cause may be referable to some property possessed by the serum of a particular horse. It is to be regretted that each bottle of serum is not marked in such a way as to enable one to trace its source to the animal which furnished it. Recovery followed in each case of abscess which I have observed.

4. *Arthritis.*—This complication is very uncommon; 13 cases only occurred amongst the 230 patients treated. In only 2 of these was obvious effusion to be detected. One of them, however, was severe, but the majority might be more fitly described as cases of joint pain rather than of arthritis. The complication may arise at any time during the first three weeks, and is almost always pyrexial. Recovery in all cases ensued.

Now, recognising, as one must, that the above ill effects are the direct result of the antitoxic inoculation, it is impossible to exercise too much care in the preparation and storage of the serum, and as these effects are without doubt dependent upon some property of the fluid medium in which the antitoxin is purveyed there is every reason to hope that they may be done away with if it ever becomes possible to separate the antitoxin from the serum which contains it.

In comparing the ill effects with the good effects of the remedy, I have no hesitation in saying that they are very unimportant, but as they furnish undoubted evidence of some abnormal pathological process going on in the body, I should not advise the irresponsible employment of antitoxin in those mild cases for which nothing more is required than local irrigation of the throat coupled with a suitable diet; but in cases of diphtheria which are at all severe, or in those about the severity of which I were in any manner of doubt, my present decision would be to pin my faith upon antitoxin.

It has been stated, I feel sure without sufficient evidence, that antitoxic inoculations are liable to set up nephritis and suppression of urine. I can only say that we have carefully watched for these results, and that we have been altogether unable to confirm them. We have found nothing either clinically or in the *post-mortem* room in cases of diphtheria treated with antitoxin which was not also to be found in those which died before the remedies was employed. A fitting commentary on the supposed connection between antitoxin and nephritis is furnished by the case of a boy who has recently recovered from one of the most severe attacks of diphtheria that I have ever known to pull through. His case was unique by reason of the fact that he showed no trace of albumen throughout the course of his protracted illness, but he had received the largest amount of antitoxin that we have ever given, namely, 215 c.cm. in three days.

VIII.—T. R. Fraser, M.D.,

Professor of Materia Medica and Therapeutics, University of Edinburgh.

1. Although a new subject, serum therapeutics has already made such rapid advances that it is necessary to restrict my remarks to one or two aspects only of the subject.

2. Nothing has been better established than that the subject deals very largely with the actions of toxic substances, and especially with the means of preventing the toxic and lethal effects of such substances.

3. A fundamental matter for consideration must, therefore, be the quantity of dose of the toxic substance present in the patient, and the relationship of this dose to the antidotal power of the remedy or antitoxin.

4. The dose of toxin present in a patient, however, can never be estimated with even an approach to accuracy.

5. It has been usual to define the antidotal power of the antitoxin by ascertaining the smallest quantity required to prevent death, or to prevent certain well-marked toxic effects, when a given dose of toxin is mixed with antitoxin *in vitro*, before injection into the body.

6. This basis is likely to lead to an exaggerated opinion of the antidotal power of the antitoxin. It seems also to be an insufficient one for practical applications, for the doses required to prevent death are altogether different in the conditions of practical use from those indicated by experiments *in vitro*.

7. This method does not even indicate the quantity of antitoxin in the most favourable, and practically unattainable, condition of the unmixed toxin and antitoxin being received simultaneously by the patient. Taking merely the minimum lethal dose of toxin, the quantity of antitoxin required as an antidote when the two are injected simultaneously into separate subcutaneous areas may be more than a hundred times as great as when the two are mixed together *in vitro* before being injected. The difference is still greater when the conditions more closely resemble those encountered in practice, for if a minimum lethal dose of toxin has been received thirty minutes before the antitoxin, the dose of antitoxin required to prevent death may be two hundred times as great as the dose required when the toxin and antitoxin are mixed together before administration.

8. These relationships, further, are again altered when the dose of toxin is greater than the minimum lethal; but it is interesting to find that when the doses of toxin are so large as twice the minimum lethal, or even somewhat larger, the difference between the quantity of antitoxin required to prevent death when it is given 30 minutes after the toxin, and the quantity required when the two substances are mixed *in vitro*, is not nearly so great as when the dose of toxin is only the minimum lethal.

9. It is also of importance to note that if the dose of toxin considerably exceeds the minimum lethal, possibly for most toxins when it is so large as thrice the minimum lethal, there are probably no existing antitoxins that are capable of preventing death in any conditions encountered in practice.

10. Indications for practical application such as those referred to, obtained by pharmacological methods, seem to be

required for each of the toxins and antitoxins that have been discovered.

11. The brilliancy of the results already obtained by serum therapeutics, their novelty, and the apparently unbounded capacity of antitoxins to produce therapeutic antidotism, have perhaps led to a neglect of some of the most important fundamental considerations which must govern their practical application and supply the information required for justly estimating their capabilities.

12. It is perhaps, also, not sufficiently appreciated that failures must necessarily occur, for the therapeutic capability of each antitoxin has definite limitations, and, unless this be appreciated, unmerited distrust may easily be engendered.

13. In the existence of the impossibility of proving in man that any administration of antitoxin has naturally prevented death, it is important that the fundamental data I have referred to should be obtained by experiment; thereby only will confidence in practice be assured, for it will become apparent that while in a certain number of cases it is impossible to save life, it is, at the same time, possible to do so in many cases, when also, in all probability, no other remedy or combination of remedial measures would have been successful.

IX.—T. J. Bokenham, M.R.C.S., L.R.C.P.,
Late Research Scholar British Medical Association.

One of the chief objections to the application of the serum treatment of diphtheria in private practice would seem to be the large size of the injections usually advocated, and the necessarily formidable size and appearance of the syringe required for the operation. Practitioners have frequently assured me that parents, who may have consented to the use of antitoxin, not at all seldom alter their minds when they see the syringe and the bulk of liquid which it is proposed to inject. This is a real difficulty, and I have for some months past set myself to work to discover the best means available of overcoming it. This, I think, has now been done in a fairly satisfactory manner. By a process of drying, combined or not with previous concentration at a low temperature *in vacuo*, I have succeeded in reducing the serum to a condition of thin golden scales; 100 c.cm. yield on an average between 10 and 11 grammes of dry scales. These are readily soluble in about two and a half to three times their weight of water, and the activity of the solution thus made is almost identical with that of the original serum. I have heard of no ill effects following its use; it keeps perfectly, and may of course be used with a comparatively small syringe.

There is a good deal of evidence in favour of the idea that local disturbances and erythematous rashes, etc., when they occur may be in great measure due to the albuminous constituents of a serum; they may appear even after injection of normal horse serum. If, therefore, it could be shown that the activity of antitoxic serum resided in some component other than the serum albumen, and if, further, this albumen could be removed, leaving the active principle behind, two important steps would have been advanced. Some experimental observations of my own seem, if corroborated by further observation, to prove the first point, and to indicate a method of accomplishing the second. I have found that a serum practically freed from coagulable albumen is still highly antitoxic, and can be obtained fairly easily by a method which I hope to describe fully in the near future. I anticipate with confidence that an elaboration of this method will so alter the conditions of administration of sero-therapeutics as to bring it into line with ordinary hypodermic treatment with drugs. However, I do not lose sight of the fact that early experimental results are apt to be fallacious, and that the most promising ones sometimes break down when put to the test of clinical experience.

Finally, I wish to say a few words concerning the "specificity" of antitoxic serums. Abundant observations demonstrate that, although a given serum—say, the antidiphtheritic—has a most marked protective or curative action on cases infected with the corresponding microbe, yet its immunising action is not entirely confined to the one affection. From personal experience I am able to state that diphtheria antitoxin has some protective action not only against the diphtheria bacillus, but also against the bacillus of typhoid and against streptococcic infection; not only this, but that a given animal, once immunised against one bacillary enemy, resists another species of microbe far more readily than a normal control animal. Starting with this knowledge, I have for some time past been engaged in increasing the natural resistance of a single animal against more than a single infective process, and I have strong hopes of eventually obtaining by this means a serum of exalted immunising powers against each of the original microbes. Simplification in sero-therapeutics is of at least as great importance as in any other system of treatment, and to obtain a serum applicable to the treatment of not only one, but of a variety of diseases, appears to me a decided advance in the right direction.

[I have only this day ascertained from the last number of the *Annales de l'Institut Pasteur*, which has just come into my hands, that my esteemed friend, Dr. A. Marmorek, of the Paris Pasteur Institute, has been working on exactly similar lines to those I have just enunciated. I need hardly say that I was entirely ignorant of this, and I can only hope that my own results may afford an independent corroboration of any that he may obtain, or may have already accomplished.]

The discussion was closed by brief replies from Dr. Klein and Dr. Washbourn.

THE TREATMENT OF SNAKE POISONING WITH ANTIVENENE DERIVED FROM ANIMALS PROTECTED AGAINST SERPENTS' VENOM.

By T. R. Fraser, M.D., F.R.S.,
Professo of Materia Medica and Therapeutics, University of Edinburgh.

For many years immunity against the toxic effects of serpents' venom has been suggested as a possibility in the tales of the performances of snake charmers, and in the widely prevailing belief that venomous serpents are protected against the venom of their own and other species of serpents.

If this immunity or protection exist, it seems reasonable to suppose that it is due to a substance or substances produced in the blood as a result of the absorption of venom, and that this substance, if present in the blood, would, when removed from it, act as an antidote against venom.

In order to test these suppositions by experiment, I had begun to collect venom more than ten years ago, but as only small quantities could from time to time be obtained, it was not until last year that a sufficient amount had been collected to justify the hope that the supply would not become exhausted before definite results had been obtained.

Protection produced by Stomach Administration.

If protection is naturally possessed by snake charmers or other persons claiming to possess it, or by venomous serpents, as a result of the absorption of venom, this protection-producing venom must generally, if not invariably, have been introduced into the body through the alimentary canal. No doubt the probability of thus producing protection is opposed by the fact, recognised even at the time of Celsus, and corroborated by such modern observers as Lacerda, Weir Mitchell, Fayrer and Brunton, and Calmette, that serpents' venom is altogether inert, or nearly so, when it is introduced into the stomach or any other part of the alimentary canal. Even assuming that venom so introduced is inert, or nearly so, as a poison, it does not necessarily follow that it is incapable of producing protection; for this protection is, in part at least, dependent on the presence in the blood of a substance or substances which possess no distinct toxic action, and which may therefore be present in the blood as the result of the administration of venom, even although the venom did not produce any evident poisonous symptoms.

In order to obtain some evidence on this subject, the following experiment was made on a cat. Taking as a basis the minimum lethal dose by the subcutaneous method of administration, the cat received at intervals of from two to five days one-fifth of the minimum lethal dose on eight occasions, then one-fourth, and one-third; and at longer intervals the minimum lethal twice, four times, six times, eight times, ten times, and so on, until, on the 116th day, a dose eighty times larger than the minimum lethal was introduced into the stomach. No observable disturbance was produced by any of these doses.

As in further administrations doses of upwards of a gramme of dry venom would have been required, the experiment was not continued beyond this point, for such large quantities would have soon exhausted the rapidly-diminishing supply of venom.

Eight days after the animal had received by the stomach a dose of venom representing eighty times the minimum lethal if given subcutaneously, a dose of venom corresponding to one and a half times the minimum lethal was injected under the skin. No obvious general symptoms followed the administration of this dose, but some local œdema and skin necrosis were produced, and the animal has remained in good health until the present time.

During this experiment an opportunity occurred for obtaining other facts of some interest. It happened that when the administrations of venom were commenced, the animal was already pregnant, and on the 54th day of the experiment two healthy kittens were born. These kittens were fed exclusively on the mother's milk, the mother continuing to receive gradually increasing doses of venom.

One of the kittens, when 57 days old, and when the mother had last received a dose equivalent to thirty times the minimum lethal if given subcutaneously, received, by subcutaneous injection, twice the minimum lethal dose of cobra venom; and only slight symptoms, consisting chiefly of drowsiness and loss of appetite, were produced, from which the kitten completely recovered in a few hours.

The second kitten, when 69 days old, received also by subcutaneous injection, thrice the minimum lethal dose; but the protection produced through the mother's milk was insufficient to antagonise this large dose of venom, and death followed the administration.

Evidence in favour of the protection by stomach administration, as well as of the toxic feebleness of venom when given by this channel, has been obtained with white rats also. Single doses, corresponding to 10, 20, 40, 200, 300, 600, and 1,000 times the minimum lethal if given subcutaneously, were given by stomach administration to each of seven different white rats. Sleepiness and loss of appetite, lasting for a day or two, were the only effects produced even by the larger of these enormous quantities, and all the animals entirely recovered.

A further experiment was made on the white rat which had received 1,000 times the minimum lethal dose. Seven days after this dose had been administered, and when the animal was apparently in good health, twice the minimum lethal dose was injected under the skin. Distinct, though not serious, toxic symptoms were produced, consisting of sleepiness, anorexia, and increase of salivary and bronchial secretions; but in less than twenty-four hours these symptoms had disappeared, and the animal was soon afterwards in a perfectly normal state.

It would therefore appear that although serpents' venom, even in enormous quantities, fails to produce any toxic effects when introduced into the stomach, it still confers upon the animal a certain and not inconsiderable degree of resistance against the toxic effects of subsequent lethal doses of venom. That it does so by causing an antidotal substance to be present in the blood is also manifest from the result of the experiment on the kitten, which had been fed with milk derived from a parent receiving venom by the stomach.

In circumstances which are no doubt exceptional some of these results would admit of useful practical application. They probably also offered an explanation of the protection apparently enjoyed by certain snake charmers, as well as by individuals who claim to be protected, whether members of special sects or not: for subcutaneous injection is not likely to be the method, and it certainly was not the method several hundreds of years ago, employed for the introduction of the protection-producing venom into their bodies.

Antidotal Properties of the Blood Serum of Venomous Serpents.

The results of these experiments may explain also the clearly-established protection possessed by venomous serpents. They, as well as other circumstances, render it important to determine whether the blood of venomous serpents contains, as does that of artificially-protected animals, an actual substance possessing antidotal qualities. In order to arrive at some definite conclusion on this subject, I have made endeavours to obtain living venomous serpents, and also the serum separated from their blood.

Last year an arrangement was concluded with one of the best known of the importers of wild animals to supply me with living cobras. He, however, has not succeeded in doing so because of some exceptional difficulties; but, as an alternative, he has recently been able to send me several living specimens of the hamadryas (*Ophiophagus elaps*), a serpent of greater size and more aggressive disposition than the cobra, and reputed to be at least as deadly as it. A few days after their arrival it was observed that moulting was about to commence, and as the condition of health is deteriorated during this process blood has not yet been taken from any living hamadryas. One of them, however, became sickly and died. A short time after its death the neck blood vessels were opened, and as coagulation fortunately had not occurred, a small quantity of blood was collected, from which a little blood serum afterwards separated. As no liquid venom could be obtained from this hamadryas this serum has been tested against cobra venom. Two experiments were made, in which it was mixed with slightly more than the minimum lethal dose of cobra venom, and the mixture then injected under the skin of rabbit. When the quantity of hamadryas antivenene was 0.15 c.cm. ($\frac{1}{70}$) per kilo. of animal death was not prevented; but as the animal did not die until more than seven hours an antidotal effect had apparently been produced by this quantity of antivenene.

In the second experiment a larger quantity of serum was used, namely, 0.25 c.cm. ($\frac{1}{4}$) per kilo., and the result was entirely successful; for not only did the animal survive, but no decided symptoms of poisoning were manifested during the first six hours in which the animal remained under observation.

Two experiments were also made in which this antivenene was administered thirty minutes after rather more than the minimum lethal dose of cobra venom. In the first the dose of antivenene was 0.3 c.cm. per kilo.; but this dose was found to be an insufficient one, for the animal died in four hours. In the second experiment 0.5 c.cm. per kilo. of antivenene was administered on the same conditions as in the former experiment, and it proved to be a sufficient quantity, for the animal recovered after manifesting only slight toxic symptoms.

I hope by-and-by to extend these observations with blood serum and venom taken in more favourable circumstances from the other and larger hamadryas, which are now apparently in a state of excellent health.

It has, however, been already possible to confirm these results with the antivenene and venom of another specimen of serpent. Dr. Thomas Bancroft, of Brisbane, Australia, has recently sent me the dried blood serum of three black snakes (*Pseudechis porphyriacus*) of that country, and also some dried venom removed from the poison glands of the same three serpents.

The venom, as it has reached me, is not a very active one, the minimum lethal dose for rabbits being between 0.003 and 0.0035 grammes (3 and 3½ milligrammes) for each kilogramme of animal. At the same time, although this serpent is a member of the Colubrine family, the irritative effects at the position of injection, and even more so on the kidneys, following its absorption, are intense. In all of the experiments made with the venom alone, the urine voided within a few hours was of a dark red, almost black, colour, and was found to contain a large quantity of hæmoglobin, but no blood cells.

Although the quantity of dry serum was small, there was sufficient to allow three experiments to be made for the purpose of determining if it can prevent death from being produced by a lethal dose of venom when the two are mixed together before administration. In one of these experiments the dose of serum was 1 c.cm., and that of venom 0.0035 grammes (3½ milligrammes) per kilo. of animal; in the second, the dose of serum was 0.5 c.cm., and the dose of venom the same as in the first experiment; and in the third experiment the dose of serum was 1 c.cm., and that of venom 0.004 grammes (4 milligrammes) per kilo. of animal. In each case the gratifying result was obtained that the animal survived the administration of these lethal doses of venom.

It has thus been shown that venomous serpents themselves possess a definite substance in the blood serum, which possesses antidotal properties against their own venom and the venom of other specimens of serpents.

It is probable that the substance is produced from venom shed upon the mouth surface, and absorbed with the blood from this surface or elsewhere in the alimentary canal, and also from venom absorbed directly into the lymphatics and blood vessels of the poison glands. At the same time, the protection which is enjoyed by several species of serpents may also be produced by venom introduced into the body with the venomous snakes on which some of them, and especially the hamadryas, largely subsist.

The blood serums of the two species of venomous serpents that have been examined are certainly not so powerfully antivenenic as the serum which can be obtained from artificially-protected animals. They have, however, been obtained in conditions which are not the most favourable for determining their true value. This can probably only be done in the countries in which the serpents are found.

If this natural antivenene be found powerful, then a new, and in some respects convenient, source for antivenene will become available; but, even if the antidotal power be not so great as that of the serum of artificially-protected animals, it is not unlikely that its value may be increased and a sufficiently powerful antidote obtained more rapidly than with entirely unprotected animals by injecting several successive doses of venom into the serpents themselves.

Antidotal Properties and Use of Antivenene.

Although some of the above experiments clearly show that it is possible to produce protection by introducing serpents' venom into the alimentary canal, this method is not so convenient, nor apparently is it productive of so powerful an antivenene as the method of subcutaneous injection. In a paper which has already been published in abstract the results of the latter method have been stated, and in that paper also the work of other experimenters, and especially of Sewall, Kaufmann, Kanthack, Phisalix and Bertrand, and Calmette has been referred to.

The experiments there described were made with the blood serum or antivenene of rabbits which had received by subcutaneous injections over periods of several months, either uniform non-lethal doses of venom or gradually-increasing doses until the last dose was thirty or fifty times greater than the minimum lethal. More recently the blood serum of a horse which had last received a dose estimated to be fifteen times the minimum lethal has also been examined.

The experiments were so planned as to obtain a definition of the antidotal power of the antivenenes, rather than to multiply examples of success in preventing death. With this object, four series of experiments were made. In the first the venom and the antivenene were mixed together *in vitro* before being injected; in the second the venom and antivenene were injected nearly simultaneously, but into separate subcutaneous regions; in the third the antivenene was injected 30 minutes before the venom; and in the fourth the venom was injected 30 minutes before the antivenene. In each series the smallest quantity of antivenene capable of preventing death from being produced by different lethal doses of venom was determined. Whereas antivenenes obtained from animals which for several months had received by subcutaneous injection doses of venom below the lethal were found to possess but little antidotal power, antivenenes obtained from animals which had received gradually increasing doses, until the last was 15 or 30 or 50 times greater than the minimum lethal, were found to possess powerful antidotal properties.

So minute a quantity, indeed, as the $\frac{1}{1000}$ part of 1 c.cm. per kilo. of weight of animal of the antivenene obtained from a horse which had last received fifteen times the estimated minimum lethal dose of cobra venom was sufficient to prevent death from rather more than the minimum lethal dose of venom when the two were mixed together before being injected.

Results obtained from experiments of this description, however, are in themselves insufficient as a basis for the application of this antidote in actual practice. With the same dose of venom a much larger dose of antivenene is required when the two substances are not mixed *in vitro* before being injected. Thus with an antivenene, which in the dose of 0·6 c.cm. per kilo. was sufficient to prevent death from twice the minimum lethal dose of cobra venom, when the two were mixed together before being injected, the smallest quantity that was sufficient to prevent death when each was injected separately, although almost simultaneously, under the skin of opposite sides of the body, was 4 c.cm.; and this latter quantity of the antivenene failed to prevent death from the same dose of venom, but 5 c.cm. per kilo. of antivenene were required when the venom was injected thirty minutes before the antivenene.

Such facts as these appear also to indicate that the antidotism is rather of the nature of a chemical reaction than of a physiological antagonism.

This supposition receives some support from the fact that a remarkable difference exists in the minimum lethal dose of venom for herbivorous as contrasted with carnivorous animals, to which I have already drawn attention. That this difference is partly, if not largely, due to the composition of the blood, and it may be of other constituents of the body, appears to be shown by such experiments as the following.

A number of young white rats—naturally herbivorous animals—were put on an animal dietary as soon as they had been weaned; and, with the slight addition of a little vegetable food once or twice a week, found necessary to maintain them in fairly good health, this dietary was continued for seven weeks. To one of the rats a dose of venom one-and-a-half time greater than the minimum lethal was then administered by subcutaneous injection, and although marked symptoms of poisoning were produced, the rat recovered. Two weeks subsequently, the animal dietary having been continued, another of these white rats received twice the minimum lethal dose, and it also recovered after a temporary illness. The experiments could not be carried further, as the other members of this family had fallen into bad health, and one after the other had died before this time.

In animals whose progenitors had subsisted mainly upon a vegetable diet, the conversion of the diet into that of carnivorous animals is, therefore, alone sufficient to reduce the vulnerability to venom and to cause, in this respect, an approximation to the resistance of a carnivorous animal.

This fact appears also to indicate that the lethal effects of serpents' venom are due to a large extent to an influence on the blood, an influence as yet only partially and imperfectly recognised.

While experiments conducted on the plan I have described are essential for the purpose of obtaining an accurate knowledge of the antidotal power of any antivenene, in actual practice the best results would clearly be obtained by several successive administrations, rather than by one single administration, of the antivenene. Even if the first single dose were an insufficient one, life would in many instances be saved by following the first administration by several successive ones.

Thus, 0·5 c.cm. per kilo. having been found to be about the smallest quantity of an antivenene that could prevent death when given thirty minutes after rather more than the minimum lethal dose of cobra venom, this dose of venom was administered to a rabbit, and thirty minutes afterwards the insufficient dose of 0·4 c.cm. per kilo. of antivenene. In three hours the animal was lying extended with the head resting on the floor, limp and unable to stand; the respirations were infrequent and shallow, the cardiac action was feeble and irregular, and rattling sounds were being produced in the throat from the excessive salivary and bronchial secretion always produced by toxic doses of cobra venom. A second dose, consisting of 0·6 c.cm. of antivenene, was now injected under the skin, and very soon a marked improvement occurred in the condition of the animal, the respirations becoming deeper and the cardiac action stronger and more rapid and without irregularity. An hour subsequently a third dose of antivenene, consisting of 0·5 c.cm. per kilo., was injected, and further improvement was produced, so that all toxic symptoms soon disappeared, and the animal was restored to a nearly normal state, from which no relapse occurred until perfect recovery had been established.

In actual practice, also, it would be advisable to inject the antivenene in the first instance into the part where the venom

had been received, before the ligature, so widely recognised as valuable, had been removed, if the position of the snake bite had admitted of a ligature being applied, and even before the tissues surrounding the wound had been excised.

These and other directions accompany a supply of cobra antivenene which has been sent to India.

As it may be of interest to members of the Section, the antivenene is now placed before them in the two forms in which it has been prepared. The first is in liquid form usual in serum therapeutics. The second is the blood serum dried *in vacuo* over sulphuric acid, in which state it has the appearance of bright, translucent, orange-yellow fragments or scales. This dry antivenene is readily soluble in water, and it retains unimpaired the original antidotal power of the liquid antivenene. It therefore has obvious advantages over the liquid preparation in its stability and convenience of carriage and storage. In the dry state 11.5 parts represent 100 parts of the liquid serum, so that about 2.3 grammes would represent 20 c.cm. of liquid antivenene. It will probably be found that 20 c.cm. is a sufficient initial dose, which, however, should be repeated in half an hour or an hour, and even a third or fourth dose be administered, according to the condition of the patient.

It appears to me necessary to state, in conclusion, that however efficacious this antivenene may prove in a certain, and probably a considerable, number of cases, it must be anticipated that, as in all other instances of antidotism, whether chemical or pharmacological, cases of snake bite will occur in which the antivenene cannot prove successful, it may be, because too large a lethal dose of venom has been received, or because the interval between the reception of the venom and the administration of the antivenene has been too long a one to admit of successful treatment.

As the dose of venom injected by a snake must always be an unknown one, an accidental concurrence of unfavourable cases may readily lead to unmerited distrust of the antidote; and therefore it is that a valuable further purpose is served by such experiments as those I have referred to, for they not only indicate the existence of limitations to the antidotal power of antivenene, but, at the same time, they prove by the most conclusive evidence that antivenene is capable of successfully preventing death, even in unfavourable conditions of administration, from not only small lethal, but also from large lethal doses of serpents' venom.

Professor Storvis (Amsterdam) was much interested in the possible effects of the epidermic application of antivenene. He stated that in the Dutch colonies it is customary for the snake catchers to prepare themselves before starting by rubbing all over their skin a powder made from the dried heads of snakes, with their poison glands. As a result of this precaution they either are not bitten, or they are rendered immune against the effects of bites.

Section of Laryngology: A Correction.

In the summary of the proceedings in the Section of Laryngology of July 31st, in the notice of Dr. Risien Russell's paper on abductor centres in the cortex, it should have been stated that stimulation of one of these centres always resulted in abduction of both vocal cords, not, as stated, in abduction of the corresponding cord only.

Successful Vaccination.—Mr. Wm. G. Loveridge, Public Vaccinator for the Humber-on-Barton District of the Brigg Union, has been awarded the Government grant for successful vaccination in his district.

Dr. John B. Murphy (of Chicago), whose name is well known to surgeons in connection with the "button" introduced by him for intestinal anastomosis, has been elected President of the American National Association of Railway Surgeons.

Ignorant Antivaccinators.—Dr. Edwardes publishes in the *Lincolnshire Echo* and the *Shrewsbury Chronicle* excellent replies to the ignorant tirade of Mr. Williamson against vaccination. The appearance of such replies is extremely desirable and useful. Hitherto antivaccination letter writers have had too much their own way, and have succeeded only too well in poisoning the public mind.

MEMBERS PRESENT AT THE ANNUAL MEETING.

The following names of members and visitors attending the annual meeting were entered in the books provided for the purpose:

Abraham, Phineas S., M.D., London
Abrahams, B. L., M.R.C.P., London
Abercrombie, J., M.D., London
Ackland, R. C., M.R.C.S., London
Acland, Theodore Dyke, M.D., London
Adam, A. M., M.D., Boston
Adam, James, M.B., Hamilton, N.B.
Adams, C. E., M.R.C.S., London
Adams, F. V., L.R.C.P., Glasgow
Adams, H., M.R.C.P., London
Adams, J. D., M.D., Matlock
Adams, J. O., M.D., London
Adams, John, F.R.C.S., London
Adams, William Francis, M.R.C.S., London
Adeney, E. L., M.D., Tunbridge Wells
Adkins, E. James, M.R.C.S., Hastings
Adkins, P. R., M.D., Clapham
Agar, S., L.R.C.P.I., Henley-in-Arden
Agar, S. H., M.R.C.S., Henley-in-Arden
Ainsley, T. G., M.D., Hartlepool
Alderson, F. H., M.B., London
Alderson, F. H., M.D., Hammersmith
Alderton, T. G., L.R.C.P., Hammersmith
Aldrich-Blake, Louisa B., M.D., St. Anns
Aldridge, Charles, M.D., Plympton
Alexander, R. R., M.D., Hanwell
Alexander, S., L.R.C.P.Edin., Bromley-by-Bow
Alexander, T. A., M.D., Epsom
Alexander, T. G., M.D., Greenwich
Allan, Francis J., M.D., London
Allan, I. H. B., M.D., Montreal, Canada
Allbutt, T. Clifford, M.D., Cambridge
Allen, B. H., M.D., Hastings
Allen, H. M., F.R.C.P.Edin, Hove
Allen, W. H., M.D., Stanmore
Allfrey, C. H., M.D., St. Leonards-on-Sea
Allingham, H. W., F.R.C.S., London
Alloway, T. Johnson, Montreal
Althaus, J., M.D., London
Anderson, Daniel Elic, M.B., Paris
Anderson, Elizabeth G., M.D., London
Anderson, J. B. M., M.B., Glasgow
Anderson, J. W., M.D., London
Anderson, Professor McCall, University of Glasgow
Anderson, W., F.R.C.S., London
Anderson, R. B., F.R.C.S., London
Antrobus, E., M.B., Great Malvern
Apple, L., M.B., London
Appleton, Thos. A., M.R.C.S., Fulham
Archer, S. A., M.R.C.S., London
Archer, Surgeon-Colonel S., London
Archibald, J. M.D., Beckenham
Argles, Robert, L.R.C.P., London
Arkle, C. J., M.D., London
Armitage, S. H. T., M.D., London
Armstead, H. W., M.D., London
Armstrong, George E., M.D., Montreal, Canada
Armstrong, H. G., M.R.C.S., Wellington College
Armstrong, Robert Stow, M.R.C.S., London
Armstrong, Samuel, M.R.C.S., Bournemouth
Armstrong, W. M., M.R.C.S., Buxton
Arnison, W. C., M.D., Newcastle-on-Tyne
Arthur, D., M.D., London
Ashe, W. F., M.D., London
Ashford, E. C., M.R.C.P., Bath
Ashton, J. Thornhill, M.B., Pickering
Atkinson, Edward, M.R.C.S., Leeds
Atkinson, F. P., M.D., Surbiton
Atkinson, G. A., M.D., Newcastle-on-Tyne
Atkinson, James, M.R.C.S., Crewe
Atkinson, T. R., M.R.C.S., London
Atkinson, Walter Alexander, M.B., London
Attlee, J., M.D., London
Atwool, W. T., M.R.C.S., Torquay
Auld, A. G., M.D., Glasgow
Auld, W., M.B., Wimborne
Aveling, C. T., M.D., Upper Clapton
Axford, W. H., M.B., Swansea
Ayling, A. H. W., L.S.A., London
Aylward, W. C., L.R.C.P., Tunbridge Wells
Ayres, C. J., L.R.C.P., London

Baber, E. C., M.B., Brighton
Batsel, C. T. U., L.R.C.P., Wellington-on-Tyne
Bacot, W. G., M.D., Bournemouth
Bagley, S., L.R.C.P.I., Manchester
Bagnell, W. H., L.R.C.S.I., Pau, France
Bagshawe, F., M.D., St. Leonards-on-Sea
Bailey, G. H., M.R.C.S., London
Bailey, R. C., F.R.C.S., London
Bailey, R. G., M.R.C.S.E., Stroud Green
Bailey, T. C., M.R.C.S., Crewe
Bailey, W. T., Surgeon-Captain A.M.S., London
Bain, W., F.R.C.S.Edin., Stockport
Bainbridge, G., Brigade-Surgeon-Lieutenant-Colonel, M.D., London
Baird, J. Y. W., M.D., Congleton
Baker, S., Surgeon-Major, London
Baker, C. E., M.B., London
Baker, J., M.B., London
Baker, J. H., M.B., London
Baker, H. F., F.R.C.S., London
Baker, W. H., L.R.C.P., London
Balding, D. B., F.R.C.S., Royston
Baldwin, H., M.R.C.S., Hampstead
Balfour, G. W., M.D., Edinburgh
Ball, J. B., M.D., London
Ballance, C. A., F.R.C.S., London
Ballance, H. A., M.B., London
Bamford, C. R., L.R.C.P., Chichester
Banks, W. M., M.D., Liverpool
Banning, R. J., M.D., Pudsey
Bantock, G. G., M.D., London
Barbour, A. H. F., M.D., Edinburgh
Barcroft, P. J., F.R.C.S.I., Amesbury
Barendt, F. H., M.D., Liverpool
Bark, John, F.R.C.S.Edin., Liverpool
Barker, Professor A. E., F.R.C.S., London
Barker, A. J., M.D., London
Barling, G., F.R.C.S., Birmingham
Barlow, A. J., L.R.C.P., Catford
Barlow, E., M.R.C.S., St. Peter's
Barlow, T., M.D., London
Barlow, T. C., L.R.C.P., London
Barnard, R., L.R.C.P., London
Barnes, E. C., M.R.C.S., London
Barnes, E. G., M.D., Rye, Sussex
Barnes, J. W., F.R.C.S., London
Barnes, T. H., M.D., London
Baron, B. J., M.D., Clifton
Barr, James, M.D., Liverpool
Barr, Thomas, M.D., Glasgow
Barr, W. H., L.R.C.P., Bury
Barratt, J. O. W., M.D., London
Barren, W., Surgeon-Lieutenant-Colonel, L.R.C.P., London
Barrett, W. H., M.B., Edinburgh
Barrington, F., F.R.C.S., London
Barrington, N. W., M.D., London
Barron, G. B., M.D., Southport
Barrow, H. J. W., Surgeon-Lieutenant-Colonel, A.M.S., Woolwich
Barry, A. G., M.D., Leeds
Barry, Charles J., L.K.Q.C.P.I., London
Bartlett, E., M.R.C.S., London
Bartlett, W., M.R.C.S., Bideford
Barton, J. K., M.R.C.P., London
Barton, S. J., F.R.C.S., Norwich
Barwise, Sydney, M.D., Derby
Bastian, H. C., M.D., London
Bateman, A. Geo., M.D., London

Bateman, F. A. N., F.R.C.P., London
Bateman, Sir F., M.D., Norwich
Bateman, W. A. F., M.R.C.S., Richmond
Batten, F. E., M.D., London
Batten, G. B., M.D., Dulwich
Batten, R. D., M.D., London
Batterham, J. W., F.R.C.S., St. Leonards-on-Sea
Battersby, C. H., M.R.C.P.I., Cannes
Baxter, W. W., L.R.C.P., Manningtree
Beach, F., M.B., Kingston Hill
Beale, A. G., L.R.C.P., London
Beale, E. C., M.B., London
Beaman, E. H., M.R.C.S., Southport
Beard, F., M.B., Croydon
Beardmore, G. R., M.R.C.S., London
Beaton, R. M., M.B., London
Beatson, G. T., M.D., Glasgow
Beattie, J. F., Brigade-Surgeon-Lieutenant-Colonel, London
Beatty, W., M.D., Dublin
Beauchamp, Sydney, M.R.C.S., London
Beaumont, Edgar, L.R.C.P., Upper Norwood
Beaumont, W. M., M.R.C.S., Bath
Beck, Edw., M.B., Ravenstonedale
Beddoe, J., M.D., Bradford-on-Avon
Bedford, W. G. A., Surgeon-Major A.M.S., London
Beedham, H. W., M.B., Cambridge
Beevor, Chas. E., F.R.C.P., London
Beevor, Sir Hugh R., M.B., London
Bell, J. H., M.D., Bradford
Bell, J. V., L.R.C.P., Rochester
Bell, W. B., M.D., Blackheath
Benham, R. F., M.R.C.S., London
Bennett, C. H., M.D., London
Bennett, E., M.R.C.P.I., Seacombe
Bennett, E. H., F.R.C.S.I., Dublin
Bennett, F. W., M.D., Leicester
Bennitt, Lizzie, M.B., Leicester
Benson, A., M.B., London
Benson, A. H., F.R.C.S.I., Dublin
Benson, G. V., L.R.C.P., Chiswick
Bentham, S., M.R.C.S., South Hampstead
Bentley, A. J. M., M.D., Tunbridge Wells
Bentlif, P. B., M.R.C.S., Jersey
Berkeley, G. H. A. C., M.B., London
Berridge, W. A., M.R.C.S., Red Hill
Berrill, Alf., L.R.C.P., Woodford
Berry, F. M. D., M.D., London
Berry, Geo. A., F.R.C.S., Edinburgh
Berry, H. T., M.R.C.S.Edin., London
Berry, Jas., F.R.C.S., London
Berry, W., M.D., S. Lowestoft
Betts, E. G., M.R.C.S., London
Bevan, W. L. P., M.D., Alton
Beverley, M., M.D., Norwich
Bhabha, Rev. H. D., M.D.Brux., London
Bickersteth, R. A., M.B., Liverpool
Bickerton, T. H., L.R.C.P., Liverpool
Biddle, C., L.R.C.P., Merthyr Tydvil
Biden, C. W., M.R.C.S., Laxfield
Biden, G. H., L.R.C.P., Penrith
Biden, W. P., L.R.C.P., Hyères, Var, France
Bidwell, L. A., F.R.C.S., London
Biggs, H. M., M.D., New York
Biggs, M. G., M.R.C.S., London
Billson, C., L.R.C.P., London
Bingham, H., M.D., Belfast
Bingham, S., M.R.C.S., London
Bird, A. H., L.S.A., Chelsea
Birch, de Burgh, M.D., Leeds
Bird, G. G., M.R.C.S., London
Birkett, H. S., M.D., Montreal
Birmingham, Chas. L., M.B., Highgreen, near Sheffield
Birt, George, M.B., Stourbridge
Bishop, E. S., F.R.C.S., Manchester
Black, D. Campbell, M.D., Glasgow
Black, J. Watt, M.D., London
Black, J., M.D., Harrogate
Black, Jas., M.B., Upper Norwood
Black, W. G., F.R.C.S.E., Edinburgh
Blacker, A. B., M.D., London
Blacker, G. F., F.R.C.S., London
Blackley, J. G., M.B., London
Blackman, J. G., M.D., Portsmouth
[illegible], A. F., L.R.C.P., Bristol
Blake, G. F., M.R.C.S., Birmingham
Blake, T. W., M.R.C.S., Bournemouth
Blake, Wm. Hy., M.P., Harpenden
Blaker, W. C., M.R.C.S., [illegible]
Bland, A. E. H., M.D., London
Blandford, G. F., M.D., London
Blandford, H. E., M.D., Croydon
Blandford, J. W., L.R.C.P.Edin., [illegible]
[illegible], W., M.R.C.S., London
[illegible], F. R., M.D., London
Bliss, E. W., M.R.C.S., London
[illegible], W. G., M.D., [illegible]
Bodilly, R. T. H., L.R.C.P., South Woodford
Boileau, J. P. H., Brigade-Surgeon-Lieutenant-Colonel, M.D., Southsea
Bokenham, T. J., M.R.C.S., London
Bond, C. H., M.B., Banstead
Bond, C. J., F.R.C.S., Leicester
Bond, F. T., M.D., Gloucester
Bond, J. W., M.D., London
Bond, W. A., M.D., London
Boobbyer, P., M.B., Nottingham
Booth, F., M.B., St. Anne's-on-the-Sea
Borthwick, T., M.D., Adelaide
Boulton, Percy, M.D., London
Bourke, U., Surgeon-Major, L.R.C.S.I., London
Bousfield, E. C., L.R.C.P., London
Boustead, Surgeon-Lieutenant-Colonel R., M.D., Brighton
Bower, D., M.D., Bedford
Bower, E. D., M.R.C.S., Gloucester
Bower, H. E., M.B., Warrington
Bower, R. N., M.R.C.S., Richmond
Bowkett, T. R., M.R.C.S., Poplar
Bowlby, A. A., F.R.C.S., London
Bowles, R. L., M.D., London
Boxall, F. R., L.R.C.P., London
Boyce, J. W., M.D., Blackrock, co. Dublin
Boyd, A. J., M.D., Ware
Boyd, C., L.R.C.P.I., London
Boyd, Stanley, F.R.C.S., London
Boyd, Mrs. Stanley, M.D., London
Boyd, J. P., M.B., Glasgow
Boyle, Alice, H. A., L.R.C.P., Rotherham
[illegible], T. H., L.R.C.P., London
Brabyn, G. W., L.R.C.P., Wimbledon
Bradbury, J. B., M.D., Cambridge
Bradshaw, A. F., Surgeon-Major-General, C.B., London
Brady, A. J., L.R.C.P.S., Sydney
Braga, R., L.R.C.P., Woking
Braidwood, P. M., M.D., Amersham
Braine, W., F.R.C.S., London
Brailey, W. A., M.D., London
Braithwaite, James, M.D., Leeds
Brake, J., Surgeon-General, London
Branson, W. M., L.R.C.P.I., Gillingham
Branthwaite, R. W., L.R.C.P., Rickmansworth
Brebner, G. R., M.D., West Croydon
Brennan, M. A., L.R.C.S.I., Charlestown
Brett, A. T., M.D., Watford
Brew, R. H., L.R.C.P., Chew Magna
Bridgwater, Thomas, M.B., Harrow
Briggs, George C., M.B., Harrow
Briggs, Geo. J., M.R.C.S., Hull
Briggs, Henry, M.B., Liverpool
Brigham, J. K., M.D., Sydenham
Bright, J. M., M.D., Forest Hill
Brinck, Julia M., M.D., London
Bristowe, H. C., M.D., London
Broadbent, G. H., M.R.C.S., Manchester
Broadbent, J. F. H., M.D., London
Broadbent, S. W., M.R.C.S., Easington
Broadbent, W., M.B., London
Broadbent, Sir W. H., M.D., London
Broadhurst, C. H., L.R.C.P., Bournemouth
Brock, Geo. S., M.D., Rome
Brodie, D., M.D., London
Brodie, F. G., M.D., Surbiton
Brodie, W. H., M.D., Northwood
Bromley, J. B., M.R.C.S., Castle Hedingham
Bronner, A., M.D., Bradford
Brooke, N. A. G., M.B., Manchester
Brookhouse, C. T., M.D., Brockley
Brookhouse, J. O., M.D., Nottingham
Brooks, J. H., M.D., London
Brooks, R. P., M.R.C.S., London
Broom, J., M.B., Kirriemuir
Brown, John, M.D., Bristol
Brown, D. D., M.D., London
Brown, J., M.R.C.S., London
Brown, G. A., M.R.C.S., Tredegar
Brown, H. H., M.D., Ipswich
Brown, John, M.D., Bacup
Brown, J. A., M.B., London
Brown, R. C., M.B., Preston
Brown, Thomas, M.R.C.S., London
Brown, T. L., M.R.C.S., London
Brown, W. G. S., M.R.C.S., Grantham
Brown, W. P., L.R.C.P., Sowerby Bridge
Browne, C. M., M.B., Sydenham
Browne, H., M.R.C.S., Amesbury
Browne, J. A., M.B., London
Browne, J. W., London
Browne, J. W., M.D., Belfast
Browne, Lennox, F.R.C.S.E., London
Bruce, Alex., M.D., Edinburgh
Bruce, J. M., M.D., London
Brunton, T. Lauder, M.D., London
Bryan, F. C., M.R.C.S., Littlehampton
Bryant, J. H., M.D., London
Bryant, T., F.R.C.S., London
Buchanan, J., M.B., Watford
Buchanan, J., M.D., London
Buck, C. W., M.R.C.S., Settle
Buck, H. J., M.R.C.S., London
Buckley, S., F.R.C.S., Manchester
Bulger, M. J., M.B., London
Bullar, J. F., M.B., Southampton
Bullied, E. G., L.R.C.P., London
Bullock, J. E., M.D., London
Bulloch, William, M.D., London
Bunch, J. J., M.R.C.S., London
Bunn, C. G., M.R.C.S., Upper Norwood
Burghard, F. F., M.D., London
Burkitt, G. O., L.R.C.P., Whitwick
Burkitt, J. G., M.D., Whitwick
Burnet, Rob. W., M.D., London
Burns, J. N., M.B., London
Burns, W. C., M.B., Waltham Cross
Burton, R. G., M.D., Hanwell
Bury, J. S., M.D., Manchester
Busfield, James, M.R.C.S., London
Bush, J. P., M.R.C.S., Bristol
Bushnell, F. G., M.D., Chiswick
Butcher, A. H., L.R.C.P., Birkenhead
Butler, A., L.R.C.S., London
Butler, F. T., M.D., Thornton Heath
Butler-Smythe, A. C., F.R.C.P., London
Butlin, Henry T., F.R.C.S., London
Buxton, Dudley, M.D., London
Buxton, E., F.R.C.S.E., Liverpool
Buzzard, M., [illegible], London
Byers, J. W., M.D., Belfast

Cable, John, L.R.C.P., Forfar
Cadell, Martha G. I., M.D., Edinburgh
Cadge, W., F.R.C.S., Norwich
Cadman, A. W., F.R.C.S., London
Cagney, James, M.D., London
Caiger, F. F., M.D., London
Caley, G., M.D., London
Caley, H. A., M.D., London
Callender, E. M., M.D.Brux., London
Calvert, W. H., M.D., Melrose
Calwell, Wm., M.D., Belfast
Cameron, J. S., M.D., Leeds
Cameron, J. W., M.B., Glasgow
Cameron, Professor M., M.D., Glasgow
Cameron, Sir Charles, M.D., London
Cameron, Sir Charles A., F.R.C.S.I., Dublin
Campbell, Colin, M.R.C.S., Saddleworth
Campbell, H., M.D., London
Campbell H. J., M.D., London
Campbell, John, M.D., Belfast
Campbell, P. E., M.B., Caterham
Cant, Wm. J., L.R.C.P., Lincoln
Card, A. H., M.R.C.S., Anerley
Cargill, E. A., M.D., London
Cargill, L. V., F.R.C.S., London
Carless, Albert, M.B., London
Carline, W. A., M.D., Lincoln
Carr, J. W., M.D., London
Carr, Thos., M.D., Braintree
Carroll, Jos., M.B., Ilkeston
Carter, A. H., M.D., Birmingham
Carter, G. R., M.R.C.P., Anerley Park
Carter, J. B., L.R.C.P.Edin., Leeds
Carter, R., M.D., Bath
Carter, R. W., Deputy Surgeon-General, M.D., Weymouth
Carter, Wm., M.D., Liverpool
Cartwright, E. H., M.D., London
Cartwright, J. P., M.R.C.S., Oswestry
Cathcart, C. W., M.B., Edinburgh
Cathcart, G. C., M.B., London
Cathcart, S., M.R.C.P., [illegible]
Caton, R., M.D., Liverpool
Cattanach, Jas. G., M.B., Edinburgh
Catton, W., M.R.C.S., W. Brighton
Cautley, E., M.D., London
Caverhill, T. F. S., M.B., Edinburgh
Cayley, H., F.R.C.S., Southampton
Chaffey, W. C., M.D., Brighton
Chaldecott, Chas. Wm., M.R.C.S., Dorking
Chaldecott, J., L.R.C.P., Hanwell
Chambers, H. W., M.R.C.S., London
Chambers, James, M.D., Roehampton
Chapman, C. W., M.D., London
Chapman, P. M., M.D., Hereford
Charles, T. E., M.D., Bromley, Kent
Charlesworth, G. H., M.D., London
Charteris, M., M.D., Glasgow
Cheadle, W. B., M.D., London
Cheatle, T. H., M.R.C.S., Burford
Cheese, Jas., M.R.C.S., London
Chesnutt, J., L.R.C.S., Howden
Chetham-Strode, E. W., M.D., Pinner
Cheyne, W. Watson, F.R.C.S., London
Chicken, R. C., F.R.C.S., Nottingham
Chiene, John, M.D.Edin., Edinburgh
Child, H., M.R.C.S., Reading
Child, E., M.D., London
Christie, A. K., M.B., London
Christie, W. L., M.D., Bristol
Chubb, W. L., M.R.C.S., [illegible]
Church, W. S., M.D., London
Churchill, F., M.D., London
Chute, James, M.D., Glenfield Camp, co. Kerry
Claremont, Claude C., M.R.C.S., London
Claremont, Claude C., jun., M.D., Southsea
Clark, Andrew, F.R.C.S., London
Clark, F. W., M.B., Hong Kong
Clark, J., M.D., Lichfield
Clark, J. C., L.R.C.P., Southsea
Clark, J. J., L.R.C.P.I., Walthamstow
Clark, W. F., L.R.C.P., Cheshunt
Clarke, E., M.D., London
Clarke, E. W., M.D., Chesterfield
Clarke, J., M.B., Plumstead
Clarke, J. M., M.D., Clifton
Clarke, R. H., M.B., Thanet
Clarke, W. B., M.B., London
Clarkson, J. B., L.R.C.P., New York
Clayton, J. S., M.D., Accrington
Clegg, W. W., L.R.C.P., Hornsey
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Cleveland, W. F., M.D., London
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Clifford, M., M.R.C.S., London
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Clippingdale, S. D., M.D., London
Clouston, T. S., M.D., Edinburgh
Clutton, H. H., F.R.C.S., London
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Cockey, E. P., M.D., Chelmsford
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Cogan, L. F., M.R.C.S., Northampton
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Cole, T., M.D., Bath
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Collier, R. J., L.R.C.P., Manor Park
Collier, S. R., M.D., Wimbledon

Collier, Wm., M.D., Oxford
Collier, Wm. A., L.R.C.P., London
Collingridge, W., M.D., London
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Collins, H. B., M.R.C.S., Kingston-upon-Thames
Collins, O. A. G., L.R.C.P., Bath
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Collum, A. T., M.B., London
Colman, W. S., M.D., London
Colvin Smith, R. C. M., M.B., Hendon
Connolly, B. B., M.D., London
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Cook, H. G. G., M.D., Cardiff
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Coombe, R., F.R.C.S., Exeter
Coombs, R. H., M.D., Bedford
Cooper, A., F.R.C.S., London
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Cope, A. E., London
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Cornwall, W. C., L.R.C.P., Birkenhead
Costello, T. B., M.D., Tuam
Cotterell, Edw., F.R.C.S., London
Cotton, H. J., M.D., London
Couch, J. K., L.R.C.P., Swansea
Coupland, S., M.D., London
Courtenay, G. B., M.D., London
Cousins, J. Ward, M.D., Portsmouth
Coutts, J. A., M.R.C.P., London
Cowan, F. S., L.R.C.P., Bath
Cowan, W. C., L.R.C.P., Dundee
Cowell, G., F.R.C.S., London
Cowper, J. S., M.R.C.S., Upton-on-Severn
Cox, J. H., L.R.C.P., Nottingham
Cox, L. F., M.R.C.S., Denbigh
Crabb, James, M.D., London
Craig, Geo. S., F.R.C.P., Wellington Quay-on-Tyne
Craig, R. M., Surgeon-Lieutenant-Colonel A.M.S., London
Crampton, T. H., L.R.C.P.I., London
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Crawford, E. J., Surgeon-Captain, M.S., [illegible]
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Cresswell, P. R., F.R.C.S., Dowlais
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Cripps, E. C., L.R.C.P., Cirencester
Cripps, W. H., F.R.C.S., London
Critchett, G. A., F.R.C.S.E., London
Crocker, H. Radcliffe, M.D., London
Croft, John, F.R.C.S., London
Crombie, Jas., M.B., [illegible]
Crookshank, F. Graham, M.R.C.S., London
Crosby, T. B., M.D., London
Crossfield, Jessie, L.R.C.P., London
Crowe, G. W., M.D., Worcester
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Cruickshank, R. W., M.B., London
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Cunnington, C. W., M.R.C.S., London
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Currie, J. L., L.R.C.P., Ipswich
Curtis, A., M.R.C.S., Exmouth

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Dalby, Sir William, F.R.C.S., London
Dale, Geo. C., M.D., London
Dallaway, D., M.R.C.S., London
Daly, F. H., M.D., London
Daly, W. H., M.D., Pittsburgh, U.S.A.
Damian, F. G. C., M.D., Trinidad
[illegible], H. H., M.D., [illegible]
Daniell, G. W., M.R.C.S.Edin., Blandford
Darley-Hartley, W., L.R.C.P., Cape Colony
Dauber, J. H., M.B., London
Davidson, A., M.B., London
Davidson, A., M.D., Liverpool
Davidson, P., M.B., Liverpool
Davies-Colley, J. N. C., F.R.C.S., London
Davies, D., F.R.C.S., Aberdare
Davies, D. A., M.B., Swansea
Davies, D. Ll., M.B., Neath, Glam.
Davies, E., L.R.C.P., [illegible]
Davies, E. C., L.R.C.P., Lampeter
Davies, E. N., M.R.C.S., Penygraig
Davies, E. T., M.D., Liverpool
Davies, G., M.D., London
Davies, H., M.R.C.S., London
Davies, H. N., L.R.C.P., Porth
Davies, J., M.D., Maesteg
Davies, S., M.D., Plumstead
Davies, S. H., L.R.C.P.Edin., Glasgow
Davies, Thos., M.R.C.S., London
Davis, A. N., L.R.C.P., Ivybridge
Davis, A. R., M.R.C.S., Hythe, Kent
Davis, E. H., M.R.C.S., West Hartlepool
Davis, Robert, M.R.C.S., Orpington
Davison, Jas., M.D., Bournemouth
Davison, S. H., M.D., London
Davy, F. A., M.R.C.S., Royston, Herts
Dawson, W. R., M.D., Finglas
Day, J. R., M.D., London
Day, W. H., L.R.C.P., London
Dean, Geo., M.B., Aberdeen
Deane, T. V. de, L.R.C.P., Cradley Heath
Deighton, F., M.B., Cambridge
Delaney, R. A., L.R.C.P., Stratford
Dell, J. F., L.F.P.S.G., London
Dempsey, A., M.D., Belfast
Dempsey, P. J., L.R.C.P.I., Kingscourt
Dempster, J. H., L.R.C.P., Red Hill
Denham, J. K., L.R.C.S.I., Dublin
De Renzy, A. C. C., Surgeon-General, C.B., M.R.C.S., Ealing
Des Voeux, H. A., M.D., London
Dewar, John, L.R.C.P.Edin., London
Dickinson, T. V., M.D., London
Dickinson, W. G., M.R.C.S., Southfields
Dickinson, W. H., M.D., London
Dickson, E. Winifred, M.B., Dublin
Dickson, J. D., M.D., Marlow, Bucks
Dickson, T. H., M.B., London
Dillon, John T., M.D., Listowel
Dingley, Allen, F.R.C.S., London
Dingley, Wm., M.R.C.S., London
Dixey, Henry, M.D., [illegible]
Dixey, F. A., M.D., Oxford
Dobson, Joseph, M.D., Leeds
Dobson, N. C., F.R.C.S., Clifton
Dockrell, M., M.D., London
Dodd, A. H., L.R.C.P., West Brighton
Dodd, Walter H., L.R.C.P., Brighton
[illegible], L. F., L.S.A., London
Dodsworth, F. C., L.R.C.P., Gunnersbury
Doig, Surgeon-Lieutenant-Colonel A.M.S., L.R.C.P.Edin., Turin
Dolamore, W. H., L.R.C.P., London
Dolan, T. M., M.D., Halifax
Donald, A., M.D., Manchester
Donaldson, F., L.R.C.S., Londonderry
Donbavand, E. J., M.R.C.S., South Tottenham
Donelan, James, M.B., London
Donkin, H. B., M.B., London
[illegible], W. J. B., M.B., London
Donovan, William, M.D., Birmingham
Doran, A. H. G., F.R.C.S., London
Dougan, Wm., M.D., Glasgow
Douglas, C. E., M.D., Cupar
Douglas, W., M.D., Leamington Spa
Dowie, Wm., M.D., Sevenoaks
Dove, Emily L., M.B., Virginia Water
Dowding, A. W. W., M.D., Wanstead
Downes, J. L., M.B., London
Downie, W., M.B., Glasgow
Dowson, Mary E., L.R.C.P., London
Doyne, R. W., F.R.C.S., Oxford
[illegible], D. K., L.R.C.P., Merthyr Vale
Drage, C., M.D., Hatfield
Drage, Lovell, M.D., Hatfield
Drake-Brockman, E. F., Brigade-Surgeon-Lieutenant-Colonel, F.R.C.S., Kilburn
Draper, J. W., L.R.C.P., Huddersfield
Drapes, Thos., M.B., Enniscorthy
Drennan, R. H., M.B., Gravesend
Dreschfeld, J., M.D., Manchester
Drew, A. J., F.R.C.S., Oxford
Drew, C. L., M.B., London
Drew, Douglas, F.R.C.S., London
Drewitt, F. D., M.D., London
Drinkwater, Wm., L.R.C.P., Bicester
Drysdale, C. R., M.D., London
Ducat, A. D., M.D., Highbury
Duckworth, Sir Dyce, M.D., London
Dudfield, Reginald, M.B., London
Dudfield, T. O., M.D., London
Dudley, W. E., Brigade-Surgeon-Lieutenant-Colonel, London
Duka, A. T., L.R.C.P., London
Duka, T., M.D., London
Duke, A., F.R.C.P.I., Cheltenham
Duke, D. W., M.D., Cannes
Duke, M. P., L.R.C.S., Teddington
Dunbar, Eliza W., M.D., Clifton
Duncan, D., M.R.C.S., London
Duncan, H. M., M.D., South Hampstead
Duncan, Jas., M.D., Ashton-under-Lyne
Duncan, J., M.D., Paisley, N.B.
Duncan, W., M.D., London
Dundas, M. G., M.R.C.S., Swaffham
Dunkley, W. W., F.R.C.S.Edin., Foleshill
Dunn, H. G., F.R.C.S., London
Dunn, J. E., M.R.C.S., Preston
Durham, F., M.B., London
Durno, J., M.D., London
Dutch, Henry, M.D., London
Dutch, M. A., L.R.C.S., London
Dutton, Thomas, M.D., London
Dyer, J. E., L.R.C.P., Cape Town
Eade, Sir Peter, M.D., Norwich
Eades, S. O., L.R.C.P., Ipswich
[illegible], H. F., L.R.C.S., Puckeridge
Eames, W. J., M.R.C.P., Harlesden
Eastes, G., M.B., London
Eastes, Frederick, M.D., Folkestone
Eastes, Geo. E., M.R.C.S., London
Eastes, Thomas, M.D., Folkestone
Ebell, J. H., L.R.C.P., Ceylon
Eccles, A. S., M.B., London
Eccles, H. A., M.D., Upper Norwood
Eccles, W. McA., F.R.C.S., London
Eccles, W. S., M.R.C.S., Upper Norwood
Eden, T. W., M.D., London
Eddison, J. E., M.D., Leeds
Eddowes, Alfred, M.D., London
Edelston, E. A., M.B., Warrington
Edge, A. M., M.D., Manchester
Edge, F., M.D., Wolverhampton
Edge, J. D., Surgeon-Lieutenant-Colonel, M.D., London
Edmunds, J., M.D., London
Edmunds, W., M.B., London
Edridge-Green, F. W., M.D., Hendon
Edwards, A. R., M.R.C.S., Brampton Brian
Edwards, E. C., M.B., Ipswich
Edwards, F. Swinford, F.R.C.S., London
Edwards, Geo. F., M.D., Bexley, Kent
Edwards, R., M.R.C.S., London
Edwards, W. T., M.D., Cardiff
Ehrmann, Albert, M.R.C.S., Southampton
Elkington, H. P., Surgeon-Captain A.M.S., M.R.C.S., London
Ellaby, Charlotte, M.D., London
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Elliott, A., M.D., London
Elliott-Blake, H., M.R.C.S., London
Ellis, H. D., M.D., Taunton
Ellis, H. H., L.S.A., Lelant, Cornwall
Ellis, T. S., M.R.C.S., Gloucester
Elliston, G. S., Brigade-Surgeon-Lieutenant-Colonel, M.R.C.S., Ipswich
Elliston, W. A., M.D., Ipswich
Elvy, F., M.R.C.S., Eastbourne
Embleton, D. C., L.R.C.P., Bournemouth
Emrys-Jones, A., M.D., Manchester
Emmet, J. W., M.R.C.S., [illegible]
Emmett, R., M.R.C.S., Portsmouth
England, W., M.D., Winchester
Erskine, J., M.B., Glasgow
Erskine, J. W., M.B., London
Erskine, R., M.D., Camborne
Erskine, W., M.D., Sydenham
Esler, Robert, M.D., London
Evans, C. J., M.R.C.S., Northampton
Evans, D. H. P., L.S.A., Wimbledon
Evans, E. P., M.R.C.S., Mountain Ash
Evans, J. A. M., M.B., London
Evans, J. J., M.B., Carmarthen
Evans, M. G., M.D., Cardiff
Evans, P., M.D., Bangor
Evans, R. D., M.R.C.P., Festiniog
Evans, W. T., M.B., London
Eve, F., F.R.C.S., London
Evers, C. H., M.R.C.S., Morpeth
Evershed, A. R. F., M.R.C.S., Penzance
Ewart, J. H., M.R.C.S., Eastbourne
Ewart, Sir J., M.D., Brighton
Ewart, W., M.D., London
Eyre, J., M.B., London
Eyre, J. J., M.R.C.P., Rome
Ezard, E. H., M.D., London

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Fairles, A. W., M.R.C.S., London
Falconer, H. B., L.S.A., London
Fallows, John, L.R.C.S.Edin., London
Faraker, John J., M.R.C.S., London
Farmer, S., L.R.C.P., Shap
Farndon, L., M.D., Maidenhead
Farnell, H. D., F.R.C.S., Eastbourne
Farquharson, R., M.D., London
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Farr, S. B., M.R.C.S., Boscombe
Fawcett, J., M.D., London
Fayrer, Sir Joseph, K.C.S.I., LL.D., M.D., F.R.S., London
Fearnley, W., L.R.C.S., London
Fegan, R., M.D., London
Felce, S., M.R.C.P.Edin., London
Felix, E., L.R.C.P., London
Fenwick, B., M.D., London
Fenwick, E. H., F.R.C.S., London
Fenwick, W. S., M.D., London
Ferguson, Jessie B., L.R.C.P., London
Ferguson, J. C., M.D., Great Malvern
Fergusson, J., F.R.C.S., Richmond
Fernie, S., M.D., Stone
Ferrier, D., M.D., London
Ferris, J. S., M.B., Uxbridge
Field, G. P., M.R.C.S., London
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Finegan, A., L.R.C.P.I., Mullingar
Finlay, D. A. M., L.R.C.P., London
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Finlayson, J., M.D., Glasgow
Finzi, J. M., M.D., London
Firth, Charles, M.D., Gravesend
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Fisher, T. E. H., M.R.C.S., London
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Fletcher, H., M.D., London
Fletcher, John, M.B., London
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Foster, M. G., M.B., San Remo
Foster, Sir W., M.D., Birmingham
Fotherby, F. J., M.D., Reigate
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Marsh, H., F.R.C.S., London
Marsh, G. E., M.D., Hove
Marsh, T. Chas., L.R.C.P.Edin., London
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Marshall, A. L., M.B., London
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Marshall, C. F., F.R.C.S., London
Marshall, H., M.D., Clifton
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Marston, Alice K., L.R.C.P., Wood Green
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Martin, H. A., M.R.C.S., [illegible]
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Matthews, I. N., M.B., London
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O'Meara, W. J., M.B., South Tottenham
O'Neill, H., M.D., Belfast
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Orr, H. H., M.B., London
Orton, G. H., M.B., London
Orwin, A. W., M.D., London
Osburne, C. A. P., F.R.C.S.Edin., Hythe
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O'Sullivan, S., F.R.C.S.I., Cork
Oswald, J. W. J., M.D., London
Oswald, R. J. W., L.R.C.P., London
Owen, A. D., L.R.C.P., Hampton
Owen, Isambard, M.D., London
Owen, Wm. H., L.R.C.P., Huddersfield
Owens, C. A. O., M.D., Long Stratton

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Page, H. W., F.R.C.S., London
Paget, C. E., M.R.C.S., Leeds
Palmer, J. F., M.R.C.S., Chelsea
Palmer, F. S., M.D., East Sheen
Panting, Chas. H., M.R.C.S., London
Panton, J. E., M.D., Bolton
Paramore, R., M.D., London
Pardington, G. L., M.D., Tunbridge Wells
Pare, J. W., M.D., London
Park, Wm. C. C., M.R.C.S., Lewisham
Parke, C. J., M.R.C.S., Brockley
Parker, Rushton, M.B., Liverpool

Parker, Jas., M.D., Plaistow
Parkes, L. C., M.D., London
Parkes, W. C., L.R.C.P., London
Parkinson, C. H. W., M.R.C.S., Wimborne
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Parry, T. W., M.R.C.S., Ferndale
Parsons, A. R., M.B., Dublin
Parsons, Chas., M.D., Dover
Parsons, F. G., M.D., West Worthing
Parsons, F. W., L.R.C.P., Wimbledon
Parsons, H. F., M.D., Croydon
Parsons, J., L.R.C.P., Liphook
Parsons, T. E., M.R.C.S., Wimbledon
Partington, W., M.B., Tunstall
Pasteur, W., M.D., London
Paterson, A. R., M.B., Derby
Paterson, D. R., M.D., Cardiff
Paterson, W. B., F.R.C.S., London
Paton, E. P., M.D., London
Patten, C. A., L.R.C.P., Ealing
Pattison, F. S., M.R.C.S., London
Paul, J. H., M.D., London
Paul, J. L., M.D., London
Pavy, F. W., M.D., London
Payne, J. F., M.D., London
Payne, W. H., M.R.C.S., Hampstead
Payne, W. H., L.R.C.P., Brockley
Peake, G. A., L.R.C.P., Cheltenham
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Pearce, Margaret E., M.D.Berne, London
Pearse, T. F., M.D., Southsea
Pearson, D. R., M.D., London
Pedley, R. D., F.R.C.S., London
Pepper, J. H., M.D., London
Pellatt, Edw. B., L.S.A., London
Pemberton, C. L. H., M.R.C.S., Banbury
Pembrey, M. S., M.D., Oxford
Penfold, T. C., M.B., Mattishall
Penny, J., Surgeon-Captain, L.R.C.P., Crewkerne
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Perkins, G. S., M.B., London
Perrot, Geo., M.R.C.S., Hampstead
Petter, W., M.B., Darlington
Philip, E., M.B., Coventry
Phillips, S. R., M.D., Virginia Water
Philipson, Geo. H., M.D., Newcastle-on-Tyne
Phillips, C. D. F., M.D., London
Phillips, H. C., M.R.C.S., Maida Vale
Phillips, T. G., M.R.C.S., Storrington
Phillips-Conn, H. H., M.D., Reading
Philpot, C. W., M.D., Croydon
Philpots, J. R., L.R.C.P., Parkstone
Pickett, J., M.D., London
Pickles, J. J., L.R.C.P., Leeds
Pierce, B., M.D., York
Pike, T. A., M.D., Malvern
Pillow, H., M.D., London
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Pitt, G. N., F.R.C.P., London
Plaister, W. H., M.R.C.S., Tottenham
Playfair, Hugh J. M., M.D., London
Playfair, W. S., M.D., London
Plimmer, H. G., M.R.C.S., Sydenham
Pocock, A. G. C., L.R.C.P., Streatham
Pogson, W., F.R.C.S., Leeds
Pollard, John, F.R.C.S., London
Pollard, F., M.D., Upper Tooting
Pollard, G. W., M.B., Birkenhead
Pollock, Jas. E., M.D., London
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Poole, R. W., M.R.C.S., London
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Pope, F. M., M.B., Leicester
Pope, H. C., M.D., London
Pope, H. S., M.B., Bridgwater
Port, H., M.D., London
Porter, W. E., M.D., London
Potter, E. F., M.D., London
Potter, G. W., M.B., Tunbridge Wells
Potts, F. R. H., M.R.C.S., Amersham
Powell, Evan, M.R.C.S., Nottingham
Powell, H. A., M.D., Winchester
Powell, H. E., M.R.C.S., London
Powell, R. D., M.D., London
Powell, S., M.D., Peterborough
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Power, Hy., F.R.C.S., London
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Pratt, A., M.D., [illegible]
Pratt, W., M.R.C.S., Leighton Buzzard
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Pritchard, U., M.D., London
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Proctor, S. F., L.R.C.P., Trinidad
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Purcell, F. A., M.D., London
Purcell, P., L.R.C.P., London
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Redfern, J. J., M.D., Croydon
Redmond, C. S., L.R.C.P., London
Rees, J. H., M.D., Penarth
Rees, W., L.S.A., London
Reeve, W., L.R.C.P., London
Reeves, H. A., M.R.C.S., London
Reid, A., M.D., London
Reid, J. M., M.D., London
Reid, M., Surgeon-Captain, L.R.C.P., Netley
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Reid, St. G., M.R.C.S., Thornton Heath
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Rennie, A., M.B., Aberdeen
Renton, J. C., M.D., Glasgow
Renton, William, L.R.C.S., London
Rentoul, R. R., M.D., Liverpool
Reynolds, A. E., M.R.C.S., London
Reynolds, E. J., M.R.C.S., London
Reynolds, E. S., M.D., Manchester
Reynolds, Sir J. Russell, Bart., F.R.S., London
Reynolds, L. W., M.R.C.S., High Wycombe
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Richards, M., M.D., Birmingham
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Richardson, W., M.D., Isle of Man
Richardson, W. G., M.B., Newcastle-on-Tyne
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Rickards, E., M.D., Birmingham
Ridge, J. J., M.D., Enfield
Ridley, W., M.B., Newcastle-on-Tyne
Rigden, G., M.R.C.S., Canterbury
Rigdon, W., M.D., London
Rigg, S. E., M.R.C.S., London
Rigby, C. F., M.R.C.S., London
Ringer, R. S., M.D., Bournemouth
Ritchie, A. B., M.D., Manchester
Rivers, W. H. R., M.D., Cambridge
Robb, J., M.D., London
Roberts, C., F.R.C.S., Eastbourne
Roberts, C. H., M.B., London
Roberts, D. Lloyd, M.D., Manchester
Roberts, F. T., M.D., London
Roberts, H. C., L.R.C.P., Melton Mowbray
Roberts, Henry, M.D., Tonbridge
Roberts, H. W., M.R.C.S., London
Roberts, J. D., M.R.C.S., Ealing
Roberts, J. R., Surgeon-Captain, F.R.C.S., London
Roberts, J. S. H., L.R.C.P., Swansea
Roberts, H. Leslie, M.D., Liverpool
Roberts, Sir Wm., M.D., London
Robertson, D. A., M.D., Edinburgh
Robertson, F. W., L.R.C.P., Glasgow
Robertson, G., Fleet-Surgeon R.N., M.D., London
Robertson, G. M., Murthly
Robertson, James, M.B., Patna
Robertson, J. G., M.D., Ashwell
Robertson, R., M.D., Ventnor
Robertson, W. B., M.D., Dulwich
Robertson, W. F., M.B., Edinburgh
Robertson, W. J., M.R.C.S., London
Robinson, A. H., M.D., London
Robinson, G. A., M.B., Holmwood
Robinson, G. H. D., M.D., London
Robinson, H., M.R.C.S., Barnsley
Robinson, H. B., F.R.C.S., London
Robinson, M., Surgeon-Major, L.R.C.P., Wandsworth
Robinson, M. J., M.D., London
Robson, A. W. M., F.R.C.S., Leeds
Roe, E. A. H., Surgeon-Lieutenant-Colonel, L.R.C.P., Ballyconnell
Roe, J. W., M.D., Ellesmere
Rogers, B., M.D., London
Rogers, C., M.R.C.S., London
Rogers, M., L.R.C.P., London
Rolleston, H. D., M.D., London
Roper, A. G., F.R.C.S., Croydon
Roper, H. J., L.R.C.P., Leeds
Roper, W. R., M.D., Cambridge
Rose, H. C., M.D., Hampstead
Rose, W., F.R.C.S., London
Ross, Alexander, Ealing
Ross, D., M.B., London
Ross, D. M., M.D., Bournemouth
Ross, J. R., M.D., Londonderry
Rossall, J. C., M.B., London
Rotheroe, W. B., L.R.C.P., London
Roulston, R. J., M.D., Newtown Stewart
Routh, F. A., L.R.C.P., Silvertown
Routh, A. J. M., M.D., London
Routh, C. H. F., M.D., London
Rowbotham, E. J., M.R.C.S., London
Rowell, G., F.R.C.S., London
Rowland, J. T., M.D., Petersham
Rowley, C. O., M.R.C.S., Barnsley
Roy, C. S., Professor, Cambridge
Rubridge, John L., M.B., Edinburgh
Ruckley, H. R., L.R.C.P.Edin., High Wycombe
Rudd, W. A., M.D., Acton
Rugg, B. A., M.R.C.S., Wood Green
Rugg, G. L., M.R.C.P., Norwood
Rundle, H., F.R.C.S., Southsea
Rushforth, J., M.R.C.S., Ealing
Russell, Beatrice, M.D., Edinburgh
Russell, John, M.B., Burslem
Russell, J. S. R., M.D., London
Russell, W., M.D., Edinburgh
Rust, James, M.D., London
Rutter, H. H., M.B., Colwyn Bay
Ryan, P. H., M.D., London
Ryan, R. P., F.R.C.S., Clonmel
Rygate, D. J., M.B., Cambridge
Rygate, J. J., M.B., St. Leonards-on-Sea
Rygate, J. R., L.R.C.P., Bridgwater
Sadler, M. T., M.D., Barnsley
St. George, G., M.R.C.P., Lisburn
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Salmond, J. L., M.B., Aberdeen
Salter, J. R., M.D., [illegible]
Salvage, J. V., Surgeon-Captain, M.D., Woolwich
Sampson, H. M., M.R.C.S., London
Sands, J. B., M.R.C.S., Lee
Sanders, C., M.B., London
Sandford, A. W., M.D., Cork
Sandwith, F. M., M.D., Cairo
Sangster, C., M.R.C.S., London
Sansom, A. E., M.D., London
Sanson, H. A., M.D., London
Santis, P. R. W. de, F.R.C.S., London
Satchell, W. A., F.R.C.P.Edin., London
Saundby, R., M.D., Birmingham
Saunders, E. W., M.B., [illegible]
Savage, G. H., M.D., London
Savage, J., L.R.C.P., London
Savage, T., M.D., Birmingham
Saville, Lillie E. V., M.D., Rye
Scallon, E. C., M.R.C.S., Bath
Scarth, L., M.B., London
Scatliff, F. M., L.R.C.P., London
Schäfer, E. A., F.R.S., London
Schacht, F. F., M.D., London
Scharlieb, Mary, M.D., London
Schofield, F., M.D., London
Schorstein, G., M.B., London
Scott, Alexander, M.D., Glasgow
Scott, C. C., M.B., Twickenham
Scott, R. J. H., F.R.C.S., Bath
Scott, T. B., M.R.C.S., Bournemouth
Scott, W. J., L.R.C.P., Hurstpierpoint
Sealy, G. F., M.D., Weybridge
Seaton, E., M.D., London
Seccombe, P. J., M.R.C.S., London
Sedgwick, J., M.D., Boroughbridge
Sedgwick, L. W., M.D., London
Sedgwick, W., M.R.C.S., London
Sellers, W. H. J., M.B., Preston
Sells, H. T., L.R.C.P., Northfleet
Semon, F., M.D., London
Senior, A., M.B., Thames Ditton
Senior, H. D., M.B., London
Serjeant, D. N., M.D., London
Sevestre, Robert, M.B., London
Sevier, A. H., M.B., Barnard Castle
Shadwell, St. C. B., M.D., Walthamstow
Sharkey, S. J., M.D., London
Sharman, H., M.D., London
Sharpe, C. H., L.R.C.P., Langley Green
Sharpe, H. J., M.R.C.P., London
Shattock, S. G., F.R.C.S., Wimbledon
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Shaw, C. E. M., Surgeon-Lieutenant-Colonel, M.R.C.S., London
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Shaw, J. E., M.B., Clifton
Shaw, P. F., L.R.C.P., Glasgow
Shaw, T. C., M.D., London
Shaw-Mackenzie, J. A., M.B., London
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Shears, C. H., M.R.C.S., Liverpool
Sheehy, W. H. P., L.R.C.P., London
Sheen, A., M.D., Cardiff
Sheldon, T., M.D., London
Shelmerdine, H. S., M.B., Bexley Heath
Shepherd, W. G., M.D., London
Sheppard, Amy, M.B., London
Sheppard, A. M., M.B., London
Sherburn, J., M.B., Hessle
Sherrington, C. S., M.D., London
Shettle, R. C., M.D., Reading
Shillitoe, R., M.R.C.S., Hitchin
Shreeve, J., M.D., London
Shuttleworth, G. E., M.D., Richmond Hill
Sibley, W. Knowsley, M.D., London
Sidebotham, R. B., L.R.C.P., Glossop
Sieveking, H., L.R.C.P., London
Silk, J. F. W., M.D., London
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Simpson, G. A. G., M.R.C.S., E. Acton
Simpson, J., M.D., Belfast
Simpson, J. P., M.D., London
Sims, D., L.R.C.P., London
Sinclair, J. F., L.R.C.P., London
Sinclair, T., M.D., Belfast
Sinclair, W. J., M.D., Manchester
Siordet, J. L., M.B., Mentone
Skelding, H., M.B., Bedford
Skerritt, E. Markham, M.D., Bristol
Skinner, W. A., M.R.C.S., St. Leonards-on-Sea
Slade-King, E. J., M.D., Ilfracombe

Slater, C., M.B., London
Slinnon, W., M.D., London
Slyman, W. D., M.R.C.S., London
Smith, A., L.A.H., London
Smith, A. J., M.B., Dublin
Smith, C. C., M.B., Redditch
Smith, D. T., M.R., Preston
Smith, E. S., M.D., London
Smith, Frank, M.D., Plumstead Common
Smith, Gilbert, F.R.C.S., Birmingham
Smith, G. C., London
Smith, H., M.D., London
Smith, H., M.D., Highgate
Smith, H. A., L.R.C.P., Ealing
Smith, H. L., M.R.C.P., Balham
Smith, H. R., M.D., London
Smith, H. W., L.K.Q.C.P., Chatham
Smith, J., M.B., Strand Green
Smith, T. P., M.B., Ealing
Smith, J., M.R.C.S., Chiswick
Smith, J. A., M.D., London
Smith, J. B., L.R.C.P., London
Smith, J. G., M.B., Clifton
Smith, J. K., M.R.C.S., Liverpool
Smith, J. Lorrain, M.B., Belfast
Smith, J. W., L.R.C.P., Doncaster
Smith, James W., M.D., Ryton-on-Tyne
Smith, L. G., M.B., Tottenham
Smith, Noble, F.R.C.S.Edin., London
Smith, P., M.R.C.S., Birmingham
Smith, P. C., M.D., London
Smith, R. Ayre, M.D., London
Smith, R. P., M.D., London
Smith, R. S., M.D., Clifton
Smith, R. T., M.D., London
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Smith, S. C., M.D., London
Smith, S. P., L.R.C.P., Croydon
Smith, T. F. H., F.R.C.S., Farningham
Smith, Walter, M.D., London
Smith, W. G., M.D., Dublin
Smith, W. H., M.B., Meriden
Smith, Wilberforce, M.D., London
Smith, W. R., M.D., London
Smith, Professor W. R., M.B., Rhyl
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Smyth, J., M.D., Naas
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Snow, L. M., L.R.C.P., Ashford
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Snowman, J., M.R.C.S., London
Soby, E., M.B., Harrogate
Soutar, J. Greig, M.B., Gloucester
Southam, F. A., M.B., Manchester
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Spanton, W. D., F.R.C.S.Edin., Hanley
Speirs, W. R., M.B., Carlisle
Spence, J. B., M.B., Colombo
Spencer, H. R., M.D., London
Spencer, W. G., M.B., London
Spicer, F., M.D., London
Spicer, S., M.D., London
Spicer, W. T. H., M.B., London
Spokes, S., M.R.C.S., London
Spreat, F. A., M.R.C.S., Whetstone
Spreat, W. S., L.R.C.P., York
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Stamford, W., L.R.C.P., Tunbridge Wells
Stamp, W. D., L.R.C.P., Plymouth
Standring, C. T., L.S.A., Worcester
Stanfield, T. E. K., M.B., Woodford
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Starling, E. H., M.D., London
Startin, J., M.R.C.S., London
Stear, H., M.R.C.S., Saffron Walden
Steegmann, E. J., M.B., Chiswick
Steele, S. T., L.R.C.P., Morley
Steele, W. F., M.B., Darwen
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Stephenson, A., M.D., Nottingham
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Sterling, R., L.R.C.P., Stonyford
Stevens, A. E., M.B., Tulse Hill
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Stewart, R. C., M.R.C.S., Leicester
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Stoddart, W. H. B., M.B., London
Stoker, G., M.R.C.P.I., London
Stoker, Graves, F.R.C.S., Dublin
Stoker, Henry, F.R.C.S., Dublin
Stokes, Sir William, M.D., Dublin
Stokes, F. W., M.D.Brux., Mortlake
Stone, H. S., M.B., Reigate
Stone, W. D., M.D., London
Stoneham, H. A., L.R.C.P., London
Stoney, R., L.R.C.P., London
Storey, Jas. Alex., L.R.C.S.I., Dunstable
Storry, F. W., M.R.C.S., Stroud
Stowers, J. H., M.D., London
Stowers, N., M.R.C.S., London
Strahan, S. A. K., M.D., Northampton
Strange, W. H., M.D., London
Straton, C. R., L.R.C.P.Edin., Wilton
Street, A. F., M.D., Westgate-on-Sea
Street, C. T., L.R.C.P., Newton-le-Willows
Strugnell, F. W., M.R.C.S., London
Stuart, F. H., M.D., Brooklyn, N.Y.
Stuart, James, M.D., Ballymena
Sturge, Caroline, M.B., London
Sturge, H. H., M.R.C.S., New Streatham
Sturge, Mary D., M.B., Birmingham
Sturge, W. A., M.D., Nice
Sturges, M. J., M.D., Broadstairs
Sturrock, W. M., M.B., London
Style, Mark, M.R.C.S., Moreton in-Marsh
Suffern, A. C., M.D., Bromsgrove
Summerskill, W., L.R.C.P., London
Sumner, B., M.D., Liverpool
Sunderland, S., L.R.C.P., London
Surveyor, N. F., M.D., London
Sutcliffe, J., L.R.C.P., Stalybridge
Sutcliffe, W. G., M.R.C.S., London
Sutherland, G. A., M.D., London
Sutton, J. B., F.R.C.S., London
Swaby-Smith, C., M.R.C.P., London
Swain, Edward, L.R.C.P., Hitchin
Swain, J., M.D., Clifton
Swallow, A. J., M.B., Clapham Rise
Swan, R. J., M.R.C.S., Camberwell
Swanton, J. H., M.D., Edmonton
Swanzy, H. R., F.R.C.S.I., Dublin
Swayne, F. G., M.D., Upper Norwood
Swayne, J. G., M.D., Clifton
Swindale, J., M.R.C.S., Brucknell
Sykes, J., M.D., Doncaster
Sykes, J. F. J., M.D., London
Symes, E. W., M.D., Halifax
Symington, W. D., M.D., Wolverton
Symonds, C. J., F.R.C.S., London
Symonds, H. P., F.R.C.S., Oxford
Symons, W. H., M.D.Brux., London

Tait, E. S., M.D., London
Tait, E. W., M.R.C.S., London
Tait, H. B., F.R.C.S., London
Tait, Lawson, F.R.C.S., Birmingham
Tandy, B. L., L.R.C.P., Addlestone
Targett, J. H., F.R.C.S., London
Tate, W. W. H., M.D., London
Tatham, John, M.D., London
Taunton, W. W., L.R.C.P., St. Aubyns
Taylor, A. E., M.B., Acton
Taylor, C. V., M.D., Nottingham
Taylor, D. M., M.B., London
Taylor, T. R., M.D., London
Taylor, F., M.D., London
Taylor, G. F. N., L.R.C.P., Bayswater
Taylor, G. G. S., M.D., Liverpool
Taylor, H., M.B., London
Taylor, H. O., M.D., Nottingham
Taylor, J., M.D., London
Taylor James, M.R.C.S., Bristol
Taylor, J. M., L.R.C.P., Burslem
Taylor, J. W., F.R.C.S., Birmingham
Taylor, Seymour, M.D., London
Taylor, S. T., M.B., Chingford
Taylor, S. J., M.B., Norwich
Taylor, William, M.D., Cardiff
Teale, T. P., F.R.C.S., Leeds
Telford-Smith T., M.D., Lancaster
Temple, W., Brigade-Surgeon, M.B., V.C., West Dulwich
Tennant, G. P., M.D., Glasgow
Tew, J. L., M.D., Nottingham
Thimbleby, J., F.R.C.S., Spilsby
Thin, G., M.D., London
Thomas, A., M.R.C.S., Surbiton
Thomas, D., M.D., Swansea
Thomas, G. T., Surgeon-Lieutenant-Colonel I.M.S., Moulmein, Burmah
Thomas, G. D., M.D., Hampstead Heath
Thomas, J., F.R.C.S., Swansea
Thomas, J. Lyon, F.R.C.S., Cardiff
Thomas, J. Raglan, M.D., Exeter
Thomas, R. Stanley, M.B., Stareross
Thomas, W., M.B., Birmingham
Thomas, W. E., L.R.C.P., Bridgend
Thomas, W. E., M.D., Ystrad, Rhondda
Thomas, W. R., M.D., Bournemouth
Thomas, W. T., F.R.C.S., Liverpool
Thompson, A. H., M.R.C.S., Hampstead
Thompson, C. S., M.B., Bideford
Thompson, David, L.R.C.P.Edin., Launceston
Thompson, E. Symes, M.D., London
Thompson, G. W., M.B., Willesden Green
Thompson, H. G., M.D., Croydon
Thompson, J., L.R.C.P., Nottingham
Thompson, J. J., Surgeon-General, F.R.C.S.I., Upper Norwood
Thompson, K., M.B., London
Thompson, M., M.R.C.S., Hemel Hempstead
Thompson, S. W., M.R.C.S.E., East Greenwich
Thomson, A., F.R.C.S., Maidenhead
Thomson, A., M.B., Oxford
Thomson, D. G., M.D., Norwich
Thomson, G. C., M.D., London
Thomson, H. C., M.D., London
Thomson, J., M.D., Edinburgh
Thomson, J. Roberts, M.D., Bournemouth
Thomson, St. C., M.D., London
Thomson, W., M.D., Dublin
Thomson, Wm., M.R.C.S., Algiers
Thorne, Atwood, M.R.C.S., Lewes
Thornton, B., L.R.C.P., Margate
Thornton, J. K., M.B., London
Thresh, J. C., M.B., Chelmsford
Thudichum, J. L. W., M.R.C.S., London
Thursfield, T. W., M.D., Leamington
Thursfield, W. N., M.D., Shrewsbury
Tebb, W. S., M.D., Bournemouth
Tidswell, H. H., M.R.C.S., Whitby
Tilley, H., M.D., London
Tillman, H. G., L.R.C.P., Jamaica
Time, H. W. M., M.D., London
Tiplady, W., L.R.C.P., Coupar Angus
Tirard, Nestor, M.D., London
Toller, S. G., M.D., St. Thomas's Hospital
Tomkins, H. H., L.R.C.P., Leyton
Tomlins, W. H., L.R.C.P., Droitwich
Tomson, W. B., M.D., Luton
Topping, E. S., M.B., London
Torrance, D. W., M.B., Glasgow
Townsend, T. S., M.R.C.S., London
Trask, J. E., L.R.C.P., Surgeon-Captain A.M.S., London
Travers, Wm., M.D., London
Travers-Smith, V. E., M.D., London
Treasure, W. B. C., M.R.C.S., Cardiff
Trend, T. W., M.D., Southampton
Tresilian, F. J., M.D., Enfield
Treutler, W. J., M.B. West Brighton
Trevelyan, B. R. I., M.R.C.S., Bath
Trevithick, E., M.D., Cheltenham
Trollope, Thos., M.D., St. Leonards-on-Sea
Trouton, G. W., M.D., Rotherfield
Tuchmann, M., M.D., London
Tuckey, C. L., M.D., London
Tuke, C. M., M.R.C.S., Chiswick
Tuke, J. B., M.D., Edinburgh
Tuke, T. Seymour, M.B., Chiswick
Turner, D., M.D., Edinburgh
Turner, F. C., M.D., London
Turner, F. M., M.D., London
Turner, G. G., M.R.C.S., Bournemouth
Turner, J. S., M.R.C.S., London
Turner, W., M.D., Gibraltar
Turner, W. P., M.R.C.S., Leytonstone
Turtle, F. W., M.D., Woodford
Twamley, H. J., F.R.C.S., Sible Hedingham
Tylecote, J. H., M.D., Stone
Tyrrell, W., L.R.C.P., London
Tyson, W. J., M.D., Folkestone

Uhthoff, J. C., M.D., Brighton
Underhill, T. E., M.D., Barnt Green
Underhill, C. E., M.B., Edinburgh
Urquhart, A. R., M.D., Perth
Usher, C. H., M.B., Aberdeen
Usher, J. E., M.D., New York
Usher, W., M.D., Orpington, Kent

Vachell, C. T., M.D., Cardiff
Valcourt, T. de, M.D., Cannes
Van, A. P., M.R.C.S., Salisbury
Vance, W. J., L.R.C.P., North Woolwich
Vasey, C. L., Fleet Surgeon, M.R.C.S., London
Vasey, S. W., Staff-Surgeon, R.N., L.R.C.P., London
Vaughan-Jackson, H., L.R.C.P., Potter's Bar
Vernon, C. M., M.R.C.S., Ashford
Verrall, T. J., M.R.C.S., Brighton
Vicars, K. B. J., L.R.C.P., Walsingham
Vincent, H. B., M.R.C.S., East Dereham
Vinrace, D., M.R.C.P., London
Vinrace, Felix, F.R.C.S., Birmingham
Vinrace, J., M.D., Birmingham
Vinrace, J. H., M.B., London
Viret, B. P., M.B., London
Vise, C., M.D., Tunbridge Wells
Voelcker, A. F., M.D., London
Volsey, C. B., M.D., London

Wade, A. B., M.B., Southampton
Wade, C., L.R.C.P., Boscastle
Wade, Herbert, M.R.C.S., London
Waggett, E. B., M.B., London
Wainwright, L., M.D.Brux., Folkestone
Waites, R. F., L.R.C.P., Rotherham
Wakefield, R. C., M.D., London
Waldo, F. J., M.D., London
Waldo, H., M.D., Clifton
Wale, G., L.R.C.P., Croydon
Walker, Alex., M.D., St. Leonards-on-Sea
Walker, A. H., L.R.C.P., Cranleigh
Walker, B., M.B., Kirkby Stephen
Walker, B. W., M.D., London
Walker, C. H., M.B., Clifton
Walker, E., M.D., Huddersfield
Walker, G. E., F.R.C.S., Liverpool
Walker, H., L.R.C.P., London
Walker, H. R., L.R.C.P., London
Walker, J., M.D., London
Walker, J. S., M.D., Hanley
Walker, Jane H., L.R.C.P., London
Walker, J. P., Surgeon-General, M.D., London
Walker, N. P., M.D., Edinburgh
Walker, Samuel, M.R.C.S., Middlesbrough
Walker, William, M.D., Glasgow
Wall, E. B., M.R.C.S., London
Wallace, A., M.D., London
Wallace, C. S., F.R.C.S., London
Wallace, F., M.R.C.S., London
Wallace, F. G., M.B., London
Wallace, J., L.R.C.P.Edin., Portglenone
Wallace, J. B., M.B., London
Wallace, Janette F. A., L.R.C.P., Edinburgh
Wallace, Robert S., L.F.P.S.G., Longsight
Wallace, R. T., L.R.C.P., Eltham

Wallace, R. Unthank, M.B., London
Wallace, Thos., M.D., Cardiff
W[illegible], M.R.C.S., London
W[illegible], M.B., London
W[illegible], J., [illegible] Surgeon A.M.D., Upper Norwood
W[illegible], M.D., Dartford
W[illegible], London
W[illegible], L.R.C.P.I., Callan
W[illegible], H., M.B., London
W[illegible], W. J., jun., F.R.C.S., London
Walter, Wm., M.D., Manchester
Walters, F. R., M.D., London
W[illegible], M.B., [illegible] Bridge
Wanklyn, W. McC., L.R.C.P., London
W[illegible], J. W., M.D., Liverpool
Ward, A., M.D., Tottenham
Ward, Joseph, M.D., Birmingham
Ward, J. A., M.R.C.S., Thrawarline, Salop
W[illegible], C., M.D., Edgbaston
Ward Humphreys, G. H., M.R.C.S., Cheltenham
Ware, H. S., M.B., London
Ware, J. W. L., M.R.C.S., Barnstaple
Waring, F. J. A., M.D., Hove
Waring, H. J., M.B., London
Warner, P., L.R.C.P., Woodford Green
Warrington, F. W., M.D., Congleton
W[illegible], J. W., M.D., London
Waterhouse, H. F., M.D., London
Waters, E. E., Surgeon-Lieutenant I.M.S., Sheffield
Waters, G. W. B., M.R.C.S., London
Wathen, J. H., L.R.C.P., Clifton
Watkins, E. T., M.D., London
Watkins, J. W., M.D., Newton-le-Willows
W[illegible], R. W., F.R.C.S., Towcester
W[illegible], A., Inspector-General, M.D., London
W[illegible], A. W., M.D., London
W[illegible], G. A., Deputy Surgeon-General, Cheltenham
Watson, G. de H., M.B., London
Watson, J. R., M.B., North China
Watson, James, M.D., Southsea
Watson, J. A., L.R.C.P., London
Watson, J. M., M.D., Manchester
Watson, T. A., M.D., Sunderland
Watson, T. E., M.D., London
Watson, W. S., M.B., London
Watt, J. P., M.B., Aberdeen
W[illegible], A. M., M.R.C.S., London
W[illegible], J. A., M.D., Bath
W[illegible], F. P., M.D., London
W[illegible], H., M.R.C.S., London
W[illegible], M. Helen, M.B., London
W[illegible], F. Parkes, M.D., London
Weber, H., M.D., London
Webster, H. W., M.D.Brux., London
W[illegible], P. L., L.R.C.P., London
W[illegible], R. M., M.R.C.S., London
W[illegible], T. J., M.R.C.S., Merthyr Tydfil
W[illegible], Thomas, L.R.C.P., London
W[illegible], F. H., F.R.C.S., York
W[illegible], C. J., Brigade-Surgeon, M.S., Enniskillen
W[illegible], F. H., Surgeon-Colonel, F.R.C.S., Lee
W[illegible], J. L., M.B., Selangor
W[illegible], C. H., M.R.C.S., Sandhurst
W[illegible], G., M.R.C.S., London
W[illegible], A. G., M.R.C.S., London
W[illegible], J. F. B., M.R.C.S., Acton
W[illegible], Sir Spencer, M.D., London
W[illegible], R., M.B., London
W[illegible], A. G., M.D., Dover
W[illegible], J. W., M.D., Broughty Ferry
W[illegible], M.D., London
W[illegible], W. W., M.B., London
W[illegible], F. H., M.R.C.S., Cheadle
W[illegible], F. F., M.R.C.S., Stafford
W[illegible], J. R., M.B., London
W[illegible], W., M.D., Bradford
W[illegible], C. J., M.D., [illegible]
W[illegible], James, M.D., Blackburn
W[illegible], C. G., F.R.C.S., Filey
W[illegible], W. McN., M.D., London
W[illegible], F. F., L.R.C.P., Coventry
W[illegible], H., M.B., Corwen
W[illegible], Hy., M.D., London
W[illegible], H. W., L.R.C.P., Bradford
W[illegible], J., F.R.C.S., London

White, J. B., Brigade-Surgeon-Lieutenant-Colonel, London
White, T. C., M.R.C.S., London
White, W. Hale, M.D., London
Whitelegge, A., M.D., Wakefield
Whitelocke, R. H. A., M.B., Oxford
Whitestone, A. M., M.B., Maidstone
W[illegible], C. W. H., M.B., London
W[illegible], A. J., M.D., London
Whitmore, W. T., F.R.C.S.Edin., London
Whitworth, W., M.R.C.S.Edin., St. Agnes
White, A. H., L.R.C.P.I., Dublin
White, W. R., M.R.C.S., Wadhurst
Wickham, Catherine M., L.R.C.P., London
Wickham, A. O., L.R.C.P., London
W[illegible], T. C., M.D., Southend
Wigmore, A. W., L.R.C.P., London
Wilbe, R. Haydock W., M.D., London
Wilkin, G. C., L.R.C.P., London
Wilkins, G. H., L.R.C.P., London
W[illegible], F., Surgeon-Captain I.M.S., London
W[illegible], R., L.R.C.P., London
Wilks, S., M.D., London
Willan, G. T., M.R.C.S., Melton Mowbray
Willcocks, F., M.D., London
Willcox, R. L., L.R.C.P., Warminster
Willett, A., F.R.C.S., London
Willett, E., M.B., London
Williams, A. D., M.B., Hampton Hill
Williams, C., M.R.C.S., Dyffryn
Williams, C. R., M.B., Ashby-de-la-Zouch
Williams, C. T., M.D., London
Williams, Dawson, M.D., London
Williams, E., L.R.C.P., London
Williams, Ethel N., M.B., London
Williams, H. Lloyd, M.R.C.S., London
Williams, G. C., M.R.C.S., London
Williams, J., M.D., Cardiff
Williams, J. T. C., M.R.C.S., Whitland
Williams, O., L.R.C.P., Burry Port
Williams, P. W., M.D., Clifton
Williams, R., M.R.C.S., Liverpool
Williams, W. E., M.R.C.S., Abertillery, Mon.
Williams, W. H., M.R.C.S., Sherborne
Williams Freeman, J. P., M.D., Andover
Williamson, G. E., F.R.C.S., Newcastle-on-Tyne
Williamson, J. G., Brigade-Surgeon-Lieutenant-Colonel, A.M.S., Dover
Williamson, J. M., M.D., Ventnor
Williamson, R. E., M.B., Otley
Williamson, R. T., M.D., Manchester
W[illegible], E., M.R.C.S., Cardiff
Willmore, F. W., M.R.C.S., Walsall
Wilmot, A. E., L.R.C.P., Maidenhead
Willis, A. K., M.A., Hampstead
Willis, J., M.R.C.P., London
Willoughby, E. F., M.D., London
Wills, J. P., M.D., Bexhill
Wilson, A. E., L.S.A., Oxford
Wilson, A., F.R.C.S., Manchester
Wilson, A., M.D., Leytonstone
Wilson, A. H., L.R.C.P., Liverpool
Wilson, Claude, M.D., Tunbridge Wells
Wilson, D., M.D., Bushey
Wilson, D. M., L.R.C.P., Upper Edmonton
Wilson, E. F., M.B., Cheltenham
Wilson, E. M., Surgeon-Major, M.B., Manchester
Wilson, F., L.R.C.P., Hull
Wilson, G., M.B., Edinburgh
Wilson, G. J., M.D., Oxford
Wilson, H. H., M.D., Gateshead-on-Tyne
Wilson, R. M., M.D., Derby
Wilson, S., M.R.C.S., London
Wilson, William, M.B., London
Wilson, W., M.B., Forest Hill
W[illegible], C. E., L.R.C.P., Sheffield, Park
W[illegible], S. H., L.R.C.P., Woking
W[illegible], V. H. W., M.R.C.S., London
W[illegible], A., F.R.C.S., Oxford
Winslow, Henry F., M.D., London
W[illegible], R. W., M.R.C.S., Haslemere

Wise, A. T., M.D., Montreux
Wise C. H., M.D., Walthamstow
Wise, Robert, M.D., Crouch End
Wise, R. S., M.D., Banbury
Wolseley, W. D., Surgeon-Major, L.R.C.P., Brentwood
Wood, G. E. C., M.B., Portobello
Wood, N., M.R.C.P., London
Wood, T. O., M.D., London
Woodcock, John, M.D., Manchester
Woodforde, W. T. G., M.D., Reading
Woodhead, G. S., M.D., London
Woodhouse, R. H., M.R.C.S., London
Woodhouse, T. J., M.D., London
Woods, D., Surgeon-Major, London
Woods, Hugh, M.D., London
Woods, O., M.D., Cork
Woods, Robert H., M.B., Dublin
Woolbert, H. R., M.B., West Hampstead
Woolfreys, Jno. A., Surgeon General, C.D., M.D., Kintbury, Berks
Worley, W. C., M.R.C.S., London
Worrall, E. S., M.R.C.S., London
Wortabet, H. G. L., Surgeon-Major, M.D., London
Worthington, G., M.R.C.P., Bournemouth
Wray, C., F.R.C.S., London
Wray, W. T., M.R.C.S., Hull

Wrench, E. M., F.R.C.S., Baslow
Wright, F. W., Surgeon-Lieutenant-Colonel, I.M.S., London
Wright, R. Temple, Brigade-Surgeon-Lieutenant-Colonel (retired), M.D., Jersey
Wright, R. W., Surgeon-Captain, A.M.S., Woolwich
Wunderlich, V., M.D.Brux., London
Wylie, John, M.B., Stewarton
Wylie, A., M.D., London
Wyman, C., M.D., London
Wyman, W. S., M.D., London
Wynne, J. K., M.D., Birkenhead
Wynter, A. E., M.D., Beckenham

Yarr, M. T., Surgeon-Captain, F.R.C.S., London
Yarrow, G. E., M.D., London
Yearsley, P. M., F.R.C.S., London
Yelf, R. E., M.B., Moreton in Marsh
Yellowlees, D., M.D., Glasgow
Young, A. H., M.B., Manchester
Young, C. W. F., M.B., London
Young, E. P., M.R.C.S., London
Young, T. F., M.D., Liverpool
Young, W., M.B., West Calder

Zaytoun, F. S., M.B., London

Foreign Guests and Visitors.

Allen, D. P., M.D., Cleveland
Apostoli, Dr., Paris
Auzal, A. W., M.D., New York

Babes, Professor V., Bucharest
Baginsky, Professor A., Berlin
Baker, C. C., M.D., San Francisco
Balog, L., M.D., Buda-Pesth
Barkan, Dr. A., San Francisco
Barnard, J. H., M.D., Paris
Baümler, Professor, C. G. H., Freiburg
Benedikt, Professor M., Vienna
Berry, J. G., Chicago
Boisleun, Dr. N., Paris
Bolger, J. J., L.R.C.S.I., Cape Colony
Bonynge, Dr. F. G., Chicago
Bosworth, F. H., M.D., New York
Bowditch, H. P., M.D., Boston
Boyd, J. P., M.D., Albany, N.B.
Brown, F. A., M.D., Webster, Mass.
Bruecy, H. A., M.D., Toronto
Bryan, Joseph H., M.D., Washington
Bull, G. J., M.D., Paris

Camp, Dr. C. M., Canaar, Ceylon
Cantacuzene, Dr. Bucharest
Cérenville, Professor de, Lausanne
Clark, Dr. F. S., Cleveland
Coakley, C. G., M.D., New York
Collingnon, H., M.D., Brussels
Collins, C., M.D., Limo, Ohio
Comby, Dr. J., Paris
Condoxopoulo, Dr. E. N., Smyrna
Cotton, Dr. J. H., Toronto
Crofford, Q. J., M.D., Memphis
Curàtulo, G. E., M.D., Rome
Cushey, A. R., M.D., Michigan
Cushine, E. W., M.D., Boston
Custin, Dr. R. T., Philadelphia

De Backer, Dr. Felix, Paris
Deguérot, Dr., Paris
Delavan, D. B., M.D., New York
Dennis, F. S., M.D., New York
Dickson, J. Z., M.D., Coraopolis, Pa.
Dupay, E., M.D., Paris

Elhakim, Dr. M., Luxor, Egypt
Elkind, L., M.D., Berlin
Eudlitz, Dr., Paris

Farkas, E., M.D., Buda-Pesth
Faure-Miller, Dr. J., Paris
Fenwick, K. N., M.D., Kingston, Canada
Fly, A. W., M.D., Galveston
Forchheimer, F., M.D., Cincinnati
Fraenkel, Professor B., Berlin
Fr[illegible], M. A., M.D., London
Fuchs, Professor E., Vienna

Gayet, Professor A., Lyons
Gerhardt, Dr. C., Berlin
G[illegible], A. W., M.D., Nice
G[illegible], J. W., M.D., New York
G[illegible], E. A., M.D., Flushing, N.Y.

Hamburger, H. J., M.D., Utrecht
Hanot, V., Professor, Paris
Hare, H. A., M.D., Philadelphia
Harris, N. M., Toronto
Hauben, Dr., Brussels
Haymens, Professor J. T., Gand
Henderson, N. R., M.D., Kingston, Canada
Hennessy, Mary E., M.D., New York
Herbert, Alan, M.D., Paris
Hinson, Dr. J. M., Merchantville
Holmes, A. M., M.D., Denver
Howard, B., M.D., New York
Hughes, Dr. Ch., St. Louis

Jackson, W. M. M., M.D., Melrose, Mass.
Johnston, Samuel, M.D., Baltimore U.S.A.
Jordan, A., M.D., Washington
Jordan, Dr. O. J., Buffalo
Joy, H. H., M.D., Michigan
Juler, E. C., M.D., London

Kimball, J. E., M.D., Maine
Kilene, W. R., M.D., Bâle
Knapp, Geo., M.D., Vincennes Indiana, U.S.A.
Koster, W., M.D., Holland

L[illegible], Professor, Christiania
L[illegible], Professor, Paris
L[illegible], F. W., M.D., Cincinnati
Lazarewitch, Professor T., St. Petersburg
Libby, Dr. G. F., Maine
Lloyd, T. M., M.D., Brooklyn
Luc, Dr., Paris
Lusk, W. C., M.D., New York
Lusk, Dr. W. T., New York
Lutaud, Dr., Paris

Mackenzie, Dr. J. N., Baltimore
M[illegible], A. W., M.B., Aberdeen
M[illegible], D. N., M.D., Toronto
McMorrow, F., M.D., Syracuse
M[illegible], D., M.D., Montreal
M[illegible], C. H., M.D., Unionville, U.S.A.
M[illegible], Professor, Genoa
Marinesco, Dr. G., Paris
Marlow, F. W., M.D., Syracuse
Martin, Professor A. E., Berlin
Massbucker, C. F., Toledo
Meixell, E. W., Wilkes-Barre, Pa.
Mellus, E. L., M.D., Worcester, Mass.
Meyer, Dr. E., Paris
Mitchell, S., M.D., Jacksonville
Morton, H. McI., M.D., Minnesota
Mo[illegible], F. [illegible], Chicago
Mosso, Professor L., Genova
Moulton, Dr. W. B., Portland, Me.
Mudd, Henry H., M.D., St. Louis, U.S.A.
Muret, M., M.D., Lausanne
Murphy, Dr. J. B., Chicago

N[illegible], Mdlle. Durand De, Rouen

Hatter, Professor M., Paris
Jackson, L. A., M.D., Buda-Pesth
Northrup, W. P., M.D., New York

Ottolenghi, Dr. J., Genoa
Outterbridge, J. A., M.D., Louisville

Page, Dr. La F., Indianapolis
Panas, Professor, Paris
Pardu, Professor G. J., New York
Parker, G. F., M.D., Boston
Parker, G. F., M.D., Charleston
Penniman, A. W., M.D., Dudley, Mass.
Péresco, Dr. Z., Bucharest
Phelps, A. M., M.D., New York
Pinso, Dr. W. B., Minneapolis
Pistor, Dr. M., Berlin
Poonen, Dr., Travancore
Poteret, R., Paris
Pozzi, S., M.D., Paris
Pyle, W. L., M.D., Washington

Ranke, Professor H. Von, Munich
Reed, Charles A. L., M.D., Cincinnati, U.S.A.
Reolds, Dr A. W., New Orleans
Rockey, A. E., M.D., Oregon
Rosenthal, Professor H. V., Sweden
Rindlaub, J. H., M.D., Washington

Said, J. M. Abd-el-, Cairo
Schlatter, D., M.D., Baltimore
Schlegtendal, Dr. C., Munich
Schmidt, Professor M., Frankfort-on-Maine
Schlesser, Dr. G., Naples
Schuller, W. B., M.D., Cincinnati
Sherman, H. M., M.D., San Francisco
Shoemaker, W. A., M.D., New York
Smith, Dr. A. S., Kobe, Japan
Smith, J. C., M.D., St. Louis
Smythe, Dr. H. J., Detroit
Sokolowski, Dr., Warsaw
Soondly, O., M.D., London
Steele, J. D., M.D., Philadelphia
Stokvis, Professor R. J., Amsterdam
Strong, C. H., M.D., New York
Suriner, E., Paris

Taw, M. P., L.M.C., Rangoon
Taylor, G. A., M.D., New York
Thompson, C. W., M.B., Toronto
Thomson, A. G., M.D., Philadelphia
Tillmanns, Professor H., Leipzig
Trent, Hector, M.D., Leyden, Holland

Underwood, A. M., M.D., Lancaster, Pa.

Van Note, W. B., M.D., Lima, U.S.A.
Van Slyke, G. W., M.D., Kalamazoo, Michigan
Vignes, Dr. L., Paris
Vivant, Dr. J. E., Monte Carlo

Waterhouse, S. M., M.D., Cincinnati
Weeks, S. H., M.D., Portland, Maine
Whitney, W. N., M.D., Tokyo
Whitton, Thos. Blair, Reefton, New Zealand

Zuelzer, Dr. G., Berlin

ANNUAL MUSEUM.

[Third Notice.]

Messrs. J. F. Macfarlan and Co. (Edinburgh and London) exhibited their Specially Purified Chloroform for anæsthetic purposes; Anæsthetic Ether: Antiseptic Dressings, prepared according to the formulæ of Professor Sir Joseph Lister, Bart., F.R.S., including—Gauzes: Carbolised, cyanide of mercury and zinc, iodoform, sal alembroth, sublimate, thymol, etc.; Lints: Boric, carbolic, cyanide, iodoform, sublimate, etc.; Wools: Boric, carbolic, cyanide of mercury and zinc, iodised, iodoform, sal alembroth, salicylic, styptic, sublimate; Tows: Antiseptic, carbolic, sublimate, etc.: Ligatures, Catgut: Sulpho-chromic and chromic carbolic, dry; carbolic and chromic carbolic in oil, sublimated in alcohol. Ligatures: Silkworm gut, plain and carbolised, kangaroo tendons, plain and carbolised; Sutures: Plain and carbolised silk, horsehair; Sulphur Cones: 4 ozs. for disinfecting purposes.

Messrs Mackey, Mackey, and Co. exhibited Special Preparations of New Neutral Soluble Salts of Cerium for Medicinal Purposes. The preparations of cerium have been found of value as a remedy for cases of severe vomiting, irrespective of cause. Mistura Cerii Composita (tonic, stomachic, and anti-dyspeptic). This preparation is stated to be made in accordance with the prescription of a most eminent physician, and it is found that the cerium and other sedatives are presented in a form which produces the highest beneficial action which the ingredients are capable of giving. Liquor Cerii (sedative tonic). This is largely used as producing the natural action of the cerium without the addition of any other remedy. Mackeys' Mist. Bismuthi Comp. (tonic digestive). A valuable remedy for indigestion, and any disorder of the stomach in pyrosis, and for infantile diarrhœa. New Soluble Transparent and Pearl-coated Pills. Compressed Tabellæ Oleiferum Eucalypti (antiseptic, disinfectant, rubefacient, for inhalation or spray). Glycerol Pepsinæ (Each 5) contains gr. ij of active pepsine.) Glycerol Pepsinæ cum Euonymin. The beneficial action of euonymin as a cholagogue, combined with the digestive properties of pepsine renders this preparation of great value in cases of indigestion, deficient secretion of bile and gastric juice. Glycerol Bismuth. c Pepsin, et Euonymin. The combination of bismuth with the above preparation has given good results in certain cases of dyspepsia. Glycerol Podophylli (Cathartic). Powerful stimulant of the liver and intestines. Miscible with acid and alkaline solutions, infusions, tinctures, etc. Mackeys' Chlorodyne. Medical properties: Anodyne, astringent antispasmodic, diaphoretic, sedative. A great remedy for diarrhœa, cholera, dysentery, spasms, palpitation, neuralgia, coughs, consumption, asthma, bronchitis, etc. Liquor Santal cum Copaiba, Cubebâ, et Buchu. This elegant preparation is miscible with water in any proportions. Mistura Cascaræ Sapradæ Comp. An elegant aperient, laxative, or cathartic remedy in the treatment of habitual constipation, liver complaints, indigestion, and dyspepsia.

The Maltine Manufacturing Company showed their Maltine, an extract of malted barley, malted wheat and malted oats, combining the highest diastasic activity with the phosphates, albuminoids, and carbohydrates that can be extracted from these three important cereals. Maltine is decidedly palatable; its convenient consistence is a feature that is greatly appreciated by patients. Maltine with Cod Liver Oil: In this preparation 30 per cent by volume of cod liver oil is intimately combined with maltine. It is now universally recognised by the medical profession as a most palatable and assimilable form of cod liver oil. Amongst other favourite maltine compounds may be noted Maltine with Pepsine and Pancreatine, Maltine with Cascara Sagrada, Maltine with Iron and Malto-Carrageen.

The Malto-Peptone Company (Works, Needham Market, Suffolk; and 101, Leadenhall Street, E.C.) exhibited their Malt Extract. It is prepared from fine diastasic malts specially made for the purpose, and contains the whole value of malted barley, not only a high percentage of its diastase, or digestive principle, but also the soluble nitrogenous matter and mineral salts contained in the malt rootlets, which is extracted from them by a special patented process, and designated malto-peptone. Malto-Peptone Malt Extract, and Cod-Liver Oil: This preparation is made by the addition of 25 per cent of the finest cod-liver oil, which is carefully blended with malto-peptone malt extract. Malto-Peptone Malt Extract Jelly: In an entirely new form malt extract will be found to be a very delicate sweetmeat rather than a pharmaceutical preparation. At the same time it will be found to contain all the valuable properties of the plain malto-peptone malt extract. Malto-Peptone Malt Extract Jelly with Cod Liver Oil, probably the most important of the Company's preparations. By cutting up the necessary dose, and swallowing it in small pieces, it will be found that hardly a trace of the flavour of the oil will be left on the palate. In this form cod liver oil is readily taken by children and invalids.

The Medical Supply Association (98, High Holborn, London, W.C.) had on show various patterns of Stands and the latest improvements in Abbé Condensers Iris Diaphragms and Objectives; a New Spaemer Dry-Cell Battery; New Method of Attaching Removable Aseptic Linings to Midwifery Bags; Latest Inventions for convenience of working Cautery Burners; Combined Reading Lamp, Eye and Throat Lamp; a New Pattern of Urine Testing Stand; Special Aseptic Sets of Eye Instruments; Aseptic Sets and Amputating Instruments; Latest Patterns in Artery Forceps; Compact Cases of Laryngoscopic, Nasal, and Ear Instruments; Murphy's Buttons for Intestinal Operations.

Mr. H. Nestle was exhibiting Nestle's Milk Food for Infants and Invalids, and Nestle's Swiss Condensed Milk. The Swiss Condensed Milk is made from the finest Alpine cows' milk, and in condensation nothing it is stated is taken away but water, while the only addition is some sugar to preserve it.

Messrs. Francis Newbery and Sons (1 and 3, King Edward Street, Newgate Street) showed Effervescing Salts of various kinds—namely, Bromo Soda, Bromo Lithia, Antalgic Saline, etc. Ingluvin, Tablets and Powder; Fluid Extract Coca and Cascara, Elixir Cascara, Elixir Salicylic Acid. Comp., Pil. Sumbul Co., Pil. Sumbul Aperientes, Pil. Cascara, Cathartic; Small Active Pills, Granules, Parvules, Hypodermic Lentiformes.

The Norwegian Milk Condensing Company, Limited (Christiania, Norway, and 5, Philpot Lane, E.C.) showed the "Viking" Brand Unsweetened Condensed Milk. This milk is condensed by a new process discovered by Dr Olav Olsen, of Christiania. It is prepared without the addition of sugar or any other substance whatever. It is guaranteed absolutely free from bacteria and the common milk fungus.

Messrs. Oppenheimer and Co. showed their Palatinoids, a useful form for the administration of medicine consisting of two convex discs of soluble jujube containing the purest drugs obtainable in the condition of powder or liquid without the addition of excipient unless the local effect of the medicament used would be either corrosive or extremely poisonous. Palatinoids are easily swallowed, accurate in dosage, and keep indefinitely. All drugs usually taken as powders, pills, or cachets, are supplied in this portable and elegant form. Palatinoids of Active Animal Substances: Thyroid Gland, equivalent to 5 grs of the fresh substance; Thymus Gland, equivalent to 5 grs. of the fresh substance; Suprarenal Capsules, equivalent to 5 grs of the fresh substance; Red Bone Medulla, equivalent to 5 grs of the fresh substance; Pituitary Body, 2 grs. in each. These easily decomposable substances, being preserved perfectly airtight in the jujube envelope, keep perfectly for an indefinite period; the dose can be accurately exhibited and the medication is free from every objection. Bipalatinoids: These are exactly similar in form to the Palatinoids. They contain two salts, which on admixture would suffer chemical decomposition. In the Bipalatinoid these are divided by a septum of jujube. When immersed in water or ingested, the contents are disturbed, and decomposition ensues. By this means the freshly-made Ferrous Carbonate, Ferrous Arsenate Ferrous Phosphate, and other easily oxidisable substances are rendered certain of absorption and assimilation. Palatinoids and Bipalatinoids were awarded the only gold medal at the International Congress of Medicine Rome, 1894. Bipalatinoids of Fehling's Sugar Test, and the Ferrocyanide Albumen Test afford a means for the medical practitioner to test a suspected fluid at the bedside. A Bipalatinoid is dropped into the fluid contained in the test tube—in the case of sugar the fluid should be boiled—when the characteristic reaction is quickly apparent, if even a small trace of sugar is contained in the fluid. The Albumen Test may be used either in cold or hot solution, and is a sure indicator of a minute trace of albumen. This test does not react with peptones. Soluble Hypodermics: These are tiny pills made without compression. They are immediately soluble in cold water without trituration, so obviating the necessity for using pestle and mortar with the Pocket Hypodermic Case. A Soluble Hypodermic may be dropped into water in the barrel of the O. S. and Co. Hypodermic Syringe; it quickly dissolves, making a perfectly clear solution. These Soluble Hypodermics contain no acid or irritating excipients. Improved Hypodermic Syringe, in incorrodible aluminium case, with platino-iridium needles. This instrument is the development of all the latest improvements in hypodermic syringes—incorrodible, light, durable, compact. The case is fitted to hold four tubes of soluble hypodermics; flexible leather cases in morocco; emergency cases for practitioners to carry a sufficient supply of soluble hypodermics or palatinoids in the pocket to meet any emergencies, night calls, etc. Their Solid Silver Hypodermic Cases are very handsome, portable, convenient, and inexpensive. Ergole contains all the active principles of ergot, excluding volatile principles that are dissipated in the course of preparation of the *B. P.* fluid extract or concentrated infusions. Concentrated Liquors for convenient, accurate and rapid dispensing; they are standardised preparations, perfectly miscible with water, and prepared with the purest drugs obtainable. Cream of Malt: This extract is prepared by a special process; it is especially rich in diastase, and is a perfect food for brain, muscle, and bone. Cream of Malt with Cod-liver Oil: This consists of the purest cold drawn cod-liver oil dissolved in the creamy malt, which can be taken by the most fastidious, is perfectly absorbed, does not excite nausea. Cream of Malt, Cod-liver Oil and Hypophosphites is exactly the same as the foregoing, with the addition of a medium dose of the hypophosphites, lime, soda and potash. Several combinations of active substances with Cream of Malt were also exhibited. Pepsin, for which it is claimed that it does not contain any mucous peptone, or added inert matter, is perfectly soluble in cold water, and remarkably active; it is supplied in three strengths: 1 gr. to digest 2,000 grs. of coagulated egg albumen; 1 to digest 3,000 grs., and 1 to digest 6,000 grs. when submitted to the *B. P.* test for pepsin. The Globe Nebuliser and Nebulising Solutions completely atomise oily and aqueous solutions, so that the vapour can be thoroughly inhaled up the nostrils into the Eustachian tubes and pulmonary organs. It is simple in construction and manipulation, so that the most ignorant patient can employ it without difficulty. All the active substances usually employed for inhalation, such as balsams, oils, aqueous and alcoholic solutions, may be thoroughly inhaled. Fluid Petrolatum: This is a bland, non-irritating colourless, and odourless petroleum oil, and is specially adapted as a solvent for balsams, stereoptenes, and essential oils.

Messrs. Parke, Davis and Co. (21, North Audley Street, London, W.) exhibited Standard Fluid Extracts, in 4 8, and 16 fluid ounce bottles. Fluid Extract Cascara Sagrada, as first introduced by them. Normal Liquids, a class of fluid preparations introduced by them. 1 c.cm. of each said to be equivalent to 1 gramme of drug of standard strength. Solid Extract, extracts from drugs of determinable strength are accurately regulated by assay, and adjusted to a uniform standard. Powdered Extracts. Sugar-Coated and Gelatine-Coated Pills: These pills are coated by a method avoiding the application of any degree of heat which could impair their efficacy. Enteric Pills coated so as to pass the stomach intact, and dissolve in the duodenum and intestinal tract. Pink Granules, sugar coated; these granules are intended to supply the needs of physicians in cases requiring minute or frequently repeated doses. Ophthalmic Tablets: these tablets dissolve readily in distilled water, and hence can be employed for the extemporaneous preparations of solutions. Hypodermic Tablets: the materials are said to be non-irritating in character, and each tablet contains precisely the quantity of medicament stated on the label. The tablets are soluble, disintegrating in water almost instantly, and in a few seconds making a limpid solution. A Newly Improved Hypodermic Case, made of pure aluminium, light, compact, convenient shape, and will not tarnish. Medicinal Elixirs, Wines, and Syrups designed to present medicines in a form agreeable to the palate. Soluble Gelatine Capsules, Filled, prepared from the finest gelatine by improved processes and apparatus, very soluble and easy to swallow. Medicated Lozenges supplied in any formula, shape, colour, or flavour to order. Oleates, a normal or undiluted chemical combination. Semple's Atomising Inhaler provides a constant supply of vapour in a reservoir and secures the topical effects of medicated vapour on the respiratory tract. Inhalants for Use in Atomising Inhalers. Tablet Triturates. Tablet Triturate Cases: their tablet triturate cases contain various assortments of tablets. Compressed Tablets. Taka Diastase an isolated ferment in concentrated form for the treatment of amylaceous dyspepsia. Their Digestive Ferments exhibit included Pepsin Aseptic, ranging in strength from 1 1,000 to 1 15,000; Saccharated Pepsin, *U.S.P.*; Glycerole of Pepsin, Concentrated; Pepsin Cordial; Lactated Pepsin; Elixir Lactated Pepsin; Sugar-coated Pepsin Tablets; Lime Juice and Pepsin; Liquid Pancreatin, Concentrated; Saccharated Pancreatin; Peptonising Tablets, Improved; Digestive Tablets; Pure Pancreatin, Rennin, a milk curdling ferment, distinct from but associated with pepsin in gastric juice. Medicinal Specialities and Requisites: Iodoform Bougies (Gelatine-coated), Empty Oval Gelatin Capsules (Improved) Empty Rectal Suppository Capsules (Improved) Chloranodyne, Liquor Sedans, Nasal Tablets Nuclein, Antiseptic Tablets, Syrup Hematic Hypophosphites, Nutrient Suppositories Glycerine Suppositories, Syrup Trifolium Compound, etc. Physician's Pocket Reagent Case fitted. Antidiphtheritic Serum; this serum is prepared in their bacteriological laboratory. Its strength has been determined by Behring's method, and every precaution has been taken to ensure its sterility. Culture Media (Sterilised) for pure cultures of bacteria. Peptin, the ferruginous element of food. Lactopeptin; Antipyretic, antineuralgic, analgesic, stated to be useful in typhoid fever.

The Peat Industries Syndicate, Limited, exhibited a variety of articles manufactured from Peat Fibre, the value of which is based on its peculiar properties which are now becoming so well known, as an absorbent, deodoriser, and natural antiseptic. The article which is perhaps of most interest to the medical profession is Peat Wool for Surgical Dressing, for which the following advantages are claimed.

Greater powers of absorption than any other material (being capable of absorbing nine or ten times its own weight of liquid). Durability: Owing to the great absorbing power and the fact that its operation is very gradual, the dressing can remain much longer on the wound than the ordinary kinds. Power of resisting putrefaction and fermentation. Permeability, that is, the discharges become diffused throughout the dressing instead of "coming through" at one spot. Its remarkable deodorising power. Its cheapness—an important point, especially in hospital practice. Great stress has been laid on these advantages by Continental surgeons who have used the peat wool. The peat wool is also used for making absorbent sheets for accouchement, etc., and for sanitary towelettes for ladies. For the latter purpose the absorbency and the freedom from odour of the peat, combined with its power of destroying all other odours, can scarcely be overestimated. There are also exhibited Rugs and Blanketing Materials woven from peat fibre, the value of which rests on the same properties as that of the surgical dressing and on the fact that insects will not live in peat. Peat powder, a bye-product, is a natural antiseptic and deodorant, which is largely used in dry systems of excreta removal. It is also made a most powerful disinfectant by chemical treatment.

Mr. Young J. Pentland showed Dr. Radcliffe Crocker's *Atlas of Skin Diseases*; specimens of a new *Atlas of the Fungus Oculi*, which is being prepared from original drawings belonging to Mr. Adams Frost, F.R.C.S.; and a selection of Coloured Plates, which are used in the illustration of the publications which he issues.

The Peptenzyme Company (25, Alfred Place West, London, S.W.) exhibited Reed and Carnrick's Peptenzyme, said to present in functional physiological activity all the digestive agents of the animal economy, stomach, pancreas, spleen, salivary and Brunner's glands, and Lieberkuhn's follicles and free nuclein, the tissue builder of the organism. These glands are extracted mechanically without the use of acids or chemicals.

Price's Patent Candle Company, Limited (Battersea) showed their Pure Glycerine, as introduced by the Company in 1855. Price's Sanitary Soaps: Glycerine and Carbolic Acid, Glycerine and Coal Tar, Glycerine and Eucalyptol, Glycerine and Salicylic Acid, Glycerine and Thymol. These glycerine sanitary soaps are prepared from the purest materials, and besides containing those antiseptics which experience has shown to be efficient, contain also a sufficient quantity of glycerine to render them highly emollient. Price's Solidified Glycerine Soap: The transparency of this soap is due to the large proportion of glycerine present. Price's Nursery Soap ("Bonne Mere"): Specially prepared for use in bathing infants. Price's Palmitine Bath Soap; Price's Glycerine Cream Soap. Price's New Patent Night Lights: These lights have steadily grown in favour since they were introduced in 1855. Price's Royal Castle Paraffin Night Lights: These have been introduced in order to utilise the valuable light-giving properties of paraffin wax.

The Redman Publishing Company exhibited Medical, Surgical and Hygienic books; among them the following deserve special mention:—Pepper, *System of Medicine*; Starr, *Diseases of Children*; Baldy, *Gynecology*; Keen and White, *Surgery*; Warren, *Surgical Pathology*; Vierordt, *Medical Diagnosis*; Hamilton and Godkin, *Legal Medicine*; *Sajous' Annual*; Moore, *Meteorology*; Robinson and Cribb, *Food and Drugs*; *Atlas of Skin Diseases* (St. Louis Hospital, Paris); Norris, *Obstetrics*; Keating, *Life Insurance*. Pure Animal Lymph in tubes. Vaccine cream in flacons. For this it is claimed that it has unequalled stability. The flacons are strong, neat and elegant, easily carried about, easy to open and close, and practical in every regard. An interesting exhibit of Pathological Preparations (models) of the Throat and Tongue made by Dr. Paul Berliner, of Berlin under the direct supervision and guidance of Professor Virchow. *Inter alia* there are: (*a*) Larynx with polypoid growth just below left vocal cord. (*b*) Phthisis of larynx, ulcerations of epiglottis, œdema of left vocal cord, etc. (*c*) Laryngitis and tracheitis ulcerosa tuberculosa, etc. (*d*) Tuberculous ulcerations of larynx. (*e*) Larynx showing miliary tuberculosis. (*f*) Destructions caused by lupus. These models are well executed and true to Nature.

Messrs. Alexander Riddle and Co., (36 and 38, Commercial Street, E.) were present, showing Stower's Lime Juice Cordial, an excellent table drink. It is used for rheumatism, gout, eczema, pneumonia, and all fever and inflammatory cases. Stower's Clarified Lemon Squash, a more recent production, and one that may not contain all the therapeutical properties of the lime, is still a very refreshing beverage. It is most carefully manufactured from the juice of Messina lemons and pure cane sugar.

Messrs. J. Robertson and Co.'s (Edinburgh) exhibit consisted of Acidified Perchloride of Mercury Pellets for the immediate formation of an antiseptic solution by dissolving in water. Flexible Gelatine Capsules: They call special attention to the Bland's Capsules. They are the only ones which contain the ingredients in an uncombined state, so that the ferrous carbonate is formed in a nascent condition after administration; also capsules of sulphonal, cascara, cascara and euonymin, and nux vomica, guaiacol, guaiacol carbonate, hypophosph. co., paraldehyde, and numerous others. This firm also exhibit Fluid Extract and medicinal syrups; also gelatine perles of chloroform, creasote, ichthyol, guaiacol, apiol, etc. Syrup Hydrodate co. is a special preparation introduced by them.

Messrs. Robinson and Sons, Limited (Wheathridge Mills, Chesterfield, and 55, Fann Street, Aldergate Street, E.C.), were showing a selection of Antiseptic and Absorbent Surgical Dressings. This exhibit includes the various qualities of cotton lints, among which may be mentioned their XA Lint suitable, both on account of its quality and price, for hospital use. Better qualities are their brands marked S.O. XSS, and I. The bandages shown are of four qualities, namely, open woven grey, fine grey calico, fine white water dressing, and strong white water dressing. Seven grades of Corded Cotton Wool, varying in their absorptive power, are shown, also their "Extra Super" Absorbent Wool. All these various dressings as well as absorbent gauzes are shown medicated with the various antiseptics used in the Listerian system of antiseptic surgery. A notable feature is their cases of aseptic dressings, including gauzes, wool, and sponges. One of the most recent additions to surgical dressings is here shown, namely, Cellulose Wadding, a patented article, for which this firm is the sole manufacturer. This dressing is manufactured from pure white pitch pine fibre. They also showed a Bandage Shoot, and a "Non Runaway" Bandage.

J. M. Richards (46, Holborn Viaduct, London) exhibited Lactopeptine Tablets. Lactopeptine is now prepared in tablet form, each tablet containing 5 grains. The dose, therefore, is easily regulated. The tablets are small, soluble, and agreeable in flavour. Lactopeptine Powder, which is as a mixture of digestives fully up to date.

Messrs. Salamon and Co. (Rainham) exhibited their purest Chloroform in 1lb. and ½lb. blue bottles, and their Absolute Ether Purissimum, 720 Lotos (trade mark) in 1lb. and ½lb. white bottles. Both articles are specially manufactured for anæsthetical and medicinal purposes.

The Sanitary Wood Wool Company, Limited (Chavies Inn, London) showed Hartmann's Patent Wood Wool Wadding, which is thoroughly antiseptic, gives perfect drainage, does not heat, absorbs discharges of every description. Over 200,000 lbs. is said to be sold annually. It is adopted in some 200 hospitals. Hartmann's Patent Wood Wool Tissue, in a continuous roll, consisting of a layer of Hartmann's Patent Wood Wool Wadding between two pieces of sublimate gauze, possessing all the advantages of the wadding, with the advantage that any size pad can be cut off with the scissors. Hartmann's Sanitary Wood Wool Sheets, made in three sizes, at 1s., 1s. 6d., and 2s. 6d. These sheets are made of Hartmann's Patent Wood Wool Wadding; they are perfectly antiseptic. In accouchement a large sheet is laid under the patient; it absorbs the discharge and is simply burnt after use, risk of puerperal fever greatly lessened, and comfort and cleanliness ensured. These sheets are also used for bedsores, operations, etc. Hartmann's Hygienic Wood Wool Towelettes, for menstruation, and a special make for accouchement. They are comfortable and healthy; they are soft and antiseptic. The risk of infection is avoided. After use they are simply burnt. Hartmann's Towelettes are made chiefly of pure pine, and are antiseptic and soft. Hartmann's Complete Guinea Outfit for Accouchement; also

a smaller Outfit for 10s. 6d. The complete set contains all the necessary Hartmann's sanitary wood wool sheets and towelettes, macintosh, binder, safety pins, fuller's earth, oiled silk thread, antiseptic ointment, etc. It affords great cleanliness, and diminishes the risk of puerperal fever. Hartmann's Patent Wood Wool Vaccination Pads. The following advantages are claimed for this protector: It protects the arm from external violence; it absorbs all discharges and reduces the risk of septic absorption and blood poisoning. It cannot be used a second time like ordinary "shields," which it is too often the dangerous practice to use again and again. Lastly, and not its least advantage, is its cheapness. Hartmann's Sanitary Wood Wool Gonorrhœa Bags: They absorb the discharge and avoid soiling the clothes. Hartmann's Patent Method of Packing Sterilised Dressings, as applied to all wood wool manufactures, as well as cotton wools and gauzes. By this patent method the difficulty of obtaining an "aseptic" dressing at a cheap price is overcome. The dressings are packed in tubes of thick parchment, a plug of cotton wool is inserted at each end, and steam above 100° is passed through the tubes, and the ends are then drawn up tightly over the cotton-wool plugs, leaving the dressings sterile until required for use. These packets are portable and possess many advantages over the former expensive methods of packing sterilised dressings in glass jars and tins. Hartmann's Catgut put up in juniper oil and preserved in alcohol absolute; also supplied in a raw state for treatment by surgeons themselves. Hartmann's Absorbent Wood Wool Sponges for abdominal operations, put up in three sizes in antiseptic and sterilised forms.

The exhibit of the Sanitas Company, Limited (Bethnal Green, London, E.), includes Sanitary Disinfecting Fluid for general disinfecting purposes, spraying (oxygenating) the air, gargling sore throats, washing wounds and linen, for use in the bath, and for tender feet. Sea-Water Fluid, a deliquescent disinfecting agent. Pump Spray and Bellows Sprays for distributing the fluids. Disinfecting Oil for fumigating sick rooms, etc., and for inhalations in cases of bronchitis, lung and throat affections; also for treatment of ringworm and rheumatism. Soluble Oil, a preparation of Sanitas Oil made miscible with water for disinfecting purposes. Inhalers and Sanitas Pocket Inhalers for dry inhalations in cases of lung and throat affections. Disinfecting Fumigator and Bronchitis Kettle for moist inhalations in cases of lung and throat affections. Disinfectors for the automatic and continuous purification of the air of watercloseta, rooms, etc. Eucalyptus Disinfectors for the automatic and continuous purification of the air of watercloseta, rooms, etc. Eucalyptus Disinfectors (reservoir pattern) for the automatic and continuous purification of the air of watercloseta, rooms, etc. Eucalyptus Soap. Eucalyptus Oil for the automatic and continuous purification of the air of watercloseta, rooms, etc. Disinfecting Emulsion and Sanitas Crude Disinfecting Fluid for drains, sewers, cisterns, bilge water, street watering, and general outdoor use. Disinfecting Powder for urinals, sewer mud, ashbins, earth closets, stables and kennels, farmyard sweepings, etc. Sanitas Air Purifier and Sawdust for the disinfection of kennels stables, poultry runs, rabbit hutches, cattle sheds, birdcages, etc. Lastemper for whitening and disinfecting walls, ceilings, etc. Disinfecting Soaps. Disinfecting Jelly for dressing wounds, burns, and sores. Sanitas Antiseptic Cream for use on the skin during desquamation, and for perspiring feet, wounds, burns, and stings. Toilet paper, soluble and medicated. Furniture Paste, a household disinfectant. Antiseptic Gauze, a dressing for surgeons' use. Absorbent Wool for hospital use. Pocket Disinfectant, specially recommended for clergymen, children, and all who visit sick rooms. Kingzett's Patent Mercuric Bactericide. Kingzett's Patent Preserved Peroxide of Hydrogen. Kingzett's Patent Sulphur Fumigating Candles for disinfecting sick rooms and hospital wards, etc. Kingzett's Patent Sulphurators for the fumigation of kennels, stables, fowl houses, pigeon lofts, and rabbit hutches, etc.

Mr. Julius O. Sankey (Oxford) exhibited a working model of an Invalid's Bed, with reading-stand, table, candle, and light-shade, which he has invented; this bed can be put at any incline, or raised and lowered as required for operating or nursing, by means of a screw at either end.

Messrs. Savory and Moore show, amongst other well-known preparations, their Best Food for Infants, which was introduced more than thirty years ago, and, in spite of imitations, still gains in favour with the medical profession. A very useful variety of this food which they also show is made with whole meal, in accordance with the suggestion of a well-known authority on infants' feeding. They also show their Pancreatic Emulsion, which as a fat food is certainly not sufficiently known or used by the medical profession. Their Peptonised Condensed Milk and Cocoa Milk also deserve notice. Peptones in various forms; Pepsine, Pancreatine, and their respective preparations, for which the firm is justly so well known; Gelatine Lamellæ, for internal, hypodermic, and ophthalmic use; and various other useful and elegant preparations are exhibited in great variety, and the whole forms a compact and interesting collection.

Mr. K. Schall, of 55, Wigmore Street, had a very large collection of Coils, dry and liquid Continuous Current Batteries, Electrodes, and Instruments and Batteries for Light and Cautery. Amongst the novelties we notice the following things: Spamer Coils, provided with Obach dry cells (instead of the usual acid cells), working the coils for about seventy hours altogether before requiring to be renewed. A new Sledge Coil, suggested by Dr. Lewis Jones, worked by a large dry cell. A Board, with resistance, etc., for utilising the 100-volt continuous current for galvanisation, electrolysis, and faradisation. A large Wimsburst Machine in glass house, with four plates, giving sparks of about 7 inches. A cheap Transformer, for utilising the alternating current supplied for lighting houses, for cautery and small surgical lamps. A Rheostat for the same purpose, for use in connection with continuous current installations. An Arc Lamp, with lenses, on a stand, for laryngoscopic examinations. A Focus Lamp, with bull's eye and ground glass plates for laryngoscopic or ophthalmoscopic purposes. A Powerful Motor, with trephines, saws, etc., for surgical purposes. A cheap and very efficient Centrifugal machine, for separating blood, milk, urine, etc., working efficiently without the aid of a motor. An Ophthalmometer, provided with electric lamps behind the transparent glass windows, and giving surprisingly clear and sharp pictures on the eye of the patient.

The Scientific Press, Limited (428, Strand, W.C.), showed a number of their publications. Upon their stall were to be found a number of interesting medical works and manuals for students and nurses. Amongst the former were the well-known reports of the Johns Hopkins Hospital Medical School of Baltimore. The high-class publications of the W. T. Keener Co., of Chicago, were also a source of attraction. For both these series of publications the Scientific Press are the sole agents in the United Kingdom. Amongst their own publications we notice Dr. Withington's interesting *Medical History from the Earliest Times*, Dr. Ogilvie Will's *Genito-Urinary Diseases*; *Surgical Ward-Work*, by Dr. Miles; a new handbook on *Midwifery*, by Dr. Francis Haultain; *Ophthalmic Nursing*, by Dr. Sydney Stephenson; Dr. Percy Lewis's *Theory and Practice of Nursing*; *Mental Nursing*, by Dr. William Harding; *Insanity*, by Dr. Francis Walmsley, etc. A work which is sure to attract attraction is Mr. Henry C. Burdett's work on *The Hospitals and Asylums of the World*. They showed also a series of account books specially designed by Mr. Henry C. Burdett, for use by the secretaries and managers of hospitals and institutions. These books are ruled in accordance with the uniform system for keeping institutional accounts as adopted by the Metropolitan Hospital Sunday Fund. The same author's *Helps in Sickness and to Health* and *Hospital and Charities Annual*, now in its sixth year of publication, and generally recognised as the standard work on the subject. The many works on diet, both for adults and infants, massage, nursing, the duties of hospital sisters, etc., are well worth a notice. *The Hospital* and *Science Progress* were also shown.

Mr. H. Silverlock (92, Blackfriars Road, London, S.E., and 70, Knightrider Street, E.C.) exhibited his Medical Practitioners' Visiting Lists for 1896. The General Practitioners' Visiting List, Journal, Almanack, and Memorandum Book for 1896; by C. M. Kempe, M.R.C.S. and L.S.A. Medical Label Cases. Prescription Books. Silverlock's System of Medical Book-keeping. Dr. Hardwicke's System of Medical Book-keeping. Silverlock's Medical Practitioners' Ledger.

Silverlock's Obstetric Register, or Case Book; suggested by Matthew Hamilton Taylor, M.D. Silverlock's Midwifery Record Book. The Dispensing List and Calendar, as suggested by Robert Jalland, L.R.C.P. The Repeat List; E. T. Aydon Smith, L.S.A. Medicine Bottle Cases. Diet Cards for the Consulting Room. Diagrams for Clinical Use in Hospitals.

The Society of Anæsthetists had an Exhibition and Demonstration of the various Appliances employed in connection with the Administration of Anæsthetics.

The Society of Medical Phonographers had on show the Publications of the Society, and Examples of the Use of Shorthand.

Nothing says the *Chemist and Druggist*, in the Exhibition itself was equal in style to the "side shows" if it is permissible to so allude to the very stylish and costly undertakings of Messrs. Oppenheimer, Sons and Co. (Limited), and of Messrs. Hertz and Collingwood in the Savoy Hotel next door. We describe the former exhibition elsewhere. Messrs. Hertz and Collingwood's was of quite a different character. Special invitations were issued to the principal doctors attending the meeting to visit the "Princess Ida" rooms for the purpose of tasting the Laurent Perrier's champagnes. The rooms were some of the choicest in the hotel, on the first floor, with a balcony attached overlooking the Thames Embankment. Elegant luncheons were provided, and with these the Laurent Perrier "Sans sucre" champagne was served. Samples of the Laurent Perrier "Coca-tonic" champagne, and of the firm's new wine, "Jerezcona"—a fine old sherry, with which is combined an extract of cinchona—were also offered. Specimens of Jensen's cod-liver oil and of the Levico and Franz Josef waters were shown in a glass case. Some hundreds of leading medical men were entertained in this manner by Messrs. Hertz and Collingwood.

THE CHOLERA TRAFFIC TO MECCA.

At a meeting of the Supreme Legislative Council of India held at Simla on July 11th Sir Alexander Mackenzie made a long speech in introducing the Bill to make better provision for the regulation of pilgrim ships, explaining that the Secretary of State had given orders for the revised regulations being brought into force before the pilgrim season of 1895-96, hence the Bill must come into force from October 1st next and the question could not be left over for discussion by the Select Committee now. Dealing with the Indian Merchant Shipping Bill, the mover, in referring to the question of cholera being introduced into Europe, said: "I think I am correct in saying that there is no well authenticated instance on record of cholera having been imported into Europe or Egypt from India by sea." Sir A. Mackenzie having given an interesting epitome of the details of conferences hitherto held on the subject of special regulations for the pilgrim traffic, stated that the following were the chief changes in the law which the recent conference at Paris renders necessary: (1) In future every vessel embarking pilgrims for the Hedjaz will be treated as a pilgrim ship provided only that no ship carrying passengers other than pilgrims of the lowest class and having on board pilgrims of the lowest class in a less proportion than one pilgrim for every ten tons will be deemed a pilgrim ship. (2) The captain must give three days' notice of his time of sailing instead of twenty four hours' as at present. (3) Her Majesty's Government have hinted to the French Government that the minimum standard of one and a-half square metre, namely, sixteen square feet, will be prescribed on all Indian ships for every pilgrim of whatever age. This will add to the cost of passage for pilgrims. (4) The Convention provides that an upper deck shall be reserved for the use of pilgrims and kept clear of encumbrances, and that hospital accommodation at the rate of 32 square feet for 5 per cent. of the pilgrims is provided. The Bill also provides for medical inspection before embarkation. (5) The captain of a pilgrim ship is bound to pay the whole amount of sanitary taxes levied by the Turkish Government, which adds to the cost of the passage ticket. A suggestion has been made that needy pilgrims be excused this impost, and it is hoped it will be accepted by the Porte. (6) A second medical officer is to be appointed on a ship carrying over 1,000 passengers. The seventh provision introduced omitting the rule compelling ships to call at Aden on the return journey. Sir A. Mackenzie concluded by stating that the Government of India will lose no opportunity of safeguarding the interests of its Mohammedan subjects. The Bill has been referred to a Select Committee with instructions to report after one month. The recent meetings of Mohammedans held in Calcutta and Hyderabad to hear addresses from Mr. Ernest Hart have dealt with the further important questions of sanitation of the Hedjaz.

THE BRITISH INSTITUTE OF PUBLIC HEALTH.

The annual Congress of the British Institute of Public Health met on August 5th at Rymer's College, Hull, under the presidency of the Mayor, Alderman Richardson, who was supported on the platform by Alderman Frazer (Chairman of the Hull Sanitary Committee), Sir C. Cameron, Sir H. D. Littlejohn, Professor W. H. Smith, Sir A. K. Rollit, M.P., and the mayors of several provincial towns.

In welcoming the members the Mayor of Hull said that much time, thought and money had been expended on sanitary matters in that town. In 1847 the population was 70,000 and the death-rate was then 31 per 1,000, whereas last year the population had increased to 216,000, while the death-rate had fallen to 15·9.

The Sheriff of Hull drew attention to the expenditure they had had to undertake in the provision of hospital ships and in other measures with the object of preventing the incursions of cholera. Much of the benefit of these measures was reaped by inland towns, which were thus protected from the disease, and he thought the expense to which they had been put should become a national charge.

The Mayor of Folkestone said his borough also had been put to considerable expense in regard to the Continental traffic, and he trusted that the Government would be induced to make the charge a national one.

The Mayor of Bakewell also spoke in the same strain.

On August 6th an address was delivered by Sir A. K. Rollit, M.P., who urged the desirability of a very considerable extension of the principle of local government. Every effort should be made to relieve the congestion of work in Parliament and to remit local affairs to local authorities subject to the minimum of central control.

Surgeon-Lieutenant-Colonel Fripgle opened a discussion on cholera and speaking of the port expenses said that the local port authorities should no more be called upon to pay the expense of keeping out the cholera than they should be called on to support the gunboats that guard our shores.

On Saturday the members proceeded to Scarborough, where they were entertained at dinner by Mr. C. H. Wilson, M.P. for West Hull.

On August 12th a discussion was held on municipal abattoirs and meat inspection, in the course of which Sir H. D. Littlejohn said that in Edinburgh private slaughterhouses had been abolished for nearly 100 years, and not only were the public benefited but the butchers also, the facilities offered enabling them to carry on their business at a cheaper rate than in private slaughter-houses.

The provision of facilities for cremation by urban authorities was also discussed, Dr. Holden, of Hull, stating that a motion had been carried in the Hull Town Council in favour of providing a crematorium and that a site had been already arranged for the purpose. Dust and refuse disposal and the water carriage of sewage were also among the subjects discussed.

Professor Smith, in opening a discussion on the influence of schools upon diphtheria, expressed the opinion that if Board Schools had been the cause, or one of the causes, of the spread of diphtheria such increase would have taken place over the whole of the country, which had not been the case.

The proceedings of the Congress terminated on August 13th. Various resolutions and votes of thanks were passed, a special compliment being paid to Dr. Mason, the Honorary Secretary of the Reception Committee, for his indefatigable zeal in furthering the success of the meeting.

A census of centenarians has been taken in France, and the results which have been published, show that there are now alive in that country 213 persons who are over 100 years old. Of these, 147 are women.

British Medical Journal.

SATURDAY, AUGUST 17TH, 1895.

THE EAST LONDON WATER FAMINE.

THE citizens of London have been startled by the appearance of a fresh danger within their walls. Those who dwell inside the large area supplied by the East London Water Company, no fewer than 1,193,000 persons, have been for the last four weeks in the grip of a partial water famine. Their constant service has been replaced by an intermittent supply lasting for a few hours only each day, and meted out at uncertain intervals. Many of these East End householders are away at work for the greater part of the day, and owing to that absence are practically deprived of water for ordinary domestic purposes. They are thus put to the utmost inconvenience, and unfortunately the mischief does not end there. As in most modern towns, their system of sewage removal is by water carriage, so that absence of water means absence of removal of sewage, or in other words, choked closets, urinals, drains, and sewers. If this state of affairs be allowed to continue it is clear that the health of the East End, and indirectly that of Greater London, must inevitably suffer, for in a matter of this kind it is impossible to deal with the one apart from the other. At the present moment East London is furnishing the whole country with a valuable and suggestive object lesson.

The year 1895 will long be marked with a black letter in the annals of the East London Water Company. The supply has been twice curtailed, first in consequence of a severe frost, and secondly as the result of prolonged drought. Of the two the summer failure is likely to be far the more serious, chiefly on account of temperature conditions and the general prevalence of zymotic disease, especially in poor and crowded localities. Already the East End death-rate has risen and there has been a marked increase in the diarrhœa mortality. In a case of this kind it is difficult or, indeed, impossible to obtain proof of the direct causation of disease by a curtailed water supply. The general truth can be arrived at only by a careful analysis of the facts and figures of East London mortality before, during, and after the period of water scarcity and by comparing these returns with previous and coexisting averages in surrounding districts. Diarrhœa, for instance, has increased in other parts of the metropolis where there is plenty of water. It will be a matter of time and patience to calculate fairly how many deaths from that particular malady would have been prevented had the East London Water Company not failed in its supply. This and kindred points, however, will no doubt form the object of searching official inquiry, which will eventually add a valuable chapter to the history of practical sanitation in this country.

The effect of such a state of things as has just been described, both upon the convenience of working-class families and upon domestic sanitation generally may easily be imagined. The populations have been complaining bitterly, but they are practically helpless. There is no cheap and summary means of redress, although the permanence of the supply is supposed to be secured by Act of Parliament; and the Company, in answer to all remonstrances, calmly put down the whole difficulty in the first place to the drought, and in the second place to the wickedness of the County Council.

So far as we are concerned, it is not so important to consider what was the original cause of the difficulty as it is to discover by what means it may be ended before it breeds an epidemic, and how its recurrence may be avoided in future. The statistics of the Metropolitan Asylums Board make it sufficiently clear that the curve of zymotic disease is rising rapidly. A period of hot days may at any moment accentuate the mischief, and there is no certainty that the rains we have had will not fail us again for another period of dry weeks. Yet the company seem to be "trusting to luck," for up to the present we do not hear that they have taken any immediate effective steps to remedy this glaring public mischief, or that anyone has discovered a means by which they may be effectively compelled to supply a better service.

It is perfectly clear, however, that there are various ways by which a better service could at once have been or could now be obtained, if sufficient pressure were brought to bear. We believe that the arrangements between the East London Water Company and the New River Company are of such a character that the East London Company could, at a slight pecuniary sacrifice, obtain a large addition to their actual supply by arrangement with their more powerful neighbour.

Then there is the question of the supply of water by meter to the sanitary authorities on the one hand, and to business customers on the other. In the latest available report issued by the Local Government Board, it appears that the East London Company have been selling by meter no less than 23 per cent. of the total water which they obtain. We do not hesitate to say that this state of things is scandalous.

Those for whom the domestic supply is intended have undoubtedly, both in law and in every other sense, a paramount claim. They, moreover, have perforce to pay their water rates, whether they get anything to drink or not. The customers who receive their supply by meter naturally will not pay if they do not get the commodity they pay for, but as far as compulsion is concerned, it is obvious that they could not compel a water company to supply their needs in preference to the necessities of the domestic constant supply.

We are glad to hear that steps are already being taken by some of the sanitary authorities to obtain water for flushing their sewers and for watering their streets from other sources than the East London Company. The project of

bringing sea water to London for such purposes has been seriously pressed in many quarters, and we hope an effort will be made to carry it out on a sufficiently large scale. It is nothing less than monstrous that, when the supply of London drinking water is so inadequate, it should gratuitously be made worse by using a large proportion of the stock for purposes for which, however necessary they are in themselves, other water supplies would do as well.

Mr. Binnie, however, as the engineer of the London County Council, has recently been asked to report upon the situation, and he has made a most remarkable suggestion, in which, it seems to us, there is in all probability great truth. He declares, upon the Company's own figures, that they have been drawing during the recent months a relatively enormous quantity of water, and that it is plain that a large proportion of the water they have obtained cannot have reached their consumers at all. They have, in fact, drained the Lee dangerously low, and yet East London can get no reasonable supply for their taps. His inference is that there is evidently some new cause of waste as compared with previous years, and that the only possible explanation of this phenomenon is that the Company's mains were cracked and damaged by the great frost in a large number of places, where they have calmly been left unrepaired. The result is that the water, which it is of vital consequence to deliver to the poverty-stricken populations of East London, is leaking away unheeded underground.

The Company themselves unconsciously confirmed this theory, before it was made public, by alleging, as an explanation of the bad quality of some of their water, that impurities must have found their way into it by cracks in their mains, after it had left the filter beds. All we can say is that if it should be proved that a company charged with so vital a public duty and handsomely paid for the service, has brought on a water famine by neglecting to repair its own pipes, there is no available punishment which would be adequate to the offence.

As to the Company's constant cry that the whole difficulty would never have arisen if the County Council had not opposed their Bill for additional capital in the session of 1893, it is, to those who are acquainted with the facts, a very idle and audacious excuse. The recently published County Council documents set out very clearly what was the real point of the discussion in Parliament, and make it sufficiently plain that the Company might have had, even in 1893, any powers that were really necessary for an efficient supply; but that they preferred to endeavour to steal a march upon the community by getting a Bill rushed through the House which would have enormously increased the purchase price to be paid for their undertaking if it were ultimately resolved that it ought to be purchased by the community. This proceeding was opposed by the County Council in 1893, and upon the full consideration of the Bill in 1894 the necessary amendments were inserted by the House of Commons Committee before they passed the Bill.

These quarrels, however, are of little interest and less consequence to the people who are suffering from drought, and who are threatened with disease. It is the duty of all who are interested in the public health to see that instant steps are taken to compel the Company to return to a constant supply of pure water, even if the necessary cost of doing so should mean a slight reduction in their next dividend.

We ought to add that with the occurrence of each new rainfall the unfortunate consumers are threatened with a fresh danger from a different cause. The East London Company and all the other companies, except the Kent, are almost certain to open their intakes greedily to every new rush of flood water which a day's rain may produce in the hope of replenishing their deficient supply. The result of this may easily be more disastrous than any mere lack of water. It is now perfectly well known by the more accurate bacteriological tests that the scouring water which comes down the Thames and the Lee at the first onset of any rainfall is not only itself heavily charged with organisms, but is dangerously impure from the point of view of organic contamination, even after it has run through such filtrations as the companies provide. If the East London Company serves out such water to its customers to relieve them from the recent dearth, the cure may be worse than the disease.

SMALL-POX AT THE EAST-END OF LONDON.

THE recent increase in the number of cases of small-pox occurring in London, more particularly in the East-End of London, has been the occasion for the expression of a variety of opinions. The extent to which the vagrant class has been affected, and the frequent occurrence of cases in which infection appears to have been spread by the inmates of Salvation Army shelters, has directed particular attention to the need for placing these institutions under sanitary supervision.

It has been decided in the courts of law that the Common Lodging House Acts do not apply to refuges conducted on philanthropic principles; and hence while regulations as to cleanliness and the provisions of cubic air space are enforced in the places frequented by the "fourpenny dosser," no similar system of inspection is carried out in the case of the shelters resorted to by members of the vagrant class who cannot afford fourpence for a night's lodging.

Altogether apart, however, from the question of dissemination of disease by infected individuals, who may be compared to the sparks which serve to spread the fire, there remain to be considered the quality of the material attacked, and any special circumstances which may have influence as affecting its fitness or unfitness for promoting a blaze.

In relation to this it is not possible to attach much importance to the suggestion which has been made that the prolonged dry weather of the early summer has been responsible for the mischief. A drought may affect health in many ways, but it is not at all clear how it could in any way directly influence the spread of small-pox. Moreover the favourite season of prevalence of the disease is the spring, and outbreaks usually manifest a tendency to decline during the summer months.

A consideration of no little importance is, however, the growing percentage of children not accounted for in the vaccination returns. The increase in question has been during recent years particularly marked in London as compared with the rest of the country, and in London it has been most marked in some of the East End districts. Here, in the steady growth of a body of unprotected persons, is an increasing danger to the community, and one which is likely in the future to make its influence felt, and to play a part

in producing a much wider diffusion of small-pox than London has witnessed during the last few seasons, in which the disease has been limited to a modified spread among the vagrant class of the population.

Authentic copies of the address of Mr. Ernest Hart, as President of the Public Medicine Section of the recent annual meeting of the British Medical Association, have been supplied, by request, to the India Office in London. There may be reason to hope, therefore, that official notice will be taken of the somewhat trenchant criticisms and far-reaching suggestions which Mr. Hart thought it his duty to offer on the subject of the sanitary needs of India and the present position of the public medical services in relation to them.

It is suggestive of the singular attractions of London as a place of meeting that, well chosen and excellently arranged as were the various excursions in connection with the recent annual meeting of the British Medical Association, very few of them filled up their lists, and in the majority of instances members preferred to avail themselves of the numerous invitations in London and its various sights and entertainments.

The Mayor of Cork has invited the Grand Master of the Oddfellows' Society, the Secretary of the Young Men's Society, and the President of the Bakers' Association to a conference with the representatives of the South of Ireland Medical Association, in order, if possible, to effect an arrangement of the matters in dispute. The proposal has been received with a good deal of favour on both sides.

In the discussion on the revision of the *British Pharmacopœia* at the annual meeting of the British Medical Association, Dr. Donald MacAlister announced on behalf of the Editing Committee that the metric system would be introduced into the forthcoming edition. To facilitate transition, in the pharmacopœial article the official proportions will be given in the familiar British measures as well as metrically. In all gravimetric and analytical operations, however, the metric system alone will be made authoritative.

THE CHOLERA.

Cholera is reported to be prevalent at Tientsin and Chefoo. Ten days' quarantine has been imposed at Cyprus on arrivals from Cape Khelidonia to Beyrout exclusive, unless they had undergone quarantine at an intermediate port, and had clean bills of health.

"IT ALL GOES OFF IN THE BAKING."

The secrets of the baking trade are manifold, and as one by one they are made public our faith in the pastrycook is not enhanced. From the reports in the *St. James's Gazette* of a case tried at the Lambeth police court it appears that damaged tinned milk is used up in the making of pastry. The inspector, finding the milk in a very decomposed state, asked the defendant whether he thought the milk was fit for use. The defendant thereupon took up a piece of pastry for the witness to smell, and exclaimed, "Oh! it all goes off in the baking." This is purification by fire with a vengeance. We have long known that curiously stale eggs were used by pastrycooks: lately, in fact, the practice has sprung up of importing from abroad contents of eggs instead of the eggs themselves, the whites and yolks all mixed together being sent over in closed canisters. It is easy to imagine the mustiness of this egg mixture by the time it reaches its destination in the kitchen. We suppose, however, it also "all goes off in the baking." At any rate, in regard to milk such seems to be the expert opinion, for the pastrycook, in answer to the magistrate, is reported to have said that "a little bad milk would bake out," while his foreman stated that, "In the event of one tin being slightly 'blown,' it would bake out;" to which Mr. De Rutzen made the obvious comment, "Then of course you wouldn't mind putting it in?" In the end each defendant was fined £10 and costs, which from the consumer's point of view is satisfactory.

THE SURGERY OF WAR.

The interesting address with which Sir William Mac Cormac opened the proceedings of the Section of Surgery showed how important it is, from a humanitarian as well as from a surgical point of view, that a definitive solution of the question as to the effects of the new magazine rifles should be speedily arrived at. When war broke out in the East an experienced officer of the Army Medical Staff—Surgeon-Colonel William Taylor—was deputed by the Government to accompany the Japanese army for the express purpose of studying the medical aspects of the campaign in general and this matter of the wounds made by the new bullets in particular. As Surgeon-Colonel Taylor has lately been appointed Principal Medical Officer at Dover, it may safely be assumed that his report has been sent in to the War Office, and its publication will be looked forward to with interest, not only by army surgeons and by the medical profession generally, but by all who are interested in the welfare of our soldiers and in the mitigation of the horrors of war. It is to be hoped that the prolonged incubation period generally considered necessary before such departmental reports are allowed to see the light may, in this special instance, be shortened as far as the exigencies of red tape will allow.

COLOUR BLINDNESS AND COLLISION.

It will be remembered that on February 1st a deputation of ophthalmologists waited on Mr. Bryce, then President of the Board of Trade, to urge the adoption of more trustworthy tests of eyesight in the examination of seamen and railway servants. Mr. Bryce maintained that his department "had shown due diligence in dealing with the matter," whereupon Mr. T. H. Bickerton pointed out that the "diligence" of the department to which is entrusted the safeguarding of the travelling community by land and sea had manifested itself first in refusing to allow that colour blindness was a practical danger at all, though it had been urged by the medical profession since 1855, and subsequently, when compelled by the logic of facts to abandon that untenable position, in stubbornly resisting every effort to eliminate persons of defective vision from serving on our railways or the mercantile marine. Mr. Bickerton challenged the Board of Trade to mention one single case of the many thousands that had occurred in which, after a collision, the Board had ordered an examination of the surviving officers and look-outs. A striking proof of their negligence in this particular occurred soon after the interview referred to in the disastrous collision between the *Elbe* and the *Crathie*. In a paper dealing with the question of eyesight in seamen and railway servants, which was presented to the Section of Ophthalmology at the recent meeting of the British Medical Association, Mr. Bickerton read a letter dated May 20th, from Mr. Bryce's secretary, in which it was stated that "the question of the powers of vision will be carefully borne in mind in the Board of Trade inquiry into the cause of the collision." The inquiry was duly held, but on writing again to the Board Mr. Bickerton was informed that "the witnesses were not examined as to their eyesight." The Board of Trade takes credit to itself for having asked the advice of the Royal Society on the question of colour vision, but beyond adopting the Holmgren wool test, it has done nothing to carry out that scientific body's recommendations. Mr. Bickerton went on

to show that by the use of inadequate tests applied after years of service, instead of at the outset of the sailor's career, incompetent men had been foisted on the public as competent, and the cruel custom had been followed of granting certificates which, on the introduction of reliable tests were rendered valueless to the possessors. In this way men had, through no fault of their own, but purely owing to the disgraceful negligence of the authorities, been deprived of their means of livelihood at a time of life when it was too late to adopt another calling. Mr. Bickerton cited some melancholy instances in which the accidental discovery of colour blindness—which, by a proper examination would have been detected before the man had definitively taken up a seafaring life—had led to mental derangement and attempts at suicide. The reading of Mr. Bickerton's paper was followed by the passage, on the proposal of Dr. Farquharson, M.P., of a resolution that the matter should at an early date be brought to the notice of Parliament, which should be asked to insist that adequate tests should be compulsorily applied before a lad is apprenticed to the sea; that the Royal Society's recommendations should be acted on by the Board of Trade in their entirety; and that officers already holding certificates, and now by the institution of adequate tests found colour blind should have shore berths given them in Government offices. The matter is one of such vital importance to the safety of the public that a heavy moral responsibility will lie at the door of the Government if it shirks so obvious a duty as that of compelling railway and shipping companies to adopt the elementary measures of precaution that have been pointed out.

DIPHTHERIA AND SPEAKING TUBES.

Dr. King Warry, the health officer of Hackney, in reporting on the past year, produces a report made to his vestry on an outbreak of diphtheria and sore throat affecting the *employés* of a particular establishment in the district. Of the 150 *employés*, 43 were girls working in one room, and of 25 cases of diphtheritic illness coming to light, 22 were among these girls. The disease was probably introduced, and spread from one to two others of three girls sitting near together, all of whom frequently made use of the speaking tubes. They were, indeed, specially set apart for such use of the tubes, though many other girls at times did likewise; and the only other inmates of the establishment affected outside this room were one assistant on another floor whose duty it was to use the other end of one of these tubes, and two additional assistants in yet another room, who frequently came in contact with the girls of the invaded room in the lavatory, and who used the same towels. To these two causes Dr. Warry ascribes the spread of the disease, namely, common use by the infected and healthy of speaking-tube mouthpieces and the use of towels and lavatory accommodation in common.

HIGHER CLASS OFFICIALS FOR POOR-LAW INSTITUTIONS.

Hardly a week goes by without affording fresh instances of the need of some radical change of the governing body immediately controlling the metropolitan Poor-law institutions. A few days ago the kind of work that the Hackney Board obtains from its officials was illustrated by one of its nurses, who, being sent in charge of some children with eye affections whom she was told to convey to Moorfields Hospital, left them at Liverpool Street Station while she went to spend the day with some friends, not returning until 10 o'clock at night, the semiblind children having in the meantime been conveyed back to the school by some railway Samaritan. Such a display of indifference to the children and want of conscience towards her employers should, in our opinion, have been punished with immediate dismissal, but the lenient guardians contented themselves with suspending the delinquent officer for a month. Evidently the Gillespie epoch still prevails in the Brentwood schools. This week an inquiry has been held by the Local Government Board into the conduct of the master of the St. George's, Blackfriars, Workhouse, who it is alleged had neglected his duties—taking leave of absence for days together—had ignored or disobeyed the instructions of the medical officer, and had not conformed to the dietary table. Besides these charges, sundry others were preferred relating to accounts of supplies and waste of material. As usual, the inspector of the workhouse was appointed to be the judge in the inquiry, a position which, as we have frequently pointed out, is one that it is unfair to expect the same gentleman to fill judicially, and one that he would not be called upon to fill if some plan such as we have frequently urged could be carried out, which would place all the metropolitan Poor-law institutions under one central Board. This suggestion has also been adopted by our able contemporary the *Daily Chronicle*, which, in commenting on the education of the children of the State, advocates the formation of a strong representative central Board, by which a wide public opinion could be brought to bear upon the management of this vast and difficult office of public charity. At present the local Boards are too small to attract helpful criticism and too local to call for metropolitan interference, but a central body would be strong enough to deal effectively with the Gillespie incidents, and powerful enough to attract a higher class of persons than can be expected to take office under the petty governors of local Boards.

PUBLIC MEDICAL APPOINTMENTS.

It is an almost invariable rule in this country, and the result in many instances of express statutory enactment, that the public appointments open to the medical profession should be held only by those who are qualified to practise both medicine and surgery; and we therefore learn with considerable surprise that this very salutary regulation has not, according to the Fremantle *Messenger* (Western Australia), been followed in that colony. It is reported that the Government, "for some wise though presently hidden reason," have rolled into one all the public offices connected with the faculty at the port and have appointed a gentleman who, it is alleged is not legally qualified to practise surgery, as surgeon to the prison, resident medical officer at the port, health officer, and medical officer for Rottnest. To appoint to the office of prison surgeon a person holding no diploma in surgery would appear exceptionally incongruous; and if the report in the *Messenger* were less authoritative, we should expect, as we still wish to find, that there has been some misconception on the subject. It would be a matter for deep regret that there should be any departure in the colony from the established regulations which obtain in this country in reference to these appointments, and which have proved to be beneficial in the public interest.

THE GROWTH OF CHILDREN.

Our great residential or boarding public schools afford opportunities, hitherto neglected, of conducting uninterrupted courses of observations on the growth and development of boys under normal conditions. The question has for several years engaged the attention of several German physicians, especially Malling-Hansen, Schmid-Monnard, and Goepel, but almost exclusively on the children of the working classes, and especially as testing the effect of the "Ferien-Colonien" on the weakly individuals. On one point all are agreed—and it would be interesting to know whether this phenomenon is exhibited by all children, or is connected with the special conditions of the poor—that their growth is subject to variations not only seasonal, but even from day to day, dependent on the weather and temperature, or in other words on the influence of temperature and life in the open air on metabolism, nutrition, and heat production. Individuals may sometimes be observed to gain or lose as much as ½ kilo. in a single day, but if the mean of twenty or more children be

taken, the limits will be for boys 200 grammes, for girls 110 grammes, more or less. An appreciable gain of weight follows several consecutive days of warmer, and a loss the same of cold wet weather, though in neither case much exceeding 200 grammes with children in good health, and not recently recovered from illness. Dr. Goepel found that increase in height took place during the first eight months of the year, that is to say, it was slower in winter; and the gain in weight rose in summer, culminating in the August holidays, and declining during autumn and winter until in February it was *nil*, and in March even a loss of weight could not infrequently be observed in perfectly healthy children. These facts, he points out, must be taken into account in estimating the effects of change of air, etc., during the holidays, or of other changes of diet or habits. C. Roberts, F. Galton, and others have determined the annual increase in height and weight of boys and girls chiefly among the middle classes, but we may quote Dr. Schmid's figures for children in German elementary schools, who are as follows: Girls from 7 to 10 years of age gain about 1 to 1½ kilo., and from 11 to 13 years 2 kilo. per annum. Boys of 6 years 2½ kilo., from 9 to 12 years 2½ kilo., and in the 13th year 3½ kilo.

"A REAL MEDICAL TRIUMPH."

Under this title the *Pall Mall Gazette* of August 12th descants on the surgical treatment of laryngeal tuberculosis as practised by Dr. Heryng, of Warsaw. We suppose we ought to be thankful to find one evening paper which does not speak of the operating room as of a shambles, to which the poor victims of vivisecting surgeons are brought like lambs to scientific slaughter. We should have been better pleased, however, if our contemporary had sung its *Io triumphe!* in a key less jarring to the professional ear, and with less of a *puffando* movement, if we may be allowed to add a word to the terminology of journalistic vocalisation. The injudicious admirer is a sharper thorn in the flesh even than the candid friend, and to judge from the frequency with which Dr. Heryng's praises are hymned in Polish newspapers, that gentleman suffers from this affliction in a very marked degree. The pity of it is that Dr. Heryng's scientific wine is of a quality that needs no bush, and he may with justice complain not only that it is advertised to the public in this questionable fashion, but that it is adulterated by the journalistic middleman in such a way as to make it dangerous to the consumer. To drop metaphor, the *Pall Mall Gazette* has, of course unintentionally, presented the facts of the case in a way likely to mislead the reader who has no special knowledge of the subject. It is true that Dr. Heryng has been the pioneer of the treatment of laryngeal tuberculosis by *curettement*, and it is true that in his hands and in those of other specialists this method has, in a limited number of cases given excellent results. Dr. Heryng is therefore fully entitled to the credit of having made an important addition to the resources of the healing art in dealing with a deadly and previously intractable disease. It is not true, however, that the scraping away of diseased tissue from the larynx "cures" tuberculosis, and it is still less true that the method could be applied indiscriminately "even in hopeless cases." All that can be done by it is to suppress one local manifestation of a peculiarly insidious constitutional disease; the most thoroughgoing destruction of the laryngeal lesion, however, does not afford the slightest guarantee that the disease may not recur in the larynx perhaps in the scar left by the operation—or break out in the neighbourhood of that organ or elsewhere. The treatment finds its legitimate application only in cases in which the disease is strictly localised, as in the interarytenoid space, where a very small tuberculous ulcer will give rise to great pain in swallowing. This symptom can be relieved by removal of the cause, and if the infection has not extended beyond the site of operation there is a chance, though by no means a certainty, that the patient may remain free from disease. To attempt to remove tuberculous lesions by scraping when the larynx is extensively invaded is but too likely to increase the sufferings of the patient and hasten the spread of the infection. To speak of "numerous cases" being "cured," therefore, is simply an abuse of word. A pæan is sung in honour of Dr. Heryng's twenty successes—and with a certain "mitigation of voice," as Malvolio says, we are willing to join in the chorus—but what of his failures? He would, we feel sure, be the first to acknowledge that for one case in which he has been victorious he has suffered defeat in many. One success, however, makes a far deeper impression than any number of failures, and only the initiated know what an effect can be produced by one or two show cases which are trotted out before societies and taken about to congresses, and are thus made to do duty like the couple of "supers" of a stage army. Another point on which the article in the *Pall Mall Gazette* is likely to convey an erroneous impression is as to the pain of the operation, which is minimised to a degree which the facts are very far from warranting. Mysterious hints are thrown out here and there as to the opposition which the method meets with in certain quarters; of this we know nothing. The operation is practised in suitable cases by specialists in this country, and with a success which there is no reason to believe inferior to that of Dr. Heryng himself. What we do oppose and protest against most strongly is that medical subjects should be dealt with in the lay press by imperfectly informed or wrongly inspired scribes, and that a class of sufferers especially prone to ill-founded hopefulness should be cruelly deluded by exaggerated and misleading statements.

THE MASSACRE OF MISSIONARIES IN CHINA.

It is melancholy to reflect that while Dr. Smyly, of Dublin, was participating in the business and pleasures of the annual meeting his sister, Mrs. Stewart, and her children were the victims of the horrible massacre at Whasang. On that terrible 1st of August he was present at a large luncheon party at Sir William Priestley's house, and in the evening he went to the Ladies' reception at the New Gallery, unconscious of the awful fate which had befallen his sister that very day.

THE LADIES' RECEPTION ROOM AT THE ANNUAL MEETING.

The ladies' reception room at the recent meeting of the Association was so excellently arranged that some details on the subject may be interesting. The Council of the Royal Society having placed their rooms on the ground floor at Lady Priestley's disposal, the Treasurer, Sir John Evans, the Hon. Secretary, Professor Michael Foster, and the Secretary, Mr. Rix, proved themselves most anxious to make everything pleasant and easy for the ladies. With the personal goodwill of the Fellows and officials of the place, the solemn lecture room was soon transformed into an abode of light, luxury, palms, and art needlework. When Professor Michael Foster dropped in to see that the ladies had all they could wish for he was fairly dazzled with the gay aspect of the rooms. In the one sat the lady secretaries busy at work, in the other rested the busy sightseers. Not satisfied with granting the ladies the ground-floor rooms the Professor had given directions that the visitors were to be shown the great library and all the interesting relics it contains. A group of visitors immediately took advantage of this, and were personally conducted by himself. On the Thursday H.R.H. Princess Christian honoured the rooms with her presence, and was received by Lady Priestley (President), Lady Reynolds, Lady Broadbent, Lady Duckworth, Mrs. Andrew Clark, and other ladies who happened to be present. As Hon. President of the Ladies' Committee she was greatly pleased with the arrangements, and was

much amused to find that a footstool which had been hastily prepared for her use consisted of two volumes of the *Philosophical Transactions* tied into a piece of carpet and fastened with a string. Such a thing as a footstool proper was not to be found in the place, but the one extemporised did very well, Her Royal Highness remarking she had never had such a learned footstool before. After tea she went over the library, and was greatly interested to see the relics of Sir Isaac Newton, the germs of the first telescope, the first Davy lamp, etc. During the four working days of the meeting 508 cards of admission to the Ladies' Reception Room for the week were issued. It may be added that the ladies' evening party at the New Gallery was a most brilliant affair. Through the influence of Mrs. William Playfair the rooms were placed at the ladies' disposal by Mr. Comyns Carr and Mr. Charles Hallé. The Blue Zouave Ladies' Orchestra provided the music, and the arrangements generally were very complete.

DRINKING TROUGHS AND GLANDERS.

Notwithstanding the public attention and action of the London County Council which have been directed to the suppression of glanders amongst horses in the metropolis, official returns show that the disease continues to be "prevalent" without convincing evidence that the measures adopted are likely to eradicate it. Among the factors which are credited with favouring its existence and spread are the open drinking troughs erected by the Metropolitan Drinking Fountain and Cattle Troughs Association. A contemporary announces that the Vestry of St. Pancras, in which parish there are fifteen open drinking troughs, have requested the Association to erect standpipes in their stead. The Works Committee of the vestry have received a deputation from the Association which expressed regret at the suggested alteration, on the grounds of the expense and obstruction which watering animals from pails would entail, and denied that the troughs spread glanders. The vestry, however, are firm in the conviction that, from this point of view, the troughs are dangerous, and refuse to modify their resolution in any way. In this view the vestry is supported by the Master Carmen's Association and by the action of many of our largest horse owners, who supply pails for the purpose of watering their animals from standpipes so as to avoid chance of contamination from a common drinking place. Though opinion among veterinary authorities may not be unanimous as to whether horses are more commonly infected through the alimentary or respiratory passages, there can be no question that the virus may gain admission by either or both. There is as little doubt that the nasal discharges of an affected animal contain the virus, and but casual observation is sufficient to prove that nasal mucus is a common constituent of the contents of the open drinking trough, while the spread and maintenance of the disease in studs have been clearly traced to the practice of watering horses at the common trough in private stable yards. One can but respect the sentiment which would supply our thirsty animals with the means of quenching their thirst; but though the places provided are perhaps not the most important factors in the spread of glanders, it is passing strange that a philanthropic body exercising itself in this direction should deny that such a danger exists. Want of funds and the obstruction caused by standpipes may be legitimately urged perhaps, but the Vestry of St. Pancras are to be congratulated on their decision. The subject of glanders has considerably exercised the London County Council, who have given some show of a desire to eradicate from the metropolis this equine scourge, which also menaces human life. In order to effect this attention must be directed to the danger from open water troughs. It may be argued that it rests with horse owners to avert their losses at least by providing pails to be used at standpipes, which now exist in some parts of London, but it is a well-known fact that while open troughs exist drivers, to avoid personal inconvenience, will disobey the strictest orders, and submit their owners' animals to the risk and the public to the danger. Happily our views of duty to the lower animals leave no question as to the necessity for providing, as far as we can, for their comfort, but this must be done with the smallest possible risk. It would be cruel to deprive our horses of the means of quenching their thirst; it is surely the duty of our central authority to see that this is done at the smallest expense to the community. It is possible that there may be a median course between the open drinking trough as now arranged and the standpipe. A place so arranged that one horse only at a time could drink from a trough whose supply was replenished from below and whose overflow could be rendered immediately inaccessible to the next would minimise the risks by carrying away mucus, etc., containing the virus from affected animals, but details are for the central authority which must sooner or later take the matter in hand. Without any feeling but that of gratitude to the benevolence of those who founded and have carried on the work of the Cattle Drinking Troughs Association our advance in human sentiment and social economy demands that the carrying out of such matters should be the duty of a public not a private body.

GRANTS TO PUBLIC VACCINATORS.

The lay press appears to have recently got hold of the idea that some change of front has been made with regard to the granting of awards to public vaccinators, inasmuch as a decision of the Local Government Board is referred to as to granting such awards only when vaccination has been performed "from arm to arm." We cannot see in this attitude any change of practice, in view of the fact that the Board in question has always looked askance upon vaccination performed with stored lymph of any kind. Its rules and regulations have ever aimed at the maintenance of vaccination with fresh lymph, and have laid down the maxim that any other method of vaccinating should be the exception to be employed in such cases only as render really necessary a departure from the undoubtedly preferable manner of use of lymph in a perfectly fresh state. Judging by analogy we should imagine the Board would look with equal favour upon arm-to-arm and calf-to-arm vaccination, the storage of lymph being the one thing to be avoided.

ANTITOXIN AND DIPHTHERIA STATISTICS.

Mr. Joseph Collinson, writing from the Humanitarian League Office, has sent to the press the following statement: "The Registrar-General has the following in his return for the week ending July 6th: 'The deaths from diphtheria in London, which had been 45, 37, and 38 in the preceding three weeks, rose last week to 53, which is higher than the number in any week since last December.' There is no proof here that antitoxin is of any value. If there is a shadow of a shade of proof anywhere that it is of the smallest value, I should be glad to have it pointed out. Will anything be done with the experimenters who have tried at their will their 'immature practices and fantastic theories' on the unfortunate patients in our hospitals since December last?" Mr. Collinson, it will be noticed, makes the tacit assumption that all, or nearly all, the cases of diphtheria occurring in London during the week ending July 6th were treated with antitoxin. For such an assumption there is no foundation whatever. As a matter of fact, there are no available data to show how many cases, fatal or not, were treated with this particular remedy during the week in question. There is, however, reason to believe that outside hospital practice antitoxin has been, and is being, but little employed; at any rate in those parts of London and amongst those classes of society which furnish most of the patients. The majority of the cases treated in hospitals are treated in the institutions of the Metropolitan Asylums Board; yet these institutions do not receive half the cases noti-

fied. For instance, during the year 1894, 10,655 cases of diphtheria were notified, and during the same period 4,014 cases were admitted into the Board's hospitals. So, too, as regards the deaths; of 2,670 deaths from diphtheria occurring in London during 1894, 1,035 took place in hospitals of the Board. Under such conditions, therefore, it is possible for antitoxin to be a remedy of value, and yet for its value not to appear in the Registrar-General's weekly returns. The mere statement that 58 persons died of diphtheria in London during any particular week is no argument against the value of the antitoxin or any other method of treatment. During the fortnight ending July 6th there were 91 deaths from diphtheria in London, and during nearly the same period of time—the fortnight ending July 4th—there were 494 cases notified; so that with very slight error it may be stated that the case mortality was about 18 per cent., which is lower than it was for 1894, when it was about 25 per cent. (10,655 notifications with 2,670 deaths). Mr. Collinson may be allowed the full benefit of his assumption, yet he fails in his argument. For the proof of the value of antitoxin, as far as it has been tried, he may be referred to the pages of the British Medical Journal.

WOOD PAVING.

Mr. Wynter Blyth has presented a report to the Marylebone Vestry on the result of some inquiries he has recently made with a view to clearing up the question of the alleged harmful effects produced by the use of wood paving. Mr. Blyth starts by accepting the statement that wood pavement, especially old wood pavement, smells; and he has attempted to ascertain whether the smell comes from the surface or whether the blocks of wood are saturated with impurity throughout. With this object in view he has estimated the quantity of ammonia obtainable from the top slice, middle slice, and bottom slice of two wooden blocks (one taken from the centre of the roadway, the other from the channel of the roadway in Oxford Street). In the block from the centre of the roadway most ammonia was found in the top slice, the amount decreasing on proceeding from above downwards; in the other block the reverse condition was found, most ammonia existing in the bottom slice and least in the top slice. Mr. Blyth explains this phenomenon on the ground that water percolates through the interstices of old wooden blocks on to the impervious sheet upon which they are imbedded, and gravitates to the channels, thus saturating the bottom slice of the channel blocks. Mr. Blyth is unable to confirm the view that ophthalmia and throat affections are caused by emanations from wood paving; he says, however, that he cannot absolutely deny that such is the case. He prefers asphalte to wood paving, and thinks that when compressed air and electricity replace horses, and when therefore the clatter of hoofs can no longer be objected to, asphalte paving will be likely to be regarded as distinctly the most suitable form of covering for the streets of towns.

SCHOOL BOARDS AND MEDICAL MEN.

In answer to a question by Mr. Athelstan Riley, at a recent meeting of the School Board for London, Mr. Sharp (Chairman of the School Accommodation and Attendance Committee) said: "From the extract which Mr. Riley gives from the British Medical Journal it is self-evident that it must have been written in ignorance of the real facts of the case, which I have endeavoured to set forth more than once." Poor Mr. Sharp! It is very sad when a man has endeavoured to set forth the "real facts" (*sic*) of a case, even more than once, and has so failed that his critics still remain in ignorance of them. Yet, until Mr. Sharp can manage to give a more explanatory answer than this accusation of ignorance on the part of his critic with which the School Board had to be content as an answer to a proper question, the public will believe what is a very "real" fact—namely, that when we wrote we knew. The facts are extremely simple. The School Board officials, being dissatisfied with some of the medical certificates which they received in explanation of the absence of children from school—certificates which they ask for, but for which they decline to pay, have obtained permission to appoint in certain districts medical men whose duty it shall be, when certificates are considered by the school officials to be unsatisfactory, to investigate the cases, visiting the houses and if possible seeing the children, ailing or not as the case may be. For this they are to be paid a fee, and at present the number of cases so investigated is to be limited to a certain number per annum. No suggestion is made of any consultation with the medical men in attendance. These School Board spies are merely to go and find out the actual condition of affairs (as it appears to them, poor souls! who have never seen the case before and know nothing whatever about it), and report to their masters. This is what we called an "intrusion" of the official between the medical attendant and his patient. We are quite aware that since the passing of the resolution it has been explained that the great mass of the cases so investigated have been cases in which the certificates had been given by unqualified persons, thus showing the aptness and propriety of the amendment moved by Mr. Riley at the time, but the fact remains that the Board have sanctioned the appointment of these medical men for the purpose, among other things no doubt, of inquiring into the correctness and sufficiency of certificates given by other qualified medical men, and that they have ordered the names of the men they have so appointed to be sent to the magistrates in each district, apparently with the view of letting them know whose evidence they ought to accept, a proceeding which we should imagine is well calculated to "put up the backs" of these gentlemen, who have been sufficiently worried already by the repeated petty prosecutions by the School Board officers. Our advice to medical men, in districts where these offensive appointments have not been made, is that they should give careful, honest certificates, such as they could at any time swear to in a court of law, but that, in those districts in which the School Board have appointed medical spies, they should give no certificates at all. The Board has in those districts accepted the responsibility of deciding who is medically fit to go to school; let them and their officials decide it, but let the doctors, for the protection of their patients against an insolent and overbearing officialism, always be prepared to go into court to give evidence for those against whom unjust charges are brought. If they do that the School Board will soon tire of paying costs.

THE VACCINATION ACTS.

Many suggestions have been made with the object of more effectually carrying out the Vaccination Acts, and more effectually ensuring the complete vaccination of the people. Among these is a plan proposed by Dr. Garret Horder, public vaccinator at Cardiff. He is strongly impressed with the imperfect manner in which the operation of vaccination is performed by many private practitioners, and he quotes from Dr. Barry's report on the Sheffield epidemic of 1887-88, to the effect that of eighteen private practitioners whose work was specially inspected, that of eight only came up to the Government standard, whilst that done by four would have been classed as second grade, and the work of six as wholly unsatisfactory; and that, as a general thing, while the vaccination habitually performed by many private practitioners was of uniformly high class, the majority of private vaccinations which came under his notice were very much below the Government standard. Under these circumstances Dr. Garret Horder proposes to disestablish and disendow the private vaccinator, to take vaccination away from private practitioners, and place it in the hands of medical men who shall be appointed by the Local Government Board, and who shall, moreover, undertake not to practise their profession in any other way whatever. These medical men

would, in fact, become officials of the Local Government Board, and be paid by them. As a natural corollary of this comes the transfer of the administration of the Acts from the Boards of Guardians to the Local Government Board. It is obvious that, to put this scheme in force, a complete alteration of the Acts as they stand would be required. Then, in view of the facts stated in regard to the high character of the work done by the public vaccinators, who in the instance quoted did 63 per cent. of all the vaccinations, no reason appears unless it be a feeling of despair at the present condition of affairs for depriving them of work they evidently do so well. As regards private vaccinators, they undoubtedly often vaccinate badly; but as to disestablishing and disendowing them, they are neither established nor endowed at present, no influence in the way of deprivation of fees can be made to touch them; and if they are to be prevented from vaccinating their own patients, the act of performing even efficient vaccination by anyone except an official must be made a misdemeanour in the eye of the law. Are we prepared for that? Again, are we prepared to make the operation of vaccination such a speciality that a man shall be asked to devote his life to it? If we are, we must be prepared also to see the performance of the operation drift out of professional hands, for the public will not be slow to assert that a complete professional training is unnecessary for a man whose whole duty is to insert the vaccine, and who has nothing to do with the case either before or after. These are matters worth careful consideration before adhesion is given to a plan which, although put forward with the best of motives for the remedy of an undeniable abuse, entails difficulties which cannot be shirked. Nor does there seem to be much need for so radical a change. Once so modify the law that guardians shall be compelled to do their duty, and once obtain such a definition of efficient vaccination that those who give false certificates may be prosecuted, and the existing Acts would become again effective. Of the present evils, however, we have no doubt; and so long as guardians refuse to administer the law, magistrates refuse to convict when the law is broken, and doctors give bogus certificates after imaginary vaccinations, so long will small-pox repeatedly crop up, and become—as it always does when it is epidemic—a terror in the land.

SMALL-POX IN SALVATION ARMY SHELTERS.

We have already referred to a report by the Medical Officer of Health of St. George, Southwark, in which he stated he had found that a number of cases of small-pox which had recently come under his notice were traceable to infection from a man who had been sleeping at a Salvation Army shelter in Blackfriars Road. It appears that several cases of the disease have also been observed at the Whitechapel Infirmary in persons coming from a Salvation Army shelter in Whitechapel. The spread of small-pox among vagrants excited considerable attention two years ago, and was the subject of an exhaustive report by Dr. Armstrong, of Newcastle, and as the outcome of his investigations a conference of members of local authorities was held at the County Hall, Spring Gardens, in July, 1894. The first resolution adopted by the Conference was to the effect that "common shelters which are not subject to the law relating to common lodging houses should be made subject to such law." The behaviour of small-pox in London at the present time certainly affords further proof of the need for carrying this necessary reform into execution.

MEDICAL FEES IN DUBLIN.

The Recorder of Dublin, in an action lately brought before him for recovery of fees for professional services rendered by Dr. White to a grocer, is reported to have said that "he had been battling all his life, and would continue fighting as long as life would last, against the profession to which Dr. White belonged." This extraordinary statement was elicited from the learned judge after Dr. White had given evidence that he had charged 6s. 8d. per visit, and £5 for a difficult operation—a by no means heavy or unjust charge. The Recorder further remarked that "in England, medical men of the highest grade attended poor people for fees of 1s. 6d. or 2s. 6d.," and that "in Dublin medical men would not attend for less than one pound." The evidence in the case by no means bore out this statement, as it was shown clearly that Dr. White was only charging at the rate of three visits for a sovereign. In the end the verdict was given for the plaintiff, but only for the sum of £1, instead of the £6 6s. sued for. It is high time that the profession generally made a stand against the rapid monetary depreciation of the value of its services which is passing over this country and is apparently extending now to Ireland. The influence of the medical aid societies is at work, and the wholesale "store system" of treating the sick with a "reduction of fees for taking a quantity" of patients is the origin of the depreciation. Ireland has now learnt on high legal authority that it has "another grievance," and will no doubt act accordingly.

THE POOR AND THEIR DOCTORS.

The report which we publish in another column of the inquiry respecting the death of George William Clarke is a very startling one. According to the evidence, as stated in the report, Mr. Perdue, the unqualified assistant of Mr. Wilmer, a registered chemist and druggist, was in the habit of visiting patients gratuitously, with Mr. Wilmer's knowledge, and administering to them a medicine alleged to have been compounded of tea leaves. The Coroner seems to have treated Mr. Perdue as an harmless fanatic, ignoring the fact that his services would not have been asked for at all in the case which was the subject of the inquiry, had it not been for the fact that he was Mr. Wilmer's assistant, and that the parents of the child had called him in, on the assumption that he was a qualified medical man. It is also important to remark that, according to the evidence, when the child appeared to be dying, Mr. Perdue told the mother, or her sister, to put his medicine out of sight and send for a medical man, and not to mention the subject of his visit. That Mr. Perdue visited patients with Mr. Wilmer's knowledge must be either true or untrue. If true, Mr. Wilmer will no doubt be called to account by the Pharmaceutical Society. If untrue, the sooner Mr. Wilmer gets rid of his unqualified assistant the better. It seems, however, scarcely credible that the unqualified assistant could have been in the habit of paying visits to patients without the knowledge of his master, and it is equally difficult to believe that he should have paid them gratuitously, or that some benefit should not have accrued to him, directly or indirectly, from them. The attention of the Society of Apothecaries will doubtless be directed to the case, and if they consider that proceedings can be successfully instituted against Mr. Perdue, they will, we trust, commence them as soon as possible.

MILKBORNE DISEASE:

An Appeal to Medical Officers of Health.

Mr. Ernest Hart is engaged on a general inquiry into milkborne disease since 1881, in continuation of his paper of that year on the Influence of Milk in Spreading Zymotic Disease, and will be much obliged if those health officers who possess notes of outbreaks of disease traceable to the agency of milk will be good enough to furnish him with a brief statement of the facts, so far as known, in the shape of answers to the questions subjoined:

1. Date.
2. Locality.
3. Reporter.
4. Total number of cases.
5. Deaths.
6. Number of cases amongst drinkers of suspected milk.
7. Number of persons supplied by milkman.
8. Number of such families invaded.
9. Sanitary circumstances of farm or dairy from which milk was obtained.
10. Exciting cause of outbreak.
11. Circumstances implicating milk.
12. Facts showing special incidence of disease.
13. Reference to report.

WATERBORNE TYPHOID:

A HISTORIC SUMMARY OF LOCAL OUTBREAKS IN GREAT BRITAIN AND IRELAND, 1858-1893.

A Report Prepared for the Parliamentary Bills Committee of the British Medical Association.

By ERNEST HART, D.C.L.,
Chairman of the Committee.

(Concluded from page 441.)

2. *Public Water Supplies.*—Here I touch upon a much larger question. It is one that has already received such extensive consideration at my hands that I hesitate to say much more upon it. But still I am persuaded that many points need to be treated under this heading before we can hope to see waterborne typhoid fever exterminated. One of the foremost questions of to-day is that of river pollution. The importance of freeing our rivers from their sewer-like condition is not to be gainsaid. A perusal of my summary tables will at once enable my readers to perceive the enormous interest which the public have at stake in seeing that our waterways shall be preserved from excremental pollution in so far as they serve as sources of water supply. A great stride has been made of late by the creation of joint committees for the prevention of such pollution. It is to be hoped that such bodies will be multiplied, and that they will aim at the greatest good attainable by securing the co-operation of all the manufacturers in the district within the area for which they have been appointed to act. Such bodies, if really in earnest, can, I am quite sure, do much to free our rivers from contamination. At present it is no uncommon thing to learn of towns drawing water for domestic purposes from a river which higher up is receiving the untreated sewage of a large population, and the trade effluent of manufacturing districts. I would have all waterways which are sewage polluted or rendered doubtful by the flow into them of trade refuse entirely done away with as sources of water supply. And again, I would wish to see the disposal of sewage enforced in such manner as to preclude the possibility of direct egress of sewer contents to any river or stream that is not tidal. The Rivers Pollution Prevention Acts have been signal failures so far as their practical results show. If our rivers are to continue to serve our tables with drinking water, let them be absolutely free from the contents of our watercloseets at any rate in their crude forms.

But I wish here to chronicle my desire to see the State stepping in and enforcing that the sewerage of all towns shall be so carried out as to avoid contravention of the Rivers Pollution Prevention Acts. I do not think the State should in anywise countenance the disposal of sewage in a way likely to render these Acts inoperative in any sanitary district. Either let our rivers and streams be kept from all manner of pollution, or let them be frankly held to be unusable for purposes of drinking water, even after filtration. Engineering experts tell us that the effluent of sewage matters can be rendered safe for the purposes of ingress to our waterways; then by all means let the country see to it that our rivers be no longer allowed to remain common sewers.

There seems to be no safe middle course. While rivers and streams are thus dealt with, let all use of canals for drinking purposes be also absolutely prohibited. The gross sources of pollution to which they are subjected speak for themselves; for not only are they the receptacles of all sorts of abominations from the banks, but they are open to extremely dangerous contamination by means of the immense floating population always reading upon their waters. The same may be said of many of our navigable rivers.

Equally open to pollution are only too many of the gathering grounds of our public supplies. There can be no excuse for the delivery to the distributing mains of water drained from a catchment area on which are situate villages and other aggregations of populations, with their varying methods of excrement disposal, such as midden privies, cesspools, and even sewerage systems, inclusive of direct disposal of crude sewage on land draining to the storage or service reservoirs. Yet such things are happening to-day in our land. We find such other elements as churchyard drainings, heavily manured fields with natural drainage to the water conduits, and the like. To my mind, all gathering grounds should be freed from anything worse than the mere droppings of pastured animals, since whilst we permit manure, often of human origin, to be deposited within the catchment area, and excrement disposal such as is incidental to populations in villages, farmsteads, and so on, to persist in positions whence they assail the purity of our drinking water, we wilfully court disaster. Where public supplies are in the hands of corporate sanitary bodies the question of gathering grounds is made easier than where companies are in possession of the works. And for this and many other cogent reasons, I would see the way made smoother for enabling sanitary authorities to purchase such works. At present, Section 52 of the Public Health Act, 1875, is so encumbered as to be virtually a dead letter for the purpose of freeing sanitary bodies from the necessity of taking water at the hands of any company that may chance to have rights of supply in their district.

Altogether, apart from the question of pollution of water services by visible media, there is the important consideration of the construction and method of laying water mains, especially where they come in close proximity to sewers. I would see much greater care bestowed on these matters than is seen by the pages of this report to have been the case in too many instances. Badly jointed mains may well become the receptacles of any filth that may happen to be in the neighbourhood, and it is well known that water mains, even when "running full," are able to take up extraneous matters by insuction. Where, then, sewers are placed close to mains, or the reverse happens, the most exceeding care should be bestowed on every detail to secure that the water shall be free from the possibility of sucking up the leaking contents of the sewers. When sewers are laid at a higher level than water pipes this care will have to be correspondingly still greater, not only in the first laying of the pipes, but in the maintenance of the plant. The relation of sewage to water used for domestic purposes does not, however, cease when the sewers have been properly laid and egress of their contents underground prevented in the proximity of water mains. There is the factor of disposal of the sewage to which I have already referred.

Before I leave the subject of water mains, let me say that I would like to see all bull hydrants done away with. They have more than once been seen to be associated with prevalence of typhoid fever in districts served by them, and they would, to say the least, seem to be a danger to the purity of the water, even if by no worse than road detritus, but, as we know, at times also by the contents of ashpits, privies, middens, and the like.

In the matter of filtration I am much afraid we come off very far short of that point of perfection to which it were well that we should attain. The theory now advanced concerning the filtering of drinking water, which eats at the very heart of our preconceived notions as to the treatment to which our filter beds should be subjected, has also brought with it the statement of the only position which it is safe to adopt, if we are to be free from the danger of recurring outbreaks of typhoid fever by reason of our water supply becoming polluted in a manner not to be rendered harmless by our prevailing methods of filtration. To such of my readers as have not studied the paper of Professor R. Koch on Water Filtration and Cholera[1] I would say do so; and I would further lay stress on the rules which are therein laid down for the frequent and regular bacteriological examination of water from each separate filtering basin and before the water has been allowed to pass into the general storage reservoir, as also to the rule as to the construction of the filter beds in such manner that improperly filtered water can be at once removed, not being allowed to mix with the other water to be delivered to the distributing mains.

I have previously stated the rate and quality of the filtration which Professor Koch would see universally adopted, and I need not here further pursue the matter; but I could

[1] Professor R. Koch on Cholera. Translated by Geo. Duncan, M.A. Douglas, Edinburgh, 1892.

wish to see our water companies and corporations appointing as their chief engineers men of standing in regard of bacteriology as applied to the examination of water. Much as I would like to dwell upon this important portion of my subject I must hasten on, leaving my readers to further study the current literature if they feel interested in the questions at issue.

Water Supplies to Dairy Farms, Cowsheds, Etc.

This is a matter of vital importance that cannot be well overlooked. The question of the water supplied to milch cattle by no means receives the attention which it undoubtedly deserves. It would seem to be the commonly accepted idea that cattle may with impunity be allowed to drink of any and every kind of water. It is not so. Evidence testifies to the contrary.

Mr. Shirley Murphy has stated, in a paper in the *Practitioner* in 1880, that he would like to see the drinking water of cows outside cowsheds from ponds fed by springs and fenced round to prevent fouling. So, too, I would wish to see care paid to the purity of the water with which cows are regaled, alike in the pasture and the cowshed. Indeed, the water furnished to housed cows is in need of much more careful supervision than is carried on. The cases which appear in my summary tables in which water-polluted milk has played a part in the dissemination of typhoid fever speak of the want of ordinary attention to the necessities of the case. The water supply of many of our country farmsteads is a disgrace to the land and a constant menace to the milk trade. But this is only one point in which much still remains to be done in the way of securing our milk from the potency of harm which frequently attaches to it, and must form the subject of another paper, seeing that the specific pollution of cans, milk, and other dairying plant and produce by fever-contaminated water is but one phase of the dangers to which milk is exposed. Suffice it that the exercise of a minute inspection of our dairy farms and cowsheds and milkshops is called for, and much more needs to be accomplished by our health officers and nuisance inspectors in the future than has been done in the past. Regulations have of late years been increasingly brought to the notice of sanitary bodies, but their adoption, and especially their uniform enforcement, have not been correspondingly in evidence. The relation of the milk trade to the public health is too intimate to admit of any half-heartedness in the method of control of the varying businesses connected with it in so far as the health of the community is affected or is at all likely to be affected.

Conclusion.

My task is now all but finished, imperfect though it be; but if it serve to impress upon our health bodies and the community the lessons which may be learned from the history of waterborne typhoid fever in our country, and if the lessons so taught bear fruit in the direction of added care to the important matter of water supplies, then my task will not have been undertaken in vain. But it cannot be too strongly pressed home that the future exemption from the disease much depends on the attitude of the people towards matters sanitary, since public bodies of whatever nature are after all but the embodiment in brief of the public whom they represent. It is undeniable that the public ear needs to be caught before any reforms can be carried out; and in matters affecting the health of the community the people need to be educated in no small degree, especially having regard to the fact that the public purse-strings are involved. If there be one point upon which misconception arises more than another, it is the supposition that money is wasted when it is spent on sanitary reforms which are not clearly indicated by the advent of absolute disaster as a consequence of their previous neglect. The lesson has still to be widely learned that the remedy of sanitary deficiencies, the provision of pure water, proper methods of excrement removal and disposal, and the adoption of all practicable means for the prevention and stay of infectious diseases, are among the most sound investments which can be made by the individual and the community. When any nuisance touches the welfare of any one person or household an outcry is at once made until the matter is settled: but where the health, and therefore the happiness, of a town is not seriously threatened in a visible form, but is nevertheless endangered by the neglect to provide that which experience has shown to be essential to actual freedom from possible harm, then it is that the ratepayers often rise and protest against the expenditure of public moneys on a matter of "possible" concern for their health. But although this is so, still to some extent there can be no denying the fact that the people of England are awaking to some sense of their obligation to the advance of sanitary science for their present comparative exemption from the ravages of those diseases of a preventable nature from which our country has suffered in time past.

An apparent paradox has now been for some time promulgated to the effect that cholera in this country saves more lives than it costs, but the assertion is true. All sanitary measures that go to lessen the likelihood of cholera-spread go also to lessen the chance of spread of diseases which are disseminated in like manner to that plague, and typhoid fever is most certainly one of those diseases which are thus held in check. Yet when cholera threatens our coasts, there is but little difficulty in securing the co-operation of sanitary bodies and the public in carrying out those measures which are thought to be necessary. But it must be held in mind that cholera and typhoid fever are scarcely to be mentioned in the same breath for frequency of occurrence and wideness of misery and death arising therefrom. The latter disease yearly claims its thousands of victims to attack, and its hundreds of lives. Not so cholera nowadays; if half a hundred cases are heard of, and a dozen deaths are registered, the country is up in a state of panic, and the floodgates of suggestion and of costly piecemeal activity are flung wide. If the relative importance of the cost to the country year by year of these two diseases were any criterion of the attention to be paid to them, then we should have great hopes of seeing the time come quickly when typhoid fever would be reckoned as one of the scourges of a past generation; and its appearance looked upon in much the same way as cholera is now regarded.

But there is to my mind another side to the matter, and that is that if sanitary bodies are the representatives of the public they are also the bodies charged with administering the laws relating to the health of the community, and as such have a responsibility cast upon them of seeing to it that the laws are so administered as best to advance the interests of their constituents. To this end the State has sanctioned the appointment of sanitary advisers, and has also established its own health department. It will be well when our sanitary bodies see in its proper light the seriousness of neglecting this responsibility, notwithstanding that the ratepayers are averse on general grounds to the expenditure of money on measures of sanitary improvement. There are many ways in which these bodies can secure improvement in their districts without overburdening the rates, as, for example, by borrowing money with power of repayment in a number of years, so that interest and capital are in some degree paid by a succeeding generation enjoying the benefits provided by their predecessors. I regard the elementary matters of pure and adequate water supply, proper and sufficient sewers, and proper means of sewage disposal as essentials for every place of any pretensions to the name of town; whilst many rural districts possess aggregations of population for which they are none the less essential. I would see their provision enforced in all such places. Sickness is just as costly as cleanliness and much more disagreeable.

There is now an additional incentive to sanitary authorities to properly perform their statutory duties, seeing that county councils have at any rate got the power of calling upon the Local Government Board for inquiry where any district authority have made default in regard of their duties; and there can be no doubt that the power is no slight one, since the exercise of it may mean exposure to the public of the shortcomings of the health body, with possible outlay for work which could have been the more economically done by degrees when its necessity was first pointed out. There can be little doubt that county councils have in their sanitary officials a means of keeping them well informed as to the state of the administrative county, while the districts themselves will have the benefit of counsel from the county officials. I have already, in a paper which appeared in the British Medical Journal of July 15th, 22nd, and

29th, 1893, on the subject of extended powers needed by county councils, pointed out the directions in which these bodies could be made more useful still to the counties which they serve. It certainly seems that they are becoming alive to their position towards local authorities, and the stimulus thus given to those authorities will not be without its result on the healthiness of the country. The great lack of many of our county councils to-day is a medical adviser. The omission to appoint such needs to be rectified.

But there is still another body to which, after all, we must look for much that is to place our country on the basis of sanitary perfection to which we would all see it attain—I refer to the Local Government Board. The past amply testifies to the good work carried out by this State Board of Health. The influence on the present sanitary position of England of the action of this Board has been most marked. But even so, I do not think I shall err if I place the Medical Department of the Board in the foremost position, as having contributed to the advance made in the last twenty-five years. I need not here dwell on their achievements. I will satisfy myself by a reference to one piece of work undertaken during the last two years under threat of cholera invasion. The work was the special *Cholera Survey* of numerous sanitary districts throughout the country. The public press has amply demonstrated the help which this survey has been to the localities visited; and the mass of information got together at headquarters as a result of these local visits must be enormous. My chief reason for naming this matter is to ask the questions: Why a "cholera" survey only? Why not, indeed, a "sanitary" survey also? If the survey has, as we know it has in many cases, demonstrated the unreadiness of districts to resist cholera, why limit such a useful measure of supervision to cholera seasons, seeing that typhoid fever will spread where cholera can find a breeding ground? Is such a duty to be left to county councils, and if so will they perform it in a manner likely to prove generally useful? The State now has its regular school inspection, its periodical workhouse visitation, its biennial public vaccination inspection; why not its annual, biennial, triennial (or even its irregular, but constant) inspection of sanitary districts for the purposes of ascertaining the shortcomings and the remedial measures necessary in regard of the sanitary state of our country? And this not alone in England. Surely such a Governmental supervision of our local authorities would be a heavy lever in the hands of the State towards securing uniform cleanliness alike of air, soil, and water.

However it be accomplished, certainly it would seem to be of paramount importance that a country held up, and even holding itself up, as a pattern in matters sanitary, should strive to secure the prevention of preventable diseases, of which class typhoid fever is typical. It will undoubtedly be a costly piece of work, but the end in view more than justifies the adoption of the essential measures.

APPENDIX A.

DR. KLEIN'S BACTERIOLOGICAL EXAMINATION OF WORTHING WATER, 1893.

Methods of Examination.

(Appended to Dr. Theodore Thomson's Report on the Worthing Typhoid Fever Epidemic of 1893.)

The methods of examination resorted to were as follows: With the view of ascertaining the quantity of micro-organisms per cubic centimetre of the water under investigation, the ordinary method of plate cultivations was employed. This plan consists of adding to nutrient gelatine in a fluid state a small quantity of water to be examined (the amount employed varying from 1 c.cm. to a fraction thereof), shaking the mixture so as to aid distribution of the water throughout the gelatine, and then pouring the mixture on plates. These plates, on which the gelatine mixture solidifies, are then transferred to an incubator, and maintained at a temperature of 20° C.; and by subsequent observation the number and nature of the organisms that grow on the gelatine are ascertained.

Another method was resorted to in searching for particular microbes in water from a given source, and for the following reasons:

(*a*) The bacillus coli and the enteric fever bacillus, when present in drinking water, exist there for the most part in relatively small proportion. Thus, if only a small quantity of water, such as 1 c.cm., be examined, it is likely that the organism, sparingly present in the total bulk of water, may not be present in a small sample, although present in a larger bulk.

(*b*) If the number of other micro-organisms amount to several hundreds or more per c.cm.—and this is usually the case when water is unfiltered—there is risk that the numerous colonies of these may on plate cultures obscure and prevent recognition of scantily present bacillus coli or enteric fever bacillus.

(*c*) One of the bacteria most frequently found in water is the bacillus fluorescens liquescens, which grows much more rapidly than either the bacillus coli or the enteric fever bacillus, and liquefies gelatine very quickly. Abundance of the first-named bacillus in the water under examination would accordingly, by liquefaction of the gelatine mixture, tend to prevent detection of either of the last-named bacilli. With the view, therefore, of overcoming these difficulties the following means were adopted:

1. A considerable bulk of water (from 1,500 to 2 500 c.cm.) was submitted to examination. For this purpose the quantity to be examined was passed through a sterile Berkefeld filter, which retained on its outer surface all or nearly all the particulate matter contained in the water. The matter thus retained on this outer surface was then brushed with a sterile brush into 20 c.cm. of sterilised water and mixed therewith. Of this mixture 1 c.cm. was added to each of a series of gelatine plates and broth tubes.[1] Accordingly these tubes and plates contained all or nearly all the particulate matter of the total quantity of water selected for examination.

2. To prevent obscuring of the bacillus coli or the bacillus of enteric fever by other organisms that grow more rapidly than they, or that soon liquefy the gelatine, a small quantity of phenol was added to the culture media. For this purpose a 5 per cent. watery solution of phenol was used, and this solution was added to the culture media in the proportion of 1 of the former to 100 of the latter. The added phenol, which does not interfere in any way with the growth and multiplication of the bacillus coli or of the bacillus of enteric fever, exerts a marked inhibitory effect on such water bacteria as bacillus fluorescens liquescens, the proteus vulgaris, and others; and, by retardation or suppression in this way of growth of these latter organisms, better opportunity is afforded of detecting in waters examined the presence of the bacillus coli or of the bacillus of enteric fever.

The gelatine plate and broth tube cultures thus prepared were incubated at a temperature of 20° C. and of 37° C. respectively. From growths of the bacillus coli or the enteric fever bacillus obtained in these ways subcultures were made in the ordinary manner.

Features characteristic of Bacillus Coli and of the Enteric Fever Bacillus.

Bacillus Coli.	Enteric Fever Bacillus.
Shorter and less mobile than the enteric fever bacillus.	Longer and more mobile than the bacillus coli.
Forms gas bubbles in gelatine shake culture.	Does not form gas bubbles in gelatine shake culture.
Curdles milk in 1 to 2 days at 37° C.	Does not curdle milk.
If grown in broth for several days forms indol.	Gives no indol reaction when grown in broth.

The above tabular statement embodies the chief distinctive features of the bacillus coli and the enteric fever bacillus, derived respectively from the contents of the healthy human intestine and from the tissues of enteric fever. Other points are as follows: In gelatine stab culture and in gelatine surface cultures these bacilli are alike in general appearance save in two respects, namely, (*a*) that the bacillus coli grows faster than the enteric fever bacillus, and (*b*) that in gelatine stab culture the former organism forms on the upper surface of the gelatine a larger plate-like growth than does the latter. On gelatine plates both organisms form on the surface of the

[1] Beef broth; alkaline; with 1 per cent. peptone and 1 per cent. salt added.

culture medium colonies which present the appearance of flat, crenated, or irregularly outlined patches, thinner at the periphery than at the centre, translucent by transmitted light, greyish by reflected light; while colonies of both organisms, growing beneath the surface and embedded in the gelatine, are rounder than surface colonies, and appear of a brownish colour by transmitted light. Neither organism liquefies gelatine. Their growth on agar and on potato affords no definitely distinctive feature; although, as a rule, the bacillus coli forms on potato a brownish growth, while the bacillus of enteric fever forms on the same medium a colourless growth.

THE SERUM TREATMENT OF TUBERCULOSIS.

THE communication on the serum treatment of tuberculosis presented by Professor E. Maragliano, of Genoa, to the Section of Medicine has excited so much interest that we think it well to publish a full abstract of it here.

After alluding to the curability of tuberculosis as proved by the evidence of the *post-mortem* room, and after referring briefly to the endeavours of Richet and Héricourt in France, of Babes in Hungary, and of Paquin in America, to discover an antituberculous vaccine, he submitted his own researches which had been pursued for three years, and which had resulted in the discovery of a serum having a specific curative action on tuberculosis, that is to say, a serum presumably containing tuberculous antitoxins. This serum he has obtained from dogs, asses, and horses, "by procedures different from those hitherto adopted, absolutely discarding cultures of living bacilli, and availing myself exclusively of the highly toxic principles extracted from these." By progressive vaccinations dogs are immunised against intravenous injections of very active tuberculous matter taken from the human subject. As the result of experiments to determine the potency of this serum, he has found that on injecting tuberculin together with a sufficient quantity of the serum into a tuberculous subject no reaction, either general or local, takes place, whereas the same quantity of tuberculin injected alone produces both general and local reactions. Professor Maragliano considers that the capacity of a serum to neutralise the toxic effect of tuberculin is the best gauge of the therapeutic potency of an antituberculous serum. He has tried the serum clinically in 82 cases, including all forms of pulmonary tuberculosis from the gravest to the slightest, and has arrived at the following conclusions:

1. Cases in which there are circumscribed foci of disease without any great degree of fever, and without any great admixture of other micro-organisms (diplococci, streptococci), are commonly benefited. He has used the serum in 45 such cases, and all of these (29 in number) in which the treatment was carried out systematically might be looked upon as cured. The remaining 16 improved greatly, but at the date of the report they were still under treatment, or, believing themselves to be cured, had declined to continue it.

2. Cases in which there are diffuse foci of tuberculous bronchopneumonia, but without any considerable association of other microbes, even if moderately febrile, are benefited in some degree, occasionally, to such an extent as to give grounds for hope that, by perseverance with the treatment, a complete cure may be effected. Of 14 such cases treated, all were improved, some to a marked degree.

3. Cases of diffuse bronchopneumonia, with considerable association of other micro-organisms, are not appreciably benefited by the serum treatment alone. Of 14 such cases under treatment, however, none got worse, and some even gained a little.

4. Cases of destructive bronchopneumonia with cavities derive some slight benefit from the treatment. Of 9 such cases 3 showed some improvement (reduction of temperature and increase of weight); 4 others were very slightly benefited, and in 2 the disease was not checked, but ran on to a fatal issue. The improvement, according to Professor Maragliano, is lasting, provided the treatment be continued as long as is necessary to bring about a cure. In some of his cases the cure has been maintained for two years; in others, in which the treatment has been abandoned prematurely, relapse has occurred. The mechanism of the curative action of the serum is believed by the author to be that by means of it defensive materials are introduced into the organism where they lead to the production of others. He deprecates any exaggerated expectations in advanced stages of the disease when there exist profound lesions of tissue, and he emphatically declares that "antituberculous serotherapy can be of use, and can reasonably be expected to effect a cure, only in those cases of pulmonary tuberculosis in which no destructive foci exist."

The duration of the disease is a secondary matter. The important points are the extent, intensity, and nature of the pulmonary lesions. Another point of great moment as regards the result of treatment is whether one has to do with simple tuberculous infection or with a mixed infection. The association of diplococci and streptococci with the bacilli of tuberculosis retards or altogether neutralises the effect of the treatment. Hæmoptysis is not a contraindication, and indeed Professor Maragliano does not admit any contraindication whatever; he insists that the treatment is applicable in all forms of pulmonary tuberculosis. It is never injurious, and nearly always does good.

As regards the prophylactic value of the remedy, he has not yet been able to come to a definite decision, but he seems inclined to be hopeful on this point.

As regards the *technique* of the injections, a situation in which the subcutaneous connective tissue is loose should be chosen; the site which he prefers is in the posterior axillary line towards the base of the thorax. Of course the most scrupulous aseptic and antiseptic precautions must be observed. The injections do not cause pain, and as a rule are not followed by local reaction; in a few cases, however, there was some redness, swelling, and pain at the site of injection, occasionally with slight rise of temperature. All these phenomena disappeared in two or three days.

In cases in which there is no pyrexia Professor Maragliano begins by injecting 1 c.cm. on alternate days for ten days; then he injects 1 c.cm. every day for ten days; finally two injections of the same quantity are given daily for ten days. When there is pyrexia an attempt should be made to subdue it by high doses, and 10 c.cm. of serum should be given at once. If the temperature does not rise again, after three days a daily injection of 1 to 2 c.cm. should be given; if, however the fever persists, a second injection of 10 c.cm. should be given eight days after the first. The beneficial effects of the treatment show themselves, sometimes within a fortnight, sometimes not till after a couple of months. Even when cure seems to be complete the treatment should be continued for at least a month, and Professor Maragliano thinks it would be well by way of precaution to give a weekly injection of 1 c.cm. for at least a year. General hygienic treatment (climate, nourishing food, and particularly careful attention to the efficiency of the digestive apparatus) must on no account be neglected. Of the manner in which the antituberculous treatment just described may be combined with the treatment of accessory infections Professor Maragliano proposes to speak in a future communication.

HOSPITAL OFFICERS AND CORONERS' FEES.

A LETTER was addressed recently by the Medical Defence Union to the Chairman of the London County Council, calling attention to the serious grievance under which the resident medical officers of hospitals suffer, in that they are compelled to make *post-mortem* examinations by order of the coroner of their district, to attend the court and to give evidence without fee. In this way a large amount of time is occupied in discharging a duty which, if performed by a medical man not attached to a hospital, would be recognised by the payment of the customary fee. After ten days' consideration, the clerk of the Council replied that the Council regretted that it had no power, in face of the specific provisions of Section 21 (2) of the Coroners Act, 1887, to sanction the payment of such fees. Mr. de la Hooke added that the Council was of opinion "that if an amendment of the law in this respect is desired, the matter is one in which action should be taken by the medical officers themselves."

The section on which the County Council relies is Section

22, not 21 (2) as stated. Section 22 of the Coroners Act, 1887, 50 and 51, Vict. c. 71, provides that where an inquest is held on the body of a person who has died in a public hospital, etc., ... "the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution shall not be entitled to *such* fee or remuneration." *Such* refers to the fee for attending to give evidence at an inquest or for making a *post-mortem* examination when directed to do so by the coroner.

We do not know of any duty being imposed on medical officers of hospitals to hold *post-mortem* examinations for the information of coroners, at their own expense or at the expense of the hospital. Section 23 makes them liable to a penalty for failing to obey a coroner's summons to attend an inquest and give evidence; and, until the words of Section 22 are altered, the medical officer of a hospital may be bound to attend without remuneration. As regards *post-mortem* examinations, we think such medical officer may decline to undertake them unless paid. The coroner will then have to instruct some independent practitioner, who will clearly be entitled to his fee, to make the examination, or else to order the fee to be paid to the medical officer of the hospital.

SMALL-POX IN NOTTINGHAM IN 1894.

XVIII.—A Remarkable Outbreak.

It is seldom that health officers have such a unique outbreak of infectious disease to chronicle as had Dr. Boobbyer in regard of small pox in the borough of Nottingham last year. The prevalence in question comprised 27 cases, and was brought to light as the result of the notification of a suspicious case of the disease in a small yard in the centre of the old town. Proceeding to the spot, Dr. Boobbyer found 8 cases in the yard, 2 of them of three and five weeks' duration respectively, the first being evidently infected from the county asylum by an outsider, and the second the husband of the first patient. These two persons, as the event showed, worked at their homes all through their illnesses on cotton material supplied through a contractor from a local warehouse, and consigned the material back to the warehouse on January 3rd and 6th while they were still suffering. Proceeding to the warehouse, Dr. Boobbyer found as the result of exact study of the facts that of 27 workers in one room in which the returned material in question had been dealt with, no fewer than 16 individuals were absent with small-pox, and that 3 others were still at work though ill of the malady. In these cases generally the disease was of mild type, and the period of incubation short; while it would seem likely that some of the sufferers had inoculated themselves with the virus of small-pox in the course of their work. It appears that material from the home of the original cases was sent later to one other warehouse but inquiries as to any disease to be regarded as traceable to the material was negative only; and Dr. Boobbyer is of opinion that the cotton may at the time of this later transmission have been free from infective quality, and that small-pox does not retain its quality of infectiveness so long as is often supposed. The seriousness of the retention of goods capable of carrying infection in a home where there is disease of the nature of small pox is strongly emphasised, and on its becoming known that there was still material in the house of the first cases ready to be sent under concealment through the contractor to the warehouse again, measures of a penal character were adopted, and this, too, successfully, against the person so concealing the goods. Needless to say that all necessary steps for repression of the outbreak were promptly taken by the health officer.

THE GRACE TESTIMONIAL.

The following subscriptions have been received on behalf of this fund:

	£	s.	d.		£	s.	d.
Amount already acknowledged				H. S. Ware			2
Per Dr. H. S. Ware (City of London Hospital for Diseases of the Chest, Victoria Park):				C. E. Cooper			1
				W. S. H. Sequeira			1
Arnold Chaplin...	5			J. M. Beaman (Dudley)			2
V. D. Harris	20			Three Swansea Admirers ...			3
H. Wallis	5			Dr. Pearce (Truro)			5
E. H. Colcock	5			Surgeon R. D. Wright (Gosport			2

ASSOCIATION INTELLIGENCE.

NOTICE OF LAST QUARTERLY MEETING FOR 1895.

ELECTION OF MEMBERS.

A Meeting of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

Border Counties Branch.—The annual meeting, which was unavoidably postponed, will be held at Dumfries in the third week of August.—J. Altham, Honorary Secretary, Penrith.

Midland Branch: Derbyshire Division.—There will be a meeting at the Whitworth Institute, Darley Dale, on Thursday, September 5th. The President, Dr. Moxon, kindly invites the members to afternoon tea, and Lady Whitworth will throw open her gardens and grounds. Afterwards it is proposed to drive to Matlock Bath to dine at the New Bath Hotel. Members are requested to give notice of communications to be brought before the meeting before August 20th to J. A. Scrutton, Honorary Secretary, Friar Gate, Derby.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

The fifty-sixth meeting of this District was held at Sandown on July 19th; Mr. C. Mebbes (Sandown), Vice-President, in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—Messrs. H. W. Ewen, of East Cowes, and L. L. Preston, of Ryde, were elected members.

Future Meetings.—A resolution, "that time and place of future meetings should be fixed at the meeting immediately preceding," was carried *nem. con.*

The Association and the Protection of Medical Interests.—A letter having been read as to the Council of the British Medical Association taking authority to protect the interests of the medical profession, the meeting was informed by Dr. Robertson that this matter had been already dealt with by the district.

Report of the Royal Commission on Tuberculosis.—Dr. Robertson (Ventnor) initiated a discussion on this subject. He briefly reviewed the question of the relation of animal tuberculosis to human health from 1881, when Dr. Creighton, of Cambridge, at the International Medical Congress, stated his "grounds for believing that the tuberculous disease (Perlsucht) of animals which supply milk and meat for human use is communicated by such food to man." The findings of the Commission might be summed up as follows:—1. Meat: While believing that with proper care and skilled supervision a great deal of meat from tuberculous cattle might be consumed without danger to the community, the Commission were "well aware that the difficulties of such supervision are so great that many years must elapse before any measure of an effectual kind can be carried into practice." 2. Milk: Tuberculous milk is so virulent that out of twenty-eight animals experimented on with it not one failed to develop tuberculosis. "Tuberculous disease of the cow affecting the udder" is necessary to give this virulent quality to milk. But the presence in a dairy of a tuberculous

cow is a decided source of danger to the public, especially having regard to the rapid development of tuberculosis in the udder. "The boiling of milk even for a moment would probably be sufficient to remove the very dangerous quality of tuberculous milk." In effect the Royal Commission had been unable to solve the economic difficulty, and the drastic recommendations of the Departmental Committee of 1888 were amply justified by these more detailed investigations of 1890-95.—The discussion was continued by the CHAIRMAN, Dr. GROVES, Dr. SHIRTLIFF, and by Dr. HARLAND, who suggested that as warmth less than boiling point was stated in the report to exercise a destructive power upon the tubercle bacillus, the same means might perhaps be used to attenuate the virus of rabies, or other virus, as a quicker method than that of Pasteur.—Dr. ROBERTSON concluded the discussion by moving a resolution:

That the attention of the Rural and Urban District Councils should be called to the report of the Royal Commission to inquire into the effect of meat derived from tuberculous animals on human health; and that it be recommended that means be taken to insure the proper inspection of milk and meat supplies, so as to prevent the grave dangers pointed out by the said report.

This was seconded by Mr. GREEN, and carried unanimously.—A vote of thanks was then passed to Dr. Robertson for his able handling of the matter.

Next Meeting.—It was proposed by Dr. ROBERTSON, and seconded by Dr. GODFREY:

That the next meeting be held at Sandown in the third week of October.

Vote of Thanks.—The business concluded by a vote of thanks to the Chairman.

PROCEEDINGS OF THE COUNCIL.

At a meeting of the Council, held in the Council Room, Exeter Hall, Strand, London, W.C., on July 30th, 1895:

Present:

Dr. J. WARD COUSINS, President of Council, in the chair.
Mr. HENRY T. BUTLIN, Treasurer.

Dr. JAMES BARR, Liverpool.
Dr. G. B. BARRON, Southport.
Dr. MICHAEL BEVERLEY, Norwich.
Dr. THOMAS BRIDGWATER, Harrow-on-the-Hill.
Dr. J. SPOTTISWOODE CAMERON, Leeds.
Dr. JOHN CAMPBELL, Belfast.
Mr. ANDREW CLARK, London.
Dr. H. RADCLIFFE CROCKER, London.
Dr. GEORGE W. CROWE, Worcester.
Dr. ALEXANDER DEMPSEY, Belfast.
Mr. E. DONALDSON, Londonderry.
Dr. J. LANGDON H. DOWN, London.
Brig.-Surg.-Lt.-Col. E. F. DRAKE-BROCKMAN, London.
Mr. GEORGE EASTES, M.B., London.
Dr. W. A. ELLISTON, Ipswich.
Dr. D. W. FINLAY, Aberdeen.
Sir B. WALTER FOSTER, M.D., M.P., Birmingham.
Dr. J. H. GALTON, Upper Norwood.
Dr. BRUCE GOFF, Bothwell.
Dr. H. HANDFORD, Nottingham.
Mr. J. HUGHES HEMMING, Kimbolton.
Dr. C. HOLMAN, London.
Mr. ARTHUR JACKSON, Sheffield.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Mr. JORDAN LLOYD, Birmingham.
Dr. J. W. MILLER, Dundee.
Mr. W. JONES MORRIS, Portmadoc.
Mr. R. H. B. NICHOLSON, Hull.
Mr. C. H. WATTS PARKINSON, Wimborne Minster.
Dr. CHARLES PARSONS, Dover.
Dr. G. HARE PHILIPSON, Newcastle-on-Tyne.
Dr. WILLIAM RUSSELL, Edinburgh.
Dr. ROBERT SAUNDBY, Birmingham.
Dr. ALFRED SHEEN, Cardiff.
Dr. E. MARKHAM SKERRITT, Clifton.
Mr. NOBLE SMITH, London.
Mr. HENRY STEAR, Saffron Walden.
Dr. J. ROBERTS THOMSON, Bournemouth.
Dr. WILLIAM THOMSON, Dublin.
Dr. THEOPHILUS W. TREND, Southampton.
Dr. A. R. URQUHART, Perth.
Mr. F. WALLACE, London.
Mr. C. G. WHEELHOUSE, Filey.
Mr. JOSEPH WHITE, London.
Dr. A. D. WILLIAMS, Hampton Hill.
Mr. ALFRED WINKFIELD, Oxford.

The minutes of the last meeting having been printed and circulated were taken as read. Minute 3,214 was amended by striking out the words "at the next annual meeting" in the last line, and inserting the words "to a future meeting of the Council." The minutes were then signed as correct.

Read letters of apology for non-attendance from Dr. Wade and Mr. Langley Brown.

A letter from Mr. Gomme, Statistical Officer of the London County Council, was read, asking the opinion of the Council as to the form the quinquennial census should take.

Resolved: That the matter be deferred till the Council meeting in October.

Read letter of the solicitor in reply to questions by the President of Council:

14, Austin Friars, London, E.C., July 19th, 1895.

My dear Sir,—In reply to the questions contained in your letter of yesterday, I think it must first be assumed that it is impossible now to go back to any state of things which existed before the Association became incorporated; at any rate for the purpose of putting a construction on its objects as defined by a legal document. In this view no change has taken place in the Medical Acts since the Association defined the objects for which it existed, and I am of opinion, therefore, that the object of carrying out the Medical Acts as serving to maintain the honour and interests of the medical profession cannot be read into the definition contained in the Memorandum of Association, as to how that honour and those interests are to be maintained. Nor do I think that to alter the Memorandum of Association by the addition of the words proposed would be sufficient or satisfactory; and that if the Memorandum is to be altered, the terms should be far more explicit for giving effect to the intention.

At the risk of repeating what I have said before, the legal power of the Society of Apothecaries to sue for a penalty of £20 as conferred by Act of Parliament can only be taken away by another Act of Parliament.

Failing this being accomplished, the British Medical Association can only apply to the Society of Apothecaries for permission to use their name like the Defence Union do at present.—Yours faithfully,

F. Fowke, Esq. JAMES R. UPTON.

Read letter from the Right Hon. the Earl of Stamford, President of the Civil Rights Defence Association, enclosing report of the Committee.

Resolved: That the consideration of his communication be deferred till the October meeting and that a copy of the report be sent to each member of Council.

The one hundred and fifteen candidates whose names appeared in the circular convening the meeting were then considered.

Resolved: That the one hundred and fifteen candidates whose names appeared on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

Read the following resolution carried at the annual meeting of the South-Western Branch, held at Tiverton June 26th, 1895:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake such duties.

Read communication from Mr. W. G. Dickinson asking that a notice of the Association of Members of the Royal College of Surgeons should be placed in the reception room at King's College during the meeting of the Association.

Resolved: That Mr. Dickinson be informed the Council is unable to accede to his request.

LIST OF ATTENDANCES OF COUNCIL—SEVEN MEETINGS.

	Total Attendances.
Dr. E. Long Fox, Clifton, President	5
Sir J. Russell Reynolds, Bart., F.R.S., London, President-elect	3
Dr. J. Ward Cousins, Portsmouth, President of Council	7
Mr. H. T. Butlin, D.C.L., F.R.C.S., London, Vice-President, Treasurer	7
Sir H. W. Acland, K.C.B., M.D., F.R.S., Oxford, Vice-President	0
Sir J. T. Banks, Dublin, Vice-President	0
Dr. James Barr, Liverpool, R.	6
Dr. G. B. Barron, Southport, R.	4
Mr. B. Barrow, F.R.C.S., Uffculme, Vice President	0
Dr. R. W. Batten, Gloucester, R.	3
Dr. M. Beverley, Norwich, R.	7
Dr. T. Bridgwater, LL.D., Harrow-on-the-Hill, Vice-President	5
Dr. J. S. Bristowe, F.R.S., London, R.	0
Mr. Langley Browne, F.R.C.S., West Bromwich, R.	5
Dr. J. S. Cameron, Leeds, R.	7
Dr. John Campbell, Belfast, R.	2
Mr. Andrew Clark, F.R.C.S., London, R.	7
Dr. H. Radcliffe Crocker, London, R.	7
Dr. G. W. Crowe, Worcester, R.	6
Dr. J. Cuming, Belfast, Vice-President	0

	Total Attendances.
Dr. A. Dempsey, Belfast, R.	2
Dr. E. H. Dickinson, Liverpool, R.	3
Mr. E. Donaldson, Londonderry, R.	1
Dr. J. Langdon H. Down, London, R.	5
Brigade-Surgeon Lieutenant-Colonel E. F. Drake-Brockman, F.R.C.S., London, R.	7
Dr. D. Drummond, D.C.L., Newcastle on Tyne, R.	0
Mr. George Eastes, London, R.	6
Dr. W. T. Edwards, Cardiff, Vice-President	0
Dr. W. A. Elliston, Ipswich, R.	7
Dr. David W Finlay, Aberdeen, R.	4
Sir B. W. Foster, M.D., D.C.L., M.P., Birmingham, Vice-President	3
Mr. R. S. Fowler, Bath, R.	2
Professor W. T. Gairdner, M.D., F.R.S., Glasgow, Vice-President	0
Dr. J. H. Galton, Upper Norwood, R.	5
Dr. C. E. Glascott, Manchester, R.	0
Dr. Bruce Goff, Bothwell, R.	7
Dr. W. Gordon, Exeter, R.	5
Dr. Ogilvie Grant, Inverness, R.	3
Dr. H. Handford, Nottingham, R.	7
Mr. John D. Harries, Shrewsbury, R.	4
Mr. J. H. Hemming, Kimbolton, R.	7
Dr. Holman, London, Vice-President	5
Professor Sir G. M. Humphry, M.D., F.R.S., Cambridge, Vice-President	0
Dr. J. B. Isaac, Crowthorne, R.	2
Mr. Arthur Jackson, Sheffield, R.	2
Mr. T. Vincent Jackson, Wolverhampton, R.	4
Mr. T. R. Jessop, F.R.C.S., Leeds, R.	4
Mr. Evan Jones, Aberdare, R.	7
Mr. Jordan Lloyd, F.R.C.S., Birmingham, R.	3
Mr. C. N. Macnamara, F.R.C.S., London, Vice-President	3
Mr. H. J. Manning, Salisbury, R.	6
Dr. J. W. Miller, Dundee, R.	4
Sir W. Moore, K.C.I.E., London, R.	2
Mr. W. Jones Morris, Portmadoc, R.	6
Mr. W. Nettle, Liskeard, R.	0
Mr. R. H. B. Nicholson, Hull, R.	6
Mr. C. H. W. Parkinson, Wimborne Minster, R.	6
Dr. C. Parsons, Dover, R.	5
Dr. G. H. Philipson, D.C.L., Newcastle-on-Tyne, Vice-President	3
Mr. J. W. Plaxton, M.D., Jamaica, R.	1
Dr. F. M. Pope, Leicester, R.	6
Dr. W. Russell, Edinburgh, R.	4
Dr. A. W. Sandford, Cork, R.	2
Dr. R. Saundby, Birmingham, R.	5
Dr. A. Sheen, Cardiff, R.	5
Dr. E. Markham Skerritt, Clifton, R.	7
Mr. Noble Smith, London, R.	7
Dr. R. Somerville, Galashiels, R.	5
Dr. C. J. Stawell, Carlow, R.	0
Mr. Henry Stear, Saffron Walden, R.	5
Dr. J. Strachan, Dollar, R.	2
Mr. J. Taylor, F.R.C.S., Chester, R.	2
Dr. J. R. Thomson, Bournemouth, Vice-President	4
Mr. W. Thomson, Dublin, R.	2
Dr. T. W. Trend, Southampton, R.	6
Dr. A. R. Urquhart, Perth, R.	4
Mr. T. J. Verrall, Brighton, R.	5
Dr. W. F. Wade, Birmingham, Vice-President	5
Mr. F. Wallace, London, R.	7
Dr. A. T. H. Waters, Liverpool, Vice-President	0
Mr. C. G. Wheelhouse, F.R.C.S., Filey, Vice-President	3
Mr. Joseph White, D.C.L., F.R.C.S., London, Vice-President	6
Mr. A. D. Williams, M.D., Hampton Hill, R.	3
Mr. G. E. Williamson, F.R.C.S., Newcastle-on-Tyne, R.	1
Mr. Alfred Winkfield, F.R.C.S., Oxford, R.	5
Dr. W. L. Winterbotham, Bridgwater, R.	2

* The letter R signifies Representative of a Branch.

At a meeting of the Council held in the Council Room, Exeter Hall, Strand, London, W.C., on Wednesday, July 31st, 1895:

Present:

Dr. J. Ward Cousins, President of Council, in the chair.
Mr. Henry T. Butlin, Treasurer.

Dr. James Barr, Liverpool.
Dr. G. B. Barron, Southport.
Dr. Michael Beverley, Norwich.
Dr. Thomas Bridgwater, Harrow-on-the-Hill.
Dr. J. Spottiswoode Cameron, Leeds.
Dr. John Campbell, Belfast.
Mr. Andrew Clark, London.
Dr. H. Radcliffe Crocker, London.
Dr. G. W. Crowe, Worcester.
Dr. J. Cuming, Belfast.
Dr. Alexander Dempsey, Belfast.
Mr. E. Donaldson, Londonderry.
Dr. J. Langdon H. Down, London.
Brig.-Surg.-Lt.-Col. E. F. Drake-Brockman, London.
Mr. George Eastes, M.B., London.
Dr. W. A. Elliston, Ipswich.
Dr. D. W. Finlay, Aberdeen.
Dr. Bruce Goff, Bothwell.
Dr. Ogilvie Grant, Inverness.
Dr. H. Handford, Nottingham.
Mr. J. Hughes Hemming, Kimbolton.
Dr. C. Holman, London.
Mr. Arthur Jackson, Sheffield.
Mr. T. Vincent Jackson, Wolverhampton.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. Jordan Lloyd, Birmingham.
Dr. L. Mackenzie, Tiverton.
Mr. C. N. Macnamara, London.
Mr. H. J. Manning, Salisbury.
Mr. W. Jones Morris, Portmadoc.
Mr. R. H. B. Nicholson, Hull.
Dr. J. W. Oswald, London.
Mr. C. H. Watts Parkinson, Wimborne Minster.
Dr. Charles Parsons, Dover.
Dr. G. Harr Philipson, Newcastle-on-Tyne.
Dr. F. M. Pope, Leicester.
Dr. William Russell, Edinburgh.
Dr. A. W. Sandford, Cork.
Dr. A. Sheen, Cardiff.
Dr. E. Markham Skerritt, Clifton.
Mr. Noble Smith, London.
Mr. Henry Stear, Saffron Walden.
Dr. J. Roberts Thomson, Bournemouth.
Dr. T. W. Trend, Southampton.
Dr. A. R. Urquhart, Perth.
Mr. T. J. Verrall, Brighton.
Mr. F. Wallace, London.
Mr. C. G. Wheelhouse, Filey.
Mr. Joseph White, London.
Dr. A. D. Williams, Hampton Hill.
Mr. G. E. Williamson, Newcastle-on-Tyne.
Mr. A. Winkfield, Oxford.
Dr. S. Woodcock, Manchester.

The minutes of the last meeting having been printed and circulated and no objection taken were signed as correct.

The President reported the returns of the election of representatives of Branches on the Council:

Aberdeen, Banff, and Kincardine Branch.—D. W. Finlay, Aberdeen. *Adelaide and South Australia Branch.*—(No return.) *Barbados Branch.*—Surgeon-Major W. B. Thomson, York. *Bath and Bristol Branch.*—R. S. Fowler, Bath; E. Markham Skerritt, Bristol. *Bermuda Branch.*—(No return.) *Birmingham and Midland Counties Branch.*—Langley Browne, West Bromwich; Jordan Lloyd, Birmingham; Robert Saundby, Birmingham. *Bombay Branch.*—Sir Wm. Moore, K.C.I.E., London. *Border Counties Branch.*—R. Somerville, Galashiels. *British Columbia Branch.*—E. Hasell, British Columbia. *British Guiana Branch.*—A. D. Williams, Hampton Hill. *Burmah Branch.*—(No return.) *Cambridge and Huntingdon Branch.*—Henry Stear, Saffron Walden, Essex. *Cape of Good Hope Branch.*—(No return.) *Colombo, Ceylon Branch.*—(No return.) *Cork and South of Ireland Branch.*—A. Sandford, Cork. *Dorset and West Hants Branch.*—C. H. W. Parkinson, Wimborne Minster. *Dublin Branch.*—Wm. Thomson, Dublin. *Dundee and District Branch.*—J. W. Miller, Dundee. *East Anglian Branch.*—M. Beverley, Norwich; W. A. Elliston, Ipswich. *East York and North Lincoln Branch.*—R. H. B. Nicholson, Hull. *Edinburgh Branch.*—William Russell, Edinburgh. *Gibraltar Branch.*—Wm. Turner, Gibraltar. *Glasgow and West of Scotland Branch.*—Bruce Goff, Bothwell, Lanarkshire. *Gloucestershire Branch.*—R. W. Hallen, Gloucester. *Grahamstown and Eastern Province Branch.*—E. Atherstone. *Griqualand West Branch.*—(No return.) *Halifax (Nova Scotia) Branch.*—D. A. Campbell. *Hong Kong and China Branch* (No return.) *Jamaica Branch.*—J. W. Plaxton. *Lancashire and Cheshire Branch.*—James Barr, Liverpool; G. B. Barron, Southport; E. H. Dickinson, Liverpool; James Taylor, Chester; S. Woodcock, Manchester. *Leeward Islands Branch.*—(No return.) *Londonderry and North-West of Ireland Branch.*—E. Donaldson, Londonderry. *Malta and Mediterranean Branch.*—(No return.) *Malaya Branch.*—W. G. Ellis. *Manitoba and West of Canada Branch.*—(No return.) *Melbourne and Victoria Branch.*—(No return.) *Metropolitan Counties Branch.*—Andrew Clark, H. Radcliffe Crocker, Geo. Eastes, J. W. J. Oswald, Hy. Power, Noble Smith, Fredk. Wallace, London. *Midland Branch.*—H. Handford, Nottingham; F. M. Pope, Leicester. *Montreal Branch.*—(No return.) *North of England Branch.*—David Drummond, Newcastle-on-Tyne; G. E. Williamson, Newcastle-on-Tyne. *North of Ireland Branch.*—John Campbell, Belfast; A. Dempsey, Belfast. *North Wales Branch.*—W. James Morris, Portmadoc. *Northern Counties of Scotland Branch.*—Ogilvie Grant, Inverness. *Oxford and District Branch.*—Alfred Winkfield, Oxford. *Perthshire Branch.*—A. R. Urquhart, Perth. *Punjab Branch.*—(No return.) *Reading and Upper Thames Branch.*—J. B. Isaac, Crowthorne, Berks. *Shropshire and North Wales Branch.*—John Davies Harries, Shrewsbury. *South Eastern Branch.*—J. H. Galton, Upper Norwood, S.E.; C. Parsons, Dover; T. J. Verrall, Brighton. *South Indian and Madras Branch.*—J. C. L. Stawell, Ragnalstown, co. Carlow. *South Indian and Madras Branch.*—Brigade-Surgeon Lieutenant-Colonel E. F. Drake-Brockman, London. *South Midland Branch.*—J. H. Hemming, Kimbolton. *South Wales and Monmouthshire Branch.*—Evan Jones, Aberdare; A. Sacco, Cardiff. *South Western Branch.*—Wm. Gordon, Exeter; L. Mackenzie, Tiverton. *Swansea Branch.*—H. J. Manning, Salisbury; Theophilus W. Trend, Southampton. *Staffordshire Branch.*—T. Vincent Jackson, Wolverhampton. *Sunderland, Alnwick, and Tynemouth Branch.*—John Strachan, Dollar, N.B. *Sydney and New South Wales Branch.*—(No return.) *Tweeddale and Selkirk Branch.*—(No return.) *Thames Valley Branch.*—J. Langdon H. Down, London. *West Somerset Branch.*—W. L. Winterbotham, Bridgwater. *Worcestershire and Herefordshire Branch.*—G. W. Crowe, Worcester. *Yorkshire Branch.*—J. S. Cameron, Leeds; Arthur Jackson, Sheffield; T. R. Jessop, Leeds.

Dr. J. W. Oswald, of the Metropolitan Counties Branch, Dr. Woodcock, of the Lancashire and Cheshire Branch, and Dr.

Mackenzie, of the South-Western Branch, attending the Council for the first time, were introduced to the Council by Mr. Eastes.

Read letter from Professor Michael Foster and Dr. Lauder Brunton asking the Council to grant a room for a meeting to be held on Thursday afternoon in connection with the Huxley Memorial, that notice should be posted saying that the meeting was to be held, should also be published in the Daily Journal and should be announced by the Presidents of Sections.

Resolved: That a room be allowed for a meeting connected with the Huxley Memorial on Thursday afternoon, after the address in Surgery, and that a notice be posted in the reception hall and also be placed in the Daily Journal.

Resolved: That it be recommended to the annual meeting that the Council have power to arrange a place for the annual meeting for 1896 and further to appoint a President-elect.

Resolved: That in the opinion of this Council the granting of testimonials which are used for the purpose of advertising proprietary drugs and similar articles is inconsistent with the dignity of the profession and opposed to its best interests.

Resolved: That the resolution just passed be referred to the Ethical Section.

Dr. Crowe presented to the Association a bronze medal of the late Sir Charles Hastings, the founder of the Association, which had been presented to him by the artists. Knowing that any such relic would be valued he had much pleasure in presenting it to the Association.

At a meeting of the Council held in the Council Room, Exeter Hall, Strand, London, W.C., on Thursday, August 1st, 1895:—

Present:

Dr. J. Ward Cousins, President of Council, in the chair.
Mr. Henry T. Butlin, Treasurer.

Dr. James Barr, Liverpool.
Dr. G. B. Barron, Southport.
Dr. Michael Beverley, Norwich.
Dr. Thomas Bridgwater, Harrow-on-the-Hill.
Dr. J. Spottiswoode Cameron, Leeds.
Dr. John Campbell, Belfast.
Mr. Andrew Clark, London.
Dr. H. Radcliffe Crocker, London.
Dr. G. W. Crowe, Worcester.
Dr. Alexander Dempsey, Belfast.
Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, London.
Mr. George Eastes, M.B., London.
Dr. W. A. Elliston, Ipswich.
Dr. David W. Finlay, Aberdeen.
Dr. J. H. Galton, London.
Dr. Bruce Goff, Bothwell.
Dr. Ogilvie Grant, Inverness.
Dr. H. Handford, Nottingham.
Mr. J. Hughes Hemming, Kimbolton.
Dr. C. Holman, London.
Mr. A. Jackson, Sheffield.
Mr. T. Vincent Jackson, Wolverhampton.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. Jordan Lloyd, Birmingham.
D. L. Mackenzie, Tiverton.
Mr. C. N. Macnamara, London.
Mr. H. J. Manning, Salisbury.
Dr. J. W. Miller, Dundee.
Mr. W. Jones Morris, Portmadoc.
Mr. R. H. B. Nicholson, Hull.
Dr. J. W. J. Oswald, London.
Mr. C. H. Watts Parkinson, Wimborne Minster.
Dr. C. Parsons, Dover.
Dr. G. H. Philipson, Newcastle-on-Tyne.
Dr. F. M. Pope, Leicester.
Dr. William Russell, Edinburgh.
Dr. A. W. Sandford, Cork.
Dr. Robert Saundby, Birmingham.
Dr. Alfred Sheen, Cardiff.
Dr. E. Markham Skerritt, Clifton.
Mr. Noble Smith, London.
Mr. Henry Spear, Saffron Walden.
Dr. J. Roberts Thomson, Bournemouth.
Dr. T. W. Trend, Southampton.
Dr. A. R. Urquhart, Perth.
Mr. T. Jenner Verrall, Brighton.
Mr. F. Wallace, London.
Mr. C. G. Wheelhouse, Filey.
Mr. Joseph White, London.
Dr. A. D. Williams, Hampton Hill.
Mr. G. E. Williamson, Newcastle-on-Tyne.
Mr. Alfred Winkfield, Oxford.

The minutes of the last meeting were read and found correct.

There appeared to be six vacancies on the Journal and Finance Committee, and thirteen members of the Council were nominated to fill the vacancies.

A ballot was taken, and Dr. Galton and Mr. Andrew Clark having been appointed scrutineers the following appeared to have the greatest number of votes:

Dr. Markham Skerritt; Dr. Holman; Dr. Bridgwater; Sir Walter Foster; Mr. Vincent Jackson; and Mr. Jones Morris.

Resolved: That the following be appointed the Journal and Finance Committee for the ensuing twelve months:

The President; the President-elect; the President of Council; the Treasurer; Dr. J. Barr; Dr. Bridgwater; Dr. Spottiswoode Cameron; Dr. H. R. Crocker; Dr. W. A. Elliston; Sir Walter Foster; Dr. Bruce Goff; Dr. Ogilvie Grant; Dr. Holman; Mr. Vincent Jackson; Mr. T. R. Jessop; Mr. Jones Morris; Mr. Nicholson; Dr. R. Saundby; and Dr. Markham Skerritt.

Resolved: That the following members be appointed the Parliamentary Bills Committee for the ensuing twelve months:

The President; the President-elect; Dr. J. Ward Cousins, the President of Council; Mr. H. T. Butlin, Treasurer, *ex-officio*; Mr. S. H. Agar; Dr. E. Atherstone; Mr. D. B. Balding; Dr. A. G. Bateman; Dr. R. W. Batten; Dr. T. Bridgwater; Mr. George Brown; Dr. J. S. Cameron; Dr. R. R. Carey; Dr. W. A. Carline; Dr. W. F. Cleveland; Dr. G. W. Crowe; Dr. E. Donaldson; Dr. J. Langdon Down; Mr. George Eastes; Dr. R. Esler; Mr. E. H. Galton; Dr. Bruce Goff; Dr. W. Gordon; Dr. Ogilvie Grant; Mr. J. D. Harries; Dr. A. J. Harrison; Mr. Ernest Hart; Mr. E. Hassell; Mr. J. H. Homming; Dr. Holman; Professor V. Horsley; Dr. W. H. Hughes; Mr. Arthur Jackson; Mr. Evan Jones; Mr. T. C. Langton; Dr. A. R. Manby; Surgeon-Major T. A. P. Marsh; Dr. W. J. Mickle; Dr. C. H. Milburn; Dr. J. W. Miller; Mr. W. Jones Morris; Dr. James Murphy; Professor A. Ogston; Dr. I. Owen; Mr. C. H. W. Parkinson; Dr. H. H. Phillips-Conn; Dr. G. Reid; Dr. James Ritchie; Dr. G. E. Shuttleworth; Dr. R. Somerville; Mr. W. D. Spanton; Dr. J. Strachan; Mr. C. T. Street; Dr. James Stuart; Mr. James Taylor; Dr. G. D. P. Thomas; Dr. W. Thomson; Professor E. R. Townsend; Dr. A. R. Urquhart; Mr. T. J. Verrall; Mr. F. Wallace; Mr. A. Winkfield; Dr. W. L. Winterbotham; and Dr. S. Woodcock.

Resolved: That the following members be appointed the Scientific Grants Committee, and that a grant of £250 be made for the purposes of the Committee for the ensuing twelve months:

The President; the President-elect; Dr. J. Ward Cousins, President of Council; Mr. H. T. Butlin, Treasurer, *ex-officio*; Dr. Wm. Anderson; Dr. T. L. Brunton; Dr. H. R. Crocker; Dr. H. Handford; Dr. C. Holman; Professor V. Horsley; Sir Joseph Lister, Bart.; Mr. N. C. Macnamara; Dr. C. Parsons; Dr. W. Russell; Dr. R. Saundby; Professor E. A. Schäfer; and Dr. G. Sims Woodhead.

Resolved: That the following members be reappointed the Inebriates Legislation Committee:

The President; the President-elect; Dr. J. Ward Cousins, President of Council; Mr. H. T. Butlin, Treasurer, *ex-officio*; Mr. D. B. Balding; Mr. R. W. Branthwaite; Dr. T. Bridgwater; Sir C. Cameron, M.P.; Dr. G. B. Clark, M.P.; Dr. C. R. Drysdale; Mr. George Eastes; Dr. J. W. Eastwood; Dr. R. Farquharson, M.P.; Sir Walter Foster, M.P.; Professor W. T. Gairdner; Dr. W. C. Garman; Dr. J. Hill Gibson; Dr. Alexander Grant; Mr. F. J. Gray; Dr. C. J. Hare; Dr. A. A. Jamison; Mr. H. R. Ker; Dr. Norman Kerr; Dr. A. E. T. Longhurst; Surgeon-Major G. K. Poole; Brigade-Surgeon R. Pringle; Fleet-Surgeon G. Robertson; Dr. J. Stewart; Dr. G. D. P. Thomas; Dr. Wynn Westcott; and Dr. H. w. Williams.

Resolved: That the following members be reappointed the Premises and Library Committee:

The President; the President-elect; Dr. J. Ward Cousins, President of Council; Mr. H. T. Butlin, Treasurer, *ex-officio*; Dr. T. Bridgwater; Dr. J. S. Cameron; Dr. C. Holman; Mr. N. C. Macnamara; Dr. W. F. Wade; Mr. C. G. Wheelhouse; and Mr. Ernest Hart, Honorary Librarian.

Resolved: That the following members be reappointed the Trusts Funds Committee:

The President; the President-elect; Dr. J. Ward Cousins, President of Council; Mr. H. T. Butlin, Treasurer, *ex-officio*; Dr. T. Bridgwater; Mr. N. C. Macnamara; Dr. R. Saundby; and Mr. C. G. Wheelhouse.

Resolved: That the following members be reappointed the Therapeutic Committee, and that a grant of £50 be made for the purposes of the Committee for the ensuing twelve months:

Sir W. H. Broadbent; Dr. Mitchell Bruce; Dr. T. Lauder Brunton; Professor T. Cash; Dr. M. Charteris; Professor T. R. Fraser; Professor W. T. Gairdner; Dr. W. Hunter; Dr. D. J. Leech; Dr. James Little; Professor D. MacAlister; Dr. E. Mackey; Dr. Sidney H. C. Martin; Dr. M. McHugh; Dr. W. Murrell; Dr. C. Y. Pearson; Dr. C. D. F. Phillips; Dr. Sydney Ringer; Sir William Roberts; Dr. R. Saundby; Dr. R. Stockman; Dr. N. L. C. Tirard; Dr. W. Hale White; and Dr. W. Whitla.

Resolved: That the Committee for Investigating the Mental and Physical Condition of School Children be reappointed as follows, and that a grant of £150 be made to them for the purpose of completing the publication of their report:

Dr. H. Ashby; Dr. Fletcher Beach; Dr. T. Bridgwater; Dr. J. L. H. Down; Dr. C. Holman; Dr. W. W. Ireland; Dr. F. Needham; Dr. G. H. Savage; Dr. G. E. Shuttleworth; Dr. F. Warner; and Dr. D. Yellowlees.

Resolved: That the following members be reappointed the Medical Charities Committee:

The President; the President-elect; Dr. J. Ward Cousins, President of Council; Mr. H. T. Butlin, Treasurer, *ex officio*; Dr. F. H. Alderson; Mr. J. Wickham Barnes; Mr. W. G. Bott; Dr. T. Bridgwater; Dr. J. H. Brierley; Dr. J. S. Bristowe; Mr. George Brown; Dr. G. W. Crowe; Dr. J. G. H. Down; Dr. Ogilvie Grant; Dr. Major Greenwood; Dr. F. de M. Hall; Mr. Ernest Hart; Mr. J. Brindley James; Dr. J. W. J. Oswald; Dr. J. R. Thomson; Mr. F. Wallace; and Dr. Hugh Woods.

Resolved: That the Reference Committee consist of the President of Council and the Treasurer, Dr. Bridgwater acting for the latter.

Resolved: That the Committee on the Use of Anæsthetics be appointed as follows, and that a grant of £50 be made for the expenses of the Committee for the ensuing twelve months:

Professor T. Annandale; Dr. Joseph Bell; Mr. Woodhouse Braine; Professor G. Buchanan; Mr. H. T. Butlin; Dr. Dudley W. Buxton; Dr. J. W. Byers; Professor M. Cameron; Professor John Chiene; Dr. C. Childs; Mr. John Croft; Professor E. Duncan; Mr. George Eastes; Dr. A. I. Galabin; Dr. Frederic W. Hewitt; Mr. Jonathan Hutchinson; Sir Joseph Lister; Professor William Macewen; Mr. J. Mills; Professor A. Ogston; Mr. G. Rowell; Dr. W. V. Snow; Mr. T. Pridgin Teale, and Mr. David Wallace.

Resolved: That the following members be reappointed the Committee on the Control of Railway Servants' and Mariners' Eyesight:

Mr. W. M. Beaumont; Mr. T. H. Bickerton; Mr. G. A. Critchett; Dr. C. E. Fitzgerald; Dr. J. B. Lawford; Dr. D. Little; Mr. N. C. Macnamara; Dr. George Mackay, and Mr. Priestley Smith.

Resolved: That the following members be appointed the Branch Organisation Committee:

The President; the President-elect; Dr. J. Ward Cousins, President of Council; Mr. H. T. Butlin, Treasurer, *ex officio*; Dr. Bruce Goff; Mr. Jordan Lloyd; Dr. C. Parsons; Dr. R. Saundby; Dr. Roberts Thomson; and Dr. T. W. Trend.

Resolved: That the General Practitioners Committee be reappointed as follows:

Dr. J. Ward Cousins, President of Council; Mr. H. T. Butlin, Treasurer, *ex officio*; Dr. T. Bridgwater; Dr. J. H. Galton; Dr. Bruce Goff; Mr. J. H. Henning; Mr. W. Jones Morris; Mr. R. H. B. Nicholson; Mr. C. H. W. Parkinson; Dr. C. Parsons; Dr. F. M. Pope; Dr. R. Saundby; and Mr. F. Wallace.

SPECIAL CORRESPONDENCE.

PARIS.

Congress for the Protection of Infant Life.—Gynæcological Congress.—Dangerous Trades.—Employment of Children in Factories.—General News.

At the Congress for the Protection of Infant Life recently held at Bordeaux, it was urged that in thickly-populated towns milkshops should be established, and strictly supervised, in order that sterilised milk be prepared for the use of the infant population on strictly scientific principles; and that pure milk establishments, organised for the benefit of the poor, should be placed under the jurisdiction of the municipalities. It was further decided by the Congress that no pedagogic methods in connection with school sanitation should be adopted until they had received the sanction of the Superior Council of Public Health. It was further proposed that the different States should draw up treaties obliging each State to put in force among its subjects residing in another country the law concerning the protection of infants abandoned by their parents or guardians. According to these treaties any infraction of the law is to be punished according to the decision of a law court.

The Gynæcological Congress at Bordeaux was opened with an address by Professor Tarnier, who summarised the work accomplished in the Bordeaux hospitals, and described in terms of warm commendation the progress achieved. Dr. Solenief, *Privatdocent* of gynæcology in the Moscow University, read an important paper on modern female dress and its unhealthy influence. He ended by praising the Russian National Dress Society, founded with the aim of introducing and perfecting a type of costume capable of being adapted to both the taste and requirements of each individual.

Professor Gautier has sent in his report on dangerous trades to the Police Prefecture. During the years 1884 and 1885 the administration strictly enforced the measures formulated by the Conseil d'Hygiène et de Salubrité on November 25th, 1881, concerning the sanitation of factories and workrooms where lead is used. From 1876 to 1880, when these instructions were not put into force, there were 552 lead workers annually treated in the hospitals, the entire number of lead workers amounting from 28,000 to 30,000. The days of treatment amounted to 11,140; five deaths resulted. From 1884 to 1886 there was a very evident decrease; subsequently saturnism increased, owing to the precautions being imperfectly observed, which would not occur if the work inspectors exercised a more rigorous supervision. Painters and those who work up the colours suffer most; from 1890 to 1893 760 were invalided. This class of worker is the most numerous. Next come the coppersmiths and tinners; during the same period 53 were invalided. Next in order come varnishers and those exposed to the danger of drawing lead dust into their lungs. House painters and colour grinders on an average are annually treated in a hospital 21.2 days; varnishers, 19.8; glass workers, 19.6; bristle cutters, 19.4; iron founders, 14; coppersmiths, 13.1; lead workers, 12.4. The danger of these latter have greatly decreased since the lead is broken by machinery and immersed in water or oil.

In the annual report drawn up by the Superior Work Commission of Factories and Workshops concerning the observance of the law of the 2nd November, 1892, regulating the labour of children in factories, etc., it is stated that in the majority of the factories and workshops the regulation forbidding children under 13 to be employed is observed in the glass, cord, and brick factories. There are some exceptions, and the inspectors have been directed rigorously to enforce this regulation wherever its non-observance exists. There are some legal exceptions to this rule; these, of course, will be respected. Under the following conditions children who have passed their twelfth year, but not attained their thirteenth can legally be employed in factories and workshops. They must have obtained the certificate of primary education, a proof that compulsory education under these circumstances is terminated, and employment in a factory, even if arduous, the State considers preferable to vagabondage. This certificate, coupled with a medical certificate stating that the child is physically capable of working, allows the above law to be set aside. The inspectors state that the number of children working in factories under these conditions has greatly diminished during the last year. The medical certificate is given gratis, either by a medical school inspector or by a duly appointed medical inspector of infantile life, or by any medical man appointed to fill a State medical post, and indicated by a prefect. This examination is compulsory and cannot be avoided by children under 13 years of age; for children beyond 13 years of age and under 16 it is voluntary, not compulsory. The work inspectors have the responsibility of eliminating among children there those that are sick, weakly, or incapable of doing the work set them; in some cases, instead of sending the child away from the factory he directs the superintendent to give lighter labour more in proportion to its strength, specifying precisely the character of such labour. Unfortunately the practice of giving medical certificates meets with many difficulties in several departments; the directions sent by the prefects to the mayors, which leaves their conscience clear, are often neglected by these latter. It is said that the municipalities are more guilty in the matter than the mayors. The Superior Work Commission wishes the inspectors to be in direct personal communication during their inspection tours with the municipal authorities and thus verbally acquaint them with the results of their inspection. In France the authority of the work inspectors does not extend to what may be called family workshops where a whole family, father and children, suffice without any other hands. In this respect the French differs from the English law. The French State argues that the father and mother or guardian, guided by affection, etc., would not exact more work than can be healthily done by the children. In such cases, when this natural affection is wanting, the law of July 24th, 1889, is put in force, which makes

parents responsible for ill-treating their children. Overworking children to the detriment of their health and development would be considered ill-treatment in the sense of the law of 1889. Family workshops or factories where boilers and machinery are used fall under the jurisdiction of the inspectors; they are classed among the dangerous and unhealthy dwellings, and are overlooked in order to secure sanitation and avoid risk of accidents endangering human life. The French law defines family workshops within narrow limits—father, mother, and their descendants. All other relations are reckoned as strangers; their presence as hands, or even that of one stranger, brings the workshop within the jurisdiction of the law, and it is inspected by the work inspectors.

M. Rochard, one of the partners in the well-known firm of the Belle Jardinière, was a member of the Conseil de Surveillance of the Assistance Publique, and has bequeathed to it his immense fortune, valued at £72,000.

Madame Davaine, widow of the well-known scientist, has bequeathed part of her fortune to the Assistances and her estate at Garches to be used as a convalescent home for girls leaving the hospital.

CORRESPONDENCE.

HEALTH OF ARMY MEDICAL OFFICERS IN INDIA.

Sir,—If you will kindly allow me a little of your valuable space I would like to make a few remarks on the unsatisfactory condition of the health of the army medical officers in India, with a few suggestions for its amelioration. It cannot be denied that there is a great amount of sickness and invaliding in the Army Medical Staff. Statistics which might be procured from the Medical Department of the War Office would abundantly confirm this statement. I will point out some of what I consider to be the chief causes of ill-health.

1. Want of employment in the plains in hot weather. I daresay there will be a great outcry at this statement, but it is perfectly true nevertheless. I exclude cholera epidemics, which are fortunately rare. I have been seven years in India, and most certainly have done my share in many stations, but I never yet had enough to do, and I am no glutton for work. Large numbers of soldiers are sent to the hills every hot season with the result that work in the plains is materially diminished. I am sure the average executive medical officer could not honestly say he does three solid hours' work a day throughout the year. I do not count chatting and smoking in the office. I do not mean to say there are too many medical officers in India, because when a Chitral expedition occurs it leaves us shorthanded.

2. Want of leave. Though medical officers stop down in the plains doing next to nothing half of them might be on leave, and it is greatly their own fault that they are not. Some of them will not go themselves, and will not allow anyone else to go if they can help it. I knew one young medical officer who would not go on leave because having only about eighteen months in the service, and it being his first hot weather in India, he was offered the middle two months (rains). He said, "What is the good of going on leave in the rains?" The same officer was very averse to a comrade going on leave as he would have a certain number more patients to attend to, the large number being venereal cases, which do not demand an enormous quantity of time or brain power. This is how there is such a difficulty about leave; a man complains if he is asked to do about one fifth part of the work of a civil surgeon of the Indian Medical Service.

Having little or nothing to do the young medical officer crawls home just as it is beginning to warm up, and sleeps away half the day, thereby developing a liver or other maladies. If he would only follow the example of the young subaltern, who is usually poorer than he, and keep a decent polo pony, and play at any rate twice a week, you would not hear of so much sickness. If too stout or too old to play polo, he can play something else. Touching polo, I am bound to say that many of the seniors do not encourage polo or any other games which bring medical officers before the public. Some of them have been known to say that they think medical officers should "efface themselves." Oh, impressive phrase! Some years ago there was a celebrated medical polo team not 1,000 miles from Quetta, but it was broken up by a high and sapient medical authority, now happily departed to the retired list, as he thought the game brought medical officers too much in "evidence." I remember Sir Joseph Fayrer saying at Netley that he had spent the best years of his life in India, and he considered it a very healthy country provided one took care of oneself. After seven years' experience of India I cordially endorse his remarks, at all events as regards the majority of stations for British troops. If a man avoids undue exposure to the sun by wearing a suitable head covering, is moderate in eating and drinking, takes plenty of exercise and avoids chills afterwards, I believe it quite possible to spend six healthy, happy years in India, and for him to return as fit as or fitter than when he left his native England.—I am, etc., Inex.

THE GENERAL PRACTITIONERS COMMITTEE AND MEDICAL DEFENCE.

Sir,—As one who on this question hailed with satisfaction the interim report of the Committee, and as one who thought that the arguments they adduced adverse to the policy of the Association's undertaking medical defence made it desirable, at least, that more time for deliberation should be given before proposing a resolution of dissent, I should like to suggest that Dr. Welsford and those who are acting with him should advance:

1. Arguments for not accepting the contention of the Committee of the difficulties attending the prosecution of defence work over so wide an area of the globe as the Association extends.

2. Why they think that the Association is the only body that can adequately undertake medical defence; and why they think it would be better carried out by them than by a reconstituted General Medical Council and an independent defence union?

For myself, I regard medical defence as comprising three separate branches of work, each, as I think, better committed to separate bodies, namely:

1. The prosecution of quackery, and all such illegal or derogatory practices as could be brought under the ban of definite rule. This work I think, properly belongs to the General Medical Council; and I was more pleased than I can tell when I read the paragraph in the Committee's report, criticising the constitution and field of action of that inert and useless body.

2. Medical defence proper as applied to individuals, for which a system of insurance is such a boon, and is best, I think, undertaken by a distinct organisation.

3 The combating of the evils arising from excessive competition, such as underselling and other breaches of proper professional conduct; this, it seems to me, is perhaps the most serious subject of all, on account of the hardship it inflicts on many of the poorer members of the profession, and of the obvious difficulty in dealing with it. It is clear that there are minor offences which could never be brought under the ban of definite rule, and therefore could not be dealt with by any judicial body. I see little light as yet as to how these evils are to be thoroughly grappled with, but I endorse the recommendation in the Committee's report for formation of local ethical committees as the first step towards effecting good in this direction. What is most urgently needed to further these ends is the help and interest of the senior and more independent members of the profession: and while I am at present unable to subscribe to the rider which Dr. Welsford moved to the Committee's report, I regard with the greatest satisfaction the energy, determination, and ability with which he is prosecuting a cause which concerns the honour and interests of the whole profession.—I am, etc.,

Bournemouth, Aug. 5th. H. Grabham Lys, M.D.

SCOTCH SCHOOLS AND PRACTICAL MIDWIFERY.

Sir,—In the report of the second general meeting of members on Wednesday, July 30th, I am surprised to find Mr. Wheelhouse credited with the statement "that the necessities of the Scotch schools made three labours sufficient for each student to pass in midwifery." I am not aware that this is so, but so far as graduation in Glasgow University

is concerned, a student is required before attending midwifery cases either to have had a systematic course of midwifery or to have passed a special examination on the phenomena and management of labour, natural and otherwise. He must then attend no fewer than twelve cases, three of which are under the direct supervision of a qualified medical man. In the event of an unnatural or difficult case occurring after the first three, the student is instructed to call in a qualified practitioner to assist.

As an old student of the late Professor Leishman, I can confidently assert that while he valued personal supervision, he held strongly that no student could attend too many cases prior to qualification.

As the discussion on this point seems to throw discredit on Scotch schools, and on Glasgow in particular, I hope, for the honour of the University, this will not be allow to pass unnoticed.—I am, etc.,

THOS. DIVINE, M.B.Glasg.

Killamarsh, Rotherham, Aug. 8th.

TEST FOR COLOUR BLINDNESS.

SIR,—At the present time, when there appears a likelihood of the colour-blind question being settled, I think it my duty again to draw attention to the inefficiency of Holmgren's test. This test has been recommended by men of the highest attainments in science in the departments which they represent. This makes it all the more difficult for an obscure individual like myself to obtain a hearing. But we must not make the opinions of the most eminent men subversive of facts, or there would be an end to all progress.

Since the publication of my book, many of those who opposed me most vigorously have published cases in support of my views.

Strange as it may seem, the report of the Royal Society contains internal evidence that Holmgren's test is not a trustworthy one. On page 116 of the report a summary of the colour-blind cases detected is given. With Holmgren's test Mr. Mellish passed one colour-blind person, and Captain Abney four. It will also be noticed that No. 69 was rejected by Mr. Mellish with Holmgren's test, and passed by Captain Abney also with Holmgren's test.—I am, etc.,

Hendon, August 13th. F. W. EDRIDGE-GREEN.

MEDICAL MISSIONARIES AND PRIVATE PRACTITIONERS.

SIR,—I wish to enter my protest against the action of a Colonial Missionary Society here. On its staff are two doctors, who treat gratis everyone who attends their dispensary or calls them out. They ask no fees from anyone, but any presents they get from their richer clients are put into the society's treasury.

A native practitioner and a member of the British Medical Association complains bitterly to me of their action, and says he is not now able to support his family through the Society's action.—I am, etc.,

Rajputana, India, July 15th. VINDEX.

THE REGISTRATION OF NURSES.

SIR,—My object in rising to speak during the debate upon the Midwives' Registration Bill at the general meeting on July 30th was to inquire if resolutions passed at an annual meeting had any authority under the rules of the Association.

Twice—in 1891 and 1893—the members assembled in annual meeting have decided, in effect, that all nurses, whether medical, surgical, midwifery, or mental, should be under the complete control of the medical profession in the performance of their duties. In 1891 the annual meeting instructed the Council to determine and report in what manner this could best be attained. The same resolution would have been moved at the 1892 meeting, when complaint was made that the Council had not reported upon the subject, but it was ruled out of order. At the Newcastle meeting in 1893 complaint was again made that there was no report, and it was admitted the resolutions had not been taken into consideration by the Council. It was once more affirmed, and the President pledged himself it should this time be considered. In the spring of 1894 I was informed the resolution had been considered and the Council could not act upon it.

My opinion is, the Council are within their right in ignoring the unanimous resolution of an annual meeting, however discourteous it may seem. If they are within their right in so doing, it is not just to accuse them either violently or otherwise.

It would be well, perhaps, if the Council would cause the rules of the Association to be printed in the BRITISH MEDICAL JOURNAL. I think they ought to do so, more especially as there was every probability of any rules of the Association which exist being the subject of discussion in the law courts three years ago. A member of our powerful Association was standing alone in serious trouble at that time, because he had read the Memorandum of Association without the interpreting rules of the Association. The Memorandum of Association states that the meetings of the Association are to be meetings of members of the British Medical Association and of other medical men. Relying on this the member referred to concluded he was privileged in speaking in annual meetings, but he was not so privileged because laymen were present, which he did not know, in obedience, of course, to the rules appertaining to annual meetings. It may be thought he was rightly punished for not reading the rules, but he could not obtain a copy of them. He would very much like to see them now, for lawyers say rules are *ultra vires*, which do not accord with the Memorandums of Association.

Returning to the subject of nurses, I hold it is wrong in principle to make any distinction between the different classes of nurses either as regards control or efficiency. I believe a simple system of registration of nurses by the medical profession is the only practical method of obtaining control; and I consider the British Medical Association the only body in the profession which can conduct such a registration. This may be as readily done through the districts and Branches as the registration of the members of the Association, which is so done. The only serious additional labour would rest with the districts, the meetings of which would have to judge of the credentials of the nurses applying for registration. It would be worth the trouble if we could regulate and render more efficient one of the most important aids we possess in our responsible calling. And we should feel it to be worth a great deal more. We should then do our duty to the nurses without stint. We should not permit one of our registered nurses—for she would not remain on the register if found unworthy—after a life of hardship and drudgery in helping us to do our work, to die a pauper. If we gave up the odd shilling of our subscription we should have a pension fund of £800 a year; or, if that were impracticable, who amongst us would grudge an extra shilling subscription to this end? It would amount only to thirty shillings in a medical lifetime, and who would not give that any day if one of the good, true, self-sacrificing, gentle, well-trained women we all know, and who are often the greatest comforts we have in an anxious case, were in poverty?—I am, etc.,

Carisbrooke, Isle of Wight, Aug. 8th. J. GROVES.

THE WEST SOMERSET BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

SIR,—With reference to the passage in the BRITISH MEDICAL JOURNAL of August 3rd, page 332, in which Dr. Mackenzie is reported to have said that he represented "Devon and Somerset," I am requested by Dr. Mackenzie to say that the words he used were "Devon and Cornwall." He did first say "Devon and Somerset," but corrected himself at once. We must thank Dr. Kelly for drawing attention to the mistake.—I am, etc.,

W. GORDON.

Exeter, Aug. 13th. Honorary Secretary, South Western Branch.

FILTHY RAILWAY CARRIAGES.

SIR,—Let me ask your assistance in removing a possible source of danger to public health, and in remedying a state of things existing in our midst highly discreditable in this age of sanitary progress.

The condition of some of the carriages on that section of the London, Brighton, and South Coast Railway running

from Victoria to London Bridge *vid* Sydenham, by which I have of late been frequently obliged to travel, is very disgraceful. Their filthy condition suggests that they are rarely washed or cleaned, and the favourable soil that their dirt affords for the accumulation and possible development of noxious germs can be imagined.

Is there no sanitary authority responsible for the inspection of these carriages? In one case within my knowledge representations have been made, but apparently without effect.—I am, etc.,

August 13th. OBSERVER.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 2s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A SURGEON-MAJOR expecting to be ordered abroad late this trooping season wants to exchange with an officer at the bottom of the roster for home service. Apply, Alpha, Belmont, Queenstown.

THE NAVY.

STAFF-SURGEON JOHN D. HENWOOD has been appointed to the *Devastation*, August 8th; and Surgeon WALTER BOWDEN, D.S.O., to the *Urgent*, August 13th.

THE ARMY MEDICAL STAFF.

THE following is the list of successful candidates for commissions in the medical staff of Her Majesty's army at the recent examination in London:

Names	Marks.	Names.	Marks.
Brereton, F. S.	2,685	Vaudin, M. L. M....	2,213
Statham, J. C. B.	2,324	Ward, W. A.	2,167
Probyn, P. J.	2,295	Forrest, E. G.	2,083
Cooper, R. M. le H.	2,239	Hooper, A. W.	2,005
Waring, A. H.	2,214	Hayes, E. C.	2,001

Brigade-Surgeon-Lieutenant-Colonel J. H. HUGHES, M.D., is promoted to be Surgeon-Colonel, *vice* S. Archer, retired, July 9th. Surgeon-Colonel Hughes was appointed Assistant-Surgeon, September 30th, 1864; Surgeon, March 1st, 1873; Surgeon-Major, September 30th, 1876; and Brigade-Surgeon Lieutenant-Colonel, June 6th, 1890; having attained the rank of Lieutenant-Colonel, September 30th, 1884. He served with the 2nd Field Hospital during the Ashanti war in 1873-74, and received the medal with clasp.

Surgeon-Colonel W. TAYLOR, M.D., has been appointed Principal Medical Officer, South-Eastern District.

Surgeon-Lieutenant-Colonel R. EXHAM is promoted to be Brigade-Surgeon Lieutenant-Colonel, *vice* R. N. Manly, deceased, July 9th. Brigade-Surgeon Lieutenant-Colonel Exham entered the service as Assistant-Surgeon, April 1st, 1873; became Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; and Surgeon-Lieutenant-Colonel, April 1st, 1891.

Surgeon-Lieutenant-Colonel J. MCNAMARA, M.D., also is promoted to be Brigade-Surgeon-Lieutenant-Colonel, *vice* J. H. Hughes, M.D., July 9th. Brigade-Surgeon-Lieutenant-Colonel McNamara's previous commissions are contemporaneous with those of Brigade-Surgeon-Lieutenant-Colonel Exham. Brigade-Surgeon-Lieutenant-Colonel McNamara was in medical charge of the troops (detachments of Royal Artillery and 10th Foot) sent into the Native State of Sunghie Ujong, Malay Peninsula, in 1874; and was present at the attack and capture of the Kapayan stockades (medal with clasp). In the Afghan war in 1880, and in medical charge of Brigadier-General Brooke's brigade covering the retreat from Maiwand (mentioned in despatches), took part in the defence of Candahar, and present at the battle of Candahar (medal with clasp), and in the Soudan Expedition in 1884 under Sir Gerald Graham, being present in the engagements at El Teb and Tamai (mentioned in despatches, medal with clasp, and Khedive's Star).

The undermentioned surgeons on probation are appointed Surgeon-Lieutenants July 29th: LIONEL FERGUS SMITH, M.B.; ROBERT JAMES BLACKHAM, SEPTIMUS HAROLD FAIRRIE, M.B.; GEORGE T. K. MAURICE, RUPERT FAWCETT, JOHN VINCENT FORREST, M.B.; HENRY WILLIAM GRATTAN, FRANCIS ERNEST GUNTER, JOHN HAY CAMPBELL, JOHN GREEN.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT H. W. JOYCE, 2nd Volunteer Battalion the Buffs (East Kent Regiment), to be Surgeon-Lieutenant, August 14th.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL and temporary Surgeon Colonel W. R. HOOPER, late Bengal Establishment, is granted the temporary rank of Surgeon-Major-General, August 14th. It will be remembered that Surgeon-Major-General Hooper retired from the service in January last, and has been since appointed President of the Medical Board at the India Office.

Surgeon-Lieutenant-Colonel C. J. W. MEADOWS, Bengal Establishment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel, April 1st. He was appointed Assistant-Surgeon, October 1st, 1860, and Surgeon-Lieutenant-Colonel, twenty years thereafter. He was with the Lushai Expedition in 1871-72, was mentioned in despatches, and has received the Frontier medal with clasp.

Brigade-Surgeon Lieutenant-Colonel JAMES FORBES SARGENT, Madras Establishment, died at Bangalore on June 29th, from abscess on the liver. Dr. Sargent, who was in medical charge of the 4th Lancers Hyderabad Contingent, was born in 1844, and received his first appointment as Assistant-Surgeon in 1866, and became Brigade-Surgeon-Lieutenant-Colonel, May 31st, 1890.

The death is also announced of Brigade-Surgeon JOHN PROUDFOOT STRATTON, late of the Bombay Establishment, who took part in the Indian Mutiny campaign, also acting as political officer with the columns under Brigadier-General Wheler in the expulsion of the rebels from Bundelcund. He retired in 1856, and died in London on August 8th, aged 66 years.

THE VOLUNTEERS.

MR LEONARD FRANK HOUGHTON is appointed Surgeon-Lieutenant in the 1st Cornwall (Duke of Cornwall's) Artillery (Western Division Royal Artillery), August 14th.

Surgeon-Lieutenant P. R. GRIFFITHS, M.B., 2nd Glamorganshire Artillery, has resigned his commission, August 14th.

Second-Lieutenant G. A. SKINNER, 1st Sussex Engineers, Fortress and Railway Forces, is appointed Surgeon-Lieutenant in the same corps, August 14th.

Surgeon-Lieutenant W. A. ATKINSON, M.B., 1st Surrey (South London) Rifles, is promoted to be Surgeon-Captain, August 14th.

CHANGES OF STATION.

THE following changes of Station amongst the officers of the Army Medical Staff have been officially notified to have taken place during the past month:

		From	To
Brig.-Srg.-Lt.-Col.	J. H. Hughes, M.D....	Straits Settlmnts.	Devonport.
,,	R. C. Heaton ...	Bengal	Bombay.
,,	W. E. Saunders ...	— ...	,,
,,	W. J. Charlton ...	— ...	Punjab.
Surgeon-Lieut.-Col.	W. P. Bridges ...	Weedon	Landguard Fort.
,,	J. Ring	— ...	Punjab.
Surg.-Major	P. J. Dempsey, M.D. ...	— ...	Bengal.
,,	A. Keogh, M.D.	Madras ...	,,
,,	S. J. Flood	Colchester ...	Weedon.
,,	O. Todd, M.B.	— ...	Bengal.
,,	P. M. Carleton, M.D ...	Madras ...	Punjab.
,,	J. O. G. Sandiford, M.D....	Glenbeigh ...	Cork.
,,	H. Saunders	— ...	Punjab.
,,	R. F. Adams, M.B. ...	Bombay	,,
,,	T. A. Dixon...	Bengal	Bombay.
,,	R. F. O'Brien	— ...	Punjab.
Surg.-Capt.	R. J. Geddes, M.B. ...	Bombay	,,
,,	H. P. Birch	Bengal	Bombay.
,,	J. J. C. Donnet	— ...	Madras.
,,	C. Birt	Bombay	Bengal.
,,	M. W. Russell	Shoeburyness ...	Punjab.
,,	J. F. Bateson, M.B. ...	Alnwick	York.
,,	R. L. R. Macleod, M.B....	— ...	Madras.
,,	S. R. Wills	Bengal	Bombay.
,,	J. M. Nicolls, M.B. ...	— ...	Bengal.
,,	C. S. Sparkes	Colchester ...	Bombay.
,,	M. J. Saxton, M.D. ...	— ...	Punjab.
,,	A. P. H. Griffiths... ...	Blackpool ...	Morecambe.
,,	W. S. Boles, M.B	Bengal	Shoeburyness.
,,	F. J. W. Stone	,, ...	Bombay.
,,	J. B. Wilson, M.D. ...	— ...	Bengal.
,,	J. B. W. Buchanan, M.D....	Bengal	Bombay.
,,	F. T. Skerrett	Lowther Park ...	Warwick.
,,	J. Moir, M.B.	Fort George ...	Maryhill.
,,	C. J. MacDonald, M.B....	Kilkenny ...	Cork.
,,	H. A. Cummins, M.D. ...	Clonmel	Fermoy.
,,	F. R. Newland, M.B. ...	Bengal	Bombay.
,,	T. Browning	Nenagh	Limerick.
,,	W. J. Trotter	— ...	Bengal.
,,	W. Dowman	Cork	Dublin.
,,	B. H. Scott, M.D.	Bombay	Punjab.
,,	A. C. C. Watson, M.B. ...	Edinburgh ...	Fort George.
,,	W. L. Gray, M.B.	Madras	Punjab.
,,	J. Paterson, M.B. ...	Bengal	Egyptian Army.
,,	C. Dalton	Madras	Punjab.
,,	C. W. Duggan, M.B. ...	Woolwich ...	Sierra Leone.
,,	C. C. Fleming, M.B. ...	Bengal	Bombay.
Surg.-Lieut.	H. A. Hingo	— ...	Madras.
,,	G. S. Walker, M.B. ...	Kinsale	Fort Camden.
,,	W. E. Erskine, M.B. ...	— ...	Madras.
,,	W. J. Taylor, M.B. ...	Hythe	Shorncliffe.
,,	C. T. Samman	— ...	Madras.
,,	A. E. C. Koble ...	...Brackenber Moor	Preston.
,,	D. J. Collins, M.B. ...	Wexford	Cork.
,,	H. C. French	Chatham	Grenadier Grds.
,,	A. E. Milner	Portsmouth ...	Gosport.
,,	H. W. Vaughan-Williams, M.B.	Cork	Kilkenny.

THE INDIAN MEDICAL SERVICE AND THE SANITARY NEEDS OF INDIA.

ON this subject the *Medical Press and Circular* has the following remarks: "Mr. Ernest Hart's recent visit to India enabled him to form very definite conclusions upon many subjects, but his outspoken remarks in the Section of Public Health, at the recent meeting of the British Medical Association, with respect to the present position of the officers of the Indian Medical Service, should not be allowed to pass without notice. He said: 'Two things struck me in India—the remarkable ability, the enormous power of work, and the excessive overwork of the Indian medical officers, the terrible servitude which enforces on them the attempt to perform a vast mass of duties which cannot be performed, and

the lamentable results of the domination of really able young officers by effete, ignorant, and worn-out superiors, who have risen by mere seniority to positions where, owing finally and administratively, they are quite incapable of handling by reason of their age and of the antiquated state of their information, if even many of them had ever possessed at any time the qualities or the inclination necessary for such posts. Worst of all, perhaps, is the elevation to the very highest offices, by mere lapse of time and military rules of promotion, of men who are most capable of fulfilling routine duties, but are wholly unfitted to be trusted with the administration of the health and lives of the vast population depending on us in India." The testimony here given of the duties required of the officers of the Indian Medical Service, and of the hardness of their lot, should be borne in mind by the young practitioners in this country who are desirous of competing for the appointments in connection therewith. The cry has long been that the officers of the Indian Medical Service are overworked—if not in some instances "sweated"—and the grievance is one into which expediency demands that inquiry should be made."

THE ARMY MEDICAL SCHOOL.

At the conclusion of the seventieth session and Final Examination at Netley four of the candidates failed to qualify, two of the British and two of the Indian Medical Service.

POSTINGS OF MEDICAL OFFICERS.

Surgeon-Colonel W. Taylor proceeds to Dover as Principal Medical Officer, and Brigade-Surgeon-Lieutenant-Colonel Hughes to Devonport on promotion to administrative rank.

PAY IN THE INDIAN MEDICAL SERVICE.

The following rules have been laid down for the grant of pay to a Brigade-Surgeon-Lieutenant-Colonel of the Indian Medical Service during the period he is attached to the office of a Principal Medical Officer, for the purpose of acquiring a knowledge of military medical administration. 1st. In cases where it is practicable to attach the officer to the office of a Principal Medical Officer without his relinquishing his civil duties, his full civil pay will be continued to him. 2nd. In cases where the officer has been obliged to relinquish his civil duties he will be allowed the grade pay of his rank, together with half the difference between that grade pay and the substantive pay of his civil appointment, the whole to be a charge against the military estimates.

MEDICO-LEGAL AND MEDICO-ETHICAL.

INFECTION BY A MIDWIFE.

The Blackburn and District Coroner (Mr. H. J. Robinson) held an inquest on August 7th at Blackburn Town Hall on the body of Mary Jane Talbot, who died as the result of confinement on August 3rd. In the course of his evidence Dr. G. R. Wilson stated that he visited deceased at 7.30 on Saturday morning after the child was born. He found deceased suffering from septicæmia, or blood-poisoning, from which she died. With regard to that disease he said it was exceedingly catching. It was often brought by neglectful persons but might arise from bad drains. He did not perceive any bad drains in the house. The usual cause was persons attending confinements without due disinfection. If any woman in the house had attended another woman suffering from that complaint during the last week or two he should take it as positive proof of the way deceased got the disease. Joseph Wilson gave evidence as to his attendance at the birth of the child. There were three women present, one being a midwife. It was not necessary for any instruments to be used. Dr. James Wheatley, Medical Officer of Health, stated that deceased's death was from septicæmia. It was extremely likely to have arisen from the woman going straight from one case to the other without disinfecting. Further evidence having been given a verdict was returned to the effect that deceased had died from the blood-poisoning following confinement probably caused by the midwife going directly from one case to another without due disinfection.

PRESCRIBING CHEMISTS.

At the Limehouse Townhall on August 12th, Mr. Wynne Baxter held an inquiry respecting the death of George William Clark, aged 11 months, the son of a bargeman, living at East Street, Bromley. The mother of the child stated that the deceased and another of her children had been suffering from measles. She sent her sister to a chemist on August 8th for some medicine, but the chemist told her that he would come and see the child. He did so. He looked at the child and told them to fetch some medicine, which they did. He called again at 10 o'clock the same night and sent some more medicine. The following morning the child seemed worse, and the witness sent again for the chemist, but he refused to come, and said, 'Put my medicine out of sight and go for Dr. Haddock, and don't mention a word that I have been here.' The witness sent for Dr. Haddock, but the child died before his arrival. The witness and her husband thought the chemist was a qualified man, and first heard of him through his attending a woman next door for rheumatic fever and other patients in the street. The witness understood the name of the chemist to be Wilmott or Wilmer, and he lived at 111, Salmon's Lane. John Charles Perdue stated that he was a chemist's assistant, and had never passed any examination. He was employed by Mr. Wilmer, a registered chemist and druggist, and Mr. Wilmer knew that he went out to visit patients. The witness added that he had attended the sick and dying for six years in ten different districts in London. The Coroner: Then the sooner you give it up the better for everybody. Are you aware that through any want of skill on your part you might stand at the Old Bailey for manslaughter? The Witness: I am fully aware of it. The Coroner: Then in the face of such a statement I am sure no one would have mercy on you. The witness denied that he told the mother to hide the medicine, but on being confronted with Mrs. Evans he hesitated in denying it. He added that he never charged anyone for anything, and got his living by his skill. The Coroner: What is that, pray? The Witness: Converting tea leaves into anything. It would surprise anyone to see what I can make out of tea leaves. The Coroner: But that does not give you the right to pose as a doctor. The Witness: I know what I am doing, and I only live to do good for others, and if I do wrong I will stand the risk. Public opinion I care not for, but before I go I leave this (throwing 5s. on the table) for the husband; he's been out of work for weeks, and needs it. The Coroner: Do you make your medicines of tea leaves? The Witness: No, sir. The Coroner (producing the bottle): Why, this smells strongly of tea. Dr. Haddock deposed that the child died of bronchitis. The medicine given appeared to be very simple and harmless. The Coroner, in summing up, said the jury could do very little in this case, as Dr. Haddock could not say any harm had been done by the medicine. According to the law anyone may practise, but they do so at their own risk. The law does not prevent them from attending and giving medicine. The jury gave a verdict of "Natural death," and requested the coroner to write to Mr. Wilmer, calling his attention to the risk his assistant was daily running.

NEWSPAPER PARAGRAPHS.

Keighley.—Professionally annoying to honourable practitioners as such a sensationally erroneous report in the local press as that referred to would naturally be, we do not see what more our correspondent can reasonably be expected to do in vindication of himself and of the moral obligations devolving upon an ethically jealous faculty in view of the fact that he has not only interviewed the editor and protested against the objectionable article, but written a repudiating explanatory note to his local medical brethren. Such we deem to be professionally adequate for the incorrectly assumed ethically immoral proceeding of the practitioner in question.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

Intermediate Examination in Medicine.—Pass List:

Entire Examination.—First Division: W. R. Battye, B.Sc., University College, Bristol and London; Janet Waldegrave Carr, London School of Medicine for Women; H. Hartley, Owens College, Manchester; Alice Mary Hawker, London School of Medicine for Women; R. Hine, Middlesex Hospital; H. D. Singer, St. Thomas's Hospital; F. H. Thicke, University College; W. R. H. Wood, Mason College. Second Division: E. W. Adams, Sheffield Medical School and Firth College; F. A. Arnold, London Hospital; C. H. Benham, University College; T. P. Berry, Guy's Hospital; F. Brickwell, St. Bartholomew's Hospital; J. Broadley, Yorkshire College; S. A. Bull, Westminster Hospital; A. J. Cleveland, Guy's Hospital; E. M. Cowie, King's College; D. L. F. Davies, Middlesex Hospital; R. C. Field, Yorkshire College; G. M. Harston, Charing Cross Hospital; T. A. Hawkesworth, King's College; W. J. Hirst, Yorkshire College; H. H. Jamieson, St. George's Hospital; H. S. Jenkins, University College, Bristol; J. D. Jenkins, London Hospital; S. C. Leaning, St. Mary's Hospital and Birkbeck Institute; Frances Annie Leete, London School of Medicine and Birkbeck Institute; C. D. Lindsey, St. Mary's Hospital and Birkbeck Institute; Marion Sandford Linton, B.A., London School of Medicine for Women; F. S. Lloyd, St. Mary's Hospital; J. Mooney, Owens College; J. B. Page, St. Mary's Hospital; Mary Nona Sharman, Glasgow University and London School of Medicine; J. H. Sheldon, Owens College; A. B. Smallman, Owens College; J. E. Smith, University College, Liverpool; S. M. Smith, St. Mary's Hospital; J. M. G. Swainson, Westminster Hospital; E. Taunton, University College; W. H. M. Telling, Guy's Hospital; A. G. Tollemache, University College, Dundee, and Queen's, Belfast; W. F. Tyndale, St. Thomas's Hospital; Eliza Turner Watts, London School of Medicine for Women; H. E. White, Mason College; C. E. Whitehead, St. Mary's Hospital; W. D. Wiggins, St. Mary's Hospital; P. G. S. Williams, University College; A. G. Wilson, London Hospital; W. Wright, Owens College.

Excluding Physiology.—First Division: W. T. Rowe, St. Bartholomew's Hospital; H. H. Scott, St. Thomas's Hospital; G. R. Thwaites, St. Thomas's Hospital; J. G. Wallis, London Hospital. Second Division: H. T. S. Aveline, Bristol Medical School and Clifton Laboratory; F. V. O. Bolt, St. Bartholomew's Hospital; A. B. Cridland, Bristol Medical School and Clifton Laboratory; G. B. Crisp, St. Mary's Hospital; L. E. C. Handcock, Guy's Hospital; J. L. Jones, University College; J. A. Mawson, Yorkshire College; H. A. Schilberg, St. Bartholomew's Hospital; S. R. Smith, Westminster Hospital; W. S. V. Stock, University College, Bristol, and Clifton Laboratory; L. Whitfield, Mason College; E. W. Woodbridge, St. Bartholomew's Hospital.

Physiology only.—First Division: A. E. Baker, Middlesex Hospital. Second Division: J. A. P. Barnes, St. Bartholomew's Hospital; C. P. Blotchly, Middlesex Hospital; W. N. East, Guy's Hospital; E. S. Hall, Guy's Hospital; E. L. Hunt, St. George's Hospital; C. E. Lansdown, St. Mary's Hospital; H. J. Marriage, St. Thomas's Hospital; J. L. Maxwell, St. Bartholomew's Hospital; P. W. Mason, Guy's Hospital; J. W. Winterbourn, St. Thomas's Hospital.

Intermediate Examination in Medicine for Honours.

Anatomy.—First Class: C. H. Page, Guy's Hospital; and C. E. Walker, Guy's Hospital. Second Class: W. A. Dawkins, Yorkshire College, and E. B. Sherbrook, B.Sc., Westminster Hospital (equal). Third Class: E. C. Morland, B.Sc., Owens College and St. Bartholomew's Hospital; M. Dixon, B.Sc., University College; and H. E. Hewitt, St. Thomas's Hospital.

Physiology and Histology.—First Class: *E. C. Morland, Owens College and St. Bartholomew's Hospital; †R. Kelsall Owens College; and F. E. Walker, Guy's Hospital. Second Class: J. F. Dobson, Yorkshire College, and C. Sykes, University College (equal); E. B. Sherlock, Westminster Hospital; and G. E. Richmond, B.A., B.Sc., Guy's Hospital and King's College. Third Class: Mary Frances Cornford, London School of Medicine and University College, and P. Turner, B.Sc., Guy's Hospital (equal)

Organic Chemistry.—First Class: *R. W. C. Pierce, B.Sc., St. Thomas's Hospital. Second Class: P. Turner, Guy's Hospital; W. T. Milton, Guy's Hospital; E. C. Morland, Owens College and St. Bartholomew's Hospital; E. B. Sherlock, Westminster Hospital; and G. E. Richmond, Guy's Hospital and King's College. Third Class: H. W. Bruce, Guy's Hospital; and D. N. Nabarro, B.Sc., University College.

Materia Medica and Pharmaceutical Chemistry.—First Class: *P. Turner, Guy's Hospital; †E. B. Sherlock, Westminster Hospital; W. T. Milton, Guy's Hospital, and F. E. Walker, Guy's Hospital. Second Class: R. W. C. Pierce, St. Thomas's Hospital; T. H. Gardner, King's College; H. E. Hewitt, St. Thomas's Hospital. Third Class: H. W. Bruce, Guy's Hospital; Mary Frances Cornfield, London School of Medicine and University College; and C. H. Fagge, Guy's Hospital.

* Exhibition and Gold Medal.
† Gold Medal.
‡ Obtained the number of marks qualifying for the Exhibition.

PRELIMINARY SCIENTIFIC (M.B.) EXAMINATION: PASS LIST.

Pattes Examination.—First Division: W. F. Addey, University College; J. C. M. Batley, St. Bartholomew's Hospital; A. W. Bartlett University College, Aberystwith; H. F. W. Boeddicker, King Edward High School, Birmingham, and Mason College; C. H. Bullen, Mason College; J. A. Butler, Guy's Hospital; P. W. L. Camps, Guy's Hospital; T. C. English, University Tutorial College; Harriet R. D. Ford, Owens College; W. O. Greenwood, private study; Louisa Hamilton, University College; G. W. Hare, Guy's Hospital and Mentone House; R. G. Johnson, University College, Bristol; B. W. Jones, King Edward High School, Birmingham, and Mason College; Jessie Augusta Lewin, University Tutorial College; Olive McDougall, Owens College; D. J. McGavin, King Edward High School, Birmingham, and Mason College; J. R. Martin, Middlesex Hospital and University College; E. D. Mason, Mason College; A. S. Parkinson, Yorkshire College; C. B. Penny, Guy's Hospital and Alwyne Institute; C. A. S. Ridout, St. Bartholomew's Hospital; R. H. St. C. Roberts, University Tutorial College and private study; R. Rutherford, University Tutorial College and private study; J. W. S. Seccombe, private study and St. George's Hospital; C. D. Soutter, King Edward High School, Birmingham, and Mason College; C. Thackray, Firth College; Gisela Wilmersdoerffer, University Tutorial College; G. T. Wrench, Guy's Hospital. Second Division: Emily Hampgate Barnett, Bedford College, London; P. G. A. Bott, St. Mary's Hospital; C. H. Brodribb, St. Mary's Hospital; F. C. Carlé, King's College; H. Collinson, Yorkshire College; L. Cook, Westminster Hospital and private study; L. E. Dickson, University College, Liverpool; F. R. Edwards, King Edward High School, Birmingham, and Mason College; A. G. Elliot, University College; W. T. Evans, University College, Cardiff; A. Fox, Queen's College, Cork, and private study; A. Freear, St. Mary's Hospital; Caroline Lilian Gale, University College; D. G. Greenfield, Guy's Hospital; L. H. Guest, Owens College and private study; C. F. Günther, B.A., Firth and University Colleges; Florence Elizabeth Hampshire, Yorkshire College; W. C. Hirst, Yorkshire College; E. W. Holyoak, Wyggeston School; J. W. Hunt, St. Mary's Hospital; Mary Hannah Frances Ivens, University Tutorial College; Sophia Bangham Jackson, University College, Aberystwith; H. W. James, University College, Cardiff; A. H. John, St. Bartholomew's Hospital; E. W. Jones, Mason College and private tuition; W. J. Law, Firth College and Kingswood School; G. Lewin, City of London School and University Tutorial College; A. E. J. Lister, St. Bartholomew's Hospital; B. R. Lloyd, University College, Cardiff; F. W. Longhurst, University College and private tuition; J. C. Marshall, St. Bartholomew's Hospital and private tuition; G. Maw, University College; J. P. May, St. Bartholomew's Hospital and Central Foundation School; Annie Mooney, Owens College; H. McD. Parrott, Guy's Hospital and Carlyon College; Mary Elizabeth Phillips, University College, Cardiff; A. T. Pridham, St. Bartholomew's Hospital; M. F. Reaney, London Hospital; E. F. Reeve, Aske's Schools, Hatcham; B. E. Reynolds, University Tutorial College, Birkbeck Institute, and private study; Catherine Mary Richardson, Durham College of Science, Newcastle-on-Tyne; Hilda Mallinson Rowntree, University College; H. Scholefield, Owens College; E. D. Smith, St. Bartholomew's Hospital; W. L. Stuart, King's College; J. Tattersall, Birkbeck Institute and University Tutorial College; Barbara Tchaykovsky, North London Collegiate School and Bedford College; R. L. Thornley, St. Bartholomew's Hospital; F. E. Welchman, University Tutorial College and private study; Sibyl Tate Widdows, Dulwich High School and University Tutorial College; P. R. Wrigley, Owens College.

Honours Candidates recommended for a Pass.—W. B. Fry, St. Thomas's Hospital; J. S. Williamson, St. Bartholomew's Hospital.

Chemistry and Experimental Physics.—A. M. Amaler, St. Paul's School; §R. M. Barron, Guy's Hospital; F. A. Beattie, Guy's Hospital; J. M. Bernstein, Owens College; A. Birch, University Tutorial College and private study; W. Bonallo, Rutherford College, Newcastle-on-Tyne, and private study; §J. F. E. Bridger, St. Mary's Hospital; H. W. Brown, University Tutorial College; W. J. Butcher, Owens College and private study; A. Caddy, St. Paul's School; J. D. C. Calcott, Grammar School and University College, Bristol; §J. E. Chapman, Firth College; J. A. Churchill, University College and St. George's Hospital; §A. Coleridge, University College, Bristol, and private study; G. E. Cope, Westminster Hospital and private study; S. Dainow, Guy's Hospital and private study; Jeannette R. De Pass, Alwyne Institute; §Margaret B. Dobson, University College; A. F. Elliott, Oundle School; G. Evans, University Tutorial College; D. Forsyth, Guy's Hospital; J. B. Goodall, City of London College and private study; §D. S. Graves, Alwyne Institute; Horatia D. Hardy, Bedford College, Battersea Polytechnic, and private study; C. D. Hatrick, University College; H. T. Hodgkin, Leighton Park School, Reading; §L. Holland, King Edward School, Birmingham; §P. C. P. Ingram, University College, Cardiff; A. F. Izard, Cranleigh School; §D. T. C. Jones, Grammar School, Weston super Mare; H. H. Kindle, Dulwich and University Tutorial Colleges; §J. Klein, private study; H. K. Lacey, Guy's Hospital; §W. E. V. Lewis, Mason College; E. V. Lindsey, St. Bartholomew's Hospital; J. W. Little, University Tutorial College; §O. W. A. Löwe, University College, Liverpool, and private tuition; §M. T. Male, University Tutorial College; G. H. H. Manfield, University Tutorial College and private study; §Z. Mennell, private tuition; §T. D. Miller, University and University Tutorial Colleges and private tuition; H. R. Minkley, Mason College and private tuition; E. M. Niall, University Tutorial College; R. C. Norton, B.A., University College, Nottingham, and private study; W. E. Paramore, Merchant Taylors' School; A. Pearson, Guy's Hospital; §J. J. Pierce, private study; §A. R. G. Pocock, University College; E. Prall, Merchant Taylors' School; M. J. Rees, Guy's Hospital; J. H. Stormont, Mason College; H. Tattersall, Guy's Hospital; G. O. Taylor, London Hospital; A. H. Thomas, University College, Cardiff; D. H. Trail, Dulwich College; D. D. Turner, Epsom College; J. E. Utley, Owens College; V. F. Wall, University Tutorial College; §H. E. J. Wallbridge, St. Mary's Hospital; A. B. Waller, Alwyne Institute; H. S. Ward, University College, Cardiff; R. N. Watson, Westminster Hospital; A. S. Wellby, St. Thomas's Hospital; F. C. Wetherell, Guy's Hospital; A. C. Williams, King's College; F. E. Wilson, Alwyne Institute; A. S. Woodwark, University Tutorial College and private study.

Biology.—§A. J. V. Betts, Westminster Hospital; §G. Black, St. Thomas's Hospital and University Tutorial College; §T. T. Blythe, University Tutorial College; §F. A. Boissière, King's College; A. B. Brown, St. Bartholomew's Hospital; Amy Jane Burgess, London School of Medicine, University Tutorial College, and private tuition; W. S. Drew, Epsom College; §A. G. Ede, St. Bartholomew's Hospital; J. W. Evans, University College, Aberystwith; J. A. C. Forsyth, Yorkshire College; Sarah Louise Fraser, Bedford College, London; F. R. Harris, St. Mary's Hospital; P. G. Harvey, St. Bartholomew's Hospital; A. F. Hayden, St. Mary's Hospital and private study; H. C. Hocken, Kingswood School; Margaret Ethel Hutchinson, University Tutorial College; §R. S. Jones, University Tutorial College; E. T. Jones, University College, Aberystwith; §T. Leah, St. Mary's Hospital; W. A. McEnery, Middlesex Hospital and University College; A. T. Marshall, King's College; §C. de Z. Marshall, University Tutorial College; Alice Marietta Marval, University College; Agnes Emma Mecklenburgh, University College; Helen Moore, University College; §H. V. Moxon, private tuition; Emily Nelson, University College, Liverpool, University Tutorial College, and private study; §C. A. R. Nitch, St. Thomas's Hospital and private tuition; §F. C. Orford, Owens College; W. S. Page, St. Mary's Hospital; §W. Payne, Carlyon College; T. M. Pearce, St. Bartholomew's Hospital; Margaret I. Pearse, Alwyne Institute; F. H. Pearn, University College, Bristol; W. S. Rooke, University College; P. Savill, University College; §C. F. Selous, St. Thomas's Hospital; D. W. Smith, Edinburgh University and School of Medicine; A. R. Soltau, London Hospital; §N. F. Stallard, University and University Tutorial Colleges, and private study; H. S. Stanbus, St. Thomas's Hospital and private study; §A. J. Stillwell, private study and University Tutorial College; Florence Storr, Dulwich High School and University Tutorial College; J. K. Syms, University College; K. V. Trubshaw, Epsom College; G. S. Ward, London Hospital and private study; E. Wethered, St. Bartholomew's Hospital; F. H. Wood, St. Bartholomew's Hospital; M. D. Wood, Guy's Hospital; Ellen Elizabeth Janet Wyld, Westfield College.

§ These candidates have now completed the examination.

INTERMEDIATE SCIENCE AND PRELIMINARY SCIENTIFIC (M.B.) (CONJOINTLY).

Inorganic Chemistry.—First Class: S. Parrish (Int. Sci.), Royal College of Science, Yorkshire College, and private study; C. A. Hill (Prel. Sci.), Pharmacy School, King's, St. Thomas's, and private study; A. Howard (Int. Sci.), Royal College of Science; W. H. Wynn (Prel. Sci.), Mason College and private study. Second Class: E. A. Miller (Int. Sci.), Guy's Hospital. Third Class: D. J. Morgan (Prel. Sci.), St. John's College, Cambridge; E. H. Dixon (Int. Sci.), Merchant Venturers' Technical College, Bristol, and P. P. Platt, (Int. Sci.), private study, equal; E. Clark (Int. Sci.), Firth College and Central Hospital School, Sheffield; R. Mankiker (Prel. Sci.), University College and private study; Edith E. Humphrey (Int. Sci.), Bedford College, London; A. More (Int. Sci.), Royal College of Science, University Tutorial College, and private study.

Experimental Physics.—First Class: S. G. Starling (Int. Sci.), Royal College of Science and University Tutorial College; G. R. Melton (Int. Sci.), Royal College of Science, University Tutorial College, and private study. Second Class: C. V. Drysdale (Int. Sci.), Finsbury and City Guilds, Birkbeck Institute, and private study. Third Class: E. E. Brooks (Int. Sci.), private study; W. Adams (Int. Sci.), Firth College, and O. W. Griffith (Int. Sci.), University College, Bangor, and P. I. Watkin (Int. Sci.), King Edward School, Birmingham, and Mason College, and E. W. Whittington (Int. Sci.), Sheffield Royal Grammar School and Firth College, equal.

Botany.—First Class: W. G. Freeman (Int. Sci.), Royal College of Science and St. Olave's Grammar School. Second Class: Igerna B. J. Sollas (Prel. Sci.), Royal College of Science, Dublin, and Alexandra College. Third Class: H. Terry (Prel. Sci.), Owens College.

Zoology.—First Class: Agnes Kelly (Prel. Sci.), University and Bedford

Colleges, London; A. B. Lindsey (Prel. Sci.), University, St. Thomas's Hospital, and Birkbeck Institute. Second Class: C. J. Singer (Prel. Sci.), University College; Igerna B. J. Sollas (Prel. Sci.), Royal College of Science, Dublin, and Alexandra College; W. R. J. Scroggie (Prel. Sci.), Islington High School and Birkbeck Institute. Third Class: T. C. Savage (Prel. Sci.), University College.

Mr. S. Parrish was disqualified by age for an exhibition. Mr. E. G. Starling was awarded the Neil Arnott Exhibition and Medal, and Mr. W. G. Freeman and Miss A. Kelly gained exhibitions. Mr. G. R. Melton was disqualified by age for a Neil Arnott medal.

UNIVERSITY OF EDINBURGH.

The usual autumn graduation ceremonial took place on Thursday, August 1st; the Vice-Chancellor, Principal Sir William Muir, presiding.

The honorary degree of LL.D. was conferred on Professor Joseph Remi-Leopold Delboeuf, Liège, "the most illustrious savant of Belgium," on Dr. Thomas Edmondston Charles, Rome, the editor of the New Sydenham Society's translation of Marchiafava and Bignami's treatise on Malarial Fever, and on Dr. S. Weir Mitchell, Philadelphia, in absentiâ.

The following were admitted to the degree of Doctor of Medicine (M.D.): J. Allison, M.B., C.M.; J. S. Anderson, M.A., M.B., C.M.; D. Anderson Berry, M.B., C.M.; A. R. Barnes, M.B.; J. H. Battersby, M.B., C.M.; C. H. Bond, M.B., C.M.; G. C. Cameron, M.B., C.M.; E. J. W. Carruthers, M.B., C.M.; J. S. Clayton, M.B., C.M.; F. G. Connor, M.B., C.M.; W. T. Crawford, M.A., M.B., C.M.; R. Davies, M.B., C.M.; A. Dennison, M.B., C.M.; G. Dickson, M.B., C.M.; C. J. W. Dixon, M.B., C.M.; D. S. Douglas, M.B., C.M.; D. R. Dow, M.A., M.B., C.M.; J. C. Dunlop, M.B., C.M.; F. L. [illegible], M.B., C.M.; D. Fairweather, M.A., M.B., C.M.; E. Forsyth, M.B., C.M.; R. J. George, M.B., C.M.; A. B. Giles, M.B., C.M.; H. B. Gladstone, M.B., C.M.; H. L. Gordon, M.B., C.M.; J. T. Grant, M.B., C.M.; V. Green, M.B., C.M.; W. C. Grosvenor, M.A., M.B., C.M.; J. S. Hill, M.B., C.M.; G. Home, M.B., C.M.; W. E. Home, B.Sc., M.B., C.M.; R. M. Horne, M.B., C.M.; T. E. Hughes, M.B., C.M.; G. B. Jameson, M.B., C.M.; [illegible] B. S. Jareja, M.B., C.M.; G. F. Johnston, M.B., C.M.; W. W. Jones, M.B., C.M.; W. H. E. Knaggs, M.B., C.M.; W. V. M. Koch, M.B., C.M.; J. R. P. Lambert, M.B., C.M.; F. Lishman, M.B., C.M.; F. W. Lyle, M.B., C.M.; C. J. Macalister, M.B., C.M.; J. Macdonald, M.A., M.B., C.M.; F. W. Mackay, M.B., C.M.; R. MacLelland, M.B., C.M.; H. W. G. Macleod, M.B., C.M.; G. W. F. Macnaughton, M.B., C.M.; E. F. Martin, M.B., C.M.; J. E. Moorhouse, M.A., M.B., C.M.; S. G. Morris, M.B., C.M.; G. E. Morrison, M.B., C.M.; W. Murray, M.B., C.M.; G. Newman, M.B., C.M.; M. Ogilvy Ramsay, M.A., M.B., C.M.; J. D. Pollock, M.B., C.M.; S. Poole, M.B., C.M.; G. Porter, M.B., C.M.; J. Ritchie, M.A., B.Sc., M.B., C.M.; J. F. Robertson, M.A., M.B., C.M.; W. F. Robertson, M.B., C.M.; R. M. Ronaldson, M.B., C.M.; J. Ross, M.B., C.M.; T. Shennan, M.B., C.M.; J. C. Simpson, M.B., C.M.; G. T. Sinclair, M.B., C.M.; W. Sproule, M.B., C.M.; W. H. S. Stalkartt, M.B., C.M.; A. Walker, M.A., B.Sc., M.B., C.M.; J. S. Watson, M.B., C.M.; T. A. M. Wilson, M.B., C.M.

The following, having passed the requisite examinations, were "capped" M.B. and C.M.: S. J. Aarons, J. Allison, C. W. Anderson, G. Anderson, H. H. Balfour, N. D. Bardswell, W. Begg, B.A.; J. A. T. Bell, H. M. Benson, E. T. F. Birrell, J. E. Blackburn, G. J. Blackmore, J. E. Bowes, L. Bowman, E. E. Brierley, N. Caine, H. J. Cardale, S. H. Carr, W. W. Chipman, W. J. C. Coulthard, J. Crawford, R. Cross, R. W. Cunningham, J. M. E. Dalziel, J. M. Dawson, M. V. Dee, T. Dewar, A. W. Easmon, W. F. Eason, H. J. Ewald, H. M. Eyres, A. G. Fenn, F. W. B. Fitchett, A. M. Fleming, J. Forbes, M.A.; J. Forbes, M.A., B.Sc.; J. A. Forrest, J. S. Fraser, W. J. Garbutt, F. Gardiner, W. A. Gibb, T. Gibson, J. Gilchrist, S. J. Gillman, M.A.; J. Gillies, J. D. Gilruth, M.A.; W. Glegg, C. J. Gorringe, D. J. Graham, J. Gray, E. D. W. Greig, J. M. Grieve, M.A.; J. H. K. Griffiths, H. Halton, J. B. Hay, R. Haygarth, C. M. Hector, R. P. Heddle, G. Henderson, M.A.; G. P. Henderson, J. H. Henderson, I. D. C. Howden, M. Hughes, W. H. Hunter, H. E. Huntly, A. I. Husband, D. M. Hutton, B.Sc.; G. J. Jenkins, D. J. Jones, J. I. Kelly, L. Ker, M.A.; J. Kirk, D. Landsborough, J. Landsborough, I. V. Laurie, D. Lawson, H. A. Leebody, R. MacW. Leith, T. G. Lewis, W. Lillie, G. F. Lundie, M.A.; A. C. Lupton, S. F. Lusk, P. C. Luttig, B.A.; R. M'Camon, A. MacCarthy Morrogh, A. Macdonald, M.A.; F. R. Macdonald, J. M'Donald, W. M. Macdonald, W. C. W. M'Dowell, B.A.; T. H. Mackie, D. M. Mackay, C. MacLaurin, K. MacLean, J. G. Macmillan, N. H. Macmillan, W. S. Malcolm, W. R. Mander, W. L. Martin, M.A., B.Sc.; F. J. R. [illegible], R. I. Moorhead, J. S. Norwell, B.Sc.; T. T. Ormerod, E. L. Owen, R. Owen, J. A. Parsons, C. W. [illegible], H. C. Pearson, A. D. [illegible], G. R. [illegible], W. A. Potts, B.A.; W. H. Price, G. L. Proctor, J. C. [illegible], D. Rankine, M.A.; M. S. Rau, M.A., B.Sc.; J. K. Raymond, E. S. Reid, H. Richardson, W. P. Richardson, R. J. [illegible], G. L. Roberts, R. G. Robson, M.A.; T. E. E. [illegible], V. A. Ross, R. [illegible], T. D. Sadler (*in absentiâ*), R. [illegible], E. W. K. Scott, R. G. [illegible], H. J. F. Simson, E. M. Skeete, E. R. [illegible], J. E. W. Somerville, F. S. Stanwell, W. H. Steele, A. Steven, G. E. Stewart, W. [illegible], J. C. Stuart, T. Stuart, D. C. Sutton, W. M. Taylor, [illegible] Thompson, J. A. Tweedie, J. H. K. Tough, J. O. Veitch, G. [illegible], M.A.; D. Waterston, M.A.; J. R. Watson, M.A., B.Sc.; J. [illegible], A. S. Wilson, M.A.; W. De W. Wishart, J. [illegible], J. R. Wood.

The degree of C.M. was conferred on E. F. Martin, M.D.

The degree of B.Sc. was conferred on J. A. Macdonald, M.A.; A. E. Mettam, T. W. [illegible], M.A.; W. [illegible] Ritchie, M.A.; J. L. Roberts.

The degree of B.Sc. in the Department of Public Health was conferred on J. W. [illegible], M.B.; G. M. Cullen, M.D.; J. T. Grant, M.D.; E. T. Whitaker, M.B.

The degree of D.Sc. in the Department of Chemistry was conferred on A. P. Laurie, B.Sc.

The following Medals and Scholarships were presented to the successful competitors:—Thesis Gold Medallists: F. L. [illegible], M.D.; W. V. M. Koch, M.D.; J. Ritchie, M.D.; A. Walker, M.D. The Ettles Scholarship: J. E. Bowes, M.B., C.M. The Beaney Prize in Anatomy and Surgery: W. J. Garbutt, M.B., C.M. The Murchison Memorial Scholarship in Clinical Medicine: N. Macvicar, M.B., C.M. The [illegible] Memorial Prize: G. Mann, M.D. The Gunning Victoria Jubilee Prize in Obstetrics: A. Walker, M.A., B.Sc., M.B., C.M. The Gunning Victoria Jubilee Prize in Public Health: G. Newman, M.D. The Gunning Victoria Jubilee Prize in Zoology: J. D. F. Gilchrist, B.Sc. The Buchanan Scholarship in Gynæcology: W. W. Chipman, M.B., C.M. The James Scott Scholarship in Midwifery: D. J. Graham, M.B., C.M. The Milner Fothergill Medal in Therapeutics: E. M. Smith, M.D. The Cameron Prize in Therapeutics: Professor Behring. The Edinburgh University London Club Prize: R. Hutchison, M.B., C.M. Faculty of Science.—The Falconer Memorial Fellowship in Palæontology and Geology: J. S. Flett, M.A., B.Sc., M.B., C.M.

The Promoter's address to the graduates was given by Professor W. S. Greenfield, who bewailed the lack of the equipment necessary for researches on the preventive and curative treatment of infectious disease in the University of Edinburgh, all for lack of a sum of [illegible]. He urged on the new graduates a high ideal of their position and duty, urged them to ignore the fatuous charges that were frequently made against physicians because of their alleged love for money, their ignorance of literature, and what not. He discussed the question of the relation of doctor and patient; the confidences that must exist between them; the ethical duties of each. He discussed relations between practitioners and between practitioners and consultants, and finally urged the virtue of thoroughness, the lack of which was a greater sin and crime than ignorance.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

The following gentlemen passed the First Examination of the Board in the subjects indicated under the Five Years Regulations:

Part I. *Chemistry and Physics.*—E. B. D. Adams, St. Bartholomew's Hospital; H. C. Adams, St. Bartholomew's Hospital; P. F. Alderson, Middlesex Hospital; H. E. Ashley, St. Bartholomew's Hospital; W. Asten, Mason College, Birmingham; G. J. S. Atkinson, St. Paul's School, West Kensington; E. C. Austen, St. Mary's Hospital; E. V. Aylen, London Hospital; D. G. R. S. Baker, University College, London; W. L. Baker, St. Mary's Hospital; G. Barnes, St. Mary's Hospital; E. J. R. Bartlett, King's College, London; W. Bastian, University College, London; A. Batchelor, University College, London; C. T. Baxter, Middlesex Hospital; T. R. Beale Browne, Guy's Hospital; J. Beare, Firth College, Sheffield; S. Beby, St. Thomas's Hospital; J. C. Bell, University College, London; R. Bigg, St. Bartholomew's Hospital; H. H. Bignold, Guy's Hospital; F. R. Blake, London Hospital; A. H. Bostock, St. Bartholomew's Hospital; R. W. Bradley, St. Mary's Hospital; C. H. Brangwin, Guy's Hospital; H. Braund, Guy's Hospital; J. H. C. Brockwell, Guy's Hospital; T. W. Brown, St. Bartholomew's Hospital; T. W. S. Browne, Guy's Hospital; R. S. Burd, Mason College, Birmingham; C. L. Chalk, St. Bartholomew's Hospital; F. Challans, London Hospital; H. A. Chapin, St. George's Hospital; J. A. Churchill, St. George's Hospital; A. Coleridge, University College, Bristol; A. S. Compton, St. Bartholomew's Hospital; M. W. Compton, St. Thomas's Hospital; R. T. Cooke, St. Bartholomew's Hospital; H. M. Cory, Mason College, Birmingham; R. H. Crompton, University College, Liverpool; J. F. Cunningham, St. Thomas's Hospital; A. G. G. Davies, Guy's Hospital; H. R. H. Denny, Guy's Hospital; H. B. Dismore, Guy's Hospital; W. C. Douglas, St. Bartholomew's Hospital; L. S. Dudgeon, St. Thomas's Hospital; C. J. E. Edmonds, St. Thomas's Hospital; G. Edwards, Guy's Hospital; J. W. Elliott, St. Mary's Hospital; S. J. Evans, Guy's Hospital; C. H. Farquharson, St. Mary's Hospital; B. Fawssett, St. Thomas's Hospital; E. H. Felton, Guy's Hospital; F. H. Foulds, St. Mungo's College, Glasgow; F. A. French, St. Mary's Hospital; S. W. Garne, Charing Cross Hospital; G. E. [illegible], London Hospital; J. R. Griffith, London Hospital; J. G. Gubbins, St. Thomas's Hospital; R. J. Harbinson, St. Mungo's College, Glasgow; J. H. Hart, St. Thomas's Hospital; J. F. Harvey, Mason College, Birmingham; J. H. S. Hawes, St. George's Hospital; H. W. J. [illegible], Mason College, Birmingham; C. M. Heanley, St. George's Hospital; E. G. Hepper, St. Bartholomew's Hospital; V. G. Heseltine, St. Bartholomew's Hospital; C. E. Hicks, Guy's Hospital; A. Higgens, Guy's Hospital; T. Higson, Owens College, Manchester; E. T. Holland, St. Paul's School, West Kensington; H. H. Hollick, Mason College, Birmingham; W. Holmes, St. Mary's Hospital; E. H. Hubert, St. George's Hospital; H. R. Humby, St. Bartholomew's Hospital; E. W. Hutton, St. Thomas's Hospital; W. W. James, Middlesex Hospital; R. T. Jupp, Mason College, Birmingham; C. E. Last, St. George's Hospital; L. S. Leech, University College, London; J. McClintock, King's College, London; K. M. McQueen, University College, Bristol; E. J. Manning, St. Mary's Hospital; H. N. Marrett, St. Bartholomew's Hospital; H. A. Mason, Firth College, Sheffield; W. P. Miles, St. Bartholomew's Hospital; J. Miller, Owens College, Manchester; H. E. [illegible], Guy's Hospital; S. Navarra, Middlesex Hospital; A. C. D. Newton, Bedford Grammar School; F. Noakes, Charing Cross Hospital; F. T. Nicholls, Middlesex Hospital; J. C. Oates, Mason College, Birmingham; C. Parker, London Hospital; E. A. Parsons, Mason College, Birmingham; J. F. Paul, St. George's Hospital; F. M. Perkins, St. Bartholomew's Hospital; S. Pern, St. Thomas's Hospital; H. L. Pinches, St. Paul's School, West Kensington; H. G. Pinches, St. Thomas's Hospital; H. G. Pinker, St. Bartholomew's Hospital; A. K. H. Pollock, St. Bartholomew's Hospital; H. C. Pretty, University College, London; A. B. Pugh, St. Bartholomew's Hospital; W. H. Randolph, St. Bartholomew's Hospital; J. F. Robertson, St. Bartholomew's Hospital; F. C. Rogers, St. Mary's Hospital; R. [illegible], Guy's Hospital; E. J. [illegible], Firth College, Sheffield; E. F. Scott, Guy's Hospital; G. [illegible], Guy's Hospital; G. H. Simpson, St. Mungo's College, Glasgow; J. K. [illegible], University College, London, and King's College, London; F. M. Smith, St. Paul's

School, West Kensington; S. J. Smith, Charing Cross Hospital; T. W. Smith Charing Cross Hospital; A. E. Softly, St. Thomas's Hospital; G. B. A. Spicer, St. Mary's Hospital; E. H. B. Stanley, University College, London; W. A. Steen, London Hospital; V. H. Symons, Mason College, Birmingham; Y. Takaki, St. Thomas's Hospital; A. W. Talbot, Guy's Hospital; H. C. Taylor, St. Mary's Hospital; J. B. Thompson, University College, London; R. T. Thorne, St. Bartholomew's Hospital; J. E. Turle, University College, London; F. W. Twort, St. Thomas's Hospital; A. B. Tytheridge, St. Paul's School; T. H. Vickers, St. Mary's Hospital; C. Visger, University College, London; C. B. Wagstaff, Charing Cross Hospital; R. Walker, St. Bartholomew's Hospital; O. E. Ward, Mason College, Birmingham; A. G. S. Waters, University College, Cambridge; F. D. Welch, London Hospital; B. B. Westlake, Guy's Hospital; M. T. Whitehouse, Mason College, Birmingham; R. E. Wilson, London Hospital; H. C. Woodcock, St. Mary's Hospital; B. Yule, University College, London.

Part II. *Practical Pharmacy.*—H. S. D. Acland, St. Thomas's Hospital; F. B. Alderson, Firth College, Sheffield; T. P. Allen, St. Bartholomew's Hospital; F. E. Anley, Charing Cross Hospital; H. F. Ashley, St. Bartholomew's Hospital; F. R. Barwell, University College, London; H. R. Bateman, St. Thomas's Hospital, N. C. Beaumont, St. Bartholomew's Hospital; E. J. Bell, Charing Cross Hospital; A. Bevan, St. Thomas's Hospital; F. M. Bingham, St. Thomas's Hospital; A. H. Bradley, Mason College, Birmingham; H. Braund, Guy's Hospital; E. H. Bullen, St. Mary's Hospital; H. Burrows, St. Bartholomew's Hospital; H. Calvert, St. Thomas's Hospital; D. P. Chapman, Charing Cross Hospital; T. Chetwood, London Hospital; J. A. Churchill, St. George's Hospital; J. G. Churton, University College, Liverpool; J. M. Collyns, St. Bartholomew's Hospital; M. W. Compton, St. Thomas's Hospital; S. d'A. Corbett, St. George's Hospital; C. V. Cornish, St. Bartholomew's Hospital; H. M. Cory, Mason College, Birmingham; W. S. Danks, St. Bartholomew's Hospital; J. B. Davey, Middlesex Hospital; D. Davies, St. Bartholomew's Hospital; D. L. Davies, University College, London; E. H. Davies, University College, Cardiff; E. N. de V. Dawson, St. Thomas's Hospital; W. E. Dennistoun, St. Thomas's Hospital; G. B. Dixon, Charing Cross Hospital; M. S. Doubble, Charing Cross Hospital; W. C. Douglass, St. Bartholomew's Hospital; R. G. Drake Brockman, St. George's Hospital; G. M. Eastment, Middlesex Hospital; R. F. Ellery, St. Bartholomew's Hospital; F. F. Elwes, Middlesex Hospital; W. Evans, Otago University and London Hospital; E. O. Faulkener, St. Mary's Hospital; R. Fawssett, St. Thomas's Hospital; W. Fawssett, St. Thomas's Hospital; C. S. Frost, St. Bartholomew's Hospital; J. Gadd, St. Thomas's Hospital; T. H. Gandy, St. Bartholomew's Hospital; W. R. Gilbert, St. Thomas's Hospital; A. Hagen, University College, Cardiff; W. G. Hamilton, St. Bartholomew's Hospital; W. E. H. Hancock, University College, Bristol; H. S. Harris, St. Thomas's Hospital; W. T. Harris, St. Thomas's Hospital; J. D. Hartley, St. Bartholomew's Hospital; J. F. Harvey, Mason College, Birmingham; A. H. Hayes, St. Bartholomew's Hospital; P. M. Heath, University College, London; T. Hixson, Owens College, Manchester; R. E. Hodgson, St. Mary's Hospital; W. B. Hopo, Guy's Hospital; E. Hudson, St. Thomas's Hospital; J. E. Humphreys, Charing Cross Hospital; H. W. Illins, St. Bartholomew's Hospital; J. W. Illins, St. Bartholomew's Hospital; W. S. Inman, Firth College, Sheffield; A. D. Jameson, St. Thomas's Hospital; A. W. Jones, St. Thomas's Hospital; W. F. Jones, Charing Cross Hospital; J. E. Judson, Owens College, Manchester; R. T. Jupp, Mason College, Birmingham; W. A. Lamborn, Middlesex Hospital; F. S. Leech, University College, London; C. Lees, Charing Cross Hospital; E. L. Lilley, Charing Cross Hospital; H. P. Lobb, St. Bartholomew's Hospital; G. H. Low St. Bartholomew's Hospital; A. R. McLachlan, Guy's Hospital; J. A. MacLeod, London Hospital; M. M. Martin, St. Bartholomew's Hospital; W. B. Mayne, University College, London; E. Merry London Hospital; T. C. Mitchell, Yorkshire College, Leeds; A. S. Morley, St. George's Hospital; R. Navarra, Middlesex Hospital; J. S. New, University College, London; J. W. Nunn, St. Bartholomew's Hospital; H. R. Nutt, St. Mary's Hospital; J. O'Hea, St. Bartholomew's Hospital; J. M. A. Olivey, St. Thomas's Hospital; E. A. Parsons, Mason College, Birmingham; W. R. Passmore, Charing Cross Hospital; W. E. Peck, University College, London; T. Perrin, St. Thomas's Hospital; A. G. Pitts, Charing Cross Hospital; G. W. M. Pritchett, University College, London; F. G. Quinby, University College, Liverpool; A. D. Reid, King's College, London; J. J. Rodil, Guy's Hospital; E. Russell Eisen, St. Bartholomew's Hospital; J. H. Sanders, London Hospital; E. J. Scorah, Firth College, Sheffield; H. M. Scott, Charing Cross Hospital; S. R. Scott, St. Bartholomew's Hospital; J. J. S. Scrase, St. Bartholomew's Hospital; W. C. R. Smith, St. Bartholomew's Hospital; A. E. Softly, St. Thomas's Hospital; F. H. Sprague, St. Mary's Hospital; S. Stevens, St. Bartholomew's Hospital; G. W. Stone St. Bartholomew's Hospital; H. K. M. Stratford, Oxford University; Y. Takaki, St. Thomas's Hospital; H. S. Thomas, St. Bartholomew's Hospital; W. A. Trumper, St. Mary's Hospital; W. E. Turner, St. Mary's Hospital; A. L. Vaughan, St. Bartholomew's Hospital; L. A. Walker, St. Bartholomew's Hospital; C. F. Walters, University College, Bristol; J. Waters, Middlesex Hospital; A. J. W. Wells, St. Bartholomew's Hospital; G. W. S. Williams, St. Bartholomew's Hospital; C. W. Wirgman, University College, London; R. E. H. Woodforde, St. Bartholomew's Hospital; H. G. Wood-Hill, St. Bartholomew's Hospital; B. Yule, University College, London.

Part III. *Elementary Biology.*—W. Alcock, Firth College, Sheffield; P. F. Alderson, Middlesex Hospital; C. H. Anchmuty, Westminster Hospital; A. Ashmore, Yorkshire College, Leeds; C. C. Austen, Westminster Hospital; A. R. Baker, St. Bartholomew's Hospital; C. T. Baxter, Middlesex Hospital; C. H. Bennett, St. Mary's Hospital; H. Braund, Guy's Hospital; J. B. C. Brockwell, Guy's Hospital; J. A. Churchill, St. George's Hospital; J. P. Cunningham, St. Thomas's Hospital; J. B. S. D'Aguilar, University College, Bristol; F. J. P. Daly, London Hospital; D. M. Davies, St. Mungo's College, Glasgow; A. M. Davis, Mason College, Birmingham; H. R. R. Denny, Guy's Hospital; C. H. Fagan, St. Paul's School, West Kensington; F. H. Fowlds, St. Mungo's College, Glasgow; E. S. G. Fowler, Yorkshire College, Leeds; A. Frecar, St. Mary's Hospital; T. H. Glaze, Mason College, Birmingham; F. J. Gomez, King's College, London; J. R. Griffith, London Hospital; R. W. R. Haa, Guy's Hospital; R. J. Harteman, St. Mungo's College, Glasgow; C. S. Hawes, St. Bartholomew's Hospital; W. C. Hayden, St. Mary's Hospital; C. M. Heasley St. George's Hospital; R. A. Higgins, Guy's Hospital; F. P. Hughes, University College, Bristol; E. W. Hutton, St. Thomas's Hospital; C. W. W. James, University College, Bristol; F. B. Jefferies, King's College, London; F. J. F. Jones, Guy's Hospital, J. Lakeman, London Hospital; J. W. Lawson, Charing Cross Hospital; F. S. Leech, University College, London; C. E. H. Leggatt, St. Mary's Hospital; A. F. J. Lister, St. Bartholomew's Hospital; G. R. MacCormick, St. Bartholomew's Hospital; P. S. Mandy, Guy's Hospital; T. F. G. Mayer, London Hospital; C. B. Moss Blundell, St. Thomas's Hospital; H. T. T. Murdoch, Yorkshire College, Leeds; P. T. Nicholls, Middlesex Hospital; A. C. Oliver University College Cardiff; H. R. Parkinson, Owens College, Manchester; J. F. Paul, St. George's Hospital; T. J. Peirce, St. George's Hospital; S. Pern, St. Thomas's Hospital; A. P. Reardon St. Thomas's Hospital; B. Redd, Guy's Hospital; W. H. Rutherford, St. Thomas's Hospital; F. R. Seager, Mason College, Birmingham; F. A. Segrada, Guy's Hospital; M. Sheehan, Queen's College, Cork; G. H. Simpson, St. Mungo's College, Glasgow; W. G. Speers, St. Mary's Hospital; R. H. B. Stanley, University College, London; W. A. G. Stevens, Guy's Hospital; P. S. Stokes, Firth College, Sheffield; C. E. Thwaites, St. Mary's Hospital; H. Thwaites London Hospital; E. B. Townree, St. George's Hospital; C. H. Turner, St. Bartholomew's Hospital; A. C. S. Waters, Cambridge University; C. V. White, St. Thomas's Hospital; A. E. Whitehead, Firth College, Sheffield; T. York, Westminster Hospital.

Part IV. *Elementary Anatomy.*—E. C. Aveen, Westminster Hospital; G. Barnes, St. Mary's Hospital; C. H. Brangwin, Guy's Hospital; T. W. Brown, St. Bartholomew's Hospital; H. S. Capper, University College, London; A. P. Carlyton, Middlesex Hospital; J. C. Clayton, University College, Bristol; H. E. Crawley, Oxford University; G. C. Cross, Middlesex Hospital; F. J. F. Daly, London Hospital; D. M. Davies, St. Mungo's College, Glasgow; W. C. Douglass, St. Bartholomew's Hospital; W. A. Dunnage, Westminster Hospital; C. Edwards, Guy's Hospital; S. J. D. Esser, London Hospital; C. F. Etheridge, Middlesex Hospital; W. Evans, Otago University and London Hospital; R. A. Facey, St. Mary's Hospital; H. E. Fant, St. Bartholomew's Hospital; C. D. E. Forbes, St. George's Hospital; F. H. Fowlds, St. Mungo's College, Glasgow; R. Gould London Hospital; F. J. Gomez, King's College, London; S. E. Green, St. Bartholomew's Hospital; J. R. Hannay, London Hospital; J. Harris, University of Sydney, New south Wales; T. A. B. Harris, Firth College, Sheffield; A. E. C. Hawkes University College, Liverpool; A. H. Hayes, St. Bartholomew's Hospital; H. Hemstead, University College, Bristol; A. R. Hobbs, St. Mary's Hospital, W. Holmes, St. Mary's Hospital, E. Hudson, St. Thomas's Hospital; F. J. F. Jones, Guy's Hospital; J. E. Judson, Owens College, Manchester; S. J. Kerfoot, London Hospital; J. Lakeman, London Hospital; J. W. Lawson, Charing Cross Hospital; G. J. A. Leclezio, St. Bartholomew's Hospital; F. S. Leech University College, London; T. F. Maxwell, St. Thomas's Hospital; J. L. Martin, St. Mary's Hospital; S. Page, Mason College, Birmingham; W. G. Palmer, Guy's Hospital; W. P. Pambridge, Middlesex Hospital; I. Pick, St. George's Hospital; H. G. Parker, St. Bartholomew's Hospital; F. G. Quinby, University College, Liverpool; E. Raven, St. Thomas's Hospital; A. P. Reardon, St. Thomas's Hospital; I. J. Roche, Charing Cross Hospital; D. P. Rootwood, University College, London; C. S. Scott, St. Bartholomew's Hospital; G. Shorland, Guy's Hospital; J. E. Soderberg, Westminster Hospital; P. T. H. Stedman, University College, London; W. Sykes, Owens College, Manchester; C. C. B. Thompson, St. Bartholomew's Hospital; C. E. Thwaites, St. Mary's Hospital; H. Thwaites, London Hospital; R. Walker, St. Bartholomew's Hospital; W. R. Watson, St. Mary's Hospital; H. E. Weston, St. George's Hospital; R. E. H. Woodforde, St. Bartholomew's Hospital.

THE SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, EDINBURGH.

THE three bodies concerned have now agreed upon a constitution, and have formulated regulations for the conduct of what will henceforth be known as the School of Medicine of the Royal Colleges of Edinburgh, in place of the more vague designation of the Extra-mural School. Lecturers are to be recognised in relation both to qualifying and non-qualifying courses, such lecturers to form the teaching staff of the school. The Governing Board of the School is to consist of five members elected by the Royal College of Physicians, and five by the Royal College of Surgeons and five members elected by the lecturers of the school.

We believe the representatives of the physicians are Professor Simpson; Drs. Batty Tuke, Muirhead, Sibbald, and P. A. Young; of the surgeons Drs. P. Heron Watson, Blair Cunynghame, John Smith, Cadell, and Professor Struthers; of the lecturers Drs. John Duncan, Berry Hart, George Gibson, Noel Paton, and R. W. Philip.

These members are elected for two years, and are eligible for re-election. A president is to be elected annually, but he may be re-elected. He is the head of the school and chairman of the Governing Board. If he has not been elected from among the members of the Board he shall only have a casting vote. Seven members form a quorum. At least two regular meetings are to be held yearly, others in special circumstances.

The Governing Board has for its chief function to supervise the whole management, and specially the maintenance and efficiency of the school. It will issue the Calendar, receive reports from lecturers as to their

courses, maintain discipline, be a Board of Appeal both as regards lecturers and students.

The further general business of the school and all questions of finance will as heretofore be managed by the lecturers and their various committees.

The whole of the new arrangements will, without doubt, tend to advance the interests and efficiency of the extra-academical school.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

INFLUENCE OF SCHOOLS IN THE DISSEMINATION OF DISEASES.

DR. THURSFIELD, medical officer of health, in his annual report to the Salop County Council, makes the following remarks: The regulations of the Educational Department start on a wrong basis—namely, that school closure is invariably required in consequence of an epidemic, instead of with the object of preventing one. That their regulations are not enforced and only nominally exist in the code, does not, however, unfortunately prevent their causing an immense amount of mischief in constantly leading to delay by managers who, otherwise willing to close, refrain from doing so for fear of imperilling their grant by not strictly complying with the regulations of the code. Very frequently in my experience it has happened that in the meantime the infection has spread so rapidly that the school practically closed itself. In my report to your Council in [illegible] I drew attention to the impractical nature of the existing regulations which provided that no school should be closed except by order of a sanitary authority, a body which might not meet for weeks. The code was altered in the following year, but little improved, and still requires that no school should be closed except by order of at least two members of the sanitary authority, and an apparently authoritative note to an edition of the code (which I understand is most generally used) states that "Managers should never close their school unless they receive an order from the sanitary authority. A mere verbal notice, or a letter not in a mandatory form, should not be acted upon."

It is obvious that to obtain a meeting of even two members of the sanitary authority and to get them to agree to take the responsibility of making a compulsory order for closure of a school involves delay which may be fatal. As these regulations are admittedly not enforced, why should not the regulations be brought into line with the practice? The evil effects of the inelastic system as regards dates for which examinations are fixed are frequently met with. I have a very large number of notes of cases of infectious disease which have been the result of a whip-up for an examination when infectious disease was prevalent, or where closure had been put off because of an impending examination which could not be put off, and I have known instances where a school inspector has obtained the assemblage of a school for inspection, which had been closed up to the day of inspection on account of the prevalence of infectious disease, and was again closed the day after the inspection had been held. Only the other day I was advising the closure of a school on account of the presence of diphtheria in the family of the schoolmaster and in several families from which children attended the school, when it was strongly represented to me that the examination was imminent, and that an endeavour had been made to get it postponed, but without avail; and that if the school was closed the examination could not be held this year, and that this would result in a pecuniary loss to the schoolmaster of at least [illegible]. I carefully investigated this latter point, and have no doubt that the statement was correct and within the mark.

NOTIFICATION IN SURREY.

WE must congratulate Dr. Seaton, the medical officer of health of the county of Surrey, upon his ability to report in respect of the past year that the Infectious Disease (Notification) Act of 1889 is now in force voluntarily in the whole of the county. It is something to be in a position to chronicle such an achievement in a county of the size and importance of Surrey. And having reached this standard of excellence in the county, Dr. Seaton proceeds to discuss briefly the question of universal compulsorily enforced adoption of notification, and seems to incline to the side of leaving the matter where it now stands, leaving, that is, sanitary districts free to take up or not, as they individually please, the system now so widely in vogue. His argument is that authorities upon whom the Act was forced would not be likely to proceed with necessary preventive measures without further coercion. So much the worse for the ratepayers, to say nothing of the death and suffering to be set down as corollaries to neglected precautions. Then again Dr. Seaton thinks that fear of publicity being given to outbreaks of disease in districts having notification would and does militate against adoption of the system. Especially does he think of this factor in dairying counties, such as Buckinghamshire, where more or less many of the farms are in a gravely insanitary condition. But it must not be overlooked that notification is intended to give such early intimation of disease as will tend to diminish the likelihood of spread of infection, and hence it is to be argued that it is just those places in which the system is not in force that have most to fear from the attention of the public being drawn to the presence of infectious disease in their midst. And we would ask which is the greater evil—the publicity given to disease in a community whence harm may easily be propagated, or the saving of sickness and life following upon knowledge of the whereabouts of infectious sickness? In the matter of disease incidence ignorance is not by any means bliss.

THE DRAINAGE OF TAMWORTH.

IN a letter addressed to the editor of the *Herald* Dr. Joy calls attention to the fact that certain drains discharge directly on the bank of the river at Tamworth, and he points out that "the wind blowing up these open-mouthed drains carries the gases into the yards and houses" of streets adjoining the stream. Two cases of diphtheria have, it appears, recently occurred in children who had been playing by the river, the level of the water of which has been lowered by cutting through a weir with consequent exposure of the drain outlets referred to. Dr. Joy urges the importance of dealing with the matter forthwith, and not deferring its consideration on the ground that a general scheme of sewage when carried into execution will remedy the evil. The drain outlets complained of do not, it is said, discharge excremental matter, but the gases generated from the decomposition of slop water and other liquid refuse are a possible source of danger with which, as Dr. Joy observes, the Town Council, acting as the urban sanitary authority, will no doubt think it desirable to deal at once.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,516 births and 4,233 deaths were registered during the week ending Saturday, August 10th. The annual rate of mortality in these towns, which had been 22.5 and 20.7 per 1,000 in the two preceding weeks, rose again to 20.9 last week. The rates in the several towns ranged from 12.6 in Croydon, 14.2 in Huddersfield, and 14.6 in Bristol to 30.5 in Liverpool, 31.0 in Wolverhampton, and 33.8 in Preston. In the thirty-two provincial towns the mean death-rate was 22.1 per 1,000, and exceeded by 3.1 the rate recorded in London, which was 19.0 per 1,000. The zymotic death rate in the thirty-three towns averaged 5.3 per 1,000; in London the rate was equal to 4.7 per 1,000, while it averaged 5.7 in the thirty-two provincial towns, and was highest in Wolverhampton, Norwich, and Preston. Measles caused a death rate of 1.2 in Manchester, 2.1 in West Ham, and 2.9 in Blackburn; whooping-cough of 1.1 in Oldham; and diarrhœa of 6.7 in Sheffield, 7.0 in Leicester, 7.4 in Bolton, 9.7 in Wolverhampton and in Norwich, and 12.5 in Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 76 deaths from diphtheria in the thirty-three towns included 53 in London, 4 in West Ham, and 3 in Liverpool. Three fatal cases of small-pox were registered in London, 2 in Oldham, and 1 in Liverpool, but not one in any other of the thirty-three large provincial towns. There were 278 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, August 10th, against 89, 199, and 237 at the end of the three preceding weeks; 54 new cases were admitted during the week, against 23, 115, and 60 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,267, 2,347, and 2,423 at the end of the three preceding weeks, had further risen to 2,511 on Saturday last, August 10th; 281 new cases were admitted during the week, against 230, 249, and 247 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, August 10th, [illegible] births and [illegible] deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.3 and 18.0 per 1,000 in the two preceding weeks, further declined to 17.6 last week, and was 3.2 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death rates ranged from 16.0 in Edinburgh to 20.9 in Greenock. The zymotic death rate in these towns averaged 3.5 per 1,000, the highest rates being recorded in Leith and Greenock. The 283 deaths registered in Glasgow included 34 from diarrhœa, 5 from measles, 5 from whooping-cough, and 3 from scarlet fever.

NOTIFICATION BY UNQUALIFIED PERSONS.

DR. T. HANSON SMITH.—Intimations from such a source should be received as from a non-professional source, carrying neither medical authority nor the fees payable to medical men.

THE PRECARIOUS TENURE OF PUBLIC HEALTH APPOINTMENTS.

DR. JNO. JAS. RUTHERFORD ([illegible], Yorks) writes: May I ask if it is considered the right thing to do, for a younger practitioner to wrench the appointment from a senior practitioner when he finds he has a majority of friends on the Board, and especially by ardently canvassing the members? I obtained the appointment six years ago, on the retirement of my predecessor.

. The questions which Dr. Rutherford puts scarcely need any reply, but we trust that some explanation of the facts will be forthcoming.

POLLUTED WELL WATER.

URGENT writes, with reference to a previous reply under this head, that he has carefully attended to the eradication of pollution from surrounding subsoil through which did run an extremely leaky drain from a watercloset. A case of typhoid using this watercloset existed some time ago and the bacteria were only recently found by the public analyst. The water supplying the well comes out of the chalk, and the well is dug through chalk.

. It seems that the subsoil surrounding the upper part of the well has been extensively polluted and recently with sewage containing typhoid excreta. Steps have been taken to prevent further pollution. There are no certain means of disinfecting the subsoil although with lapse of time the specific infection would come to an end. If it is considered to be impracticable to obtain a supply from some other source the sides should be rendered impervious at the upper part to prevent direct inflow from the impure subsoil even during rains, and the water should be regarded as suspicious until such time as chemical and bacteriological examinations as well as inspection have given consistently negative results.

PROFESSOR HUXLEY'S personal estate has been sworn at £8,907 5s. 8d.

OBITUARY.

Dr. Kurt Schimmelbusch, who has been for some years Assistant to Professor von Bergmann in the Surgical Clinic of the University of Berlin, died on August 2nd at the age of 35. He was recognised as one of the most distinguished of the younger generation of surgeons in Berlin and had already made a considerable reputation by his researches on thrombosis and on the aseptic treatment of wounds.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Joaquin Laudo, Professor in the Medical Faculty of, and Dean of, the University of Cuba; Dr. Ernest Henri Baillon, Professor of Medical Botany in the Paris Medical Faculty, and author of numerous works on botanical subjects, aged 72; Dr. Ignacio Pirovano, Professor of Clinical Surgery in the Medical Faculty of Buenos Ayres, aged 52; Dr. Carl Bettenheim, Physician to the Rudolf-Spital and *Privat docent* in the University of Vienna aged 55; Dr. Kiener, Professor of Pathological Anatomy and Histology in the Medical Faculty of Montpellier, aged 54; and Dr. Doyen, Honorary Professor in the Medical School of Rheims.

MEDICAL NEWS.

Dr. Francis Warner has been appointed an honorary member of the Society of Public Hygiene at Buda-Pesth.

The Hodgkins prize of 10,000 dollars (£2,000) has been awarded by the Smithsonian Institution in equal proportions to Lord Rayleigh and Professor Ramsay in recognition of their discovery of argon.

The eleventh International Congress of "Americanists" will be held in the city of Mexico from October 15th to 20th. Among the subjects on the programme are some bearing on the anthropology and ethnography of the aboriginal races of the American continent.

Presentations.—The pupils attending the ambulance classes in connection with the Bolton Infirmary recently presented their teachers, Dr. Johnston and Dr. Mothersole, two of the honorary surgeons to the institution, with a handsome surgical box and a fully equipped secretaire respectively. The presentations were made through the ex-Mayor, Alderman Nicholson, J.P.

The Earl of Crewe opened the Crewe Memorial Cottage Hospital on August 7th. The site was given by the London and North-Western Railway Company, and the cost of the building has been defrayed practically by gifts of £1,000 each by Mr. F. W. Webb, chief mechanical engineer of the London and North-Western Railway Company, and Mr. Henry Yates Thompson, about £650 from the trustees of the late Mr. Martinheath, and several other donations.

Instruction in Hygiene for Ladies.—The Bedford College (for Women) has established separate courses of instruction in scientific hygiene, which now takes its place in the College curriculum as a special subject. Students are required to devote themselves for a session or more solely to hygiene and allied branches of science, such as physiology, bacteriology, chemistry, and physics. The work in all these subjects is to be practical as well as theoretical.

Fire at Minto House.—A most disastrous fire occurred in Minto House, Edinburgh, on Sunday night. Minto House is one of the numerous buildings used by lecturers in the Extra-mural School of Medicine, and it contains not only class rooms, but museums, laboratories, etc. Unfortunately it was in one of the museums that the fire broke out and did its main mischief. Dr. Halliday Croom is the main sufferer. his museum specimens (a valuable collection of many years), diagrams, and other class accessories having been irreparably destroyed. His coadjutor, Dr. Haultain, has also lost a valuable collection of microscopic preparations. The lecturer on botany (Mr. McAlpine) has had his specimens much injured by smoke and water.

British Laryngological, Rhinological, and Otological Association.—The following have been elected office-bearers of this Association: *President*: Dr. George Stoker, London. *Vice-Presidents*: Dr. E. Law, Dr. Middlemass Hunt, Dr. William Milligan. *Council (Metropolitan)*: Dr. W. McNeill Whistler (*ex-officio*), Dr. Dundas Grant, Mr. Mayo Collier, Mr. Wyatt Wingrave, Mr. G. C. Wilkin; (*Extra Metropolitan*): Dr. J. M. E. Scatliff, Mr. John Bark. *Honorary Secretary*: Dr. Pegler.

Lectures at the Sanitary Institute.—The twentieth course of lectures and demonstrations for sanitary officers under the auspices of the Sanitary Institute will begin on September 3rd, and will be continued on Tuesdays and Fridays at 8 P.M. in the Parkes Museum, Margaret Street, W. The various subjects will be dealt with in a course of twenty-four lectures given by well-known authorities, and will be illustrated by diagrams, drawings, models, and lantern slides. The Museum of Sanitary Appliances and the Library will be open free during September, October, and November to students attending the course. Information as to fees, etc., may be obtained from the Secretary of the Institute, Mr. E. White Wallis, Margaret Street, W.

MEDICAL VACANCIES.

The following vacancies are announced:

CONVALESCENT FEVER HOSPITAL, Gore Farm, Darenth, near Dartford—Dispenser; must be qualified under the Pharmacy Act. Salary, £5 a month, with board, lodging, and washing. Applications to the Medical Superintendent.

CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Appointment for one year. Applications to the Secretary by August 20th.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer; doubly qualified, must devote his whole time. Salary, £60 per annum, with board and lodging. Appointment for one year. Applications to the Chairman of the Medical Board by August 20th.

GENERAL HOSPITAL, Nottingham.—House-Physician. Appointment for two years, but eligible for re-election. Salary, £100 per annum, rising £10 a year to £120. Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing in hospital; no salary. Applications to the secretary for the former post by September 11th, and for the latter by September 7th.

GLAMORGAN COUNTY ASYLUM, near Bridgend.—Junior Assistant Medical Officer. Salary, £350 per annum, rising £10 yearly to £150, with board (no beer or wine), lodging, and washing. Applications to the Medical Superintendent by August 22nd.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, Birmingham.—Resident Medical and Surgical Officer, doubly qualified. Salary, £150 per annum, with board, residence, and washing. Applications to the House Governor, General Hospital, Birmingham, by August 24th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Honorary Assistant Physician. Must be on the *Medical Register*. Applications to Charles Behrens, Honorary Secretary, before August 26th.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant, doubly qualified. Salary, £120 for the first year, and £150 afterwards. Applications to R. W. Sisson, Honorary Secretary, by August 21st.

NORFOLK AND NORWICH HOSPITAL.—Assistant House-Surgeon; doubly qualified. Appointment for six months. Board, lodging, and washing provided. Applications to the House-Surgeon by September 2nd.

PARISH OF LAMBETH.—Assistant Medical Officer and Dispenser for the Infirmary in Brook Street, Kennington; doubly qualified; must devote his whole time to the duties of his office. Salary, £125 per annum, with board, furnished apartments, and washing. Applications, on forms provided, to W. B. Wilmot, Clerk, Guardians' Board Room and Offices, Brook Street, Kennington Road, S.E., by August 24th.

ROYAL SOUTHERN HOSPITAL, Liverpool.—Third House-Surgeon. Salary, £65 per annum, with board, lodging, and laundry. Applications to the Chairman of the Medical Board by August 26th.

SALISBURY INFIRMARY.—House-Surgeon, unmarried, doubly qualified. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by August 23rd.

SCHOOL BOARD FOR LONDON.—Medical Officer for the Board's Training Ship *Shaftesbury*, lying off Grays, Essex; must reside within two miles of the ship. Commencing salary £100 a year, which may be increased by annual increments of £10 to £150 a year. Applications to A. E. Garland, Clerk to the Managers, School Board Offices, Victoria Embankment, W.C., by August 31st.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House-Surgeon. Salary, £30 per annum, with board, lodging, and washing, etc. Applications to the House-Surgeon by August 20th.

TEIGNMOUTH INFIRMARY, DISPENSARY, AND CONVALESCENT HOME.—House-Surgeon (to act also as Secretary), doubly qualified. Salary, £60 per annum, with rooms, board, and washing. Applications to the Chairman of Committee by August 19th.

MEDICAL APPOINTMENTS.

Barcroft, A. E. J., L.R.C.S.I., L.K.Q.C.P.I., appointed Medical Officer for the Mydtle and Beechurch District of the Ellesmere Union.

Beaumont, Dr., appointed Medical Officer for the Camberwell Union Infirmary, vice Henry Chabot, M.R.C.S.Eng.

Bond, N. T., M.B., C.M.Edin., appointed Medical Officer for the No. 4 District of the Liskeard Union.

Brebdin, J. N., L.R.C.S.I., L.K.Q.C.P.I., L.S.A., appointed Medical Officer for the Potton District of the Biggleswade Union.

Carey, W., L.R.C.S.I., L.M., appointed Medical Officer for the Workhouse and the Holbrook District of the Samford Union.

Coates, Richard, L.R.C.P., M.R.C.S., appointed Resident Medical Officer to the Newport and Monmouthshire Infirmary vice S. H. Lee, B.A., M.B., B.C.Camb., M.R.C.S., L.S.C.P.Lond., resigned.

Cornish, Charles Percival, M.B.Lond., F.R.C.S.Eng., appointed Honorary Surgeon to the Weston super Mare Hospital, vice G. E. Alford, deceased.

Fleetwood, Dr J. C., appointed Medical Officer and Vaccinator for the Winster District of the Bakewell Union.

Green, Mr. E. F., appointed Medical Officer for the No. 2 District of the Steyning Union.

Griffin, A., M.B., appointed Medical Officer for the Sutton-on-Trent District of the Southwell Union.

Jenkins, John Henry, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the Lytham Urban District Council.

Johnstone, J. L., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Upholland District of the Wigan Union.

Jones, Mr. D. W., appointed Medical Officer for the Inkberrow District of the Alcester Union.

Jones, Dr. R. D., appointed Medical Officer for the Grangetown District of the Cardiff Union.

Kelly, Charles, M.D., F.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health to the Worthing Town Council.

Kingdon, Wilfred R., M.B.Durh., appointed Junior Resident Medical Officer to the Stoke Newington Dispensary, London, N.

Parsons, G. G., M.B., appointed Medical Officer for the Fourth District of the Westbury and Whorwellsdown Union.

Powell, Dr J. J., appointed Medical Officer for the First District of the Highworth and Swindon Union.

Reilly, Mr. F. W., appointed Medical Officer for the Bellinge District of the Wigan Union.

Rhind, T., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the No. 1 Western District of the Billesdon Union.

Roberts, A. H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Malling Rural District Council.

Royds, W. A. S., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the St. Mary Bowine District of the Whitchurch (Hants) Union.

Sandford, G. Cabrow, M.B., appointed Resident Obstetric Surgeon to the Dispensary, York.

Spicer, R. H. S., M.D.St.And., M.R.C.S.Eng., reappointed Medical Officer for the East and West Austey Districts of the Southmolton Union.

Stubb, E. C., F.R.C.S., appointed Assistant in the Throat Department at St. Thomas's Hospital.

Thompson, Dr., appointed Medical Officer for the Twycross District of the Mark Bosworth Union.

Thyne, Thomas, M.D.Edin., F.R.C.S.Eng., reappointed Medical Officer for the Millcorner and Cockfosters District of the Edmonton Union.

Weeks, Mr. C. E., appointed Medical Officer for the Pinchbeck District of the Spalding Union.

Wicks, E. M., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the Infirmary of the City of London, Bow Road, E.

DIARY FOR NEXT WEEK.

TUESDAY.

The Clinical Museum, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGES.

Harmon—Heis.—On July 17th, at St. Catherine's Church, Belle Vue, Wakefield, by the Rev. R. N. Hurt and the Rev. H. I. Bardsley, James Milne Harmon, M.B.&C.M.Edin., to Lucy Margaret, second daughter of G. S. Heis, Esq., of Bellefield House, Wakefield.

Weeks—Swan.—On August 1st, at St. Mary's, Pinchbeck, by the Rev. F. J. Wayet, Vicar, assisted by the Rev. G. E. Weeks, B.A. (brother of the bridegroom), Courtney Charles Weeks, M.R.C.S., L.R.C.P.Lond., second son of G. H. Weeks, R.N., to Nannie Cochrane, daughter of W. Swan, Esq., of Monaghan, Ireland. No cards.

Wood—Minkley.—On August 13th, at the Cathedral, Southwell, by the Rev. E. A. Coghill, Vicar of Holy Trinity, Southwell, W. T. Wood, L.R.C.P.Edin., L.R.C.S.Edin., L.M. & L.F.P.S.Glasg., of Cresswell, Derbyshire, to Grace Eliza, eldest daughter of the late J. W. Minkley, Esq., of Southwell, Notts.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not to his private house.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

H. B. L. would be glad to learn of a home for an old man who is imbecile. The man is harmless, but not fit to take care of himself. His friends can pay 30s. per week.

M. B. will be much obliged for information as to the details of the treatment of ulcers by exposure to oxygen gas, as demonstrated by Dr. Stoker on August 1st at King's College.

E. J. D. writes: Is there any institution for the mechanical treatment of infantile paralysis, affecting the left arm and leg? Massage has been used with some success.

R. V. S. would be glad to know of an institute, private or public, where a home could be made for a female patient suffering from silliness and hallucinations of paralysis. Her family could pay 7s. to 10s. weekly. Near Newport (Mon.) if possible.

*** There is no institution where such a case can be taken at the price. If insane, why not have her certified and sent to the county asylum?

Far Away writes: Will you or any of your readers kindly answer the following questions for me?: (1) Are there any statistics published giving the result of the treatment of enteric fever and tropical diseases with and without alcohol? (2) Has abscess of the liver ever been noticed in persons who have been total abstainers? (3) How many members of the British Medical Association are total abstainers and do not prescribe alcohol in their practice?

M. D. asks for suggestions for treatment in case of obstinate and very long-continued constipation. Spare habit of body, sallow complexion; occasional heartburn, often rejection of mucoid jelly-like material by mouth, no vomiting; very good appetite; below proper weight for age and height; flatulence, sometimes extreme and distressing; stools generally hard and dry, varying in colour, generally too dark, rarely too light; very rarely they are quite normal for day or two, then complete amelioration of symptoms.

ANSWERS.

L.R.C.P.&S.E.—We are afraid nothing can be done in the matter.

A Member.—Mr. Alfred Cooper gives the following formula in his book (page 454) for a solution of sozolodol of mercury for intramuscular injection: Sozolodol of mercury, 5 grains; iodide of sodium, 10 grains; distilled water, 200 minims. The quantity for an injection is 10 to 15 minims.

Mr. Albert Dews (Wetherby Road, S.W.) writes that in a *Textbook of the Diseases of Children*, edited by Louis Starr, M.D., 1894, on page 51 an analysis of Mellin's food is given as follows: Water, 12.37; fat, 0.16; albuminoids, 10.07; soluble carbohydrates, 68.13; starch, 0.00; gum, cellulose, etc., 5.45; ash, 3.75=100.00.

Listerite.—Our correspondent appears to be under a misapprehension in supposing that the appeal referred to is intended to have an international or national scope. It is, as we understand it, a proposal that the Fellows and Members of the Royal College of Surgeons should present to the College a portrait of Sir Joseph Lister, who was at one time a member of the Council of the College.

Ambulance Work.

Vaton.—Either of the following works would probably answer our correspondent's requirements: *First Aid to the Injured and Management of the Sick*, by E. J. Lawless, M.D.; *Illustrated Lectures on Ambulance Work*, by R. Lawton Roberts, M.D.

INSTRUCTION IN LIP READING.

MR. J. BRADBURY WORTH (Brighton) writes: In answer to "Scalpel" I can thoroughly recommend Miss Hare's School, 11, St. Michael's Place, Brighton. The teaching is admirable, judging from the results, and there are all home comforts.

HOT WATER HEATING.

B. H.—Our correspondent will find in *Hygiene*, by Notter and Firth (Longmans, Green, and Co.), a description of the proper arrangement of the piping required for the distribution of hot water throughout a dwelling-house. In recent volumes of the architectural papers the matter has been gone into in considerable detail.

NOTES, LETTERS, ETC.

ERRATA.—In Mr. Anderson's paper on Art in Relation to Anatomy, published in the BRITISH MEDICAL JOURNAL of August 10th, Figs. 7 and 13 were accidentally transposed.—Under the head "Answers," in the the same issue, Mr. Lewis, instead of Messrs J. and A. Churchill, was given as the name of the publisher of Chavasse's *Advice to a Wife*.—At page 393 of the same issue the name of Mr. Robert Cuffe, Woodhall Spa, was misspelt.

THE END OF THE CENTURY.

DR. FITZ JAMES MOLONY (Porlock) writes: In the President's eloquent address there is a passage, apparently intended if we may judge from the context, to refer to the end of the century, "When the last stroke of the bell is knelled at midnight the last hour of 1899." Should not this be the last hour of 1900?

The impression that the new century begins in 1900 is very general, but it is obvious that it must begin in 1901—the Christian era having begun in the year 1, not in the year 0!

MEDICAL MISSIONARY WANTED.

IN a letter published in a contemporary, Mr. H. Vere White, 8, Dawson Street, Dublin, wishes it to be made known to young medical men who might be willing to devote some years to medical mission work, that the Bishop of Chota-Nagpore is anxious to get this year the help of a fully qualified doctor for the mission station at Ranchi, Bengal. The Society for Promoting Christian Knowledge, has for this purpose put a grant of £120 a year at the bishop's disposal, and has undertaken to pay this sum for at least three years. The society will also give £30 for passage and outfit. The doctor appointed will be entitled to a house rent free, or, if he so desired, it might be possible for him to make arrangements for living in the house of a married missionary. Ranchi is about sixty miles from Hazaribagh, the head-quarters of the Dublin University mission to Chota Nagpore. Further information can be obtained by application to Mr. White.

PATHOLOGY UP TO DATE.

DR. A. STODART WALKER (Edinburgh) writes: In a recent weekly instalment of Lloyd's *Encyclopædic Dictionary* at present publishing, the following is given as the pathology of locomotor ataxy: "A peculiar form of apparent paralysis with more or less wasting, but always unsteady and disorderly muscular movements, though muscular power is entire, and loss of co-ordinating movement. It is generally associated with degeneration of the posterior columns of the spinal cord and posterior roots of the spinal nerves, sometimes known as Charcot's disease. According to Sir James Paget and Professor Humphry, it is probably a compound of two things—rheumatic gout and chronic rheumatic arthritis—not definitely so, but a method of rheumatic arthritis altered from its ordinary fashion by the intervention of the locomotor ataxy. Mr. Hutchinson considers it a sort of tumultous old age, an old age of premature senility of the nervous system, with loss of sensation and considerable alteration in the heads of the bones."

This is really too good to be missed. I have copied the statement word for word, and the addition of italics might detract from many of its delicious items. I can only hope that the pathology of this otherwise excellent dictionary is not *non tangenda, non movenda*.

A CURIOUS POULTICE.

MR. HERKLOTS VOS (Tottenham, N.) writes: I well remember a case I had when dressing for Mr. Holden at St. Bartholomew's Hospital. A man who had been intemperate was rolling a sod of grass, and got some grit into his left palm. It inflamed; he put on hot cow-dung poultices by the advice of some country friends. He was admitted with a dreadfully swollen hand. It was opened, but the phlegmonous process spread up to the shoulder, and it was opened in many places, and at last, under chloroform, the limb was amputated below the joint. The stump sloughed, and pus pointing at the back of the neck, an opening was again made. He became in such a weak state that chloroform could not be administered, and one morning, in going the usual round of the ward, he had such a dread of more incisions that, saying to us all standing round his bed, "I can bear it no more, I must now die," he actually did die in a few minutes in our presence. His was the last arm that Mr. Holden ever amputated at St. Bartholomew's, and I had the honour of holding it at the operation.

F.R.F. writes to say that the disgusting poultice described by Mr. Bate was commonly used some years ago in North Devon. It had the effect of making abscess of the breast point and discharge much more quickly than ordinary applications did, but there was a corresponding destruction of tissue. The dung was used fresh.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Dr. J. Hill Abram, Liverpool; J. Ambrose, M.B., Bristol; Mr. H. Ashton, Oldham; Mr. H. G. Armstrong Baines; Adams Patent Sewage Lift Company, York. (B) H. G. Brooke, M.B., Manchester; Dr. J. W. Bond, London; P. Boobbyer, M.B., Nottingham; Dr. J. B. Bradbury, Cambridge; Dr. S. W. Bryant, Strathpeffer; Dr. T. H. Barnes, London; Mr. W. P. Bridges, Felixstowe; B. P. (C) Mr. E. Collard, London: Messrs. C. S. Fox and Co., London: Mr. W. H. Cox, Edinburgh; Mr. W. E. Collins, Ilfracombe: Mr. R. Coates, Huddersfield; Mr. W. Cox, Winchcombe; Mr. R. Cuffe, Lincoln; Mr. A. P. Clyne, London; Messrs. J. and A. Churchill, London; D. E. Cantellon, M.B., London; Dr. W. T. Cocking, Sheffield; Dr. J. W. Carr, London. (D) Mr. E. Denison, Leeds; T. Divine, M.B., Rotherham; Dr. G. W. Daly, Ratoah; Mr. E. J. Donbavand, London. (E) Examinator, Mr. E. East, London; R. H. Elliot, M.B., Madras; Mr. H. S. Elliott, Southsea. (F) Messrs. Fassett and Johnson, London; Far Away; Dr. E. F. Fussell, Brighton. (G) Mr. A. T. Greenhill, Bournemouth; Mr. W. Graham, London; Messrs. Griffin and Co., London; Dr. J. Gairdner, Crieff; Dr. W. Gordon, Exeter; R. R. Giddings, M.R., Nottingham; Mr. P. Gabbett, Norwich; Dr. W. Gairdner, St. Andrews; Mr. G. B. Gibson, Worcester; Mr. W. G. Green, London. (H) Mr. C. W. Hunt, Manchester; Dr. W. P. Herringham, London; Dr. W. H. Haynes, London; Mr. H. Hemsted, Whitchurch; Messrs. Hertz and Gellingwood, London; Mr. C. J. Hewetson, Scarborough; Mr. J. S. Horn, Burnley; Hard Lines; Dr. T. G. Horder, Cardiff; P. T. Halliday, M.B., Lochgilphead; Mr. H. Hutchinson, Abingdon; Mr. J. R. Harper, Barnstaple. (I) Hex; Ignoramus. (J) Mr. R. S. Jaques, London; J. L. C.; R. W. Jones, M.B., Penrhiwceiber. (L) Mr. G. Longbotham, Middlesboro'; L. & C.P. & S.E.; Mr. J. R. Lynch, London; Dr. T. Laffan, Cashel. (M) Professor Macewen, London; Medicus; H. Morris, M.B., London; Mr. C. A. Morton, Clifton; M.B.; Dr. J. R. Morrey, London; Mr. F. Molony, Porlock; Mr. E. F. MacCarthy, London. (O) Dr. J. G. Ogle, Reigate; J. Ogilvie, M.B., Bolton; Dr. M. D. O'Connell, Ballincollig. (P) Mrs. R. M. Paget, London; C. C. Percival, M.B., Weston-super-Mare; Dr. L. H. Pegler, London; Lady Priestley, Cranleigh; Mr. E. Popham, London; Professor J. Penberthy, London. (R) Mr. C. Ruata, Perugia; Dr. A. Roberts, Harrogate; Mr. J. A. Rigue, Henley-on-Thames; W. F. Robertson, M.B., Edinburgh; Mr. A. R. Reynolds, London. (S) Mr. J. A. Smith, Maryport; Mr. G. G. Sinclair, Durham; Messrs. T. F. Soyer and Co., London. (T) Mr. D. T. Thomson, Dundalk; Mr. H. Terry, Northampton; Dr. St. G. Thomson, London. (V) Mr. G. Viceconti, Naples; G. H. Vos, M.B., London; Vesical. (W) Dr. F. J. Waldo, London; Dr. L. Wilde, London; Mr. W. Washbourn, Gloucester; J. L. Watt, M.B., Plymouth; H. S. Ware, M.B., London; Mr. W. Wylie, Belfast; Mr. M. Wardle, Bishop Auckland; D. Walsh, M.B., London; Mr. J. N. Winter, Brighton; Mr. T. E. Williams, Talgarth; Mr. E. S. Wood, Cambridge, etc.

BOOKS, ETC., RECEIVED.

Le Phtisique et Son Traitement Hygiénique (Sanatoria—Hôpitaux Spéciaux—Cure d'Air). Par Dr. E. P. Leon-Petit. Paris: Félix Alcan. 1895. Fr. 4.

Some Practical Points in connection with Rupture of the Female Perineum. By W. D. Spanton, F.R.C.S.E. Leicester: *Provincial Medical Journal*. 1895.

Lord Reay Lectures on the Physiology of Vision. By A. Da Gama, L.M. Bombay: Anglo Lusitano Press. 1895.

Practical Sanitation. By Dr. George Reid. Third Edition. London: C. Griffin and Co. 1895. 6s.

Das Laryngo-Stroboskop und seine Verwendung in der Physik, Physiologie und Medicin. Von Dr. M. J. Oertel. Berlin: August Hirschwald. 1895.

Eine neue Transplantations-Methode für die Radikaloperation bei chronischen Eiterungen des Mittelohres. Von Dr. Passow. Berlin: August Hirschwald. 1895.

Die Mundseuche (Stomatitis Epidemica Maul und Klauenseuche des Menschen). Von Dr. Siegel. Berlin: August Hirschwald. 1895.

The Scientific Basis of Medicine, its Prospects and Limitations. By E. Hobhouse, M.A. Oxford: B. H. Blackwell. 1895. 1s.

*** In forwarding books the publishers are requested to state the selling prices.

BRITISH MEDICAL ASSOCIATION.

SIXTY-THIRD ANNUAL MEETING.

SECTION OF MEDICINE.

F. W. Pavy, M.D., F.R.S., President.

Wednesday, July 31st.

DISCUSSION ON DIPHTHERIA AND ITS TREATMENT BY ANTITOXIN.

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Mr. President and Gentlemen,—There have been numerous remedies which have been used in the treatment of diphtheria, some of which—local applications—have for their object an antiseptic action on the membrane or a loosening action by which the membrane is made to separate more easily. Others, again, have been vaunted for their general action; that is, for their effect in counteracting the general symptoms of the disease. In no instance, however, in which a drug has been so extolled is there evidence that there has been an effect on the general symptoms of the disease, either in relieving the bodily depression, in reducing fever, in relieving or preventing the occurrence of bronchopneumonia or paralysis, and the extension of the disease to other parts. When, therefore, a remedy is introduced, the recommendation of which is based on well established scientific experiments, its application in the treatment of the disease, and especially its effect on the symptoms of the disease, require close examination, not only at the bedside, but in the laboratory. The recommendation of antitoxin in the treatment of diphtheria is based on the results of a study of the pathology of the disease, and it is necessary that this should be clearly understood before the value of the remedy can be in any way gauged.

Diphtheria may be defined as a membranous inflammation of a mucous membrane, usually of the respiratory passages, due to the invasion of the bacillus diphtheriæ, which does not enter the body but forms poisons in the membrane, which produce general symptoms, fever, etc., as well as a palsy due chiefly to a nerve degeneration. One point I should like to insist upon in this definition, namely, that the presence of nerve degeneration is the pathological test of diphtheria as a disease.

There are other membranous inflammations of the throat due to micro-organisms, but diphtheria is the only one which leads to nerve degeneration. Similarly, the pathological test of the bacillus is not that it produces death, but that it produces nerve degeneration. The pathological test of the poisons found either in the bodies of patients dead of diphtheria, or formed by the bacillus diphtheriæ outside the body, is not that they produce death (because many poisons have a similar effect), but that they produce nerve degeneration. It is not meant by this that there are no other poisons which produce nerve degeneration, because such are known, but when it is a question of the bacillus diphtheriæ, it is nerve degeneration which is the final and most accurate test of its presence.

It must be evident that the chemical poisons which are found in diphtheria are of great importance in the present connection, inasmuch as it is these poisons which the antitoxin has to counteract. Patients the subjects of diphtheria die, some from mechanical obstruction by the membrane, some from bronchopneumonia, and some from a mixed infection, but the majority die from the effects of the poisons in combination with one of the two first. Deaths due to the poisons occur from syncope, suppression of urine, asthenia, and from paralysis.

The chemical poisons which are found in patients who have diphtheria belong to two classes: one is found in the membrane, the other is found in the tissues, blood, and spleen, and the action of these two classes of poisons, although similar in some respects, presents important points of difference. The chemical poison which is found in the membrane may be extracted by treating the fresh membrane with sterile salt solution, diluting and concentrating it at a low temperature, dialysing (to get rid of the extra amount of salt) and precipitating with alcohol. The alcohol precipitate, after drying, may be dissolved in water. If a small quantity of this precipitate, which is almost imponderable, be injected into a vein of a healthy rabbit, the animal will after a time show paralysis, which gradually increases in severity; it will waste, it may have diarrhœa, and it will die after a longer or shorter period. At the *post-mortem* examination, extensive degeneration of the nerves is found, associated with fatty degeneration of the skeletal muscles, and—what is of extreme importance—fatty degeneration of the heart. Subcutaneously injected, the poison produces a necrosis of the tissue. The characteristics of this poison, therefore, are that it acts in a single dose, and that it reproduces the symptoms and the pathological changes found in diphtheria. It is, so to speak, the chemical representative of the living, infective agent in the membrane, which is the bacillus diphtheriæ. No analysis is possible of this chemical substance of the membrane; but the profound effect which it produces on the body by a single infinitesimal dose would suggest that it belongs to the class of bodies known as ferments.

The poisons which are found in the tissues of patients dead of diphtheria—especially in the blood and the spleen—differ from this poison in the membrane. They are of two kinds; one of which belongs to the class of digested proteids, namely, albumoses, and is similar in chemical reactions to the albumoses formed in digestion in the stomach and small intestine; the other body is a nonproteid substance, namely an organic acid. It may be said of this latter substance that although it produces some nerve degeneration it does not produce the progressive paralysis nor the profound effect on nutrition which is characteristic of the other poisons of diphtheria. The albumoses, on the other hand, have a very characteristic action. Injected intravenously into rabbits, they produce in one or two hours a rise of body temperature, which on the repetition of the dose frequently lasts several days. They are are in fact the fever producers in diphtheria. Although it is possible to kill an animal in a few hours by a single dose of the albumoses intravenously injected (an event which does not follow the injection of the ferment of diphtheria), yet the characteristic action of the albumoses is only brought out by the injection into a vein of two or three small doses on successive days. When this is done, besides the fever produced, the animal shows at the end of a week or ten days slight paralysis, which gradually increases, and which is not infrequently accompanied by severe attacks of dyspnœa, in one of which the animal may expire. Large doses of the albumoses produce great wasting of the body, as well as diarrhœa. In the *post-mortem* examination of animals that have died, extensive nerve degeneration and fatty degeneration of the heart are found, and after large doses there is fluidity of the blood after death, which is characteristic of death from many different kinds of albumoses. These albumoses differ, therefore, from the poison present in the membrane, not only from the fact that their injection produces an immediate rise of temperature, and their repeated injection a continuous fever, but from the fact that they act in producing palsy only in multiple doses. Injected subcutaneously they do not produce necrosis, but œdema, the extent of which depends on the largeness of the dose given.

In some experiments with the albumoses there is no paralysis observable during life, but after the animal is killed, in from four to ten weeks, the nerves are found degenerated in one or other part of the body, showing that the poison had some effect, although the degeneration was not sufficiently extensive to produce symptoms during life. The fatty degeneration of the heart, which is a feature of poisoning by albumoses, is an effect which is produced by the albumoses formed by other micro organisms—for example, the bacillus anthracis and some forms of septic agent; and since these micro organisms do not produce toxic ferments like the bacillus diphtheriæ and the bacillus tetani, it is possible that the fatty degeneration of the heart is ascribable to the action of the albumoses, and not to any direct action of the ferment.

Both these classes of poisons—that which is found in the membrane and that which is found in the tissues of patients dead of diphtheria—can be formed artificially outside the body by growing the bacillus diphtheriæ in suitable media. The ferment which is present in the membrane, or toxin as it is sometimes called, is now made by growing the bacillus diphtheriæ in a slightly alkaline meat broth, containing 2 per cent. of peptone and 0.75 per cent. of salt. When such a solution is inoculated with a pure culture of the bacillus, and placed in an incubator while a current of air passes over the surface of the liquid, as in Roux's method, the liquid is found to contain this poison after a week or two. The bacilli are removed by filtration through a porcelain filter, and the filtrate, which is still alkaline and yellowish or yellowish-brown in colour, contains the greater part of the peptone which was added, as well as the poisonous body. This liquid may be obtained of a very high degree of virulence, so that one-fifth of a cubic centimetre, or even less, injected subcutaneously into a guinea-pig weighing 500 grammes will produce death in thirty-six to forty-eight hours; this effect of the poison has been taken as a test of its activity. In his earlier experiments Roux separated this poison by carrying it down in the liquid by means of calcium phosphate, and thus obtained a substance which reproduced the symptoms of diphtheria in infinitesimal single doses. Injected intravenously into rabbits this toxin, as will be shown presently, reproduces not only the symptoms, but also the nerve degeneration which is the pathological characteristic of diphtheria.

If, instead of growing the bacillus diphtheriæ in broth containing peptone, it is grown in alkaline broth containing 0.75 per cent. of salt, but instead of peptone about 1 per cent. of alkali albumin, the products of the growth of the bacillus are not the same as in the first instance. Alkali albumin is a proteid which is digestible—that is, pepsin or pancreatin in a suitable medium will transform it into albumoses and peptone. The bacillus diphtheriæ does the same. It transforms the alkali albumin into albumoses which have the specific action previously described, and forms a small quantity of the organic acid. These albumoses, for example, when injected in repeated small doses into rabbits, produce fever, wasting, and sometimes diarrhœa, but chiefly a progressive paralysis, which is associated with extensive nerve degeneration and also with fatty degeneration of the heart.

For these reasons, therefore, the bacillus diphtheriæ is the cause of diphtheria. It is found in the membrane, it can be separated from the membrane, and when grown in suitable media outside the body it forms poisons which have the same physiological action as those present in the membrane and in the tissues of patients dead of diphtheria, the specific test relied on being the dependence of the palsy on nerve degeneration. It is these poisons, therefore, which the antitoxin has to counteract.

The pathological process in diphtheria must be considered in the following manner. When the membrane is formed, the bacilli growing in it, especially near the surface, secrete a ferment which, when absorbed into the body, produces by acting on the proteids of the body digestive products, the chief of which belong to the albumose class. It is not that the body is poisoned by a single large dose and then the action stopped (although this may occur in certain cases), but it is that numerous small doses are, in the course of the disease, absorbed into the system, and are gradually producing their effects.

We will now proceed to discuss the effect of the diphtheritic antitoxin in counteracting the effects of these poisons.

The preliminary experiments in this direction have been performed solely on rabbits, the poison alone being injected into one animal, and the poison, with a certain amount of antitoxin, being injected into another, both animals being kept under similar conditions. The effect on the temperature and weight of the animal was observed, as well as the onset of any paralytic symptoms, and a *post-mortem* examination was made soon after death (or, if the animal did not die, some weeks after the inoculation), the heart being examined for fatty degeneration, and the nerves for the characteristics of degeneration. In this way rabbits can be used as a very delicate test of the action of the diphtheria poisons and of the antitoxin.

When the antitoxic serum itself is injected in large doses into the venous circulation of an animal it produces but little effect on the body temperature and no loss of weight. It is, as far as could be judged in the rabbit, a perfectly innocuous substance (Chart I).

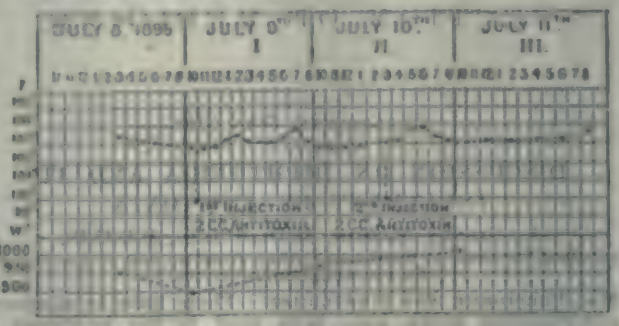

Chart I.

The effect of injecting a dose of the toxin in one animal and a dose of toxin mixed with a certain proportion of antitoxin in another is seen in the following experiment (Chart II). The toxin was prepared by Roux's method, and

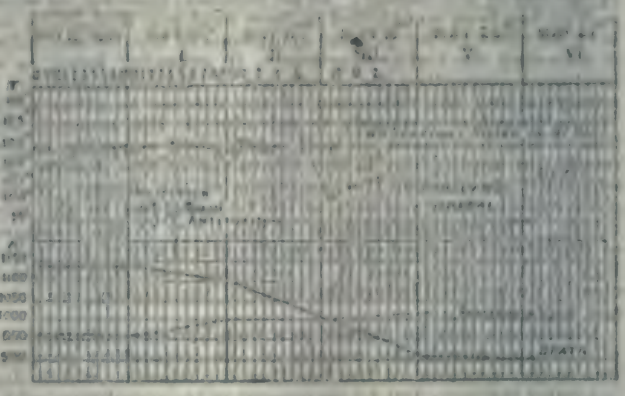

Chart II.

was formed by the bacillus diphtheriæ growing in 2 per cent. peptone broth for one month. The virulence of the solution may be gauged by the fact that one-tenth of a cubic centimetre, subcutaneously injected, killed a guinea-pig weighing 500 grammes in less than three days.

In the experiment shown in this chart (Chart II) each of two healthy rabbits received 0.5 c.cm. of toxin into the vein of the ear, but in one 0.3 c.cm. of antitoxin was added. The thick line on the chart represents the effect of the toxin alone on the temperature. It will be seen that on the first day following the injection there was practically no effect on the body temperature, but towards the end of the second day the temperature began to fall rather rapidly, and continued low on the third day, after which it was not taken. Paralysis supervened on the fifth day, and became general, and death ensued on the sixth day. In the animal which received the antitoxin as well as the toxin there was no effect on the body temperature, which did not fall or rise. No symptoms were observed, and the animal was killed in forty-one days, being fat and well nourished. The effect on the weight is shown on the lower part of the chart. In the animal that received the toxin alone the weight began to fall soon after the injection, and on the second and third days there was a rapid fall, nearly 250 grammes being lost during this time; and the weight continued to fall until death ensued on the sixth day. In the animal, however, that received the antitoxin and toxin there was a slight rise in the weight, which continued until the animal was killed. To all appearances, therefore, the antitoxin in this experiment completely counteracted all the effects of the toxin or the diphtheritic ferment. The absence of any effect on temperature, the absence of paralysis, and the gain in body weight show this. The *post mortem* examination of the animal that died from the toxin showed well-

marked fatty degeneration of the heart muscle, and the characteristic nerve degeneration, which is shown in this photograph of one of the branches going to the vastus internus. (Fig. 1.) In the antitoxin animal there was no

Fig.

fatty degeneration of the heart, but some of the branches of the nerves to the vastus internus showed the characteristic degeneration as in this photograph. (Fig. 2.) The dose of

Fig. 2.

antitoxin given to this animal, therefore, did not counteract all the effects of the toxin, since some nerve degeneration was produced. The immunity strength of the specimen used (British Institute of Preventive Medicine) was 1; therefore the amount injected was more than sufficient to counteract the effects of the toxin, according to the calculations in vogue.

A few other experiments were performed on the effect of the antitoxin in preventing the symptoms which have been described as produced by the injection of the diphtheritic albumoses into the blood. The albumoses were obtained from the spleens of patients dead of diphtheria. In one experiment, shown in Chart III., two rabbits each received intravenously on two occasions 7 centigrammes of albumose. In one animal 0.5 c.cm. of antitoxin was injected with each dose of the albumose—that is, 1 c.cm. in all. The thick line, which represents the effect of the albumose alone, shows that after the first injection the temperature rose, then sank rapidly, recovering, however, the following morning. A second injection at this time produced high fever, succeeded by a fall on the same day, after which the temperature on the third and fourth days was practically normal. The animal that received antitoxin as well showed after the first dose no rise of temperature, but a well-marked fall, with recovery on the second day. A second dose now given showed a rise of

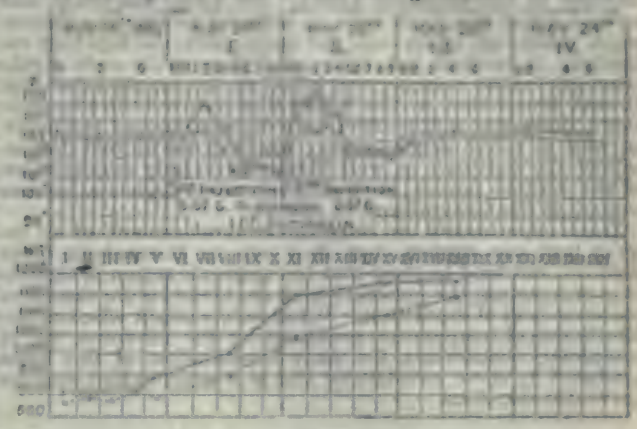

Chart III.

temperature, succeeded by a fall, after which, on the third and fourth days, the temperature was normal. The body weight, which is shown in the lower part of the chart, shows in both animals a gradual increase up to the eighteenth day and later, as in all healthy rabbits which are taken from the stock, placed in cages, and which receive an abundance of food. The antitoxin in this case, therefore, although it diminished, did not prevent the effects on the temperature which normally result from the injection of albumoses into the venous system.

In another experiment a much larger dose of albumose was given—namely, 0.125 gramme, on two successive days, followed by 0.072 gramme on the third day. In one animal antitoxin was given with the albumose, 1.4 c.cm. being given altogether (Chart IV). The effect on the temperature when the

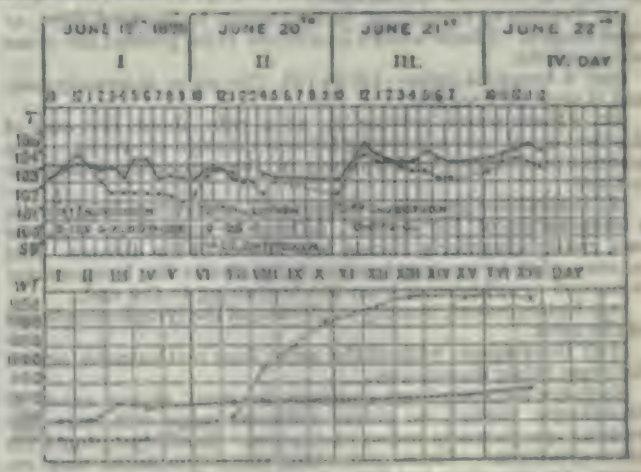

Chart IV.

albumose alone was given was a slight rise after the first dose, no rise after the second, but a well-marked rise after the third, lasting over the following day. In the antitoxin animal following the first dose was a fall of temperature, following the second dose practically no effect, following the third dose a rise of temperature of the same character as that in the first animal, but rather less in degree. The effect on the body weight is well marked, the animal that received the albumose alone showed a nearly stationary weight for seventeen days, there being a slight increase, but very slight.

The animal that received the antitoxin as well as the albumose, however, showed after the first week a rapid rise of body weight, contrasting strongly with the first animal. The animal that received the albumose alone showed on the fourth day slight weakness in the hind legs; on the sixth day this was more pronounced, and gradually increased till the seventeenth day, when it presented an appearance in marked contrast to the antitoxin animal: the latter was lively, and walked about the room like an ordinary rabbit; the former, when taken out of its cage, lay quite quiet, the legs half extended; it walked but little, and then with only feeble attempts. Both animals were killed on the twenty-third day. It was found that in the rabbit that received the albumose alone there was well marked fatty degeneration of the heart, as well as nerve degeneration; while in the animal that received the antitoxin as well there was no fatty degeneration of the cardiac muscle, and although nerve degeneration was present it was insignificant in extent.

These experiments are only the commencement of an inquiry into the subject, but they are in themselves quite definite, and tend to show that the antitoxic serum is capable of counteracting the poisons which are found in the tissues of patients dead of diphtheria. It has only a slight effect on the febrile rise of temperature produced by the albumen, but it completely counteracts the fatty degeneration of the heart produced by these substances, and to a great extent also the nerve degeneration.

II.—E. W. Goodall, M.D.,

Medical Superintendent, Eastern Hospital, Homerton.

The points concerning diphtheria and its treatment set down for discussion in this Section are so many, and the time for speaking so short, that I must confine my remarks to the following:

1. The symptoms of severe cases of diphtheria, especially as regards the mode of death.

2. The general results of the antitoxic treatment, drawn from the personal observation of cases.

(1) In a severe case of diphtheria there are:

(I) Extensive exudation, that is, the exudation covers or affects at some time or other the tonsils, uvula, soft palate, pharynx, and often the posterior parts of the nasal fossæ, in which case there is a discharge from the nose, the worst form having a gelatinous appearance.

(II) Persistent exudation, lasting seven to fourteen days, or even longer. I have known exudation to be present for close on six weeks.

(III) A frequent pulse—120 to 150. The pulse is usually soft, and it may be irregular.

(IV) Albuminuria, setting in, as a rule, about the end of the first week, and persisting for several days or weeks. The amount of albumen varies much in the same case from time to time.

(V) Sometimes pyrexia. A case will sometimes begin with a temperature of 103° or 104°, falling to normal in a day or two, rising irregularly during the course of the disease. But in some of the very worst cases of diphtheria the temperature is normal or subnormal from the beginning to the end.

(VI) Enlargement, usually moderate, of the lymphatic glands of the neck.

(VII) Drowsiness, with at the same time restlessness, active delirium being uncommon.

Such are the symptoms common to most severe cases of diphtheria, though no doubt different cases will have the various symptoms in different degrees. These symptoms are toxic symptoms. Cases presenting these symptoms may recover. On the other hand they may, and often do, prove fatal, usually by cardiac failure (ignoring for the present cases where the larynx, trachea, etc., become invaded). Again, to these symptoms may be added others still more grave, symptoms which usually herald a fatal termination, and it is of these I wish now to speak. These symptoms are frequent vomiting, anuria, a hæmorrhagic condition, and convulsions.

Frequent vomiting, either after or independently of food, may occur apart from anuria, but it is more often found in connection with this symptom. It is an exceedingly grave symptom; it may be met with not only in the membranous, but also in the paralytic stage.

Of anuria I have written elsewhere, so that now I will only observe that it may be partial or complete; that it may come on suddenly or slowly; that it is almost invariably preceded by albuminuria, so that this latter symptom is of more prognostic importance than is usually believed; that there is with the anuria progressive cardiac failure, and often a progressive slowing of the pulse rate. In some cases the patient, to a careless or unskilful observer, may appear to be getting better; for the local exudation has disappeared, and the child, far from being unconscious, may be amusing himself with pictures, toys, etc., even when the anuria has lasted a day or two, and he is within thirty-six or even twenty-four hours of death. It is important, therefore, in all severe cases of diphtheria, to pay attention to the quantity as well as the character of the urine.

In hæmorrhagic diphtheria there are hæmorrhages in the skin and subcutaneous tissue, and into the retropharyngeal and retroperitoneal tissue, the hæmorrhages being such as are seen in purpura, that is, either small or large and onion-like. Hæmorrhage may also take place from any of the mucous surfaces, especially the gums, lips, stomach, and intestines; a necropsy will reveal submucous hæmorrhages in these organs. Occasionally, too, there are hæmorrhages into the lungs, beneath the pleuræ, epicardium and endocardium, and into the heart muscle.

Convulsions are a certain sign of approaching death. They occur apart from anuria as well as with that condition. There may be only localised muscular twitchings or generalised convulsions.

There is hardly another of the acute infectious diseases besides diphtheria in which the modes of death are so various. The patient may succumb during or soon after the membranous stage to heart failure, anuria, or convulsions, or he may have constant vomiting and diarrhœa, and die of inanition; the membranous formation may spread to the larynx and trachea, and he may be suffocated. Should tracheotomy be performed he may still perish from extension of membrane or lobular pneumonia. For weeks after the primary sore throat he is liable to be attacked by paralysis, which brings its risks of death from syncope, vomiting, respiratory failure, choking, or septic lobular pneumonia.

I have made these observations because some of these symptoms have been ascribed by some observers to antitoxin.

(3) From January 1st to June 30th of this year I have had under my care or observation 241 cases of diphtheria under 15 years of age, in all of which the diagnosis has been confirmed by a bacteriological examination. Of these 105 have been treated with antitoxin, 136 without: 24 of the former have died—a mortality of 22.8 per cent.; of the latter 45—a mortality of 33.0 per cent. Arranged according to ages the cases are as follows: (Also 4 adults.)

Treated with Antitoxin.

Under 5 ...	...	57 cases, of whom	17	died	=29.8 per cent.
5 to 10 ...	...	36 " "	6	"	=16.6 "
10 to 15 ...	...	12 " "	1	"	= 8.3 "
		105	24		=22.8 "

Treated without Antitoxin.

Under 5 ...	...	67 cases, of whom	30	died	=44.7 per cent.
5 to 10 ...	...	46 " "	14	"	=30.4 "
10 to 15 ...	...	23 " "	1	"	= 4.3 "
		136	45		=33.0 "

Of the cases treated with antitoxin 54 per cent. were under 5, 34 per cent. between 5 and 10, and 12 per cent. between 10 and 15; while of those not treated with antitoxin 49 per cent. were under 5, 34 per cent. were between 5 and 10, and 17 per cent. were between 10 and 15. As regards age distribution, therefore, the numbers are in favour of the cases not treated with antitoxin; you would expect, I mean, a lower mortality with these cases. During January and the first half of February, the latter part of May and the whole of June, no cases were treated with antitoxin, but during the remaining period all cases were treated, except some which were very mild or doubtful. These cases will be of the higher ages rather than the lower.

It will be observed that the figures of the cases not treated

with antitoxin show that for the first and last six weeks of first half of this year the diphtheria cases admitted into the Eastern Hospital have not been of so severe a type as they were during 1893 and 1894; for these years the mortality of cases under 15 years, even when uncorrected by bacteriology, was 41.8 per cent. and 36 per cent. respectively. Yet even if we assume that for the first half of the present year the cases were all of a milder type than before, the figures are distinctly in favour of the antitoxin treatment. The mortality of the cases under 10 treated with antitoxin is 24·4 per cent., of cases under 10 not so treated 39.2 per cent. For the cases under 10 occurring in 1893 and 1894, uncorrected by bacteriology, the mortality was 39.3 per cent.

In 61 of the 241 cases there was evidence of laryngeal implication, and in 39 cases tracheotomy was performed; 25 of these 39 cases were treated with antitoxin and 16 recovered—that is a proportion of 64 per cent. Of the remaining 14 tracheotomies who were not treated with antitoxin only 4 recovered, or 28.5 per cent.

Of laryngeal cases not tracheotomised there were 7 cases treated with antitoxin with 5 recoveries, and 15 not so treated with 10 recoveries—proportions of 71 and 66 per cent. respectively. These figures are all in favour of antitoxin.

In 56 of the 105 antitoxin treated cases there was albuminuria, = 53 3 per cent. In 9 of these there was anuria more or less complete.

In 67 of the 136 cases not treated with antitoxin there was albuminuria, = 49 2 per cent. In 12 of these cases there was anuria.

In not one of the 241 cases was nephritis observed.

Antitoxin does not therefore lessen the incidence of albuminuria; nor will it, if employed too late, prevent anuria.

In 18 of the 105 antitoxin treated cases there was paralysis, 17 1 per cent. Four of these cases were fatal.

Of the 136 cases not treated with antitoxin, 20 developed paralysis, 14 7 per cent.; and 3 of these died.

Antitoxin does not therefore prevent the occurrence of paralysis; in fact in this series of cases 2 4 per cent. more occur in those treated by it than in those treated in other ways.

With respect to this difference I would point out (1) that paralysis follows severe cases of diphtheria more often than it does mild; and (2) that paralysis is met with if the cases of diphtheria—fatal during the membranous stage of the disease—are excluded, more frequently in patients under three over 10 years of age.

The more severe a case of diphtheria the more likely is the patient, if he survives the membranous stage, to be attacked by paralysis. I should expect, therefore, if antitoxin or for the matter of that any other drug) afforded material help in tiding patients through the membranous stage, that the percentage incidence of paralysis would become higher.

III.—Alex. Johnston, M.D.,

Physician Superintendent of the Belvidere Hospital, Glasgow.

With regard to the spread of diphtheria, Dr. Johnston said that five points needed consideration:—

1. It is due to a specific poison which breeds true.

2. The disease spreads usually by direct infection from person to person.

3. Aërial diffusion is possible (but slight in hospital wards where precautions are taken to collect and destroy all matter coughed up by patients).

4. Young children are most susceptible and readily infected when brought into close contact in schoolrooms with a child suffering from a mild attack of the disease.

5. The association of spread of diphtheritic infection with defective drainage is possible, but not proven (untenable as far as recent research goes in Glasgow).

Referring to the parts played in the process by (1) staphylococci, (2) streptococci, (3) septic bacilli, (4) Loeffler's bacilli, Dr. Johnston proceeded as follows: It seems improbable that only one of these bacteria is concerned in producing the phenomena of diphtheria, local and constitutional. That one only (Loeffler's bacillus) may be concerned is possible, yet I have seen undoubted cases of diphtheria where the so-called diphtheritic bacillus could not be found. Again, I have seen at least one case of scarlatina (confirmed afterwards by the characteristic desquamation of the cutis) treated by inoculation with the diphtheritic antitoxic serum on the presumption that it was a case of diphtheria because the characteristic Klebs-Loeffler bacillus had been obtained from the patient's fauces. Granted that the Klebs-Loeffler bacillus is both pathognomonic and pathogenic and that the theories of chemical poisoning are correct, we ought to expect a startling reduction in the mortality from diphtheria on applying the results to practical treatment. The results so far are disappointing, and the natural inference is that the processes are more numerous or more complicated than described.

The effects of the antitoxic treatment on the disease are: (1) Local, (2) general, (3) sequelæ.

Local.—Occasionally I have seen a more rapid separation of the membrane than I expected, but not sufficiently often to establish a rule. In laryngeal cases where tracheotomy has been performed I have seen the best results of all from the use of antitoxin. The membrane was coughed up quickly and easily, and the recoveries were above the average. But in this operation my experience has been that a series of successful cases may be the good fortune of a man at any time, without any apparent special cause acting. Recently, in Belvidere, we had five consecutive recoveries from tracheotomy in diphtheria; but two years ago the same thing happened when no antitoxin was employed.

General Condition.—Practically nothing has been noticed at all different since the use of the antitoxin. Sudden improvement after injection of antitoxin has been distinguished by its absence.

Sequelæ.—Paralysis of the soft palate has been noticed to occur in about the same proportion of cases treated by antitoxin as formerly.

Altogether I cannot say that I have seen any injurious effects produced by the use of antitoxin, and I believe that the results, on the whole, are, as far as they go, favourable to its use. At the same time, I would advise those who use antitoxin not to expect too much, and to be satisfied with the benefits obtained, slight though they be.

The first attempts at treating diphtheria by means of the antitoxic serum were made in November, 1894. The serum used was obtained from the British Institute of Preventive Medicine, through the kindness of Dr. Armand Ruffer. The mode of using the antitoxin has been in accordance with the printed regulations of that institution.

At first all cases were treated with antitoxin, with the striking result that all the severe cases (which experience said were likely to end fatally) died, while the mild cases recovered: 8 cases, 5 severe (died), 3 mild (recovered).

It was soon quite apparent that no benefit was to be obtained by using the antitoxin in cases *in extremis*, and that nothing was gained from its use in very mild cases. Thus our practice became one of selecting cases for the special treatment, excluding cases *in extremis* and very mild cases, that is, treating by antitoxin injection only moderately severe well-marked cases.

IV.—Professor Dr. Von Ranke,

University of Munich.

During the time from September 24th, 1894, to July 1st, 1895, 197 cases of diphtheria were admitted into my clinic at Munich.

From these have to be deducted all cases complicated with scarlet fever and measles, as well as the cases still under treatment on July 1st.

So there remain 163 cases of primary diphtheria with a mortality of 29 = 17 7 per cent.

Of these 163 cases, the last 145 were examined bacteriologically under the personal control of my colleague Professor Hans Buchner, the successor of Professor von Pettenkofer.

In 136 of the 145 examined cases, the Loeffler bacillus was found present in the pharynx, that is, in 93 8 per cent.

But only in 12 cases the Loeffler bacillus was present in undoubted predominance (in pure culture). In 124 cases = 85.5 per cent., it was greatly mixed up with streptococci.

Only in 9 cases the Loeffler bacillus was not found. If we deduct these 9 cases as not being real diphtheria, there remain 154 cases of undoubted diphtheria, with a mortality of 18 8 per cent.

But for the comparison with the mortality of former years, when this bacteriological distinction was not made, we have to abide by the figures of 17.7 per cent.

Ninety-five cases showed at the time of their admission into the clinic symptoms of croup = 58.3 per cent.

In 27 cases of undoubted diphtheritic croup, the croupy symptoms, that is, the symptoms of laryngostenosis, ceased soon after the injection of the serum = 28.4 per cent.

In 61 cases, that is, in 41.1 per cent. of all admitted cases of primary diphtheria, an operation for relieving the laryngostenosis had to be performed. This operation consisted in the first place in intubation. Of these we lost 20 = 32.7 per cent.

In 1 of the 41 intubated and cured cases, intubation gave no immediate relief, so that it had at once to be followed by tracheotomy. Of the other 40 cured cases:—

6 wore the tube less than 24 hours	=	15.4	per cent.		
20	,,	,,	48	,,	= 50.0 ,,
5	,,	,,	72	,,	= 12.9 ,,
3	,,	,,	96	,,	= 7.5 ,,

Only 3 = 7.5 per cent. had to wear the tube longer than four days, and in all these secondary tracheotomy was performed.

Intubation.

Of the 68 cases that had diphtheria of the pharynx only, without complication of the larynx, we lost only 2 = 2.9 per cent; both cases had been ill already seven and nine days before they were admitted, and both died from heart failure after the diphtheritic membranes had disappeared.

Among the 68 cases of pure pharyngeal diphtheria there were 19 with the clinical symptoms of septic diphtheria (foetor, large discoloured membranes, etc.); of these 19 cases we lost 1. In 2 other cases of septic diphtheria the larynx also was attacked; both cases died, so we had 21 cases of septic diphtheria with only 3 deaths=14.3 per cent. mortality.

In 158 of the 163 cases treated with serum the day of commencement of the disease could approximately be determined.

Of 19 cases admitted on the first day we lost	1	= 5.2	per cent.		
,, 47	,,	,,	second	,,	4 = 8.5 ,,
,, 39	,,	,,	third	,,	7 = 17.9 ,,
,, 19	,,	,,	fourth	,,	3 = 15.8 ,,
,, 9	,,	,,	fifth	,,	1 = 11.1 ,,
,, 10	,,	,,	sixth	,,	4 = 40.0 ,,
,, 15	,,	,,	seventh & later		7 = 46.6 ,,

Mortality of Patients according to Age.

Under 12 months old	5, all of whom died	= 100.0	per cent.		
,, 2 years old	24, of whom 9 died	= 37.5	,,		
,, 3 ,, ,,	25	,,	3	,,	= 12.0 ,,
,, 4 ,, ,,	32	,,	4	,,	= 12.5 ,,
,, 5 ,, ,,	17	,,	2	,,	= 11.8 ,,
,, 6 ,, ,,	20	,,	2	,,	= 10.0 ,,
,, 7 years old & more	39	,,	3	,,	= 7.7 ,,

Comparison.

Mortality of Primary Diphtheria in the Clinic in Former Years.

1887	...	...	...	42.2	per cent.	1891	...	...	... 46.0 per cent.
1888	...	...	...	48.9	,,	1892	...	...	... 58.2 ,,
1889	...	...	...	46.5	,,	1893	...	...	... 46.0 ,,
1890	...	...	...	47.9	,,	1894, till Sept. 24th			... 57.0 ,,

Since the period of the serum treatment, from September 24th, 1894, till July 1st, 1895, 17.7 per cent.

The mortality has therefore been reduced to considerably more than one-half, compared with the best years, and to two-thirds compared with the worst year.

Among the cases operated upon for laryngostenosis we also have a reduction of the mortality to nearly one-half of the figures in the former years.

But what seems to me to prove the value of the serum treatment even more than these statistical figures, is the change in the clinical course of the disease.

Under the influence of the serum treatment diphtheria loses its progressive character. This comes out most remarkably in regard to diphtheritic laryngostenosis.

Amongst all my cases I have not had a single one in which laryngostenosis developed itself after injection, if symptoms of it had not been present already on admission.

As I stated, in 27 cases of undoubted diphtheritic croup the symptoms of laryngostenosis subsided after the injection. That is in 28.4 per cent. Formerly this happy result occurred in my clinic at the most in 5 per cent.

Then all cases requiring an operation for the relief of laryngostenosis were operated upon within the first twenty-four hours after admission.

Formerly an operation for croup might have become necessary any day during the course of the disease.

And another point is, that if a case has to be intubated to avoid suffocation, the tube can be removed considerably sooner than it was possible before the serum treatment. I may not trespass too much on your time by giving you the exact figures in this respect.

Now, gentlemen, these changes in the clinical course of diphtheria prove to my mind more than general statistics can do that we have really got in the serum treatment a most powerful and specific remedy against that disease.

V.—Lennox Browne, F.R.C.S.Edin.,

Senior Surgeon Central Hospital for Diseases of the Throat.

Mr. Browne commenced by stating that although his enthusiasm in regard to the serum treatment of diphtheria was somewhat more modified than that of other speakers, as the result of a daily watching of its effects in a public hospital for nearly four months, he desired to deprecate any suggestion that he was adverse to this system of remedy or to those scientific investigations on which it was founded. On the contrary, nobody would be more pleased than himself should it be ultimately proved that the conclusions at which he had unavoidably arrived were negatived in favour of the new treatment. Certainly the figures given by Professor von Ranke would go far to that end. The first point to be considered was that the results of the interesting experiments performed by Dr. Sidney Martin were not verified by practice at the bedside. For example, we had been told that antitoxin injected at the same time as toxins or toxic albumens completely counteracted fatty degeneration of the heart and lesions of the nerves. But in practice it was found that serum injections did not prevent either cardiac failure or paralysis. Indeed, Dr. Goodall had shown that the incidence of paralysis was somewhat more frequent in cases treated with the serum, and this had been his own experience. Dr. Woodhead had also laid down the maxim that antitoxin could not affect organic lesions.

A great deal too much had been made of the effect of antitoxin on the temperature, which—albeit trifling and of brief duration—was in the direction of elevation rather than of decrease; and Dr. Martin's experiments had proved this.

The same observer's statements as to the improvement in weight under serum treatment was contrary to those of Arloing, who had found that both in regard to nutrition in the grown rabbit and to the growth of the young, normal as well as antitoxic serum acted prejudicially.

Further, with regard to nephritis: many observers—Dr. Woodhead, among others—held that the kidneys were affected to a greater or less degree in every case of diphtheria; thus minimising the experience of the speaker, who was in accord with the observations of Hansemann, Benda, and others, that the tendency to parenchymatous changes in those organs was almost constant in the cases which were examined *post mortem* after serum treatment. Dr. Goodall, on the other hand, had just stated that out of 241 cases there was not a single one of nephritis, but a few months ago at the Clinical Society he had stated that anuria, etc., was common.

Another point to be considered was the class of cases suitable for this treatment. It was laid down by many that the serum was not advisable in cases of mixed diphtheria, and Dr. Woodhead had stated recently that pure diphtheria was found in 60 per cent. of them, which the speaker thought was rather a large proportion. Professor von Ranke, however, had just said that in 197 cases, after eliminating 31 complicated by scarlet fever and measles, he had found only 12 cases out of the remaining 163 which gave pure cultures. Dr. Goodall had stated that the mortality in his cases under 15 years of age treated with antitoxin was 22·8 per cent., but, had he not included 12 cases between 13 and 15 in which but one death occurred, his mortality would have been 24.7 per cent. for all cases under 10 years.

The speaker had shown in a comparative study at the North-Western Fever Hospital—presided over by Dr. Gayton, the *doyen* of medical superintendents—that the mortality of 27 per cent. on a total of 1,103 cases treated in 1894 was exactly the same as that which occurred in the first 100 cases treated with antitoxin in 1895, and it was contended that if comparisons were to be made between old and new treatments they must be based, not on the previous mortality of 40, 50, or 60 per cent., but on those at such an institution as that mentioned, where, on a total of nearly 2,500 cases treated, the mortality prior to antitoxin had been under 27 per cent.

Mr. Browne then proceeded to consider some of the fallacies of published statistics, and particularly drew attention to those which had been published during the past year in the BRITISH MEDICAL JOURNAL. He concluded by saying that it was abundantly evident that with suitable precautions the results, in this country at any rate, under serum treatment and under former methods at command did not at present justify the claim of antitoxin to so high a therapeutical eminence as at foreign centres of observation. This discrepancy, it was submitted, was mainly due to the greatly diminished mortality long obtaining in England, and this was in turn due to the improved conditions of *personnel* and hygiene in this country, much in the same way as those who oppose Listerism can only show comparable results by strict observance of the laws of cleanliness, which are absolutely inseparable from Listerian principles.

VI.—Professor Dr. A. BAGINSKY,
University of Berlin.

PROFESSOR BAGINSKY stated that during the past year he had treated 525 cases of diphtheria with serum. Previous to the introduction of this form of treatment the mortality had during four years averaged 41 per cent., whilst now it was only 15.6 per cent. Further, when the cases came to be examined in detail, the improvement was even more striking.

Of cases under 2 the previous mortality was				63.3 %	whilst now it is	25.20 %
,,	from 2—4	,,	,,	52.85 %	,,	17.12 %
,,	,, 4—6	,,	,,	37.50 %	,,	17.24 %
,,	,, 6—8	,,	,,	27.41 %	,,	11.39 %
,,	,, 8—10	,,	,,	18.66 %	,,	5.11 %
,,	,, 10—12	,,	,,	15.07 %	,,	10.00 %
,,	,, 12—15	,,	,,	13.00 %	,,	0.13 %

As to the general condition of the patients Dr. Baginsky considered that the serum treatment not only reduced the mortality, but that the whole condition of the children was improved, that there was very much less danger from heart failure, that there were fewer cases of nephritis, that there was less danger of laryngeal stenosis, no case in his experience ever having had laryngeal obstruction unless this condition had been present before the treatment had been commenced, and that intubation was always possible, whereas under the older treatment tracheotomy was very often necessary.

VII.—G. SIMS WOODHEAD, M.D.,
Superintendent of the Laboratory of the Royal Colleges of Physicians and Surgeons.

DR. SIMS WOODHEAD was of opinion that up to the present the remedy had not in England been used in sufficiently large doses, and that this perhaps explained the better results that had been obtained on the Continent. In rabbits he had obtained the best results when he had used large doses. He further thought that one of the most important effects produced was an alteration of the type and course of the disease, the serum-treated cases running a milder course and showing less tendency to the onset of complications. The speaker then quoted some statistics from a recent paper by Richet of Paris. In Paris from 1881 to 1894 the smallest number of deaths from diphtheria per hundred days had been 82, whilst the highest number had been 116 in the same period. In 1895, however, whilst the highest figure was 57 the lowest was 4. Dr. Woodhead further thought that the period of immunising enthusiasm had now been passed and that in the opinion of all those who had had much experience of diphtheria and its treatment by antitoxin this remedy had proved its claim to be far above all other remedies for the cure of the disease.

VIII.—HERMANN BIGGS, M.D.,
Bacteriologist to the Board of Health, New York.

DR. BIGGS stated that he had had under his charge in New York between 400 and 500 cases which had been treated with antitoxin for diphtheria in their own homes. These had all been severe cases, and the mortality had been slightly over 16 per cent. The mortality for the whole of New York, he added, had been reduced by over 40 per cent. The speaker then proceeded to deal with the importance of antitoxin in preventing the spread of the disease by rendering those who were exposed to the infection immune. In one institution in New York there had been a large number of cases of diphtheria, 107 cases having occurred during the 103 days preceding the injection of the serum. The antitoxin was then injected, 200 units of Behring's preparation being used in each case. During the next thirty days only 1 very mild case occurred, in the following thirty days another case was reported, and shortly after 5 more patients were attacked; 225 units were then injected, with the result that no more cases occurred. The same result was obtained in three other institutions, showing the extreme value of the immunising power of the serum. Dr. Biggs considered that the protective period was a short one, probably not extending over thirty days, but within this time it was almost absolute. The speaker concluded by saying that in over 800 patients treated for the purpose of rendering them immune, he had in no case observed any unfavourable symptoms. In a few patients, rashes, apparently urticarial in nature, had occurred on the eighth day, and in some there had been a temporary rise of temperature, which, however, in no case had resisted treatment for more than twelve hours.

IX.—J. CAMPBELL HALL, M.D.,
Monaghan.

DR. CAMPBELL HALL stated that he had been studying diphtheria for the past sixteen years, but in his hands no other form of treatment had produced such satisfactory results as the treatment by antitoxin, and in the future he would never feel justified in neglecting the serum treatment in any case which he was called upon to deal with.

THE TREATMENT OF DIABETES MELLITUS BY URANIUM NITRATE.

BY SAMUEL WEST, M.D., F.R.C.P.,
Assistant Physician to St. Bartholomew's Hospital; Senior Physician to the Royal Free Hospital.

SOME time ago my colleague at St. Bartholomew's Hospital, Dr. W. J. Russell, the lecturer on chemistry, placed in my hands a double chloride of quinine and uranium, and suggested that I should try its action in disease.

Uranium is interesting as having the highest atomic weight, 240, and forming the remarkable series of salts, many of them with beautifully coloured crystals, the uranic and uranous salts. The two salts employed in these investigations were both of them uranic salts, namely, the double chloride and the nitrate. The nitrate is a very acid salt, soluble in half its weight of water. In order to obtain the fine crystals, in which it is usually sold commercially, they have to be deposited from a solution strongly acidified with nitric acid, and even the crystals contain a certain amount of free nitric acid also. Being so strongly acid it was thought wise to administer it in small quantities at first after food and well diluted with water, and to increase the dose gradually.

The physiological action of uranium salts has been very little studied. In 1824 Gmelin first investigated its action upon dogs, and found that in large doses it produced vomiting, but in small doses had little effect. In rabbits doses of 34 grs. killed the animal with heart paralysis. When injected into the veins of rabbits much smaller doses proved fatal in a very short time—3 grs., or even less.

Leconte in 1851 stated that prolonged administration of small doses to dogs produced glycosuria. On this Dr. Hughes, a homœopathic physician, suggested the use of uranium in diabetes. He tried it, he stated, in several cases, and found that many were relieved and several com-

pletely cured. The doses that he used were from $\frac{1}{10}$ gr. to $\frac{1}{4}$ gr.

Beyond these stray observations nothing, I believe, was done until Chittenden published his first paper in 1888,[1] and a second, in association with Lambert, in 1889.[2] He found that in full doses uranium acted as an irritant poison, producing gastro-intestinal irritation, but when administered to rabbits in full doses it caused rapid emaciation, and the animal died with general weakness, loss of co-ordination, and paralysis of the locomotor muscles. Besides these symptoms in dogs acute parenchymatous nephritis was produced, with much albumen in the urine. After the albumen a few days later sugar also appeared in the urine, and this they regarded as very characteristic of uranium poisoning.

Further investigation showed that even in small quantities uranium and its salts had an inhibitory influence on amylolytic and proteolytic action, so that a few drops of a 1 per cent. solution of the nitrate of uranium prevented the action of ptyalin, and a rather larger quantity that of pepsine and trypsin.

The explanation which the authors gave of this action was that nitrate of uranium formed in combination with albumen a more or less constant and indigestible compound. When administered by the mouth the drug acted slowly, and small doses seemed to be almost as efficacious as large doses. For instance, they obtained the same effect with $\frac{1}{4}$ gr. as with 1 gr.

When administered by injection into the veins, the drug was rapidly fatal, and even in small doses it caused a rise of temperature and an increased excretion of carbonic acid. Further investigation showed that the presence of albumen in the urine was due to a specific destructive action of the salts on the epithelium of the kidney, that sugar was produced in the urine only after poisonous doses, an effect also produced, they state, in poisonous doses of mercury and phosphorus.

On administering to a dog weighing 18.8 kilos. uranium nitrate in doses of $\frac{1}{6}$ gr. albumen appeared in the urine after taking this amount for five days, and this was followed five days later by the presence of sugar. On stopping the administration of uranium the sugar was the first to disappear, then the albumen; and then, on renewing the administration of the drug, neither albumen nor sugar appeared until the doses were increased up to ten times the original toxic amount, namely, 4 grs. This would seem to show that some tolerance was gradually established.

This represents, so far as I can ascertain, all that is known of the physiological action of uranium.

In considering in what class of cases it might be most profitable to investigate the action of the drug, my attention was directed to diabetes, for there was first of all the statement that it had been tried in that disease and had been found useful, although the evidence upon which the statement rested was not very conclusive; and further, there was the statement that the drug had a powerful action upon amylolytic and proteolytic digestion.

Having selected diabetes as the class of case to investigate, I next administered the drug in a routine sort of way to a number of diabetic out-patients, with a view of seeing if any obvious action could be traced. I gave small doses at first and gradually increased them, not knowing how much a patient would be able to stand. I found after the drug had been administered a short time only that all the patients without exception stated that their thirst was greatly relieved, and the frequency of micturition and the quantity of urine passed greatly reduced. This result seemed very promising, and I then instituted a careful investigation by means of daily examination of the urine of certain patients whom I took into the wards for that purpose. The first patient I had under observation for more than twelve months, and during that time an almost daily examination of the urine was made, and a careful record kept of the patient's weight, diet, and general condition. The second case has also been under observation for a long time, though not under the close supervision that is possible with a hospital patient, the lady being a private patient, and seen by me from time to time in consultation with her doctor. I have, however, the advantage of a very long series of determinations and analyses of the urine made by her husband, whom I instructed in the processes, and whose results I have from time to time carefully checked. In all cases I have tried to place the patient under constant conditions, so that the only difference should be the administration or withholding of the drug which I was investigating; that is to say, they were all placed upon the usual strict diet, and placed under constant conditions. The results were then recorded for some little time—a few weeks or so in each case—before the administration of the drug. Then the drug was given, and the results then obtained compared with those previously recorded.

Besides the effect of the drug under investigation, the records show many other points of interest in respect to diabetes which will be referred to in their proper place.

CASE I.—The first case is that of F. S., a lad aged 21, who had complained of thirst, loss of flesh, and frequent micturition for a period of six weeks. The urine was found to be of high specific gravity (1036) and to be loaded with sugar. He was taken into the hospital, kept in bed, and dieted. The effect of this change in his habits of life is well shown in the increase for the next few days in the amount of sugar and the

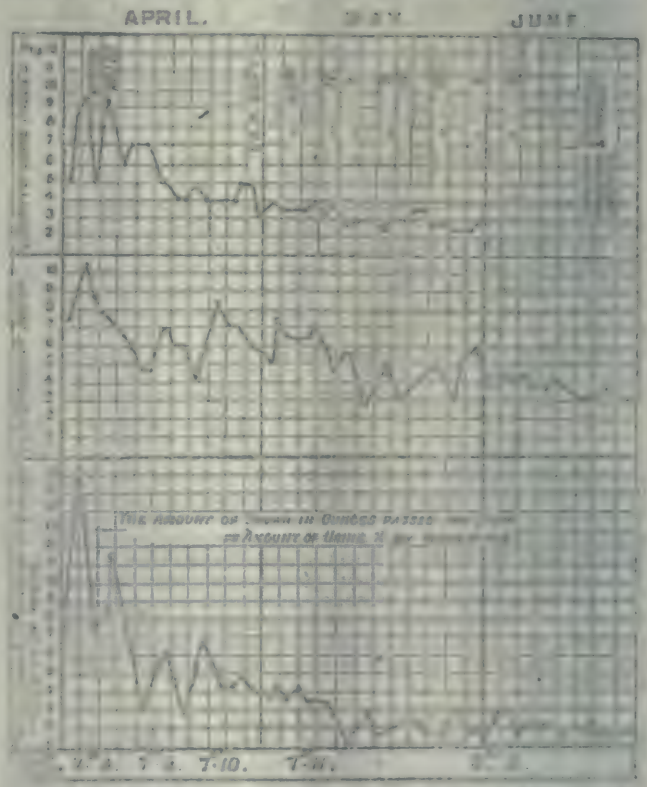

Chart I, showing the amount of urine, the percentage of sugar, and the total excretion of sugar before and after the use of uranium nitrate, the diet being throughout the same.

amount of urine. This is in accord with what is well known in diabetes, that any sudden change in the conditions of life for the time aggravates the disease. I shall have to draw attention to the effect of a specific disease, namely, influenza, in another case in producing the same result.

The next point of interest which the table clearly shows is the unsteadiness, both in the quantity of urine, the percentage, and the amount of sugar, so that the rise and fall, occurring at intervals of a few days, shows itself in the tables in the form of waves. This unsteadiness again is very common in diabetes, and is to be observed under any sudden change of conditions as well as when the disease is in an acute or active stage.

The diet and general treatment effected a considerable improvement in the patient, so that the percentage of sugar was reduced to 6, having been on admission more than 8, and

[1] *Therapeutic Gazette*, 1888, p. 693.
[2] *Zeitsch. f. Biologie*, 1889, p. 513.

having risen on one occasion to as much as 10 per cent. Five pounds in weight were also gained, and the patient appeared and felt very much better.

Having now got the patient into a condition of more or less equilibrium, uranium was administered in the form of the nitrate, and, as the dose of this drug was not established, it was at first given in small quantities—1 and 2 grs. three times a day—but this quantity was gradually increased up to 10 or even 20 grs. three times a day, when it was found that it could be tolerated by the stomach without disturbing the digestion.

The first effect noticed was that which the out-patients had already stated to occur, namely, the diminution in the amount of water and the decrease in the thirst. The amount of urine, it will be seen, fell from an average of between 4 and 5 pints to an average of about 3. This of course greatly diminished the total amount of sugar passed in the twenty-four hours, as one of the tables shows.

The percentage, however, of sugar did not fall materially until the medicine had been taken for more than fourteen days. It then fell to a mean of 4 per cent., varying, however, from day to day considerably between 3 per cent. and 5 per cent. As the improvement continued, the oscillation became less, and the tendency towards a more or less fixed percentage became marked.

The uranium was gradually increased up to 15 grs. by the commencement of June, that is, after a period of six weeks, during which period there had been an increase in weight of 5 or 6 lbs. The percentage fell further, and became more or less constant, about 3.5, and there was a further decrease in the amount of urine, the quantity averaging between 2 and 3 pints daily, and the total daily excretion of sugar, which had been as much as 5 ounces, was now under 1 ounce. The uranium was now gradually reduced, and about the third week in June the administration was stopped.

For a time no change occurred in the patient, but after about ten days the percentage of sugar again rose, and in the course of a week reached to between 5 and 6; the quantity of urine, however, was not materially altered. This is shown in Chart II.

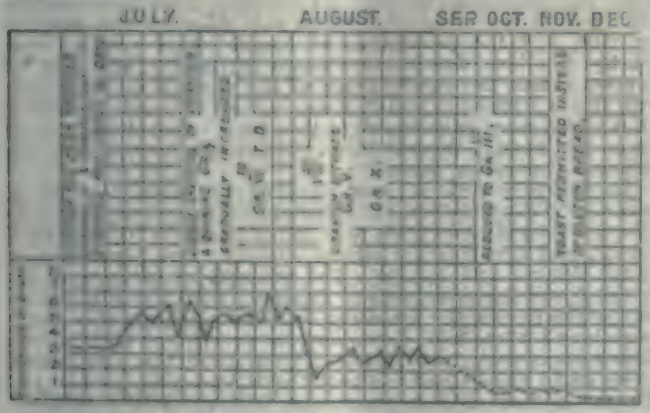

Chart II, showing a relapse after uranium was given up, the slight effect only of small doses of the salts, and the marked effect of larger doses.

On July 18th the administration of uranium was again commenced, but this time not in the form of the nitrate, but as a double chloride of quinine and uranium. As the action of this form of the drug was not known, the administration was commenced in small doses, and it was not until July 30th that 6 grs. had been reached, given three times daily.

The smaller doses seemed to have little effect, but as soon as 6 grs. three times a day was reached, a sudden drop in the amount of urine and the percentage took place, the percentage falling to about 3 and the quantity to about 55 ounces. The dose was now increased to 10 grs., and during the month of August, sometimes the nitrate and sometimes the double chloride, according as the supply of these drugs held out, was administered. In the course of September a still further fall gradually took place in the percentage of sugar, until it reached below 1, the amount of urine ranging between 40 and 50 ounces. The uranium was then reduced in quantity gradually to 3 grs. three times a day, and this was continued for some time longer; and during the months of October, November, and December there was hardly more than a trace of sugar present, oftentimes considerably under the 1 per cent.

In the middle of November toast was permitted in the place of gluten bread, the uranium being continued in the same doses. This, however, caused no change in the condition of the urine, and appeared to do the patient no harm, so that he was allowed to have an amount of 6 ounces of toast daily, and this he had till Christmas time. The patient was now about a stone heavier than when he was admitted.

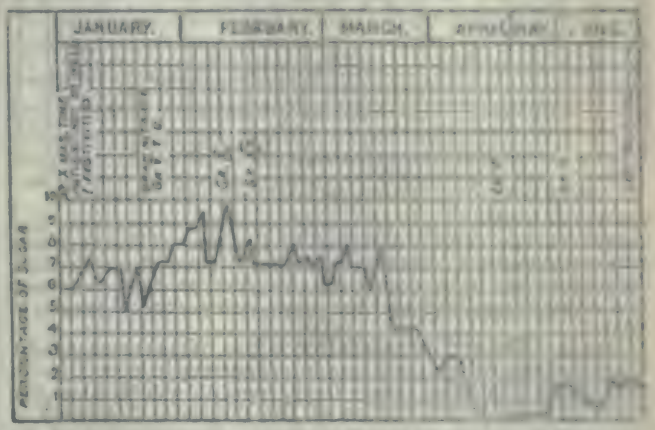

Chart III, showing an obstinate relapse after Christmas festivities, which ultimately again yielded to uranium.

After Christmas time the patient was found to be not quite so well. The percentage was found to be much higher, fluctuating and reaching to nearly 6 per cent, while the urine was also increased in quantity; the patient had also lost 2 lbs., and looked more ill. Presumably this relapse was due to some error of diet during the Christmas festivities. Ordinary treatment having no obvious effect, and the percentage still continuing to rise, at the end of a fortnight the patient was placed upon 5 grs. of uranium three times a day. This, however, had no effect, and the percentage still rose, till in the middle of February it once reached as high as nearly 10, though it averaged about 8. The uranium was increased rapidly to 15 grs., but it was not till this amount had been taken for nearly three weeks that its effect was produced, and then—that is to say about the middle of March, the percentage fell to about 4, and having begun to fall the fall continued, until at the end of March the sugar was almost gone, and the urine contained but very minute traces of it, a great deal below 1 per cent., and so this continued to the end of May, the uranium having some time previously been gradually reduced to 5 grs. three times a day, which dose the patient continued to take.

At the end of May and during the early part of June the percentage rose again to between 1 and 2, and finally, when the patient left the hospital in the middle of June, the percentage was about 2, and the quantity of urine about 50 ounces. The patient presented none of the symptoms of diabetes, nor did he look ill. He said he felt well and strong, and left the hospital with the intention of going to work.

He was warned to be careful with his diet and his habits, but he disappeared entirely from observation for several months, and did not appear again until October, when he told us he had been harvesting, living a good deal in the open air and under rough conditions. He came back because he did not feel so well. He had been for about three months without any of the medicine.

Chart IV shows his condition, the percentage of sugar at this time and the effect of the administration of uranium subsequently. On October 12th, when he first presented himself, the percentage of sugar was 6. On the 19th 6, and on the 25th a little more than 6.5 grs. of uranium were given, and subsequently 10. By November 30th the percentage had

fallen to a little below 4. At Christmas time, probably again in consequence of the festivities of the season, the percentage was as high as 8; 15 grains of uranium were given, and the percentage rapidly fell, and by the end of January was constantly under 2. During the whole time since October the patient had been regulating his diet as far as he was able as an out-patient, and had been eating about 6 ounces of toast.

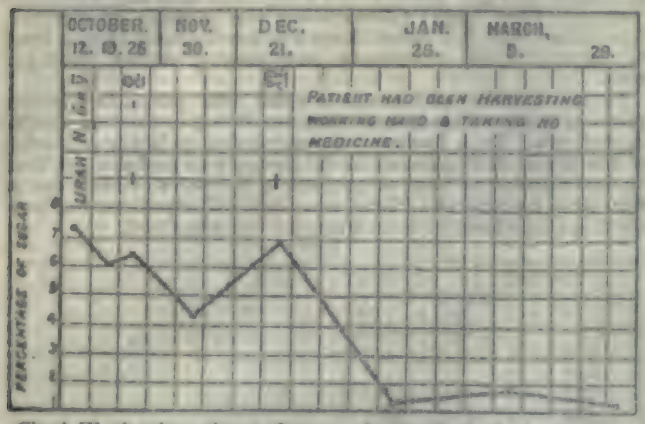

Chart IV. showing relapse after an absence from the hospital for three months, and its ultimate subsidence under uranium.

Case II.—The second case is that of Mrs. W., a married lady, 46 years of age, without children, who had been in robust health until about 6 months before I saw her, at which time she began to suffer with irritation of the pudenda, frequency of micturition, thirst, and loss of flesh. Examination of the urine showed that she was diabetic. She was placed upon a fixed diet and treated with various drugs. She weighed at the commencement of her illness 9 st. 3 lbs., but about a year previous had reached 10 st., which was much above her usual weight, and she was distressed then to find herself growing fat. I saw her in consultation with Dr. Brown, of Tring, and I suggested the administration of uranium. The husband was instructed how to make the necessary quantitative tests. He made them with great care, and as I had the opportunity of checking them from time to time, I believe them to be quite accurate.

The previous treatment had already caused considerable improvement in her general health, and the loss of weight had not continued, her weight being now 9 st. 2 lbs. Before using the uranium it was decided to have analyses of the urine made for two or three weeks, so as to be able to compare the results before and after the administration of the drug. These are shown on Chart V. It will be seen that the quantity of urine averaged about 1625 c.cm., the specific gravity 1034, the percentage of sugar about 2·4. In the lower part of the table the total amount of sugar passed per diem is shown; it averaged about 35 grs., varying considerably, as did also the quantity from day to day.

At the end of November uranium nitrate was commenced in small doses. One grain was given at first twice a day, and then, a little later, three times a day. After taking these small doses for a short time the effect showed itself in the beginning of December, first upon the quantity of the urine, which fell considerably. Subsequently, as the dose was increased, the percentage fell also. It was about three weeks from the commencement of the treatment that the percentage began to fall, and with each increase in the medicine the percentage fell further, till after taking 2 grs. three times a day for a week or ten days the percentage was under 1. Then 3½ grs. three times a day were given, and the percentage fell further, to ½. Four grs. were then given, and on January 22nd the sugar disappeared from the urine entirely. At this time the average amount of urine was 1300 c.cm. instead of 1625, and the specific gravity 1018 instead of 1034.

From this date the sugar remained entirely absent, except on four odd days, until the end of April. The highest amount of sugar present in the urine on these odd days was 0.37 per cent. During May, June, and July occasional traces were present, though on most examinations no sugar was found at all; but even when this small amount was found, it usually was less than ¼ per cent., and the highest record was only 0.7 per cent. During all this time 3½ grs. of uranium nitrate were being given three times a day.

Chart V.—Case of diabetes treated with uranium nitrate after having been for some time previously strictly dieted.

In September, though still taking the uranium nitrate, the percentage rose, the quantity of urine was also increased, and averaged about 1,500 c.cm., the specific gravity being about 1020, and sometimes higher. At the same time considerable fluctuations were noticed, both in the quantity, the specific gravity, and the percentage of sugar. This relapse was partly, I believe, due to experiments in diet, but was also to a great extent the consequence of the worry of house hunting and of removing, and of irregularities in meal times and diet which were unavoidable at this time. Probably if I had seen her then I should have advised an increase in the amount of uranium taken.

In February Mrs. W. was attacked by influenza. There was a good deal of fever, and altogether it was a severe attack. She was very ill, had great pain in her head and limbs, slept badly, lost her appetite almost entirely, and became very much thinner and weaker. The quantity of urine, specific gravity, and the percentage of sugar all rose immediately as the table shows, the quantity of urine reaching on several occasions 1,600 to 2,000 c.cm., and the percentage being about 2, and occasionally reaching 3. The uranium was suspended then, and I understand has never been resumed. As the influenza passed off the percentage fell, but still continued well over 1, averaging perhaps 1.2; the quantity of urine also was greatly increased, averaging between 1,800 and 1,900 c.cm.

In April she was still ailing, very feeble, and continuing to lose flesh; the percentage of sugar was 2, specific gravity 1030, the average quantity about 2,000 c.cm. Soon after this she went away to Ireland, where she got better, but was not able to diet herself so strictly as she would have done at home; still she improved. On her return home in May she was still thin, looked feeble, and the percentage of sugar remained much as before. She has since then still further improved in general health, but the conditions in the urine remain very much as they were, the daily percentage of sugar being about 2 and the quantity of urine about 2,000 c.cm. In fact, as her husband says, she seems at this time to be in much the same condition as she was two years ago, when the treatment with uranium was commenced. I advised that the uranium nitrate should be resumed, but some little objection was felt to that by the patient, because she thought it upset her digestion, for during the time that she took the

drug she used about every month or so to have an attack of gastric indigestion, and the bowels became somewhat relaxed. She attributed this disturbance to the medicine, but there is no actual proof that it was the effect of it. She also thought that the medicine caused her to lose weight, but that might have been, and very likely was, merely the effect of the disease, and not of the drug. At any rate it was not much, for after leaving the medicine for seven months her weight was 8 st. 8 lbs., having been previously 9 st. 2 lbs.

It has been at present agreed that she should continue on her present lines, without medicine, dieting herself strictly, and living a healthy out-of-door life as far as possible. If the improvement does not continue, no doubt the medicine will be resumed.

The chief point of difference between this case and the preceding one is that small doses of uranium not exceeding 4 grs. had a marked effect, though in the first case much larger doses were given, and appeared to be necessary. Still, it is quite possible that when the effect is once produced it can be maintained by small doses, and I am inclined to think that though the drug takes longer to act when given in small quantities, its effect does not depend entirely upon the amount administered each day, but that in some respects, though taking longer to act, the small doses may have almost as efficient an action as the larger ones.

Chittenden observed that the prolonged administration of uranium was followed by the presence of albumen in the

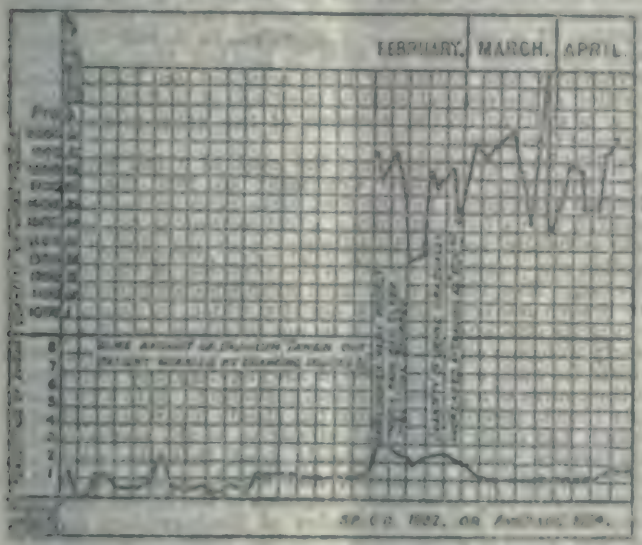

Chart VI.—Same case, showing relapse caused (1) by worry, (2) by influenza, and return to early condition when uranium was given up, both the amount of urine and the percentage of sugar being doubled.

urine consequent upon an irritant and destructive action on the renal epithelium. It is important to state in respect of these observations that albumen did not appear at any time in the urine in either of these cases, nor have I ever observed it in the other cases I have treated with uranium. Possibly this may be due to the gradual administration of the drug. If so, this is quite in accord with Chittenden's further statements that if the albuminuria produced by a certain dosage was allowed to disappear by suspension of the drug, the drug could then be given again, and increased even to ten times the original amount before albumen again appeared. This would appear to point to the necessity of giving the drug as I did in these cases in small amounts at first, and increasing them gradually.

Case III.—The third case is that of F. R., a woman, aged 36, an in-patient of St. Bartholomew's Hospital, who had been treated in the ordinary way for diabetes for many weeks before she was placed upon uranium. She had had carefully restricted diet, and codeia had been administered in the usual way. Even upon this treatment the quantity of urine averaged about 6 pints, the specific gravity between 1035 and 1040, and the percentage of sugar was 7. Five grains of uranium nitrate were then given three times a day. This was followed in the course of a week by a gradual drop in the amount of urine from 6 pints to about 5. The percentage of sugar also fell a little, from 7 to 6. In the course of the following days, however, both the amount of urine and the percentage of sugar rose to much what it was before, the only difference being that the percentage was less steady, that is to say, there were greater oscillations in it from day to day. After three weeks the uranium was increased to 10 grs. a day, and a few days later to 20. Then a rapid fall took place, first evident in the amount of urine, and about a week later in the percentage and the specific gravity, as is shown in Chart VII. The average

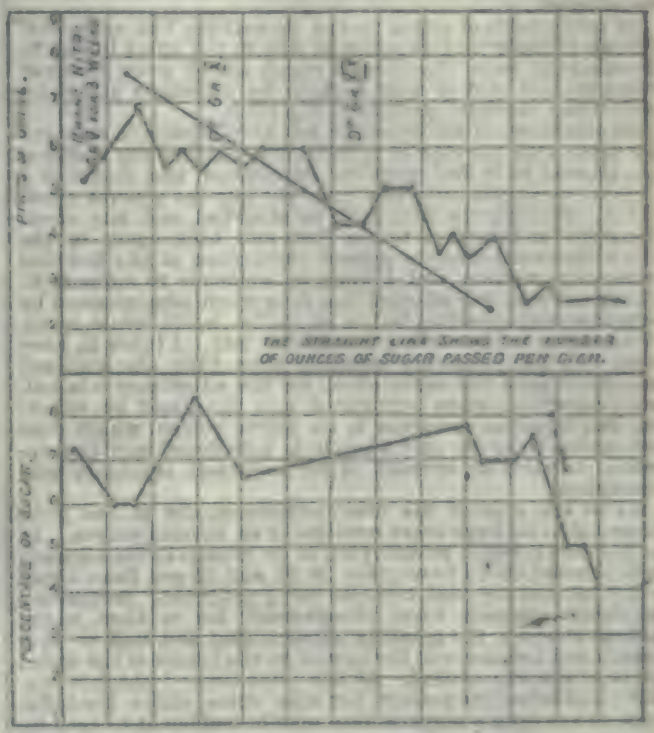

Chart VII, showing the effect of uranium upon a patient treated already in the usual way with diet and codeia.

was then reduced to about 3 pints for the quantity of urine, 1030 for the specific gravity, and 4 for the percentage of sugar, the total amount of sugar passed per diem having fallen to about one-quarter of what it had been prior to the administration of the uranium.

Dr. Brown, of Tring, has also given me the particulars of another case in which good results followed the use of the drug in a woman of 58, the sugar again almost entirely disappearing. In this case also as in Case II, the drug caused some disturbance of the digestion, and had to be suspended at intervals. To this case may be added several others of my own in which the general results entirely confirmed the experience of the rest, but in which the observations are not systematic or prolonged enough to deserve publication in detail.

These cases, taken together with several others not systematically observed, all point to the conclusion that we have in uranium a drug which has a powerful effect upon diabetes. In Cases I and II the amount of sugar was very largely influenced by diet, and it is quite possible that uranium may be found most useful in this class of case on account of its physiological action upon digestion. That the effect is clearly due to the drug is shown by the fact that when dieting and ordinary treatment have produced all the improvement they can in the patient, still further improvement takes place after administration of the drug, leading, in the second case, to an entire disappearance of sugar from the urine for a considerable period of time, and in the first case

to what was practically the same thing. In the third case also, where the patient had been treated by varieties of drugs, especially by codeia, the administration of uranium caused great improvement also. In the first case also the stopping of the drug was followed by an increase in the sugar, and its readministration by another fall. Again, after the patient had been away from the hospital and observation for some time and without medicine, the percentage of sugar was found high and the symptoms of diabetes marked, but the administration of the drug was followed by great improvement in the condition of the urine and in the general state of the patient. I think these facts leave no doubt that the uranium was instrumental in the improvement which was effected.

As to its mode of action we can do nothing but speculate. I think it likely that its action is due to the effect it has in checking the rapid digestion of starch and of some forms of albumen, and that it may perhaps be especially useful by controlling excessive pancreatic digestion.

On one occasion Mr. Symonds was kind enough to examine the urine with the view of ascertaining whether any uranium was present in it, but none was discovered, and therefore I suppose we may assume that none got into the general circulation. Possibly the drug may be absorbed, and may circulate from the intestines to the liver and back again in the bile without entering the general circulation at all; but this is mere speculation, and I know no evidence to support it. I have not tried the effect of the drug when administered by subcutaneous injection, but it might be worth while to investigate its action when given in this way. I think it, however, very likely that the uranium when thus administered would not have the same effect, for the experiments in animals show that, when introduced into the blood by subcutaneous injection, uranium is an active poison, which does not appear to be the case when it is introduced into the stomach, probably on account of its imperfect solubility and absorption.

As to the size of the dose, experimentally it has been proved that in large doses uranium is an irritant poison. In large doses it would probably act as an irritant to the stomach and bowels; still I have given 10, 15, and 20 grs. three times a-day without any such troubles being produced. Something no doubt depends upon idiosyncrasy, for in Case II the patient referred the monthly attacks that she had of dyspepsia and looseness of the bowels to the action of the drug; perhaps she was correct. At the same time, I think it possible that when the patient has once come under the influence of the drug a reduced dose may be sufficient to keep its action up. Thus, in Case II, 3 grs. and 4 grs. were quite sufficient to keep the urine free from sugar; and in Case I the patient, who required a large dose to produce an effect at first still continued to do as well upon a reduced dose as with the larger one when that effect had once been produced.

Next as regards loss of flesh. In the second case, the patient attributed her loss of flesh to the action of the drug. This I think is doubtful, and certainly the first case continued to gain weight while taking much larger doses.

As regards the salts of uranium, I have only used two, the nitrate and the double chloride of uranium and quinine. So far as I can see there is no difference in the action of these two salts; still it may be that the uranous salts, instead of the uranic which I have been using, may have a different effect, and that question I propose subsequently to investigate.

As to the method of administration: The nitrate is best given freely diluted with water and after food, commencing with a small dose of 1 or 2 grs. twice daily after the chief meals, and increasing the quantity slowly at intervals of a few days until its effect is produced. So given I have not found it disturb digestion or cause any irritation of the stomach or bowels; and, as stated, I have never found its prolonged administration produce albuminuria.

The American Electro-Therapeutic Association will hold its fifth annual meeting at the College of Physicians and Surgeons of Ontario, in Toronto, Canada, on Tuesday, Wednesday, and Thursday, September 3rd, 4th, and 5th, 1895.

INTRODUCTORY REMARKS

DELIVERED AT THE OPENING OF

THE SECTION OF LARYNGOLOGY AND RHINOLOGY

At the Annual Meeting of the British Medical Association at London, July-August, 1895.

By FELIX SEMON, M.D., F.R.C.P.,
President of the Section.

THE POST-GRADUATE TEACHING OF LARYNGOLOGY.

Gentlemen,—When, twenty-two years ago, for the last time previous to the present occasion, the British Medical Association met in London, there was no question as to the establishment of an independent Section of Laryngology and Rhinology. Although our speciality at that time was already well out of its teens, yet it was cultivated by a few only; it was anything but popular, and made no claim to occupy an independent position of any kind. Hardly nine years afterwards, however, the state of matters had so much changed, thanks to the progress meanwhile made not only in the scientific part of our work but also in the estimation of the profession, that on the occasion of the Seventh International Medical Congress held in London in 1881, the position of a subsection was accorded to it, and the good work then done bore its fruit in the fact that ever since laryngology and rhinology have occupied an independent position at the general medical meetings of individual countries as well as on the occasion of the subsequent International Congresses.

In 1884 laryngology attained the rank of a full Section at the Copenhagen Medical Congress; in 1887 the British Medical Association for the first time gave an independent position to us in constituting a subsection at the meeting held at Dublin, and in the following year the rank of a full Section was bestowed on it on the occasion of the Glasgow meeting. Ever since, when local arrangements permitted it, our branch has occupied the position which by general consent is its due, and to-day it is my privilege to offer you a hearty welcome on the first occasion on which London sees within its walls a full Section of Laryngology and Rhinology in the course of a general medical gathering. It is a pleasing duty thus to record the gradual but steady progress which our branch has made in general estimation in the course of the last twenty years, and I sincerely trust that the work for which we now are assembled, and which is graced by the presence not only of so many members of the British Medical Association but also of a number of distinguished foreign *confrères*, some of whom have travelled many hundreds and even thousands of miles to be with us, will in every respect equal the achievements of its predecessors.

In compliance with the standing regulation of this Association, namely, that the introductory remarks of the Sectional Presidents are not to encroach too much upon the time of the Section, I have selected one topic only upon which I should like to engage your attention for a few minutes before we enter upon the important general discussion of to-day's proceedings. This topic is by no means a new one, and I myself have incidentally touched upon it when I had the honour of presiding over the Laryngological Section of the Glasgow meeting of the Association in 1888, but its importance comes more and more to the front, and although I am by no means sanguine as to the immediate realisation of my ideas, I wish to avail myself of an exceptional opportunity such as the present to submit it again prominently to your consideration. The subject I refer to is the question of the post-graduate teaching in laryngology in this metropolis. I need hardly say that all or nearly all I am going to state on this important topic ought to be considered merely as a concrete illustration of a much more general subject. For what obtains of laryngology and rhinology in this connection finds equal application, I believe, in almost any of the more advanced and specialised subjects of medical science as taught at present. I shall limit, how-

ever, my observations to the requirements of the two last-named specialities, because on these I am able to speak with personal knowledge and experience.

It cannot be denied, I think, that post-graduate instruction such as given at the present time in these two branches in London, is inadequate to both the opportunities and the requirements of this, the greatest city in the world. Lest this statement should be misinterpreted, let me hasten to say that I speak in anything but a carping or derogatory spirit concerning the present facilities given with regard to the teaching in our own branch. Nobody can be more ready than I am to acknowledge that the present arrangements not only have done good pioneer work, but are excellent in many respects so far as they go, but what I contend is that they do not go far enough, and from conversations I have had with the President and Secretary of the Laryngological graduate course I have come to the conclusion that this opinion is shared by some of the officers of that institution itself. Clinical lectures on selected chapters of rhino-laryngology, accompanied or followed by the demonstration of a few cases, are all well enough, but I am not afraid of contradiction if I boldly say that nobody will learn from such clinical lectures alone to properly diagnose and treat throat and nose cases when they later on come under his own observation. For this purpose a much more methodical instruction is necessary.

Another point of considerable importance in this connection is the fact that the post-graduate course as at present constituted consists in a combination of a few hospitals in which every special branch is represented by one hospital only. Thus, the number of teachers is by this very arrangement limited to a very narrow circle, and without the least disparagement to the distinguished gentlemen who at present represent the science of rhino-laryngology in this course, it may be stated that experience has shown that those who wish to take part in the post-graduate instruction appreciate nothing more than the option of an extensive selection amongst various teachers. The same, of course, applies to the post-graduate classes held from time to time by the staffs of some special hospitals, and it applies with even greater force to the general hospitals in which there is practically no selection possible. Additionally another consideration comes into play with regard to the general hospitals. In these hospitals it is almost, if not quite, impossible to combine such a methodical post-graduate instruction as would be desirable with the routine work of an out-patient department. The great question of the overcrowding of out-patient departments, which in so many other respects nowadays engages the attention of the profession at large, throws its detrimental effects also upon systematic teaching. We must be glad enough if within the prescribed time we can satisfactorily see to our patients, and methodical instruction is practically out of the question. Moreover, the students attached to any of the large hospitals demand, and have a right to demand, that the teaching should be in the first place addressed to them and not over their heads. Thus, their requirements and those of post-graduate British and foreign visitors, as I have had over and over again the opportunity of learning myself, are frequently incompatible with one another.

Lastly, successful competition with foreign post-graduate courses is rendered almost impossible by the fact that the laryngological and rhinological clinics in almost all the general and special hospitals as well as in the post-graduate courses clash with one another, in that the days and hours of attendance and of lectures are the same in all these different institutions, so that those who would like to condense into a short span of time such post-graduate instruction as they require had no opportunity to utilise their time in a really satisfactory manner.

Assuming this description to be correct, as I think it is, it will be seen that the various factors enumerated so far, and all co-operating to interfere with really successful post-graduate instruction, can be summarised under one head, namely, lack of proper organisation. It is indeed, I think, solely this want of organisation which has hitherto prevented London from occupying that position with regard to post-graduate instruction which its magnitude of material and its other opportunities it surely ought to occupy—the position of the foremost centre for post-graduate instruction in the world. Far be it from me to introduce into the deliberations of a scientific meeting anything [illegible] spirit of Jingoism, but when I see how matters actually are and how they might be with regard to this question, I am constantly reminded of the line of the old Jingo song:

We've got the ships and we've got the men

We have, indeed, the ships (that is, the material), we have got the men (that is, the teachers), but, unfortunately, they have never been properly utilised; and yet methinks it ought not to be a matter of extreme difficulty to organise something worthy of this great metropolis, worthy of the material, worthy of the large amount of teaching [illegible] that at present lies fallow.

What we require is an organisation not conflicting, but supplementing, the existing institutions, with a view to aims at providing practical instruction [illegible] relatively short time not only for the Continental and Colonial visitor, who at present passes by [illegible] and prefers to put up with the inconvenience of [illegible] instruction in another than his mother tongue, but also for the wants of the British practitioner who, after a short acquaintance with practical work, finds gaps in [illegible] which he considers it desirable to fill up, preferably to be done without too great a loss of time. It would [illegible] cult, I believe, or indeed impossible, to effect [illegible] sation if it were limited to one special branch [illegible] it should be possible to create it if teachers of all [illegible] in which special post-graduate instruction is [illegible] such as ophthalmology, otology, laryngology, [illegible], dermatology, bacteriology, etc., joined [illegible] it. My own ideal in this respect would be [illegible] conducted very much, though not slavishly, [illegible] of the Viennese post-graduate instruction. [illegible] of teachers which I see in my mind's eye ought [illegible] a large house situated as centrally as possible, and [illegible] with a sufficient number of rooms to allow of quite a number of classes in different subjects being held simultaneously. The courses in the different branches ought to be [illegible] simultaneously, and to be limited to six weeks at the utmost to two months, because it has been found by experience that such courses are the more sought after the more practical instruction is condensed in them within a [illegible] time. Every special branch ought to be taught not by one teacher but by quite a large number of them, if possible in a condition whilst the plan is on its trial that the teachers in each branch should agree to hold their classes at [illegible] times as not to clash with one another. So far as our own branch is concerned, its foremost aim ought to be to give practical instruction in the use of the laryngoscope and rhinoscope, in diagnosis of throat and nose diseases such in the *technique* of those applications which every practitioner ought to be able to effect himself.

Clinical lectures, etc., ought only to [illegible] as a supplement, but not as the mainstay of the course. My plan, of couse, does not exclude that special courses of instruction in the more delicate operations, in bacteriological and microscopic investigation, etc., should be given to those who wish to devote themselves more specially to our [illegible]. As to the times at which these classes ought to be held, they ought to occupy as much as possible the whole of the working day. Thus one teacher may hold his class from 9 to 10 another from 10.30 to 11.30, a third from [illegible] a fifth from 3.30 to 4.30, etc., etc., so that students, if [illegible] serious, could practically on one and the same day [illegible] and the same building enjoy the instruction of [illegible] different teachers on a subject in which he [illegible] desired to perfect himself. After the end of the course, six or seven new teachers would give the next, and in this way all the valuable teaching talent could be utilised. Later on—that is, when the plan had shown itself to be workable—even parallel classes in one and the same subject may be held at the same time, experience having shown, as already mentioned, that nothing is appreciated so much by those intending to participate in these courses as a wide choice of teachers. No monster classes ought to be held if really practical instruction is to be given. It will be hardly possible for a single teacher to really instruct more than twelve pupils at one and the same time. As to the appointment of teachers, I would

with the broadest and most catholic principles of austerity or of fame, or of an official position of the general or special hospitals, ought to give the lead in this respect, but everybody should be welcome who could satisfy the Board of Directors—and here I will say that I should like to see such an association as that established by me affiliated to an institution like the [illegible] University of London, if that happy consummation should come to pass—that he is a fit and proper person for teaching the branch in which he proposes to [illegible]. I see, indeed, in an organisation of this kind a desirable means for many of our younger brethren to find the most honourable way to their ordinary income by being specially recommended for imparting good instruction to others as to the material, this would, of course, have to be provided by every teacher from his own hospital or other source, a number of specially selected cases being brought for the work.

Of course, I beg to say that such a plan in my opinion could only be effective if in one and the same building simultaneously [illegible] of all or most of the special branches were held, so that the intending student could utilise in the way most [illegible] to himself his time during the six weeks or two months he had to spend to fill up all the gaps of which he might become conscious in his practical career; whilst the [illegible] specialist would within the same time have the opportunity of hearing the various views of a great many colleagues and teachers on his favourite subject. I am [illegible] aware that the few points I have touched upon [illegible] but a sketch of what ought to be some day [illegible] built up edifice, and I am, finally, [illegible] that my plan may be considered by [illegible] as the impracticable dream of an enthusiast; but my reply to such [illegible] would be that during the short time of my own [illegible] have seen apparently more impracticable dreams [illegible] beyond expectation, and, indeed, the whole history [illegible] development of our specialty in this country is a proof [illegible] of this statement. I do not see why it should be impossible to realise in London what has worked [illegible] results in Vienna; and I recommend you [illegible] interested in post-graduate instruction my [illegible] thought and improvement.

DISCUSSION ON THE ETIOLOGY OF NASAL POLYPUS POLYPI OF THE NOSE,

I.—Professor Guye, M.D.,

University of Amsterdam.

In this paper I propose to consider two theories, those of Woakes and Grünwald. Woakes considers nasal polypi to be the result of [illegible] ethmoiditis. Grünwald looks upon them as secondary [illegible] empyema of the accessory nasal cavities. Zuckerkandl has discussed both theories, and I agree with him when he says that sufficient pathological evidence has not been brought forward to substantiate either.

My clinical [illegible] records with Zuckerkandl's opinion, which is supported by his own extensive pathological investigations; [illegible] opinion is that to the etiology of nasal polypi one [illegible] words are applicable: *Ins innere der Nase [illegible]*. In my own investigations [illegible] the majority of nasal polypi, yet [illegible] I have seen a few cases in which I did find such a [illegible] but the rarity of these cases confirmed me in my opinion that we have no right to generalise from these cases. In one case I found a nasal polypus alternating with common fetid ozæna. A young lady who had been successfully treated by me for ordinary fetid ozæna returned after one year with a simple nasal polypi, after the removal of which she began again to suffer from ozæna, which quickly disappeared under the treatment previously adopted.

In another case I had operated on a middle-aged gentleman for empyema of the antrum of Highmore, and during the subsequent treatment, which was much protracted owing to the irregular attendance of the patient, I discovered numerous polypi arising from the edges of the foramen maxillare, and obstructing the passage of fluid injected into the antrum [illegible] the alveolus. This is the only case in which I have [illegible] nasal polypi produced by empyema of the antrum.

In a third case I found one nostril completely blocked by [illegible] and on removing them I found as the probable cause [illegible] formation a large rhinolith, the removal of which [illegible] patient.

[illegible] adding the above in reference to the antrum of [illegible] I have seen one similar case in which the nasal [illegible] were the result of empyema of the frontal sinus. [illegible] these three cases I could not add many in which I [illegible] assign any definite cause for the formation of nasal [illegible].

[illegible] catarrh, an irregular septum narium and habitual [illegible] breathing, may or may not have an etiological bearing; [illegible] support, for though they are often found in combination [illegible] nasal polypi, yet they are more often met without. [illegible] can be said of rhinolithis, empyema, and ozæna. [illegible] to which this points is that we must ascribe to the mucous membrane a peculiar predisposition which makes it produce nasal polypi as a reaction to noxious influences of very different natures. I may also allude to the climatic influences of some places. There is a place in Holland [illegible] which I have seen an immense number of patients with nasal polypi, and one of them told me that it was the popular opinion amongst the inhabitants there that nasal polypi were of unusual frequency amongst them. This may be quite [illegible] and easy of explanation by the fact that patients suffering from a certain disease always hear of a number of similar ones, and thus easily get a false impression as to its frequency. For this reason I at present withhold the name of the place, and I only mention it as a hint for further observations in this direction which in the future might throw some light on this question. Although I am inclined to admit it as possible that either histological, bacteriological, or other researches will some day afford us a more definite [illegible], yet for the present we must be satisfied with the rather eclectic theory which I have sketched.

II.—Dr. Luc,

Paris.

On this question it can be said that it was a few years ago one of the least advanced in pathology. In fact, if we consult the most recent treatises of the diseases of the nasal fossæ on this subject, we find nothing in them but the same views transmitted with little variation from one book to another, such as the rarity of the affection in children and the influence of protracted or repeated catarrhs of the nasal mucous membrane and on its development. To these two propositions is reduced the whole chapter of etiology. The former rests on a fact of observation which has not been contradicted by the progress of rhinology, although several publications during the last few years, and especially an article of my colleague, Dr. Sellier,[1] proved that nasal myxomata before the first year are not so exceptional as had been thought hitherto. Two cases of even congenital nasal polypi have been published, one by Le Roy, the other by Cornaille.

I cannot say the same of the second proposition which is perfectly [illegible]. Many patients affected with nasal polypi to whom I put the question whether they had been particularly liable to attacks of nasal catarrh during the previous years gave a negative answer; and, as regards patients whose answer was different, it might be supposed that the nasal obstruction attributed by them to a catarrhal condition of the mucous membrane was the effect of unsuspected nasal polypi. The [illegible] question which forms the subject of our discussion has been decidedly advanced by von Ziem's publications, as they enabled us to recognise many cases of suppuration of the accessory cavities of the nose that would formerly have remained perfectly unknown. In fact, we can no longer fail to be struck by the frequent and remarkable coincidence of the presence of myxomatous tumours in the middle meatus with the various nasal suppurations, the common outlet of which is in the region of the semilunar hiatus, where nasal polypi almost exclusively develop; and as is generally the case, whenever new views

[1] Polypes Muqueux des Fosses Nasales chez les Enfants jusqu' à 15 Ans. *Annal. de la Polyclin. de Paris*, Juillet, 1895.

are offered to us by scientific discovery, many of our colleagues felt inclined to consider nasal myxomata as the constant consequence of a suppuration, sometimes latent, of one of the sinuses of the face. But this theory, which was only criticisable in its exaggeration, was soon going to meet a rival.

In the very year in which von Ziem[2] published the first of his epoch-making articles on maxillary empyema, one of our London colleagues, Woakes, brought out in the *Lancet* his first article on a subject (Necrosing Ethmoiditis in its Relations to Nasal Polypi) to which he devoted many other articles in the course of the following years. In those various articles, the greatest number of which appeared in the British Medical Journal[3], the author endeavoured to prove the existence of a disease discovered by him in the course of his rhinological investigations, the clinical and anatomical peculiarities of which I will try to review as shortly and plainly as possible.

At first the affection is anatomically characterised by fibrous hyperplasia of the muco-periosteal costing of the middle turbinated bone. The extension of this process to the external tunic of the arteries gives rise to trophic lesions of ischæmic origin in the underlying bone, where lacunæ and sometimes (twice out of twenty cases examined by Martin) necrosis takes place.

In consequence of the constriction of the fibrous tissue, the glands of the mucous membrane undergo a sort of cystic degeneration, and the several cysts produced in such conditions opening into one another coalesce into a single and large cavity, which occupies the greatest part of the turbinated bone, and ends by rupture, giving exit to exuberant granulations and myxomata, another consequence of the same process, and the only one that interests us here, being the formation of myxomatous tissue. If I did not misunderstand the author, he seemed inclined to consider his necrosing ethmoiditis as the primary cause of every case of nasal myxoma, and by the persistence of the deep bone lesion he trys to explain the frequent recurrence of the polypi.

Clinically the affection is manifest in its first stage by a hypertrophic appearance of the middle turbinated bone, which ends by pressing against the septum and making it project into the other nasal fossa. In a later stage a cleft may be observed at the inferior surface of the tumour, through which granulations and myxomatous products make their way outwards. By means of a metallic probe passed through that opening, a trained hand will be able to detect pieces of denuded bone, or even small sequestra.

Such are the chief points of Woakes's description. I do not intend to discuss here the result of his clinical investigations, nor to contradict the statement of such a histologist as Martin, but I protest against the author's conclusions. In his various publications Woakes describes numerous and rather incongruous lesions, but he does not show us the patients themselves. At least there is not a single clinical observation to be found in the only articles of the author's[4] which I could get. Hitherto we had been accustomed to consider such lesions as arteritis obliterans, osteitis, or necrosis as anything but spontaneous. We had been taught by books and experience that age, constitution, or such general diseases as tuberculosis or syphilis, played a frequent and important part in their development. But about these various pathogenic agents not a word is said in these articles. Shall I give a reason for the doubt awakened in my mind by such omissions? My friend Ruault, of Paris, mentioned to me lately the case of a patient of his who, in consequence of a tertiary syphilitic process, presented in the middle meatus of one of the nasal fossæ little sequestra surrounded by granulations and myxomatous tumours, which lesions all disappeared after local *curettement* combined with a general antisyphilitic treatment. Had a supporter of the necrosing ethmoiditis met such a case, would he not have been inclined to consider it as an example of the new disease?

I consider as equally open to criticism the fact that the author passed silently over the condition of the accessory cavities of the nose, suppuration of which so often brings about deep modifications of the mucous membrane of the middle meatus, which greatly resemble some of the lesions described by Woakes. Now I insist on the fact that in such conditions the underlying bone does not always share the modifications of the mucous membrane. I remember having attended—five years ago—a gentleman affected with empyema of the maxillary and of the frontal sinuses. The middle meatus was filled with granulations and myxomatous masses, and a probe introduced through those tumours up into the ethmoidal cells easily broke in the thin long cells, giving the sensation of little movable sequestra. Well, some of those bony fragments having been extracted by means of a curette with the myxomata fixed upon them, I was anxious to ascertain whether the bone was affected with osteitis, and sent them to Dr. Gombault, one of our best histologists. His answer was that the bone was perfectly normal. I ceased after that time attaching much importance to the feeling of multiple sequestra given by the probe introduced into the ethmoidal cells, but rather felt inclined to consider the fact as a normal one, depending on the specially fine and brittle bony structure of the region.

More recently—this very year—I had an opportunity of treating a lady (Mrs. B., aged 35) whose rhinological aspect was somewhat analogous to that described by Woakes. Her middle turbinated bone, considerably tumefied and covered with a mucous membrane of myxomatous appearance, pressed against the septum and presented the characteristic form of a date stone, insisted upon by this author. Its under surface was besides covered with pus. The electric illumination of the face having removed any doubt that might exist in my mind as to the presence of pus in the maxillary sinus, I proceeded to open the latter through the socket of a decayed molar tooth, and found the antrum of Highmore full of pus. I further removed, by means of the snare, the entire middle turbinated bone, including the myxomatous mucous membrane covering it, and sent it to Dr. Gombault, requesting him to state whether the bone presented any pathological modification. Dr. Gombault's answer was that the bone showed no sign of inflammation whatever, nor any of the lesions described by Martin, whereas the mucous membrane presented the characters of a most pronounced myxomatous and œdematous condition.

I owe it to Dr. Gombault's kindness that I am able to show you some of his microscopic preparations, and to enable you thus to confirm his statements by your own observation.

I must say, in conclusion, that Woakes's description gave me the impression of various pathological conditions artificially grouped in a common frame, and it is a satisfaction for me to find the same opinion expressed by Moritz Schmidt in an analysis of Woakes's first article, which was published in the *Monatschrift für Ohrenheilkunde*, 1885, p. 314.

But where I chiefly disagree with Woakes is in his statement that the necrosing ethmoiditis is a *sine qua non* condition of every case of nasal myxomatous polypus. Nothing seems to me more contrary to clinical experience.

The microscopic preparations I submit to you plead eloquently enough against such a statement. The specimen I now present to you is likely to corroborate the conclusion derived from the former. The preparation has been made by Gombault from a fragment of bone which formed the origin of a common polypus, which I removed with the snare at the same time with it. The patient, a lady aged 50, had never been operated upon previously, so that her nasal tissues had not undergone any traumatism before. She did not present any appearance of suppuration in the middle meatus, and oral electric illumination gave a perfect transluscency of the suborbital regions. Now each one of you can verify for himself that the bony fragment presents no pathological modification, and especially no lacunæ nor any signs of inflammation. This simple fact proves conclusively that the bone underlying the myxomatous mucous membrane may remain quite normal. It proves also, that myxomatous degeneration may be completely independent of any lesion in its neighbourhood. If this independence is a matter of fact, I am far from assuming it to be constant; we know the contrary. A certain number of nasal lesions are capable of furthering the development of nasal polypi. As unquestionable in that respect, I acknowledge the influence of the empyema of the accessory cavities of the nose. The frequent association of

[2] *Monatschr. für Ohrenheilk.*, 1882, p. 271.
[3] British Medical Journal, August 6th, 1892, March 12th, 1892, and June 18th, 1892.
[4] British Medical Journal, March 12th, 1892; June 18th, 1892.

these lesions is such as not possibly to be merely a chance, inasmuch as the pus escaping from those cavities finds its way through the semilunar hiatus, causing an uninterrupted irritation of the mucous membrane of the middle meatus, where nasal polypi almost exclusively develop.

Another clinical observation of which each of us can surely find examples in the records of his own practice is the frequent coincidence of myxomata with other nasal neoplasms, the latter being generally of a malignant nature. I have myself observed four instances of that coexistence. In two patients to whom I am alluding the maxillary sinus was the seat of an epithelioma; in the third there was a sarcoma of the outer wall of the nasal fossa; in the fourth (a young man aged 16, still under treatment) myxomata coexisted with an enormous fibro-sarcoma of the naso-pharynx. In all these cases the malignant neoplasm was in contact with the mucous membrane of the middle meatus, where the polypi, as usual, had their origin; and, taking into account the recent appearance of the latter, there can be no doubt that their development had been originated by presence of the former.

The fact mentioned above and borrowed from my friend Ruault's practice proves the possibility of development of nasal myxomata in consequence of the irritation of the mucous membrane. The same applies to syphilitic lesions. The conclusion I draw from these various facts all derived from clinical experience is that the development of myxomata in the nasal fossæ, and especially in the region of the middle meatus, represents the mode of reaction of this part of the mucous membrane when submitted to certain pathological irritations, just as pachydermia represents the mode of reaction of certain parts of the laryngeal mucous membrane; that sometimes the irritating agent shows itself plainly as a lesion of the neighbourhood (empyema, tumour), whereas in other cases, which perhaps form a majority, the irritation is absent or cannot be detected by the eye, and the disease has then all the appearance of a complete spontaneity.

Before concluding there is a question closely connected with our subject which I cannot abstain from raising, as it naturally presents itself to our minds. Why do nasal polypi almost exclusively develop in one particular region of the nasal fossæ, represented by the middle turbinated bone, by the middle meatus, and more especially by the edges of the semilunar hiatus?

Such a particular localisation of the lesions could only be accounted for if they were constantly consecutive to suppurations of the accessory cavities of the nose, the region referred to being the most exposed to the irritating contact of pus. But we know that such is not the case, and that, even in cases thoroughly destitute of such a local irritation, the middle meatus nevertheless shows itself as the starting point, and seat, of nasal polypi. Struck by this etiological peculiarity I thought its explanation might perhaps be found in a peculiarity of structure, and I committed to Dr. Gombault the care of comparing two fragments of normal mucous membrane taken from a dead body twenty-four hours after death, one having been removed from the edges of the semilunar hiatus, and the other from the inferior turbinated bone, which experience showed us as one of the most exceptional sort of myxomata. Dr. Gombault's answer was as follows:

"Both fragments are similar. Their tissues are nearly of equal consistence; the mucous membrane of the hiatus is, perhaps, a little thicker, it is also much more sinuous and provided with more folds; further, it contains a larger number of glands."

I submit to you this comparative histological description, leaving you to draw your own conclusions from it as regards the question raised above. For my own part I cannot help considering that the presence of folds on a mucous membrane is a condition favourable to the production of pedunculated tumours, in consequence of the development of a myxomatous œdema of its tissues, whereas the same pathological condition is likely only to provoke a general tumefaction in the regions where the surface of the mucous membrane shows itself more even, as is the case of the septum and of the inferior turbinated bone.

I will try to sum up the preceding in the following propositions:

1. The myxomatous degeneration of the mucous membrane of the nose, which histologically differs little from a simple œdema of this membrane, shows itself in a different aspect according to the region where it is observed. The pedunculated disposition is nearly exclusively observed in the region of the middle turbinated bone and of the middle meatus, which, perhaps, results from the presence of folds on the surface of the mucous membrane of that region normally.

2. The coexistence of lesions of the underlying bone with myxomata of the mucous membrane of the nose is anything but constant. My own experience induces me to consider it as exceptional.

3. The myxomatous condition of the nasal mucous membrane is often quite independent of any neighbouring lesions; it may then be the result of repeated or protracted nasal catarrhs, though such a pathogenic relation cannot always be ascertained.

4. In other cases the myxomatous degeneration shows itself as a neighbouring œdema (*œdème de voisinage*) in consequence of various lesions, the most frequent of which are undoubtedly chronic suppurations of the nasal fossæ or of their accessory cavities.

In rarer circumstances the presence of malignant neoplasms in the nasal fossæ seem to play the same pathogenic part.

III.—Professor Dr. Zuckerkandl,

University of Vienna.

The majority of rhinologists are of opinion that polypoid hypertrophies and polypi of the nose are not really neoplasms in the strict sense of the word, but inflammatory hypertrophies, which are due to chronic irritation of the nasal mucous membrane.

The following facts seem to prove their inflammatory origin:

1. The round-celled infiltration which is found in all stages of the development of the polypi.

2. The fact that other inflammatory symptoms are present in the nasal mucous membrane and its osseous base (to this fact I shall refer later on).

3. The fact that flat hypertrophies develop into polypi or polypoid tumours.

4. That polypoid growths can be caused by the irritation of rhinoliths.

5. That there is no sharp line of demarcation between the growths and the physiological tissue.

6. The frequent occurrence of the growths.

7. The fact that polypi are never congenital, whereas many neoplasms can be of congenital origin.

Most authors believe that chronic inflammation of the nasal mucous membrane gives rise to a hypertrophic condition and to polypi; a new theory has, however, lately been started, namely, that necrosis of the ethmoid is the cause of these growths.

I propose in this short paper to criticise this theory from an anatomical point of view. Before doing so I should like to say a few words on the hypertrophic conditions of the nasal mucous membrane. I am of opinion that, from an etiological point of view, polypoid hypertrophies and polypi are identical. The fact that one develops into the other seems to prove this statement. You can observe this very clearly in the hypertrophied mucous membrane of the uncinate process or of the bulla ethmoidalis. The great difference in shape between the polypi and the polypoid hypertrophies depends entirely on the condition of the seat of the growth, and on the shape and width of the nasal passages into which the tumours give. They are broad but flat, when they grow into narrow fissures, and may have a long base when they grow from pointed projections of the ethmoid. These tumours are of a more rounded shape when they grow from the lower turbinated bones or from similar places, when they have a broad base and room to expand. Well developed polypoid hypertrophies of the lower turbinated bones frequently not only completely fill up the nasal meatus, but, like polypi, hang over the floor of the nares, where they can expand. In these cases we could equally well call them polypi of the lower turbinated bones. We have therefore no reason for asserting that there is not such a thing as polypus of the lower turbinated bones. Polypi of the ethmoid and polypoid hypertrophies of the lower turbinated bone are due to one

and the same cause. As regards the connection between necrosing ethmoiditis and polypi, I was, I must confess, most astonished to read that this necrosis is so very common, and that it always necessarily causes the growth of polypi. There is no doubt that necrosing ethmoiditis can give rise to hypertrophic conditions of the mucous membrane, such as we see, for instance, in cases of syphilis. It is, however, going rather too far to state that necrosing ethmoiditis is a very common affection, and to attempt to explain the growth of polypi on this theory; it is also not at all in accordance with the evidence of anatomical investigation. During the past year I have carefully examined in every available case the osseous base of the nasal polypi and polypoid hypertrophies, and will at once state that not in a single case have I found carious or necrotic affection of the bone. The processus uncinatus and the bulla ethmoidalis are very suitable for these investigations. When there is a polypus or polypoid hypertrophy growing from the edge of the processus uncinatus, we frequently find that this edge becomes thickened. The bone becomes rough and thick, and the presence of numerous small vascular cavities proves that new bone is being formed.

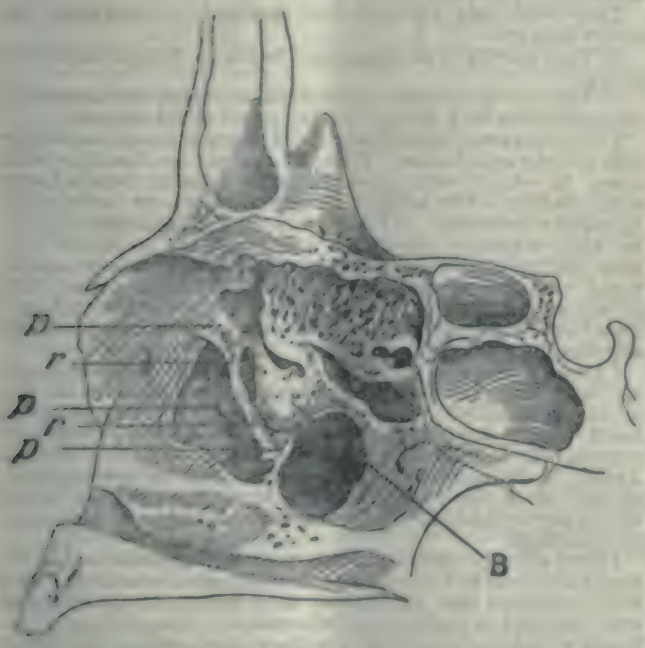

Fig. 1

In some cases this process develops further, and we find an osseous process, sometimes as long as 1 cm., which projects into the polypus. This process may be thick and hard, or soft and flexible, and is always adherent to the surrounding soft tissue. Similar changes are found in the bulla, which often becomes elongated, covers the hiatus semilunaris, and projects into the middle meatus. The projection is no longer round, but flat with projecting edges. I examined very carefully a case in which both these parts—the uncinate process and the bulla—were affected, and found: Discoloration of the nasal mucous membrane on the right side; ridge of septum, with corresponding depression of lower turbinated bone; mucous membrane of uncinate process hypertrophied, and the bulla with a polypoid growth which hung over the constricted hiatus semilunaris of the left side; a movable hypertrophy near the uncinate process and large swelling of mucous membrane the size of a small cherry on the bulla; frontal sinus and sphenoidal cells normal; mucous membrane of maxillary sinuses thickened (about five times the normal) and of œdematous nature; in the cavities a little muco-pus; ostium maxillare covered by swollen mucous membrane; molar teeth missing on right side and carious on left; sticky mucus on walls of pharynx; pharyngeal tonsil enlarged and with numerous cysts; mucous membrane of ends of Eustachian tubes thickened.

This was evidently a case of chronic catarrh of the nasal mucous membrane, which had affected the bone and the maxillary sinus. Fig. 1 shows the changes in the bone of the right side of the specimen. B is the elongated bulla; P the uncinate process, with thickened edge. Fig 2 represents another case, in which there was a polypus on the bulla; and where on the specimen we see this part (B) overhanging the hiatus and covered with depressions of vessels; P is the atrophic uncinate process. We acknowledge that the polypoid hypertrophies of the lower turbinated bone are identical in character with polypi, and therefore in the described cases we should have found necrosis of the bone if the theory which I am criticising were correct. The lower turbinated bones show no symptoms whatever of necrosis; the bone is quite normal, or slightly thickened.

I have further examined the osseous walls of the maxillary sinus in cases of polypi of these sinuses, and have never seen any trace of caries or necrosis.

Fig. 2.

We have proved that there is frequently a thickening of the bone at the base of the polypi, and this seems to be a direct contradiction to the statements that the base shows caries or necrotic changes. The tumours are characterised not by the presence of degeneration and atrophy of the bone, but by the presence of new formation of bone, and this holds good to such an extent that we can easily tell from the condition of the macerated bone, whether the mucous membrane has suffered from polypoid degeneration or not.

How are we to explain this hypertrophy of the bone? We know that the deep layers of the nasal mucous membrane take the place of the periosteum; this is also the case in the accessory nasal cavities, the middle ear, and other places. As soon as the superficial layers of the mucous membrane become congested and hypertrophied, the deeper, periosteal layer may also become affected, and cause hypertrophy of the bone. The same changes take place in parts of the ethmoid, as in the walls of an accessory cavity, where the deep seated inflammation of the mucous membrane gives rise to the formation of diffuse thickening or of osteophytes and exostoses. If we find the base of the polypus in a normal condition, this simply means that the inflammation of the mucous membrane has been confined to the superficial layers, and has not pene-

trated to the deep, periosteal layers. In some cases we find that the osseous projection into the polypus has become soft. This is due to changes which are very similar to those found in ozæna.

I have attempted to show that from the anatomical point of view the theory that necrosing ethmoiditis is the cause of ordinary polypi is incorrect and untenable.

IV.—P. McBride, M.D.,

Aural Surgeon and Laryngologist Royal Infirmary, Edinburgh.

In a meeting of this kind it seems hardly desirable to define the term "mucous polypus" yet this is almost an essential preliminary to any discussion of the subject. I suppose that most of you will agree in accepting my definition, namely, a mucous polypus is a tumour of the nose having the following characteristics: (1) A smooth, or more rarely, a lobulated surface, (2) a greyish-blue colour, sometimes merging into a delicate shade of pink, (3) a tense appearance and feeling, (4) a jelly-like consistence. If I add that the attachment may be a broad or thin pedicle I shall perhaps have given sufficient details for the present purpose.

The question of etiology may be approached either from the pathological or the clinical aspect, and perhaps it will be well to consider the data furnished by each. As you are aware most observers are now agreed that the microscope shows mucous polypi to be simply œdematous fibromata. They generally grow from the upper and anterior part of the nose, being frequently attached to the walls of the middle meatus and more rarely to the free edge of the middle turbinated body. I am not aware that growths corresponding in character to mucous polypi have often been seen to spring from the inferior turbinated body or below it. On the other hand in the last named situation we meet with a variety of tumour which has been described as papilloma. It differs from the mucous polypus in its red colour and papillary surface, but its microscopic structure is similar. Such growths rarely if ever spring from the upper regions of the nose. We have then two varieties of growths, differing in macroscopic characters only, but histologically identical; one is found almost universally growing from the upper parts of the nasal cavity while the other is usually found only in the lower. This fact gives good cause for reflection and would lead us to believe that position has much to do with the macroscopic characters of polypi. If we once admit this it follows as a corollary that their etiology can in part be explained by physical laws.

This is a conclusion which we can also reach by another chain of reasoning. Polypoid tissue is excessively œdematous and obviously the œdema must be increased by the pendulous position which the growths nearly always assume. Œdema causes increase of size, therefore part of the growth in bulk at least must be explained by physical laws. It has always appeared to me that this hypothesis is self evident and I am quite aware that somewhat analogous theories have been held by others. Even if we admit so much, however, we are still far removed from any satisfactory explanation of the initial stage. It is very easy to frame an hypothesis which may explain certain cases. Thus we may assume that at some particular point, whether as a result of inflammation or as as a consequence of the pressure of a small vascular loop, a projection of the mucous membrane occurs and hangs downwards. If we admit so much, it follows that we can explain the occurrence of a single polypus; for wherever one hypothetical projection has become pendulous its increase in size will have been assured. Even if we accept this as correct, it is difficult to understand why polypi should usually be multiple.

It appears to me that the explanation of the origin of nasal polypi which I have suggested and which I believe to be, so far as it goes, correct for certain cases is incomplete in some important particulars. We must therefore assume some abnormal condition of the mucous membrane to start with. I cannot believe that inflammation alone is enough to account for more than a proportion of cases. I can understand that if the mucosa on the edge of the middle turbinated body or margins of the hiatus semilunaris becomes inflamed irregular excrescences may develop, and these aided by gravity may finally become polypi. In all likelihood the growths so frequently associated with empyema of the antrum originate in this manner.

Again it must be remembered that the favourite seat of origin of polypi is the anterior region of the middle meatus just where irregularities of the mucosa are normally found, and this fact may be adduced in favour of an inflammatory origin in certain cases. My own clinical experience, too, leads me to think that the anterior part of the nasal chamber is the most common seat of multiple growths, and that the nearer we approach the naso-pharynx the less is the tendency to multiplicity. I need only remind you of the comparatively frequent occurrence of single growths attached to the margins of the choanæ—the so-called fibro-mucous polypi. Again I suppose that most of us are familiar with the condition known as polypoid hypertrophy. The most typical specimens I have seen originated from the free margin of the middle turbinated body. In some instances these enlargements when removed show very distinctly two macroscopic characters: (1) the part nearest the seat of attachment is pink and readily recognised as simple hypertrophy: (2) the part which is furthest from the seat of attachment is grey, translucent, gelatinous—in short presents the characteristics of polypoid tissue.

The deductions I should feel inclined to draw from the above data are:

1. That gravity is an important factor in the production of polypi.

2. That in a certain proportion of cases inflammatory changes alone may be the starting point of the disease.

I fear, however, that many cases cannot be explained by this simple conclusion. Thus we are all too familiar with noses in which, even after the most careful removal and cauterisation, a few weeks' absence of treatment is followed by rapid recurrence. When such a case is seen after, it may be, only a month, the whole middle meatus looks as if it were producing small growths perhaps about as large as currants, and closely packed together. For such cases some other explanation must be sought, and I fear that so far no data have become available by means of which we can with any certainty trace the cause.

I suspect that the fault lies with the mucous membrane, and it is just possible that histological examination of the middle turbinated region carried out on a number of specimens might show deviations from the normal in some instances which, if exaggerated, would give rise to polypi. Again, it is possible that a similar line of investigation carried out in cases where polypus formation had just begun might throw light upon what we must consider a dark spot in rhinology.

I have already referred to the papillary growths which are found attached to the lower parts of the nasal chamber. You will remember that these have been shown to be identical with polypus in histological characters. A tempting hypothesis would be that such papillary degeneration may occur in the upper regions, and that then the projections hang downwards and develop into polypi. However, we have no proof that this ever actually occurs, and my own clinical experience is against the occurrence of macroscopic papillary swellings in the upper parts of the nasal chambers. It is, however, conceivable that microscopic papillæ may precede the occurrence of polypi.

You are of course aware that Dr. Woakes has attempted to show that necrosis of the middle turbinated bone is the cause of nasal polypus in most, if not all, cases. I am quite prepared to admit that in a certain proportion of cases empyema of the ethmoidal cells may and does give rise to polypoid growths, but to state that disease of bone is the primary lesion in all cases of polypus is obviously a mistake. The objections which give the *coup de grâce* to this theory are:

1. That no satisfactory proof has been adduced in its support.

2. That where the muco-periosteum is converted into gelatinous tissue the probe is certain to reach bare bone if it be employed with even moderate force.

3. In many cases of polypus we have none of the symptoms commonly associated with disease of bone—namely, copious suppuration, etc.

Grünwald[1] has committed himself to the statement that in

[1] *Die Lehre der Nasenretterungen*, p. 82.

most cases polypi are pathognomonic of empyema of an accessory cavity. This assertion is founded on a comparatively small number of cases—38 in all. Of them he tells us that only in 5 was no affection of an accessory cavity diagnosed, although he hints that in one at least it may have existed. I would ask those among you who have read Grünwald's work whether you consider it possible to diagnose ethmoidal empyema as described by him in cases of well-marked nasal polypi with the growths *in situ*. You will recollect that he relies upon the presence of pus and indications of bare bone in the region of the middle turbinated body for his diagnosis. After the removal of the growths both these conditions—especially the second—may possibly exist as a direct result of surgical interference, and also because in mucous polypus the muco periosteum is degenerated, and so admits the probe readily to the surface of the bone. For this and other reasons I consider that Grünwald's statement is much too sweeping. At the same time it must be admitted that many cases of supposed polypus are actually the result of empyema of one or more of the accessory cavities, usually in my experience the antrum of Highmore. I do not know that the polypi produced by this cause can always be distinguished from others, but in a large proportion of cases they present certain peculiarities. Thus, not uncommonly they are of a distinctly red colour, they bleed more readily when touched, pus is present in the nostril, and the patient complains of a bad taste and smell, while frequently the affection is unilateral, although occasionally these mucous polypi are confined to one side. While I admit these differences, still the appearances resulting from empyema of the accessory cavities are often so like true polypus that we cannot in all cases distinguish one from the other.

My own view, then, as to Grünwald's statement is that, while it contains an element of truth, it must be accepted with caution. Those of us whose experience considerably surpasses 38 cases of mucous polypus will probably arrive at the conclusion that in a considerable proportion of cases the cause is to be sought in empyema of one of the accessory cavities, but that in a very much larger proportion we have to do with growths which owe their origin to some other cause or causes.

In cases of that very rare affection, coryza caseosa, a polypoid mass, which is usually of a somewhat red colour and bleeds freely when touched, is commonly—so far as the term is applicable—found.

It is somewhat remarkable, and at the same time indicative of the difficulties with which our subject is beset, that in discussing the etiology of nasal polypus it is hardly necessary to refer to the histories given by patients, because they yield practically no assistance in arriving at a conclusion. It has struck me, however, that in conclusion it may not be altogether uninteresting to lay before you a very rough analysis of 114 cases of nasal polypus extracted from my hospital records. The data are somewhat meagre, as they simply comprise such facts as name, age, residence, occupation, and diagnosis. Out of the 114 cases I find that 63 were males and 51 females.

In 105 patients the ages were noted, and the results may be briefly stated thus:

Age.	Male.	Female.	Total.
Years.			
1 to 10	1 (aged 8)	1 (aged 8)	2
10 to 20	4	5 (youngest 15)	9
20 to 30	13	8	21
30 to 40	7	11	18
40 to 50	12	3	15
50 to 60	7	6	13
60 to 70	6	5	11
70 to 80	1	0	1

From these figures we may deduce the following data with regard to hospital cases:

1. The disease is rather more common in males than in females.
2. It is most common between 20 to 30 years of age.
3. It is least common at the extremes of life—that is, under 20 and over 60.

With regard to occupation, I have not been able to trace its influence. I may, however, mention that the occupations were noted in 75 patients, and fairly representative of the class of persons who frequent our hospitals. The following list comprises all those callings which supplied 3 or more cases:

	No. of Cases.
Coachmen	3
Clerks	5
Constables	3
Domestic servants	7
Engineers	5
Housewives	7

As I have said, these cases were all taken from my hospital records, and therefore refer to the poorer classes. For the sake of comparison I have collected 89 cases from the records of my private practice. In these notes I take of my private patients I do not as a rule mention the profession, so that data on this point are wanting. Among the 89 patients there were 46 females and only 43 males. The age was stated in 77 instances and gave the following results:

Age.	Male.	Female.	Total.
Years.			
1 to 10	0	0	0
10 to 20	1 (aged 19)	1	2
20 to 30	5	5	5
30 to 40	6	9	15
40 to 50	6	7	13
50 to 60	12	5	17
60 to 70	10	8	18
70 to 80	1	3	4

These statistics form a very considerable contrast with those supplied by my hospital books, and it certainly looks as if social position to some degree modified the course and occurrence of nasal polypus.

Thus we find that among the wealthier classes (1) the disease appears to be somewhat more frequent in women than in men; (2) that it is most common after middle life, the greatest number of cases occurring between 60 to 70, as against 20 to 30 in hospital patients.

It is somewhat difficult to explain the results derived from my two sets of statistics. I do not wish to insist upon any deductions from them, because the numbers are too small to justify sweeping assertions. Only it almost seems as if a hard and exposed life leads in those who are predisposed to nasal polypus to an earlier development of the affection.

I may be asked why I have not included in my statistics the presence or absence of empyema affecting one or more of the accessory cavities. To this I should reply that while in a certain proportion of my cases I have been able to demonstrate the presence of empyema of the antrum, sometimes bilateral, and in a very much smaller number the existence of ethmoidal and sphenoidal disease (the latter only once to my satisfaction), and while I have occasionally suspected the existence of latent empyema, I do not think that our present methods of diagnosis are sufficiently exact to enable us in doubtful cases to arrive at a conclusion without exploratory puncture. This last method is really justifiable when applied to the antrum, but in many cases we may suspect frontal empyema, and yet the urgency of the symptoms by no means justifies external operation. With regard to ethmoidal disease I have already indicated my views. Under these circumstances I have avoided any attempt to define the proportion of cases in which inflammation of the accessory cavities leads to the presence of polypi.

V.—Alexander Hodgkinson, M.B.,

Lecturer on Diseases of the Throat and Nose, Owens College, Manchester.

Dr. Hodgkinson said his clinical experience did not tend to throw much light on the subject: polypi were certainly not a necessary consequence of empyema, either of the maxillary or any other sinus. Adjacent caries was also by no means a common accompaniment; therefore we must still consider them as arising from an at present undiscovered predisposing condition of the mucous membrane.

VI.—Scanes Spicer, M.D Lond.,

Physician, Throat Department, St. Mary's Hospital

Dr. Scanes Spicer quite agreed with the views expressed in Dr. Zuckerkandl's paper as to the inflammatory origin of mucous polypi of the nose and analogy with mulberry growths of the inferior turbinated bone, and thought any factor of inflammation of the muco-periosteum might cause polypoid growth. Dr. Woakes had done service in pointing out that polypi were not tumours, but products of inflammation. However, the term necrosing ethmoiditis was an unsatisfactory one; but, as he understood Dr. Woakes, the term was not applied primarily or chiefly to the bone, but rather to the muco-periosteal element of the middle turbinate body, of which the polypi and the (assumed) necrosis were independent results, although they reacted on each other. Previous speakers had spoken as if ethmoiditis referred to bone only. Even in the more extended interpretation the term ethmoiditis was insufficient to express the whole case, for polypi were found in the accessory sinuses also. The epithet "necrosing" was unsatisfactory, because it gave excessive prominence to the element of necrosis, which was a rare and secondary result of inflammation to the exclusion of the much more usual superficial absorption changes (dry caries, osteitis granulosa of Billroth), osteophytes and cystic conditions in the ethmoid body. He did not agree with Grünwald that polypi were always secondary to accessory sinus disease: the latter might excite the former, but only as causes of muco-periosteal inflammation; but, on the other hand, polypi might excite disease of the accessory cavities. He had confined his remarks to the essential and primary nature of polypi rather than to the conditions of œdematous infiltration of hyperplastic inflammatory growths, which resulted from gravitation, conditions of intranasal pressure, etc.

VII.—Wm. Hill, M.D.,

Surgeon to Aural Out Patients St. Mary's Hospital.

Dr. Hill pointed out that mucous growths in parts of the body other than the nose were not associated with one particular etiological factor, for polypi might spring from a mucous membrane so far remote from bone as the bladder and rectum, so that the cause must be sought for in irritating or inflammatory changes in the mucosa itself. In the ear, on the other hand, polypi were usually associated, and probably etiologically related to, inflammatory lesions in the bone from which they sprang. Exceptionally aural polypi seemed to result from long-standing suppurative discharges without obvious bone lesions; therefore Dr. Hill considered that nasal polypi must also be associated with one or other of these etiological factors. More than half his cases were mucous polypi unassociated with obvious bone lesion or accessory sinus diseases. Whilst Dr. Woakes had taken up an untenable position by reason of his sweeping statements and eccentric nomenclature, it must be remembered that he was a pioneer striking out new ground, and he deserved credit for having directed attention to the fact that bone lesions of some kind were present in a certain proportion of cases of nasal polypi. This was probably very small, and the bone lesion was of the nature of an inflammatory osteitis rather than necrosis. Nasal polypi clinically came under two heads (1) simple œdematous growths unconnected either with bone disease or with accessory sinus disease which admitted of curative treatment with the snare, and (2) polypi associated with the latter in which pus and sometimes granulations were present, which tended to recur on simple removal, and even after much more radical treatment to the sinuses and middle turbinate.

VIII.—F. H. Bosworth, M.D.

New York.

I cannot agree with either of the theories which have been advanced to explain the origin of nasal polypi; certainly that view which teaches that they are due to empyema of one of the accessory sinuses seems to me untenable. In probably seven-eighths of our cases after extirpation of all the growths, we fail to detect any pus formation whatever, or any evidence of empyema. In one-eighth, perhaps, we do find pus. shall we accept this as a cause? Is it not rather an accompaniment of the disease? My own belief is that the source of polypi is in one of the accessory cavities. In the large majority the ethmoid cells are at fault; in a small proportion the antrum and perhaps the frontal sinus are the source of the growth. The starting point is in an inflammatory process; when this occurs in one of the closed cavities the process takes on something of a myxomatous character. The membrane becomes thick and of a soft gelatinous consistence; this is pressed out as it were from the cells as the result of intracellular pressure, and makes its appearance in the nasal cavity in the form of a polypus. This degeneration also makes its appearance by extending to the membrane covering the middle turbinated bone, which now becomes a new seat for the attachment of growth. In this way I think we find in the ethmoid cells the favourite locality for the development of polypi, by an inflammatory process but not by suppuration. Pus formation in these cavities I believe to be a sequence or result of the polypi, either from retention of secretion or possibly as the later stage of the inflammatory process involving the lining membrane of the sinuses.

IX.—Professor Moritz Schmidt, M.D.,

Frankfort-on-Maine.

I believe that for the origin of polypi an irritation of the mucosa is necessary, be it either through chronic rhinitis or through empyema of the accessory sinuses, or through disease of the bones (this is rare), or through foreign bodies, the commonest form of irritation. Hypertrophy is always present, and acts by at present unknown channels.

X.—W. H. Daly, M.D.,

Pittsburgh, U.S.A.

Dr. Daly said with regard to Dr. Woakes's theory, that, in his opinion, to say that necrosing ethmoiditis was the cause of polypi was to put the cart before the horse, and in fact he was not at all sure that this particular horse should be found properly in the vicinity of this cart at all. That inflammatory degeneration of underlying bone either of a caseous or myxomatous character would follow as a result of a long continued presence from nasal polypus, say for three to ten years, there can be no doubt; this can be demonstrated by grasping the diseased bone beneath the polypus, which breaks down and comes away with a crepitation and fracture quite distinct from healthy bone. Often, though, in our desire to be considered erudite, "seek we high for things close by," so he took his chance of being considered commonplace in saying we need seek no further for a predisposing cause than prolonged acute rhinitis. He had frequently observed in these cases of a few weeks' standing a baggy fold or reduplication of mucous membrane caused by too free a use of the handkerchief to eject suspected mucus, when in reality the nose was blocked by engorged tissue, and more than once had prepared the patient's mind for the surgical reduction of the incipient polypi; these had, however, disappeared with the attack. During twenty years he had not seen benign antral disease as a concomitant or precursor of nasal polypus. He desired to qualify this by saying that in cases of antral disease becoming malignant nasal polypi frequently developed, but the biological examination revealed them to be also malignant.

XI.—J. N. Mackenzie, M.D.,

Professor of Laryngology Johns Hopkins University, Baltimore, U.S.A.

Dr. Mackenzie expressed his adhesion to the inflammatory view of the etiology of mucous polypi. He did not consider Woakes's views correct; caries might occur, but not necrosis.

XII.—David Newman, M.D.,

Surgeon Glasgow Royal Infirmary.

Dr. Newman said œdema of the nasal mucosa and hypertrophic conditions acted as predisposing causes of polypi. They were never myxomatous, and contained water and serum albumen. A predisposition existed in certain individuals due to fibrosis of the submucous tissue.

XIII.—Richard Lake, F.R.C.S.,

Mr. Lake said he considered mucous polypi to be an outcome of hypertrophic rhinitis, and that the polypi were

histologically identical with the hypertrophic tissue; he had cut a large number of these growths, and never had he seen either a myxoma or an œdematous fibroma; in fact, fibromata which occur not infrequently in the naso-pharynx and posterior end of the lower turbinated bone and hang free into the naso-pharyngeal cavity, do not become markedly œdematous. There is no comparison possible between aural and nasal polypi. In children the engorged mucosa is not truly hypertrophic but is caused by the presence of adenoid vegetations, which, obstructing respiration, prevent the suction action necessary for the commencement of polypi.

XIV.—P. Watson Williams, M.D.Lond.,

Physician for Diseases of the Throat, Royal Infirmary, Bristol.

Dr. Watson Williams referred to the confusion existing in the conception of the term "mucous polypus," and said that, inasmuch as the myxoma of the nasal mucosa is excessively rare, it might be excluded in the present discussion, and in his remarks he would refer only to the common œdematous fibroma of the nose. Professor Zuckerkandl had found inflammatory changes in the deeper layers of the periosteum and in the bones from which polypi sprang in many instances, and had drawn attention to spicules of new bone that were found. The speaker had himself observed such new bone formation, and he believed that the spicules were really what were felt in some cases, the so-called rough or bare bone said to be detected by the probe. He had also observed formative and rarefying osteitis in the base of polypi. He believed in Hopmann's theory of polypoid formation from vascular obstruction.

XV.—A. W. de Roaldes, M.D.,

Surgeon-in-Chief Eye, Ear, Nose, and Throat Hospital; Professor of Otology and Laryngology Polyclinic School, New Orleans, U.S.A.

I will limit myself to a point of racial pathology which, maybe, adduces arguments in favour of the views of some of us on the etiology of this disease. Nasal polypi are very rare in the negro races. What is the reason? The black race owes apparently its immunity to the roomier cavities with better drainage and their diminished liability to acute rhinitis, not being of the neuro-arthritic type like the white races. That mucus polypi are concomitant with suppuration of the accessory sinuses must be admitted, but it is less common than is supposed. In regard to necrosis of the turbinated bone, it is certainly frequently met with as a result of syphilis in the negro, but it is never productive of polypi.

Replies.

Drs. Guye, Luc, and McBride briefly replied. The latter said he thought Dr. Hill took a false position, and that he was much interested in Dr Bosworth's explanation of ethmoidal disease; and also that polypi receiving support from other structures did not interfere with the gravitation theory.

THE REPRESENTATION OF ABDUCTION OF THE VOCAL CORDS IN THE CEREBRAL CORTEX.

By J. S. RISIEN RUSSELL, M.D., M.R.C.P.,

Assistant Physician and Pathologist to the Metropolitan Hospital.

The author first alluded to the fact that others who have preceded him in this field of experimental research have been able to demonstrate the existence of a focus in the cerebral cortex, excitation of which results in adduction of the vocal cords. This was first shown by Krause in the dog, and was confirmed in the dog, cat, and monkey by Semon and Horsley, who, in an elaborate investigation, discovered many new points of great importance with regard to the central innervation of the larynx. These observers were unable to find any representation of abduction of the vocal cords in the cortex of the dog and monkey, and attributed its occurrence in the cat to some peculiarity associated in some way with the special respiratory requirements of this animal. But certain considerations suggested to the author that it was probable that a focus for abduction of the vocal cords exists in the cerebral cortex even in animals in which other observers had failed to detect it. Among these considerations was the fact that Semon and Horsley obtained abduction from the cortex of the cat, and further, that they demonstrated the existence of a focus in the internal capsule, excitation of which resulted in abduction of the vocal cords in the dog and monkey. Unless it were assumed that these experimenters were exciting some abductor centre in the region of the basal ganglia, which was extremely unlikely, the most natural supposition was that they were stimulating excitable fibres of the internal capsule which were connected with a certain part of the cerebral cortex, the grey matter of which, if stimulated, would yield abduction of the vocal cords.

It seemed not unlikely that this focus in the cerebral cortex might be situated close to that from which adduction of the vocal cords had been obtained, but that the adductor representation was so powerful that it was impossible to obtain a stimulus at once strong enough to evoke abduction of the cords, and delicate enough not to spread to and evoke from the more powerful adductor centre a liberation of energy capable of overpowering the effect from the less powerful abductor centre. In order to make it possible to demonstrate the existence of an abductor focus in the cortex under such circumstances it was necessary to lessen or abolish the adductor effect on the vocal cords, and the simplest way that suggested itself as likely to effect this was to divide the adductor fibres in one or both recurrent laryngeal nerves, leaving intact the abductor fibres.

This led to his making use of a former observation, in which he found that it was possible to separate, in the recurrent laryngeal nerve, the abductor from the adductor fibres, so that stimulation of one bundle resulted in abduction of the vocal cord and of the other in adduction. The adductor fibres were accordingly separated from the abductor in one recurrent laryngeal nerve, and the former bundle of fibres was then divided transversely, leaving the latter bundle intact; after which it was found possible to evoke abduction of vocal cords in the dog on excitation of the prorean convolution in front of and below Krause's adductor centre, the two foci being separated by the supraorbital sulcus. The division of the adductor fibres in one nerve was found sufficient to allow this result to be obtained, and, under these conditions excitation of the prorean convolution of either cerebral hemisphere resulted in abduction of both vocal cords, while excitation of Krause's adductor focus naturally only resulted in adduction of the vocal cord, the adductor fibres of whose recurrent laryngeal nerve were intact. The advantage of being able to leave the adductor fibres in one nerve intact was great, as it allowed abduction and adduction of the vocal cord to be evoked on excitation of their respective cortical centres at the same stage of ether narcosis.

Having once determined the existence of this abductor focus in the dog in the way described, it became possible to evoke the movement in some dogs without adopting the preliminary measure of dividing the adductor fibres of one recurrent nerve. In such animals it was found that the movement of abduction could be best evoked from the anterior composite gyrus, below the adductor centre and slightly behind the point on the prorean gyrus, from which it could be obtained when the adductor fibres of one nerve had been divided. Both foci were, however, close together, with the supraorbital sulcus separating them.

On turning his attention to the cat, he found, in confirmation of Semon and Horsley, that adduction of the vocal cords was sometimes to be obtained on excitation of a point just above and in front of the anterior end of the coronal fissure, corresponding to that discovered by Krause in the dog, but that it was more frequently to be obtained when the coronal convolution was stimulated a little posterior to its point of junction with the anterior composite gyrus.

With regard to abduction in the cat, he found that it was possible to evoke this movement on excitation of a point on the prorean gyrus corresponding to that from which he was able to obtain the same movement in the dog after division of the adductor fibres in one recurrent nerve. The cat differed from the dog in that this movement could always be obtained from the prorean gyrus without previous section by the adductor fibres of one recurrent nerve.

The focus on the prorean gyrus from which abduction was

obtained in the cat, was shown to be quite distinct and widely separated from that from which Semon and Horsley were able to obtain the movement in this animal. The probable nature of the focus determined by these observers was discussed, and the author pointed out that he had found a similar focus in the dog also. Excitation of this point on the lower border of the hemisphere, in the anterior composite gyrus, just above the rhinal fissure, resulted, in his hands, in arrest of the vocal cords in abduction both in the cat and dog. Further, in both animals, there exists a focus on the anterior composite gyrus, in front of that last described, and just behind the junction of the lower end of the supraorbital sulcus with the rhinal fissure, from which he was able to arrest the vocal cords in adduction, that is, in the expiratory phase of their excursions.

The paper was illustrated by lantern slides of the cerebral hemisphere of the cat and the dog, and by others of tracings of movements of the vocal cords obtained by means of an india-rubber bag inserted between the cords, communicating with a Marey's tambour by means of an india-rubber tube, and the writing point connected with the tambour recording on the blackened surface of a Hürthle's kymographion.

The President congratulated Dr Risien Russell upon his splendid results, which so much extended our knowledge of the cortical innervation of the larynx, and which had been obtained by such ingenious methods. Dr. Russell had succeeded, where Professor Horsley and he (the speaker) had failed, because he had been able to exclude the preponderance of the adductors, which was such a marked peculiarity of the entire motor laryngeal nerve apparatus, through dividing the adductor fibres of the recurrent laryngeal nerve—a proceeding the possibility of which had also been shown in a previous paper by Dr. Russell and the results of which he had now most ingeniously and happily applied to his present investigations. That abduction must be represented in the cortex had, of course, been conclusively shown by the fact that he (the speaker) and Professor Horsley had obtained well-marked abduction from the internal capsule, which was a mere transit station, but the merit of having actually discovered the abductor centres in the cortex undoubtedly belonged to Dr. Russell. In conclusion, he wished to ask Dr. Russell, in view of the great practical importance of the subject, whether he had ever been able to produce isolated movements of the opposite vocal cord (adduction or abduction) by stimulation of the corresponding areas in the opposite hemisphere.

Dr. Watson Williams, in congratulating Dr. Risien Russell on his paper, referred to a case which had recently come under his observation at the Bristol Royal Infirmary. The patient was under the care of his colleague, Professor Shaw, and was suffering from right-sided Jacksonian epilepsy. In the course of very frequently recurring convulsive attacks, the patient developed absolutely complete motor aphasia. Without any sensory aphasic symptoms the patient, while perfectly intelligent, was unable to utter a single word, although he could utter inarticulate sounds. It occurred to the speaker that this was an especially interesting case as bearing on the bilateral character of the cortical centres for vocal cords. He most particularly noted the movements of adduction and abduction, and was able to state that in this case they were perfect, and then, if he was correct in believing that the left speech centres were completely inactive, the clinical observation accorded with the experimental results obtained by the President and Dr. Risien Russell, who had found that the adductor and abductor cortical centres were invariably bilateral in action.

Dr. Risien Russell, in reply to the President, said he had not found any unilaterality in the cortical centres of the vocal cords.

ON THE VIBRATIONS OF THE VOCAL CORDS.

By ALEXANDER HODGKINSON, M.B.,
Lecturer on Diseases of the Throat and Ear, Owens College, Manchester.

If sand is sprinkled on the surface of a vibrating plate or membrane, it leaves those areas where the vibrations are the greatest, and passes to those where the vibrations are of less amplitude, finally coming to rest on certain well-marked lines or areas termed nodal areas, or parts where the vibrations are absent or at a minimum. From the arrangement of the sand, therefore, or the pattern which the sand forms on such plates during their vibration, the change of form which the plate undergoes during such vibration may be inferred. It is the object of my communication to show that the same method may be employed to demonstrate the vibrating and nodal areas of the vocal cords in man; and also to shortly describe some results which have been obtained by its employment in the normal larynx and also in certain abnormal conditions of the cords. The following is the method employed: A powder consisting of finely-pulverised indigo is blown into the larynx by means of a curved insufflator, indigo being selected on account of its insolubility, conspicuous colour, and lightness. Whilst insufflating the powder, which should be done with the aid of the laryngoscope, the individual is instructed to make an inspiratory sound in order to abduct the cords, and so ensure the distribution of the powder over their whole surface. Though the powder causes little or no irritation as a rule unless used in needlessly large quantities, it is well to caution the individual against coughing, clearing the throat, or swallowing. Where irritation is occasioned by the insufflation, a weak solution of cocaine in form of spray may be used, though usually it is not found necessary.

On now examining the larynx, if the powder has been used in suitable quantity the cords will be seen thinly sprinkled with indigo. The individual is now directed to make a sound, and the effect of the vibrations of the cords on the insufflated powder is noted. These effects are found to vary according to the register (chink or falsetto), the pitch, the loudness, and the physical condition of the cords, that is, healthy or diseased. The best results occur when the powder, having passed into the windpipe, appears on the cords mixed with mucus, such small masses of coloured mucus moving much more freely over the surfaces of the cords than powder alone.

As I hope on another occasion to give the special results obtained under varying conditions of register, pitch, and intensity, and also in certain diseased conditions of the cords, I shall now only allude in general terms to some of these results. One feature common to all cases on the commencement of vibration of the cords is the immediate movement of the particles of indigo away from the free edges of the cords in the form of a dark line such line being at first parallel with the edge of the cord, but rapidly becoming convex towards the outer or ventricular side, demonstrating the well-known fact that the amplitude of the vibrations of the cords decreases towards their extremities. In the case of normal cords—that is, cords free from catarrhal changes, and with a chest note of medium pitch—the wave line of indigo passes outwards from the free edges of the cords, outwardly convex, and extending in length from the anterior commissure to a point a little posterior to the vocal process. Powder alone has a tendency to adhere to the cords, as its distance from the edges increases, and becoming arrested might lead to the supposition that even with chest tones a nodal line existed in the middle of the cord parallel to its free edge. This is, however, disproved by the fact that when the cords are healthy and the powder mixes with mucus it passes outwards until it reaches the base of the cord. If instead of a tone of medium pitch a lower note is sounded, the wave line of indigo extends posteriorly further beyond the vocal process and becomes less curved posteriorly, pointing to an increase in the amplitude of vibration of the posterior ends of the cords and the participation of the cartilaginous portions of the cords in the vibration. This inference is supported by the fact that in the case of low notes the mucus is vibrated posteriorly along the base of the cords to the anterior commissure, that is from a point of great amplitude to one of less. In the case of chest tones with normal cords, therefore, it will be noticed that the whole of the cord is cleared of mucus or powder, the latter moving from the free edge of the cord in a line curved towards its base. The whole cord from edge to base therefore in such case is in a state of vibration, the amplitude of such vibrations being greatest at the central point of the free edge of the cord and diminishing towards its extremities and base—a result which might be expected from the anatomical arrangement of the cords, and is borne out

by the experiments of others (Oertel). In the case of falsetto tones and normal cords the result varies. The powder rapidly forms the wave line parallel to its free edges, but instead of the line being markedly curved, it remains almost parallel with the free edge excepting at its extremities. On the arrival of the wave line to near the middle of the cord, that is, at a line intermediate between the edge of the cord and the ventricle, its onward movement becomes arrested, forming a dark line parallel with the free edge of the cords. From the above results we see that in the case of falsetto tones the whole length of the edge of the cord vibrates, and with nearly equal amplitudes, but that only the narrow portions of the cord near the free edges vibrates, with slighter movement in the portion of the cord near the ventricle, these broad vibrating areas being separated by a nodal line parallel to the free edge. The result in this instance seems to confirm the results previously determined by Oertel, Kaschkakoff, and others. I should like to draw attention to the extremely ingenious arrangements by which Professor Oertel demonstrates the actual movements of the vocal cords during vibration, thus enabling him to make extremely valuable contributions to this branch of laryngology. An account of his researches appears in the *Münchener medicinische Wochenschrift*, March 12th, 1895, and an abstract of the article by Dr. Haring appears in the *Medical Chronicle* for July, 1895.

Time will not allow of my describing the modifications which occur in the above results by variation in pitch, loudness, or disease. To give some idea of the marked effect of morbid condition on the result, I may perhaps be allowed to call your attention to a case of paralysis of the abductor muscle of the left side, the cord being immovable in the adducted position. Both cords were slightly catarrhal, and the voice low and husky. Indigo was applied, and, on phonation in a low tone, a dark wave line of indigo, extending from anterior commissure to far beyond the vocal process, formed on the right or unaffected cord, whilst on the paralysed cord a short curved wave line formed, extending from the anterior commissure to a point considerably in front of the vocal process; thus showing that whilst the unaffected cord vibrated throughout its entire length, little more than half the paralysed cord vibrated. The value of such results for diagnostic purposes remain to be tested.

SOME POINTS IN THE ANATOMY AND PHYSIOLOGY OF THE LARYNX.

By C. R. Illingworth, M.D.

Dr. Illingworth read a paper in which he said he wished to point out fallacies in the theory that the larynx was a stringed instrument; in point of fact it was like a cornet or trumpet. He also asserted that the falsetto voice was produced in the larynx, the larynx being analogous to the lips during the act of whistling; also that the cords were acted upon by the crico-thyroid and crico-arytenoid muscles at the same time.

A Substitute for Electrocution.—Electrocution does not seem to be all that the fancy of our Transatlantic cousins painted it as a means of eliminating criminals from the social *organismus cito, tute, et jucunde*. An Ohio physician has recently suggested the lethal chamber as a substitute. The room in which the condemned man is sleeping his last sleep is filled with carbonic acid gas, and he is no longer stretched upon the rack of this rough world.

The following members of the medical profession have during the current year been selected as members of the Order of the Hospital of St. John of Jerusalem in England, or enrolled as honorary associates. *Knights of Grace:* William Ezely Thorne, M.D.; Charles Edward Milnes Hey, M.R.C.S.; Sir William Overend Priestley, M.D., LL.D.; Deputy Inspector-General Edgrave Ninnis, M.D., R.N. *Honorary Associates:* Professor William Robert Smith, M.D.; Walter Edward Hacon, L.R.C.P., M.R.C.S., of Christchurch, New Zealand; James Edward Neild, M.D., of Melbourne, Victoria; Charles Cotton, M.R.C.P.E., M.R.C.S.; Andrew Clark, F.R.C.S.; Arthur Trehern Norton, F.R.C.S.; Charles Fox Goode, M.R.C.S.; Reuter Fuerbich Roth, M.R.C.S., of Sydney, New South Wales; John Edward Squire, M.D.; Alfred Crondson Tunstall, M.D.

NOTES ON A CASE OF ADDISON'S DISEASE, RECOVERING DURING THE ADMINISTRATION OF EXTRACT OF SUPRARENAL BODY.

By E. Lloyd Jones, M.D.Camb.

The fact that Addison's disease has not yet been cured by the administration of suprarenal material is, I believe, sufficient excuse for the publication of the following rather curious case:

Mrs. X. came to consult me on April 26th, 1895, complaining of frequent sickness and of great weakness, with discoloration of the skin. Illness first commenced about two years ago, when she was seized with acute pain in the back, diarrhœa and vomiting; began to get brown soon after, and has suffered from sickness and fainting attacks ever since, with some remission of the symptoms in the winter of 1893. (She believes that she became browner twenty-four years ago, when her first child was born.)

Sickness began to be very troublesome in May or June, 1894, and has continued ever since. She has suffered from more severe attacks of faintness since last summer. At first she used to "feel a bit faint," but of late "goes quite off," and has been found in an unconscious state; she has not been free from sickness or faintness for a single day for some months; she is sick two or three times every day, at all hours, often before rising in the morning or in the night. There is much pain in the back. The face is very brown, but does not show any emaciation; the conjunctivæ are very white; the lips pale, with brown discoloration along their lines of contact. There is very marked pigmentation on the neck, axillæ, anterior aspect of the elbows and wrists, nipples, about the umbilicus, and a very dark band extends round the waist and from the umbilicus to the pubes. Tongue fissured and pigmented at the side. Pulse 116 per minute very small, very soft. Heart dulness natural; apex beat natural position, soft systolic murmur at base and at apex and audible (some murmur?) in neck. Lungs natural. Stomach displaced downwards; lower curvature reaches very nearly to the pubes. Grasp exceedingly weak.

She was ordered peptonised milk at frequent intervals; suprarenal tabloids (Messrs. Burroughs, Welcome, and Co.) three per diem; and iodide of mercury.

April 30th. The number of tabloids increased to twelve; taken none of the mercurial iodide; is better; has not been sick to-day for the first time for months.

May 1st. No more sickness.

May 4th. A little sickness the last few days, felt faint at times. Ordered vin. ipecac., tinct., stroph., ää mij. aq. ad 3ij. secundis horis. Has taken no iodide.

May 7th. Pigmentation much less. Hands and arms appear quite natural except over right antecubital region.

About this time, after the sickness had become less frequent, she began taking small doses of perchloride of mercury, iodide of sodium, and reduced iron; and the preparation of suprarenal was changed. Messrs. Benger prepared for me a 1 in 2 extract, and of this she took, and still takes, one ounce and a-half each day. She has left home now for a holiday. She has not been sick for a month, and can eat almost any food. The excessive pigmentation has quite disappeared, and she appears to be practically well.

I do not wish now to comment upon the case, or to make suggestions as to its nature, but record it in the hope that others may be induced to give the remedy a trial. Four or five years ago I prepared some extract of suprarenal, but the case for which it was got ready proved eventually to be of another kind from what we had suspected. Dr. Rolleston, in his valuable Goulstonian lectures on the suprarenal capsules, has recently advocated the use of suprarenal material, but so far as I am aware, no case has yet given a successful result.

Mr. William Berry, who died at Bowden, Cheshire, recently, has bequeathed a sum of £30,000 to charities. To the Manchester Infirmary he leaves £10,000 to Southport Convalescent Hospital, £2,000, and to the Royal Eye Hospital, £1,000.

ANNUAL MUSEUM.

[Concluding Notice.]

Messrs. Southall, Brothers, and Barclay (Birmingham) had an interesting exhibit divided into four sections as follows:—Drugs and Pharmaceutical Preparations, Sanitary Specialities, Apparatus for the Use of Medical Men and Students, and Educational. Standardised Belladonna Preparations, of which an account is given in the recently published report of Dr. Attfield to the General Medical Council, were a leading feature of the first section. They also showed specimens of their Bland's Pills, Pearl and Sugar Coated, and of the special brands of Castor Oil and Cod Liver Oil which they manufacture. Amongst new remedies, etc., several useful forms of Granular Effervescent preparations were shown, including a Granular Effervescent Citrate of Colchicine. The sanitary section included the Improved "Sanitary Towel" of which mention has recently been made in this Journal, and various sanitary appliances for use in the nursery and accouchement chamber; the Ureometer and other urine-testing apparatus, as also bacteriological apparatus of the latest type. The interesting character of the exhibit was in no small measure enhanced by a series of beautifully executed photographs of Surgical Instruments discovered in the ruins of Pompeii. These reproductions are, we understand, original, and were only obtained by the sanction and under the direction of the Italian Government.

The Standard Malt Extract Company, Limited, 23, Billiter Street, E.C., showed their Malt Extract, of the great diastasic power useful in cases of consumption, malnutrition, pulmonary, and kindred complaints; Standard Malt Extract with Cod Liver Oil, containing 25 per cent. of Norwegian cod liver oil; and Standard Liquid Malt Extract.

Messrs. G. and G. Stean, exhibited Narissa which is a preparation in which all the constituents of a normal food are contained in physiological proportions. These are carefully blended, after being subjected to a process of cooking, and it appears as a homogeneous powder, of a light brown colour, which can readily be converted into a highly palatable food or beverage, equally suited for infants or grown persons, whether in health or suffering from dyspepsia or other functional disturbance of the process of nutrition. It is rich in albumen (21 per cent.), in fats, and in phosphates, and as the proportion of insoluble starch has been reduced to a minimum it is readily and completely digestible. It can be taken as a beverage in lieu of tea, coffee, cocoa, meat essences or meat extracts; in larger quantities it can be used as a substitute for porridge or other farinaceous food. It is exceptionally palatable and does not pall on the taste. Pepsalia is intended to be used as a substitute for table salt, which it closely resembles in appearance and taste. The crystals of salt contain particles of the most active digestive ferments obtainable, in a stable form, devoid of any disagreeable taste or odour. It is extremely active, and, when mixed with the food during mastication, it forthwith initiates the changes which precede absorption and assimilation. Pumiline, the aromatic essential oil distilled from the snow-grown pine of the Alps. As an inhalation and internally it is largely used in the treatment of bronchial, throat and lung catarrh, with the most gratifying results. Pumiline is also employed in the form of extract for baths, or as a liniment for the relief of rheumatic affections of joints, myalgia, neuralgia, etc.; as an ointment, and also in the form of jujubes and plasters. Zalone (pumiline) Lozenges, prepared with a basis of chlorate of potash, milk, sugar, gum arabic, and liquorice. Each lozenge contains one minim of pumiline essence and one minim of menthol. An agreeable and efficient remedy for irritation of the throat, bronchial catarrh, etc. Neena Breast Shields. These are convenient contrivances for supporting the breasts for medical or other purposes. They are made of an impervious, light material, perforated to allow of ventilation, and capable of methodical cleansing without detriment to their shape.

Messrs. Thos J. Syer and Co. (45, Wilson Street, Finsbury, London, E.C.) exhibited their Patent Combined Consulting Room Couch and Operating Table, shown in duplicate to illustrate the various uses of the same; Improved Consulting Room Couch with head support for throat examinations, etc.; Invalid Cushion; Registered Stationery Case, with calendar and drawer and lock and key. Combined Tool Cabinet and Work Bench, suitable for working out experiences or inventions; the upper part is fitted with various tools and appliances, and the under part can be arranged to hold models, apparatus, or books as required, the whole when closed forming a piece of furniture, and having the appearance of a bookcase or cupboard. Patent Periodical or Newspaper Rack for waiting rooms.

Brigade-Surgeon Lieutenant-Colonel R. Temple-Wright, M.D. (Jersey) showed the Anglo-Indian Bungalow, designed by himself, showing plan, section, elevations, and site plan. The Milver Ambulance Cart Models, also designed by himself. The object of the inventor is to enable the sick and wounded on field service to be carried safely and comfortably, even with cavalry, if necessary. Ordinary invalids can be carried in the ordinary ambulance carts and waggons, but the Milver cart is an attempt to transport special patients without pain or injury, even if they suffer from a compound fracture or an equally serious medical case. This system has been adopted already in India on railways, so the author suggests its use also on ships and on military transport carts.

The Viking Food and Essence Company exhibited their Food Specialities and Delicacies for Invalids.

Messrs. Warrick, Brothers (Old Swan Lane), showed Warrick's Iron Jelloids, a palatable sweetmeat form of Bland's pills.

Messrs. John Weiss and Son, of Oxford Street, W., showed Lithotrites and Evacuating Appliances and Cannulas, by Thompson, Bigelow, Freyer, Keegan, Morgan, etc. Vaginal Hysterectomy Speculum, Broad Ligament Clamps and Needles; Suture Catcher and Pessary and Tube for Vesico-Vaginal Fistula or Divided Ureter, by F. B. Jessett. Murphy's Anastomosis Buttons including extra large one for resection of rectum; small Secondary Battery, Working Drills, etc., for Bone. Large and Small Cautery, Points and Loops, Hand Lamp or Small Light for bladder and throat illuminations, etc. Carter Braine's Modification of Junker's Chloroform Inhaler; the shape and size of bottle is such that there is no danger of the bottle being upset when in use, and of the chloroform being pumped into the patient's mouth. Hewitt's Modification of Ormsby's Ether Inhaler, with a hot water chamber beneath the sponge, which leads to more rapid etherisation, and prevents the sponge freezing in cold weather. O'Callaghan's Modified Paquelin Cautery, with Safety Benzine Bottle and more compact points, etc. Dr. G. Stoker's Appliances for use in the "Oxygen Cure" of Ulcers, etc. O'Dwyer's Intubation Instruments for Children and Adults; Aseptic Syringes for Injecting Antitoxin; Portable Sterilisation Instruments for private use, dimensions 7 ins. by 2½ ins. by 1¼ ins.; set of 12 Ear Instruments fitting one metal handle in metal case 4 ins. by 2 ins. by ¾ ins.; Eye Instruments, various kinds, in aluminium handles; Amputating Knives, Scalpels, etc., in handles of steel, gold, silver, and aluminium; Instruments generally, all metal, and therefore aseptic; sets of Pocket Instruments and Hypodermic Syringes in aluminium cases, lessening size and weight; various Instruments for Throat and Nose, Gynæcological Operations, etc.; and Batteries, etc.

Messrs. Willows, Francis, and Butler (101, High Holborn, W.C.) exhibited on their stand Extractum Corticis Cerebri (Brain Extract), which is a whitish powder prepared from the cortical portion of healthy brains, and said to contain, in concentrated form, essential constituents of the nerve centres. Suprarenal Preparations: It is said that the administration of suprarenal extract in doses of 1 grain, or 15 minims of the tincture, causes distinct arterial contraction and corresponding rise of blood pressure. Pituitary Body Preparations and the Fluid Extract, Elixir, and Tablets are convenient forms for administering the product of the functions of the pituitary body. Thyroid Extract, extracted from fresh thyroid glands, and uniform in strength. Pancreatic Extract: 1 minim equals 1 grain of the fresh substance. Orchitic Extract: 1 minim equals 1 grain of the fresh substance. Liquor Calcis Iodinatæ, a recently discovered compound of lime and iodine: It is preferable to tincture of iodine for injection into the enlarged thyroid gland in goitre and into strumous glands of joints.

Messrs. John Wright and Co. (Medical Publishers and Printers, Bristol) exhibited their well-known *Medical Annual*

from the commencement of the work, and a numerous selection of their other more recent publications, amongst which were their *Improved Visiting List* for 1896, the distinctive features of which are that names require writing but once a month instead of weekly, and the small compass within which the whole is contained. For this, the third, edition several minor improvements have been added, suggested by extended experience, and its elegance of appearance is increased by gilding the edges. The same list is also issued by request for the first time in perpetual form for any who may prefer this style. Lists in this shape can be specially bound to any thickness desired. The various account books for medical practice made by the firm, including Jefferson's single book system, were also shown, together with an assortment of medical charts for the pocket or otherwise, and were all worth inspection. Amongst the books issued recently are Mr. Harry Fenwick's *Epitome of Modern Urinary Surgery*; Dr. Watson Williams's *Diseases of the Upper Respiratory Tract*, and a monograph on *Eyesight and School Life*, by Mr. Simeon Snell, all well illustrated, and a remarkable and somewhat eccentric pamphlet on *The Eye in Relation to Health*, by a Chicago physician, Dr. Chalmer Prentice. Especially interesting at the present moment, both in view of the late Indian Commission and the agitation in some other countries on the subject, and the authors' almost unique experience in dealing with the disease, is Drs. Hansen and Looft's *Leprosy*, just issued, with typical photographs and coloured plates.

Wyleys, Limited (Coventry and Birmingham) exhibited their principal specialities in the form of Compressed Pellets, Hypodermic Pellets, Gelatine-coated Oval Pills, Flexible Gelatine Capsules (containing liquid and solid drugs), Nasal Bougies, Jelly of Cocaine and Thymol in flexible tubes, Malt Extract Combinations, Liquid Extracts, Non-alcoholic or Glycerine Tinctures, etc. Hæmatinic Ferruginous Pellets, a combination of reduced iron and chocolate, are intended as a palatable means of giving iron to children. A new form of Ointment Tube, described by the firm as for "ophthalmic use," consists of a flexible tube with a perforated wooden cap, blunted at its apex, and through which a minute amount of any special ointment can be forced out and directly applied to the eyelid. Codeia in pastille form consists of codeia jelly, made of such a consistence that it can be supplied in lozenge-shaped masses, each disc being of a definite weight and containing a definite amount of the alkaloid. Tropels, a new form of medicated lozenges, are made by pressure from the dried materials, the various drugs of the pharmacopœial lozenges being thus massed together; the tablets thus formed are supplied without name, and it is claimed for them that they can be manufactured much more economically than lozenges made by the ordinary process. The firm also show their Cachets for the tasteless administration of powdered drugs, such cachets being tasteless and soluble and formed of rice flour and gum.

Messrs. Parsons and Johnson wish us to state that the exhibit which they recently exposed to the museum at the annual meeting of the Medical Association was that of Messrs. Seabury and Johnson, of New York.

The 22nd annual street collection in connection with the Hospital Saturday Fund Association, held on July 13th, has realised a sum of £2 985, being a decrease of £1,842 upon the collection of 1894. The falling off is attributed to the greatly increased number of street collections as compared with previous years. The workshop collection on Saturday, the 10th inst., amounted to £6,043.

The Treatment of Inebriety.—In the annual report of the Walnut Lodge Hospital for Inebriates (U.S.A.) Dr. T. D. Crothers gives a record of 66 patients who had been treated in the institution previous to 1895. Of this number 21 have died after relapse as the result of excesses; 16 are living orderly temperate lives, and may be considered cured; 4 are insane, 10 are hopeless inebriates, and 15 are subject to occasional lapses from the path of temperance. Of 38 inebriate patients treated in 1894 no fewer than 48 had previously been in other similar institutions. The number of relapses after the "gold cure" is said to be increasing, and Dr. Crothers finds symptoms of acute insanity common in such persons.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

REMOVAL OF LAMINARIA TENTS.

I have noticed on nearly all occasions when the subject of dilating the os uteri by laminaria tents is under discussion that someone complains of the great difficulty in removing the tents which have become swollen behind the tight os internum. I find a good method to avoid this is to enclose the tent in a quill open at both ends, and split down the side. This dilates the parts in an even manner, and is easily withdrawn. I have no doubt a celluloid covering similar to the quill and perforated to allow a more free entrance of moisture would act better, but I have not tried it. The tent should be dipped in antiseptic solution immediately before use.

W. Watson Pike, F.R.C.S.I.,
Belfast. Surgeon-Major, A.M.S.

PRURITUS ANI SUCCESSFULLY TREATED BY APPLICATION OF UNGUENTUM CONII.

The affection almost invariably made its appearance at the onset of a menstrual period, in a girl aged 16. It was worse at night and when warm in bed, and so painful as to prevent any sleep.

The girl had been treated for eczema of the eyelids when younger; there had been considerable constipation recently, and, on one occasion, there was somewhat sharp pain at the anal orifice while at stool, resulting in a streaking of the fæces with blood. Careful examination failed to disclose any evidence of piles or of a fissure of the anal margin, though there was a very painful and sensitive spot, pointing to the possible presence of the latter. Arsenic had failed to relieve the pruritus on previous occasions.

Concluding that the cause probably lay in local irritation from the lochial discharge, and perhaps reflexly from ovarian disturbances at the onset of the menstrual period, I ordered potassium bromide internally, the careful washing of the parts with soft water, and the local application of unguentum conii, made from the succus (not from the *B.P.* extract), with lanolin. This was supplemented by an occasional dose of cascara sagrada to keep the motions soft.

The result was most satisfactory, as perfect relief was given whenever the unguentum conii was applied, and after the third day of the application the pruritus ani entirely disappeared, while the anal fissure has presumably been cured, as no pain is felt at stool.

George Birdr,
Surgeon-Lieutenant, I.M.S., 4th Infantry, Hyderabad Contingent.

HYDATID OF THE LIVER: OPERATION: RECOVERY.

Three years ago M. J., a girl aged 9, was operated on by Dr. Weld, of Avenel, for hydatid tumour of the left lobe of the liver. She was previously tapped twice without ill results, but also without cure. She was seized one evening with severe dyspnœa, threatening death, through pressure on the heart. Dr. Weld incised the sac, stitching it to the lips of the wound, and draining. The mother cyst was not expelled, but a good recovery took place.

When I saw her on April 23rd, 1895—three years after the operation—I found her with a large hydatid cyst occupying the convex surface of the liver, and presenting at the margin of the thorax. She was in somewhat bad health from bronchitis, caused by the pressure of the tumour, and she was also only just recovering from a badly fractured elbow-joint.

A fortnight afterwards I made an incision below the rib margin, parallel with the fibres of the external oblique, and exposed the tumour, which lay tucked under the ribs. Owing to the thin state of the adventitious capsule I was unable to bring the tumour up to the wound margin after Lindemann's method. The anchoring ligatures cut through in attempting it, and a considerable quantity of hydatid fluid escaped into the peritoneal cavity, which, however, was well packed with sponges. On being turned on her side the cyst was soon emptied, for the most part clear of the peritoneum, and I was then able to bring the cyst into the wound.

The child made an uninterrupted recovery after the operation. She was well four weeks after, with the wound soundly healed, the scar being tucked almost out of sight beneath the rib's margin.

The feature of the operation was the absolute impossibility of following Lindemann's method of bringing the cyst well up before it was opened, owing to the delicate nature of its structural wall. This fact is also, in my opinion, the strongest argument which can be used in favour of the radical operation in this case. If tapping had been resorted to the escape of contents into the peritoneal cavity would have been certain, as the delicate adventitia would have collapsed after the withdrawal of the fluid to almost as small a compass as the cyst it contained, with the inevitable result of leakage into the peritoneal cavity.

If I had to operate again in a similar case I should most certainly do so through the pleura low down, where the hydatid, being immediately underneath, could have been simply and expeditiously sutured to the wound margin before the capsule was incised. The extra risk from the opening of the pleural cavity would be more than compensated for by the time saved and the less immediate risk to a patient in a delicate state. Moreover, in this situation the suturing of the two pleural layers would have been easily and speedily effected.

GEORGE FOX, M.R.C.S.E.,
Late Resident Surgeon to Sydney Hospital.
Euroa, Victoria.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

MATER MISERICORDIÆ HOSPITAL, DUBLIN.

SUCCESSFUL LIGATURE OF RIGHT SUBCLAVIAN AND COMMON CAROTID ARTERIES FOR INNOMINATE ANEURYSM.

(By CHARLES COPPINGER, M.D., F.R.C.S.I., Surgeon to the Hospital.)

A SOLDIER, aged 49, suffering from a large and thin-walled innominate aneurysm, which had caused dislocation forwards of his right clavicle, and which had defied the usual medical measures of treatment—namely, prolonged rest, potassium iodide, calcium chloride, etc.—is now under surgical treatment at the above hospital. His right subclavian and common carotid arteries were ligatured simultaneously three weeks ago, and both wounds have long since closed by first intention. Consolidation has not, however, taken place in the aneurysm, but its pulsation has become much less strong, while its walls have become perceptibly thickened by fibrinous deposit. The arteries of the right arm are, however, pulseless.

The distal operation for innominate aneurysm has been performed on three occasions only in Dublin: once by Mr. Conway Dwyer, of Jervis Street Hospital, and twice by myself. The first two patients are now well, and cured apparently of their disease, while the last promises fairly.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEAT JUICE.

IT is claimed for Vitalia Meat Juice that it consists of the albuminous and extractive constituents of British lean beef, and that it contains in solution 20 per cent. of coagulable solids, including a considerable proportion of uncoagulated albumen, soluble phosphates, and colloid iron. Analysis confirms the statement as to the amount of coagulable material, and further shows the presence of 6.6 per cent. of mineral constituents, of which nearly 5 per cent. is sodic chloride. The preparation also contains 0.25 per cent. chloroform, which is added as a preservative in addition to the sodic chloride. The use of chloroform as a preservative of materials to be used for nutritive purposes is not to be commended, and in many cases the presence of chloroform might be prejudicial to patients. In this preparation the amount of chloroform present is only about one half that present in the *Pharmacopœia* chloroform water, but even when the preparation is diluted in the proportion of a teaspoonful, the dose prescribed, to four of water the chloroform is quite perceptible. In other respects the meat juice is well made. The makers are the Vitalia Company, 1, Holborn Circus, E.C.

SOME NEW TABLOIDS.

MESSRS. BURROUGHS, WELLCOME AND CO. (Snow Hill Buildings, E.C.) have sent specimens of some recently introduced tabloids. Gregory Powder Tabloids contain a proportion of sodium bicarbonate in place of carbonate of magnesium. It is said that greater benefit follows the administration of this combination than of the ordinary pulv. rhei co. Tabloids of vinum ipecac. form a very convenient method of taking ipecacuanha; they contain in each tabloid the amount of ipecacuanha extract contained in 5 minims of the wine. Nasal Tabloids (Dr. Carl Seiler) are composed of bicarbonate, benzoate, biborate, and salicylate of sodium with thymol, menthol, etc. An antiseptic alkaline solution for irrigating the nostrils or gargling the throat in nasal or pharyngeal catarrh can easily be prepared by dissolving a tabloid in water.

COCOA EXTRACT.

THIS is a well prepared cocoa preparation giving a good infusion with agreeable flavour. It has had about 30 per cent. of the cocoa butter naturally present in the bean removed, and is thus rendered more acceptable to persons having a tendency to be dyspeptic. The analysis shows 33 per cent. of fat and 6.1 per cent. mineral constituents. It does not contain any admixture of starch or sugar. It is prepared by W. Teetgen, 52, Old Kent Road, S.E.

B. O. S. WHISKY.

SAMPLES of this whisky have been submitted to us for examination by Messrs. Pease, Son, and Co., Darlington and London. It is said to be a blend of the finest Scotch whiskies matured by storage in sherry casks. Analysis shows that it is a whisky of good character, strength, and flavour, and has evidently been carefully blended. It contains 47.1 per cent. of alcohol, by measure equal to 17.4 under proof; 0.098 per cent. solid contents, and 0.017 per cent. acidity as acetic. Its specific gravity is 940.4.

IMPROVED ETHYL CHLORIDE BULB.

THE latest improvement on Dr. Bengue's instrument for producing ethyl chloride spray is to have the bulb with both a curved and straight neck. This arrangement enables the operator to use either shape according to the operation to be performed, and also to have another spray ready if one should become stopped. The curved spray is closed with a metal screw cap. The straight one by a closed capillary glass tube, which when it is desired to open must have a small file mark made upon it close to the rim of the metal mantle, so that a sharp tap with the file on the side of the mark breaks off the protruding tube smoothly. Each bulb is supplied with a spare cap to be used for the fresh jet.

INFANTS' FOOD WARMER.

REID'S Infants' Food Warmer consists of a tin vessel or water bath in which three bottles are contained in a frame. This is half filled with water, and heated by means of a night light. The chief advantages claimed for this apparatus are that the food is always ready for immediate use, no warming or pouring out is required, and the trouble at night is reduced to a minimum. The nurse must, of course, be on her guard that milk or other liquid does not become sour during the night. The wholesale agent is Mr. William Toogood, Burlington Buildings, Haddon Street, Regent Street, W.

British Medical Journal.

SATURDAY, AUGUST 24TH, 1895.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

It was evident from the extraordinary interest that was taken in the work of the various Sections at the recent meeting of the Association when antitoxins and antivenenes formed the subject of discussion, that all who have had extended experience of the use of these therapeutic agents, especially in connection with the treatment of diphtheria, have come to the conclusion that, from the clinical point of view at any rate, these substances possess considerable value. Although this has undoubtedly been the general experience, it is only on an occasion such as that afforded by the meetings of the Association that comparisons of results, clinical and experimental, can be brought before, and discussed by, any large numbers of the profession.

The Section of Medicine set an exceedingly good example in obtaining as the foundation of their discussion a most interesting experimental paper by Dr. Sidney Martin, whose previous work on the question was a sufficient guarantee that the subject would be ably and scientifically dealt with, and those who were present could not but be struck first of all by the breadth with which the subject was handled; and, secondly, by the thoroughly scientific spirit that pervaded both the methods adopted and the conclusions arrived at.

After a lucid account of the present state of our knowledge of the pathological process in diphtheria and of the poisons secreted by the bacilli, Dr. Martin gave the result of his own investigations, showing that extensive nerve and heart muscle degeneration—the pathological characteristic of diphtheria—was produced by injection of pure diphtheria toxin, from which it is evident that the Klebs-Loeffler bacillus is the cause of diphtheria. His experiments on the effect of the diphtheria antitoxin showed that when administered in sufficiently strong doses it counteracted all the effects of the toxin or the diphtheritic ferment. It has only a slight effect on the febrile temperature produced by the albumose, but it completely counteracts the fatty degeneration of the heart, and to a very great extent also the nerve degeneration, which was insignificant in extent. It was found, also, that the injection of large doses of the antitoxic serum into the venous circulation of the rabbit produced but little effect on the body temperature and no loss of weight, appearing to be, as far as could be judged, a perfectly innocuous substance.

It is evident from these experiments, carried out under such exactly observed and controlled conditions, that the actions of the antitoxic serum may be followed with the greatest nicety. The actions are, first, that antitoxic serum, even when injected in considerable quantities, produces no appreciable injurious effect even on very susceptible animals. Secondly, that this serum, when given in sufficient doses, appears to neutralise completely the action of the active ferment which plays so important a part in the production of symptoms of diphtheria; whilst thirdly, it also neutralises in a very marked degree the effect of those albumoses which are formed in the later stages of the disease, apparently through the action of the ferment on the albuminoid substances with which it comes in contact, and which appeared to be stored up in the body for some considerable time after the ferments have ceased to act. Most of the speakers who followed were in full accord with Dr. Martin on most points, and brought forward strong clinical evidence in support of the position they assumed.

Dr. Goodall, who dealt only with cases in which a bacteriological examination had been made, making every allowance for age and for mildness of epidemic, is satisfied that antitoxin is a valuable therapeutic reagent, especially in those cases in which tracheotomy was performed; as of those so treated without antitoxin only 28.5 per cent. recovered, whilst of those treated with antitoxin the recoveries were no fewer than 64 per cent. The proportion of cases in which there was albuminuria was nearly the same, but the percentage was slightly higher in those cases treated with antitoxin—53.3 as against 49.2 per cent.; but of the cases in which anuria occurred, there were 8.57 per cent. in which antitoxin was used, and where antitoxin was not used 8.69. He showed that antitoxin cannot prevent the occurrence of paralysis, but points out that it is to be expected that "if antitoxin, or, for the matter of that, any other drug, afforded material help in tiding the patients through the membranous stage, the percentage incidence of paralysis would become higher."

Professor von Ranke's statistics speak for themselves, but the value of antitoxin in those cases in which some operative procedure is found to be necessary, could not, von Ranke thought, be too strongly accentuated. He specially insisted, however, on the fact that under the influence of the serum treatment diphtheria loses its progressive character, and in support of this he cited the extraordinary result that the laryngostenosis disappeared in 28.4 per cent. of his cases, whilst formerly he had never been able to obtain a higher percentage of the disappearance of that condition than 5; whilst operation was never necessary at a later period than twenty-four hours after the treatment had been commenced.

Professor Baginsky added to his already published statistics, and showed that the mortality in his clinic in Berlin had been brought down from an average (of over 9 years) of 41 per cent. to 15.6 per cent.

From the point of view of prophylaxis some statistics were brought forward, on which to base arguments which up to the present have been founded merely upon experimental data. Dr. Hermann Bigg's figures are so striking that a protective injection would appear to be valuable in all cases where children cannot readily be isolated, or where they have already been exposed to infection. It is only in

such cases, however, that such a course would be valuable, as the period of protection is comparatively limited, though it is certainly sufficiently long to allow of measures being taken to remove those not already infected beyond the danger of infection.

It is somewhat remarkable that there should be such a very great difference in the results obtained in the hands of different observers and Mr. Lennox Browne, whose experience seems to have been singularly unfortunate, in so far that he has been able to observe little or no improvement in the cases under his immediate observation, must, along with a few others, seek for some explanation of the differences in the results obtained. Several explanations have been offered. Dr. Woodhead suggested that the better results obtained abroad might perhaps be explained on the assumption that those who had had most experience of this method of treatment—that is, the French and German physicians—had now confidence in giving larger doses of the antitoxic serum—a confidence which it was evident was justified also by laboratory experiments. It is, of course, obvious that there may be another explanation, and that is that the strength of the antitoxic serums sent out by different firms is not uniform, and that the different methods of standardising the serum may leave the practitioner in some doubt as to the exact amount of serum that may be given. It has certainly been found that the serums from different laboratories vary very considerably in strength, and that even those sent out from the same laboratory are not always the same.

Such being the case, it is impossible, especially in the case of weak serums, to expect that the physicians will give sufficiently large doses to obtain the required results until they have gained that confidence in the use of the remedy which only a careful study of its effects can give. It certainly appears that Behring's system of sending out, not a definite quantity of serum but a definite number of immunising units, is very much better than that of supplying serum which is said to be above a certain strength.

The whole discussion was exceedingly suggestive, and, taken with those in the other Sections, is one of the most important contributions to the question of serumtherapy that has yet been made in this country, and we congratulate Dr. Martin on having given a lead which was so excellently followed, though on somewhat diverging lines, by those who spoke.

MEDICAL RESEARCH IN INDIA.

We have been favoured with a copy of an address delivered before the Calcutta Medical Society by the President, Surgeon-Lieutenant-Colonel A. Crombie, M.D. This address comes not inopportunely at a moment when the painful inefficiency, and even retrogression in many quarters, of scientific medicine in India have been brought prominently under notice. Dr. Crombie is in an excellent position for putting forward everything that can be said on the other side, for, characteristically enough, notwithstanding the warlike official titles prefixed to his name, he has, we believe, been for many years chiefly, if not wholly, a highly-successful medical practitioner, earning a handsome income by private practice in India, and having little to do with the army medical duties which might be presumed from the titles which decorate his name. It is one of the many misfortunes of the medical services in India that this anomalous relationship of army medical rank to much more lucrative and preoccupying civil medical practice is still maintained; and it is probably owing to the large monopoly thus accorded to official position in the army in Indian civil life that so little progress is made.

It is impossible for one man to serve so many masters, and when we see, as we do in India, medical officers holding the highest ranks in the Indian army and drawing pay accordingly, but really occupied with other multifarious duties, and most largely with private practice, and deriving from them their chief income, it is not surprising that so artificial a state of things gives a highly unsatisfactory result. Dr. Crombie has a right to speak on medical research in India, for he was, we believe, one of the first who brought home from Italy recently the rather belated evidence of the importance of the malarial organism as an element in pathology and in clinical medicine. The chief use which Dr. Crombie makes of the occasion is to make a smart attack upon the address of Mr. Ernest Hart before the Indian Medical Congress. He commences by assenting to Mr. Hart's dogma that the policy of the teakettle and the filter and that of providing pure water supplies was the great factor to which we must look to the diminution of the excessive mortality from cholera and typhoid; but he retaliates reasonably enough by suggesting that if the same advice were uniformly acted on in England typhoid and cholera would be stamped out there also. This is undoubtedly true, but on the other hand we have succeeded in acting upon this policy in England so far, and we have thereby completely stamped out cholera and rendered its invasion a thing of the past and an impossibility of the future. We have also succeeded in reducing the mortality from typhoid by more than two-thirds, and during the experience of this generation it may be hoped that we shall succeed in extinguishing the disease as completely as we have suppressed cholera and typhus fever. In India, however, where the mortality from cholera and from malarial fevers amounts to over two millions, and appears to be by no means diminishing on the whole, the question is of course much more pressing; and it might have been desirable that Dr. Crombie's assent should have taken a more pressing and practical form, and should have been communicated to the Government. We are glad enough, however, to have his avowed support to this all-important matter of the purification of water supplies, and the nullification by filtering and boiling of their potency to poison the people.

There are other points in which Dr. Crombie's address is far more open to exception. After referring in euphemistic terms to the presence among them of Mr. Ernest Hart as that of "a great man and eloquent with a name to conjure with," he goes on to charge him "with wonderful ignorance on the matter of the present state of Indian research in reference to bacilli." The facts which he brings forward to justify his statement by no means indicate either adequate knowledge on his own part or the possession of the true spirit in which so grave a matter should be handled by a person in authority and claiming to be a leader in medicine in India. He says: "As regards the additions we have made to the advance of scientific medicine, which Mr. Ernest Hart tells us has only

been confusion, it can hardly be possible that he has never heard of the filaria sanguinis hominis and its discovery by Lewis. Has he never heard of Vandyke Carter and the spirillum of relapsing fever, and his observations on the malaria organism corroborative of those of Laveran a short time after their discovery? He has evidently never heard of Hehir of Hyderabad and his observations on the connection between the amœba coli and liver abscess," etc.

Dr. Crombie could not have read the address, in which the following passage occurs, page 41: "With the exception of Maitland, of Madras, since Lewis's time no strictly Indian observer, so far as I know, has done much to advance our knowledge of filaria sanguinis." This certainly recognises Lewis's work. The statement in this, as in other respects, is, we believe, absolutely correct. It would be satisfactory if Dr. Crombie could contradict it. Of Vandyke Carter the address says, page 29, "One name certainly stands out a prominent exception in this, as it has done in many other departments of Indian pathology, that of Vandyke Carter." Dr. Hehir deserves great credit for his enthusiastic labours, but unfortunately he works in too solitary a position, and hitherto his name has not been associated with any pathological work of stable character. His name appeared in connection with a treatment of filariasis with minute doses of thymol, a treatment the uselessness of which Dr. Crombie was among the first to demonstrate. Dr. Hehir is responsible also for some remarkable figures purporting to be representations of the malaria parasite, and which certainly do not represent that organism; we are aware that he published some equally remarkable figures of amœboid bodies in cholera blood; we also recollect that he expressed the opinion that the amœba coli may get to the liver from the intestine *viâ* the peritoneum. So far as we know no one has corroborated any of these observations.

Mr. Hart did not say that it was necessary or even desirable that the malaria organism should be sought for in all cases of malarial fever; but he did say that everyone in tropical practice should be familiar with the appearance of this organism.

As regards Bryden Mr. Hart did not specify his name, but he did ample justice to the distinguished body of which Bryden was a principal ornament, when he said: "As tropical sanitarians and medical statisticians you are still infinitely ahead of all other tropical colonising powers together who, in these respects, are content enough to be your imitators."

Dr. Crombie says: "It is always dangerous to attempt to instruct practical men in a matter of which one's own knowledge is only second-hand." In the next paragraph, referring to the time of the fever cycle during which examinations of malarial blood should be made with a view to finding the parasite, he goes on to say: "The best time in quotidian ague is at the end of the hot stage and during the sweating stage. You will not find them in the apyrexia unless at the very beginning of it in cases where the pyrexial period is short and the apyrexial long. In tertian ague you will find them during the same stages, but also during the earlier period of apyrexia." He also says: "Mr. Hart should have mentioned this, but probably he did not know it." Details about the malaria parasite were purposely avoided by the orator, but if he had spoken about the most favourable time for finding the parasite in ordinary examinations he would have recommended his hearers to select quite another time; he would have recommended, to quote Mannaberg, "from a few hours before the commencement of the attack until it has reached its height." We fear Dr. Crombie is attempting "to instruct practical men in a matter of which one's own knowledge is only second-hand." At any rate he is all wrong about this. Parasites are always present in simple tertian even in the peripheral blood. In malignant tertian they are sometimes hard to find unless at the time mentioned, although generally pigmented leucocytes and crescent bodies are to be discovered at all times.

It would scarcely call for comment if Dr. Crombie's criticisms were merely unjust, but they are worse than this, they are calculated to do a great amount of harm, for they are mixed up with many errors of fact and they convey an exaggerated idea of the difficulties of finding the malaria parasite, an idea calculated to deter the modest worker from attempting it.

So far from the malaria parasite frequently being absent in malarial fever, Mannaberg states that he failed to find it only in 3 out of 130 cases. Thayer and Hewetson say: "Excepting two or three instances where the patients entered hospital during convalescence, the specific microorganism was found in every case (616) of malarial fever treated in the wards." Dr. Manson's experience is that he has never failed to find it in cases of active malarial disease. Cunningham is an excellent microscopist; so is Virchow, and Virchow failed to recognise the parasite in malarial blood. The parasite requires to be looked for in the right way, and if this right way is employed a child might recognise it.

Those fevers in which in India it is not found are certainly not malarial fever. And herein lies a principal value of the parasite as a diagnostic mark and as a means of study and classification. Dr. Crombie's whole speech is in a wrong tone and full of error.

Lewis did not discover the filaria sanguinis. Demarquay discovered it and so did Wucherer, several years before Lewis said it: Lewis discovered it in the blood, but those other men had seen and described it before, one in chylous dropsy of the tunica vaginalis, the other in chylous urine.

On the whole we fear it must be said that while Dr. Crombie's address is couched in too resentful a tone to have any judicial claim to consideration, it is also too imperfectly informed on the subject of which he professes to offer corrections to be of any permanent or even temporary scientific value. This is not the spirit or the method in which scientific research in India is likely either to be encouraged or developed, and we grieve to see it on the part of a man occupying high official position, and whose influence might well have been cast into the scale of beneficial progress.

OUR MILK SUPPLY.

The facts relating to milk supply which have been laid before our readers by the Special Commission of the British Medical Journal are now sufficient in number and general enough in character to justify a brief review. So far, the Commission has been mainly concerned with an investigation as to the quality of milk sold in some of the poorer districts of the metropolis, with the general bacterio-

logical condition of the milk supply, and with the nature of several of the preparations so commonly and improperly sold under the false title of "condensed milk." No one who takes the trouble to read the report which we have published, and to consider the significance of the facts recorded, can fail to conclude that the existing law upon the subject must in itself be crude and inadequate, and that, such as it is, its administration must be extremely feeble and unsatisfactory. To those who are directly concerned with public health work and with the suppression of adulteration and false trading, these facts are well enough known, but without some such authoritative revelations as those which we have made, it cannot be expected that members of the medical profession who are not specially occupied with such matters will give that attention to them which it is of the utmost importance that they should give in the interests of the public at large, which looks to the medical man for guidance in all matters connected with food and feeding. By a general consensus of opinion in the medical profession it may be hoped that a feeling of some strength will be produced in that slow-moving engine, the "public mind;" and that, perhaps, in the fulness of time, after a frequent repetition of the facts and a patient and constant inculcation of the lessons to be drawn from them, even the "commercial conscience" will be touched, and our legislators will be induced to legislate to rather better purpose on food production and sophistication than they have succeeded in doing in the past.

It is sufficiently obvious, from the conditions under which it is produced and consumed, that milk lends itself particularly to the reception of polluting matters, and to the dissemination of disease; and that it is a substance which affords the fullest and easiest opportunities to the sophisticator and adulterator. The grossly defective sanitary conditions under which milk is so commonly obtained, stored, and distributed by dairymen and dealers, are amply sufficient to account for the bacteriological results obtained by Mr. Sidney Rowland.[1] The bacillus coli communis, an intestinal product affording evidence of disgusting and dangerous contamination, was found by Mr. Rowland in every sample of milk examined by him, and it contributed fully 90 per cent. of all the forms of micro-organisms found, while in two samples oidium albicans, the exciting cause of thrush, was detected. If, in addition to the latter, other pathogenic micro-organisms were not found, it does not follow that they were not present in any of the samples, and the fact of contamination is sufficient to justify the demand for the enforcement of improved conditions in regard to milking, and to the cleanliness of cows and their surroundings, of the milkers, and of the vendor's shops. With some few exceptions, none of these points are properly attended to, and it is plain that any widespread improvement can be brought about only by the institution and maintenance of a system of compulsion.

Of the 50 samples of ordinary milk analysed by Mr. Cassal, 24 were found to be more or less sophisticated by the addition of water or by the abstraction of fat, by admixture of separated milk, or both, even where the calculations of the results were based on the lowest limits of quality which it is possible to adopt; 10 were unquestionably sophisticated upon the basis of a somewhat higher, but perfectly fair, standard of quality in regard to fat—a percentage, namely, of 3.5; and 3, while otherwise of genuine composition, had been tampered with by the admixture of a boric acid preparation; 11 of the otherwise sophisticated samples having also been found to contain boric acid. Seventeen brands of so-called Condensed Milk, examined by Mr. Cassal and Dr. Dyer, were found to consist of condensed separated milk, (that is milk from which nearly the whole of the cream has been mechanically separated) mixed with sugar, and containing exceedingly low percentages of fat—so low as to be negligible quantities so far as value to the consumer is concerned. In all these cases the main title of the article was "Condensed Milk," and purchasers would be under the impression that they were getting condensed whole milk instead of the comparatively worthless material supplied to them. The contrast with condensed milk of a trustworthy type, such as that of the Milkmaid Brand and the Ideal Brand of the Anglo-Swiss Condensed Milk Company, was impressive and significant.

It must not be supposed from the statement of these somewhat startling facts that the existing Adulteration Acts have been a failure. In many places those Acts are dead letters, and in most others they are very inadequately applied, while the absurd defects in the Acts themselves militate very seriously against their usefulness for the suppression of fraud. But when the existing state of things is compared with that which obtained twenty-five years ago it cannot be denied that there has been an improvement, not so much in respect of the frequency or generality of sophistication as in regard to its degree. The grossness of adulteration has to some extent diminished, and it has diminished most in generality as well as in grossness in those districts where serious attempts have been made to enforce the Acts. It is plain that fresh legislation as free as possible from the technicalities which at present afford so many loopholes for the escape of offenders is urgently required. A new Act of Parliament must be compulsory in regard to its adequate enforcement, and not merely permissive. The officers called upon to carry it out, while they may be appointed by local authorities, must be rendered as far as possible independent of local influences. They should never be confined to one appointment, and in view of the evils of centralisation in matters of the kind they should not be the mere mechanical agents of a central authority. The adoption by the Somerset House laboratory of an absurdly low standard for fat in milk has, as is well known, done great injury to the consumer as well as to the honest producer and vendor. To prevent an evil of this kind and to ensure at the same time the fixing and if need be the variations of standards of quality, the only suggestion of a practicable nature which has been made appears to be that of the establishment of a thoroughly representative Board of Reference, whose duty it should be to advise local authorities, public analysts, inspectors, and magistrates.

The moral of the whole matter is that producers and vendors must be compelled within reasonable limits accurately and fully to describe the articles which they supply to the public, and that the standard of composition for a natural product such as milk shall not be that of an abnormal fluid yielded by a diseased or improperly fed animal, but shall be the normal composition which, within certain well-ascertained limits, the mixed milk of healthy

[1] BRITISH MEDICAL JOURNAL, August 3rd, 1895.

and properly fed cows is known to possess. "Milk" does not mean "thinned milk," nor does it mean "separated milk." These which are, of course, articles of commerce, should be described by their distinctive titles. Condensed milk means condensed whole milk, and if a preparation which has been obtained by condensing separated milk is called condensed milk, a distinct fraud is perpetrated on the public.

If sophistication, adulteration, and the production of milk under insanitary conditions are to be suppressed or appreciably minimised, an awakened and vigorous public feeling on the matter is essential. It rests mainly with the medical profession to bring this about.

We regret to announce the death of Professor Hoppe-Seyler, of Strassburg, who died suddenly on August 12th at the age of 70. He was one of the founders of modern physiological chemistry and a scientific investigator of the first rank. He had just been elected a Corresponding Foreign Member of the French Academy of Medicine.

It is with deep regret that we have to announce the death of Dr. J. S. Bristowe, F.R.S., Consulting Physician to St. Thomas's Hospital, who passed away at Dixton Vicarage, Monmouth, on Tuesday, August 20th, at the age of 68. Dr. Bristowe was a man of many gifts, and his work entitles him to a niche amongst those who have increased the realm of medicine. His *Theory and Practice of Medicine* is recognised as a classic textbook. He was a member of the Council of the Association, and did good service in promoting its well-being and enlarging its sphere of influence. A full notice of his career will appear in due course.

THE HEALTH OF THE FLEET.

A Plymouth correspondent of the Exchange Telegraph Company states that since July 26th no fewer than sixty officers and men had been invalided by medical survey after fever attack. It is difficult, he says, to understand Admiral Seymour's statement that the health of the fleet is satisfactory. An authoritative despatch, dated Gibraltar, August 19th, and received at Plymouth recently, states that the *Collingwood*, *Rodney*, *Barfleur*, *Arethusa*, and *Fearless* have arrived there with much sickness, mostly cases of fever, on board.

THE ASSOCIATION OF GERMAN SCIENTISTS AND PHYSICIANS.

The Association of German Scientists and Physicians will hold its sixty-seventh annual meeting at Lübeck on September 16th and five following days, under the presidency of Professor Johannes Wislicenus, of Leipzig, and Professor Hugo von Ziemssen, of Munich. Among the communications of medical interest will be an address by Professor E. Behring on the Question of Serum Treatment; one on Surgical Operations on the Brain, by Professor Riedel, of Jena, and one by Professor von Kundrat, of Würzburg, on Neuroplasm.

SANITARY CERTIFICATES FOR SEASIDE LODGINGS.

An old question, to which we have drawn attention again and again, cropped up afresh last week, namely, as to the necessity of some system of inspection and certification of lodgings at health resorts. Fortunately for the British public it has become the custom for the annual holiday to be taken at a time of year when an open window and outdoor life are possible, otherwise the evils arising from insanitary lodgings would doubtless be much greater than they are. Even now, however, the holiday is sufficiently often productive of illness rather than of health to make it desirable that every means should be taken to ensure that it is spent amid reasonably good sanitary surroundings. No doubt great improvements have taken place in lodging houses during recent years. The public have to some extent become educated in sanitary affairs, and in response to their demands the letters of lodgings have provided a brave show of sanitary appliances. But herein lurks a fresh danger. In days gone by an intelligent visitor gifted with a nose could generally protect himself. A look in the lavatory or bath room would tell him what sort of a house he had got into, for the appliances were then usually all of a piece. The lodging-house landlord of to-day has, however, almost eliminated that simple criterion. He has provided his houses with up-to-date closets, and decorated their exteriors with ventilating pipes so that it is no longer safe to sample a house by its bathroom, or judge of it by its soil pipes. The questions now are: Where do these pipes go to, and what is there under the cellar floor? Obviously these things can only be ascertained by a complete sanitary investigation such as a local authority, or persons deputed or recognised by them, alone can undertake. The widespread obtrusiveness of external signs of sanitation makes it all the more necessary to be assured by official certificate that the out-of-sight appliances are in equally good condition.

IGNORANT MIDWIVES.

Scarcely a week passes without the occurrence of some fresh illustration of the need of more knowledge on the part of women practising as midwives, and of some means of placing them under medical supervision and control. At an adjourned inquest before the Coroner for West Ham on the body of a woman who had been attended in childbirth by a midwife named Garland, and had died, evidence was given which led to some serious charges being made against the midwife. The result of a *post-mortem* examination of the body of the deceased woman showed that death had occurred from blood poisoning due to the decomposition within the uterus of a portion of the placenta that had been left behind. With this evidence before them the jury very properly came to the conclusion that a criminal charge against the midwife could not be sustained. In returning this verdict, however, they expressed the opinion that she was much to blame for not having summoned medical assistance, an opinion with which everyone must fully agree.

THE PROFESSION IN PARLIAMENT.

Now that the din of the elections is over and Parliament has assembled in its full strength, we may be allowed to refer to some of the changes which have taken place so far as they affect the great public objects with which the profession is concerned. Without at all entering into the political questions which have decided the issue, we may be permitted to express great satisfaction at the good likely to accrue to the public welfare from the exclusion of a certain number of dangerous faddists who appeared to think that opposition to the most necessary measures of public health formed in some mysterious way an article of the radical creed. Such was, among others, Sir James Stansfeld, who, with all his undoubted abilities and great moral sincerity, has probably done more harm to the public than any other man of his generation. On his shoulders lies the burden of that constantly present and apparently increasing mass of enthetic disease which cripples our army both at home and abroad; and to him more than anyone else is due that large measure of inefficiency in sanitary organisation which is the consequence of the imperfections of the areas, duties, and tenure of office of our health officers in England. Next to the absence of Sir J. Stansfeld we may congratulate all well wishers to the public health on the disappearance for a time from the sphere of Parliamentary activity of Mr. G. W. Russell, who "hates Pasteurism and

vaccination with all his heart," and is a friend of rabies and small-pox; of Mr. Hopwood, whose dense obstruction and denial of the overwhelming evidence and conclusions from that evidence as to vaccination are simply incomprehensible, and of his allies and coagitators. On the other hand we have the pleasure of still welcoming the useful presence in the House of Sir Walter Foster, of Dr. Farquharson, and of Dr. Clark. It is a very unfortunate but noteworthy fact that it is from the ranks of the Radical Party that the greatest objections to sanitary progress have always come, and whatever their political activity may have been it is a source of no small satisfaction that for some years at least public health measures will stand a better chance of impartial and intelligent consideration in their absence from the House than if they were present. The timidity and helplessness of the late Government against any attack by a band of faddists of whatever creed was one of its chief sources of weakness. The strength and independence of the position of the Government now in power, and their known willingness impartially to consider all measures of public sanitation, is a very satisfactory incident in public affairs in which the profession and all interested in the progress of preventive medicine may heartily congratulate themselves.

STREET COLLECTIONS.

The diminished receipts of the Hospital Saturday Fund from its street collections is attributed, and no doubt justly, to the extent to which this mode of raising money has been independently worked by charities of every kind, each on its own behalf. The fact is, street collecting has become a great nuisance, and now stands on a completely different footing from what it did when it was first introduced. Then it was representative of a great movement guaranteed by well-known names; now it is representative of private push and bounce, and its *bona fides* is not guaranteed at all. The very existence, indeed, of some of the so-called charities for which it is undertaken is probably unknown to many who drop their contributions into the boxes to please a pretty face, or more often to get rid of an importunate one. No doubt the loose change so extracted from the pockets of many would not be gained for charitable purposes in any other way, and if it be admitted that money is good whencesoever it may come, such money may properly be accepted and used for charitable purposes. The principle, however, is open to question, and many who have been pounced upon by young women armed with collecting boxes in such regions as the Strand, or Regent Street, or Piccadilly Circus, must have questioned the judiciousness of gaining a few pence, even for charity, at the price of such unseemliness. It is a question, however, whether even the charities themselves gain much in the end by such proceedings, and in a strong protest against these street collections by Mr. Loch, Secretary of the Charity Organisation Society, it is pointed out that the fitful and irresponsible giving of trifles in the streets may soothe the conscience of many a man who would feel constrained to give far more liberally if his contributions were made in a more orthodox fashion.

THE SICK POOR IN PROVINCIAL WORKHOUSES: SMALLBURGH, NORFOLK.

The disgraceful overcrowding of some of our workhouses and infirmaries while in other parts of the country vast barrack-like structures are occupied by a mere handful of inmates is one of the anomalies which can only be remedied by a more vigorous central control. Our Commissioner's report of a Norfolk workhouse built for 800 inmates and containing at the most 70 points this moral with sufficient force. The mere maintenance of the fabric must be costly enough, and the money so spent hardly benefits the unfortunate inmates, who are deprived of the comforts and even of the decencies of life. Able-bodied labour is scarce, so the infants are in charge of an imbecile and a deaf and dumb woman; the sick and infirm have an untrained nurse to attend them by day and no attendance at all at night. There is no sanitary accommodation, and no water laid on. Much of course might be done in the way of minor improvements, and we hope that our report may direct the attention of the guardians to some of these points, but we would fain see the day when these great empty structures will be closed, and the sick and infirm properly treated in well-appointed infirmaries, the children boarded out, and the few able-bodied drafted into workhouses worthy of the name.

THE IRISH WORKHOUSES.

We have been watching the triangular duel between the Local Government Board, the Irish Medical Association, and the Boards of Guardians with much interest. There has been hard hitting all round; but at present the combatants seem more eager to pass the quarrel on to the next man than to remove the cause of offence. Looking on from afar, and judging from the material at our disposal as furnished by the local press, we are of opinion that there is a disposition on the part of the local authorities to pass by the question at issue, and an unwillingness to face the facts that almost amounts to a confession of the truth of the indictment brought by the Irish Medical Association. Some Boards have hastily taken up the brush and applied a thick coat of whitewash over the administration of the house, whilst others have steadily looked another way when expert critics have tried to bring the condition of the aged and infirm in the body of the house, and of the feeble minded and idiots in the lunacy wards, within the range of official vision. The reports furnished to the Boards of Guardians by the medical officers are sad reading, and reveal a state of neglect and indifference to the treatment of the sick pauper that calls for instant action on the part of all concerned in the administration of the Poor Law. Our medical brethren across the Channel may feel assured of our sympathy and co-operation in the great reform to which they have put their hands.

OPHTHALMIA AT CHESTER.

That the Chester Guardians should have allowed such an outbreak of ophthalmia as the children under their care are now suffering from is little else than criminal. It is not as if ophthalmia were a new disease, or as if the conditions under which it develops were not perfectly well known. Guardians are either too ignorant or too indifferent to seek the knowledge which would save the children under their care, not only from present pain and loss of education, but from a disease, the results of which frequently handicap them through life, and bring them again upon the rates. It has repeatedly been proved, and is therefore no longer a question of opinion, that children require, when aggregated, a larger amount of cubic air than when sleeping alone or in twos or threes. Many experts consider the allowance—300 cubic feet—demanded by the Local Government Board quite inadequate, but at Chester we find that there were 20 beds in the boys' ward when there should only have been 12, and that the accommodation was very defective and the ventilation bad. We are not surprised, therefore, to learn that the general appearance of the children was unsatisfactory, and that besides those who had already contracted the disease there were others who had very suspicious eyes, and that many of the children looked weakly and required building up. That to preserve children in good health it is necessary that they should have abundance of exercise in the open air is almost a platitude, and yet here we find a number of children confined in an institution without a field or yard to play in. Neither these conditions nor the epidemic are new incidents. We have the Chairman's word that the question of better ventilation had been up before the Board over and

over again, only to be ignored or indefinitely postponed. Three months ago the epidemic was sufficiently important to require the attention of a specialist, and yet the conditions are allowed to remain unchanged, and the consequence is the growth and development of the disease, which is of so severe a form that, in the opinion of Dr. Fowler, it will probably be twelve to eighteen months before the children infected are again fit to re-enter the school. It is lamentable that the Chester paupers have to suffer in order to teach the Chester guardians the elementary facts about ophthalmia, all of which should have been told them by their own medical officer, or pointed out to them long ago by Mr. Dansey, the Local Government Board inspector. Not without sacrifice does knowledge come, but in this case it is by the sacrifice of the children that the knowledge comes to the guardians—a knowledge which we recommend them to obtain either from Dr. Stephenson's pamphlets or Dr. Littlejohn's reports, though the latter deals not so much with methods of cure as with the causes of and the hygienic condition which develops the disease. "The longer a child has been in the school the less healthy its eyes are, even when it has never had an attack of ophthalmia," he writes, and this is a valuable testimony in support of the statement, which we have made more than once in these columns, that ophthalmia is a disease created by the Local Government Board; and in this we are borne out by one of Dr. Stephenson's tables in which he shows that, after examination, he found 1.42 per cent. of the children, who had recently entered the schools to be "markedly diseased;" but that among those who had been previously in barrack schools, 25.27 per cent. could be put under that category. And in spite of such experience, guardians continue to aggregate the children whom they profess to guard, and so ignorantly breed ophthalmia to their life-long injury.

URANIUM NITRATE IN DIABETES.

THE paper by Dr. Samuel West on the Treatment of Diabetes Mellitus by Uranium Nitrate, which we publish on another page, will be read with interest as indicating what is practically a new resource in the management of a very obstinate condition. The cases which Dr. West records appear to have been very carefully and accurately observed, and considerable pains seem to have been taken to get the patients into what may be termed a condition of equilibrium before the drug was exhibited, so as to avoid as many as possible of the pitfalls which lie in wait for the therapeutic investigator. There is, then, no reason to doubt that we have in certain salts of uranium a powerful means of influencing some of the more prominent among that group of symptoms which we are wont to call diabetes. As to their mode of action, we can do nothing but speculate. Dr. West seems to think it likely that their action is due to the effect they have in checking the rapid digestion of starch and of some forms of albumen, and that they may be especially useful in the direction of controlling excessive pancreatic digestion, and he lays some stress on the fact that no uranium was discovered in the urine as suggesting that none had got into the general circulation. It must be remembered, however, that in experiments on dogs acute parenchymatous nephritis was produced with much albumen in the urine, showing that either the drug itself or some kidney irritant produced by its interference with assimilative processes had obtained access to the circulation. In fact, till we know more than we do of the exact nature of diabetes it is almost idle to speculate as to the *modus operandi* of a remedy, although if it could be proved that the disease could be stayed by a drug which does not enter the circulation a long step would have been made towards localising the seat of the morbid action. It is needless here to refer to the correspondence which has taken place in the general press regarding the assumed illustration afforded by the action of uranium salts of the homœopathic doctrine of "similars" beyond drawing attention to the fact that the production of glycosuria is not the only effect of a large dose, and that any facts which show that in more moderate doses the drug relieves one such symptom to the exclusion of others is, so far as it goes, a disproof rather than a proof of the homœopathic dogma.

THE CASE OF DR. ANDERSON.

WE have received from the Civil Rights Defence Committee a copy of their second interim report of the matters relating to the Anderson (Privy Council) appeal fund, and we are glad to see that they appear to be making substantial progress in the endeavour to secure redress for Dr. Anderson in the very important appeal which he is endeavouring to bring to a hearing. It is hardly necessary to remind our readers of the gravity of the matters which constitute Dr. Anderson's complaint. Shortly stated, his position amounts to this: that the judgment by which Lord Coleridge deprived him of the fruits of his verdict on the ground that no action lies against a judge, even where it is found that "he has oppressively, and with malice, overstrained his judicial powers to the prejudice of the plaintiff and the wilful perversion of justice," involves the conclusion that Dr. Anderson's professional and general civil rights have been violated by the authority of the Crown administered improperly by the Colonial judge. If Dr. Anderson is held in the final appeal to have no redress against the individual judges who have wronged him, it is contended that he must have a clear claim for redress as against the Crown itself, by whose misused authority the damage has been done to him. As the matter now stands, Dr. Anderson is deprived of the damages he was awarded by the jury, and although this is defended on the theory that the executive authority of the Crown covers and protects the misdeeds of a judge, yet the Crown itself does nothing to redress the wrong. The appeal against this decision to the House of Lords and the concurrent appeals against the original unjust judgments in the Colony to the Judicial Committee are the primary business of the Civil Rights Defence Committee, though they are doing all they prudently can to keep the wide aspects of the question also in view. The whole matter is one of great consequence, not merely to the profession, but to the public at large, and we do not doubt that Lord Stamford's energetic Committee will be enabled in due course to bring it to a successful issue.

MEDICAL MOBILISATION: THE DEFENCE OF LONDON.

WE have already referred to the baseless rumours of war to which the issue by the War Office of a circular to metropolitan Boards of Guardians had given rise. The inquiry of the Principal Medical Officer of the Home District whether, "in the event of a war or invasion," the guardians would be prepared to appropriate the Poor-law infirmaries for use as military hospitals fluttered the parochial dovecots to a perfectly unnecessary extent, and visions of thousands of men wounded by bullet and bayonet taking the place of the pauper inmates within the next few weeks rose before Bumble's mental eye. As there are doubtless many persons who believe that there was some kind of foundation for the scare, we think it well to state that the circular which created such unnecessary alarm is not to be taken as an indication that the Government thinks there is any immediate prospect of war. The issue of the official inquiry was merely the carrying into effect of the mobilisation drawn up a considerable time ago by Surgeon-Colonel J. B. Hamilton, Surgeon-Colonel Churchill's predecessor in the post of Principal Medical Officer of the Home District. This scheme, which was publicly referred to in terms of warm commendation by Major-General Lord Methuen at the dinner of the Volunteer Ambulance Association some months ago, is intended to provide against the contingency of having to find accommodation for 20,000 sick and wounded men in

the event of the country being invaded. Under this scheme it is arranged that if a great battle were to be fought between the coast and the capital all the wounded of both sides should be transferred to London, where the workhouse infirmaries, hotels, and other large buildings suitable for the purpose could be utilised. The inquiries of the War Office as to the extent to which the several Boards of Guardians would be prepared to help in providing the accommodation required were but a step in the filling in of the details of the scheme. The military authorities simply wish to be thoroughly prepared to deal with a possible situation which fortunately there is not the slightest reason to consider at all imminent.

THE COST OF SMALL-POX.

Small-pox is not only a loathsome disease but an expensive one. Returns were furnished to the Dudley Board of Guardians on August 16th, which showed that for the two years ending June last the parishes of Dudley, Tipton, and Rowley had been mulcted in the maintenance of small-pox patients to the tune of over £700. Dudley suffered most. For the two years they paid about £5 a week in consequence of the disease.

BARTON REGIS NEGLECTS TO FOLLOW SHEFFIELD.

We cannot but regret that the decision of the Barton Regis Guardians to build temporary buildings for their adult paupers practically results in keeping the children within the workhouse. The need for further accommodation for the able-bodied gave them the opportunity of removing the children, and trying in the West of England the experiment that has been so successfully carried through at Sheffield. The Barton Regis guardians seem to have shrunk from the responsibility of building, but one of the advantages of the Scattered Homes Scheme is that it does not necessitate capital expenditure in bricks and mortar. The essence of the plan is to bring up and educate pauper children as much as possible as other children are reared; and to hire an ordinary house in a working-class neighbourhood is an effective as well as an easy method of accomplishing this. At a recent meeting of the Sheffield Board it was announced that the experiment had been entirely satisfactory; the health of the children was excellent, the Board school teachers thoroughly pleased with their regularity and intelligence; the difficulties of supervision considerably less than had been anticipated, and the cost below that of any other institutional system, though not as cheap as boarding-out. A further advantage of hiring instead of building houses is that the guardians are able to discontinue one or more homes should the number of children chargeable at any time become greatly reduced, whereas those guardians who have encumbered themselves with institutions are obliged to maintain them even should the changed circumstances of the union diminish their use. We again recur to the Sheffield plan in the hope that other provincial unions may see their way to adopting the system should they require further accommodation for their pauper children.

DOCKING OF HORSES AND TETANUS.

During the course of the present century certain mutilations of the domesticated animals have been regarded as necessary to the well-being of the animal or his fellows, the safety and comfort of man, or to the gratification of his fancy. In the earlier years the cropping of horses' ears had a short-lived existence. Up to the twenties "nicking"—division of the depressor coccygis muscles, etc.—was largely in vogue, and certain classes of horses were regarded perfect only when the tail was elevated and the animal a "cocktailed" horse. Like the former operation, nothing on the score of utility could be urged in its favour, and it fell into disrepute. Popular taste and sentiment prevailed, and both are things of the past. It might possibly be interesting to inquire into the psychical condition which had directed the fancy of the human animal into the view that such were necessary to render the outline of the equine beautiful and correct. The value of such an inquiry is certainly open to question. It is, however, curious to note how general at the present time is the practice of amputating a portion of the caudal appendage. Of all operations on the lower animals, "docking" of horses and lambs is the most common. The utility and, according to some, the consequent necessity of the operation has of late years been seriously disputed. Attempts have been made by the Royal Society for the Prevention of Cruelty to Animals and by influential individuals to suppress the practice by law and by persuasion; the Humanitarian League has set its face against the practice, and in a letter to a contemporary, referring to a recent prosecution for docking, a representative uses an argument which, if founded on facts, is of some interest to the pathologist. This writer says: "Last year 102 well defined cases of lockjaw were reported to the Royal Society for the Prevention of Cruelty to Animals, with a certificate in each case from the attending veterinarian that the malady resulted from docking, and one single veterinarian stated that out of "31 cases of tetanus which he had been called to attend within a year, 27 of these cases resulted from this same brutal custom." The persons prosecuted in the case referred to possessed no surgical qualification, and it cannot be too widely known that it is cruelty in sight of the law for persons, be they owners or not, to operate unskilfully on dumb animals. The question of the propriety or impropriety of docking horses admits of a considerable amount of discussion, into which it is not desirable to enter here, but when such arguments are raised they should be subjected to the light of comparatively recent discovery, which has demonstrated the virus, and shown that the disease in man and the lower animals has a common causal factor, which is plentiful in certain ordinary matters, as soil, and induces tetanus after gaining access to abraded surfaces. Considering the fact that the stump of the horse's tail is most favourably situated for coming into contact with contaminated matter, there is little wonder, if the operation be performed regardless of disinfection, that a considerable proportion of cases of tetanus should follow docking. The proportion of 27 out of 31 cases met with in a year is, however, extraordinary. It is not uncommon for a veterinary surgeon to see a large number of lambs suffering from the affection after a similar operation, but for a veterinary surgeon to experience so many cases in the horse in course of one year is certainly phenomenal; while it is not possible to dispute this allegation in the latter, it is highly important that such be not taken as a common occurrence. Indeed, inasmuch as more than 90 per cent. of all the horses in Great Britain are subjected to the operation, the effect of such disastrous treatment would soon lead to its disuse. Any such occurrence must be regarded as special, and in the majority of instances to indicate contaminated surroundings, instruments, etc., or absolute disregard for disinfectant measures applicable to amputation wounds. In contradistinction to the foregoing allegation many careful veterinary surgeons in extensive practice have never met with a case of tetanus after docking. Tetanus in horses, as in man, is a highly preventable affection. Enlightened veterinarians are cognisant of the prophylactic measures, which may not, of course, always be successful in amputation of the tail or other operation, and if the Humanitarian League and the Royal Society for the Prevention of Cruelty to Animals exercise their powers by preventing the operation being performed by unskilled persons while the legality of the operation is *sub judice*, they will effect a material reduction in the fatalities and prevent much suffering. To bring forward such evidence as that 85 per cent. of the cases of tetanus attended by one veterinary practitioner in one year were caused by docking as reason for the legal abolition of the practice, is

not likely to further their cause, or to convey a correct impression of what actually exists. If tetanus, even under the most unskilled operator, very commonly occurred in considerable numbers of animals in a district, docking would never have become so general.

THE GOVERNMENT AND SALVATION ARMY SHELTERS.

On August 17 a letter was received by the officials of the Southwark Vestry and Board of Guardians, in which the President of the Local Government Board acknowledged the receipt of a memorial from the local authorities on the subject of the Salvation Army shelters, and promised to give the same his careful consideration. The memorial asks the Government without delay to place all the Army shelters within the meaning and scope of the Common Lodging-houses Act.

LEITH AND THE EDINBURGH HOSPITAL FOR INFECTIOUS DISEASE.

The adjourned petition by the Corporation of the City of Edinburgh for warrant to erect a temporary hospital for infectious disease on ground belonging to them as Governors of Trinity Hospital came before the Leith Dean of Guild Court on August 13th. The adjournment had been made in order that answers might be prepared on behalf of the Edinburgh Corporation to the objections of Mr. Welsh, S.S.C., who claimed that the ground belonged to him. Despite all this, the Provost of Leith, who presided, read a statement, which was described by another member of the Court (Bailie Archibald), as "the most extraordinary jumble of nonsense that he ever heard read in a court of law." Another bailie, in supporting the motion of the Provost, said "they should do everything they could possibly do to keep the hospital out of Leith, whether it was legal or not." Mr. Asher, who appeared for the Edinburgh Corporation, pointed out that the meeting had been called in order to allow him to answer, on behalf of his clients, certain objections. He was, however, informed by the Provost that he was out of order; and, finally, that he had been given a good deal of licence, but that now he could not be heard further, and they must proceed to the next case. The Local Government Board will doubtless see that the Leith Dean of Guild Court is not allowed to interfere with the ends of justice. The present hospital at Leith is built on Edinburgh ground. It is high time Leith were, for public health purposes at least, merged in Edinburgh.

RESULTS OF THE ANTITOXIN TREATMENT OF DIPHTHERIA IN GERMANY.

The results of the collective investigation relative to the antitoxin treatment of diphtheria in Germany set on foot by our excellent contemporary, the *Deutsche medicinische Wochenschrift*, have recently been published. The following is a summary of the facts set forth in the reports to the schedules issued to practitioners. The observations extended over the period from October 1st, 1894, to April 1st, 1895. The total number of cases of diphtheria reported was 9,615. Of these, 5,755 were treated with serum and 4,870 without it; the proportion of deaths in the former group was 25 per cent., while in the latter it was 44·7 per cent. In all cases of children under the age of 2 years in which the serum treatment was used early—that is to say, on the first or second day of illness—11·8 per cent. died, the mortality under corresponding conditions when serum was not used being 33·7 per cent. Of 2,330 children between 2 and 10 years of age 6 per cent. died after early treatment with serum, the death-rate among those not so treated being 14·1 per cent. Of 780 patients over 10 years of age only 1·9 per cent. died after early treatment with serum, the mortality among the others being 3·1 per cent. This gives a total death-rate of 4·2 per cent. when the serum was used on the first or second day of illness, against a percentage of 14·7 when no serum was used. When the use of the serum was begun late, that is, after the second day, the mortality at the three age periods already indicated was 34·4, 14·9, and 9·9 respectively, giving an average percentage for the three classes taken together of 16·9 per cent. As regards dosage, the mortality in cases in which 600 units were given was, in children under 2, 16.1; in those between 2 and 10, 5.3; and in those above 10, 1.8 per cent., an average percentage of 6 per cent. for the three groups; when 1,000 units were used, the deaths in the three classes were respectively 33·6, 13.8, and 7.5 per cent., an average percentage of 14·6. Death from heart failure occurred in 69 cases, or 1.2 per cent.; albuminuria was noted in 724 cases, paralysis in 343, but no death occurred from this cause.

THE METRIC SYSTEM.

The report of the Select Committee appointed to inquire whether any and what changes in the present system of weights and measures should be adopted has just been published. The Committee recommend the metric system of weights and measures to be at once legalised for all purposes; that after a lapse of two years it be rendered compulsory by Act of Parliament; that the metric system of weights and measures be taught in all public elementary schools as a necessary and integral part of arithmetic; and that decimals be introduced at an earlier period of the school curriculum than is the case at present.

NO MARRIAGE WITHOUT VACCINATION.

The stringency of the vaccination laws is in England the subject of noisy agitation on the part of ignorant demagogues; but what would such persons say to the interference with the rights of the individual which is maintained by the laws of Norway and Sweden? In these countries so impressed is the Legislature not only with the advantages but with the public duty of vaccination that before a couple can be legally married certificates must be produced showing that both the bride and bridegroom have been satisfactorily vaccinated?

FILTHY RAILWAY CARRIAGES.

Mr. Thos. Christy writes us: On page 451 of the British Medical Journal there is a letter from "Observer," dated August 14th, respecting the filthy condition of the railway carriages on the Brighton line. In 1893-94 I kept a record of these carriages that were running between Victoria and London Bridge. Several of the season ticket holders combined with me to protest against the continuance of these carriages on this line, but it was only with some small success that we got a change for the better. In the latter part of last year the medical journals recorded the prosecution in the North of England of one of the railway companies by the sanitary inspector. We took advantage of this information, and several carriages were removed. If we could get the sanitary inspector in the Crystal Palace district (where the carriages often remain for some hours) to take action on his own account or in combination with the season ticket holders, we should very soon get a change of carriages, and the old ones removed to Brighton to be repaired. While writing on this subject I would like "Observer" to take notice if he finds the compartments that are attached to the smokers smell stronger than those which have no smoking compartments attached. Another point I found was that during the wet weather the cushions under the windows were saturated with moisture, and the coarse hair stuffing gave off a most offensive smell.

The Ophthalmological Congress, which recently met at Heidelberg, has awarded the Graefe Medal to Dr. Leber, Professor of Ophthalmology in the University of Heidelberg.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF PROVINCIAL WORKHOUSES AND INFIRMARIES

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

LII.—SMALLBURGH, NORFOLK.

It seems that this rambling old house once belonged to a county magnate, who turned it into a house of industry, gathering into it such weavers as were not in a position to earn their living in their cottages. Some of the floors show the marks of weavers' looms, and the hooks that they used are still in the walls. The staircases have wide easy steps and spacious landings, contrasting most pleasantly with the narrow winding stairs of the workhouses of later date, neither serviceable for the living, nor convenient for transporting the dead.

The outward aspect of the house is that of barracks. It is built of red brick, with few and small windows towards the road; it has accommodation for 800 inmates, but only 45 were on the books at the time of our visit, and the master said that 70 would be the largest number, even in the winter. A large part of the house is therefore shut up.

THE OLD MEN'S INFIRMARY

is on the ground floor; it is one of the old rooms unaltered; windows small, and on one side only; low pitched roof with open rafters. There were about eight men in bed. A dreary day-room is close to the ward, well supplied with benches, but there were very few armchairs, either in day room or ward. The one redeeming feature was a pleasant and good-sized garden, where such of the old men as can get out may sit and smoke.

THE OLD WOMEN

are on the first floor in two rooms, a day room and an inner room as the ward. Here are more comforts: a good supply of armchairs and a horsehair couch, cushions, a table cover, and growing plants gave a more homelike air. The old ladies need such compensations, as they are rarely able to go up and down stairs, and moreover their piece of ground was not so well cared for as that of the men. There were two curtains to each bed. The bedding throughout is flock; in many cases we noticed that it was lumpy and wanted teasing out.

THERE IS A NURSE,

but she is untrained, and is getting on in years; there is no night nurse, only paupers sleeping in the wards at night. The male and female infirmaries are some distance apart. The class of cases is such as is usual in country workhouses, paralysed and bedridden patients, helpless as children, and requiring at the least as much attendance; whatever they may receive by day it is clear that they get none at night. There were about twenty patients at the time of our visit.

THE NURSERY

is a large dreary room near the female infirmary. A baby in a cradle was being tended by a deaf and dumb woman, and another infant was in the arms of an imbecile. A flight of stairs from this room led to the night nursery. Here we found an infant lying in a large bed placidly sucking a tube feeding bottle, and an older child in a wooden cradle. The latter was, we were told, an orphan being brought up (?) by the guardians. It was well that these infants were so capable of looking after themselves, for the deaf and dumb woman would, of course, have heard no sound, and the intellect of the imbecile could hardly be reckoned on in an emergency. When will guardians recognise their responsibility for these infants? We would suggest that the orphan should be put out to nurse in the village.

THE LYING-IN WARD

is on the first floor near to the nurse's room, a small room containing two beds; it is not often used.

SANITARY ARRANGEMENTS

are non-existent. In the wards are the usual commodes, and outside, at some distance from the wards, are privies, too far to be of any avail for the old and infirm. The commodes of course are not emptied at night. No water is laid on inside the house; there are consequently no baths. The wards are ventilated by the windows, supplemented by Tobin's system, but the tubes are not placed at the right height in the walls.

The well-cultivated garden, plentifully stocked with vegetables and fruit trees, suggested a varied diet for the sick, with jam to take the place of butter at times. We hope that the inmates share in the produce before it is sold by the guardians for the relief of the rates.

RECOMMENDATIONS.

When we find such an antiquated house in a sparsely-peopled district, we wonder if it is worth while to maintain such an establishment for so few. Could not the inmates be placed in another house, with no disadvantage to themselves and a manifest saving to the ratepayers? A certain amount of money would need to be spent on the present house to make it sanitary and workable. The master told us that he had the greatest difficulty in finding able-bodied paupers to do the work, and the fact that the infants are in the charge of an imbecile and of a deaf mute bears out his statement.

A REPORT
ON THE
MILK SUPPLY OF LONDON
BY A
SPECIAL ANALYTICAL AND BIOLOGICAL COMMISSION.

REPORT UPON THE ANALYSIS OF TWENTY SAMPLES OF MILK.

BY CHARLES E. CASSAL, F.I.C.,
Public Analyst for Kensington, St. George Hanover Square, etc.

SECOND REPORT.

I CERTIFY that I have analysed 20 samples of milk, numbered from 31 to 50, on behalf of the British Medical Association Special Milk Commission. From a consideration of the results of my analyses I have arrived at the understated opinions concerning the composition of the samples (see Table). It has been explained in a previous report (No. 1) that 3 per cent. of fat is the lowest amount which should be present in a sample to which the term "milk" can still justifiably be applied, and that a purchaser ought fairly to receive *not less* than 3.5 per cent. of fat in an article sold to him as milk.

A sample of milk purchased in the ordinary way from a well-known dairy company (the Aylesbury) has already been reported as containing 4.2 per cent. of fat. Another sample purchased from a large firm showed 5.1 per cent. of fat, but was found to contain boric acid. The amount of fat, however, will serve as a further example.

In those cases where the fat found was below 3.5 per cent. but not below 3 per cent., the percentage of fat deficiency on the 3.5 standard is shown. Inasmuch as deficiency of fat is now generally brought about by the admixture of separated milk, which contains practically no fat, with a milk of genuine composition, it is convenient to regard milks deficient in fat as made up of "milk devoid of fat" and milk of genuine composition. In those cases where the amount of fat found was below 3 per cent. the calculations have been made on the lower, or 3 per cent. limit, a fact which is indicated by the genuine milk present being reported as "milk of genuine composition but of the poorest quality."

Results of Analysis.

No.	Name of Sample.	Date of Purchase.	District.	A Percentage of Milk Devoid of Fat, yet 8 Per Cent. Solids-not-fat.	B Percentage of Milk of Genuine Composition, but of the Poorest Quality.	C Percentage of Added Water.	D Percentage of Milk Devoid of Fat, yet 8.5 Per Cent. Solids-not-fat.	E Remarks.
31	Milk	1895 July 6	North Kensington and Notting Hill	25	75	—	—	—
32	"	"	"	—	94	6	—	—
33	"	"	"	—	—	—	14	—
34	"	"	"	37	63	—	—	—
35	"	"	"	21	79	—	—	—
36	"	"	"	—	—	—	—	Genuine composition; fair quality.
37	"	July 17	North Kensington	—	94	6	—	—
38	"	"	"	—	—	—	—	Boric acid present, *otherwise* genuine; fair quality.
39	"	"	"	5	95	—	—	Boric acid present.
40	"	"	"	—	—	—	13	—
41	"	"	"	14	86	—	—	"Working Men's Stores."
42	"	"	"	—	—	—	10	—
43	"	July 18	Islington, Clerkenwell, and Holloway	—	—	—	—	Genuine composition; fair quality.
44	"	"	"	—	96	4	—	—
45	"	"	"	—	—	—	—	Genuine composition; fair quality.
46	"	"	"	—	—	—	—	Genuine composition; fairly quality.
47	"	"	"	—	—	—	—	Genuine composition; fair quality.
48	"	"	"	—	—	—	—	Genuine composition; fair quality.
49	"	"	"	—	—	—	—	Genuine composition; fair quality.
50	"	"	"	—	—	—	—	Boric acid present, *otherwise* genuine; fair quality.

GAS LIGHTING CONSIDERED FROM A HYGIENIC POINT OF VIEW.

THE observation has long been made that the air of a room lighted by gas becomes unpleasant and oppressive, acquiring a disagreeable smell, and irritating the mucous membrane of the larynx and windpipe. These effects are partly due to incomplete combustion resulting from the use of defective burners, and with the object of studying the question whether gas burnt in good burners is prejudicial to health, Professor Geelmuyden has carried out a long series of experiments at the Physiological Institute of Christiania University, with results which are decidedly favourable to gas as it is used in that town. A full account of these experiments is published in the *Gas World*, from which the following summary of the more interesting details is taken:

The average composition by volume of the gas used was 47 per cent. hydrogen, 36 per cent. marsh gas, 4 per cent. heavy hydrocarbons and benzine, 8 per cent. carbonic oxide, 2 per cent. carbonic acid, 2 to 3 per cent. nitrogen, with from 301 to 347 grains of sulphur in all forms per 1,000 cubic feet. In the complete combustion of such a mixture the products are carbonic acid and water vapour, together with a little nitrogen, some sulphurous acid which soon becomes sulphuric acid in damp air, and some traces of oxygen compounds of nitrogen.

Three types of burners were used in the experiments: the ordinary slit burner, the argand, and the incandescent burner, and when once it had been ascertained that with good ordinary burners combustion is complete, the questions to be determined had reference only to carbonic oxide, arsenious acid, hydrocyanic acid, ammonia, nitrous acid, and other oxygen compounds of nitrogen.

The author concludes from his observations that, with a slit burner or an argand, there is no volatile unburned carbon compound of neutral reaction such as hydrocarbon or carbonic oxide liberated in the combustion of gas. The incandescent burner allows small quantities of carbon to escape imperfectly burned, and this unburned portion may amount to 2 per cent. of the whole carbon, but even on the assumption that all the imperfectly burnt carbon were in the state of carbonic oxide the proportion of that gas would be too small to produce a poisonous effect, so that, at the worst, no danger is to be feared in using incandescent burners.

Besides carbonic acid and sulphurous acid no other volatile acids were found in the products of combustion in any appreciable amount. Special search was made for hydrocyanic acid with very doubtful, if not entirely negative, results. The average amount of sulphurous acid was 0.0942 per cent. by weight, or 0.687 grain, corresponding to 0.343 grain sulphur, per cubic foot of gas. Of oxidation products of nitrogen, which are always formed when combustion takes place in moist air, the amount of nitrous acid found was 0.36 milligramme per 100 litres of air passed through the apparatus in which the gas was burnt with the slit burner, 0.4 with the argand, and 0.22 with the incandescent burner, the air being so highly charged with products of combustion as to contain from 2 to 3 per cent. of carbonic acid. Special search was made for arsenic that might have come from pyrites in the coal, but no trace of it was detected.

The water condensed is slightly lighter than pure water; it is slightly acid, and becomes greenish yellow when neutralised with ammonia. The quantity of sulphuric acid found was 0.0042 per cent., that of sulphurous acid 0.0042 per cent. with the slit burner, 0.0053 and 0.0048 with the argand, 0.0048 and 0.0078 with the incandescent burner, the possible quantity of sulphuric acid being 0.2683 per cent., so that only about 2 per cent. of the sulphur at once forms sulphuric acid, the greater part passing on as sulphurous acid in the gaseous state. There was no ammonia or hydrocyanic acid in the condensed water, but some trace of nitrous acid. The condensed water also contained a small proportion of organic material, probably derived from atmospheric dust, but it was ascertained to be quite innocuous.

Experiments in which animals were made to breathe air containing the products of combustion were carried out without any indications of injurious effects, even when the air was so highly contaminated with the products of combustion from good gas burners as to contain from 1 to 3 per cent. carbonic acid. There was no evidence of absorption of carbonic oxide or of the action of nitric acid upon the blood.

By testing the air in rooms lighted with gas under varying conditions of ventilation it was ascertained that to have as much as 1 per cent. carbonic acid in the air of a room is perfectly exceptional; an amount of from 0.6 to 0.8 per cent. may be reached in an unventilated room, but in a well ventilated room 0.2 or 0.3 per cent. can scarcely be exceeded, even when gas is burnt with extravagant superfluity. The carbonic acid takes the place of an equal volume of oxygen, but the researches of Paul Bert, Friedländer, Herther, Speck, and others, have shown that the replacement of oxygen by carbonic acid to the extent of 1 per cent. is unimportant as regards health or comfort. The author's experiments show that even 3 per cent. makes no difference in these respects, but that applies only to pure carbonic acid, and not necessarily to carbonic acid mixed with other products of combustion, and the amount of such products is not indicated by or proportional to that of carbonic acid.

The amount of sulphurous acid in the air respired scarcely reaches 0.001 or at most 0.015 per cent. by volume when the gas burnt contains 310 to 345 grains of sulphur per 1,000 cubic feet. According to Lehmann and Hirt, that proportion has no importance from a hygienic point of view. In a well ventilated room the proportion falls to 0.2 or 0.4 per 1,000,000 cubic feet.

Under the worst conditions the humidity of the air was 77 per cent. Gas lighting always falls short of saturating the air with moisture because it warms the air, so that the air of a room lighted with gas may be actually drier than the cold air outside, though containing more moisture. The consequent discomfort would be greater if the air were treated to the same degree without being supplied with moisture. The rise of temperature in a room lighted with gas cannot be altogether prevented by ventilation, and although the amount of carbonic acid may be kept down in that way, the temperature increases as the result of radiation, warming the walls, ceiling, and floor.

In Christiania the following are the data corresponding to 100 English standard candles per hour, the price of gas being 4s. 8½d. per 1,000 cubic feet:

—	Material used.	Water Grammes.	Carbonic Acid Grammes.	Heat, Kilogramme Calories	Cost Pence.
Slit burner	1,160 litres	1,044	805	6,200	2.179
Sugg's argand burner	576 ,,	808	643	4,500	1.761
Regenerative ,,	430 ,,	387	335	2,870	0.874
Incandescent ,,	200 ,,	180	156	1,100	0.403
Stearine candles ...	330 grains	847	2,816	7,100	17.467
Good petroleum lamp	318 ,,	300	990	3,440	0.755
Electric glow lamp...	—	—	—	200	3.525

A good petroleum lamp is thus shown to be better than an ordinary slit burner, and worse than an incandescent burner. Both stearine and petroleum may contain sulphur, which escapes as sulphuric acid into the air, so that gas is, from the hygienic point of view, no worse than other means of lighting, while good gas burnt in argand or incandescent burners is even better than petroleum.

DEATHS UNDER ANÆSTHETICS.

Chloroform.

Dr. Pacheco Mendes recently communicated to the Medical and Surgical Society of Bahia[1] a case of death under chloroform which occurred in his service in the Hospital Santa Izabel of that city. The patient was a robust man, aged 40, with a tibio-tarsal dislocation of thirty days' standing. There was no sign of heart disease. Chloroform was administered, and the dislocation was reduced without much difficulty. While preparations were being made to apply a supporting apparatus, it was observed that the patient had ceased to breathe. By means of rhythmical tractions of the tongue, after Laborde's method, the patient was easily restored to consciousness; he opened his eyes, and began to breathe regularly. Ten minutes later syncope suddenly occurred, and the man died in spite of renewed tractions of the tongue, artificial respiration, injections of ether, electricity, etc. The total quantity of chloroform given was about 5 vss. Dr. Pacheco Mendes thinks that, as the man was an alcoholic subject, fatty degeneration of the heart probably existed, and he suggests that the measures of stimulation adopted to revive him probably contributed indirectly to bring about the fatal result by rousing the damaged organ to efforts which finally exhausted it.

CYCLING FOR ADULTS AND ELDERLY MEN.

"An Old Member" having written to us on the question of cycling for medical men, we have thought it would be interesting to have the opinion of a surgeon who is justly considered an authority thereon. We therefore referred the question to Mr. Noble Smith, Senior Surgeon to the City Orthopædic Hospital, who writes as follows:

The chief point raised is with respect to the choice between a tricycle and a bicycle, it being suggested that "a man over middle age who is not agile" would find riding a bicycle not an easy task. I entertained the same opinion until quite recently, when I learned that a bicycle can be very quickly mastered without much risk of falls, even by a man past middle age. The effort required to ride a tricycle is enormously greater than that needed for a bicycle, and the older and less agile the rider the more he will appreciate the difference.

As regards rough and heavy ground, undoubtedly there are serious difficulties both with the bicycle and the tricycle; but whereas a good track of a foot wide will serve for the bicycle, a three-foot track or a wider one are required for the tricycle. Wet roads and an adverse wind are very much against cycling, but with a good bicycle neither of these drawbacks will prevent travelling except when they are very severe, whereas they may easily be prohibitive to tricycling. I have been in the habit of recommending cycling for patients suffering from various weaknesses whenever it is desirable to take off the weight of the body from the legs, and I have been very satisfied with the results. There are many other points which might be described, but probably the above may serve the object required.

[1] *Annaes da Sociedade de Medicina e Cirurgia de Bahia*, April, 1895.

LITERARY NOTES.

The Library of the Surgeon-General of the United States Army at Washington now contains about 112,000 bound volumes and some 130,000 pamphlets.

An American edition of the *British Gynæcological Journal* is now published in New York.

The *Medical and Surgical Reporter*, which has for forty years been published in Philadelphia, has transferred itself to New York.

The library of the late Professor Ludwig, of Leipzig, the famous physiologist, is to be sold. A catalogue has been prepared by Th. Stauffer, 26, Universitätstrasse, Leipzig, who will send a copy to anyone who asks for it. A collection of theses and reprints, to the number of 10,000, the accumulation of fifty years, is offered in one lot for 6 000 marks (£300). The books will be sold separately.

The *Woman's Medical Journal*, published in Toledo, Ohio, is presenting its readers with a series of illustrated biographical sketches of the leading women of the medical profession. The August number contains records of Dr. Marie Zakrzewska, of Boston, who is said to have been one of the earliest graduates; of Dr. Eliza Burnside, of Philadelphia, another pioneer woman; and of Dr. Mary Spink, of Indianapolis, a representative of the younger generation of medical women.

Nature, of August 1st, contains an excellent appreciation of Huxley from the pen of Professor Michael Foster. The following passage will be read by many with special interest: "Future visitors to the burial place on the northern heights of London, seeing on his tombstone the lines

> And if there be no meeting past the grave,
> If all is darkness, silence, yet 'tis rest,
> Be not afraid ye wailing hearts that weep,
> For God still 'giveth his beloved sleep;'
> And if an endless sleep He will—so best.

will recognise that the agnostic man of science had much in common with the man of faith."

The Memorandum on the Radcliffe Library, drawn up by Sir Henry Acland for the use of members of the British Medical Association on their visit to Oxford on August 3rd, gives an interesting account of the history and growth of that great collection of scientific literature. It was built in 1740 in conformity with the terms of the will of Dr. Radcliffe, the famous physician to Queen Anne, who was himself so little of a bookworm that the wits of the time said that his founding a library was as though a eunuch should set up a harem. The principal contents of the library, being for the most part books on physical science, were in 1861 removed to the Museum, so that they should be in convenient proximity to the scientific collections and laboratories which were to be placed in one Scientific Institute or "Museum." The Museum itself was designed to promote the study of the Kosmos, or, in other words, of the several elements of knowledge which are included in our day under the head of physical science in the widest sense. In the Library the literature required by the professors who deal with these subjects is as far as possible maintained. More than 550 *Transactions* and periodicals, British and foreign, are kept up complete. Besides the Library proper there is a Students' Library, with a separate catalogue of its own; it consists of a special selection made by each professor in his own department. The selection con-

tains elementary works, systematic works, and some typical examples of the higher works in the science to which they relate.

In the *Ugeskrift for Läger* Dr. Friis advances a claim on behalf of a Holstein schoolmaster named Peter Plett, to the honour of priority in the discovery of vaccination. Jenner's first vaccination was, he says, performed on May 14th, 1796, but Plett had already done it in 1791. The latter was a tutor in a family at Schönweide in Holstein in 1790, and while there he heard that it was a matter of common knowledge that the milkmaids who had previously been infected with cow-pox never caught small-pox. Having by chance seen a medical practitioner perform inoculation, Plett conceived the idea that cow-pox lymph might be used for the purpose of conferring protection against small-pox. In 1791 he was at Hasselburg, and an epidemic of cow-pox occurring among the cows on a farm, he told the children under his charge to rub their hands with matter from the pustules; as no result followed he himself vaccinated three of them without the consent or knowledge of their parents. He used a table knife for the purpose, making the incisions on the back of the hand, between the thumb and the forefinger. The operation was successful, and a year later, when the other children of the family suffered from small-pox, the three who had been vaccinated by Plett remained free from the disease. There appears to be no record of his having performed any other vaccinations.

In the *Archives de Médicine et de Pharmacie Militaires* for July, Dr. C. Finot, a medical officer of the French army, gives an account of the contents of a document of some interest and value in connection with the history of military surgery. A few years ago a number of papers relating to a projected expedition against the Turks, for which some preparations were made by Philippe le Bon, Duke of Burgundy, in 1457, were unearthed in the archives of the Nord department. Among these are the reports of the medical officers of the Duke's army as to the provision for the care of the sick and wounded, and the drugs, instruments, dressings, and other material necessary to put the equipment on a war footing and ready for mobilisation. Between 1449 and 1463 the medical staff of Philippe le Bon consisted of the following physicians: Simon de Roches, Henri de Wocht, Pons de Lavaux, Jehan de Vaulx, Gonsalves de Vazas, Anthoine Paternostre, Jehan Surquet, Jehan Espine, Nicole de Vallernesse, Maître Dominique, and Pierre de Harlem. There were also three surgeons, Josse Bringt, Jehan Sans-Pitié (if this was a nickname, let us hope it was undeserved), and Guillaume du Bois. The strength of the expedition is estimated at 2,000 men. The quantity of dressings asked for is equivalent to three or four panni r loads of the kind now in use. The list of drugs includes eighty-seven substances, in which balsams and plasters figure largely. The applications used for the dressing of wounds consisted largely of aromatic substances, which were probably to some extent antiseptic, and which were certainly better than the oily and "emollient" preparations which came into use at a later period. Among the injuries which are considered likely to require treatment are the "bites of serpents."

Thanks to the public-spirited efforts of Dr. Sajous and Dr. Jacobi there seems to be a good prospect that the *Index Medicus* may rise like the phœnix from its ashes before they are yet cold. It is also stated that Dr. Marcel Baudoin, General Secretary of the Medical Press Association, has undertaken the publication of what is practically a continuation of the *Index Medicus*, "with a few important modifications."

If a man in these days has the fatal gift of genius, the best thing he can do is to conceal the fact, and be content to be a "mute inglorious Milton," lest he be sent to a madhouse. Criminologists like Lombroso, Max Nordau, and Mr. [illegible] about, the poor child of Apollo would have no chance. As Villon put it, "smellers out" were not enough, now we have Dr. Forbes Winslow, D.C.L.Oxon., LL.M., M.B Camb., prowling about (merry, tropically, in the pages of *The Humanitarian*) seeking what man of genius he may devour. For this gentleman philosopher the line that separates "the [illegible] driveling idiot from the man of transcendent genius" is "fine and fragile." We are told that "the development of the brain and nervous system on which the poetical inspiration depends" is nearly allied to "that cerebral condition so frequently associated with insanity." We gather that poets and men of genius generally suffer from "excessive expansion of brain matter." It is also discomforting to be informed that "in the majority of studious men there already exists a predisposition to cerebral disease which may have actually existed." Further on we read that "Byron had—1784—as a child a temper sullenly passionate." The sentence is a little obscure, but on any construction of the text it would appear that the author of *Childe Harold* must have been the most precocious infant phenomenon of whom there is record if he displayed these unamiable characteristics four years before he was born. Of Scott we are told that although his "early composition" was wonderful, "there was evidence to the psychologist of *that flaccid degeneration of tubular neurine* which probably began with his reveries," etc. Poor Scott! Torquato Tasso may be accounted fortunate that he only suffered from "mania periodique" and "phantasmagoria." The statement that "Jean Jacques Rousseau, the great French poet, suffered from a bane of moral insanity" suggests that the writer had never heard of Jean Baptiste, the rhyming namesake of the Citizen of Geneva. Coleridge's life was not exactly a model of self-restraint, but it is painful to learn that he "became an habitual resorter of drugs." The "premonitory cause" of Charles Lamb's "mental condition becoming unhinged" is alluded to. For the discovery of "Edgar Allen, poet," the printer's devil is probably responsible. Dr. Forbes Winslow sees in the insanity of genius "one of the many awful proofs of immortality," but he does not condescend to explain this mysterious utterance. Rasselas said that his instructor had convinced him that it was impossible to be a poet; had he read Dr. Forbes Winslow's article he would have been thankful for this impossibility. Surely it is far better to plod on along the beaten road of life than to soar into the empyrean and fall a victim to "flaccid degeneration of tubular neurine."

THE GRACE TESTIMONIAL.

With the acknowledgment of a subscription of one shilling received from Mr. R. V. Gorham (Yexford), we beg to intimate that the list is now closed. The total number of shillings subscribed is 936. Readers who may still wish to contribute to the Grace Testimonial are requested to send their subscriptions direct to the *Daily Telegraph*.

ASSOCIATION INTELLIGENCE.

NOTICE OF LAST QUARTERLY MEETING FOR 1895.
ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

South Wales and Monmouthshire Branch.—A meeting of this Branch will be held at the Swansea General Hospital on Thursday, September 12th, at 4 P.M. Gentlemen desirous of reading papers or showing cases will please communicate titles, etc., on or before August 20th to D. Arthur Davies, M.B., Honorary co-Secretary, Northampton House, Swansea.

Midland Branch: Derbyshire Division.—There will be a meeting at the Whitworth Institute, Darley Dale, on Thursday, September 5th. The President, Dr. Moxon, kindly invites the members to afternoon tea, and Lady Whitworth will throw open her gardens and grounds. Afterwards it is proposed to drive to Matlock Bath to dine at the New Bath Hotel.—J. A. Southern, Honorary Secretary, Friar Gate, Derby.

MALAYA BRANCH.

The usual monthly meeting of this Branch was held at Singapore on February 2nd; the Vice-President (Dr. Simon) occupied the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—Surgeon-Captain Smith, A.M.S., who had been elected a member of the British Medical Association by the Council of the Branch, was elected a member of the Branch in accordance with the rules of the Association.

Pseudo-Leprosy.—Dr. Simon read notes of a case of pseudo-leprosy in a Chinaman, an inmate of the convict prison, who presented many of the classical features of mixed leprosy. The man had rapidly improved under the influence of arsenic, so much so that Dr. Simon considered this to be a case of pseudo-leprosy. He supported the idea that there was a form of skin and nerve affection which closely simulated leprosy, but differed from it in being amenable to the influence of arsenic.—Dr. Galloway said that he had seen the case along with Dr. Simon, and had no doubt as to its nature. There were the peculiarly thickened nerves, the atrophy of certain muscles, the anæsthesia, and the peculiar, parchment-like glossy skin. So much light had lately been thrown upon leprosy, and so many diseases which were supposed to be distinct morbid entities such as the "painless whitlow" of Morvan, sclerodactylitis, sclerodermia, some forms of morphœa and syringomyelia had been shown to be modified forms of leprosy, that it was evidently this possible danger which had been in the Vice-President's mind when he raised the question of pseudo-leprosy. With regard to the symmetry of leprous lesions, in Dr. Galloway's experience it was an exceedingly rare thing to find bilateral symmetry even in the skin lesions, and when we go deeper and search for atrophy of muscles, thickening of nerves, etc., asymmetry is the rule.—Dr. Lim Bom Keng had had cases very similar to the one reported. He discussed the question of the want of symmetry of the lesions, the frequency of acute onset, and spoke of the rapid disappearance of skin eruptions in some cases, and of the danger of mistaking leprous eruptions for something else. He referred to the relation of a certain chronic scaly and pigmented eruption with leprosy.—Dr. Highet had seen the case, and in his opinion it was a case of true leprosy, although it presented certain peculiarities. He referred to a case of leprosy which he had seen before coming to the meeting, in which none of the many skin lesions were in any way symmetrical. Symmetry is of far more frequent occurrence in syphilis. He discussed the point raised by Dr. Lim Bom Keng with regard to a chronic scaly, and pigmented eruption, and referred to two cases in Europeans. He asked if the bacillus had been searched for in the case reported.—Dr. Simon, in reply, stated that he still leaned to the idea that there was such a thing as pseudo-leprosy. In this case, search for the bacillus had as yet been without success.

A vote of thanks to the Chairman terminated the proceedings.

An ordinary meeting of the Branch was held at Singapore, on March 2nd, 1895. In the absence of the President and Vice-President, Dr. Galloway was called to the chair.

New Member.—In accordance with the rules of the Association, Dr. Travers, Residency Surgeon, Selangor, was appointed a member of the Branch.

Mania Transitoria.—Dr. Lim Bom Keng read notes of a case of "Mania Transitoria." The patient was a Eurasian lady, aged 37. She had given birth to ten children, was always of an excitable temperament, had frequent attacks of angina pectoris, and suffered from chronic phthisis pulmonalis. As a result of anxiety and sleeplessness incident to an attack of measles among her children, she became very despondent, and suddenly, one afternoon, she became violently maniacal. She barked like a dog, foamed at the mouth, was delirious, and attacked everyone who came within her reach. The body was cold, and was covered with a cold perspiration. The pupils were dilated, speech was incoherent, and references were made to poison, indicating possible delusion. Bromides and ether were prescribed. She slept well, and was perfectly well the following day. There had been no return of the madness. She had no fever at the time, nor even for some time previous to the attack of the insanity.—In discussing the case, Dr. Galloway spoke chiefly of cases of mania following malarial fever, and described several cases.—Dr. Highet described a typical case of malarial mania which recurred with every attack of fever, and presented strange delusions. During one of these attacks homicidal tendencies developed, and the patient shot dead with a revolver one of his best and most intimate friends.—Surgeon-Captain Greig also joined in the discussion.

Dislocation of Thumb Backwards.—Surgeon-Captain F. J. Greig showed a case of dislocation of the right thumb backwards on to the metacarpal bone, in which he had to operate owing to the impossibility of reduction by other means. Under chloroform an incision was made over the projecting metacarpal bone down the centre of the thumb, beginning about ½ inch above the point, and ending about ½ inch below. The head of the metacarpal bone had been forced between the two heads of the flexor brevis pollicis, which were now separated with aneurysm needles, and after some manipulation the dislocation was reduced. The operation was performed on January 3rd, 1895, under full antiseptic precautions. He is a signaller in his regiment, and can now perform his duties perfectly, although there is still some stiffness of the joint, the movements of which are slowly but steadily improving.

TRINIDAD AND TOBAGO BRANCH.

An ordinary meeting of this Branch was held at the Colonial Hospital on June 17th, Hon. Dr. De Wolf (President) in the chair. Drs. Eakin, Alston, Koch, Read, Lawrence, Duprey, Macfarlane, A. Lota, L. Lota, Perez, Rodriguez, Scheult, Stollmeyer, and Prada were present.

Communications.—Dr. Alston read a very exhaustive paper on Immunity and Protection. Drs. Lota, Rodriguez, Read, and Eakin discussed the paper.—Drs. Rodriguez and Lawrence read notes on two interesting cases that had come under their notice, the former on a Midwifery Case, and the latter on a Case of Tuberculosis.—Dr. Koch read a paper entitled Is Leprosy Hereditary? This valuable paper gave rise to a good deal of discussion, and it was agreed to reopen the discussion at some future occasion.

SPECIAL CORRESPONDENCE.

PARIS.

The Stenches of Paris.—The Manufacture of Lucifer Matches and Phosphorism.—The Utilisation of Sewage.—The Remuneration of Hospital Dressers.

The Subtechnical Commission appointed to study the subject of the stenches of Paris has held a meeting at the Police Prefecture; Professor Armand Gautier, Member of the Academy of Sciences, presided. The following resolutions were passed:

That a complete list of establishments classed in the category of dangerous and unhealthy dwellings should be drawn up.

That two separate maps, one of Paris the other of the environs, be prepared. On each of them the position of the establishments dangerous to public health in consequence of the bad smells emanating from it is to be clearly indicated.

That the mayors and police *commissaires* be directed to inform themselves of the origin of the local stenches in their respective circonscriptions.

That Dr. Miquel, Director of the Montsouris Laboratory, be requested by the Administration to make analyses of the soil and subsoil in certain parts of Paris and the environs, and the gases emanating therefrom.

The administrative subcommittee of the Paris Stench Commission has also met; M. Escudier, General Councillor of the Seine department, was in the chair. It was decided by this Commission:

That M. Nivard, Barrister to the State Council, be requested to draw up report on the legislation in force.

That Dr. du Mesnil be requested to treat the question of how to remove and utilise mud and refuse heaps.

That M. Barrier be requested to draw up a plan for reorganising the service of inspection of the establishments classed as dangerous and unhealthy.

At the Panton lucifer match manufactory since the last fire one of the new forms of lucifer matches has been adopted. Ten carts full of matches made without phosphorus are daily removed from the factory to be stored in the State depôt. The hands are forbidden to go from one workshop to another. One of them was recently suspended for twenty-four hours for having infringed this rule. He asserts that the foreman gave him permission to do so, and refuses to submit to the punishment. The Marseilles Syndicate has voted £6 to send a lucifer match worker to Paris to consult Dr. Magitot. Two of the Marseilles doctors diagnose phosphorus necrosis. The Administration doctors have not detected symptoms of the disease, and refuse to subject her to the treatment.

The law of April 4th, 1889, concerning the sanitation of the Seine and the utilisation of sewage for agricultural purposes directs that the execution of its clauses concerning the limits of the ground so saturated is to be controlled by a permanent Commission of five members named by the Minister of Agriculture, the General Council of the Seine and Oise, the Minister of Finance. One is to be a member of the Comité Consultatif d'Hygiène de France, elected by his fellow members. These experts will every six months send in a report to the Ministers of Agriculture and Finance, and the said report will be inserted in the *Journal Officiel*. Dr Bonneville is elected as expert by the Comité Consultatif d'Hygiène.

A disagreeable surprise awaits the hospital dressers when they resume their posts after a refreshing holiday. At the Beaujon, Lariboisière, Andral, St. Antoine, and St. Louis Hospitals the dressers and clinical clerks received a small annual remuneration. This is to be suppressed, the reason alleged being that the means of access are now much easier. It is estimated that the saving will amount to £3,000. Two *cahiers de visite* will in future be kept instead of one. The food register will thus be apart from that of the medicines prescribed.

BERLIN.

German Anthropological Congress.—The Disposal of Refuse in Berlin.—General News.

At the German Anthropological Society's congress just held in Cassel, Professor Waldeyer (Berlin) presided, and read a paper on characteristic differences between the sexes from the point of view of anthropological research. In Europe, he said, in the great majority of cases, newborn boys are from ½ centimetre to 1 centimetre longer than newborn girls. In full-grown individuals the average difference is 10 centimetres to the advantage of the men. The average weight of newborn boys in Europe is 3,383 g., against 3,200 g. for newborn girls. Laughter was raised by the speaker's remark, that though man was superior to woman in strength, height, etc., the muscles of the tongue were more highly developed in women. He proceeded: On an average, a cubic millimetre of male blood contains 5 millions red corpuscles, the same amount of female blood contains only 4 millions. Waldeyer laid great stress on the greater average size and weight of man's brain as compared with women's (1,372 g. to 1,221 g.), pointing his remarks by the statement that as a rule distinguished men are the possessors of brains above the average in size and weight. He gave some examples, among them Turgenjew, whose brain weighed 2,000 g.; Gauss, the physicist, 1,490 g. However, he was obliged to add that the average brain weight of Chinese coolies is 1,430 g., a fact that detracts somewhat from the force of his argument. Waldeyer read a second paper on the question: Which species of anthropoid ape is most similar to man in build? Brain examinations show the chimpanzee to be the kind that most nearly approaches man. His skull, eyeholes, hard palate, etc., are all more like man's than those of the gorilla, orang-outang, or gibbon. The spinal marrow and nerve bundles of the chimpanzee also are more highly developed than those of the other apes. Professor von Ranke (Munich) read a highly interesting paper on the anthropology of the spinal cord. His concluding words were: "The researches on the subject of the relative weights of spinal marrow and sensory organs give us one of the most important characteristic differences between man and the animals; of all vertebrates man, in proportion to his brain, has the least developed mechanical nervous apparatus; again, in proportion to the rest of the nervous system, he has the largest and heaviest brain, and this places him at the head of the entire animal world. The ancient axiom of Aristotle—namely, 'Man has the largest and most humid brain'—is thus, with these limitations, accepted by modern science." Dr. Buschan (Stettin), in a paper on the criminal anthropology of the present day, attacked Lombroso's theory of the "typo-criminal." Professor Virchow, who during the first two days of the Congress had been unwell and unable to attend the meetings, on the third day read a paper on the ethnological question in Hessen, in which he strongly encouraged research in the hills and along the rivers of Hessen. The town chosen for the scene of next year's congress is Speyer in Bavaria, and Virchow will preside.

How to get rid of the ashpits and other refuse of great cities is a difficult problem. In Berlin the refuse is carried away in carts, transferred to river boats, and shipped off to fields far from the habitations of men. But this method is troublesome and not entirely satisfactory, and for some time experiments have been carried on with a view of finding out whether the English plan of burning town refuse might not be equally practical in Germany. But these experiments have not been very satisfactory. Curiously enough, Berlin town refuse differs materially from English; it contains only from 1 to 2 per cent. combustible matter, whereas English refuse contains up to 29 per cent. In England the temperature in the oven where the refuse is burnt varies from 200° to 600° C., whereas in Berlin 200° C. is the highest point that can be reached. There are enormous quantities of sand and incombustible ash in Berlin refuse; in fact it requires a large admixture of coal to burn at all. The experiments, for which the municipal authorities of Berlin have voted the sum of £5,000, have not yet been brought to a close, but that the method is not suited to Berlin may be foretold even now.

According to a new decision of the Prussian Cultus-Minister, all weights and scales used in chemists' shops must be submitted to the Royal Gauging Institute every two years.

There is a rumour that the professions of dentist and of chemist and druggist are to be opened to women. Up to the present, all the lady dentists practising in Germany have had an American training.

CHICAGO.

The Unveiling of a Bust of the late Dr. W. H. Byford.—College Commencements.—The Annual Pilgrimage Abroad.—Hospitals and the County Board.

The unveiling of a bronze bust of the late William H. Byford at Rush Medical College, was an event of interest to those who were closely associated in college work with the deceased, to the large alumni list of the college wherein he taught for many years, and to the host of surviving friends, both professional and lay. Dr. Byford was a broad-minded and progressive teacher, and a pioneer in this part of the world in the subject of modern gynecology. He was an extensive contributor to the literature of his time, which, with his strong and popular personality, his long years of service, and his power of teaching has made his name and works revered. The presentation was in the presence of a large audience, and was made by Professor Henry T. Byford, son, successor, and now professor of gynecology in the College

of Physicians and Surgeons. The bust was formally accepted by the venerable Dr. De Lackie Miller, President of the Board of Trustees of Rush College, who took occasion to review the life of his colleague in terms of fitting eulogy.

The college commencements are now over, and a small army of young doctors has gone out into the field of actual practice. Notwithstanding the lament of "an overcrowded profession," the classes continue "larger than ever." This, too, in the face of the fact that all colleges belonging to the American Association of Medical Colleges—quite all of the leading institutions—have now entered upon a four year requirement for graduation.

The annual pilgrimage "abroad" of medical men was as large this year as usual. Some of these trips are largely for rest; some are largely for pleasure; but most are for study in the European centres, those of Germany having the preference. Many physicians go accompanied by their wives, and we have heard of some who will tour "awheel"—tandem or independently. Wheeling, by the way, is becoming more and more popular in the profession, both for business and pleasure, and the doctor who rides awheel at home will be very much inclined to take his machine for a trial on English or Continental thoroughfares.

A question has arisen between the hospitals and the County Board with reference to the payment by the county for the care of indigents served by the several independent hospitals. The county maintains the largest hospital in the city solely for the medical and surgical care of the poor, and it is expected that all unfortunates needing such care shall be placed under its roof. But many accident and emergency cases happening a long distance from the county institution, yet very near one of the independent hospitals, naturally find their way into the nearest haven, and early removal is not always advisable. Under these circumstances a claim has been made upon the county for services to its legitimate charge or charges. In reply to a request from one hospital for stated compensation the County Board has merely, and rather facetiously it appears, extended a vote of thanks for the kindness rendered.

CORRESPONDENCE.

A SANITARY REPRESENTATIVE ON THE INDIAN COUNCIL.

SIR,—The question of Indian sanitation, raised anew by Mr. Ernest Hart's address in the Public Medicine Section at the recent annual meeting of the British Medical Association, is now much to the front.

I desire to say that no real progress will be made in this vital question until a special appointment is made on the Council of the Secretary of State for India of a sanitary member. All the other interests of India, such as military, public works, etc., find representatives on that Council, but the medical and sanitary work of India is still unrepresented. The physician to the Secretary of State for India is engaged with medical boards, etc., and may have no idea whatever of sanitary administration. Such an appointment will cost £1,200 a year to India, but it will well repay its expense.

The affairs of the Indian Medical Service are now dealt with in the Military Department of the India Office. Perhaps the proposed member might take over this work also. Such an appointment would be a fine reward for an Indian medical medical officer.—I am, etc.

August 19th. I.V.R.C.

"THEY KNOW NOT THE MANNER OF THE GOD OF THE LAND."

[Forwarded for insertion by the DIRECTOR GENERAL of the Medical Department of the Admiralty.]

SIR,—In the BRITISH MEDICAL JOURNAL of August 3rd is the report of the opening address by Mr. Ernest Hart, in the Section of Public Medicine at the meeting of the British Medical Association, and in it the following statement occurs:

"Every case of typhoid is, in fact, a violent death, an example of water poisoning, and should be the subject of sanitary inquest."

In the JOURNAL of August 10th there is a letter from Surgeon-Major Battersby, A.M.S. Chitral Relief Force, in which this officer, speaking with reference to "the present prevalence of the disease (enteric fever) among the *European troops* (the italics are mine) of the Chitral Relief Force," says: "Our water supply has in many instances been above suspicion, being procured from springs coming directly from the mountain side, and yielding no reaction as to oxidisable organic matter when tested by permanganate of potash solution."

The contrast between the statement of theory and the statement of the actual occurrence is very striking, and I take advantage of it to direct attention to a different aspect of the causation of the enteric and other fevers from which British sailors and soldiers suffer in hot climates.

Surgeon-Major Battersby, finding that the theory of water causation did not fit the facts, has recourse to flies as the carriers of the poison and disseminators of the disease. To my mind, however, the flyborne as well as the waterborne theory leaves unexplained the constantly observed but much neglected, fact that while the strangers are suffering, as the Chitral relief force appears to be doing now, the natives, both military and civil, are in good health. It cannot be contended that the customs and habits of the latter render them less liable to the ingestion of disease poisons carried by water or flies. The very opposite is eminently the fact. The native Egyptian, whom I know, abhorring filters, drinks the highly contaminated Nile water, and lives in a swarm of flies, yet he also is not attacked by typhoid fever, while the carefully fostered British soldier is.

This disparity in the incidence of the diseases in question in the cases of strangers and natives of hot climates I have long attributed mainly to the cause brought forward so forcibly by Mr. Stanley, M.P., in his speech at the recent International Geographical Congress—ignorance of the art of living in hot countries. That this opinion is correct appears to me to be proved by the fact that the stranger who acquires the knowledge of and practises this art will, as a rule, enjoy good health.

I cannot here specify what the art of living in hot climates consists in, but it includes matters of personal hygiene relating to exposure to the heats of day and the chills of night, the quantity and kind of food and clothing, and the amount of exercise and employment.

Whenever I think of this subject I am reminded of the story of Shalmaneser's Samarian colonists, and the reason of their misfortunes "at the beginning of their dwelling" in the new land. "The nations which thou hast removed and placed in the cities of Samaria know not the manner of the God of the land."[2] This story is still further apposite because the remedy adopted by the Assyrian monarch is also required to-day. As Mr. Stanley said, "Before sending these young men into Africa they should go and study for two or three months the various arts of conquering these fevers, warding them off, and living wisely." Officers and men in the British army and navy need similar instruction, and a little of the time they spend in learning the art of war would be usefully spent in learning the art of preserving their health and lives in hot weather.—I am, etc.

GILBERT KIRKER
Staff Surgeon R.N.

H.M.S. *Clyde*, Aberdeen, Aug. 13th.

"A REAL MEDICAL TRIUMPH."

SIR,—On June 16th I saw a case of advanced pulmonary and laryngeal tuberculosis, concerning which I reported to the practitioner who had sent the patient to me as follows: ". . . . I agree with you that it is a practically hopeless case. Not only are both apices, as you know, extensively affected, but the whole larynx is one mass of ulceration, the epiglottis is in part destroyed, and the neighbourhood of the arytenoid cartilages is considerably tumefied and ulcerated.

[1] *Times*, August 1st.
[2] II Kings, xvii, 26.

Radical treatment of any kind is quite out of the question in such a case. . . . . "

To-day I received from my friend's partner the following letter: "I have promised to write to you on behalf of the parents of a young Mr. L., whom you saw a short while back (for N.) to ask whether you consider any operative procedure in his case justifiable. . . . . They saw an article in the *Pall Mall Gazette* on the subject, and wished me to write to you . . . . . "

No better illustration, I venture to say, could be given of the need of your strong protest against the fact "that a class of sufferers especially prone to ill-founded hopefulness should be cruelly deluded by exaggerated and misleading statements."—I am, etc.,

Wimpole Street, W., Aug. 20th. FELIX SEMON.

THE VACCINATION ACTS.

SIR,—With reference to my proposal, I should like to make one or two remarks. In the first place, everyone must acknowledge that the present condition of affairs is unsatisfactory from every point of view. Boards of guardians are allowed to make the Vaccination Acts a dead letter if they so wish. Private practitioners are allowed to certify as successful cases where only one vesicle has been obtained; and they are also permitted to give certificates of insusceptibility where children have not been vaccinated with fresh lymph. I agree with Dr. Cory in believing that there is no such thing as insusceptibility to vaccination. My plan may not be the best one, but at all events it is the only one which ensures the proper vaccination of every child in the country. Inefficient vaccination is responsible for the large number of adults who take small-pox. The figures I have quoted in my paper show that persons are better protected from small-pox who have two or three good (that is, foveated) scars than those who have a number of ill defined (that is, unfoveated) scars. If you or any your readers can suggest any scheme which will ensure the efficient vaccination of all children born in this country, I shall rejoice. The difficulties of ensuring that all children shall be efficiently vaccinated appear to me very great, and I am sufficiently democratic to believe that for the purposes of the Act all children, whether rich or poor, should be treated exactly alike.—I am, etc.,

Cardiff, Aug. 20th. T. GARRETT HORDER.

SIR,—In the BRITISH MEDICAL JOURNAL of August 17th you draw attention to a suggestion of Dr. Garrett Horder, of Cardiff, re public vaccination; you also make comparisons with public and private vaccinations.

May I give you an illustration of what very recently came under my notice—not an isolated one by the way? A lady in a very important position in a country parish, when asking me to vaccinate her youngest child, incidentally remarked, "Oh! my youngest but one has not been properly vaccinated; it was done by my doctor, but the vaccine did not take." I then inquired if the doctor had filled up the vaccination register. "Oh, yes! but he never came again to see whether it was successful, and I did not take the trouble to inform him." And yet this child has been registered by the vaccination officer as having been successfully vaccinated. As a public vaccinator I forbear any comment.—I am, etc.,

Morriston, Aug. 20th. E. RICE MORGAN.

SCOTTISH SCHOOLS AND PRACTICAL MIDWIFERY.

SIR,—As a fellow student with Dr. Divine, I heartily endorse his remarks in his letter to the BRITISH MEDICAL JOURNAL of August 17th.

Both Mr. Wheelhouse's and Dr. Rentoul's statements concerning Professor Leishman's ideas and practical midwifery in Glasgow are misleading. I have been present in the late Professor Leishman's class when he strongly advised students to attend as many midwifery cases, over and above the twelve requisite cases, as possible, before qualifying; this is not the natural inference from Mr. Wheelhouse's speech—indeed, the reply of Dr. Douglas shows the interpretation put on it.

I would respectfully remind Dr. Rentoul that hearsay evidence is worth very little; for instance, concerning the supply of midwifery cases and the training of students he is reported to have said, "He was told that in Scotland, and more especially in Glasgow, it was very much worse."

Now anyone who knows anything about the working of the practical midwifery for students in Glasgow knows that 95 per cent. of the students take either a fortnight or a month (many more) at the Maternity Hospital, when they attend outdoor cases, getting from twelve to eighteen in a fortnight. This is due to the enormous poor working-class population in Glasgow, who nearly all are attended by students. The outdoor house-surgeon goes out with students to the first three cases, and instructs them in various small practical matters. If any difficulty arises at subsequent cases students send either for him or a local medical gentleman specially appointed. These gentlemen, in my experience, have always been most careful to instruct minutely how to overcome the difficulty.

As for midwives instructing the students, the most polite way of putting it is to say it is not the truth, and I am sure every Glasgow graduate will resent the insult.

I am glad to see that Dr. Holmes contradicted Dr. Rentoul with regard to Edinburgh. It is a pity he was not corrected at the same time about Glasgow and other Scottish schools, concerning which both he and Mr. Wheelhouse seem somewhat fogged.—I am, etc.,

Garstang, Aug. 17th. WM. WALTON DON, M.B., C.M.Glasg.

MEDICAL FEES IN DUBLIN.

SIR,—In your note on Medical Fees in Dublin the Recorder of Dublin is reported to have said that he had been "battling all his life.....against the profession to which Dr. White belonged."

AS I happen to have read a different report of this case in an Irish newspaper, I should like to offer a correction which places the Recorder in a less hostile position to the profession. In the report which I read the Recorder was made to say that he had been "battling all his life.....against the system of the profession" (in reference to medical fees in Ireland), and not against the profession itself, to which he bears no malice whatever. The system which provokes the learned judge's hostility is that under which (according to him) Irish medical men charge a minimum fee of £1 or a guinea, although they may go out two or three times for that fee, the alternative to this minimum fee being absolute charity, which, the Recorder holds, is demoralising. In contrast to this system the Recorder cited English cases in which a fee of 1s. 6d. or 2s. 6d. was charged to "the poor" instead of charity. I am not defending the Recorder's views, but it seemed to me that without this explanation his position would appear altogether unreasonable and absurd.—I am, etc.,

August 21st. H. W. J.

THE MALARIAL PARASITE.

SIR,—In the BRITISH MEDICAL JOURNAL of August 10th Dr. P. Manson invites attention to what he calls an extraordinary statement in the *Times*, to the effect that Lawrie and Jordan, as the result of inquiry, report that there is no parasite in the blood in malaria, and that the Italian and other observers had mistaken the nuclei of white cells for parasites.

The statement of Lawrie and Jordan's views in the *Times* may or may not be correct for all I know. Even if it is correct, it is not apparent why it should cause surprise. Even Martin, the translator of Laveran's work, remarks in his preface that it cannot be said that Laveran's discovery has put an end to all further controversy.

Dr. Manson thinks the statement in the *Times* cannot be correct, for Lawrie knows well that the malaria parasite has nothing to do with the white corpuscles; that it is for the most part located in the red corpuscles, and is readily seen in fresh blood without staining. Still, although the parasites do not attack the white corpuscles, Laveran evidently thinks it possible that a pigmented white cell may be mistaken for a parasite. For he points out what he considers the best means of distinguishing one from the other. He says the melaniferous leucocyte always exhibits a nucleus, and the parasite never does. This is clear so far. But Mannsberg, who has minutely studied the structure of Laveran's bodies, describes at some length their nuclei! If they have nuclei,

what becomes of Laveran's test to distinguish them from the melaniferous leucocytes?

Again, in pointing out that the parasite is for the most part located in the red corpuscle, Manson follows Marchiafava rather than Laveran; for while Laveran says the parasite lies on or is adherent to the red corpuscle, he does not think it ever penetrates the corpuscle. Marchiafava, on the contrary, thinks the parasite does penetrate the red corpuscle, and is therefore endoglobular. In fact, Laveran thinks the parasite swallows, so to speak, the red corpuscle, while Marchiafava thinks the red corpuscle swallows the parasite, which then grows in its interior.

These are only two of the many points on which the supporters of the parasitic theory differ amongst themselves. In view of such differences how can it be maintained that the parasitic theory is established beyond question? And if it is not, why may not Lawrie have come to the conclusion that Laveran and the Italian investigators had mistaken pigment-bearing white cells for parasites? Perhaps Lawrie never made such a statement; still, if he has, is it not better to wait until we have his views fully before us before we condemn them?—I am, etc.,

MATHEW D. O'CONNELL, M.D.
Surgeon Lieut.-Colonel A.M.S.

Ballincollig, Aug. 11th.

FILTHY RAILWAY CARRIAGES.

SIR,—I wish to support and emphasise the statement of your correspondent, "Observer," in the BRITISH MEDICAL JOURNAL of August 17th, respecting the dirty and insanitary condition of the carriages on the London, Brighton, and South Coast Railway. I have personally drawn the attention of the executive to this matter, but unavailingly. The company, however, is an offender to a grievous extent in other ways hardly less inimical to health. The carriages are so lightly constructed that in motion the noise and vibration are most trying, whilst the jolting from the inferiority of the springs and the state of the permanent way make serious demands upon the nervous health of travellers generally, but especially of delicate persons. Moreover, many of the carriages—the third class especially—are not waterproof. Further, the slowness and unpunctuality of the trains is proverbial, and very trying to both health and temper.

I have for some time past ceased to advise patients and friends to visit the South Coast for the above named reasons; and if, unmindful of representations and the just and reasonable claims of the public, the company will not improve upon their present discreditable service, medical men generally will do well to advise their patients to seek health and rest in other directions.—I am, etc.,

J. O. BROOKHOUSE.

Nottingham, Aug. 20th.

AUTUMN HOLIDAYS IN SCOTLAND.

SIR,—I have read with much interest your leading article on autumn holidays in Scotland, but I regret that you have omitted to mention one important centre for tourists, namely, the town of Greenock. From it, both by land and sea, excursions can be made to the finest inland as well as highland scenery every lawful day. It is not necessary to specify all the places that can be readily reached from it in a day; sufficient to mention only the Falls of Clyde, the land of Burns, and all the lochs on the Clyde, as well as Arran, Kintyre, Bute, the Cumbraes, and Loch Lomond. Any one of these places of interest can be readily visited by leaving at the reasonable hour of 9 in the morning, and in such a way as to enable the traveller to return to his hotel by 7 o'clock in the evening. The tourist need not fear dearth of accommodation, as he will find in the best situation in the town an admirably-managed hotel, within easy reach of the railways and steamboat pier, from the latter of which elegantly-appointed steamers leave almost every hour to most of the places specified.—I am, etc.,

LAND OF THE MOUNTAIN AND THE FLOOD.

August 14th.

PROFESSOR ADAMKIEWICZ, of Vienna, has been elected a foreign corresponding member of the Paris Academy of Medicine, in recognition his researches on the nature and treatment of cancer.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A MEDICAL officer of field rank under orders for India wants to exchange with an officer who will have at least a year to remain at home.—Address No. 483, Office of BRITISH MEDICAL JOURNAL.

A SURGEON-CAPTAIN going to Ceylon this trooping season wishes to exchange with one who is under orders for India.—Address Surgeon-Captain Hale, Salford Barracks, Manchester.

A SURGEON-MAJOR with two years to serve in India wishes to exchange with one having nearly a full tour at home.—Address "Bona fide," Holt and Co., 17, Whitehall Place, London.

THE NAVY.

THE following appointments have been made at the Admiralty: FRANCIS J. BARTER, Surgeon, to the *Pembroke*, additional, August 6th; HENRY S. ARCHDALL, Surgeon, to the *Excellent*, additional, August 6th; FREDERICK FEDARB, Surgeon, to the *Victory*, additional, August 4th.

THE ARMY MEDICAL STAFF.

SURGEON-MAJOR G. M. H. COLMAN, M.B., has retired from the service, receiving a gratuity, August 21st. He was appointed Surgeon February 3rd, 1883, and Surgeon-Major twelve years therefrom.

The undermentioned Surgeon-Captains, having completed twelve years' full pay service, are promoted to be Surgeon-Majors, August 4th: DAVID BRUCE, M.B.; EDWARD H. L. LYNDEN BELL, M.B.; JOHN RIORDAN, M.B.; ROBERT H. FIRTH, F.R.C.S. Eng.; ROBERT R. H. MOORE, M.D.; ALAN E. TATE, CHARLES E. FAUNCE, HENRY J. WYATT, F.R.C.S.I.

Brigade-Surgeon-Lieutenant-Colonel JOHN RIDDICK died at Mussoorie, India, on July 27th. He was appointed Assistant-Surgeon, October 1st, 1867; Surgeon, March 1st, 1878; Surgeon-Major, October 1st, 1879; and Brigade-Surgeon-Lieutenant-Colonel, January 24th, 1894, having attained the rank of Lieutenant-Colonel, October 1st, 1887. He was engaged in the Afghan war in 1880, receiving the medal for that campaign.

INDIAN MEDICAL SERVICE.

THE following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held in London on August 2nd, 1895, and following days. Thirty-eight candidates competed for sixteen appointments.

Names.	Marks.	Names.	Marks.
W. W. Clemesha	2,605	C. R. Bakhla	2,2[illegible]9
A. W. R. Cochrane	2,594	K. V. Kukday	2,[illegible]87
V. E. H. Lindesay	2,500	E. R. Rost	2,254
R. P. Wilson	2,446	C. B. Harrison	2,238
N. R. J. Rainier	2,441	W. J. Niblock	2,237
E. L. Perry	2,423	E. Le F. Payne	2,223
J. A. Black	2,411	N. P. O'G. Lalor	2,222
J. H. Symons	2,[illegible]87	J. C. Robertson	2,212

The promotions of Surgeon-Lieutenant-Colonels C. W. CALTHROP, M.D., and W. A. C. ROE, of the Bengal Establishment, to be Brigade-Surgeon-Lieutenant-Colonels, and which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

Surgeon-Lieutenant-Colonel J. O'M. M'DONNELL, M.D., Bengal Establishment, has retired from the service, July 29th. He was appointed Assistant-Surgeon, April 1st, 1870, and Surgeon-Lieutenant-Colonel twenty years therefrom.

Surgeon-Lieutenant-Colonel H. HYDE, Madras Establishment, has also retired from the service, May 25th. His appointment as Assistant-Surgeon dates from October 1st, 1866; that of Surgeon-Lieutenant-Colonel, October 1st, 1886.

THE YEOMANRY AND RIFLE VOLUNTEERS.

SURGEON-LIEUTENANT C. E. L. B. HUDSON, Middlesex Yeomanry (Duke of Cambridge's Hussars), is promoted to be Surgeon-Captain, August 21st.

Surgeon-Captain J. D. LLOYD, Shropshire Yeomanry, is promoted to be Surgeon-Major, August 21st.

Surgeon-Lieutenant J. FULLER, 1st Devon and Somerset Engineers, Fortress and Railway Forces, Royal Engineers, is promoted to be Surgeon-Captain, August 21st.

PUBLIC QUARTERS IN INDIA FOR MEDICAL OFFICERS.

THE Government of India have decided that surgeon-captains drawing pay as surgeon-lieutenants (including their sixth year of service) shall be treated as subalterns for public quarters occupied by them. If provided at their own expense with quarters superior to those to which a subaltern is entitled, rent is to be charged at the rate laid down for the rank of the officer for whose accommodation they are suitable, in accordance with the principle laid down in Bengal Barrack Regulation, para. 142.

HARWICH INFANTRY VOLUNTEER BRIGADE BEARER COMPANY.

DURING the week ending August 10th, the brigade encamped at Colchester under the command of Brigadier-General Barmardiston. The feature of the camp was the new Brigade Bearer Company, which had been raised half at Ipswich and half at Cambridge, under the supervision of Brigade-Surgeon-Lieutenant-Colonel G. S. Elliston, V.D. The officers and men looked very smart in the volunteer medical staff uniform, and had been so well instructed by Surgeon-Captain Hoyland, of Ipswich, and Surgeon-Lieutenant Douty, of Cambridge, as to call forth the special approval of Major-General Carr-Glyn, at his inspection of the Brigade

Hospital and Company on August 7th. At the Field Manœuvres carried out on Friday, August 9th, the red or defending force consisted of the regular troops forming the garrison, and the blue or attacking force were represented by the Harwich Brigade. By order of the General commanding the Eastern District, the bearer company was attached to the attacking force, and two ambulance wagons with a water cart horsed by the Army Service Corps paraded with them. During the action, a field force of eight stretcher squads under a medical officer was detached to keep up with the fighting line and pick up the casualties that were ordered to fall out in various parts of the field. A collecting station and dressing station was formed in sheltered positions, and the ambulance wagons worked between them. After the action, the General and a numerous staff minutely examined the way the ambulance wagons had been loaded up with the imaginary wounded, and not only expressed his approval, but hoped the day's work had been an instructive one to the bearer company.

FILTERS IN INDIA.

A reference has, it is understood, been made to the Principal Medical Officer of Her Majesty's forces in India as to the desirability of adopting the Pasteur filter for British troops. "An experimental issue of the filter should certainly be made," says the *Pioneer*, "especially in stations where enteric fever has been prevalent of late years." There can be little doubt that the Principal Medical Officer in India will strongly urge the use of these filters, seeing the very satisfactory results that have attended their use in the French army.

ENTERIC FEVER IN INDIA.

A correspondent at one of the largest stations in India writes as follows: Within a fortnight an order has been published directing all filters in use with the — Regiment to be returned to stores for repairs and sanctioning about 600 lbs. of wood per diem for boiling the water. Government goes to expense to adopt certain measures to prevent enteric fever and cholera, and yet in giving their local contracts for aerated waters for hospitals accepts tenders of 8 to 10 annas per dozen for lemonade and soda. What stuff can you expect for such rates when one considers the earnest deposit, bribery, and payment to understrappers who have to be squared before a bill is passed.

TROOP TRAIN SERVICE IN INDIA.

The various reports received on the experimental long running of troop trains carried out during the past relief season, says *The Pioneer* in its military notes, show that, on the whole, they are favourable, but where the views of the men themselves have been obtained they are against the system, and as they are the class chiefly concerned, the Commander-in-Chief considered their opinions were practically decisive. His Excellency was further of opinion that though it was practicable to run troops long distances under special arrangements, it was not desirable or conducive to the comfort, health, or efficiency of the men, and that the old system of running from rest camp to rest camp is best suited to Indian requirements. The Government of India has accepted the above views, and the old system will consequently be reverted to.

One important point is not here dealt with, namely, the overcrowding of carriages with soldiers.

MOBILISATION.

The Military Correspondent of the *Times* remarks as follows regarding the regular bearer company during the experiments in mobilisation: "For some reason or other a bearer company is not permitted to have in its ranks more than a fixed proportion of men who are above a certain standard of physique. Many of the bearers are, therefore, small sized men; but the casualties in this mixed brigade, whom these small men would have had to carry off the battle field, were heavy guardsmen, many full grown. It was intended, therefore, to ascertain during the fight on Thursday (August 8th) whether the small bearers were powerful enough to carry the stalwart men. But, unfortunately, not only did the fight take a turn not contemplated by Lord Methuen, but, owing to the miscarriage of an order, the bearer company was not present where its services were required; so the opportunity of testing the wisdom of the restriction on the physique was lost.

BREACHES OF THE GENEVA CONVENTION.

At the conference of the Institute of International Law the discussion commenced with the Geneva Convention of 1864 for the protection of the wounded in time of war, which all the European Powers have signed. The experience of the Franco-Prussian war goes to prove that either one in the throes of a death struggle will be quick to accuse the other of breaches of the Convention, and to threaten to retaliate by acts of similar brutality. What is specially wanted is machinery for inquiry, so that the truth may be at once ascertained. Various schemes for preventing infractions of the Convention were suggested. M. van der Beer-[illegible]gael, a Belgian general, favoured the idea of a permanent military commission to hold inquiries in such cases. Another proposal was that each belligerent should depute military authorities of its own to act as a check on their brother officers; but *quis custodiet ipsos custodes?* Finally, the proposition of M. Lammasch was adopted, that either belligerent complaining of violations should be able to appeal to a neutral State, which should exercise the sort of voluntary supervision of a bystander in a street fight; the State appealed against must hold the inquiry, punish the offender, and report what has been done to the neutral Government. This scheme has perhaps the merit of being a trifle less unworkable than the others, but the position of the neutral State as a [illegible] would be no guarantee of the [illegible] of the inquiry.

THE KISSING CASE.

Surgeon-Major Clarence Smith has, wisely it is generally thought, declined the [illegible] made to him by the Indian Government, at the instance, presumably, of the Secretary of State, on the ground that the proposed investigation was to be neither judicial nor public, that the burden of proof is unjustly thrown on Surgeon-Major Smith himself, and that reinstatement ought to have preceded inquiry.

MEDICO-LEGAL AND MEDICO-ETHICAL.

OLEINE CHEESE.

APPEAL FROM THE LEEDS STIPENDIARY.

In the Queen's Bench, on August 5th, before Justices Grantham and Lawrance, Mr. Bigham, Q.C., and Mr. A. V. Lawrence, appeared in support of an appeal against a conviction by the Leeds stipendiary of a provision merchant named Collett, carrying on business in that city, for having sold as cheese an article named "Valleyfield Finest Oleine Cheese." Mr. Cyril Dodd, Q.C., with Sir George Morrison, was for the respondent, Mr. Walker, an inspector appointed under the Food and Drugs Act. The circumstances of the case were simple, and the legal point a short one. The inspector sent a man named Gill to buy 3 lbs. of the "Oleine," at 6d. per lb. The point raised by Mr. Bigham was that Mr. Walker was the purchaser, that he knew "Oleine" was not cheese, and that he was not, therefore, subjected to the prejudice which the Act required to be found before a conviction could be arrived at. Mr. Dodd, on the other side, cited a section of the amended Food and Drugs Act, which provided that this plea as to prejudice could not be raised against an inspector or analyst. Were the law otherwise it could be said that because an inspector had caused one sample to be analysed he could never do any more, because he knew all about it. That would be to reduce the law to an absurdity.

Mr. Justice Grantham, without troubling Mr. Dodd further, said the Court was of opinion that the conviction ought to be upheld. The words "Valleyfield Cheese" were very catching and ingenious, "Valleyfield" being, perhaps, the one word more calculated to deceive ordinary persons than any other that could have been hit upon. It was a very clever word. It appeared that something like three-fourths of this cheese consisted of animal fat, and that oleine was used in the manufacture of woollen materials. He thought the magistrate's decision was right. Mr. Justice Lawrance concurring, the conviction was upheld, and the appeal dismissed with costs.

THE *LOCUM TENENS* AND HIS LIQUID REFRESHMENT.

Medicus.—It is customary to board a *locum tenens* in the house of his principal, and board, generally speaking, implies food and drink. The *locum tenens* would naturally expect to fare the same as his principal and family, and to live at their table, but in the absence of special agreement, it is not incumbent on the principal to find any extras for him.

COLONIAL UNIVERSITY DEGREES.

J. O.—Under the Medical Act of 1886 a registered medical practitioner who has a recognised colonial diploma can cause a description of such diploma to be added to his name on the *Medical Register*. If our correspondent is able to get M.D. added to his name on the *Medical Register* he will be entitled to use the title of "Dr." or to put M.D. on his doorplate.

THE L.R.C.P. AND THE TITLE OF PHYSICIAN.

J. E. P.—If our correspondent will refer to our answer in the British Medical Journal of August 17th, under the heading of "Titles of Physician and Surgeon," he will see that we did not state our own opinion on the point in question. We gave the effect of a decision by the Judges of the Queen's Bench Division (one of whom was the late Lord Chief Justice) as to who they considered were entitled to call themselves Physicians. Our own opinion on the point is practically of little value while that decision is left unquestioned. We may add that if our correspondent will read the 47th section of the Medical Act of 1858 carefully, he will at any rate see the ground of the decision, whether well or ill founded.

MIDWIFERY ENGAGEMENTS.

Hard Lines.—Personally annoying as would be the incident of the unexpected advent of the principal of the pre-engaged accoucheur (a non-qualified assistant), we would note in response to our correspondent's special query that in resigning the case he acted in strict accord with prescriptive usage and the rule laid down in the *Ethical Code*, chap. ii, sect. 5, rule 12 (4th edit.). Moreover, we are distinctly of opinion that under the exceptional circumstances he would be fully justified in charging a special fee for a night visit and detention.

ALLEGED "COVERING."

Member.—A detailed statement of the facts might be forwarded to the General Medical Council, accompanied by some evidence in support. *Primâ facie* also it would seem that proceedings for unqualified practice would lie against the person conducting the branch establishment; and if particulars in some two or three instances of patients who have been attended were furnished to the Clerk to the Society of Apothecaries, Blackfriars, London, we have no doubt that the Society would be willing to take proceedings under their Act.

HONORARY MEDICAL OFFICERS OF COTTAGE HOSPITALS AND PAYMENT FOR *POST-MORTEM* EXAMINATIONS.

Dr. [illegible] J. [illegible] (Senior Honorary Medical Officer, Bromley Cottage Hospital, Kent) writes: Some months since I wrote to you, forwarding correspondence that I had had with members of the Kent County Council, re payment of fees for post-mortems at inquests to the honorary medical officers of cottage hospitals, especially with reference to our hospital at Bromley.

This is a matter of great importance to those medical men who are on the honorary staff of our cottage hospital, five in number, as since the coroner has refused the fees some ten inquests, some accompanied by post-mortem examinations, have been held and no fees paid. Our hospital being in a town on an important highway leading out of London, we get a large number of accidents, many of a serious nature, the

subjects of which are mostly dwellers in the metropolis; so this non-payment of the few fees we might obtain in the case of inquests or *post-mortems* is a matter of importance. I send you a copy of our *Hospital Report*, so that you may see the amount of work done.

*** This complaint is merely a reiteration of one which has frequently been noticed in these columns. The Coroners Act, 1887, s. 22, is unfortunately so worded as to prohibit the payment of any fee to the medical officer of a hospital for attending to give evidence at an inquest on the body of any person on whom as such medical officer it was his duty to attend. The Act (s. 22) imposes a penalty on a medical practitioner who fails to obey a coroner's summons, "unless he shows a good and sufficient cause for not having obeyed the same." Whether the refusal to pay fees for attendance would amount to sufficient cause for not obeying a summons to appear as a witness may be doubtful. But it certainly seems that medical officers of hospitals will incur no penalty if they decline to undertake the extra work of making a *post-mortem* examination until their remuneration is secured. A few such refusals would direct public attention to the unsatisfactory state of the law, and might accelerate its amendment.

THE COURTESY VISIT

M.D. writes: My landlord, a chemist, gave me notice to quit his house, which I had occupied several years, saying it was about to be pulled down. As soon as I am gone he lets it to another medical man whom he has introduced into the place. This tenant calls on me; am I not justified in refusing to return the call after such a deliberate attempt to poach my practice?

*** Exceptionally unfair as we deem the alleged course of action of the landlord chemist to have been, such *per se* would not, in our opinion, justify "M.D." in refusing to return the newly settled practitioner's visit of courtesy unless the latter was in the first instance cognizant of the (assumed) misrepresentment in relation to the "notice to quit" or subsequently connived thereat.

PRINCIPAL AND ASSISTANT: ALLEGED WRONGFUL DISMISSAL.

M.R.C.S.Eng.—On the facts stated by our correspondent we think he was justified in the course taken by him, and should be successful if proceedings were taken by the assistant. These cases, however, are never entirely free from doubt, and in the event of proceedings being taken (although in the county court), we would recommend our correspondent to consult his solicitor.

A QUESTION OF DOORPLATE.

Mem. B. M. A. inquires: What is the usual style of doorplate with those holding the L.S.A. diploma (double qualification)? Would it be considered incorrect to put any or either of the following: Dr. X.; Mr. X., Surgeon; Mr. X., Surgeon-Accoucheur?

*** There can be no objection, we think, to such a Licentiate adopting either of the two last-named designations. With regard to the prefix "Dr.," this has been largely adopted as belonging by courtesy to the general medical practitioner, but having regard to a recent decision of the High Court (to which we have before had occasion to refer), it would appear to be a matter of doubt whether anyone not possessing a registrable degree of "M.D." is strictly speaking entitled to call himself "Dr."

CLUB PAYMENTS.

R. W.—Such disunion among neighbouring practitioners is much to be regretted, and nothing but mutual co-operation offers any chance of success in raising the rate of remuneration paid by clubs and friendly societies to their medical officers. There can be no doubt that this is a subject of very great importance to the profession, and that before long some attempt ought to be made to improve the rate of club payments: the minimum should not be less than 8s. per annum per member, and there should be no reduction for women and children, although in the case of families children over a certain number should not be charged for. We wish our correspondent every success in his endeavour to increase the club rate in his district; but after the letter from the Secretary of his Society, unless he can obtain unanimity among his professional brethren in his neighbourhood, it is much to be feared that he will fail.

CLUB APPOINTMENTS.

B. writes: A., B., C., and D. are in practice in a small town. A. has been doctor to a Foresters' club for several years, but latterly has not given complete satisfaction to some of the members. A few prefer A., others prefer B., others again C., and still others D. as their doctor. Would it be professionally correct for B., C., and D. to take the members who severally prefer them, or should they refuse to do so without A.'s consent?

*** We are of opinion that, before adopting such a course, B., C., and D. ought to obtain A.'s consent, for it is quite likely that under such circumstances it would not be worth A.'s while to hold the club, for such an abstraction might not unlikely render his appointment valueless.

PROFESSIONAL SECRECY.

M.D. writes: On two separate occasions within the last month I have been written to by doctors, asking my opinion on, and the nature of the illness of, two patients of mine. In the one case the patient was a personal friend of the doctor's wife and I only saw the patient in consultation. In the other case it was not a consultation, and the request was made at the desire of friends and he my correspondent had previously seen the lady professionally in Scotland. I replied to both that I could give no information without the permission of the patients, further than to say that in the first case the illness was a very grave one, and that in the latter case the patient was nearly well and would soon be able to travel. Both doctors replied that they could not understand my declining to give them the information requested. Am I right or wrong?

*** Although M.D., according to the strict letter of the ethical rule, was justified in withholding the solicited information for members of the laity, we nevertheless incline to the opinion that, under the special circumstances related, he might, without moral dereliction of duty, have relaxed it so far as regards his medical *confrères*, strictly enjoining on them a judicious reserve in imparting to the patient's lay friends his professional views of the respective cases.

THE USE OF TITLES.

Enquirens writes: An individual near here, who is engaged in coaching students for the Medical Profession, also in teaching the rudiments of pharmacy and dispensing, has on his plate: "Mr. So-and-So, Medical Tutor." And on another plate: "School of Pharmacy." Is he not infringing the Medical Acts by so doing? He is not either a qualified medical man or chemist, but I believe he has had some medical training but am not sure of this. Who ought to prosecute if he is illegally using a title which infringes the Medical or Pharmacy Acts?

*** In reply to "Enquirens," we do not think that the titles assumed by the person referred to constitute any infringement of the Medical Acts, nor do we think that they infringe the Pharmaceutical Acts. Our correspondent might, however, draw the attention of the Pharmaceutical Society to what is put on the plate.

FEES TO MEDICAL WITNESSES.

F.R.C.S. writes: I am subpœnaed to give evidence in a county court. (1) I get 2s. 6d. for expenses, etc. (2) I get 10s. 6d. for attendance per diem. (3) I am expected to give evidence as to kind of fracture, duration of convalescence, etc., and other matters of opinion. I claim a fee (10s. 6d. more for the fact of its right than anything else) for such evidence. Solicitor says 2s. 6d. and 10s. 6d., namely, (1) and (2), are my proper fees for evidence which the law imposes upon me to give. (As a matter of fact when I stated to him I should ask the judge before being sworn whether I need state more than facts he promised to make it all right, but this is not the point. Solicitor now says the above). I claim 10s. 6d. for what is practically expert evidence; he says I was bound to give such evidence.

*** A medical witness is entitled to a minimum fee of 1 guinea for giving professional evidence in a county court, that is, he incurs no liability for refusing to give evidence if that sum has not been tendered with his subpœna. The safest plan is always to insist on prepayment of the fee; there may be difficulty in enforcing payment afterwards.

EXHIBITION OF CARDS IN SHOP WINDOWS.

Inasmuch as the author of the appended card not only wrongly assumes the title of "Dr.," but seeks more or less notoriety by exhibiting it in a window and leaving copies in private letter boxes, we accord it still greater publicity with the view of exposing so unprofessional a proceeding and in the hope also that it may attract the attention of the authorities of the Royal Colleges of Physicians and Surgeons, of which the offending practitioner is reported to be a licentiate and member.

Dr. Charles G. Thorp,
Physician, Surgeon and Accoucheur, *(sic)*
56, Marston Street,
Oxford.

At home 9 till 12 A.M. and 6 till 10 P.M.

IS RAISING THE HAT AN INSULT?

Perplexed writes: A. is a practitioner in a neighbourhood, who, till lately, was unopposed. B. comes in and sets up against A. As is customary B. calls on A., but does not see A.'s wife during his call, and yet a few days afterwards B. meets A.'s wife in the street and raises his hat to her. A.'s wife tells her husband, and A. calls on B. and remonstrates with him, and considers his wife insulted. Was it an insult? or was B. merely indiscreet? Allowing that it is a breach of ordinary etiquette to raise one's hat to a lady to whom one has never been introduced, is it not possible that B., in his anxiety to be courteous to A., overstepped the bounds of propriety?

*** Although in the absence of a personal introduction B. would have been more than justified by the rules of social etiquette in passing A.'s wife unnoticed, and, probably, under the peculiar circumstances, would have acted more prudently by so doing, still, the simple raising of his hat would not, as alleged by her husband, constitute an insult, but should rather be looked upon as a natural and courteously intended act towards the wife of a brother practitioner to whom, in accordance with the medico-ethical rules, he had recently paid the customary visit of courtesy as a newcomer; and, in our opinion, A. would have acted wisely in accepting it as such. Probably, however, and not unnaturally, his mind and temper were somewhat disturbed by the prospect of professional competition in his hitherto unopposed practice.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Dr. F. Wesbrook, John Lucas Walker Student of Pathology in the University of Cambridge has been appointed Professor of Bacteriology in the State University of Minneapolis, U.S.A. Dr. Wesbrook has taken an active part in the teaching of pathology at Cambridge, and has published in the English, French, and German journals a number of original papers on bacteriological subjects. He was entertained by his Cambridge colleagues at a farewell dinner in Caius College Combination Room on Monday, August 19th.

THE REGISTRAR OF THE UNIVERSITY OF LONDON.

The London University is threatened with the loss of one of its oldest and most esteemed officers on account of its subjection to Civil Service regulations. Mr. Millman, the second son of the late Dean Millman, became Assistant Registrar and Librarian to the University in 1858, and in 1879 succeeded the late Dr. W. B. Carpenter in the registrarship. Although still in the full height and vigour of his powers, the Civil Service age regulation will necessitate his resignation at the beginning of next year. It is to be hoped that some means may be found of preserving to the University the sound judgment and experience of the present head of its permanent staff.

ERRATUM.—In the list of gentlemen admitted Diplomates in Public Health by the Royal Colleges of Physicians and Surgeons, published in the BRITISH MEDICAL JOURNAL of August 10th, the name of Dr. W. W. Sansom was misprinted "Shrubsall."

OBITUARY.

FREDERICK ALBERT HESLOP, F.R.C.S.Edin., Blackpool.

THE death is reported of Mr. Fred. Heslop, of Blackpool. On July 25th he was wet through, and returned home to change his clothes but finding an urgent message to visit a poor patient in the country he set out at once, unmindful of the risk he was running. The next two days he did his work as usual, though feeling out of sorts. On the evening of July 27th he had a severe rigor, and his temperature was found to be 104°. He passed a delirious night. On Sunday he had an extensive area of dulness at the left base, rusty sputum, a poor pulse, and a pain in the left side, and the illness speedily ended in death. About twelve years ago Dr. Heslop suffered from an abdominal tumour, which was thought to be sarcomatous, and he was to be operated upon in Manchester and London, but on each occasion the surgeons dared not do more than make an exploratory incision. The deceased was born in Manchester in 1858, being a son of Dr. Robert Heslop, of St. Mary's Hospital. Having been educated at Epsom College he proceeded to Aberdeen and later to Edinburgh, where he took the L.R.C.P. and L.R.C.S. in 1882. He practised in Kensington for several years, when his health broke down. After the operations mentioned above he settled in Blackpool, where he held the post of police surgeon, and was also one of the surgeons to the Blackpool Hospital, of whose Board he was a member. He had filled the office of President of the Fylde Medical Society, and was a lecturer and examiner for the St. John Ambulance Association, and was also a member of the British Medical Association. Just a month ago he had obtained the F.R.C.S.Edin. He had earned the affectionate regard of his medical brethren by his geniality and sterling qualities.

DR. JOHN H. CARSLAW, who died recently, was the eldest son of the Free Church Minister of the Park Church, Helensburgh. He passed with distinction through his period of probation as resident medical officer in the Western Infirmary, Belvidere Fever Hospital, etc. He was Subeditor of the *Glasgow Medical Journal*. Latterly he was obtaining a fair share of medical practice, and had also for several years held the position of tutorial assistant to the professor of medicine—at first in the clinical department, and for the last two years under an appointment from the University Court. Dr. Carslaw was married, and had one infant child.

PROFESSOR S. MOOS, the distinguished otologist of Heidelberg, whose death was recently announced in the LANCET MEDICAL JOURNAL, was born in 1831, and studied medicine at Heidelberg, Prague, and Vienna, taking his doctor's degree in the first named of these Universities in 1856. He qualified as *Privatdocent* in the University of Heidelberg in 1859, and in 1866 he was appointed Extraordinary Professor. After a time he devoted himself specially to the study of diseases of the ear, and in 1874 he published his researches on the anatomy and physiology, normal and morbid, of the Eustachian tube. In 1891 he was appointed Professor Honorarius of Otology, a title unique in Germany and specially created for him. In conjunction with Knapp he founded the *Archiv für Augen-und Ohrenheilkunde*; afterwards he started the *Zeitschrift für Ohrenheilkunde*, in which he published a series of valuable researches on the relations between affections of the ear and constitutional diseases, such as the infectious fevers, pneumonia, erysipelas, meningitis, diabetes, etc.

DR. WILLIAM C. JARVIS, Clinical Professor of Laryngology and Rhinology in the University of the City of New York, died after a short illness on July 30th. Though not much over 40 at the time of his death, Dr. Jarvis had for many years been a prominent member of the American Laryngological Society. He contributed largely to the literature of his speciality, and was the inventor of many instruments for the diagnosis and treatment of diseases of the throat and nose.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently passed away are: Dr. José Maria Teixeira, Professor of Pharmacology and Therapeutics in the University of Rio de Janeiro, Member of the Academy of Medicine of that city, author of important papers published in the *Transactions* of the Academy of Medicine of Brazil, and a distinguished medical journalist, aged 41; Dr. Elias Rodriguez, Professor of Therapeutics and Forensic Medicine in the Medical Faculty of Caracas; Dr. Em. Goth, Professor of Obstetric Medicine and Gynæcology in the University of Klausenburg, aged 47; and Professor Nagel, Director of the Ophthalmological Clinic in the University of Tübingen, aged 62.

MAJOR THURE BRANDT, whose name is associated with massage of the female pelvic organs, died recently. He was not, we believe, a member of the medical profession.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.

The London University Question.—EARL COWPER called attention to a question which, as it had not assumed a party character, was not so much discussed as many other matters. He meant the establishment of a great teaching University for the great metropolis of London. He would only touch upon the necessity for such a University—which, indeed, was widely acknowledged—and would not enter at all into the particular plan for the establishment of such a University which was before Parliament when Parliament was dissolved. Everybody was agreed that it was a positive disgrace that the great population of London was not possessed of that which almost every capital in Europe was possessed—a great teaching University, because they could not call by that name the University of London, which was merely an examining Board, well as it did its work and eminent as were the people connected with it, and which, in spite of its name, had no more to do with London than it had to do with the rest of the United Kingdom. What was wanted was that for which for years thinking people had been striving—namely, that there should be a proper and economical system of teaching which would apply to poor as well as to rich, and which would enable the student from point to point up to that final examination which would only be commenced at the crowning of the whole, and by which the stamp of a completed education would be conferred. The plan prepared by the Commission of which he had had the honour to be chairman had received the support of all the bodies interested in the question, and he urged the Government to act on the report of that Commission, without any further delay. If in that first session a Bill had been brought forward to carry out the recommendations of the Commission, it would have slipped through utterly unopposed and with as little difficulty as an ordinary private Bill. Even last session a Bill would easily have passed if Parliament had not come to an untimely end, and the Bill, which he was grateful to the late Government for bringing in, would have become law. He could not, of course, hope that in the present short session anything would be done, although he wished that it could. But if an expression of opinion should be elicited from Her Majesty's Ministers to say that they were disposed to regard the evidence favourably, that recommendation, together with the fact that the late Government brought in a Bill on the subject showing that both sides were practically agreed, would have the effect of preventing [illegible] and would be a great boon to many persons who had been striving [illegible] every kind of difficulty for [illegible], and who would be assured

that the question would not be again indefinitely postponed.—The DUKE OF DEVONSHIRE said: My noble friend was good enough to inform me of his intention to call attention to this question, and I was obliged to tell him that, although this would perhaps be the most convenient opportunity, if he desired to say anything on the subject during the present session, there was only one answer which could possibly be given to him on behalf of Her Majesty's Government. It has been stated in the Queen's speech itself, and repeatedly in the course of this debate, that under the present circumstances Her Majesty's Government intend to proceed with no legislative measures whatever, except such as are absolutely necessary for carrying on the business of the country. My noble friend is perfectly well aware that it would be quite impossible to carry out a settlement of this question without legislation. As he has stated, a Bill was introduced by the late Government for the purpose of carrying out the recommendations of his Commission, but was not proceeded with, even to the second reading. It would be quite impossible to make an exception from the general rule, which has been universally acquiesced in, and now to introduce legislation on this subject, which cannot be said to be of first and most urgent necessity. I may state that, like our predecessors, we are strongly convinced of the desirability and even of the necessity of meeting the views which have been expressed in favour of the establishment of a teaching University for London. My noble friend has mentioned the unanimity with which the present scheme has been received by many important bodies in the country, but he has passed over somewhat lightly the strong objection taken to the scheme by a large and not unimportant section of Convocation. As it is impossible to legislate at present, it would be premature on my part to commit the Government wholly to the scheme in the shape proposed by his Commission. I can only assure my noble friend that the subject will receive careful attention on the part of Her Majesty's Government before Parliament meets again for legislative business.

HOUSE OF COMMONS.

The Health of the Mediterranean Squadron.—Mr. GOSCHEN, in reply to Mr. HERMON HODGE, said he was glad to say that on August 13th the Commander-in-Chief telegraphed that the health of the squadron was perfectly satisfactory.

The University of Wales.—The CHANCELLOR OF THE EXCHEQUER, in reply to Mr. BRYNMOR JONES, said the grant of £3,000 was made for the preliminary expenses of the University of Wales last year, and he understood that as that sum was insufficient for the purpose, and his predecessor in office promised a further grant of the same amount in the present year, a vote for that sum would be taken in a supplementary estimate.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE SMALL POX OUTBREAK.

THE Mile End Vestry are taking active measures to cope with the outbreak of small-pox within the district under their jurisdiction. Dr. J. Taylor, the medical officer, has visited the various districts where cases have occurred, and every possible precaution has been taken to prevent any extension of the disease. Altogether there have been 30 cases in Mile End since the outbreak occurred. In a report which has been presented to the vestry, Dr. Taylor states that, so far as can be ascertained, the disease first manifested itself in Whitechapel. For some time past the Board of Guardians have not enforced the Act, there being a majority of antivaccinationists on the Board.

THE COMMITTEE ON POLICE AND SANITARY REGULATIONS BILLS.

THE Committee on Police and Sanitary Regulations Bills in the last Parliament did a great deal of useful work, to the damage of the Parliamentary Bar. Acting in concert with the Local Government Board, they have, says the *Daily News*, laid down a rule that they would not grant powers which were in excess of or which contravened the general law, except in two classes of cases: (1) where there was strong evidence of special local needs, and (2) where the regulations were such that they might well be introduced everywhere. They recommended, in their last report, that clauses which they had frequently approved as coming within the latter category might well be included in a general public Act. It is to be hoped that a strong Chairman will be appointed to succeed Mr. Walter Long, and it is believed that Sir Walter Foster—who, like Mr. Long when he was appointed in 1892, is the outgoing Secretary to the Local Government Board—will be chosen.

CROYDON BOROUGH HOSPITAL.

THE report of this hospital by Dr. Leonard Wilde, the visiting physician, gives evidence of the proper view taken by the corporation of Croydon of their responsibilities in regard to the provision of accommodation for the isolation and treatment of infectious diseases. A full description is given of the new hospital for 100 beds which is now approaching completion, and a careful record is added of the work done in the older temporary buildings which have till now served the purpose of a hospital. There can be no doubt that the people of the district will soon feel the advantage of having in their midst a properly equipped and permanently open hospital, with a resident and visiting staff, for the reception of cases of infectious disease.

THE NOTIFICATION OF MEASLES.

DR. BOND, in a report to the St. Olave's Board of Works, comments upon the high mortality from measles in his district last year as compared with that of other forms of infectious disease, and commits himself to the opinion that measles should be a notifiable disease.

The difficulty felt with regard to this matter is that the isolation of cases of measles in hospital would be a large undertaking, and one from which no such benefit would accrue as is the case in such a malady as scarlet fever, on account of the frequency with which measles infection is spread in the early stages of the illness, before the nature of the disease is recognisable. Dr. Bond, however, points out that if notification were in force, it would be possible to exclude all children resident in infected houses from attendance at school, and thus to limit the spread of the malady.

THE WATER SUPPLY OF HAWARDEN.

AT the meeting of the Hawarden Rural District Council on August 9th, Mr. John Roberts presiding, it was reported that typhoid fever had broken out at Sealand, one case being of a virulent type. The medical officer, Dr. E. B. Roberts, stated that a fatal case of typhoid fever had occurred in the same house two years ago. The water supply was totally inadequate for the wants of the neighbourhood. Great complaints were made by the residents that they were compelled to use either rain water, which was contaminated, or river water, which could not be free from pollution. There was a good supply of water on the other side of the river and he recommended that these houses should be supplied from the same source—the Hawarden Waterworks. At Mancot, where a woman 21 years of age had contracted the disease the drinking water was taken from a ditch. All possible means had been taken to prevent the disease from spreading, but until better drainage and a purer water supply were provided fever was liable to break out at any time. The sanitary inspector (Mr. Vickers) stated that the landlord was already taking the matter in hand, and it was decided to forward him a copy of the medical officer's report.

DIPHTHERIA AND SCHOOLS.

E. D. EVANS, M.R.C.S., L.R.C.P.Edin. (Bodeirian, Wrexham) writes: In the BRITISH MEDICAL JOURNAL of July 20th there is an error at page 156, referring to "Diphtheria and Schools." If you refer to the *Advertiser* you will find that the report refers to Flint and not to Wrexham. The Mayor who would not be convinced as to the desirability of closing the schools is the Mayor of Flint.

"*" We are obliged to Mr. Evans for the correction.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,516 births and 3,884 deaths were registered during the week ending Saturday, August 17th. The annual rate of mortality in these towns, which had been 20.7 and 20.8 per 1,000 in the two preceding weeks, declined to 19.1 last week. The rates in the several towns ranged from 9.1 in Croydon, 10.7 in Birkenhead, and 13.3 in Bristol to 27.7 in Liverpool, 29.2 in Wolverhampton, and 31.0 in Preston. In the thirty-two provincial towns the mean death-rate was 20.4 per 1,000, and exceeded by 3.1 the rate recorded in London, which was only 17.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 4.6 per 1,000; in London the rate was equal to 3.8 per 1,000, while it averaged 5.1 in the thirty-two provincial towns, and was highest in Hull, Bolton, and Preston. Measles caused a death-rate of 1.6 in Swansea, 2.5 in West Ham, and 3.7 in Blackburn; whooping-cough of 1.1 in Liverpool and 1.5 in Salford; and diarrhœa of 4.9 in Norwich, 5.5 in Wolverhampton, 6.4 in Sheffield, 7.0 in Bolton, 8.7 in Hull, and 10.2 in Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 82 deaths from diphtheria in the thirty-three towns included 50 in London, 5 in West Ham, and 3 in Birmingham. Two fatal cases of small-pox were registered in Oldham, and 1 in London, but not one in any other of the thirty-three large provincial towns. There were 358 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, August 17th, against 199, 237, and 273 at the end of the three preceding weeks; 79 new cases were admitted during the week, against 115, 69, and 54 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,347, 2,423, and 2,511 at the end of the three preceding weeks, had further risen to 2,522 on Saturday last, August 17th; 357 new cases were admitted during the week, against 249, 247, and 281 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, August 17th, 866 births and 479 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 18.3 to 17.6 per 1,000 in the two preceding weeks, further fell to 16.6 last week, and was 2.5 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death rates ranged from 13.6 in Aberdeen to 21.8 in Paisley. The zymotic death-rate in these towns averaged 3.4 per 1,000, the highest rates being recorded in Leith and Paisley. The 208 deaths registered in Glasgow included 31 from diarrhœa, 9 from whooping-cough, 5 from scarlet fever, 4 from measles, 4 from "fever," and 2 from diphtheria.

PRESENTATION.—Dr. A. S. Merrick, Resident Medical Superintendent at the Belfast District Asylum, has been presented with a silver salver and an address as a memento of his long period of service in the institution.

ALLEGED POISONING BY POTTED MEAT.—It is stated that at Wakefield on August 17th, thirty men, women, and children developed symptoms of poisoning after eating potted meat purchased at a shop in the city. The police, who have the matter in hand, have seized the unsold portion of the supply for the purpose of having it analysed. All the persons attacked are making satisfactory progress towards recovery.

MEDICAL NEWS.

Sir Julian Goldsmid has been elected Vice-Chancellor of the University of London in succession to Sir James Paget, who has resigned.

The Merchant Taylors' Company has contributed the sum of twenty guineas to the new building fund of the Royal Ear Hospital, Soho Square.

Cremation in the United States.—A new crematory has been opened in the Oddfellows' Cemetery, San Francisco. Within a fortnight of its erection 15 incinerations took place. The building is said to be beautiful architecturally, and, it is added, that "the average churchman will find all that he desires to make a funeral service solemn and impressive."

The Abernethian Society.—The opening address of the 51st session of the Abernethian Society will be delivered by Mr. Church in the Anatomical Theatre of St. Bartholomew's Hospital on October 10th, at 8 P.M. The subject of the address will be "The Rise of Physiology in England and its Effect on the Practice of Medicine."

Metropolitan Water Supply.—The Clapham Ratepayers' Association has made a protest against the action of the water companies, and a hope is expressed that the new Government will deal with the whole question of the metropolitan water supply. It is understood that they have been advised that the Government is unlikely to be able to deal with the matter at present, but that if the question is brought to the attention of the Ministers next session, it will receive the attention of Parliament.

The Scientific Slaughter of Cattle.—A meeting was held last week, in the Guildhall, York, under the auspices of the Church Society for the Promotion of Kindness to Animals and the York Sanitary Committee, to hear a paper by Mr. Greener, of Birmingham, describing a machine for the instantaneous and painless slaughtering of cattle. Canon Argles presided. The invention consisted of a single rifled barrel, fitted with a cartridge chamber and a simple detonating mechanism, and terminated by a bell-shaped chamber with an inclined face which serves to deaden the sound, protect the operator, and guide the bullet in the direction of the spinal cord when the machine is fired. A cartridge is placed in the bore, and the instrument is held to the animal's forehead: a tap on the striker explodes the charge, and the beast falls immediately to the ground completely unconscious, and can be bled at once in the usual way. Dr. Ramsay said that the weight of scientific testimony was in favour of a mode of slaughtering in which there was the least possible agitation, distress, and pain. After a few remarks from Dr. Cattley, the medical officer of health, and Canon Fausset, the company adjourned to the premises of Alderman Clayton, ex-Lord Mayor, and witnessed the slaughtering of a 3 year-old bullock. Upon the motion of the medical officer of health, seconded by Alderman Clayton, a resolution was passed expressing entire satisfaction in the manner in which the instrument had effected its purpose safely, painlessly, instantaneously, without smoke, and practically without noise.

The Coates Memorial Fund.—The usual monthly meeting of the Medical Association of India was held at Calcutta on July 17th. After the minutes of the last meeting were read and confirmed, and prior to proceeding with the business of the evening the following resolutions were proposed and duly adopted: 1. The members of the Medical Association of India have heard with deepest sorrow the sad intelligence of the death of Brigade-Surgeon J. M. Coates, M.D., I.M.S., late Principal of the Calcutta Medical College, and desire to place on record their high appreciation of him as the Principal of the College, the esteem in which he was held by them as a physician, and the confidence in which they held him as a friend. Resolved that a copy of the above resolution be forwarded to the relatives of the deceased. 2. That a public memorial fund be opened at once, to be called the "Coates Memorial Fund," the shape of the memorial to be determined hereafter. 3. That Dr. L. Fernandez, the Secretary of the Association, be appointed Honorary Treasurer to the above fund; and that he deposit all subscriptions received in a public bank. As a mark of respect to the memory of Dr. Coates, no further business was transacted, and the meeting was adjourned. Subscriptions may be sent to the Bank of Calcutta, Limited, Clive Row, Calcutta, or to the Honorary Treasurer, Dr. L. Fernandez, No. 5, Royd Street, Calcutta.

The Association of British Postal Medical Officers.—The annual general meeting and conference of this Association was held recently at the Hôtel Métropole, Dr. John Watson, the Vice-President, occupying the chair in the unavoidable absence of the President, Dr. Frank Iliffe. There was a large attendance of members. The secretarial reports exhibited a persistent and encouraging increase in the membership, and the opinion was expressed by those present that it should be clearly intimated to those who are still non-members that admission into the Association in the near future would be attended by considerable difficulty. Several important matters were brought under discussion, but the reading of the paper by Dr. Giddings on the subject of "How much should Postal Medical Officers be influenced by Heredity in examining Candidates for the Postal Service?" was postponed on account of the numerous engagements connected with the meeting of the British Medical Association. The following executive was elected for the ensuing year: *President:* Mathew C. Halton, J.P., M.R.C.S., Ex-Mayor of Barnsley. *Vice-Presidents:* Frank Iliffe, M.R.C.S., Derby; John Watson, M.D., Manchester. *Honorary Secretary in Scotland:* W. Dougan, M.D., Glasgow. *Honorary Secretary in Ireland:* H. Fitzgibbon, M.B., Dublin. *Honorary General Secretary and Treasurer:* R. R. Giddings, M.B., Nottingham. *Executive Committee:* E. L. Adeney, J.P., M.D., Tunbridge Wells; T. W. Browne, M.D., Belfast; M. Coates, M.D., London; W. H. Hughes, J.P., M.R.C.S., Ashton-under-Lyne; W. Husband, M.R.C.S., Manchester; B. Thornton, J.P., M.R.C.S., Margate; S. Walker, M.R.C.S., Middlesbrough. *Auditors:* W. Dougan, M.D., Glasgow; E. W. Sykes, M.D., Halifax. In the evening the annual banquet took place in the Whitehall Rooms, and was a very great success, Dr. Frank Iliffe, the President, being in the chair.

MEDICAL VACANCIES.

The following vacancies are announced:

BRIGHTON, HOVE, AND PRESTON DISPENSARY, Queen's Road, Brighton.—Medical Officer for the No. 6 District. Applications to the Secretary by September 9th.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn Road.—Clinical Assistants. Applications to Richard Kershaw, Secretary.

CHILDREN'S HOSPITAL, Temple Street, Dublin.—Resident Surgeon. Salary, 50 guineas a year, with rooms, fire, light, and attendance. Applications to the Honorary Secretary of the Medical Board.

CITY ASYLUM, Birmingham.—Resident Qualified Clinical Assistant. Board and lodging provided; no salary. Applications to the Medical Superintendent.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician. Board and residence and allowance for washing provided. Appointment for six months. Also Assistant Physician; must be M. or F.R.C.P.Lond. Applications to the Secretary for the former post by September 12th, and for the latter by September 14th.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer; doubly qualified; must devote his whole time. Salary, £60 per annum, with board and lodging. Appointment for one year. Applications to the Chairman of the Medical Board by August 27th.

GENERAL HOSPITAL, Nottingham.—House Physician. Appointment for two years, but eligible for re-election. Salary £50 per annum, rising £10 a year to £80. Assistant House Surgeon. Appointment for six months. Board, lodging, and washing in hospital; no salary. Applications to the Secretary for the former post by September 11th, and for the latter by September 7th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 146, Buchanan Street, Glasgow, by November 8th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road, Manchester.—House Surgeon. Salary, £60 per annum, with apartments and board. Applications to Mr. Hubert Teague, Secretary, 32, Barton Arcade, Manchester, by September 3rd.

NORFOLK AND NORWICH HOSPITAL.—Assistant House-Surgeon; doubly qualified. Appointment for six months. Board, lodging, and washing provided. Applications to the House Surgeon by September 2nd.

ROYAL SOUTHERN HOSPITAL, Liverpool.—Third House-Surgeon. Salary, £50 per annum, with board, lodging, and laundry. Applications to the Chairman of the Medical Board by August 28th.

SCHOOL BOARD FOR LONDON.—Medical Officer for the Board's Training Ship *Shaftesbury*, lying off Grays, Essex; must reside within two miles of the ship. Commencing salary £100 a year, which may be increased by annual increments of £10 to £150 a year. Applications to A. E. Garland, Clerk to the Managers, School Board Offices, Victoria Embankment, W.C., by August 31st.

WEST HAM HOSPITAL, Stratford, E.—Senior House-Surgeon. Appointment tenable for one year. Salary, £35 per annum, with board, lodging, and washing. Applications to G. E. Adams, Secretary, by August 31st.

WEST RIDING ASYLUM.—Fifth Assistant Medical Officer. Salary, £100 per annum, rising £10 a year up to £150, with board, etc. Applications to the Medical Superintendent by August 28th.

MEDICAL APPOINTMENTS.

BENSAFIELD, Dr., reappointed Temporary Medical Officer of the Chase Farm Schools of the Edmonton Union.

CLENDINNEN, W. M., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Sedgley No. 3 District of the Dudley Union, *vice* J. G. Clendinnen, deceased.

HEATHCOTE, H. C., M.B., Ch.B., appointed Medical Officer for the Fifth District of the Bath Union.

HOUGHTON, Dr. L. F., appointed Medical Officer for the Second District of the Liskeard Union.

JENKINS, Dr., reappointed Medical Officer of Health for Lytham.

KINGDON, E. C., M.B., M.R.C.S., appointed Honorary Surgeon to the Nottingham Eye Infirmary.

MACKEITH, A. A., M.B., C.M.Glasg., appointed Medical Officer for the Seventh District of the Barnstaple Union.

MIRZA, Ahmed, M.B., B.Sc.Edin., Medical Officer for the City of Hyderabad, appointed Lecturer on Medical Jurisprudence at the Medical School at Hyderabad.

NAIRN, Dr. R. W., appointed Medical Officer for the Farnsfield District of the Southwell Union.

NASH, Mr. W. G., appointed Medical Officer for the No. 7 District of the Market Harborough Union.

NASON, W. S., M.B., C.M.Edin., appointed Medical Officer for the Nuneaton Union Workhouse.

O'SULLIVAN, Michael, M.B., B.Ch., appointed Medical Officer for the C, D, and G Divisions of the Dublin Police.

PERKINS, Henry Campbell, M.R.C.S., L.R.C.P., appointed Medical Officer Nayar Brigade, Travancore, Madras.

RAY, M. B., M.B., C.M.Edin., appointed Resident Medical Officer to Wadsley Asylum, near Sheffield.

SMAILES, Thomas, M.D.St And., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the South Crosland Urban District Council.

SMITH, R. W. Innes M.B., appointed Assistant House-Surgeon at Ancoats Infirmary, Manchester.

TEMPLEMAN, Charles, M.D., D.Sc., appointed Medical Officer of Health for the City of Dundee, *vice* Dr. A. M. Anderson, resigned.

TURNER, G. J. K., M.B., C.M.Aberd., appointed Medical Officer for the No. 4 District of the Chipping Norton Union.

WALKER, Dr. F. H. R. J. A., appointed Medical Officer for the Coleford District of the Frome Union.

WHITE, J. A. Henton, M.B., B.S.Dunelm, L.R.C.P., M.R.C.S.Eng., appointed Resident Surgical Officer to the General Dispensary, Birmingham.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

BENSON.—August 16th, at Grosmont, Pontrilas R.S.O., the wife of H. P. D'Arcy Benson, M.B., Ch.M.Edin., of a son.

MARRIAGES.

FOTHERGILL—WOON.—On August 14th, at St. Luke's Church, Chelsea, by the Rev. T. Bird, W. E. Fothergill, M.A., B.Sc., M.B., C.M., Manchester, to Edith Alberta, third daughter of J. Dillon Woon, Esq.

YOUNG—WHITE-RICKARD.—On the 15th inst., at St. Columb Minor, by the Rev. J. Broad Eade, Alfred B. Young, M.B., F.R.C.S., of the Owens College, Manchester, to Caroline Mary, daughter of the late R. White-Rickard, Esq., of "The Bays," Putney, and Newquay, Cornwall. No cards.

DEATHS.

BRISTOWE.—On August 20th, at Dixton Vicarage, Monmouth, John Syer Bristowe, M.D., LL.D., F.R.S., F.R.C.P., Consulting Physician to St. Thomas's Hospital, of Old Burlington Street, æt. 68.

WALSH.—On the 14th inst., at his residence, Jud Falls, Stonyhurst, John Walsh, Esq., M.R.C.P., M.R.C.S., L.S.A., 25 years Physician to Stonyhurst College, Lancashire.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

Z. Y. T. asks: What is the cost of disinfecting stoves, by whom made, and which kind are most suitable for rural hospital?

H. W. would be glad to hear of any recent literature on the subject of senility and senile diseases.

H.L.D asks for particulars about Muybridge and Eddison's anatomical illustrations, alluded to by Professor Keen, as reported at page 358 of the BRITISH MEDICAL JOURNAL.

RIPWOOD asks: (1) Which is the best underclothing for extremely irritable and sensitive skins; and (2) if there is any genuine electric belt on the market?

DR. J. J. RIDGE (Enfield) writes: Can you or any of your readers inform me of any hospital—the nearer London the better—where the "plenum" system of ventilation is at work? I should also be glad to know the experience of this plan.

MR. F. PENNY (North Devon Infirmary, Barnstaple), writes: In the BRITISH MEDICAL JOURNAL of August 10th, page 334, there is an account of wounds and ulcers treated by exposure to oxygen gas. I should be glad to be informed (1) What is the exact method of procedure; (2) the apparatus required, and its approximate cost.

A CASE FOR DIAGNOSIS.

DR. W. F. MACFARLANE (Abertillery, Monmouthshire) writes: I should be obliged if some readers would give me their opinion on the following case. M. E., aged 25, spinster, the daughter of a respectable working man, always enjoyed sound health until February last, when she began to feel nervous, and also noticed that her eyesight was not as good as it had been. The last week in February, while attending divine service, she had a fit of an epileptic nature, there being a distinct aura and then complete unconsciousness. She was carried home, and recovered in half an hour, but felt ill and weak for a fortnight after, and only with effort managed to get about her household duties. Then she had another attack of a similar nature, recovering again in the same way. Her sight began to fail, and she was unable to read or sew without a great effort. Her menstrual functions had also ceased. She now consulted a medical man, and was recommended to try a change of air and surroundings. She went to the country, and remained there until the end of May, and though she had no more seizures she found herself getting weaker and more nervous daily, her sight was getting worse and worse, and she suffered from violent headaches. Her menses had also not reappeared. She ultimately became so weak that she was obliged to take to her bed. She was now sent back home by the practitioner who was attending her, reported to be in a dying condition.

I now saw the patient for the first time. I found a well-developed young woman, who answered quite cheerfully any questions that were asked her, but immediately relapsed into a dull apathetic condition. She took time to gather her thoughts, however, before replying, sometimes pausing for about thirty seconds. She complained of hemicrania, the pain being limited to the right side of the head, but not to any particular area. She was extremely weak, not being able to stand without support, and her hand pressure was very feeble. Her eyesight was very bad, she being only able to detect objects in the abstract, and not to distinguish what they were. Her eyes looked perfectly normal, but the pupils were somewhat dilated; they did not respond to light and accommodation. There was no pain elicited on pressing on the eyeballs, and their tension was normal. Her appetite was fairly good considering her confinement to bed; her bowels acted daily; she possessed perfect control over her sphincters, and she enjoyed a fair amount of sleep. On examining the chest the heart sounds were found normal, and her lungs showed no tendency to weakness. Her tendon reflexes were normal, and her sense of touch and hearing per-

feet. Urine was normal. In spite of all treatment her symptoms have become more aggravated. She is now in so weak a condition that she cannot even turn herself in bed. She has quite lost the use of both eyes, being even unable to distinguish light. Her menstrual functions are still in abeyance. Her head troubles her exceedingly, the pain being still limited to the right side. She still takes light nourishment, and has the regular use of her bowels. Her pulse has become thready, and beats at 80 or 90 a minute. Her breathing is somewhat shallow, and more rapid than normal. There has been no reappearance of the convulsive fits.

Massage, galvanism, bathing have not produced any beneficial results, and [illegible] arsenic, quinine, pot. iodide, pot. bromide, iron and valerian have all been tried in various combinations, but without success.

ANSWERS.

F. C. (Newcastle-on-Tyne).—Sir George Johnson's work on *Diseases of the Kidney* is one of classic authority, and Dr. George Harley's work on *Diseases of the Liver* is also one of considerable weight.

LEPROSY.—The adjudication of the National Leprosy Fund prizes was left unconditionally in the hands of the gentlemen named; and it appears to have been quite in their power to withhold one or more of the prizes on the ground of the essays not being "sufficiently full."

FOREIGN DEGREES.

CONTINENTAL can obtain the M.D. either of Paris or Berlin on paying the fees and passing the prescribed examinations. The Berlin degree alone does not entitle the holder to practise in Germany.

THE OXYGEN TREATMENT OF ULCERS.

M.B.—Cylinders holding 10, 20, or 40 feet Brin's oxygen and appliances for the treatment of ulcers may be obtained from Messrs. Krohne and Sesemann, and details of treatment from Dr. George Stoker.

ABSCESS OF THE LIVER IN TOTAL ABSTAINERS.

SURGEON-MAJOR W. O'SULLIVAN, A.M.S. (Station Hospital, Newry), writes: In reply to "Far Away," in the BRITISH MEDICAL JOURNAL of August 17th, an orderly of the Medical Staff Corps, aged 22, who had been a total abstainer for at least a year previously and had never been of intemperate habits, died of multiple abscess of the liver at Penang, S.S., in [illegible]. He had then been about eighteen months in the tropics. The disease supervened on dysentery, which was found to be present at the *post-mortem* examination.

ANALYSIS OF URINE.

URINOMETER will find full details as to the clinical examination of urine in Roberts's *Diseases of the Kidney* (Lewis); Finlayson's *Clinical Manual* (Smith, Elder, and Co.), Quain's *Dictionary of Medicine* (Longmans), or indeed in any complete work on clinical medicine. There is a small work of 140 pages—*A Guide to the Examination of the Urine*, by J. Wickham Legg, revised by H. Lewis Jones (Lewis), which is devoted entirely to the subject in question. On the more purely chemical side "Urinometer" might consult [illegible] or some of the larger works on organic chemistry. Dealing with the matter from quite a different standpoint is the small book by G. Oliver on *Bedside Urine Testing*, in which methods are described which can be made available at the patient's home.

NOTES, LETTERS, Etc.

AIRD JOLLY FUND.

THE following additional subscriptions have been received in aid of the Aird Jolly Fund:

	£	s.	d.
Dr. Langham (Acton) ...	2	2	0
Dr. Francis (Acton) ...	2	2	0
Dr. Tremlow (Acton) ...	1	1	0
Dr. [illegible] (Acton) ...	1	1	0
Dr. Thornton (Acton) ...	1	1	0
Dr. Garrett (Acton) ...	1	1	0
J. N. [illegible], M.D. (Brondesbury) ...	2	2	0
W. T. Gairdner, M.D. ([illegible]) ...	1	1	0
Sir Joseph Lister, F.R.S. (London) ...	2	0	0
C. B. Keetley, F.R.C.S. (London) ...	3	3	0
Professor Victor Horsley, F.R.S. (President Medical Defence Union) ...	2	2	0
The President of the Royal College of Surgeons (London) ...	1	1	0
E. Osborne Fountain, M.D. ([illegible]) ...	1	1	0
A. H. N. Lewers, M.D. (London) ...	1	1	0
Stephen Paget, F.R.C.S. (London) ...	1	1	0
William Vawdrey Lush, M.D., F.R.C.P. (Weymouth) ...	1	1	0
A. Joseph Waters, M.B. (Southend-on-Sea) ...	0	10	6
H. T. Butlin, F.R.C.S. ...	1	1	0
J. F. Goodhart, M.D. Lond. ...	2	2	0
Dr. A. Wilmot (Burnham House, Bucks) ...	0	10	6

CARBOLIC ACID IN TYPHOID FEVER.

DR. A. [illegible] (Ballarat, Victoria) writes: In the BRITISH MEDICAL JOURNAL of April [illegible], [illegible], there was a letter from a correspondent drawing attention to a successful treatment of typhoid fever by a combination of carbolic acid and chloroform administered in a novel manner. Having failed with this drug in the past I however determined upon giving it a further trial. Eight cases were so treated with one death, and ran an ordinary course of from three to five weeks' duration. The drug did not appear to have the slightest specific action in any way whatever. Two cases treated by other means ran a similar course. The temperature in no case was above 104°, but this was due to the mild type of the disease prevalent in the town. The fatal case had taken ʒij of pure acid, and in another the enormous amount of ʒj was administered before convalescence was entered upon, therefore the drug has not maintained its reputation.

MEDICAL AID ASSOCIATIONS.

THE Medical Aid Association to which J. G. O. refers is one of those institutions which have frequently been condemned in the pages of the BRITISH MEDICAL JOURNAL. There can be little doubt the feeling of the profession towards them is very adverse, and at the recent meeting of the British Medical Association in London, the following resolution was unanimously carried at the Ethical Section, and referred to the Council: That the Council be requested to take steps to prevent members of the British Medical Association accepting posts in medical aid societies, and that in the opinion of this Section no practitioner who holds office in any Society of this kind should be eligible for membership of the Association.

DOCTORS AS FIRST CLASS SERVANTS.

MEDICUS INDICUS encloses the following slip from *The Pioneer* (Allahabad daily paper): "First Class servants, mechanics, artists, clerks, bandmasters, doctors, engineers, etc., supplied by A. S. S. Fernandez and Co., agents, Hornby Road, Fort, Bombay." Our correspondent adds: There is no need of the profession starving at home now; all the surplus have to do is to put their names on Messrs. Fernandez list and "walk in." Perhaps individuals who were familiar with the duties of a domestic servant, and had some knowledge of mechanics (say plumbing, etc.) would obtain higher wages.

WATERBORNE CHOLERA.

DR. STEPHEN G. HUBBARD (New Haven, Conn., U.S.) writes: In 1832 the Asiatic cholera made its first appearance upon this continent in the month of June. I was then sixteen years of age, and our family then having been for 100 years intimately associated with the medical profession, I was in the way of learning much about the cholera. Recently, in overhauling some notes taken by my family upon the subject, I came upon the following cases, which you may be interested in reading, as I think they are corroborating proof of the correctness of your opinion that, while not always strictly "waterborne," cholera germs must find their way into the stomach in order to reproduce the disease in a human body, and that the disease is probably in no other way communicable. Briefly, then, we knew from the first, as now, that the disease was contagious and communicable; was transported along lines of travel by persons and their baggage. Were it needful, I could trace its progress from Dublin to Quebec, to Montreal, to Albany, and thence in its distribution throughout North America; but as these two cases were personally known to me, I send them as probably typical ones.

In the village of Boonville, State of New York, where my family resided in 1832, thirty miles distant from the small city of Utica, on the Erie Canal, lived a manufacturer named Tuttle, who had a business note due at the Utica Bank, which he determined to pay at maturity, though he knew the cholera was raging there at a fearful rate, and was at the time universally fatal. His wife put into the pocket of the carriage for him a loaf of domestic bread tightly wrapped in a napkin, and a bottle of milk. He found the streets deserted, all places of business closed, no human beings visible except two or three burial parties stopping at houses, and crying "Bring out your dead!" and a few doctors letting themselves in and out of the closed houses. The dead bodies were thrown into a long open trench, as in the days of the plague, and covered with quicklime. After wandering about in search of some official to take his money, he finally found the cashier, and made his way out of this silent city of the dead and dying, and, seeking shelter from the sun, a few miles in the country, he partook of his loaf and drank the milk with as much relish as he had ever done, and went home feeling uncommonly well. Taking now his evening meal he retired, still feeling quite well; but in a few hours was seized with all the usual symptoms of cholera, and in six or eight hours was dead of that disease. I should add that no other case of the disease has ever been known in the town. What were the facts of exposure? He was intelligent and brave, fearing nothing. He had been for several hours exposed to cholera contagion in an atmosphere heavily laden with cholera germs (as we now may assume); his hands and face uncovered offered lodgment to those bacilli, so that when he partook of his own protected bread, exposed to a polluted atmosphere and taken with unwashed hands, and drank the milk that was open to the air, he was at the time in the best possible condition to receive into his stomach with great facility the cholera bacillus, and rapidly develop the disease. He had no possible personal contact with any person during his absence from his own home, and ate or drank nothing that he did not bring from home.

The second case, which also proves the affirmative of Mr. Ernest Hart's proposition, occurred in [illegible], some years after I had become a physician. In August of that year, in the General Hospital of New Haven, Conn., where I now reside, I had a patient, a girl of 17, convalescing from ship fever, as it was then called. Without my knowledge another female German patient was admitted in an irregular manner, and placed in the same ward with the fever patient, and some ten feet from her bed. She could speak no English, and as she had some fever, she was left in that room for observation, and these two women were the only patients in that room. When I entered the room the fever girl was sitting up and feeding herself with [illegible] broth, and she continued to convalesce. [illegible] days and a half after the German woman was admitted, my ship fever patient was attacked with fever and severe headache. Her pulse rose rapidly from [illegible], and she vomited profusely, and at 3 P.M. she had vomiting and purging of rice-water fluid, a heavy sweat, was very cold, had cramps and spasms with all the other symptoms of Asiatic cholera, and died in collapse at 11 o'clock that evening. The German patient afterwards admitted that she was convalescing from cholera, and her bed-clothing to which she was wrapped when she was admitted was still wet with the rice-water discharges. As neither of the women could get out of bed there had been no possibility of personal contact between them, so that, on the current theory of Mr. Ernest Hart, we can now easily see how the cholera bacilli were readily taken into the stomach of my fever patient with her liquid food. So far as two cases go, they prove the affirmative of Mr. Hart's proposition. Let those who are able prove the negative.

AN IMPOSTOR.

DR. FREDERICK W. SAUNDERS (Chieveley, Newbury) writes: It has just come to my knowledge that an unknown person, giving an address in Goswell Road, E.C., and writing under the name of Dr. G. R. Saunders, has put himself in communication with old St. Bartholomew's men, stating that he has just returned from New Zealand in distress, and asking for pecuniary assistance. I am happy to state that my brother, Dr. G. R. Saunders, is now in New Zealand, and that such an intimation is entirely untrue. I shall be glad to hear from any of the victims of this person.

"EXPOSURES OF QUACKERY."

M. J. L. writes: Some three months ago I received an advertisement of a work entitled *Exposures of Quackery*, and purporting to be published by the Savoy Press, 115, Strand. The price, 2s. 3d., I forwarded, and received a postcard in acknowledgment on which it was stated that the book was in the press, and would be sent immediately on publication. I have written twice since, but no notice has been taken of my communications.

"WANTED A NAME."

VESICAL writes: I have at present a patient passing in his urine a worm-like body, not unlike a tapeworm as far as the segments and general appearance are concerned. The length of each segment being about one fourth of an inch, the breadth rather less; sometimes one and a-half segment is joined together. The worm is serrated on the one side, each segment having one and a half cusp. Urine pale, faintly acid at first, within the last week almost neutral. Considerable vesical irritation for the first week, with abundant mucus in urine, specific gravity 1010, no albumen nor tube casts nor uric acid in urinary sediments. Later pus cells and abundant pus. Tenderness behind prostate and along course of left ureter. Temperature of patient oscillating from 97.5° to 103.2° F. No history at any time of recto-vesical fistula. Can anyone suggest the name, etc., of this helminth?

*** It is impossible without seeing these bodies to say what they are. "Vesical" should send specimens either to Dr. PATRICK MANSON or to the Clinical Research Association.

SPECIAL DISPENSARIES.

FAIRPLAY writes: A medical man in practice in a town with 40,000 inhabitants for over twenty years, and holding the degree of M.D. amongst others, wishes to make a speciality of skin diseases, at the same time continuing his general practice. Five or six years ago he started a skin dispensary, which is free to anyone who likes to attend. This has now assumed large dimensions, over 900 cases having been treated at it last year, and he has got the assistance of another qualified medical man. There is a large infirmary in the town with considerably over 100 beds in it, where also some thousands of out-patients are treated annually. I should be glad to know if this free skin dispensary conducted by these two medical men is in keeping with the rules of medical etiquette and fairness towards their fellow practitioners. Neither of these medical men is connected with the infirmary.

*** Unless the benefits of a free dispensary are very carefully restricted to the really deserving poor of the town, an abuse of a serious character may be established, working to the manifest injury of the philanthropist's neighbours, and having the same pauperising effects upon the inhabitants as the unchecked resort to out-patient departments has upon the citizens of our largest towns, particularly perhaps of the metropolis.

THE LOURDES PILGRIMAGE.

SINCE M. Zola wrote his book *Lourdes*, the annual departure of pilgrims to that interesting place of miracles in the High Pyrenees has, says the Paris correspondent of the *Daily Telegraph*, become the subject of great public curiosity. Recently the terminus of the Orleans Railway on the south side of the river presented the customary scenes and incidents associated with this remarkable pilgrimage. All the afflictions to which poor humanity is heir were represented in the crowd of sufferers who filled the waiting-rooms and platforms. The company's staff of attendants were specially reinforced for the occasion, the cripples and sick requiring assistance in their laborious entrainment. Priests in the throng were being continuously besought by ailing members of their flock for a blessing upon their journey. Nine special trains were provided. The first was the yellow train reserved for the use of the paralytic passengers. Two of its carriages maintained a strange silence amidst the hubbub, as they were occupied solely by the deaf and dumb. The second or grey train was laden with scrofulous patients, and the third, the famous white train, contained 780 sick people suffering from divers maladies, each one carefully ticketed and numbered. On the step of each compartment the military mode of writing in chalk special instructions was followed, but instead of reading "A sergeant and nine men," the inscription ran, "Sister Marie Madeleine," or gave the name of one of the lay organisers who were charged with the care of the sick during the long railway journey to the frontiers of Spain. Other trains were respectively labelled blue, violet, green, white, and yellow, and finally sky-blue. It is stated that 15,000 pilgrims from Paris and its suburbs have been transported to Lourdes, in addition to those who are proceeding thither from Tours, Orleans, Mans, and Bordeaux. The majority of the pilgrims carried white pocket prayer-books, and were provided with flasks, in order to bring back water from the Holy Pool, in which many of them hope to derive their complete cure.

A TOOTH REMOVED FROM THE NOSE.

In the *Norsk Magazin for Laegevidenskaben*, January, 1895, it is reported that Dr. HAVE, at a meeting of the Medical Society in Christiania, showed a tooth removed from the nose of a woman, aged 23. The patient had consulted him for an ear trouble, and the tooth was found accidentally during the examination. It was easily removed, and had been lying in a small depression at the junction of the floor and external nasal cavity, 22 millimetres from the external nares. This patient had all her teeth; they were placed somewhat far from each other. The tooth resembled a milk canine; the end of the imperfect root was covered with a fold of mucous membrane with stratified epithelium. The speaker suggested that part of the mucous membrane of the mouth, with its tooth germs, had become separated between the superior and premaxillary bones, and been cut off from the cavity of the mouth. Another speaker explained this facial dislocation, and believed it to be due to an inversion—a development in the wrong direction—by which the tooth had grown upwards into the nose. The same speaker also pointed out that the stratified epithelium of the mucous membrane did not prove a connection with the cavity of the mouth, as it is known that cylindrical epithelium cells after irritative processes are replaced by flat ones.

LETTERS, COMMUNICATIONS, ETC., have been received from: (A) Dr. S. H. Appleford, London; Anxious; Mr. W. A. Algie, Port Patrick. (B) Dr. L. A. Betts, Port Elizabeth, Cape of Good Hope; H. P. D. Benson, M.B., Grosmont; Messrs. P. B. Burgoyne and Co., London; Dr. W. G. Bacot, Bournemouth; Dr. J. O. Brookhouse, Nottingham; Mr. J. Bird, Basingstoke. (C) Country Master; Dr. E. C. Corlette, Muswellbrook, N.S.W.; Dr. C. J. Cullingworth, London; J. Cowper, M.B., Shanklin; Mr. H. J. Cheetham, Manchester; Dr. C. Coppinger, Dublin; Messrs. Thomas Christy and Co., London; Correspondent; Critic; Mr. W. M. Clendinnen, Bliston; Mr. R. H. Clarke, Ramsgate; Messrs. J. and A. Churchill, London. (D) Distinctor; Dr. A. D. Ducat, London; Mr. W. W. Don, Garstang; Mr. F. Daunt, Bexley. (E) E. R. L. (F) F.R.C.S.I.; Mr. W. V. Furlong, Dublin; Dr. E. B. Fiennell, Kimberley, Notts. (G) Mr. G. B. Gibson, Worcester; Mr. W. G. Green, London; Mr. H. E. Garrett, Brighton; Mr. C. H. Garland, London; Mr. R. E. J. Griffin, Kilkenny; G. R. P.; Gamma. (H) H. L. D.; Dr. W. Hind, Stoke-on-Trent; H. J. L.; Mr. G. H. Hicks, Loughborough; H. W. J.; Dr. T. G. Harder, Cardiff. (I) I. V. R. C.; Inquirer. (J) Dr. E. Lloyd Jones, Cambridge; Justice. (K) Mr. A. F. S. Kent, London; E. C. Kingdon, M.B., Nottingham; A. D. Keith, M.B., Aboyne. (L) Dr. H. G. Lys, Bournemouth; Land of the Mountain and the Flood; Miss A. S. Levetas, Birmingham; Mr. A. F. Lesson, Monireux; Listerite. (M) Member; Mr. C. Y. Moor, London; Messrs. Marshall, Arthur, and Co., Glasgow; Mr. G. H. Morris, Gateshead; M.B.; Mr. J. G. Mackinlay, London; Mr. R. Morgan, Llandilo; J. D. Malcolm, M.B., London; M.D. (N) Mr. N. E. Norway, Newquay. (O) Dr. G. Oliver, Harrogate. (P) Mr. F. Penny, Barnstaple; Mr. J. W. Porter, Sangor; Phenad; Professor J. Penberthy, London; Mr. J. C. H. Peacocke, Satara. (R) Dr. E. Roberts, Auckland, N.Z.; Messrs. Reynolds and Branson, Leeds; Royal Ear Hospital, Secretary of, London; Mr. O. Rothschild, Edinburgh; Dr. C. S. Redmond, London; Ripwood; Mr. T. Richardson, London; Dr. J. J. Ridge, Enfield; Mr. T. P. Roberts, Harrogate. (S) Dr. J. H. Scott, Dunedin, N.Z.; Mr. F. W. Sullivan, Navan; Messrs. F. Stearns and Co., London; Scruples; Mr. W. W. Shrubshall, London; R. W. J. Smith, M.B., Shetland; Sister; Dr. G. A. G. Simpson, London; Dr. F. W. sanderson, Chieveley. The Earl of Stamford, London; Dr. F. Semon, London. (T) Dr. J. W. Taylor, Belfast; Dr. C. Templeman, Dundee; Tasmania; Mr. H. Thomlinson, Gateshead-on-Tyne; Mr. J. W. Thomas, Neath. (W) Mr. F. W. Wood, Mansfield; Dr. S. West, London; Mr. H. L. Wilks, Salisbury; W. G. F.; J. A. H. White, M.B., Birmingham; Mr. W. R. Williams, Preston; W. H. Wilson, M.B., London; A. G. Welsford, M.B., Dover; Mr. F. C. Walsh, Stonyhurst; D. Walsh, M.B., London; Mr. T. H. Watt, Hovingham. (X) X. X. X. (Y) M. Young, M.B., Brighouse; etc.

BOOKS, ETC., RECEIVED.

The Animal Tuberculoses and their Relation to Human Tuberculosis. By Professor E. Nocard. Translated by Dr. H. Scurfield. London: Bailliere, Tindall, and Cox. 1895. 4s.

*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-THIRD ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in LONDON July 30th, 31st, and August 1st and, 1895.

PROCEEDINGS OF SECTIONS.

THE SECTION OF PUBLIC MEDICINE.

ERNEST HART, D.C.L., President.

WEDNESDAY, JULY 31ST.

President's Address.

MR. ERNEST HART delivered the address on Public Health Legislation and the Needs of India, which was published in the BRITISH MEDICAL JOURNAL of August 3rd. p. 289.

The President's address was listened to with much attention: at the conclusion of it

Dr. PISTOR (Geheimer Medicinalrath, Berlin) moved a vote of thanks to the President for his able and very interesting address.

Dr. J. GROVES (Carisbrooke), in seconding the vote of thanks, said that Mr. Ernest Hart, the President of the Section, had delivered a most important and practical address, which ought to bring forth from the Section some resolution calling the attention of the Government of India to the scandalous state of the sanitary administration of that country. As regards England, he did not think the great defects to which Mr. Hart referred would be remedied by the Government for a long time to come. He believed that the medical officers of health throughout the country often suffered conditions of persecution and social obloquy for the greatest and most important reforms, and for the creation of an educated public opinion which would influence whichever political party was in power. He referred to the poison of enteric fever being waterborne, and he spoke of an epidemic of enteric fever due to the corporation of a provincial town pumping the water of a millpond for the supply of a population of 10,000 or 12,000 people. He ended his remarks by moving:

That the Public Health Section of the sixty-third meeting of the British Medical Association begs to recommend that representations be made to the Secretary of State for India as to the utter inadequacy of the sanitary administration of the Government of India to give the most elementary protection to the public health of the inhabitants of Her Majesty's Indian empire, and that a copy of Mr. Ernest Hart's address be forwarded to the official authorities at home and in India requesting their attention to the points urged therein.

Brigade-Surgeon PRINGLE (Blackheath) seconded the resolution, and cordially endorsed all that Mr. Ernest Hart had said regarding the waterborne theory of disease. He had laboured as a medical officer of health in India forty years ago, and knew the truth of all Mr. Hart had said. He had himself suffered for daring to believe in the waterborne theory of disease. He thought it would be a great blessing to have the President's address printed and sent to the Government of India.

The resolution was carried unanimously.

A DISCUSSION ON THE REGULATION OF THE SLAUGHTER OF ANIMALS FOR HUMAN FOOD.

I.—T. M. LEGGE, M.A., M.D.Oxon., D.P.H.Camb.

DR. LEGGE opened the discussion by saying that in his opinion the proper person to have done so was one who had qualified in both medicine and veterinary science, subjects which were very much more frequently combined abroad than in this country. His only claim to open the discussion was that he had spent some time in several of the chief capitals of Europe in studying the methods of meat inspection adopted, and the most useful contribution he could make, therefore, would be to point out how far ahead of Great Britain Continental countries were in this matter. In his opinion, the abolition of private slaughterhouses and the erection in their stead of public slaughterhouses should be the first thing aimed at. Without it he believed a proper meat inspection could never be arrived at. An occupation that was in many of its details revolting, and one that might lead, if proper precautions were not taken, to grave nuisance, ought to be concentrated as far as possible. The advantages to be derived from centralising the slaughtering of animals and the various processes incidental to it, such as gut scraping, fat melting, the extraction of the albumen from blood, etc., far outweighed the objections that were urged on the other side by the butchers in this country. The erection of public slaughterhouses had preceded as a rule the introduction of meat inspection on the Continent. For instance, the abattoir at Copenhagen had been in use for five years before the systematic veterinary control was introduced in order to break down gradually the prejudices of the butchers.

The credit of having introduced public slaughterhouses and compulsory meat inspection into France in modern times must be attributed to Napoleon I. In Germany a law passed in 1868 gave power to the local authorities to compel the butchers to close their private slaughterhouses and slaughter only in the abattoirs; and further, in 1881, it was made a penal offence for anyone to introduce from outside fresh meat into a city without first submitting it to an expert examination. Dr. Legge preferred the German type of slaughterhouse (that of large halls) to the French (small separate chambers), as in the former cleanliness, ventilation, and the supervision over the slaughtering of the animals could be more easily secured than in the latter. An essential point in a well-organised scheme of meat inspection was for the cattle market to adjoin the abattoir, as was the case in nearly all large Continental cities.

After referring to the regulations in force in France, Belgium, and Denmark, which differed in some respects from those in Germany, he proceeded to describe the routine methods of meat inspection adopted abroad, and contrasted them with those adopted at home. The control of meat inspection abroad was almost entirely in the hands of veterinary surgeons, and a class of highly-trained scientific experts in this line was found there which did not exist at all in this country. He explained this partly on the ground that veterinary science had always been on a higher level on the Continent than in this country, owing to the State support given to veterinary colleges, to the fact that more freedom was allowed and more opportunity given for scientific research abroad than here, and, lastly, because public abattoirs, having existed for a considerable time, the need for a scientific control of the health of the animals slaughtered in them became more felt. It should be added that the contiguity of Germany to Russia, the breeding place of plagues and pestilences amongst cattle, had also had much to do with keeping up a high level in veterinary science. Not the least of the services rendered by public slaughterhouses under the control of veterinary surgeons abroad had been the very valuable knowledge that had been gained as to the extent of diseases amongst domestic animals, especially as regards tuberculosis. Abroad meat inspection appeared to be worked smoothly, whereas in this country few things gave so much trouble and anxiety to medical officers of health as a diseased meat prosecution.

A great defect in the law in this country under which the medical officer of health had to take action was that no indication was given him as to what diseases in animals made the meat unsound, unwholesome, or unfit for human consumption. In Germany the law of 1879 recognised only two kinds of bad meat—injurious to health (*gesundheits-schädlich*), and bad or spurious (*verdorben*), but the local regulations adopted in the towns where public slaughterhouses had been established usually went much further than the law referred to and chiefly determined the action of the veterinary inspector. Meat that was *verdorben* became therefore subdivided into (*a*) bad in the ordinary sense of the word and to be treated as equivalent to injurious to health, and (*b*) bad, but not so seriously bad that it might not be utilised as food, provided its condition was marked either as of diminished value (*minderwerthig*), or as defective in quality

(*mangelhaft*). The strict regulations under which much of the meat affected with tubercle had been condemned were relaxed in 1892 by a Ministerial decree making it permissible to regard as a rule as of first quality (and to be sold therefore without any restriction) the flesh of animals affected with tubercle (*a*) in one organ only, or (*b*) in the case where two or more organs were found affected, provided they lay in the same cavity and were not connected with one another by lymph channels or blood vessels belonging to the systemic circulation. As 65 per cent. of all tuberculous cattle came under these two heads, the importance of the rule would be understood. Further, the meat of tuberculous cattle must as a rule be regarded as dangerous to health (and therefore be condemned) when the muscular tissue contained tubercles, or when the animal was wasted. In Berlin now enormous quantities of tuberculous meat were cooked in Rohrbeck steam ovens by which complete sterilisation was effected, and then sold at a much reduced rate.

After giving statistics as to the meat seized at the Berlin abattoir and elsewhere, Dr. Legge concluded by saying that the recent report of the Royal Commission appointed to inquire into the effect of food derived from tuberculous animals had come to very definite and startling conclusions which could not be without effect on public opinion. Public opinion was at the present time lukewarm on the subject, and even the medical profession had not devoted the attention to the subject of the transmissibility of tubercle to man through meat or milk that it deserved. There was too the undeniable hostility on the part of the various meat traders' and butchers' associations to anything that was likely to drive the control of the trade by centralisation into the hands of a few large firms.

But the evils of the present system adopted in this country were so apparent that he hoped the whole question of meat inspection would before long be made the subject of a Royal Commission.

II.—R. Sydney Marsden, M.B., D.Sc.(Edin.), F.R.S.E., M.O.H., Birkenhead.

Dr. Marsden said that the consideration of the subject naturally divided itself under three heads, namely:

1. Treatment of cattle before slaughter; lairage accommodation, etc.
2. Method of slaughter and dressing of animals.
3. Treatment and inspection of the carcass after dressing.

1. Treatment of Cattle before Slaughter.

Animals should be brought to the slaughterhouse as quietly as possible. Proper lairage accommodation should be provided, in the form of enclosed sheds, with good top light and ventilation (side ventilation was too cold in the winter months).

The surface of the floor should be flagged and channelled with a good fall from the head to the rear, so as to keep the standing always dry, and all drains should be outside the building. A chain and perpendicular rod with movable ring that could slide up and down should be provided for each animal (in the case of cattle), and a water trough at the head of each stall. The pens for sheep and pigs should not be too large. The animals should be provided with a bed to lie on so as to keep them warm; they would then bleed better at the time of slaughtering. Animals should be kept here at least twelve hours without food before slaughtering, and there should be no overcrowding.

The standing pens (if separate from the lairages) where the cattle were placed immediately before slaughter should not be in view of the slaughtering, as animals were easily frightened by the smell of fresh blood, and fright had a deleterious effect upon the "keeping" qualities of the meat. The surface of these pens should be flagged and rough to give a good foothold.

The slaughterhouse should be lofty, with good light and ventilation from the roof; the surface of the floor flagged and rough. There should be a plentiful supply of water, and rails and hooks for dressing purposes. The ring to which the animals were tied when poleaxed should be fixed in the wall about 2 feet from the floor, and there should be proper receptacles for the garbage, which should be removed immediately after the slaughter of each animal, and the surface of the floor washed.

2. Method of Slaughter.

The animals should be poleaxed and pithed without delay, stuck immediately after pithing, and the body well bled. The heart went on beating for some little time after pithing. After skinning the carcass should be wiped with a damp, clean cloth, using as little water on the carcass as possible; if this precaution were carried out the flesh would appear brighter, and would not "turn" so soon. No blowing or stuffing of the carcass should be permitted, and when the dressing was finished it should be at once run into the cooling house and numbered. All offal should be trimmed and washed when taken from the body, and when finished it should be numbered to correspond with the carcass, and hung up in the slaughterhouse.

3. Treatment and Inspection of the Carcass.

All carcasses and offal should hang in a properly ventilated, light, clean, and cool cooling house for twelve hours after slaughter to cool. It was well for the meat inspector to be present if possible during slaughtering. Most diseases showed themselves at once, and it was important that he should see the diseased parts before anything had been done to them to alter their appearance. But there were cases in which the disease was more noticeable after the carcass and offal had cooled it; it was therefore important that they should be inspected both before and after cooling. The following diseases showed themselves at once: Tubercle, pleuropneumonia, peritonitis, anthrax, cystic disease of the kidney, abscesses, Texan fever, swine fever, and puerperal fever; but the disease showed itself more distinctly after cooling as regards colour, smell (or both), etc., in the following cases: Texan, swine, and puerperal fevers, jaundice, most diseases of the kidney, and inflammations generally.

Freezing of Carcasses.

A word should be said about the freezing of carcasses. No carcass should be put into the refrigerator until properly cooled; the freezing process should then be gradual, and not too great, otherwise the carcass sweated again on exposure. Freezing was beneficial in all cases in which the meat had to travel by train or be much lifted about, as it gave it a firmer surface. The freezing rarely got deeply into the body, but was generally only superficial, and it had this disadvantage, namely, that in damp and warm weather the carcass soon became wet, turned putrid more rapidly, and frequently became green.

III.—John F. J. Sykes, D.Sc., M.D., M.O.H. St. Pancras.

Dr. Sykes said that diseased meat must be prevented from being distributed for food. This applied equally to home-killed dead meat and to imported dead meat. The best time to judge of the health of food animals was at the time of slaughtering when they could be examined during life as well as after death, but above all when the internal organs could be examined together with the carcass and at the same time. In order to facilitate the inspection of home-killed meat the aggregation of slaughterhouses was desirable. To spare pain to food animals and inconvenience to traffic the aggregation should be close to railway depôts, and in the interests of public health the aggregation should take place outside large towns and well removed from populous places. London being in reality a collection of cities would either require the aggregation of its slaughterhouses to take place at separate points of the compass in the suburbs, or that all meat sent to London should be dead meat, the home meat being killed at public slaughterhouses established on the lines of railway either in the outskirts of provincial towns or in rural districts. In spite of the precautions indicated it would still be possible to foist upon the market meat of animals dying of disease. In order to prevent this and to take away the inducement to profit by the sale of diseased meat it would be necessary to institute (1) the systematic inspection of milch cows at periodical intervals by veterinary inspectors; (2) the purchase at the public expense of diseased

animals and meat before exposure for sale at a price that would materially relieve the owner from bearing the whole loss—in other words, paying compensation; (5) or failing the adoption of this course the compulsory examination and marking of all meat and the prohibition to sell meat without the recognised token or mark. As to importation, imported food animals were killed at the ports of debarkation, and were examined before, during, and after slaughter. But imported dead meat escaped all form of examination, and the only measure of control possible was examination before, at, or after disembarking and the affixing of some token or mark.

IV.—Surgeon-Major George A. Poole, M.D.

Surgeon-Major George A. Poole considered that veterinary surgeons were the proper inspectors of meat, and that they should primarily see the carcasses of the animals that were slaughtered. In case of a second opinion being wanted, the medical officer of health should be consulted. All private slaughterhouses should be abolished, as they were, generally speaking, centres of cruelty and filth, from which in many cases diseased meat often emanated.

V.—Alfred Hill, M.D.,
M.O.H., Birmingham.

Dr. Hill said he had much pleasure in supporting the main points alluded to in Dr. Legge's paper. He was pleased to find that more moderate views prevailed at present on the subject of meat affected to even the slightest extent. A year or two ago a number of gentlemen advocated the rejection of all such carcasses on the theoretical views formed on bacteriological observations and inferences. Such an extreme view was not in accordance with experience, with the practice of the Governments of Germany and France, nor with that generally of this country. It was not in keeping with the fact that the majority of infected animals were not detected, and were therefore consumed. That being the case, if the extreme purist view were correct, frequent outbreaks of such a disease as tuberculosis should be the rule, whereas it was the fact that though the consumption of such meat was greater than ever, and the disease was said to be more prevalent now than formerly, tuberculous disease in its various forms was not on the increase. He quite agreed that in the interests of public health generally, not to mention the avoidance of unnecessary suffering on the part of the animals slaughtered, private slaughterhouses should be abolished and be replaced by public abattoirs. It could not be denied that a large number of private slaughterhouses scattered all over a town were sources of nuisance and ill-health in themselves, while they contaminated the sewers in all points of their extent, and they allowed unlimited opportunities for the concealment of disease of the animals slaughtered, and the dangerous distribution of their carcasses for general consumption.

VI.—E. J. Slade-King, M.D.,
M.O.H., Ilfracombe.

Dr. Slade-King observed that if a medical officer of health did not understand the inspection of meat his education was incomplete in some part; veterinary inspectors would encounter the same difficulties as the medical officer of health met with, and it was useless to introduce any other incompetent set of men to deal with inspection. The chief question was how to get rid of private slaughterhouses. The question of compensation stood in the way, and the British butcher was as tenacious of his rights as the publican was of his, and any slaughterhouse local veto Bill without compensation would have no chance of surviving.

VII.—Brigade-Surgeon-Lieutenant-Colonel Parkes, M.D.,
Blackheath.

Dr. Parkes pointed out that, after the experience he had acquired of the practice of slaughtering animals in slaughterhouses or other places, during his service in India, where animals were killed according to the religious custom of the Hindoos, that is Levitical, he trusted that perfect arrangements were made in all slaughterhouses for the careful bleeding of the carcass, as on this depended in a greater measure than was generally supposed, not only the flavour of the meat, but its keeping possibilities and its tenderness or otherwise, and besides it was a check on cruelty.

Dr. Legge's Reply.

Dr. Legge, in reply, congratulated the Section on the excellent discussion which had taken place. He thought that if medical officers of health did learn something about the diseases of animals by attending for some time at a veterinary college there would be less objection to their exercising the functions of an expert on meat. He referred, in reply to a remark of Dr. Sykes, to what was done by the Danish Government in inoculating herds of cattle with tuberculin in order to do something to eradicate cases of tuberculosis from them. He concluded by pointing out the difficulties there were in the way of abolishing private slaughterhouses, quoting the conclusions of the Model Abattoir Society on this point. There appeared to be no power to close private slaughterhouses wholesale, either in London or provincial cities and towns. London, however, now had it in its power to close any private slaughterhouse, the use of which was objectionable or undesirable, by non-renewal of licence. Provincial cities and towns could acquire the same power, as far, at any rate as new licences are concerned, by adoption of the Public Health Amendment Act. In both cases the circumstances of each individual slaughterhouse must be considered separately. In rural districts, unless the sanitary authority had obtained urban powers, there was entire absence of control over private slaughterhouses. Provincial cities and towns had, but London appeared not to have, any power to erect abattoirs.

Resolution.

At the conclusion of the discussion, the following resolution was moved by Dr. Newsholme (Brighton) and agreed to:

That in the opinion of this Section, and in view of the fact that the Royal Commission on the effect of tuberculous food on human health by the terms of their appointment were restricted to tuberculosis, it is desirable that a Royal Commission be appointed to consider the whole question of meat supply and inspection, and that a copy of this resolution be sent to all the Ministers of State.

The resolution was seconded by Dr. Slade-King.

THE LATE VISITATION OF CHOLERA IN HUNGARY.

By Eugene Farkas, M.D.,
District Superintendent of Public Health, Buda-Pesth.

Dr Farkas said that the cholera epidemic which reached Europe in 1892 had been three times imported into Hungary, in each of the years 1892, 1893, and 1894. In 1892 the Government, early in the summer, made strenuous efforts to prevent the importation of cholera. Travellers and their baggage were submitted to medical inspection and restrictions were imposed with regard to the importation of goods from infected countries, which caused much injury to commerce and trade. In spite of these measures the cholera arrived in Buda-Pesth towards the end of September, and there was also a considerable extension in Hungary which followed mostly the course of the rivers.

The experience of the cholera in 1892 proved that the restrictions which nearly annihilated commerce were useless. The Hungarian Government abandoned a great part of them in November 1892. There was also a marked change in public opinion as to the usefulness of general sanitary measures which were formerly neglected. A great many sanitary improvements were carried out and in this the panic due to the cholera in 1892 had a very great share. So that the epidemic of the year 1893, although imported early in the summer, did not attain great dimensions.

In 1894 the cholera was again imported into Hungary, this time to the county of Máramaros. The epidemic lasted here 107 days, but with the exception of this county could not establish a footing in Hungary.

We cannot hope for any success except by means of general sanitation, as was pointed out by Sir John Simon thirty years ago.

Surgeon-Major Theodore Duka said that the paper was

important, as setting forth facts regarding the recent visitations of cholera epidemic in 1892, 1893, and 1894 in Hungary. It avoided all controversial topics. Dr. Farkas told the Section that restrictive measures, such as quarantine, were useless, and that cleanliness, with general hygienic measures, proved the only means of averting cholera. One point of special interest was that on the banks of the river Tisza and its tributaries the epidemic had spread indiscriminately up and down the stream—an experience which had long ago been pointed out in India. Dr. Farkas was a thorough believer in English hygienic measures, particularly in the management of epidemic outbreaks, and the Hungarian Government were to be congratulated for having entrusted to his charge the north-eastern counties of that kingdom, those contiguous with Roumania and Galicia, one of the well-known routes along which epidemics travelled from Russia and Poland into Central Europe.

A DISCUSSION ON SEWER VENTILATION.

I.—J. Parry Laws, F.I.C.

The results of modern research have not only enlarged our knowledge of the causation and propagation of infectious diseases, but they have also shown that in many instances the exciting causes of the disease, namely, the specific micro-organisms, pass out of the body with the bowel discharges, and so gain access to our underground sewers. These facts have imparted to the subject of sewer ventilation a significance and importance unknown in earlier times. To find a thoroughly satisfactory solution to the question, Is sewer air harmless or otherwise? and, If harmless, its mode of action?—is of great moment to hygiene, for our attitude with regard to this all-important question must of course be profoundly influenced by the conclusions at which we ultimately arrive. The injurious effects which have been, and still are, attributed to sewer air may arise from three separate and distinct causes:

1. From poisonous inorganic gases, such as sulphuretted hydrogen and sulphide of ammonium, and concomitant diminution of the percentage of oxygen in the sewer air.

2. From the organised constituents (the micro-organisms) of sewer air.

3. From the presence of some volatile and highly-poisonous organic compound or compounds, possibly of an alkaloidal nature.

The dangers arising from the first of these three causes are, on the whole, not now very great, owing to the improved construction and more perfect ventilation of our sewers. We are, nevertheless, occasionally reminded of the dangers arising from this cause by some sudden and tragic loss of life, such as that which has so recently occurred at East Ham.

The discharge of different waste liquors from manufactories into our sewers is no doubt at times a source of grave danger, and one, perhaps, not sufficiently recognised. A waste liquor from one manufactory, which by itself is quite harmless, may when mixed with another waste liquor give off a deadly poisonous gas. If the discharge of these two liquors in the same locality should synchronise, we have all the elements necessary to produce a serious calamity. It will be perfectly evident that the more perfect the ventilation the less will be the danger arising from these causes.

The second cause—namely, the organised constituents or micro-organisms of sewer air, is that with which we are more particularly concerned, inasmuch as the theory which has gained most general acceptation regards sewer air as laden with organisms both nonpathogenic and pathogenic. This theory, which may be said to have mainly influenced the growth of modern sanitation, was arrived at by the deductive method, and not from experimental data. It is founded upon two assumptions, both of which were received as self-evident; they were as follows:

1. That sewage matter swarms with the specific germs of various infectious diseases.

2. That these specific germs living, and possibly multiplying indefinitely, in sewage can rise into the surrounding air with the volatile organic compounds, which impart to sewer air its characteristically disagreeable odour, and therefore that they can be carried far and wide wherever the smell of sewer air can penetrate.

If these assumptions had been corroborated instead of disproved by experiment, then we should have had justification for the fear, almost amounting to terror, lest we should breathe a whiff of sewer air. That this theory should be tacitly accepted is not to be wondered at, for it is ingenious, easily comprehended, and removes many of the difficulties met with in attempting to correlate cause and effect in certain zymotic diseases. There are two possible sources of the micro-organisms in sewer air: they may be derived from the sewage and sewer walls, or simply from the fresh air gaining access to the sewer by ventilation. If the organisms be derived, in accordance with the above hypothesis, from the sewage and sewer walls, we should expect to find (1) that their number would increase with the length of sewer traversed by the air, or with the length of time during which the air had been in contact with the sources of contamination; (2) that the micro-organisms of sewer air would bear a strong resemblance to those species of micro organisms which predominate in sewage; (3) that their number would not vary markedly at different seasons, inasmuch as the temperature of sewage and sewer air remains moderately equable throughout the year.

If, on the other hand, their source were the fresh air gaining access by ventilation, then we ought to find the following conditions: (1) That they would bear a close resemblance to the micro-organisms existing in fresh air at the same time and in the same vicinity; (2) that owing to the constant tendency of organisms to deposit, their number should diminish the more imperfect the ventilation; (3) that their number would fluctuate with the seasonal fluctuations that we find in the number of micro-organisms in fresh air.

From the now numerous experiments of Carnelly and Haldane, Petrie and myself, in many instances carried out under abnormal conditions, the latter are the conditions which actually obtain. These conclusions are further strengthened and corroborated by the results of more recent experiments on the micro-organisms of sewage by Dr. Andrewes and myself. We have shown that the micro-organisms of sewer air bear no relation whatever to those of sewage, and that the predominant micro-organisms of sewage are entirely absent from sewer air. Furthermore, we have shown that it is extremely difficult to find any evidence of the presence of the typhoid fever bacillus in ordinary sewage, and that, instead of sewage being a favourable soil for its indefinite multiplication as stated by many advocates, it gradually but surely exterminates it. These results lead irresistibly to the conclusion that sewer air has no power of taking up bacteria from the sewage with which it is in contact. If sewer air is free from those special organisms which exist in immense numbers in every drop of sewage, how infinitely improbable, nay, almost impossible, becomes the existence of pathogenic organisms which can only be present in sewage relatively speaking in most minute proportion.

The third cause from which it is possible to regard sewer air as dangerous to health is an indirect one. It may contain some highly poisonous and volatile chemical substance, possibly of an alkaloidal nature, which, though present in but minute quantity, may nevertheless produce a profound effect upon the general vitality, and so predispose the system to any and every source of infection. The experiments of Dr. Alessi, although open to criticism, tend to strengthen this argument. So far all attempts to isolate such a substance have only given negative results. There appears to be no justification, in the light of the experimental evidence now obtained, for regarding sewer air as capable of disseminating the germs of disease. If it should act as an indirect poison in either of the two methods I have indicated, the evil will be diminished in proportion to the efficiency of ventilation.

Among the many natural causes which induce ventilation of a sewer, the following may be mentioned:

1. Flow of sewage.
2. Difference between internal and external temperatures.
3. Sudden change of barometrical pressure.
4. The aspirating and driving action of the wind blowing over the surface ventilators in the middle of our streets.

The action of wind is one of the most important of all, though, as a rule, it is not sufficiently taken into account. The wind is often sufficient to produce a fairly rapid current of air in a sewer opposite in direction to the flow of the sewage. In order to obtain the full benefit of this means of ventilation, I should advocate many more open grid ventilators at shorter distances apart (50 yards). The communication between sewer air and fresh air should be by the shortest and freest route. Probably some of the ill effects which have been erroneously ascribed to sewer air may be due to subsoil air, derived from soil polluted by constant infiltration of excremental matter through a leaking drain or sewer. It is a well recognised fact that subsoil air does at times gain access to our dwellings, either through the pressure of the wind on the surface of the ground, or from currents induced by wide differences between the exterior and interior temperatures. Under such conditions it is possible that sewage may gradually extend through a permeable soil until its outer margin becomes sufficiently dry to give off micro-organisms to the subsoil air.

Although the hypothesis which regarded sewer air as capable of disseminating the morbific germs of disease is, I think, proved beyond reasonable doubt to be an erroneous one, we must not therefore forget the immense benefits and the saving of life that modern sanitation, mainly influenced by this hypothesis, has brought about. Whatever the ultimate verdict be, whether sewer air is harmless or otherwise, it will always be the imperative duty of those charged with the care of the public health to ensure rapid and efficient removal of all sewage and refuse matter, and, above all, to guard against defective drainage and probable pollution of water supplies. The more light that is thrown upon the dissemination of those diseases which have been, I think erroneously, associated with sewer air, the more evident does it become that a polluted water supply, and, as an incidental result, a polluted milk supply are among our most insidious foes.

II.—James T. Neech, L.R.C.P.Edin., D.S.Sc.Vict., M.O.H. Atherton.

Dr. Neech in the first place related some experiments made on sewers of ordinary size to test the movement of air in sewers. In the experiments on one sewer it was found that when the flow of sewage was very small air moved upwards, while when the flow was larger it moved downwards. In another experiment it was found that the velocity with which the smoke introduced into the sewer moved increased directly with the fall of the sewer and the velocity of a body of water passing down the sewer.

The question, Dr. Neech continued, might be asked, Ought sewers to be ventilated? A sewer with good even and self-cleansing gradients, with perfect air and water tight joints and connections, with house drains efficiently disconnected therefrom, and constructed in a district where there was no possibility of subsidence, probably needed no ventilation other than a few 4-inch pipes at suitable points carried high up into the air to let off any undue accumulation of gases, and equalise internal and external pressure.

The conditions connected with many of the older sewers were different. Often they had gradients, and were not self-cleansing. They had defective joints and connections, which allowed sewer air to pass into the subsoil, especially when of a gravelly nature; not being able to escape through the surface of paved streets, it tended to be drawn into the basements of houses. There were many drains connected with old sewers the existence of which was unknown, and many others the course of which was uncertain. The joints of such drains were very defective; they often ran near and even beneath houses, and occasionally sink waste water pipes of some of the older houses were found connected directly thereto. Such a sewer should be ventilated.

It was also a question if new sewers should not be ventilated, even when properly constructed, in mining districts, where subsidence was liable to take place; the joints then became dislocated, and sewer gas escaped into the subsoil. All sewers passing from one part of an inhabited district to another through open country should be ventilated, because they conveyed sewer gases from the one locality to the other.

In the ventilation of sewers many methods had been tried; some had failed, while others had been more or less successful. If natural forces were to be utilised, the means adopted must be applied in a manner that would assert those forces. Where sewer air was constantly going downhill, it was useless to fix a ventilator at the upper end of the sewer, or one served.

Were it possible to extract sewer air with heat and burn it, that doubtless would be the most effectual means of dealing with it from a sanitary point of view, but this appeared not to have been found practicable for general application. It had been stated to be impossible to draw sewer air through a sewer for a greater distance than 400 yards, but this could scarcely be true in every case, for in one of Dr. Neech's experiments smoke passed down the sewer nearly 1,000 yards. A fan or special furnace for ventilating a system of sewers should be erected upon the main, and the chief reason given for the limited effect of such a furnace was that outside air rushes in at the nearer openings. But the author thought there was yet another condition which helped to restrict its action. A main sewer drains a considerable area, and has many branches; therefore the sum total of the sectional area of its branches, together with the drains connected therewith, will exceed several times over the sectional area of the main. The sectional area of a main sewer was found to be 346.36 square inches, while that of its branches was 2,450 square inches, without including the many drains connected therewith. The result of this was that sewage in the higher part of a system ran over a comparatively wide area, while in the main it was collected into one volume, and flowed over a narrow area. Therefore the higher parts of a system contain a much larger volume of sewer air than the main, and in passing towards the main the sectional area diminished, while the volume of sewage increased. Thus the space in the sewers containing air diminished in greater proportion than the sectional area. This condition seemed to place a difficulty in the way of drawing the larger volumes of air in the sewers above through the diminished air space of the main.

The method of ventilating sewers at the street level was still the most common. Where other means had been resorted to, it had been generally the erection of pipe ventilators against high buildings or other structures, and this method also appeared to have been pretty widely adopted. It was doubtless safer to discharge sewer air high up in the atmosphere than at the street level, although then occasionally and, under certain conditions of atmosphere, it would descend. Among objections urged against pipe ventilators was that they were inoperative, or their action was very feeble. With this Dr. Neech did not agree, as they were useful under certain conditions. It should be borne in mind that in some sewers the air constantly moved downwards, in others nearly always upwards, while in others there was little or no movement, and that variable. He had proved experimentally that air carried down a sewer by a quick flow of sewage impeded the action of pipe ventilators, and he believed that air flowing quickly up a sewer would do the same thing. This difficulty could be to a great extent overcome by inserting automatic valves in the sewer, which valves should stop short of the bottom of the sewer just sufficiently to allow the ordinary amount of sewage to flow on unimpeded. Experience extending over eighteen months showed that the ventilators acted constantly and well. They had been watched and tested, and there was a constant in-current at the manhole tested. The force of the flowing sewage assisted under these conditions in propelling air up the shafts. During the prolonged frost of last winter while every manhole grating was damp from the condensation of vapour of escaping sewer air, that of the manhole provided with this addition was quite dry, and sewer air was observed passing out of the tops of the shafts, it being distinctly seen through the condensation of its vapour on reaching the outside air.

A sewer in which the air constantly moved upwards should have the valves inserted at that side of the manhole at which the sewage left it. Then the air moving upwards would escape through the ventilators in preference to the manhole. Valves were useless where the movement of sewer air was variable, but in these cases the air could be filtered as it passed out of the sewer at the street level.

Mr. Baldwyn Latham had said: "That if large volumes of pure air are allowed to pass through a sewer in contact with sewage large volumes of foul air will escape at some point, and that the great secret in sewer ventilation is not to encourage these currents of air through sewers." Large volumes of air did pass through some sewers, as Dr. Neech's experiments showed. Sectional ventilation, as suggested by him, would prevent this, because the ventilators connected therewith would remove gases generated or escaping from the sewage within the section. The greatest nuisance from sewer emanations most frequently occurred in connection with sewers in which there was free movement of air, because it then escaped in large quantities at special points, thereby intensifying the nuisance at its exits. Sectional ventilation prevented this by causing a more even distribution of sewer air on its escape from the sewer, and thereby very much diminished the nuisance.

Conditions doubtless differed in different districts, and the methods applied must be varied and adapted to the circumstances of the locality. The foregoing remarks applied to ordinary sized sewers. In conclusion, Dr. Neech acknowledged the services of Mr. Clough, the surveyor of Atherton, who had prepared plans and rendered every possible facility and assistance in carrying out the experiments.

III.—Sidney Davies, M.A., M.D., M.R.C.S.,
D.P.H. Camb.; Medical Officer of Health, Plumstead.

Dr. Davies said there were two questions to be considered—the injuriousness of sewer gas, and the more or less independent question of sewer ventilation. The researches of Mr. Laws went to show that sewer gas did not usually contain the germs of disease. There was good reason to think, however, that the gas might contain organic substances which went to affect the system injuriously, and render it more susceptible to the inroad of infectious diseases. It had been shown that animals exposed to sewer exhalations were more prone to take enteric fever than animals not so exposed. But besides the injuriousness of sewer gas, they had to consider its unpleasantness and the popular prejudice against its emission. No necessity had been shown for the open system of ventilation. The exhalations of sewers could not be sweetened by ventilation. Air thrown into a sewer at one point caused a corresponding quantity of foul gas to emerge at another point. But a certain amount of ventilation was necessary to prevent gas accummulation from forcing traps. The vent should be supplied in each sewer according to special local circumstances. Open manholes might be permitted in broad streets where the traffic was great, but were inadmissible in narrow streets which were the playgrounds of children. The system of making each house ventilate the sewer by a shaft was decidedly objectionable. Shafts were required at the heads of steep gradients, and should be very carefully made and placed. The argument as to the healthiness of sewer men was not supported by any sufficient evidence. If the proximity of sewage was desirable and harmless, he thought that medical officers of health had better resign their posts.

IV.—Dr. Oldright,
Ontario, Canada.

Dr. Oldright, replying to the remark that because some scavengers were healthy sewer gas was not harmful, said similar observations would apply to many other filth works. None but robust men, as a rule, undertook such positions. Their work was out of doors. No one would recommend the inhalation of sewer gas to sick friends. Sewer air was not always perceptible to the senses. Typhoid fever was a water-borne disease he believed, although cases, in his opinion, had had their origin in a dry and disused trap or other defective drains. Sewer gas caused deterioration of health and vitality. The sewer should not discharge on the street level, but overhead. At Toronto he had seen children playing over street gratings. He had been criticised in the *Lancet* for urging that sewer pipes should be carried up through the houses. The writer must have been ignorant of the fact that even rain pipes could not be placed outside the houses in Toronto. The openings should be placed 10 feet away from any window. Then, again, the gratings were insufficient. A manhole generally had in it about fifty openings 1 inch in diameter, and this broken-up space was not equal to a clear pipe without openings. These apertures became clogged with mud and snow when ventilation was most required. Every house-drain should have its own ventilator made perfectly tight and carried up overhead. This pipe should be in addition to the extension above the roof of its soil pipe. It had been objected that there might be leaks in these pipes. In Toronto the city ordinance required that the whole pipe system, including such pipes as he had described, should stand a severe hydraulic test, being filled to a point above the roof—to the very top—with water, which should stand three or four hours without any leakage. If there were a pinhole it would be nothing in comparison with the openings in the street level wafted towards open windows or doors. These ventilating tubes were not allowed to open nearer than 10 feet to any opening into the house. Movement of air through the pipes was secured by differences of temperature, one pipe being more exposed to the air than another, and in Canada the climate was such that a pipe would, by repeated coatings of ice on its inner walls, become choked. The differences between the temperature of inside and outside pipes secured a movement of air. If it should remain in the sewer nobody need care, but stagnation in pipes situated under such diverse circumstances as to sun, air, and artificial heat of houses was not possible. It was safer probably to have a trap between the houses and the sewer and at the same time to have a separate ventilating pipe outside on to the roof. Winds had a powerful influence in ventilating sewers, and he disapproved of flap valves.

V.—Edward Haughton, M.D., M.R.C.S., B.A.,
Upper Norwood.

Dr. Haughton recommended the use of natural shafts, like the South Tower at the Crystal Palace, for carrying away sewer gas, especially when furnace heat was readily available: also that the sewers themselves should be lined with smooth tubing of moderate size, and well flushed with water. Sewer ventilation ought to be undertaken mainly by the municipal authorities, and not by the individual householders. He characterised the present sewers as being merely elongated cesspools.

VI.—F. T. Bond, M.D.Lond., M.R.C.S.,
Medical Officer of Health of Gloucester Combined District.

Dr. Bond said the Bristol sewers were not ventilated at all, and yet the town was singularly free from typhoid fever.

VII.—Joseph Groves, B.A.Lond., M.B., L.R.C.P.Lond.,
Medical Officer for Isle of Wight Rural District.

Dr. Groves said he thought their great object, now that they knew the causes of many diseases, was to get all the fresh air possible into any sewer or drain from which it was likely any sewer gas or pathogenic organisms which might be associated with it might pass into the body. The aim was to scotch and kill the organisms which produce disease, and to which oxygen was inimical. With absolutely tight sewers and an open-air inlet trapped on the sewer side between the sewer and every house connected with it, no ventilation of sewers would be required, or should only need valves to relieve extreme pressure of sewer gas. House drains simply required a ventilating shaft at the end of each branch of the drain in order to secure free circulation of oxygen. In obedience to the law of the diffusion of gases, the air would sometimes pass down the fresh air inlet and up the ventilating shaft, or down the ventilating shaft and up the inlet.

VIII.—Alfred Hill, M.D., M.R.C.S., F.R.S.E., F.C.S.,
M.O.H. and Analyst City of Birmingham.

Dr. Hill said he thought too much attention was paid to cure and too little to prevention in the matter of sewer ventilation. If sewers were properly laid—that is, not too large—of proper material, and of suitable gradient, there would be little necessity for the various conflicting methods of ventilation at present under discussion. Natural running sewage was not offensive in odour: it was not putrescent, but nearly inodorous, and did not in his opinion evolve gases

which produced typhoid or similar diseases. It would appear that certain speakers confounded sewers with drains, the conditions of which, as they actually exist, were in most cases very different. For a reflection commonly occurred in drains, whereas it was the exception in sewers. If, however, it should happen, it was due to the defective condition of the sewer, and in such a case the obvious course was to remove the defect. With such normal sewers no harm could result from gas and openings; he was of opinion that they formed the most simple and best arrangement. Chimney shafts for extraction had been repeatedly tried, and had always proved failures. Combustion by street lamps, enthusiastically advocated by certain theorists, had also proved expensive and useless, although a "consulting chemist" had issued a certificate to the effect that he had found the combustion complete, and that it had moreover the effect of considerably increasing the luminosity of the gas. The health of large towns with sewers ventilated on the ground level was a standing evidence that typhoid fever and similar diseases were not the outcome of ventilation on the ground level, and it was clear that they should direct attention to the condition of the sewage rather than to the methods of ventilation.

UNDERGROUND WORKSHOPS.

BY

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and

DAVID WALSH, M.B., C.M. EDIN., Assistant Physician, Western Skin Hospital, London.

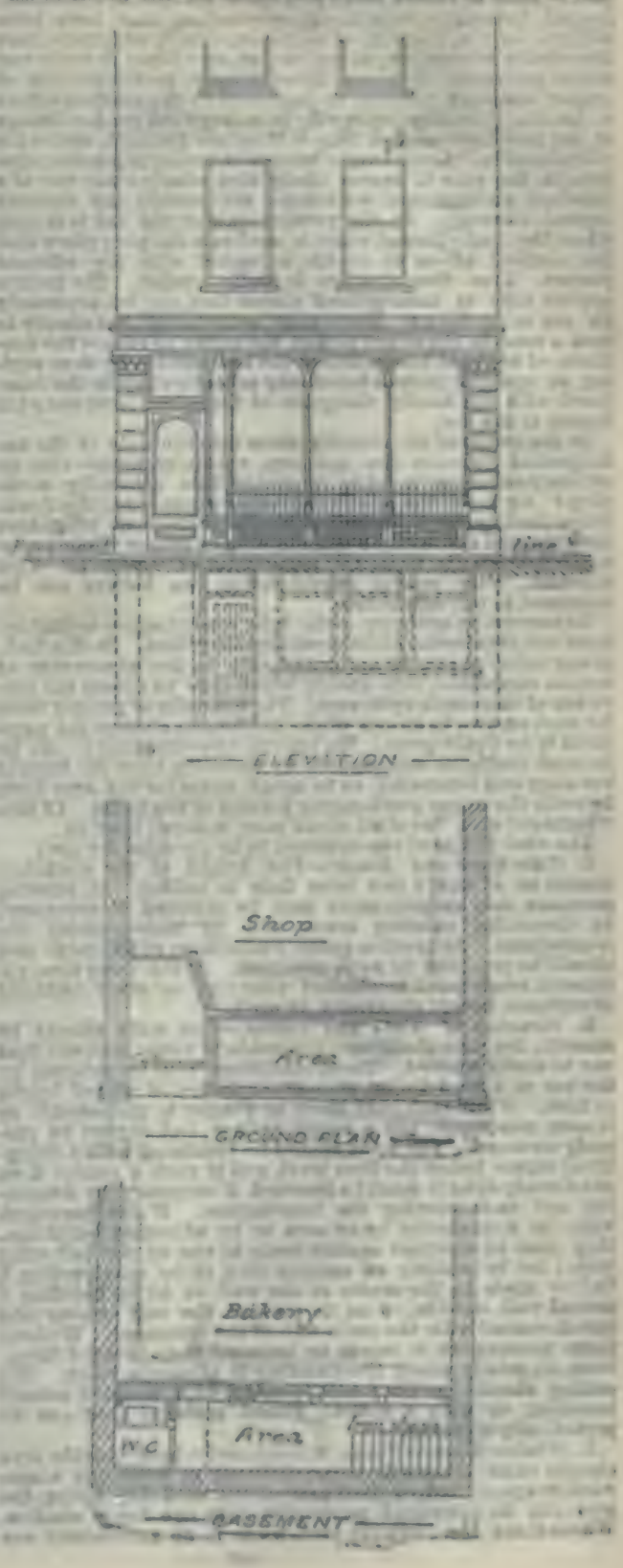
The general tendency of civilised communities is to flock towards particular centres of population. In order to make the most of costly ground, the builder tries to gain in height what he lacks in breadth. Hence we see huge blocks of buildings springing up on all sides. These lofty rows of houses, often on the sides of narrow streets, prevent the circulation of air and the entrance of sunlight. In order to obviate this particular danger the London Building Act of 1894 restricted the height of houses in the metropolis to a maximum of 80 feet, and laid down certain definite relations to be observed between the height of the houses and the width of the streets on which they abut. This Act does not apply to the City proper, for reasons that will be fairly obvious. Nor does it touch an opposite danger, which is a further outcome of the excessive value of town lands. The builders, not content with soaring skywards, have taken to burrowing in the earth, so that we find London basement rooms used as workshops, being two or even three floors beneath the level of the street.

An "underground workshop" may be defined as "any workshop almost or wholly below the adjoining street or surface level." This definition includes basements the roofs of which are raised several feet—say, two or three—above the neighbouring ground level.

Our attention has been drawn to the subject of underground workshops generally by an investigation of the bakeries carried on in London basement rooms. The majority of these places, especially in the older houses, are nothing more or less than cellars. The process of conversion from the cellar to the bakehouse is simple. The baker rents a house in a business thoroughfare, furnishes the cellar with a few gas jets, some kneading troughs, a water tap, and a furnace, and he is forthwith the possessor of a bakehouse. From cellars of this type, on a moderate estimate, more than one-half of the daily bread of Londoners is issued.

The bakers have hitherto made light of the evils of their underground workshops. For a long time they contended that however bad the bakehouse no harm could result to the consumer, as the process of baking sterilised the loaf. The fallacy of that assumption has been shown by the present writers, who cultivated numerous bacteria from the centre of newly baked London loaves. In the particular case of the underground workshops used for the making of bread, we hold that their use, under present conditions, involves distinct danger to the public safety, as regards both consumer and producer. We may add that the view as to the possible spread of disease by means of bread has been widely adopted in India, where several outbreaks of typhoid fever have been ascribed to bread baked in [illegible] bakeries.

In London, and [illegible] to a [illegible] point in most of the



large towns throughout the kingdom, there are many basement rooms used as workplaces that are unfit for the purpose. Indeed, for the most part, as in the case of the underground bakeries, they are simply cellars that have been utilised for the housing of workmen. Such adapted cellars are almost always low, damp, airless, and liable to drain and sewer pollution. Nor can these defects, in the absence of proper statutory powers, be remedied by the medical officer of health. The most he can do is to check the grosser defects in the rare instances in which they are brought under his official notice. Until a rigid system of house-to-house visitation is the rule it seems likely that ninety-nine out of a hundred underground workshops will escape any sanitary control whatever. In the present state of the law it is only when the underground room is used as a sleeping place that the medical officer of health is vested with any efficient powers. Even then the law is easily evaded. The statute applies only to underground places that are let separately for use as dwellings. The tenant, accordingly, has simply to rent a room in the upper part of the house to escape the condition of separate occupation of the basement. By thus renting an upstairs room a baker may actually sleep in the basement with his family alongside of his bakery, and snap his fingers at the law.

In the course of our investigations into the facts of the underground bakeries the question naturally arose—Can an ordinary cellar basement be converted into a healthy workshop? Or to put the matter into other words—Can the downstairs chamber of a dwelling house, almost or altogether underground and with no outside area or proper windows, be made structurally fit for the occupation of workmen? This question, after careful consideration, we believe can be answered in the affirmative.

To convert an ordinary cellar into a wholesome workshop, however, requires no little structural alteration. Such a task, in our opinion, can be performed only by the observance of certain essentials, first among which may be placed the provision of an outside open area. The difficulty of getting room for such an area in streets where the houses abut on the pavement is no doubt great. We believe, however, that it can be in most instances surmounted by throwing back the front of the shop and borrowing, so to speak, space for the area from beneath the upper overhanging portion of the house. Of this "borrowed area" we shall speak more in detail later on.

The vital points of construction to be provided for are:

1. *Cubic Space and Height.*—The height of the workshop should be at least 8 feet from floor to ceiling. In altering premises this measurement may be attained, if necessary, by deepening existing levels and by underpinning the foundations. As to cubic space, a minimum of 500 cubic feet should be provided for each workman. At the same time additional space must be allowed where gas or other artificial illuminant, except electricity, is used.

2. *Structure of Walls and Ceiling.*—The walls should be smooth, dry, non-absorbent, and made of some material that can be easily washed. These conditions may be satisfied by the use of a good lining cement, or, better, of glazed bricks or tiles. Whitewash over brick or plaster is undesirable as it soon gets dirty, has a rough surface, and cannot be properly cleansed. The walls should be furnished with a damp-proof course below the floor level, and if such a course does not already exist it must be inserted, if necessary, by deepening and underpinning the foundations. If the basement walls be unprotected by an area or by adjoining buildings, they must be shielded against damp in one of the following ways: (*a*) by making an outside area, (*b*) by constructing a hollow space in the centre of the wall, or (*c*) by building a second wall outside, so as to prevent the soil coming into direct contact with the main wall of the basement. Without these precautions it would be impossible to prevent dampness, especially where the building is of porous brick. The ceiling should be lined with plaster, with tongued match-boarding, or with a smooth glazed material that can be periodically cleansed.

3. *Window Space.*—Where a front and a back outside area already exist there will be no difficulty in providing ample window space; indeed, that part of the workshop facing the area can be converted practically into one large window. Where there is no outside area there is no satisfactory way of getting room for windows except by the unsatisfactory expedient of digging a space down in front of the window itself. In all cases the windows should reach to the ceiling, and be made to open flapwise in their upper halves; they should be placed at each end, or on two sides of the basement, whether the latter be an open chamber or divided off by cross partitions. The total window surface should be equal to at least one-eighth of the floor area.

4. *Light and Ventilation.*—These must be to a certain extent regulated by the special conditions of each case. An open outside area and ample window space are great aids to natural light and ventilation. Artificial ventilating inlets may be furnished by Tobin's tubes, by perforated bricks, by louvred panes, and by other well-known methods. In dusty situations they must be guarded by filters of wire, of gauze, or of other suitable material. In an underground chamber the outlet often presents a good deal of difficulty. The most usual way is by an exhaust shaft, the draught of which is created by waste heat from the furnaces, by lighted gas burners, by a steam jet, or by a mechanically driven fan. An open fireplace and chimney should be provided in every basement room intended for human occupation, whether by day or by night. The difficulty of getting good ventilation will be, of course, much increased if the builder descend to a second or a third downstair floor. In such a case he will want a special means of air supply. Some of the modern methods which purify and warm the distributed air should be insisted upon in second or lower downstairs rooms, if, indeed, they should be permitted to exist at all.

5. *Light.*—Artificial light is best obtained from electric lamps, which do not unduly warm and foul the air. Where gas is used, an extra allowance of air space should be made, each burner counting as three adults. The amount of day- and sunlight will depend very much on the size of the outside area and of the window space.

6. *The Floor.*—This should be made of good concrete, at least 9 inches thick. Its surface should be of smooth cement, of glazed brick tiles, or of tesselated paving. On no account must any gully or sink connected with a drain open through the floor.

7. *Drainage and Lavatory Accommodation* should be ample, especially in places where food is prepared. Waterclosets should be of good modern type, supplied with automatic flushing tanks and wash-out pans. They should be placed away from the workshop, if possible in the area. As the ventilating air for the basement passes through the area, it will be well to cut off connection with closets as much as possible, and to provide them with a separate system of ventilation. Washing accommodation should in all cases be provided. If any drains pass under the basement, they should be encased in 6 inches of concrete, and laid at least a foot below the concrete floor, and their joints made gastight with Portland cement. Better still, the pipes may be of iron, prepared by the Barff process, or lined with Angus Smith's solution; such pipes should be laid on concrete, and cemented at the joints.

8. *Water Supply* should come from the rising main. If that cannot be arranged, owing to the absence of a constant service, separate cisterns must be provided for drinking and for closet purposes, such cisterns to be of approved modern type.

9. *The "Borrowed Area."*—In cases where the front of the house runs up flush with the pavement, we suggest that space can be got for an outside area in the following way: The front of the shop is to be thrown back some 5 or 6 feet, and an area sunk in the space borrowed in this way from the main overhanging building. The outside area is thus gained at the expense of a part of the shop and the basement. The size of the shop is somewhat lessened by the alteration, but by way of makeweight the basement is converted into a light and habitable room. Access to the shop is provided by a bridge crossing the new area from the pavement.

The area we regard as absolutely essential to the construction of a healthy basement workshop. A proper supply of air and light, to say nothing of the disconnection of lavatory arrangements, can hardly be obtained in the absence of an outside open area of fair size. Further, if the whole of the basement is to be used for workmen, we think that an area should exist on more than one side of the basement. We

would suggest, therefore, that every basement room meant for use as a workshop should have an outside area along its entire frontage, that the said area be properly drained and paved, be at least 4 feet in width in all parts, and extend to 8 inches or more below the floor level. We would also make a second area compulsory in every basement workshop. The second area, which might be placed at the side of the basement in some cases, should be of similar construction to the front one, except that it may be 3 feet wide in all parts. In the case of basements having 2 feet or more of their height above the level of the adjoining surface, the width of the front area might also be reduced to 3 feet. It need hardly be pointed out that absolute precautions must be taken to prevent any access to the area of sewage or other contamination. It is equally clear that open ashpits must not be allowed in the area. All refuse should be kept in covered galvanised iron bins, which should be systematically emptied and cleansed. The Public Health Act of 1875 made it illegal for any cellar built or rebuilt since 1848 to be separately occupied as a dwelling, nor any cellar whatever, unless it complies with the following requirements:

The height must be in every part at least 7 feet, 7 feet of which must be above the level of the adjoining street; (b) an open area, at least 4 feet wide in every part and 8 inches below the level of the floor, must extend along the whole frontage. It may be crossed by steps but not opposite the window; (c) the cellar must be drained by a drain at least 1 foot below the floor; (d) there must be proper closet and ash-pit accommodation; (e) there must be a fireplace and chimney; and (f) a window at least 9 square feet in area, made to open. The window of a back cellar, let or occupied along with the front cellar, need only be 4 square feet in area.

With certain modifications we have applied the foregoing regulations as to cellar dwellings to cellar workshops. The chief points of difference are that we ask for 8 feet in room height instead of 7; for an open outside front area 4 feet instead of 3; and for an additional area of less width along one of the sides or the back of the basement. The main practical difficulty in the way of satisfying these requirements would no doubt be in making an area in town houses. In order to meet this objection we have devised the scheme of the "borrowed area," whereby an open area can be obtained for a house even if situated in the narrowest street of London.

The main conclusion of this paper is, then, that an underground or basement room can be converted into a healthy workshop by a proper expenditure of money in structural alterations whereby the basement may be rendered dry, light and airy.

DRY METHODS OF DEALING WITH URINE.

By G. V. Poore, M.D., F.R.C.P.,

Professor of Medical Jurisprudence and Clinical Medicine, University College, London.

Dr. Poore said that the object of his paper and demonstrations was to show how different was the behaviour of urine when mixed with absorbent material from that which it manifested when it was mixed with water or left unmixed with anything.

Dr. Poore's experiments went to show that when mixed with absorbent material and exposed to the air it never became offensive, notwithstanding that a good deal of ammonia was developed. He showed a conical flannel bag, 2 feet 6 inches long and 1 foot in diameter at the base, which was filled with about 6 pounds of dry deal sawdust on May 29th, 1894, and which had stood in his room at University College ever since. Between May 29th and July 26th, 1894, over 30 pounds weight of urine was added to the sawdust. Very little urine was added between July 26th, 1894 and May 1st, 1895; but between May 1st and July 30th, 1895 about 45 pounds weight of urine was added. Notwithstanding that the flannel bag had become so rotten that it would scarcely hold together, the mixture of sawdust and urine was still in the least offensive and had never made its presence in the room felt by any unpleasant smell. Of the 84 pounds of urine added, only 6 pounds had been returned as filtrate, while about 68 pounds had been evaporated or retained. The filtrate had been dark brown, acid, and of high specific gravity, but had never been offensive nor had it shown after lying about for months any tendency to putrefy or become offensive. The sawdust, the urine added, and the filtrate had been analysed by Dr. Kenwood. The results of filtration through other materials, such as earth, cinder and ashes, old stucco, peat-moss litter, and crumpled paper were also given. The results as regards the absence of offensive smell were identical with the above in the case of earth, stucco, and peat-moss litter. When fresh earth, fresh stucco, and fresh ashes were used the filtrate was almost colourless and odourless, but the power of ashes to give this result was short-lived, and after the ashes and cinders had become saturated the filtrate became strongly ammoniacal and offensive. The filtrate from peat was dark-coloured but clear (not thick like that from sawdust), and never offensive. The crumpled paper at first gave a very offensive filtrate, but when it got fairly soaked and really absorbent all odour ceased. The paper became, in the process of drying, riddled with a fungoid growth (saccharomyces and penicillium), and gradually dried up to a material scarcely, if at all, to be distinguished by the eye or nose from ordinary garden earth.

The explanation of the above facts was, in Dr. Poore's opinion, doubtful. It was probable that in the case of deal sawdust and peat, the antiseptics contained in these bodies might have had some effect. In the case of the other bodies it was probable that microbial action might have produced the result.

As far as he was able to judge from limited experience, sawdust that had thus been soaked with urine became a valuable manure. In contrast with the above a sample of urine which had stood in a glass beaker lightly covered with paper since January, 1895, was exhibited, and was shown to be intolerably offensive.

DISCUSSION ON HOSPITAL ISOLATION AND THE DISINFECTION OF PATIENTS.[1]

I.—Philip Boobbyer, M.B., M.S.Durh.,

M.O.H. Nottingham, and Medical Superintendent of the Borough Isolation Hospital.

The existing system under which each sanitary authority is left very much to do as it pleases in the way of providing or practically neglecting to provide adequate hospital accommodation for the infectious sick in its district is in the highest degree unsatisfactory. The powers conferred by the Act of 1893 upon County Councils are insufficient to meet the difficulty, for no sufficient provision is made for the proper and systematic performance of its duty by the Hospital Committee after the establishment of the hospital, or to insure uniformity of practice among neighbouring authorities. Without this last, much of the utility of hospital isolation is lost. In my own town (Nottingham) we have attempted in recent years to isolate scarlet fever, but no such attempt has been regularly made in the small townships lying immediately around us (which, again, do not come within reach of the compulsory clauses of the Act); the consequence to ourselves, I need hardly say, has been highly unsatisfactory. In one town lying just outside Nottingham on the north, and which contained 13,004 inhabitants in 1891, no attempt whatever has hitherto been made to isolate scarlet fever in a public hospital. In December, 1890, I reported to my Health Committee and the Local Government Board that infection was undoubtedly coming into our Bulwell district from this town. An inspector of the Local Government Board was sent down, and my statements were more than confirmed. The number of deaths from scarlet fever in this township during 1893 was 74, which was only eight short of the total number in Nottingham during the same period, and our population is eighteen times greater than theirs. The same sort of thing is now occurring in another suburb of Nottingham. The presence of an epidemic of scarlet fever is practically ignored by the sanitary authority having supervision of the district, and we on our side are left the unprofitable task of toiling in slough. There are more than sixty cases of scarlet fever in one short street of this suburb, which closely approaches our boundary.

These are illustrations from my own experience of scarlet

[1] N.B.—A paragraph on classification has been omitted on account of the unusual length of the paper.

fever. Other people have had similar experience with this and other diseases. Again, when two neighbouring authorities have undertaken the isolation of cases of a particular disease, it is very desirable that as far as possible a uniform procedure should be adopted by both. This is very far from being the case at present. In one place it is held to be dangerous to remove cases in the acute or other stages, in another they are removed in all stages; in some places patients are kept in hospital much longer than in others; in one place all the secondary evils of overcrowding are recognised, and it is rigidly avoided; in another they are ignored; in one place convalescent departments are established, in another cases at all stages are housed together; in one place hospital clothing is uniformly provided for all patients, in another no such provision is made; in one place the hair of all patients is cut, in another it is not; in one place all patients are admitted free of charge, in another payment is demanded; in one place all patients are attended by the medical officer in charge, in another they are, or can if they or their friends will, be attended by private medical men.

In short, the widest possible divergence exists between the practice of different, and it may be neighbouring, hospitals under the control of different authorities. What the public are taught to hold as the truth in one district they learn to be heresy in the next.

I have hitherto said nothing about treatment, but in this an even wider divergence of practice occurs than in anything else. So-called water treatment is used in one hospital, it is condemned in another; antiseptics and disinfectants are largely depended on in one, they are not used at all in another; drugs are administered in one hospital which are held to be actually injurious in another; oil inunction is practised in one, it is condemned in another; the period of confinement to bed varies in almost all hospitals; and so on runs the series of variations to an almost limitless extent.

Much of this might be beneficial if only the line of action adopted in each case were regularly and systematically followed, and its results recorded for the public benefit; but this up to the present has not been done to any considerable extent. A great deal of the difference in both administration and treatment has arisen through the charge of hospitals in the smaller districts being entrusted to persons who have undergone no special training beforehand; and I fear that this is likely to continue under the new Act unless very careful supervision is exercised. Much care and forethought are frequently exercised in the choice of a site and in determining details of construction, but here too often care and forethought cease. One or two members of the public authority, and a medical man with many other duties to perform, are frequently entrusted with the management of this most important institution when completed, and unless these gentlemen shall be at the pains to find out what is the practice elsewhere, and then be wise enough to benefit by the experience of others, it will generally happen that the hospital is managed in a haphazard manner, without fixed principle or continuity of purpose. No attempt will be made to educate the public up to a recognition of the necessity for systematic isolation, and the hospital will frequently become simply an asylum for odd cases of any infectious disease which cannot be properly nursed at home. I do not, of course, wish to suggest that the hospital is not performing a very useful and necessary function in accommodating such cases, and indeed common sense and the Public Health Acts alike agree in assigning it such an office in the first instance, but the managers should have a higher ultimate aim, and should endeavour to recognise at the outset as far as possible its direction and its scope.

Large hospitals, designed to meet the requirements of very wide surrounding areas are now springing up on all sides, and the question at once arises, How far is it possible or desirable to use these, in the same way as such hospitals are used in the large towns, for outlying places? One permanent hospital of thirty beds is now in course of erection in my own neighbourhood, which is intended to serve for a district having an area of some 75,000 acres, containing more than 50,000 inhabitants and many colliery villages, and measuring some 24 miles across at its widest part. I have had a little experience of the difficulty and inconvenience attending the removal of patients long distances by road, but have never yet carried them, in any numbers, so far as they will have to travel in order to reach this hospital, if they are to be brought in from the ultimate limits of the district to which it belongs. One large village is about 12 miles distant by road from the hospital, and not only would the patients have to be carried by ambulance all the way, but the friends would have to travel this distance to make inquiry about them. This undoubtedly constitutes a serious drawback. I have repeatedly found the arduous work of securing prompt removal much facilitated by the existence of a ready means of communication between the patients' friends and the hospital, and I cannot but feel that the distance and lack of means of communication will be a serious difficulty in the way of obtaining systematic removal in such cases. I know it is possible, as Mr. Fosbroke and others have shown, to remove a few patients even a longer distance than this, but when it comes to the transportation of a large number at once the distance difficulty is almost insuperable. In dealing with an acute epidemic in a fairly populous district a distance of five or six miles on all sides is usually quite as great as can be conveniently covered. The medical officers of the Local Government Board have, I know, given this matter their very serious attention, and I well remember Dr. Thorne Thorne's remarks upon the subject at the seventh International Congress of Hygiene in 1891. Still, I cannot but feel that the desire to secure the provision of permanent, well planned, and well equipped hospitals has in some cases been allowed to override other not less weighty considerations.

There is, I think, still much to be said in favour of the erection of small but well-equipped and permanent local hospitals for isolated townships, which can be closed when not required, and opened often at a few hours' notice with the nucleus of a staff and equipment drafted from elsewhere. It may be that some of the large central hospitals are intended to serve as a species of hospital headquarters for their district in the future; but, if this be so, an outlay of between £10,000 and £15,000 is a somewhat large expenditure for a beginning. A dray for the removal of furniture and a movable steam disinfecting apparatus would be useful accessories to a system of local hospitals. The objection to steam disinfection on the score of cost seems likely to disappear in the near future with the introduction of such apparatus as those of Reck and Thresh.

I wish it to be understood that I do not advocate the erection of separate hospitals for every village or group of villages in a sparsely-inhabited district. I only wish to insist that wherever the necessary funds are available and the number of people within a short distance is large enough to justify the erection of a local hospital, it is far better to provide such an institution than one many miles away, however superior the plan and complete the equipment of the latter may be. We must, however, bear in mind that small-pox has to be separately dealt with; but, as it would probably be found practicable to remove small pox patients a greater distance than scarlet fever, diphtheria, or typhoid fever, a central hospital might be provided for small pox.

I have already alluded to the lack of uniformity of practice among neighbouring authorities. It will be seen at once that this must necessarily be encouraged and increased by want of uniformity in some of the essential conditions of management. Of course, if it is recognised at once that only odd cases here and there which cannot be looked after at home are to be admitted to these rural or semi-rural hospitals, there will be less difficulty and embarrassment entailed; but, if they are intended to perform the same functions as have been recently assigned to those in the large towns, I am satisfied that extreme centralisation will in many cases prove a mistaken policy. I am not saying—I am very far from either thinking or saying—that we have hitherto done entirely right in the towns; but what I do say is that these distant hospitals cannot reasonably be expected to do the work that ours have hitherto done; they cannot be expected to get nine-tenths of the patients eligible for admission.

I must say I cannot help feeling that we have not sufficiently defined our policy with respect to the whole question of hospital isolation, but it is clearly not for me to

attempt to discuss in detail what that policy should be. I shall close this paragraph with the remark that we have hitherto enjoyed a considerable measure of public confidence and credit, and that it behoves us to be very careful how we act in this matter lest we should run the risk of losing it.

I have spoken of differences in practice in different hospitals. I shall now very briefly discuss some pathological premisses affecting the practice of isolation and disinfection in the case of a few of the commoner infectious diseases coming under our observation in this country.

To commence with scarlet fever. I am of opinion that too much importance has hitherto been attached to the desquamation as such and too little to secondary inflammatory conditions, especially those of the naso-pharynx. I have often known single cases of scarlet fever occur in households containing several apparently susceptible persons, and here, whenever I have had opportunity of examining the cases, I have been struck by the general absence of those lesions of the throat, ears, nose, skin, and other parts which so commonly complicate the later stages of scarlet fever, although desquamation might be well marked. Again, when considering secondary and return cases, I have frequently observed the existence of these secondary lesions in the cases through which they were supposed to have arisen, though their skins might be perfectly clear. The rapid spread of naso-pharyngeal catarrh and albuminuria in overcrowded wards, referred to by Thorne Thorne, Gresswell, Sweeting, Ashby, and others, is continually observed in hospitals where overcrowding is practised, and can, I think, only be accounted for on the theory of a superimposed acuter infection. Second attacks following the first within a few weeks, also not infrequently observed in overcrowded wards, probably belong to the same category.

My assistant, Dr. Griffith, has prepared for me a table of the apparently infective cases sent out from our hospital during 1894. An analysis of these may be instructive. The average age of all was 7·6 years; the eldest was aged 39, the youngest 3; but, as the eldest was certainly doubtful as an infective case, I shall also give the average age of the others (the eldest of which was 12): this average was 6·5 years. Twelve of the cases were male and 17 female. The average residence in hospital of all was 8.1 weeks. The longest period of residence was 12 weeks, the shortest 6 weeks. The shortest interval between the return of the primary hospital case to the home and the development of symptoms in the secondary case was about 24 hours, the longest 29 days. The interval, however, in the majority of cases ranged from 3 to 7 days. None of these infective cases were peeling at the time of their discharge, but 5 had inflamed throats, 7 discharging noses, 3 discharging ears, and 3 nephritis; 11 were apparently quite recovered from the disease.

Putting all my facts together—fragmentary and incomplete though they often are—I have come at length to the conclusion that too much importance has hitherto been attached to the dry cuticle as an infecting agent, and too little to inflammatory products from the naso-pharynx and elsewhere. I do not mean to imply that the infective quality of the latter has not hitherto been recognised, but that sufficient importance has not been attached to it. My assistant, Dr. Griffith, is now treating all throats with eucalyptus spray, and I am disposed to think that the line of treatment to which this belongs is likely to prove efficacious in a very high degree. I will only add, in order to emphasise my meaning, that, if my conclusions are correct, we should treat the later stages of scarlet fever more as we do those of diphtheria than we have hitherto been accustomed to do.

One gentleman who will follow me to-day will speak upon this subject after an experience much more extensive than mine, and I shall await his remarks with much interest. I have said so much about scarlet fever that I must condense what I have to say about other diseases into a few words.

Diphtheria has been so exhaustively discussed of late that I shall here only insist upon the necessity for systematic bacteriological investigation of all suspected cases and for public hospital accommodation for this disease.

With respect to small-pox, it has long been known, and frequently pointed out by Mr. Power and others, that the amount of infection emanating from small-pox hospitals depends upon the degree of aggregation of acute cases, but I do not think we sufficiently realise the rapidity with which the infective virus loses its specific power after the acute stage is over. This must of course vary with the acuteness of the attack, but I have known several cases of undoubted eruptive small-pox discharged fourteen days after eruption without giving rise to secondary cases. One man in Nottingham last year, who manipulated some cotton goods while suffering from acute unmodified small-pox, infected a large number (19 out of 27) of other persons through a consignment of these goods which he sent into the warehouse where the other persons were working when his eruption was in the pustular stage, but failed to communicate infection through a similar channel a short time afterwards when his pustules were scabbing. It has been our custom to house our convalescent small-pox cases in a large wooden block only 80 feet distant from a scarlet fever ward, and we have never known the small-pox infection to spread across this interval. Infection undoubtedly exists in the scabbing stage, and we all know that in the last century the scabs were actually used for inoculation, but I am confident that the active force of the virus is rapidly dissipated in this stage. Frequent bathing is, I think, the best preventive treatment for convalescent small-pox cases.

I shall close my illustrations with a few words about typhoid fever. I am convinced that too little importance is usually attached to the liability of this disease to spread among persons living in contiguity with those suffering from it. In my annual reports I have often pointed to the occurrence of multiple cases in hospitals and other places where the infection was almost certainly derived from imported cases. In my last annual report I gave an account of an outbreak of 16 cases in a small row of cottages where the infection was brought from outside the borough, and subsequently spread in ways clinically indistinguishable from those by which the ordinary infectious fevers are propagated. Several outbreaks have occurred in recent years among members of the nursing staff and others in our own general hospital, to which the same remark regarding causation equally applies. I have known four nurses down with typhoid at the same time. In my opinion enteric fever should be treated as an infectious disease in the ordinary sense of the term, and in towns like my own, where it is unduly prevalent, hospital isolation should be provided by the sanitary authority in the same way and to the same proportional extent as it is for scarlet fever and small-pox. Enteric fever is not, of course, nearly so liable to spread by simple contiguity as either of these diseases, but the very appreciable amount of this liability, together with the necessity for careful nursing for the sake of the patients themselves, are sufficient, in my opinion, to justify such a provision.

In conclusion, I venture to suggest that a monograph up to date, issued under authority, and containing information in brief upon salient matters connected with isolation and disinfection, would be at the present juncture of very great service to isolation hospital boards and committees and local authorities. Plenty of excellent data exist, but they require to be collected and codified in order to render them accessible to those who have little opportunity of finding them in their present scattered and fragmentary condition.

The time has probably come when public authorities might with advantage be advised upon higher official authority than that of their own medical officers respecting the nature and degree of benefit to be looked for as a result of isolation and disinfection and other kindred precautions, carried out in various degrees of completeness in the case of particular diseases.

II.—J. Spottiswoode Cameron, M.D., B.Sc., M.O.H. Leeds,
Consulting Physician Huddersfield Infirmary.

Dr. Spottiswoode Cameron desired to lay stress on the necessity of making the isolation of the patient complete by removing all infected articles. Quite recently a repeat scarlatina case occurred in Leeds. After the return of the isolated patient, it was found that a doll which the first patient had played with at the commencement of her illness had been carefully put away till her return. It was given her when she came back, and her little brother, who helped her

to play with it, developed scarlet fever himself. The completion of desquamation before the patient returned was pretty generally insisted upon, but catarrhal conditions of the pharynx, nose, etc., were occasionally overlooked, and mischief resulted. The necessity of isolating enteric fever in hospital was not very generally received by the profession. Even professional nurses had been known to treat discharges from such patients very inadequately. A little strong carbolic acid poured over a motion and washed away from it by the flush of the watercloset, had been regarded as disinfection. The drains of a town ought never to become infected by typhoid. This could only be prevented by keeping such imperfectly sterilised motions out of them. Dr. Cameron for many years back had used a tub for the motions of such patients in the better class houses. He regarded the comparative immunity of Rutland from typhoid fever as largely due to this practice, and the free use of the infectious diseases hospital. Few towns had adequate provision for the isolation of diphtheria; some general hospitals admitted such cases. If the stir which was being made as to the infectiousness of this disease was at all justifiable, surely authorities ought to provide for the isolation and treatment of this terrible disease. It should be remembered that cases were taken into hospital first to treat them, and secondly to protect the public. It was not right to remove patients from their homes under a magistrate's order unless they could be provided with ample air space and other comforts. A 12 feet cube should be allowed for each infectious case. There was the rash tendency even amongst medical men to crowd children together. The foul throats seen in some hospitals were due no doubt partly to the previously unhealthy surroundings of the little patients, but too often to their overcrowding in imperfectly ventilated wards.

III.—Sidney Barwise, M.B.Lond., D.P.H.Camb.,
County Medical Officer Derbyshire.

Dr. Barwise did not agree that the 1893 Act was insufficient. The Derbyshire County Council had inserted in the Orders they had made a clause stating that unless a proper and sufficient hospital was erected in five years a new Hospital Committee should be constituted on which the County Council should have a majority of the members. He differed from Dr. Boobbyer as to the distance that patients could be removed, and was quite satisfied that eight or ten miles was not too far in a non-mountainous country. Another point that he thought they ought to bear in mind was the desirability from an economical point of view of adopting mechanical ventilation on the plenum system. This had been done at Blackburn with the result that they were able to double the number of their beds, at a cost of about £5 a bed. He was emphatically on the side of one large central hospital, which would be cheaper to administer and to build than a number of smaller ones.

IV.—Brigade-Surgeon Lieutenant-Colonel Pringle, M.D.,
Blackheath.

Brigade-Surgeon-Lieutenant-Colonel Pringle stated that the Metropolitan Asylums Board, of which he had the honour to be a member, were using their utmost endeavour to increase the accommodation in their fever hospitals, not so much by the erection of other fever hospitals, but by the construction of a large convalescent hospital on a suitable site, capable of enlargement to an extent which would meet all possible requirements for very many years to come. Into this convalescent hospital all cases would be removed as soon as they were capable of undergoing the fatigues of the journey. This would leave many vacancies for new cases. As regards the infection from cases of small-pox being wanting in the period of scabbing, as pointedly laid down by Dr. Boobbyer, when judged by the case of the lacemaker at Nottingham, Dr. Pringle stated that his practice of vaccination in India in the Himalayas thirty years ago, was entirely opposed to this view of infection, for, before he had taught his vaccinators to fill tubes with vaccine lymph, he was obliged to carry on vaccination by means of vaccine crusts carefully prepared and powdered, and then moistened with water and applied to the abraded surface, exactly as carried on at the time by the inoculators' operation for small-pox in the villages around. Powdered crusts used by the inoculators were blown into the nostrils as a means of small-pox inoculation in the East. As regards enteric fever being infectious, it would be a grave matter to say it was as infectious as similar diseases. The real danger was that pointed out by the Chairman, namely, the carelessness of the attendants with the excreta, etc. As regards segregation, when this was compulsory by law, in the case of men, women, or children, the authorities were bound to see that every possible comfort was secured to these cases.

V.—Meredith Richards, M.D., B.S.Lond.,
City Hospital, Birmingham.

Dr. Richards confined his remarks to the four diseases which were commonly received into municipal hospitals—scarlet fever, small-pox, diphtheria, and enteric fever. Regarding the criteria of personal infectivity in the first he was decidedly of opinion that the desquamation period was not the most important factor in determining infectivity. Infection might persist long after that period had passed. Desquamation was simply a concomitant and not the essential cause of infection. Regarding small-pox he said there appeared no reason to believe that the desquamatory fringe round the rest of pocks were capable of conveying infection. He referred to the Clinical Society's report on the Cause of Diphtheria, and said it would be interesting to hear from bacteriologists whether the presence of the diphtheria bacillus in the throat constituted a danger of infection, and for how long their potency was supposed to remain.

VI.—F. Fraser, M.D.,
M.O.H. Stevenage Union.

Dr. Fraser said that during the past few months he had had the opportunity of conducting a number of experiments with a new disinfector, devised by a well known medical officer of health. Disinfection is accomplished by means of "current" steam at a temperature slightly above 212° F.; perfect drying being then effected by hot air, steam is shut off and hot air introduced by slight movement of a lever. This constitutes all the manipulation of the machine; there being nothing to get out of order and no complicated mechanism, any ordinary labourer is quite able to manage it. The whole disinfecting and drying process for the bulkiest articles takes one hour. The points principally investigated were: (1) The time taken for steam to penetrate to the centre of the articles as recorded by an electric thermometer. (2) The maximum temperature obtained in the centre of the articles. (3) The sterilising effect on micro-organisms, those used being spore-bearing anthrax. (4) The efficacy of the drying process. He used two blankets, weighing together about 7½ lbs.; these were folded in sixteen layers, and placed compactly upon each other; between the two were placed a maximum electric thermometer and anthrax threads, which were also placed on the surface. The mean time taken for the temperature in the centre to reach 212° F. was 12 minutes, the extremes being 7½ recorded once and 14 minutes twice. The average maximum temperature was 216°; the steam in the centre of the blanket was maintained at 212° or above for 25 minutes. As regards dryness the blankets almost invariably came out of the machine drier than when they were put in, the average loss in weight being 1.4 per cent. The anthrax in every case was sterilised. Similar experiments were also made with clothes, sheeting, eider down quilts, carpets, etc., with equally satisfactory results; the only reason for quoting those done with blankets was that they are the most difficult to thoroughly disinfect and dry.

VII.—The Rev. E. L. Benthon.

The Rev. E. L. Benthon made some remarks regarding his portable isolation hospital, which he alleged was useful in times of stress for increasing hospital accommodation, and could be erected in a few minutes. In cases of outbreaks of infectious disease in distant ports of a sanitary district it would be better to send the hospital to the patient and localise the infection there than to bring the patient to a central hospital.

VIII.—T. F. Caverhill, M.B., C.M.Edin.

Dr. Caverhill was of opinion that a hospital for infectious

diseases should be as comfortable as a general hospital, and should be as attractive as possible. The Belvidere Hospital at Glasgow was the model which should be followed in this respect. For country districts a combination of fixed and portable hospitals, as in Haddingtonshire, was necessary, as many cases could not be moved more than a few yards. The fixed hospital was iron and weatherboard, and the temperature never fell below 55° during the past severe winter with hot water alone. The portable hospitals were iron sectional hospitals, tortoise tents, and caravans, and were only to be used in cases that could not be transported at all. With pneumatic tyres on ambulance waggons their ideas of distances that cases of infectious diseases other than those of diphtheria or enteric fever could be carried must undergo some change. Temporary or portable hospitals should never be the sole means of isolation. To get people to submit readily to isolation the hospital and staff of a fixed hospital must win the confidence of the community. Local authorities should organise a system of home nursing when hospitals were full or removal impossible, and the results of the Marylebone Nursing Institution in preventing the spread of disease in cases nursed at home were most instructive. Simple measures adopted during the illness tended to make success more certain than the most complete subsequent disinfection. Domiciliary and public disinfection required more attention, and some universal system should be adopted. Both fixed and portable steam disinfectors with accommodation for the inmates of a house were specially necessary in rural districts, as many poor people could not do without their clothes and bedding. These were being supplied in Haddingtonshire. The tortoise hospital tent with cooking apparatus was admirably adapted for the purpose. It had a partition, on one side of which baths and sterilised clothing were placed. Disinfection of houses ought to be carried out by spray, as bacteriological experiments had proved sulphur fumigation to be inefficacious.

IX.—E. W. Goodall, M.D.Lond.,

Medical Superintendent, Eastern Fever Hospital, Homerton, N.E.

Dr. Goodall said that "return" cases of scarlet fever were by no means all due to the returned patients. The non-disinfection of clothing accounted for a good many instances of second cases. For now such cases were often found occurring in houses before the return home of the first case. Typhoid fever was only slightly infectious, from one to another person; with proper care and attention to cleanliness members of the staff should not contract the disease. It was very important to allow a proper amount of air and floor space to acute cases of scarlet fever and other infectious diseases. This observation applied to children more, perhaps, than to adults.

X.—J. Groves, B.A., M.B.Lond.,

M.O.H. Isle of Wight Rural District.

Dr. Groves said there was one serious defect in the Isolation Hospital Act which rendered the Act useless in county council districts in which there were towns of over 10,000 inhabitants, namely, the consent of each of those towns must be obtained. The question of the isolation hospital was a practical one. In the rural sanitary districts the rural councilor too often ignored his duty under the Public Health Acts, and was influenced largely by financial considerations. And if there was no other reason, the cost of separated hospitals advocated by Dr. Boobbyer would bar them. But the proposition was wrong in principle. In a rural district a central hospital always under administration was necessary, and every medical officer of health in a rural district would be only too glad to have the smallest possible central hospital rather than none at all. The difficulty supposed to exist in the removal of patients long distances was not experienced in practical work. If proper care were taken there was no more difficulty in practice in removing a patient in bed in an ambulance eight or ten miles than in moving him one mile.

XI.—T. F. Heath Smith, F.R.C.S.Eng.,

M.O.H. Third District, Portland Union.

Mr. Smith asked what advice the reader of the paper would give to the medical officer of health whose authority had refused to provide either a stationary or portable disinfection apparatus in regard to the disinfection of clothing. He pointed out that however carefully the treatment of enteric fever was conducted with the view of preventing spread of infection, in first cases the faecal matter had been disposed of in the ordinary way up to the time when the true nature of the disease was revealed.

XII.—G. H. Fosbroke, M.R.C.S., D.P.H.Camb.,

County M.O.H. for Worcestershire.

Mr. Fosbroke regretted that he had not heard Dr. Boobbyer's remarks, but understood that he was of opinion that infectious patients could only with safety be removed from five to six miles. With this he joined issue in most emphatic fashion on practical grounds, as it had fallen to his lot to supervise isolation hospitals for twenty years, and 4,400 patients had been removed under his supervision. Of this number 241 were transported distances of from seven to eleven miles without detriment to themselves or to the districts through which they passed. In Worcestershire two isolation hospitals had been passed after inquiry by that most eminent sanitarian, Sir Douglas Galton, and in one of them patients would have to be removed eleven miles. In rural districts it was only practicable to provide hospitals for large areas. As to temporary hospitals, he hoped the Section would not encourage lax authorities to rest on such a broken reed. Such buildings should only be utilised to meet emergencies, and not relied upon for ordinary requirements. Permanent hospitals should be generally provided, and if grouping of sanitary areas was facilitated by county councils and local authorities, there was no reason why they should not become general.

XIII.—Ogilvie Grant, M.D.Edin.,

M.O.H. Inverness.

Dr. Ogilvie Grant supported the last speaker in what he said about the great advantage of large fully-equipped hospitals over small temporary ones. One difficulty experienced was the opposition made to local authorities in their endeavours to get suitable sites for hospitals, and until compulsory powers were given to local authorities this difficulty would continue to be felt. Another difficulty was to get patients and the friends of patients to consent to the removal of fever cases to a hospital. A new Public Health Act was urgently required for Scotland.

XIV.—F. T. Bond, M.D.Lond.,

M.O.H. Gloucester Combined Districts.

Dr. Bond strongly endorsed the opinion expressed by Mr. Fosbroke as to the inexpediency of leading the weight of the Section to any action in the direction of encouraging sanitary authorities, especially in rural districts, to provide for the wants of their districts in regard to the arrest of infectious disease by the construction of small hospitals scattered over different parts of their districts. He also said that the difficulty which those who, like himself, were mainly interested in rural districts chiefly felt, was the want of the initial impulse which was required to start the whole machinery of the business. That action could only be supplied by county councils, and until these bodies could be got to view their responsibilities in this matter more seriously than most of them at present appeared inclined to do, he feared they would not be likely to make much progress.

Dr. Boobbyer's Reply.

Dr. Boobbyer, in reply, said he feared he had been misunderstood upon several points. He did not approve of local hospitals in rural districts where removal to the central hospitals could be secured; but he felt that if it was intended that the county hospitals should do the same sort of work in the same way as the large town hospitals, the distance difficulty would often be found well nigh insuperable. How could fifteen or twenty patients be moved a distance of, say, from twelve to twenty miles in one day? Again, he did not say that small-pox crusts were not infective, but that the infection rapidly declined during the scabbing stage. He would not advocate the regulation of isolation hospitals by the central authority, but the issue of an instructive monograph for the information of hospital managers and their

officers. Lack of uniformity in practice with respect to matters of fundamental importance was liable to affect the credit of the Public Health Service with the public. He was sorry to say that he had been able almost certainly to verify the "return" nature of the so-called return cases at Nottingham. When houses had been free from infection since the removal of a case, and a case or cases developed within a week of the return home of a hospital patient, there was strong presumptive evidence in favour of a return infection. With respect to the isolation of typhoid cases in hospital, while he was strongly in favour of hospital isolation for this disease, he considered it highly dangerous to remove the majority of cases after the end of their second week. It had been his rule to refuse to remove cases after the second week unless they were very mild, or the circumstances calling for their removal were very special.

A DISCUSSION ON THE DIAGNOSIS OF DOUBTFUL CASES OF DIPHTHERIA

AND THE USE OF BACTERIOLOGY FOR THAT PURPOSE.

I.—E. Klein, M.D., F.R.S.,

Lecturer on Physiology, St. Bartholomew's Hospital Medical School.

The occasions are not by any means rare when, either from a clinical or a pathological point of view, a case of acute inflammation of the fauces, larynx, or nasal membrane cannot be trustworthily diagnosed as diphtheria; likewise it is not a rare occurrence that in such doubtful cases the means of isolation and prevention of further spread, owing to that uncertainty of diagnosis, are imperfectly carried out. It is sometimes assumed that where there is no false membrane there is no diphtheria, and where there is false membrane there is diphtheria. Experience proves, however, that cases of so-called simple sore throat or simple rhinitis have been followed by, or have directly given rise to, true membranous diphtheria. As medical officers of health you have been occasionally placed in a position of doubt whether cases of sore throats in children associating with other children in or out of school are or are not cases of diphtheria, not of course classical membranous diphtheria; and you must have experienced no less doubt about the period at which a case convalescent from diphtheria can again be freed from isolation. In saying this I am only giving expression to truisms with which you are well familiar. I am saying it, however, with the object of laying emphasis on the proposition which I am about to make—namely, that in the majority of doubtful cases it is possible to decide whether the case is one of diphtheria if in the secretion or membranous exudation of the affected mucous membrane the bacillus diphtheriæ or the Klebs-Loeffler bacillus is demonstrable, and that this bacteriological diagnosis is in most instances verified by subsequent events.

Those who have had experience in examining the false membrane of true diphtheria cases, that is, of cases which from a clinical and epidemiological point are at once recognised as such, agree that in some of these cases the superficial layers of the necrosed mucous membrane, that is of the false membrane, contain large numbers, occasionally in almost pure culture, of one and the same species of bacilli, aggregated in larger and smaller masses, separate, but more often grouped together. These are the Klebs-Loeffler bacilli. From the superficial parts of the membrane the groups extend, as vertical sections show, also into the deeper parts of the membrane and even as small groups into the inflamed but as yet not necrosed part of the mucous membrane. Cultivations made from such false membrane, particularly from washings of it, yield an almost pure crop of the characteristic colonies of the diphtheria bacilli. For the morphological and cultural character of the diphtheria bacilli I must refer to the slides exhibited in the museum of the Association meeting. A film or a cover-glass specimen made from a piece of the membrane shows a large majority of cylindrical or rod-shaped non-motile bacilli of about the size of 1.5 to 3.5 micro-millimetres, many distinctly conical and pointed at one end; they occur as single rods or in pairs, attached end to end—in this latter case often touching with the thicker parts; occasionally a bacillus is seen which at one end is enlarged and club-shaped; sometimes a longer rod is met with which is composed (linearly) of unequal joints, some short, like granules, others longer and rod-shaped. Besides isolated bacilli there are often found irregularly grouped masses. As mentioned above, cultivations made by rubbing a trace of such a membrane, or by spreading a drop of sterile salt solution or bouillon in which a piece of the membrane has been shaken up, over the surface of solidified agar or solidified blood serum or nutrient gelatine, yield colonies of one and the same kind of bacilli, namely, the Klebs-Loeffler bacillus.

On solidified blood serum (pure, or better Loeffler's serum), on solidified beef bouillon agar, on glycerine agar incubated at 37° C., there are seen already after twenty-four hours whitish-grey dots, which under a lens appear finely granular, and in transmitted light thicker and brownish at one point (generally in or near the centre), more transparent around this point; after forty-eight hours the colonies have increased in size, and the difference between a central thicker, less transparent, and peripheral, more transparent part is more pronounced; after three or four days, the colony being much larger shows in reflected light the central part prominent and yellowish, the peripheral part thin and comparatively film-like. Microscopic specimens made of young colonies show that they are composed of the same cylindrical bacilli described above, many pointed at one end, some distinctly swollen and clubbed at the other; after forty-eight hours' growth there will be recognised longer forms with segregated protoplasm, being seemingly composed of a chain of rod-shaped bacilli, with here and there a granule between them; these longer forms possess an enlargement at one or both ends. Cultivations on gelatine incubated at 20.5° to 21.5° or 22° C., show the same characteristic colonies, only the growth is much slower, but becomes less slow in further subcultures.

Such are the bacilli found in the false membrane of typical cases of diphtheria; as a rule, these bacilli occur abundantly in the membrane, in some cases in almost pure culture. As regards the size (or length) of the bacilli, both in preparations of the membrane as in those of the resulting colonies in culture, there appear certain differences; for in some cases the bacilli are very short, while in others there are a good many long forms isolated or arranged more particularly in chains, with segregated protoplasm, and with larger or smaller club-like enlargements. From my experience I am not able to confirm the observations of those who recognise a definite relation existing between the size (length) of the bacilli and the severity of the case from which they are derived. I have seen cases which ran a rapidly fatal course, and on examination of the membrane taken from the fauces in faucial diphtheria, or from the larynx in diphtheritic croup, it (the membrane) contained in almost pure culture sometimes very short, sometimes long forms of the bacilli, and the same applies to the cultures made from the membrane; on the other hand, I have examined membranes removed from the fauces of cases of diphtheria which were mild and rapidly recovered, and which yielded abundance of diphtheria bacilli of the short variety, while others yielded those of the long variety.

A second group comprises cases, which in clinical and epidemiological respects are undoubted diphtheria, which can be traced to an antecedent case of diphtheria, and in which the membrane or muco-purulent secretions contain a very variable number of the diphtheria bacilli; but they contain at the same time a very large number of other microbes, which on cultivation prove to be chiefly cocci, staphylococcus aureus and albus, small streptococci and chains of larger cocci.

In these cases the number of diphtheria bacilli may be sufficiently large to be identified by their shape and grouping and to be easily recovered by culture, or they may be so limited as to be only identified by culture; but even then the chances of identification are not great, if the bacilli are practically swamped by cocci, notably streptococci; in these cases only after careful and extensive searching can the colonies of diphtheria bacilli be discovered, and I am under the impression that it is such cases which have given rise to the opinion occasionally expressed that in some diphtheria cases no diphtheria bacilli have been found.

The third group of cases are those in which no obvious antecedent connection can be established, and in which the clinical history does not enable one to make a diagnosis. It is obvious that it is precisely in these cases that correct

diagnosis is of the utmost importance. Now, if from the secretion of the fauces (in cases of faucial inflammation, follicular tonsillitis) or from the nose (in cases of rhinitis) diphtheria bacilli can be isolated, then the case must be pronounced to be one of diphtheria. In some such instances, and in conformity with other observers, I have found the diphtheria bacilli at an early stage, and the diagnosis was confirmed by subsequent events, namely, other cases of true membranous diphtheria followed in the same household, and the first individual developed afterwards symptoms of paralysis.

I may mention here the case of a child which sickened with "feverish sore throat." The child had been at a school where diphtheria had been prevalent, but it had been removed and kept at home for at least three weeks previous to the onset of the attack of sore throat. There was a little purulent discharge from the right tonsil but no membrane. The child was seemingly again convalescent after three or four days. The examination of the discharge from the tonsils during the acute stage yielded under microscopic examination, as well as on cultivation, diphtheria bacilli amongst a large number of staphylococcus aureus. The diagnosis was pronounced as diphtheria; the attending medical man had at first some doubts about the correctness of the diagnosis. Some weeks later the child complained of difficulty in swallowing, and on examination paralysis of the fauces was established.

In another instance, from a case of sore throat with no previous history, a particle of membranous exudation was submitted for examination, and also here diphtheria bacilli were found. The case was mild, but was the starting point for two subsequent cases of typical membranous diphtheria. Owing to the scarcity of bacilli in some such cases the diagnosis becomes sometimes extremely difficult. These cases are obviously of importance both to medical officers of health, as also to those who ask help from the bacteriologist. In such cases occasionally, only by cultivation, and then only by very extensive searching, can colonies of diphtheria bacilli be discovered. In those cases in which, owing to the presence of a great number of other bacteria, chiefly cocci, the ordinary methods of tube cultivation are likely to fail in yielding evidence of the presence of the diphtheria bacilli, the following method of culture seems better adapted for demonstrating the diphtheria bacilli. If on the examination of stained cover glass specimens of the membrane or other secretion no definite evidence can be obtained of bacilli morphologically resembling the diphtheria bacilli, and if there are present large numbers of cocci and other microbes, agar plates are made in this manner: Sterile bouillon agar in a tube is melted over the flame, and then poured out into an ordinary sterile plate dish; after the agar has set, a piece of the membrane or secretion is rubbed, by aid of a platinum loop, gently over the solidified agar surface in the whole extent of the plate dish, and the plate is incubated at 37° C., lid downwards. Next day the surface is found covered and bestrewn, as it were, with minute colonies: in many parts they are so numerous as to lie very close together; now all these colonies are on the surface, none in the depth, because the sowing has been performed on the surface of the agar already set. In an ordinary agar plate, that is, when the melted agar is inoculated, shaken, and poured out into a plate and allowed to set, a good many colonies, of course, come up in the depth and only a fraction on the surface, and it is these latter only which can be subjected to further microscopic and cultural examination: those in the depth are practically lost for such examination. Cultivations on the surface of agar or serum contained in tubes offer likewise great difficulties if very numerous colonies are present, because if amongst a crowd of colonies only a limited number of diphtheria colonies are present, these obviously are easily overlooked.

Now these difficulties are overcome by the above surface agar plates, for in these almost every colony can be subjected to microscopic examination. Provided the sowing has been done by lightly rubbing the material over the surface of the agar in the plate all colonies are easily taken off by pressing against the surface of the agar a cover glass, that is, making impression preparations on a series of cover glasses from the agar surface, if necessary from the whole surface; the cover glass impressions are dried and stained; each is found covered with great numbers of dots, each dot being a colony. Subjecting the dots on the cover glasses to an examination with a power of 150 to 300, those that are made up of cocci can be easily distinguished from those made up of bacilli, and each one made up of bacilli can with high powers be readily identified as a colony of diphtheria bacilli by the shape and arrangement. Such plates after having been used for impression specimens as above are of no further use; but I think anyone with a little experience could recognise, when examining the agar surface with a magnifying power of 100 to 150, whether a colony is composed of diphtheria bacilli, and if so could under a simple microscope make subcultures from such a colony. The cases in which this method is necessary are not common; in most instances, though cocci are numerous, there are generally a sufficient number of diphtheria bacilli present to yield fairly easily recognisable colonies on the surface of agar or serum in tube cultivations. I have had, however, recently two cases of what clinically and epidemiologically were clearly cases of diphtheria, but in which the tube cultivations failed; the above surface agar plates yielded positive results; in the cover glass impressions amongst about each sixty colonies of cocci one distinct diphtheria colony was identified.

Lastly, there are cases of sore throat and membranous exudations, in which even on most careful search no diphtheria bacilli can be recognised by culture. The purulent and membranous exudation in these cases is in morphological respects somewhat different from the true diphtheritic false membrane, inasmuch as it is composed of leucocytes only; it does not contain the reticulated fibrinous matrix constituting the true diphtheritic false membrane; besides in the former when examined in the fresh state by means of films, the microbes, though sometimes comparatively limited in number, consist chiefly of cocci and cultivations do not yield diphtheria bacilli. The cocci chiefly present in these cases are staphylococcus aureus and albus, and particularly streptococci. Such cases are recognised now as cases of pseudo-diphtheria or cocco-diphtheria; though in clinical respects they are not distinguishable from mild cases of diphtheria, as regards their sequelæ they are not difficult to distinguish from true membranous diphtheria, and, as stated before, they do not contain the true diphtheria bacilli.

The culture test is also of importance in respect of the disappearance of the diphtheria bacilli from the previously diphtheritically-affected mucous membrane or with regard to the presence or absence of these bacilli in the throats of persons that have been attending on, or have come in contact with, diphtheria cases; for if on diligent search by cultivation the bacilli cannot be demonstrated, it may be assumed that they are not present, though one should not be satisfied with a single examination.

On the whole, then, the microscopic examination and culture test alone will be found to supply a valuable help in diagnosis, and where necessary it may be effectually controlled by animal experiment.

If a guinea-pig be inoculated subcutaneously in the groin with a broth culture, incubated 48 hours at 37° C., derived directly from a first subculture of a typical diphtheritic membrane, it will be found that as a rule 0.25 to 0.5 c.cm. is sufficient to kill a guinea-pig of 400 to 500 g. weight in 30 to 36 hours. Already the morning after inoculation there is a distinct, soft, œdematous swelling about the seat of inoculation, in some cases extending over large areas—the whole abdomen and chest: the animal is quiet and does not feed; it becomes gradually weaker in its movements, the temperature falls below normal, and the animal is found dead in 30 or 36, or at the latest in 48 hours. On post-mortem examination there is a hæmorrhagic, œdematous infiltration of the subcutaneous and muscular tissues in the region of the tumour, the nearest lymph glands are swollen and congested, the viscera, particularly the suprarenals and also the kidney are congested. Cultivations from the tumour and nearest lymph glands yield a copious growth of the diphtheria bacilli; the blood and viscera as a rule yield no growth. If the animal survives two or three days it will be found that the tumour becomes more circumscribed and firm, and in a few days, or it may be in a few weeks, it may begin to slough. The tumour of the later stages shows the same kind of necrosis as the diphtheritically-affected mucous membrane in man.

According to the age and origin of the culture the result is found different as regards the severity and duration of the disease in the guinea-pig.

According to my experience, which is in harmony with that of other observers, there is no definite relation between the virulence of the culture, judging by the quantity required for producing a result in the guinea-pig, and the severity of the case from which the culture is derived.

Abbot states that he has found all transitional states between non-pathogenic diphtheria bacilli and those that had great virulence on the guinea-pig. I have not met with diphtheria bacilli, that is bacilli which were derived from a presumable or a definite case of diphtheria, and which morphologically and in culture (serum, agar, gelatine, and broth) had all the characters of true diphtheria bacilli, which in early and recent subcultures did not possess virulence on guinea pigs, though I have met with bacilli which morphologically resembled the diphtheria bacilli, but in culture differed from them in some, it may be but slight, respects, and which did not act harmfully on the guinea-pig. I must therefore for the present withhold my judgment as to whether these are transitional forms or varieties of the true diphtheria bacilli.

Whether the absence of pathogenic action from some bacilli which are in morphological and cultural respects similar to the diphtheria bacilli is sufficient to consider these bacilli as non-diphtheritic, I am unable to say from my own experience. I do not think that the subject is sufficiently exhausted. Those bacilli which I have met with, and which in morphological and cultural respects were typical diphtheria bacilli, had pathogenic action; those non-pathogenic bacilli which I have met with, and which resembled morphologically diphtheria bacilli, showed some differences in cultural respects.

The true diphtheria bacilli are capable of producing in animals necrotic changes and pseudo-membrane, with multiplication of the diphtheria bacilli in them, as for instance, when inoculated on abraded and inflamed mucous surfaces in the guinea-pig—that is, the mouth, trachea, and vagina.

Add to this the important discoveries by Dr. Sidney Martin as to the chemical identity of the toxins of diphtheria, both of culture and of the human body infected with diphtheria, and as to the identity in physiological action of these toxins, that is, their capability of producing paralysis, and I think we are justified in concluding that, morphologically, culturally, experimentally, and, in chemical respects, sufficient data exist, which enable us to say that the Klebs-Loeffler bacillus is the true cause of diphtheria, and to give in most cases a definite, positive, or negative opinion, according to the presence or absence from the exudations of the diphtheria bacilli; and, consequently, if in cases which, in clinical, pathological, and epidemiological respects are of doubtful nature the presence of true diphtheria bacillus is demonstrated, we are justified in declaring that they are cases of true diphtheria.

II.—Hermann M. Biggs,

Pathologist and Director of the Pathological Laboratory, Health Department, New York.

Dr. Hermann Biggs discussed the subject under three heads: (1) He recommended the examination of the throats of healthy persons who had been in contact with diphtheria, or who were inmates of institutions in which diphtheria prevailed, these examinations to be made with relation to prophylaxis, both with a view to the isolation of those in whose throats the diphtheria bacilli were found, and to the immunisation with diphtheria antitoxin. (2) He recommended also examinations in cases of throat inflammations for diagnosis. (3) Examinations should also be made at short intervals during convalescence from diphtheria, to determine the time of disappearance of the diphtheria bacilli from the throat. In connection with this discussion he described briefly the methods employed by the New York City Health Department in making these examinations and the evidence of the laboratory work. The paper was founded on experience gained from the examination of about 25,000 cultures by the New York City Health Department.

III.—E. W. Goodall, M.D.,

Medical Superintendent Eastern Fever Hospital, Homerton.

If only a single bacteriological examination of cases were made, sources of error were apt to occur. It was not uncommon to miss the bacilli. The plate method was better than the swab method of making a culture. Return cases were not by any means so common as in scarlet fever. Therefore, in Dr. Goodall's opinion, it was not necessary to keep diphtheria patients in hospital longer than six weeks if they had perfectly recovered.

IV.—Edgar Underhill, M.D.Edin.,

Dr. Underhill had had some experience in an outbreak of diphtheria in a public school. He wished to know whether cases clinically perfectly healthy, but pronounced by bacteriologists to have the bacillus, should be notified as cases of diphtheria? Whether they should be kept apart until the bacillus could not be discovered? He cited cases which had occurred in February last, which had completely recovered, had lost the bacillus, and yet which had fresh attacks in May and June. One attack did not appear to afford any protection against another. He asked for information as regards disinfection.

Dr. Hermann Biggs's Reply.

In reply to certain queries, Dr. Biggs said that in New York children were kept isolated, and were not allowed to return to school until bacteriological examinations had shown the disappearance of the bacilli from the throat. There was abundant evidence to show that diphtheria might be transmitted to others by convalescent cases, although, because of the smaller number of organisms, there was far less risk. They did not hesitate, just as in small-pox, to keep patients isolated for eight weeks, or longer if necessary.

Dr. Klein's Reply.

Dr. Klein, replying in reference to the questions asked by Dr. Goodall and by Dr. Underhill as to the relation of the short or long variety of the bacillus of diphtheria to the severity of the case, could only repeat what was set forth in his paper that, so far as his experience went, there existed no definite relation. Mild cases or severe cases might yield either variety. Moreover, to him the two varieties did not appear to be sufficiently definitely demarcated the one from the other, either morphologically or culturally. Dr. Goodall had mentioned that there was a difficulty in obtaining positive results by the swab method. Dr. Klein agreed with that, and preferred for his examinations a piece of membrane or a simple scraping from the tonsils sent in a small phial.

THE USE OF DIPHTHERIA ANTITOXIN FOR IMMUNISATION.

By Hermann M. Biggs, M.D.,

Director of the Bacteriological Laboratories of the New York City Health Department.

Remarkable results have attended the use in New York of diphtheria antitoxin for immunising purposes. The conditions under which it has been employed have been peculiarly favourable for demonstrating its exact value. From May, 1892, to February 18th, 1894, no cases of diphtheria occurred in the New York Infant Asylum, which ordinarily has about 400 inmates. From February 18th to September 1st, 1894, there were 22 cases of diphtheria and 15 deaths. In September there were 16 cases, and from this time to February 10th—168 days—107 cases of diphtheria occurred. These were very evenly distributed over this time, about 20 cases developing in each month. In the latter part of October systematic bacteriological examinations of the throats of the healthy children showed that diphtheria bacilli were present in so large a number that in order to isolate these nearly one half the inmates were quarantined. All efforts directed to checking the progress of the epidemic were unattended with success up to the time that antitoxin was employed for immunisation. By the use of antitoxin it has been possible to completely stamp out diphtheria in four great institutions for children in which it was prevailing in epidemic form. In no instance have there been, so far as can be determined, any serious results from the

administration of the remedy for this purpose. The duration of immunity is apparently not more than thirty days in many cases.

A NATIONAL SYSTEM OF NOTIFICATION OF SICKNESS.

By Arthur Newsholme, M.D.Lond., M.R.C.P.,
Medical Officer of Health of Brighton.

In September, 1877, the first local act for enforcing the compulsory notification of the chief infectious diseases came into operation in Bolton, Lancashire. This example was gradually followed by other towns, and the adoptive enactment of the Infectious Disease (Notification) Act in 1889 was followed by a rapid adoption of the Act by urban and rural sanitary authorities throughout England. At the present time the Act applies to over three-fourths of the English population, and there is little doubt that it will shortly be made compulsory throughout the whole of Great Britain and Ireland.

It does not come within the plan of this paper to discuss whether the prompt and early information of cases of infectious disease obtained by this enactment has been so effective a means of preventing the spread of disease as was anticipated by its original sanguine advocates. Assuming, what is obviously contrary to fact, that it has not prevented radiation from a single focus of infection, the continued operation of the Act is justifiable, and in fact most desirable, for the following reasons:—

(1) The knowledge acquired by notification has forced on local authorities attention to infectious diseases, and has in a large number of instances compelled them, however unwillingly, to provide efficient means of disinfection and isolation for their respective districts. There has at no previous period of the sanitary history of England been such great activity, as since 1889, in the provision of isolation hospitals.

(2) We are, by means of notification, gradually accumulating throughout the country a mass of information as to the seasonal, annual, epidemic, and cyclical prevalence of the chief infectious diseases, such as has never previously been possessed by epidemiologists and physicians.

As the first condition of success in the prevention of disease is knowledge of its natural history—its epidemicity, its relation to age and sex, to social and industrial conditions, to the complex meteorological conditions embodied in the words "season and climate"—such an accumulation of information must ere long bear fruit of a practical useful character.

I am anxious in the present connection to emphasise more particularly this second consideration. As practical physicians—and I claim that title for all medical officers of health—we do not desire to degenerate into mere empiricists concerned with the performance of certain ceremonies of sprinkling and washing and with the enforcement of isolation of Mosaic rigidity. That is the view that some, alas! take. If we are to maintain our standing and reputation this view must not be allowed to spread. The scientific and purely medical aspects of our work must be kept in the forefront. We are concerned not solely with individual cases of disease, but also with the conditions producing and controlling entire epidemics. It is part of our duty to study the influence of every personal and environmental condition on the evolution of each disease, in order that by so doing we may arrive at a less empirical and more rational conception of its causation.

Such considerations as these must necessarily influence our decision on the vexed question as to the advisability of retaining erysipelas in the schedule of notifiable diseases. It is frequently urged that no practical gain has accrued from the notification of this disease, regardless of the valuable data which are being accumulated and which cry aloud for exhaustive study. Similar considerations would apply to the notification of measles, whooping cough, epidemic diarrhœa, as also of chicken pox, mumps, etc. It is most desirable in the ultimate interests of the community that all these diseases should be notified to the medical officer of health in every town and district.

There is, however, the important difficulty of expense. We cannot reasonably expect local authorities to pay half a crown or a shilling (according as the case occurs in private or public practice) for each notification of these minor diseases, unless we can show some immediate practical utility. This difficulty might be overcome by adopting the system in vogue in some Continental countries, as Germany, Scandinavia, etc., a system which works smoothly and efficiently, as I have recently had personal opportunities of observing. The chief infectious diseases are required to be notified immediately, but there is a much longer list of diseases, in connection with which only a weekly list is required. No fee is given to the notifying practitioner for either of these returns. Without advocating the retention of compulsory notification and the abolition of payment for the certificates, it is, I think, evident that we can expect no general extension of compulsory notification unless medical practitioners are prepared to accept as small a fee as a shilling for each certificate, and are prepared to make weekly returns of the minor infectious diseases, and of such specific febrile diseases as croupous pneumonia and rheumatic fever for a modified fee.

I am aware that serious objection will be taken to any proposal to reduce the payment for notification certificates. I might, however, quote the fact that death certificates have been compulsorily and yet gratuitously furnished by medical practitioners for many years, the Legislature having apparently held that inasmuch as the doctor practises his profession by virtue of a special licence having statutory authority behind it, and the doctor is furthermore protected (though it must be admitted to a much smaller extent than in the countries in which there is compulsory notification without fee) from competition outside his own profession, he owes it to the State to furnish it with such information as to the fatal termination of his patient's illness, as is desirable in the interest of the whole community. It is but a step to extend this doctrine—which I have assumed to be the basis of the present unpaid medical death certificates—to the illnesses of patients which happily do not terminate fatally. The doctor in both instances is a privileged person, and is it not proper that privilege from and duty to the State should go hand in hand?

It is not likely that such a view will find acceptance in the medical profession, and I am more than willing to abandon even the suggestion of it if such abandonment will not impede and prevent the accomplishment of what should, I think, be the chief object to be aimed at by every hygienist, namely, a general and universal notification of all cases of sickness of every description.

It will be seen that the direction in which I look is not that of the erasure of certain diseases from the notification schedule, but a vast addition to the list. The work of the medical officer of health is not limited, as is commonly imagined, by the "seven chief zymotic diseases." Medical officers of health have themselves largely to thank for this cramped and restricted view of their duties. Happily they have now made a notable addition to the list of preventable diseases, and scarcely an annual report appears in which local authorities—and through them the public—are not made acquainted with the infectivity and means of prevention of tuberculous diseases.

There is need for notification, not only of tuberculous diseases, but also of rheumatic fever. I have recently shown[1] that this disease must be included among the infective diseases. For very many years all cases of rheumatic fever medically treated have been compulsorily notified in Norway and Denmark, and I have based on these returns and on hospital returns in this and other countries the conclusion that rheumatic fever occurs in great epidemics, sometimes assuming pandemic proportions; and that these epidemics occur in dry seasons, especially when there has been a succession of such seasons, producing a low ground water and an exceptionally high ground temperature. Much further light would be immediately shed on this most important disease were all cases of it to be notified and its local and climatic incidence carefully studied.

Croupous pneumonia is another specific febrile disease, the natural history and causation of which awaits its complete elucidation until we have a general system of notification of all cases of the disease. The importance of notification of such diseases as acute summer diarrhœa, of syphilis, and of

[1] Milroy Lectures, 1895.

such epizootic diseases as glanders, rabies, and anthrax need not be argued in detail.

I may, in passing draw attention to the new departure contained in the Factory and Workshops Act of last session, of compulsory notification of disease to a layman. It is laid down (Section 27 (1)) that "every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from lead, phosphorus, or arsenical poisoning, or anthrax, contracted in any factory or workshop, shall . . . send to the Chief Inspector of Factories, at the Home Office, London, a notice stating the name and full postal address of the patient and the disease from which, in the opinion of the medical practitioner, the patient is suffering;" being entitled to a fee of 2s. 6d. for every such notification. In subsection (3) of the same Section 27, it is stated that written notice of each case shall forthwith be sent to the inspector and to the certifying surgeon for the district (presumably from the Home Office).

We have here the introduction of what must be regarded as a most pernicious procedure, and one which, unless modified, may be fraught with serious direct and indirect detriment to the medical profession. The prevention of metallic poisoning and of anthrax (and of such other diseases as the Secretary of State may under subsection (4) of Section 27 add to the list of diseases to be compulsorily notified to a lay inspector) are medical questions, and the medical officer of health is the person to whom these diseases should be primarily notified, and who should guide the remedial measures to be taken.

Attention has been already drawn to the danger of limiting our field of vision and of work to the "seven chief zymotic diseases." No more can it be limited by the whole range of microbic diseases, although year by year the number of diseases coming within this category is increased. Industrial diseases must be regarded as our special province, and medical officers of health as a body will resent the primary notification of such diseases to a central office in London, as they will equally resent not having the control of the remedial measures to be adopted.

The medical officer of health should adopt as his motto *Morbiditatis nil a me alienum puto*. Preventive measures are not limited to the scope of the infective diseases. They may be applied to the whole range of the special diseases of industries, the diseases of the different seasons, of heat and cold, of exposure and want, of defects or excesses of food and drink, of prostitution and venereal diseases, of overwork and nervous strain, of accident and carelessness, of everything, in short, which goes to make up our complex social life.

If this is the scope of the health officer's work it is essential that his information shall be full and complete in order that he may fulfil his high vocation. It is not too much to say that the system of death certification in this country is the foundation on which the great sanitary ameliorations already achieved have been built. Nor is it overbold to prophesy that a complete system of certification and registration of all forms of sickness would in a few years produce an almost incredible further amelioration of the sanitary conditions of our schools and workshops, our shops, our factories and our mines, and of every industry throughout the country. Attention would be drawn to the chief points at which leakage of life and health occurs, and a great saving of life must necessarily follow.

Is the country ripe for such a general system of notification of sickness? Possibly not. The reform might, I think, be best commenced by a compulsory system of periodical notification of all cases of sickness treated in hospitals and dispensaries, by Poor-law medical officers, classified into outdoor and indoor patients, and by the medical officers of friendly societies. I had intended, had time allowed, to describe the systems of sickness notification in force in Scandinavia and in Prussia, which I have recently had an opportunity of personally investigating through the kindness of Dr. Bentzen, of Christiania, Dr. Linroth, of Stockholm, Drs. Tryde and Heff, of Copenhagen, Dr. Böckh, of Berlin, and Drs. Reincke and Penecke, of Hamburg.

The Scandinavian system may be described as immediate compulsory notification of the more important infectious diseases, and a weekly notification of all cases of a more extended list of diseases treated by the practitioner during the week. This weekly list includes erysipelas, whooping-cough, measles, mumps, bronchitis, follicular tonsillitis, pneumonia, pleurisy, rheumatic fever, ague, scorbutus, infecting and non-infecting chancre, gonorrhœa, etc.

The Prussian system is one of immediate compulsory notification of cases of infectious disease; and a more complex and complete system of notification and collation of statistics of sickness in hospitals in Berlin and other Prussian towns. The hospital statistics of Berlin have been tabulated since 1877. These and the corresponding statistics for other German towns are controlled by a special department of the imperial government, under the supervision of Professor Guttstadt, to whom I am indebted for much valuable information. These statistics are separately tabulated for general diseases, lying-in hospitals, diseases of the eye, lunacy and idiocy, and infirmaries for the old. The returns are made compulsorily by the resident medical officers of both State and private hospitals, no fee being paid for the returns. The statistics issued by Professor Guttstadt are most elaborate and complete. They show the number of cases of hospital sickness for each Prussian town, the nature and duration of illness, age and sex of the patients; and it is not too much to say that this series of reports constitutes an almost invaluable mine of information for epidemiological and general medical purposes.

How far could this system be applied in this country? The hospitals and dispensaries of this country are supported by subscriptions or bequests; and they owe it to the State to furnish the fullest particulars which the latter may require. Every public institution for the treatment of the sick should, I maintain, be required to give to the medical officer of health a weekly statement of the number of in patients and out-patients treated during the week, specifying the home address, age and sex, and nature of the illness of the patients; also a quarterly or yearly statement of the total cases and the number of days spent by each patient in the hospital. If this were done for a few years, a mass of most valuable sickness statistics would be available for demographic work; the work of friendly societies and allied bodies could be established on a firmer foundation; and the science of preventive medicine would be immensely enriched.

It is not pleasing to our national vanity to find that although we began earlier than other European countries our system of death certification, we are rapidly being left behind in completeness of detail of death certification by several Continental countries, and must look to them for guidance in more complete and wider sickness notification.

To sum up: On what lines can we and ought we to advance?

1. Extend the schedule of notifiable diseases, and make notification universally compulsory.

2. Make it compulsory on all friendly societies, and on sickness insurance societies of every description, to furnish periodical returns of the number and duration of cases of sickness, character of the sickness, and further particulars.

3. Make it compulsory on all hospitals, dispensaries, etc., to make similar periodical returns.

4. Establish a central office for the collation and tabulation of these data.

It is too much to expect that any Government of this country will take in hand such an important work until they are compelled to do so. For a considerable time after compulsory notification of infectious diseases was in force in a large number of towns there was no machinery available for intercommunication of the weekly returns; and it was only after Dr. Tatham had for some time supplied this deficiency that the Local Government Board took up the work. In a recent investigation into the statistics of rheumatic fever in the general hospitals in London, I found that more than one such hospital does not publish any annual tabulated statement of the cases treated in it during the year. Some external compulsion is obviously desirable in these hospitals.

I can conceive of no work more important in conducing to the progress of both curative and preventive medicine than

that which I have briefly sketched. The British Medical Association has made attempts in the past, with greater or less success, at the conjoint investigation of certain individual diseases. Here is a work which might advantageously be carried on under the auspices of the Association with comparatively little expense. The registrars of the great metropolitan hospitals would doubtless aid by supplying on a fairly uniform basis particulars of the cases treated during the year. An annual report of this character for all the London hospitals would possess a great intrinsic value, and lead the way to other similar reports for the provinces. When the British Medical Association has made it, as I hope they will, a "going concern," the Government might be induced to undertake the work, which is one of great national importance.

A DISCUSSION ON THE PREVENTION OF MILK EPIDEMICS.

I.—Henry Kenwood, M.B., D.P.H.,

M.O.H. Stoke Newington and Finchley.

Dr. Kenwood said that the main object of his paper was to direct attention to the insufficiency of the present means of preventing the recurrence of those milk epidemics that result from disease in milch cows. By means of a circular note addressed to all the medical officers of health of areas situated within the metropolis and the home counties of Middlesex, Surrey, Essex, Kent, Hertfordshire, Buckinghamshire, and Berkshire, he had collected the following facts in reference to those milk epidemics that had had their origin in diseased cows in the years 1893 and 1894. In each of his two districts (Stoke Newington and Finchley) there had been such an epidemic during the past year, and it was abundantly clear in both cases that the community was practically unprotected from such visitations; indeed, a sufficient answer to those who might contend that the steps taken at the present day were satisfactory was found in the reply that such outbreaks were not prevented, that they occurred in large numbers in this country, and that they showed a tendency to increase.

It was high time, with these epidemics constantly cropping up, that something more should be done to prevent their recurrence. Practically present action was restricted to preventing the further spread of the outbreak after it had already worked a varying amount of harm, but it was easily practicable to proceed upon lines of true prevention that would aim at removing the possibility of future outbreak. The necessity for further steps was a growing one, for the reasons—1. That the cowkeepers were becoming less and less generally the milk retailers, and they were not therefore affected to anything like the same extent as the latter by the consequences of a milk epidemic; moreover, cowkeepers did not (and it seemed would not) recognise the necessity of excluding the milk of cows suffering from those transitory, often slight and generally obscure ailments that might furnish an infective quality to the milk. 2. The establishment of large companies with large and irregular areas of distribution was gradually displacing the small man with a small and circumscribed area to supply, and the result was a much greater difficulty in tracing the origin of a milk epidemic. He then proceeded to discuss the powers that had been granted to local authorities and the reasons of their failure.

Careful examination of all milch cows at short intervals, preferably once a week, the prompt isolation of those animals likely to furnish infective milk, and the adoption of means that would deter the cowkeeper from mixing the milk of such animals with other milk were, in his opinion, the only ways of dealing with the difficulty. He then dwelt on the necessity for the appointment of special inspectors of cows and cowsheds, discussed the qualifications of such inspectors, and recommended their appointment in some cases by neighbouring authorities in combination. The necessity for such inspectors to notify at once all cases of suspicious disease in cows to the medical officer of health was pointed out.

The conditions in cows which might render their milk noxious to human beings were enumerated, and the symptoms that would warrant the inspector in requiring isolation were stated. Suggested rules for the guidance of such inspectors were given.

II.—Brigade-Surgeon Lieutenant-Colonel Parkes, M.D.

Brigade-Surgeon-Lieutenant-Colonel Parkes stated that he was quite in sympathy with what Dr. Kenwood said when he remarked, "These dairymen, with whom I most sincerely sympathise." Well might he sympathise with them, as the places into which the pure milk and butter of the country was received in many instances were enough to give both milk and butter a disagreeable flavour and an odour which very often led to the blame being laid on the source of the milk instead of on the shops into which it was received. Let the inspector look well at the state of the shops into which milk and butter were received, and more justice was likely to be done to the poor absent and distant dairyman.

III.—Francis T. Bond, M.D.Lond.,

M.O.H. Gloucester Combined Districts.

Dr. Bond was afraid that Dr. Kenwood considerably underestimated the practical difficulties in the way of carrying into effect the excellent suggestions which he had made in his paper, which he (the speaker) feared must be looked on as counsels of perfection hardly to be expected to be adopted by rural sanitary authorities within any proximately probable period. As an instance of these difficulties, he might say that in one of the thirteen districts for which he acted as medical officer of health there were nearly 150 registered dairies and cow sheds. If he were to suggest to the sanitary authority of this district the expense which would be necessary to carry out with anything like efficiency the system of inspection which Dr. Kenwood advocated, he feared that they would raise their eyes in pious horror. At the same time, Dr. Bond warmly endorsed Dr. Kenwood's recommendations as to the provisions which ought to be enforced as soon as it might be practicable to do so.

VITAL STATISTICS OF DIPHTHERIA IN LONDON, 1891-95.

By F. A. Dixey, M.A., M.D.,
Fellow of Wadham College, Oxford.

The remarkable rise in the number of deaths attributed to diphtheria during the last few years in London has attracted much attention, and has given occasion to many valuable memoirs which have largely increased our knowledge of the subject. In the course of the following remarks I propose to examine the recent progress of the disease in London from the statistical side, making chief use of the information contained in the "Weekly Returns" of the Registrar-General.

1. *The General Course of Diphtheria in London, 1891-95.*—The history of fatal diphtheria in London since the beginning of 1891 is shown in Table I, which gives for each week the actual number of deaths returned as due to "diphtheria," together with the average number of deaths attributed to the same cause for the corresponding week of the last ten years, corrected for increase of population. The facts contained in this table are, perhaps, more readily appreciated by the help of the wall diagram [exhibited], in which the continuous black line gives, week by week, the actual number of deaths, while the broken line represents the mean of ten years, as before. It will be seen that the number of deaths, though somewhat above the average for the greater part of 1891, had towards the end of the year sunk almost to the normal level. Soon after the beginning of 1892, however, a gradual rise takes place, which, with some considerable fluctuations, is, on the whole, steadily maintained through out 1892 and 1893, until it culminates in the second week of November in the latter year; when the deaths attributed to diphtheria reached the unexampled total of 103. From this point a descent begins; at first rapid, afterwards more gradual, until finally, in the closing week of 1894, the number of recorded deaths once more coincides with the normal, from which it has not since greatly deviated.

Such are the broad facts relating to the recent prevalence of

fatal diphtheria in London. It now remains to inquire whether the figures and curves before us afford any special information on points of interest in the natural history of the disease.

2. *The Seasonal Prevalence of Diphtheria in the Years 1891-95.*—The ordinary seasonal relations of diphtheria are well known, having been worked out for London and New York by Sir A. Mitchell and Dr. Buchan in their admirable papers,

TABLE I.—*London, 1891-1895: Weekly Deaths from Diphtheria, with Corrected Means for Ten Years of the Corresponding Weeks.*

Weeks.	1891.		1892.		1893.		1894.		1895.	
	Deaths.	Corrected Mean (10 Years).	Deaths.	Corrected Mean (10 Years).	Deaths.	Corrected Mean (10 Years).	Deaths.	Corrected Mean (10 Years).	Deaths.	Corrected Mean (10 Years).
January:										
1	28	22.9	25	24.0	47	25.2	66	26.0	50	33.2
2	23	18.8	29	19.3	61	26.9	55	26.9	34	30.1
3	17	19.8	20	20.1	37	26.7	48	24.2	31	28.6
4	25	21.4	24	22.5	53	25.5	52	26.6	29	30.4
February:										
5	34	23.2	27	24.8	43	25.7	74	28.2	45	33.4
6	29	23.4	18	22.9	62	23.1	56	28.2	34	32.0
7	34	20.2	15	22.1	60	23.0	58	27.9	27	31.2
8	32	20.4	30	22.3	51	24.1	42	27.5	29	30.5
March:										
9	31	19.0	27	20.7	37	22.1	59	24.6	31	29.6
10	18	18.9	34	16.4	38	18.4	59	21.1	34	25.4
11	33	19.5	31	21.4	65	20.3	52	24.3	27	32.4
12	26	17.2	30	18.7	49	19.8	56	23.5	24	28.0
13	24	17.9	15	18.8	36	17.3	57	19.8	31	24.6
April:										
14	26	16.9	31	19.8	38	21.2	63	23.1	23	23.3
15	26	22.8	33	23.9	44	24.4	50	26.9	27	30.4
16	23	16.9	20	17.7	47	18.8	53	21.7	30	25.4
17	34	19.5	17	20.7	50	21.0	63	24.2	27	28.9
May:										
18	24	17.2	31	18.2	54	19.9	58	24.0	29	29.9
19	19	17.6	24	17.3	68	18.5	55	24.3	38	29.3
20	21	16.8	41	17.5	51	20.7	56	24.3	41	29.0
21	27	17.8	30	19.8	41	22.6	41	25.4	37	27.8
June:										
22	24	17.9	40	19.5	51	22.5	36	26.1	41	27.5
23	21	19.0	37	20.1	39	22.1	34	23.9	33	25.8
24	29	19.5	34	20.4	62	22.9	43	27.9	45	29.9
25	31	17.3	39	19.1	68	21.2	44	27.1	37	30.6
26	18	17.9	35	17.9	64	20.7	56	25.9	38	29.7
July:										
27	21	16.9	30	20.3	54	21.7	43	26.2	—	—
28	25	18.3	43	20.2	51	20.8	45	26.6	—	—
29	29	18.3	37	20.1	68	22.6	36	27.3	—	—
30	30	21.4	25	22.7	72	24.4	52	30.6	—	—
August:										
31	24	19.7	42	21.8	64	24.7	57	29.6	—	—
32	23	20.5	35	21.5	63	25.2	69	27.7	—	—
33	24	17.9	37	19.5	63	21.6	57	27.3	—	—
34	24	21.5	38	22.4	56	24.5	43	29.4	—	—
September:										
35	24	19.9	34	21.6	56	23.3	33	27.2	—	—
36	17	19.9	37	20.3	65	22.4	39	27.6	—	—
37	32	21.8	36	24.6	65	26.0	55	30.6	—	—
38	29	24.8	43	26.4	88	29.1	52	35.7	—	—
39	32	26.0	50	28.1	96	30.4	67	38.5	—	—
October:										
40	29	26.3	51	28.1	74	31.1	66	36.9	—	—
41	25	25.4	46	26.7	86	28.8	54	35.4	—	—
42	29	29.6	41	30.4	84	31.8	61	37.7	—	—
43	31	24.4	56	24.9	83	30.0	49	36.5	—	—
November:										
44	25	21.4	47	22.7	88	26.3	54	34.2	—	—
45	24	26.2	51	25.3	103	31.7	42	40.2	—	—
46	30	27.4	29	29.0	91	29.5	44	38.8	—	—
47	36	29.2	46	29.2	90	32.4	48	39.7	—	—
December:										
48	27	26.8	29	27.4	74	29.7	54	34.5	—	—
49	33	29.7	58	30.5	89	34.5	57	41.5	—	—
50	30	26.9	59	28.8	86	33.7	53	40.1	—	—
51	20	24.4	60	24.5	63	29.5	36	34.4	—	—
52	37	23.1	50	25.1	79	29.1	35	35.1	—	—
Weekly Mean for whole Year ...	26.2	—	26.2	—	62.8	—	51.4	—	33.5	—

entitled The Influence of Weather on Mortality from Different Diseases, in the *Journal of the Scottish Meteorological Society*, vol. iv., pp. 187-265, and vol. v., pp. 171-188. These authors have shown, from a consideration of the Registrar-General's weekly returns for sixteen years, that the deaths from diphtheria in London rise above the average in the beginning of September and remain above it till the beginning in March. The seasonal prevalence in New York is much the same as in London, except that the rise takes place about a month later, and the range between maximum and minimum is of greater extent. They add that in New York the character of the seasonal curve remains fairly constant from year to year notwithstanding much fluctuation in the number of deaths.

Looking at the London mortality curve for 1891 we see that the usual seasonal features are on the whole fairly well maintained, in spite of the somewhat exceptional mortality in the earlier part of the year. In 1892 the general rise begins, the most marked step occurring at the end of April and beginning of May, and to the high level of mortality thus abnormally reached and maintained the usual autumn exacerbation appears to be superadded. The curve for 1893 is a very fluctuating one, but in spite of the great variation of numbers from week to week and the general upward tendency of the curve the autumnal invasion is again well marked, and of greater value, both absolutely and relatively, than in any previous year. In 1894, however, we find an altered state of things. With the high mortality of November, 1893, the disease seems to have in great measure spent its force; and a downward tendency begins, which by the beginning of June brings the deaths to within 10 of the corrected average. Here another rise seems to be starting, but it never becomes fully developed; and although September, as usual, shows a considerable increase in the number of deaths, the accustomed heavy mortality of the end of the year is altogether missing. The curve for 1895 has not as yet shown any marked elevation; a slight upward tendency, however, has been in progress since April, the further development of which it will be interesting to watch.

The history of fatal diphtheria during the last twelve months is of very special interest, as I hope to show before the close of my paper. In the meantime I desire to call attention to one or two minor points brought out by the tables and diagrams as a whole.

3. *Diphtheria and School Attendance.*—In his excellent Annual Report of the Medical Officer of Health of the Administrative County of London, 1893, and more recently in his Presidential Address to the Epidemiological Society in 1894, Mr. Shirley Murphy has adduced much reason for thinking that the increased prevalence of diphtheria in this country is at least partly due to the operation of the Elementary Education Act of 1870. This conclusion, based by him mainly on the observed facts of age incidence of diphtheria, derives additional support from a consideration of the tables and diagrams before us. The portions of the year selected for comparison by Mr. Shirley Murphy were three consecutive periods of four weeks, corresponding to the months of July, August, and September respectively. The fall during the summer holidays in August, and the rise corresponding to the reassembling of the schools in September, are plainly shown by the curves of weekly deaths in every case; though, as Mr. Murphy notes, the August fall is less conspicuous in 1892 than in other years. The fact is evident enough when the only curve considered is that of "all ages," but becomes much more clearly demonstrated when the figures for the ages 3 to 13 (the school going age) are considered separately. But in addition to the variations of the August to September period, it will, I think, be recognised, on an inspection of the charts, that a similar series of variations, of equal significance though of smaller amount, characterises the duration and close of the holidays at Christmas. Each of the five years begins with a fall, while the end of the holiday period at the third or fourth week is marked by a distinct rise of the death curve.

4. *Diphtheria and "Croup."*—I now turn to the question of the relation between diphtheria and what appears in the Registrar-General's returns as "croup." Dr. Longstaff[1] cites with approval the opinion of Dr. Whitelegge "that there is no such disease as croup;" and it has long been admitted on all hands that a great deal of "croup" is actually diphtheria. In Table II I have given the figures for "croup" corresponding to those in Table I for diphtheria.

[1] *Studies in Statistics*, 1891, p. 321, note.

TABLE II.—*London, 1891-1895: Weekly Deaths from "Croup," with Corrected Means for Ten Years of the Corresponding Weeks.*

Weeks	1891.		1892.		1893.		1894.		1895.	
	Deaths.	Means.	Deaths.	Means.	Deaths.	Means.	Deaths.	Means.	Deaths.	Means.
January:										
1	10	14·4	14	15·4	6	15·0	4	13·7	3	12·9
2	10	17·2	14	16·5	5	16·7	3	15·2	3	13·6
3	9	17·6	7	16·8	7	16·1	5	14·1	5	12·1
4	6	15·2	13	13·9	4	13·4	6	12·6	1	11·3
February:										
5	9	13·8	10	12·9	3	12·1	2	10·9	1	9·2
6	12	14·4	6	14·0	4	12·6	7	12·3	5	10·7
7	9	15·5	11	14·8	4	14·8	3	13·1	3	11·9
8	18	15·4	17	15·4	5	15·2	6	14·0	6	13·7
March:										
9	14	15·4	9	15·0	5	14·5	4	12·0	5	11·8
10	6	13·5	6	14·5	1	10·8	4	9·4	3	8·1
11	12	16·6	4	16·3	3	15·3	4	13·2	1	12·3
12	13	13·2	10	11·9	3	11·0	2	9·9	4	9·3
13	12	13·3	8	13·5	6	12·6	3	11·0	3	10·2
April:										
14	10	15·0	4	14·2	8	13·3	4	12·1	4	10·3
15	11	13·4	6	13·1	6	11·4	4	10·1	1	9·2
16	9	12·2	6	10·7	1	9·3	1	8·3	3	7·4
17	6	11·9	—	11·3	2	10·1	3	8·9	4	7·8
May:										
18	9	11·4	3	11·5	4	9·7	3	8·7	4	7·4
19	5	10·0	2	9·3	5	8·2	5	7·3	—	6·1
20	10	14·3	4	12·1	2	10·7	3	9·4	2	8·4
21	8	11·6	6	10·9	1	9·8	3	8·4	3	6·9
June:										
22	8	8·7	3	8·8	2	7·6	—	6·3	5	5·1
23	1	11·9	2	10·6	3	8·5	4	8·1	1	6·9
24	6	11·2	5	10·6	2	9·8	2	8·1	1	6·8
25	4	8·7	1	7·9	4	6·4	3	5·8	4	4·5
26	5	10·6	1	9·8	1	8·3	—	6·5	2	5·4
July:										
27	5	9·1	6	8·3	7	8·0	3	7·6	—	—
28	4	10·0	5	10·0	4	9·1	6	7·8	—	—
29	5	9·4	2	9·2	4	8·2	2	7·4	—	—
30	6	9·5	2	8·7	4	7·1	3	6·8	—	—
August:										
31	3	10·3	3	9·4	5	8·3	3	7·5	—	—
32	5	11·1	6	10·0	1	8·1	4	7·0	—	—
33	7	9·8	4	9·0	—	6·0	2	6·5	—	—
34	4	11·2	2	10·4	5	8·3	1	7·8	—	—
September:										
35	4	9·2	2	8·8	2	6·2	4	5·4	—	—
36	3	10·4	2	9·2	3	7·7	2	6·5	—	—
37	7	11·3	2	11·0	6	9·3	1	7·7	—	—
38	4	10·7	4	9·4	4	8·2	5	7·1	—	—
39	10	12·0	5	12·1	4	10·3	3	9·3	—	—
October:										
40	6	12·3	6	11·0	2	9·6	3	8·2	—	—
41	5	13·6	3	13·7	2	12·1	3	10·0	—	—
42	12	17·7	5	16·9	6	15·5	3	14·4	—	—
43	7	14·8	6	14·9	3	13·2	1	10·7	—	—
November:										
44	9	13·3	2	12·7	11	11·6	5	11·6	—	—
45	15	18·7	5	14·0	6	13·2	2	12·0	—	—
46	7	14·7	3	13·6	9	12·0	—	11·0	—	—
47	6	15·9	5	14·1	5	12·3	5	10·7	—	—
December:										
48	5	15·0	4	14·0	3	12·7	4	10·7	—	—
49	10	15·6	4	14·8	7	13·0	3	11·8	—	—
50	6	11·8	5	13·7	6	14·0	3	12·6	—	—
51	10	15·0	11	14·9	3	13·0	3	12·0	—	—
52	5	11·3	3	10·9	10	14·0	4	10·3	—	—

The facts thus disclosed appear to me to make in favour of the view that, at least in past years, "croup" has robbed diphtheria of many deaths that were its due. While diphtheria has been rising, croup we see has been falling, in a way more suggestive of altering diagnosis than of real diminution of disease. Moreover, besides the general shrinkage which it has undergone, the croup curve has also changed its character, becoming less like the typical diphtheria curve almost every year. A comparison of the weekly means for the ten years 1881-90 with the figures of subsequent years will show that on the whole the fall has been greater at the end of the year than at the beginning, which seems so far to accord with Dr. Whitelegge's opinion that the old winter and spring maxima of croup were due to different causes, the former corresponding to diphtheria cases, the latter mainly to laryngitis. If the fall in "croup" is due to the gradual removal of diphtheria cases to their proper category, this relative decline of the winter maximum is exactly what we might expect.

5. Effect of the Antitoxin Treatment.—The last point which I shall here deal with is the diminution in mortality which has become apparent since the spring of 1894. The average weekly number of deaths from diphtheria for the whole year, which rose from 26.2 in 1891 to 36.2 in 1892, and to 62.8 in 1893, fell in 1894 to 51.4, and for the first half of the present year to 33.5. It is evident that from some quarter fatal diphtheria has received a check. This is not to be explained by any diminished occurrence of the disease, for it has remained on the whole as prevalent as ever. Evidence of this is furnished by Table III, which gives the weekly number of admissions and cases under treatment for diphtheria in the Metropolitan Asylums and London Fever Hospitals since the beginning of 1893.

TABLE III.—*London: Diphtheria: Cases in Hospitals and Admissions for every Week, 1893-1895.*

	1893.		1894.		1895.	
	Cases.	Admissions.	Cases.	Admissions.	Cases.	Admissions.
January:						
1	288	76	269	64	499	94
2	295	35	289	62	517	74
3	271	50	310	70	514	74
4	268	55	319	69	528	73
February:						
5	274	53	320	57	519	76
6	291	57	334	80	560	69
7	290	64	329	50	498	55
8	278	56	310	54	488	54
March:						
9	267	54	303	67	463	63
10	276	64	304	69	456	56
11	277	51	307	63	456	61
12	286	55	299	58	455	64
13	283	47	307	66	435	67
April:						
14	283	58	306	68	440	71
15	280	54	315	71	435	64
16	301	73	316	60	441	73
17	302	60	316	66	432	69
May:						
18	318	71	324	76	457	79
19	332	75	328	60	464	73
20	325	61	304	63	455	57
21	327	64	324	70	462	70
June:						
22	294	49	330	56	508	88
23	306	80	337	53	529	86
24	286	71	347	84	542	107
25	291	76	349	71	553	126
26	293	53	351	78	533	115
July:						
27	304	67	351	90	—	—
28	295	46	365	65	—	—
29	278	59	402	94	—	—
30	293	69	435	102	—	—
August:						
31	281	71	470	99	—	—
32	282	66	469	85	—	—
33	272	69	456	69	—	—
34	291	78	448	71	—	—
September:						
35	291	53	450	75	—	—
36	290	54	464	103	—	—
37	282	54	456	98	—	—
38	287	79	495	101	—	—
39	296	74	494	90	—	—
October:						
40	314	79	502	96	—	—
41	310	59	521	105	—	—
42	309	54	521	96	—	—
43	306	63	523	94	—	—
November:						
44	326	69	537	99	—	—
45	321	70	548	97	—	—
46	301	75	544	83	—	—
47	311	69	526	100	—	—
December:						
48	308	56	517	78	—	—
49	309	54	504	104	—	—
50	298	51	522	101	—	—
51	298	71	509	90	—	—
52	293	43	521	78		

...I am aware that these figures form only a rough measurement of the prevalence of disease; for, in addition to the fact that, to quote the Registrar-General's weekly returns, "in a considerable proportion of cases the diagnosis sent on admission is found, after sojourn in the hospital, to have been erroneous," it is also true that the proportion of hospital admissions to total cases notified is a variable one, ranging, for instance, in the cases of the hospitals of the Metropolitan Asylums Board, for the four years 1890-93, from 15 per cent. in 1890 to 25 per cent. in 1892;[1] moreover, it must be remembered, as has been specially pointed out by Dr. Whitelegge, that a period of great prevalence of a disease is by no means necessarily one of great case mortality. Still, when every allowance has been made for these sources of error, it must be granted to be a striking fact that the prevalence of diphtheria from the middle of 1894 up to the present date is out of all proportion to the number of fatal cases. Now, the antitoxin treatment of diphtheria began to be employed in this country in June, 1894, and by the end of the year it was in fairly full operation. It is, I think, an inference well warranted by the facts of the case that this method of treatment was last year instrumental in preventing the usual autumnal rise in the number of fatal cases, and has helped during 1895 in keeping down the diphtheria mortality in spite of the large amount of the disease still present in the metropolis.

FRIDAY, AUGUST 2ND.

A DISCUSSION ON THE INSECURITY OF TENURE OF EXTRA-METROPOLITAN MEDICAL OFFICERS OF HEALTH.

I.—B. A. WHITELEGGE, M.D.(Lond.).

County M.O.H., West Riding of Yorkshire; Lecturer on Public Health, Charing Cross Hospital Medical School.

IT is my privilege to introduce a subject which has of late been so thoroughly debated that there is, perhaps, little that is new to be said upon it. On March 8th last a deputation representative of the British Medical Association, the Incorporated Society of Medical Officers of Health, the Sanitary Institute, and the British Institute of Public Health, waited upon Sir Walter Foster, then Parliamentary Secretary of the Local Government Board, "to urge the necessity of making the appointments of medical officers of health in the provinces permanent, as in the case of London, instead of for short periods." It was made clear by a number of speakers that the existing system not only involved injustice to individuals, but reacted unfavourably upon public interests also; and Sir Walter Foster's reply marks the beginning of a new and much more hopeful phase of the question.

Among the officers whom local sanitary authorities may or must appoint, one—and as far as I know, one only—is required by statute to hold a professional status before he can take office. The medical officer of health must be a qualified practitioner, and, if the population of the district under his charge exceeds 50,000, he must also hold a special qualification in public health. Some of his duties are of a kind likely to bring him into collision with influential ratepayers, and we may even contemplate the possibility of a member of the authority being in default. Then, again, the medical officer of health, and no other officer, has to make an annual report, for the information of the Local Government Board and the County Council, as well as the local authority. In that report he must, among other things, call attention to the sanitary needs of the district, and that often means the sanitary shortcomings of the authority. If his district, or any part of it, has not been furnished with proper drainage, or water, or scavenging, or hospital, or other means of combating infectious disease, it is his duty to say so in the annual report, and to go on saying so year after year. Such reminders are not always welcome.

It might be expected that the one expert professional officer, the one, moreover, upon whom is placed the ungracious duty of criticising not only individuals but also the authority in their corporate capacity, would, even more than his colleagues, have secured to him reasonable remuneration and reasonable fixity of tenure. As a matter of fact, he has hitherto had neither, except by accident. His salary is often small to absurdity, and reasonable fixity of tenure is not only not ensured, but is (or has been until quite recently) actively disallowed by the Local Government Board, where the local authority were willing to concede it.

I shall attempt no definition of reasonable salary under the widely different circumstances of local appointments, but will content myself with affirming that many of the salaries now being paid to medical officers of health cannot by any stretch of imagination be regarded as reasonable, except on the assumption that only a part of the work is being done. In such cases, either the authorities intend that some of the statutory duties of the medical officer of health shall be evaded, or they intend that part of the work shall be done gratuitously. Perhaps I ought to include a third possibility, that the authority do not know what the duties of the medical officer are. In my own county alone there are eighteen sanitary districts in which the medical officer is paid not more than £10, and six in which the annual salary is £5 or less. It is true that the Local Government Board have of late protested against some of the more glaring instances of this kind, where an opening is given to them by application being made for repayment of half the salary out of county funds, but this is not always the case. County councils have no voice in the matter beyond the privilege of contributing the half salary on demand. As the question of remuneration does not, strictly speaking, come within my text, I will only add that the London Act of 1891 established the proper basis, by giving the Local Government Board control over the conditions of appointment, including salary.

As for tenure, the most satisfactory arrangement is, of course, a permanent appointment, subject only to dismissal with the consent of the central authority in case of default or incapacity. Next to this comes appointment without specification of time, but terminable by notice on either side. Here dismissal can only be brought about by a direct vote, which is a very different matter from outvoting the former officer at a re-election. Thirdly, the appointment may be for a specified period only, at the end of which the officer retires unless the authority deliberately re-elect him. Under this arrangement there is no fixity of tenure except for the period of appointment, a period which in perhaps the majority of cases is twelve months only, though it is sometimes extended to two, three, five, or even seven years.

It is the third and worst system which governs the appointment of medical officers of health in general, not from any statutory necessity, but because the Local Government Board until 1895 insisted upon it, and it would be difficult to devise any more effectual means of hampering their work. Frequent change of skilled officers is not conducive to efficiency, nor is the constant recurrence of the question of re-election calculated to strengthen the hands of the officer for the time being when he finds that his duty brings him into collision with powerful interests. It cannot be justified on the score of precedent, for the precedents are the other way. It is not so with the other officers of the sanitary authority, always excepting the inspector. No such slipshod arrangement is tolerated in medical appointments under the Poor Law, or under the Factory Acts. It has been expressly reversed in regard to London health appointments by the Act of 1891, which provides that the appointment shall not be for a limited time, and that the officer shall not be removable except with the consent of the Local Government Board.

Taking this last precedent only, can any single valid reason be given why the conditions which are necessary and proper in London are not to be regarded as equally necessary and equally proper in the provinces? I claim on behalf of provincial medical officers of health that the last shred of justification of the present system vanished when the London Public Health Act of 1891 gave to metropolitan health officers the security which is needed not only for their own protection, but also for the proper working of local sanitary administration. Let us concede that good reason, as well as bad reason, may sometimes arise for terminating the appointment. Why should that good reason require the endorsement of the central authority in London and not in the provinces?

[1] See Annual Report of Medical Officer of Health of London, 1893: Diphtheria, Diagram XI.

It may be urged as an abstract proposition that local authorities ought to have control over their own officers. Why, then, place the medical officer on a different and inferior footing to the rest, when he more than any other needs some degree of independence? Why impose upon him, and upon him alone, direct responsibilities to the Local Government Board which may at any time bring him into collision with the local authority whose control over him must needs be so exceptionally absolute? Why refuse to permit more permanent appointments, when the local authority themselves wish to place their medical officer upon the same level as others? Above all, why legislate in flat contradiction to this supposed principle as regards London, and London only?

From whatever standpoint we regard the matter, the paradoxical conditions which prevail outside London are contrary to the public interest, and contrary also to both the letter and spirit of all recent sanitary legislation. The tendency is to insist more and more upon the possession of the diploma in public health, and to require the whole-time service from the medical officer of health, debarring him from private practice. Meanwhile, by way of inducing competent men to devote themselves to the speciality thus legally marked out, they are left to draw the conclusion that public health appointments are uncertain in their allotment, underpaid for the most part, and liable to termination at any time, with or without reason, leaving the ex-officer without appeal and without redress.

The injustice being admitted, what can be done to bring about a remedy? Sir Walter Foster made certain important suggestions in this direction, which afford convenient landmarks for discussion of the subject. First, he told us that nothing short of fresh legislation could be entirely curative. This is only one of the many good reasons for a new Public Health Act, bringing the provinces more into line with London, and we may rely upon the Parliamentary Bills Committee to see to the interests of the profession in this respect. Next, we have had from no less an authority than the late Parliamentary Secretary of the Local Government Board an assurance that, whatever may have been the case in the past, the Board is now prepared to exercise such powers as it already possesses to encourage more permanent appointments, as well as more reasonable remuneration. It may be assumed that the change of Government will not affect the general policy of the Board in this respect, but a further expression of opinion from Whitehall, in a form which would reach the local authorities, might advance matters materially, and I venture to suggest that this too is a direction in which the influence of the Association may profitably be employed. I am glad to be able to point to at least one recent precedent, the Croydon Rural Council having appointed Dr. Darra Mair without limitation to time. Thirdly, it is suggested, and with only too much truth, that we ourselves as a profession have contributed to the present anomalous position of public health appointments. The frequent ordeals of re-election, we must all agree, ought not to be. Does it not follow as a general principle that rival candidatures ought not to be; that contests should be reserved for real vacancies, and should not arise in case of formal reappointments? I fully realise the difficulty of laying down any hard and fast line, but I think that we ought to recognise that the mere fact of re-election becoming due does not in a professional and ethical sense make the field an open one.

But there is a further consideration which Sir Walter Foster put in this pointed way: "We (the Local Government Board, that is) should have been able to do a great deal more if we had had that co-operation of the medical profession which we ought to have had, but unfortunately the medical profession is a broken and disorganised body, and when we have endeavoured on more than one occasion to obtain more adequate salaries for medical officers of health, we have been met by the fact that other medical men had agreed to take these offices at lower salaries, and naturally the local authorities thought it their duty to the ratepayers to obtain their officers at the cheapest rate." I trust that instances of this kind do not often occur. They might with advantage be brought to the notice of the Branch within whose area they arise.

There is one more suggestion which I must not pass over, namely, that medical men in general should use their influence with local authorities, in the direction of placing health appointments upon a proper footing. This ought to be done whenever opportunity offers, and especially by those of the profession who are members of the public bodies concerned.

For my own part I am hopeful of the future welfare of this branch of the profession, and by no means dissatisfied with the progress which has been made of late in the direction of an organisation more worthy of the name of a public health service. A large instalment of necessary reform cannot be long delayed, in face of the London Act and of the new policy of the Local Government Board which Sir Walter Foster announced. What is wanted is that the principle established by the London Act should be applied in the provinces also; that in the meantime advantage should be taken of the changed attitude of the Local Government Board to press for the omission of the now unnecessary time-limits in appointments of this kind, and lastly that where time-limits are retained, the objectionable necessity of formal reappointments should be regarded, by ourselves at all events, as equivalent only to a vote of continued confidence which should not lightly be opposed by any member of the profession. I think that the whole-time system will ultimately prevail, and ought to prevail, but that without some adequate guarantee of proper salary and security of office, it is unfair to the officer and inexpedient in the public interest to put the cart before the horse, and to insist indiscriminately upon exclusion from private practice in all cases.

II.—J. Carroll, M.B., D.P.H.

Dr. Carroll said that he had a very personal interest in this subject, having last year lost his appointment as M.O.H. of the borough of Ilkeston through what could only be regarded as a gross abuse of the powers conferred upon sanitary authorities by the Public Health Act, 1875. This Act gives them the power to appoint a M.O.H. for a short term of years, and also at the end of this term not to reappoint him should they think well. Dr. Carroll was convinced that the Public Health Act, 1875 never for one moment contemplated the dismissal of medical officers for the too faithful discharge of the statutory duties of their office. But this had come about because the M.O.H. was completely at the mercy of the sanitary authority; he had no court of appeal. It surely had never been expected when the Act was framed that the power thus conferred would be so grossly abused. As a matter of fact, however, it had been abused over and over again, to the serious injury of the districts thus deprived of the services of an experienced and conscientious M.O.H. He need recall only the dismissal from office of such men as Murphy, Vacher, and Hime to prove the point. He was of opinion that in all such cases, the M.O.H., and also the inhabitants of the district should have the power of appealing to the Local Government Board if there were reasons to believe that the sanitary authority had abused the powers entrusted to them by Act of Parliament. This power of appeal was granted to Poor Law medical officers, and in their case had undoubtedly been instrumental in saving them from much injustice. The law relative to the appointment of M.O.H.'s ought to be altered without delay so as to make it impossible to dismiss them without sufficient and reasonable cause, and without the full knowledge and consent of the Local Government Board after inquiry into the whole facts of the case.

The ethical side of the question—the duty of medical men to each other—ought also to be considered, and to this direction a radical alteration was much to be desired. The General Medical Council, the universities, and the various licensing bodies should take action in all such cases of breach of professional etiquette. To apply for the post held by another was, he held, as much infamous conduct in a professional sense as covering and advertising. The General Medical Council should have and exercise powers to deal with offenders against professional etiquette in the same way as they dealt with those guilty of covering and advertising. For a medical man to take advantage of the fact that he belonged to a certain political party, and be in private relations with members of the town council, in order to oust another man from his post, was really contemptible.

Medical officers of health in reality did State work, and Dr.

Carroll was therefore of opinion that they should be State-appointed, State-paid, and, in case of neglect, incompetency, or other good cause, State-dismissed. Where part of the salary was paid out of money voted by Parliament it would be only reasonable and fair that they should have the privilege of appealing to such an outside central authority as the Local Government Board. Were such a privilege granted, tenure of office would be much more secure, and the Public Health Service would command the services of a larger number of the best men, many of whom now went into other branches of the profession where salaries and other advantages were greater. Short term appointments would practically cease, and with them insecurity of tenure of office. These were among the greatest hindrances to sanitary progress in this country. This power of appeal would avoid or remedy much existing injustice.

III.—J. Manley, M.A., M.B., D P.H.,
M.O.H. West Bromwich.

Dr. Manley shortly recapitulated the opinions of Sir Walter Foster, and said that he was assured that if the present Government could be induced to bring in a Bill which would remedy the grievance it would have the hearty support of that gentleman. Much good, he thought, could be done by a repetition of the deputation, now that a change had taken place at the Local Government Board, and, without moving any formal resolution, he felt that in the session of '96 a combined deputation should again go to Whitehall. The ethical side of the question remained beyond control, and complete professional ostracism seemed to be the only remedy, and should be carried out. In conclusion he urged upon every medical officer of health to enlist the sympathy of his member of Parliament, and thus help in bringing about a favourable issue.

IV.—W. Graham, M.D., M.Ch.,
M.O.H. Middleton.

Dr. Graham had no grievance of his own, but on broader grounds he considered that the present insecurity of tenure should be removed. This should be done on public grounds. The medical officer was entrusted to a great extent with the carrying out of the most important laws. Anyone who tried to do his duty in the matter of insanitary property was open to a good deal of hostile criticism. He mentioned Bradford as one of the towns in which the medical officers had been badly treated. The zealous advocacy of vaccination was enough in some places to secure the termination of the officer's appointment. If anyone desired to push an active crusade against the smoke nuisance in the large manufacturing towns he would provoke considerable opposition. For himself he had not been encouraged in his work by his authority, still he had not met with any marked unkindness when taking proceedings under the 105th section of the Public Health Acts as a private individual. The best remedy would be to allow the Local Government Board concurrent powers with the sanitary authorities in administering the Public Health Acts, especially in reference to the smaller sanitary authorities. He hoped that within a short time what had been done in Scotland and in London would be made general all over the country.

V.—R. S. Marsden, M.B.Edin., C.M , D.Sc., D.P.H.,
M.O.H. Birkenhead.

Dr. Marsden had held appointments under two conditions: one of them was of short tenure—and he had had to face a very severe struggle with the chief landowner against sanitary reforms. Seven-eighths of the property in the district was owned by one landowner; that gentleman declined to let him have a house in the district. He had to reside outside his own district. He served the landowner with 228 notices within six months to put his property in order. He was warned that he would have to succumb to the numerous influences which this landowner would bring against him, but happily for him he had in the meantime received another appointment, and wrote a letter to the Local Government Board informing them of the state of affairs. On the other hand, his present appointment being for life he found himself much more free to recommend reforms, which were almost invariably carried out without objection. In his opinion permanency of tenure ought to be made compulsory.

VI.—Brigade Surgeon-Lieutenant-Colonel Pringle, M.D.

Brigade-Surgeon-Lieutenant-Colonel Pringle stated that his only reason for speaking on this subject was that as an elected guardian of the poor, and a member as such of the Metropolitan Asylums Board, he had done his best in his Board of Guardians (Lewisham) to support the vaccination officer, but he had lately been so outvoted that he had been obliged to warn the Board of the coming storm, and the need of having a vaccination officer ready when the storm burst, and the alarmed populace rush to the vaccinating station. As regards the absolute independence of all medical sanitary officers, Dr. Pringle said had this been strictly enforced, and medical officers of the army in India been sheltered under the shield of Government protection, instead of being handed over to the autocratic will of a senior medical officer, whose views on the question of the importance of the water supply and the modes of propagation of disease were as strange as unique, the remarkable paper of the President of this nationally vitally important Section, as it related to the sanitation of India would never have been, in the interests of the public health of that country, necessary. Long, long ago, said Dr. Pringle, he and others had laboured to improve the water supply, and if possible to check in some measure the propagation of disease, notably cholera from Hardwar and in large gaols, but the views were not those of the head of the medical department, and they were not only not carried out, but the medical officers became marked men, and though protected by their commissions from the possibility of removal, except by the sentence of a court-martial of their brother officers, yet they were made too often the victims of a persecution far from petty. What they had heard of the medical officer of health, who for the honesty of his report was by the one ground landlord prevented from residing within the town, read more like a tale of the early feudal times than of the powers of the Public Health Act of the end of the nineteenth century to acquire land for public purposes.

VII.—E. J. Slade-King, M.D.Ed., D.P.H.Ed.,
M.O.H. Devon County Council and of Ilfracombe.

Dr. Slade-King remarked that those cases of injustice which from time to time arose naturally excited more attention than the numerous cases in which the authorities re-elected their medical officer of health year after year and supported him in his sanitary efforts; yet all were agreed that insecurity of tenure was a great let and hindrance to sanitary education and progress. As an acting county council health officer he had noticed that the reports of rural medical officers were far less outspoken when they had been tabulated and placed before the public than when they used to be pigeonholed in Whitehall.

VIII.—J. Groves, B.A., M.B.Lond.,
M.O.H. Isle of Wight District.

Dr. Groves said that he preferred to look at the subject from the point of view of the public well-being, although his sympathies were entirely with the sentiments expressed and with his brother medical officers of health. The medical officers of health throughout the country were doing an enormous amount of good to the community, not only in encouraging their authorities to do their duty by fulfilling their obligations under the Public Health Acts, but by educating the public in sanitary matters. It was most important, therefore, that this good work should be conserved. One of the greatest obstacles to this was the Local Government Board, which required entire reconstruction. Medical science was quite different from any other, including as it did so many separate sciences, and men of medical training and education alone were capable of understanding fully sanitary questions. In his opinion the Local Government Board would not become wholly satisfactory from the point of view of the public health until what was now the Medical Department ceased to be simply an advising department. He believed that, however anxious medical officers of health were to be treated justly, there was at the bottom of their hearts—

was the real spring of action which moved them in their work—an earnest anxiety for the sanitary well-being of the community.

IX.—Jas. Spottiswoode Cameron, M.D.Edin., M.O.H. Leeds.

Dr. Cameron thought all were pretty well agreed that some amount of fixity of tenure was necessary; at the same time, the ratepayers of a district must not be saddled permanently with an impracticable officer. Certainly the health officer should hold his appointment *aut vitam aut culpam*, and an appeal to the Local Government Board should be permitted as to the "culpam." When medical officers were first appointed, the staff of the old Poor-law Board regarded the medical officer to the guardians as a likely man for the new post, but we have been pressing for larger districts for which these men in general practice would not be suitable, and their permanent appointment might hinder the gradual change. As whole-time men increased this difficulty would cease. Medical officers ought to act reasonably, and no medical man should apply for a post from which the health officer had been ejected unfairly.

X.—Ogilvie Grant, M.B., C.M.Ed., D.P.H.Ed., M.O.H. Borough of Inverness.

Dr. Ogilvie Grant, as a county medical officer having security of tenure, desired to express his sympathy with his professional brethren who had not the security he had, and he thought that if the security the county medical officers of Scotland had was extended to England a great hardship would be abolished.

XI.—F. T. Bond, M.D.Lond., F.R.C.S.Ed., F.I.C., M.O.H. Gloucester Combined District.

Dr. Bond thought that it was important that they should agree as to what they understood by security of tenure. If they meant that they should be installed in office in perpetuity without the possibility of being dispossessed on any ground, he was sure that they would not attain their object; but if they meant, as he thought was only reasonable, that they should not be exposed to the possibility of being dispossessed of their office without the right of appealing to a formal inquiry by a competent tribunal as to the sufficiency of the grounds upon which their dismissal from office was sought, then he felt sure that the sense of justice which all Englishmen possessed would acquiesce in the justice of their claim.

Dr. Whitelegge's Reply.

In his reply Dr. Whitelegge said if he had wanted a typical instance of what he meant it was afforded by the case of Dr. Carroll. It made one wonder why Ilkeston was fit to be entrusted with municipal powers when it considered itself too small for the removal of the nuisance for which Dr. Caroll had been condemned. He agreed that it would be wise to have another deputation. The only reason for hesitation was the circular which had been sent out by the Local Government Board. Dr. Slade King said it was only a memorandum sent to several authorities intimating that they quite approved of what the Section was now advising. Dr. Whitelegge thought it would be wise to induce the Board to reform the policy of their predecessors, and to make that circular general, so that they might be able to point to it as the official attitude of the Local Government Board on the subject. Dr. Graham's alternative remedy of giving concurrent powers to the sanitary authorities might prove almost unworkable in some of the larger areas. In Yorkshire it would mean an enormous increase of responsibility. Dr. Slade-King had said that the Devonshire returns were watered down when they had been made public. In Yorkshire he had found exactly the reverse—the more public their reports were made the more plainly they seemed to speak. He agreed with Dr. Groves as to the necessity of some alteration of the Central Service at the Local Government Board. It was some years since Lord Ebury had asked how long the Public Health Department would be content to sit at the feet of the Mahdi at Whitehall. He hoped that the nominal reappointment arising out of local matters would be considered by members of the profession certainly not as a justification for opposition on the part of other members of the profession.

Resolution.

Dr. Bond moved, and Dr. Manley seconded, a resolution in the following terms:

That this Section desires to reiterate the opinion which has been expressed at previous meetings of the Association, that the interests of the public, no less than the just demands of medical officers of health, require that the same security of tenure which is enjoyed by medical officers of health of the metropolis and Scotch counties and Poor-law medical officers should be conceded to medical officers of health, and requests the Parliamentary Bills Committee to take such steps as may be expedient to bring this matter under the notice of the Local Government Board, with the hope that the Committee will see their way to print and circulate Dr. Whitelegge's address as an excellent summary of the merits of the question, together with an abstract of the discussion.

The resolution was carried *nem. con.*

ON THE DESIRABILITY OF APPOINTING MEDICAL MEN AS SUPERINTENDENT REGISTRARS OF BIRTHS AND DEATHS.

By Louis C. Parkes, M.D., D.P.H., M.O.H. Chelsea.

The Select Committee of the House of Commons on Death Certification (1893) reported that it had been represented to them that a great improvement might be looked for in the way in which the work of registration is discharged if the medical officer of health for every district were entrusted with the performance of this duty, he being appointed superintendent registrar, and having under his immediate control and supervision the staff of registration officers, by whom the work would actually be performed. The Committee shared in the opinion of witnesses that the work of registration would be more satisfactorily performed under the arrangement indicated, and they thought that the practicability of such a scheme merited careful consideration. Evidence was given before the Committee that some of the present registrars are less efficient than they might be, no steps being taken prior to appointment to ascertain whether the candidate possesses the necessary qualifications for the proper discharge of the duties of the office. In many instances it appears that the registrars do not understand the medical terms made use of in the certificates presented to them; and it is doubtful if they always possess in a sufficient degree the intelligence and discretion required in questioning an informant in a doubtful case so as to elicit the information necessary to decide whether a death should be registered or referred to the coroner for further inquiry.

The regulations for registrars of births and deaths issued by the Registrar-General on June 19th, 1885, provide that the holders of the office must be "intelligent, active, and not suffering from any infirmity calculated to hinder the efficient performance of his duties." The registrar must not be an undischarged bankrupt, a pawnbroker, an undertaker, a person licensed to retail intoxicating drinks, or engaged in any business or occupation which may be considered by the Registrar-General to be incompatible with the office, or with the proper discharge of its duties. The regulations do not require any medical knowledge on the part of those seeking this appointment.

The reason why it would be advantageous to the public welfare for registrars of deaths to have had a medical training, and to be the possessors of a registered medical qualification, will be more apparent on considering in some detail the duties of the registrars as laid down in the regulations of 1885.

1. On receiving a certificate purporting to be under the hand of a registered medical practitioner, it is no part of the registrar's duty (except he has reason to believe that the signature is a forgery) to question the truthfulness of any of the statements contained therein, as the responsibility for such statements rests entirely upon the certifying practitioner.

This is no doubt a very proper regulation, having regard to the fact that the registrars have no medical knowledge; but it is evident that a system which provides for no supervision

of the certificates given by medical practitioners leads inevitably in numerous instances to looseness or inadequacy of statement in the body of the certificate, which detracts very largely from their value as the data upon which are founded the most important part of the vital statistics of the country.

According to the evidence of Dr. Grimshaw, Registrar-General of Ireland, in that part of the United Kingdom, where the office of registrar of births and deaths is frequently held by a medical man (usually a Poor-law medical officer), the causes of death are more correctly certified than in England, Scotland, and Wales.

2. The registrar may register deaths which are not medically certified, if upon inquiry "he finds that the case is not one that he should report to the coroner." The deaths that must be reported to the coroner are: Deaths caused directly or indirectly by violence (poison, drowning, burns, suffocation, fractures, contusions, cuts, gunshot wounds, and all other injuries, whether occasioned by accident or otherwise); deaths in which the cause of death is stated to be "unknown"; and deaths attended by "suspicious circumstances." This instruction applies to all cases, whether certified by a registered practitioner or not. Whenever the death is stated to have been "sudden," and no certificate issued by a registered practitioner is produced, the registrar must report to the coroner. It may also be added that in addition to the above any death taking place during chloroform administration must be reported to the coroner.

It will be evident from these regulations for registrars that there is a large field for the exercise of their discretion as to reporting to the coroner deaths which may not exactly fall within any of the above definitions, and also in determining what are "suspicious circumstances." The trained perception of a medical man might detect unusual or suspicious circumstances or descriptions where the judgment of a lay mind without technical training would be quite at fault. Instances will be found in the report of the Select Committee on Death Certification; and it can hardly be doubted that under the existing system deaths are registered without inquiry which should properly have formed the subject of investigation by a coroner or his officer.

The greatest responsibility cast upon the registrar is that of determining when there are "suspicious circumstances" attending a death. It is highly probable that when a certificate is forthcoming from a registered practitioner, "suspicious circumstances" are hardly likely to suggest themselves to the mind of the registrar, and yet death may have resulted from criminal means adopted by the certifying practitioner himself, or the certificate may have been given to cover the practice of unlawful acts by an unregistered person. Not only would a medical registrar be more likely to have his suspicions aroused in cases of this kind, which are happily very rare, but there would be the deterrent effect of all certificates of death being liable to be scrutinised by a medical man, that is to say, by a person whose technical knowledge would invest him with a much wider discretion in accepting or refusing medical certificates of death, the knowledge of which would have a powerful restraining influence upon the minds of the criminally disposed. At the present time the medical officer of health of a district is the only person who has in any way the opportunity to inspect medical certificates of death within a few days of their being drawn, but he does not receive the copies of the registrar's entries until some days after they have been handed in by the informants of death, and it is no part of his functions to act as a detector of crime. Any inquiries he at present makes are limited to deaths which appear to have arisen from infection, or to be connected with insanitary surroundings, and when he does make inquiry to elucidate the cause of a death for the purpose of his own statistics, he is under no obligation to forward the result of his investigations to the registrar or to the Registrar-General. When no medical certificate is forthcoming as to the cause of death, the want of medical knowledge is likely to prove especially disadvantageous to the registrar. How is the registrar to arrive at an opinion which would justify him in reporting "suspicious circumstances" when he is unacquainted even with the symptoms of disease, and is unable to interrogate the informant of the death in such a manner as would lead to the disclosure of evidence pointing in the opinion of one qualified to judge to violence or criminality?

From the point of view of statistical correctness, the want of medical knowledge on the part of the registrar is likely to prove disadvantageous in those cases where an uncertified death has been reported to the coroner by the registrar, but the former informs the latter that he does not consider an inquest necessary. The regulations instruct the registrar to register the death, giving at the same time the best information respecting its cause that he is able to obtain from the informant of death. The little value to be attached to the registered cause of death, when concocted by two laymen in this manner, need hardly be insisted on.

The Select Committee of the House of Commons on Death Certification recommended that medical officials should be appointed whose duty it would be to investigate all cases of death which are not certified by a medical practitioner in attendance during the last illness. They were of opinion that the medical officer of health of each district should discharge this duty, but that where his engagements are such that he cannot personally undertake the medical investigations that may fall to him, he should be permitted to delegate the duty to a deputy, who should be a registered medical practitioner.

The London County Council adopted this suggestion amongst other recommendations contained in a report of the Public Control Committee on February 12th, 1895, but no Bill has been introduced during the past session either by the County Council or by the Government to give effect to these recommendations. The duties of these medical investigators were defined by the County Council as follows:

1. To inquire into causes of all uncertified deaths, assisted by responsible qualified inquiry officers. 2. To examine the body in all such cases, and make *post-mortem* examinations where necessary. 3. To report the results to the coroners sitting in court, who will then decide as to the necessity for holding formal inquests. 4. To give evidence at inquests, and act as medical advisers to the coroners.

As regards duty No. 3, the Select Committee on Death Certification were of opinion that the medical investigator might report direct to the registrar, forwarding a certificate of death, in all cases where he had satisfied himself that death was due to natural causes.

There can be no doubt that the appointment of medical investigators of uncertified deaths would cut away a good deal of the ground from the agitation in favour of the appointment of medical men as registrars of death. The most difficult and delicate part of the functions of the registrar would then be shifted to officials specially qualified to undertake the work. Granting, however, that this would be so, it still would appear to be desirable that a medical man should be the official superior of the registrar, and should have official cognisance of all deaths whether certified by a medical practitioner or not.

The principle appears to have been clearly admitted by the Select Committee on Death Certification that the interests of the public demand that no death shall be registered that has not come, or that could not come if the circumstances demanded it, under the official cognisance of a registered medical practitioner.

Where medical investigators of the kind contemplated by the Select Committee and by the London County Council have been or are about to be appointed, it might or might not be desirable that they should also fill the office of superintendent registrars of deaths. This is a point which might be profitably discussed in this Section. Whether the posts of medical investigators of uncertified deaths should be filled by the local medical officers of health, by police surgeons, or by specially selected pathologists is a question that has been considerably debated and about which various conflicting opinions may be held. There appear to me to be several objections to medical officers of health holding these appointments, but very few of any weight against the medical officer of health of a district being appointed to the post of superintendent registrar of deaths in his district. It would in many instances be almost impossible for the medical officer of health to act himself as registrar, but he might very well superintend subordinates, who could refer to him in any case of doubt or difficulty.

There is a very considerable modern tendency to cast all sorts of new duties upon medical officers of health without increasing their salaries in a corresponding ratio; and it will be necessary to safeguard professional interests in this matter. But otherwise the combination of the posts of medical officer of health and superintendent registrar of births and deaths should be welcomed by the members of

the Public Health Medical Service as likely to increase their sphere of usefulness in a direction in which it will be of great advantage to the public interests.

A DISCUSSION ON DESTRUCTION OF TOWN REFUSE BY HEAT.

I.—J. Spottiswoode Cameron, M.D., B.Sc.,

M.O.H., Leeds; Consulting Physician, Huddersfield Infirmary.

Dr. Cameron, after premising that it was necessary to find some mode of disposal of the contents of the dustbin, other than tipping them near populous places, described experiments made in Leeds since 1876 in this direction. This city had now three refuse destructors, and a fourth was nearly ready for use. Some 63,132 loads of dry ashpit refuse of market garbage, or of the unsaleable material from wet ashpits weighing 52,629, 2,691, and 9,540 tons respectively, were burned in the three existing destructors during last year. This was less than could be burned if necessary; for a large park absorbed a quantity of the dry rubbish for gardening purposes. The actual quantity burned in each cell averaged 5.6 tons in each working day, but the yearly average varied. It was 3.72 tons at the oldest, but 6.59 at the two newest destructors. The original intention of the Corporation had been to burn only the unsaleable rubbish from wet ashpits. To consume this, however, it was found necessary to add the drier material from dustbins where waterclosets prevailed, and now, owing to closing of tips and greater attention to sanitary requirements, a much larger quantity of this drier but subsidiently offensive material was consumed by heat.

At the newer destructor the fumes passed out from the hottest part of the chamber, not as in Fryer's original cells, alongside the new material being fed. A forced draught by steam jets assisted the combustion, which was kept up without any fuel other than was contained in the waste material itself. The temperature in the main flue in the destructor on similar lines rarely fell below 1,500° F. At the oldest destructor it was found that complaints of nuisance arose if the temperature was allowed to fall much below 1,000°. The weight of rubbish consumed in each cell varies with the frequency of clinkering. An average of 6¼ tons a cell meant a much larger amount at certain parts of the year. By employing three shifts of men it was easy to burn 8 tons a cell, and this had been done at one of the destructors in Leeds for weeks at a time. Experiments had also been made under the direction of the city engineer, and it had been found that by increasing the frequency of clinkering to every half hour, and using for each cell two half-inch steam jets, as much as 20 tons in twenty four hours could be passed through a single cell. This mode of working the destructors, however, was not economical. The table circulated among the members showed that with one-eighth inch jets clinkering every two hours 10.2 tons per cell were burned in twenty-four hours at cost of wages alone of nearly 9d. a ton. Without jets the quantity was 8½ tons, and the cost in wages nearly 11d. a ton. With half-inch jets with half-hourly clinkering the quantity increased to 28⅔ tons per cell, and the wages alone amounted to nearly 1s. 1½d. a ton. In considering the question of erecting destructors, it had to be remembered that the cost of burning was considerable—probably, with plant and everything else, not much under 2s. a ton. Against this had to be put the distance to which the rubbish would have to be carted to a tip. No fuel was necessary but a large amount of heat was developed, and it would be well so to place a destructor that this heat could be made available. It was also desirable that the site selected should be so situated as to involve as little cellar work in carting as possible. Finally, it had to be remembered that the collection of material at the destructor and the carting it there might be itself a nuisance. The daily emptying of ashbins would do much to prevent this.

II.—Brigade-Surgeon-Lieutenant-Colonel Faingle, M.D.

Brigade-Surgeon-Lieutenant-Colonel Faingle stated that they were discussing a very ancient subject, the destruction of refuse by fire, and when they considered the possible impurities finding their way, if not destroyed, into the river water supply, the subject had a really vital importance in the case of large cities. In the East, in many places fires were used as the great sanitary measure of the city, and the Tobhet of Jerusalem, or as Milton calls it: "black Gehennum styled the type of hell," was the place of burning refuse; where "the fire was never quenched," and the burning, fiery furnace of the plain near Babylon, was only a vast receptacle for burning the city refuse, and the fact of those who threw in the Hebrew captives being burnt, was due no doubt to some defect in the draught-shutters, by which the flames, instead of passing up the chimney, rushed out at the door. The plan on which this vast cinerator was placed, is what is seen now in the East, where bricks, etc., are burnt for the purpose of securing a draught in that windless land.

TYPHOID FEVER AS A DIRECTLY INFECTIOUS DISEASE.

By Joseph Priestley, B.A., M.D., D.P.H.,

M.O.H., Leicester.

I will not detain the members of the Section long, but I would like to draw their attention to what I consider an important fact in the etiology of typhoid fever—a fact the importance of which is not always admitted. We hear so much nowadays of waterborne and milkborne typhoid (with my apologies to you, Mr. President), that there is danger, I think, at times of medical officers of health forgetting or overlooking the fact that there may be other means by which this particular disease may be spread. I refer to its directly infectious nature—a subject to which my attention was first drawn in the following way. During the years 1892-4 there were notified at Leicester 634 cases of typhoid fever, all of which were visited and careful notes taken of their origins, surroundings, etc. Investigations into the milk and water supplies negatived the idea of there having been any spreading of the disease by such means in the case of these particular outbreaks; but in considering and classifying the sanitary arrangements in connection with the infected houses, it was found that, in contrasting water carriage and conservancy methods, those houses supplied with the former were infected nearly three times less than those with the latter. The number of pails to waterclosets in the whole town of Leicester is as 1 to 2, so that the incidence of this particular disease which we are discussing upon pail houses is comparatively much greater than that upon watercloset houses. But how? Why should pails be media through which this disease spreads? I confess that I am not one of those who believe in the *de novo* origin of the typhoid, the existence of an antecedent case being, in my opinion, necessary, and, if searched for, generally found. My explanation is that the pails become specifically infected with typhoid, and may then be the direct media through which the disease is spread from person to person, without water or milk playing any part in the carriage of such infection. Pails, *per se*, are of course not the causes of typhoid, but merely the means by which the disease may spread. Theoretically, therefore, granted a case of typhoid unnotified or unrecognised in a house supplied with a pail, the contents of which were not removed for a few weeks, with a temperature of the atmosphere sufficient to cause the germs to multiply, the inmates of such a house ought to run a great risk of infection. Such a theoretical state of affairs I have long searched and waited for, and my patience has at length been rewarded. The facts I will lay before you. The pails in Leicester are emptied once a week, but occasionally this rule is not observed, and excretal matters remain therefore in the neighbourhood of dwellings for longer periods. An exaggerated case occurred at 166, Green Lane Road, Leicester, the pail remaining unemptied for about four weeks, with the result that its contents accumulated until the pail at the end of that time was full to the brim, and even overflowing. There were eleven inmates in the house, and they all used the pail. R. G. sickened March 24th, and was ill for four weeks. His symptoms were sickness, diarrhœa, sleeplessness, and fever, but the medical practitioner in attendance did not notify it as a case of typhoid. Within two weeks from this time two others sickened, and from them six other cases arose within two weeks more, and were all notified as typhoid. I have no doubt that the eight cases were directly traceable to the first case, thus—

The ordinary channels through which typhoid may spread were wanting, so that I was driven to the view that the pail contents became infected specifically with typhoid germs, and through the pail not being emptied acted as a centre from which the disease spread directly to the persons coming into its immediate neighbourhood. How this happened, how the germs were conveyed to the individuals from this pail, whether through the atmosphere or by actual personal contact, I am not prepared to say; nor can I explain at present how a privy in a rural district after being once infected may, after the lapse of many months, or even years, become again a source of infection. Such is the fact, however. Other pails in this neighbourhood with their contents, allowed to accumulate, because not specifically infected, did not give rise to attacks of typhoid.

I would remind you that a pail may be infected at one house and then be transferred to another without efficient disinfection, so that it does not necessarily follow that only inmates of the same house will become infected, but also those of other houses in the immediate neighbourhood or district from which the pails are collected (the town being mapped out for purposes of pail collection). Further, friends or relatives from other parts of the town visiting infected houses may use the infected pails, catch the disease therefrom, and sickening at their own homes give rise to other centres. Bearing these facts in mind you will more readily understand the groups of cases which I propose to bring before you.

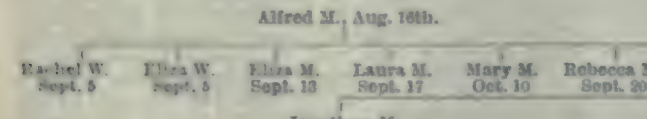
An imported case occurred at a house (44, Lea Street), and from this centre arose (as I traced them) nine other cases—namely, at 6, 10, 15, 13 (two cases), 23, 37, Alfred Terrace, and at 84, Gresham Street (two cases).

A case at 39, Burley's Lane, gave rise to eleven others, namely, 39, 43, 35, in the same street, 21, New Lane, 1 and 16 Court L, 2, Court N, 8 Court T, Northgate Street, and 10, 45, and 57, Northgate Street.

In Diamond Street there were 8 cases of typhoid amongst the inmates of the houses supplied with pails, whilst no case occurred in the houses supplied with waterclosets in the same street; 30 per cent. of the pail and 0 per cent. of the waterclosets houses became infected in the one street, resulting from a case that arose from drainage alterations in a neighbouring street.

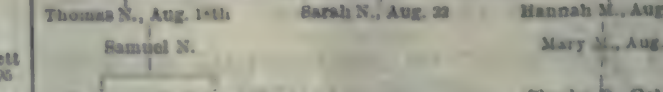
At 6, Court B, Littleton Street, there was a case of typhoid, and in consequence one of the inmates was removed to 15, Northgate Street, where she sickened, and then transferred the disease to a person living next door (5, Court A, Northgate Street).

At 13, Caroline Street, A. M. was notified as suffering from typhoid, but was not removed to the hospital, owing to the severity of his case and the refusal of his mother to allow him to be moved. He required careful and constant nursing at home, and this was done by his mother, assisted by her two unmarried daughters living in the same house, a married daughter living in the same court, a married son and daughter living near, and a neighbour living in the same street. All these 7 persons sickened with typhoid contracted, in my opinion, directly from A. M. Thus:



The dates are when the notification certificates were received.

At 3, Caroline Street, J. N. was notified suffering from typhoid fever on August 7th. Eight members of the same family, living in the same house or near, or friends living near, sickened afterwards with the same disease, in all probability caught from this first case. Thus:



and so on. I could mention from my notebook many other cases that can only be explained in the same or in a similar manner, but it will suffice for my purpose if I have pointed out the lines along which we must work, as well as upon the well-recognised lines of waterborne infection.

A DISCUSSION ON SMOKE ABATEMENT.

I.—Brigade-Surgeon-Lieutenant-Colonel R. Pringle, M.D.

Dr. Pringle said that the soot in the chimneys of ordinary dwelling-houses contained a very small proportion of carbon. The carbon was carried by the powerful draught into the upper strata of air in the form of smoke. In designing his apparatus for getting rain water free from the smuts from the roof he found that by washing the smuts under water, as was done in his appliance, they were divided automatically into their chief constituents—carbon and ash. The ash fell to the bottom, while the carbon rose and floated on the surface in very minute particles, which remained invisible until they collected in a fine film, which always came together again, however much broken up. On examining this fine film of carbon particles he found that they were so light as to float in the air. When the air was very dry the minute particles of carbon adhered together and carried upward a considerable quantity of ash, forming large smuts. When the air became moist these large smuts absorbed moisture and fell to the ground. They were sure precursors of a fog more or less dense, for the particles of carbon, floating invisibly in the highest strata, as they reached the moist strata in their fall collected there. The fog thus formed, however the wind might break it up, always came together again by the force of attraction between the particles. Such particles of carbon suspended in water in a glass vessel were invisible, but in a white china vessel they communicated to the water a hazy appearance, varying in density with the quantity of the particles in the water. This was the clue to the formation of the smoke or carbon fog. The transmission of light and the background becoming changed, a dense fog would suddenly develop. There was not 5 per cent. of carbon in ordinary soot, while from the smuts on the roof 50 per cent. of carbon could be washed out. The conclusion drawn by Dr. Pringle was that the prevention of fog was to be sought in the more perfect combustion of coal, and the prevention of the deleterious effects of fog in the use of gas stoves, in which the products of combustion were more thoroughly rendered innocuous than they were at present, since the excess of atmospheric air in the vast majority of gas stoves necessitated a flue into a chimney to remove these injurious products into the upper strata of air where they formed. Dr. Pringle believed that layers of noxious gases were formed in much the same way that noxious malarial emanations and the fog of swamps hung over lagoons or land that had been supersaturated with water.

II.—W. Graham, M.D.,

Middleton, Lancashire.

Early History in Lancashire.

In 1842, the year in which the twelfth meeting of the British Association for the Advancement of Science was held in Manchester, a Society for the Prevention of Smoke was started under the presidency of Lord Francis Egerton. It being indisputable that the smoke produced by manufactories, dye works, and furnaces might be prevented, it proposed to institute experiments and examine the relative merits of the various inventions. Mr. Houldsworth had made some experiments expressly bearing on the principles on which boilers should be constructed, and Mr. Fairbairn read a paper before the Association on the Consumption of Fuel and Prevention of Smoke, and the advantages of air admission were pointed out. About the same time Sir Robert Kane was asked to make a report to the Dublin Steam Navigation Company, and he showed that in furnaces of ordinary construction a great

deal of heat was lost, and a body of smoke produced. He showed, further, that the combustion of the gaseous material was best accomplished by introducing through a number of small orifices the necessary supply of air in a divided form in such proportions as to ensure complete combustion. Mr. Charles Wye Williams had obtained a patent in 1839, and investigated the subject in a philosophical manner. His invention consisted in admission of air to the bridges and flame-beds. The facility with which stokers can counteract the best arrangements suggested the advantages of mechanical feeders, of which Jukes's furnace was amongst the first. It was practically smokeless, and the parent of the modern coking smokeless furnace.

The suppression of smoke nuisance in Lancashire had been a comparative failure. Some time the excuse was the difficulty of procuring suitable smoke-consuming appliances, for it had been found that cold air applied at the back of a furnace was not sufficient, although a step in the right direction. The radical method was by a coking machine, of which there were several in the market.

In 1843 a Select Committee of the House of Commons was appointed to inquire into the means and expediency of preventing the nuisance of smoke. In 1853 Lord Palmerston's Act was passed, and only applied to London. In Lancashire there was a rapid growth of the cotton and allied industries difficult to contend with, and though London was immediately benefited it was not so in Lancashire, until in 1875 the Public Health Act gave power to private individuals under Section 105 of that Act, as well as to local authorities. Yet all over the country, outside a few towns, no great improvement had taken place, and it was surprising how action had lagged behind knowledge.

The New Movement.

The indifference has led to a new movement for smoke abatement now beginning to make itself felt. In 1881, in London, a Smoke Abatement Institution was formed and an exhibition held; it was then transferred to Manchester, where the Noxious Vapours Abatement Association has done some service. The work of testing smoke appliances being practically ended, the issue of the report would deprive smoke producers of the last shred of cause for continued pollution of the air.

Aggressive methods were acknowledged to be necessary, but they had been preceded by education of the public mind. Mr. Herbert Fletcher had made a brave attempt to accomplish the necessary reform, whilst the late Dr. Patterson's results in the court were very satisfactory. A Smoke Abatement League for the county had been formed with a view to the more firm administration of the law, and in encouragement of efforts to solve the problem of prevention of smoke caused by ordinary domessic fires, etc.

The law required that furnaces should consume their smoke as far as practicable, and "hollow bars, split bridges," and other openings of the bridge, air tubes through side flues, and other furnace openings were only partial methods, whilst the uselessness of sprinkling machines had been demonstrated. A good coking machine was a radical cure, but favourable results could be obtained by hand firings when their was ample boiler room, a good draught, and a damper not automatic.

A great deal could be done in a few years; amongst recent proposals that of appointing Government smoke inspectors, and of giving concurrent powers to county councils with the local authorities in the administration of the Public Health Act deserved commendation. The local branch of the league at Middleton had 200 members. At Oldham it had been decided to give triennially a "Patterson memorial prize" for the best essay on the methods of smoke consumption.

THE VACCINATION LAWS.

By T. Garrett Horder, L.R.C.P.Ed., M.R.C.S.

Dr. Horder pointed out that the amount of protection afforded by vaccination depended entirely on the efficiency with which the operation had been performed. He then quoted evidence that vaccination was frequently inefficiently performed under the system at present existing in this country. Thus, Dr. Gayton's statistics showed that of 10,000 cases of small-pox treated in the Metropolitan Asylums Board Hospitals, the vaccination marks were good in 2,085 cases, and imperfect in 4,854 cases. The patients with good marks had a mortality of 3 per cent., those with imperfect marks a mortality of 9 per cent. Dr. Barry, in his report on the Sheffield epidemic of 1887-88, showed that only one-third of the vaccinations performed by private vaccinators were satisfactory, and added that the majority of the private vaccinations which came under his notice were very much below the Government standard. Dr. Horder considered that the facts he had brought forward proved that there was a large class of children imperfectly vaccinated, and therefore imperfectly protected from small-pox. He added that it was well known that there existed in most large towns a class of general practitioners who were ready to vaccinate children at a very small fee indeed, and who were in the habit of vaccinating children in one or two places only. My proposal, he said, is to take vaccination away from private practitioners, and to place it in the hands of medical men who shall be appointed by the Local Government Board, and who shall, moreover, undertake not to practise their profession in any other way whatever. They would become, in fact, officials of the Local Government Board, would be paid by them, and would have the same privileges as the medical inspectors of that Board. This means, you will naturally say, the disestablishment and disendowment of the private vaccinator. This is undoubtedly true. With respect to those practitioners who are public vaccinators and Poor-law officers at the same time, it is probable that the question of compensation would be favourably entertained by the authorities. It must not be forgotten that some of those practitioners would receive appointments under the new regulations. I have made a rough estimate of the number of vaccinations performed by private practitioners in Manchester, Liverpool, Birmingham, and Cardiff, and I have taken the number of medical men practising in these towns from the *Medical Directory*. Allowing an average fee of 2s. per each case, I find that the medical practitioners would, if my proposal were carried out, sustain a loss of about 26s. each annually. It is curious to note the difference in the amount of private vaccination performed in the towns named. Manchester, with a population of about 500,000, returns the number of private vaccinations as 2,268. Liverpool, with a population almost the same as Manchester, returns the number of private vaccinations as 1,363. Birmingham, with a population less than either of these two towns, returns the number of private vaccinations as 3,202; and Cardiff, with a population of 136,000, returns the number of private vaccinations as 2,219. According to these figures, medical men in Cardiff would derive an annual income from vaccination of three guineas, whilst those in Manchester would only earn 6s. from the same source.

With the change in the status of public vaccinators, it would necessarily follow that the status of the vaccination officers would also change; they would become officials of the Local Government Board, and would cease to have any connection with the Boards of Guardians. We should then have the Vaccination Acts efficiently carried out in every part of part of the country.

REVIEWS.

Die Seelenkunde des Menschen als Reine Erfahrungswissenschaft. Von Professor Dr. Moritz Benedikt. Leipzig: Reisland. 1895. (Octavo, pp. 372.)

In the dedication of his book to his "Magnificence the Rector of Vienna University" the author says that having completed his sixtieth year he has now reached an age at which one feels anxious lest the heart should become still before the brain has given out all its messages. Dr. Benedikt has been a student of psychology from his youth upwards, and while his vigour of thought and force of expression have in no wise diminished, age has added maturity to his stores of knowledge. In treating of psychology he excludes metaphysics. Taking the standard of the common sense school, he assumes at the outset the reality of our knowledge and the existence of the outer world, though in one passage he

appeals to our geometrical ideas and their accordance with experience as a proof that our senses correctly inform us of what is without in space. What we have to study in psychology is the change of physical, chemical, and biological forces into consciousness and thought. How this is accomplished the Professor owns he cannot explain. *Ignoramus et ignorabimus*; but he does not question that such a transmutation takes place and that the organ through which it is affected is the grey matter of the brain without the co-operation of any spiritual entity. It might be objected that physicists did not assume that one force could be changed into another till they had proved this experimentally. We may say that heat or chemical action may be transmuted into electricity, and that into magnetism; but we cannot say with the same assurance that they may be changed into gravitation, and when one talks of thought being evolved out of any form of motion, the mind at once reacts against the assertion. Dr. Benedikt gives us a masterly sketch of the anatomy and physiology of the brain; but how does this help us to understand the problem which he puts before us?

He considers the direct observation of human nature, history, poetry, pedagogy, and the study of mental aberrations to be the most trustworthy methods of making acquaintance with the processes of our mental life. The Professor discusses latent consciousness, the growth and formation of our impressions and thought-life up to abstract ideas, pleasure and pain, the passions and affections, the origin and nature of right and wrong, responsibility, and law, æsthetics, and the nature of the will. During the course of the work we have many sagacious remarks—sidelights thrown out on points connected with those abstruse subjects. He then gives us essays on the nature of language and the illustrations which the aberrations of speech give of the faculty of expression, on the nature of work, the *Ichheit-ueberein*, the consciousness of the mind reflected in itself, and the differences in the mental make-up and characters of men and women.

Dr. Benedikt has a decided superiority over the mere scholastic psychologists who reproduce traditional ideas in traditional phraseology, when he comes to show the value of observations of diseased and altered mental life, illustrating the normal process of thought. His remarks on illusions and delusions, insanity, idiocy, and hypnotism, show a mature knowledge of these subjects. In the twenty-four pages on Criminal Anthropology we have to do with an observer of the first class. Perhaps the most original chapters in the book are those devoted to the inner life—the world of ideas and fancies which surround so many, and give a character which is often little suspected by their most intimate friends.

But it is when we come to the chapters on educational questions that we see Benedikt's vigorous mind breaking free from the traditional prejudices of the learned. He denounces the fight against Nature in the up-bringing and education of children, and the waste of time and trouble in forcing useless subjects of study upon unwilling youths. His hostility to the teaching of the classics goes so far that he not only objects to terms derived from the Latin and Greek tongues being used in German scientific works, but he wishes to avoid or get rid of those words already in use. While we agree with the Professor that Greek and Latin are now too heavy a load on general modern culture we think the advantage of having words not in common use for precise scientific and technical definitions is considerable, and the words adopted from the Latin and Greek often fit very well. We have thus a vocabulary common to all the Romance languages and to English, and to some extent even to German. The vernacular scientific terms in German are often a great difficulty to the student of its rich scientific literature; nor will he rejoice if Benedikt succeed in styling bacilli "Ansteckungs-Stäbchen" and cocci "Ansteckungs-Kerne."

The Professor holds that it is a great advantage for the cultivation of their mental powers that men should know more than one living language. These he recommends to be taught in childhood, when the speech faculty is most active. He does not spare the medical examinations, in which "the candidate must know everything which all the teachers know collectively, and even what they do not know, but think they do." With great solemnity the professor lays down the fallacies (*Denkfehler*) to which the learned are exposed. Those besetting medical men may be repeated for our instruction. They spring from the desire to make the healing art to repose wholly upon a scientific basis. The outer appearance of science diverts the specialist: with his scientific knowledge he wishes to build a complete structure. This tendency—the source of many errors in the history of medicine—appears in physiology and multiplies itself in the numberless symptoms of the sick bed. What should save the practitioner from being thus misled is his instinctive common sense.

Benedikt is too learned to know that it is an ancient *cheval* of the philosopher to think the public partakers of his own philosophical character. We are inclined to give as an instance of this the Professor's hope and desire that the common people should be indoctrinated in real science, and in the love of art and high class literature. As a *Denkfehler* of the German we should class the professor's dislike to cold water bathing, which, he observes, acts most prejudicially upon children and old people. The misuse of cold water, he tells us, destroys the function of a great organic surface, and gives an over-stimulus to the extremities of the nerves which they discharge upon the whole nervous system. Though the wet, cold stimulus, gives a delusive kind of pleasant reaction, if continued it can easily come to act as a nerve poison.

Dr. Benedikt holds that the increase of mental diseases and other brain and nervous affections is owing, in great part, to this excessive hardening of the constitution. It is a relief to reflect that when the cause is recognised the effects can be so easily put an end to.

In this country Professor Benedikt is a well-known figure at our medical meetings, and his well deserved reputation will no doubt be increased by this able, learned, and original work.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CONCENTRATED MEAT STOCK.

Vigor Consommé is a meat preparation consisting of a solid cake or tablet adapted for the purpose of readily making soup. In character it is similar to the ordinary stock of the cuisinier, but is in a much more concentrated form, and its nutritive value bears the same relation to that of meat as broths, soups, etc., generally do. Analysis shows it to contain nearly 85 per cent. dry material, including 8½ per cent. mineral matter. It does not contain coagulable albumen, nor more than a microscopic quantity of fibrinous material. It is well flavoured with vegetable extracts, and would be useful for the purpose intended. It is put up in boxes containing 1¼ oz., cake sufficient to make 1 pint of soup, and is prepared by the Vigor Syndicate, Walbrook, E.C.

SCOTCH WHISKY.

Messrs. Charles Blundell and Co., Ormond House, Great Trinity Lane, E.C., and Glasgow, have submitted to us samples of their "Cabinet whisky," which is said to be a blend of Highland whiskies averaging eight years old. It is a very mellow and sound whisky, free from noxious constituents, and of good alcoholic strength. The analysis shows it to contain alcohol equal to 15·5 per cent. under proof, while the acidity does not exceed 0.025 per cent. as acetic acid, and there is a somewhat large proportion of solid contents, amounting to 0.60 per cent.

MARVINO WINE.

This is a light-bodied wine of a Burgundy character. Analysis of the sample sent to us shows it to contain 12·25 per cent. of alcohol by measure, 2·42 per cent. extractives, and 0.74 per cent. total acidity in terms of tartaric acid. The specific gravity of the wine is 0·9943, at 60° F. It is supplied by Messrs. Dewdon and Co. Limited, St. Martin's Lane, E.C.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, AUGUST 31st, 1895.

DIPHTHERIA STATISTICS.

Dr. F. A. Dixey's contribution to the vital statistics of diphtheria in London, 1891-1895 (published at p. 531), is of special interest and value. The diphtheria statistics of the present year are being watched most carefully by those who take an interest in the seasonal and school prevalence of diphtheria, and particularly as statistical data are being freely used in the diphtheria antitoxin controversy by those who take widely divergent views as to the value of the antitoxin treatment. It cannot but be felt by those who take a strictly impartial view that both sides are in danger of trying to make statistics fit into their theories, instead of taking the statistics, considering them fairly, and allowing them to tell their own tale. Dr. Dixey's figures are therefore of value from the point of view that he, as an expert, arranges his figures first, and only then endeavours to see how far the results obtained fit in with other facts and theories. It may be gathered from his tables that during the year 1891 the number of deaths from diphtheria was about the average of the preceding ten years. In the year 1892, about the beginning of March, there is a commencement of a gradual rise, "which, with some considerable fluctuations, is, on the whole, steadily maintained throughout 1892 and 1893 until it culminates in the second week in November in the latter year, when the deaths attributed to diphtheria reach the unexampled total of 108." From this point there is a fall which goes on until the end of 1894, since which time the number of deaths has been, with slight deviations, about normal.

It is to be expected, as he points out, that under ordinary circumstances from the beginning of next month on to the beginning of March there should be a considerable rise in the number of deaths from diphtheria, unless some new factor should come in to interfere with the normal curve, and it will be exceedingly interesting to observe whether such rise does actually take place, or whether it is as marked as statistical and meteorological observers would predict from the data at their command.

Another most important point brought out is one to which all those who are called upon to deal with throat affections should pay special attention. There seems to be a rise in the diphtheria mortality during each period immediately following the return of children to school, which can be accounted for only on the supposition that there is a spread of infection amongst them by cases which are sent back to school before disinfection of the clothing and person of patients has been effectually carried out. This being the case, the present seems to be an exceedingly good opportunity of putting to the test the possibility of isolating these children until it has been proved through bacteriological examination that diphtheria bacilli are no longer harboured in their throats beyond the stage of convalescence, especially in those patients suffering from chronic enlargement of the adenoid tissue of the fauces, etc. It is well worth running the risk of keeping from school a few children who are not suffering from diphtheria, if by so doing the medical attendants of diphtheria patients can ensure the isolation of those under their charge until all risk of carrying infection has been thoroughly removed.

Dr. Dixey's contention that many of the old cases of diphtheria were not cases of diphtheria at all, whilst on the other hand those cases that were diagnosed as membranous croup were undoubtedly true cases of diphtheria, must commend itself to all who have had experience of this so-called croupous affection; and there can be little doubt that in the revision of the diphtheria statistics this factor will have to be taken into very serious consideration, especially when modified, as Dr. Whitelegge has pointed out, by a consideration of the seasonal occurrence of these cases of so-called croup. The last point with which Dr. Dixey deals is the effect of the antitoxin treatment on the diphtheria mortality, and he brings into prominence the fact that the diphtheria mortality has fallen from 62.8 in 1893, and 51.4 in 1894, down to 33.5 for the first half of the present year.

In accounting for so sudden a fall, he points out that there has not been any diminished occurrence of the disease, which is as prevalent now as ever, and, after allowing for all sources of error, he maintains that the fatality of diphtheria has received a very decided check; he thinks, indeed, that even last year the antitoxin treatment must be credited with "preventing the usual autumnal rise in the number of fatal cases;" whilst it has also "helped during 1895 in keeping down the diphtheria mortality in spite of the large amount of disease still present in the metropolis." These deductions are sufficiently startling in themselves, but should there be a still further decline during the coming autumn, the evidence may be looked upon as being still stronger; whilst as greater precautions are taken to isolate, even for lengthened periods, cases in which the diphtheria bacilli remain in the throats of the convalescent patients, it may be anticipated that not only will there be a fall in the case mortality, but also that the actual number of cases will also be diminished; for such number of cases ought to diminish in proportion to the diminution in the number of the centres of infection.

It is, perhaps, well on most occasions not to prophesy until one knows, but the history of epidemiology during the last few years has corresponded so closely with what had been anticipated as the result of measures taken to cut short different forms of epidemics that prophecy on these matters has become a very much less risky affair than hitherto, and has been reduced rather to a question of logical deductions from well ascertained data. At all events the diphtheria question in London is one of enormous importance, and any statistics which afford a clue as to the method

of spread of the disease cannot be set aside until they have been carefully considered. Should Dr. Dixey's paper do nothing more than accentuate Mr. Shirley Murphy's contention that there is an increase in the mortality from this disease resulting from the carriage of infection amongst hitherto healthy school children, the appearance of the paper, well-timed as it is, will have served a purpose for which the author will earn the gratitude alike of parents and doctors. The other questions raised by him can be tested only by careful observation and comparison of the statistics for the next twelve months, but if special attention be paid to those points to which reference is made, and if anything like the same results are obtained with the antitoxin treatment in this country that have been obtained in the large Continental cities, the figures for the next twelve months should be as significant as those published by M. Richet in the *Revue Scientifique*. In the nature of things the fall can never be so marked in this country as in those where the hospital equipment and the hygienic conditions under which the patients are placed are not so favourable as they are with us; but in the case of patients treated at home or sent into hospital at an early stage of the disease equally good results should be obtained, although the fall may proportionately not be so great. These points, however, as already stated, can be determined only by prolonged observation, but the subject is now looked upon as being of sufficient importance to ensure such prolonged observation being carefully carried out.

"A DISGRACE TO OUR NATION."

We need offer no apology for again returning to the question of the adulteration of milk. In view of the enormous consumption of this form of food, and its importance as an article of diet, more especially to the young whose early growth and development largely depend on the purity and nourishing quality of the milk with which they are supplied, it is of the greatest public importance that the interest aroused by the publication of the results of our investigations should not be allowed to die down, or the results themselves be forgotten like a nine days' wonder. In truth, although the statements we have made are largely new, and from the way they are presented have attracted much attention, the abuse against which they are directed is old enough, and has not only for long been the subject of severe stricture by sanitarians, but has led to a certain amount of legislation with a view to its correction. What, however, may be news to some, and what everyone should know, is that, Acts or no Acts, the evil goes on, and that with the introduction of new methods of treating milk, and new means of keeping and distributing it, new forms of adulteration and sophistication have come into vogue, and are so commonly practised that of fifty samples of ordinary milk examined by Mr. Cassal, twenty-four were found to be more or less sophisticated either by the addition of water or the subtraction of fat, even when judged of by the lowest possible standard, while on the perfectly fair basis of requiring that milk should contain at least 3.5 per cent. of fat, ten more samples were undoubtedly sophisticated.

What is perhaps of equal importance is the extent to which milk is prevented, by the addition of preservatives, from going sour, and thus declaring that it is on the verge of going bad. Sourness naturally occurs long before decomposition, and its occurrence is so effectual a danger signal that people are warned off before more dangerous changes are likely to take place; but by the addition of preservatives this warning is prevented, and only this week we received a letter from a correspondent complaining that East-End milk will not go sour, and that absolute putridity comes on without any warning sourness. In this regard we must repeat that Mr. Cassal's analyses showed that boric acid preparations had been added to 28 per cent. of the samples of milk examined.

The point, however, to which we wish especially to draw attention is the pollution with organic impurity of the foulest and most disgusting origin, which was proved, by the careful bacteriological examination made by Mr. Sidney Rowland, to have existed in every case examined. The bacillus coli communis, the common and preponderating micro-organism found in the intestines, was not only discovered in every sample of milk which he examined, but existed in such quantity as to form fully 90 per cent. of all the micro-organisms discovered. There is no use in blinking the fact. Mr. Sidney Rowland's bacteriological investigations show the presence of this microbe, whose natural habitat is the intestines, in every sample which came before him; and in view of the profound impassiveness of the public in regard to matters of this sort, it is necessary to call a spade a spade, and in regard to this investigation to declare that in every case examined, the samples being bought over the counter in the usual manner, there was proof that the milk contained fæcal matter, presumably cow dung. Nor is this a mere deduction of an enthusiastic bacteriologist. It has long been known that cow dung was a very common ingredient of milk ordinarily sold. Professor Lehmann, in his work on *Methods of Practical Hygiene*, actually gives the proportion in which it existed in various samples, but the statement by Mr. Sidney Rowland, that in no one specimen which he examined was the bacillus coli communis absent, points to a constant and continuous defilement of the milk at its very source, which ought to drive the public to demand strict legislative control over the collection, storage, and distribution, of so important an article of diet. It is easy enough to understand how the filthy impurity gains access to milk. The cowshed in which milking is usually carried on is often saturated with excremental matter, and the movements of the animals and the walking of the milkman disturb at each moment myriads of micro-organisms which, rising in the form of dust, settle upon the fresh milk and defile it. But there is much reason to believe that in many cases the milk is fouled in a coarser and grosser manner than by dust. The cows themselves are plastered with dirt, the milker's hands touch their dung-stained hides, and then are straightway used in milking and, what is worse, a moment's thought will tell that should a cow be suffering from diarrhœa, the udder and the teats themselves will readily be soiled by mere contiguity to the parts involved.

So much for the fact that milk as it is ordinarily collected, transported, and sold is by no means the sweet and clean, the bland and innocuous substance which people imagine it to be when they order it for babes and invalids. Yet it might be. Nothing is required to alter all this except the enforcement of decency and cleanliness. But people hold back and hesitate to interfere with trade, forgetting appa-

rently that it is the absence of all restrictions in the trade that is permitting this great waste, and allowing a food product of an enormous money value and of unspeakable nutritive importance to be spoiled and rendered unsafe as an article of diet. For the danger of using common milk without a previous sterilisation in the form of boiling is by no means a small or theoretical one. This was never more forcibly put than by Mr. Ernest Hart in a paper read before the International Medical Congress in London, now fourteen years ago, in which he gave an abstract of upwards of 80 various epidemics due to polluted and infected milk. Since that time, however, proofs have accumulated on all hands, and the range of diseases so communicable has been widened. We still find, however, in the most recent communications on the subject the same tale. In the Historic Summary on Waterborne Typhoid, by Mr. Ernest Hart, recently published in the BRITISH MEDICAL JOURNAL, it is again shown how close is the relationship existing between dairies, milkshops, and the like on the one hand and typhoid fever on the other. While, however, he urges, as is most logical, that as things now are milk should be boiled before being used as food, he says, as we say now, that such a necessity ought not to exist. The conditions of the milk trade, in fact, should be such that the boiling of milk by the householder should not be required. But at present it is, for, as Mr. Hart says, "the state of a vast proportion of the places whence milk is sent to our markets, and the state of only too many of the shops where that milk is retailed, is a disgrace to our nation."

THE "SWEATING" OF DOCTORS BY FRIENDLY SOCIETIES.

THE dispute between the doctors and the friendly societies of Cork has been watched with the keenest interest by the medical profession as an object lesson in what may be called economic strategy. The working man and the tradesman, who act on the principle that all is fair in war against the doctors, are being fought with their own weapons, and they do not like it. They have adopted the tactics with which trades unionists are fond of reproaching masters and imported "blacklegs," but this manœuvre has practically failed, and within the last few weeks they have hung out a flag of truce. Through the intermediation of the Mayor of Cork a conference was arranged between representatives of the belligerent parties. The first meeting took place on August 14th, Professors Corby and W. E. Townsend, and Drs. Hobart, Magner, Guisani, and Lee attending on behalf of the doctors, the societies also sending six delegates. The terms of the doctors were, after some discussion, accepted, with some slight modifications, by the delegates, on condition that the ban of professional ostracism should be removed from the outsiders who had been imported by the societies; on this point, however, the doctors utterly refused to give way. The Mayor then undertook to see Drs. Morris, McMath, and McLoughlin—the "importations" in question—with the view of persuading them to evacuate an untenable position. At a further conference on August 21st the Mayor reported that this peacemaking mission had been a failure. The negotiations have therefore fallen through, and the situation is still one of acute tension between the doctors and the societies. The issue of the conflict can hardly be doubtful. The societies have decided to make no new appointments to the posts now vacant, which are to be divided between Drs. Morris, McMath, and McLoughlin. However energetic these gentlemen may be, their powers can hardly fail to be strained to breaking point by a widespread epidemic or even by a sickly season. While recognising that the societies were in honour bound to stand up for the men who had helped them at a time of difficulty, the medical profession cannot do otherwise than heartily approve the action of the Cork doctors, who are fighting not merely their own battle, but that of their brethren throughout the country. No one who knows the facts can deny that they have their quarrel just. They are fighting for a vital principle—that societies professedly intended for the benefit of the poor shall not be abused by the well-to-do. The fate of the interlopers may seem a hard one, but it must in justice be remembered that they have brought it on themselves by playing for their own hands without regard for the common weal of the profession to which they belong.

It is pleasant to turn from this matter to the conduct of the Mayor of Cork, who was the bearer of the olive branch, and whose disinterested efforts to bring about a treaty of peace are gratefully acknowledged by both sides.

Nor can the doctors on their part be said with any truth to have shown an unconciliatory spirit. They have been ready to make reasonable concessions where they could do so without receding from the main position which they have taken up. Had they consented to admit the imported doctors to professional intercourse, that would have been simply equivalent to striking their flag.

We congratulate the South of Ireland Branch of our Association on the determined stand they are making in defence of the interests of the medical profession; they have set an example which we hope will be followed wherever there are friendly societies which "sweat" medical men. Combination among members of the profession is the one method by which these associations can be taught to deal fairly by the doctors, without whom they could not exists.

It is interesting to note that a battle of the same kind against the "sweating" of benefit societies is being fought by the medical profession in Brussels. The dispute seems to have begun in the early part of 1894, when the Syndicate of Medical Practitioners of Brussels, after considering the question of their relation to the friendly societies, proposed certain modifications which, after a good deal of shuffling on the part of the societies, were finally declined by them. Accordingly after due notice the syndicate, which includes 420 of the 435 medical practitioners in Brussels decreed what was practically a "strike," the suspension of work coming into effect on July 6th. The members of the syndicate entered into an engagement not to take the place of any fellow member who resigned his appointment, and a strike fund was raised by a call on each member to the amount of 100 francs. Further, a rigid "boycott" was decreed against the few practitioners who refused to "come out." The number of these is now reduced to four, and the Federation of Mutual Aid Societies will doubtless soon be forced to surrender at discretion. It is amusing to note that in Brussels, as in Cork, the mere fact of the medical men daring to stand up for a living wage is denounced by some of the leading spirits of the societies as "infamous" and even "illegal."

In Brussels one indignant orator seems to have been so carried away by his feelings as to call the doctors "traitors," and to speak of invoking the aid of the law to make them return to their allegiance! It is the members of these societies themselves that have taught us the lesson, and it shall go hard, but we will better the instruction.

Let the profession only be true to itself and stand shoulder to shoulder, and it will not only be able to dictate its own terms, but it will be far more highly respected than it is at present by the very bodies who now thrive by "sweating" the members of it.

The only medical officers on whom distinctions have been conferred in recognition of their services during the recent operations in Waziristan are Surgeon-Colonel Lionel Dixon Spencer, I.M.S., who is made an Ordinary Member of the Military Division of the Third Class, or Companion of the Most Honourable Order of the Bath; and Brigade-Surgeon-Lieutenant-Colonel George M'Bride Davis, I.M.S., who is appointed a Companion of the Distinguished Service Order.

CYCLES FOR INVALIDS.

The possible uses of the cycle have not yet been dreamt of. The cumbersome Bath chair for invalids is giving place to the Coventry chair, which consists of a light wicker chair mounted as a tricycle driven from behind. In this easy little carriage an invalid can be trundled about the country lanes at the rate of five or six miles an hour, enjoying the breezes and the sunshine and the invigorating pleasure of change of scene at very small expense. Many country doctors have long been accustomed to pay their visits on a tricycle; but we hear now of a cycle cab used by a metropolitan doctor, which is driven by two youths, one behind and the other in front. By this method fatigue is avoided and the expenses of the stable abolished.

THE OPENING OF THE MEDICAL SCHOOLS.

With the approach of autumn the fancy of young men who intend to devote themselves to the study of medicine or who are already engaged in it, turns, not always lightly, to thoughts of the opening of the schools. That event used to be celebrated everywhere with an efflorescence of homiletic and didactic oratory that reminded one of the eloquent harangues which ancient historians put into the mouths of generals before a battle. The introductory address forms an appropriate commencement of the medical session, and we think it a pity that it should have been allowed to fall into desuetude at some of our schools. At most of them, however, the custom is kept up. Thus, on October 1st, introductory addresses will be delivered at St. George's Hospital by Mr. George D. Pollock; at the Middlesex Hospital by Dr. W. Julius Mickle; and at the Westminster Hospital by Dr. Monckton Copeman, where also Viscount Peel will distribute the prizes. At University College the introductory address will be delivered by Professor J. Rose Bradford, M.D., F.R.S., and the annual dinner of the Old and Present Students will take place on October 1st at the Hôtel Métropole, Sir Richard Quain, Bart., in the chair. At St. Mary's the introductory address will be delivered by Mr. A. P. Laurie; the annual dinner will be held the same evening in the King's Hall, Holborn Restaurant, Mr. Malcolm Morris in the chair. At St. Thomas's Hospital the prizes will be delivered on October 2nd by Sir Edwin Arnold, K.C.I.E., C.S.I., and the students will have the privilege of listening to a discourse by the author of *The Light of Asia*. At Guy's there will be no formal introductory address, but an excellent substitute will be provided by Mr. George De'Ath, who, on the evening of October 1st will read a paper at the opening meeting of the Physical Society on "Our Profession, our Patients, our Public, and our Press." The annual dinner will take place in the Club Dining Hall, Dr. Pye Smith in the chair. At the Yorkshire College, Leeds, the prizes will be distributed on October 1st by Professor D. J. Leech, of Manchester, who will also deliver an address. At the Sheffield School of Medicine the introductory address will be delivered by Professor Victor Horsley, F.R.S.; at University College, Liverpool, by Mr. Jonathan Hutchinson; and at Mason College, Birmingham, by Professor Percy Frankland, who will speak on "Pasteur and his Work: The Debt of Medicine to Chemistry." At St. Mungo's College, an introductory address will be delivered by Professor F. H. Napier. The other Scotch, like the Irish, schools open without sound of trumpet.

THE CHOLERA.

It is officially announced in St. Petersburg that 9 cases of cholera, of which 7 proved fatal, have occurred on board the steamer *Baikow*, which arrived at Vladivostock from Chifu on August 6th, and that, up to August 20th, 16 further cases, of which 12 terminated fatally, have been recorded in Vladivostock itself. In the town of Aleppo between the 19th and 20th inst., 7 cases and 5 deaths were registered; at Orfa 9 cases and 5 deaths; at Kilis 4 cases. No fresh cases have occurred in Hasmanzor for the last 9 days. On the 18th and 19th inst. no cases were registered at Adalia. The public health of the town of Nev-Shehir has also improved. During the last 3 days there was a blank bulletin. At Diarbekir, between the 19th and 20th inst., there were 19 cases and 17 deaths; at Sivrik, between the 18th and 19th, 5 cases and 3 deaths, and between the 19th and 20th 7 cases and 3 deaths. No fresh cases occurred either at Adana or Mersina on the 19th and 20th inst.; at Hatchin 4 cases and 1 death were recorded between the 17th and 18th inst.

OUR PAUPER SCHOOLS.

It seems as if the fact of becoming a guardian or manager of a pauper school had a paralysing effect on any power of criticism which men or women may previously have possessed. A seat on a board of managers or of guardians seems to beget a confidence that all is going well, that the school is in the best possible condition, and that the health of the children everything that could be desired. This was the tone at one of the recent meetings of the Lambeth Board, although Dr. Rigg, the Medical Officer of the Schools, reported that there was nearly seventy children under treatment in the infirmary and isolation wards; that several more cases of chicken-pox and mumps had occurred: and that three children had been removed with scarlet fever. No regret nor surprise was expressed by anyone that something like 20 per cent. of the children were ill enough to be in the infirmary; a spirit of contentment in the result of their own management reigned supreme in the board. That this satisfaction in things as they are is not justified is shown by a letter from the Local Government Board, enclosing a table of cases of ophthalmia for the last three and a-half years, showing how this disease had seriously increased. The "government of the people by the people" is attractive in principle, but when it is translated into the practice of allowing men and women, who seem unable to recognise that they are ignorant of hygienic laws, to govern an institution in such a way that 20 per cent. of its inmates suffer from preventable diseases, it sets thoughtful minds inquiring as to whether a central board, commanding more general notice and enlisting members of greater knowledge, should not control these local institutions.

UNDERGROUND BAKEHOUSES.

At a demonstration of the Amalgamated Union of Operative Bakers and Confectioners, held in Battersea Park on August 25th, Mr. John Burns, M.P., said the hours of the operative baker ranged from 60 to 120 hours per week, for which he received from 18s. to 30s., and in too many cases he had to

work under sanitary conditions which public opinion and medical science had both condemned; these, combined to long hours, were responsible for the premature breaking-up of men engaged in the business. In support of his contention he quoted from the work of Drs. Waldo and Walsh. The London County Council was preparing a Bill which would give them the general sanitary supervision of all bakehouses, and when that came into operation they would see that all defective places were attended to. He was sorry that the amendment which he moved on the Factories Bill had been prevented from coming into operation, but they had been able to arrive at a compromise by which, after January 1st next, no new underground bakehouse would be permitted. For himself, he would not give up until the baker, like other workmen, had his eight-hour day, and was able to work under proper sanitary conditions. Mr. Burns quoted figures showing that of 340 bakehouses in the West End 308 were underground, the proportion in that part of London being 88 per cent. as against 48 per cent. in the East End.

LEITH AND THE EDINBURGH HOSPITAL FOR INFECTIOUS DISEASES.

It is stated that the opposition of Mr. Welsh, as proprietor of the adjoining lands, to the proposed temporary hospital for infectious disease, was likely to have been withdrawn in virtue of an arrangement proposed. As stated in the British Medical Journal of August 24th, the high-handed action of the Provost of Leith, as chairman of the Dean of Guild Court, prevented the discussion of the very point for which the Court held its adjourned meeting. It is likely that the Court of Session will now be called upon to review the matter.

AN INTERNATIONAL CONGRESS OF RAILWAY AND MARINE HYGIENE.

At one of the meetings of the Public Health Section, Professor A. A. C. Guye, of Amsterdam, drew the attention of members to the forthcoming International Congress of Railway and Marine Hygiene which is to be held at Amsterdam on September 20th and 21st. The official languages of the Congress are French, English, and German. The work of the Congress will be divided into three Sections, dealing respectively with the securities for the physical competence of the staffs of railways and ships, the organisation of the medical service, and the hygienic interests of employees and travellers. The Committee has already prepared a report on what has been done under these three heads in Holland, whether by the Government or by the companies, and a hope is expressed that similar reports will be laid before the Congress by the representatives of Governments and companies in other countries, so that a comparative study may be made of the measures at present in force, and any faults or deficiencies therein discovered. At the annual meeting Dr. Guye expressed a hope that many members of the Association would attend the Congress. The subscription is 5 florins. All communications should be addressed to the General Secretary of the Congress, Dr. Pijnappel, Stadhouderskade, 60, Amsterdam.

THE INTERNATIONAL CONGRESS OF OTOLOGY.

The fifth of these quadrennial gatherings will be held in Florence on September 23rd and three following days, under the presidency of Dr. V. Grazzi. We have already published the subjects of the principal discussions, which will be introduced by Dr. Barr of Glasgow, Dr. Gellé of Paris, Professor Gradenigo of Turin, Professor A. Politzer of Vienna, and Dr. Secchi of Bologna. The complete programme which has now been issued contains the titles of fifty-nine original communications. The social side of the meeting is already well provided for by private and public banquets, a concert at the Artists' Club, a reception within the classic walls of the Palazzo Vecchio, and an excursion to Fiesole. The comfort of visitors has been further assured by arrangements with several of the leading hotels for bedroom, lights, attendance, and morning coffee for a charge of from 3 to 5 francs. All the Italian railway companies have granted reductions of 30 to 50 per cent. on their ordinary fares to those attending the Congress, these terms being available from September 12th to October 8th. A leaflet indicating the various routes has been published by Messrs. Cook and Son. The Congress promises from every point of view to be an interesting event, and the members will have an opportunity of seeing the Tuscan capital under most favourable circumstances. It is hoped that British otology will be well represented, as it is intended to invite the sixth Congress to meet in London, either in 1898 or 1899. The subscription is 20 francs (16 shillings), and entitles the "Congressista" to a copy of the printed transactions. It can be paid to Dr. St. Clair Thomson, 28, Queen Anne Street, W., from whom vouchers and all particulars as to routes, hotels, etc., can be obtained.

THE ADULTERATION OF DRUGS.

Important as it is to the healthy that their food should be pure, it is equally so to those who are ill to be assured not only of the purity of their medicines, but of the accuracy with which they are dispensed. We are glad, therefore, to note, from the report of the Chief Constable of Leicestershire, that in the administration of the Food and Drugs Act in that county the drugs side of the question is not neglected. Reporting on the drugs submitted for analysis, Dr. Bernard Dyer, the county analyst, says that the samples of medicine examined consisted of tonic mixtures obtained by submitting to 39 druggists throughout the county prescriptions for a mixture containing iron and quinine. In 36 of the 39 cases the mixture was both accurately dispensed and correctly labelled. In one case, however, while properly dispensed, it was wrongly labelled, teaspoons being substituted for tablespoons, thus giving the patient only one quarter the dose he ought to have taken. In another case the error was only slight, but in the third, although a mixture of quinine and iron was made up, it was quite a different mixture from that ordered, so different, indeed, that a patient taking it as directed, would be consuming 7½ g. of quinine a day instead of the 3 g. that would have been contained in the mixture as ordered. The druggist who dispensed this mixture was cautioned to be more careful in future. It is obvious enough that in the dispensing of medicines there are three chances of error, against none of which has the public any protection except by the intervention of the public analyst. The wrong drugs may be put in, or they may be dispensed in wrong quantities, or the drugs themselves may be impure. To these we must now add a fourth, for it is clear that, however carefully medicines may be made up, their action will not be what was was intended if they are not properly directed. It will then be a matter of considerable interest to the public to know that dispensing chemists are not being left entirely to their own devices in these matters, but that their doings are to some extent being kept in check by careful analyses such as those reported by Dr. Bernard Dyer.

THE CANCER HOSPITAL.

We have received a copy of a correspondence which has lately taken place between Mr. Charles R. Jennings and the authorities at the Cancer Hospital in regard to the case which some years ago was the cause of a trial for libel (Jennings *v.* Snow) in the Court of Queen's Bench. It is unnecessary to recall the details of the case further than to say that while Mr. Jennings was of opinion that the patient was suffering from cancer, and advised amputation of the arm, three other members of the staff were agreed that amputation would be a very unnecessary procedure, and reported the circumstances to the weekly board in such a manner that the dismissal of Mr. Jennings followed in due

course. Mr. Jennings now draws attention to the fact, which he thinks cannot be within the cognisance of the governing body of the Cancer Hospital, that, after being absent some time, this patient was readmitted to the Cancer Hospital, where her arm was amputated; that ultimately she died in 1891; and that the primary cause of her death was then certified as "Morbus cordis" and the secondary as "Suppuration following necrosis of rib." Evidently Mr. Jennings thinks that the result justified his recommendation three years before, and it will not escape the observation of the reader that a suggestion is thrown out as to the imperfect character, to say the least of it, of the certificate of death. Now these are not matters in which we expect, or indeed would wish, either the profession or the public to take much interest at this time of day. The lesson to be drawn from this feud, and from its continuance through these long years, is that special hospitals devoted to the treatment of one class of maladies, and as a consequence officered by men actively competing with each other in one particular branch of practice are far more subject to these miserable squabbles, and much less able to quell them than general hospitals. The staffs of the latter contain men practising in every department, a large majority of whom must therefore be outside and independent of any *casus belli* which may arise between individual members, and much better fitted to take a judicial view of any such differences. In regard also to the question of operations, or, as it has been termed, "over-operating," such a staff are by the weight of their authority much more likely to be able without offence to exercise a restraining influence on any over-enthusiasm in operating than could be done by a group of men actively engaged as coadjutors (or shall we say as opponents?) in the same field of practice. At any rate, it seems to be the fact that these "rows" tend to cling especially to special hospitals, and periodically throw such suspicion on their management that even when things are quiet the public is not easily satisfied that all is well. If things can reach such a pass before an actual explosion occurs as they have seemed to do in certain comparatively recent instances, but little security is given to the public as to good management, or to the patients as to orthodox treatment, by the parade of names in the published lists of the staffs of special hospitals, or by the apparent harmony which may seem to exist among them.

RAILWAY RACING.

The railway race to the North is over for the present, but it is only reasonable to believe that it will leave behind it a growing demand for acceleration of the services on many lines, and it becomes a matter for careful consideration how far these higher speeds will have a deteriorating influence upon the nervous tone of the drivers engaged in the work. If, as seems to us quite certainly the case, the nervous strain of driving a train is increased as the average speed is raised, we must believe that such a strain will tell upon the drivers, and that either they must work much shorter hours, or that greater risks must be run. We doubt whether the remarks of Mr. John Burns on the subject have received that consideration which they deserve. They have been met on the one hand by the assertion that the "racers" have not run at higher speeds than are common enough over certain sections of the line, and on the other by the testimony of the practical driver that there is no danger, and that few things are more enjoyable than making up time with a good engine on a good line. This may be so when a man is in the prime of life and in perfect health, and when, as in these races, he knows the line is clear. The general public, however, does not travel by trains for whose progress everything is pushed on one side, and when it becomes a question of general increase of speed all round the problem is very different. One has to consider the average engine driver doing his ordinary work, and overcoming his usual daily difficulties, but at a higher speed—that is, putting more work into the time—and we have no hesitation in saying that the wear and tear will be greater, and that that condition of strain or fatigue, or whatever one likes to call it, will be sooner reached, at which danger arises from the mind failing to solve in the given time the problem put before it. Few people have any idea of the complexity of the dilemmas, each of which has to be grasped and solved in a moment by the driver of an express. Everything has to be decided in an instant, and it is idle to say that the increased frequency and the increased urgency of the dilemma which has to be thus solved do not vastly add to the strain and wear and tear thrown upon the man who has to solve it. Higher speed means harder work, with more continued and concentrated attention, which certainly will sooner produce exhaustion and earlier necessitate rest.

PREVENTION OF RABIES AT THE PASTEUR INSTITUTE.

In a recent number of the *Annales de l'Institut Pasteur*, M. H. Pottevin gives the statistics of preventive treatment of hydrophobia in Paris during 1894. The total number of persons treated was 1,392. Of these, 12 died of hydrophobia, but as in 5 of the fatal cases the first symptoms showed themselves within a fortnight of the last inoculation, these should be deducted. Three cases in which hydrophobia developed whilst the patients were under treatment were also excluded. This leaves a total of 1,387 persons treated, with 7 deaths, a mortality of 0.50 per cent. The corresponding figures for the eight preceding years are as follows: In 1886, 2,671 persons were treated with 25 deaths, or 0.95 per cent.; in 1887, 1,770 with 14 deaths, or 0.79 per cent.; in 1888, 1,622 with 9 deaths, or 0.55 per cent.; in 1889, 1,830 with 7 deaths, or 0.38 per cent; in 1890, 1,540 with 5 deaths, or 0.32 per cent.; in 1891, 1,559 with 4 deaths, or 0.25 per cent.; in 1892, 1,790 with 4 deaths, or 0.22 per cent.; in 1893, 1,648 with 6 deaths, or 0.36 per cent. Of the 1,387 persons treated, 1,161 were French, and 226 belonged to other nationalities. Among these Great Britain heads the list with 128; Greece and Spain come next, though *longo intervallo*, with 26 each; then comes British India with 19. Belgium sent 16, Turkey 7, Holland 2, Russia and Egypt 1 each.

ALCOHOL AND THE NATIVE RACES.

Mr. Chamberlain has given great satisfaction to the total abstainers, and particularly to those who are interested in preventing the degradation, physical and moral, of the native races by the use of alcohol, by one of his first acts as Secretary of State for the Colonies. He insists that in view of Bechuanaland being annexed to the Cape Colony, the condition should be observed that the Cape Government shall not propose Bills to the Cape Parliament altering Bechuana laws affecting liquor traffic with natives, which laws are of a very stringent character. The subject was recently brought up at the International Congress at Bale by the Rev. J. Grant Mills, Honorary Secretary of the Native Races Liquor Traffic Committee. He drew attention to the fact that while duty on spirits in Great Britain was 10s. per gallon, in the Niger Coast and in British Central Africa Protectorate it was only a 1s. per gallon, in the Gold Coast and Togoland 9½d. per gallon, and in Sierra Leone 3s. per gallon. He contended that these low tariffs were quite inadequate to restrict the liquor traffic, and he urged on the members of the Congress to use their influence so that when the Brussels General Act is revised in 1898, such measures shall be passed into law as will secure for Africa total prohibition of the liquor traffic. Whether so stringent a law can be passed or if so whether it is advisable, is a question, but there can be no doubt that means could be taken to restrict or prohibit the sale of intoxicants to natives. One of the most melancholy results of our colonising energy is the frequent degradation of the native races as the result of introducing intoxicants among them. Everybody who has read Mr. Stanley's dramatic account of the discovery of

the Congo will remember the striking difference between the wild people of Central Africa and the miserable wretches who met him as he approached the West Coast, and who demanded simply rum and gunpowder. In Upper Burmah the importation of alcohol and opium was strictly forbidden by the native kings; but as soon as we took possession of the country we introduced the trade in alcohol and opium, with the unavoidable result of certain moral and physical degradation of the easy-going Burman, whose temperament particularly exposes him to temptation. This is a question on which the medical profession cannot be either blind or dumb, as to them more fully than to the members of any other profession are known the physical loss and terrible diseases which follow in the train of alcohol. It is our duty to the native races whom we conquer in the interests of our Empire and trade to teach them how to preserve health while accepting civilisation.

THE POLICEMAN'S CLOTHES.

Sir Blundell Maple has done good service to the Metropolitan Police by calling the attention of the Home Secretary to the discomforts they suffer during hot weather, owing to the thickness and style of their present uniform, and to the necessity of providing them with alternate uniforms for summer or winter wear. In this matter the Metropolitan force might with advantage follow the example of some of the provincial police authorities. We have lately had the opportunity of inspecting the suits furnished to the Cheshire Constabulary for summer and winter wear. The former is of serge, the latter of cloth, and as alternative to the helmet a cloth cap is furnished, which, without detracting from the smartness of the men's appearance, affords great relief to the wearer in sultry weather. Printed instructions are issued to each member of the force as to wearing these alternate suits from November to March, and from April to October. We have been informed that the example of Cheshire is being followed in many counties in the north of England.

A FIELD FOR CLINICAL RESEARCH.

A point which was raised in the Section of Public Medicine at the annual meeting by Dr. Boobbyer demands the earnest consideration of the profession. He insisted that a revision was necessary of much that had hitherto been taught respecting the criterion for estimating the continuance or decline of infection and the actual seat, or at any rate the principal seat or seats of infection in the different stages of such zymotic diseases as small-pox and scarlet fever. Of this there can be no doubt. Medicine, like every other science, requires occasional—nay, frequent—revision; and this not only at its growing points, but at its very base. We know, if we know anything, that certain diseases are spread by infection from man to man; and we know, also, that by the scales or scabs from the skin, and by clothing which has been worn by the patient while ill, the infection can be transmitted. What has been to a certain extent taken for granted, and what, although constantly taught in the schools, and constantly acted on in practice, we certainly do not know is whether these are the usual means by which such diseases are ordinarily disseminated. Dr. Boobbyer pointed out that he had found small-pox on one occasion to have been conveyed by a patient in the stage of eruption, who a few days later, in the scabbing stage, appeared by strong negative evidence to have been incapable of communicating the disease. Doubtless in a case of small-pox the whole man, himself, his scabs, and his clothes may for a considerable time remain infectious, but the researches of Dr. Power in regard to the diffusion of infection from the Fulham Hospital—researches which the Local Government Board has for long taken as the basis of its recommendations—all went to show that it was the aggregation of acute cases which was associated with outbreaks in the neighbourhood. So far as aërial infection is concerned, the stage of scabbing appeared harmless compared with the acute stage of the disease, and in many of the genealogies of outbursts of small-pox which have been drawn up nothing is more striking than the punctuality with which the incubation period of the one case dates back to the acute stage of one preceding. What, then, is the seat of this virulent infectivity, and what is its limit? In regard to scarlet fever the matter is no less interesting, and, we may add, the necessity for revision of old teaching is no less important. Firmly fixed in the older teaching, and still forming an essential part of modern practice, is the idea that the desquamation after scarlet fever is infectious. Although we now know that the infection spreads from the throat, it still is a rule both of faith and practice that after having had scarlet fever a child shall not mix with his fellows until all desquamation has ceased. It would be interesting to know the exact basis on which this rule is founded, and what is the evidence that after proper measures of cleanliness a desquamating skin, apart from an infectious throat, will convey the disease. The matter is most important, and one on which a careful revision of our knowledge is essential. Dr. Boobbyer says, as indeed is now generally accepted, that scarlet fever is often apparently propagated by a person whose skin is perfectly clean and normal, but whose nasopharynx continues affected. But he also says, what is not so widely recognised, that the disease frequently fails to spread from an actively desquamating patient (though surrounded by susceptible persons) if the mucous surfaces had only been slightly invaded. The points of danger must be determined before personal disinfection can be practised effectively. There is something which would be ludicrous if it were not so serious in the idea of a child patiently waiting through long weeks for the last trace of desquamation to vanish, and then returning to his nursery with a throat charged with infection. No doubt efforts are made to disinfect the throat, but it is by the skin the child is judged. The report of the Clinical Society Committee has done much to fix the limits of time during which diseases are infectious; we now want information as to the route by which infection leaves the body. Many unexpected bypaths of infection may be discovered—like that, for example, of the discharge of typhoid bacilli by the urine rather than by the fæces. It is a field of clinical research which is open to all, and is large enough for all. Revision of the very groundwork of our knowledge is required.

THE IRISH WORKHOUSES.

From the attitude taken by the Irish press we judge that it is making use of its widespread influence to champion the cause of the neglected and forgotten in the workhouses all over the country. The press is taking the wise course of giving full reports of the Board meetings, with, in many cases, short comments drawing attention to the point at issue. The Local Government Board has thrown upon the medical staff the onus of placing the various defects in structure or in management before their respective Boards; but this action on the part of the medical advisers to the guardians is simply waste of time and paper, unless the central authority is prepared to use the disciplinary powers with which it is entrusted to enforce reforms where these are called for. Dr. Moorhead, of Cootehill, has reported on serious defects in structure and on the insufficient dietary for the aged; Dr. Vesey, of Magherafelt, has placed before his Board a serious indictment of the state of the sanitary appliances in the near neighbourhood of his infirmary; the Cookstown Board is requested to improve the lavatory accommodation and to see to the ventilation of the wards; Dr. MacNamara, of Corofin, is in want of nearly everything for the sick wards; and so on; and as we glance over the daily papers of the Sister Country we cull these extracts, which might be added to indefinitely; but the point to which we wish to draw attention is that the efforts of the medical officers will be unavailing unless en-

forced where necessary by the Local Government Board, which has the power to make its will obeyed.

COVENTRY GUARDIANS AND THE REPORT OF THE VACCINATION COMMISSION.

According to the report of a recent meeting of the Coventry Guardians, vaccination in the workhouse has been suspended for a period of three years, owing to a resolution of the guardians to the effect that the medical officer shall not vaccinate children whose parents are in the workhouse without the consent of those parents, and that orphans are not to be vaccinated without the special authority of the Guardians. The position is a difficult one: for we believe that parents, though inmates of a workhouse, are still regarded as controlling their children in this respect, and that they can hence refuse to allow them to be vaccinated; but they would thus at once become amenable to the law, if that law were properly enforced. The Guardians have the same position as regards orphans; and if they, who are the administrators of the law, defy it, by not giving the medical officer instructions to vaccinate, they are responsible for the whole position of deadlock which arises, and this notwithstanding any duties which may devolve on the medical officer under the orders of the Local Government Board. The case is only one of many where the law as to vaccination is in abeyance pending the issue of the Report of the Royal Commission. When that is to appear neither the President of the Local Government Board nor anyone else is able to say. Including the late Dr. Bristowe, three of the Commissioners appointed in 1889 are already dead. What else may happen before the report is ready remains a matter of surmise.

SCHOOL BOARD CHILDREN'S VISION.

We have received from Dr. James Kerr, Medical Superintendent of the Bradford School Board, a report on the above subject. This report, although not pretending to be more than that of a first examination of the children, is worthy of notice as evidence of the increasing attention which is being given by the authorities to the question of the eyesight of school children in this country. It also possesses intrinsic merit. The tests employed were designed to detect every child who had not good distant vision with one eye at least, the list of children thus obtained including those with defect of distant sight from all causes, remediable or otherwise. Such a list having been made, it was an easy matter to more fully examine all the children thus tabulated, and to classify and deal with them as may be necessary. Dr. Kerr gives tables showing the number of children examined, and the percentage of defective eyesight in the different standards from 1 to 7. The result of this work, for which he deserves credit, will be of considerable value and benefit in the schools in Bradford, and his report will repay perusal by those who have to conduct similar examinations of large numbers of school children.

MEDICINE OR POISON.

The necessity of keeping poisonous articles as far as possible apart from medicines will be obvious to the most ordinary intelligence, but to a nurse who is supposed to possess special capability of appreciating the consequences of neglect in this respect there should not be any need to enforce this fundamental principle. The importance of such discrimination in dealing with medicines, and at the same time with poisonous articles, has been painfully demonstrated by an occurrence which has been the subject of a coroner's inquest at Northampton. According to the evidence of Mr. Cogan, who was called in to see the deceased person, the condition of his mouth and throat was such as to indicate that some irritant corrosive substance, such as carbolic acid, had been administered by mistake, and there were in the room two bottles of carbolic acid, one of which had apparently been mistaken for the medicine which should have been administered. The expression of regret, on the part of the jury, that more caution had not been exercised is not by any means a harsh or unnecessary comment, and it should be useful in directing the attention of the attendants of sick persons as well as their relatives to the danger of neglecting mechanical precautions against confounding poison with medicine, above all things when the exigencies of a sick person's room may interfere with the power of observation by the eye.

THE DEAN OF NORWICH ON DOCTORS' BILLS.

It is always pleasant to find the profession to which we belong properly and justly appreciated by those outside its bounds; perhaps all the more pleasant from the infrequency with which such appreciation is expressed. We therefore thank the Dean of Norwich for the kind eulogy of the medical profession which he introduced into his sermon at the Cathedral on Hospital Sunday. His remarks concerning doctors' bills should be widely read, for they deserve the attention of many whose position in the world is undisputed, who stand well with their neighbours, and are looked on as honest men, but nevertheless relegate the payment of their doctors' bills to the dim and distant future. The Dean is reported as having said: "Nor can I, nor shall I, be silent about the wrongs to which scores of medical men are subject. I refer to the startling contrast there is between the inexorable demands which society makes on medical men and the elasticity of the social conscience with respect to his remuneration. I have known cases where men are summoned, at all hours, and at all seasons of the year. Their bills are presented with timidity, if not anxiety, and they are received sometimes with amazement, sometimes with indignation, and sometimes relegated to oblivion. Nor are cases unknown where the righteous demand for work done is met by calling in another practitioner, he in turn to suffer as his brother did before him. I cannot permit myself to imagine that I address any such wrongdoer here to-day. But if I do, then, in my Master's name, I entreat you to remember that the medical men of this nation are the highest type of their class in the world; they are entrusted with the secrets of domestic life; they have all our liabilities, with the special liabilities of their order; they frequently die as martyrs to science, to suffering, to sympathy, to destitution..... Believing this, my plea is that every unpaid medical bill be discharged generously, gratefully, cheerfully, and that whatever account must be deferred in payment, the last to be deferred is the account of him who is the human agent who has brought us into the world, enables us to continue our work in life, and many a time lays down his own in endeavouring to battle death." How much more comfortable would be the life of many a hard-working practitioner if his patients would but act up to the duty so eloquently taught.

DOCTOR AND PROFESSOR.

A CORRESPONDENT writes: The discussion on medical titles seems to be migrating from your columns, where there is no more to be said—much as there is to be done elsewhere—into those of the daily journals. The latest correspondence is in the *Morning Post* of August 13th. As regards the title of Professor, there seems to be much confusion in the general mind. Some innocent readers—not ladies only—seem to think that this title signifies a certain standard of "merits and qualifications." It signifies, of course, nothing of the sort. A professor is one who holds, well or ill, a chair in a university, or at any rate in some technical school of high standing. That such a one is a person of high qualities is an assumption—he may be or he may not. As to the title of Doctor, the word is used in two senses, as are many other words, namely, to signify a certain grade in a university, and, again, to signify a member of the medical profession. In the latter sense the word has become rather a vulgarism. No medical man likes to be "Yes, Doctor"-ed

and "No, Doctor"-ed, a mode of address which some members of the public keep up in a most wearisome way. A medical man is, generally speaking, a physician; or, if he wishes to be regarded as a specialist in operative work, a surgeon. For the rest he wishes to receive the title of "Sir," like any other gentleman. In their inner minds we believe that even upon doorplates and cards most members of our profession would prefer to be addressed as is usual among other gentlemen; and that "Mr." accords better with the modern aversion from special costumes and small titles. Unfortunately certain persons, mostly those whose claims are not of the strongest, use the title of "Doctor" as a means of self-assertion; and thus others are obliged in self-defence to claim the same advantages—remembering Carlyle's allusion to "thirty millions of people, mostly fools." Before long, every qualified man will be called Doctor, and when the title is so general as to convey no distinction, perhaps it will be dropped by mutual consent all round.

THE SADDLE OF THE LADY'S BICYCLE.

That bicycling undertaken in moderation is conducive to health and vigour in women is now undisputed. The French physicians have pronounced decidedly in its favour, and M. Lucas-Championnière is a warm advocate of women bicycling. The fatigue in moderate bicycling is slight, the muscles are exercised, and the lungs are well inflated. The charm of the "wheel" is moreover so great that it induces women, who would otherwise be indolent, to take healthful exercise and long runs into the country. There is, however, still one desideratum in order to make bicycling quite safe for women, and and that is a satisfactory saddle adapted to the anatomical necessities of the case. In bicycling the body is often tilted forwards, and in the pressure brought to bear on the treadles and steering rod, the weight of the trunk is thrown on to the peak of the saddle, which thus gives direct support to the lower rim of the pelvis. The position is an unnatural one, and may, combined with the incessant movement of the legs, cause irritation and discomfort, if not more serious mischief. The correct saddle has yet to be devised for women bicyclists, and it would be well for bicycle manufacturers to give their attention to this detail.

LAVATORY CARRIAGES TO HEALTH RESORTS.

It is curious that the various health resorts, subsisting as they do on their popularity with invalids, do not take more trouble to lessen the irksomeness of the journey to their gates. We have long urged the necessity of providing lavatory carriages on all long distance trains, and on many of our main lines, especially those to the north, great improvements have been made in this respect, but the want of such conveniences is still bitterly felt on many of our lines; and among those worst off in this respect are some which lead to popular health resorts, places frequented by large numbers of invalids who must often be put to great inconvenience in getting there. In regard to Margate this deficiency has been forcibly brought to our notice by a correspondent, who states that the London Chatham and Dover Railway do not put a lavatory carriage on any of their trains, and that the only conditions upon which the South-Eastern will do so is that one pays four times over for a first-class ticket. Many invalids for whom change and sea air would be of the greatest possible benefit find themselves debarred from it by the impossibility of their undertaking a journey of several hours' duration cut off from access to lavatory accommodation. Our correspondent says: "Practically one line refuses to carry me, the other offers to do so on payment of £3 6s. for a single fare, and that only after a lot of telegraphing and writing to arrange the matter." Thousands of people go to Margate simply because they are out of health, and no doubt many more would flock in the same direction were the journey made easier for them. Everyone knows how suitable the clear air of that part of the coast is for elderly people, and what a benefit it is to them to be able to run off for a few days when fagged or tired of town; yet by their bad arrangements the railway companies practically deprive themselves of a remunerative traffic, and these watering places of what they want above all things—namely, an all-the-year-round *clientèle*; meanwhile crowds of invalids and men who would not like to be called invalids, but still cannot stand a journey in an ordinary English railway carriage, go to Brighton week after week, not because they love that London-by-the-sea, but because they can get there in comfort.

THE CASE OF DR. R. B. ANDERSON.

On Thursday afternoon a deputation from the Civil Rights Defence Committee, accompanied by Dr. R. B. Anderson, Dr. Ward Cousins, President of Council, and Mr. Francis Fowke, General Secretary of the British Medical Association, were received at the House of Commons by Mr. Cohen, M.P.; Mr. Dalziel, M.P.; Mr. Albert Lewis, M.P.; Mr. McKenna, M.P.; and Mr. W. Jones, M.P.: in order that a short conference might be held in reference to the judicial injuries to Dr. R. B. Anderson, and the civil rights of medical men and British subjects involved in them. The Right Hon. the Earl of Stamford, the President of the Civil Rights Defence Committee, introduced the deputation; and the facts of the case having been stated by Maj.-Gen. G. F. L. Graham, Dr. Ward Cousins, and other gentlemen, Mr. Cohen and the other members of Parliament present promised to give Dr. Anderson whatever support his legal advisers might consider it necessary to take. Arrangements were made for a further conference between members of the Civil Rights Defence Committee and members of the House, to be held at an early date.

MEDICAL WOMEN IN RUSSIA.

According to the official register of medical practitioners in Russia the total number of women licensed to practise medicine in the dominion of the Czar was 554. Of these 291 were private practitioners, 98 were in the public service as Poor-law medical officers, and 17 as sanitary officials; 33 held appointments in schools and colleges for girls; 31 occupied posts in private or municipal hospitals, and 10 in lying-in hospitals; 8 had medical charge of factories or other industrial establishments, 4 were assistants in special educational establishments, and 2 held appointments in lunatic asylums. Most of these ladies had gone through the old courses for medical women in the Nicolai-Krieg Hospital of St. Petersburg, which were abolished in 1882. More recent statistics show that in August, 1894, the number of medical women had risen to 691. In the medical faculties of Switzerland there were in 1891-92 114 Russian women studying medicine; the majority of these are described as "politically untrustworthy" from the official point of view. There is also a considerable number of Russian women, for the most part Jewesses, at present studying medicine in Paris. It is not considered likely that the opening of the School of Medicine for Women in St. Petersburg, which is, we believe, definitely fixed for July, 1897, will materially diminish the number of Russian ladies studying medicine in Paris, for it is stated that only women professing the Christian faith will be admitted to the new school.

Testimonial to a Medical Officer of Health.—Mr. Edward Marshall, having resigned his appointment as medical officer to the Mitcham Industrial Schools after forty years' service, has been granted a superannuation allowance of £66 13s. 4d. annually, and on August 17th last he was presented with a testimonial consisting of a silver tea tray and waiter, with his name and words of esteem engraved, by all the officers of the Holborn schools, as a memento of their regard and esteem.

THE PREVENTION OF CHOLERA AND TYPHOID:

VALUABLE REPORT OF PROFESSOR HANKIN.[1]

PROFESSOR HANKIN'S annual report for the year 1894 will be read with deep interest by all who are concerned with the practical sanitation of India, or who are interested in the preservation of the health of our troops, and in the prevention of the epidemics of cholera and typhoid. Mr. Hankin is the Chemical Examiner and Bacteriologist to the Governments of the North-West Provinces and Oudh and of the Central Provinces. His laboratory at Agra, though of the simplest and least costly character, is the most living centre for the prosecution of bacteriological research in India, and is a model which should be adopted in each of the great provinces of India, under the direction of an able bacteriologist trained in the latest methods of scientific research, and freed from the hampering control of a rigid military medical system.

Mr. Hankin's report deals with medico-legal cases of poisoning, with investigations into the nature of the hairs from mud smears on mango trees which excited so much attention and apprehension about two years ago, with the examination of filters, of mildew on canvas, of aerated waters, of substances suspected to contain pathogenic microbes, and of the microbes in Indian rivers. It deals with the testing of water at municipal waterworks, the analyses of well water, the disinfection of wells, the bacteriological test for the presence of the cholera microbe in water, and it gives a most deeply interesting account of the causes of the outbreak of cholera in Cawnpore, and of the virulent outbreak of

THE CHOLERA MYSTERY IN THE EAST LANCASHIRE REGIMENT AT LUCKNOW.

The study of the latter is full of instruction, and bears out in a remarkable, and in many respects unexpected, manner Mr. Hart's waterborne theory of cholera in India. Out of a total of 646 officers and men there were 145 attacks, of which 93 terminated fatally. As Mr. Hankin says, "A few years ago this outbreak would without doubt have been quoted as a conspicuous proof of the view that cholera is a disease of locality, or that it is caused by a 'miasma.' It would further have been cited as a conspicuous illustration of the incapacity of the 'waterborne theory' of cholera to explain the facts connected with the distribution of the disease in India. Although all the companies were living under exactly the same conditions of life, and their supplies of water and food were identical, so far as could be seen, the disease showed the strangest preference to particular bodies of men, while certain barracks nearly or completely escaped the disease. Some companies furnished cases daily throughout the epidemic; others had but single cases, both while in barracks and while in the preparatory camp, but on their arrival in the Kokrail Cholera Camp the disease broke out among them as severely as in the rest of the companies. The disease appeared suddenly in the station hospital at the same time that the rest of the regiment was suffering so severely, although, so far as I know, there was nothing in common as regards water-supply or diet between the patients in hospital and the men on duty in the regiment. The disease showed a preference for certain wards of the hospital, while others remained perfectly unaffected. In short, the outbreak showed every character that has on other occasions been quoted as proof the inexplicability of cholera, and it is so referred to in the Government Blue Books."

THE WATERBORNE THEORY SUBSTANTIATED.

Now what is the explanation which was the result of a most careful inquiry on the part of Mr. Hankin and his colleagues? The East Lancashire Regiment consisted of companies A, C, E, F, G, H. When the cholera broke out in the cantonments the regiment was transferred to the Kokrail Cholera Camp. Throughout the epidemic the E company remained immune from attack, though the conditions of life were identical with those of other companies and their barracks were almost surrounded by those of companies who suffered severely from cholera. To again quote the dramatic statement of Mr. Hankin: "On cross-examining the colour-sergeant of this company the mystery at first seemed to deepen, for he roundly asserted that the men of his company had exactly the same supplies of food and water as the men of other companies. But on his being pressed as to how he knew that the water supply was the same as that of other companies he replied that he ought to know, if anybody, as *he boiled it himself*." It is needless to say that on making inquiries we found that this sanitary precaution had not been taken by the colour-sergeants of other companies."

THE PROTECTION GIVEN BY BOILING THE WATER.

By this simple sanitary expedient of boiling the drinking water the E company was completely protected from cholera. This is not, however, a solitary instance. Mr. Hankin gives another equally striking. When cholera was raging at Lucknow, and had attacked the cantonments, the 16th Lancers remained immune, and on inquiry into the cause it was found that nine months previously Mr. Hankin had sent a report to the regimental authorities strongly condemning their filter tank well, in consequence of which report the drinking water used by the men had since always been boiled. These striking cases explained the assumed "vagaries" of cholera, and gave the clue to further inquiries.

"THE WORST FILTERS IN THE WORLD."

The drinking water in use in the regiment was obtained from two "filter tank" wells. Some days after the cessation of the epidemic this water was bacteriologically examined, and the cholera microbe was found in the water coming from the filter tank—that is, in the filtered water, but not in the water coming direct from the well, that is, before filtration. The filter was obviously, therefore, the source of infection. On inquiry it was found that the sand used for the filters had been taken from an insanitary spot on the banks of the river below the town, and had been specifically condemned by Mr. Hankin as unfit several months before, and also that four out of the six coolies employed in collecting this sand came from a cholera district.

THE MACNAMARA FILTER FOSTERED THE EPIDEMIC.

Thus we find cholera prevented by boiling the water, and cholera engendered by fouled filter tanks; but another mystery was unexplained. Companies A, G, and H of the East Lancashire Regiment remained almost free from the disease while they were in cantonments, but on their arrival at the Kokrail Cholera Camp they suffered severely. "A minute inquiry," Mr. Hankin says, "showed that the water supply in the preparatory camp on the parade ground and in the Kokrail Camp was as good as could be desired, so could not possible be regarded as a source of infection. Nevertheless the disease broke out with redoubled severity. It occurred to the Commission that possibly the Macnamara filters in use by the soldiers were to blame, in that once having been infected they might possibly have continued to infect the pure water that was being poured into them. I had already found that these filters, so far from being able to remove the cholera microbe from water, appear to act as excellent breeding grounds for this microbe."

The evidence tends to show that the filters of companies C and F were highly infected, and that they became infected when taken to pieces and transported to the cholera camp. The filters of the companies A, G, and H were less highly infected. Now, companies C and F suffered severely, but companies A, G, and H only slightly, except when, by a series of untoward circumstances, they had the opportunity of drinking from the more highly infected filters of C and F companies, when there was an acute exacerbation of the epidemic. How the filters became thus specifically infected there is no direct evidence; there are reasons, however, for thinking that the infection was brought by one of the soldiers who had to do with unpacking the filters and setting them up again.

FILTERS THAT DO AND DO NOT PROTECT.

On the practical question of the use of filters Mr. Hankin has much to say that is instructive. Various filters were sent him to examine by the principal medical officers of Her Majesty's forces in India. He reports: "The Macnamara filter and the Morris patent circulating filter have been

[1] Annual Report of the Chemical Examiner and Bacteriologist to the Governments of the North-Western Provinces and Oudh, and of the Central Provinces, for the year 1894. Allahabad: North West Provinces and Oudh Government Press.

examined. The latter was found to be quite incapable of keeping back the cholera microbe, as is the case with all domestic filters, with the reputed exception of those known as the Pasteur, Chamberland, and the Berkefeld." The Macnamara filter was found to pass starch granules, which are much larger than cholera microbes. But the most dangerous thing about the Macnamara filter is that the cholera microbes remain in the filter and there breed. In the case of two infected Macnamara filters, the water they yielded contained the cholera microbe daily for nearly a month in each case. Every precaution was taken to ensure the purity of the water supplied to the filter. As to "filter tanks" attached to covered-in wells, Mr. Hankin is of the opinion that they are open to grave objections.

The Security of Closed-in Wells.

"It is now known," he says, "that everything objectionable that may be in well water comes in from above; the ground water itself is absolutely free from any infectious substance. Recently Koch has recommended in certain cases that existing municipal waterworks should be abandoned, and that the ground water should be pumped up and distributed to the town without filtration. If a well is properly closed in and its water raised by means of a pump, and if the well is otherwise properly constructed no possible infectious substance can get into its water. If the pump is so arranged that the man who has to oil it has an opportunity of infecting the water, then the well cannot be described as properly constructed. This was the state of affairs with the wells concerned in the outbreak of the East Lancashire Regiment. The Commission happened to get evidence that on the fifth day before the commencement of the outbreak a coolie went down into the well to oil the pump, and we had to take into consideration the possibility of this coolie having infected the water in the wells. It is now obvious that if the well is properly constructed filtration of the water is unnecessary, and, as in the present case, dangerous."

Mr. Hankin goes on to tell how both he and Surgeon-Major Rankin obtained the enteric microbe from the water coming from regimental filter tanks, which microbe had probably been introduced with the sand into the filter tank; from which it appears that there is a fresh danger in the renewal of the filtering materials, and Mr. Hankin says definitely in condemnation of the filter tank system: "It would be well to remove all the filtering materials, to see that the well is properly covered in, and by periodical inspection or bacteriological tests of the water, to be sure that it has been properly preserved from contamination. Some sort of continuous and impervious platform should be placed below the pump, so as to make it impossible for the man who oils the pump to infect the water beneath him while so doing. If this were done properly, I believe that the soldiers would always have for drinking purposes perfectly good water, and that filtration of municipal water supplies would, as far as they are concerned, be unnecessary."

The Cawnpore Epidemic of Cholera.

Investigation into the cause of the outbreak of cholera among the troops in Cawnpore was almost as instructive as that of the East Lancashire Regiment. Dropping cases of cholera had been occurring among the British troops, and cholera also appeared in the hospital for native troops. Water of the well used in this hospital was sent to Mr. Hankin for examination. The cholera microbe was found in it. The well was closed, and the cholera immediately ceased. The cases among the British troops could not be referred to the water, which was obtained from two closed in wells, in which the cholera microbe could not be detected. The cook house and coffee house were then examined by Mr. Hankin; they were perfectly clean and neat, but as the result of a bacteriological examination of the articles in the cook house the cholera microbe was discovered in milk which had been set aside for the men on guard; in chopped meat, not cooked, and in the drain crossing the floor of the cook house. Tested on guinea-pigs these microbes were found to be fully virulent. The cholera microbes were probably brought into the cook house by the cook's mates, who have practically unrestricted access to the native parts of the town.

Cholera in Relation to the Cholera Bacillus.

The strict and invariable relation which exists between outbreaks of cholera and the presence of the cholera bacillus has been abundantly proved by Mr. Hankin's researches, and dispose of the ignorant assertions made in some quarters that the theory that cholera is due to the cholera bacillus is not proven. The cholera microbe was detected in two wells which furnished the supply of water to the East Lancashire Regiment which suffered so severely from cholera; it was not detected in the water supply of the Royal Artillery, which remained practically free from the disease; no cholera microbe was detected in the various wells belonging to the 16th Queen's Lancers, who remained immune. The cholera microbe was found in the well used for drinking purposes in the hospital in the Rae Bareli Road. There was a history here of importation, and owing to the microbe having reached the water supply the imported case became the focus for a small series of fresh cases; and so on. The report itself must be studied for the details of numerous other cases cited. The cholera microbe in a degenerated condition is found in wells and tanks as the epidemic diminishes, and three months later it has generally vanished altogether. These degenerated cholera microbes are isolated with difficulty, and they show a small degree of virulence when tested on guinea-pigs. As, however, these cholera-resembling microbes are nearly always capable of producing diarrhœa, Mr. Hankin considers that any well containing such should be closed.

Disinfecting the Wells.

Mr. Hankin devoted a great part of his report to the question of the disinfection of wells. Lime was the first object chosen, which was certainly successful in destroying the microbes, but as it frequently killed frogs in the well as well, the results were not uniformly satisfactory. Latterly he found permanganate of potassium much more satisfactory. In a great majority of cases when a well, known to be a source of cholera infection and containing cholera microbes, was disinfected with permanganate, the cholera ceased at once in the area supplied by that well. The results were however not uniform, but they have been so good that Mr. Hankin asks for an extended trial of this method of combating cholera and of destroying it at its source.

Observations on Enteric Fever.

The first part of the report concludes with some observations on enteric fever. A sudden outbreak of enteric among the men of the East Surrey regiment threw suspicion on the milk. The milk consumed by the men was obtained only from the regimental dairy, and it was sent to the camp in padlocked cans. Both the municipal water and the milk were sent to Mr. Hankin for examination, and in neither was the enteric microbe found. A few days later a native, on his way from the regimental dairy to the camp, was caught in the act of prizing open the lid of a padlocked can containing milk, and pouring into it water from a neighbouring well. This can was sent to Mr. Hankin for examination, and he found the milk was adulterated with 30 per cent. of water, and that the enteric microbe was present. These accidents do not, however, explain, according to Mr. Hankin, the prevalence of enteric fever so constantly occurring among the British troops in India, and further researches are required on the subject, particularly as to the cause of the outbreaks of enteric fever during the rains.

Government Thanks.

The thanks of the Government are rendered very cordially to Professor Hankin for his able report and for his devotion to his work, which on one occasion, when he accidentally inoculated himself with virulent cholera poison, nearly led to serious results.

The work and researches of Mr. Hankin must have a widespread and permanently beneficial influence on the sanitation of India, which has hitherto been a reproach to England and a frequent menace to Europe, and we trust that the Indian Government will, in accordance with the representations made on behalf of the Indian Medical Congress by Mr. Ernest Hart and of the promises made by Sir A. Mackennell, establish other such laboratories in each of the great Indian presidencies.

RED CROSS WORK IN NEWCHWANG.

For the following interesting notes we are indebted to Surgeon Herbert Lloyd Penny, R.N., H.M.S. *Firebrand*, China Station:

The total number of wounded treated reached certainly over 600, but exact statistics were impossible owing to such large numbers coming in at once and occasional panics causing friends to carry away a small number. The first to be admitted were about 50 stragglers, who had found their way in carts from the fight at S. Chinchow, having been three weeks on the road. After the engagements at Kang Wang Tsai, Newchwang (the native town), and Ta-ping-shan large numbers were brought by carts, in baskets, slung from bamboos, or even carried on their comrades' backs, taking from one to three days on the road.

Our hospitals consisted of Manchurian inns, holding from 1 to 200 persons, the patients lying at right angles to the walls on "kangs" extending the length of the building, benches made of brick work, with the flues from the reed fires running through them, the sole means of warmth. The wounded lay in their sheepskins and wadded clothes as they were brought in, blankets being out of the question.

Several of the attendants were Chinese of some education, who had been doing work under medical missionaries inland, and were most useful in carrying treatment and dressings. The rest were of the coolie class, and very little to be relied on. I may mention that several of the foreign residents volunteered their services as dressers, doing most valuable work. One hospital was entirely worked by volunteers from the officers and men of H.M.S. *Firebrand*, with the co-operation of the Rev. J. McIntyre, in charge of commissariat, etc.

The medical staff consisted of Dr. Daly (of Newchwang), Drs. Christie, Grey, Gregg, and Brander (Medical Missionaries), Surgeon Arnold, U.S.S. *Petrel*, and myself.

The wounds were nearly all caused by the Murata bullet, calibre 0·45 inch, which we later verified as being the weapon used by the Japanese. No magazine bullets were found. A few were wounded by splinters of shell, and still fewer by the bayonet. Of the total number one-third were flesh wounds, the majority healing within three weeks; but in cases in which bits of clothing remained violent inflammation often set in, followed by prolonged suppuration. Of the remainder about 30 per cent. required immediate operative treatment, that is, extraction of bullets, amputations, trephining, etc. No case of primary hæmorrhage, of course, reached us.

(*a*) The injuries of the head were remarkable for some of the wonderful recoveries made. Of 4 cases of trephining and elevation of bone depressed by glancing shots, 3 were completely successful, in the other death was caused by suppurative meningitis. One case in which the bullet passed through the right orbit, entering the external angle, destroying the eye, passing between the pillars of the left fauces, coming out below the left angle of the jaw, entering just behind the middle of the clavicle, coming out in posterior fold of the axilla. Recovery, with loss of right eye and slight paralysis of left shoulder.

(*b*) The injuries of the upper extremity were numerous and varied. A large number were compound fractures involving the elbow-joint. These were usually followed by prolonged suppuration and necrosis of fragments of bone, requiring removal. Amputation was necessary in 4 or 5 cases, the usual result being ankylosis with some movement in several cases. The amount of splintering varied considerably, but I saw no case in which more than one-third of a long bone was shattered, although fissures might extend further. Removal of the greater part of the ulnar was necessary in one case. Destruction of tendons, nerves, and vessels took place in several, followed usually by extensive sloughing and subsequent loss of motion. Wounds of the hand, as a rule, did well.

(*c*) Wounds of the chest: There were several cases in which the bullet passed completely through the lung recovered with scarcely a bad symptom, but cases in which the bullet was embedded and unable to be extracted developed a septic form of pneumonia, followed by death.

(*d*) Of wounds of the abdomen very few came under observation. Two cases of wound of the wall, with protrusion of gut, the latter being almost gangrenous, treated by stitching the serous coat to the wall and applying antiseptic dressings, in one the slough came away and healing followed, in the other general peritonitis set in followed by death. One case of wound of the colon recovered without operation, being seen too late for surgical interference.

(*e*) Of the wounds of the lower extremity, those involving the knee-joint were by far the most serious, in nearly every case septic inflammation of a severe type following, and necessitating amputation. Several cases in which operation was refused died with symptoms of general pyæmia. Compound fractures of the long bones did better, but necrosis of splinters delayed union. In two cases about one third of the tibiæ required removal. About 100 of the cases were complicated with frostbite, sometimes requiring removal of both feet, and greatly lowering the vitality of the patients. Wounds of the ankle and foot were usually followed with good results; those involving the joint, however, in most cases became ankylosed. General complications were happily rare. Two cases of tetanus resulting in death occurred. Amputation of the forearm had been performed in one. Two doubtful cases of erysipelas (cutaneous) occurred, but recovered rapidly under treatment. Of other diseases, pneumonia and malaria (the latter only in two or three) were the commonest.

The treatment was throughout carried out as far as possible under the general principles of antiseptic surgery, but the impossibility of getting anything like personal cleanliness increased the difficulties of maintaining antiseptics.

SMALL-POX AND VACCINATION IN OLDHAM IN 1894.

XIX.—Hospital Influence.

In his annual report for 1894, Dr. Tattersall, the health officer of Oldham, has set out concisely an account of the epidemic of small-pox from which that borough suffered last year, to the extent of 165 cases, with 22 deaths, all the attacks being in persons removed to hospital with the exception of 3. No fewer than 13 cases were traced to one unnotified attack and 8 to another. The per-case mortality from all attacks was 13.3 per cent., and of vaccinated (117 cases, 8 deaths) 6.8 per cent., the rate in the unvaccinated (48 cases, 14 deaths) being 29.1, or upwards of four times that of the former class.

The following table shows the several facts at differing age periods, and be it remarked that all the vaccinated cases are together, whether of a kind that so often throws discredit on vaccination, or done in a proper and efficient manner. And be it further remarked that no successfully revaccinated person contracted small-pox, the hospital staff also escaping attack:

Borough of Oldham. Small-pox, 1894.

Ages.	Borough.			Primarily Vaccinated.			Unvaccinated.		
	Cases.	Deaths. Total.	Deaths. Per-centage.	Cases.	Deaths. Total.	Deaths. Per-centage.	Cases.	Deaths. Total.	Deaths. Per-centage.
Under 5 years	24	10	41.6	3	1	33.3	21	9	42.8
5 to 10	16	2	12.5	6	1	16.6	10	1	10.0
10 to 15	13	1	7.7	11	—	0.0	2	1	50.0
15 to 20	25	2	8.0	21	1	4.7	4	1	25.0
20 to 25	53	3	5.6	28	2	7.1	6	1	16.6
25 to 35	19	3	15.8	10	3	30.0	—	—	—
35 to 45	9	1	11.1	8	—	0.0	1	1	100.0
Over 45	1	—	0.0	1	—	0.0	—	—	—
Total ...	165	22	13.3	117	8	6.8	48	14	29.1

It is of interest to note the proportion which attacks in the one and the other class bear to the whole of the class at the several periods of life, and, whilst the numbers are small,

they still carry the same conviction with them as to the saving power of vaccination, whilst by its absence the revaccinated class lays claim to public attention as a uniquely-protected community, here as elsewhere.

Another short table taken from Dr. Tattersall's report deals with the influence of the Westhulme small-pox hospital on the neighbourhood surrounding it, under two differing sets of conditions, namely, in 1893, when acute cases were under treatment therein, and in 1894, when only convalescent cases were under its roof, the attacks being in the first place sent to the new hospital away from the town:

Untreated Cases of Small-pox in relation to Westhulme Hospital, Oldham.

Quarter-mile Zones.	Total Number of Houses in 1893.	1893 (Acute Cases in Hospital). Number of Untreated Cases in 1893.	1893 (Acute Cases in Hospital). Percentage of Houses Affected.	1894 (Only Convalescent Cases in Hospital). Number of Untreated Cases in 1894.	1894 (Only Convalescent Cases in Hospital). Percentage of Houses Affected.
Within ¼ mile radius of Westhulme Hospital	170	10	5.8	0	0.00
Zone ¼ to ½ mile	1,060	62	3.7	3	0.18
,, ½ ,, ¾	2,450	40	1.6	4	0.16
,, ¾ ,, 1	5,000	46	0.9	10	0.20
Outside 1 mile radius	20,200	49	0.2	19	0.09

The marked manner in which the ratio of houses invaded by small-pox lessened as their distance from hospital increased in the earlier year as compared with the absence of any such condition in 1894 tells its own tale.

Dr. Tattersall throws out a warning as to the probable advent at no distant time of another small-pox outbreak in the borough, looking to the large number of unvaccinated children growing up there; and indeed the borough even now seems to be passing through an abnormal amount of small-pox of an equally abnormally fatal character.

UNHEALTHINESS OF THE TELEGRAPHISTS' LIFE: THEIR MORTALITY GREATER THAN THAT OF THE SHEFFIELD GRINDERS.

THE Committee of Inquiry regarding the grievances of the telegraphists in the service of the Post Office has taken a large amount of evidence.

One of their troubles on which the greatest emphasis has been laid is the great irregularity of their hours of work, and therefore of rest and of meals. Apparently with the object of letting each clerk have his fair share of the disagreeable hours, their time table is so arranged that every week there is a change, the hour for coming on duty varing from 7 A.M. to 3 P.M. This necessitates a weekly change of all the habits, from getting up to going to bed, and it is to be observed that the position of the meal times in the working day is also altered with each change. Usually the change is made once a week, but in some cases it appears that there is a variation every day. From a medical point of view it is obvious for people leading a sedentary life such a complete absence of all semblance of regularity must be injurious.

The most startling evidence as to the unhealthiness of the telegraphist's life was that adduced by Mr. C. H. Garland, a First Class Telegraphist, who showed the very large preponderance of phthisis among the causes of death in the Telegraph Service. Drawing a comparison with the deaths from the same cause among "all adults" and among "grinders in the cutlery trade," as shown in the Registrar-General's Report, he gives the following table:

—	Phthisis.	Other Respiratory Diseases.	All Respiratory Diseases.
All adults, 1887-8-9	14.4	19.7	34.1
Telegraphists...	45.4	17.4	62.8
Grinders, 1880-92	34.5	26.5	61.0

In view, however, of the fact that very few deaths in the service had occurred above 55 years of age, he constructed a further table excluding in each class all deaths after 55 years of age. Thus:

—	Phthisis.	Other Respiratory Diseases.	All Respiratory Diseases.
All adult males	13.4	18.4	31.4
Telegraphists...	46.6	12.9	59.5
Grinders	33.1	24.3	57.3

Compared in this way it is seen that the proportion borne by respiratory diseases to the total mortality among telegraphists between the ages of 15 to 55 is greater than among the grinders, and more than twice as great as that among the ordinary populace during the same age period, and that among respiratory diseases phthisis has an alarming preponderance.

We need hardly say, however, that the facts are not necessarily so bad as from a cursory inspection of the above tables might appear. Nothing is said of the death-rate in proportion to the total number of telegraphists living; the ratio is only worked out in proportion to the deaths from other causes, and it is obvious that this ratio might be comparatively high among the telegraphists, while the death-rate from respiratory disease in proportion to those living might not be above the normal. Still it is a notable fact, and well worthy of the most careful attention of those in authority, that considerably more than half of all the telegraphists who do die die from respiratory diseases, against 24 per cent. among other classes of the same age, and that of these respiratory diseases phthisis occupies so high a place.

ARCHÆOLOGICA MEDICA.

XIV.—JOHN BROWNE AND THE ROYAL GIFT OF HEALING.

THE literature of the Royal touch for the cure of the king's evil is large and the plums have already been extracted from John Browne's book by Pettigrew in his work on medical superstitions. The author and his subject, however, are of sufficient interest to repay further study, especially as Dr. Payne's research has given us particulars of the author's life.

John Browne was born at Norwich in 1672, but he does not appear to have been related to Sir Thomas Browne, who was also of Norfolk extraction. John Browne was destined from his earliest infancy to the practice of surgery, for he says in the preface to his *Adenochiradelogia* that he has been "evermore conversant in chirurgery almost from my cradle, being the sixth generation of my own relations, all eminent masters of our profession." First in his native town he was apprenticed to Thomas Hollyer and was entered under him at St. Thomas's Hospital in London. He was licensed to serve as a surgeon's mate in the navy, but he soon quitted the sea, settled for a time in Norwich, and published a book on *Preternatural Tumours*. He migrated to London about 1678, and was appointed one of His Majesty's surgeons in ordinary. He was elected a surgeon to St. Thomas's Hospital by letters mandatory from the King on June 21st, 1684, a post which he held until July 7th, 1691. The surgical staff of the hospital then came into collision with the governors, under that Sir Thomas Clayton as their President who was libelled by

Dryden as Ishban in *Absolom and Achitophel*. The specific charges brought against the surgeons was that they did not obey the regulations of the hospital and that being appointed by Royal mandate they did not consider themselves servants of the governors. These charges being proved the staff was dismissed. Browne continued in his Court appointments throughout the reign of James II and into that of William III. He died about the year 1700.

Browne was so prolific a writer that he was charged publicly with the *cacoëthes scribendi* which his great namesake was at some pains to repudiate. He published a *Discourse on Wounds*, a *Surgeon's Assistant*, and a *Myographia Nova*, consisting of copper-plate engravings of the muscles, remarkable, says Dr. Payne, as being probably the first instance in which the names were actually printed upon the muscles. The fame of John Browne rests upon his *Adenochoiradelogia, or an Anatomick-Chirurgical Treatise of Glandules & Strumæs, or King's-Evil-Swellings, together with the Royal Gift of Healing*, "succinctly described" in a volume of 525 pages, not counting the prefaces and eleuchi, and digested into three tracts. The work was licensed to be printed on February 28th, 1683-3, and its exclusive production was assigned to him by the King his master for a term of fifteen years.

The first part of the work is the Adenographia, or an exact anatomical treatise of all the glands in the body, lymphatic and otherwise. The author shows himself to be a moderately good anatomist and a fair physiologist. It is dedicated in the effusive language of the time to Charles II.

The second tract is entitled Chiradelogia, or an Exact Discourse of Strumæs or King's-Evil-Swellings. It is dedicated to the Earl of Arlington, and is dated from "my house at Charing Cross, London, April 3rd, 1683." It deals with the various manifestations of the king's evil, which the author decides to be "no fictitious distemper or imaginary evil, but rather a proper disease. Its cause is flegm, which by all physitians is allowed to be the colder and more moist part of the blood, so it must be allowed a great parent of this evil brat." His pathology is consequently in advance of his predecessor Wiseman, who held that "it arose from a peculiar acidity of the serum of the blood, which whensoever it lights upon gland als, muscle, or membrane, it coagulates and hardens; and when it mixeth with marrow always dissolves it and rotteth the bone." Browne includes goitre as a manifestation of struma, and thinks that all the forms are particularly common in Ireland and in England, "the French pox and the scurvy being the two great clubbers toward advancing and increasing the evil." He then discusses the signs of the king's evil and its treatment, but in a most unsatisfactory manner, for he quotes authorities instead of giving his own experience—experience which must have been of the most extensive nature, "because I have been oft conversant and attending at many of these laudable operations, having waited on his sacred person both at publick and private healings, as one of his meanest chirurgions, where I have seen many thousands of poor souls touch'd and cured by his sacred hands (and as a more particular account hath lately been given in that he hath healed above six thousand this very last year)." Apart from the royal touch—the sovran'st remedy—the evil was cured as in the days of Clowes, Woodall and Wiseman, either by the pharmaceutical, the chirurgical, or the dietetic method. These are considered in detail, and we find that Browne would not bleed in such cases, and that he abhorred the use of vomits. He pins his faith to diet, for he says: "Let the exercise of the patient be moderate before and after dyet, and let his dyet be both attenuating and of good digestion, as veal, capon, mutton, lamb, rabbet, cock's breath, pheasant, partridge, and all small birds, and the like. Let his bread be made of good corn, to which may be added a little salt. In his broaths may be boiled either mint, balm, marjoram, marygolds, or pennyroyal; let him abstain from all things which may be thought to engender crudities.....let him drink wine, but in small quantities, or mix the same with small beer or water." The surgical treatment for tuberculous glands approximates very closely that which has recently been introduced. Browne shall speak for himself: "These tumours do require extirpation and extraction.....to be so dexterously performed, as that no part be left behind..... Our greatest advice in the use of the knife is to have a particular and special care to the vessels bordering upon these parts, namely, the nerves, veins, and arteries, lest they be injured hereby. The glands are to be extracted with great care and caution, so as no vessel whatsoever be injured by the operation; and if any flux of blood may happen in this operation, it is presently to be stopped with restrictives; and this method is to be prosecuted till every part of the cystus or bags thereof are perfectly and thoroughly eradicated and extracted, the which being done and the part clean, mundifie the ulcer, digest, incarn, and then induce a cicatrice." It is only in this after-treatment that his method differs from that of Professor Clifford Allbutt and Mr. Prodgn Teale.

The third tract, or the Charisma Basilicon, is the most interesting to the general reader. It is dedicated to the Bishop of Durham, who, as Clerk to the Closet of his Sacred Majesty, was officially present at each of the healings. It was his duty to stand on the right of his Sovereign, and to hand to him the piece of royal gold which was hung by a piece of white ribbon round the neck of each patient, and was supposed to be possessed of talismanic virtues. This portion of the work is partly historical, partly descriptive, and partly laudatory. It traces the gift of healing from the time of Edward the Confessor, and it gives a clear account of the exact details of the ceremony as it was carried out by Charles II and by James his brother. It appears from this account that the touching usually took place on Sundays, and immediately after morning prayer, though there was a common belief that it was more likely to cure if it was done on a Good Friday. The question of the numbers and of the expense, as well as the details concerning the touch pieces, have been so admirably treated by Pettigrew, that it is unnecessary to do more than to allude to his work.

The third book of the *Royal Gift of Healing* ends somewhat lamely with a series of cases of semi-miraculous cures vouched for by a variety of persons in different parts of the kingdom. An appendix is added, containing a list of the numbers of persons touched for the cure of the king's evil from 1660 to 1664 and from 1667 to 1682, the hiatus of 1665 and 1666 being due to the fact that the plague was raging in London, and the King was advised not to exercise his prerogative. It reached the astounding total of 92,107 persons, each of whom received a piece of gold worth about 7s. 6d.

LITERARY NOTES.

Dr. Lusk's *Midwifery* is to receive the exceptional honour of an official translation into Arabic. According to the *New York Medical Journal* the Vice-Principal of the Egyptian School of Medicine in Cairo has been directed by the Minister of Public Instruction in Egypt to arrange for the translation of a textbook of midwifery into Arabic, for the use of the students of medicine and the young women of the School for Midwives. The Vice-Principal has accordingly asked Dr. Lusk to sanction the translation of his work for the purpose.

In *Napoleone, Una Pagina Storico Psicologica del Genio* (published by Draghi, of Padua), Signor Augusto Tebaldi weighs the greatest of the Buonapartes in the balance of the psychological physician, and, as might be expected, finds him wanting in sanity. By his defects as well as his qualities Napoleon was, we are assured, predisposed, like Ancient Pistol, to make the world his oyster, which he with sword did pretty well open. "Assiduous observation, a clear notion of things and persons, the intuition of historical moments, the right choice of means, promptitude in action, always in the direction of his egotistic aspirations, all that psychological mechanism was in him very perfect and very active." But there was in his composition an original want of equilibrium, which was increased as time went on by his environment to such an extent that General Buonaparte and the Emperor Napoleon may almost be looked upon as two different personalities. Only a "neuropath" would have dreamed of forcing on the French people after the Revolution a restoration of the Empire of Charlemagne. This want of mental balance was the manifestation of a morbid inheritance. It showed itself first in the form of attacks of headache or colic, which would seize him in the middle of a battle; later it revealed itself in weakening of the energy and readiness of resource with which in his early days he could meet difficulties; and, finally, in the torpor of mind and body which

as Lord Wolseley has recently told us, lost him the battle of Waterloo. Tebaldi admits that Napoleon was not actually a madman, but he considers him an incomplete genius—"a great *dégénéré*," whose splendid endowment of intellect and will was spoilt by an exuberance of imagination and passion, a boundless egotism, an unmeasured pride, and an almost absolute lack of moral sense. He was an example of a great brain badly served by the inferior viscera.

The St. Louis *Medical Mirror* for July contains an account of the last illness of the founder of the great Western Republic. The following passage is quoted from a letter written by a gentleman of Alexandria to a friend in Baltimore:

> I sit down to give the truly melancholy event of the death of our much beloved General George Washington. He made his exit last night between the hours of 11 and 12, after a short but painful illness of 24 hours. The disorder of which he died is by some called croup, by others an inflammatory quinsy, a disorder lately so mortal among children in this place, and, I believe, not until this year known to attack persons of maturity.

In the library of an old gentleman of Washington, a copy of the *Sentinel of Liberty*, published in Georgetown, D.C., in 1799, has been discovered. It contains an account of the death of Washington, which, in some particulars, differs from the version that has hitherto generally been received. It runs as follows:

> Some time in the night of Friday, the 13th inst., having been exposed to a rain on the preceding day, General Washington was attacked with an inflammatory affection of the upper part of the windpipe, called in technical language cynanche trachealis. The disease commenced with a violent ague, accompanied with some pain in the upper and fore part of the throat, a sense of stricture in the same part, a cough and a difficult rather than a painful deglutition, which were soon succeeded by a fever and a quick and laborious respiration. The necessity of blood letting suggesting itself to the General, he procured a bleeder from the neighbourhood, who took from his arm in the night 12 or 14 ounces of blood. He would not by any means be prevailed upon to send for the attending physician till the following morning, who arrived at Mount Vernon at 11 o'clock on Saturday. Discovering the case to be highly alarming, and foreseeing the fatal tendency of the disease, two consulting physicians were immediately sent for, who arrived, one at 3½ and the other at 4 o'clock in the afternoon. In the interim were employed two copious bleedings, a blister was applied to the part affected, two moderate doses of calomel were given, succeeded by repeated doses of emetic tartar, amounting in all to 5 or 6 grains, with no other effect than a copious discharge from the bowels.
>
> The powers of life seemed now manifestly yielding to the force of the disorder. Blisters were applied to the extremities, together with a cataplasm of bran and vinegar to the throat. Speaking, which was painful from the beginning, now became almost impracticable, respiration grew more and more contracted and imperfect till 11.30 on Saturday night, retaining the possession of his intellect, when he expired without a struggle. He was fully impressed at the beginning of his complaint, as well as through every stage of it, that its conclusion would be mortal, submitting to the several exertions made for his recovery rather as a duty than from an expectation of their efficacy. He considered the operations of death upon his system as coeval with the disease, and several hours before his decease, after repeated efforts to be understood, succeeded in expressing a desire that he might be permitted to die without interruption.
>
> During the short period of his illness he economised his time in the arrangement of such few concerns as required his attention with the utmost serenity, and anticipating his approaching dissolution with every demonstration of that equanimity for which his whole life had been so uniformly and singularly conspicuous.
>
> JAMES CRAIK, Attending Physician.
> ELISHA DICK, Consulting Physician.

The signature of Dr. Gustavus Brown, of Port Tobacco, who attended as consulting physician on account of the remoteness of his residence from the place, was not procured to the statement.

The idea of tracheotomy does not seem to have been entertained.

At one time most ambitious young men in France began their career by writing a play, which usually was, dramatically speaking, a stillbirth. Claude Bernard was no exception to this rule. Some interesting particulars of his early career were given not long ago by Dr. Cabanès in *La Chronique Médicale*. On leaving school the future physiologist went to Lyons to study pharmacy. He there gave his services to a druggist in exchange for board and lodging. His employer supplied the veterinary school which was close to his shop, and it was part of young Bernard's duty to deliver the medicines intended for the sick animals. Once a month he had an evening out, when he used to go to the theatre; this inspired him with the ambition to write a play, and during the moments that he could snatch from the rolling of pills and the putting up of bottles of physic, he actually wrote a comic sketch entitled *Rose du Rhône*, which was played at one of the minor theatres of Lyons in 1833, and was so far successful that Bernard received some £4 in author's fees. With this capital he went to Paris to seek his fortune. Encouraged by this small stage triumph, he next wrote the inevitable tragedy in five acts, which he submitted to M. St. Marc Girardin, at that time the most influential dramatic critic in Paris. That gentleman would seem to have given Bernard advice similar to that given by Dryden to another ambitious youth when he said: "Cousin Swift, you are no poet." Bernard, however, received the advice in a meeker spirit than the author of *Gulliver's Travels*, and at once turned his attention from the stage to the dissecting room. The play on which Bernard had founded his hopes of fame and fortune somehow escaped destruction and in 1876 it was given by the author himself to his pupil, M. Georges Barral, who in 1887 published it. For this he had the sanction of Bernard himself, who only stipulated that it should not see the light till he had been at least five years in his grave. The title of the play is *Arthur de Bretagne*, and the scene is laid in Brittany and Normandy in 1202. It is endorsed by the author as an "unpublished play, read and declined after numerous corrections by M. Saint Marc Girardin in November, 1834," and Dr. Cabanès, with all his admiration for the great physiologist, can only damn his youthful dramatic effort with the faintest of praise.

Mr. Mitchell Banks, in his presidential address to the Lancashire and Cheshire Branch, which is published in the *Liverpool Medico-Chirurgical Journal* for July, complains of the laxity of some of the examinations in subjects of preliminary education which leads to the admission to the profession of "an enormous number of men whose general education is of the lowest type, and who never could have got into it if the entrance examinations had been of a proper standard. He gives some instances of misspelling from a paper on anatomy, such "foramine," "sepperated," "rige" (ridge), which are disgraceful enough in a second year student. It is some comfort, however, to find that in this matter we are, perhaps, not quite so bad as some of our neighbours. The Philadelphia *Medical News* of August 10th publishes the following list "culled with exact spelling from the papers of those examined by the Board of Medical Examiners representing the State Medical Society of Philadelphia" at its last examination. "Some of these gentlemen," writes the examiner who sent the list to the editor, "were graduated this year by medical colleges in Philadelphia":

> Athromatous, adhear, allways, amaloid, apatite, apetite, arcule, asslep, amediately, aeriated, aleow, breight, brane, be ded (dead), burried, beath, brite, caranus (of air), [illegible], [illegible], [illegible], cepets, caracteristic, clavical, consolidation, [illegible], consequence, crosse, crisis, cealing, dryziness (drowsiness), dieing, draft (draught), diseaze, dropsey, diastallic (diastolic), detale, dilated, extream, embarrased, exhasis, fatal (facial), fatiue, first strata, furnature, freshly, filter, hycalin (casts), herd (heard), height (hight), heaache, [illegible], [illegible], knapkins, Klebs-Lefra (bacillus), Krebs-Leffer, lavery, lene, liberaly, malase (malaise), manuburm (manubrium), murmer, matress, menl (meal), nasuao (nausea), osculation, [illegible], phinaties (females), partical, posable (possible), possiable, [illegible] (frontal), [illegible], parencaimo (parenchyma), prespiration, pereferal (peripheral), [illegible] (gravity), pulley, parient, pail (pale), quarrentine, quarenteened, quarintine, rhals, rales, rals, rhumatism, resever (reservoir), [illegible] (reservoir), resirvour (reservoir), resinence (resonance), resonence, [illegible], read (blood corpuscles), [illegible], [illegible], [illegible], sternum, sures (sewers), suden (sudden), sudent (sudden), [illegible], [illegible], sneeing, sourse, spleen, sputum, sterals, [illegible], [illegible], stomack, [illegible], sover (sore), tare (tartar), therally (thoroughly), [illegible], vemes (blood), vesiles (blood), [illegible], weesing, weaten, [illegible].

We venture to doubt whether Mr. Mitchell Banks can match that list of orthographical atrocities.

CREMATION IN PARIS.—From statistics recently published by the Prefecture of Police of the Seine Department it appears that during the six years the crematories in the Père-la-Chaise cemetery, Paris, have been in use there has been a steady increase in the number of cremations. The following are the figures from August 5th, 1889, till May 1st, 1895: In 1889 (less than five months), 49 bodies were cremated; in 1890, 121; in 1891, 134; in 1892, 159; in 1893, 189; in 1894, 216; in 1895 (four months), 75. These figures refer solely to incinerations carried out at the request of the deceased persons' legal representatives. The Père-la-Chaise crematories are also largely used for the disposal of what are called "hospital débris," that is to say, amputated limbs and other fragments of anatomised humanity. Of such relics, [illegible] were burnt in 1889; [illegible] in 1890; [illegible] in 1891; 2,261 in 1892; 2,380 in 1893; [illegible] in 1894; and [illegible] in the four months of 1895 included in the report.

ASSOCIATION INTELLIGENCE.

NOTICE OF LAST QUARTERLY MEETING FOR 1895. ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

MIDLAND BRANCH: DERBYSHIRE DIVISION.—There will be a meeting at the Whitworth Institute, Darley Dale, on Thursday, September 5th, at 3 P.M. The following papers will be read and discussed:—Dr. C. H. Hough: Bovine Tuberculosis, its relation to Milk as Human Food. Dr. W. Armstrong: The Nauheim Treatment of Cardiac Affections at Buxton. Afternoon tea will be provided by the President after the meeting, and Lady Whitworth will throw open her magnificent grounds to the members. The party will afterwards drive to Matlock Bath, for dinner at the New Bath Hotel, at 6.30 P.M. Tickets, 6s., exclusive of wine.—J. A. SOUTHERN, Honorary Secretary, Friar Gate, Derby.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—A meeting of this Branch will be held at the Swansea General Hospital on Thursday, September 12th, at 4 P.M.—O. ARTHUR DAVIES, M.B., Honorary co-Secretary, Northampton House, Swansea.

SPECIAL CORRESPONDENCE.

PARIS.

Psychological Medicine and the Law.—The Hygiene of Wet Nursing.—An Epidemic of Dysentery.—Anti-alcoholic Teaching in Schools.

PROFESSOR JOFFROY, in an address at the Bordeaux Congress of Mental and Nervous Diseases, summarised the progress achieved in this department of medicine during the last century owing to the labours and talent of Pinel, Esquirol, Duchenne (de Boulogne), and Charcot. He especially dwelt on the close connection existing between the study of insanity and neurology, and insisted on the necessity of a well-organised system of clinical teaching of psychiatry in every medical faculty coupled with compulsory attendance. In the absence of a special examination, part of the medical examination should be devoted to the subject. In order to prove the necessity of the new organisation, Professor Joffroy cited some of the numberless errors in medical jurisprudence committed by medical experts. This year a much larger number of members of the bar attended the French Congress of Allenists than in preceding year. A high judicial authority, the Premier Président of the Bordeaux Court of Appeal, addressed the Congress several times. He is impressed with the necessity of mutual understanding between doctors and lawyers in order to study together criminal responsibility, which on both sides he declares is regarded from a specialist point of view and not studied in all its aspects. He wishes for a course of lectures on mental diseases to be organised expressly for law students. The result he aims at is much to be desired but how to attain it is a question bristling with difficulties. At the Paris Law Faculty, Dr. Dubuisson, a distinguished alienist, gives a "free course," that is, one outside the compulsory curriculum and gratuitous. These lectures are largely attended, but law students among the audience are in an insignificant minority. It is suggested that the only means of compelling law students to study the medical aspect of law is to introduce this branch into the examination. This suggestion, however, does not find favour with some who declare that the best means is to facilitate a constant intercourse between members of the medical and legal profession, and to establish a common meeting ground between law and medicine.

Dr. F. Lédé has examined the question of the domestic hygiene of wet nurses receiving nurslings in their homes, and the mortality among the infants confided to them. He has ascertained that the mortality in 1894, like that of the preceding years, has varied in different departments. In the Ardennes it is 5.17 per cent.; in the Eure department, 5.58 per cent.; in the Seine department 6.18 per cent.; in the Seine and Marne, 8.32 per cent.; Loir, 10.03 per cent.; in the Aube department and in the northern departments, 10 30 per cent. Among the 974 nurses' dwellings examined by him, 12 per cent. had only one room, 59 per cent. had two, and 25 per cent. three rooms; the others had more than three rooms; 44 per cent. of the nurses were in ground-floor rooms, 26 per cent. on a first floor, 19 per cent. on a second floor; the remaining number on higher floors. In 1894 the mortality among infants thus boarded out in the Seine department was favourably influenced by the strict medical supervision exercised. Dr. Lédé wishes to see the following rules observed. The medical inspector should be the only person authorised to grant a certificate as to the sanitation of the nurses' dwellings. The inspector's report should be endorsed on the nurses' medical certificates. In cases of insalubrity from illnesses or other causes a certificate should be refused by the inspector, who should immediately notify the fact to the prefect of the department without stating the reason for refusing the certificate.

An epidemic of dysentery at Boissy broke out at the beginning of July; 10 deaths have resulted, 60 people have been attacked. The deaths, with one exception, occurred among the aged and infants, 3 of the former and 6 of the latter. The water supply of Boissy is taken from a well which is not a metre below the soil; the streets are not on an incline and are never cleansed, consequently the dirty water and refuse from the village slaughter-house percolates through the soil and contaminates the water supply. A small rivulet runs through the village, and is at the present moment a long track of mud. It was intended to remove the mud next September "in order not to interfere with the usual habits." The Mayor of Boissy has been directed to have this brooklet cleansed as soon as the temperature renders it possible. The streets have been disinfected, and the epidemic is decreasing. The inhabitants incriminate green manure heaps at a farm close to Boissy, but as the farmer in question has used similar manure during fifteen years the inspectors do not attribute much importance to them.

The Commission appointed by the Minister of Public Instruction to decide as to the means of combating alcoholism by school instruction has approved and adopted the report of M. Steeg, General Inspector of Primary Instruction. The Minister has addressed a circular to the prefects and rectors calling upon them to put in force the scheme of teaching formulated by M. Steeg, which is as follows: The curriculum, as it now stands, is utilised by M. Steeg. The "moral teaching" consists in explaining principles and giving lectures on practical morality. It is here, and in the chapters treating of "self respect, temperance, domestic and social duties," that M. Steeg dwells on the horrors of alcoholism and its results. In the chemistry and anatomy lectures, in which alcohol and fermentation are treated of, the same thesis is elaborated; as also in lectures on sanitation and in political economy. In the anatomy and physiological lectures the professor describes the organs in their normal condition, and afterwards by illustrations describes the fatal influence of alcohol.

BERLIN.

Cremation.—Death of Dr. E. Graf.—Forthcoming Congresses.

CREMATION is not yet permitted in Berlin, but its partisans are not idle, and are trying in all ways to get in the thin end of the wedge. Thus a petition has been presented to the Prussian Minister of the Interior by the Berlin magistrates praying that the limbs and other parts of the human body both of living and of dead individuals, and also the dissected corpses which are transmitted to the township of Berlin for burial from the clinics and municipal hospitals, may be destroyed by fire in the municipal churchyards. The petitioners state that, *de facto*, cremation is already practised to a certain extent in the surgical and gynæcological clinics, inasmuch as amputated limbs and corpses that have served for dissection are there burnt.

The medical profession in Germany has sustained a severe loss through the death of Dr. Edward Graf, Vice-President of the Prussian Diet. A man of great brain power, especially distinguished as an organiser, Graf devoted his energies equally to his medical duties, to forwarding the medical profession and uniting its members, and to political work. For more than twenty years he was the President of the Working Committee of the German Medical Association ("Deutscher Aerzteveinbund"), which at the present day numbers 10,000 members, and which owes not a little of its success to Graf's energetic leadership. In all questions of public hygiene, of safety appliances for workmen, etc., he was a pioneer, and in the Prussian Diet he was an earnest advocate in questions affecting the health and wellbeing of the masses. For the last fifteen years Graf was a member extraordinary of the Imperial Board of Health, where his advice was greatly valued. In politics he was a moderate liberal. He was in his 67th year when his death took place, after a short illness—in Constanz, on the Bodensee—on August 20th.

The Society of German Doctors for the insane will hold its annual meeting in Hamburg from September 13th to the 15th. Its first and foremost subject of discussion will be proposals of reform of the German lunacy laws. The Mariaberg revelations show that this question is a burning one, and that it is high time for public interest in it to be aroused.

Another annual congress or meeting, to be held in September, is that of the German Society for Public Hygiene, which will meet in Stuttgart. The chief subjects of discussion are to be: (*a*) measures to ensure the sanitary and hygienic development of towns; (*b*) sanitary questions connected with drinking water and water supply generally. Herr Röehling will read a paper on the technical arrangements employed in England for the water supply and canalisation. An exhibition of plans, models, etc., bearing upon matters of public sanitation will illustrate the purposes of the meeting.

CHICAGO.

Rush Medical College.—Subsidence of Small-pox Epidemic.—General News.

THERE is considerable agitation in favour of a million dollar endowment of Rush Medical College, and its consequent affiliation with the new University of Chicago. The present value of the property belonging to the College is said to be between 400,000 and 500,000 dollars, and the attendance of students is regarded as the largest in the country, the number for the last College year being 836. Notwithstanding the erection of large laboratories and many recitation rooms, and a general reconstruction of former quarters, there is yet a need for more room and greater extension of teaching power. These considerations, as well as the advantage of a large endowment, have led up to the connection above mentioned, the consummation of which would be a great advance for both parties interested.

Ex-Health Commissioner Reynolds has departed for a tour of inspection of European hospitals and health bureaus. Political positions, even in the profession and with professional approval, are exceedingly uncertain; and if Dr. Reynolds can find in the circuit of his travels some system of municipal management which shows appreciation of merit, and which pledges continuance in office for those who truly deserve the same, it will be a revelation to his eyes and a gladness to his mind.

Health returns now indicate the almost complete subsidence of the late small-pox epidemic, which began about two years ago. The climax was passed long since, and a gradual decline has marked latter months.

Dr. Nicholas Senn, our eminent surgeon, is taking his usual vacation outing this season in Northern Europe, principally through Norway. He is an enthusiastic hunter, and generally returns with substantial trophies of the chase. His literary work of the past winter consisted largely of a revision of his *Surgical Pathology*, and the completion of a large text-book on tumours soon to be issued from the press.

CORRESPONDENCE.

"THEY KNOW NOT THE MANNER OF THE GOD OF THE LAND."

SIR,—Under the above heading, there occurs, in the BRITISH MEDICAL JOURNAL of August 24th, a most interesting and suggestive letter. In connection with the matter discussed in it you may think it well to give space to what follows:

When Sir A. Home, V.C., was Principal Medical Officer in India, he issued a circular letter requesting medical officers to send him their views as to the causation of typhoid fever in recently arrived young soldiers. Compliance with the request was altogether optional. Nobody complied, as a matter of fact, except myself, which elicited from Sir Anthony the remark that it was refreshing to find anybody taking the trouble to write at all. I have no copy or notes of what I then wrote, but the burden of it was briefly this: A., B., C., D., E., and F., are six recently arrived young soldiers. They are all in the same barrack room, and are placed in precisely the same circumstances as to food and drink and general surroundings, as far as is known. A., C., and E. get typhoid fever; B., D., and F. escape. The only available and quite unsatisfactory explanation is that A., C., and E. were "susceptible," and that B., D., and F. were not. I suggested to Sir A. Home that we might with advantage try to discover in what this susceptibility might consist. I did not say that it might consist of "not knowing the manner of the God of the land," delighted though I am with the fitness of the phrase, now I hear it. What I did suggest was that, owing to special conditions in India, the effectual phagocytosis by which disease germs (ingested as well by B., D., and F. as by A., B., and C.) are destroyed in the body and eliminated cannot always take place, and that this failure might depend on personal unhygiene; that in a hot climate there is increased metamorphosis of tissue and increased determination of blood to the skin; but that, owing to a defective supply of underclothing to the soldier, there is an insufficient amount of cutaneous exhalation, and a consequent accumulation in the blood of material in which to "culture" and multiply disease germs. That a shirt or undershirt saturated with skin gland products is in contact with the skin for many hours—often days—longer than should be the case, and in numerous instances is worn without change through the night as well as in the day—in short, that there is defective personal hygiene. The skin as an emunctory is not half made use of. The natives, "knowing the manner of the God of the land," are aware of the value of "changes of raiment" and, in its absence, of judicious exposure of the body to this end.

I think that if the question be asked, What constitutes predisposition—susceptibility? probably the best practical answer is, Imperfect personal hygiene. These are days for identifying disease causes under the microscope, causes which in the main are impossible of exclusion from the body with certainty. While, however, we recognise the importance of ingesting pure and wholesome food and water, the question of the fitness of the body to resist and get rid of disease germs if introduced is a good deal forgotten. I have had occasion to note the very large appetite which young soldiers develop during the early months of their residence in India. With this there is in the hot weather insufficient exercise and occupation, and defective

elimination by the skin for the reasons given. And it may well be—I should be sorry to dogmatise—that a condition of blood is thus induced which is favourable to the culture and multiplication of the germs of disease, be their introduction into the body effected how it may—water, flies, or otherwise.

I would earnestly impress on the military authorities the importance of providing sufficient changes of linen for the soldier, and also the fact that cleanliness of the body cannot be attained by what is called bathing and tubbing as ordinarily carried out. Soap is needed for thorough skin cleansing, more especially in India. At present there is little inducement for the soldier to make use of the bathing facilities provided in India for him, seeing that he has (on completing his ablutions) to put on the wet shirt he has just taken off, or perhaps a sun dried, unwashed one, containing the skin gland products of the previous day or days. I ought to add that Sir A. Home, while thanking me for communicating with him to the above effect, wrote that he did not at all agree with me: that typhoid fever was a disease of palaces rather than of hovels, and he would not suggest to the Government of India the issue of more underclothing to the army. He may be right, but in what direction are we to go for light as to this excessive prevalence of typhoid fever in newly-arrived young soldiers in India? The Pasteur filters, I have no doubt, will do much, yet it cannot be out of place to make an appeal for improvement in the personal hygiene of the soldier.—I am, etc.,

F. A. DAVY, M.D.,

August 27th. Surgeon-Lieutenant-Colonel, A.M.S. (Retired Pay).

ENTERIC IN THE TROPICS.

SIR,—In Staff-Surgeon Kirker's letter last week he takes exception to the theory that enteric fever like cholera is a waterborne disease, or as some say in some cases fly-borne, because in several instances the result has not been traced back to its cause. It is incontrovertible that typhoid and cholera are frequently traced to water specifically infected with cholera and typhoid microbes, but because we are not always in the position to prove that waterborne microbes cause the disease, it is owing to our want of knowledge that we are unable to trace back the disease to the germ. The theory is not consequently vitiated, but facts are wanting; our only safety lies in accepting the theory and in cleansing or disinfecting known sources of disease. At the same time there is much common sense in Surgeon Kirker's advice that strangers in hot climates should, as has recently been ably put forward by Mr. H. M. Stanley, study the art of living.

That many lives are lost, not merely because new-comers refuse to study this vital art but actually run counter to accepted knowledge and custom on the subject, is well known to all inhabitants of tropical countries. A striking example is graphically described in the *Daily Graphic* of August 23rd, where a game of cricket is illustrated, played, it is said, by the British soldiers at Chitral, with a temperature of 115° in the shade. Such acts predispose, there is no doubt, to fever, and it is the opinion of some Indian physicians that many cases which pass for enteric fever are really due to the sun. In the BRITISH MEDICAL JOURNAL of August 10th Surgeon-Major Battersby, A.M.S., Chitral Relief Force, complains of the prevalence of enteric fever among the European troops, and the *Daily Graphic* tells of cricket played at a temperature of 115° at the same date. It would be well for medical inquiry to be made to ascertain if there is not some relation between these two.—I am, etc.,

Aug. 28th. OX-LOOKER.

THE MALARIAL PARASITE.

SIR,—Referring to Surgeon-Lieutenant-Colonel O'Connell's letter in the BRITISH MEDICAL JOURNAL of August 24th, I beg to say that I have not condemned Surgeon-Colonel Lawrie's views about the nature of the malaria parasite. I do not know what his views are, but I do condemn the views attributed to him by the *Times* correspondent at Hyderabad; they are manifestly wrong, retrogressive in their tendency, and their publication in the *Times* is calculated to check the slowly-spreading belief in a great pathological fact: and I warned your readers against allowing themselves to be influenced by them.

Surgeon-Colonel O'Connell makes too much of supposed differences of opinion among the believers in the parasitic theory of malaria: for example, the want of agreement among them as to the exact situation of the parasite as regards the red corpuscle, whether it is in the corpuscle as Laveran says or in the corpuscle as almost every other observer holds. This is a small matter, and does not affect the main question.

In working with cover-glass films it is sometimes very hard to say on which side of the cover-glass the blood is; how much more difficult to be sure of the position of the infinitely more minute parasite on the infinitely minute blood corpuscle! I believe that at first it is on the corpuscle, stuck to it limpet fashion; once or twice I have seen it in such a position that it could be viewed in profile at the edges of the corpuscle! This epicorpuscular position occurs only in the very earliest stage of the life of the parasite; at all later stages I feel sure, from personal observation—not merely following Marchiafava—it is inside the corpuscle, for I have seen it turn round inside the corpuscle, and I have seen it squeeze its way out of the corpuscle, like a leucocyte in diapedesis, through what must have been a minute breach in the limiting membrane.

Laveran and Mannaberg are not, as Surgeon-Colonel O'Connell says at variance about the presence or absence of a nucleus in the malaria parasite; both, as do all other observers, agree that in unstained and in methylene blue preparations the nucleus is invisible, and that in this fact we have a good distinguishing mark from melaniferous leucocytes. Mannaberg has shown that by using hæmatoxylin in a particular way the nucleus of the parasite can be demonstrated, proving that Laveran's bodies are not simply degenerated hæmoglobin, but living organised beings. There is no difference of opinion on this point, therefore, between Laveran and Mannaberg.—I am, etc.,

Queen Anne Street, W., Aug. 26th. PATRICK MANSON.

THE BRITISH MEDICAL ASSOCIATION AND MEDICAL DEFENCE.

SIR,—The assertion is made in the report of the General Practitioners Committee of the Council that the Association cannot undertake medical defence, but it is supported by no reasoned argument. While I agree with Dr. Lys that the thorough discussion of this subject is advisable, and that nowhere can the argument, both for and against, be so advantageously placed before the members as in the BRITISH MEDICAL JOURNAL, it is impossible to reply to arguments until they have been advanced. However, I will endeavour to answer the questions which Dr. Lys has asked in his courteous letter on the subject.

It is only through a world-wide association that the members of the English medical profession can keep in touch with one another, and the wide extension of the Association is distinctly a point in favour of the contemplated reform. For the efficient working of medical defence a central organisation is essential, but local needs must be dealt with by local Branches. It is scarcely conceivable that the financial stability of the Association will be threatened, unless these duties are entrusted to hopelessly incompetent persons. So far the affairs of the Association have been managed wisely and discreetly, and there is no reason to assume that "our property will be endangered" by entrusting the Council with wider duties.

We are not urging the Council to engage in a blind crusade against quackery, but that it should, either directly or indirectly, enforce the Medical Acts, which are now practically a dead letter. In many other ways action by the Association will do much to counteract the present evils.

It is no difficult task to anyone endowed with even moderate business capacity to devise a practical scheme that shall give us a central controlling body, while retaining the local autonomy of the Branches.

To form independent local centres will be to increase the evils of decentralisation, and to prevent uniformity of action. We have now to deplore the existence of some four or five defence unions, which are weakened too much by competition to actively maintain the interests of the profession. We want one powerful, large, and representative defence union—and one only.

This we shall find in the British Medical Association, of which the latent power is as yet hardly appreciated. The necessary machinery is ready to our hand, and if medical defence is to be carried out in a thorough business-like manner, we shall have either to make use of it, or to create another Association similar to it.

The Association at present is of little use to the medical profession, and fails to excite any interest in the majority of the members. Notwithstanding the annual complimenting of ourselves that we indulge in, it is very patent that the influence of the Association is not so great as we should like to see it become. The large and increasing membership of which we boast is not the result of any general interest that is taken in the Association, but is nearly entirely due to the excellence of our JOURNAL.

It is therefore not surprising that many members are disgusted with the *non possumus* attitude the Council has hitherto adopted with regard to medical defence, which is entirely justifiable seeing that since the Companies (Memorandum of Association) Act, 1890, has been passed the necessary amendment of our Memorandum can be easily effected. Unless adequate reasons are given, the Council will fail to satisfy the members by a repeated assertion of the impossibility of reform. The difficulties, which have been somewhat exaggerated, can be overcome if an earnest attempt is made.

The suggestion that the duties of medical defence should be entrusted to the General Medical Council, whose feeling on this point may be gauged by recalling that one prominent member of that Council stated at a recent meeting that the Council did not sit in the interests of the medical profession, and that such duties should be entrusted to the British Medical Association, is a postponement of the matter *sine die*. Without a new Medical Act no change in this body can be effected, and constituted as it is now it is entirely independent, and cannot be made to perform these duties even if they were imposed upon it.

The reform of the General Medical Council is urgently required, but Government Institutions are difficult to alter. We must not forget, too, that the judicial functions of the Council are entirely incompatible with the duties of medical defence. The duties of judge and advocate must be entrusted to separate bodies.

Some of the superfluous energy of the Association might with advantage be diverted from the organising of picnics to the active defence of our sorely distressed profession. It will be the fault of the members themselves if they do not make of their Association an active working organisation.—I am, etc.,

Dover, Aug. 23rd. A. G. WELSFORD.

THE DISCUSSION OF DIPHTHERIA IN THE SECTION OF MEDICINE.

SIR,—Being deeply interested in the study of diphtheria, I have read with great pleasure and avidity, in the BRITISH MEDICAL JOURNAL of August 24th, the report of the proceedings of the British Medical Association in the Section of Medicine, which was so ably and scientifically opened by Dr. Sidney Martin, but I am greatly disappointed at what appears to be one great omission or oversight on his part, as viewed by me, an ordinary practitioner.

Let me briefly analyse his remarks: We are told by him that diphtheria is caused by a bacillus, which sets up various poisons: a chemical one, probably a ferment found in the membrane and two kinds of poisons in the tissues, etc., one belonging to the class of digested proteids, namely albumoses, and the other an organic acid. He clearly and definitely shows us the action of these poisons, and tells us that therefore our first duty is to administer or to be more precise, to subcutaneously inject an antitoxin to counteract these toxins. I admire the scientific principle immensely, and the theory is exceptional one, as far as the toxins are concerned, but I will ask Dr. Sidney Martin to explain why it would not be more rational and practical to destroy the bacillus, the prime cause in the matter. He tells us that these poisons are not formed in most cases for two or three weeks after its inoculation with the bacillus, and I believe I am correct in saying that about the same interval elapses, in the human economy, from the time that the bacillus enters, until the appearance of the secondary symptoms, paralysis, etc. Why, I repeat, does Dr. Sidney Martin advise us to attack the poisons, and not the poison-producer?

I await his reply with very great interest.—I am, etc.,

Shaftesbury Road, W. BROWNLOW R. MARTIN.

A NOTE ON THE SUPRARENAL TREATMENT OF ADDISON'S DISEASE.

SIR,—The publication of Dr. Lloyd Jones's "Notes on a Case of Addison's Disease recovering during the Administration of Extract of Suprarenal Body" in the BRITISH MEDICAL JOURNAL of August 24th is, I think, interesting by the side of the clinical observations which I have made during the past two years on the effects of suprarenal treatment in Addison's disease. One of my cases, a patient of Dr. Mackern, of Blackheath, elsewhere referred to—in *Pulse-guaging*, in a paper contributed to the annual meeting, and in Dr. Rolleston's Goulstonian Lectures—has taken the suprarenal preparation for over twelve months, and is now practically restored to health; and at the present time I have two cases—both presenting the pigmentation, not only on the skin but within the mouth—who are deriving marked benefit from the treatment. But in such a disease as Addison's there must, of course, be many failures; still, it is obvious from the encouraging results so far observed that every case should have the chance of benefit which may be achieved from the prolonged administration of a trustworthy suprarenal preparation.

Perhaps in this brief note I ought to point out that the therapeutic value of suprarenal treatment really extends far beyond the comparatively limited range of Addison's disease, and in the paper referred to I have endeavoured to sketch the wider curative lines which clinical observation has clearly indicated. This important extension of it is the direct outcome of the physiological observations on suprarenal extract made by Professor Schäfer and myself in the Physiological Laboratory of University College, London.—I am, etc.,

Harrogate, Aug. 26th. GEORGE OLIVER, M.D.

CYCLING FOR ELDERLY MEN.

SIR,—It appears that the attempt to condemn the orthodox stooping posture of the modern cyclist is to be a failure. After a strong effort in the direction of advocating an upright posture, I find myself so outvoted (with the tacit consent of the medical profession), that I have retired from the contest. I suppose that the present low, forward position of the handles, and the consequent stoop, and contracting of the shoulders, will remain the commonly favoured posture in cycling.

There is another point, however, which appeals specially to elderly cyclists, and it may be that as my cycling experience (on the racing path and touring) has extended over more than twenty years, I may be allowed to speak. I mean the matter of saddles. Our elderly cyclists will soon find out what it means to ride with their weight on the perineum; the profession as a body seem to quite approve of that method of sustaining the weight, as they do of the orthodox camel hump posture, but I can very strongly recommend all elderly riders to obtain a seat made of two small cupped circular air pads, one for each ischial tuberosity, with no pressure upon the perineum whatever. The comfort of such a seat (such as Burgess's seat) is enormous, and does away with all that perineal servitude which is so painful and often serious to heavy riders. Still, I find that in this matter also the cyclists prefer to keep the old methods; they like bruising the bulb of the urethra and the occasional difficulty in micturition after a long ride. It is no business of mine; let us by all means keep both the camel hump posture and the perineal suspension; personally I shall continue to assume the upright posture, with long, low, backward handles, and shall ride on my non-perineal seat.—I am, etc.,

M.R.C.S., TWENTY FIVE YEARS A CYCLIST.

HEALTH OF ARMY MEDICAL OFFICERS IN INDIA.

SIR,—Allow a surgeon-major who has done two tours in India, and who thoroughly appreciated Mr. Ernest Hart's onslaught on medical arrangements in India, to endorse "Ibex's" letter.

Its style reminds me of a P.M.O. who was most averse to leave, and said: "Look at me—fifteen years in India and no leave." He forgot to mention he had never spent a hot weather in the plains, having been on the staff of the Viceroy and other illustrious people, and it is stated that his first experience of hot weather was as P.M.O. when ordered to investigate an outbreak of cholera.

The curse of the Army Medical Staff is selfishness. The P.M.O. goes off to his hill station on commencement of the hot weather, and does not descend or do an inspection in the plains unless compelled by an outbreak of cholera. He thinks he has done his duty by the youngsters if he asks them once to dinner. I have known P.M.O.s and S.M.O.s object to polo, but only one who ever took an interest in his youngsters or the trouble to advise them as to the occupation or study they should pursue during the long Indian day, and it would be so easy to affect a little interest in their pursuits.

"Ibex's" experience differs from mine as regards work. Except at a few stations, headquarters of a district where the P.M.O. either will not give leave, fears an epidemic, or the senior and junior officers do not pull, there is never a surplus of medical officers; and at out stations, where there are only one or two medical officers, it is next to impossible to get leave unless by arrangement with the overworked Indian medical officer to do his duty, or *vice versâ*.

During my first tour I never got a day's leave, was always on duty liable for any call, and my senior never willingly answered for me if I wanted a morning's shoot. In my second tour, when broken down in health through hard work, at the end of three years leave was granted on condition of going to the nearest hill station and liability to instant recall.

Finally, a word of advice to "Ibex" and his kind. Try and encourage the youngster to work, do not scoff if he cannot play polo, take him shooting, pig sticking, golfing, do not introduce him to whist at rupee points and a gold mohur on the rubber at the club, do not leave to him the entertainment of any stray doctor passing through; in a word, do not be selfish and treat your youngsters as you experienced in your early service.—I am, etc.,

AUDI ALTERAM PARTEM.

"DISGUISING THE TRUTH."

SIR,—The cases on this subject detailed in the BRITISH MEDICAL JOURNAL of July 14th, by your lay correspondent J. H. T., are quite exceptions to the rule certainly observed by most of us.

I feel sure that—at all events in the majority of cases—it is a delusion of the patient himself that the true nature of his complaint is being disguised; and the delusion arises in many cases in this way: What with ambulance classes, popular lectures, articles in magazines, and the like the general public now feel that they have a pretty considerable smattering in medicine. They consequently consider themselves qualified to discuss, as well as to question, both our diagnosis and our treatment; nor do they stop, in some instances, at doubting the accuracy of the dose or doses prescribed. The smattering often leads them out of their depth. I have quite recently met, in my practice, with two cases amongst cultured people—at all events, "cultured" as far as the possession of a university degree in arts goes—which illustrate this. The first was a gentleman with post-nasal catarrh. I assured him positively that his affliction was a local one, and that he had nothing mortal to fear. He, however, continued terribly anxious about himself, and it was not till he was safe from ridicule in a foreign clime that I learnt from him that he was afraid he had cancer of the brain, and he was blowing it down his nose.

This is a class of patient who invariably thinks "the worst" is being kept back from him, and the persistent delusion that his doctor is "disguising the truth" of his case becomes his one idea.

Another patient had a slight temporary cystitis after confinement. Micturition was, naturally, frequent, and I instructed her to assume the knee-elbow posture for that purpose. One morning early her husband sent for me in a horrible hurry, and all I could learn from him on my arrival was that his wife had urinated twelve times in the night. I told him that was capital; went upstairs and found her in every way better than on the previous days. He then confided to me that he had sent because he was afraid that twelve times would bring on *post-partum* haemorrhage.

Lastly, a large majority of the public seem to think that a doctor naturally has one opinion for them and another for himself. This is well illustrated by a story which the late Towers Smith once told me with infinite gusto. He had been called to a case of illness in a child, and, on leaving the bedside, told the parents it was a case of whooping-cough. At the doorstep the father knowingly inquired, "And what do you think, doctor, it *really* is?" "Oh," said Towers Smith, "it's pertussis." "Ah," said the intelligent parent, "I thought so."—I am, etc.,

Folkestone, July 29th. H. A. POWELL.

SCOTTISH SCHOOLS AND PRACTICAL MIDWIFERY.

SIR,—I notice in Saturday's issue of the BRITISH MEDICAL JOURNAL, in the correspondence on the above subject, that Dr. Walton Don says, with reference to practical midwifery instruction in Glasgow: "As for midwives instructing students, the most polite way of putting it is to say it is not the truth."

Now, speaking from my own experience, I may say that the first practical instruction in midwifery that I received was from a midwife, sent with me from the Maternity Hospital, Balmano Street. That of course was prior to 1884. It was the first and only practical lesson I received. Things, however, may be different now; I trust they are.—I am, etc.,

Glasgow, Aug. 26th. J. PATERSON.

VOLUNTEER MEDICAL SERVICE.

SIR,—I beg to inform the Volunteer Medical Service, through the BRITISH MEDICAL JOURNAL, that my corps has been enabled to obtain permission, after representation to that effect, for regimental stretcher bearers to wear a permanent badge on their right arm, showing their efficiency in their special instruction. The Geneva Cross, hitherto worn, has rightly been withdrawn, as regimental stretcher bearers, being actually fighting men, could not adopt that badge without contravening the provisions of the Geneva Convention.

Knowing that the Geneva Cross was much valued, and that a badge would be appreciated, and that without some such mark the ambulance work in all regiments would languish and suffer, I made a special representation of the case to the authorities at the War Office, which was strongly backed by my Colonel and the P.M.O. of the Home District. The result has been that last week we received an official letter stating that His Royal Highness the Commander-in-Chief had granted the request, and that for the future all regimental stretcher bearers might wear as a permanent badge of their efficiency a distinctive mark on their right arm, a sketch of which was enclosed. This badge consists of a circle of red round a ground of the same colour as the tunic, having the letters S.B. embroidered on it in red and blue; and in due course it will be adopted and ordered.

I trust that this willing and ready desire to meet the wishes of the Volunteer Medical Service will prove satisfactory to all; and in concluding I desire to express my opinion that the new badge will in no way interfere with the adoption by all regimental stretcher bearers, when actually employed as such, of the authorised brassard hitherto worn on the left forearm.

I willingly express my thanks to Colonel Josselyn and Surgeon-Colonel Churchill, A.M.S., for the ready assistance which they have given to my application.—I am, etc.,

W. BAINES, V.D., M.D.,
Surgeon-Lieutenant-Colonel, 1st Mx. V.R.E.

Headquarters, College Street, Chelsea, S.W.

THE HERMITE PROCESS.—Messrs. Paterson and Cooper inform us that they have been instructed by the War Office to proceed with the erection at Netley Hospital of the Hermite sanitation plant, the cost of which has been provided for in this year's Parliamentary estimates. The Corporation of Cape Town have also ordered a plant for producing electrolised sea water, with a view to the Hermite process being applied to the sanitation of Cape Town.

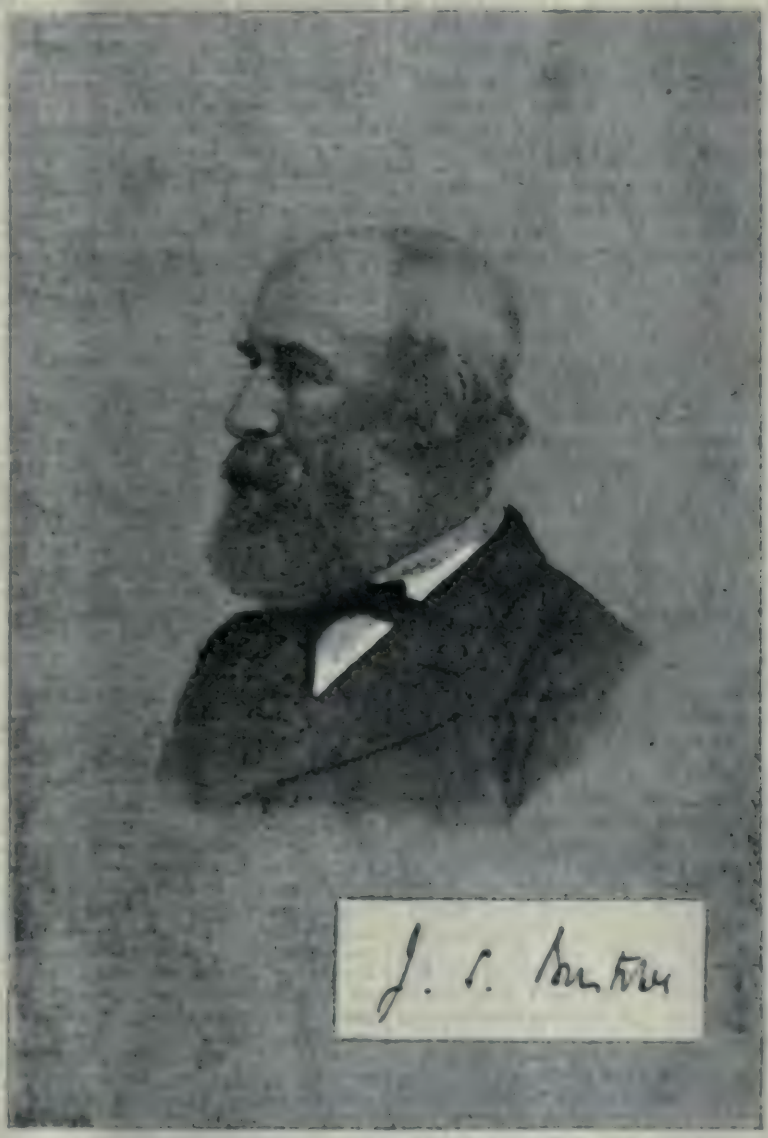
OBITUARY.

JOHN SYER BRISTOWE, M.D., F.R.C.P., F.R.S.,

Consulting Physician, St. Thomas's Hospital.

Dr. John Syer Bristowe was born at Camberwell on June 19th, 1827. Both his grandfather and his father had been medical men before him, and bore the same names. His grandfather practised at Ilkley, in Yorkshire. His father was born in Ilkley, but settled in Camberwell, where he became the leading medical practitioner.

Dr. Bristowe received his early education at Enfield, and subsequently went to King's College. After leaving the latter, he assisted his father for a year. About this time his father had two pupils, who afterwards became eminent, Mr. Sydney Jones and Dr. Alfred Carpenter. Young Bristowe at this time showed little inclination for the drudgery of a surgery, for he occupied himself more with painting and writing poetry than in compounding pills or attending minor ailments. His ambition was to become an artist. He published a volume of poems at the age of 18, but his passion for art and poetry did not last long, for in 1846 he was entered as a student at St. Thomas's Hospital. That he worked in good earnest is shown by the fact that he took many prizes, including the Treasurer's Medal and the Gold Medal of the Apothecaries' Society in Botany.



In 1849 he qualified as M.R.C.S. and L.S.A. In 1850 he took the M.B. Lond., gaining the Scholarship and the Medal in Surgery. Previous to this, at the University of London he had carried off the Exhibition and Medal in Materia Medica and the Medal in Physiology. These achievements are all the more remarkable when we consider that they were made by a young man of artistic and poetical tastes.

He became House-Surgeon at St. Thomas's in 1850. His ambition now was to be a surgeon, not an artist, and undoubtedly if an opening had occurred for a surgeon he would have become one. In addition to a leaning to surgery, he displayed a liking for athletics, and especially that branch of it concerned with self-defence. In later life he made very clever pen and ink sketches and wrote a few poems, but beyond that nothing came of his early aspirations. His athletic training may serve to explain, what often puzzled his students, how he managed to outstrip them all as he raced up the long stairs to his wards.

In 1850 he became Curator of the Museum, and added many valuable specimens during his term of office. It was probably at this time that he developed his leaning towards pathology. At any rate, not long after we find him holding the post of Pathologist to the hospital, and this he continued to occupy for ten years. Meanwhile, he was appointed Assistant Physician in 1854, and he became full Physician in 1860, at the early age of 33. The reports which he wrote as Pathologist still exist, and are models of what *post-mortem* reports should be. He described minutely every lesion or morbid condition, and omitted nothing of any importance. In 1859 he lectured on Botany, and from 1860 to 1865 on Materia Medica. In 1865 he was appointed joint lecturer with Dr. Ord on General Anatomy and Physiology. In 1870 he was elected to lecture on Pathology, and in 1876 he was again joint lecturer with Dr. Ord, this time on Medicine. He took great pains to make his lectures clear and interesting, and in this he thoroughly succeeded. He continued to deliver the lectures on Medicine until 1892.

In 1876 he brought out his *Treatise on the Theory and Practice of Medicine*, a work which had engrossed all his spare time during over three years. This work at once brought him into fame. It immediately became one of the principal textbooks for students and practitioners, and since its first appearance edition after edition has been called for. He began about this time to be sought after as a clinical teacher, and his reputation as such steadily increased as years went on. To an almost unequalled experience of clinical medicine he united a thorough knowledge of pathology. He attracted advanced students from other schools as well as the best of his own. All who were privileged to study under him profited greatly from his instruction.

In 1888 he published *Diseases of the Nervous System*, a collection of papers, some of which had previously been published in periodicals. He thus added to his high reputation, and took a leading place among neurologists.

Many of his contributions to medical literature appeared in the transactions of the medical societies. His earliest papers appeared in the third volume of the Pathological Society's *Transactions*. He assisted Sir John Simon in the reports to the Privy Council on Phosphorus Poisoning in 1862, and on Infection by Rags at Paper Works in 1865. With Dr. Burdon Sanderson he wrote a report on the Cattle Plague, and with Mr. Timothy Holmes one on English Hospitals in 1863.

Among other important writings may be mentioned the Lumleian Lectures in 1879, on Pathological Relation of Voice and Speech; the Lettsomian Lectures, on Syphilis of the Nervous System; and the Croonian Lectures on Disease and its Medical Treatment.

Dr. Bristowe was elected a Fellow of the College of Physicians in 1858, and was Censor in the years 1876, 1886, and 1887, and Senior Censor in 1889. He was made F.R.S. in 1881. He was an Honorary LL.D. of Edinburgh University.

He held various important public appointments. He was appointed Medical Officer of Health for Camberwell in 1856, a post he continued to hold until his death. He took great interest in all matters relating to hygiene and sanitation. For over thirty years he was Physician to Westminster School, and there he had the opportunity of carefully studying occasional epidemics. He was here enabled to satisfy himself of the non-identity of measles and rötheln. In 1871 he was appointed to make a report on the Outbreak of Diphtheria at Wellington College. He also held the position of Physician to the Commercial Union Insurance Company for a period of over thirty years.

He was an Examiner in Medicine at both the Royal Colleges, at the London University, at Oxford, and at the War Office. He had the reputation of being a very fair and impartial examiner, being perhaps more stringent in the case of his own pupils than with strangers.

He was President of the Pathological Society in 1885 and 1886, of the Metropolitan Counties Branch of the British Medical Association in 1887, of the Neurological Society of London in 1891, of the Medical Society in 1893, of the Society of Medical Officers of Health, and of the Hospitals Association, to which he was elected on the death of Sir Andrew Clark. He was also Vice-President of the Sanitary Protection Association, a Corresponding Member of the Edinburgh Medico-Chirurgical Society, an honorary member of the Ophthalmological Society, of the West Kent Medico-Chirurgical Society, and of the Sydenham District Medical Society.

In the question of hospital administration he always took a great interest, and did all he could to check the abuse of hospitals, especially in the out patient department. He was always a warm friend to nurses, and took an active part in the foundation of the National Pension Fund for Nurses.

He was a member of the Vaccination Commission, and a regular attendant at its meetings.

His term of office as Physician at St. Thomas's expired in 1887, but on the unanimous recommendation of the medical staff he was reappointed by the governors for a term of five years. He completed thirty two years' service as full physician. On his retirement in 1892 there was a general feeling among his colleagues and pupils that some testimonial should be subscribed for to mark their appreciation of the valuable services he had rendered for so many years to the school and hospital. A sum of £380 was subscribed, and at Dr. Bristowe's desire the bulk of it was devoted to the founding and endowment of a medal at St. Thomas's for proficiency in pathology. At the same time Miss Beatrice Bristowe painted for the subscribers a portrait of her father, which was exhibited at the Royal Academy in 1893, and now hangs in the Committee Room of St. Thomas's Hospital.

Dr. Bristowe married Miriam Isabella, eldest surviving daughter of Mr. Joseph J. Stearns, of Cranbrook Park, Essex. In addition to his widow he leaves behind him a large family, five sons and five daughters. His eldest son, Mr. Leonard Bristowe, had a brilliant career at Oxford, and is now coming to the front at the Bar. He married last year a daughter of Mr. Henry Power. The second son, Dr. Hubert Bristowe, is the only one who has kept up the family tradition and devoted himself to medicine. He is an M.D.Lond., has his father's leaning towards neurology, and until recently was assistant medical officer at the Bath and Wells Asylum. One daughter has graduated in Arts at London University, distinguishing herself in mathematics, and has held an important appointment in Japan. Another daughter has inherited her father's artistic talent, and is making a name for herself as a portrait painter. She has exhibited important pictures at the Royal Academy, among others a striking likeness of her father, the posthumous portrait already referred to. A third daughter is an accomplished musician, and has a charming contralto voice. Dr. Bristowe was devotedly attached to his wife and family, and was equally beloved by them.

Dr. Bristowe achieved his greatest successes as a writer, pathologist, diagnostician, and clinical teacher. Although he had a considerable private practice, he did not attract the public so much as would have been expected from his great abilities. His practice was an increasing one, and probably, had he lived, would have become very large. His patients learned to appreciate his honesty and candour, and greatly benefited from his skill in diagnosis. Those who knew him best valued his opinion most. His pupils were greatly attached to him, and followed his teaching with enthusiasm. His clinical clerks were always the best men of their year, and he took great trouble to instruct them.

He had a profound acquaintance with pathology and clinical medicine. His retentive memory and thorough grasp of his cases enabled him to make use of his wide experience in the elucidation and illustration of the diseased conditions to be met with in his wards. He paid great attention to physical signs, and was most skilful in auscultation and percussion. His diagnosis in difficult thoracic and abdominal cases nearly always proved to be correct when an opportunity was afforded of a *post-mortem* examination. As a neurologist he had one of the highest reputations in London, and added much to our knowledge of the more obscure cerebral and spinal affections.

For the following interesting appreciation of Dr. Bristowe we are indebted to his friend and colleague, Dr. J. F. Payne:

In Dr. Bristowe we have lost one of the most eminent pathologists and physicians of our day, one who was a zealous and successful worker in the great task of basing medical science on the solid ground of anatomical fact, which was the main achievement of the generation now passing away. Even if Bristowe's name be not connected with any great discovery, it will always be associated, like those of Jenner, of Wilks, of Moxon, of Fagge and others with this period of English medicine.

Of his early life and first scientific work, I, of course, know nothing at first hand, but enough exists in a published form to show what was from the beginning the special bent of his mind. He entered on medical teaching and research with a good intellectual equipment. He had attained distinction as a student in anatomy and physiology, and had a good knowledge of botany—studies which, joined to a natural faculty of observation, and a keen sense of the value of fact, eminently fitted him to become as he did become, a first-rate observer. He was early appointed to a post which he held for many years, that of pathological demonstrator at St. Thomas's Hospital.

The earlier volumes of the *Transactions of the Pathological Society* give evidence of the nature and value of Bristowe's work in pathology. With the exception, perhaps, of Dr. J. W. Ogle, he was the most copious contributor of specimens and papers, many of which were of great value. Such communications are, indeed, only of ephemeral interest; they have served their purpose when they have been exhibited and criticised, and have in part their lesson to other observers; but many of Bristowe's observations are of permanent value as being either the earliest descriptions or the best of particular morbid conditions. Having had occasion to go over these volumes more carefully, perhaps, than many people have done, I have been struck by the remarkable accuracy, conscientiousness, and often by the minuteness of Bristowe's observations. Many of them, of course, leave much to be added to, but few show anything to be corrected.

In addition to the faculty of observation and veracity of mind which they display, there are two circumstances which give them special value—one is that Bristowe saw the value of the microscope in pathology when it was much less used than it is now. Even in my recollection there have been medical teachers who always referred to the microscope in a tone of banter or sarcasm; and I remember one eminent man, himself a skilful microscopist, who held that these things were of no use to students; it was time enough when they had taken their degree. Bristowe however (influenced partly I believe he himself would have said by the example of George Rainey), threw himself thoroughly into microscopical work, and became an excellent observer with the instrument. The other element in his success in minute pathology was his skill as a draughtsman. It appears to me, with all submission to better judges of art, that some of Bristowe's

microscopical drawings have never been surpassed. His beautiful figures of trichina spiralis (of which, though he did not solve the riddle of that mysterious organism, he gave a very good description) have been copied into a hundred textbooks. And there are other figures which, though the specimens were not prepared with all the modern apparatus of microtomes, double staining, etc., would be well worth looking up. There can be no doubt that Bristowe possessed powers of delineation which, had he preferred art to science, would have made him a very competent, if not a great, artist.

Another point which strikes me in relation to these pathological papers is that in a good many instances they anticipate later observations which have obtained much greater notoriety. It is a curious question why these observations did not attract more notice. It appears to have been partly because the descriptions are short, and not accompanied by explanations or deductions. A certain want of self-assertion, combined, perhaps, with a touch of scepticism, seems to have prevented Bristowe from pointing out the conclusions which followed from his observations, and hence these have not always obtained due recognition. His knowledge of morbid anatomy generally was wide as well as minute, and had he set himself to write a systematic textbook of that subject, it would certainly have been of equal, if not greater, value than his *Textbook of Medicine*.

Of the *Textbook of Medicine*, the work of Bristowe's later years, it is needless to say much, since it is so well known and successful; but it may be permissible to say that what especially commended it on its first appearance was that, beyond any previous textbook, it was based on a profound and practical knowledge of morbid anatomy in the widest sense. It was the pathological textbook, and this peculiarity gave it a stamp of actuality which so-called clinical manuals did not always display. Moreover, it is a mature work, bringing out the best fruit of the author's immense clinical experience. Though he made it a rule not to quote cases, this practical knowledge underlies all his statements.

In his clinical work and teaching Bristowe displayed much the same qualities as in his pathological work. His diagnosis was essentially physical diagnosis; there was never any doubt about what he meant; and his logical power, combined with great quickness of apprehension, made him an admirable, often a brilliant, diagnostician. As a clinical teacher his reputation displayed a steady rise, which those who were intimately associated with him were able to watch. Out of the pathologist expanded an admirable clinical physician. He was not of the dogmatic school; he had not that unhesitating confidence on which some teachers, and some very good ones, have founded their influence over students and their power of driving knowledge into the uninstructed brain. His tentative and rather sceptical method was sometimes a stumbling-block to the weaker brethren, but more intelligent students, and especially instructed hearers, soon came to value the candid way in which the teacher exhibited the workings of his own mind and the valuable lessons in reasoning and observation thus conveyed. His more direct teaching was very lucid and based on such manifold knowledge that it could not fail to be instructive.

Bristowe was, perhaps, not often thought of as a literary physician. Nevertheless, his interest in literature was considerable, and in early life he published a volume of poems. Possibly the non appearance of a second volume showed that Nature meant Bristowe to be distinguished otherwise than as a poet; but be this as it may, his prose writing had many merits. Its chief distinction was that it was eminently consecutive; every sentence seemed to follow naturally from that which went before; he saw the end from the beginning, and never lost his way, as even good writers will occasionally do, in a long exposition. There can be no doubt that the lucid and flowing style of his great textbook was an important element in its success.

Having undertaken, at the request of the Editor, to say a few words about the scientific position of my much respected and lamented friend, it is impossible to forbear some reference to his fine moral qualities. Bristowe was a man of remarkable independence. The mere opinion of others, apart from reasons, influenced him not at all. He never shrank from expressing any view or taking up any cause because they were unpopular; whether it was the opinion of the public or that of the profession which he had to face—as, indeed, he showed on more than one occasion. In every relation of life he merited the epithet so often bestowed upon him of being "absolutely straight." No shadow of insincerity or indirect motives ever dimmed the clearness of his character. Genial to all, he was especially helpful and sympathetic to the young and to his younger colleagues. All have lost much in him: we at St. Thomas's a loyal colleague and a devoted friend; science a mind always clear, always accessible to new ideas; the medical profession one of its most accomplished, many-sided, and brilliant representatives.

We regret to announce the death of Mr. John Cornwall, of Glastonbury, a former President of the West Somerset Branch of the British Medical Association, and one of the oldest and most highly respected practitioners in the West of England. Mr. Cornwall was born in 1817, and was therefore 78 years of age. He studied his profession at St. Bartholomew's Hospital, passing the "College" in 1840, and the "Hall" in the following year. He settled at Ashcott in 1844, and soon acquired a large practice, which extended over a wide district. He was a man entirely devoted to his profession, a "country doctor" of the best type, honoured by the rich and beloved by the poor. He was buried at Meare on August 16th, many prominent inhabitants of Glastonbury and a large concourse of people from Meare and the surrounding district following his remains to the grave.

Thomas Spencer Lawry, M.B., C.M.Edin., M.R.C.S., of Auckland, New Zealand, died on June 22nd, aged 38 years. Returning to work after an attack of influenza in most inclement weather, and before convalescence was complete, he was seized with pneumonia, and never rallied. A native of New Zealand where his grandfather and father were members of the early Wesleyan mission to the Maoris, he received his early education in Auckland. He completed his medical education in the Edinburgh University in 1883. During the following year he was house-surgeon at Leeds Infirmary under Mr. Jessop. Returning home shortly after this, he settled in Auckland and soon acquired a considerable practice. At the time of his death he was one of the honorary visiting physicians to the Auckland Hospital, and had served as chairman of the medical staff. His death will come as a great shock to the many friends of his college days. At the time of his death he had been married only three years. He leaves a widow and one child, a daughter.

We regret to announce the death of Mr. John Llewellyn, J.P., of Caerphilly, who passed away on August 16th at the age of 87. Mr. Llewellyn was born in 1808, and in 1824 he was apprenticed to the late Dr. William Price, the famous Druid, at Nantgarw. On the completion of his apprenticeship he entered St. Bartholomew's Hospital. In 1829 he studied for a time in Paris, and in 1829 he was admitted a Member of the Royal College of Surgeons of England, passing the "Hall" in 1830. He then settled at Caerphilly, where he soon had one of the largest practices in South Wales. In 1880 he was named a Justice of the Peace for the county of Glamorgan, and some time afterwards he was appointed Chairman of the Petty Sessions for the Caerphilly division. Mr. Llewellyn took a very active interest in the formation and prosperity of various Lodges of Oddfellows at Caerphilly, Cardiff, and elsewhere, and he was also prominent as a politician. He was a brother-in-law of Zephaniah Williams, and had many interesting tales to tell of the Chartist movement. Mr. Llewellyn was beloved and respected by all who knew him well. He was a man of exemplary uprightness in every relation of life. His favourite hobby was agriculture, and he was a frequent prizewinner at shows. He was twice married, and leaves one son and three daughters. Mr. Llewellyn was a member of the South Wales Branch of the British Medical Association.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Pasquale Landi, Professor of Clinical Surgery successively in the Universities of Siena,

Bologna, and Pisa, aged 79; Dr. Treier, Professor of Internal Pathology in the Medical School of Alger; Dr. Thomas McKennan, a prominent member of the profession in Western Pennsylvania, aged 71; and Dr. E. J. Whitney, a well known physician of Brooklyn, who served with distinction through the Civil War, and was medical director of the expedition which escorted the first Governor of Arizona to his duty during the troubles in that territory, aged 56.

MEDICO-LEGAL AND MEDICO-ETHICAL.

THE TITLES QUESTION.

SCRUPLES.—Under the exceptional circumstances described, we think our correspondent need have no scruple in using a title which *materialiter*, if not *formaliter*, denotes his real professional position.

PROFESSIONAL SERVICES TO DOCTORS AND WIVES

A MEMBER.—The following is the more essential part of the rule relating to the gratuitous professional services to the faculty, which has a direct bearing on the case referred to: "All legitimate practitioners of medicine, their wives, and children while under the paternal care, are entitled (not as a matter of right, but) by professional courtesy, to the reasonable and gratuitous services—railway and like expenses excepted—of the faculty resident in their immediate or near neighbourhood, whose assistance may be desired."—*Code*, Chap. II, Sect. 7, Rule 1.

INQUESTS AND *POST MORTEMS*.

L.R.C.P., L.R.C.S. (St. Pancras) was called to see a dying man, and on arrival found he was recently dead, and that a quantity of arterial blood which had been sudden and profuse, had evidently come from the mouth, causing death by syncope. Our correspondent states that he had only seen the body after death, and therefore he was not in a position to certify or to state, when called as a witness at the inquest, whether the blood came from the lungs, or from a rupture of the arch of the aorta into the œsophagus or trachea, or from the abdominal aorta into the stomach—any of which might have occurred; and he further complains that no *post-mortem* examination was ordered by the coroner.

"*" We learn that the inquest was held a fortnight since by the deputy coroner, and from the evidence given it appeared that the deceased, who was 47 years of age and a newsagent, was seen by our correspondent about two years ago, when the man was suffering from chronic bronchitis and some affection of the heart, and last seen by him a year previous to his death. Since then the deceased had not been well, and six months ago he was worse, began to lose flesh, and was admitted to the St. Pancras Infirmary on April 14th last, when he described his illness as of five months' duration. He was then suffering from a bad cough, night sweats, rapid emaciation, and extensive crepitation of the left lung, and the diagnosis was "acute phthisis." The deceased was "slated" at the infirmary, but although advised to remain he took his discharge on July 24th last, and died as described on August 6th. His widow stated that he had been very bad since he returned home, but had been walking about; that on the day of his death he kept his bed, and at 9.30 P.M. she went out to make a purchase, and on her return, very shortly after, she found the deceased insensible, lying on the floor by the side of the bed, with blood coming from the mouth in large quantities, and that he died a few minutes after. This evidence, confirmed by other witnesses and a written report from the medical officer of the infirmary, satisfied the coroner and jury that the death arose from natural causes. Even in the absence of a *post-mortem* examination there appears to be no reasonable doubt but that the deceased died from syncope following sudden and severe hæmorrhage when suffering from acute phthisis, and this was the verdict of the jury. Our correspondent considers that a more accurate verdict might have been obtained if a *post-mortem* examination had taken place; but although he could not certify to the cause of death, not having attended the deceased in his last illness, yet had he done so and diagnosed the disease, there is little doubt that he would have been prepared, as required by law, to certify in the usual way, which would doubtless have been in accord with the verdict returned by the coroner's jury, even without a *post-mortem* examination, which might have been objected to by the friends. We do not for a moment desire to underrate the value of *post-mortem* examinations, which of course in many cases are necessary; in the case under consideration, however, it appears that the deputy coroner in the exercise of his discretion, and with the medical history of the case before him, acted wisely in the course he thought proper to adopt. Our correspondent should not forget that if the jury are not satisfied with the evidence and testimony brought before them at the inquest, they have the power to adjourn and request the coroner to order a *post-mortem* examination or to call such further medical evidence as they may require.

WHAT IS A *POST MORTEM* EXAMINATION?

TASMANIA writes: Here we are paid £2 2s. for making a *post-mortem* examination and £1 1s. for evidence as a medical witness, both being quite separate items specified by law and in the forms which are filled in for payment and signed by the coroner. I have lately been summoned by the coroner to make a *post-mortem* examination upon a man who committed suicide by blowing his brains out with a gun-shot, removing half the skull. I made an examination externally, and made an examination of the skull and contents thereof, a policeman being present. I returned to the coroner and jury, with whom I then was, back to view the body. I gave my evidence as to the injuries to the body and the cause of death upon the examination made, and I send in my claim for £2 2s., which the authorities refuse to pay as they did not consider a *post-mortem* examination was made, adding that the £1 1s. will be paid me for medical evidence. They say that a *post-mortem* examination means by long usage an internal examination of a body, and that when a knife has not been used no *post-mortem* examination is made. The Act says here, "*Post* and *post-mortem* examination." I said a *post-mortem* examination was according to the reading of the Act, and the definition in Quain's Dictionary of Medicine, an inspection or examination of the body after death, and that neither differentiated between an internal and external examination, nor did it specify that a knife should be used. Will you kindly state what is the least that must be done to constitute a *post-mortem* examination?

"*" The question raised by "Tasmania" is, as far as we know, a novel one, but we do not think that his contention can be "upheld, and we fear we cannot embark upon an elucidation of the meaning of Acts of Parliament in the Colonies. All medico-legal writers are agreed that a *post-mortem* examination or inspection of the body—for the words are used interchangeably—must be complete and thorough, and should include the naked-eye examination of brain, spinal cord, mouth, larynx and pharynx, and of the contents of the thorax and abdomen. In "Tasmania's" case such an examination might, by revealing some organic disease, have supplied an explanation of or motive for the suicide. In a very notable case of suicide in London a few years ago the proof that the man was at the time suffering from pneumonia supplied the jury with reasonable ground for surmising that the act might have been committed during the delirium so often present in that disease. The discovery of aortic valvular disease would be another instance of an organic disease known to be often followed by insanity. "Tasmania" will, on reconsideration, probably see that to press his claim further when he really has a weak case would be injudicious, and that he will adopt the wiser policy in withdrawing from a position which is likely to prove untenable.

CERTIFICATES OF DEATH.

M.B., M.A., would be glad to know of a small book dealing with the question of death certificates and coroners, and he asks several questions as to the granting and withholding of such certificates.

"*" Medical practitioners who have attended a deceased person during the last illness are required by law to give, for the purposes of registration, a certificate stating to the best of their knowledge and belief the cause of death, and forms for this purpose are supplied by the local registrars. In cases where the death has either directly or indirectly arisen from violence or injury, it is well for the practitioner to send details of the same without delay to the coroner, and to withhold the certificate until his reply is received. If an inquest is held, which is usually the case, the certificate will not be required, and the coroner will register the death on the verdict of the jury. If, however, a certificate of death is given, which shows that the death did not arise from natural causes, it is the duty of the registrar to return it to the coroner before registration, which may cause a delay in the inquest, and annoyance to friends. There is no penalty for giving a certificate stating the cause of death, if the statements therein contained are true and correct; but under the registration Acts the giving of a false certificate is an indictable offence. We do not known of any small book bearing on these subjects only, but our correspondent will find in the first few pages of Dr. Luff's recently-published *Textbook on Forensic Medicine and Toxicology*, vol. 1, comments and suggestions which will assist him in the exercise of his discretion when called to certify in doubtful cases.

ANON.—Read reply to "M.B., M.A.," above. In answer to your first question. To your second, the coroner is bound to advance and pay at the termination of the inquest the sum of one guinea to a medical witness summoned to attend the court.

PATENTS FOR SURGICAL APPLIANCES.

SURGEON CAPTAIN.—In response to our correspondent's query, we may note that to hold a patent for a surgical appliance is deemed (and, in our opinion, rightly) derogatory to the faculty, and is so laid down in the Medical Ethical Code, chap. II, sect. 1, rule 4, to which, as corroborative of our views, we would refer him.

THE TITLE OF SURGEON.

M.D. writes: My son has passed the surgical final, and been told, as usual, by the President of the College of Surgeons that he is a member thereof, and that he is exempt from service on juries, etc. I have,

taken a new residence three miles off. Do I offend against any law or by-law by putting his name upon the brass plate at either house with the designation "surgeon"? He has still his medical final to pass.

*** If the object of putting the designation of "surgeon" on the door-plate is to hold out the son as practising his profession as such for gain, we think that under the Medical Acts 1858-86 it will be very dangerous to do so.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A Senior Surgeon-Captain with 2½ years to do at home, would go to India for about two years, to complete a tour—in exchange.—Apply, Rex, care of Messrs. Holt and Co., 17, Whitehall Place, S.W.

A Surgeon-Captain, under orders for Barbadoes, who expects to embark about first week in December, wishes to exchange with an officer lately [illegible].—Address, A. E. M., care of Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

Surgeons Edward J. Morley, Hugh W. Macnamara, Joseph H. Whelan, M.D., Percy W. Bassett-Smith, John P. J. Coolican, Edgar R. Dimsey, Joseph R. McDonnell, M.D., Hamilton Meikle, and Herbert Canton, having completed twelve years' full-pay service, are promoted to be Staff-Surgeons, August 21st.

The following appointments have been made at the Admiralty: George Lea, Surgeon, to Bermuda Hospital, August 22nd; Hugh S. Burniston, Surgeon, to the *Active*, August 22nd; John H. Thomas, Surgeon, to the *[illegible]*, August 22nd; George Welsh, Surgeon, to the *Tyne*, August 22nd; Ivan St. M. [illegible], Surgeon, to the *Victory*, additional, August 22nd; Joseph H. Whelan, Staff-Surgeon, to the *Volage*, August 21st; Edward P. Mourilyan, to the *Cormorant*, August 21st; William J. Maillard, Surgeon, to the *Excellent*, August 21st; Frank Bradshaw, Surgeon, to the *[illegible]*, August 21st; Horace Elliott, Surgeon, to the *[illegible]*, August 21st; Thomas Austen, Surgeon, to the *Wildfire*, August 21st; Percy W. Bassett-Smith, Staff-Surgeon, to the *Magdala*, August 21st; Alexander F. Harper, Surgeon, to the Royal Marines, Plymouth, August 21st; Harold F. D. Stephens, Surgeon, to the *Vivid*, August 21st; James M. Smith, M.B., Surgeon, to the *Blonde*, undated; Frederick Fedarb, M.B., Surgeon, to Haslar Hospital, September 10th.

INDIAN MEDICAL SERVICE.

Surgeon-Colonel Alexander Porter, M.D., Madras Establishment, has retired from the service, July [illegible]. He was appointed Assistant-Surgeon March [illegible], and Surgeon-Colonel, July [illegible]. He has been on furlough, pending retirement, since March 1st, [illegible].

The London Gazette of Tuesday last contains the announcement that Surgeon-Colonel [illegible] Spencer and Brigade-Surgeon-Lieutenant-Colonel G. [illegible] Davis, both of the Bengal Establishment, have been nominated, the former to be a Companion of the Bath, the latter to the Distinguished Service Order, in recognition of their services during the recent operations in Waziristan. It will be remembered that Surgeon-Colonel Spencer was the Principal Medical Officer with the force, and Brigade-Surgeon-Lieutenant-Colonel Davis was Principal Medical Officer to the 1st Brigade.

The following is a list of surgeons on probation of the Indian Medical Service who were successful at both the London and Netley examinations on July [illegible]. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:

Names.	Marks.	Names.	Marks.
*J. Stephenson (B.)	5,921	R. F. Standage (Bo.)	4,274
F. [illegible] (B.)	5,127	A. A. Gibbs (Bo.)	[illegible]
W. S. [illegible] (B.)	5,068	F. L. Blenkinsop (M.)	[illegible]
†E. [illegible] Waters (B.)	[illegible]	A. Moore (M.)	3,924
A. Leventon (B.)	[illegible]	H. A. F. Knapton (Bo.)	[illegible]
P. P. Chapman (B.)	[illegible]	E. M. Illington (M.)	[illegible]
A. [illegible] (B.)	[illegible]	T. E. Watson (M.)	3,681
A. F. W. King (Bo.)	[illegible]	C. G. Webster (M.)	[illegible]

* Gained the Herbert Prize of £20, the Parkes Memorial Medal, the Martin Memorial Medal, and the prize in Pathology.

† Gained the 1st Montefiore Prize of 20 guineas and bronze medal.

‡ Gained the Maclean Prize for Clinical and Ward work.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Rodolphe Harman, M.B., is promoted to be Brigade-Surgeon-Lieutenant-Colonel, vice J. Reddick, deceased, July [illegible]. Brigade-Surgeon-Lieutenant-Colonel Harman was appointed Assistant-Surgeon, April 1, [illegible]; Surgeon, March 1st, [illegible]; Surgeon-Major, April 1st, [illegible]; and Surgeon-Lieutenant-Colonel, April 1st, [illegible]. He had no war record in the Army List.

ARMY MEDICAL RESERVE.

Surgeon-Lieutenant Percival M. Yearsley, having vacated his Volunteer medical appointment, ceases to be an officer of the Army Medical Reserve, August 28th.

THE VOLUNTEERS.

Surgeon-Lieutenant F. J. L. [illegible], 1st Volunteer Battalion the Suffolk Regiment, has resigned his commission, August 28th.

Mr. Samuel John James Kirby, M.D., is appointed Surgeon-Lieutenant to the 2nd Volunteer Battalion the Suffolk Regiment, August [illegible].

Surgeon-Lieutenant S. Braithwaite, 1st [illegible] Volunteer Battalion the Border Regiment, has resigned his commission, August [illegible].

Surgeon-Lieutenant G. M. Edmond, M.D., 1st Volunteer Battalion the Gordon Highlanders, is promoted to be Surgeon-Captain, August [illegible].

UNIVERSITIES AND COLLEGES.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, August, 1895. The following candidates passed in

Surgery.—A. F. Blake, London Hospital; G. W. Brown, St. Thomas's Hospital; J. A. Clough, Leeds; R. G. Jones, London Hospital; W. J. Lubeck, Madras; A. R. McCullagh, Charing Cross Hospital; H. S. Maw, Bristol and St. Bartholomew's Hospital.

Medicine, Forensic Medicine, and Midwifery.—F. H. Blatchford, St. Mary's Hospital; J. A. Clough, Leeds; A. D. P. Dudley, University College; R. E. T. Ingram, Guy's Hospital; H. S. Maw, Bristol and St. Bartholomew's Hospital; U. W. N. Miles, King's College; D. Pettigrew, Glasgow and Sheffield; S. J. Wareham, Charing Cross Hospital.

Medicine and Forensic Medicine.—J. G. Owen, Charing Cross Hospital; A. H. Wade, St. Bartholomew's Hospital; R. P. R. [illegible], St. Thomas's Hospital.

Medicine.—G. Lowsley, St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—D. D. Stewart, Liverpool; T. W. Wakem, Charing Cross Hospital.

Forensic Medicine.—R. G. Jones, London Hospital; S. E. H. Martin, Royal Free Hospital; M. White, St. Thomas's Hospital.

Midwifery.—O. W. [illegible], University College; D. C. Kemp, University College; J. Watts, Manchester.

To Messrs. Blake, Blatchford, Brown, Clough, Dudley, Ingram, Jones, Lowsley, McCullagh, Maw, and White was granted the diploma of the Society.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

Sanitary Condition of Labourers' Cottages.—Mr. Chaplin (Sleaford, Lincolnshire), in reply to Mr. Yerburgh (Chester), said that the practice of the Local Government Board had been to refer to the reports of the Assistant Commissioners in connection with the examination of the annual reports of medical officers of health, and where the reports of the Assistant Commissioners had contained statements respecting cottage accommodation the Board had communicated with the local authority on the subject when it had appeared to them that advantage would be likely to result from such communication. Apart, however, from the reports of the Assistant Commissioners, the Board were accustomed upon the materials furnished by the annual reports of the medical officers of health to draw the attention of local authorities to matters of sanitary importance in connection with the housing of the working classes. It would entail a good amount of labour to go through the files with respect to all the sanitary districts in the country for the purpose of preparing a list of the cases in which action had been taken in the matter.

Dr. Herz.—Mr. Griffith Boscawen (Tunbridge, Kent) asked the Home Secretary whether he would lay upon the table of the house a copy of the correspondence which had passed between the Home Office and the French Government with reference to the case of Dr. Herz; and also a copy of the report of Sir Russell Reynolds on the prisoner's state of health in [illegible], and his subsequent report.—Sir M. White Ridley (Blackpool) said he could not see that any good purpose would be served by laying upon the table of the House the correspondence referred to. Speaking generally, that correspondence had been initiated by a representation as to the serious condition of Herz's health, and the impossibility of removing him to London, and an inquiry whether the French Government persisted in their requisition for his surrender, to which a reply in the affirmative was returned. Sir Russell Reynolds had three times visited Herz, and reported on his health; his reports were confidential in their details, and it would be contrary to practice to publish such documents. Her Majesty's Government were now in communication with the French Government with a view to fresh conventions being come to which would enable the Act of last session to be put in force.

Increase of Lunacy.—Mr. G. Balfour, in answer to Dr. Kenny (College Green, Dublin), said the increase in the number of admissions of lunatic patients into institutions was attributed by the Lunacy Commissioners in great measure to causes other than an increase of the disease of insanity in its more serious forms; and in their last report they pointed to the continuously increasing proportion of old-age admissions as confirming this view. At present he had no well digested information with respect to foreign countries, and was not satisfied that anything would be gained by an international commission. He would, however, consider the matter during the recess.

Salvation Army Shelters.—In answer to Mr. Tatton Egerton (Knutsford), Mr. Chaplin (Sleaford, Lincolnshire) said his attention had been called to a report in the *Times* of August [illegible] as to proceedings instituted by the Vestry of St. George the Martyr, Southwark, with regard to alleged overcrowding of the Salvation Army shelter in Blackfriars Road. He understood that the case had been adjourned, and no decision had been given by the magistrate in the matter, and he thought, therefore, that he could not properly make any observations with reference to the case referred to. The Local Government Board were aware that a considerable number of cases of small-pox had occurred amongst persons who

had been relieved in the Salvation Army shelters. In the early part of last year the Board directed an inquiry as to the arrangements in connection with these shelters, especially as regards dealing with cases of infectious disease, and at the beginning of the present month he had requested that further inquiries should be made by one of the medical inspectors of the Board as to the precautionary measures taken at the shelters with a view to the detection of cases of small-pox among the persons admitted. The general result of the inquiry appeared to be that the Salvation Army authorities realised their responsibility in the matter of small-pox, and were anxious to do all in their power to prevent the spread of that disease by means of the shelters. The Local Government Board were not empowered to enforce a medical inspection. Any powers for this purpose, apart from those which might be exercised by the medical officer of health, could only be obtained by legislation. The subject had been receiving his attention, and the question as to an alteration of the law with regard to these and other similar institutions would be considered by him.

Pauper Workhouse Infirmaries.—Mr. TALBOT called the attention of the President of the Local Government Board to the treatment of the poor in workhouse infirmaries, and asked that the report of the Committee on Pauper Schools might not be longer delayed.—Mr. CHAPLIN, in a general answer to the questions which had been addressed to him by preceding speakers, admitted that the regrettable cases which had occurred in workhouses of patients suffering from illness owing to incompetent and inferior nursing ought to receive his careful attention. He had already made inquiries on the subject, and he understood that at the present time there was in existence a Workhouse Nursing Association, by means of which nurses were trained and also recommended. He understood, moreover, that many boards of guardians subscribed to the association. The Local Government Board attached great importance to the work of the association, and also to the nursing duties in workhouses by trained nurses. It was also the policy of the board to discourage as far as possible the nursing of patients by pauper nurses. This had been the general policy of the Department, and it was one which he hoped to continue to carry out in the future, realising how important it was that the nursing establishment connected with workhouses should be thoroughly reformed. As to the position of district schools in the metropolis, he had made some inquiries of the chairman of the committee now sitting in connection with this subject. He understood that the report might be presented not later than November next. When the report had been presented and the Department was in possession of the views of the committee, it would be his duty to give his best attention to the subject.—Mr. T. P. O'CONNOR said that he had received the most alarming and shocking communications with regard to the treatment of the pauper sick, and the right hon. gentleman might do much good by making searching inquiry into the subject.—Sir W. FOSTER said that the subject of the nursing of the sick poor had received much attention on the part of the local authorities of late years, but, of course, the Local Government Board were bound to proceed cautiously in regard to the matter. He was glad to say that trained nurses were now employed in workhouse infirmaries in place of pauper nurses. He entirely approved of what had fallen from the right hon. gentleman as to placing casual paupers on the land so as to enable them to recover their self respect. An endeavour should be made to group unions in order to enable the inmates of the workhouses to be classified.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,794 births and 4,045 deaths were registered during the week ending Saturday, August 24th. The annual rate of mortality in these towns, which had been 20.8 and 19.1 per 1,000 in the two preceding weeks, rose again to 19.9 last week. The rates in the several towns ranged from 11.8 in Croydon, 12.4 in Swansea, and 12.9 in Plymouth to 30.4 in Manchester, 33.2 in Hull, and 35.6 in Blackburn. In the thirty-two provincial towns the mean death rate was 20.0 per 1,000, and exceeded by 5.0 the rate recorded in London, which was 17.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 4.8 per 1,000; in London the rate was equal to 3.0 per 1,000, while it averaged 6.1 in the thirty-two provincial towns, and was highest in Salford, Hull, and Blackburn. Measles caused a death-rate of 1.5 in West Ham, 1.8 in Salford, and 9.4 in Blackburn; whooping-cough of 1.2 in Blackburn and 1.5 in Birkenhead; and diarrhœa of 7.5 in Sheffield, 7.9 in Wolverhampton and in Preston, 8.8 in Salford, 9.6 in Bolton, and 13.0 in Hull. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 47 deaths from diphtheria in the thirty-three towns included 21 in London and 3 in Liverpool. Six fatal cases of small-pox were registered in London and 2 in Oldham, but not one in any other of the thirty-three large provincial towns. There were 357 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, August 24th, against 297, 273, and 324 at the end of the three preceding weeks; 65 new cases were admitted during the week, against 60, 54, and 79 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,423, 2,511, and 2,529 at the end of the three preceding weeks, declined again to 2,507 on Saturday last, August 24th; 367 new cases were admitted during the week, against 247, 326, and 357 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, August 24th, 877 births and 478 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 18.3 to 16.6 per 1,000 in the four preceding weeks, was again 16.6 last week, and was 3.3 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death rates ranged from 12.1 in Leith to 21.4 in Aberdeen. The zymotic death rate in these towns averaged 2.9 per 1,000, the highest rates being recorded in Greenock and in Dundee. The 201 deaths registered in Glasgow included 17 from diarrhœa, 6 from scarlet fever, 6 from whooping-cough, 4 from "fever," and 1 from measles.

THE LAW AS TO DISINFECTION.

B. B. writes: The Public Health Act, Section 126, states that any person who gives, lends, sells, transmits, or exposes without previous disinfection any bedding, clothing, rags, or other things which have been exposed to infection shall be liable to a penalty. Does this render a person liable whose clothing has been exposed to infection by visiting a patient who is suffering from an infectious disease—for example, small-pox—provided he does not disinfect them before leaving the house? If not, is there any law by which people can be prohibited from visiting a case of small-pox in a cottage (we have no isolation hospital), and then going straight into public thoroughfares, shops, etc.?

*.** Strictly speaking, a fully proved case of the kind would come within the terms of the Section, but it is not usual to prosecute in such cases. It is proper to prohibit, in the sense of warning, but there might probably be difficulty in inducing magistrates to convict, especially as the District Council have failed to provide means of proper isolation.

POSTAGE FOR NOTIFICATION RETURNS.

R. W. JONES, M.B.—The Act says nothing as to cost of postage, but holds the medical attendant responsible for sending the certificate to the medical officer of health. It seems reasonable that the former, if he uses the post for the purpose, should pay the trifling cost of postage. There has not, as far as we know, been any legal decision on the point, but it is more than doubtful if he could compel the district council to refund it, although the Local Government Board would raise no difficulty if they were to do so.

GRANTS TO PUBLIC VACCINATORS.

We sympathise with Dr. Ducat, and such of his colleagues as are in a like position in respect to their non-award of a grant for efficient vaccination, by reason of their use of stored calf lymph. But we still fail to see the "change of front" which is attributed to the Local Government Board in the matter. We have before us now a handbook containing the official "Instructions to Vaccinators under Contract," dated 1871, and a copy of the amended instructions of seventeen years later, but the difference in the two in nowise affects the subject now in question, namely, the withholding of awards on account of use of calf lymph in a stored state; rather the older instructions of twenty-four years ago expressly inveigh against any use of stored lymph where this can be avoided, emergent circumstances alone calling for its use. Seeing that the grants to public vaccinators are given on the basis of these instructions, we can hardly expect that disregard of a clause which Dr. Ducat himself looks upon as inculcating a method of vaccination "the most efficient and the most preferable" should be met with approval and reward. Doubtless the day is not far distant when calf lymph, always of absolutely fresh character like that now used at Lamb's Conduit Street Station, will be almost universally made use of; but we trust that the day of general use of stored lymph is never to come. If the Local Government Board has the power to do away with the use of such lymph, we are ignorant of the fact; but they show in unmistakable fashion their disapproval of it, and for the rest we must be content to await with what patience we can the report of the Vaccination Commission before we can reasonably look for any "change of front" on the part of the Government in the manner of administration of the Vaccination Acts. And meantime, we have still to learn that vaccination with lymph calf-to-arm has been unrewarded in the matter of the official grant.

LONGFORD (IRELAND) BOARD AND THE LOCAL GOVERNMENT BOARD.

The Longford Board of Guardians has had a disagreement with its medical officer about the nursing in the fever hospital, Dr. Cochrane being strongly of opinion that the staff at night was insufficient, so much so that whilst the question was still unsettled by the Board, he paid an assistant nurse himself. This matter with some others has been laid before the Local Government Board, with the result that the decision was in favour of retaining the nurse in the fever hospital. The Local Government Board sent a peremptory letter to the Longford Board to the effect that if it did not follow the counsel of its medical officer in the treatment of the sick, the central authority might feel justified in suspending the Board. The Board persists in its contumacy, and we are sorry that the Local Government Board has not maintained a firm attitude, but instead thereof has sent a weak letter to the clerk in which it practically throws up the sponge. A grand opportunity has been lost of setting an object lesson to the guardians all over the country—an opportunity of teaching them the true relation of the medical officer to the Board of the Union.

MEDICAL NEWS.

We learn with pleasure that a Civil List pension of £200 a year has been granted to Mrs. Huxley.

At the recent elections to the Councils-General in France more than 150 members of the medical profession were returned.

The King of Siam has, following the example of the Emperor of Japan and the Shah of Persia, given his adhesion to the Geneva Convention.

There are now 343 small-pox patients in the hospitals of the Metropolitan Asylums Board. The western, northern, and central districts still remain free fom the disease.

The American Association of Obstetricians and Gynæcologists will hold its eighth annual meeting at Chicago on September 24th and two following days under the presidency of Dr. J. Henry Carstens.

Presentation.—On August 23rd at the Wansbeck Home for Females, Newcastle, Dr. William Teasdale was presented with a handsome and inscribed silver salver in recognition of his fourteen years' voluntary service in connection with that institution.

The New York City Board of Health has appointed three ladies—Miss Mitchell, Miss Deane, and Miss Weiss, all holding the degree of Doctor of Medicine—to be medical inspectors under the board. The salary is 100 dollars (£20) a month.

Fatal Accident to a Medical Man.—Dr. Frank Marsh Wright, of Bottesford, met his death through attempting to enter a train in motion on August 23rd. Dr. Wright, who was in practice at Bottesford with his father, was 32 years of age, and was formerly a student at Guy's Hospital.

Dr. Emma Johnston Lucas has been appointed Health Commissioner Peoria, Ill., U.S.A. She is the first woman who has held any public office in that city. Her candidature was strongly supported by the medical men, as well as the Women's Club, of Peoria.

The Intercolonial Medical Congress of Australia will be opened on February 3rd, 1896, instead of the 17th as previously arranged. Diseases of the Eye, Ear, and Throat will be considered in a subsection of the Section of Surgery at the forthcoming Congress. Drs. J. H. Scott and L. E. Barnett, of the University, Dunedin, N.Z., are the General Secretaries.

MEDICAL VACANCIES.

The following vacancies are announced:

BRIGHTON, HOVE, AND PRESTON DISPENSARY, Queen's Road, Brighton.—Medical Officer for the No. 6 District. Applications to the Secretary by September 9th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence and allowance for washing provided. Appointment for six months. Also Assistant Physician; must be M. or F.R.C.P.Lond. Applications to the Secretary for the former post by September 12th, and for the latter by September 14th.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Clinical Assistant; must be qualified and registered under the Medical Acts of Students of Medicine, who have only their Final Examination to pass. Appointment for six months. An honorarium of £10 after six months' satisfactory service will be given, and board, residence, and washing. Applications and testimonials to Walter G. Carnt, Secretary, before September 13th.

GENERAL HOSPITAL, Nottingham.—House Physician. Appointment for two years, but eligible for re election. Salary, £100 per annum, rising £10 a year to £120. Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing in hospital; no salary. Applications to the Secretary for the former post by September 11th, and for the latter by September 7th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 146, Buchanan street, Glasgow, by November 8th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Must be doubly qualified and able when required to give lectures for probationer nurses. Salary, £90 per annum, with board and lodging. Applications and testimonials to R. F. E. Ferrier, Honorary Secretary, before September 14th.

LANCASTER INFIRMARY AND DISPENSARY.—House-Surgeon; unmarried. Must be doubly qualified and registered. Salary, £80, with residence, board, attendance, and washing. Applications to Allan Stewart, Honorary Secretary, before September 13th.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road, Manchester.—House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to Mr. Herbert Teague, Secretary, 33, Barton Arcade, Manchester, by September 3rd.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House-Physician, House-Surgeon, Assistant House-Physician, and Assistant House-Surgeon. Appointments tenable for six months. The House-Physician and House-Surgeon will each receive a salary at the rate of £60 a year. Must possess a registered English medical and surgical qualification. Applications and testimonials to Charles H. Byers, Secretary, before September 9th.

NORFOLK AND NORWICH HOSPITAL.—Assistant House-Surgeon; doubly qualified. Appointment for six months. Board, lodging, and washing provided. Applications to the House-Surgeon by September 2nd.

PLYMOUTH PUBLIC DISPENSARY.—Second Medical Officer of the Provident Department. Appointed for one year, but eligible for re-election; doubly qualified. Remuneration will be the net profits (after deduction of the expenses mentioned in the Scheme). Applications to the Honorary Secretary, W. H. France, 7, Athenæum Terrace, Plymouth, by September 11th.

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Candidates must be M.R.C.S.Eng., and registered. Appointment for one year. Salary, £60, with board, lodging, and washing. Applications and testimonials to W. Stockwell, Secretary-superintendent, before September 11th.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Physician. Candidates must be Fellows or Members of the Royal College of Physicians, London. Applicants must attend the Court of Governors to be held on Thursday, September 26th. Applications and testimonials to W. Henry Cross, Clerk, by September 9th.

MEDICAL APPOINTMENTS.

Berresford, Robert de la Poer, M.D.Glasg., L.R.C.P., L.R.C.S.Edin., re-appointed Medical Officer of Health to the Oswestry Town Council.

Blount, G. B. C., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

Byers, Professor, M.A., M.D., reappointed Physician for Diseases of Women to the Royal Hospital, Belfast.

Clendinnen, W. M., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health, Covely Urban District, *vice* J. G. Clendinnen, deceased.

Cornwall, J. W., M.A., M.B., B.C.Cantab., appointed Clinical Assistant in the Throat Department of St. Thomas's Hospital.

Conford, G. J., B.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

Candler, G., Senior, B.A.Cantab., L.R.C.P., M.R.C.S., appointed Obstetric House-Physician to St. Thomas's Hospital.

Grouch, H. C., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

Dawnay, A. H. P., Junior, L.R.C.P., M.R.C.S., appointed Ophthalmic House-Surgeon to St. Thomas's Hospital.

Davis, H. J., M.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

Daniel, E. G. C., B.A.Cantab., L.R.C.P., M.R.C.S.(extension), appointed Resident House-Physician to St. Thomas's Hospital.

Dixon, W. E., B.Sc.Lond., L.R.C.P., M.R.C.S.(extension), appointed Clinical Assistant in the Electrical Department of St. Thomas's Hospital.

Genge, G. G., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Skin Department of St. Thomas's Hospital.

Saunders, E. A., Junior, M.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed House-Physician to St. Thomas's Hospital.

Seccombe, P. J. A., M.A.Cantab., L.R.C.P., M.R.C.S., appointed non-resident House-Physician to St. Thomas's Hospital.

Stone, W. G., M.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

Templeman, Charles, M.D.Edin., appointed Medical Officer of Health for Dundee, *vice* Dr. Anderson, resigned.

Thomas, Dr. J., appointed Medical Officer of Health to the Lowestoft Town Council.

Thurston, E. O., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

Walker, Dr., reappointed Medical Officer of Health for the Stoke Rural District.

Wallace, L. A. R., B.A., M.B., B.Sc.Oxon., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

Watkins, J. W., M.D.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health for the Newton Urban District.

Winn, John, L.R.C.P., L.R.C.S.I., appointed Medical Officer of Health for Clayton-le-Fylde.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGES.

Campbell—Grinnon.—On August 1st, at St. Matthew's Church, Bayswater, by the Rev. J. A. Chapman, B.A., E. Kenneth Campbell, M.B., F.R.C.S., son of Hugh Campbell, of Wimpole street, W., and late of Eweland Hall, Essex, to Rose Maude, daughter of the late Brigade-Surgeon G. C. Gribbon (K. O. Scottish Borderers), and granddaughter of the late Sir Hugh Allan, of Montreal, Canada.

Gifford—Ellis.—At Brierley Hill, Staffordshire, on August 27th, George Keith Gifford, M.B., C.M.Aberd., to Gertrude Mary, only daughter of H. D'Arcy Ellis, M.R.C.S., L.R.C.P., etc., West Flatts, Stourbridge.

Hellier—Harrison.—On August 22nd, at the Wesleyan Church, Brooden Lane, Manchester, by the Rev. Dr. Moulton, of Cambridge, John Benjamin Hellier, M.D., of Leeds, to Lily, younger daughter of the late Henry Bowers Harrison, J.P., of Prestwich.

Shaw-Mackenzie—Yule.—On the 29th inst., at St. James Paddington, by the Rev. E. A. Midwinter, John A. Shaw-Mackenzie, M.B.Lond., M.R.C.S., of 24, Savile Row, W., to Fanny, daughter of the late Robert Yule, of Gravesend.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with duplicate copies.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

HYGIENE asks which is the journal of public health that deals most efficiently with sanitary questions of the day at present under discussion, and the one most useful from a practical point of view to a medical officer of health?

CANTAB. asks: (1) What place in Canada is the best for medical study and which grants the best degree in surgery and medicine? (2) Would they take a certificate of having passed the Cambridge 2nd M.B. Examination and certificates of one of the best London hospitals for medical studies pursued there as equivalent for their preliminary examinations, and allow a student to proceed from that point and obtain their degree? or, would he have to start and pass all their examinations? (3) If this could not be done in Canada, is there any English-speaking country where the 2nd M.B. Cambridge would be taken for preliminary examinations? (4) How could I find out about the expenses and course of studies, etc., in this Canadian school of medicine?

THOS. C. PENFOLD, M.B. (East Dereham) writes: Does any practitioner know of a patient having an invalid chair, with an adjustable back and leg rest, to carry a man of 6 feet, with bicycle wheels, and which could be drawn by a donkey or by hand. The above is for a clergyman in straitened circumstances, who requires to maintain a horizontal position almost continually on account of heart disease.

A NEW MEMBER asks where he can find a list of the literature on cancer. He is specially interested in having as full a list as possible of the more recent investigations into its nature and pathology. He also wishes to know if there is any place where such articles may be consulted, and if there is any place where specimens of cancer can be obtained, with a view to carrying out some research into its causation, etc.

H. O. S. writes: Being desirous of treating a case of anæmia with bone marrow, will any of your readers kindly inform me (1) the best kind of marrow to use, (2) mode of administration, (3) dose to commence with.

MEMBER OF B.M.A. would be glad of hints for the treatment of the cocaine habit from any practitioner who has successfully dealt with the same.

C. B. G. asks: What is the best form of manual restraining apparatus for permanently bad habits?

ANSWERS.

X. X. X.—Yes, if you wish it.

RESTRAINT OF INEBRIATES.

BEACON.—We know of no power in this country to compel an inebriate to go under restraint, unless the person be certified as a lunatic and sent to an asylum for the insane, whence he or she would have to be discharged on recovering sobriety unless insanity supervene. The question as to the girl over 16 might be submitted to a solicitor.

NOTES, LETTERS, Etc.

MEMBER No. 7.—We have handed your letter to the President of Council.

AQUA PURA AND DR. J. M. TAYLOR.—The British makers of the Pasteur filter are Messrs. J. Defries and Sons, Limited (Sanitary Department), 147, Houndsditch, London. We do not know whether there are any agents in Belfast.

MEDICAL AID SOCIETIES.

JUSTICE writes: I was much gratified to see that in the Section of Ethics at the recent annual meeting of the British Medical Association, Dr. Greenwood's motion—namely, "That steps should be taken to prevent members of the Association accepting the post as medical officer to a medical aid society"—was carried unanimously. A few days ago I was interviewed by the representative of one of these societies and asked to take the post, but I indignantly refused to have anything to do with them, and I was much pleased to learn shortly afterwards that one of my professional neighbours had also refused to have anything to do with them, and I trust that the remaining medical man—who was away on a holiday at the time—will also decline to have any connection with them. I think if medical men, whether members of the British Medical Association or not, would refuse to become the hirelings of these so-called medical aid societies, they would at the same time show respect for themselves, keep up the dignity of the profession, and ultimately stamp out these societies altogether. It is time that some action should be taken by such a powerful body as the British Medical Association to guard the honour and the interests of the profession.

COLONIAL MEDICAL APPOINTMENTS.

WEST-INDIAN CREOLE writes: Your correspondent "Colony," in the BRITISH MEDICAL JOURNAL of July 6th, proposed "That all appointments to the colonial (civil) Medical Service be made from officers serving in the Army Medical Staff, who are willing to accept such service;" and, again, he writes: "And whatever advantages the Colonial Service holds out should be first of all offered to those medical men who are serving the State in peace and war in her army." The unprecedented selfishness of such a proposal as the above, and the lame reasons by which it is supported, makes it difficult to understand how any medical man could have urged it. In the first place, if such a proposal were adopted, then no colonial young man need think of medicine unless he makes up his mind to shoulder his gun; if he has no taste for army work, then no matter what his advantages may be he must not think of a Colonial appointment in Her Majesty's Service, as that is reserved for the young men of the United Kingdom. The Colonial must, however, pay his taxes for the upkeep of the colony in which he lives, but he is not to derive any benefit from that colony, as that colony is for the benefit of young Englishmen, Scotchmen, and Irishmen. After all, then, we Colonials must entertain the idea that colonial advantages are not for the benefit of youths born and living in the colonies, but for the benefit of the youths of the mother country. As each colony is taxed to support its own medical officers we doctors in the colonies are to be taxed to support so-called army medical men, who many a time are too lazy to seek private practice in England, Scotland, or Ireland, and we ourselves to take a back seat: if not, the only other alternative *is to join the army.* I now know that the German compulsory law that all young men must serve in the army has been written in the Statute Book of Great Britain; perhaps the law is only applicable to Her Majesty's colonies. No: no Government, be it Liberal or Conservative, would ever sanction such an iniquitous idea, except that Britain no longer wants her colonies.

I am sorry this reply is so late, but that can be explained by the time the paper reached me.

"EXPOSURES OF QUACKERY."

THE MANAGER (Savoy Press) writes: My attention has only to-night (August 28th) been drawn to "H. J. L.'s" letter published in your issue of last week. When he subscribed, it was through an advertisement that the book was in the press, and he says that he received a postcard of acknowledgment, but omits to mention that the postcard stated that the book would be sent when ready. Within the last few weeks 1,000 copies have been sent out to subscribers and others of Vol. I, and Vol. II is (as has been announced) in the press, and will also be supplied when ready. Out of many hundred names, but entered alphabetically but in order of receipt, I cannot pick out any merely by initials; but if "H. J. L." will write to me, giving his name and address, I will make inquiries as to whether his particular copy has been sent—it may have left this office and miscarried, for which I can hardly be held blamable—and I should also be glad to hear from any subscriber who has not yet received Vol. I. Against "H. J. L.'s" complaint, which was sent to you instead of the Savoy Press with the intention of exciting prejudice, I must ask you to set hundreds of letters and cards received from subscribers and others acknowledging receipt of Vol. I, and containing expressions of satisfaction with it. It will be evident to any unprejudiced person that it must be to our interest to get the copies out, and not to keep them on our shelves.

CHRONIC LOCAL VENOUS CONGESTION AS A CAUSE PREDISPOSING TO RUPTURE OF THE PERINEUM DURING DELIVERY.

DR. GEORGE F. BARNES writes: I desire to direct the attention of the members of the profession to a cause not generally recognised, as far as I know, which, acting for a prolonged period during gestation, leads to changes in the structure and physical properties of the female perineum, rendering its chances of rupture at the time of delivery more probable. This cause is chronic passive congestion, from pressure of the uterus above, of the veins of the anal and perineal region, leading to piles, with local swelling of the former, and to a condition of œdema of the latter, with impairment of nutrition from interference with the local circulation, which condition of the perineum may be very slight, or the reverse, and likely to be aggravated if there be much inflammation and consequent phlegmon around the hæmorrhoids, tending to spread forwards directly into the perineal body.

It is not desirable to discuss here either the structure or the *modus operandi* of the perineum during the exercise of its functional part in the mechanism of delivery, beyond pointing out that on its sufficient elasticity depends its safety from injury, and the effective performance of its special duty at that time. Elasticity confers upon it the power to stand the necessary stretching without tearing, thus insuring its integrity, and also enables it, after receiving the muscular thrust of the uterus and accessory muscles, transmitted

through the body of the fœtus in the axis of the inlet to reciprocally store and return to the head an almost equal equivalent of elastic pressure in the line of the axis of outlet, as well as following the head when advancing or receding, this elastic recoil materially assisting extension of the head. According to my experience, it is the thin perineum which escapes injury, and this is doubtless due to the fact that, owing to its elasticity, its substance is uniformly spread over a large surface of the head, every part bearing its share of the strain, and returning its modicum of elastic counterpressure. The thick heavy inelastic perineum is the one most likely to be injured, and here it is that I desire to emphasise the fact that under conditions of chronic venous obstruction of these parts a thin elastic may gradually become transformed into a thickened inelastic unyielding structure, which from its want of elasticity tears when the descending head will no longer be denied. I am not desirous of being understood to say that all thin perinea have sufficient elasticity, or that there are not many which are naturally thick, yet sufficiently elastic, but only to point out that very many of those which tear will be found to be thickened, and suggest that local venous congestion is the cause both of the extra thickness and diminished elasticity. If the above be true, there will be further need for care on the part of the practitioner, not only as far as possible by support of bed, etc., and by position to remove the pressure of the uterus on the veins of the pelvis, thus trying to attack the cause, but also by judicious local treatment, and especially by warning the patient or friends to immediately report them, endeavour to prevent or get rid of the local symptoms.

THE KENT COMBINED SANITARY DISTRICTS.

IN referring to the suggested salary of the future medical officer of health to the above area we pointed out "that the remuneration was to be [illegible] instead of £800 which the late official enjoyed," and we added that a clerk was to be appointed whose salary of £100 per annum was to be paid by the medical officer of health, reducing the amount to £300.

A correspondent who has held one of the largest combined areas in England over twenty-one years reminds us that we have omitted to state other important and necessary expenses which cannot be altogether escaped from. He names his annual season ticket and the annual fare on a second line of railway. The expensive item of conveyances in the country districts is a considerable amount. Also ? a saddle horse or a bicycle; the latter in a very hilly neighbourhood is useless. Moreover, it must often be taken by train. The Infectious Diseases Notification Act has not only largely increased the work, but quadrupled the correspondence and postage. If the officer undertakes to analyse water he should not forget to ask his authorities to provide the apparatus for such a purpose. To efficiently carry out the duties which will be expected of him in the present day he should ask for that very costly instrument, a "microscope up to date." As a "new broom" he may obtain "anything and everything" at the outset of his career provided he be not too modest to urge his requirements.

EXCISION OF SPINA BIFIDA.

DR. HERBERT TANNER (South Lambeth) writes: In the BRITISH MEDICAL JOURNAL of July 27th Mr. Morgan reported a case of spinal meningocele which he had cured by excision of the sac. A fortnight previous to this I did the same thing for an almost exactly similar condition. My case—a patient of my friend, Dr. Corlett—was only 10 days old when I operated; it was very apparent that there were no nerve cords in the sac, which was about as large as an orange, and was covered at the sides with skin, but the greater part was enclosed only by extremely thin membranous tissue. The gap in the laminæ appeared to be just about the same size as in Mr. Morgan's case—as large as a threepenny piece. I ligatured the "pedicle" of the sac with silk and cut away, bringing the skin flaps very accurately together with horsehair sutures, and dressed with iodoform and collodion. The wound healed by first intention throughout, and the infant had no bad symptom whatever connected with the operation, but had some dyspepsia due to artificial feeding, of which it died a few days ago, I regret to say, about a month after the operation. My friend, Mr. A. M. Hickley, took a "snap-shot" of the result, but I regret to say that, owing to defective light, the result was not good. The remarkable coincidence in this case with that reported by Mr. Morgan will be recognised by this brief report—coincidence both in the original condition and in treatment.

A VALUABLE PRESENTATION.

DR. W. R. BACOT, Surgeon to the Townsville Hospital, North Queensland, has been presented with a testimonial so original in character that a brief description (which we take from the *Townsville Daily Bulletin* of July [illegible]) may be interesting. "Enclosed in a glass case with silky oak base and frame is a stand in tiers, covered with red plush, on which are arranged gold and mineralogical specimens. In the pride of place is a bar of pure gold, measuring [illegible] inches long by [illegible] inch broad, and nearly [illegible] inch thick, with Dr. Bacot's name and the date of presentation on a finished surface. Then reposing on successive tiers are nuggets and specimens of reef gold, fourteen in number, weighing from an ounce downwards; pieces of alluvial gold—fine, coarse, and in the form which the precious metal occasionally takes, wire; [illegible] rich and beautiful quartz specimens, illustrating not only remarkable peculiarities in the deposit of gold, but the wealth of all the more notable mines of the field; and dainty and valuable pieces of opal, agates, etc." Accompanying this very practical evidence of Dr. Bacot's popularity among the people of Charters Towers was a framed address. Dr. W. R. Bacot is a son of Dr. Bacot, of Bournemouth, and is an old University College man.

CREMATION *v.* INHUMATION.

DR. J. M. BARNETT forwards us an interesting statement from his pen on the subject of cremation *v.* inhumation. It contains, however, nothing of novelty for our readers, and we fear that we shall be unable to find space for it.

PUFFS AND PRICE LISTS.

DR. J. FFRENCH BLAKE (Putney) complains of the appearance of a list of eminent doctors, with their respective addresses in the published price list of Parke's Drug Stores, Limited. It may be taken for granted that this is done entirely without the knowledge of the gentlemen whose names are so used, but if our correspondent will forward us a copy of the list the matter shall be further dealt with.

A LEARNED DOCTOR.

THE following is taken from a recent number of the New York *Medical Record*:

"There is a quaint and original doctor located on one of the islands of Puget Sound. He advertises in posters and placards printed in a home outfit. In one of his announcements he says: 'Legs and arms sawed of while you wate without pane. Childbirth and tumors a specialty. No odds asked in measles, hooping cough, mumps, or diarrear. Bald head, bunions, corns, warts, cancer and ingrowing tow nales treated scientifically. Colock, cramps, costiveness, and worms nailed on sight. Wringworms, pole evil, shingles, moles, and cross eye cured in one treatment or no pay. Private diseases of man, woman, or beast eradicated. P.S. Terms, Cash invariably in advance. No cure, no pay. P.S. (Take Notis.) No coroner never yet sot on the remains of my customers, and enny one hiring me doan't haf to be good layin' up money to buy a gravestone. Come won, come awl.' This man is said to do a good business, although you would not expect it, and his patients say he cures diseases, and does it thoroughly and quickly."

SHAKESPEARE IN THE LAW COURTS.

THE American papers report a curious instance of the application of Shakespeare's creations to the purposes of a judicial inquiry. The case was that of Dino, an Italian, who was accused of murdering his wife last February. His defence was insanity, and Dr. Dana, a visiting physician at Bellevue Hospital, described him as insane because his pulse had remained normal under the extraordinary and exciting tests to which he had been subjected. The prosecution urged that Dino was shamming insanity. The presiding judge inclined to this opinion, and the jury adopted it and found the accused guilty of murder in the first degree. It was during the cross-examination of Dr. Dana by the judge that the characters of Shakespeare were brought into court. "Do you believe that Othello was insane, or was he responsible for the murder of Desdemona?" asked the judge. The doctor replied, "I believe he was a man of violent temper, who had been misled by circumstances and malignant insinuations. He appears a sane man throughout the play, and should assuredly have been held accountable." "Is that your opinion of Leontes, in *The Winter's Tale* also?" "Not at all," was the witness's reply, "Leontes, judging from his actions in the play, was undoubtedly insane, and therefore should not have been held accountable."

RAW ONION IN THE TREATMENT OF TRISMUS.

SURGEON-MAJOR J. C. H. PEACOCKE, I.M.S. (Satara) writes: A few evenings ago I was sent for hurriedly to see a Hindu girl, aged 16, who was said to be comatose. On arrival, her mind seemed obscured and she had trismus. Her friends told me she had suffered from dysentery for eight days, the urgent symptoms of which had yielded to chlorodyne, but that she still had diarrhœa with intense pain and frequent micturition; they also added that she was commencing the ninth month of her first pregnancy. I asked her some questions, but she scarcely noticed me, and could not reply owing to the trismus. I asked her friends if she ever spoke, and they said, "Oh yes, when her mouth is opened;" and they asked me if I should like to have her mouth opened, to which I replied, "Yes." An old woman who was sitting beside her thereupon put her hand into a bag by her side, took an ordinary onion out, cut it into two pieces, and applied one to each nostril, closing the girl's mouth at the same time. After ten to fifteen seconds the girl sighed deeply, opened her mouth, mumbled something, and gradually gained her speech and told me about the pains. From the nature of these, with the other symptoms, I strongly suspected the case to be one of incipient parturition, although the people positively stated the girl was commencing her ninth month only, and they had no suspicion as to her being near delivery. Of course no examination beyond palpation was permitted, so I advised them to at once send for a midwife, which they did. I heard next morning that two hours after my visit the girl had been delivered of a fully-grown infant, and was doing well, all the nervous symptoms having passed away. The treatment of the trismus by raw onion had, I learned, been shown them the previous night by a native quack who had been called in to treat the case. Camphor or ammonia would probably have done just as well, but I had no chance of trying them.

LITERATURE FOR MALINGERERS.

THE REV. HARRY JONES tells a story drawn from Portland Prison, which is worth reproducing. On going into the library Mr. Jones asked what were the favourite books of the prisoners, and was told, to his surprise, that Buchan's *Domestic Medicine* was more frequently asked for than any other. As there was a surgeon always ready to attend to the ailments of the convicts, the reason for this searching after medical knowledge was difficult to find, but he afterwards learnt that the description of the symptoms of illness was carefully studied by the inmates of the prison as a scientific guide in the shamming of sickness. A successful malingerer was relieved of his tasks, and obtained the coveted idle time on sick leave.

DRY GANGRENE AFTER SNAKE BITE.

SURGEON-CAPTAIN F. J. [illegible], A.M.S. ([illegible], Central Provinces India) writes: With reference to the case of dry gangrene after snake bite reported by Dr. M. S. [illegible] in the BRITISH MEDICAL JOURNAL of July [illegible], I would like to mention that a [illegible] boy aged about 11 came to the [illegible] Hospital about three weeks ago with typical dry gangrene of the terminal phalanx of the middle finger of the left hand. He had been [illegible] by a [illegible] about ten days previously. The line of demarcation was well marked about the middle of the second phalanx. It was let alone until the ulceration had extended to the bone, and then the bone was cut through a little higher up, leaving

him with a very useful stump. In this case I suppose one can only account for the gangrene on the supposition that the circulation had been stopped in the terminal phalanx on account of the pressure on the blood vessels of the inflammatory products poured out at the seat of mortification. The gangrene was also strictly local. From the extent of the gangrene in Dr. Lobbyn's case, I should be inclined to think that the barber's ligature was the cause of the extensive gangrene which resulted.

"A Curious Poultice."

Dr. N. E. Norway (Newquay) writes: Cow's dung is largely used in this neighbourhood as a poultice in cases of eczema from varicose veins, and with apparently good result. It has apparently also relieved cases in which the skin of the leg has become highly glazed, and small drops of blood exude. I had tried a variety of treatment in one such case, without the slightest effect, and was afterwards much surprised to find the condition very much better, the improvement being attributed to poultices of cowdung.

Dr. G. H. Morris (Gateshead) writes: It may be interesting to note that the late Mr. Chas. Waterton, as far back as 1820, had recourse to cowdung poultices during his wanderings in South America. In the third journey he says:

"I had pursued a red-headed woodpecker for above a mile in the forest, without being able to get a shot at it. Thinking more of the woodpecker, as I ran along, than of the way before me, I trod upon a little hard wood stump, which just about an inch or so above the ground; it entered the hollow part of my foot, making a deep and lacerated wound there. It had brought me to the ground, and there I lay till a transitory fit of sickness went off. I allowed it to bleed freely, and on reaching headquarters washed it well and probed it, to feel if any foreign body was left within it. Being satisfied there was none, I brought the edges of the wound together, and then put a piece of lint on it, and over that a very large poultice, which was changed morning, noon, and night. Luckily Backer had a cow or two upon the hill; now as heat and moisture are the two principal virtues of a poultice, nothing could produce these two qualities better than fresh cowdung boiled. ——I now took entirely to my hammock.....When the inflammation was completely subdued, I applied a wet cloth to the wound, and every now and then steeped the foot in cold water during the day, and at night again applied the poultice. The wound was now healing fast, and in three weeks from the time of the accident nothing but a scar remained."

No one will dispute that Mr. Waterton did not treat his wound with surgical skill, whilst he anticipated antiseptics by boiling his cowdung.

Mr. L'Heureux Blenkarne (Leicester) writes: I may inform you that a cowdung poultice was by no means an uncommon domestic remedy in cases of abscess of the breast, etc., when I was in practice at Buckingham some years since, but they have doubtless become more enlightened now, and use cleanlier and more scientific remedies. Here (in Leicester) an equally curious but not quite such a dirty domestic application is a hot pancake (superfatted), which the people use in cases of that supposititious entity, so dear to the unprofessional mind, "inflammation" (spelt with "a big I").

Is Matabeleland Healthy?

So many of our most vigorous and enterprising young men are going now to Matabeleland that the above question is asked with anxiety by relatives and others interested in their welfare. In reply the *Bulawayo Chronicle* contends that there is very little malarial fever in Matabeleland. The cases which have proved fatal from this cause have been among prospectors, who are notoriously careless about their health and in their habits. Farmers who turn up new soil thickly covered with the dead vegetation of years also "occasionally get a touch." Among the regular miners there is said to be but little sickness, and only slight malaria. As a set off, however, there is said to be a complete immunity from cholera, typhoid, and small-pox, and in Rhodesia influenza is quite unknown.

Workhouse Infirmaries.

An anonymous critic of the workhouse system, signing himself "Country Master," sends us, says the *Daily Chronicle*, an odd little indictment, which merits attention. His great complaint is that the small houses are starved in respect of staff, and for this reason "Another Workhouse Scandal" is so often the staple of the newspapers. "What," he asks, "would the Local Government inspector have thought if he had come in to visit my house to-day about half past 11 A.M.? Neither the matron nor myself had been near the sick wards. We make no secret of it either, and could readily account for all the time spent were it actually required; nevertheless, it is sufficient for me to say the bedridden cases were dirty, not attended to, the poor old man, aged 76, who generally did his best, not feeling well; one old man, over 80, had fallen out of bed, bruised and cut himself terribly, till one would have almost suggested ill treatment, and yet we are without a nurse or anyone to assist.....These items are not exaggerated luxuries from some would-be notables, but actual and daily facts. Were I to attempt giving a few of the primitive and highly insanitary arrangements in many of our country houses, I should expect to shock the most sceptical."

Morphinomania in China.

Our Consuls in China continue to draw attention to the increasing prevalence in several ports of the pernicious habit of injecting preparations of morphine, practised by unqualified persons among the natives. This custom was originally introduced as a cure for opium smoking, but it is a case in which the remedy is worse than the disease. Those who sell morphine and make the injections procure a profit of from 300 to 400 per cent. The charge for smoking an injection is 1 cent. One of the victims of the practice said: "It is much cheaper than opium smoking, and I get the same satisfaction out of it. I know of ten Chinese doctors, each of whom treats 50 to 100 men daily with this medicine."

An Infant Colossus.

According to the *Boston Medical and Surgical Journal*, a male child, aged 15 months, which is said to have weighed 92 lbs., died at Coney Island on August 10th. It had been of phenomenal size from early infancy, and was exhibited at several museums during the past year.

Letters, Communications, Etc., have been received from:

(A) C. N. Alexis, M.B., Grenada; Audi Alteram Partem; Messrs. Allen and Hanburys, London; Aqua Pura. (B) Mr. W. L'H. Blenkarne, Leicester; Dr. G. F. Barnes, London; Dr. J. M. Barnett, Belfast; Mr. J. F. Blake, London; Mr. L. Browne, London; Beginner. (C) Cantab.; Mr. F. W. Collingwood, Devonport; C. I. H.; C. B. G.; Dr. T. Churton, Leeds; Dr. C. Coombs, Castle Cary, Somerset. (D) Mrs. Daley, Abingdon. (E) Mr. R. Edwards, London. (F) Mr. W. J. Forbes, Sutton-in-Ashfield; Fairplay; Dr. R. Farrar, Stamford; Mr. F. W. H. Fraser, Bridge of Allan; Dr. T. R. Fraser, Edinburgh; Fully Qualified; F. I. I. (G) Messrs. George Gregory and Co., London; Mr. W. W. Grainger, Harrogate; G. B. M. (H) Hygiene; Mr. C. W. Harris, London; J. A. Hutton, M.B., Scarborough; Dr. W. Havard, Newport; H. O. S.; Mr. F. B. Herring, Douglas. (I) Mr. J. V. Ingram, Philadelphia. (J) Dr. C. E. Jennings, London; Mr. H. Jackson, London; R. W. Jones, M.B., Penrhiwceiber. (K) Mr. H. W. M. Kendall, Hokitika. (L) Mr. C. Y. Ladds, London; Lex; Liquor Carnis Co., London. (M) Member; Dr. C. F. G. Mann, Washington, co. Durham; Member No. 7; M. B. M. Association; Dr. B. R. Marlin, London; J. Morton, M.B., London; T. F. McDonald, M.B., Edinburgh; M.D.Lond.; Mr. H. F. Moore, London; Mr. H. T. Mills, London; Mac; M.D.London; Mr. F. C. Melhado, London; Mr. D. McVeagh, Coventry. (N) A New Member. (O) Dr. G. Oliver, Harrogate; Dr. W. O'Neill, Michelstown, co. Cork. (P) Dr. C. H. Phillips, Hanley; Dr. R. Purdon, Belfast; Dr. J. F. Payne, Kings Lynn; Mr. C. J. Parish, London; T. C. Penfold, M.B., East Dereham; Dr. J. Paterson, Glasgow; Physician. (R) R. E. B.; Mr. H. Robson, Leeds; Registrar. (S) Miss M. T. Schofield, Ballincollig; Mr. J. A. Southern, Derby; Dr. J. W. Springthorpe, Melbourne; Mr. G. Smith, London; S. W.; Mr. J. S. Sewill, London; G. Sharp, M.B., Leeds; Mr. D. Stockwell, Bath; Mr. G. H. Seagrave, Milnthorpe; Mr. J. H. Sykes, Southport; Mr. R. Simon, Nottingham. (T) Mr. H. Tanner, London; Mr. F. H. Tinker, Hyde. (U) Ut Prosim. (V) Victim. (W) W. E. C.; Mr. A. C. Watts, Colchester; F. G. Wallace, M.B., London; Dr. A. G. Welsford, Dover; Mr. F. F. White, Coventry; Dr. C. Wenyon, Fatshan, South China; Dr. Woods, Alverstoke; A. S. Wilson, M.B., Hastings; Mr. T. M. Watt, Hovingham; D. Walsh, M.B., London; Mr. H. O. Westwood, Bingham; etc.

BOOKS, Etc., RECEIVED.

The Cavendish Lecture. By Sir James Crichton-Browne. London: Baillière, Tindall, and Cox. 1895. 1s.

The Causes of the Neglect of Suppurative Ear Disease. By James Erskine, M.A., M.D. Glasgow: A. MacDougall. 1895.

Hebammen-Unterricht und Hebammenwesen. Von Dr. W. A. Poten. Berlin: Verlag von August Hirschwald. 1895. 80 pf.

The Volunteer Surgeon's Guide. By Surgeon-Captain R. R. Sleman. London: W. Clowes and Sons, Limited. 1895. 3s. 6d.

The Recent Evolution of Surgery. By A. Pearce Gould, M.S., F.R.C.S. London: Kegan Paul, Trench, Trübner, and Co. 1895.

Law and Chemistry of Food and Drugs. By H. Mansfield Robinson and Cecil H. Cribb. London: F. J. Rebman. 1895. 8s.

A Trip to Chicago, What I Saw, What I Heard, What I Thought. By Martindale C. Ward, M.D. Glasgow: A. Malcolm and Co. 1895.

Jahresbericht ueber die Fortschritte in der Lehre von den Gährungsorganismen. Von Dr. Alfred Koch. Vierter Jahrgang. 1893. Braunschweig: Harold Braun. London: Williams and Norgate. 9s. 9d.

An Introduction to the Study of Zoology. By B. Lindsay. London: Swan, Sonnenschein, and Co. 1895. 6s.

*** In forwarding books the publishers are requested to state the selling prices.

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SESSIONS 1895-96.

THE MEDICAL CURRICULUM.

THE present issue of the BRITISH MEDICAL JOURNAL is intended to serve as a guide to those who purpose to enter the medical profession in Great Britain or Ireland. The following pages contain particulars of the requirements of the various universities and medical corporations, but a few introductory remarks may be of service to those who are unacquainted with the nature of the training which a medical student is required to undergo. It is of the utmost importance that the student and his advisers should have a clear idea of the object to be aimed at. Life-long disappointment may be the consequence of a false step at the outset.

The relations of the medical profession to the public and the State are governed by Acts of Parliament, of which the most important are the Medical Act of 1857 and the Amending Act of 1886. By the former, which was primarily designed to enable the public to "distinguish qualified from unqualified practitioners," a General Medical Council was created, charged with the duty of keeping a *Register* of qualified persons, and by the Act of 1886 it was enacted that no person should be admitted to the *Register* who did not possess degrees or diplomas in Medicine, Surgery, and Midwifery, obtained after examination from a body or bodies recognised as competent legally to give such diplomas or degrees. Such degrees are granted by all the Universities in England, Scotland, and Ireland, while diplomas are granted by, in England, (1) The Conjoint Examining Board of the Royal College of Physicians of London and the Royal College of Surgeons of England; (2) by the Apothecaries' Hall in London. In Scotland by (3) the Conjoint Examining Board of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow. In Ireland by (4) the Conjoint Board of the Royal Colleges of Physicians and of Surgeons of Ireland. The curriculum of each one of these Universities and Conjoint Boards is governed in its broad features by the regulations laid down by the General Medical Council, but a certain margin is allowed for differences in arrangement, and the standard of examination varies, though all must reach the minimum laid down by the Council.

The difference between the various bodies begins at the outset of the student's career. The regulations of the General Medical Council require that a period of five years should be spent in the study of the various subjects of the medical curriculum, the progress of the student being tested at intervals by examination. At the beginning of his studentship the student must register with the General Medical Council, either in London, or at Edinburgh or Dublin, and before a name is entered on this *Medical Students' Register*, evidence must be produced that a preliminary examination in Arts has been passed. As will be seen by the list published on pp. 577-78, the General Medical Council recognises a large number of examinations as fulfilling its requirements in Arts, but the Universities, of course, require that their alumni shall pass the University examinations, and the preliminary examinations of the various corporations are not in all cases interchangeable. It is desirable, therefore, that an early decision should be arrived at as to the degree or diploma which the intending student hopes to attain.

The first point to decide is whether or no a University degree is to be sought. If it is, the regulations of the University selected must be followed from the first. Any attempt to begin in one direction, with an indefinite intention, if circumstances permit, afterwards to embark on a more ambitious career, must be productive only of waste of time and money, and probably of disappointment in the end. Though it was formerly the custom of the majority of medical students in England not to seek to obtain the degree of M.D., but to take in its place the diplomas of the Royal Colleges or of the Apothecaries' Hall; and though this is still done by many, and though a legal right to practise is thus obtained, there can be no doubt that the public, rightly or wrongly, does attach a special value to the degree of Doctor of Medicine, and we believe it to be our duty to recommend all students to seek to enter a university. The only reason why any hesitation at all should be felt, is that at present a student entering a medical school in London will find that he is still confronted by a somewhat formidable barrier in the shape of the Matriculation Examination, and the Preliminary Scientific Examination of the University of London. There is now a good prospect that the onerous regulations of this University will be modified in material respects under the new Charter which it is hoped will be granted within a reasonable time, and which will convert it into a teaching University. But in the meanwhile the student of to-day must face the barriers which, after all, are not formidable to a lad who has been properly trained at school, and has subsequently attended classes at a well-appointed science college, or at the medical schools in London where special classes are arranged for preparation for the Preliminary Scientific Examination. On the other hand, it should be pointed out that the Universities of Oxford and Cambridge have medical schools in which the student can prosecute the studies of the first three years of the medical curriculum, and is able at the end of that period to leave the University with the degree of B.A., and to proceed to London to obtain the advantages of the large hospital practice which are offered in this great centre of population.

The excellent educational facilities offered by the University of Durham and its Medical College at Newcastle-on-Tyne are well worthy to be carefully considered, as are also those of the three Colleges of the Victoria University—Owens College, Manchester; University College, Liverpool; and the Yorkshire College, Leeds. At the Durham University and at the three Colleges of the Victoria University the student can pass his whole curriculum with advantage, whereas at Oxford and at Cambridge it will be advisable for him for the last two years of the five years to which the curriculum must extend to pass on to a London medical school attached to one of the larger hospitals. Some of these offer special facilities to men coming up to London from Oxford or Cambridge; among the schools which have such arrangements mention may be made of St. George's and St. Mary's, though this must not be understood as implying that these are the only schools which may be chosen with advantage by Oxford or Cambridge men.

Students at Mason College, Birmingham, and at University College, Bristol, are under precisely the same disadvantages as in London. Although both these schools are in every way admirably equipped for teaching, they do not at present form a constituent part of a university. To students who may prefer one or other of these Colleges, or one of the London medical schools, while yet unwilling to pass through the curriculum of the University of London as at present constituted, it may be pointed out that the University of Durham will grant its degree after examination on condition of a limited period of residence at Newcastle. As will be seen by a reference to the article on the requirements of this University, which will be found on page 582, only one year of residence in the North is actually insisted on, and at many of the medical schools not at present affiliated to a university arrangements can be made to comply with this regulation. It is, however, essential that the student should have passed one of the preliminary examinations in Arts recognised by the University of Durham.

The old custom by which a medical student entered the school of his choice at the beginning of the winter session in October has now to a considerable extent given place to the growing preference for commencing attendance at the classes in preliminary scientific subjects at the beginning of the summer session, a plan which presents many advantages.

The student who elects to seek a degree from a Scottish university will be embarrassed only by the difficulty of making a choice between universities which each and all offer advantages too generally understood to need many words of explanation here. To the Scottish as to the English student, we would say that he will be well advised to obtain if possible a university degree. Educational facilities north of the Tweed are so good, that an average man of reasonable diligence ought to find no difficulty in achieving this end within the prescribed time, and he will ever after be glad to have made any little sacrifice thus entailed. As a matter of fact, if he be content to seek only a diploma, he will have to give the same time, attend the same classes, and probably in the end spend as much money. To the Irish student very much the same observations apply, only that his choice of a university is more limited, since he must seek a degree either from Trinity College, Dublin, or from the Royal University, the latter allowing him much latitude in the selection of the College at which to obtain his medical education.

The details contained in the following pages will afford material for forming a judgment as to the relative advantages of the various medical centres; in any individual case the final judgment must be governed by many considerations which cannot be discussed in general terms. Due weight should be given to social ties and the retention of home influences. The position of a young man suddenly cast into the wilderness of a great city without friends, and without, perhaps, much pocket money to pay for healthy amusements, is exceedingly trying, and where such a trial can be spared it is well to sacrifice even some apparent educational advantages to attain that end.

THE COST OF A MEDICAL EDUCATION.

There are few things more serious than the choice of a profession, and there is no doubt that in many homes at the present time anxious family councils are being held regarding the career of lads who are now leaving school, and must in some way or another be launched upon the world. Among the careers in which the highest prizes are open to all who have wit and energy and can afford the cost of the necessary course of study, medicine offers to many the highest attractions. The scientific character of the study, the purely personal nature of the work, the life of intimacy with many people of many ranks, the possibility—dim perhaps, but still the possibility—of wealth and honour, and the almost certainty at least of bread and cheese as the reward of patience, sobriety, and hard work, are sure to draw many to medicine as their career in life. It would be well, however, before coming to a decision, that they should consider the drawbacks and the hardships. No one will deny that the prizes are great and that those who win them find their way smoothed to wealth, influence, and position. These, however, are but few. It must not be thought that all men of consulting rank, however successful they may be in science, are successful also as the world counts success. No; to the immense majority who next October commence their professional studies medicine will prove but a harsh mother, and will give little beyond the necessaries of a simple and frugal life.

Those, then, who have but little capital should look this matter squarely in the face before they spend it on a medical education; for, unless they are willing to accept the life which medicine offers, it is of small advantage to sink such capital as they have on a course of study which may lead to nothing.

We say "capital," for the curriculum is too long and the work is too absorbing to leave anyone much chance of earning money by the way. The man who is to succeed must give himself up to being a student for five years at the least, and that means that he must have sufficient capital to keep himself during that time as well as to pay the necessary fees.

The educational course demanded of the medical student of to-day is, in fact, an affair not to be entered into without due deliberation. At the least it must last five years, and any slip, any failure to satisfy the examiners at any stage, any accidental disablement from ill-health at the time appointed for examinations, must inevitably

lengthen it still further, adding to the period during which the student must be supported somehow, and rendering more remote the hoped-for goal—the qualification which shall make it possible to earn a living. It is no small matter to fix one's life beforehand for a certain five and a probable six years, and the importance of the decision is in no way lightened by the knowledge that a medical education is peculiarly special, leads to little else but medicine, is of no service in obtaining entry into any other profession or even trade, and that, unless it can be carried through to the end, it means so much loss of time. If a medical education should turn out more expensive than had been anticipated and arranged for, or if from family reasons, or personal distaste arising on more intimate acquaintance with the details of the work, or any other cause it should have to be broken off, not only are the money and the time spent on it thrown away—absolutely wasted from a money-earning point of view—but the student finds himself, at an age which makes an entry into business difficult, stranded without employment or profession, and his little capital gone. It is, then, of the greatest moment before embarking in this profession that an accurate estimate of the cost of obtaining a diploma should be formed, otherwise the student runs the risk, of which every year sees sad examples, of dropping out of his course in mid-career, his youth wasted, his future spoilt.

There are certain expenses connected with the medical curriculum which can be calculated with considerable accuracy beforehand. The fees for examinations vary greatly among the different qualifying bodies, but they are all published, and can be estimated in advance; the same is the case with the fees for medical schools and hospital attendance, and by adding to these a fair estimate for books and materials, it is possible to form an accurate judgment as to the necessary expenses outside and beyond those of maintenance. It must always be remembered, however, that such an estimate is but a minimum; if examinations are not passed in due order and at proper times expenses increase, fees have to be paid over again, dissections to be done afresh, and often the help of a tutor obtained—a luxury to some, an unfortunate necessity to others, but in either case a great addition to expense.

To come to particulars. The fees for the various examinations will be found under the headings of the different qualifying bodies.

The cheapest qualification is that given by the Apothecaries' Society—namely, £15 15s.; the dearest, that of the Conjoint Board of the Colleges of Physicians and Surgeons of England, is £36 15s., and as the last is the one aimed at by the mass of the English students, we will take it as representing the fees for examination.

The fees for lectures and hospital practice vary considerably, and will be found set forth in detail on page 611. Roughly, they vary between £57 10s. and £115 for the whole course; and a little study of the tables given will enable one to discover with great exactitude the cost of the curriculum when the school is once decided on.

Then there are certain other expenses, the exact amount of which cannot be found from published tables, and which also vary at different schools—namely, subscriptions to library, cost of "parts" for dissection, of chemical, biological, and pathological apparatus and materials; of books, bones, etc.; and the subscription to cricket, football, or rowing clubs, which, although not in the estimate, may be practically obligatory. As regards all these points, when the school and the diploma are provisionally decided on, a little correspondence, asking for definite answers to definite questions, ought to enable any man to make an estimate within a few pounds of the sum required.

So far we have been dealing with things definite. The great question to which no precise answer can be given is as to the cost of maintenance. Here we have to do with individual idiosyncrasy, the previous training, the habits of the family, the standard of life acceptable not only to the student but to his friends, all become factors in the problem, and, in view of their extreme variations, it is clear that no exactitude in the answer is attainable. No two men are alike, and no standard of comfort can be set up as appropriate to the genus medical student. As to dress, some men can clothe themselves for what others spend in hats and gloves; and amusements are entirely beyond all rule.

The range of possibilities in these matters becomes obvious enough when we consider, on the one hand, on what wages an artisan can live, and, on the other, how easily £5 a week slips through the fingers of one not inured to petty thrift and to the care of pence. It is here that the nicely brought up youth finds himself at a disadvantage with those who, from early habits, do not feel the hardship of surroundings which to him would be constant misery; for there is no denying that it is possible, to one accustomed to the style of life, to pass through the curriculum on an artisan's wages added to the necessary fees. To come however to ordinary possibilities, we know well enough that many a clerk lives respectably and comfortably on £70 to £80 a year, and certainly numbers of curates do not receive more than £100 to £130, and it appears to us that this last may fairly give an idea of what a gentleman willing to live carefully can keep himself upon. Here again locality has much to do with expense of living. It may possibly be the case that lodgings in certain parts of Manchester, or Dublin, or Edinburgh do not cost much less, if any less, than they do in London, but from the smaller size of these towns a greater range is available within a moderate distance, a walk which in London would make no appreciable difference in surroundings bringing one in smaller towns into those more open regions where cheaper lodgings are most likely to be found.

In this matter, however, one should not overlook the facilities afforded by the position of many of the London schools for living practically in the country during the first two years of professional study. Young men are proverbially bad to manage, and on first introduction to London will probably often be found to resent the suggestion that they should live in the suburbs, and only come into town for the necessary college life. Yet that is a course most highly to be recommended during the first two years.

Till the Intermediate Examination in Medicine for the University Degree or the Second Professional Examination for the Conjoint Diploma is got out of the way there is no more necessity to live near the hospital or school than there is for a clerk to live near his office, and anyone who takes his stand at any city terminus between 5 and 6 o'clock in

the afternoon will see with what general consent those who wish to live decently but cheaply sleep in the suburbs.

Nearly every school in London is within five minutes' walk of a railway, which will, in half an hour, take a student, not perhaps out of London, but into parts which are green and open, and there can be no doubt that, except for a few months in midwinter, the advantages are greatly on the side of a suburban residence. Especially is this the case for students connected with such schools as Guy's, St. Bartholomew's, the London Hospital, and other schools which have suburban recreation grounds, around which we should be glad to see colonies of first and second years' students establish themselves.

At first sight it may not be very apparent where the cheapness comes in, and probably to men of rigid self-restraint it may not come in at all, but those who have lived in London and know the fatal facility with which money slips through the fingers whenever relaxation or amusement is in question, will understand how considerable is the saving in solid cash resulting from the absence of all temptation to spend it.

After the second year, however, the student's life must centre in the hospital, and he should live near it, but by this time he will have got into the way of ordering his life according to his means, and will easily be able to find lodgings to suit his purse.

Attached to several of the hospitals there are residential colleges at which students can live very comfortably. St. Bartholomew's, Guy's, King's College, St. Mary's, Middlesex, all receive resident students.

At Leeds there is Lyddon Hall, a Hall of Residence in connection with the Yorkshire College. The charge is at the rate of £56 per annum for medical students, whose session lasts about thirty-eight weeks.

In Manchester there are two halls of residence in connection with Owens College, the expense at Hulme Hall for the academic year being £63 (exclusive of laundry), and at Dalton Hall £90. At Hulme Hall there are twenty-five scholarships of £25 per annum, tenable for three years, of which six or more are offered annually for public competition. Two of those offered for competition in October will be of the annual value of £50.

There is nothing in the Scotch Universities akin to the social life of Oxford and Cambridge, but of late years Edinburgh has possessed in University Hall a completely equipped social residence for students, graduates, and others connected with the University. In the several buildings which together form this institution there is now accommodation for forty-five men. The rents vary from 7s. to 16s., and some few more luxurious rooms run up to 22s. 6d. per week. Board may come to about 12s. 6d.; last summer it averaged 11s. 9d. The place partakes of the character of a club so far as admission is concerned, applications being voted on by the residents; and, owing to the fact that some graduates are generally in residence, coaching can be arranged on moderate terms. Information as to lodgings can be obtained at the Students' Representative Council Office, or at the Students' Union.

At Cork there is an institution called Berkeley Hall, at which the rent of rooms is £1 2s. 6d. a month, and the cost of breakfast, dinner, and tea 11s. 1d. a week; but luncheon would be required as well, and some linen would have to be provided.

At Toynbee Hall there are admirable facilities for pleasant companionship and true collegiate life. The terms are extremely moderate. Each resident has a combined bed and sitting room furnished, and each house has a common room. It is, however, much more than a mere residence; there is a large library, and much educational and social work centres in the place. For those who are prepared to interest themselves in such matters, and can afford to give a certain amount of time to promote its great social and scientific work, Toynbee Hall affords an admirably appointed residence at a very moderate cost. It is specially suited for men who have come down from the universities to complete their education in London. The same may be said of University Hall, in Gordon Square, for students who are interested and willing to take part in what is called "Settlement" work.

Taking all things into consideration, it would appear that the total "living" expenses will range from 30s. to 45s. a week.

It is impossible to give an estimate for clothes; sartorial requirements vary with different people and different modes of bringing up; it should, however, be possible to keep within £20 a year if cash is paid.

For the London student, then, we can make a fair estimate of the cost of education. Taking one of the more expensive schools and living at 40s. a week on the one hand, and one of the less expensive with living at 30s. on the other, and adding in each case the Conjoint Examination fees and £20 a year for clothes, we find the total expense of the five years' curriculum in London as follows:

	£	s.	d.		£	s.	d.
Composition fee for school and hospital ...	157	10	0	.....	115	0	0
Fees for instruction in vaccination and fevers...	4	4	0	.....	4	4	0
Materials (biology and chemistry), and "parts"	5	5	0	.....	5	5	0
Clubs	5	5	0	.....	5	5	0
Instruments, about	10	10	0	.....	10	10	0
Books, about	10	10	0	.....	10	10	0
Diploma fees	36	15	0	.....	36	15	0
Five years of forty weeks at 40s. and 30s. a week respectively	400	0	0	.....	300	0	0
Five years' clothing at £20	100	0	0	.....	100	0	0
Total.....	£734	3	0	.....	£587	0	0

To this must be added provision for three vacations a year, with the necessary railway fares, or else proportionately increased charges for living. In the case of a student whose home is either in London or in one of the school towns a considerable modification of this estimate will be required, the expense of maintenance being so much less at home than in lodgings. It is probable, moreover, that by care the expenses might be reduced below the amount we have named. But education does not consist entirely of attendance on lectures and demonstrations, and unless a student is enabled to mix on terms of equality with his fellows he loses much of the advantage of his student life.

It is no small loss that a period so full of expansive possibilities should be turned into a time of penurious counting of petty cash, and we feel sure that it is better, as an educational proceeding, to send a youth whose means are small to a school so suited to his pocket that he can join in what is going on evenhanded with the rest than to place him where he will have to study economy and even parsimony at the expense of sociability. We doubt, for example, the educational advantage of trying to live at

Oxford or Cambridge for less than £150 a year. What is gained in knowledge is lost in bitterness of spirit.

Nor must it be forgotten that the life of a medical student is a trying one, and that for the maintenance of health provision must be made for a considerable amount of outdoor exercise. Boating, cricket, tennis, football—things for which the solitary walk is no substitute—all mean clubs and subscriptions, and, although this is a side of student life which is often overdone, it is absolutely essential that some provision be made for it. Two years spent in laboratories and dissecting rooms form but a poor preliminary from a health point of view to the long study of disease which then has to be undertaken, in wards and out-patient rooms, mixing daily with the sick of every kind. The athletic side of education is really more necessary for the medical than for any other class of student.

To revert again to our main subject: the expense of a medical education may in a few cases be materially diminished by the various scholarships and prizes that are offered for competition. It must be remembered, however, that the race is to the swift, and that these prizes fall to none but the more brilliant students. To those, however, who are able to win them the number of such possible additions to income attached to any school must have some influence in the choice of a place of study. Unfortunately, as regards average students, the question of exhibitions hardly arises; many fail even to pass their ordinary examinations at the proper time, fail not only once but over and over again, thus lengthening their course and increasing its expense, besides having to pay extra fees for repeated examinations.

A little inquiry will show what a very large proportion of candidates at every examination get plucked, and how largely, therefore, the average expense of a medical education must exceed the estimated minimum. And it is obvious that a youth who has found a difficulty in passing examinations while at school, and either from want of knowledge or disorderliness of mind has shied a time or two at his preliminary, will cost much more to educate than one whose neat and trim intellect enables him to glide easily through the barriers set up by the examining bodies. This is a matter worth most serious consideration, for "cutting it too fine," calculating the cost on the basis of the published fees, and taking for granted that the examinations will be passed in due season is at the root of much bitter disappointment and many wasted careers.

The question of intellectual fitness should certainly be borne in mind not only in the choice of one's profession, but in the arrangement of one's studies. The advantages of going through the course *pari passu* with the best men of his year, and the disadvantages of being thrown back among the laggards are so great, that we strongly advise the average student to go as far as he can before registering—that is, to pass in chemistry and physics, practical chemistry, and elementary biology, but especially in chemistry, before he becomes a medical student. When these are once done with the course is clear, and the chance of passing the examinations in their appointed seasons is much increased. The orderly passing of the appointed examinations as they become due is the key to economy in medical education.

Dr. Ottolenghi authors of *An Artist in Crime*, has written a new story entitled *The Crime of the Century*, which Messrs. G. P. Putnam's Sons will shortly publish.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL.

IN REGARD TO THE REGISTRATION AND EDUCATION OF MEDICAL STUDENTS.

The regulations of the General Medical Council as to registration, preliminary examination, and as to professional education must be followed by all medical students seeking to obtain degrees or licences to practise from the universities or medical corporations of the United Kingdom. The separate regulations of the universities and corporations are so drawn up as to meet the requirements of the General Medical Council.

PRELIMINARY EXAMINATIONS.

Every medical student must be registered by the General Medical Council at the commencement of his studentship. To obtain registration the student must pass a preliminary examination in general education, and must produce evidence that he has commenced medical study. The student must make application for registration on a special form to be had on application to the several qualifying bodies and medical schools.

The *Students' Register* is kept by the Branch Registrars, namely: in England, Mr. W. J. C. Miller, B.A., 299, Oxford Street, London, W.; in Scotland, Mr. James Robertson, 1, George Square, Edinburgh; in Dublin, Dr. R. L. Heard, 35, Dawson Street, Dublin.

The following is a list of examining bodies whose examinations in general education are recognised by the General Medical Council as qualifying for registration as a medical student:

I.—Universities in the United Kingdom.

University of Oxford:
(1) Junior Local Examinations; Certificate to include Latin and Mathematics, and also one of these optional subjects (Greek, French, German).
(2) Senior Local Examinations; Certificate to include Latin and Mathematics.
(3) Responsions.
(4) Moderations.
(5) Examination for a Degree in Arts.

University of Cambridge:
(6) Junior Local Examinations; Certificate to include Latin and Mathematics, and also one of these optional subjects (Greek, French, German).
(7) Senior Local Examinations; Certificate to include Latin and Mathematics.
(8) Higher Local Examinations.
(9) Previous Examination.
(10) Examination for a Degree in Arts.

University of Durham:
(11) Examination for Certificate of Proficiency.
(12) Examination for Students at the end of their first year.
(13) Examination for a Degree in Arts.

University of London:
(14) Matriculation Examination.
(15) Preliminary Scientific (M.B.) Examination.
(16) Examination for a Degree in Arts or Science.

Victoria University:
(17) Preliminary Examination; Latin to be one of the subjects.
(18) Entrance Examination in Arts, to include all the subjects required.

University of Wales:
(19) Matriculation Examination. The whole of the Examination to be passed at the same time, and to include one of the optional subjects required by the Council.

University of Edinburgh:
(20) Local Examinations (Junior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(21) Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(22) Preliminary Examination for Graduation in Science or Medicine and Surgery.
(23) Examination for a Degree in Arts.

University of Aberdeen:
(24) Local Examinations (Junior Certificate); Certificate to include all the subjects required.
(25) Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(26) Preliminary Examination for Graduation in Medicine and Surgery.
(27) Examination for a Degree in Arts.

University of Glasgow:
(29) Local Examinations (Junior Certificate); Certificate to include all the subjects required.
(30) Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(30) Preliminary Examination for Graduation in Medicine and Surgery.
(31) Examination for a Degree in Arts.
University of St. Andrews:
(32) Local Examinations (Senior Certificate); Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of these optional subjects (Greek, French, German).
(33) Local Examinations (Junior Certificate), to include all the subjects required.
(34) Preliminary Examination for Graduation in Medicine and Surgery.
(35) Examination for a Degree in Arts.
University of Dublin:
(36) Public Entrance Examination.
(37) General Examination at end of Senior Freshman year.
(38) Examination for a Degree in Arts.
Royal University of Ireland:
(39) Matriculation Examination.
Oxford and Cambridge Schools Examination Board:
(40) Certificate, to include the following subjects, an adequate knowledge of English Grammar and Orthography, as shown in the course of the Examination, to the satisfaction of the Examiners, being held as conforming to the requirements of the General Medical Council in regard to those subjects:—
(a) Arithmetic, including Vulgar and Decimal Fractions;
(b) Algebra, including Simple Equations;
(c) Geometry, including the subjects of the first three books of Euclid;
(d) Latin, including Translation and Grammar;
(e) Also one of these optional subjects:
Greek, or any Modern Language, or Logic.

II.—OTHER BODIES NAMED IN SCHEDULE (A) TO THE *Medical Act.*
[1] *Apothecaries Society of London:*
(41) Examination in Arts.
[2] *Royal Colleges of Physicians and Surgeons of Edinburgh:*
(42) Preliminary (combined) Examination in General Education.
Faculty of Physicians and Surgeons of Glasgow:
(43) Preliminary Examination in General Education.
[3] *Royal Colleges of Physicians and Surgeons in Ireland:*
(44) Preliminary Examination; Certificate to include Mathematics.

III.—EXAMINING BODIES IN THE UNITED KINGDOM, NOT INCLUDED IN SCHEDULE (A) TO THE *Medical Act*, 1858.
College of Preceptors:
(45) Examination for a First Class Certificate, or Second Class Certificate of First or Second Division, Algebra, Geometry, Latin, and either a Modern Language, or Greek, or Logic, having been taken.
(46) Preliminary Examination for Medical Students.
Intermediate Education Board of Ireland:
(47) Junior Grade Examination
(48) Middle Grade Examination
(49) Senior Grade Examination
} Certificate in each case to include all the subjects required.
Educational Institute of Scotland:
(50) Preliminary Medical Examination.
Scotch Education Department:
(51) Leaving Certificates in each Grade and in Honours.

IV.—INDIAN, COLONIAL, AND FOREIGN UNIVERSITIES AND COLLEGES.
University of Calcutta:
(52) Entrance Examination.
University of Madras:
(53) Matriculation Examination.
University of Bombay:
(54) Matriculation Examination.
Ceylon Medical College:
(55) Preliminary Examination.
Punjab University:
(56) Entrance Examination.
University of Auckland:
(57) Entrance Examination.
University of McGill College, Montreal:
(58) Matriculation Examination.
College of Physicians and Surgeons of the Province of Quebec:
(59) Matriculation Examination.
University of Bishop's College, Montreal:
(60) Matriculation Examination.
Trinity Medical College, Toronto:
(61) Departmental Arts Matriculation Examination.[3]
University of Toronto:
(62) Departmental Arts Matriculation Examination.[3]
Trinity University, Toronto:
(63) Departmental Arts Matriculation Examination.[3]
Queen's University, Kingston:
(64) Departmental Arts Matriculation Examination.[3]
Victoria University, Toronto:
(65) Departmental Arts Matriculation Examination.[3]
College of Physicians and Surgeons of Ontario:
(66) Departmental Arts Matriculation Examination.[3]
Western University of Ontario:
(67) Departmental Arts Matriculation Examination.[3]
University of Montreal:
(68) Preliminary and Previous Examinations.
University of Fredericton, New Brunswick:
(69) Matriculation Examination.
University of Mount Allison College, New Brunswick, Canada:
(70) Matriculation Examination.
University of King's College, Windsor, Nova Scotia:
(71) Matriculation Examination.
Dalhousie College and University, Halifax, Nova Scotia:
(72) Matriculation Examination.
Provincial Medical Board of Nova Scotia:
(73) Preliminary Examination.
New Brunswick Medical Board:
(74) Preliminary or Matriculation Examination.
University of Melbourne:
(75) Matriculation Examination.
University of Sydney:
(76) Matriculation Examination.
(77) First Year Examination in Arts.
(78) Senior Public Examination.
(79) Entrance Examination for Medicine and Science
University of Adelaide:
(80) Senior Public Examination.
University of Tasmania:
(81) Senior Public Examination.
University of the Cape of Good Hope:
(82) Matriculation Examination.
University of Otago:
(83) Preliminary Examination for Medical Students.
University of New Zealand:
(84) Preliminary Examination for Medical Students.
Codrington College, Barbadoes:
(85) Examinations qualifying for a Degree in Arts at the University of Durham.
Continental Bodies:
(86) The German Abiturienten-Examen of the Gymnasia and Real gymnasia; Examinations entitling to the French Diplomas of Bachelier-ès Lettres and Bachelier-ès-Sciences, and other corresponding Entrance Examinations to the Universities.
Egyptian Government:
(87) Secondary Education Certificate.

*** (a) No Certificate from the Bodies in the foregoing Section (iv) will be accepted after October 1st, 1895, unless it shows that the examination has been conducted by or under the authority of the Body granting it, includes all the subjects required by the General Medical Council, and states that all the subjects of examination have been passed in at one time; and copies of the form of the required certificate will be supplied by the Registrar of the Council for the purpose.

(b) In the case of natives of India or other oriental countries, whose vernacular is other than English, an examination in a classical Oriental language may be accepted instead of an examination in Latin.

The examinations in Divisions I, II, III at present entitle to registration on production of satisfactory evidence that the applicant has passed them. The examinations in IV are accepted if the certificates contain evidence that the examination passed included all the subjects required by the General Medical Council. These are:

"(a) English Language, including Grammar and Composition.
"(b) Latin, including Grammar, Translation from specified authors, and Translation of easy passages not taken from such authors.
"(c) Mathematics, comprising (α) Arithmetic; (β) Algebra, as far as Simple Equations, inclusive; (γ) Geometry, the subject matter of Euclid, Books I, II, and III, with easy deductions.
"(d) One of the following optional subjects:
(ε) Greek, (ζ) French, (η) German, (θ) Italian, (ι) any other Modern Language, (κ) Logic."

The Council will not in future accept any certificate of pass in Preliminary Examination in General Education, unless the whole of the subjects included in the Preliminary Examination required by the Council for Registration of Students of Medicine have been passed at the same time. A certificate of having passed a University Examination required for graduation in Arts, or a Senior or Higher Local University Examination, or a Senior Grade Examination of the Intermediate Education Board of Ireland, or the Leaving Certificate Examination (honours and higher grade) of the Scottish Education Department, wherein the specified subjects of General Education are included, may be recognised for the purpose.

[1] N.B.—This Examination has been discontinued.
[2] These Examinations are conducted by the Educational Institute of Scotland (No. 50).
[3] Conducted under the direction of the Provincial Education Department of Ontario.
[4] The Council has recommended that this Examination should be discontinued.

FRENCH MEDICAL CONGRESS.—The third French Congress of Medicine will be held at Nancy in 1896, under the presidency of M. Pitres, Dean of the Faculty of Medicine of Bordeaux. The following are the questions proposed for discussion: Intravascular Coagulation of Blood; Prognosis of Albuminuria; Applications of Serum Therapeutics to the Treatment of Diseases.

PROFESSIONAL EDUCATION.

A.—REQUIREMENTS.

The period of professional study between the date of registration as a medical student and the date of the Final Examination for any diploma which entitles its holder to be registered under the Medical Acts as a qualified practitioner shall be a period of *bonâ fide* study during not fewer than five years. The course of professional study and examinations must include the following subjects:

(i) Physics, including the Elementary Mechanics of Solids and Fluids, and the rudiments of Heat, Light, and Electricity. (ii) Chemistry, including the principles of the science, and the details which bear on the study of Medicine. (iii) Elementary Biology. (iv) Anatomy. (v) Physiology. (vi) Materia Medica and Pharmacy. (vii) Pathology. (viii) Therapeutics. (ix) Medicine, including Medical Anatomy and Clinical Medicine. (x) Surgery, including Surgical Anatomy and Clinical Surgery. (xi) Midwifery, including Diseases peculiar to Women and newborn Children. (xii) Theory and Practice of Vaccination. (xiii) Forensic Medicine. (xiv) Hygiene. (xv) Mental Disease.

The first four of the five years must be passed at a school or schools recognised by any of the licensing bodies (universities or medical corporations). The first year, however, may be passed at a university or teaching institution recognised by any of the licensing bodies, where the subjects of Physics, Chemistry, and Biology are taught. Further, graduates in arts or science of any university recognised by the General Medical Council, who have spent a year in the study of Physics, Chemistry, and Biology, and have passed an examination in these subjects for the degrees in question, are held to have completed the first of the five years of medical study.

B.—RECOMMENDATIONS.

The Council recommend that due time should be set aside for attendance at practical courses in which practical work is done by the student himself under the direction of a duly qualified teacher. It is also recommended that attendance on systematic courses should be concluded at the end of the fourth year of study, and that the fifth year should be devoted to clinical work in one or more recognised public hospitals or dispensaries, British or foreign, with the proviso that of this year six months may be passed as a pupil to a registered practitioner possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities.

THE ENGLISH UNIVERSITIES.

UNIVERSITY OF OXFORD.

THERE are two degrees in Medicine (B.M. and D.M.), and two degrees in Surgery (B.Ch. and M.Ch.), which under the most favourable circumstances may be obtained in six or seven years from Matriculation.

B.A. DEGREE.

The Degree of B.M. and B.Ch. are conferred only on candidates who have taken the B.A. degree, for which residence for three years within the University is necessary; the examinations, however, for the degrees in Arts and Medicine may be passed in any order, provided the subjoined regulations are complied with.

The degree of B.A. may be obtained in either of the following ways:

(*a*) By passing Responsions (or one of the Extra-University Examinations, which are held as equivalent to it), Moderations, a Divinity Examination, or, in the event of a candidate objecting, an examination in some specified Greek book; and the Final Pass School in three subjects, two of which may be the same as the Preliminary Examination in Natural Science.

(*b*) By passing Responsions, an additional subject in Responsions, the Divinity Examination, and the Preliminary Examinations in the Natural Science School, and by passing the Final Honour Examination in Chemistry, Physics, Animal Morphology, Botany, *or* Physiology.

Responsions and the additional subject may be passed before a candidate is a member of the University.[1] Moderations can be passed in the fourth term; the Divinity Examination at any time after Responsions; the Final Pass School may be taken any time after Moderations; a Final Honour School may be taken at the end of the third or within the fourth Academical year, that is, twelve or sixteen terms respectively; the Preliminary Examinations of the Natural Science School may be taken as soon as Responsions have been passed.

[1] Membership is constituted by Matriculation, and by becoming a member of a College or Hall, or a non-collegiate student.

DEGREES IN MEDICINE AND SURGERY.

Candidates for degrees in Medicine must take the degrees of B.M., B.Ch., to obtain which the following examinations must be passed:

Preliminary.—The preliminary examination of the Natural Science School must be passed. It is held in two parts, namely: (1) Mechanics and Physics and (2) Chemistry in November and June, (3) Animal Morphology and (4) Botany in December and March.

Professional.—There are two professional examinations, held twice a year at the end of Michaelmas and Trinity terms. The subjects of the first B.M. examination are Organic Chemistry, Human Anatomy and Physiology, Materia Medica, and Pharmacy; but candidates who have previously obtained a First or Second Class in the Final Examination in Physiology or Chemistry are exempt from further examination in these subjects. This examination may be passed at any time after the preliminary. The second examination, held in June, may be taken at any time after the first, but usually two or three years elapse. It comprises the remaining subjects of the medical curriculum, namely, Medicine, Surgery, Midwifery, Pathology, Forensic Medicine, and Hygiene.

D.M. Degree.—A B.M. who has entered his thirty-ninth term is admitted D.M. on presentation of a dissertation approved by the appointed professors and examiners.[2]

M.Ch. Degree.—An examination for this degree is held in June. The candidate must be in his twenty-seventh term.

Fees.—University: B.A., £16 or £17. B.M. and B.Ch., £14. D.M., £25. M.Ch., £17. Also an annual fee to the University of £2 for the first four years, reduced to £1 when the B.A. is taken.—College: Fees (varying in amount) on taking degrees and for first four years of membership. Tuition fees, £21 to £30. The cost of living for the four University terms cannot be stated at less than £120.

Scholarships, etc.—The several colleges grant scholarships of £80 a year tenable for four years in Natural Science, Chemistry, Physics, and Biology, and also exhibitions. Particulars can be obtained on application to the College tutors. A Radcliffe Travelling Fellowship of £200 a year, tenable for three years, is conferred annually. Candidates who have been placed in the First Class in any Final Examination in the Natural Science School, whether they have taken the degree of B.M. or not, are eligible.

TEACHING.

Preliminary Examination.—Courses of lectures and demonstrations on Elementary Mechanics and Physics, on Inorganic Chemistry, on Animal Morphology, and on Botany are given at convenient periods, and are open to members of the University intending to proceed to a medical degree.

Degree of B.A.—The course of instruction for the Final Honour Examination in Physiology consists of lectures and practical work, and extends over two years. It is intended for students who have passed the Preliminary Examination in other subjects.

First B.M.—The instruction in Human Anatomy is by lectures and demonstrations; the dissecting room is open daily, and dissection may be continued during the vacation. The course of instruction in Physiology consists of a course of lectures extending over three full terms, a course of practical instruction in Histology during two terms, and a course of Elementary Physiological Chemistry, with practical laboratory work during two terms. Instruction in Organic Chemistry is given in the Chemistry Department.

Second B.M.—Lectures on Materia Medica and practical instruction in Pharmacology are given during the summer term, and clinical lectures and tutorial instruction and demonstrations in Physical Diagnosis and Regional Anatomy are given in each term at the Radcliffe Infirmary. Lectures

[2] The regulations for Graduates who took the degree of B.M. previous to 1894 differ slightly.

on Pathology and Practical Instruction in Bacteriology and Pathological Histology are given in Michaelmas and Hilary Terms in the Pathological Laboratory.

UNIVERSITY OF CAMBRIDGE.

Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.C.).

A student proceeding to this degree must (1) reside in the University during the required portion of each of nine terms, (2) pass (or obtain exemption from) the Previous Examination, (3) pursue medical study for five years.

There are three examinations for the degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical. The examinations take place twice in the year, in the Michaelmas and Easter terms.

The First Examination is divided into two parts: 1, Chemistry and other branches of Physics; 2. Elementary Biology. These two parts may be taken together or separately. Before admission to this examination the candidate must have passed (or obtained exemption from) the Previous Examination. He must also produce certificates of diligent attendance on a course of lectures in Chemistry, and of practical instruction in Chemical Manipulations.

The Second Examination is divided into two parts, which may be taken together or separately: 1. Human Anatomy and Physiology; 2. Pharmaceutical Chemistry. Before admission to this examination the student must have passed both parts of the First Examination, must have attended hospital practice, and have practised dissection, during six months, and must produce certificates of diligent attendance on a course of lectures on each of the following subjects: 1. Human Anatomy; 2. Physiology.

The Third Examination is divided into two parts, called the First part and the Second part respectively. Before presenting himself for either part, the student must have passed both parts of the Second Examination. The first part includes Principles and Practice of Surgery and Midwifery and Diseases Peculiar to Women. The second part includes Pathology, Principles and Practice of Physic, Elements of Hygiene, Medical Jurisprudence, and Mental Diseases. The student, before admission to the First part, must produce certificates of attendance on one course of lectures in each of the following subjects: Pathology, Principles and Practice of Surgery, and Midwifery; he must have attended a course of Practical Surgery and acted as dresser or house surgeon at a recognised hospital for six months; must have attended twenty cases of Midwifery; and must have obtained a certificate of proficiency in vaccination from an authorised vaccinator appointed by the Local Government Board. Before admission to the Second part, he must produce evidence that he has completed the course of medical study and obtained certificates of diligent attendance on one course of lectures in each of the following subjects: Principles and Practice of Physic, Physiological Actions and Therapeutic Uses of Remedies, and Medical Jurisprudence; he must also have attended the Medical and Surgical Practice of a recognised hospital (with clinical lectures), including certain special hospitals and asylums, during three years at least; must have been Clinical Clerk at a recognised hospital for six months at least, or have, subsequently to the completion of his attendance on Hospital Practice, attended to Practical Medicine or Surgery with special charge of patients in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless the student himself be duly qualified. All candidates must also produce certificates of attendance during three months on (1) practical instruction in Pharmacy and Dispensing, (2) clinical instruction in Fevers at a general or special hospital.

Act.—After these examinations have been passed, an Act must be kept in the schools in the following manner. The Regius Professor of Physic assigns a day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself on some subject approved by the Professor; the Professor brings forward arguments or objections for the candidate to answer, and examines him orally, on questions connected with his thesis as well as on other subjects connected with medicine of a more general nature. As the Third Examination for the degree of M.B. includes operative and clinical surgery, the degree of Bachelor of Surgery is conferred upon candidates who pass the Final Examination for M.B. without further examination and without the Act.

Doctor of Medicine (M.D.).

This degree may be taken by an M.B. of three years' standing, or by an M.A. of four years' standing, who has been engaged in medical study for five years. In the latter case certificates of attendance on lectures and hospital practice as for the M.B. must be produced, and the examinations for the M.B. must be passed. In either case the candidate keeps an Act by reading a thesis, upon which he is examined, and writes a short extempore essay upon one of four topics (at his choice) relating severally to Physiology, Pathology, Medicine, or State Medicine.

Master in Surgery (M.C.).

This degree is granted to a candidate who has completed all that is required for the degree of B.C. at least two years previously; the candidate is examined in Pathology, Surgery, Surgical Anatomy, and Surgical Operations; the examination is both written and practical.

Dates, Fees, etc.

The dates of examinations are announced early in the Michaelmas and Lent terms. Each candidate pays £2 2s. to the Registrary of the University on giving notice of his intention to offer himself for either part of the First, Second, or Third Examination for M.B. He pays £3 3s. before that for M.C. Schedules defining the range of subjects in the First M.B. Examination, and of the Pharmacy and Pharmaceutical Chemistry in the Second Examination; also schedules for the necessary certificates, and a list of the schools of medicine and hospitals recognised by the University, may be obtained on application to the Registrary of the University, The Registry, Cambridge.

UNIVERSITY OF LONDON.

Degree of M.B.

Every candidate for a medical degree is required to take the degree of M.B. To obtain this degree four examinations must be passed.

Matriculation, held twice a year in January and June. This examination consists of the following subjects: (1) Latin, (*a*) translation of selected authors, (*b*) unseen translation, (*c*) translation of English into Latin, (*d*) Latin grammar; (2) one of the following languages: Greek, French, German, Sanscrit, Arabic; translation and grammar; (3) English, the general history and grammatical structure of the language; History of England to the end of the seventeenth century, with the geography relating thereunto; (4) Mathematics, including Arithmetic, Algebra to Quadratic Equations, Geometry, including the subjects of the first four books of Euclid, and simple deductions; (5) Mechanics (a general acquaintance with the apparatus by which the elementary principles of Physics can be illustrated and applied must be shown); (6) one of the following branches of science: (*a*) Chemistry, (*b*) Heat and Light, (*c*) Magnetism and Electricity, (*d*) Botany. The full text of the regulations with schedules in each subject, can be obtained on application addressed to the Registrar of the University of London, Burlington Gardens, London, W. The candidate must be 16 years of age.

Preliminary Scientific (M.B.) Examination.—This examination is held for Pass and Honours in July, and for Pass only in January. It consists of two parts, (*a*) Chemistry and Physics, (*b*) General Biology. The examinations are conducted by written papers, *viva voce*, and by practical tests. The two sections may be taken together or separately, and the candidate who passes in one section only, though presenting himself in both, will be credited with the one in which he is successful. Honours may be taken in (*a*) Inorganic Chemistry, (*b*) Experimental Physics, (*c*) Botany, (*d*) Zoology. Particulars as to the conditions of competition for honours and schedules of the subjects, both in the Pass and in the Honours examination, may be obtained on application to the Registrar, as above.

Intermediate Examination in Medicine.—This examination is held for Pass and Honours in July, and for Pass only in

January. The candidate must have completed his nineteenth year and must, subsequently to having passed the Preliminary Scientific Examination, have been a student in a recognised medical school for at least two years, have dissected for two sessions, have attended courses of Practical Chemistry and Practical Pharmacy, and have attended lectures in a recognised medical school. The subjects of the examination are: Anatomy, Physiology and Histology, Organic Chemistry, Materia Medica, and Pharmaceutical Chemistry. The examination is conducted by written papers, *viva voce*, and by practical examination. Honours may be taken in any one of the subjects of the examination under conditions stated in the *Calendar*, an extract from which containing these particulars, as well as schedules of the subjects, can be obtained from the Registrar.

M.B. Examination.—This examination is held for Pass and Honours in October, and for Pass only in May. The candidate must have passed the Intermediate Examination twenty-one months earlier, must have attended lectures and hospital practice in a recognised medical school for two years, one of which must be subsequent to the Intermediate Examination, must have conducted at least twenty labours, and have acquired proficiency in vaccination. The period between the passing of the Preliminary Scientific and the M.B. Examination must be at least four years. The examination, which is conducted by written papers, *viva voce*, and by practical examination, comprises the following subjects: Pathology, Therapeutics, Hygiene, Surgery, Medicine, Obstetric Medicine, and Forensic Medicine. The candidate must pass in all the subjects; Honours may be taken in Medicine, Obstetric Medicine, or Forensic Medicine.

DEGREES IN SURGERY.

Bachelor of Surgery (B.S.).—This degree is granted to Bachelors of Medicine after an examination held annually in December. The candidate must have attended a course of operative surgery. The examination comprises Surgical Pathology and Surgery, and the candidate is examined by written papers and clinically, and is required to operate on the dead body. Candidates who pass this examination may be examined in Honours.

Master in Surgery (M.S.).—This degree is granted, after examination, to Bachelors of Surgery of at least two years' standing. The examination comprises Mental Physiology, Surgery, and Surgical Anatomy.

DEGREE OF M.D.

Doctor of Medicine.—The degree of Doctor of Medicine is granted to Bachelors of Medicine of at least two years' standing. The examination comprises Mental Physiology and Medicine, and is conducted by written papers, clinical examination, and *viva voce*. A candidate who presents a printed dissertation, thesis, or commentary, approved by the examiners, is excused the written examination.

Doctor of Medicine in State Medicine.—This degree is granted to Bachelors of Medicine after examination on producing evidence of having been engaged in the study of State Medicine for at least two years. The examination is the same as for the ordinary M.D., with the exception that State Medicine takes the place of Medicine.

FEES AND SCHOLARSHIPS.

The fees are as follows: Matriculation, £2; for the other examinations, in each case, £5. A rejected candidate, on again presenting himself, pays half the fee.

Exhibitions or Scholarships are granted to the first six candidates in the Matriculation Examination, and to the first candidates in honours at all the other examinations.

The Shaftesbury Prize.—This prize, founded by the late Lord Shaftesbury, will in future be awarded triennially for the best essay embodying original research in some branch of natural science. It is open to graduates of not more than five years' standing. The first award will be made in 1895 for an essay in any department of the science of Public Health.

VICTORIA UNIVERSITY.

Colleges.—The Colleges of the Victoria University are Owens College, Manchester; University College, Liverpool; and the Yorkshire College, Leeds.

Entrance.—The first step towards a Degree in Medicine or Surgery is to pass the Entrance Examination in Arts, or some other examination recognised by the University. The candidate for the Entrance Examination in Arts, who must present a certificate from his last instructor to the effect that he is a proper person to be admitted to the examination, is examined in: (1) Latin; (2) Elementary Mathematics; (3) Elementary Mechanics; (4) English Language, including Grammar and Composition; (5) One of the following: i, Greek; ii, French; iii, German; iv, Italian; v, Spanish. Candidates may, by special permission of the Board of Studies, substitute any other modern language for either of the subjects named under (5). Candidates who propose to present themselves in Italian or Spanish, or in a modern language not included in the list, must give notice to the Registrar on or before March 31st in the year in question.

Matriculation.—Before matriculating, which consists in signing the University Register, candidates must produce proof that they are registered students of a College of the University, or of a medical school recognised by it.

DEGREES OF BACHELOR OF MEDICINE AND OF SURGERY (M.B., CH.B.)

Curriculum and Residence.—Five years must be spent in study at a recognised medical school subsequent to registration as a medical student; of these five years, two must be passed in a college of the University, and one of these two years must be subsequent to passing the First M.B. Examination.

First M.B. Examination.—Candidates must have attended during at least one year courses of lectures and laboratory work in each of the subjects of the examination—namely Part I. (*a*) Physics; (*b*) Chemistry. Part II. Physiology (Animal and Vegetable Morphology, Physiology, and Laboratory work). The two parts may be taken together or separately.

Second M.B. Examination.—Candidates must have attended winter courses in Anatomy and Physiology, and a summer course in Materia Medica and Pharmacy, must have dissected for two winter sessions and one summer, and must have had practical instruction in Physiology and in Materia Medica and Pharmacy. The subjects of the examination are: (1) Anatomy; (2) Physiology; (3) Materia Medica and Pharmacy; (3) may be passed separately.

Final M.B. Examination.—Candidates must produce certificates of having attended, in a recognised medical school, courses of instruction in all the subjects of the examination, which are:—Part I.: (*a*) Pharmacology and Therapeutics, (*b*) General Pathology and Morbid Anatomy, (*c*) Forensic Medicine and Toxicology and Public Health. Part II.: (*d*) Obstetrics and Diseases of Women, (*e*) Surgery, (*f*) Medicine (including Mental Diseases and Diseases of Children). The two parts may be taken separately, and any one of the subjects of Part I. may be deferred and taken with Part II.

DEGREE OF DOCTOR OF MEDICINE (M.D.).

A candidate must have obtained the degree of M.B. at least one year previously. He must present a printed dissertation, and may be examined on any subject connected therewith.

DEGREE OF MASTER OF SURGERY (CH.M.).

A candidate must have obtained the degree of M.B. at least one year previously, must have been engaged in the study of Practical Surgery in the interval, and have held a surgical appointment for not less than six months in a hospital or other public institution. He must also produce certificates of having attended special courses in Operative Surgery, Surgical Pathology, and Ophthalmology.

FEES AND DATES OF EXAMINATION.

Entrance examination, £2; re-examination after failure, £1. First, Second, and Third M.B. Examinations, each, £5; re-examination after rejection, £2. M.D., £10. Ch.M., £5 on examination, and £5 on the conferring of the degree.

The entrance examination in Arts is held in June and September. The First M.B. Examination is held in June (Part I.) and July (Part II.), and also in September. The Second and Final M.B. Examinations are held in March and July, and that for the Ch.M. in July.

UNIVERSITY OF DURHAM.

The University of Durham grants six degrees in the medical faculty—M.B., M.D., B.S., M.S., B.Hy., D.Hy. The degrees of M.D., B.S., and M.S. are granted only to M.B. graduates of the University. The degrees B.Hy. and D.Hy. are granted under certain conditions to registered medical practitioners (see page 613). The University also grants a Diploma in Public Health. These degrees are open both to men and women. It is hardly necessary to say that every student intending to attend the University of Durham College of Medicine (Newcastle-on-Tyne) would do well to pass the necessary examination in general knowledge, and qualify himself to obtain the degrees of the University.

DEGREE OF BACHELOR IN MEDICINE (M.B.).

Preliminary Examination in Arts.—A candidate must (*a*) pass the Preliminary Examination in Arts for the degrees in Medicine of the University of Durham, or (*b*) be a graduate in Arts of the University of Durham, Oxford, Cambridge, London, Dublin, Queen's University (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill (Montreal), Queen's College (Kingston), the Victoria or the Royal University of Ireland, or (*c*) must have passed the Preliminary or Extra-professional Examination for graduation in the University of Cambridge, London, Edinburgh, Glasgow, St. Andrews, Aberdeen, Queen's (Ireland), the Victoria, or Royal (Ireland), or (*d*) have passed the Preliminary Examination in Arts which, until 1881, qualified for the F.R.C.S.Eng. Particulars as to the Preliminary Examination of the University of Durham (*a*) can be obtained from Mr. A. Beanlands, the University, Durham, to whom the fee (£1) is payable.[1]

[2] In addition to the Certificate of Registration, the candidate must produce a certificate of having passed the Preliminary Examination in Arts for the Degrees in Medicine of the University of Durham, unless he shall have, previously to passing the Final Professional Examination, graduated in Arts at one of the following Universities: Oxford, Cambridge, Durham, London, Victoria (Manchester), Edinburgh, Aberdeen, Glasgow, St. Andrews, Dublin, Queen's University, Royal (Ireland), Calcutta, Madras, Bombay, McGill College (Montreal), Sydney, and Melbourne. This examination is held twice yearly, in March and September, at the same time as the Registration Examination. The next examination will be commenced on September 24th, 1895.

Curriculum.—The curriculum extends over five years, of which one at least must be spent in attendance at the University of Durham College of Medicine, Newcastle-on-Tyne, and in the clinical practice of the Royal Infirmary there. Students are recommended to carry out the curriculum on some such plan as the following:—

First Winter: Anatomy, Dissections, Chemistry, Physics. First Summer: Practical Chemistry, Practical Physics, Practical Physiology, Elementary Biology, Dissections.

Second Winter: Anatomy, Physiology, Dissections. Second Summer: Practical Physiology, Practical Pharmacy, Materia Medica, Therapeutics and Pharmacology, Dissections.

Third Winter: Medicine, Surgery, Hospital Practice, with Clinical Lectures, Midwifery and Diseases of Women and Children, Practical Midwifery. Third Summer: Pathology, Practical Pathology, Medical Jurisprudence, Hospital Practice, with Clinical Lectures.

Fourth Winter: Medicine, Surgery, Regional Anatomy, Public Health, Hospital Practice, with Clinical Lectures. Fourth Summer: Mental Diseases, Operative Surgery, Hospital Practice, with Clinical Lectures.

Fifth Winter: Infectious Diseases and Clinical Lectures. Fifth Summer: Clinical Lectures.

Professional Examinations.—There are four professional examinations conducted in writing practically and *viva voce*, each held twice a year (April and September). *First Examination:* Elementary Anatomy and Biology, Chemistry, Physics. *Second Examination:* Anatomy, Physiology, Materia Medica, Therapeutics, and Pharmacology. *Third Examination:* Medicine, Surgery, Midwifery and Diseases of Women and Children, Pathology, Medical Jurisprudence, Public Health, Practical Pharmacy. *Final Examination:* Clinical Medicine and Surgery. The *Calendar* of the University of Durham College of Medicine, Newcastle-on-Tyne, contains synopses of the subjects of the examinations and examination papers. Applications for further information should be addressed to Professor Howden, at the College. A candidate who has passed the First Examination of the Conjoint Board in England of the Royal College of Physicians of London and the Royal College of Surgeons of England, will be exempt from the First Examination of the University of Durham except in the subjects of Chemistry and Physics.[3] Candidates who hold a qualification from a recognised licensing board in the United Kingdom at the date of entry for the First Examination for the Degrees of Medicine are in every case required to pass in Chemistry with Chemical Physics; and are also required to pass in Botany and Medical Botany, if they have not previously passed in that subject at one or other of their examinations for qualification; but they are exempt from examination in Elementary Anatomy and Physiology.[4] Candidates who have completed part of their curriculum elsewhere may pass their First and Second Examinations *previously* to entering at Newcastle-upon-Tyne.

DEGREE OF DOCTOR OF MEDICINE (M.D.).

A candidate for this degree must have been engaged in practice for at least two years subsequent to obtaining the degree of M.B in the University of Durham. The candidate is required to write an essay based on original research or observation, and is subjected to examination on the topic of his essay. For particulars as to the degree of M.D. for medical practitioners of fifteen years' standing, without curriculum, see page 610.

DEGREES IN SURGERY.

Bachelor of Surgery.—A candidate must have passed the examination for the degree of M.B.(Dunelm), and have attended courses of lectures on Operative Surgery and on Regional Anatomy. He is required to perform operations on the dead body, and to show practical acquaintance with the use of surgical instruments and appliances.

Master in Surgery.—A candidate must have obtained the degree of B.S.(Dunelm) at least two years previously, and have been engaged in practice for that period. The subjects of the examination are: Surgery (Pathology, Anatomy, and Operations and Clinical).

DEGREES IN HYGIENE (B.Hy., D.Hy.).

For the regulations as to these degrees, see page 613.

FEES.

Preliminary Arts Examination for Degrees, £1. First, Second, and Third Professional Examinations (M.B.), each £5. Final (M.B.), £10. Examination for the degrees of M.D., B.S., and M.S., each £5. In addition to the University of Durham for each degree, £6.

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[1] Candidates from Indian Universities must have passed a Matriculation Examination at one of the Indian Universities, and will have to reside for one academic year at the University of Durham College of Medicine, at Newcastle-upon-Tyne, before presenting themselves for the M.B. Degree Examination, in accordance with the regulation on page 56 of the *Calendar*. If the Matriculation Examination at the Indian University did not embrace Latin, and Persian, or Sanskrit, then it will be necessary for the candidate, in addition, to produce evidence that he has passed in Latin and one of these subjects, or in Greek, within twelve months of his presenting himself for the Examination for the Degree in Medicine.

[2] This regulation applies to all students who shall have been registered by the General Medical Council after October 1st, 1896.

[3] A candidate who has passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board in England, and will be entitled to present himself for the Final Examination of the Board on the completion of the necessary curriculum.

[4] All candidates for the First Examination for the Degrees in Medicine, whether exempt from a portion of it or not, are required to pay the full fee—£5.

THE ENGLISH COLLEGES.

THE Medical Corporations in England are the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London. The two Royal Colleges now co-operate to hold a series of examinations, on passing which the candidate receives the diploma of Licentiate of the Royal College of Physicians (L.R.C.P.), and Member of the Royal College of Surgeons (M.R.C.S.). The Society of Apothecaries grants its diploma separately.

CONJOINT EXAMINING BOARD IN ENGLAND.

A candidate who desires to obtain the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to pass four professional examinations, and to produce evidence of having passed through a stated course of instruction at a recognised medical school. The candidate must pass an examination in subjects of Preliminary Education before entering the medical school (see page 577), and must register as a medical student within fifteen days of entering such school. Except in the case of Chemistry and Physics, Practical Chemistry, Practical Pharmacy, and Elementary Biology, professional studies commenced before registration will not be recognised.

First Professional Examination.

The examination consists of four parts: (1) Chemistry and Physics, (2) Practical Pharmacy, (3) Elementary Biology, (4) Elementary Anatomy.

A candidate may take this examination in four parts at different times, or he may present himself for the whole at one time. A candidate will be admitted to examination in Chemistry and Physics, and Practical Chemistry and Elementary Biology before registration as a medical student by the General Medical Council, *and he may take Practical Pharmacy as part of the Third Examination*; but he will not be admitted to the examination on Elementary Anatomy earlier than the end of his first winter session, or than the completion of his first six months' attendance at a recognised medical school during the ordinary session, that is, exclusive of the months of April, August, and September.

A candidate is required to produce evidence of having received instruction in each of the above-mentioned subjects. A candidate referred in any part or parts will not be admitted to re-examination for three months. If referred in Chemistry, Biology, or Anatomy he must produce evidence of further instruction. A candidate who produces evidence of having passed an examination for a degree in Medicine on any of the subjects of this examination at a university in the United Kingdom, India, or a British colony will be exempt from examination on the subjects in which he has passed.

Second Professional Examination.

The subjects of this examination are Anatomy and Physiology, and both must be passed at the same time. A candidate must have passed the First Examination at least six months earlier, and have attended during two winter sessions and one summer session (or fifteen months during the ordinary sessions) at a recognised medical school lectures on Anatomy, Physiology, and a course of Practical Physiology and Histology, and have dissected for twelve months during the ordinary sessions. If rejected, a candidate, before being admitted to re-examination, must continue his studies for not less than three months.

Third Professional Examination.

This examination consists of three parts: Part I, Medicine, Pathology, Pharmacology, Therapeutics, Forensic Medicine, and Public Health; Part II, Surgery; Part III,[1] Midwifery and Gynæcology. The examination may be passed at one time or in each part separately. Evidence of attendance at courses of instruction in the subjects of the three parts must be produced, and also of attendance on twenty labours. The candidate must have passed the Second Examination two years previously, and have been registered as a medical student for at least four years. A rejected candidate must produce evidence of further instruction during three months.

Final Professional Examination.

The subjects of this examination are Clinical Medicine and Clinical Surgery, which must be taken up at the same time. No candidate will be allowed to pass in one subject without obtaining at the same time at least half the number of marks required to pass in the other. The Third Examination must have been passed one year previously, and the candidate must have been registered as a medical student for five years. A rejected candidate must produce evidence of three months' further hospital practice.

All applications with reference to the examinations for the Licence of the Royal College of Physicians of London and to the Diploma of Member of the Royal College of Surgeons of England, should be addressed to the Secretary, Examination Hall Victoria Embankment, London, W.C. (telegraphic address, "Conjoint," London), from whom also synopses of some of the subjects can be obtained.

[1] May be deferred to Final Examination.

Regulations for Colonial, Indian, or Foreign Candidates, and University Candidates.

A person holding a Colonial, Indian, or foreign qualification which entitles him to practise in the country where such qualification has been obtained, is admissible to the Second, Third, and Final Examinations without any interval. Members of an English, Scotch, or Irish University are under certain conditions eligible for admission for the Third and Final Examination, without any intervals between them, two years after passing at their University the subjects included in the First and Second Examination of the Board.

A Doctor or Bachelor of Medicine or Surgery of an Indian or Colonial University recognised for the purpose, who shall have passed at his university in the subjects of the First and Second Examination will be eligible for admission to the Third and Final Examinations two years after passing in the said subjects.

Fees, Dates, Etc.

First Examination, £10 10s. Re-examination, Part I, £3 3s., Parts II, III, IV, each £2 2s. *Second Examination*, £10 10s. Re-examination, £6 6s. *Third Examination*, £10 10s. Re-examination, Part I, Medicine, £3 3s.; Pharmacology, £1 1s.; Practical Pharmacy, £2 2s. Part II, £3 3s. Part III, £3 3s. *Final Examination*, £5 5s. Re-examination, £5 5s. Clinical Medicine only, £2 12s. 6d.; Clinical Surgery only, £2 12s. 6d.; Midwifery and Gynæcology, £3 3s. Members of an English, Scottish, or Irish University: For each examination, £5 5s.; for the diplomas, £26 5s.

The examinations are held in January, April, July, and October. A book of questions set at the several examinations is published annually, and can be obtained from Messrs. Taylor and Francis, Red Lion Court, Fleet Street, London, E.C.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Licentiates.—Candidates are now subject to the regulations of the Conjoint Examining Board in England.

Members.—The Membership of the College is granted after examination to persons above the age of 25 years who do not engage in trade, do not dispense medicine, and do not practise in partnership.

Medical graduates of a recognised university are admitted to a pass examination, but others must have passed the examinations required for the licence of the College. The examination, which is held in January, April, July, and October, is partly written and partly oral. It is directed to Medicine, and is conducted by the President and Censors. Candidates under 40, unless they have obtained a degree in Arts in a British University, are examined in Latin, and either Greek, French, or German. Candidates over 40 are not so examined, and the Examination in Medicine may in their case be modified under conditions to be ascertained by application to the Registrar. The fee for the Membership is £31 10s., but if the candidate is a Licentiate the fee is £15 15s. In either case £6 6s. is paid before examination.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Membership.—The candidates are now subject to the regulations of the Conjoint Board.

Fellowship.—The Fellowship of the College of Surgeons is granted after examination to persons at least 25 years of age, who have been engaged in professional studies for six years. There are two examinations—the first in Anatomy and Physiology, which may be passed after the third winter session; the second, chiefly directed to Surgery, which may be passed after six years of professional study. A graduate in Arts of a recognised university may pass the examination after five years of professional study. The Second Examination may be passed before attaining the age of 25, but the diploma is not granted until that age is reached.

Fees.—At First Examination: Members, £5 5s.; non-

Members, £10 10s.; £5 5s. returned if rejected. At Second Examination: Member, £10 10s.; if not a Member, £21. In the latter case £10 10s. is returned in case of rejection. Further information can be obtained on application to the Secretary of the Royal College of Surgeons, Lincoln's Inn Fields, London, W.C.

SOCIETY OF APOTHECARIES OF LONDON.

The following are the regulations for the Five Years' Curriculum required by the General Medical Council:

The examinations are Primary, Intermediate, and Final. The Primary Examination is held quarterly on the first Wednesday, and on the Monday and Thursday in the same week, in the months of January, April, July, and October. The Intermediate Examination is held monthly, and consists of: 1. The examination in Surgery, on the second Wednesday and following days. 2. The examination in Medicine and Forensic Medicine, on the third Wednesday and on the Monday and Thursday of the same week. 3. The examination in Midwifery, on the third Wednesday and on the Monday and Thursday of the same week. The Final Examination is held monthly, and consists of: 1. The examination in Surgery, on the second Wednesday and following days. 2. The examination in Medicine, on the third Wednesday and on the Monday and Thursday of the same week. 3. The examination in Midwifery, on the third Wednesday and on the Monday and Thursday of the same week. Candidates for the examination in Midwifery may enter for the same at the Intermediate or Final Examination.

Primary Examination.—This examination consists of two parts: Part I includes (*a*) Elementary Biology (oral only), (*b*) Chemistry, the Principles of the Science which bear on the Study of Medicine; Chemical Physics, including the elementary mechanics of solids and fluids heat, light and electricity; Practical Chemistry; (*c*) Pharmacy. A synopsis indicating the range of the subjects in the examination will be sent with the regulations on application. Evidence of instruction in these subjects must be produced prior to examination; *a* and *b* may be passed any time before or after, and *c* any time after registration as a medical student, and *a*, *b*, and *c* may be passed either together or at separate times; *c* may be postponed to the Intermediate Examination. No professional studies commenced before registration, except in *a* and *b*, will be recognised as part of the medical course. Should the candidate not succeed in passing in all the subjects of the examination, he will be referred only in the subject or subjects in which he failed. Part II includes Anatomy, Physiology, and Histology. This examination cannot be passed before the completion of twelve months' Practical Anatomy, with demonstrations. These subjects cannot be taken separately except in the event of the candidate having previously passed in one. Evidence must be produced of the candidate's course of study. A schedule for the Primary Examination, to be obtained of the Secretary, must be signed by the Dean of the Medical School or other authority. Candidates will be excused any or all the subjects of the Primary Examination on producing evidence that they have passed equivalent examinations before any examining body recognised by the General Medical Council. Candidates referred in Anatomy will be required to produce evidence of further work in the dissecting room before being admitted to re-examination.

Intermediate Examination.—This examination consists of three parts. Part I includes: The Principles and Practice of Surgery, Surgical Pathology, and Surgical Anatomy. Part II includes: (*a*) The Principles and Practice of Medicine (including Therapeutics, Pharmacology, and Prescriptions), Pathology, and Morbid Histology; (*b*) Forensic Medicine, Hygiene, Theory, and Practice of Vaccination and Mental Diseases. Candidates passing either of the Sections (*a*) or (*b*) will not be re-examined therein. Part III: Midwifery, Gynæcology, and Diseases of Newborn Children, Obstetric Instruments and Appliances. Part III may be postponed to the Final Examination, and candidates may enter for Parts I, II and III together or separately. Candidates who have passed in Pharmacy at the Primary Examination will not be re-examined therein. The Intermediate Examination cannot be passed before the expiration of 45 months after registration as Medical Student, during which time not less than 3 winter sessions and 2 summer sessions must have been passed at one or more of the medical schools connected with a general hospital recognised by the Court of Examiners.

Final Examination.—This examination consists of three parts. Part I includes: An examination of and written report of Surgical Cases, Operative Manipulation and Surgical Anatomy, Instruments and Appliances. Part II includes: An examination of and written report on Medical Cases, Medical Anatomy. Part III includes: Midwifery, Gynæcology, and Diseases of Newborn Children, Obstetric Instruments and Appliances. Parts I and II of this examination cannot be passed before the end of the fifth year. Candidates may enter for Parts I, II, and III together or separately. Course of Medical Study.—The course of study is as follows: For the Primary Examination, Part I, Elementary Biology, not less than 3 months; Chemistry and Chemical Physics, not less than 6 months; Practical Chemistry, not less than 3 months; Pharmacy and Dispensing, not less than 3 months. Evidence of having received instruction in Biology and Chemistry before registration will be admitted. Instruction in Pharmacy and Dispensing must be given by a registered medical practitioner or by a member of the Pharmaceutical Society by examination or in a public hospital, infirmary, or dispensary. Part II: Anatomy, not less than 6 months; Practical Anatomy with Demonstrations, not less than 12 months; Physiology, not less than 6 months; Histology with demonstrations, not less than 3 months. Class examinations on the above subjects. The study of these subjects must be pursued at a medical school or at a place of instruction recognised by the Society.

Information as to the details of the course of study required and as to the certificates which must be produced, may be obtained on application to the Secretary to the Examiners, who attends at the Hall of the Society, Blackfriars, E.C., from 10 to 12 o'clock daily.

Fees.—The fee for the three examinations is £15 15s., or £5 5s. for each examination, except in the case of persons holding a foreign diploma, and who are required to pay the entire fee of £15 15s. In the event of failure a candidate will be referred for three or for six months, as may be directed. Re-examination Fees.—For the Primary Examination: A fee of £1 1s. is required for an extra or additional examination in the case of failure in Part I or Part II of the Primary Examination or any subdivision of such parts respectively. For the Intermediate Examination: A fee of £3 3s. is required for an extra or additional examination in the case of failure in Parts I, II, or III of the Intermediate Examination, or any subdivision of such parts respectively. For the Final examination: A fee of £3 3s. is required for an extra or additional examination in the case of failure in Parts I, II, or III respectively, of the Final Examination, or any subdivision of such parts respectively. Separate or Special Examination Fee: The fee for this Examination, which can be held only under very exceptional circumstances, previously approved of by the Examiners, is £26 5s. No fees are returned under any circumstances.

DR. J. H. BAAS has completed a history of the origin and development of the status of the physician and of the progress of medical science from the earliest times till the present day. The work, which is entitled *Geschichtliche Entwickelung des aerztlichen Standes und der Medicinischen Wissenschaft*, will be published very shortly by F. Wreden of Berlin.

THE BERLIN ANGLO-AMERICAN MEDICAL SOCIETY.—Students wishing to pursue their studies in Berlin will find the Berlin Anglo-American Medical Society useful to them. The object of the Society is to promote social and professional relations among English-speaking physicians permanently or temporarily resident in Berlin. Fortnightly meetings are held for discussion, and facilities are afforded to visitors to Berlin for obtaining information with regard to opportunities for special study. Intending members should communicate with Dr. H. R. Wessidlo, Secretary, Potsdamerstrasse 117, Berlin, W. The applicant must produce his passport and diploma or matriculation card at the Berlin University. The fees are: Admission, 4 marks; annual subscription, 4 marks while resident in Berlin, 2 marks after leaving.

THE SCOTTISH UNIVERSITIES.

IT will be convenient to give the regulations for Edinburgh more in detail, and then briefly indicate points of difference as regards the other three Universities.

UNIVERSITY OF EDINBURGH.

The new regulations apply to all who begin their studies after October 1st, 1892.

Four degrees in Medicine and Surgery exist—namely, Bachelor of Medicine, Bachelor of Surgery, Doctor of Medicine, and Master of Surgery. The degree of M.B. is not conferred separately from Ch.B., and *vice versâ*, but M.D. and Ch.M. are separable.

PRELIMINARY EXAMINATION.

This must be passed before beginning medical study: the subjects are: (1) English, including Grammar (analysis, parsing, derivation, and correction of sentences), Composition, Literature (general knowledge of life and works of the greater writers, and a more special knowledge of the works of two or three),[1] Geography (general knowledge of the world, and special of the British Empire), History[2]; (2) Latin, Translation, Prose Composition, Grammar, and Sentences; (3) Elementary Mathematics, Arithmetic,[3] Algebra, and Geometry, Euclid, Books i, ii, and iii (or their equivalents with easy deductions); (4) Greek, or French, or German—Translation and Parsing, Sentences and Grammar.

Excellence in one or more subjects will in some measure compensate for deficiency in others. The examination is conducted by a Joint Board of the four Universities, and will be held from September 28th to October 2nd, 1895, and from March 28th to April 1st, 1896, and these dates apply to all the Scottish universities. The standard of examination corresponds pretty nearly to the leaving certificate of the Scotch Education Department, or the lower certificate of the Oxford and Cambridge Schools. The whole examination must be passed at one time, save in the case of those who had already passed part under the old regulations. The examinations of a large number of bodies are taken as equivalents of the Preliminary; these will be found on page 627 of the University Calendar (Regulations of the Joint Board of Examiners). The fee is 10s. 6d. each time, and is payable to T. Gilbert, the University Clerk, ten days before the examination.[4]

(*Note.*—It is particularly important that the candidate should observe that: (1) The entire examination must be passed at one and the same time. (2) The examinations in Latin, Greek, French, and German will be wholly on "unseen" passages, no special authors having been prescribed by the Joint Board.)

REGISTRATION.

The student must register within fifteen days after the commencement of medical study. There is no fee. Forms and information may be had from Mr. James Robertson, 1, George Square, Edinburgh, or at the office of the Faculty of Medicine.

PROFESSIONAL EDUCATION.

The course extends over five years. During the first four the student must attend Elementary Botany, Elementary Zoology, Physics, Practical Chemistry, Practical Physiology, Practical Pathology, and Medical Jurisprudence and Public Health during courses of not less than 2½ months each; Practical Anatomy during two courses of not less than 5 months each; Chemistry, Anatomy, Physiology, Pathology, Surgery, Materia Medica and Therapeutics, Medicine, and Midwifery, and the Diseases of Women and Infants, during courses of not less than 5 months each. During the fifth, or final year, he must be engaged in clinical study for at least 9 months, and must attend a 9 months' course in Clinical Medicine and in Clinical Surgery. In all, before graduation he must have attended, for at least three years, a hospital which accommodates not fewer than 80 patients, and possesses a distinct staff of physicians and surgeons, and he must have acted as clerk in the medical, and dresser in the surgical, wards of such a hospital, or the practice of a dispensary, or of a physician or surgeon. He must have had approved opportunities of studying at a hospital *Post-mortem* Examinations, Fevers, Diseases of Children, and Ophthalmology. He must have attended a course of 25 meetings on Practical Pharmacy, a course on Mental Diseases, been properly instructed in Vaccination by a certified public vaccinator, have attended 12 cases of labour, or had 3 months' attendance at a lying-in hospital, and have personally conducted 6 cases. Certificates for these various courses must attest regular attendance and due performance of the work of the class. The fees vary from 1 to 4 guineas for each class, and the total minimum cost in class, examination, and other fees for M.B. and Ch.B. may be set down as £150. Two of the five years' course must be taken in the University of Edinburgh. For students beginning their course in winter there may be given the following minimum curriculum for the degrees of M.B. and Ch.B., with suggested order of study and examination:

First Winter Session: Chemistry, including Practical Chemistry, Physics,[5] or Elementary Zoology, Anatomy (Lectures), Examination in Chemistry, including Practical Chemistry, and either Physics or Elementary Zoology. First Summer Session: Elementary Zoology or Physics,[5] Elementary Botany, Examination in Elementary Botany and Elementary Zoology or Physics.

Second Winter Session: Practical Anatomy, Physiology, Surgery. Second Summer Session: Practical Physiology, Practical Materia Medica, Clinical Surgery (with Dressership), Hospital.

Third Winter Session: Materia Medica, Practical Anatomy, Clinical Surgery (with Dressership), Hospital, Examination in Anatomy, Physiology, and Materia Medica and Therapeutics (the last may be postponed to the end of the following summer). Third Summer Session: Practical Pathology, Medical Jurisprudence and Public Health, Clinical Medicine, Hospital, Examination in Materia Medica and Therapeutics (if not previously taken).

Fourth Winter Session: Pathology, Medicine, Midwifery and Diseases of Women and Children, Clinical Medicine (with Clerkship), Hospital, Examination in Pathology, and Medical Jurisprudence and Public Health (the latter may be postponed to the end of the following summer). Fourth Summer Session: Examination in Medical Jurisprudence and Public Health (if not previously taken).

Fourth Summer and Fifth Winter Session: Clinical Medicine, Clinical Surgery, Mental Diseases, Ophthalmology, *Post-mortem* Examinations, Fevers, Diseases of Children, Out-practice of a Hospital, Dispensary, etc., Midwifery Cases and Practice, Vaccination, Hospital.

Fifth Summer Session: Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery.

PROFESSIONAL EXAMINATIONS.

These are four in number, and the first three may be taken in sections as indicated above.

First.—Botany, Zoology, Physics, Chemistry, taken any time after the full specified course in these subjects.

Second.—Anatomy, Physiology, Materia Medica, and Therapeutics, at the end of the fourth winter.

Third.—Pathology, Medical Jurisprudence, and Public Health, at the end of the third winter.

Final.—Surgery, Clinical Surgery, Medicine, Clinical Medicine, and Midwifery, at the completion of the fifth year.

Failure in one subject does not involve failure in the other subjects of that division. Candidates must be 21 years of age before admission to the degrees of M.B. and Ch.B.

[1] For next October those specially cited are Shakespeare's *Julius Cæsar*, and Scott's *Fortunes of Nigel*; for April and October, 1896, Shakespeare's *Henry the Fifth*, and Scott's *Fair Maid of Perth*.

[2] For October, 1895, the outlines of the History of both England and Scotland from the Union of the Kingdoms to the Reform Bill of 1832: for April and October, 1896, from the Roman occupation to the accession of James VI.

[3] *Arithmetic* (including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest); *Algebra* (including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratics, and Problems leading to Equations).

[4] A student whose native language is not English may substitute his own language for either French or German, and may substitute any other classical language for Latin or Greek.

[5] Three months' course.

Examination Fees for M.B. and Ch.B.

	First Time. £ s. d.	Re-entry. £ s. d.
Preliminary	0 10 6	0 10 6
First Professional	6 6 0	
Any two subjects of Ditto	3 3 0	
Second Professional	6 6 0	
Anatomy and Physiology	4 4 0	
Materia Medica, etc.	2 2 0	
Third Professional	4 4 0	
Final	6 6 0	

Degree of M.D.

The candidate must be M.B. and Ch.B. of Edinburgh, must have been engaged for one year in the medical wards of a hospital, or at scientific work in a recognised research laboratory, or in the military or naval medical services, or for at least two years in general practice, and must be 24 years of age. He must write a thesis on a subject not exclusively surgical, and he will be examined in Medicine, and in some of its special departments. The fee is £10 10s., and the stamp duty £10.

Degree of Ch.M.

The candidate must be M.B. and Ch.B. of Edinburgh, have worked one year in the surgical wards of a hospital, or been engaged in scientific work, or in the military and naval medical services, or for at least two years in practice not confined to medicine. He must be 24, must submit a thesis on a subject not exclusively medical, will be examined on Surgical Anatomy, Operations on the Dead Body, Clinical Surgery, and some of its special departments. The fee is £10 10s.

For further details the student is referred to the *University Calendar* (published by Mr. Thin, South Bridge, Edinburgh, price 3s., post free 3s. 6d.), or the medical *Programme*, price 2d., also published by Mr. Thin, or to the Dean of the Faculty of Medicine, University of Edinburgh.

UNIVERSITY OF GLASGOW.

The new regulations came into force on January 1st, 1892. They are essentially the same as those given above for Edinburgh.

Preliminary Examination.

The dates of the next two Examinations are the same as those given under Edinburgh. Fee, 10s. 6d. each time. Names to be given in and fee paid by September 18th, 1895, and March 11th, 1896, to the Assistant Clerk, Matriculation Office. The extent of the examination will be found under Edinburgh.

Registration.

Printed form of application may be had from the Assistant Clerk at the Matriculation Office, and this must be transmitted to Mr. James Robertson, Scottish Branch Registrar, 1, George Square, Edinburgh.

Professional Education.

The minimum cost is about £126, and the course is the same as at Edinburgh.

Fees etc.

The total examination fees for M.B., Ch.B. are the same as for Edinburgh, but are differently distributed. The fee for the First and Second is £6 6s., and for the Third and Fourth £5 5s. each. In the event of a candidate being rejected in any of these he may be admitted once to re-examination without payment of further fee, but for a second and for each subsequent re-examination a fee of £2 2s. is charged.

For further details the student is referred to the *Glasgow University Calendar* for 1895-96, published by James Maclehose and Sons, 61, St. Vincent Street, Glasgow, price 3s., post free 3s. 6d. (see also p. 600).

Queen Margaret College, which provides a course of instruction for women, has now been affiliated with the University. For course of study, etc., see p. 600.

UNIVERSITY OF ABERDEEN.

The new regulations came into force at the beginning of the winter session of 1892-93. They are essentially the same as for Edinburgh.

Preliminary Examination.

The next Preliminary Examinations will be held on precisely the same dates as are given under Edinburgh, and the subjects are the same. Names must be intimated and the fee paid ten days previous.

Professional Education.

The University Court has ordained that the candidate before admission to his Final Examination must produce certificates to the effect that he has acted for a period equal to a winter session both as a Clinical Clerk and Surgical Dresser, that he has attended not fewer than twenty-five necropsies, and taken part in some; that he has attended for not less than three months a fever hospital of at least forty patients, and has had a three months' course on Disease in Children, and the same in Ophthalmology. The total minimum cost for M.B. and Ch.B. is about £115.

The fees for Professional Examinations are: Preliminary, 10s. 6d.; First, Second, and Third, £5 5s. each; Final, £7 7s. The fees for second and subsequent examination have apparently not yet been adjusted.

Further information will be given by the Secretary of the Medical Faculty, or will be got in the *University Calendar* for 1895-96, published by A. King and Co., Aberdeen; price 2s. 6d., or post free 2s. 11d.

UNIVERSITY OF ST. ANDREWS.

The new regulations, in so far as they are applicable to the University of St. Andrews, have not yet received the approval of Her Majesty in Council, and are consequently subject to alterations in detail. They will probably come into force on October 1st, 1895.

Preliminary Examination.

Although the new regulations are not yet in force, students now beginning their medical studies are recommended to take the examination under these regulations, as given above under Edinburgh, instead of that prescribed by the old regulations, and in any case the whole examination must be taken at once. The dates and subjects of examination are the same as those given for Edinburgh. Applications for an Examination Schedule must be made to the Secretary of the University, and that must be filled up and returned, along with the fee of 10s. 6d., to the Dean by September 23rd, and for Spring, 1896, by March 23rd, 1896.

Registration.

Forms may be had from the Dean, or from the Branch Registrar for Scotland, named under Edinburgh.

This registration in the books of the General Medical Council is not to be confounded with matriculation or other registration in the books of the University.

Professional Education.

This extends over five years from the date of registration. Two of the five years of medical study must be spent in the University of St. Andrews; the remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such medical schools or under such teachers as may be recognised for the purpose by the University Court. The total minimum cost will depend on the fees of the various schools where parts of the course have been taken. The University of St. Andrews has not in itself a completely equipped medical school, but by being in 1890 affiliated to University College, Dundee, its scope and possibilities were greatly enlarged. Unfortunately the validity of the affiliation agreement has been brought under review in the law courts, and the growth and consolidation of the school are thus temporarily at least, interfered with. As the Principal of Dundee College says in his report of July 31st, 1894, "the distrust of our status and qualifying powers induced by the regrettable attempt to repudiate a contract deliberately entered into has operated very prejudicially on the numbers of the students."

Professional Examinations.

When the new regulations come into vogue these will be the same as in the University of Edinburgh. It is not now necessary to refer to the scheme under the old regulations.

Examination Fees.

For M.B. and Ch.B. the total fee will be 22 guineas, but the proportion for each examination has yet to be determined by the University Court.

Degrees of M.D. and Ch.M.

The regulations and fees for these will be found under Edinburgh.

Further information will be given by the Dean of the Faculty of Medicine, or will be found in the *University Calendar* for 1895-96, published by William Blackwood and Sons, 45, George Street, Edinburgh, price 2s. 6d., or post free 2s. 11d.

THE SCOTTISH COLLEGES.

The three medical corporate Colleges in Scotland—the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow—now co-operate to hold a series of examinations, after passing which the student is presented with the diplomas of all three Colleges. Each College grants its single qualification only to persons who already possess another and opposite qualification (see below).

CONJOINT EXAMINATION.

A candidate who passes this series of examinations is granted the diploma of each of the co-operating bodies, and is entitled to register the three diplomas under the Medical Acts, and to write after his name—L.R.C.P.Edin., L.R.C.S.Edin., and L.F.P.S.Glasg.—qualifications which are recognised by the army, navy, and other public services.

Preliminary Examination.

The Educational Institute of Scotland conducts special preliminary examinations in Edinburgh and Glasgow for the Colleges. Full particulars may be obtained from Thomas Morrison, LL.D., Free Church Training College, Glasgow, Secretary to the Examining Board of the Institute; or to Alex. Mackay, LL.D., 10A, South St. Andrew Street, Edinburgh, Treasurer of the Institute. Certain other preliminary examinations, of which a list may be obtained on application, are also accepted. The entire examination must be passed at one period.

Professional Curriculum.

The course of study after registration as a medical student must occupy not less than forty-five months, which period shall include not less than four winter sessions' attendance.[1] Professional studies commenced before registration will not be recognised, except in the case of Physics, Elementary Biology, Chemistry, Practical Chemistry, and Practical Pharmacy; but graduates in arts or science of any recognised University, who have spent a year in the study of Physics, Elementary Biology, and Chemistry, and have passed examinations in these subjects for their degrees, are held to have completed the first year of medical study. The fifth year must be devoted to practical clinical work, and six months of this year may be spent as a pupil of a registered practitioner.

The following order of study is recommended as conforming generally to the sequence of examinations, but is not imperative:

First Summer: Physics, Elementary Biology. First Winter: Chemistry, Practical Chemistry, Junior Anatomy, Dissections. Second Summer: Histology, Dissections. Second Winter: Anatomy, Dissections, Physiology. Third Summer: Pathology, Materia Medica. Third Winter: Dissections, Surgery, Hospital Practice, with Clinical Surgery. Fourth Summer: Midwifery and Gynæcology, Medical Jurisprudence and Hygiene, Hospital Practice, with Clinical Surgery. Fourth Winter: Medicine, Hospital Practice, with Clinical Medicine. Fifth Summer: Clinical Medicine, Insanity, Practical Midwifery, Eye Diseases. Fifth Winter: Hospital Practice, Dissections, Forensic Medicine.

Students are also recommended to study in the fifth year the following subjects: Operative Surgery, Diseases of Children, Ear and Throat, Skin.

Professional Examinations.

During the five years of the professional curriculum the student has to pass four examinations. Each examination is held six times in each year, four times in Edinburgh, and twice at Glasgow, and a candidate may present himself at either place. He may pass two or more examinations at the same time. The pass mark in each subject shall be 50 per cent. A candidate who obtains 60 per cent. in any subject will be exempted from re-examination in that subject, although he may fail to obtain a pass in the other subjects of examination; and on re-examination he shall be required to obtain 60 per cent. of the conjoined marks in the remaining subjects. Schedules showing the course of study followed must be submitted before the examinations to one or other of the Inspectors of Certificates: in Edinburgh, Mr. James Robertson, Solicitor, 1, George Square; in Glasgow, Mr. Alexander Duncan, B.A., Faculty Hall, 242, St. Vincent Street, to whom all inquiries as to professional examinations should be addressed.

[1] This regulation does not apply to students who commenced medical study before January 1st, 1893.

Table showing the Fees for the Conjoint Examinations in Scotland.

The Figures signify Pounds Sterling.

	Whole Examination.	Re-entry for all Divisions.	Re-entry in one or two Divisions.	Entry for one Division.	Re-entry for one Division.
Preliminary	1	1 1s.	—	—	—
Professional, First ..	5	3	2½	2½	2
,, Second ..	5	3	2	—	—
,, Third ..	5	3	2	1	—
Final ..	15	5	—	4	3

First Examination.—This examination may be passed at any time after registration as a medical student, by any candidate who has attended the obligatory courses. The examination consists of three parts: (1) Physics, (2) Chemistry, (3) Elementary Biology, and each division may be taken separately.

Second Examination.—This examination may be passed at any time after the end of the second year by a student who has attended courses of Anatomy, Physiology, and Dissections for six months each. The subjects of the examination are (1) Elementary Anatomy, and (2) Physiology, including Histology. A candidate may pass in one subject while failing in the other.

Third Examination.—The student must have attended Practical Anatomy for twelve months, and a course of Pathology and of Materia Medica before presenting himself for this examination, the subjects of which are (1) Advanced Anatomy, (2) Pathology, (3) Materia Medica and Pharmacy. It may be taken in three divisions, or at one time, or at any time after the end of the third year.

Final Examination.—The student must be 21, and may not pass this examination till the end of the fifth year. The subjects are (1) Medicine, including Therapeutics, Medical Anatomy, and Clinical Medicine; (2) Surgery, including Surgical Anatomy, Clinical Surgery, and Diseases and Injuries of the Eye; (3) Midwifery and Diseases of Women and of Newborn Children; (4) Medical Jurisprudence and Hygiene. Candidates may also be examined on Diseases of Children, Diseases of the Ear and Throat, Insanity, Vaccination, etc. The examination may be taken in divisions or all at once.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

Licence.—The Licence is only granted as a separate qualification (in Medicine) to persons (of either sex) who already possess a recognised British, Irish, Colonial, or Indian qualification in Surgery. A candidate, who must not have been rejected within three months by any Licensing Board, is subjected to written and oral examination in Medicine, Materia Medica, Midwifery, and Medical Jurisprudence. The fee for the examination is £16 16s.: it is held on the first Wednesday and succeeding days of each month except September and October. A special examination can be obtained on showing cause and paying £5 5s. extra. Eight days' notice must be given by all candidates to the Secretary of the College, from whom further particulars can be obtained.

Membership.—The candidate, who must be a Licentiate of a College of Physicians, or graduate of a British or Irish University, and 24 years of age, is examined in (1) Medicine and Therapeutics, and in (2) one of the following subjects chosen by him: (*a*) One or more departments of Medicine specially professed; (*b*) Psychological Medicine; (*c*) General Pathology and Morbid Anatomy; (*d*) Medical Jurisprudence; (*e*) Public Health; (*f*) Midwifery; (*g*) Diseases of Women. Further particulars as to other formalities can be obtained from the Secretary. A candidate 40 years of age and ten years in practice *may be excused* any part of or all the examination by the Council. The fee paid by a Licentiate of the College is £21 if licensed prior to August 1st, 1876; if subsequently, £15 15s. Fee for others, £31 10s. The examination is held quarterly (October, January, April, and July), and application must be made a month previous to the date of examination.

Fellow.—A Member, aged 25, and of at least one year's standing, may be elected a Fellow; he pays £56 10s. (including stamp duty). Women are not yet admitted to the Membership or Fellowship.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

Licence.—The Licence is only granted as a separate qualification (in Surgery) to persons (of either sex) who already possess a recognised British, Irish, Colonial, or Indian qualification in Medicine. A candidate, who must not have been rejected by any other Licensing Board in Surgery within three months, is examined on one day by written papers, and on a subsequent day orally, on specimens in the wards of a surgical hospital, and may be required to operate on the dead body. The fee is £15 15s., of which £10 10s. will be returned to unsuccessful candidates, and is payable to Mr. James Robertson, Clerk to the College, 1, George Square, Edinburgh, from whom further particulars may be obtained, and to whom eight days' notice must be given. A special examination can be obtained on showing cause. The fee is £20, of which £10 will be returned to candidates remitted on examination.

Fellowship.—A candidate must have the diploma of the Royal College of Surgeons of Edinburgh, England, or Ireland, or of the Faculty of Physicians and Surgeons in Glasgow, or the surgical degrees of the Universities of Great Britain and Ireland, must be 25 years of age, and must have been engaged in practice for two subsequent years at least. Candidates who are Licentiates of the Edinburgh Colleges are examined in Surgery, including Clinical and Operative Surgery, and one optional subject; other candidates are examined also in Surgical Anatomy, and in other subjects not adequately included in the examination passed elsewhere. The optional subjects embrace: (*a*) Surgery in any one of its Ophthalmic, Aural, Cerebro Spinal, Laryngeal, Dental, Abdominal, Orthopædic, Venereal, or Genito-Urinary branches; (*b*) Advanced Anatomy; (*c*) Advanced Physiology; (*d*) Surgical Pathology and Morbid Anatomy; (*e*) Midwifery; (*f*) Gynæcology; (*g*) Medical Jurisprudence; (*h*) Hygiene. The examinations are written, oral, and practical. Three weeks' notice must be given to Mr. James Robertson as above, from whom full particulars as to certificates required among others two from Fellows of the College, of whom one must reside in Edinburgh) may be obtained. The fee is £30 for those who hold the diploma of Licentiate of the College, and £45 to others (no stamp duty is payable on the diploma). Registered practitioners, aged not less than 40, and who have been in practice for not less than ten years, and who have highly distinguished themselves by original investigations, may under special circumstances be elected without examination. Women are not admitted to the Fellowship.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Licence.—The Licence is only granted as a separate qualification to candidates who already possess a recognised British, Irish, Colonial, or Indian qualification in Medicine. Candidates are examined in Surgery. The fee is £15 15s. The examination is held quarterly. Further particulars can be obtained on application to Mr. Alexander Duncan, B.A., 242, St. Vincent Street, Glasgow.

Fellowship.—Every candidate must be qualified for two years, and aged 24; he may pass one or two examinations. If he elects to take two examinations he is examined in Anatomy and Physiology at the first, and in Pathology and Surgery or Medicine at the second. If he elects to take one examination he is examined in Medicine or Surgery and an optional subject. The optional or alternative subjects are: (1) Human Anatomy, (2) Comparative Anatomy, (3) Physiology, (4) Pathology, (5) Midwifery and Diseases of Women, (6) Medical Jurisprudence, (7) Ophthalmic Surgery, (8) Aural Surgery, (9) State Medicine, (10) Psychological Medicine. Three examinations are held annually (April, July, October). Fourteen days' notice must be given. The fee to a non-licentiate is £25 unless he desires to qualify to hold office, when it is £50; to a Licentiate, £20 and £10 respectively.

Four Fellows may be elected in each year "in virtue of distinction," and without examination. They must be 40 years of age, and ten years qualified.

THE IRISH UNIVERSITIES.

UNIVERSITY OF DUBLIN.

The University of Dublin grants two degrees in Medicine (M.B. and M.D.), two in Surgery (B.Ch. and M.Ch.), and two in Midwifery (B.A.O. and M.A.O.). A candidate for any one of these degrees must be a graduate in Arts, and have passed the Previous Medical Examination.

The following schools, in addition to the School of Physic, are recognised by the Board of Trinity College—the Schools of the Royal College of Surgeons in Ireland, the School of the Catholic University.

Previous Medical Examination.

This examination is divided into three parts—(1) Physics and Chemistry, (2) Botany and Zoology, (3) Anatomy, Practical Histology and Physiology. The three parts may be taken together or passed at separate examinations. The examinations are held in November, January, May, and twice in June.

Degrees in Medicine.

Regulations for Students who Matriculated since 1891.—The following conditions must be fulfilled in order to qualify for the degrees in Midwifery (B.A.O.), Surgery (B.Ch.), and Medicine (M.B.): The student must be of B.A. standing, and his name must be for at least five (academic) years on the books of the Medical School, reckoned from the date of his matriculation. He may carry on his Arts course concurrently with his Medical course, and he need not have taken his B.A. before presenting himself for his Final Medical Examination, but he cannot have the Medical degrees conferred without the Arts degree. The following courses must be attended:—Lectures: Winter Courses: Systematic Anatomy; Practical Anatomy (with Dissections), first year; Practical Anatomy (with Dissections), second year; Applied Anatomy (with Dissections), Chemistry, Surgery, Physiology (two courses), Practice of Medicine, Midwifery, Pathology. Summer Courses: Practical Chemistry, Practical Histology, Botany, Zoology, Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene, Operative Surgery. Term Courses: Physics (Michaelmas, Hilary, and Trinity Terms. The student must attend 3 courses of nine months' attendance each on the Clinical Lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College. One year at a recognised London or Edinburgh hospital or two years at a recognised county infirmary or recognised Colonial hospital previous to the commencement of their metropolitan medical studies may be allowed, on special application to the Board of Trinity College, to count as equivalent to one year spent in a recognised metropolitan hospital. The following examinations must be passed: The Previous Medical or Half M.B. Examination, the Final Examination. The Final Examination is arranged as follows:—First Part—Section A: Applied Anatomy (Medical and Surgical), paper; Applied Physiology, *viva voce*; Jurisprudence and Hygiene, paper and *viva voce*. Section B: Materia

Medica and Therapeutics, paper and *viva voce*; Medicine, paper and *viva voce*; Surgery, paper and *viva voce*; Pathology, paper and *viva voce*. Section A may be passed in any part of the fourth year, provided the corresponding curriculum shall have been completed; Section B not before Trinity Term of the fourth year. Examinations for both Sections are held in November, February, and June. Second Part—Section A: Midwifery, paper and *viva voce*: Gynæcology, paper and *viva voce*; Obstetrical Anatomy, paper. Section B: Clinical Medicine; Mental Disease, paper. Section C: Clinical Surgery, Operations, Clinical Ophthalmology. Section A may be passed in Hilary Term of the fifth year, provided the corresponding curriculum shall have been completed; Sections B and C not before Trinity Term of the fifth year, but not necessarily in the same term.

Degree of M.D.—The candidate must have taken, or have been qualified to take, the degree of M.B. three years previously, and must read a thesis or undergo an examination before the Regius Professor of Physic.

Degree of M.Ch.—The candidate must be a B.Ch. of not less than three years' standing, and have been engaged in practice for two years. Graduates of ten years' standing may be given a special examination.

Degree of M.A.O.—The candidate must have passed the M.B. and B.Ch. examinations. The examination is specially directed to Obstetrics and Practical Gynæcology.

University Diplomas.

The University grants diplomas in Medicine, in Surgery, and in Obstetric Medicine. A candidate must have completed two years in Arts and five years in medical studies.

Diploma in Medicine.—The medical course and examination are the same as for the degree of M.B., except that attendance is not required on lectures on Botany and Zoology, and that the candidate is not examined in these subjects.[1]

Diplomas in Surgery and in Obstetric Science.—The examination and courses necessary for these diplomas are the same as for the degrees of B.Ch. and B.A.O. respectively.

Fees.

Matriculation, 5s.; M.B., for the examination, £5, for the degree, £11; M.D., £13; B.Ch., for the examination, £5, for the degree, £5; M.Ch., £11; B.A.O., £1; M.A.O., £5; diploma in Medicine, for the examination £5, for the diploma, £5; diploma in Surgery, for the examination, £5, for the diploma, £5; for the diploma in Obstetrics, £1.

A schedule containing recommendations respecting the five years' medical curriculum can be obtained on application to the Registrar of the School of Physic in the University of Dublin.

ROYAL UNIVERSITY OF IRELAND.

The University grants two Degrees in Medicine, M.B. and M.D.; two in Surgery, B.Ch. and M.Ch.; and two in Obstetrics, B.A.O. and M.A.O. The course of five years for these degrees is reckoned from the completion of one academical year from the date of matriculation. Graduates in Arts or Science who have spent a year in the study of Physics, Chemistry, and Biology, and passed an examination in those subjects, are held to have completed the first of the five years.

Medical Curriculum.

The order in which the subjects of the medical curriculum are required to be studied is minutely stated in the *Calendar*: the general character of the curriculum is sufficiently indicated by the examinations held at the termination of each year.

Matriculation and First University Examination.

Candidates for any degree must pass the Matriculation Examination and First University Examination.

Matriculation.—This examination is held for pass and honours in June, and for pass only in September. Notice of intention to compete must be sent with the fee to the Secretary, Royal University of Ireland, Dublin, on a printed form, not later than May 15th or August 15th respectively. The examination consists of the following parts:—I, Latin; II, any one of the following languages: Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; III, English Language; IV, Elementary Mathematics; V, Natural Philosophy. A schedule of the subjects is contained in the *University Calendar*.[2]

First University Examination.—A candidate who has passed the Matriculation Examination in the autumn of one year may be admitted to the First University Examination in the summer of the next year, otherwise an academical year must elapse. The subjects are:—I, Latin, II, any one of the following languages: Greek, French, German, Italian, Spanish, Celtic, Sanskrit, Hebrew, or Arabic; III, English Language, and Literature; IV, Mathematics; V, Natural Philosophy. Schedules are published in the *Calendar*.[2]

Degrees in Medicine, Surgery, and Obstetrics.

A candidate must pass four examinations subsequently to the First University Examination.

First Examination in Medicine.—Candidates must have matriculated two years previously and must have completed the first year of the medical curriculum. The subjects are Natural Philosophy, Systematic Chemistry, Botany, and Zoology. Schedules are contained in the *Calendar*. The examination is written, oral, and practical.

Second Examination in Medicine.—Candidates must have passed the First Examination one year previously, and are examined in Anatomy, Physiology, and Practical Chemistry. Schedules will be found in the *Calendar*.

Third Examination in Medicine.—Candidates must have passed the Second Examination one year previously. They are examined in Anatomy, Physiology, Materia Medica, Pharmacology, and Therapeutics, and clinically in Physical Diagnosis.

Examination for the Degrees of M.B., B.Ch., B.A.O.—Candidates must have passed the Third Examination. The examination consists of three parts—(*a*) Medicine, theoretical and clinical, including Therapeutics, Mental Diseases, Medical Jurisprudence, Sanitary Science, and Medical Pathology. (*b*) Surgery, theoretical, clinical, and operative, including the use of instruments and appliances; Surgical Anatomy, Ophthalmology and Otology, Surgical Pathology. (*c*) Midwifery and Diseases of Women and Children. All candidates must enter for and go through the entire examination, but a candidate may be adjudged to have passed in any of the foregoing parts in which he satisfies the examiners. Successful candidates receive the triple degree.

Honours.—There are special examinations for honours held in connection with each of the last four examinations.

M.D. Degree.

A candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously, and must have spent at least two of these in practice. The candidate is examined in writing and orally in Medicine and Pathology and at the bedside.

M.Ch. Degree.

The candidate must have obtained the degrees of M.B., B.Ch., B.A.O. at least three years previously, two of which must have been spent in practice. The candidate is examined in Surgery, including Ophthalmology and Otology, at the bedside, and is required to write detailed reports on cases.

M.A.O. Degree.

The candidate must have obtained the degree of M.B., B.Ch., B.A.O. at least three years previously, have been engaged in practice for two years, have had personal charge of at least twenty cases of labour, and have attended clinical Gynæcology for three months. The candidate is examined in writing, orally and clinically, in Midwifery, Diseases of Women and Children, and Pathology.

Exhibitions and Scholarships.

Two first class and two second class exhibitions are given after each of the four examinations in Medicine. They are of the value at the first of £20 and £10; at the second of £25 and

[1] A Diplomate in Medicine, on completing the course in Arts and proceeding to the degree of B.A., may become a Bachelor in Medicine by attending the lectures on Botany and Zoology, passing the Previous Medical Examination in those subjects, and paying the degree fees.

[2] Dublin: Alex. Thom and Co. London: Longmans, Green, and Co. Extracts can be obtained on application to the Secretary of the University.

£15; at the third of £10 and £20; and at the degree examination of £40 and £25 respectively. A travelling medical scholarship, value £100, is awarded in October, after a special examination, to a candidate who has passed the Medical Degrees Examination in that year or the preceding year. Two Dr. Henry Hutchinson Stewart Medical Scholarships are awarded annually, the one of the value of £10, tenable for three years, in the subjects of the Second Examination in Medicine; the other of the annual value of £50, tenable for three years, for Proficiency in the Knowledge of Mental Diseases. One Medical Studentship, tenable for two consecutive years, of the annual value of £200.

FEES.

Matriculation, £1; First University Examination, £1; First, Second, and Third Examinations in Medicine, for each £1. The Examination for Degrees, £3; for admission to the Degrees, £10; for the Degrees of M.D., M.Ch., M.A.O., each, £5.

THE IRISH COLLEGES.

CONJOINT EXAMINING BOARD OF THE ROYAL COLLEGES OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE diplomas of these two bodies are now granted upon conditions and after examinations settled between the Colleges.

Preliminary Examinations.—Examinations in general education, which fulfil the requirements of the General Medical Council, are conducted by the Colleges (see pages 577 578). The Preliminary Examination of the College is held twice a year, in spring and autumn, and seven clear days' notice must be given to Mr. Greenwood Pim, Secretary of the Committee of Management, Royal College of Physicians, 6, Kildare Street, Dublin. The Preliminary Examination for the commencement of medical study of the Royal Colleges of Physicians and Surgeons for Sessions 1895 96 will be held on Tuesday and Wednesday, October 1st and 2nd, 1895. Prospectus can be had on application.

PROFESSIONAL EXAMINATIONS.

There are four Professional Examinations:

The *First Professional Examination* may be passed not earlier than the end of the first winter session. It consists of four Parts: I, Chemistry and Physics; II, Practical Pharmacy; III, Biology; IV, Anatomy (Bones and Joints). The four Parts may be taken together or separately.

The *Second Professional Examination* may be passed not sooner than the end of the second winter session. It consists of four Parts: I, Anatomy; II, Histology; III, Physiology; IV, Materia Medica; the two last named subjects may be postponed at the option of the candidate, and if he fail in either of the other two subjects, he may, at the discretion of the examiners, receive credit for the subject in which he obtains passing marks.

The *Third Professional Examination* may be passed not sooner than the end of the fourth winter session. It consists of five Parts: I, Medicine; II, Surgery; III, Pathology; IV, Therapeutics; V, Public Health and Forensic Medicine. A candidate must present himself in the first instance in I, II, and III at least, but if he pass at either I or II he will obtain credit therefor.

The *Final Professional Examination* may be passed not sooner than the end of the fifth year of medical study. A candidate may present himself in all the subjects at one time, or in one or more in the following groups: (*a*) Medicine, including Mental Diseases, Medical Anatomy, and Clinical Medicine; (*b*) Surgery, including Ophthalmic and Aural Surgery, Clinical Surgery, Operations, and Surgical Anatomy; (*c*) Midwifery, including Diseases of Women and Newborn Children, and the Theory and Practice of Vaccination.

CURRICULUM.

The curriculum as above stated extends over five years, and its general arrangement can be gathered from the subjects of the examination, which are arranged to test the student's progress. Full details may be obtained on application to the Secretary as above.

FEES.

Preliminary Examination, £2 2s., except in the case of matriculated pupils of the Royal College of Surgeons, who pay £1 1s.; re-examination, £1 1s. First Professional Examination, £15 15s.; Second, £10 10s.; Third, £9 9s.; Final, £6 6s.; Re-examination fee, £1 1s. for each subject, with a maximum fee of £3 3s.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

This College continues to issue its Licence in Medicine and the Licence in Midwifery to registered medical practitioners whose names appear on the *Medical Register* of the United Kingdom.

Licence in Medicine.—The subjects of examination are: Practice in Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics.

Licence in Midwifery.—The candidate must produce certificates of having attended a course of lectures on Midwifery, and of having attended Practical Midwifery and Diseases of Women, for six months, at a lying-in hospital or maternity recognised by the College; or, where such hospital attendance cannot have been obtained during any period of the candidate's course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding a public medical appointment, the certificate in either case to state that no fewer than twenty labour cases have been actually attended. A registered medical practitioner of five years' standing is exempted from the examination by printed questions.

Fees.—Fee for the Licence to practise Medicine, £15 15s., except in the case of Graduates in Arts and Medicine of any University in the United Kingdom, when the fee shall be £5 5s. only. Fee for examination for the Licences in Medicine and Midwifery, if obtained within the interval of a month, £16 16s.—to be lodged in one sum.[1] Fee for special examination for the Licence to practise Medicine, £21. Fee for examination for the Licence to practise Midwifery, £5 5s. Fee for special examination for the Licence to practise Midwifery, £5 5s. The admission fee, less the sum paid to the examiners, will be returned to rejected candidates. The examinations for these licences are held in the week following the first Friday in February, May, and November. Notice must be given, and the schedule transmitted at least four days before the first Friday in each of the above months to the Registrar of the Royal College of Physicians of Ireland, Kildare Street, Dublin, from whom further information can be obtained. A special examination can be obtained under certain conditions which can be ascertained on application to the Registrar.

Membership.—A candidate for the Membership of the College must be 25 years of age and a Licentiate of the College of three years' standing, or if a graduate of Arts of a university in the United Kingdom, a Licentiate of one year's standing, or, if a practitioner of seven years' standing, then he is admitted to the Membership after one year. He must not be engaged in trade, dispense medicine, or practise in partnership. He must also have held during at least six months the office of resident physician or resident medical pupil, or of having acted during the same period as medical clinical clerk in a recognised hospital, or of having been in medical charge for at least twelve months of a public institution for the treatment of the sick. Every candidate must pass an examination in: 1. Principles of Medicine, including Pathology, Morbid Anatomy, and Medical Chemistry; 2. Practice of Medicine, including Principles of Public Health; 3. Clinical Medicine. The fee for the Examination is £21 (to graduates in Arts 15 guineas), which must be lodged in the Royal Bank, Dublin, before the applications and certificates are sent in. The examinations are held in January, April, July, and October.[2]

[1] Any candidate who has been rejected at the examination for the Licence in Medicine loses this privilege, and shall be required to pay the full fee of £5 5s. for the Licence in Midwifery.

[2] The admission fee, less the sum paid to the examiner, will be returned to the rejected candidates.

Officers.—President: Walter G. Smith, M.D. *Vice-President:* Andrew J. Horne. *Treasurer:* Lombe Atthill, M.D. *Registrar:* G. P. L. Nugent, M.D. *Librarian:* J. C. Benson, M.A.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship.

A candidate for the Fellowship shall make application to the President and Council to be admitted to examination, and, if the Council decide to entertain the application, it shall lie on the table for at least a fortnight for consideration before it is put to the Council for approval. All the required evidences of study or qualification, fees, and testimonials as to character must be submitted previously to its being so considered, and the candidate shall then, if approved by the Council, be admitted to the next Sessional Examination or to a Special Examination if granted by Council, at such date as the President may fix.

Periods of Examination.—Sessional Fellowship Examinations commence, as far as arrangements permit, on the third Mondays in February, May, and November. Special Examinations may be granted at other times by the Council if they see fit, on sufficient cause being shown.

Grades of Examination.—Candidates for the Final Fellowship Examination are divided into two grades: 1. Licentiates or Graduates in Surgery of less than ten years' standing. 2. Licentiates or Graduates in Surgery of more than ten years' standing. Candidates, not either Licentiates or Graduates in Surgery, are permitted to present themselves for the Primary Examination under Grade 1.

Grade 1.—Candidates are required to pass two Examinations—Primary and Final. But candidates may present themselves for the Final Examination immediately after passing the Primary part, provided they have complied with the necessary regulations. The subjects for the Primary Examination are: (*a*) Anatomy, including Dissections, (*b*) Physiology and Histology; those for the Final are: (*a*) Surgery, including Clinical and Operative Surgery, (*b*) Surgical Pathology.

Grade 2.—The subjects of examination are: (*a*) Surgical Anatomy, (*b*) Surgery, including Clinical and Operative Surgery, (*c*) Surgical Pathology.

Fees.—Grade 1: For Licentiates of the College—for Primary Examination, 15 guineas; for Final Examination, 10 guineas. For Licentiates in Surgery of other licensing bodies—for Primary Examination, 25 guineas; for Final Examination, 15 guineas. *Grade 2:* Licentiates of the College, 25 guineas; Licentiates in Surgery of other licensing bodies, 40 guineas. Extra fee for Special Examination, 10 guineas. In case of rejection, £10 10s. in addition to the Special Fee, if such has been paid, is retained by the College, and is not allowed in the fees of re-examination. In the case of Fellowship candidates who fail to present themselves for the examination at the time fixed, without having previously given at least a week's notice of their withdrawal, £5 5s. of the fees is retained by the College.

Further information can be obtained from the Registrar at the College.

APOTHECARIES' HALL OF IRELAND.

Licence.—The Apothecaries' Hall of Ireland does not now grant its licence except to qualified practitioners, whose names appear on the *Medical Register*, who wish to add this to other qualifications. Doctors of Medicine, Licentiates of a College of Physicians, and Licentiates of a College of Surgeons, who have also a Certificate in Practical Pharmacy, may obtain the Licence of the Hall by undergoing examination—the first two in Pharmacy, the latter in Medicine and Pharmacy. The fee is £10 10s.

Certificate of Assistant.—The Hall grants a certificate of Assistant after examination to persons of not less than 16 years of age who have spent two years at Practical Pharmacy under the superintendence of a duly registered Apothecary or Pharmaceutical Chemist. The examination, which is held monthly (except in August), embraces the subjects of Pharmacy, practical and theoretical Materia Medica, the British Pharmacopœia, and the correct translation and compounding of Medical Prescriptions. Fee for examination and registration, £1 7s.

Further information can be obtained from Mr. R. Montgomery, M.R.C.S., Secretary.

NOTES ON MEDICAL SCHOOLS AND COLLEGES.

LONDON.

The special attention of all students intending to enter at a medical school in London should be directed to the fact that the degrees of Doctor and Bachelor of Medicine are conferred by Universities only. The holders of diplomas from Corporations (the Colleges of Physicians and Surgeons, or the Apothecaries' Hall) have no legal right to use the title of "Doctor." Those students who desire the degree of Doctor, and intend to obtain their medical education in London, are warned that they should matriculate at the University of London before entering a medical school. Failure to understand this point is a common source of delay, disappointment, and avoidable expense. Further remarks on this subject will be found in the article on the Medical Curriculum printed on page 573.

Particulars are given below of the twelve medical schools in London which provide for the full curriculum. The schools are connected in each case with a large general hospital, where clinical instruction is given in Medicine and Surgery, and within which students can obtain the necessary appointments as medical clinical clerks and surgical dressers. All the schools have arrangements under which the student is enabled to attend the requisite number of cases of midwifery.

The arrangements at the various schools are everywhere the same in principle, and are in conformity with the requirements of the General Medical Council and the qualifying bodies. The laboratories for chemistry, physiology and histology, and pathology have at most of the schools been greatly improved during recent years, and the facilities for instruction at the smaller, as well as at the larger, schools are now in most respects very complete, and are yearly extended and improved.

St. Bartholomew's Hospital Medical School.

The Hospital contains 750 beds.

Appointments.—Clinical Clerks to the Physicians and to the Physician-Accoucheur, and Dressers to the Surgeons and in the Casualty Department are chosen from the most diligent students. Clerks and Dressers are also selected to attend in the out-patient rooms, in the special departments (Ophthalmic, Orthopædic, Gynæcological, Laryngological, Aural, Dermatological, and Electrical), and in the *post-mortem* room. Eight House-Physicians and ten House-Surgeons (who must be qualified to practise), and a Senior and a Junior Assistant Chloroformist, are appointed annually. A Resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months. Each of these officers receives a salary of £25 a year, except the Senior Assistant Chloroformist, who receives £75, and the Junior Assistant Chloroformist, who receives £50. All, except the nine Junior House-Physicians and House-Surgeons, are provided with rooms. An Extern Midwifery Assistant is appointed every three months at a salary of £50, and two Assistant Electricians are appointed every six months.

There is a residential college within the precincts of the Hospital.

The recreation ground which has recently been purchased for the use of members of the Students' Amalgamated Clubs was formally opened last June.

A special class is held for students preparing for the Preliminary Scientific Examination. Tutorial Classes in all subjects are held in preparation for all University and other examinations without further fee.

Entrance Scholarships.—Two Senior open Scholarships in Science, value of each £75, tenable for one year, to be competed for at the end of September; candidates must be under 25 years of age. The subjects are Physics and Chemistry for one, Physiology and Biology for the other. Two Junior open Scholarships, value £150 and £50, will be competed for at the same time in the subjects of the London University Preliminary Scientific Examination. Candidates must be under 20 years of age. The successful candidates must enter at St. Bartholomew's Hospital in the October succeeding the examination. Jeaffreson Exhibition: £20; examination at the end of September; subjects: Latin, Mathematics, and any one of the following languages—Greek, French, German. Candidates for the open Scholarships and the Jeaffreson Exhibition must not have entered to the hospital practice of any metropolitan medical school. The Treasurer's Research Studentship in Pathology, of the value of £100 a year, is given by election to the most promising of the recently qualified men. The Research Student must engage in original work in the Hospital laboratories. The total value of the Scholarships and Prizes is nearly £900 per annum.

Communications regarding the Hospital and Medical College must be addressed to Dr. T. W. Shore, Warden of the College, St. Bartholomew's Hospital.

Charing Cross Hospital Medical School.

The Hospital contains 180 beds. Students are also admitted to the practice of the Royal Westminster Ophthalmic Hospital, which contains 30 beds.

Appointments.—Clinical Clerks and Dressers, Clinical Ward Clerks, Surgical Ward Clerks, and Pathological Assistants are appointed for three months. Assistant Demonstratorships of Anatomy and Physiology are also open to the students. Four House-Physicians, four House-Surgeons, and two resident Obstetric Officers are appointed by competitive examination for six months. They are entitled to rooms and commons in the hospital. A Medical and a Surgical Registrar, each with a salary of £40 a year, are appointed for twelve months. An Electrical Assistant is appointed every six months, and receives an honorarium of £12 12s. at the end of his term of office.

Entrance Scholarships.—Two Entrance Scholarships, of the value of 120 guineas and 60 guineas respectively, are awarded annually at the commencement of each winter session, after a competitive examination in the following groups of subjects: (1) English, including Language, History, and Geography; (2) any two of the following four languages—Latin, Greek, French, and German; (3) Mathematics, including Arithmetic, Algebra, and Geometry; and Mechanics, including Statics and Dynamics; (4) Inorganic Chemistry and Experimental Physics, including Acoustics, Heat, Magnetism Electricity, and Optics; and (5) Animal and Vegetable Biology. The value attached to each group of subjects is 1,000 marks; 200 marks will be deducted from the number of marks given for each paper, so that no credit will be given for any paper in which the candidate obtains less than one-fifth of the total marks. Candidates must be under 25 years of age on the first day of the examination. No candidate may offer himself for examination in more than three of the above groups of subjects, the selection of the groups being left entirely to the candidate. In the first three groups the subjects, as regards the extent and the authors selected, will be the same as those chosen for the Matriculation Examination of the University of London in the June immediately preceding; in the fourth and fifth, the same as those for the Preliminary Scientific Examination of the same University. Candidates must give notice to the Librarian of their intention to compete, and of the groups in which they offer themselves for examination, on or before Saturday, September 14th, 1895. The Examination will commence at the School on Monday, September 16th, at 10 A.M., and continue during the week. The successful candidates will be required to enter forthwith for their complete medical education at the Charing Cross Hospital.

A Universities' Scholarship (of the value of 60 guineas) is open to students from the University of Oxford who have passed the First M.B. Examination, and to students of the University of Cambridge who have passed the second M.B. Examination, and who have not entered at any London medical school. Subjects: Anatomy and Physiology, including Histology. The Examination for this Scholarship, which will be partly practical, will be held at the School on September 16th and 17th, 1895. Candidates must give notice to the Librarian of their intention to compete on or before Saturday, September 14th. The successful candidate will be required to enter forthwith at the Charing Cross Hospital for the completion of his curriculum.

Further information may be had of the Dean, Mr. Stanley Boyd.

St. George's Hospital Medical School.

The Hospital contains 351 beds, of which 205 are devoted to Surgical, and 146 to Medical cases.

Appointments.—Four House-Physicians and four House-Surgeons are appointed quarterly from among the perpetual pupils; they hold office for six months in each capacity in succession, and reside and board in the hospital free of expense. An Obstetric Assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100. A Curator of the Pathological Museum and a Medical and a Surgical Registrar are appointed annually from among the senior pupils, each with a salary of £50; and an Assistant Curator with a salary of £30. A Senior Anæsthetist is appointed annually, with a salary of £50 a year; and a Junior Anæsthetist with a salary of £20. As the result of a competitive examination held every three months, those students who desire to proceed to the offices of House-Physician and House-Surgeon are appointed as assistants during twelve months in the special and general divisions of the out-patient department. Two Demonstrators of Anatomy are appointed annually, each with a salary of £50. Each pupil of the Hospital must act as Clinical Clerk and Dresser before a certificate of attendance on hospital practice can be signed.

Entrance Scholarships.—The following Entrance Scholarships are offered for competition: 1. A Scholarship, value £145, for the sons of medical men who have entered the school during the current year. 2. Two Scholarships, each of £50, open to all students commencing their studies. The subjects for these three Scholarships will be Latin, Greek, French, German, Mathematics, Physics, Chemistry, and Physiography. Three of these to be taken, at option, save that at least one linguistic and one scientific subject must be taken. The examination will be held in October. The examination for all these Scholarships will be on October 3rd, 4th, and 5th. 3. Two Scholarships, value £85, for students who have entered during the current year, and have passed or completed the curriculum for the Oxford First M.B. or the Cambridge Second M.B. Subjects for these three Scholarships: Organic Chemistry, Anatomy, Physiology, Zoology, Botany; any two to be taken, at option. 4. A Scholarship, value £85, for students of Provincial University Colleges in England and Wales who have entered the School during the current year, and have passed or completed the curriculum for the 1st M.B. of London or the corresponding examination of the Victoria University or of Durham. The examinations for these Scholarships will commence on October 7th.

Further Information may be obtained from the Dean of the School; from any of the Lecturers; or from Mr. F. J. Marshall, the Resident Medical Officer at the Hospital.

Guy's Hospital Medical School.

The Hospital contains 695 beds, of which 500 are in constant occupation. Detached wards, containing 40 patients, are set apart for the purpose of instruction in clinical medicine.

Appointments.—All appointments are given according to the respective merits of the candidates, and without extra payment. There are appointed annually House-Physicians, House-Surgeons, Assistant House-Physicians, Assistant House-Surgeons, Surgeons' Dressers, and Medical Clinical Clerks, Dressers in the Eye Wards, Dressers in the Throat Department, Clinical Assistants, Assistant Physicians' Clerks, Assistant-Surgeons' Dressers, Dressers in the Surgery, Obstetric Ward Clerks, Surgical Clinical Clerks, Assistant-Surgeons' Clerks, for three months; Obstetric Residents, *Post-mortem* Clerks, Dental Surgeon's Dressers, Aural Surgeon's Dressers, Obstetric Out-Patient Clerks.

Extern Obstetric Attendants, Clerks in the Electrical Department, also Clerks to the Anæsthetists. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices.

Entrance Scholarships.—Four open Scholarships, two in Arts and two in Science, will be offered for competition in September, 1895. Entrance Scholarships in Arts: 1. A Scholarship of £100, open to candidates under 20 years of age. 2. A Scholarship of £50, open to candidates under 25 years of age. Subjects: English Language, including Grammar and Composition. Latin. Greek, including Grammar, translation from specified authors, translation of easy passages not taken from such authors, and translation from English into Latin or Greek. In Latin and Greek the passages for translation will be taken from the set books required for the previous July Examination for Matriculation at the University of London, or the September Examinations of the Society of Apothecaries, and of the College of Preceptors. French; German; including Grammar, translation into English, and translation from English into French or German. Arithmetic and Algebra: As far as simple equations inclusive. Geometry: Including the subject matter of Euclid, Books I, II. and III. with easy deductions. Candidates may choose between Greek, French, and German, but will not be allowed marks in more than one of these subjects. Entrance Scholarships in Science.—1. A Scholarship of £150, open to candidates under 25 years of age. 2. A Scholarship of £60, open to candidates under 25 years of age. Subjects: Inorganic Chemistry, General Biology (Zoology, Botany), Experimental Physics, including General Properties of Solid, Liquid, and Gaseous Bodies, Acoustics, Heat, Magnetism, Electricity, and Optics. There will be a practical examination in Chemistry, in addition to the paper. Specimens will be given with the papers in Botany and Zoology. The successful candidate will be required to enter at the Hospital, as a Perpetual Student, in the October immediately succeeding the Examination. Names of intending candidates should be forwarded on or before September 9th, to the Dean, Guy's Hospital, London, S.E., and candidates for the Scholarships in Arts must then specify the set subjects in Latin and Greek in which they propose to present themselves for examination.

A Residential College within the precincts of the Hospital accommodates about sixty students.

Further information may be obtained on application to the Dean of the Medical School.

King's College Medical Faculty.

The Hospital contains 220 beds in daily use.

Appointments.—Resident Medical Officers, Clerks, and Dressers are chosen from matriculated students, and the former have rooms and commons free. Two Sambrooke Registrarships, of the annual value of £50 each, tenable for two years, open to matriculated students who have filled any of the higher appointments of the Hospital.

Entrance Scholarships.—Two Warneford Scholarships, for the encouragement of previous education, each £25 per annum, for three years; one Additional Scholarship of £25 per annum for two years will be given in October, and one Warneford Scholarship of £25 per annum for two years, for third year resident matriculated students, at the close of the winter session. Two Sambrooke Exhibitions, one £50 and one £10, open to all matriculated students at the commencement of their course of study; subjects of examination, Mathematics, Elementary Physics, Inorganic Chemistry, Botany, and Biology. Babbeth Scholarship, value £20, in July, for best evidence of early scientific training. Two Science exhibitions, given annually, in October, by the Clothworkers' Company, one of £30 per annum and one of £20 per annum, each tenable for two years, for proficiency in any four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy, and Zoology, will be open to all candidates who are under the age of 19. Rooms are provided within the College for a limited number of matriculated students under the supervision of the Censor. The cost of the academical year varies from £50 to £60 for rent of rooms and dinner. The Dean of the Medical Department, Professor Carnow, attends daily (Saturdays excepted), at King's College, from 11.30 A.M. to 1 P.M., for the purpose of seeing students and their friends. Any letter addressed to the Dean during the vacation will receive early attention.

London Hospital Medical School.

The Hospital is the largest general hospital in the kingdom; it contains 786 beds.

Appointments.—Five House-Physicians, five House-Surgeons, and a Resident Accoucheur are appointed every six months; two Assistant Anæsthetists, two Receiving-room Officers, and a Senior Dresser to Out-patients every three months. Clinical Clerks, Surgical Dressers, and Clinical Obstetric Clerks are appointed every three months. Every student must act as a Clinical Clerk for three months in the medical out-patient department, after passing the second examination in Anatomy and Physiology. Maternity pupils reside in the hospital every week. Each student must attend at least twenty cases of Midwifery; those who have attended one hundred are entitled to a special certificate. Dressers reside and board in the hospital every week. Every student must act as a dresser in the surgical out-patient department for at least six months after the end of the first winter session. Three Clinical Assistants are appointed every three months for the medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £50 per annum. Unpaid Clinical Assistants are appointed in the Ophthalmic department. A Medical Registrar and a Surgical Registrar are appointed annually; each receives £100. An Instructor in Anæsthetics is appointed annually, and receives £50. Every student must act as a *Post-mortem* Clerk for three months. A Dental Assistant, Prosectors of Anatomy, and Dressers in the Ophthalmic and Aural departments, are also appointed. The holders of resident appointments are provided with rooms and board.

Entrance Scholarships.—Six Entrance Scholarships, value £120, £60, £60, £35, £30, and £20; examination at the end of September. Science, value £120, £60, and £35, in the subjects appointed by the University of London as the subjects of the Preliminary Scientific Examination. Human Anatomy and Physiology, and Histology, value £60. Conditions: Candidates must be students of the University of Oxford who have passed the First M.B. Examination, or students of the University of Cambridge who have passed the Second M.B. Examination. Arts, value £30 and £20. The Epsom College Scholarship, open to students of Epsom College, represents a free medical education at the London Hospital. Nineteen other Scholarships and Prizes will be offered during the ensuing session.

Information may be obtained from the Warden, Mr. Munro Scott, at the College.

St. Mary's Hospital Medical School.

The Hospital contains 281 beds; the number will shortly be raised to 381.

Appointments.—Three House-Physicians and three House-Surgeons are appointed for six months each, and two Obstetric Officers for six months each; all live free of expense in the Hospital. All students must act as Clinical Clerks and Dressers for eight months after passing the Primary Examinations, and after having acted as Dressers two months in the Casualty Department. Demonstrators of Anatomy are appointed annually at salaries of £70; two Assistant Demonstrators and two Prosectors with an honorarium of £5 each; a Demonstrator of Physiology at a salary of £100, and two or three Assistant Demonstrators, who receive an honorarium of £5; a Demonstrator of Chemistry and Physics at a salary of £100, and an Assistant Demonstrator, who receives an

[1] The examination will begin on Saturday, September 28th, in the following subjects: 1 Divinity: *Old Testament*, First and Second Books of Samuel; *New Testament*, the Gospel according to St. John; the Church Catechism; Books recommended: Barry's *Notes on the Catechism*, or Maclear's *Class Book of the Catechism of the Church of England*. 2 English: Shakespeare, *King Henry V.* 3 History: the History of England, from 1688 to 1760; Textbook, Bright's *History of England*. 4 Latin: Cæsar *De Bello Gallico*, Book VII. 5 Greek: Xenophon, *Hellenica*, Book IV. 6 French: Fredureau-Clayton, *Histoire d'un Paysan*. 7 German: Schiller, *Wallenstein*. 8 Mathematics: Arithmetic, Algebra, as far as and including Quadratic Equations, together with Proportion and Arithmetical and Geometrical Progression; Euclid, Books I.-IV. or the subjects thereof. Names of candidates must be sent to the Secretary before 2 P.M., on Thursday, September 26th.

honorarium of £5; a Demonstrator of Biology at a salary of £50; and two Assistant Demonstrators who receive £5; and two Demonstrators of Pathology, to assist the lecturers, who receive an honorarium of £5 each.

Entrance Scholarships.—One Scholarship in Natural Science, value £105, and three of the value of £52 10s. each; subjects, Inorganic Chemistry, Experimental Physics, and Elementary Biology. There will be a practical examination in each subject. The examination takes place at the end of September. The candidates must not have completed a winter session of study at a medical school in London. The successful candidates must enter as perpetual pupils of the Hospital, and pursue the full course of study there. A scholarship of £138 for students of Epsom College, who are sons of medical men. Two scholarships, each of £52 10s., open to students from a University, who have not entered at any London medical school: subjects, Physiology and Histology, and either Anatomy or Chemistry at the option of the competitor.

Special Classes are held for the Preliminary Scientific, Intermediate M.B., and Final M.B. Examinations of the University of London, and for the Examinations for the Fellowship of the Royal College of Surgeons.

Students may reside in the College, 33 and 35, Westbourne Terrace, under the supervision of the Warden, Mr. E. Roughton. Terms, inclusive of all school fees, and including the assistance of the demonstrators on three evenings in the week, can be obtained on application to the Warden.

Further information may be obtained from the School Secretary, Mr. Frederic H. Madden, or from the Dean of the School, Mr. George P. Field.

Middlesex Hospital Medical School.

The Hospital contains 320 beds.

Appointments, etc.—Eighteen Resident Appointments are open annually to competition among pupils of the Hospital. The officers reside and board in the Residential College free of expense. There are two Casualty Medical and two Casualty Surgical Officers appointed annually. Six House-Surgeons are appointed every year at intervals of two months, after examination; they must have a legal qualification. Six House-Physicians are also appointed annually at similar intervals; they must have a legal qualification, or hold a Broderip Scholarship. An Obstetric House-Physician (qualified to practise) is appointed every six months. Each of the above-mentioned resident officers pays (except the Casualty officers who receive a salary) £10 10s. on appointment. Non-Resident Physicians' Assistants are appointed in the out-patient department. Clinical Clerks and Dressers are appointed for six months. An Obstetric Physician's Clerk is appointed. In the out-patient department the appointments are: Dresser to the Assistant Surgeon and to the Dental Surgeon, Clerk to the Assistant Physician, Dresser to the Ophthalmic Surgeon, Clerk in the Department for Diseases of the Skin, Clerk in the Department for Diseases of Women, and Dresser to the Throat and Ear Department. There are also Extern Midwifery Clerks, and *Post-mortem* Clerks. The appointments are so arranged that every student may during his course take both a Clerkship and a Dressership. Each student must be an out-patient clerk or an out-patient dresser before being eligible to an in-patient clerkship or dressership. No student can be appointed to any office until he has passed the second examination of the Examining Board in England, or its equivalent. Clinical Assistants are appointed in the Ophthalmic, Skin, and Throat and Ear Departments.

Entrance Scholarships.—Two Entrance Scholarships, value £55 and £40, tenable for two years,[1] are open to all gentlemen commencing their medical studies at the Hospital in October, 1895. The successful candidates must become general pupils of the school. Examination on September 27th and following days. Candidates must send in their names to the Dean, stating the three subjects they select, on or before September 20th.

Universities Scholarship.—An annual Entrance Scholarship of the value of £30 a year, tenable for two years, is open to students of the University of Cambridge who have passed the Second M.B. Examination, and to students of the University of Oxford who have passed the First M.B. Examination. Subjects: Anatomy and Physiology, including Histology. The examination takes place in October.

The Freer Lucas Scholarship is annually awarded on the nomination of the Head Master to a pupil of the Royal Medical College, Epsom, who has passed the Preliminary Scientific M.B. Examination.

Information may be obtained from Dr. Coupland, the Dean; from Dr. Pasteur, Secretary of the School; from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

The Residential College is situated in Cleveland Street, W., and has its frontage in the Hospital garden; it accommodates about 30 students. The Warden is the Rev. W. G. Deighton, M.A., Chaplain of the Hospital.

St. Thomas's Hospital Medical School.

The Hospital contains 572 beds.

Appointments.—A Resident Assistant Physician and a Resident Assistant Surgeon, at a salary of £100 per annum each, with board, are appointed, and may hold office for a term not exceeding three years. Two Resident and two Non-Resident House-Physicians, and four Resident House-Surgeons, four Assistant House Surgeons, a Senior and Junior Obstetric House-Physician, are selected from gentlemen who have obtained their professional diplomas, every three months. Two Ophthalmic House-Surgeons, chosen from qualified students, are appointed for six months, the senior receiving a salary at the rate of £50 per annum, and the junior being provided with commons. The Resident House-Physicians, the Resident House-Surgeons, the Senior Obstetric House-Physician, and the Dresser on Accident Duty are provided with rooms and commons. Clinical Clerks and Dressers are selected each year to the number of at least one hundred for in-patients and eighty to one hundred for out-patients. Clinical Assistants in the departments for Diseases of the Throat, Skin, and Ear are appointed every three months. Obstetric Clerks are from time to time appointed; also Assistants in the Physiological Laboratory, Prosectors, and Assistants to the Lecturer on Materia Medica, to teachers of Practical Surgery, and to Demonstrators of Morbid Anatomy. All students have the opportunity of being engaged in the performance of the practical duties in connection with the Medical, Surgical, and Special departments of the Hospital. Two Hospital Registrars are appointed at an annual salary of £100, and an Obstetric Tutor and Registrar at a salary of £50 per annum. A Chief Assistant in the department for Diseases of the Throat is appointed annually.

The school buildings, isolated by a large quadrangle from the Hospital, stand at its southern extremity, between the river and the gardens of Lambeth Palace. They are very commodious, and every effort has been made to provide

[1] The following are the subjects for examination:—(1) Latin: The examination will consist of passages for translation into English; short passages for translation from English into Latin; and questions in grammar. September, 1895, *Cæsar*, Gallic war, Book VII. September, 1896, Cicero, *de Amicitia* and *In Catilinam*, III.—(2) Greek: The examination will consist of easy passages for translation into English, and questions in grammar. September, 1895, Xenophon, *Hellenica*, Book IV. September, 1896, Euripides, *Andromache*. The books selected are those set for the Matriculation Examination of the University of London held in the preceding June.—(3) French or German: The examination will consist of passages (authors not set) for translation into English, short passages for translation from English into French or German, and questions in grammar.—(4) Mathematics: comprising Arithmetic, Algebra up to and including Quadratic Equations; and Euclid, Books I., II., III.—(5) Mechanics and Experimental Physics: comprising the composition and resolution of Statical Forces. Simple Machines, the ratio of the Power to the Weight in each. Centre of Gravity. General Laws of Motion. Law of the Motion of Falling Bodies. Pressure of Liquids and Gases, Specific Gravity, and the subjects included in the Schedule of Experimental Physics for the Preliminary Scientific (M.B.) Examination of the University of London.—(6) Chemistry: the range of subjects is comprised in the course prescribed by the University of London for the Preliminary Scientific (M.B.) Examination under the head of "Chemistry." The fundamental principles of the Science aptly illustrated will claim more attention than a detailed account of the manufacture of the Salts of the Metals.—(7) Botany: the use of recognised Botanical Terms. Vegetable Morphology. The outlines of Vegetable Physiology. The Features and Life history of the various classes of the Cryptogamia. The Classification of the principal British Natural Orders. Demonstration of the characters of recent Specimens, and the recognition of Vegetable Tissues and Organs in prepared Microscopical Slides.—(8) Zoology: the Schedule will be that of the Preliminary Scientific Examination of the University of London.—Candidates will be required to examine Microscopic and other Specimens.—Candidates will be examined in any three, and not more, of the above subjects which they may select.

accommodation completely fulfilling modern requirements. In the year 1885 the Anatomical department was much enlarged and remodelled. In 1892 considerable alterations were carried out in the Physiological department, giving increased space in the Laboratory and providing facilities for lectures and lantern demonstrations. In 1893-94 further extensive alterations were made. Two new wings were added to the main building, containing a large laboratory for the classes in Elementary Biology and Pathology, private working rooms for the teachers in those departments, a dissecting room for the Biology class, improved accommodation for the Operative Surgery class, and a large class room for the classes in Practical Surgery. At the same time the collection of Physical apparatus was removed to a laboratory *en suite* with the Chemical department. New premises were also provided for the Students' Club, to which a Gymnasium has been added, and the arrangements are now such as to render it quite unnecessary for students to leave the School buildings during the working hours of the day. Electric lighting has been introduced into the new departments and part of the older building.

Entrance Scholarships.—Two Open Scholarships in Natural Science, value £150 and £80, are open to students not exceeding 24 years of age who have passed a preliminary examination in Arts: subjects: Physics, Chemistry, and either Physiology, Botany, or Zoology; examinations in September. Notice must be given not later than September 19th. Successful candidates must become students of the Hospital. One of the value of £50 is open to students who have completed their examinations in Anatomy, Physiology, and Materia Medica and Pharmacy for a medical degree in any of the Universities of the United Kingdom, and have not entered as students in any London medical school.

The Salters' Company Fellowship, of the annual value of £100, and tenable for three years, has been established and endowed by the Salters' Company with the view to the promotion of research in Pharmacology.

University of London.—Classes in the subjects required for the Preliminary Scientific Examination are held from October to July, and for the Intermediate M.B. Examinations from January to July.

Further information may be obtained from Mr. G. Rendle, the Secretary to the Medical School, at the Hospital.

University College: Medical Faculty.

The Hospital contains 207 beds available for clinical instruction and study.

Appointments.—Eight House-Physicians, six House-Surgeons, twelve Obstetric Assistants, Out-Patients Physicians' and Surgeons' Assistants, Clinical Clerks, Surgeons' Dressers, and Ophthalmic Surgeons' Assistants, are selected annually from among the students without extra fee. The House-Physicians, the House-Surgeons, and four Obstetric Assistants reside in the Hospital, receiving free board and lodging.

Entrance Scholarships.—Three Entrance Exhibitions, one of the value of 131 guineas, and two of the value of 55 guineas, to gentlemen who are about to commence their first winter's attendance. Subjects: Chemistry, Physics, and Biology. The examination will take place on September 25th and 26th. Notice of intention to compete must be given on or before September 24th.

Other exhibitions and prizes of the annual value of about £500 are given in the Faculty of Medicine.

Information respecting the College may be obtained from the Dean, Professor A. E. Barker; the Vice-Dean, Professor W. Ramsay; the Sub-Dean, Professor Thane; or the Secretary, Mr. J. M. Horsburgh.

Westminster Hospital Medical School.

The Hospital contains upwards of 200 beds.

Appointments.—A Curator of the Museum and a Pathologist are appointed annually, each with a salary of £50; and a Medical and a Surgical Registrar, each with a salary of £40. Two House-Physicians, two House-Surgeons, two Assistant House-Surgeons, and a Resident Obstetric Assistant are appointed for six months, after examination, and are provided with rooms and commons. An Assistant House-Surgeon, after six months' service, becomes House-Surgeon for a further period of six months. Clinical Assistants to the Assistant Physicians and Assistant Surgeons, and to the officers in charge of special departments, are appointed from among qualified students. Every student must perform the duties of Out-patient Dresser for four months, and afterwards hold the office of In-patient Dresser for four months, of Out-patient Clinical Clerk for four months, and of In-patient Clinical Clerk for four months. Two Pathological Clerks are appointed every four months to assist in the *Post-mortem* Room. No student is eligible as In-patient Dresser or Clinical Clerk until he has passed the second Examination of the Conjoint Board, or an equivalent examination. Clerks and Dressers in the Special Departments of Hospital Practice are periodically appointed. So far as vacancies permit students of other hospitals are admitted to In-patients' Dresserships or Clerkships.

Entrance Scholarships.—An examination for three Entrance Scholarships, value respectively £60, £40, and £20, will be competed for on September 26th and 27th, 1895. The third is offered for competition to intending students of dentistry. The subjects of examination are: Latin (same subjects as those of the Matriculation Examination of the University of London of the same year), Greek, French or German, Mathematics, and Experimental Physics and Chemistry. A scholarship in Anatomy and Physiology is offered for competition to members of the University of Oxford or Cambridge. A week's notice must be given to the Dean. An examination for a Natural Science Scholarship (Inorganic Chemistry, Physics, and General Biology), value £60, will be held on April 23rd and 24th, 1896. On the same date will be held an examination for a Scholarship (Chemistry, Inorganic and Organic, and Physics), value £40. There is a Free Presentation open to pupils of Epsom School. Preliminary Scientific (M.B.) Examination: Special classes in Chemistry, Physics, and Biology; fee, £12 12s. to those becoming general students. Intermediate M.B. and First F.R.C.S.: Special classes in Anatomy and Physiology, including Advanced Practical Histology and Embryology. Diploma in Public Health: The course of Laboratory instruction in Chemistry, Physics, and Bacteriology; fee, £12 12s. General Bacteriology: A separate course in General Bacteriology; fee, £5 5s. Any of the above classes are open to other than students of the School on terms to be learned on application to the Dean, from whom further information can be obtained.

London School of Medicine for Women.

Clinical Instruction is given at the Royal Free Hospital, which contains 160 beds.

Entrance Scholarships.—An Entrance Scholarship, value £30, is offered for competition at the end of September in each year. Candidates must have passed a Preliminary Examination in Arts, and the successful candidate must enter on a full course of medical study at the school. The Stuart Mill Scholarship, value £30 a year for four years, is offered to ladies willing to practise in India under the Dufferin Fund. A Medical Scholarship, value £100 a year for three years, for girls under 19, residing within the metropolitan area (St. Dunstan Trustees). The John Byron Bursary, value £20 a year for four years, is offered to ladies requiring assistance for the prosecution of their medical studies; the next award will probably be in 1896. The Fanny Butler Scholarship, value £14 10s. a year for four years, for ladies guaranteeing to practise medicine under the Church of England Zenana Missionary Society. Two Mackay prizes of £20 each are awarded to the two students taking the highest place in the class examinations of the first two years. Three Evans prizes of £3 3s. each are given in the Midwifery class, and a Woods prize of £5 5s. for the Operative Midwifery class. The Helen Prideaux Memorial Prize of £50 is offered every alternate year to graduates of the School. The Mary Royce Memorial Fund gives £5 to the Senior Assistant Anæsthetist at the Royal Free Hospital on the completion of her term of office. The Society for the Promotion of Christian Knowledge offers valuable scholarships on certain conditions. The Zenana Medical Mission Society assist ladies who wish to go to India as missionaries.

Cooke's Medical School, London.

The School is prepared to admit to its supplementary work

all who may wish to join the same, but in regard to its curriculum work it does not receive more than half a dozen students in the course of the year. These curriculum students are taken on at reduced fees on the understanding that they shall help in the work of the school from the time of their being capable of doing so till they have passed their examination in Anatomy and Physiology. They are supplied with the necessary material for dissecting the human body two or three times over, which amount of most profitable dissecting is rendered easy of accomplishment by the methods of the "Dissection Guide." Corresponding advantages are offered in regard to Physiology. The Syllabus of the experimental work in Physiology will be forwarded on application.

The Bland Sutton Presentation, named after Mr. Bland Sutton, F.R.C.S., Sir Erasmus Wilson Lecturer at the Royal College of Surgeons, Surgeon to the Middlesex Hospital (a former pupil of the School), confers the privilege of free education during the first two years of medical studies. Particulars forwarded on application.

By decision of the various Examining Bodies, gentlemen rejected at their Anatomical and Physiological Examinations (Second Conjoint, etc.) can get "signed up" from this school for the three or six months' supplementary work they are now required to put in before re-examination. The School is also recognised for the special dissections for the Fellowship of the Royal College of Surgeons.

The instruction is given on the dissected and undissected body, with normal and pathological specimens, microscopical preparations, chemical, physiological, and surgical apparatus, splints, etc. The operations of Surgery are performed on the dead body. The school possesses a collection of physiological and chemical apparatus, and gentlemen preparing for the higher examinations receive special instruction in the more difficult subjects, and have the advantage of personal use of the physiological apparatus.

PROVINCES.

The medical schools in England, outside London, which give instruction in the full medical curriculum are those of the Universities of Oxford, Cambridge, and Durham (University of Durham College of Medicine, Newcastle-on-Tyne); the three Colleges of the Victoria University (Owens College, Manchester; University College, Liverpool; and the Yorkshire College, Leeds); Mason College, Birmingham (Queen's Faculty of Medicine); University College, Bristol; and Firth College, Sheffield (School of Medicine).

The opportunities for obtaining a good knowledge of the Preliminary Sciences, and of Anatomy and Physiology at the Universities of Cambridge and Oxford are unsurpassed; the staff of teachers is distinguished, and the laboratories are most completely appointed. Instruction in Clinical Medicine, Surgery, and Midwifery is given by the University Lecturers, and by the visiting staffs of the Radcliffe Infirmary at Oxford and of Addenbrooke's Hospital, Cambridge; but it is the rule for Oxford and Cambridge men, after spending three years at the University and passing the necessary examinations, to proceed for the remaining two years to London or some other large town where the opportunities for gaining clinical experience are greater. At many of the London schools special arrangements—as to which full particulars can be obtained on application to the respective Deans—are in existence to meet the case of students from the Universities joining under these circumstances. At some of the schools they are placed on the same footing in regard to obtaining the appointments of House-Physician and House-Surgeon as students who have attended the hospital throughout. As the circumstances of the various schools are liable to vary from time to time, special inquiries should be made on this point, which after-experience will show to be of great importance.

The arrangements and appliances for laboratory and other practical instruction at Owens College, Manchester, at University College, Liverpool, at Bristol, and at the Yorkshire College, Leeds, are most complete, having in each case been recently enlarged and improved. At Birmingham the medical school is now a Faculty of the Mason College, and is provided with all the most modern facilities for instruction in science, while the great hospitals afford equally excellent opportunities for clinical work. Reference may also be made here to the new Medical School of the University College of South Wales and Monmouthshire at Cardiff. The school now gives instruction in all the subjects of the medical curriculum belonging to the first three years.

Mason College, Birmingham (Queen's Faculty of Medicine).

Mason College was founded in 1875 by Sir Josiah Mason, Kt. The Medical Faculty was transferred from Queen's College, Birmingham, to Mason College in 1892, additional buildings being erected at a cost of about £20,000. There are Professorships of Medicine, Surgery, Anatomy, Physiology, Chemistry, Physics, Zoology, Botany, Therapeutics, Forensic Medicine, Public Health, Midwifery, Gynæcology, Pathology, and Mental Diseases; and Lectureships in Operative Surgery, Toxicology, Ophthalmology, Osteology, Applied Anatomy, Materia Medica, etc.

Clinical instruction is given in the General and Queen's Hospitals, which have a joint total of 400 beds: 6,000 in-patients and 80,000 out-patients are treated annually.

Appointments.—General Hospital: Two Resident Medical Officers, salary £70 a year; a degree in Medicine is necessary. One Resident Surgical Officer, salary £130 a year. Four Assistant House-Surgeons, office tenable for six months, without salary; a Surgical qualification is necessary. Two Medical Assistants, unqualified, tenable for six months, without salary. One Resident Assistant at the Jaffray Hospital, unqualified, tenable for three months. *Queen's Hospital:* Two House-Physicians, tenable for twelve months, at a salary of £50; a Medical qualification is necessary. Three House-Surgeons, tenable for twelve months, at a salary of £50; a Surgical qualification is necessary. One Obstetric and Ophthalmic House Surgeon, tenable for six months; candidates must have a qualification; salary £10, with board and lodgings, etc. One Resident dresser, unqualified, tenable for three months.

Entrance Scholarships.—Queen's Scholarship, 30 guineas; Sands Cox, restricted to sons of medical men, 30 guineas; Sydenham Scholarships, one or more annually, restricted to orphan sons of medical men, elected by the Council, on the recommendation of the Medical Board of Studies, 30 guineas.

Further particulars may be obtained by application to Professor Windle, Dean of the Medical Faculty, at the College.

University College, Bristol: Faculty of Medicine.

Clinical instruction is given at the Royal Infirmary and General Hospital. The Royal Infirmary contains 264 beds, a Library, and Museum. The General Hospital contains 200 beds, a Library, and Museum.

Appointments—Royal Infirmary: House-Physician, House-Surgeon, Junior House-Physician, and Junior House-Surgeon; Clinical Clerks and Dressers, also Ophthalmic, Obstetric, and Pathological Clerks are appointed. The Dressers reside in the Infirmary in weekly rotation. *General Hospital:* House-Surgeon, Assistant House-Surgeon, and Physicians' Assistant; Clinical Clerks, Dressers, and Obstetric, Ophthalmic, and Pathological Clerks are appointed. The Dressers reside in the Hospital in rotation free of expense.

Entrance Scholarships—Royal Infirmary: Two Entrance Scholarships (in subjects of general education), value £36 15s. and £10 10s. *General Hospital:* Lady Haberfield Entrance Scholarship, value, the interest of £1,000, at the beginning of the winter session, after examination in subjects of general education. Second Entrance Scholarship, value £30. Clarke Surgical Scholarship, for third year students, £15 annually.

Full information can be obtained on application to the

Dean of the Medical Faculty, Professor E. Markham Skerritt, University College, Bristol.

THE YORKSHIRE COLLEGE, LEEDS: MEDICAL DEPARTMENT.

Clinical Instruction is given at the Leeds General Infirmary, which has over 400 beds in constant use, and includes gynæcological and ophthalmic wards and a large new out-patient department. The Ida Semi-convalescent Hospital attached to the Infirmary has over 40 beds. The West Riding Lunatic Asylum at Wakefield is also open for the study of Mental Diseases. Students can in addition attend the practice of the Leeds Public Dispensary, the City Fever Hospitals (100 beds), and the Hospital for Women and Children.

Appointments.—The Resident Medical, Surgical, and Casualty Officers, each at £100 per annum. The Resident Ophthalmic Officer at £50 per annum. A Resident Obstetric Officer is attached to the gynæcological wards and an extensive external maternity department. A Resident Medical Officer is appointed every six months for the Ida Hospital (honorarium £25). Two House-Physicians and four House-Surgeons hold office for twelve months. Physicians' Clerks, Surgeons' Dressers are appointed for six months; Ophthalmic and Aural Dressers, Gynæcological Ward Clerks, Assistant Physicians' Clerks, and Assistant Surgeons' Dressers, Dressers in the Casualty Room, *Post-mortem* Clerks, and Laboratory Assistants for three months. A Pathological Curator (honorarium 20 guineas) has charge of the new pathological laboratory. Appointments are also open to students at the Leeds Public Dispensary (three Resident Medical Officers with salaries commencing at £80), at the Hospital for Women (House-Surgeon, honorarium £70), and at the West Riding Asylums).

Entrance Scholarships.—The Yorkshire College awards annually a scholarship in the form of a free admission to the lectures and classes covered by the composition fee. Candidates must have passed the Preliminary Scientific (M.B.) Examination of the London University or the First (Scientific) Examination of the Victoria University. The subjects of the examination are those included in the above examinations. The Infirmary also awards a scholarship of the value of 40 guineas in the form of a free admission to the clinical teaching of the Infirmary. The subjects of the examination are (*a*) Latin, (*b*) Elementary Mathematics, (*c*) English Dictation and Composition, (*d*) English History, and (*e*) one of the following languages: French, German, or Greek.

Further information can be obtained from the Dean, the Medical School, Leeds, or from the Secretary of the Faculty, General Infirmary, Leeds.

UNIVERSITY COLLEGE, LIVERPOOL: MEDICAL FACULTY.

In addition to the £25,000 presented to the College last year by the Earl of Derby and Mr. George Holt, for the endowment of the chairs of Anatomy and Physiology, the Medical School has further been enriched by a donation of £15,000 from the Rev. S. A. Thompson Yates for the erection of new Physiological and Pathological Laboratories. These are now in course of erection, and the laying of the foundation stone will form part of the ceremony at the opening of the coming Winter Session. The Chemical Laboratories are at present being extended, so as to provide *inter alia* more complete accommodation for those engaged in laboratory work for diplomas in Sanitary Science. Still more recently steps have been taken to provide for the extension of the Anatomical Department, and structural alterations for this purpose are at present in progress. During the past year the Dissection Room and Theatre have been provided with the electric light. The chair of Pathology has secured adequate temporary accommodation in Ashton Hall, an institute adjacent to the College, which has been recently opened, and contains ample class room and laboratory accommodation for study and research in Pathology and Bacteriology. The museums of Anatomy, Pathology, Materia Medica, and Public Health are furnished with complete provision for the needs of students, and have recently been reorganised and revised.

Royal Infirmary.—The Royal Infirmary, which adjoins the School, contains 300 beds, with 40 special beds for the treatment of Diseases of Women. The Lock, Lying in, Eye and Ear, Children's, and Dental Hospitals, are in the immediate vicinity, and their practice is open to the students of the Medical Faculty.

Fees.—The composition fee for lectures and classes is £24 15s. for Preliminary Scientific Classes; £60 for the Medical Classes required for the Victoria University Degree; £70 for all the classes required for the Diplomas of the Conjoint Boards. The medical composition fees are payable in two instalments, at intervals of twelve months. The fee for hospital attendance at the Royal Infirmary is 40 guineas, also payable in two annual instalments.

Appointments.—Three House-Surgeons, three House-Physicians, and one External House-Surgeon to the Thornton Wards, are appointed for six months, after (if necessary) competitive examination. Candidates must have a legal qualification. Three Clinical Clerks for each physician, three or more Dressers or each surgeon, and two Clerks to the Thornton Wards for Diseases of Women, are appointed every three months. *Post-mortem* Clerks are appointed for six weeks. All students are required to perform this duty before the schedule for the Final Examination is signed.

Scholarships.—(*a*) Two Holt Tutorial Scholarships, each of the value of £100 for one year, are awarded annually by the Medical Faculty to senior students. The successful candidates are required to devote a year to tutorial work and investigation in the Anatomical and Physiological Departments. (*b*) Two Lyon Jones Scholarships, of the value of £21 each for two years, are awarded annually—a Junior Scholarship, open at the end of the first year of study to Victoria University students, in the subjects of the first M.B. Examinations; and a Senior Scholarship, open to all students in the School at the end of the third year of study, on the subjects of Anatomy, Physiology, and Materia Medica. (*c*) The Derby Exhibition of £15 for one year is awarded in Clinical Medicine and Surgery in alternate years. Students may compete in their fourth and fifth years; in 1896 the subject will be Clinical Surgery. (*d*) The Torr Gold Medals in Anatomy and Physiology and Class Prizes are awarded annually.

Communications should be addressed to the Dean, Professor Paterson, M.D., University College, Liverpool.

OWENS COLLEGE, MANCHESTER: MEDICAL DEPARTMENT.

The Royal Infirmary contains 300 beds. Associated with it are the Monsall Fever Hospital (306 beds) and the Convalescent Hospital (136 beds), and the Royal Lunatic Asylum at Cheadle, which accommodates 260 patients.

Appointments.—The following appointments are made: A Surgical Registrar, at £100 per annum; a Pathological Registrar, at £100 per annum; a Medical Registrar, at £50 per annum; two Assistant Medical Officers, each at £80 per annum; an Anæsthetist, at £50 per annum; an Assistant Anæsthetist, at £50 per annum. Resident Medical Officer, two years, £150 per annum; ditto, at Cheadle, one year, £150 per annum; ditto, at Monsall, one year, £250 per annum; Resident Surgical Officer, one year, £150 per annum; four House-Surgeons and two House-Physicians, a Resident Assistant at Monsall (salary £100 per annum); and one at Cheadle, each for six months. The House-Physicians, House-Surgeons, and the Resident Assistant at Monsall must possess a qualification which can be registered. Four or more Clinical Clerks are attached to each Physician or Assistant-Physician, and four or more Dressers to each Surgeon and Assistant-Surgeon. Additional Clinical Clerks are appointed to assist in the departments for the Diseases of the Ear and Throat, and to assist the Surgical Registrar.

Entrance Scholarships.—Rogers and Seaton Scholarships (in alternate years), £40 per annum, tenable for two years. Subjects: Greek and Latin. Credit given for knowledge of Geometry, Algebra, French, German, and English. Dalton (entrance), two of £40, one of which will be awarded annually, and tenable for two years. Examination in June, 1896. Subjects: Geometry (Euclid I—IV and VI, or the subjects thereof); Algebra (as far as the Binomial Theorem, inclusive); Plane Trigonometry (to Solution of Triangles); Elementary Analytical Geometry; Conic Sections. Credit given for knowledge of Classics and Modern Languages (including English). Hulme, three of £45, one of which will be awarded annually, tenable for three years. Examination in June, 1896. Subjects: English Language (Grammatical Structure and Outlines of its History); English Literature (an Essay on some

subject of English Literature); and Modern History (Outlines of English History and Geography); with at least two of the following: Latin (Translation at sight; Grammar and Easy Composition); Greek (ditto); French (ditto); German (ditto). Credit given for knowledge of Mathematics (Geometry and Algebra). James Gaskill, two of £40, one of which will be awarded annually, and tenable for two years. Examination in June, 1896. Subjects: Mathematics: Geometry, the subjects of Euclid, I—IV and VI; Algebra, as far as the Binomial Theorem inclusive; Plane Trigonometry (to Solution of Triangles); Elementary Mechanics, including Composition and resolution of forces in a plane, centre of gravity of simple bodies, uniform acceleration, direct impact, the elements of Hydrostatics, Boyle's Law. Chemistry: Inorganic Chemistry, elementary Organic Chemistry; Practical work, including preparations, analysis of mixtures of inorganic salts, easy quantitative analysis. Credit given for knowledge of Classics and Modern Languages (including English). Two Dauntesey Medical Scholarships, value £50, tenable for one year. Candidates must not have attended lectures in a medical school. Subjects of Examination: Zoology, Botany, and Chemistry. The successful candidates must enter for the full course of medical studies at the College. A Gilchrist Scholarship of £50 per annum, tenable for three years in the College, awarded annually upon the results of the June Preliminary Examination of the Victoria University. Grammar School Scholarship, value £18, tenable for three years, open to scholars of the Manchester Grammar School between the ages of 16 and 21. A subject for an English Essay will be set each year. The successful candidate must enter to one of the departments of Owens College.

Prospectuses may be obtained from the Registrar, Mr. H. W. Holder, M.A.

FIRTH COLLEGE, SHEFFIELD: SCHOOL OF MEDICINE.

Clinical instruction in Medicine and Surgery is given at Sheffield General Infirmary and the Royal Hospital, and in Midwifery and Gynæcology at the Jessop Hospital for Diseases of Women. Students are also admitted to the practice of the Borough Fever Hospitals and the South Yorkshire Asylum. The General Infirmary contains 200 beds, including Ophthalmic wards and Dermatological department. The Royal Hospital contains 105 beds.

Scholarships, etc.—An entrance scholarship of the value of £110 will be awarded at the commencement of the winter session to the best candidate, if of sufficient merit, in Latin, Mathematics, Elementary Physics, Inorganic Chemistry, and English. The examination will be held on September 26th and 27th at Firth College; applications to be sent to the Secretary of the Medical School not later than September 19th. Prizes in Clinical Medicine and Surgery, of £10 10s. each, awarded by the Clinical Committee. Certificates and Book Prizes are awarded annually.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.

The Royal Infirmary contains 280 beds.

Appointments.—Assistant Demonstrators of Anatomy, Prosectors for the Professor of Anatomy, Assistant Physiologists, Pathological Assistants, Assistants to the Dental Surgeon, and Assistants in the Eye Department, Throat and Ear Department, and Department for Skin Diseases are elected annually. The Assistant Demonstrators of Anatomy receive £5 each; the others are unpaid. Four times in the year Clinical Clerks and Dressers are appointed for three months.

Scholarships.—A University of Durham Scholarship, value £100, for proficiency in Arts, open annually at the beginning of the winter session to intending students, and to those who have attended only one winter and one summer session. The Dickinson Memorial Scholarship, interest of £400, with a gold medal, for Medicine, Surgery, Midwifery, and Pathology; open to perpetual students who have passed the primary examination of a licensing body. The Tulloch Scholarship, interest of £400 annually, for Anatomy, Physiology, and Chemistry. The Charlton Memorial Scholarship, interest of £700 annually, open to full students entered for the class of Medicine, at end of winter session. The Gibb Scholarship, interest of £500 annually, for Pathology, at end of summer session. The Goyder Memorial Scholarship, proceeds of £325; subjects: Clinical Medicine and Clinical Surgery. Lake Armstrong Memorial Scholarship, proceeds of £680. The Scholarship is open to all the candidates for the Degree of Bachelor of Medicine, and will be awarded to the candidate who obtains highest marks in the Honours Division in the Final Examinations in June and December in each year. The Stephen Scott Scholarship in Surgery, interest of £1,000 annually. The Heath Scholarship. The late George Y. Heath, M.D., M.B., D.C.L., F.R.C.S., President of the University of Durham College of Medicine, bequeathed the sum of £4,000 to found a scholarship in Surgery, the interest to be awarded every second year. First award in 1896. The Gibson Prize in Midwifery and Diseases of Women and Children, interest on £225.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE MEDICAL SCHOOL, CARDIFF.

This College has for some years prepared students for their Preliminary Scientific Examination (M.B.), and these students have continued their studies in London and elsewhere. By the foundation in 1893 of two new Chairs of Anatomy and Physiology, and also of a Lectureship in Materia Medica and Pharmacy, students are enabled to prepare for the Intermediate M.B. of London, and may spend three out of their five years of medical study in Cardiff, proceeding subsequently to a London hospital for the remaining two years. A student preparing for a Scottish University, the University of Durham, for the Conjoint College Surgical and Medical Diploma, or that of the Society of Apothecaries, may spend his first two or three years in Cardiff. Believing that many students—more especially in Wales and Monmouthshire—will avail themselves of the opportunity of study near home, the Council has sanctioned the construction at considerable cost of new laboratories and lecture rooms for the teaching of Anatomy, Physiology, and Materia Medica and Pharmacy, which are now complete and furnished with the newest and best appliances for teaching and research; these, together with the laboratories of Physics, Chemistry, and Biology previously founded, will enable a student to obtain the best possible training in the work of his first three years of medical study.

Students preparing for the Preliminary Scientific and Intermediate Examination in Medicine of the University of London may compound for their classes by paying a composition fee of £57 10s. Students who are preparing for the examinations of the Conjoint Board or of the Society of Apothecaries, London, may compound for their classes by paying a composition fee of £47 10s. In both cases the composition fees may be paid in two instalments. The composition fees include hospital attendance. The teaching staff is as follows:

Physics.—Professor: J. Viriamu Jones, M.A.Oxon., B.Sc.Lond., F.R.S., Fellow of University College, London. Assistant Professor: A. L. Selby, M.A., Fellow of Merton College, Oxford. Demonstrator and Assistant Lecturer: W. S. Hensley, B.A., Christ's College, Cambridge.
Chemistry.—Professor: C. M. Thompson, M.A., Trinity College, Cambridge, D.Sc.Lond., F.C.S. Assistant Lecturers: E. P. Perman, D.Sc. Lond., and A. A. Read.
Biology.—Professor: W. N. Parker, Ph.D.Freiburg, F.Z.S.
Botany.—Lecturer: A. H. Trow, B.Sc.
Anatomy.—Professor: Alfred W. Hughes, M.B., F.R.C.S.Eng. & Edin.
Physiology.—Professor: John Berry Haycraft, M.D., D.Sc., F.R.S.E.
Materia Medica.—D. R. Paterson, M.D., M.R.C.P.
Registrar.—J. A. Jenkins, B.A.

The students have the privilege of attending the Cardiff Infirmary, a large and growing institution containing 200 beds, a large and well-organised out-patient department, and special departments for the eye, ear, etc. The Infirmary is within three minutes' walk of the College, and notices of cliniques, operations, and *post-mortem* examinations are posted on the College notice boards. Further information may be obtained from Dr. John Berry Haycraft, Dean of the Medical Faculty.

SCOTLAND.

UNIVERSITY OF ABERDEEN.

Special opportunities for practical instruction are afforded in the chemical, anatomical, physiological, pathological, and hygienic laboratories; and anatomical, pathological, botani-

cal, materia medica, forensic medicine, midwifery, natural history, and surgical museums throughout the day, under the direction of the professors. Practical instruction is given also in the toxicological, pharmaceutical, botanical, and zoological laboratories, and in the surgical museum and laboratory. Courses of practical instruction are given in summer in Medical Jurisprudence and Hygiene; in Diseases of Children, at the Sick Children's Hospital; in Fevers, at the Fever Hospital; in Insanity, at the Royal Asylum; in Diseases of the Ear and Larynx, at the Dispensary; in Diseases of the Eye, at the Infirmary and Eye Institution; in Diseases of the Skin, at the Royal Infirmary and Sick Children's Hospital. The General Dispensary and the Lying-in, Vaccine, and Eye Institutions, and the Sick Children's Hospital are open daily. Practical Pharmacy, Operative Surgery, Practical Medical Jurisprudence, and Hygiene, fee to each class, £3 3s., except Anatomical Demonstrations, Practical Natural History, Practical Midwifery, and Gynæcology, each £2 2s.; Practical Ophthalmology, Insanity, Public Health, Diseases of the Ear and Larynx, Diseases of the Skin, and Dental Surgery, each £1 1s.; Matriculation Fee, both sessions, £1; summer session alone, 10s.; Royal Infirmary: Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s. The winter session begins on October 10th. Bursaries, scholarships, and fellowships, to the number of forty-six, and of the annual value of £1,018, may be held by students of medicine in this University. They range from £8 to £100 per annum, and are tenable in most cases for two years. Thirty-two are vacant in 1895, varying from £7 to £90 per annum.

Edinburgh University.

Practical Instruction.—The following means are afforded for practical instruction: Royal Botanic Garden, Herbarium, and Museum; Zoological Laboratory and Museum of Science and Art; Physical Laboratory; Chemical Laboratories; Dissecting Rooms, Bone Room, and Anatomical Museum; Physiological Laboratory; Medical Jurisprudence Laboratory; Materia Medica Museum and Laboratory; *Post-mortem* Department of Royal Infirmary, and University Pathological and Bacteriological Laboratory; Royal Infirmary of 736 beds; Royal Hospital for Sick Children, with some 70 beds; Maternity Hospital; City Fever Hospital; Mental Diseases at Royal Morningside Asylum; Tutorial Classes of Practice of Physic, of Clinical Medicine, and Clinical Surgery.

Fees.—The Sessional Fee for Zoology, Botany (Garden Fee, 5s.), Chemistry, Anatomy Lectures, Physiology, Pathology, Materia Medica, Medical Jurisprudence, Surgery, Medicine, Clinical Surgery (Winter), Clinical Medicine (Winter), is £4 4s. each. Second Course, £3 3s. Third, free. A perpetual ticket taken at the beginning of the first year is £6 6s. Physics, Practical Chemistry, Practical Physiology, Practical Pathology, Clinical Surgery (Summer), Clinical Medicine (Summer), Practical Anatomy (Winter), Operative Surgery, Insanity, Obstetric Operations, Diseases of the Eye, and Comparative Embryology are £3 3s. Practical Botany (besides charge of 5s. for Laboratory expenses), Practical Anatomy (Summer), Anthropology, Anatomy Demonstrations, £2 2s. Diseases of Children and Vaccination, £1 1s. Matriculation Fee, £1 for each year, or 10s. for a Summer Session. Library open from 10 to 4; Saturdays, 10 to 1.

Fellowships, Scholarships, Bursaries, and Prizes open to Competition in Session 1895-96.

I. *Fellowships.*—(1) The Leckie-Mactier Fellowship of the annual value of £50, tenable for three years, open to M.B.'s of not more than three years' standing, awarded after examinations on written reports on Medical, Surgical, and Gynæcological cases in the University wards of the Royal Infirmary, and written examinations in Midwifery, Medical Jurisprudence, and Public Health; also Oral Examinations in Medicine, Surgery, Midwifery, Medical Jurisprudence, and Public Health. Examinations in November. (2) The Freeland Barbour Fellowship, of the value of £50, open to award to the Bachelor of Medicine who has gained the highest collective marks in Anatomy, Physiology, and Pathology in the professional examinations, and who is prepared to devote not less than one year to original research in Midwifery and Diseases of Women in any of the Laboratories or Practical Departments of the University of Edinburgh. July, 1896.

II. *Scholarships.*—(1) The Vans Dunlop Scholarships, each of the value of £100, and tenable for three years. One will be awarded for preliminary subjects in March, 1896. The new arrangements for the other Vans Dunlop Scholarships have not yet been announced. (2) The Stark Scholarship in Clinical Medicine of the value of £112 (less expenses), tenable for one year, open to all matriculated students who are, or have been, in attendance at the University Class of Clinical Medicine and to M.B.'s of not more than eighteen months' standing who have attended this class. The examination, oral and in writing, shall include: (a) Examination of Patients; (b) questions on Therapeutics and Pathology; (c) Examination of Specimens. Each holder of the scholarship is required to devote his time in the wards of the professors of clinical medicine to original investigations or other work directly connected with clinical medicine, and to report his proceedings every three months. July, 1896. (3) The Murchison Memorial Scholarship—annual proceeds of about £100—open to registered medical students who have attended for not less than four, and not more than six, years at hospitals and classes in Edinburgh or London. The next competition will take place in London in July, 1896. (4) The Buchanan Scholarship, of the value of £40 10s., awarded annually to the M.B. of the year who has shown the highest proficiency in Midwifery and Gynæcology, as evidenced by (1) Class Examinations, (2) records of cases, and (3) the Final M.B. Examination. (5) The James Scott Scholarship, of the value of £42 10s., awarded at the graduation ceremonial in March or August for proficiency in Midwifery. (6) The Ettles Scholarship, of the annual value of £35, awarded to the most distinguished M.B. of his year. (7 and 8) Two Hope Prize Scholarships, each of the annual value of about £20, awarded for excellence of work in the Chemical Laboratories. (9 and 10) Two Crichton Scholarships for Research will be offered in October to candidates who have been students of the University for not less than four years—one in Anatomy and one in Physiology, each of the value of £100, tenable for one year. The examinations are written and practical. (11) Mackay Smith Scholarship in Chemistry of the value of £25, tenable for two years. March, 1896.

III. *Bursaries.*—(1) Sibbald Bursary of the value of £30, tenable for three years. Subjects of the Preliminary Examination. (2 to 7) Six Heriot Bursaries of the value of £30, tenable for four years. Examination as in preceding. (8 and 9) Two Thomson bursaries of the value of £25, tenable for four years. Subjects of Preliminary, and preference to candidates of the name of Thomson or Traquair or to those who belong to the town or county of Dumfries or city of Edinburgh. (10 to 13) Four Grierson Bursaries of the value of £25, tenable for three years. One for subjects of the Preliminary; one in Chemistry, Botany, and Zoology; one in Anatomy and Physiology; and one in Materia Medica and Pathology. (14 and 15) Two John Aitken Carlyle Bursaries of the value of £22, tenable for one year; one open to students of first year by examination in Chemistry and Anatomy, the other to students of the second year by examination in Anatomy and Physiology. (16 and 17) Two Mackenzie Bursaries of the value of £20, tenable for one year, open to students in the junior and senior anatomy classes who shall display the greatest industry and skill in Practical Anatomy, awarded at the end of each session. (18) Renton Bursary of the value of £13 13s. 6d., tenable for one year, for a student in the classes of Physics or Chemistry. (19) Maclise Bursary of the value of £20, tenable for two years, open at end of first or second annus medicus. (20 and 21) Two Crichton Bursaries of the value of £50, tenable for four years; one in autumn, 1895, and one in spring, 1896. Examination in Latin, Greek, French, German, Mathematics, Logic, and Ethics.

IV. *Prizes.*—In addition to Gold Medals given on the day of Graduation to Doctors of Medicine whose theses are deemed worthy of that honour, some nine or more prizes will be available for the session 1895-96.

V. *William Dickson Travelling Fund.*—This fund, the interest of which amounts to about £100 per annum, has been established for the purpose of assisting graduates of any faculty, of not more than three years' standing, to travel, for a shorter or longer period, for purposes of study or research. Grants from the fund may be made to holders of scholarships, bursaries, etc. Applicants are required to state: (1) The purpose for which they desire to get a grant for travelling; (2) The total amount of expenditure thought necessary; (3) The other means they have towards meeting this expenditure; and (4) The amount of the grant required. Holders of grant require to report periodically to the Senatus. Applications to be made to the Secretary of the Senatus on or before March 15th. One medical graduate had £50 this year, and a second £20.

VI. *Lectureship.*—The Swiney Lectureship on Geology is in the patronage of the Trustees of the British Museum; is of the annual value of £100, is open to graduates in any of the faculties of the University of Edinburgh who have obtained their degrees after examination. The lectureship is tenable for five years only. Twelve lectures must be given by the holder in each academical year.

VII. *Regulations for George Heriot's Bursaries for Women Students of Medicine.*—George Heriot's Trust have arranged for a certain number of bursaries for those who require aid in obtaining "higher education." Application by the appropriate form of schedule has to be made by September 15th, 1895, to the Treasurer, 28, York Place, Edinburgh. The Bursar may attend any School of Medicine for Women recognised by the Edinburgh University Court, and may hold her bursary for three years. VIII. The subjects of examination shall be the same as those prescribed for the Preliminary Examination in Arts or Science—namely, English, Latin (Higher Grade), Latin (Lower Grade), Greek (Higher Grade), Greek (Lower Grade), Mathematics (Higher Grade), Mathematics (Lower Grade), French, German, Italian, and Dynamics. Candidates may take as many subjects as they please, but should they fail to obtain 25 per cent. of the marks allotted to a subject, the paper in that subject will be cancelled. *Note.*—The marks assigned to each subject are as follows: English, 100; Latin (Higher Grade), 100; Latin (Lower Grade), 50; Greek (Higher Grade), 100; Greek (Lower Grade), 50; Mathematics (Higher Grade), 150; Mathematics (Lower Grade), 75; French, 75; German, 75; Italian, 50; Dynamics, 50. No marks shall be given for the lower paper in any subject where the higher paper in that subject is also taken.

Edinburgh Royal Infirmary.

Fees.—Six months, £4 4s.; one year, £6 6s.; perpetual, £12 in one sum, or separate payments £12 12s.

Six resident physicians and five surgeons are appointed every six months; they live in the house free of charge, save laundry. They must be registered. Many non-resident clinical clerks are also appointed for six months. The physicians and surgeons appoint their own clerks and dressers, and assistants in the Pathological Department are appointed by the pathologists. Instruction is given in all the special departments.

School of Medicine of the Royal Colleges, Edinburgh.

The School of Medicine of Edinburgh claims antiquity; it dates from 1505. The teaching is similar to that of the Scottish Universities, and the students receive similar certificates at the close of each session. The courses on the special subjects not included in the curriculum of the Examining Boards are also conducted by teachers specially qualified in each branch, and have for the last quarter of a century formed a special feature of the School.

This school of Medicine is composed of lecturers licensed by the Royal Colleges of Physicians and Surgeons, and who are also recognised by the University through their *licentia docendi*, who, for the sake of convenience, lecture in several buildings near at hand to the Royal Infirmary. The lecturers form one body, are all subject to the same rules and regulations, and enjoy the same privileges. A new constitution and set of regulations have just been drawn up, in virtue of which the government of the School will be placed in the hands of a Governing Board consisting of five members elected by the Royal College of Physicians, of five members elected by the Royal College of Surgeons, and of five members elected by the Lecturers in the School. This Board will, with the assistance of the Standing Committees of the School, supervise the whole management, and specially the maintenance of the efficiency and discipline of the School. The different buildings at present utilised for the purpose of lecturing are the following; 1. Surgeons' Hall, Nicolson Street; 2. Minto House, Chambers Street; 3. Nicolson Square; 4, Marshall Street; 5. The New School, Bristo Street; and other places.

Edinburgh School of Medicine for Women.

No student is admitted under the age of 18, and a form of application must be got from the Secretary, filled up, and returned at least a month before the beginning of each session. No one can be admitted to the classes until a favourable answer has been given. Students must conform to directions given by the Dean (Dr. Sophia Jex-Blake) from time to time; must take the advice of the Dean respecting her curriculum, both as to order of study and as to repetition of any class; cannot proceed to any professional examination without the sanction of the Dean, who will, when necessary, make arrangements for special probationary examinations, for which a small fee will be charged; must satisfy the Dean that lodgings selected by themselves are of a desirable character in all respects.

A full curriculum of instruction in all subjects is provided.

Anatomy and Practical Anatomy, Chemistry and Practical Chemistry will be given every year at the School, and Physiology at Surgeons' Hall; as also courses of Clinical Medicine and Surgery at the Hospital; and the other courses in biennial rotation. For winter 1895-96 the courses will be: Practice of Medicine, Physiology, Clinical Medicine, Clinical Surgery, Hospital, Pathology, *Physics*, *Anatomy*, *Practical Anatomy*, *Chemistry*, and *Histology*. [Those in italics are for Junior Students.] For summer, 1896: Operative Surgery, Ophthalmology, Mental Diseases, Fevers, Clinical Medicine, Clinical Surgery, *Botany*, *Zoology*, *Materia Medica*, *Practical Chemistry*, *Practical Pharmacy*.

Cost.—The whole amount of a student's fees for education and examination may be set down at about £160. This includes £30 as examination fees for the "Triple Qualification" of the Scotch Colleges. The usual arrangement as to the fees for the classes in the School is to pay £30 for each of the first two years, £25 for the third, £20 for the fourth, the fifth year being free. The cost of books, instruments, etc., will vary from £10 to £30 over and above the £160.

Scholarships.—(1) The Executive Committee hope every year to be able to offer two or three Entrance Scholarships of £25 for competition to those who need assistance; (2) the Arthur Scholarship, of the value of £50, open to competition among First Year's students who need help; open in March, 1896. (3) The Waldie Griffith Scholarship of £30, open similarly to the last; (4) the Dufferin Scholarship of £100, open to women who intend to practise in India, is hoped to be again available as in 1890; (5) the Cropper Scholarship of £50; (6) some five missionary societies frequently give help in bearing the cost of education. Particulars as to George Heriot's Bursaries for Women Students will be found at p. 599.

The classes at this School form an integral part of the Extra-Mural School (The School of the Royal Colleges) of Edinburgh, and provide the whole curriculum required by the Scottish Conjoint Board, and the classes also qualify for such of the Examining Boards as are open to women, namely, the University of London, the University of Edinburgh, the University of St. Andrews, the Royal University of Ireland, the Conjoint Irish Colleges of Physicians and Surgeons, and the Society of Apothecaries of London.

It is hoped that a hall of residence may ultimately be opened in connection with the School, and in the meantime Miss La Cour will be glad to assist students to find desirable lodgings, or board in families. The latter can be obtained at about £1 per week, or more, according to requirements. Arrangements will be made to supply a substantial midday meal at the school during the session for those who cannot conveniently go home. The charge is £3 for a winter session, and £1 10s. for a summer. Further particulars from Miss La Cour, or in the *Edinburgh Medical School Calendar*, published by E. and S. Livingstone, 15, Teviot Place, Edinburgh, price 2s.; post free, 2s. 3d., or the prospectus of the school got on application to the Secretary, Miss La Cour.

Medical College for Women, Edinburgh.

Clinical instruction in the Royal Infirmary qualifies for graduation in the Universities. Precisely the same facilities for medical study are given as to male students in the School of Medicine, Edinburgh. Arrangements, fees, and regulations are similar. All the teachers are qualified lecturers of the School, and their courses admit to the qualifying bodies for women. The classes are open to all ladies, whether taking a full medical curriculum or not. The school is a large and vigorous one. Prospectus and all information from Miss H. F. Mackay, 30, Chambers Street.

University of Glasgow.

The whole course of study presented by the University of Glasgow (*q.v.*) can be passed in the Medical School of the University.

For practical work there are available the Physical, Chemical (winter course, £10 10s.; summer, £5 5s.), Physiological, Zoological, and Botanical Laboratories; and the Botanic Gardens.

Partial Study Elsewhere.—Only two of the five years need be spent at the University; the remaining three may be spent in such universities or schools, or under such teachers, as are recognised by the University Court.

Bursaries, etc.—Fourteen Bursaries and Prizes in Medicine are open to competition during Session 1895-96, the aggregate value of which is £309.

Hospitals.—The University is in the immediate neighbourhood of the Western Infirmary, with 400 beds, and near to the Lunatic Asylum, and Special Hospitals for Diseases of the Eyes, Skin, etc.

Fees.—The class fees are, as a rule, £3 3s., excepting Practical Anatomy and Anatomical Lectures (in summer), Operative Surgery, Embryology, and Diseases of Women, which are £2 2s. A Perpetual Hospital Ticket costs £21, payable £10 10s. in the first year, and the same the second, and this includes clinical instruction. The fee for the degree of M.D. is £10 10s. (exclusive of stamp duty, £10); for Ch.M., £10 10s. The total class and hospital fees for the five years' course amount to about £97 13s., to which add the annual matriculation fee (£1 1s.) and the fees for M.B., Ch.B. (£23 2s.) making a total of £126.

The Women's Department of the University (Queen Margaret College).—The course of study, degrees, regulations, fees, etc., are the same as for men, but women students have their own buildings, with reading and writing rooms, drawing room, library, etc., and are taught in classes apart from male students, but have all the rights and privileges of university students. Their clinical studies are taken in the Royal Infirmary, where wards (110 beds) are reserved for their exclusive use, and in its Dispensaries.

Scholarships and Bursaries at Queen Margaret College.—A Scholarship of £25 for three years will be open to competition by first year students at the First Professional Examination in October, 1895. The Mackintosh Mental Science Bursary

of £30 is open to medical students who have attended the Insanity Lectures. The University Commissioners have issued an Ordinance to make regulations for the admission of women to certain Bursaries, Scholarships, and Fellowships. It came into force on May 11th, 1895.

Class and Examination Fees.—The class and hospital fees, for the subjects enjoined by Ordinance as constituting a five years' course of study and clinical work, amount to about £98 14s. To this must be added £5 5s. for matriculation fees, £23 2s. for examination fees, and £5 1s. for registration as a practitioner.

Board for Students.—A House of Residence for women students, Queen Margaret Hall, situated near the College, has been opened. For information regarding terms, etc., apply to Mrs. Riddoch, 2, Lawrence Place, Dowanhill, Glasgow, or to Mr. James Maclay, 169, West George Street, the Joint Honorary Secretaries. The cost for board and residence is £32 or £40 for the College session of 32 weeks, according to accommodation.

For further information, male students may apply to W. Innes Addison, Matriculation Office, Glasgow University; women students to Miss Galloway, Queen Margaret College, Glasgow, W.; or the *Queen Margaret College Calendar*, published by James Maclehose and Sons, 61, St. Vincent Street, Glasgow, price 1s., post free 1s. 2d.; and to the *Prospectus* for session 1895 96 by the same publishers.

St. Mungo's College, Glasgow.

The College buildings are situated within the grounds of the Royal Infirmary, the wards and clinical instruction therein being available for students. The Winter Session opens on October 23rd. Qualifying Classes are held during the winter in Physics, Zoology, Embryology, Chemistry, Anatomy, Materia Medica, Physiology, Pathology, Medicine, Surgery, Ophthalmology, Gynæcology, Diseases of Throat and Nose, and in Public Health Laboratory Work. Instruction is also given daily in the Dispensary by the Assistant Physicians and Surgeons of the Royal Infirmary. During the summer the classes include Botany, Medical Chemistry, Practical Pathology, Practical Physiology, Anatomy, Operative Surgery, Diseases of Children, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, Dermatology, Otology, Bacteriology, and Psychological Medicine. All classes in this College qualify for the diplomas of the English, Scotch, and Irish Conjoint Boards.

Sessional Fees.—First year, £15 15s.; second year, £15 15s.; third year, £10 10s.; fourth year (and perpetual), £5 5s. Total cost of qualifying course including Corporation Licence about £100.

Class Fees.—£2 2s. for each class, except Anatomy, £4 4s.; Pathology, £4 4s.; Zoology, £4 4s.; Botany, £3 3s.; Otology, Throat and Nose, and Dermatology, £1 1s.

Hospital Fees.—First year, £10 10s.; second year (and perpetual), £10 10s.

Full information from the Dean of the Faculty of Medicine, R. T. Kent, at the College.

Glasgow: Anderson's College Medical School.

Lectures are delivered on all the subjects of the five years' curriculum. Hospital Practice and Clinical Lectures in Western or Royal Infirmary; Pathology in Western or Royal Infirmary; Vaccination and Dispensary Practice in Western or Royal Infirmary Dispensary. The above lectures qualify for all the Licensing Boards in the United Kingdom. They are also recognised by the Universities of London, Durham, Glasgow, Edinburgh, and Ireland, under certain conditions which are set forth in the *Calendar*.

The new buildings are situated in Dumbarton Road, immediately to the west of the entrance to the Western Infirmary, within two minutes' walk of that institution and four minutes' walk of the University.

A *Calendar* containing full particulars of the School may be obtained from Professor A. M. Buchanan, M.A., M.D., the Secretary to the Medical Faculty, Anderson's College Medical School, Dumbarton Road, Partick, Glasgow.

The session opens on Tuesday, October 22nd, 1895.

Class Fees.—For each of the above Courses of Lectures (Anatomy, Chemistry, Zoology, and Botany excepted), first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy Class Fees: Winter, first session (including Practical Anatomy), £4 4s.; second session (including Practical Anatomy), £4 4s.; third session, £2 2s. To those who have had the necessary courses of Practical Anatomy, the fee will be £1 1s. Summer—Lectures and Practical Anatomy, £2 2s.; Lectures alone, £1 11s. 6d.; Practical Anatomy alone, £1 1s.; Osteology and Practical Anatomy, £2 2s.; Osteology alone, £1 11s. 6d. Chemistry Class Fees: Winter, first course, £2 2s.; second course, £2 2s. Summer (Practical), first course, £2 2s.; second course, £2 2s. Zoology, £1 11s. 6d. Practical Zoology, £1 1s. Botany, £1 11s. 6d. Practical Botany, £1 1s. Matriculation Fee: Winter, 10s. to those taking out two or more classes, which represents a combined fee for the winter and summer sessions; 5s. to those taking out only one class. Summer, 5s., except to those who have paid a fee of 10s. for the winter session. A Matriculation Fee of 2s. 6d. will be charged students attending classes with a view to the Science and Art Department. Students who have attended classes at other schools, and who desire to pursue their studies at Anderson's College Medical School, will be admitted to such classes as they may have attended elsewhere at the reduced fees.

University College, Dundee.

Students proceeding to the degrees of St. Andrews or any other Scottish University, the University of London, the Royal University of Ireland, and the licences of the Royal Colleges, can now complete the first two years of the curriculum by attendance on the classes of this department, which along with the practice of the Dundee Royal Infirmary are open to women.

The following order of study is suggested:

First Winter.—Chemistry, Zoology, and Anatomy. *First Summer.*—Botany, Physics, Zoology (if not taken in winter), Anatomy (optional). *Second Winter.*—Anatomy, Physiology, Surgery, Hospital. *Second Summer.*—Practical Physiology, Practical Pharmacy, Practical Anatomy, Hospital.

Royal Infirmary.—The Infirmary contains 286 beds, including a special ward for children. In addition there were during last year 7,523 out-patients, and 5,685 patients seen at their own homes. Appointments: Two qualified resident medical assistants are appointed annually. Clinical clerks and dressers are attached to the physicians and surgeons, and students are appointed as assistants in the *post-mortem* room. There is in connection with the hospital course a class of Minor Surgery and Bandaging, conducted by the assistant surgeon, and a class of Practical Pharmacy and Materia Medica held at the dispensary.

Royal Asylum.—Clinical instruction is given at the Royal Asylum. Appointments: one qualified resident assistant and one resident clinical clerk.

IRELAND.

Students desirous of prosecuting their medical studies in Ireland may attend the School of Physic in the University of Dublin; the Schools of Surgery of the Royal College of Surgeons of Ireland (including the Carmichael and Ledwich Schools), the Catholic University School of Medicine, Dublin; or the Schools of Medicine of the Queen's Colleges in Belfast, Cork, or Galway. The student will be guided in his arrangements for clinical instruction by the advice of the teachers of the School which he may select to attend.

Dublin.

School of Physic in Ireland.

This school is formed by an amalgamation of the medical schools of Trinity College and of the King and Queen's College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, being appointed by the latter. (See also Table on p. 608.)

Clinical instruction is given by the staff of Sir Patrick Dun's Hospital. The following Hospitals are also recognised by the Board of Trinity College: Adelaide Hospitals, City of Dublin Hospital, Dr. Steevens's Hospital, House of Industry Hospitals, Jervis Street Infirmary, Mater Misericordiæ Hospital,

Mercer's Hospital, Meath Hospital, the National Eye and Ear Infirmary, St. Mark's Ophthalmic Hospital, St. Vincent's Hospital.

Catholic University Medical School.

Prospectuses and further information about this school, which provides complete courses of lectures as required by the examining bodies, may be obtained from the Registrar of the School, Cecilia School, Dublin, who has written a very useful *Guide for Medical Students*. (See also p. 603).

The Schools of Surgery; including Carmichael and Ledwich Schools.

The Schools of Surgery are attached by Charter to the Royal College of Surgeons, and have existed as a department of the College for nearly a century. They are carried on within the College buildings, and are specially subject to the supervision and control of the Council, who are empowered to appoint and remove the Professors and to regulate the methods of teaching pursued. The buildings have been reconstructed, the capacity of the Dissecting Room nearly trebled, and special Pathological Bacteriological, Public Health, and Pharmaceutical Laboratories fitted with the most approved appliances, in order that students may have the advantage of the most modern methods of instruction. There are special rooms set apart for lady students. The entire building is now heated by hot-water pipes, and lighted throughout by the electric light. The certificates of this school are accepted by all the Universities and Colleges of Physicians and Surgeons throughout the Kingdom. All these lectures and courses of practical instruction may be attended by medical students who are otherwise unconnected with the college.

Belfast.

Queen's College.

Clinical instruction is given at the Belfast Royal Hospital. The Ulster Hospital for Diseases of Women and Children, the Belfast Maternity Hospital, the Belfast Ophthalmic Hospital, the Ulster Eye, Ear, and Throat Hospital, the Belfast District Lunatic Asylum, and the Belfast Hospital for Sick Children are open to students.

Cork.

Queen's College.

Clinical instruction is given at the North and South Infirmaries (each 100 beds). Students can also attend the Mercy Hospital (60 beds), the Cork Union Hospital, the County and City of Cork Lying-in Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital, and the Eglinton Lunatic Asylum. The session at Queen's College extends from October to April inclusive (thirty weeks), but the hospitals are open to students in May, June, and July also.

Galway.

Queen's College.

Clinical instruction is given at the Galway County Infirmary and the Galway Town Hospital.

Prizes.—Attached are eight scholarships of the value of £25 each. The Council may award Exhibitions to matriculated students at the examinations for junior scholarship. All scholarships and exhibitions of the second, third, and fourth years may be competed for by students who have attained the requisite standing in any medical school recognised by the College Council, and have passed the Matriculation Examination in the College, or in the Royal University of Ireland.

Clinical Hospitals of Dublin.

Sir Patrick Dun's Hospital.

Appointments.—A House-Surgeon is appointed annually, and four Resident Pupils half-yearly.

Richmond, Whitworth, and Hardwicke Hospitals.

These hospitals contain 312 beds: 110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases.

The Richmond Lunatic Asylum, containing over 1,200 patients, adjoins these hospitals, affording facility for the study of mental disease.

Appointments.—A Resident Surgeon and a Resident Physician are appointed every year, receive a salary, and hold office for one year. Eight Residential Clinical Clerks are appointed each half year, and provided with furnished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine and Surgery. The dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

Further information can be obtained from the Honorary Secretary, Dr. G. P. L. Nugent, 19, Lower Fitzwilliam Street; or the Hon. Treasurer, Dr. Thomson, 54, Stephen's Green, E.

Adelaide Medical and Surgical Hospitals.

The hospitals contain 140 beds. A Resident Surgeon is appointed yearly, and three resident pupils are selected half-yearly.

Further particulars may be obtained from Mr. F. T. Heuston, or any of the members of the medical staff.

City of Dublin Hospital.

Appointments.—Clinical Assistants to the Physicians and Dressers to the Surgeons are appointed from the most deserving of the class, and certificates awarded for the faithful performance of their duties. Medical and Surgical Resident Pupils are appointed, and Special Certificates awarded if merited. A House-Surgeon is appointed annually.

For further particulars apply to Mr. Arthur Benson, F.R.C.S., 42, Fitzwilliam Square, or at the hospital.

Jervis Street Hospital, Dublin.

The hospital was founded in 1718, and was rebuilt in 1886.

Appointments.—Resident Pupils, Clinical Clerks, and Dressers are appointed every six months, without additional fee, and are awarded special certificates if their duties have been satisfactorily performed. Six interns are appointed each half-year, and are provided with apartments, etc., free of expense. *Fees:* Winter session, £8 8s.; summer, £5 5s.; winter and summer, £12 12s.

The hospital prospectus and any further information can be obtained from Dr. J. B. Coleman, Hon. Secretary, Medical Board.

Mater Misericordiæ Hospital.

This hospital, the largest in Dublin, at present contains 323 beds. Fifty beds are specially reserved for the reception of patients suffering from fever and other contagious diseases. Connected with the hospital are extensive Dispensaries, which afford valuable opportunities for the study of general Medical and Surgical Diseases, Accidents, etc.

Appointments.—A House-Physician and Four House-Surgeons are appointed annually. They each hold office for one year. Sixteen Resident Pupils are elected from the most attentive of the class, each one to hold office for six months.

Entries are to be made with and fees paid to the Registrar, Dr. Joseph Redmond, 8, Clare Street.

A prospectus containing in detail the arrangements for clinical instruction, prizes, etc., may be obtained from the Secretary of the Medical Board, Arthur Chance, F.R.C.S., etc., 90, Merrion Square, W., Dublin.

Dr. Steevens's Hospital.

The hospital contains 200 beds. The facilities for obtaining practical acquaintance with the treatment of injuries from accidents and other emergencies are usually great in this institution, owing to its position, and there are always in the wards instructive cases of acute and chronic disease. The various forms of syphilis can be studied in the ward set apart for this disease, and there is also a separate Fever House.

A fee of £10 10s. is charged for each term of three months' residence. This fee includes that for Hospital Practice, and must be paid in advance. Resident pupils not requiring

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES—IN ENGLAND AND IRELAND.

	ST. BARTHOLOMEW'S.	CHARING CROSS.	ST. GEORGE'S.	GUY'S.	KING'S COLLEGE.	LONDON.	ST. MARY'S.
Composition Fee for all Systematic Lectures and Hospital Practice required by Examining Boards, with certain minor exceptions in some instances	£157 10s.; or 1st year, £42; 2nd year, £42; 3rd year, £42; 4th year, £42	£115 10s. in one payment, or £127 1s. in five instalments namely: 1st win., £34 13s.; 1st sum., £23 2s.; 2nd win., £23 2s.; 2nd sum., £23 2s.; 3rd win., £23 2s.	£145 9s.; or, by four instalments, £150	£150; or 1st win. and 1st sum. each, £75 10s.; or 1st and 2nd year each, 50 gs.; 3rd year, 30 gs.; 4th year, 20 gs.	£135; or two years £70 each year; or three years, £48 each year; or four years, £37 each year	120 guineas by three instalments, or 126 guineas in one payment	£130; or 1st year, £40; 2nd year, £30; 3rd year, £30; 4th year, £30
University students who have finished Anatomical and Physiological studies	£84, or £85 1s. in three instalments	Proportionate reduction	£95	£80, or instalments of £52 10s. and £31 10s.	—	£63	£95 in a year.
Fee to qualified practitioners for Hospital Practice and Clinical Lectures	£15 15s.	—	—	Three months, £7 7s.; six months, £10 10s.; unlimited, £15 15s.	£10 10s. for one year; £5 5s. for any less period	—	Perpetual, £15 15s.

	MIDDLESEX.	ST. THOMAS'S.	UNIVERSITY COLLEGE.	WESTMINSTER.	LONDON SCHOOL OF MEDICINE FOR WOMEN.	MASON COLLEGE, BIRMINGHAM.	BRISTOL MEDICAL SCHOOL.
Composition Fees for all Systematic Lectures and Hospital Practice required by Examining Boards, with certain minor exceptions in some instances	£126; 1st win., £63; 2nd win., £42; 3rd win., £21 10s.	£150; or on entr., £95; 2nd year, £72 10s.; or, 1st year, £75; 2nd year, £50; 3rd year, £32 10s.; or, 1st year, £65; 2nd year, £50; 3rd year, £30; 4th year, £12 10s.	£136 10s.; or 1st year, £63; 2nd year, £52 10s.; 3rd year, £26 5s.	£115; or 1st win., £60; 2nd win., £60; or six payments of £27 and £17 alternately	£125; or 1st year, £40; 2nd year, £40; 3rd year, £30; 4th year, £25	£105, or two instalments of £52 10s.	£94 10s.; or for lectures, two instalments, £52 10s. and £26 5s.; and perpetual hospital, £26 10s.
University students who have finished Anatomical and Physiological studies	£73 10s., or instalments of £42 and £36 15s.	£80, or two instalments of £52 10s. and £31 10s.	—	£84, or two instalments of £34	—	—	—
Fee to qualified practitioners for Hospital Practice and Clinical Lectures	Ordinary class fees if certificates are required, if not £2 2s. for three months.	Perpetual, £15 15s.	Special arrangements may be made.	£12 12s.	—	—	—

	YORKSHIRE COLLEGE, LEEDS.	UNIVERS. COLL., LIVERPOOL.	OWENS COLL., MANCHESTER.	UNIVERSITY OF DURHAM COLL. OF MED.	SCHOOL OF PHYSIC, UNIVERSITY OF DUBLIN.	CATHOLIC UNIVERSITY SCHOOL OF MEDICINE.	SCHOOLS OF SURGERY, R.C.S.I.
Composition Fees for all Systematic Lectures and Hospital Practice required by Examining Boards, with certain minor exceptions in some instances	£115 10s., or two instalments of £59 16s.	£114 2s., or two instalments of £91 and £23 2s., or Comp. for Vict. M.B. Ch.B. three instalments, £24 15s., £51, and £51	£112, or two instalments of £57	£99 15s., or by two instalments of £61 19s. and £40 7s.; or by three of £39 17s., £42, and £27 9s.	£122 6s. 6d., or including degree fees, £150 18s.	R.U.I. course, total cost, including degree fees, £168 1s.; Conjoint course, R.C.P. and S.I., total cost, including examination fees, £162 15s.	Conjoint course, R.C.P. and S.I. Lectures and Hospital Practice, £121 5s.; total cost, including licence fees, £161 5s.; R.C.S.I. and A.H., £105 10s., and £[illegible] respectively.
University students who have finished Anatomical and Physiological studies	£67 4s., or two instalments of £34 13s.	—	—	—		—	—

certificates in Hospital Practice are admitted at reduced rates.

There is accommodation for two Medical and Six Surgical Resident Pupils, who are provided with separate furnished rooms, with coals and gas, also a common comfortable sitting-room for meals, which latter can be obtained at a reasonable rate.

Further particulars may be obtained from the Honorary Secretary, Dr. R. A. Hayes, 82, Merrion Square South, Dublin.

ST. VINCENT'S HOSPITAL.

This hospital contains 160 beds, and has attached to it a dispensary and three special dispensaries. The whole practice of the hospital is available for clinical instruction, which is carried on during the session in a systematic manner. Systematic courses are delivered on Medicine and Surgery. *Post-mortem* examinations are made in the pathological theatre, and frequent opportunities are given for the examination of morbid specimens. There is a museum in connection with this department. Instruction is also given daily in the dispensaries.

The hospital is in proximity to the principal colleges and medical schools. Its certificates are recognised by all the universities and licensing bodies in the United Kingdom. Two Resident Medical Officers and sixteen Resident Pupils are appointed annually from amongst the most deserving members of the class. The fees for clinical attendance are the same as at the other Dublin hospitals.

Arrangements have been made with the Fever Hospital, Cork Street, and with other hospitals, for providing senior students with clinical instruction in infective fevers, as required by the licensing bodies, without extra charge.

Further particulars can be obtained on application to the Honorary Secretary, Dr. McHugh, 25, Harcourt Street, Dublin.

ROTUNDA HOSPITAL.

Master—Dr. W. J. Smyly.

This institution consists of two distinct hospitals, namely, the Lying-in Hospital, into which 1,200 labour cases are, on an average, admitted annually, and the Auxiliary Hospital, set apart for the reception and treatment of patients suffering from the various forms of uterine and ovarian disease; about 500 patients are received into this hospital during each year.

There is also in connection with the hospital a large extern maternity (1,858 patients were in the past year attended at their own homes), and a Dispensary for diseases Peculiar to Women, which is open daily.

Pupils are admitted to the practice of all these departments. Clinical Instruction in Midwifery and the Diseases of Women is given daily, and lectures are delivered regularly during the session on these subjects. Pupils can enter at any time.

The diploma from this hospital is granted to pupils on their passing an examination before the Master and Assistants after a period of six months' attendence on the practice of the hospital.

Accommodation is provided for a limited number of intern pupils.

Fees.—Intern pupils: Six months, £21; three months £12 12s.; two months, £9 9s.; one month, £6 6s. Extern Pupils: Six months, £10 10s.; three months, £6 6s.

CLINICAL HOSPITALS.[1]

OPPORTUNITIES for clinical instruction and study are afforded by many hospitals which are not directly connected with any medical school, and the student will often find it to his advantage to resort to them, especially in the fifth year of the curriculum, as they offer great facilities for practical clinical experience. The following pages contain brief particulars as to the most important of these.

A student may obtain clinical instruction at certain hospitals in London, and at some of them, both general and special, he can hold appointments.

GENERAL HOSPITALS: LONDON.

Great Northern Central Hospital, Holloway Road, N.—This hospital is now recognised by the Examining Board in England by the Royal Colleges of Physicians and Surgeons as a place of study during the fifth year of the medical curriculum. The hospital contains 155 beds, of which 100 are at present occupied. The large rectangular and circular wards, each of which contains 20 beds, the operation theatre, out-patient general and special, and the pathological departments, have all been erected since 1887. They are specially designed with a view of offering the greatest facilities for clinical work, and contain all the most recent and approved hygienic and antiseptic requirements for the proper care of the sick, and for the treatment of disease. Medical practitioners are cordially invited to see the general and special practice of the hospital. In- and out-patient clinical assistants are appointed in the general and special departments, and receive certificates at the end of their terms of office. Further particulars from Peyton T. B. Beale, F.R.C.S., Hon. Sec. Medical Committee.

London Temperance Hospital.—The hospital contains 110 beds. The medical and surgical practice is open to students and practitioners. Special departments for Ophthalmology and Gynæcology. Classes arranged during the winter and summer sessions for students preparing for the Final Examinations at the Colleges and Universities. Appointments (vacancies for which are advertised in the medical journals): Registrar and Pathologist, Resident Medical Officer and Assistant Resident Medical Officer. For particulars as to hospital practice and classes apply at the hospital to Dr. W. J. Collins.

[1] Additions or corrections intended for future editions should be forwarded to the Editor not later than the end of July in each year.

Seamen's Hospital Society, Greenwich.—The hospital contains 235 beds, and the branch hospital 18 beds. Opportunities are afforded to students and others who may be desirous of studying Practical Surgery and Diseases incidental to Tropical Climates before entering the services or going abroad.

West London Hospital, Hammersmith Road, W.—The present building contains 101 beds. The erection of a new wing, which will contain another 70 beds, is now nearly completed. The practice of the hospital is open to practitioners and to senior students on payment of a small fee; clinical assistants are appointed to the wards, and instruction is given in the out-patient department. Courses of Post-Graduate Lectures are given by the staff, on Wednesdays, at intervals, particulars of which are advertised in the medical journals. Further information can be obtained on application to the Honorary Secretary of the medical staff, Mr. L. A. Bidwell, at the hospital.

CHILDREN'S HOSPITALS: LONDON.

Hospital for Sick Children, Great Ormond Street.—There are 186 beds in the hospital at Great Ormond Street, and 52 at Highgate. The Physicians and Surgeons at the hospital give Clinical Instruction in the wards during the winter session, and out-patients are seen every morning at 9 o'clock. The fees are 2 guineas for three months. Six clerkships and six dressership tenable for three months, are open to students of the hospital; particulars can be obtained on application to the Secretary.

East London Hospital for Children, Shadwell.—The hospital contains 102 cots, one-third being devoted to infants. The hospital practice is open to students and practitioners. Clinical Demonstrations being given by the Visiting Staff. Out-patient Clinical Clerks are appointed, for which application should be made to the Assistant Physicians or Assistant Surgeons. Two House Surgeons and two House Physicians (holding office for six months) are appointed annually.

North-Eastern Hospital for Children, Hackney Road, Shoreditch, N.E.—The hospital contains 58 beds. The practice of the hospital is open free to students, both male and female. Patients in 1894: In-patients, 701 (198 under 2 years of age); Out patients, 13,125 new cases, 47,313 attendances. Particulars of facilities for attending Medical and Surgical practice can be obtained on application to T. Glenton-Kerr, Secretary (City office), 27, Clement's Lane, E.C.

LYING-IN HOSPITALS AND HOSPITALS FOR WOMEN.

Queen Charlotte's Lying-in Hospital and Midwifery Training School.—This hospital receives over 1,000 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing Obstetric complications and Operative Midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical Instruction is given on the more important cases that present themselves. Certificates of attendance at this hospital are recognised by all Universities, Colleges, and Licensing Bodies. Pupil Midwives and Monthly Nurses are received and specially trained. *Fees.*—Medical Pupils, £5 5s. for two weeks, and £8 8s. for four weeks, exclusive of board and lodging; Pupil Midwives, £26 5s. for three months; Pupil Nurses, £15 15s. for twelve weeks, inclusive of board and lodging. For further particulars, application should be made to the Secretary, at the hospital.

Hospital for Women, Soho Square.—There is an organised School of Gynæcology open to qualified medical men, and students after their fourth year. A limited number of Clinical Assistants to the Physicians and Surgeons in the In patient and Out-patient Departments are appointed every three months. A course of lectures on the Anatomy and Physiology of the Female Pelvic Organs is given during each quarter. Clinical lectures are given throughout the winter and summer sessions. Prizes are given annually after examination, open to past and present Clinical Assistants. *Fee* for the three months' course, £8 8s. Further information can be obtained by letter, addressed to the Dean at the hospital.

Ophthalmic Hospitals: London.

Royal London Ophthalmic Hospital, Moorfields.—There are 100 beds for in-patients, and a large out-patient department. Operations are performed daily, from 10 A.M. until 1 P.M. Gentlemen are admitted to the Practice, and to Lectures and Demonstrations. *Fees* for six months, £3 3s.; perpetual, £5 5s. A perpetual ticket admits to Lectures and Demonstrations free. Students of the hospital are eligible for the office of House-Surgeon, and may be appointed Clinical Assistants for twelve months, Junior Assistants for six months. Courses of instruction in Ophthalmoscopy, Refraction, and External Diseases are given three times in each year. Perpetual students of the hospital are allowed to attend one course in each subject without extra fee. Other students can attend these courses on payment of a separate fee for each course. Systematic instruction is also given in the Pathology of the Eye.

Royal Westminster Ophthalmic Hospital (King William Street, West Strand).—The hospital contains 30 beds, and an out-patient department. The practice is open to practitioners and students from 1 to 4 P.M. daily. Special instruction is given in the Diagnosis, Pathology, and Treatment of Eye Affections, including the Operations on the Eye, the Treatment of Errors of Refraction, and the Use of the Ophthalmoscope. *Fees:* Six months, £3 3s.; perpetual, £5 5s. For particulars, apply to Mr. Adams Frost, 17, Queen Anne Street, W.

Fever and Small-Pox Hospitals of the Metropolitan Asylums Board.

Students are admitted to study at the Fever Hospitals and the Small-Pox Hospital Ships of the Metropolitan Asylums Board after they have completed the third year of medical education, provided they have held the offices of clinical clerk and dresser. The minimum duration of the course of study at the hospitals is two months, and at the small-pox ships not less than two weeks, nor more than four. At the fever hospitals the student must attend two days a week; at the small pox ships he resides, paying 12s. a week for board and lodging. He must abide by the rules laid down as to disinfection, and show that he is sufficiently protected against small-pox by vaccination or otherwise. In the case of the ships the student must produce a medical certificate of having been successfully vaccinated within three years, or, failing that, of having been unsuccessfully vaccinated on three occasions within six months, unless he has had small-pox, in which case he must produce a medical certificate certifying that he has had small-pox, or certifying that he bears evidence of having suffered from that disease. A certificate signed by the medical superintendent of the hospital at which attendance is made is granted to students who complete satisfactorily the courses of study. Qualified medical men are admitted under similar terms and conditions.

Fees.—Fever hospitals, two months, £3 3s., and £1 1s. for every additional month; small-pox ships, two weeks, £2 2s., and £1 1s. for the remaining period.

Other Special Hospitals: London.

Bethlem Royal Hospital.—Two resident clinical assistants are appointed twice a year for six months from recently qualified medical students. Students of certain hospitals are allowed to attend for clinical instruction. Qualified medical men are allowed to attend for three months on payment of a fee. Post-graduate courses are given from time to time.

Hospital for Consumption and Diseases of the Chest, Brompton.—The hospital has been recognised by the Conjoint Board for England as a place where under the present curriculum six months of the fifth year may be spent in clinical work. There are 321 beds in the two buildings constituting the hospital, and a special throat department. Pupils are admitted to the in-patient and out-patient practice of the hospital. Three courses of lectures and demonstrations will be given during the year on Wednesdays. The next course will commence on October 9th, 1895. Clinical assistants are appointed to the Assistant Physicians in the out-patient department, and clinical clerks are appointed to the Physicians in the wards. These appointments are tenable from three to six months. The fee for the practice of the hospital is £1 1s. for each month, or £2 2s. for each period of three months.

City of London Hospital for Diseases of the Chest, Victoria Park.—There are 164 beds. The practice of the hospital, both as regards in- and out-patients, is open to students and medical practitioners. Certificates of attendance in the medical practice of this hospital are recognised by the London University and London medical examining boards. Information as to medical instruction can be obtained on application to the Secretary of the Clinical Subcommittee at the hospital.

Central London Throat and Ear Hospital (Gray's Inn Road).—The hospital contains accommodation for seventeen in-patients, and has an extensive out-patient department, which is open to all medical practitioners and students for the purpose of Clinical Demonstration and Instruction. Fee for three months' attendance, £3 3s.; for six months, £5 5s.

St. Peter's Hospital for Stone and Urinary Diseases (Henrietta Street, Covent Garden).—Qualified medical men and students are admitted free to the practice of this hospital, which contains 26 beds, and has a large out-patient attendance (34,452 for 1894). New cases, 4,722. Operations are performed and consultations are held on Wednesdays and Fridays at 2. Clinical lectures and demonstrations are given regularly by members of the staff.

Royal Ear Hospital (Frith Street, Soho Square, W.).—The clinic of the hospital is open to medical practitioners and advanced students by previous arrangement with the Secretary.

St. John's Hospital for Diseases of the Skin, Leicester Square, W.C.—The Out-patient Practice is open to the medical profession at the following times: Every day (except Friday) from 2 to 4 P.M., and Thursday mornings from 10 30 to noon. Specially prepared Clinical Demonstrations, also Demonstrations on the different diseases presenting themselves in the out-patient department, followed by Lectures, are given on Wednesday and Saturday afternoons from 2 o'clock P.M. Fee for the complete course, £2 2s.; or the Wednesday or the Saturday course may be taken separately at a fee of £1 1s. for each. Entries should be made with the Secretary.

Liverpool.

Royal Southern Hospital: Clinical School.—The hospital is situated within convenient distance of the School of Medicine, and contains 200 beds. There is a children's ward, and beds are appropriated to the diseases of women. Clinical teaching is given in the hospital, and arrangements have been made to render it both thorough and systematic. The members of the staff visit the wards daily, and clinical lectures are given each week. Tutorial classes are also held each day, at which the junior students are instructed in the methods of diagnosis, and the seniors are prepared for their final examinations. The pathological department has a good laboratory attached, in which the students receive practical instruction. *Appointments:* In addition to the usual clinical and *post-mortem* clerkships, the resident post of Ambulance Officer is awarded every three months to the student whom the Board may consider most suited to hold it. *Fees:* Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. *Terms:* (Exclusive of fees for Hospital Practice), £15 15s. per quarter. The practice of the hospital is recognised by all examining bodies. Further particulars may be obtained from the Dean, Mr. Robert Jones, 11, Nelson Street, Liverpool.

Northern Hospital.—The hospital contains 160 beds. There is a special ward for the treatment of children. Clinical lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee. *Fees:* Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. Students can enter to the medical or surgical practice separately on payment of half the above fees. Practical Pharmacy, three months' fee, £2 2s.

Ear and Eye Infirmary, Myrtle Street.—The infirmary contains 46 beds. Evening courses of lectures on Refraction and Medical Ophthalmoscopy and Diseases of the Ear are delivered at this infirmary during the winter months by the honorary medical staff. Students of medicine of University College, Liverpool, have free access to the practice of the infirmary. Out-patient dresserships may be obtained on ap-

plication to the Secretary of the Medical Board. The infirmary is recognised by the Conjoint Board as a teaching institution.

Liverpool Infirmary for Children.—The infirmary contains 88 beds, and has a large out-patient department. In-patients (1894) 1,250; new out-patients, 18,575; out-patient attendances, 49,516. The practice of the hospital is free to students, and clinical instruction is given by the Medical Staff. For further particulars apply to the Secretary of the Medical Board.

MANCHESTER.

General Hospital for Sick Children, Pendlebury.—The hospital at Pendlebury contains 140 beds, including 28 for fever. The medical staff see out-patients daily at the Dispensary, Gartside Street, at 9 A.M., and visit the hospital at 10 A.M. and 5 P.M. The practice of the hospital and dispensary is free to students accompanying the medical staff.

Royal Eye Hospital.—The hospital contains 100 beds. The medical staff attend daily from 9.30 to 12. Clinical instruction is given to students.

St. Mary's Hospital for Diseases of Women and Children.—Fifty beds, including six for the reception of lying-in cases, especially those attended with difficulty or danger. In the out-patient department students are taught the various methods of examination and diagnosis, and the use of gynæcological apparatus; while, in the wards, they have an opportunity of becoming familiar with the diagnosis and treatment of graver cases, and of witnessing more important gynæcological operations. The large number of maternity cases attended annually (3,000) in connection with this hospital affords ample opportunity to students for receiving instruction in practical midwifery. Every student, on registering himself as a midwifery pupil, is supplied with a card, on which must be filled in the particulars of every labour at which he is present, each entry being attested by the initials of the medical officer or certified midwife in charge of the case. The hospital possesses a library, presented by the late Dr. Radford, consisting of nearly 5,000 volumes, chiefly on subjects connected with obstetrics and gynæcology. There is also a museum, containing a large number of pathological specimens, and a valuable collection of deformed pelves, casts, obstetric instruments, and anatomical models. The gynæcological practice of the hospital is free to third and fourth years' students. The fee for the midwifery practice, which includes attendance upon twenty cases of labour, as required by the examining bodies is £2 2s. Application, must be made to the House-Surgeon at the hospital.

NEWCASTLE-ON-TYNE.

Hospital for Sick Children.—There are 60 beds in the hospital, which the honorary staff visit every day. There is a large out-patient department. The practice of the hospital is open free to all students or qualified practitioners.

SHEFFIELD.

Jessop Hospital for Diseases of Women.—The number of beds is 45; in the Diseases of Women Department 36, and in the Maternity Department 9. Students can attend the practice of the hospital, and be supplied with cases of midwifery. (See also p. 589.)

BRADFORD.

Infirmary and Dispensary.—The hospital contains 220 beds. Non-resident pupils are received, and have every opportunity of acquiring a practical knowledge of their profession under the superintendence of the House-Surgeon. One year's attendance is recognised by the Examining Boards. *Fee:* Perpetual, £10 10s.

BATH.

Royal United Hospital.—130 beds. The hospital is recognised by the Royal Colleges of Physicians, Surgeons, etc., and licensed for dissections. It contains a library and an excellent museum in which are a large number of interesting specimens, both in Pathology and Comparative Anatomy. Fees for attendance: twelve months, £10 10s.; six months, £5 5s. (temporary pupils can also, by permission of the honorary staff, attend the practice of the hospital by the payment of £1 1s. for each month). Instruction in Practical Pharmacy for three months, £3 3s. For further particulars apply to the Registrar.

BRIGHTON.

Sussex County Hospital.—The hospital contains 180 beds, with separate wards for children and for cases requiring isolation; and the Out-patient Department is attended by 700 to 800 patients weekly. It is recognised by the College of Surgeons and by the Conjoint Board as a hospital where part of a medical course may be spent. Out-pupils are admitted to the clinical teaching and the classes at a fee of £21 for two years. The Ormerod Exhibition, of the average value of £30, is awarded annually, after examination, to the best student of those leaving to pursue their studies at a medical school. Further information may be obtained from the House-Surgeon.

DERBY.

Derbyshire Royal Infirmary.—The infirmary is being rebuilt, and will provide for 200 beds. The accommodation now provided is for 104 beds. Pupils are admitted to the practice of the infirmary at £10 10s. a year.

EXETER.

Devon and Exeter Hospital.—The hospital contains 214 beds, including a special Children's Ward. There are a good Library, Museum, Dissecting, and *Post-mortem* Rooms. Attendance on the practice at this hospital qualifies for all the Examining Boards. Two Resident Pupils are received. Arrangements may be made by which students can attend Midwifery. For further particulars as to fees, etc., apply to the House-Surgeon.

West of England Eye Infirmary.—The infirmary contains 50 beds. Arrangements can be made for students of the Exeter Hospital to attend the practice of the Eye Infirmary.

DEVONPORT.

Royal Albert Hospital.—The hospital contains 218 beds. The pupils of the medical staff are allowed to attend the hospital practice and to learn pharmacy on the payment of £2 2s. to the dispenser.

GLASGOW.

Royal Hospital for Sick Children.—This hospital, containing 77 beds for the non-infectious diseases of children, is open for clinical instruction, as is the dispensary, or out-patient department. Students, by paying the fee of £1 1s., are entitled to the practice of the hospital and dispensary for twelve months from the term of entry, which may be at the beginning of February, May, or November. Further particulars may be had by applying to the Resident Medical Officer, 45, Scott Street, Garnethill.

Glasgow Western Infirmary.—This hospital adjoins the University of Glasgow. Number of beds 400. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. Special wards are set apart for Diseases of Women and for Diseases of the Skin. In the Out-Patients' Department there are special clinics for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. All the courses of clinical instruction are recognised at the University of Glasgow and other Boards in the kingdom. Nine resident assistants are appointed annually without fee from those who have completed their course. *Fees.*—For the hospital practice, including the various courses of clinical instruction in Medicine and Surgery, £21 in one payment, or in two equal instalments for the first and second years; for six months, £7 7s.; and for three months, £4 4s.

Glasgow Eye Infirmary (Berkeley Street Infirmary and Dispensary: Charlotte Street Dispensary only).—New buildings opened June, 1894. 1. Gentlemen may attend as students on payment to the Treasurer of the following fees: for six months' attendance, £1 1s.; for twelve months' attendance,

£2 2s. Further information may be obtained from the Secretary, Mr. W. G. Black, 88, West Regent Street, Glasgow.

GLOUCESTER.

The General Infirmary and the Gloucestershire Eye Institution.—The hospital contains 156 beds. Resident and non-resident pupils are admitted by the General Committee on the recommendation of a member of the Medical Board. Each pupil pays in advance £10 for the first half-year, and £5 for every subsequent quarter, or portion of a quarter, of a year. Each resident pupil has board and lodging in the house, for which he pays in advance 26 guineas for the first half-year, and 13 guineas for every subsequent quarter, or portion of a quarter, of a year. Each pupil pays in advance to the House-Surgeon a fee of £5 5s. for instruction, and a further fee of £3 3s. for every subsequent year or portion of a year. One year spent at this hospital, after passing a preliminary examination, is recognised by the Royal College of Surgeons.

CANTERBURY.

Kent and Canterbury Hospital.—The hospital contains 106 beds. Over 600 in-patients and 1,200 out-patients attend every year. Lectures are delivered weekly to the students of St. Augustine's Missionary College on Practical Medicine by Dr. Gogarty, and on Surgery by Mr. T. W. Reid.

LINCOLN.

County Hospital.—The hospital contains 119 beds and 8 isolation beds. The House-Surgeon is allowed to take two pupils, on terms arranged by the Weekly Board, himself, and the pupils. A fee of not less than £10 10s. is paid by every pupil to the hospital. The House-Surgeon is responsible for the conduct of his pupils. The pupils remain in the hospital only when occupied in performing or observing the actual work of the hospital.

NORWICH.

Norfolk and Norwich Hospital.—The hospital contains 220 beds. Fees: £10 10s. for six months, £15 15s. for twelve months' Medical and Surgical Practice. Pupils, resident and non-resident, are admitted.

NORTHAMPTON.

General Infirmary.—There are 160 beds and a large out-patient department. Out-pupils are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given by the House-Surgeon in Anatomy, Materia Medica, and Pharmacy. Non-resident pupils are taken at a fee of £10 10s.

NOTTINGHAM.

General Hospital.—The hospital contains 175 beds. The Honorary Staff introduce pupils to witness the practice of the hospital on payment of £10 10s. annually in advance. The pupils receive instruction from the Resident Medical Officers.

PORTSMOUTH.

Royal Portsmouth Hospital.—133 beds. One year's attendance recognised by the Examining Boards. For particulars as to fees apply to the Secretary of the Committee of Management.

SOUTHAMPTON.

Royal South Hants Infirmary.—The out-patient department contains an eye department, fitted with modern instruments, lamps, lenses, etc.; also an electrical department, containing a new set of modern batteries. The hospital contains 120 beds. The number of in-patients so far in 1895 has been 1,112, and of out-patients 4,202.

STAFFORDSHIRE.

Staffordshire General Infirmary.—There are 120 beds. The pupils of medical practitioners resident in the county of Stafford are allowed to witness the Medical and Surgical Practice of the infirmary, and to be present at operations. The pupils of the officers of the institution are admitted to these privileges gratuitously, those of other practitioners on the payment of £10 10s. with each pupil. The assistants of a medical practitioner, having gone through a complete curriculum, are admitted on the annual payment of £5 5s.

North Staffordshire Infirmary and Eye Hospital.—The infirmary has accommodation for 222 patients, including children's wards, eye department, and special ovarian wards. The attendance of pupils at this infirmary is recognised by all the Examining Boards. Particulars as to fees, etc., may be obtained from the Secretary, Mr. R. Hordley, Hartshill, Stoke-on-Trent.

SWANSEA.

Swansea Hospital.—The House-Surgeon is permitted to take two articled pupils, whom he binds himself to transfer to his successors in the event of his leaving the hospital during the term of their apprenticeship. The premium or fee on the introduction of pupils is such a sum as the Committee may consider reasonable. It is apportioned between the House-Surgeon and the institution, as the Committee for the time being may determine. The hospital contains 130 beds.

WINCHESTER.

Royal Hants County Asylum.—The hospital contains 108 beds. Apprentices are received by the Committee on payment of £100 per annum, and are bound to the House-Surgeon for five years. During the first two years they are chiefly employed in dispensing; afterwards they may witness the practice, and attend clinical lectures and operations and *post-mortem* examinations. The Physicians and Surgeons are allowed to introduce a certain number of pupils; the House-Surgeon may also receive a pupil on payment of £100 per annum. Pupils of qualified medical practitioners not belonging to the staff of the hospital may, with the consent of the Committee, become out-pupils, and see the practice of the hospital, under the direction of the House-Surgeon, on the payment of £10 10s. for one year, of £21 for unlimited attendance. Out-pupils are permitted daily (Sundays excepted) to read in the Library on payment of £1 1s.

WOLVERHAMPTON.

Wolverhampton and Staffordshire General Hospital.—The hospital contains 230 beds, and is a preparatory School of Medicine and Surgery. The pupils see the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. Attendance at this hospital is recognised by all the Examining Boards. *Fees:* Six months, £6 6s.; twelve months, £12 12s.; perpetual, £21.

INSTITUTIONS FROM WHICH CERTIFICATES ARE ACCEPTED BY THE CONJOINT BOARD IN ENGLAND.

I. Hospitals recognised for a part of the required attendance on Medical and Surgical Practice, for Medical Clinical Clerkship, and for Surgical Dressership, namely:

IN ENGLAND AND WALES.

Bath.—Royal United Hospital.
Bedford.—General Infirmary.
Bradford.—Infirmary.
Brighton.—Sussex County Hospital.
Canterbury.—Kent and Canterbury Hospital.
Cardiff.—Glamorganshire and Monmouthshire Infirmary.
Derby.—Derbyshire General Hospital.
Exeter.—Devon and Exeter Hospital.
Gloucester.—General Infirmary.
Hartshill.—North Staffordshire Infirmary.
Hull.—Royal Infirmary.
Leicester.—Infirmary.
Liverpool.—Northern Hospital.
Norwich.—Norfolk and Norwich Hospital.
Northampton.—General Infirmary.
Nottingham.—General Hospital.
Oxford.—Radcliffe Infirmary.
Plymouth.—South Devon and East Cornwall Hospital.
Portsmouth.—Royal Hospital.
Reading.—Berkshire Royal Hospital.
Salisbury.—General Infirmary.
Shrewsbury.—Salop Infirmary.
Stafford.—Staffordshire General Infirmary.
Winchester.—Hampshire County Hospital.
Wolverhampton.—Wolverhampton and Staffordshire General Hosp
Worcester.—Infirmary.
York.—County Hospital.

In Scotland.

Dundee.—Royal Infirmary.

In Ireland.

Dublin—Sir Patrick Dun's Hospital.

In Tasmania.

Hobart Town.—The General Hospital.
Launceston.—The General Hospital.

II. Institutions recognised for Instruction in Chemistry, including Chemical Physics, Practical Chemistry, and Elementary Biology.

Aberystwith.—University College of Wales.
Bedford.—The Grammar School (without Biology).
Bishop's Stortford.—Nonconformist Grammar School (without Biology).
Bradford.—The Grammar School.
Bristol.—University College; Merchant Venturers' School.
Cardiff.—University College of South Wales.
Cheltenham.—Public School of Science and Technical School, Clarence Street.
Chester.—School of Science and Art, Grosvenor Museum.
Clifton, Bristol.—The Clifton Laboratory (without Biology).
Dulwich.—The College.
Epsom.—The College.
Huddersfield.—Technical School.
Hull.—Royal Institution (without Biology).
Liverpool.—School of Science and Technology.
London.—Royal College of Science.
" The Pharmaceutical Society (without Biology).
" City of London School (without Biology).
" St. Paul's School, West Kensington.
" Birkbeck Institute.
Newcastle-upon-Tyne.—The Durham College of Science.
Nottingham.—University College.
Plymouth.—Science, Art, and Technical Schools.
Portsmouth.—Higher Grade School (without Biology).
Reading.—University Extension College.
Sheffield.—Royal Grammar School.
Southampton.—Hartley Institution.
Stoke-upon-Trent.—School of Science and Art (without Biology).
Swansea.—Technical College (without Biology).
Wellington (Shropshire).—The College (without Biology).
Wolverhampton.—Science School.

III. Recognised Lunatic Asylums.

Banstead.—London County Asylum.
Birmingham.—Borough Asylum.
Cane Hill.—Lunatic Asylum.
Claybury.—Lunatic Asylum.
Colney Hatch.—Lunatic Asylum.
Dartford.—City of London Asylum.
Hanwell.—Lunatic Asylum.
London.—Bethlem Royal Hospital.
Rainhill.—Lancashire County Asylum.
Wakefield.—West Riding Asylum.

IV. Recognised Fever Hospitals.

London.—Metropolitan Fever Hospitals.
Liverpool.—Corporation Fever Hospitals.
Birmingham.—Corporation of the City of Birmingham Fever Hospital.
Bristol.—Corporation Fever Hospitals.

V. Recognised Ophthalmic Hospitals.

Liverpool.—The Eye and Ear Hospital.
Southampton.—The Eye and Ear Hospital.

VI. Hospitals recognised for six months' attendance during the fifth year of the curriculum.

London.—City of London Hospital for Diseases of the Chest, Victoria Park; Hospital for Sick Children, Great Ormond Street; Brompton Hospital for Consumption; Great Northern Central Hospital.

VII. Laboratories recognised for instruction in Public Health for the Diploma in Public Health.

London.—St. Bartholomew's, Guy's, London, University College, King's College, Charing Cross, St. George's, St. Mary's, Westminster, College of State Medicine.
Birmingham.—Mason College.
Bristol.—Medical School.
Liverpool.—School of Science and Technology; University College.
Newcastle-on-Tyne.—University of Durham College of Medicine.

The Electrical Standardising, Testing, and Training Institution.—Medical students wishing to acquire a practical knowledge of electricity may be glad to know that the Electrical Standardising, Testing, and Training Institution, in addition to its ordinary course in Electrical Engineering, which occupies two or three years, also arranges for special courses in any branches of the subject, either by private tuition, or a special course at the College or at the works of the companies connected with it. There are entrance scholarships and exhibitions to the value of 80, 50, and 40 guineas. The principal of the institution is Mr. Hugh Erat Harrison, B.Sc.Lond., F.C.S. Particulars can be obtained from the Secretary, Mr. Howard Foulds, Faraday House, Charing Cross Road, W.C.

MEDICAL EDUCATION OF WOMEN.

THE QUALIFICATION OF FEMALE PRACTITIONERS.

By Elizabeth Garrett Anderson, M.D.,
Dean of the London School of Medicine for Women, and Consulting Physician to the New Hospital for Women.

The medical education for women is now so far organised in England that there is very little to say about it. It is almost as easy at this moment for a woman to get a complete medical education in England, Scotland, or Ireland, as it is for a man. The course of education is precisely the same, and its cost is practically the same in both cases. Men and women pass the same examinations and obtain the same qualifying diplomas, though at present there are still a few of the examining bodies which admit men only. There is no examining body which admits women only. The degrees of the Universities of London, Durham, Ireland, Edinburgh, Glasgow, and St. Andrews, of the Colleges of Physicians and Surgeons of Edinburgh and Glasgow and of Ireland, and the Licence of the Apothecaries' Hall, London, are all open to women. The examinations are prepared for in medical schools, some of which are for women only and some for men and women together. The schools for women only are in London, Edinburgh, and Glasgow. The mixed schools are three in Ireland and one in Newcastle upon-Tyne. The curriculum is the same in the mixed and separate schools.

About fifty-five medical women are practising in London, and they are gradually winning public confidence. Several important medical charities are worked entirely by women. The New Hospital for Women in London contains forty-two beds. No effort has been spared in trying to make it a model of all that a hospital should be in construction and in administration. The patients contribute each a small sum towards the expenses of maintenance; the aggregate sum thus raised in 1894 amounted to £1,277. The number of new out-patients is restricted to 30 a day. The beds are always full, and there are usually from 25 to 40 patients waiting their turn for admission.

During 1894 there were 12 hysterectomies, with 1 death; 8 ovariotomies, 12 removals of appendages (5 suppurative), 1 nephrorrhaphy, 2 nephrotomies, 2 nephrolithotomies, 2 cholecystotomies, 8 radical cures of hernia, 5 amputations of the breast, and 14 ophthalmic operations, all with no death. There were also 107 minor operations, with no mortality.

In India excellent work has been done during the past year by medical women at the Cama Hospital, Bombay. Eleven women, holding a British qualification, are working as doctors under the Dufferin Fund, and about thirty in connection with the various missionary societies. Valuable as their work is, experience shows that to remain for eleven months out of the year hard at work in an Indian town is a very severe trial to the health of most Englishwomen. It is work which cannot as a rule be continued for many years, and which ought not to be undertaken rashly, nor for inadequate remuneration. It may indeed be doubted if for any very long time, or on any large scale, the need of India for medical women can be met by sending out Englishwomen. India is a poor country, and to pay a sufficient number of English women what they have a right to expect if they go there would be a heavy burden. Possibly the final solution of the problem will be found in educating native ladies to work as doctors in the various Indian communities. Well trained medical women are able to get on very well in England, and fresh opportunities are opening up to them every year. There is no necessity for them to go to India in order to make a living, and if they are needed there they have a right to expect to be well treated financially and socially. Women undertake the study of medicine for the same reasons that men do. They wish to maintain themselves, and they are willing to work hard in order to fit themselves for their responsibilities and to gain a good position in their profession. They aim at making themselves as trustworthy as the best men, and they expect to receive the same remuneration. It is no part of their programme to lower fees or to do work for nothing which ought to be paid for, whether in England or in India.

Degrees, Diplomas, and Schools.

The qualifying bodies in the United Kingdom which admit women as candidates for their degrees as diplomas are as follows: The University of London, the University of Durham, the University of Edinburgh, the University of Glasgow, the University of St. Andrews, and the Royal University of Ireland, the Society of Apothecaries, London, and the Conjoint Board of the Royal College of Physicians and Surgeons in Ireland. Women candidates for qualification are subject to the regulations of the General Medical Council as to education and examination in precisely the same manner as men.

Women medical students can obtain a complete medical education by becoming students of the London School of Medicine for Women, the Edinburgh School of Medicine for Women, the Medical College for Women, Edinburgh; Queen Margaret College, Glasgow, and the Schools of Surgery of the Royal College of Surgeons in Ireland. The three first-named schools receive women only. In the Schools of Surgery of the Royal College of Surgeons in Ireland special rooms are set apart for lady students. They can also enter at the University of Durham, the Medical and Science Faculties of which are located in Newcastle-upon-Tyne, the former in the College of Medicine, and the latter in the College of Science, where women students can receive instruction in the various subjects of these two Faculties.

For the University of Glasgow a complete medical education is given at Queen Margaret College, which has been transferred or affiliated to that University. The University of St. Andrews does not as yet give a complete medical course, but women are admitted to the classes of Botany, Zoology, Physics, Chemistry, and Physiology; and the Lecturers of the Edinburgh School of Medicine are held *ex officio* to give qualifying courses in their various subjects for the degrees of M.B., C.M. of that University.

The classes available for women, University College, Dundee, are stated at page 601. The rest of the course must be taken elsewhere, and may be in Edinburgh, Glasgow, or London. If in Edinburgh it will necessarily be at one or other of the two schools alluded to at p. 600, and the course, examination fees, etc., of the second of these are those of the Conjoint Board given at p. 587. The course of Queen Margaret College, Glasgow, is noted at page 600.

Some further particulars as to the London School of Medicine for Women will be found on page 595, but intending students should write to the Secretary of the School, Miss Heaton, 30, Handel Street, Brunswick Square, London, W.C. The prospectus of this School contains an article of advice to students which will be found very useful. A further note on the Edinburgh School of Medicine for Women will be found on page 600. Candidates may obtain a prospectus on application to the Secretary, Miss Black, School of Medicine, Surgeon Square, Edinburgh, who will also forward a pamphlet containing full particulars on medical facilities offered to women in the United Kingdom, published by the National Association for Promoting the Medical Education of Women (post free six stamps).

Before entering upon the career of a medical student a woman should consider well whether she is in a position to meet the serious calls which the career will make upon pocket and health. She must be prepared to spend at least five full years at a medical school (after passing a preliminary examination in Arts), and must remember that during this period she will find her time fully occupied, and should not attempt—in fact, if she does her duty, should have no time—to earn a penny. Further, the work, which is severe and prolonged, and of necessity sometimes performed under somewhat unhealthy conditions, makes a serious call upon a constitution not naturally robust. A very serious percentage of male students break down in health.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

POST-GRADUATE STUDY.

LONDON.

Considering the immensity of the clinical material in London, there can be no doubt that there is a great want of proper arrangements for making it available for post-graduat study. This has of late years become a much more recognise institution than it used to be in former times. At every hospital it has always been common enough to see the middle-aged practitioner revisiting the scenes of his youthful studies; but this was a matter of pleasure, a visit paid for the sake of renewing old acquaintances, and seeing how "the old place" looked, and had no relation at all to the post-graduate study of modern times. That men long after obtaining their diplomas, should flock again to the schools and take up the study of their profession as a serious business is a comparatively new phenomenon, due partly to modern facilities for travel, partly to the rapid advances which are being made in the science of medicine.

Army or navy men between one appointment and another, ship surgeons ashore, young men who after being educated in the provinces wish to have a few months' study in the metropolis, medical officers of health studying bacteriology, men who have sold their practices and wish to polish up a little before entering on fresh fields of work, and a constant stream of Americans and Colonials on the search for what is new, drift in a steadily increasing crowd towards London, where to some extent special arrangements are now made to cater for their wants. It cannot be said, however, that as yet these are completely satisfactory, and especially there is but small provision for that increasing class of men who, having obtained their diplomas, are dissatisfied with their knowledge, and wish to carry further their study of the various specialties.

Among the various facilities at the disposal of the visitor to London we should first mention the London Post-Graduate Course, which, under the management of its secretary, Dr. Fletcher Little, has become a permanent institution. Three full courses are given every year, besides short ones on public health during the vacations. The courses for the ensuing session are to be given by members of the staffs of the following hospitals: The Hospital for Sick Children, Great Ormond Street, Bloomsbury; the National Hospital for the Paralysed and the Epileptic (Albany Memorial), Queen Square, Bloomsbury; the Royal London Ophthalmic Hospital, Moorfields; the Hospital for Diseases of the Skin, Blackfriars; Bethlem Royal Hospital for Lunatics; the London Throat Hospital, Great Portland Street; and at the Bacteriological Department, King's College. A course of clinical lectures on Medicine and Surgery will also be given at the Central London Sick Asylum, Cleveland Street, W., by various teachers not necessarily connected with London hospitals. The fees are £1 1s. and £2 2s., according to the number of lectures in the course, and practitioners can enter for one or more courses as they may please. Any further information can be obtained from and fees paid to the Secretary, Dr. Fletcher Little, 32 Harley Street, Cavendish Square, W.

The clinical demonstrations given by Mr. Hutchinson, on Tuesday afternoons, at his museum close to Portland Road Station (Metropolitan Railway), are of great interest, and well worth attending by the post-graduate student. There is no fee. Certain of the school hospitals have also arranged special post graduate courses independently. At Charing Cross, for example, a special series of clinical lectures and practical demonstrations, exclusively arranged for the convenience of practitioners and post-graduate students, are given by members of the staff throughout the year. The lectures for the year are arranged in three courses, each consisting of ten meetings, and lasting ten weeks, two being held during the winter and one during the summer. The class meets on each Thursday afternoon, at 4 P.M. The fee at present charged for

each course of ten lectures is £1 1s. Practitioners wishing to attend can receive any further information as to the dates and subjects by communicating with the Honorary Secretary, Dr. Willcocks, at the hospital.

At the British Institute of Preventive Medicine various courses are given on Public Health and on Bacteriology. In the coming term Dr. Armand Ruffer will lecture on the Theory and Practice of Serum Therapeutics and Preventive Inoculations. All the departments of medical knowledge have their special hospitals, at most of which courses of lectures are delivered, the dates being advertised from time to time; and, so far as occasional visits go, these, like all the hospitals in London, are practically open to the profession, but for regular attendance a fee is required. (For list of special hospitals open for purposes of study see page 611 *et seq.*) Some of these special hospitals contain cases of great interest, and a short course of study at them may be of considerable utility to a post-graduate student, and their large out-patient departments give a good general survey of the routine treatment of the more common ailments.

For those who wish not merely to "drop in" at a hospital, but to take up a careful study of any special subject, a certain number of appointments are available as clinical clerks or assistants. No doubt these posts are mostly filled by senior students or newly qualified men, but as the special hospitals are not connected with schools, there is nothing to prevent senior men taking them up. The field is very large, and the opportunity for gaining technical knowledge is great, as the work is done in conjunction with, and under the eye of, a member of the staff. At the children's hospitals, both at Great Ormond Street and at Shadwell, appointments of this kind can be obtained.

The large school hospitals are freely open to any practitioner with a card in his pocket, but it must be confessed that it is not at them that the occasional visitor will get most benefit or receive most attention. The reason is obvious: the staff is thoroughly employed in teaching: and, although a stranger is always courteously received by the professor, no visitor can help feeling himself an intruder when he perceives that every attention paid to him is so much taken from the class. The operating theatres, however, and the clinical lectures and consultations held in the theatres are freely open. Most of the large hospitals, however, make full provision for short time students, and a stranger wishing to spend a whole session in London might do far worse than attach himself to one of the large hospitals, entering as a student and paying the fee, which is not a large one, and thus gaining the right to the full practice of the hospital, including all the special departments, which at the larger schools are very well done. A man so entering ceases to be a stranger: he becomes one of the regular students of the place, and, if he be a man of conversation and sociability, gets a better view of the *vie intime* of the student world than he does by wandering from hospital to hospital. To one who wishes to enter on a more complete study of a speciality, however, and is willing to devote some time to that object, the only really satisfactory plan is to attach himself to two or more of the special hospitals, or special departments of general hospitals, taking care of course that the time tables do not interfere, and put up as best he may with the trouble of running about from one to another. It is much to be regretted that there is not in London such a central home for post-graduate study as was recently sketched out by Dr. Felix Semon at the annual meeting. There is no doubt, however, about the immensity of the field for study in London, or that the growing demand for post-graduate instruction will gradually open it out to those who wish to taste again the joys of student life.

SCOTLAND.

At Edinburgh there are permanent post-graduate courses, some of them running for most of the year, among which may be noted:

1. Demonstrations on the Anatomy and Pathology of the Brain and Spinal Cord, by Dr. Alexander Bruce.
2. Demonstrations on Dermatology, by Dr. W. Allan Jamieson, assisted by Dr. Norman W. Allan.
3. Consumption and Diseases of the Chest, by Dr. R. W. Philip.
4. Ophthalmology, in the Royal Infirmary, by several of the ophthalmic surgeons.
5. Diseases of the Ear, Nose, and Throat, and Laryngology, at the Royal Infirmary, by Dr. P. McBride, assisted by Dr. R. Mackenzie Johnston.
6. Diseases of Children, by Dr. John Thomson, at the Children's Hospital and New Town Dispensary, and also by other physicians elsewhere from time to time.
7. Diseases of the Tropics and Climatology, by Dr. R. W. Felkin.
8. Medical Electricity, including Electro Physics, Diagnosis, and Therapeutics, by Dr. Dawson Turner.
9. Laryngology and Medical Ophthalmology, and the Uses of Electricity in Medical Treatment and Diagnosis, by Dr. John Wyllie.
10. Pathologic Bacteriology, by Dr. Robert Muir.
11. Diseases of the Eye, by the three Surgeon Oculists to the Royal Infirmary.

The fees vary from £1 1s. to £3 3s., and the courses are of various lengths. Full particulars are advertised some time in advance, and inquiries may be addressed to the lecturers named.

DEGREES FOR PRACTITIONERS.

Since it was formerly the almost universal custom for medical students educated in London not to seek a University degree, and as that custom still prevails to a considerable extent, a very large proportion of medical men in actual practice in England possess diplomas to practise but not degrees in Medicine. The want of a degree and of the title of "Doctor" is often a subject of regret in after-life, and certain universities have issued special regulations under which the degree of M.D. is granted to practitioners of a certain standing under special conditions. The regulations of these universities are stated briefly in the following paragraphs. The University of Brussels also grants the degree of M.D. to practitioners after examination, without restrictions as to residence or curriculum; but this degree is not registrable on the *Medical Register* if obtained subsequently to June, 1887.

University of London.

Registered medical practitioners of not less than three years' standing, and not less than 25 years of age, who shall pass, or have already passed, the Matriculation and Preliminary Scientific Examinations, may proceed to the Intermediate and M.B. Examinations without the intervals prescribed by the Regulations, on producing certificates that they have gone through the required course of training at any time previously (see p. 581).

University of Durham.

The degree of M.D. is granted by the University of Durham to registered practitioners of not less than fifteen years' standing, who have been qualified and in practice for that period, upon the following conditions without residence: The candidate must be 40 years of age, and must produce a certificate of moral character from three registered medical practitioners. If he have not passed previously to the professional examination in virtue of which his name was placed on the *Register* an examination in Arts, he is examined in classics and mathematics; if otherwise, he is required to translate into English passages from Cæsar, *De Bello Gallico* (first three books), Virgil, *Æneid* (first three books), or Celsus (first three books); he is afforded an opportunity of showing proficiency in Moral Philosophy, Greek, or some modern language, but no extra marks are awarded for these subjects.

Professional Examination.—The candidate must pass an examination in the following subjects: i. Principles and Practice of Medicine, including Psychological Medicine, Hygiene, and Therapeutics; ii. Principles and Practice of Surgery; iii. Midwifery and Diseases Peculiar to Women and Children; iv. Pathology, Medical and Surgical; v. Anatomy, Medical and Surgical; vi. Medical Jurisprudence and Toxicology. The examination is conducted by means of printed papers, clinically, in the Royal Infirmary, Newcastle, and *viva voce*. The classical portion of the examination may be taken separately from the professional, on payment of a portion (£10 10s.) of the full fee.

Foreign and Colonial Practitioners.—Natives of India or the British Colonies are placed on the same footing as natives of Great Britain. Natives of India may produce evidence from an Indian university that they have passed within one year an examination in Latin, and in Greek, Persian, or Sanskrit.

Fees.—The inclusive fee is fifty guineas; if a candidate fail to pass twenty guineas are retained, but if he present himself again forty guineas only are required.

Dates, etc.—The examinations are held twice a year, at the end of April and of September. Notice, accompanied by the fee and certificates, must be sent to Professor Howden, Secretary of the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination.

University of St. Andrews.

The degree of M.D. may be conferred on any registered medical practitioner above the age of 40, of approved professional position and experience, and who shall pass a satisfactory examination in (1) Materia Medica and General Therapeutics, (2) Medical Jurisprudence, (3) Practice of Medicine and Pathology, (4) Surgery, (5) Midwifery and Diseases of Women and Children. Certificate of age, and certificates from three medical men of acknowledged reputation as to the professional position and experience of the candidate, must be sent in.

Fees.—The fee is 50 guineas, inclusive of stamp duty, and a Registration Fee of £1. Only 10 such degrees are conferred in any one year.

University of Brussels.

British practitioners of medicine holding medical and surgical qualifications are, in common with legally qualified practitioners in other countries, admissible without further curriculum to the examination for the degree of M.D. of the University of Brussels.

Examination.—The examination is divided into three parts. The "First Doctorate" includes Medicine, Pathology (with microscopical examination), Therapeutics, Mental Diseases, and Diseases of Women and Children. The "Second Doctorate" comprises Surgery, Ophthalmology, Midwifery, Hygiene, and Medical Jurisprudence. The "Third Doctorate" consists of clinical examination in Medicine and Surgery, examination in Midwifery with the mannequin, Operative Surgery (amputation, ligature of arteries in the dead subject), and Regional Anatomy with Dissections. Special importance is attached to practical knowledge. The examination is conducted in French through an official interpreter, but most of the examiners, it is stated, speak English fluently. The examination is *viva voce*, but a written examination may be obtained on paying a special fee of £1 for each part.

Dates.—The examinations take place on the first Tuesday in November, December, February, May, and June. It is desirable that the candidate should arrive in Brussels on the previous Saturday before 2 P.M. at latest. The whole examination (First, Second, and Third Doctorate) may be got through in about a week.

Fees.—Candidates are required to leave their diplomas with the Registrar of the University prior to the examination. The fees are: for inscription of name, £8 12s.; for examination, £13; for legalisation of diploma, 8s.; total, £22. If a candidate fail in the first part of the examination the fees for the second and third are returned to him; if in the second, the fees for the third. A rejected candidate may present himself again in three months on paying one half of the examination fees.

Further particulars may be obtained from Dr. Major Greenwood, Hon. Sec. Brussels Medical Graduates' Association, 203, Hackney Road, London, N.E. An article containing a full description of everything concerning the degree was published in the British Medical Journal on September 15th, 1888.

N.B.—This degree, if obtained subsequent to June, 1886, is not registrable.

Admission of Women to the University of Buda-Pesth.—The University of Buda-Pesth, in reply to a question addressed to it by the Hungarian Minister of Public Instruction, has expressed the opinion that women should be allowed to enter as students of the medical and pharmaceutical faculties, and should be admitted to degrees in medicine and pharmacy on the same terms as men.

PUBLIC HEALTH OR STATE MEDICINE.

A medical officer of health of any county or county district, or of any metropolitan district, or the deputy of any such officer, must be legally qualified for the practice of Medicine, Surgery, and Midwifery, and also either be registered in the *Medical Register* as the holder of a diploma in Sanitary Science, Public Health, or State Medicine under Section 21 of the Medical Act, 1886, or have been, during three consecutive years preceding the year 1892, a medical officer of a district or combination of districts in London or elsewhere with a population, according to the last published census, of not less than 20,000, or have, before the passing of the Local Government Act, 1888, been for not less than three years a medical officer or inspector of the Local Government Board.

Certain regulations for candidates for diplomas in Public Health have been laid down by the General Medical Council, and are binding on any candidate who may have been registered or become entitled to be registered as a medical practitioner after January 1st, 1890. These regulations are designed to ensure "the possession of a distinctly high proficiency, scientific and practical, in all the branches of study which concern the Public Health." The Executive Committee of the General Medical Council has power in special cases to admit exceptions to the rules. The regulations are as follows: "(*b*) A period of not less than twelve months shall elapse between the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery and the examination for a diploma in Sanitary Science, Public Health, or State Medicine. (*c*) Every candidate shall have produced evidence of having attended, after obtaining a registrable qualification, during a period of six months practical instruction in a laboratory approved of by the body granting the qualification. (*d*) Every candidate shall have produced evidence that during a period of six months after obtaining a registrable qualification, he either has practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district, or else has himself held appointment as medical officer of health under conditions not requiring the possession of a special sanitary diploma. (*e*) The examination shall be conducted by examiners specially qualified, and shall comprise laboratory work as well as written and oral examination." Further regulations have been laid down, and are binding on any candidate who may have been registered after January 1st, 1894, and require such candidate to produce evidence (1) of having after obtaining a registrable qualification attended during a period of six months practical instruction in a laboratory approved by the bodies granting the qualification, including the pathology of those diseases of animals that are transmissible to man; (2) of having before or after obtaining a registrable qualification attended the clinical practice of a hospital for infectious diseases approved by the several licensing bodies recognised under the Medical Acts. The rules (1) (2) do not apply to medical practitioners registered or entitled to be registered on or before January 1st, 1894.

The rules (*b*) (*c*) (*d*) as to study do not apply to "(1) Medical practitioners registered, or entitled to be registered, on or before January 1st, 1890; (2) registered medical practitioners who have for a period of three years held the possession of medical officer of health to any county, or to any urban district of more than 20,000 inhabitants, or to any entire rural sanitary district."

The examinations for diplomas in Public Health, granted by the various Universities and Medical Corporations, and the courses of study required are adapted to meet the regulations of the General Medical Council, and, as a rule, to fulfil the recommendations issued by that body from time to time. It would be unnecessary to recapitulate in every case details of this nature.

Books.

Inquiries are often made with regard to the most suitable books to be read by practitioners preparing for examinations

in Public Health. The following list issued until recently by the University of Cambridge will be found useful. It is not, of course, intended that these candidates should read all, or even the majority, of these works, but it will not be difficult to make a selection. The books marked (*) may be used for reference.

Parkes's *Manual of Practical Hygiene* (Churchill); Wynter Blyth's *Manual of Public Health* (Macmillan); Grimshaw and others, *Manual of Public Health for Ireland* (Fannin, Dublin, and Longmans); Cameron's *Manual of Hygiene* (Hodges, Foster, and Co., Dublin; and Baillière, Tindall, and Cox); Seaton's *Handbook on Vaccination* (Macmillan); McVail's *Vaccination Vindicated* (Cassell); *Reports of the Royal Commission on Vaccination; *Army Medical Reports, *Reports on Hygiene* (Eyre and Spottiswoode); *Reports to Privy Council and Local Government Board by their Medical Officer (Eyre and Spottiswoode); Simon's works (Churchill).

On Chemistry: General Principles.—Watts's *Manual of Chemistry* (Churchill); Bloxam's *Chemistry* (Churchill); Roscoe's *Lessons in Elementary Chemistry* (Macmillan); *Miller's *Chemistry* (Longmans); *Thorpe's *Dictionary of Applied Chemistry* (Longmans).

Analysis.—Sutton's *Systematic Handbook of Volumetric Analysis* (Churchill); Frankland's *Water Analysis for Sanitary Purposes* (Van Voorst); Wanklyn and Chapman's *Water Analysis* (Trübner); Hartley's *Air and its Relations to Life* (Longmans); Wanklyn's *Air Analysis* (Trübner); C. Fox, *Sanitary Examination of Water, Air, and Food* (Churchill); Wynter Blyth's *Foods, Composition, and Analysis* (Griffin).

Physics.—Everett's *Textbook of Physics* (Blackie); Ganot's *Physics* (Longmans); Deschanel's *Physics* (Blackie); *Daniell's *Textbook of the Principles of Physics* (Macmillan).

Microscopy.—Macdonald's *Guide to Microscopical Examination of Drinking Water* (Churchill); Davis's *Practical Microscopy* (Allen); *Cornil and Babes's *Les Bactéries* (Alcan); Crookshank's *Manual of Bacteriology* (Lewis); Klein's *Micro-organisms and Disease* (Macmillan); Flügge's *Micro-organisms* (New Sydenham Society).

Sanitary Engineering, Water Supply, Sewage, etc.—Eassie's *Sanitary Arrangements for Dwellings* (Smith, Elder, and Co.); Galton's *Healthy Dwellings* (Clarendon Press); Corfield's *Dwelling Houses: their Sanitary Construction and Arrangements* (Lewis); *Bailey-Denton, *Sanitary Engineering* (Spon); *Latham's *Sanitary Engineering* (Spon); *Bayles's *House Drainage and Water Service* (Williams, New York); Tomlinson's *Warming and Ventilation* (Lockwood); Corfield's *Treatment and Utilisation of Sewage*, 3rd edition, 1887, by Corfield and L. Parkes (Macmillan); *Report of Committee appointed by President of Local Government Board on Modes of Treating Town Sewage (Eyre and Spottiswoode); *Reports of Royal Commission on Pollution of Rivers, especially the Sixth on Domestic Water Supply (Eyre and Spottiswoode); *Reports (two) of Royal Commission on Metropolitan Sewage Discharge; *Report from Select Committee on Public Health Act (1875) Amendment Bill, with the Evidence (Eyre and Spottiswoode); *R. Angus Smith's *Air and Rain* (Longmans).

On the Laws of the Realm and By-laws relating to Public Health.—For England: Public Health Act, 1875, and the Acts of Parliament relating to the various subject matters within the domain of Hygiene passed since that date; Housing of the Working Classes Act 1890; Vaccination Acts. For the Metropolis, or for Scotland, or for Ireland; Laws dealing with the same subject matters as the above, and having application to the particular part of the United Kingdom. Model By-laws of the Local Government Board (Eyre and Spottiswoode), or the same annotated (Knight); Adulteration of Food and Drugs Act.

Statistics.—Newsholme's *Vital Statistics* (Sonnenschein); Lewis's *Digest of the English Census* (Stanford); *The articles on "Statistics" in the *Cyclopædia of Anatomy and Physiology* (Longmans); *Papers by Mr. Noel Humphreys in the *Journal of the Statistical Society*; *Dr. Farr's *Vital Statistics* (Stanford); *Dr. Farr's letters to the Registrar-General in the early Reports of the Registrar-General; *Reports of the Registrar-General (Eyre and Spottiswoode); *Deaths in England, Average Annual Proportion of Deaths, etc., 1851-70, Parliamentary Paper C. 874, Session 1873 (Eyre and Spottiswoode).

Construction of Hospitals.—Miss Nightingale's *Notes on Hospitals* (Longmans); Galton *On the Construction of Hospitals* (Macmillan); Burdett, *Cottage Hospitals* (Churchill); **Hospital Construction and Organisation*—Johns Hopkins Essays (W. Wood and Co.); *Mouatt and Snell's *Hospital Construction and Management* (Churchill); **L'Etude et les Progrès de l'Hygiène en France*, article "Hôpitaux et Hospices" (Masson); *Dr. Thorne's *Report on Infectious Hospitals*—Local Government Board (Eyre and Spottiswoode); *De Chaumont, article "Hospitals" in the *Encyclopædia Britannica*, ninth edition.

The books recommended in the regulations for the Diploma in Public Health and the degree of B.Hy. in the University of Durham are:

Professor A. Wynter Blyth, *Manual of Public Health*; Dr. Louis C. Parkes, *Hygiene and Public Health*; Dr. George Wilson, *Handbook of Hygiene*.

Comparative Pathology.—Professor Crookshank, *Manual of Bacteriology*; or Dr. G. Sims Woodhead, *Bacteria and their Products*.

Sanitary Chemistry and Physics.—Dr. C. B. Fox, *Sanitary Examination of Water, Air, and Food*; Professor Wanklyn, *Analysis of Food and Water*; Mr. Noel Hartley, *Air, Water, and Disinfectants*.

Professor Corfield, *Dwelling Houses*; Professor Walley, *Meat Inspection*; Aitken's *Practice of Physic*—Medical Geography.

Law.—Knight and Co.'s *Public Health Acts* (latest edition); Infectious Diseases Prevention Act, 1890; Housing of the Working Classes Act, 1890; Public Health Acts (Amendment) Act, 1890; Knight's *Model By-laws*.

UNIVERSITY OF CAMBRIDGE.

A diploma in Public Health is granted by the University, and any person whose name is on the *Medical Register* may apply to be examined, provided that he can show that he has complied with the regulations laid down by the General Medical Council (*see* Regulations (*b*), (*c*), (*d*), (1), (2), page 611). [These regulations do not apply to candidates registered or entitled to be registered on or before January 1st, 1890.]

The examination, which is usually held twice a year, on the first Tuesday in April and October respectively and three or four following days, is divided into two parts, both of which are partly oral and practical, and partly in writing. One day at least will be devoted to practical laboratory work, and one day to oral and practical examination in and reporting on subjects connected with outdoor sanitary work. They may both be passed together. A fee of £5 5s. must be paid before admission to either part.

PART I comprises Physics and Chemistry: the principles of Chemistry and methods of analysis, with especial reference to analyses of air, water, and food; applications of the microscope, including the investigation of micro-organisms; the laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with special reference to ventilation, water supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; meteorology in relation to health; sources of water supply; statistical methods in their application to public health.

PART II comprises laws and statutes relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases, including those diseases of animals that are transmissible to man; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.[1] A list of Colleges and Schools of Medicine at which the courses of laboratory instruction have, for the purposes of this examination, been already approved by the syndicate, can be obtained on application. The foregoing schedule is not to be understood as limiting the scope of the examination, which will include every branch of sanitary science. No candidate will be approved by the examiners who does not show a high proficiency in all the branches of study, scientific and practical, which concern the public health.

Applications for further information should be addressed to Dr. Anningson, Walt-ham-sal, Cambridge, who will also supply particulars as to the course of instruction provided in the University.

Application for admission to the examination must be made to J. W. Clark, M.A., Registrary, University Registry, Cambridge, not later than March 13th or September 17th, and must be accompanied by the proper fee and certificates. A candidate who has not been on the *Medical Register* for three years must show that he is in his 24th year at least when he presents himself for Part I. and at least 24 years old when he presents himself for Part II.

N.B.—It should be understood that the qualification is non-gremial, and confers no university position or privilege.

UNIVERSITY OF OXFORD.

A Diploma in Public Health is granted after an examination which will be held for the first time in Michaelmas Term, 1895. The examination will be conducted in two divisions: (1) First Division: The application of Chemistry and Physics to General Hygiene. (2) Second Division: (*a*) General Pathology, with special relation to Infectious Diseases; (*b*) Laws relating to Public Health; (*c*) Sanitary Engineering; (*d*) Vital Statistics. It will be permissible to take the two divisions at the same or at different examinations. Candidates must comply with the regulations of the General Medical Council (see p. 611). The First Division may be passed at any time after registration, provided that the candidate has spent six months studying in a public health laboratory approved by the Board of the Faculty of Medicine.

UNIVERSITY OF LONDON.

The University does not grant a Diploma in Public Health, but Sanitary Science is made a branch of the M.D. Examina-

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[1] The examination papers set at former examinations can be obtained at the Cambridge University Press Warehouse, Ave Maria Lane, London, price 1s. each set, or by post 1s. 1d.

tion, which is open only to persons holding the degree of M.B.Lond. Candidates must in addition have complied with the regulations laid down by the General Medical Council (See Regulations (*b*), (*c*), (*d*), p. 611).

Victoria University.

A Diploma in Sanitary Science is granted after an examination, which begins on the third Monday in July in each year. The candidate must fulfil the requirements laid down by the General Medical Council (see Regulations (*b*), (*c*), (*d*), page 611). The examination is divided into two parts: the subjects in each part, and their scope, as defined in the regulations of the University, so nearly coincide with those of the University of Cambridge that it is unnecessary to reproduce them. Special mention is, however, made of the use of meteorological instruments, of the diseases of animals in relation to the health of man, and of "Sanitary Reporting," every candidate being expected to visit and report upon the sanitary condition of some actual locality assigned to him by the examiners.

Each part of the examination occupies two days, and the fee for each part is £4 4s. Application for admission to the examination must be made to the Registrar of the University, Owens College, Manchester, not later than July 1st, and the fee must be paid on or before July 5th.

Conjoint Board in England.

The diploma in Public Health of the Royal College of Physicians of London and the Royal College of Surgeons of England is granted to persons whose names are on the *Medical Register*, subject, so far as concerns those who have registered after January 1st, 1890, to the conditions laid down in the Regulations printed below. The examination is held in two parts, and Part I may be passed before fulfilling Clauses 1 and 2 under Part II. The subjects of the two parts of the examination are as follows:

Part I.—1. Physics in their application to Health, with reference to—(*a*) Warming and Ventilation; (*b*) Water Supply, Sewerage, and Drainage; (*c*) Sanitary Construction. 2. Meteorology in relation to Health. 3. Chemistry with special reference to Food, Air, Soil, and Water. 4. Microscopical Examinations as applied to Air, Food, and Water. 5. Bacteriology, including the Cultivation and Recognition of Micro organisms. 6. Geology and Soil in their relation to Drainage and Water Supply.

Part II.—1. The origin, development, and prevention of Disease with reference to: (*a*) Special Pathology of Epidemic and Endemic Diseases, including the Natural History of the Specific Organisms of Diseases: (*b*) Influence of Climate, Season, and Soil; (*c*) Effects of Unwholesome Air, Water, and Diet; (*d*) Diseases of Animals in relation to the Health of Man; (*e*) Influence of Occupation and Lodgment; (*f*) Isolation, Quarantine, Disinfection, Vaccination. 2. Sanitary Work and Administration with reference to: (*a*) Health Requirements of Houses, Villages, and Towns; (*b*) the Sanitary Regulations of Households, Establishments, and Occupations, including the Construction and Arrangement of Hospitals; (*c*) the Prevention and Control of Epidemic and Endemic Diseases. 3. Statistics in Relation to Health. 4. Statutes, Orders, and By-laws relating to Public Health. 5. Duties of Sanitary Authorities and their Officers. (The candidates may be required to visit and report on some premises selected by the examiners.)

A candidate will be admissible to examination in Part I on producing evidence: (1) Of having been in possession of a registrable qualification in Medicine, Surgery, and Midwifery for at least 12 months. (2) Of having attended, after obtaining such registrable qualification, practical instruction in a Laboratory recognised by the Examining Board in England during a period of six months.

I. Physics. Gases: examination of their physical properties: their weight and bulk under varying alterations of pressure and temperature, and the movements thereby set up: diffusion, with especial reference to warming and ventilation. Anemometers, and their use. Liquids: their physical properties, their pressure, and flow through tubes and conduits: their action on gases. Meteorological instruments, their construction and use. Barometers, thermometers, hygrometers, rain gauges. II. Chemistry: The analysis of water for domestic purposes, including the significance and approximate estimation of total solids, chlorine, magnesia, carbonic, and nitric acids and nitrites, ammonia, and lead; and loss on ignition of solids; determinations of hardness, of organic impurities, and of acidity and alkalinity. Chemical methods of treating sewage. The examination of air for the detection of polluting gases. Simple methods of eudiometry. Estimations of the quantity of carbonic dioxide in air. III. Microscopy. The recognition of the constituents of food, such as starches and muscular fibre. The recognition of the fibrous fabrics of clothing, such as wool, cotton, and silk. The recognition of constituents of ordinary dust and deposits from water. IV. Bacteriology, including the cultivation and recognition of micro-organisms. V. Parasites and other organisms infesting hosts, stuffs, or the human body.

(3) Of being at least 23 years of age. A candidate will be admitted to Part II of the examination on producing evidence: (1) Of having, during a period of six months after obtaining a registrable qualification, either practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district, or else held appointment as Medical Officer of Health under conditions not requiring the possession of a special Sanitary diploma. (2) Of having attended the clinical practice of a hospital for infectious diseases recognised by the Examining Board in England, either before or after obtaining his registrable qualification in Medicine, Surgery, and Midwifery.[1] (3) Of being at least 24 years of age.

The two parts may be passed separately or at the same time. The fee for each is £5 5s., and must be paid three days before the examination commences. Fourteen days' notice must be given to the Secretary at the Examination Hall, Victoria Embankment, from whom further particulars and the dates of the examinations (which are held in the months of January and July) may be obtained.

University of Durham.

The University grants a Diploma in Public Health (D.P.H.) and the degrees of Bachelor in Hygiene (B.Hy.) and Doctor in Hygiene (D.Hy.).

Degree of Bachelor in Hygiene (*B.Hy.*).—1. The candidate for the degree of Bachelor in Hygiene (B.Hy.) must be a registered medical practitioner and a graduate in medicine of a recognised University, not less than 22 years of age, and must have passed his first registrable qualification in Medicine, Surgery, and Midwifery at least twelve months previously. He must have spent six months of professional study subsequent to the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery, in attendance at Newcastle-upon-Tyne, in the following manner: *University of Durham College of Medicine.*—(α) Course of Lectures on Public Health. (β) Three Months' Course of Lectures of Comparative Pathology with practical work in a Bacteriological Laboratory. *Outdoor Sanitary Work.*—(γ) Six Months' practical study of outdoor Sanitary Work under the Medical Officer of Health, Newcastle-upon-Tyne. *City Hospital for Infectious Diseases, Newcastle-upon-Tyne.*—(δ) Three months' attendance on the Clinical Practice and Instruction. Regulation (α) to be omitted in the case of a candidate who has already attended the course before obtaining a registrable qualification. Regulation (γ) to be omitted in the case of a practitioner who has himself held appointment as a medical officer of health under conditions not requiring the possession of a Sanitary Diploma under the Local Government (England and Wales) Act, 1888. *Durham College of Science.*—(ε) Course of Lectures on Sanitary Chemistry and Physics. (ζ) Three months' practical instruction in a chemical laboratory. This course must not be concurrent with the three months' course of Lectures on Comparative Pathology with practical work in a bacteriological laboratory. The candidate shall be required to pass an examination in the following subjects: (*a*) Sanitary Chemistry.—The examination of Air; detection of noxious gases and atmospheric impurities. Water for sanitary purposes; detection of metals in water; the action of water on metals. Milk and Food. Detection of Poisons in Articles of Dress and Decoration. (*b*) Physics.—Hydrodynamics, Pneumatics, and Hydraulics, as applied to Hygiene. Light; Propagation of Light; Reflection and Refraction; Photometry. Heat; Thermometers; Laws of Heat in relation to Hygiene. Principles of Hygrometry and Hygrometers. (*c*) Sanitary Legislation.—Knowledge of the following Statutes and By-laws, namely: The Public Health Acts, Rivers Pollution Prevention Act, 1876; The Public Health (Water) Act, 1878; The Infectious Dis-

[1] This certificate is not required in the case of a candidate who produces evidence that he has commenced special study in Sanitary Science before January 1st, 1894.

cases (Notification) Act, 1889; The Local Government Act, 1888; The Infectious Diseases (Prevention) Act, 1890; The Housing of the Working Classes Act, 1890; The Public Health Acts (Amendment) Act, 1890; The Model By-laws of the Local Government Board relating to Cleansing, the Prevention of Nuisances, New Streets and Buildings, Slaughter-houses, Common Lodging Houses, Houses Let in Lodgings, Offensive Trades. Most of the above-mentioned statutes will be found in Knight and Co.'s *Public Health Acts* (latest edition), and the By-laws in the work under that title, by the same publishers. (*d*) Comparative Pathology, etc.:—Knowledge of the Comparative Pathology, Methods of Propagation, and Prevention of Microbic and Parasitic Diseases inter-transmissible between Man and the lower Animals; Morphology of Microbes and Animal Parasites; Methods of Microscopical Examination and Artificial Cultivation of Micro-organisms. The Bacteriological Examination of Water, Air and Earth; the Special Characteristics, Life History, Properties, and Natural and Artificial Modes of Inoculation of Pathogenic Micro-organisms and Animal Parasites. (*e*) Vital Statistics:—Rates of Birth, Death, and Marriage; Methods of Calculation, Classification, and Tabulation of Returns of Sickness and Mortality; Data required and Conclusions deducible therefrom. (*f*) Nosology: Definition, Nomenclature, and Classification of Diseases. (*g*) Meteorology, Climatology, and Geographical Distribution of Health and Disease over the Globe, and in different Urban and Rural Districts of the United Kingdom. (*h*) Sanitary Science in relation to the Origin, Propagation, Pathology, and Prevention of Epidemic, Endemic, Epizootic, and other Communicable Diseases; Diseases attributable to Heat, Cold, or Dampness, Insufficiency or Impurity of Air, Food, or Drink; Parasitic and other Diseases affecting the Food and Drink of Man; Diseases due to Habitation in Cities, Towns, Villages, and Separate Houses; Occupation and Trade Operations in relation to the Health of the Workers; Overwork, Intemperance, Heredity; Preventive Measures, Vaccination, Isolation, Disinfection; the Regulation of Noxious and Offensive Manufactures and Trades; the Removal of Nuisances. (*i*) Practical Hygiene in reference to Meteorological Apparatus, Sanitary Appliances, the Site, Materials, Construction, Capacity, Lighting, Ventilation, Warming, Dryness, Water Supply, Drainage, and Refuse Disposal of Houses, Schools, Hospitals, Artisans' Dwellings, Workshops and Workplaces, and other Buildings of Public or Private Resort; the Construction of Drains, Abattoirs, and Disinfecting Stations; Action with respect to Nuisances, and Outbreaks of Disease; the Examination of Butchers' Meat and other Food; the Preparation of Sanitary Reports, and other Duties of a Medical Officer of Health. The examination will be conducted by written papers, and practical and *viva voce* examination, and will be commenced on April 15th and September 16th, 1895. The candidate shall also be required: (1) To pass an examination on medical clinical cases at the City Hospital for Infectious Diseases, or elsewhere: (2) to draw up outlines for annual or other reports of a medical officer of health; (3) to report upon the condition of some actual locality; (4) to analyse liquids, gases, and specimens of food; (5) to describe the construction and use of instruments employed in Meteorology, Hygienic Apparatus, and Sanitary Appliances; (6) to examine with the Microscope submitted Specimens; (7) to describe submitted Specimens of Diseased Organs and Tissues (human and other); (8) to show a practical acquaintance with the usual methods of Bacteriological investigation; (9) to inspect and describe Carcasses. The fee for the examination for the B.Hy. is £10 10s., and for the degree £5. The fee for the examination and Diploma in Public Health is £10 10s. Holders of the licence in Sanitary Science of the University of Durham, prior to January, 1892, who are Graduates in Medicine of the University of Durham, are entitled to admission to the examination for the Degree of Bachelor in Hygiene without residence.

Degree of Doctor in Hygiene (D.Hy.).—The candidate must be a Bachelor in Hygiene, and must have been engaged for two years subsequently to the date of his acquirement of the degree of Bachelor in Hygiene, in practice, as a Medical Officer of Health. He will be required to write an essay upon some practical Hygienic subject, selected by himself and approved by the Lecturer on Public Health, and shall be examined thereon, and upon questions relative to the subject of the essay. The essay should not exceed thirty pages. The essays must be forwarded to the Lecturer on Public Health one month before the date of the Examination, and will be retained by the Faculty of Medicine.

Diploma in Public Health (D.P.H.).—The regulations for education and examination for the Diploma in Public Health (D.P.H.) are the same as those for the degree of Bachelor in Hygiene on pp. 613, etc., with the following exceptions, namely: (1) That the candidate is not required to be a Graduate in Medicine of a recognised university; (2) the course of study for the D.P.H. need not be spent at Newcastle-upon-Tyne.

Diploma in Public Health for Medical Practitioners.—The following are the regulations for the Diploma in Public Health, for medical practitioners, registered, or entitled to be registered, on or before January 1st, 1890: (1) The candidate shall be a medical practitioner, registered or entitled to be registered, on or before January 1st, 1890; (2) the candidate shall be required to pass the same examination as that for the ordinary Diploma in Public Health; (3) every candidate wishing to be present for the examination must give at least fourteen days' notice to the Registrar of the College, and must, at the same time, send the examination fee and the necessary certificates; (4) the fee for the examination and diploma is £10 10s.

University of Aberdeen.

The University grants a diploma in Public Health. Candidates for the diploma must have graduated in Medicine in the University, or in a University in the United Kingdom, one year before they receive the diploma; and they must produce evidence of (1) having complied with the regulations of the General Medical Council (see p. 611); (2) of having attended a fever hospital, containing not fewer than fifty beds, for six months; (3) if not a graduate in Medicine of Aberdeen University, of having attended a course in the University in one or more of the subjects embraced in the examination for the diploma. The examination consists of two Parts; Part I (*a*) Physics, Engineering, and Meteorology; (*b*) Chemistry, Microscopy, and Bacteriology. Part II (*a*) General Hygiene; (*b*) Sanitary Law and Vital Statistics. The examination (which is written and oral) is held in March and July, and notice must be given to the Secretary of the Medical Faculty two weeks before. A detailed synopsis can be obtained from the Dean of the Medical Faculty, or will be found in the University *Calendar* for 1895-96, pp. 418-421. The fee, which must be paid at the time of giving notice, is £5 5s. The fee for re-examination, £1 1s.

University of Edinburgh.

This University confers two degrees in science in the department of Public Health, namely, Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

Bachelor of Science.—Two examinations must be passed, and the candidate must produce evidence of having complied with the regulations of the General Medical Council (see p. 611), and have taken a degree in Medicine in the University of Edinburgh or in a university recognised by it. The subjects of the First Examination are: (1) Laboratory work, practical, written and oral; (2) Elements of Experimental Physics; (3) Geology, written and oral. The Second Examination cannot be taken sooner than six months after the First. The candidate must have attended a course of lectures (fifty at least) in the University of Edinburgh, or in a university recognised by the Court. The subjects of the Second Examination are: (1) Medicine in its application to Public Health: Sanitation; (2) Sanitary Law; (3) Vital Statistics; (4) Medicine in its bearings on Public Health; and the examinations in these subjects are taken at one time; (5) Mensuration and Drawing. (A detailed syllabus is given in the *Calendar*, pp. 424 to 426). The examinations are held in March and July. The fee for each examination is £3 3s. Further particulars may be obtained on application to the Convener of the Science Degree Committee, at the office of the Faculty of Medicine, University New Buildings, where the schedules for examinations are issued and the certificates of candidates examined.

Doctor of Science.—Bachelors of science in the Department of Public Health may, after the lapse of five years, proceed to the degree of Doctor in the same Department, on presenting a Thesis on some subject in the Department of Public Health, or a published memoir of works, and are required to pass an examination in Public Health, and in such of its special departments as may from time to time be determined. Every such Thesis must be certified by the candidate to have been composed by himself, and must be approved by the examiners. The Thesis must be lodged with the Convener of the Science Degrees Committee on or before April 30th, in the year in which the candidate proposes to graduate. The fee is £10 10s.

University of Glasgow.

The diploma of Public Health may be obtained by any Bachelor of Medicine in the University on his passing the required examination twelve months at least after he has taken the degree of M.B. Every candidate for a diploma in Public Health shall produce certificates giving sufficient evidence: (1) that after obtaining the degree of M.B. he has undergone the practical laboratory training required by the General Medical Council (see page 611); (2) that he has for six months practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district.

The examination is written, practical, and oral. The subjects of the examination are as follows: (*a*) Physics, Meteorology, and Climatology; (*b*) Chemistry and Biology; (*c*) General Hygiene; (*d*) Sanitary Law and Vital Statistics. The fee for the examination is five guineas. A course of instruction is provided by the University, the fee for which is ten guineas. (*See Calendar* for 1895-96, pp. 154-156).

The Conjoint Board of Scotland.

The Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow will grant a conjoint diploma in Public Health, after examination by a Board on which these bodies are represented. Candidates qualified before 1890 will be admitted without evidence of special instruction, though even in their case such instruction is strongly recommended. Registered medical practitioners who have for a period of three years held the position of medical officer of health to any county or urban district of more than 20,000 inhabitants, or any entire rural sanitary district are also exempt from courses of special instruction. Other candidates must produce evidence of attendance (subsequent to obtaining a registrable qualification) for six months at a Public Health Laboratory, and for six months under a Medical Officer of Health of a county or large urban district. There are two examinations, and candidates may present themselves for both of them at one period, or for either examination separately. The First Examination embraces the following subjects in their relation to Public Health: Chemistry, Laboratory Work, Physics, and Meteorology. The Second Examination includes Epidemiology, Endemiology, Vital Statistics, Practical Sanitation, and Sanitary Law. The various subjects of both examinations are detached and limited by syllabuses given. The laboratory work embraces not only Chemical Analyses, but also Microscopical Examination, Bacteriology, Parasites, etc. At the Second Examination each candidate is required to submit a report on the sanitary condition of premises to which he may be sent for the purpose, and is exempted on the Acts of Parliament included under "Sanitary Law." The fee is ten guineas, or five guineas in respect of each examination; and candidates referred are readmitted on the fee of three guineas in respect of each examination. The examination is held in Edinburgh or in Glasgow, there being two periods of examination yearly—October and May. Application for examination in Edinburgh to be sent to Mr. James Robertson, 1 George Square, Edinburgh; and in Glasgow to Mr. Alexander Stevens, 242 St. Vincent Street, Glasgow, not later than one week before the examination day.

University of Dublin.

The diploma in State Medicine is conferred after examination upon M.D.s or graduates in Medicine and Surgery of Dublin, Oxford, or Cambridge. The name of the candidate must have been on the *Medical Register* at least twelve months before the examination, and, subsequently to registration, the candidate must have completed six months' practical instruction in a laboratory approved by the University, and have studied practical outdoor sanitary work for six months, under an approved officer of health. [This condition does not apply to candidates registered or entitled to be registered on or before January 1st, 1890.] The examination is held in December, and candidates are required to send in their names at least a week before the first day of the examination to the Registrar of the School of Physic, from whom a full syllabus of the examination can be obtained. Candidates who have registered since January 1st, 1890, are required to make application for permission to present themselves for examination to the Board of Trinity College, submitting at the same time certificates of the required courses of study. The subjects of examination are: State Medicine and Hygiene (paper); Chemistry (paper and laboratory); Physics and Meteorology (oral); Engineering (paper); Sanitary Engineering (practical); Morbid Anatomy (oral); Vital Statistics (paper); Medical Jurisprudence (oral); Law (paper).

Further particulars can be obtained on application to the Registrar of the School of Physic, Dublin.

Royal University of Ireland.

The University grants a diploma in Sanitary Science, but only to graduates in Medicine of the University. The fee is £2. Further particulars will be found in the *Calendar*.

Conjoint Examining Board in Ireland of the Royal College of Physicians and the Royal College of Surgeons.

A diploma in State Medicine is granted by these two Colleges after an examination conducted by them jointly. Candidates are required to comply with the regulations of the General Medical Council (see page 611). The regulations as to study do not apply to practitioners registered or entitled to be registered on or before January 1st, 1890. The examination comprises the following subjects: State Medicine and Hygiene, Chemistry, Meteorology and Climatology, Engineering, Morbid Anatomy, Vital Statistics, Medical Jurisprudence, Law. The candidates will be examined orally in the Law of Evidence, and practically in the reading of Plans, Sections, and Scales, as well as in Analytical Chemistry, with special reference to Air, Water, and Food, including the use of the Microscope. They will also be required to read meteorological instruments, and to explain their construction; and they may be called upon to make a practical Sanitary Report.

The candidate must return his name to the Secretary of the Committee of Management under the Conjoint Scheme, Royal College of Physicians, 6, Kildare Street, Dublin, three weeks before the examination, and lodge with him a testimonial of character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh.

The fee for examination is £10 10s.; for re-examination £5 5s.; the examinations begin on the first Tuesday of the months of February, May, and November. The examination, which is in two parts, lasts four days.

A Special Examination for the diploma can be obtained on payment of £5 5s., in addition to the ordinary fees mentioned above, and on giving notice at least one fortnight before the date of the proposed examination.

Schedules of the subjects can be obtained from the Secretary.

Instruction and Laboratory Classes.

Courses of lectures and laboratory instruction to suit the requirements of candidates for diplomas in Public Health have been organised at the following schools, and could probably be arranged for at other schools and colleges.

London

St. Bartholomew's Hospital—Inclusive fee, 20 guineas.
Charing Cross Hospital—Inclusive fee, 20 guineas.
St. George's Hospital—Inclusive fee, 20 guineas, for candidates registered before January 1st, 1890, 12 guineas.
Guy's Hospital—Inclusive fee for six months' course of Laboratory Instruction and Lectures, 20 guineas.

King's College.
London Hospital.—Inclusive fee, 20 guineas; three months' course, 12 guineas.
St. Mary's Hospital.—Six months' course, inclusive fee, 12 guineas.
St. Thomas's Hospital.—Inclusive fee, 20 guineas; short course, 6 guineas.
University College.
College of State Medicine.

PROVINCIAL.

Cambridge University.
Mason College, Birmingham.
University College, Liverpool.
Yorkshire College, Leeds.
University of Durham College of Medicine.
University College, Bristol.

IRELAND.

School of Physic, Dublin.
The Catholic University School of Medicine.
Royal College of Surgeons, Schools of Surgery, Dublin.

PSYCHOLOGICAL MEDICINE.

The facilities for the study of mental diseases are now vastly increased, and in addition to the regular lectures given in the different medical schools, post graduate lectures are also given at the Bethlem Royal Hospital in connection with the London Post Graduate Course, of which Dr. Fletcher Little, 32, Harley Street, W., is the Hon. Sec. The London County Council is proposing to throw open their large asylums, and contemplate applying to the Conjoint Medical Boards for the recognition of all of them as teaching hospitals. Dr. Savage, at Guy's, and Dr. Rayner, at St. Thomas's, have special classes, with clinical instruction, at Bethlem Royal Hospital; Professor E. W. White lectures at King's College, and gives clinical instruction at the City of London Asylum, near Dartford; Dr. Percy Smith is the Lecturer at Charing Cross; Dr. Claye Shaw at St. Bartholomew's; Dr. Mickle at Middlesex and University College; Dr. Hyslop at St. Mary's; Dr. C. Mercier at Westminster; Dr. J. K. Will at the London Hospital.

In the provinces, also, each medical school has a Lecturer on Psychological Medicine, who gives clinical instruction in a neighbouring asylum; and in Scotland and Ireland similar arrangements exist.

The Royal University in Ireland grants a diploma for proficiency in the treatment of mental diseases under the following conditions:—

The diploma is conferred only on Graduates in Medicine of the University.

Candidates must give notice, in writing, to the Secretaries of their intention to present themselves, and must pay the prescribed fee of £2 at least one month previous to the examination.

Candidates who satisfy the examiners will be required to pay a further fee of £3 before the diploma is conferred.

The subjects for this examination are those prescribed for the Hutchinson Stewart Scholarship for proficiency in the treatment of Mental Diseases.

The Medico-Psychological Association of Great Britain and Ireland also grant a Certificate in Psychological Medicine after a course of training, according to the rules of the Association, to candidates registered under the Medical Act. The examinations are held in London, Scotland, and Ireland twice a year. The fee for the examination is £3 3s. Full particulars may be obtained from the General Secretary, Dr. Fletcher Beach, 64, Welbeck Street, W. The Medico Psychological Association further gives a Bronze Medal and £10 10s. to Asylum Assistant Medical Officers for the best dissertation on any clinical or pathological subject relating to insanity, and also the Gaskell Prize, value £30.

OPENING OF THE MEDICAL SCHOOLS.

The arrangements for the opening of the Winter Session of the Medical Schools and Colleges in the United Kingdom, so far as they are at present complete, are as follows:—

METROPOLITAN.

Charing Cross Hospital Medical School.—Tuesday, October 1st. (The annual dinner of the past and present students will not take place till the third week in October.)

Guy's Hospital Medical School.—Tuesday, October 1st. At 8 P.M. the first meeting of the Physical Society will be held under the presidency of Dr. Wilks, F.R.S., when Mr. George De'Ath, of Buckingham, will read a paper on Our Profession, Our Patients, Our Public, and Our Press. There will be a House Dinner of the Students' Club before the meeting. After the meeting the rooms of the Club in the College will be open for the exhibition of Instruments, Microscopical Preparations, and Photographs taken by members of the Society during the past year. All past and present students are invited to attend.

King's College, London, Medical Faculty.—Tuesday, October 1st.

London Hospital Medical College.—Tuesday, October 1st. The annual Dinner will take place in the evening at the Criterion, Mr. John Couper in the chair.

London School of Medicine for Women.—Tuesday, October 1st. The opening address will be given at 3.30 P.M. by Miss Ellaby, M.D., Ophthalmic Surgeon, New Hospital for Women.

Middlesex Hospital Medical School.—Tuesday, October 1st. Introductory Address by W. Julius Mickle, M.D., F.R.C.P.

St. Bartholomew's Hospital Medical School.—Tuesday, October 1st. The Old students' Annual dinner will take place in the evening, Mr. Howard Marsh in the chair.

St. George's Hospital Medical School.—Tuesday, October 1st, Introductory Address, at 4 P.M., by George D. Pollock, F.R.C.S.

St. Mary's Hospital Medical School.—Tuesday, October 1st, Introductory Address, at 4 P.M., by Mr. A. P. Laurie, M.A., B.Sc. The Annual Dinner will take place the same evening in the King's Hall, Holborn Restaurant, Mr. Malcolm Morris in the chair.

St. Thomas's Hospital Medical School.—Wednesday, October 2nd. The prizes will be delivered at 3 P.M. by Sir Edwin Arnold, K.C.I.E., C.S.I., who will afterwards deliver an address. The annual dinner, to which all former and present students are invited to join, will take place the same evening at the Hôtel Métropole at 6 for 6.30 P.M., Dr. F. J. Payne in the chair.

Westminster Hospital Medical School.—Tuesday, October 1st. The Introductory Address will be delivered at 4 P.M. by Dr. Mackenzie Copeman. The Prizes will be distributed by the Right Honourable Viscount Peel, late Speaker of the House of Commons. The Annual Dinner will take place at the Café Monico at 7 P.M., Dr. de Havilland Hall in the chair.

University College, Medical Faculty.—Tuesday, October 1st. The Introductory Address will be delivered at 4 P.M. by Professor J. Rose Bradford, M.D., F.R.S. The Annual Dinner of the Old and Present Students will take place at 6.30 P.M. at the Hôtel Métropole, Sir Richard Quain, Bart., M.D., in the chair.

PROVINCIAL.

Birmingham, Mason College.—Tuesday, October 1st. An Introductory address will be delivered by Professor Percy Frankland, F.R.S., on Pasteur and His Work: the Debt of Medicine to Chemistry.

Bristol University College.—Tuesday, October 1st.

Leeds, Yorkshire College.—Tuesday, October 1st. The Introductory Address will be delivered at 4 P.M. by Professor D. J. Leech, M.D., F.R.C.P., Senior Physician, Manchester Royal Infirmary, Member of the General Medical Council, etc. Professor Leech will afterwards distribute the prizes.

Liverpool, University College.—Tuesday, October 1st. The Introductory Address will be delivered by Mr. Jonathan Hutchinson, F.R.S.

Manchester, Owens College.—Tuesday, October 1st.

Newcastle, University of Durham College of Medicine.—Tuesday, October 1st. The scholarships and prizes will be delivered by the Dean of Durham, Warden of the University.

Sheffield School of Medicine.—Tuesday, October 1st. The Introductory Address will be delivered at 4.30 P.M. by Professor Victor Horsley, F.R.S., F.R.C.S.

SCOTLAND.

University of Edinburgh.—The medical classes open on Tuesday, October 15th; the Anatomy Rooms and Laboratory Courses on October 1st.

The Edinburgh School of Medicine.—The session commences on Tuesday, October 15th. The Practical Anatomy Rooms and Chemical Laboratories will be opened on October 1st.

The Medical College for Women, Edinburgh.—Tuesday, October 15th.

Edinburgh School of Medicine for Women.—Tuesday, October 15th.

The University of Aberdeen.—Tuesday, October 15th.

The University of Glasgow.—Tuesday, October 22nd. Opening Address by one of the Professors.

University of Glasgow: Queen Margaret College, Medical School for Women.—Tuesday, October 22nd.

St. Mungo's College, Glasgow.—Wednesday, October 23rd. Introductory Address by Professor Napier, M.B.Lond., F.R.C.S.

Anderson's College Medical School, Glasgow.—Tuesday, October 22nd.

The University of St. Andrews.—Tuesday, October 8th.

University College, Dundee.—Tuesday, October 15th.

IRELAND.

Trinity College, Dublin.—The Dissecting Rooms will be opened on October 1st; the Lectures will begin on November 1st.

Catholic University Medical School, Dublin.—Dissecting Room open October 1st; Lectures November 2nd.

Schools of Surgery of the Royal College of Surgeons in Ireland.—Dissecting Room open on October 1st; Lectures November 1st.

Queen's College, Cork.—Monday, October 21st.

Queen's College, Belfast.—Tuesday, October 29th.

M. Guillemot has bequeathed £8 000 to the Paris Hôtel Dieu.

The total number of students in the French Medical Faculties in 1894 was 7,510, of whom 1,059 were foreigners.

Antirabic Vaccinations at Saigon.—Dr. J. Pineau, Director of the Pasteur Institute at Saigon, Cochin China, reports that from May 1st, 1893, to May 1st, 1894, the number of persons treated there by preventive inoculations was 49, 31 of whom were Europeans and 18 natives. There were only 2 deaths.

THE PUBLIC SERVICES.

THE NAVAL AND MILITARY MEDICAL SERVICES.

The Medical Services of the Royal Navy, of the Army Medical Staff, and of India offer careers which possess certain advantages, but are not without some drawbacks. The pay offered to the young surgeon on joining is fair, if not liberal, and it ought to be possible for him, with care, to live upon it. On the other hand, the prizes of the services are few, and a man without private means may in middle life find himself in somewhat straitened circumstances if he has incurred the responsibility of maintaining and educating a family.

The prospects of officers entering the Indian Medical Service are not now what they were a generation, or even a decade, ago. A variety of circumstances have combined to bring about this unfavourable result, the chief among which may be mentioned the fall in the value of the rupee, which has not only much diminished in this country an income derived from India, but has also seriously hampered the financial resources of the Government of India. The fall in the value of the Indian currency also much affects the Medical Staff, of whom a large number are constantly employed in that country. Representations have been made by the Parliamentary Bills Committee of the British Medical Association to the India Office, and the proposals made are still under the consideration of the Government of India. Medical officers will have the benefit of the recent regulation issued by the Government of India, which has undertaken, in view of the great depreciation in the value of the rupee, to make special allowance to officers whose pay does not amount to £1,000 a year, with regard to exchange rates of so much of that pay as they may wish to transmit to this country. This concession will be a great boon. The Indian Medical Service is a great and honourable service: it affords to earnest men almost unlimited opportunities of clinical work. It places within the reach of the more fortunate administrative posts of much importance and some dignity, and it has a splendid record of past service to the State, and to our Indian fellow subjects.

The Army Medical Department has long laboured under grievances with regard to military rank and titles which sometimes appear to civilians to be mainly of a sentimental character, but which those who have served, or who are serving, know to be very real and substantial. These grievances have been partly remedied by the concession of the progressive compound titles of Surgeon-Lieutenant, Surgeon-Captain, Surgeon-Major, Surgeon-Lieutenant-Colonel, Surgeon-Colonel, and Surgeon-Major-General. It is possible, we hope we may say probable, that the Army Medical Staff will eventually be converted into a Royal Corps. The reply received from the Secretary of State for War, showed that, for the present at least, the authorities are indisposed to listen to representations on various points made to the Secretary of State by Mr. Ernest Hart on behalf of a deputation of the Parliamentary Bills Committee of the British Medical Association.

The Medical Service of the Royal Navy we mention last, though the Royal Navy is the senior service, because at the present time the position of the department is on the whole satisfactory to medical officers belonging to it. And no man who feels he has a vocation for the Navy need be deterred from entering its medical department by the fear of meeting with ungenerous or harsh treatment at the hands of the authorities.

All candidates for these services must submit to an examination by a medical board into their physical fitness before being admitted to the entrance examinations. Special attention is given to the candidate's power of vision. A moderate degree of myopia is not considered a disqualification, provided it does not necessitate the use of glasses during operations, and that no organic disease of the eyes exists.[1]

As the prospects of a medical officer of one of these services attaining to the highest administrative grades depends on a large extent upon the regulations with regard to compulsory retirement at the age of 55, if below a certain grade at that age, there is a distinct advantage in entering the service at as early an age as possible.

ARMY MEDICAL STAFF.

A candidate for a commission in the Army Medical Staff must be over 21 and not over 28 years of age at the date of the commencement of the competitive examination. He must be of unmixed European birth, and registered under the Medical Act.[2] He must produce a certificate of moral character, and a certificate to the effect that he is of steady habits, and likely to prove creditable to the department. Before admission to the examination his physical fitness will be determined by a Board of Medical Officers. These and some additional facts of minor importance must be embodied in a "declaration" upon a special form, which may be obtained on application to the Director-General of the Army Medical Department, War Office, London, S.W., who will also forward a memorandum on conditions of admission, pay, etc.

A competitive entrance examination is held twice a year, generally in February and August. Announcement of the date and of the number of vacancies is made in advance by advertisement in the medical and some other papers, and in the *Monthly Army List*.

Entrance Examination.

The examination consists of two parts:

I. *Compulsory*, the subjects of which are (*a*) Anatomy and Physiology, (*b*) Surgery, (*c*) Medicine including Therapeutics and the Diseases of Women and Children, (*d*) Chemistry and Pharmacy, and the Practical Knowledge of Drugs; 1,000 marks are given for each division (*a*, *b*, *c*, *d*). The examination in medicine and surgery is in part practical, and includes operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The examination in chemistry is limited to the elements of the science, and to its application to medicine, pharmacy, and practical hygiene.

II. *Voluntary.*—A candidate may be examined in the following voluntary subjects: (*a*) French and German (150 marks each), (*b*) Natural Sciences (300 marks). Competitors are urged to qualify in French and German, as a knowledge of modern languages is considered of much importance. The Natural Sciences include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica. A number less than one-third of the marks obtainable will not be allowed to count. An entrance fee of £1 is payable, and no candidate is allowed to compete on more than two occasions.

Successful candidates are arranged in order of merit, and are required to proceed to the Army Medical School at Netley as Surgeons on Probation; they receive an allowance of 8s. a day.

Final Examination.

Surgeons on probation at Netley attend courses in: (1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service. At the conclusion of the Netley course a further examination in the subjects there taught is held, for which marks are awarded, and the final position of the candidate is determined by the number of the marks ob-

[1] Further particulars as to the standard of eyesight will be found in the pamphlet by Sir J. Fayrer, M.D., K.C.S.I., entitled, *Regulations as to Issues of Forms, etc.*, published by Messrs. J. and A. Churchill, 11, New Burlington Street, London, W. Price 2s.

[2] He must have a diploma in Medicine and in Surgery, but the diploma of the Society of Apothecaries in London, obtained under the conditions of the Medical Act of 1858, is accepted as a double qualification. A candidate is required to produce also the following certificates: (1) Of having discharged the duties of a medical clinical clerk during six months, and of a surgical dresser during another period of six months, of which, in each case, not less than three months must have been spent in the wards of a hospital. (2) Of having attended a course of instruction during not less than three months at an ophthalmic hospital, or the ophthalmic department of a general hospital, which course shall include instruction in the errors of refraction.

tained at the Entrance and Final Examinations. On leaving Netley the Surgeon on Probation receives a commission of Surgeon-Lieutenant, the pay of which rank is £200 a year. The next grade is Surgeon-Captain, and after five years' service the pay is £250 a year. A Surgeon-Captain may be promoted to the rank of Surgeon-Major after twelve years' full-pay service; to qualify himself for this promotion he must at any time after his seventh year of service pass a special examination in Surgery, Medicine, Hygiene, the Duties of Medical Officers, Hospital Organisation, Military Law, and the Administration of the Medical Staff Corps.

Retired Pay.—All officers under the rank of Surgeon-Colonel must retire at the age of 55; above this rank at the age of 60, unless specially extended. An officer of ten years' service on full pay may be permitted to retire on a gratuity of £1,250; after fifteen years' service, £1,800; after eighteen years' service, £2,500.

INDIAN MEDICAL SERVICE.

All natural born subjects of Her Majesty between 21 and 28 years of age may be candidates; the conditions are otherwise the same as for the Army Medical Staff (see above), but there is an additional voluntary subject, Hindustani, for which 150 marks are allowed.[1]

The final order of merit is determined, as in the case of the Army Medical Staff, by the combined results of the Preliminary and of the Final Examinations, and, so far as the requirements of the Service will permit, candidates will have the choice of Presidency in India, according to their position in that list. The examinations are held, as a rule, twice a year, in February and August.

Free passage to India is provided. The rate of pay, until arrival in India, is 10s. a day. The minimum rate of pay in India is stated to be Rs. 317.8 a month. After seventeen years' service for pension the rate of retired pension is £292 a year; after twenty, £365; after twenty-five, £500; after thirty years, £700. Further particulars as to rates of pay, promotion, pensions, and half-pay will be found in Military Department Form 124, which can be obtained on application to the Under-Secretary of State, India Office, London, S.W.

It should be stated that much dissatisfaction is expressed as to the mode in which certain of the provisions as to pay and allowances are interpreted by the authorities. The Parliamentary Bills Committee of the British Medical Association is in communication with the India Office with a view of obtaining some remedy of the grievances alleged.

MEDICAL DEPARTMENT OF THE ROYAL NAVY.

The regulations for admission to examination for the Medical Department of the Royal Navy are generally the same as in the case of the Army Medical Staff (see above). The candidate must be between 21 and 28 years of age. The entrance examination consists of two parts; in Part I, *Compulsory*, the subjects are the same and the number of marks allowed for each the same as in the Army Medical Staff. Part II, *Voluntary*, consists of two divisions: (*a*) French and German (150 marks each). A knowledge of modern languages being considered of great importance, all candidates are urged to qualify in them. (*b*) Natural Sciences (Biology, Physics, and Physical Geography). Candidates will be examined in all, or any, of these sciences. Candidates who qualify in the compulsory subjects will be allowed to count marks in those of the three sciences only in which they obtain one third of the maximum marks for each.

Biology.—The examination in biology will include the general principles of the science; structure and life histories of the chief animal and vegetable parasites; bacteria and their reaction to disease; distinctive characters of the important groups of animals, with a special knowledge of the vertebrate; the elements of embryology; the general morphology and physiology of flowering plants; diagnosis of the chief British natural orders; medicinal plants.

Physics.—The examination in physics will be limited to the general principles of mechanics, acoustics, optics, heat, magnetism and electricity, such as: the properties of solids, liquids, and gases; preservation of energy, specific gravity, propagation and reflection of sound and light, temperature, specific and latent heat, thermometers, conduction of heat, properties of mirrors and lenses, chromatic dispersion of light, chief forms of batteries, faradaic, galvanic and frictional electricity, general properties of magnets.

Physical Geography.—The examination in physical geography will be limited to general principles, such as the relation of the earth to the rest of the solar system, movements of the earth, nature of the earth's crust and the chief kinds of rocks, general configuration of land and water, mountain ranges, plains, lakes, rivers, islands, glaciers and icebergs, the ocean currents, tides, the earth's atmosphere, winds and storms, dew, clouds, rain, climate, general distribution and nature of volcanoes, earthquakes, general distribution of animal and vegetable life.

The order of merit is determined by the total number of marks obtained in the compulsory and voluntary parts.

Successful candidates, immediately after passing the examination, will receive commissions as Surgeons in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

The rate of pay of Surgeon is on entry £209 17s. 6d. a year; after four years' full pay service, £234 7s. 6d. a year; after eight years' full pay service, £292 17s. 6d. A Surgeon at the expiration of twelve years' service may, on the recommendation of the Director-General, be promoted to the rank of Staff-Surgeon, if he has passed the required examination at any time after completion of eight years' service. The pay on promotion is £383 5s.; after four years' full pay service in the rank, £438.

Retirement.—Compulsory retirement will be as follows:

Inspector and deputy-inspector-general of hospitals and fleets.	At the age of 60, or at any age, if he has not served for five years.* Except that if in any particular case the Lords Commissioners of the Admiralty may consider that the interests of the public service will be materially advanced by the further retention of an inspector-general of hospitals and fleets on the active list, the age for the retirement of such inspector-general may be extended to 62.	To be retired irrespective of age if found physically unfit for service.
Fleet-surgeon, staff-surgeon, and surgeon.	At the age of 55, or at any age, if he has not served for five years.	

* Order in Council, May 17th, 1890.

Voluntary retirement and withdrawal will be allowed as follows:

(*a*) Every officer will have the option, subject to their Lordships' approval, of retiring after twenty years' full pay service on the scale of retired pay provided in Paragraph 14, or with a gratuity on the scale provided in that paragraph if not eligible for retired pay.

(*b*) At the expiration of 8, 12, or 16 years' full pay service, every officer will be permitted, subject to their Lordships' approval, to withdraw from the Naval service, receiving a gratuity on the scale laid down below.

The name of an officer so withdrawing will be removed from the lists of the Navy, with which all connection will then be severed.

(*c*) Voluntary retirement and withdrawal will be allowed, as a rule, only when an officer is unemployed or serving at home.

(*d*) Applications from officers, not entitled to retire or withdraw, to resign their commissions will receive every consideration.

Gratuities and retired pay will be awarded on retirement and withdrawal on the undermentioned scale:—

Rank.	Gratuities.	Daily.	Yearly.
	£ s. d.	£ s. d.	£ s. d.
Surgeon and Staff Surgeon:			
After 8 years' full-pay service	1,000 0 0	—	—
" 12 " "	1,500 0 0	—	—
" 16 " "	2,250 0 0	—	—
Fleet Surgeon:			
After 20 years' service (including proportion of half pay time)	—	*1 0 0	365 0 0
After 24 years' service (including proportion of half pay time)	—	*1 2 6	410 12 6
After 27 years' service (including proportion of half pay time)	—	*1 5 0	456 5 0
After 30 years' service (including proportion of half-pay time)	—	*1 10 0	†547 10 0
Deputy Inspector General ..	—	1 [illegible] 0	[illegible] 15 0
Inspector General	—	2 [illegible] 0	730 0 0

* To obtain this rate an officer must hold the Commission of Fleet-Surgeon.

† Or on compulsory retirement at the age of 55.

[1] Candidates presenting themselves for examination in Hindustani are recommended to study some recognised textbook, such as the annotated edition of the *Taubat-un-Nasuh*, which is the text used by candidates for the Indian Civil Service.

The allowance of 8s. a day, in addition to full pay, at present granted to the fleet surgeon of a flag ship bearing the flag of a commander-in-chief on a foreign station, will be given to the senior medical officer of such ship, being a fleet or staff surgeon; and an allowance of 2s. 6d. a day to the senior medical officer, being a fleet or staff surgeon, of a ship of a commodore or of a senior officer commanding a foreign station.

Medical officers conducting the course of instruction at Haslar Hospital will receive the following allowances:

The senior officer employed upon this duty ...	£150 a year.
The junior officer assisting	80 ,,

The hospital allowances for naval medical officers at home and abroad, in lieu of provisions for themselves and servants, and for fuel and light, are as follow:

	At home.	Abroad.
Inspectors-general of hospitals	£95	£150
Deputy-inspectors-general	67	112
Fleet surgeons and staff-surgeons ...	53	112
Surgeons	30	168

Medical officers serving afloat receive an allowance of 1s. 6d. a day in lieu of provisions, fuel, and lights, as laid down in the Queen's Regulations.

The travelling allowances, extra pay, lodging money, and compensation for losses are fixed for naval medical officers according to their relative rank in the Service.

PRISON MEDICAL SERVICE.

The prison department consists of two branches—the convict service and the local prison service. In the case of the smaller prisons the medical officer is usually a local practitioner, but in the case of the larger prisons the medical officers are appointed by the Convict Prison Board or the Prison Commission, and form practically a special service. The Chairman of the Boards is Mr. Evelyn Ruggles Brise and application for employment may be made to him on a special form which, we understand, can be obtained from the acting private secretary, Mr. J. Purvey, Prison Department, Home Office, London, S.W.

The number of vacancies is not large, and the prospects of promotion bad. This is due in part to the fact that the rate of pay of the higher appointments depends upon the number of prisoners in the particular prison, and that the total number of prisoners in the country is decreasing.[1]

The following was the staff in 1892:

Convict Service.—Seven assistant surgeons at £250, rising by quinquennial increments of £25 to £300; seven medical officers, at incomes ranging from £350 to £550.

Local Prison Service.—Seven assistant surgeons, at £250, rising by quinquennial increments of £25 to £300. Six medical officers at £320. Four medical officers at £320, rising after five years to £350. Four medical officers at £400, rising by quinquennial increments of £50 to £500.

MEDICAL APPOINTMENTS IN THE COLONIES.

The following Memorandum has been supplied to us by the Colonial Office:

1. Medical appointments are from time to time filled up by the Colonial Office in the following Colonies: British Guiana, Jamaica, Trinidad, Windward Islands, Leeward Islands, British Honduras, Fiji, Sierra Leone, Gambia, Gold Coast, Lagos, Ceylon, Straits Settlements, Hong Kong, Cyprus, Gibraltar, St. Helena, and the Falkland Islands. In Ceylon and Jamaica vacancies are almost always filled locally by the appointment of qualified native candidates.

It is for the West Indies and the West African Colonies that medical officers are chiefly required.

2. The majority of the West Indian appointments involve medical charge of a district, including, as a rule, the care of a hospital, poor house, asylum, or other institution, and free attendance on the aged and children.

In West Africa the medical officers are also required to take charge of the hospital, public dispensary, lunatic asylum, or other Government institution at their respective stations, to supervise the sanitation of the district, to perform vaccination, and to give gratuitous attendance to all Government officials, and, in most cases, the families of such officials also.

N.B.—Passage money on first appointment and leave of absence on half-pay (in case of sickness, or after six years' service, if the medical officer has given satisfaction in the discharge of his duties), are granted to medical officers in the cases specified in the Colonial Regulations; and those serving in West Africa are allowed six months' leave, with full pay and free passages home and out again, after every twelve or fifteen months of continuous residential service. With regard to pension, medical officers are usually on the same footing as other Government servants; but in cases where private practice is allowed, the rule is that they are not entitled to pension, except in West Africa.

3. The following is a short account of the appointments in the separate Colonies:

British Guiana.—Forty-five appointments. Candidates must have held for at least six months a resident medical appointment in some public institution. Officers are appointed on two years' probation as supernumeraries, and are paid a salary at the rate of £300 per annum, with quarters, without the right to private practice. Supernumerary officers, married or single, who obtain leave to reside out of the quarters provided for them, will not be entitled to lodging allowance. After serving for two years, if appointed to the permanent staff, the officer will receive £400 per annum, rising by increments of £25 annually up to £700 per annum. A Government medical officer on being appointed to a district, and a supernumerary on being appointed to act in charge of a district, will receive a salary of £500 per annum, but will not receive any increments thereto until entitled to such increments by length of actual service. Every medical officer appointed to a district, or to act in charge of a district, will receive a travelling allowance at a rate varying from £100 to £150 per annum, as the extent of the district may require. He is allowed private practice. No more than £30 is allowed for passage money on first appointment. There is a Widows' and Orphans' Fund in the Colony, to which all Government servants are compelled to subscribe at the rate of 4 per cent. on their salaries.

Jamaica.—The appointments, 56 in number, are mainly district appointments with private practice allowed; the salary paid by Government varies from £150 to £250 per annum, and in most cases is £200. New comers are, in some cases, attached for a while to the public hospital in Kingston, and given an allowance at the rate of £200 per annum, but not permitted to undertake private practice. No pension is given, but there is a Civil Service Widows' and Orphans' Fund established by law, to which all medical officers are obliged to subscribe at the rate of 4 per cent. on their salaries.

Trinidad and Tobago.—In Trinidad there are 32 appointments. Officers are appointed in the first instance on two years' probation as supernumeraries. They will receive a salary of £250 per annum, with furnished quarters, and are usually attached to the Government Hospital; the salary assigned to the district appointments, to which they are promoted as vacancies occur, is £300, which is increased to £400 and upwards by various allowances for horse, house, or otherwise; these posts carry the right to private practice; after every five years' service an officer is given an additional personal allowance at the rate of £50 per annum. All officers hereafter appointed are required to contribute 4 per cent. of their salaries to the Widows' and Orphans' Fund.

In the Island of Tobago there are three district appointments with a salary of £200 per annum attached.

Windward Islands (Grenada, St. Lucia, St. Vincent).—The twenty-two appointments are, with few exceptions, district appointments with the right to private practice attached; the salaries paid by Government vary from £200 to £400, with allowances in certain cases.

Leeward Islands (Antigua, St. Christopher and Nevis, Dominica, Montserrat, Virgin Islands).—The twenty-five appointments are of the same nature as in the Windward Islands. An officer when first sent out is not appointed to a particular colony, but to the service of the Leeward Islands with a salary of £200, and the Governor decides as to the district which is to be allotted to him. As a rule, £30 only is allowed for passage money. The medical officers receive fees for successful vaccinations, *post-mortem* examinations, attendance and giving evidence at courts of justice, certificates of lunacy, and in the larger islands for burial certificates. They are also allowed private practice.

British Honduras.—There are five medical appointments, in all of which private practice is allowed, if it does not interfere with the public duties of the officer; the pay is 720 dol-

[1] Intending applicants would do well to consult a memorandum prepared for the use of the Parliamentary Bills Committee of the British Medical Association, and published in the British Medical Journal on April 23rd, 1892.

lars. The Colonial Surgeon and District Surgeon are public vaccinators, and as such receive a fee for every successful case. Four of the medical officers are also district magistrates, and receive an additional 720 dollars in the latter capacity. Unless they already possess a diploma of public health, medical officers before they join the colony are liable to be required to undergo a course of instruction at a laboratory of public health or analogous institution.

Fiji.—There are at present eight medical officers, of whom the senior medical officer receives £600 per annum, the others receiving £300 per annum with quarters, or £50 house allowance, at the option of the Government.

District medical officers receive, in addition, capitation fees upon all the indentured labourers in their respective districts. These amount, usually, to sums ranging between £60 and £150 per annum. Government medical officers are entitled to the private practice of their profession in all districts, on the understanding that their official duties are not made subservient to it.

Sierra Leone.—There are three Government medical officers, who are all allowed to take private practice. The pay of the Colonial Surgeon is £500 a year. One Assistant Colonial Surgeon receives £300, and the other £250. The senior is in charge of the lunatic asylum and the incurable and small-pox hospitals at Kissy, and is stationed in Freetown. The other is stationed in Sherbro. Quarters are not provided.

Gambia.—There are two medical officers, paid respectively £400 and £300 per annum, and allowed private practice. Quarters are provided or an allowance in lieu thereof.

Gold Coast.—The pay of the Chief Medical Officer is £800, rising to £1,000 by £50 per annum, with consultation practice only. The Colonial Surgeon, the next officer, receives £600 with annual increments of £25 to £700 and there are two Assistant Colonial Surgeons receiving £500 with annual increments of £25 up to £600. The other Assistant Colonial Surgeons (sixteen in number) are paid at the rate of £350 per annum for three years. After three years if the officer has performed his duties in a satisfactory manner and is continued in his appointment, the salary will be increased to £400 rising by annual increments of £20 to £500. Private practice is allowed, but there is very little to be had, and it cannot be counted upon, as the medical officers are liable to frequent change of station. Free quarters are provided. It is not considered desirable that anyone under 25 should be appointed to the medical department of the Gold Coast.

Lagos.—The pay of the Colonial Surgeon is £500 per annum, and he also receives £100 as Health Officer. The senior Assistant Colonial Surgeon receives a salary of £400 a year, rising by annual increments of £20 to £500. Three other Assistant Colonial Surgeons receive £350, rising by triennial increments of £25 to £400. There are two other native Assistant Colonial Surgeons at £240, rising by triennial increments of £25 to £300 per annum. Private practice is allowed in all cases. Free quarters, or allowances in lieu thereof, are granted to the Colonial Surgeon and to the European Assistant Colonial Surgeon.

N.B.—The special rules as to leave and pension in the case of Government servants on the West Coast of Africa apply also to medical officers.

Ceylon.—The pay of the (35) Sub-assistant Colonial Surgeons and (10) Deputy Colonial Surgeons and (8) other subordinate medical officers who are mainly recruited from among gentlemen born in the island, but possessing British diplomas, is at the rate of from Rs. 600 to Rs. 1,500 per annum. The (22) Assistant Colonial Surgeons are paid at a rate of from Rs. 3,000 to Rs. 5,000 per annum, and the (4) Colonial Surgeons and (3) other superior medical officers at a rate of from Rs. 5,000 to Rs. 8,000 per annum. The Principal Civil Medical Officer receives Rs. 12,000 per annum. Private practice is allowed to the subordinate officers, but the Colonial Surgeons may take only consultation practice.

Straits Settlements.—The pay of the (11) different medical appointments is not uniform in value, but the salary of a Colonial Surgeon varies from 1,800 to 6,000 dollars per annum, with quarters in some cases, private practice being generally not allowed.

Hong Kong.—The pay of the (5) Government medical appointments varies from 2,400 to 4,800 dollars per annum, besides rent and carriage allowances in some cases, but private practice is in general not allowed.

N.B.—There are Widows' and Orphans' Pension Funds in Ceylon, Straits Settlements, and Hong Kong, to which all permanent Government servants are called upon to subscribe at the rate of 4 per cent. on their salaries.

Gibraltar.—There is a Surgeon of the Colonial Hospital receiving 7,500 pesetas (peseta=about 9½d.) and an Assistant Surgeon receiving 2,625 pesetas, with quarters and private practice. The Surgeon of the Hospital, assisting Surgeon of the civil prison and lunatic asylum, receives 1,500 pesetas; the Assistant Surgeon is also Police Surgeon (1,250 pesetas), Port Surgeon (3,000 pesetas), Public Vaccinator (625 pesetas), and has private practice.

Cyprus.—There is a Chief Medical Officer, paid at the rate of £[illegible] per annum, and two District Medical Officers, paid at the rate of £250 per annum, all enjoying private practice; these are the only medical appointments in the island which are open to English candidates.

St. Helena.—The Colonial Surgeon receives £200 per annum, and £30 horse allowance; private practice is allowed.

Falkland Islands.—There are two appointments, one of which is paid at the rate of £300 per annum, and the other at the rate of £200 per annum. Private practice is allowed in both cases.

4. All applicants for ordinary medical employment in these Colonies must be between the ages of 23 and 30, and must be doubly qualified; preference will be given to those who have held hospital appointments as house-physicians and house-surgeons: certificates of moral character and of sobriety will be required, and every officer before being appointed will be medically examined by one of the consulting physicians of the Colonial Office, Dr. Gage Brown, 88, Sloane Street, London, S.W.; Sir D. S. Maclagan, 28, Heriot Row, Edinburgh; and Dr. Hawtrey Benson, 57, Fitzwilliam Square, Dublin.

5. In addition to the ordinary medical appointments in these Colonies vacancies also occasionally, though very rarely, occur for which specialists are required, as, for example, to take charge of a lunatic asylum: and the particulars of chief medical officer in some of the larger Colonies have not been given, as the headship of the Medical Department in such Colonies, requiring administrative as well as professional qualifications, is not reserved to the ordinary medical staff of the same Colony, but is often filled up directly by transfer, and sometimes from outside the service.

6. Applications for medical employment in these Colonies from persons in the United Kingdom must be addressed to the Private Secretary, Colonial Office, Downing Street, S.W., during the month of April in each year, and notices to that effect will be posted up early in the year in the leading hospitals and medical schools of Great Britain and Ireland. Out of the total number so applying a list of candidates will be made, who will be eligible to fill any vacancies which may occur during the year, but no promise whatever can be held out that candidates will eventually receive an appointment. It is not possible to forecast either the number or the nature of the vacancies which will arise in the course of any given year, and it is not expected that candidates should hold themselves in readiness by refraining from other employment, as usually, when selected for an appointment, they can be allowed sufficient time to make their preparations and to terminate their existing employment.

In the course of the year April, 1887, to April 1888, there were in all 15 vacancies to which appointments were made from this country. They occurred in the following Colonies: British Guiana, British Honduras, Falklands, Gambia, Gold Coast, Hong Kong, Straits Settlements. In the course of the year 1888-89 there were 8 vacancies (British Guiana, Fiji, Gold Coast, Straits Settlements, Trinidad). In 1889-90 there were 12 vacancies (British Guiana, Fiji, Gibraltar, Gold Coast, Hong Kong, Lagos, St. Helena). In the year 1890-91 there were 17 vacancies (British Guiana, British Honduras, Gambia, Gold Coast, Leeward Islands, Straits Settlements, Windward Islands). In the year 1891-92 there were 12 vacancies (British Guiana, British Honduras, Fiji, Gold Coast, Leeward Islands, Windward Islands). In the year 1892-93 there were 18 vacancies (British Guiana, British Honduras, Fiji, Gold Coast, Jamaica, Leeward Islands,

Trinidad). In the year 1893-94 there were 18 vacancies (British Guiana, British Honduras, Falklands, Fiji, Gambia, Gold Coast, Jamaica, Lagos, Leeward Islands, Straits Settlements, Trinidad). In the year 1894-95 there were 14 vacancies (British Guiana, Cyprus, Fiji, Gold Coast, Lagos, Leeward Islands, Windward Islands).

The list of candidates applying in April last comprised about 80 names.

BRITISH PRACTITIONERS ABROAD.

FOREIGN practitioners can practise medicine in Great Britain without restriction, but unless registered cannot recover their fees by legal process nor give medical evidence in courts of law, nor hold public medical offices. Under the Medical Act of 1886 the General Medical Council may recognise equivalent qualifications granted in countries which treat this country with reciprocity; after certain formalities such qualifications would be registrable. At present, however, no foreign countries have arranged to treat this country with reciprocity, and as a rule British practitioners are required in European countries to pass an examination of greater or less severity. The following list contains particulars as to the regulations of the British Colonies as well as of foreign countries:

BRITISH COLONIES AND DEPENDENCIES.

AUSTRALASIA

Australia.—The applicant must be registered by the Medical Board of the colony in which he proposes to practise. He may be required to prove the genuineness and authenticity of his diplomas.

New Zealand.—Certain legal formalities must be gone through, but there is no examination.

Tasmania.—A diploma must be verified by the Medical Examining Board.

DOMINION OF CANADA.

Except in British Columbia and Ontario it is necessary only to register British diplomas, but evidence of authenticity and genuineness may be required. For this registration a fee is charged, and in some cases there is also an annual tax. In British Columbia the Medical Council of the colony holds an examination, and there is a fee of 100 dollars; in Ontario an examination is held by the College of Physicians and Surgeons of Toronto.

SOUTH AFRICA.

There is a Colonial Medical Council both in the Cape of Good Hope and Natal. British diplomas are registrable after inspection and verification.

By a resolution of the Executive Council, ratified by the Volksraad, every medical practitioner, dentist, and apothecary must be registered and licensed before he can be permitted to practise within the limits of the South African Republic. The section of the Act which applies is stringent, and runs as follows: "It shall not be allowed to any person in this Republic to have himself advertised as Medical Practitioner, Surgeon, Dentist, Apothecary, Chemist, or Druggist unless his name appears in the Register of the Medical Board and his admission fee has been paid. Contravention of this rule will be punished with a fine of from £10 to £100, or in case of nonpayment with imprisonment with or without hard labour for a period of from one to six months." Also, "Any admitted Medical Doctor, Surgeon or Dentist, Apothecary, Chemist or druggist shall pay the following licence during the time they carry on their profession within the Republic: Doctors, for a year, £25, for nine months £20, for six months £15, and for three months £10; Apothecaries, for a year, £10, for nine months £8, for six months £6, and for three months £4."

WEST INDIES.

British qualifications are everywhere recognised. In some instances registration is necessary, for which a small fee is charged.

EUROPE.

Austria.—It is necessary to pass the State examination, or obtain a University Degree in Medicine, and to become an Austrian subject. Exemptions may be granted under very special circumstances.

Belgium.—Upon the advice of a jury which has a right to grant the diploma of Doctor, the Government can give permission to practise medicine to a foreign subject who possesses a diploma in Medicine, Surgery and Midwifery.

Denmark.—Foreigners are required to pass the State examination.

France.—Under the new law the degree of M.D. obtained by examination before a French faculty indispensable. This law has recently been extended to Algiers. The examinations are precisely the same as those which have to be passed by French students, but holders of British diplomas may obtain exemption from portions of the curriculum and examination at the discretion of the Minister of Public Instruction. In no case, however, shall the exemption extend to more than three of the required examinations. The examinations may be passed before any one of the following Medical Faculties: Paris, Montpellier, Nancy, Bordeaux, Lyons, Lille, or Toulouse. Before he is admitted to examination the candidate must submit his qualifications, and whatever other degrees or certificates he may possess, to the Minister of Public Instruction, stating the Faculty before which he wishes to present himself. The examinations are conducted in the French language. Fees to the amount of £61 must be paid.

Ireland.—Foreigners are required to pass the State examination.

Germany.—Any person may practise medicine, but if he has not passed the State Examination he does so at his own peril, and is liable to fine and imprisonment if convicted of a mistake. A lad who intends to enter the profession of medicine must attend a gymnasium (upper school), and pass an examination in general knowledge—Latin, Greek, German, French, divinity, mathematics, physics, history, and geography. After passing this examination the student may be accepted as an ordinary full student of a university. At the end of the fourth semester (second year) he can pass the first State Examination (*Tentamen Physicum*), which embraces anatomy, physiology and physics, chemistry, botany and zoology. In the tenth semester he may pass the Final State Examination. In some universities the degree of M.D. can be obtained at the end of the eighth semester (fourth year)—that is, before the *Staats* Examen can be passed. The degree of M.D. does not in itself confer a licence to practise in the German Empire. We believe that the Universities of Leipsic, Göttingen, Heidelberg, and some others do not grant the degree of M.D. except to persons who have passed the State examination. The fee for the *Tentamen Physicum* is £1 16s.; for the final State Examination £4 6s. The fee to the university for the M.D. degree varies between £5 and £25.

Greece.—A State examination must be passed, but graduates of foreign schools may take their examination in French or English.

Italy.—A foreigner must (a) obtain an authorisation (*abilitazione*) from one of the Royal Universities of Italy; or (b) if he desire to practise only among foreigners he is at liberty to do so.

Monaco.—The following British qualifications are, for the purposes of medical practice in the Principality of Monaco, considered equivalent to the French diploma of Doctor of Medicine: The degree of Doctor of Medicine, of the universities of "the United Kingdom of Great Britain," and the diplomas of Fellow of the Royal Colleges of Surgeons and Physicians of London, Edinburgh, Dublin, and of the Faculty of Physicians and Surgeons of Glasgow. Every application for leave to practise must be accompanied by the diplomas of the applicant or by copies of those documents certified as correct either by a consul of the Principality or by the Mayor of Monaco. The applicants must enter into an undertaking to live in the Principality and to practise their profession during the whole or part of the months of May, June, July, August, September, and October, agreeably to Article 1 of the Ordinance of May 29th, 1894. Only those who send in their applications in time will be included in the official list, which is to be drawn up and distributed at the beginning of each month to all hotels and boarding houses, where it will be posted up in a conspicuous place. This list will contain the name and nationality of the practitioners and the nature and source of their qualifications.

Portugal.—The State examination must be passed.

Roumania.—A State examination must be passed (*sind voce*).

Russia.—The State examination must be passed, but if the applicant possess the degree of M.D. from a university of high repute, the Minister of Education may give an authorisation after requiring the candidate to compose and defend a dissertation.

Norway.—The State examination must be passed.

Spain.—The State examination must be passed, but exemptions are sometimes granted on application through the British Ambassador. A licence costing from £1 to £24 must be taken out. This regulation applies to Spanish colonies (Canary Islands, etc.).

Sweden.—The State examination must be passed.

Switzerland.—A qualified English practitioner desiring to practise in Switzerland, even if he desire to practise only among his own countrymen, is required to pass the Federal examination in that country. The degree of Doctor of Medicine does not give the right to practise. The Federal examination may be passed at Basle, Zürich, or Berne in German, and at Geneva or Lausanne in French. The applicant is advised to obtain from one of his teachers in this country an introduction to a professor at the university at which he proposes to pass the examination. His proper course would be to call upon the Rector of the university. We are informed that every information would be afforded, and that no difficulties are placed in the way of candidates. At the University of Zürich, the three examinations which it is necessary to pass are held as a rule at the following periods of the year. *First Examination*: End of January, and mid-September; *Second Examination*: end of January and mid September; *Third Examination*: beginning of January, end of May, and beginning of October. At Basle the next examinations are in October. At Geneva the examinations are held in the third week of October, and in the second week of July, at the opening and conclusion respectively of the winter and summer session. At Lausanne the examinations take place as follows: *First and Second Examinations*: April and October; *Final Examination*: February and March, and June and July.

Turkey.—An examination must be passed (fee, £4 16s.) at Constantinople.

SOUTH AMERICA.

Argentine Republic.—The applicant's diplomas must be verified by the Argentine Consul in this country (fee £2 2s.). This should be done before leaving this country. On arriving at Buenos Ayres the endorsement of the Argentine Consul in this country must be verified by the Argentine Foreign office. Three examinations must be passed in the University of Buenos Ayres or Cordova. First Examination: Anatomy with Dissections, Physiology, Pathology, Ophthalmology, and Gynæcology. Second Examination: Clinical and Operative Surgery, Histology, Materia Medica, and Mental Diseases. Third Examination: Clinical Medicine, Pathology, Midwifery, and Toxicology. The fee for examination is 50 dollars, half of which is retained in case of rejection. The examinations can be passed consecutively at a few short intervals or separately; a rejected candidate is not readmitted to examination until after the lapse of six months. The examination is conducted viva voce in Spanish. Temporary authorisations to practise for six months may be obtained from the governor of a province, and the applicant may utilise this time to improve his knowledge of Spanish. The regulations for graduates of Spanish Universities are less onerous.

Brazil.—A State examination must be passed which is conducted in Portuguese or French.

Chili.—The regulations resemble those in the Argentine Republic: examination by the University of Santiago.

Peru.—An examination must be passed before the University of Lima; it is conducted in Spanish.

Uruguay.—The conditions are similar to those in the Argentine Republic; examination by the University of Monte Video.

NORTH AMERICA.

United States.—The law differs in the different States and Territories, and the regulations in some of them are subject to variations. The following, however, be taken as approximately correct:

A. No regulations or inoperative.

[illegible]	Kansas	Ohio
District of Columbia	Maine	Rhode Island
Indian Territory:	Massachusetts	Utah
[illegible]		

B. Diploma to be registered with State or county officials.

Arizona	Idaho	Nebraska
Arkansas	Indiana	Nevada
Delaware	Michigan	Wyoming
Georgia		

C. Diploma to be endorsed by a college "in good standing," or by the State Medical Society, or by the State or Territorial Board of Examiners; or by the State Board of Health.

*California	Louisiana	Pennsylvania
*Colorado	Maryland	*South Dakota
*[illegible]	*Missouri	*Tennessee
*Indian Territory:	*Montana	*Texas
Choctaw Nation	New Hampshire	Vermont
Iowa	*New Mexico	*West Virginia
Kentucky	*Oregon	Wisconsin

* signifies that the applicant may be submitted to examination by the State or District Board of Medical Examiners.

D. Candidate is examined by State, Territorial, County, or District Board of Medical Examiners, or Board of Censors.

Alabama	Mississippi	North Dakota
Florida	New Jersey	South Carolina
Indian Territory:	New York	Virginia
Cherokee Nation	North Carolina	Washington
Minnesota		

Mexico.—No special requirements.

DENTAL SURGERY.

REGULATIONS OF THE GENERAL MEDICAL COUNCIL.

Candidates for a diploma in Dental Surgery are required to produce certificates of having been engaged during four years in professional studies, and of having received three years' instruction in Mechanical Dentistry from a registered practioner. Two years' *bonâ fide* apprenticeship with a registered dental practitioner, after being registered as a dental student, may be counted as two of the four years of professional study. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the dental student, either before or after his registration as a student; but no year of such mechanical instruction shall be counted as one of the four years of professional study unless taken after registration.

A *Register of Dental Students* is kept by the Registrar of the General Medical Council, 299, Oxford Street, London.

Preliminary Education.—Dental students are subject to the same regulations as regards preliminary education as medical students. (This does not apply to dental students who were apprenticed or had commenced attendance upon professional lectures before July 22nd, 1878.)

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Licence in Dental Surgery.

The candidate must fulfil the conditions of the regulations of the General Medical Council in regard to registration, and must pass through the following curriculum:

(1) Instruction in Chemistry and Materia Medica, which may be attended before registration. (2) Attendance at a recognised medical school on (*a*) Anatomy (one winter session) and Dissections (twelve months), (*b*) Physiology (six months), and Practical Physiology (three months); (*c*) Medicine (six months), Surgery (six months), and Clinical Surgery (two winter sessions). (3) Attendance at a recognised school for two courses of lectures upon each of the following subjects: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one course of lectures on Metallurgy, by Lecturers recognised by this College. Students are required to attend examinations which are held in the several classes, and to spend not less than three years in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent practitioner, or under the direction of the Superintendent of the Mechanical Department of a recognised Dental Hospital where arrangements for teaching are satisfactory to the Board of Examiners. In the cases of qualified Surgeons evidence of a period of not less than two instead of three years of such instruction will be sufficient. This instruction may be taken prior to the date of registration as a dental student. Candidates must also produce evidence of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of Dental Surgery during the period of two years, and of having attained the age of 21 years.

Examination.—The examination, which is held in May and November, comprises the following three parts:—

Written.—General Anatomy and Physiology, General Pathology and Surgery, Dental Anatomy and Physiology, and Dental Pathology and Surgery.

Practical.—(*a*) On the treatment of Dental Caries. Candidates may be required to prepare and fill cavities with gold or plastic filling or material, or to do any other operation in Dental Surgery (candidates must provide their own instruments). (*b*) On the mechanical and surgical treatment of the various irregularities of children's teeth. (*c*) On Mechanical Dentistry.

Oral.—The several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc.

Special Exemptions.—Candidates who have passed the Second Examination of the Examining Board in England, or who shall produce evidence of having passed the examination in Anatomy and Physiology required for the Licence in Surgery of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or an examination in Anatomy and Physiology required for a degree in Medicine or Surgery at a University in the United Kingdom, will be exempt from re-examination in those subjects. Candidates who are Members of the College, or who have passed the Examination in Surgery of the Examining Board in England, or who shall produce evidence of having passed the Examination in Surgery for the Licence in Surgery of the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, or an Examination in Surgery for a Degree in Medicine or Surgery at a University in the United Kingdom, will be exempt from re-examination in General Surgery and Pathology.

Fee.—The fee for the Diploma is £10 10s. over and above stamp duty. Further particulars may be obtained on application to the Secretary, Examination Hall, Victoria Embankment, London, W.C.

THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

Licence in Dental Surgery.

The candidate must fulfil the conditions of the regulations of the General Medical Council (see above); and the regulations as to curriculum are generally the same as those of the Royal College of Surgeons of England.

Examinations.—First: Anatomy, Chemistry, and Physiology (lectures on these subjects must have been attended). *Second:* Surgery, Medicine, Therapeutics, and the special subjects of Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics.

Special Exemptions.—Candidates who have passed the corresponding examinations for the Triple Qualification will be exempt from the first dental examination, and will have the advantage of being admissible either to the final dental examination or to the final examination for the Triple Qualification, or to both. But the first dental examination will not be held as equivalent to the Triple examinations, and will admit to the final dental examination only. Candidates who are Licentiates of this College, or who may be registered medical practitioners, will require to produce certificates of attendance on the special subjects only, and will be examined in these only for the Dental diploma. Any candidates who shall produce satisfactory evidence of having passed in any of the subjects of the first dental examination before any Dental or Surgical Licensing Board recognised by the Royal College of Surgeons of Edinburgh, will be exempt from examination in such subject or subjects; but no examination will be recognised as giving exemption unless it is coextensive in its scope with the examination of this College, and is the only or final examination on the subject or subjects required by the Board at which it was passed.

Fees.—The fee for the diploma is £10 10s.

A copy of regulations, giving a list of preliminary examinations recognised for this, as well as of the subjects of the professional examinations, may be obtained from James Robertson, Esq., Clerk to the Royal College of Surgeons, at No. 1, George Square, Edinburgh.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

The regulations as to certificates, curriculum, number of examinations, fees, and examinations are in effect similar to

those of the Royal College of Surgeons of Edinburgh. There is special provision for candidates who intend to qualify both under the Medical and the Dentists' Act, and there is an examination in Practical Dentistry conducted in a dental hospital, and also a practical examination in Mechanical Dentistry.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

LICENCE IN DENTISTRY.

Candidates are required to pass three examinations, namely: Preliminary (in General Education), Primary Dental, and Final Dental.

I.—PRELIMINARY EXAMINATION.

All examinations in General Education recognised by the General Medical Council are accepted by the College. Preliminary Examinations are held conjointly by the Royal Colleges of Physicians and Surgeons. A syllabus can be obtained on application to the Registrar.

II.—PRIMARY DENTAL EXAMINATION.

Every candidate is required to produce evidence: (1) Of having passed a recognised Preliminary Examination, and of having been registered as a medical or dental student by the General Medical Council; (2) of having, subsequently to registration as a dental or medical student, attended at a recognised medical school (*a*) one course (six months) lectures on Practical Anatomy, including Dental Anatomy; (*b*) two courses (six months each) Demonstrations and Dissections; the certificate must include a statement that the candidate has dissected the head and neck at least three times; (*c*) one course (six months) lectures on Chemistry; (*d*) one course (six months) lectures on Physiology, including Dental Physiology; (*e*) one course (three months) lectures on Materia Medica; (*f*) one course (six months) lectures on Surgery; (*g*) one course (six months) lectures on Medicine; (*h*) one course (three months) Practical Chemistry, including Metallurgy; (*i*) one course (three months) Practical Physiology and Histology, including Dental Physiology and Histology, human and comparative; (3) of having attended clinical instruction at a recognised general hospital for one year. The subjects of examination are: Physics, Chemistry (including Metallurgy), Anatomy, Physiology and Histology, and Surgery. Candidates who have passed in Chemistry and Physics at a First Professional Examination under the Conjoint Board with the Royal College of Physicians in Ireland, or with the Apothecaries' Hall, or an equivalent examination recognised by the College, are exempted from examination in these subjects at the Primary Dental Examination. There will be practical examinations in Physiology and Histology and in Chemistry and Metallurgy.

III. FINAL EXAMINATION.

Candidates must produce evidence of having passed the Primary Dental Examination of this College, or the Third Professional Examination under the Conjoint Board with the Royal College of Physicians in Ireland, or with the Apothecaries' Hall, or an equivalent examination recognised by the College. Candidates are required to produce certificates of having attended subsequent to registration as a Dental or Medical Student: (1) The following courses of Lectures recognised by the College, Dental Surgery and Pathology (two courses), Dental Mechanics (two courses); (2) for two years the practice of a Dental Hospital recognised by the College, or of the Dental Department of a General Hospital so recognised; (3) of having been engaged during four years in Professional Studies; (4)[1] of having received three years' instruction in Mechanical Dentistry from a registered dentist. Exemptions: Candidates holding a diploma in Surgery shall be admissible to the Final Dental Examination on producing certificates of having attended (1) one course of Lectures on Dental Surgery and Pathology; (2) one course of Lectures on Dental Mechanics; (3) for one year the practice of a Dental Hospital recognised by the College, or of the Dental Department of a General Hospital so recognised, where such attendance has been subsequent to the date of diploma. This remission (3) has been made on the understanding that the Surgeon devotes his whole time to Dental work; (4) of having been engaged during a period of not less than two years in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a registered dentist. Candidates are examined in Dental Surgery, theoretical (including Dental Pathology), clinical, and operative; Dental Mechanics, theoretical, clinical, and practical (including the metallurgy of the workshop). Candidates must pass in all the subjects at the same time.

[1] The three years' instruction in Mechanical Dentistry, or any part of them, may be taken by the Dental Student, either before or after his registration as a student, but no year of such instruction in Mechanical Dentistry shall be counted as one of the four years of professional study unless taken after registration. One year's *bond fide* instruction from a registered dentist after being registered as a Dental Student may be counted as one of the four years of professional study.

FEES.

Primary Dental Examination, £10 10s.; if rejected £5 5s. *Final Dental Examination.*—Candidates holding L.R.C.S.I., or students who have passed Primary Dental, or Third Professional Examination of the College, £10 10s.; Re-examination, £5 5s. Fees for Final Examination of all other candidates, £26 5s. Re-examination, £10 10s. Extra fee for Special Examination, £5 5s. Fees are not returned to candidates who may fail to present themselves without having given two days' previous notice to the Registrar, or who may have been rejected. A rejected candidate will not be again admitted to Examination until after a period of three months.

Candidates seeking a Special or Supplemental Examination must make application to the Council of the Royal College of Surgeons (showing special cause), and, if admitted thereto, must pay £5 5s. in addition to the fees of the examination which they seek.

Age and Moral Character.—The Licence in Dentistry is not conferred on any candidate under the age of 21 years, and unless he be of good moral character.

Examinations for the Licence in Dentistry sine Curriculo.—The Council has power to admit to examination, *sine curriculo*, candidates whose names are on the *Dental Register* published under the direction of the General Medical Council, and who are unable to furnish the certificates required by the foregoing regulations, on presentation of the schedule of application as hereinafter set forth, accompanied by any certificate they may have of general or professional education, and by the required fee. The application of the candidate for examination shall be made on a form, obtainable at the College, setting forth a certificate, signed by two Fellows, Members, or Licentiates of a College of Surgeons, and by two Licentiates in Dental Surgery in the Royal College of Surgeons in Ireland (or two members of the British Dental Association, or of the Odontological Society) to the effect that applicant is of good moral character, has been for five years engaged in the practice of dentistry, is a registered Dentist, and has not during the past two years attracted business as a Dentist by advertising or other unbecoming practices. The applicant must also submit a declaration made by him before a magistrate to the effect that the applicant has not during the two years preceding the date of such declaration attracted business as a Dentist by advertising or other unbecoming practices. The application must also contain a statement by the applicant subscribing to the terms of the declaration laid down for all candidates before receiving the diploma. The examination and fees for candidates *sine curriculo* are the same as for Final Dental Examinations of other candidates.

DENTAL SCHOOLS AND MEDICAL SCHOOLS HAVING SPECIAL DENTAL DEPARTMENTS.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, LONDON.

Students can attend lectures in the special subjects of the dental curriculum and practical work and dental hospital practice.

Appointments.—There are eight house-surgeons, and these appointments may be held by students as soon as they are qualified. Twelve senior dressers for extraction under anæsthetics, and eighteen junior dressers for ordinary extractions, are appointed every month.

Fee for two years' hospital practice required by the curriculum, including lecturer, £50 in one payment, or £52 10s. in two yearly instalments. The *Calendar*, containing further

particulars, may be obtained on application to the Dean, at the hospital, Leicester Square, London, W.C.

National Dental Hospital and College, London.

Students can attend lectures in the special subjects and dental hospital work required by the colleges.

Exhibition.—An entrance exhibition of the value of £15 is awarded at the commencement of each summer and winter session after an examination in Elementary Physiology (Functions of Respiration, Circulation, and Digestion), Osteology (Bones of the Head), Chemistry, and Dental Mechanics (Theoretical and Practical).

The usual medals and certificates are open for competition in the Class Examinations.

Appointments.—Dresserships in the extraction room are held for two months by twelve senior and twelve junior students of the hospital.

Fees.—Total fees for the special lectures and hospital practice required £31 10s. Information respecting the hospital practice and the college may be obtained from the Dean, who attends at the hospital, Great Portland Street, on Tuesday mornings.

Each student on entering the school passes through a preliminary course under the care of a demonstrator, and all the members of the staff take part in chair side teaching, and also give Special Demonstrations. Tutorial classes are held to prepare for the Final Examinations.

Guy's Hospital Dental School, London.

The buildings for the purposes of the dental school have recently been enlarged, and the arrangements for teaching perfected, so that students can now obtain a complete curriculum.

Appointments.—The following appointments are allotted to dental students: Three dental house-surgeoncies; two assistant dental house surgeoncies; six demonstratorships in the conservation room; two curatorships of the laboratory; dresserships in the extraction rooms; dresserships in the conservation room; an assistant demonstrator in dental microscopy.

Fees.—The fee for the two years' hospital practice, required by the Royal College of Surgeons for the L.D.S., including lectures, is £50. Dental students are also required to receive two years' instruction in a general hospital, the fee for which in Guy's Hospital Medical School is £60, with a reduction of 12 guineas in the case of those students who have obtained recognised certificates of instruction in Chemistry, Practical Chemistry, and Materia Medica. Further particulars, with prospectus, may be obtained from the Dean, at Guy's Hospital.

Mason College, Birmingham.

The teaching of Dentistry is undertaken by the Mason College, acting in association with the Birmingham Dental Hospital and the Birmingham Clinical Board, so that students may fully qualify themselves for the dental diploma of the Royal Colleges. The college buildings contain a special dental museum and a dental laboratory. The Dental Hospital is situated near the College.

Entrance Scholarship.—A scholarship of £15 is open to competition by students entering in October.

Fees.—Hospital, Dental, Composition, £12 12s.; Non composition, £14 14s; General Surgical Hospital, two winters, £10 10s. A Composition Fee of £50, payable in one sum—or in two sums—namely, £25 at the beginning of the first year, and £25 at the beginning of the second year of studentship—admits to the full curriculum required for the Dental Diploma. Students wishing to take the diplomas of M.R.C.S. and L.R.C.P. in addition to a dental qualification pay a Composition Fee of £75, payable in two annual instalments of £30 and one of £15.

Owens College, Manchester.

Arrangements have been made for dental students to attend the hospital practice at the Manchester Royal Infirmary and the practice at the Victoria Dental Hospital. Lectures on the special subjects will be given in the College.

Fees.—For course of Metallurgy, £3 3s.; other lectures, one course, £3 3s.; two courses, £4 4s. Dental practice for two years at the Manchester Royal Infirmary, £10 10s.; at the Victoria Dental Hospital at Manchester, £12 12s., paid in advance, or £8 8s. for the first year, and £5 5s. for the second year.

Further particulars can be obtained from the Dean of the Dental School, Victoria Dental Hospital, Manchester.

University College, Liverpool.

There is a school of Dental Surgery in connection with the medical faculty. The curriculum includes Lectures and Demonstrations on all the subjects required for the Licences in Dental Surgery of the Royal Colleges of Surgeons of London, Edinburgh, and Dublin, and of the Faculty of Physicians and Surgeons of Glasgow. In addition Laboratory courses are conducted in Dental Histology and Dental Pathology.

Practical instruction in Dentistry is given at the Dental Hospital in Mount Pleasant.

Fees.—A payment of £50 on entrance, or in two equal instalments (one-half on entrance and the remainder within twelve months), entitles the student to attendance on all lectures and demonstrations (medical and special) required for the Dental Licence of the College of Surgeons. The fee for two winters' surgical practice is £10 10s., and for two years' dental hospital practice £12 12s. The total expenditure for the whole curriculum is £73 2s.

Further information can be obtained from the Dean of the Medical Faculty, Professor Paterson, University College, Liverpool.

The Incorporated Edinburgh Dental Hospital and School.

The following lectures are given in the School: Dental Anatomy and Physiology (winter); Dental Surgery and Pathology (summer); Mechanical Dentistry; Practical Demonstrations; Dental Materia Medica; Dental Metallurgy; Gold Filling; Dental Histology.

Fees.—The fee to Hospital Practice, including one course of Demonstrations in Gold Filling, is £15 15s.; one course of Dental Anatomy, Dental Surgery, and Mechanical Dentistry, £9 15s.

Further information can be obtained from the Dean at the School, 31, Chambers Street, Edinburgh.

Glasgow Royal Infirmary Dental Department.

The following course in the curriculum can be taken at St. Mungo's College: Anatomy, six months; Practical Anatomy, nine months; Physiology, six months; Chemistry, six months; Practical Chemistry, with Metallurgy, three months; Surgery, six months; Medicine, six months; Materia Medica, three months; Clinical Surgery, six months; Dental Surgery, six months; and attendance for two years on the Dental Department of the hospital. The attendance on the dental clinic is free to students of the hospital; to dental students, one year, £5 5s.; perpetual, £10 10s. Lectures on Dental Surgery, £2 2s.

Glasgow: Anderson's College Medical School.

Dental Curriculum.—Students studying with a view to the Dental Diploma can obtain instruction in the following subjects: Anatomy, Chemistry, Physiology, Surgery, Practice of Medicine, and Materia Medica. The special Dental Courses may be obtained at the Dental School.

Devon and Exeter Dental Hospital.

Attendance at the practice of this hospital is recognised by the Royal College of Surgeons of England as qualifying for its Dental diploma. Pupils of any member of the staff, or other recognised practitioner (being a Life or Annual Governor), are permitted to attend the practice of the hospital, subject to the approval of the Medical Subcommittee, on payment of £5 5s. annually to the funds of the Institution. The honorary secretary is Mr. Henry Yeo.

CHANGES IN THE MEDICAL SCHOOLS.

The following are the principal changes in the staff and teaching arrangements that have taken place in the Medical Schools and Hospitals during the past year.

Charing Cross Hospital.

Dr. Galloway has been appointed Physician for the Treatment of Diseases of the Skin in place of Dr. Sangster, appointed Consulting Physician in the same department. Dr. Lubbock not having sought re-election as Assistant Physician, Dr. Arkle was appointed to succeed him, Dr. William Hunter succeeding Dr. Arkle as Pathologist and Curator of the Museum. Drs. Arkle and Galloway have succeeded Drs. Willcocks and Murray as Lecturers on Practical Medicine. Dr. Percy Smith has been appointed Lecturer on Psychological Medicine in place of the late Dr. Hack Tuke. Dr. Patrick Manson has been appointed Lecturer on Tropical Diseases. Dr. H. P. Pollard has been re-elected Lecturer on Biology in place of Mr. Chalmers Mitchell, resigned. Dr. Mott, having been appointed Pathologist to the London County Asylums, was obliged to resign the Chair of Physiology, to which Dr. M. S. Pembrey, late Demonstrator of Physiology in the University of Oxford, has been appointed. Dr. Mott, however, continues to hold the post of Assistant Physician.

A refreshment department has been opened in connection with the Students' Club.

Guy's Hospital.

Guy's has Hospital suffered a great loss by the death of Mr. Arthur Durham, who, though no longer on the active staff, was still connected with the hospital as Consulting Surgeon. Mr. Jacobson has resigned his Lectureship on Anatomy. The vacancy thus created has been filled by the appointment of Mr. Arbuthnot Lane; and other consequent changes have been the appointment of Mr. Dunn to be the Teacher of Operative Surgery, of Mr. Targett to be Demonstrator of Surgical Pathology, and of Mr. F. J. Steward to be one of the Demonstrators of Anatomy. Mr. W. C. G. Pakes has been appointed an Assistant Demonstrator of Bacteriology.

London Hospital Medical College.

At the London Hospital Dr. Percy Kidd has been appointed a Lecturer on Pathology. Dr. Leonard Hill, late Assistant Professor of Physiology in University College, London, has been appointed Joint Lecturer on Physiology. Mr. Barnard has been appointed Demonstrator of Practical Physiology in the place of Dr. Gregor Brodie, who has migrated to St. Thomas's. Dr. Arthur Keith has been appointed Senior Demonstrator of Anatomy, in place of Mr. Jonathan Hutchinson, junior. Dr. F. J. Smith has succeeded Dr. Galloway as Demonstrator of Materia Medica. Dr. Schorstein has been appointed one of the Pathologists, in place of Dr. Charlewood Turner. Mr. Hugh Candy has been appointed Lecturer in Organic Chemistry, and to take the Preliminary Scientific and Intermediate M.B. (University of London) classes in Chemistry and Physics.

As regards structural alterations, the department for the teaching of Practical Physiology has been extended to about double its former size. In the Museum considerable additions in furniture, cases, etc., have been made, from a fund bequeathed by an old student of the school, and called the Witherby Museum Fund.

London School of Medicine for Women.

Miss White, B.Sc.Lond., has resigned the post of Demonstrator of Physiology, in which she has been succeeded by Miss Ewart, B.Sc.Lond. Miss Helen Webb, M.B.Lond., has been appointed Demonstrator to the Gynæcological Class held for senior students of the school at the New Hospital for Women. Arrangements have been made with the sanction of the London County Council for Demonstrations in Mental Pathology to be given to students of the school by Dr. Mercier.

At the Royal Free Hospital the students' quarters have been enlarged and the operating theatre has been greatly improved. The wards have been repaired and repainted. A Throat and Ear Department has been opened under Mr. E. W. Roughton. The following further changes have taken place in the staff: Dr. J. Walter Carr has been appointed Medical Tutor, *vice* Dr. Calvert; Mr. E. W. Roughton has been appointed Surgical Tutor, *vice* Mr. W. H. Battle; Miss Aldrich Blake, M.D., B.S.Lond., takes the place of Dr. Silk as Anæsthetist; and Miss Appel, M.B., B.S.Lond., and Miss Hunter, L.S.A., have been appointed Assistants to the Anæsthetist.

Middlesex Hospital.

On the death of the Senior Surgeon, Mr. J. W. Hulke, Mr. Andrew Clark was promoted to be full Surgeon, Mr. Leopold Hudson being elected to the post of Assistant Surgeon. Dr. Pringle has resigned the post of Assistant Physician, and Dr. Francis Voelcker has been appointed to the resulting vacancy. In the Medical School Messrs. Arnold Lawson and Reginald Gladstone have been appointed Demonstrators of Anatomy, and Messrs. L. Milburn and E. Protheroe Smith Demonstrators of Physiology.

During the past year a new operating theatre, minor operating room, and accessory rooms, replete with every improvement for carrying out the aseptic system of surgery, have been opened.

St. Bartholomew's.

The chief changes in the staff during the past year are the appointment of a fifth Physician and the retirement of Mr. Henry Power as Ophthalmic Surgeon, a post which he had held for twenty-four years. The new Physician is Dr. Lauder Brunton, F.R.S., and the new Assistant Physician is Dr. Herringham. There is still a vacancy for another Assistant Physician. Mr. Power was succeeded by Mr. Vernon as Senior Ophthalmic Surgeon, and Mr. Jessop has succeeded Mr. Vernon as Junior Ophthalmic Surgeon. Dr. Kanthack has been appointed Pathologist and Bacteriologist to the hospital, and Mr. Edgar Willett has been elected an additional Anæsthetist. In the Medical School, Mr. H. J. Waring, M.S., has become Senior Demonstrator of Anatomy, and Mr. C. Bailey, M.S., has succeeded Mr. Waring as Junior Demonstrator. The ranks of the Assistant Demonstrators of Anatomy have been recruited by the election of Mr. A. N. Weir, F.R.C.S., Mr. P. Furnivall, F.R.C.S., and Mr. J. S. Sloane, M.B., F.R.C.S. Dr. H. M. Fletcher has succeeded Dr. Calvert as Assistant Demonstrator of Medicine, and Dr. Horton-Smith, Fellow of St. John's College, Cambridge, has been elected Assistant Demonstrator of Physiology. Mr. W. L. Brown, B.A., and Mr. T. J. Horder, B.Sc., are Assistant Demonstrators of Biology. In the Department of Public Health Dr. Waldo, M.O.H. for Southwark, has been appointed to assist Dr. Thorne Thorne, under the title of Tutor in Public Health. During the past summer Dr. Kanthack has conducted classes in Practical Chemical Pathology, and Dr. Edkins has been appointed to lecture on Advanced Chemical Physiology.

St. George's Hospital.

At St. George's, Mr. Rouse, late Senior Surgeon, has been appointed Consulting Surgeon; Mr. Clinton Dent has been appointed Surgeon; Mr. Herbert Allingham has been appointed Assistant Surgeon, and Mr. H. E. Grimsdale, Assistant Ophthalmic Surgeon. Dr. Patrick Manson has been appointed Lecturer on Tropical Diseases; and Dr. Alexander, Teacher of Clinical Lunacy. Dr. Ewart will lecture on Advanced Practical Medicine, and Drs. Penrose and Lee Dickinson have been appointed Lecturers on Practical Medicine. Mr. Cockburn has been appointed Demonstrator in Chemistry.

The school buildings have been fitted with the electric light, and lanterns have been arranged for demonstration purposes in the theatres. The biological laboratory has been extended, and a large number of anatomical models have been added. A new operating theatre and a new chapel for patients are in course of erection.

St. Mary's Hospital.

The following changes have taken place on the lecturing staff: Mr. A. P. Laurie, M.A., B.Sc., has been appointed Lecturer on Chemistry, in succession to the late Dr. Alder Wright, F.R.S.; Dr. T. B. Hyslop has been appointed Lecturer on Mental Diseases, in succession to Sir James Crichton Browne, F.R.S. The new out patients' department and dispensary in connection with St. Mary's Hospital, now in course of erection, will occupy the whole of the basement

floor of the new Clarence Wing. Near the entrance and in connection with the registration hall there is a waiting room for suspected fever cases, with separate exit. Each consulting room has two dressing rooms and a clerk's room attached. The consulting rooms are considerably larger than those in the present out-patients' department. The heating will be by open fireplaces in the consulting rooms, and hot water radiators, and the ventilation by means of open windows and skylights, and a system of descending flues and main channel under floors to an upcast shaft. Adjoining the dispensary is a large laboratory and drug store with a dispenser's room.

ST. THOMAS'S HOSPITAL.

By the death of Dr. J. S. Bristowe St. Thomas's has lost its Senior Consulting Physician. Mr. J. B. Lawford has been appointed Ophthalmic Surgeon and Lecturer on Diseases of the Eye. Dr. T. Gregor Brodie has been appointed Lecturer on Physiology and Practical Physiology in succession to Dr. Sherrington, and Messrs. S. W. F. Richardson and A. E. Russell Demonstrators of Physiology, in place of Mr. A. F. Stanley Kent, resigned. Dr. H. G. Turney has been appointed a Third Demonstrator of Morbid Anatomy. Mr. Robinson is associated with Mr. Makins in the direction of the Anatomy Classes for the Intermediate M.B. Examination of the University of London. Mr. J. H. Fisher has been appointed Junior Demonstrator of Anatomy and Demonstrator of Diseases of the Eye; Dr. A. W. Crossley, Demonstrator of Chemistry; and Mr. H. R. Le Sueur, B.Sc., Demonstrator of Physics. Mr. Shattock gives a short course of Practical Bacteriology in the summer session. Mr. E. C. Stabb has been appointed Chief Assistant in the Throat Department. Two additional Assistant House-Surgeons are now appointed every three months.

A Gymnasium has been fitted up in the basement of the new West Wing of the Medical School.

UNIVERSITY COLLEGE.

Dr. Bastian has resigned the Chair of Medicine, which has been filled by the appointment of Dr. F. T. Roberts. The vacancy in the Chair of Materia Medica, Therapeutics, and Pharmacology, caused by the transfer of Dr. Roberts to the Professorship of Medicine, has been filled by the appointment of Dr. J. Rose Bradford, F.R.S.

WESTMINSTER HOSPITAL.

By the death of Dr. Sturges the School has lost one of its chief clinical teachers and its treasurer. It has been decided to name one of the hospital wards after him, and a memorial is being raised by past and present members of the School, in which some of the Governors have joined. It is hoped that this will take the form of a prize or scholarship in medicine. In consequence of the death of Dr. Sturges the following appointments have been made: Dr. Potter, Treasurer; Dr. de Havilland Hall, Physician to the Hospital; Dr. Gossage, Assistant Physician; Dr. J. P. Parkinson, Medical Registrar. Mr. Spencer has succeeded Dr. de Havilland Hall in the Throat Department. Dr. Gossage has become Lecturer on Histology; Mr. A. H. Tubby has been appointed Assistant-Surgeon, and has been put in charge of the Orthopædic Department; he will give the Lectures on Minor Surgery and on Orthopædic Surgery. Mr. Brooksbank James has been during the past year Assistant Demonstrator of Anatomy, and Mr. R. N. Watson Demonstrator of Biology. In addition to his former munificent donation of £500 to the School funds, Mr. Fish has endowed an Annual Scholarship of £20 a year for five years, which will be awarded for proficiency in Pathology. The accommodation for clerks and dressers whilst on duty at the hospital is now undergoing improvement.

UNIVERSITY COLLEGE, LIVERPOOL.

New physiological and pathological laboratories are being erected, and the chemical laboratories and the anatomical department are being extended. The dissecting room and theatre have been provided with the electric light.

FIRTH COLLEGE, SHEFFIELD.

Dr. Harvey Littlejohn has been appointed Lecturer on Public Health, *vice* Dr. Sinclair White; Dr. Andrew Walker has been appointed Assistant Demonstrator of Practical Physiology; and Dr. Wilkinson and Dr. Somerville Demonstrators of Practical Pathology.

THE SCHOOLS OF SURGERY, DUBLIN.

The buildings have been reconstructed, the capacity of the dissecting room having been nearly trebled. The whole building is now lighted with the electric light.

ADELAIDE HOSPITAL, DUBLIN.

The following changes have taken place in the medical staff within the past year: Henry Head, M.D., has been elected Consulting Physician; Wallace Beatty, M.D., F.R.C.P.I., Physician; and J. Alfred Scott, M.D., F.R.C.S.I., Pathologist and Bacteriologist.

QUEEN'S COLLEGE, BELFAST.

At Queen's College, Belfast, Dr. J. Lorrain Smith has been appointed Lecturer in Pathology in succession to Dr. W. H. Barrett.

The erection of a new block of buildings for the accommodation of the departments of physiology and pathology has been commenced, and will be ready for occupation next spring. It will provide excellent suites of lecture rooms, laboratories, and practical class rooms. The movement for a Students' Union has proved very successful; arrangements for the erection of the building are almost completed and it is expected that it will be ready next spring.

ASSOCIATION INTELLIGENCE.

NOTICE OF LAST QUARTERLY MEETING FOR 1895.

ELECTION OF MEMBERS.

A MEETING of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—A meeting of this Branch will be held at the Swansea General Hospital on Thursday, September 12th, at 4 P.M.—D. ARTHUR DAVIES, M.B., Honorary co-Secretary, Northampton House, Swansea.

LITERARY NOTES.

THE first part of a new Dictionary of Therapeutics has been published by August Hirschwald of Berlin. The title is *Encyclopædie der Therapie*, and the work is edited by Professor Oscar Liebreich with the co-operation of Drs. M. Mendelssohn and A. Würzburg. The entire work will form three volumes, to be issued in nine parts, and completed within two years.

Messrs. J. and A. Churchill will shortly publish *Mental Physiology, especially in its Relation to Mental Disorders*, by Dr. Hyslop, Assistant Physician, Bethlem Royal Hospital; a second edition of Dr. E. H. Starling's *Elements of Human Physiology*; a third edition of Dr. Clowes and Mr. Coleman's *Quantitative Chemical Analysis*; a third edition of Mr. Jacobson's *Operations of Surgery*; and the second and concluding volume of Professor Reynolds Green's *Manual of Botany*, which deals with the classification and physiology of plants. Among other works in preparation, Messrs. Churchill also announce *A Handbook of Diseases of the Eye*, by Mr. Jessop, Ophthalmic Surgeon to St. Bartholomew's Hospital; *A Manual of Midwifery*, by Dr. Lewers, Obstetric Physician to the London Hospital; *A Student's Textbook of Mental Diseases*, by Dr. Percy Smith, Resident Physician and Medical Superintendent, Bethlem Royal Hospital; and a fifth edition of Dr. Lloyd Roberts's *Practice of Midwifery*.

Messrs. Longmans and Co. have in the press *The Life of Sir Henry Halford, Bart, G.C.H., M.D., F.R.S., President of the Royal College of Physicians, Physician to George III, George IV, William IV, and to Her Majesty Queen Victoria*, by William Munk, M.D., F.S.A., Fellow and late Vice-President of the Royal College of Physicians of London. The same firm have also in the press *The Life and Letters of George John Romanes, M.A., L.C.D., F.R.S.* The book, which is written and edited by Mrs. Romanes, contains correspondence between Romanes and Charles Darwin, and also many of Romanes's letters to scientific men and to private friends.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 7TH, 1895.

ALLEGED CHOLERA IN GRIMSBY.

Two fatal cases, which in their essential symptoms resembled cholera, have occurred in Grimsby, one patient being seized on Friday, August 30th, and dying the following day, seventeen hours after the commencement of the illness; the other being attacked early this week and dying on September 3rd. The former was a man who had been engaged in cleaning out the cholera vessel used in 1893; the latter was a woman who had no relations with the vessel or the man in question. But this was not the beginning of suspicion as to Grimsby. In the middle of last week the excess of diarrhœa there led the medical officer of the Local Government Board to seek Mr. Chaplin's instructions to send a medical inspector down there, and the inspector found two curious things. First, that at the commencement of the autumnal season the floating cholera hospital had been sold and had sailed away for Newcastle; and secondly, that when the notifications of diarrhœa multiplied by leaps and bounds, the Town Council immediately decided to stop such inconvenient information reaching them, and gave notice that diarrhœa was no longer to be notified. And we further believe that, owing to this extraordinary action, they hardly heard of the first case before it terminated fatally. Whether cholera is going to recrudesce in Grimsby or not this autumn the action of the Town Council is, as it was in 1893, most disquieting. In the meantime, Dr. Klein has not found bacteriological evidences as to the Asiatic disease in either case; but the Local Government Board have sent their inspector, Dr. Theodore Thomson, back again to Grimsby, and although the Town Council excluded the press from their last meeting, we believe they had the good sense to cancel their unfortunate resolution as to diarrhœa notification.

THE CHOLERA.

Some further cases of cholera are reported from Tarnopol, in Galicia. By order of the Russian Minister of the Interior the town of Vladivostok has been declared infected with cholera. According to official returns, 2,025 cases of cholera and 718 deaths from the disease occurred in the government of Volhynia between July 11th and August 17th. In the town of Aleppo, between August 26th and 27th, 4 cases and 1 death were registered; 1 death occurred at Orfa on August 27th; at Biredjik there were 2 cases and 2 deaths. Between August 27th and 28th, 12 cases and 17 deaths were recorded in the town of Diarbeker; at Hizirou 8 cases and 4 deaths. At Adalia, on August 27th, there occurred 22 cases, 2 of which ended in death. One case and 1 death took place at Hatchin between August 23rd and 24th; between the 24th and 27th no fresh cases occurred, but one of the persons previously attacked died.

REPORTED SCANDAL AT BETHNAL GREEN WORKHOUSE.

The Master of the Bethnal Green Workhouse is going to apply for a Local Government Board inquiry as to his conduct. Some of the guardians, paying surprise visits, found that "one woman had not had a change of linen for a month, and was miserable" in consequence; another had not had any clean clothes for three weeks, and "there was a general clamour in the ward." The doctor reported that another woman was suffering from sores, "due, he believed, to dirt and vermin." Inquiries were then made as to the use of the bath, and, although there was a bath attendant who had nothing else to do, it was found that the "old people had not been bathed for three weeks, and in some cases for a month," and that the bathroom was disused, "the room being filled with clothes." On paying later surprise visits the guardians were literally surrounded by old women, who, finding themselves sympathetically listened to, told of many discomforts and discourtesies, among them being that they "had to stand in a big room and be stripped in order to change their clothes," that their clean linen when they got it was damp, and that they had to wear their stockings so long that they turned them inside out to make them a little more fit to use. These discoveries were brought out at the ensuing meeting of the Board of Guardians, and were met with the oft-repeated and time-honoured protest that the matter had been brought up at the open Board when the reporters were present, instead of being considered by the House Committee in private. There was, however, one speech which is noteworthy in view of the opinions often expressed in these columns. Mr. Bailward urged that "two Local Government Board inspectors had reported favourably on the state of the house." Now it may be that the guardians were mistaken in their surprise visits and that the inspectors were right to be content with the condition of things. It cannot, however, be satisfactory to the public that the judge who is to decide on the appeal of the master as to his management of the institution is to be an official of the Local Government Board. If the judge acquits the master, he acquits his own department, and, although his judgment may be just, it will be suspected. It may be, however, as a country workhouse master points out, possible to acquit the master and yet condemn the management of the institution. "So long," writes this official, "as the workhouses are so fearfully stinted in their staff, as many of the infirmaries and workhouses are, so long will there be scandals, neglect, and infringements of all the circulars and memorandums the Local Government Board or any other Board like to give." Speaking from practical experience, he goes on to say that "most of such communications are merely allowed to lie on the table and the next business proceeded with, and the master never hears of their existence." "They are useless unless the Local Government Board will insist, not merely suggest, that there should be an adequate staff as is properly required in these days of improvement." This candid official confesses that on the day when he writes, in the workhouse of which he is master, "the bedridden cases are dirty, not attended to; the poor old man, aged 76, who generally did his best, not feeling well, one old man over 80 had fallen out of bed and bruised and cut himself terribly," and that yet we are "without a nurse or anyone to assist." He refers to the reports which have appeared in the British Medical Journal on Workhouse and Infirmary Administration, and implies that he could add much from the point of view of one who sees from the inside which would "shock the most sceptical." Echoing his hope that these matters may be thoroughly and widely ventilated, and in the end, we hope, remedied, we welcome the inquiry demanded by the Bethnal Green master. Such inquiries are at present the only means available for letting in light, and we have good hope that whatever be the result, an en-

lightened public opinion will demand changes in the directions we have often urged. First, a central Poor-law Board for London, which, being elected over a wide area, may be expected to be made up of members of greater knowledge, sympathy, and intelligence will, in administering its affairs in greater prominence, be both stimulated and restrained by public opinion. Secondly, a system of expert inspection by which men and women with eyes trained to see, and with knowledge as to the needs of the poor, may replace or reinforce the cultivated gentleman who, after a University career and some experience as a clerk in the office, is sent to report on the washing arrangements of old ladies, the best means of bringing up children, and generally on the conditions good for health and life in workhouses and infirmaries. If a Central Board with distinct functions with regard to the poor were existent in London, and if a body of expert inspectors were in active work, there would be no longer any necessity for the "inquiries." The Board would manage its own affairs, or in cases of neglect would call in the help of the judges of the land; and it is not unreasonable to hope that if a better system existed there would be no scandals into which to inquire, and the sick would get the comforts their ailments entitle them to, the indolent the discipline their characters require, and the children would be educated at least in such a way as to preserve to them their health, and enable them, once started, to keep themselves by their own handicrafts off the already heavily burdened rates.

CONSTANT WATER SUPPLY AND THE USE OF STORAGE SYSTEMS.

THE Secretary of the East London Water Company directs public attention to a question of considerable importance, upon which there appears to be urgent need for arriving at some basis of agreement. The secretary of the water company, replying to Dr. Talbot, the medical officer of health of Bow, states that he never intended to suggest that Dr. Talbot or any other medical officer of health was not fully alive to the importance of having a "continuous supply of pure water from the company's mains," and he says, "the company by voluntarily instituting, years ago, a constant service, placed these means in the hands of every consumer." He then proceeds to express his regret that, owing to a misapprehension, storage cisterns should be generally disapproved of by sanitary officials, and contends that while a draw-off tap from the incoming pipe should be provided in order to ensure a continuous supply of pure water, the use of storage cisterns should be regarded as equally necessary for sanitary purposes, and he adds, their adoption would have prevented the recent inconvenience which the population have suffered and would prevent its recurrence. In other words, he combats the notion that a constant service should be expected to entirely obviate the need for the employment of storage cisterns, and argues that the draw-off tap from the main should not be the sole means of supply, but should be supplemented by storage, in order that the consumer may not be deprived of water at times when the constant service is not maintained. The question is by no means a new one; it was raised a year or two ago by the failure of constant service in the case of the upper storeys of high blocks of dwellings in East London, and in some instances cisterns were introduced in the East End for the supply of tenements in the upper storeys of such dwellings, while the lower storeys continued to enjoy the advantage of drawing directly from the main. The failure of the constant service during the present summer has, however, been more pronounced, and there have unfortunately been in the East End of London multitudes of cases in which, the cistern having been abolished, failure of the draw-off tap from the main has led to the consumer having no water at all during the greater part of the day. It is quite clear either that means must be taken to ensure the constancy of the "constant service," or else that the consumer must fall back upon the precaution of retaining his storage cistern. The Secretary of the East London Company appears to assume that the former alternative is not a possible one, and regrets that, owing to a misapprehension, storage cisterns are "very generally disapproved of by the sanitary officials." Clearly some agreement must be arrived at as to the degree of constancy which is to be looked for in a "constant service," and as to the nature of the "misapprehension" under which we are told sanitary officials are labouring. The deputation which waited on the President of the Local Government Board on August 30th elicited from Mr. Chaplin the statement that "after all, the real question is this: we want to avoid this condition of things in the future." Mr. Chaplin said his experience of life told him that there are generally two sides to a question, and there certainly seems to be some difference between the point of view of the member of the deputation who stated that "it was only due to a marvellous Providence that there had not been a devastating epidemic in the East End," and the belief of the Secretary of the East London Water Company that what is required is that sanitary officials should overcome their "misapprehension" with regard to the use of storage cisterns. The institution of an inquiry is certainly desirable with a view to arriving at some practical rule of procedure which may be adopted with justice to all parties concerned in this matter.

THE MARCHING POWERS OF OUR SOLDIERS.

THE recent correspondence in the public press, and questions asked in the House of Commons respecting the excessive number of casualties arising on the march during the manœuvres in the New Forest, once more raises the question whether those responsible for the physical training and pattern of clothing of the British soldier have yet devised the best means of securing these important essentials. The recent manœuvres appear to us to demonstrate two things. First, the soldier is unsuitably shod. This defect in his equipment has repeatedly been pointed out in these columns, as well as by innumerable army medical officers. Too much latitude in these matters is left to the men themselves, and to the non-commissioned officers. The one chooses a boot often from motives of personal appearance as much as from ideas of prospective comfort, while the other regards one pair as good as another, provided a pair is issued according to orders received. What is required is that a more practical and intelligent interest in these matters should be taken by the captains and subalterns of companies. The second point is the question of the training of the soldier. The fact is that nine soldiers out of ten now with the colours are out of condition. These men do not get sufficient exercise in marching. The young lads and men who fill the ranks need to be daily, or at least twice a week, exercised in squads in marching. They might well begin with short marches, and be gradually schooled up until they can do their fifteen to twenty miles a day with ease. Here, again, arises the question of close and intelligent supervision by the company officers. There are methods which are not readily laid down by regulation or to scale. Each set of men need to be physically educated on their merits, and by no one can this be better done than by their own immediate officers. The army is about to have a new Commander-in-Chief. We would suggest to him the elaboration of a better system of regimental training, whereby each company or squadron officer should have full scope for the application of individual methods of making the men under his command efficient soldiers. The methods employed in the German army are on these lines; they permit of initiative on the part of junior officers, and at the same time evolve excellent soldiers. With the material available in this country, there is no reason why the results should not be even better than the German.

THE SICK IN PROVINCIAL WORKHOUSE INFIRMARIES.

The *Local Government Board Journal*, which has from the first and throughout given most valuable and generous assistance to our efforts to bring about reform in the treatment of the sick poor in provincial workhouse infirmaries, has this week the following comment:—"One word more on this matter! Endeavours are now, and have been, made to make workhouse infirmaries model hospitals for the treatment of the sick. The crusade of the British Medical Journal roused the consciences of hundreds of Guardians, and many miserable dungeons, which were designated Poor-law infirmaries, are now properly fitted and provided with trained night and day nurses, and a competent staff. The movement is spreading, for it is gradually being realised in some of our country districts that when a pauper is ill he suffers quite as much as his richer brother, who may be his guardian. It is a singular thing how long it has taken to convince provincial guardians, especially in wholly rural districts, of the truth of this. In most London workhouse infirmaries the nursing, treatment and accommodation is even superior to that found in some of the best known public hospitals. This example, set by, among others, the St. Marylebone Guardians, should be one to be emulated by guardians, wherever their union may be situated. It is only right that a patient in a Poor-law infirmary should have the best treatment procurable, and that end should be the aim of all guardians who desire to be real guardians of the poor." It will be observed that in the House of Commons in the debates on the Poor-law systems the subject has also been referred to, and we are glad to say that the new President of the Local Government Board, Mr. Chaplin, expressed himself as fully alive to the great importance of the subject, and very anxious to do everything to bring about a satisfactory state of things. It would perhaps have been just, not to say generous, if the President of the Local Government Board, instead of taking to the Board, as he did, all the credit for the recent vast improvements which have been made in this respect since we commenced to publish our series of reports, had acknowledged in any way the impetus given to this commendable zeal on the part of the Local Government Board by the publication of our reports. The information which they furnished to the Board, and the powerful effect which they have had on local opinion and on the consciences of the Board of Guardians. We are somewhat surprised, moreover, that Sir Walter Foster, in the brief reference which he made to the subject, seems also, so far as reported, to have omitted to refer to the initiatory part which the British Medical Journal has played in this important matter. Such a reference would have been the more graceful because we have endeavoured throughout to avoid taking any public measures disagreeable to the Board, and at the outset Mr. Ernest Hart communicated to Mr. Shaw-Lefevre his earnest desire that the Board should itself take action upon these reports, without any appearance of pressure, and abstained from applying such pressure, by deputation or otherwise, in the desire to co-operate with and assist the Board, rather than take up the critical and condemnatory attitude which the circumstances evidently fully warranted. The attitude of the inspectors of the Board was at first extremely hostile, not to say insolent; but, except in a few instances, we passed them over also with very slight comment. The result has been in the highest degree satisfactory to all well-wishers of the sick poor and of the public administration of the Poor-law medical service, and we shall hope to obtain at an early date a preliminary report showing what changes for the better have been made in the various workhouses on which we have reported in respect to sickness and accommodation. Meantime, it is in the highest degree satisfactory to have had and to have used our opportunities for rendering this great national service. It is not yet too late for the Local Government Board to make some recognition, and we will await with interest the publication of their next annual report, in the hope that it will contain an adequately full statement of what has been done in this matter in each workhouse: how many new night nurses or trained nurses have been appointed, and what other steps have been taken by the inspectors to remedy the shocking defects which our Commissioner has revealed, and to carry out the remedies which we have suggested in each case.

THE LESSENED CHOLERA MORTALITY IN BOMBAY.

We have received a communication from Surgeon-Lieutenant-Colonel T. S. Weir, of the Health Department of the Municipality of Bombay, giving some details regarding the lessening ratio of cholera to other diseases in that city, which are of considerable interest in view of the fact that a plentiful and pure supply of water was introduced in the year 1892. Up till that year, whenever a high death-rate from general causes existed, an outbreak of cholera was expected, and preparations were made accordingly. For the last two years, however, and during this year also, the change has been most remarkable, for, while the general mortality has been very high, there have been very few cases of cholera. A general high death-rate, unaccompanied by a high fatality from cholera, has only, he says, been an experience of recent years in this city, and he ascribes this to the pure and plentiful supply of water recently introduced, and to the general measures of cleanliness and sanitation which have been taken.

THE ARMY MEDICAL SERVICE.

The ill-repute in which the Army Medical Service now stands in the medical schools was well exemplified at the last competitive examination, when but ten candidates qualified for fifteen vacancies. While the curriculum for medical qualification is steadily becoming more protracted, more costly and exacting, the privileges and emoluments of the Army Medical Staff are being reduced to a minimum. The latest development is a threatened reduction in the highest administrative grades. While the pay in India of the British army medical officers is now considerably below that promised to candidates on appointment, and when serving at home and in the Colonies, we may point out that during the past few years the number of Surgeon-Colonels has been reduced from 35 to 24, and if any further reductions of the administrative grades are carried out, it will certainly not tend to popularise the department in the medical schools.

THE SHAZADA AT ST. THOMAS'S HOSPITAL.

His Highness Nasrulla Khan, attended by Sir Michael Biddulph, Surgeon-Major Leahy, and other members of his suite, paid a visit to St. Thomas's Hospital last Saturday afternoon. In the absence of the Treasurer the Shazada was received at the main entrance by the steward, Mr. Walker, and by the Dean of the Medical School, and was conducted over the whole institution. His Highness visited the Court Room, the wards for paying patients, and the general wards of the hospital. He exhibited much interest in the patients, examined the surgical appliances in use, and had the system of heating and ventilation explained to him. In the operating theatre the general arrangements and the system of sterilisation of water and surgical instruments were at his request demonstrated, and he was also much interested in the dispensary and hospital kitchen. He then visited the Nightingale Home and School for Nurses, and also the Registration department, where the method of recording the work done in the wards was demonstrated to him. The various departments of the school were then shown, the museum especially attracting his interest. He asked many questions regarding individual specimens, and talked in an animated manner with the members of his staff on the subject. The anatomical department also interested him,

and he asked many questions as to the use of the elementary subjects, such as chemistry, to the medical student. More than two hours were spent by him at the institution, and when he left he expressed his most gracious thanks for what had been shown, and much appreciation of the institution. His Highness moreover evidenced his practical interest by a generous donation of £150 towards the fund now being raised to open the closed wards of the hospital.

THE SHAZADA'S PHYSICIAN.

Among the most interesting members of the Shazada's suite is Miss Hamilton, M.D., the personal physician of the Ameer of Afghanistan and his Sultana, and physician to the Royal Court. Dr. Hamilton was sent in personal attendance on the Shazada by the Ameer under strict injunction to accompany him everywhere and to advise him upon health questions, with the pledge to return with him to Cabul. During the whole of the Shazada's stay in London she has forwarded weekly reports to the Ameer, and intends to fulfil her pledge of returning with him, taking with her a trained nurse. The Ameer and his Queen have written repeated letters to Miss Hamilton while in London, addressing her always as "My sincere friend and well-wisher, Miss Hamilton, our personal Doctoress." Miss Hamilton, whose career has been in many respects an interesting one, is a fully qualified British physician. She was in the first instance trained for three years as a nurse in the Liverpool Workhouse Infirmary. She joined the London School of Medicine for Women in 1886, where she studied for four years. In 1890 she qualified in Glasgow, taking the triple qualification of Glasgow and Edinburgh, and in the autumn of the same year she went to Brussels, and passed the M.D. there with distinction. Thence she went direct to Calcutta, and established herself in private practice with great success. She is, we believe, the only Englishwoman who has succeeded in medical practice in India without having a Government appointment or being backed by a society. During her stay in London Miss Hamilton was commanded to Windsor, and graciously received in special audience by the Queen. The Secretary of State for India has, through Sir Stewart Bayley, written a very kind letter to Miss Hamilton, expressing the desire of the Government that everything should be done for her convenience and comfort. Miss Hamilton has favoured us at our request with the following brief account of the circumstances under which she went to Cabul, of her residence there, and her present mission:

During the very hot weather in Calcutta I suffered constantly from fever, which did not leave me during the cold weather, and in the spring of 1894 I was ordered either to go home or up to the hills. I chose the latter chiefly because I heard that the Ameer of Afghanistan wished an English lady to go up to Cabul for the summer to show the ladies of his Court how English ladies employed and amused themselves. The Ameer has suffered from gout for many years, and had a slight attack in May. In August he first sent for me to attend him, and I remained in the Barbar Garden, living in a tent for two months and a-half, and was not even allowed to go outside the walls without his permission. I may say that I nursed as well as doctored him, as there was no nurse of any sort in Cabul, and the ladies are not allowed in the Ameer's own palace, except on special occasions, when all the male attendants are dismissed; for three weeks, when he was so very seriously ill, I hardly ever left his room, and did not have more than two hours' sleep at a time. About Christmas-time I again had to live just outside the palace, as His Highness was not as well as he had been in the latter part of October and November. I was six weeks there at that time. I have at all times met with the greatest kindness and consideration from the Ameer himself, any discomforts I had arose from the very marked difference between the Eastern and Western modes of living. I was at all times allowed to enter the palace unannounced, a privilege not always granted to the Governor of the city or his own private secretary. I was very much surprised when His Highness ordered me to come to this country with his son, but his anxiety at the time of our departure was very great. He felt that Prince Nasrullah Khan was coming to unknown regions, where diseases unknown to his own native hakims (herbalists) were prevalent, and he wished me to be with him rather than in Cabul, where there were no diseases with which the hakims are not familiar. My orders were that I was to see the Shazada every day, and to write to his father by every mail concerning the health of the party. This I have done, and have received the kindest letters in reply from both the Ameer and the Sultana, in which they have alluded to my services in the past.

THE SHAZADA AND THE MECCAN PILGRIMAGE.

WE understand that the Shazada's route after leaving Marseilles will be in the first instance to Civita Vecchia for Rome; after visiting Rome he will probably take ship again either at Venice or Brindisi, and thence to Suez and Jeddah. It is the present firm intention of the Shazada to make the pilgrimage to Mecca, which will occupy from a fortnight to three weeks, so he will not pass through the Red Sea until the period of great heat is over. The dangers of health involved in a pilgrimage to Mecca have been fully put before the Shazada, who has had copies of the publications of Mr. Ernest Hart on this subject and of the means best calculated to obviate the risks incurred. Mr. Hart has also had the opportunity of communicating to him the reports of Jabbar Ali, a distinguished Mahommedan of Calcutta, who took part in a meeting of Mahommedans at Calcutta addressed by Mr. Hart in December last, and who has since made an interesting report to Sir Charles Elliott on the details of the pilgrimage and the dangers of quarantine at Camaran, of which copies have kindly been communicated to us by Sir Charles Elliott. The Shazada is, however, fully resolved to make the pilgrimage, and no doubt the special precautions which will be taken to ensure his freedom from ordinary risks will be effectual. He is, however, much interested in questions which have been put before him concerning hardships and dangers of quarantine at Camaran from which he will happily be exempt, and has remarked that he will be able now to see for himself and to form his own opinion. That which he will see, however, accompanied by special escort, freed from quarantine, and with every comfort which rank, wealth, and privilege can confer, will be very different from the experience of the ordinary pilgrim.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A SURGEON-MAJOR serving in Bengal wishes for an exchange which would give him about three years at home. Address, stating terms, to S. L. H., care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

A SURGEON-CAPTAIN going to Bermuda this trooping season wishes to exchange with one who has completed a part tour in India, or with one who is under orders for India. Address, No. 741, BRITISH MEDICAL JOURNAL.

EXCHANGE wanted at once by Surgeon-Major warned for Madras about November next. Apply, "Omega," Belmont, Queenstown.

MEDICAL NEWS.

Erratum.—In the report of the discussion on Hospital Isolation and the Disinfection of Patients in the Section of Public Medicine which was published in the British Medical Journal of August 31st, certain remarks on disinfection on p. 524 were erroneously attributed to F. Fraser, M.D., M.O.H. Sevenoaks Union. The speaker was Dr. A. Mearns Fraser, D.P.H., of Chelmsford.

Dr. Hans von Becker has been appointed Physician in Ordinary to the Khedive, in succession to Comanos Pacha, who lately resigned that position. Becker Bey is an Austrian and at one time practised in Vienna, where he acquired some reputation as a specialist in diseases of children. For some years he has been connected with the Crown Prince Rudolph Hospital in Cairo.

MEDICAL VACANCIES.

The following vacancies are announced:

BRIGHTON, HOVE, AND PRESTON DISPENSARY, Queen's Road, Brighton.—Medical Officer for the No. 6 District. Applications to the Secretary by September 9th.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield. Resident House-Surgeon, tenable for two years. Salary, £100 per annum, with board, apartments, and laundries. Applications and testimonials to the Secretary before September 10th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Board and residence and allowance for washing provided. Appointment for six months. Also Assistant Physician; must be M. or F.R.C.P.Lond. Applications to the Secretary for the former post by September 12th, and for the latter by September 14th.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Clinical Assistant; must be qualified and registered under the Medical Acts of Students of Medicine, who have only their Final Examination to pass. Appointment for six months. An honorarium of £10 after six months' satisfactory service will be given, and board, residence, and washing. Applications and testimonials to Walter G. Carnt, Secretary, before September 13th.

GENERAL HOSPITAL, Nottingham.—House-Physician. Appointment for two years, but eligible for re-election. Salary, £100 per annum, rising £10 a year to £120. Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing in hospital; no salary. Applications to the Secretary for the former post by September 11th, and for the latter by September 7th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 146, Buchanan Street, Glasgow, by November 8th.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Must be doubly qualified and able when required to give lectures for probationer nurses. Salary, £90 per annum, with board and lodging. Applications and testimonials to R. F. E. Ferrier, Honorary Secretary, before September 14th.

LANCASTER INFIRMARY AND DISPENSARY.—House-Surgeon; unmarried. Must be doubly qualified and registered. Salary, £80, with residence, board, attendance, and washing. Applications to Allan Sewart, Honorary Secretary, before September 12th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House-Physician, House-Surgeon, Assistant House-Physician, and Assistant House-Surgeon. Appointments tenable for six months. The House-Physician and House-Surgeon will each receive a salary at the rate of £80 a year. Must possess a registered English medical and surgical qualification. Applications and testimonials to Charles H. Byers, Secretary, before September 9th.

NORTH CAMBRIDGESHIRE HOSPITAL, Wisbech.—House-Surgeon; fully qualified. Salary, £130 per annum, with detached house (furnished), coals, gas, and water provided. Applications and testimonials to Mr E. R. Scholfield, Honorary Secretary, Wisbech, before September 12th.

PLYMOUTH PUBLIC DISPENSARY.—Second Medical Officer of the Provident Department. Appointed for one year, but eligible for re-election; doubly qualified. Remuneration will be the net profits (after deduction of the expenses mentioned in the rules). Applications to the Honorary Secretary, W. H. Prance, 3, Athenæum Terrace, Plymouth, by September 11th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Doubly qualified and registered. No salary, board, lodging, and washing. Applications and testimonials to the House-Surgeon by October 1st.

ROYAL UNITED HOSPITAL, Bath.—House-Surgeon. Candidates must be M.R.C.S.Eng., and registered. Appointment for one year. Salary, £80, with board, lodging, and washing. Applications and testimonials to W. Stockwell, Secretary-Superintendent, before September 11th.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—Assistant Demonstrator of Chemistry. Applications to Thomas W. Shore, Warden, before September 21st.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Physician. Candidates must be Fellows or Members of the Royal College of Physicians, London. Applicants must attend the Court of Governors to be held on Thursday, September 26th. Applications and testimonials to W. Henry Cross, Clerk, by September 9th.

MEDICAL APPOINTMENTS.

Frohn, C. M., M.R.C.S., L.R.C.P., and Diploma in State Medicine, appointed Medical Officer of Health to the Ampthill Rural District Council.

Gould, J. E., M.D., L.R.C.P.Lond., reappointed Medical Officer of Health to the Chesterfield Town Council.

Halligan, Dr., appointed Medical Officer for the Ballyroan Dispensary District of the Abbeyleix Union, *vice* Dr. Fitzgerald, resigned.

Haward, H. H., B.A.Cantab., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Ear Department of St. Thomas's Hospital.

Home, A. L., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

Jenner, L. L., M.A., M.B., B.Ch.Oxon., M.R.C.P. (extension), appointed Resident House-Physician to St. Thomas's Hospital.

Layton, F. G., L.R.C.P., M.R.C.S., appointed non-resident House Physician to St. Thomas's Hospital.

Louden, M. M., M.D., appointed Public Vaccination Officer for the Arundel District of the East Preston Union.

Macintyre, H., M.B., C.M.Glasg., appointed Assistant Medical Officer to Shoreditch Infirmary, *vice* Dr. Pearce, resigned.

Orchard, Edward, M.B., C.M.Aberd., appointed Medical Officer of Health to the Kingussie and Irish Parish Council.

Palin, E. W., M.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Ear Department of St. Thomas's Hospital.

Pearse, R. E. Franklyn, L.R.C.P.Lond., M.R.C.S.Eng., reappointed House-Surgeon to Jagersfontein Hospital, Orange Free State, South Africa.

Prain, J. L., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

Yearsley, P. Macleod, F.R.C.S., appointed Clinical Assistant to the Central London Throat and Ear Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

Brierley.—On Sunday, September 1st, 1895, at Old Trafford, the wife of James Brassey Brierley, M.D., of a son.

Staveley.—August 13th, at 13, South Eaton Place, S.W., the wife of W. H. C. Staveley, F.R.C.S., of a son.

Taylor.—On August 26th, at Aylesford, Kent, the wife of Herbert Edward Taylor, B.A., M.D.Dub., of a daughter.

Williams.—On August 9th, 1895, at Fishkill-on-Hudson, New York, the wife of George Herbert Williams, M.D., M.R.C.S.Eng., L.R.C.P.Edin., of a daughter—Helen Merritt.

MARRIAGES.

Daldy—Hitchcock.—On the 3rd inst., at St. George's Church, Bloomsbury, by the Rev. R. A. Hitchcock, assisted by the Rev. G. E. Hitchcock, brothers of the bride, and the Rev. A. B. Boyd Carpenter, Arthur Mantell Daldy, M.D., son of O. G. Daldy, Esq., of Rochford, to Mary Ellen, only daughter of the Rev. Canon Hitchcock.

Hackett—Wynne-Jones.—August 28th, at St. Mary's Church, Pembroke, Surgeon-Major R. I. Dalby Hackett, M.A., M.D., Army Medical Staff, to Evelyn Mary Wynne-Jones, niece of Mr. W. O. Hulme, Glynderwen House, Pembroke.

Macnab—Dening.—On June 29th, at Thandiani Hazara, Punjab, by the Rev. F. J. Montgomery, M.A., Chaplain of Hazara, Surgeon Captain Allan J. Macnab, Indian Medical Service, "Q.O." Corps of Guides, eldest son of the late Alexander Macnab, C.E., to Honoria, eldest daughter of Lieutenant-Colonel L. Dening, D.S.O., Commanding 36th Punjab Infantry.

Webb—Baxter.—August 28th, at Stockport, Frederick J. Webb, M.B., etc., Beech House, Gorton, Manchester, to Emily, daughter of George Baxter, Esq., Fleet, Lincolnshire.

Yelf—Barnard.—August, at Christ Church, Gloucester, by the Revs. Vaughan Payne and Alfred J. Barnard, John Burnet Yelf, M.R.C.S., L.R.C.P., Shipston-on-Stour, to Blanche Mary, eldest daughter of John Barnard, Esq., Gloucester. No cards.

DEATHS.

Aldridge.—On August 30th last, in London, suddenly, Russell Aldridge, M.D., L.R.C.S., L.S.A., J.P., Consulting Surgeon Central London Throat Hospital, Certif. Factory Inspector, etc., aged 64.

Buxton.—At 10, Albert Terrace, Blackpool, on August 23rd, Evelyn Douglas, only and much loved child of John Buxton, M.D., late 14th Regiment, and A.M.D.

Stevenson.—On August 29th, at Whitby, from accidental drowning, Harold Thomas Stevenson, aged 27, elder son of Thomas Stevenson, M.D., F.R.C.P., of Sandhurst Lodge, Gresham Road, S.W.

Thomson.—At 11, Barnes Street, Ayr, on September 2nd, James Johnstone, infant son of Dr. Gemmill Thomson, aged 10 months.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

F. I. J. I. would be glad to be informed where a copy of pamphlet on *Sanitation and Health*, by Colonel Hart, V.C., revised by Surgeon-Colonel Headley, C.I.E., can be got. It is referred to in the *Army and Navy Gazette* of July 13th, 1895.

ANSWERS.

DR. J. A. HUTTON.—The address of Dr. J. William White is 1810 S. Rittenhouse Square, Philadelphia.

VARICOCELE.—The varicocele should be operated on, and there would then be no difficulty about the candidate's passing.

A JOURNAL OF PUBLIC HEALTH.

DR. REGINALD DUDFIELD (Maida Vale, W.) writes: "Hygiene" will, I think, find all he wants in *Public Health*, the journal of the Incorporated Society of Medical Officers of Health. I shall be pleased to give him any information about joining the Society if he is not a member.

DEATH CERTIFICATE.

DR. C. S. AITKEN (London) writes: In reply to M.B., M.A., there is a small book called *Hints to Medical Men concerning the granting of Certificates of Death*, by A. Braxton Hicks, barrister-at-law and coroner for London and Surrey, published at 6d. by Wm. Clowes and Sons, 27, Fleet Street.

A CASE FOR DIAGNOSIS.

DR. D. MCVEAGH (Coventry) writes: Dr. MacFarlane's interesting case would seem to present some features indicative of Addison's disease. He does not allude to any skin discoloration, but the extreme asthenia, and some other symptoms, would lead one to suspect disease of the suprarenal capsules. The progress of the case and its final issue would be very desirable.

MEDICAL GRADUATION IN CANADA.

F. T. M. C. TOR. writes: In reply to "Cantab." in the BRITISH MEDICAL JOURNAL of August 31st I should say (1) Toronto would be the best place for his purpose; (2) The examinations he mentions are accepted in Ontario, and I believe in Quebec and most of the Provinces; (3) The expenses, I should say, may be taken at about one-half of what they are here. I shall be pleased to communicate with "Cantab." direct if he likes to obtain my address from you and write me. As I graduated at the University of Trinity College, Toronto, in 1889 I could probably give him some useful information.

THE ANTITOXIN TREATMENT.

G. D.—Diphtheria antitoxic serum and syringe may be obtained from Messrs. Allen and Hanburys; Burroughs, Wellcome, and Co.; Oppenheimer; Zimmerman, and various other agents in this country. There is now no difficulty in obtaining this substance. The Clinical Research Association, 1, Southwark Street, Borough, London, will send tubes and full instructions for the making of diphtheria cultures, and will then examine and report for a fee of about 7s. 6d. Similar arrangements may also be made with the British Institute of Preventive Medicine, 101, Great Russell Street, W.C.

NOTES, LETTERS, Etc.

TREATMENT OF INEBRIATES.

CONSEQUENT on the 777th appearance of the sexagenarian inebriate, Jane Cakebread, before a police magistrate, Lady Henry Somerset has written to the *Daily Chronicle* that the projected British Women's Temperance Home will be glad to receive and care for this unfortunate woman, on the magistrate consigning her to such a reformatory instead of to short terms of imprisonment. We have repeatedly advocated the reformative and curative treatment of such cases. The adoption of therapeutic restraint instead of the existing penal procedure of a few days or weeks incarceration in a police cell or gaol, which latter plan is neither curative nor deterrent, but, on the contrary, tends to confirm an inebriate career, inasmuch as a brief enforced residence where intoxicants are not supplied suffices to enable the inebriate to recover that capacity for intoxication which had been for the moment lost.

But the law must be amended if such judicious and ameliorative procedure is to be applied to police court inebriate "repeaters." Four British Parliamentary or Governmental Committees, and a Canadian Royal Commission, have strongly recommended such amended legislation, which was embodied in Lord Herschell's Inebriates Bill, which had passed a second reading in the House of Lords just before the dissolution of the last Parliament. Again and again existing homes have undertaken the care of cases similar to that of Jane Cakebread, but have been foiled by having no power to retain the inebriate against his or her will.

Every one interested in the necessary and valuable work done by genuine homes for the treatment of inebriety should therefore strenuously support the Inebriates Legislation Committee of the Association and the Society for the Study of Inebriety in their sustained effort to secure the compulsory reception and detention for a period long enough to afford a reasonable hope of cure, or at least improvement. In the end such a method would be truly economical, as 277 committals of one person involve a large expenditure of public monies. Magistrates can at present aid the curative seclusion of inebriate offenders only by the moral pressure of recognisances, for a few months at most, on the understanding that the offender remain in a home. What is required is power of committal for from one to two or three years, or more if required. There is some reason to believe that the Government, if not able to see their way to establish and carry on such reformative institutions, may lend their influence to the empowering of magistrates to send such offenders to a genuine philanthropic home.

DOCTORS AND THEIR FEES.

THE story is told that Dr. Graefe, the eminent court physician and father of the well known Berlin oculist, once attended Schleiermacher, the great theologian. On his recovery the latter sent the Doctor a polite letter of thanks, and enclosed four *louis d'or*, with the request that he would accept this trifle as a token of gratitude for all the trouble Dr. Graefe had taken in his illness. The next day he received the following laconic letter: "Poor persons I cure gratis; well-to-do people pay according to the medical tariff; wealthy patients fee me respectably, as they think proper." The theologian was not, however, disconcerted at this curt reminder of his duty, and, determining that he should be rather considered poor than generous, he returned the following answer to his benefactor: "Received, with thanks, the four *louis d'or* returned to poor Schleiermacher."

LETTERS, COMMUNICATIONS, Etc., have been received from: (A) Asterian; Dr. J. Abcarius, Beyrout; Mr. C. S. Aitken, London; Mr. H. J. Allford, Grantham; Mr. T. A Alexander, Norfolk; Dr. L. T. Ager, Brooklyn; A.B.C. (B) G. Birt, M.B., Stourbridge; Mr. E. Brooks, Blackburn; Dr. F. A. Brooks, Felixstowe; A. Barlow, M.B., Leicester; Burmah; Dr. E. G. Barnes, Eye. (C) The Civil Rights Defence Committee, Secretary, London; J. Culross, M.B., Newton Abbot; Mr. W. Catto, Bath; Sir Charles A. Cameron, London; Mr. H. W. Collier, London; Mr. A. Charlton, London; Chemist; C. R. D. (D) Mr. A. H. Dodd, West Brighton; Mr. G. Dickinson, Leamington Spa; Doubtful; Democritus; Dr. S. Davies, Plumstead; D. P. H.; Mr. C. R. Dearden, Sheffield. (E) Mr. F. R. A. Evans, Birmingham; Enquirer; Esprit de Corps. (F) Dr. J. Farquhar, Marlborough; Mr. C. Forbes, London; Mr. E. Field, Gosport; A. M. Fraser, M.B., Chelmsford; Professor F. Frankland, Birmingham; Mr. C. M. Fegan, Toddington; F. T. M. C. Tor. (G) Mr. F. W. Gibbon, South Shields; Dr. E. G. Gilbert, Tunbridge Wells; Mr. F. G. Gardner, Warwick; T. A. Granger, M.B., Kohat. (H) Miss M. Hannan, Cardiff; Dr. G. A. Heron, London; Mr. T. G. Horder, Cardiff; Dr. C. Hailes, Clifton; Messrs. J. Haddon and Co., London; Dr. C. P. Handson, London; Dr. J. Highet, Workington. (I) Messrs. Ingram and Royle, London. (J) Mr. H. Jackson, London. (K) Mr. T. G. Kerr, London; Mr. H. V. Knagge, London; Mr. P. Kingston, Yeovil. (L) L. N. A.; Mr. A. E. Livesey, Liverpool; Mr. J. R. Liston, Gloucester. (M) Mr. H. C. MacBryan, Box; Member; Mr. S. V. Mercier, London; Dr. H. W. G. Mackenzie, London; Mr. E. C. Montgomery, Ostend; T. Marshall, M.B., London; J. D. Malcolm, M.B., London; Mr. A. T. M. Myers, Instow; Dr. A. M. Murdoch, Glasgow; Messrs. Maxton and Co., London; H. Macintyre, M.B., Shoreditch; J. A. Macdonald, M.B., Grantham; Mr. T. H. Moorhead, Cootehill; M.B., M.A. (N) Mr. H. Nestle, London. (O) On-looker; Mr. G. Okell, Middlewich; Mr. P. W. O'Gorman, Midnapore. (P) Mr. A. Perry, St. Leonard's-on-Sea; Dr. C. Porter, Stockport; Mr. C. Peach, Norwich. (R) Radius; Dr. W. Russell, Edinburgh. (S) Mr. R. W. J. Smith, Sheffield; Mr. J. Stewart, Inverness; Mr. G. E. Sinclair, Esk; Dr. J. S. Scriven, Stourport; Dr. E. M. Sympson, Lincoln; Dr. C. Steele, Clifton; Mr. Garry Simpson, London; Mr. W. J. Stavort, Skipton; Dr. H. Scurfield, Sunderland; Dr. J. Smyth, Madras. (T) Mr. W. Thomas, Liverpool; Mr. H. Tuley, Kentucky; Mr. J. Terry, Guildford; Mr. F. H. Thompson, Cleobury. (V) Varicocele. (W) Mrs. C. E. Wallace, Glasgow; Mr. James Wigg, London; Mr. E. S. Wood, Cambridge. (Y) Mr. J. B. Yelf, Shipston-on-Stour. (Z) Zed; etc.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF ETHICS.

At the Annual Meeting of the British Medical Association at London, July-August, 1896.

By W. F. CLEVELAND, M.D.

Consulting Physician Kilburn Dispensary; President of the Section.

GENTLEMEN,—In offering you a hearty welcome on this, the first occasion that an Ethical Section has been formally instituted at our annual meeting, it may be well that I make some general remarks on the subject under consideration.

Ethics, derived primarily from the Greek ἦθος, usage or custom, and signifying the same as the Latin *mos, mores*, and from whence is derived our English word morals, has been defined by Dr. Johnson as the doctrine of morality, while by others it has been called the science of human duty, and by Cicero the *ars vivendi*. Lord Bacon says ethics treats of the will, appetite, and affections.

Ethics, as you are aware, is no new subject. It occupied much of the attention of the early Greek philosophers, such as Socrates, Plato, Aristotle, and others. It may be regarded from two different standpoints. First, as it was taught by the ancients, to whom I have alluded, as "the doctrine of the model or image of good," *per se*, which simply means an abstract or barren philosophy, but still a philosophy entitled to our respect, inasmuch as it was the parent of a truer and more beneficent one. And secondly, as it is taught, or should be taught, under the inductive or Baconian method, as "the doctrine of the regulation and culture of the mind which brings it into conformity to good."

That Bacon considered the ancients taught ethics only in theory is evident from the following remarks in his seventh book on the *Advancement of Learning*, where he says: "In ethics the philosophers have culled out a certain splendid mass of matter wherein they might principally show their force of genius or power of eloquence; but for other things that chiefly conduce to practice, as they could not be so gracefully set off, they have entirely neglected them." Again: "They appear like writing masters who lay before their scholars a number of beautiful copies, but give them no directions how to guide their pen or shape their letters, for so the writers upon ethics have given us shining draughts, descriptions, and exact images of goodness, virtue, duties, happiness, etc., as the true objects and scope of the human will and desire; but for obtaining these excellent and well-deserved ends or by what means the mind may be broke and fashioned for obtaining them they either touch this subject not at all or slightly."

Macaulay, in his brilliant essay on the *Life of Lord Bacon*, has pointed out that "the key of the new method, or Baconian doctrine, was utility and progress; that the ancient philosophy disdained to be useful, and was content to be stationary; that it dealt largely in theories of moral perfection, which were so sublime that they never could be more than theories; that it attempted to solve insoluble enigmas; that it exhorted to the attainment of unattainable frames of mind, etc.;" and, to sum up in the words of Bacon, "that it ended in nothing but disputation, and was neither a vineyard nor an olive ground, but an intricate wood of briars and thistles, from which those who lost themselves in it brought back many scratches and no food."

But how different was the teaching of the father of experimental philosophy not only in physics and laws, but also in morals! He had the persuasion "that nothing can be too insignificant for the attention of the wisest, which is not too insignificant to give pleasure or pain to the meanest." He held that "the true object of philosophy was something which should add to the comforts or alleviate the calamities of the human race." And to attain this end his efforts were directed, not to the discovery of the essences and causes of things, but the laws by which they are governed; in other words, to the knowing not the "why" but the "how," the first being impossible or unattainable, the last within the limits of the Human faculties.

To revert, however, to the ethical bearing of these remarks, we are introduced, through another passage in the same essay by Macaulay to which I have alluded, to the view held by Plato on medical ethics—a view that suffers greatly by comparison with the utilitarian philosophy of Bacon, as well as with the exercise of that virtue of Christian virtues, charity. He says, "To Plato the science of medicine appeared to be of very disputable advantage. He did not indeed object to quick cures for acute disorders, or for injuries produced by accidents, but a life protracted by medical skill he pronounced to be a long death. The exercise of the art of medicine ought, he said, to be tolerated, so far as that art may serve to cure the occasional distempers of men whose constitutions are good. As to those who have bad constitutions, let them die, and the sooner the better. Such men are unfit for war, for magistracy, for the management of their domestic affairs, for severe study and speculation. If they engage in any vigorous mental exercise, they are troubled with giddiness and fulness of the head, all which they lay to the account of philosophy. The best thing that can happen to such wretches is to have done with life at once."

Now, gentlemen, I need not say, for obvious reasons, that we do not recommend such ethics as Plato's for your adoption in this Section. But Bacon, of whom it has been said we feel almost tempted to forgive his moral delinquencies, great as they undoubtedly were, on account of the philanthropy and beneficence of his philosophy, did not attempt, like Plato, to exalt man into a god, but to make "imperfect man comfortable, and to increase the pleasures and to mitigate the pains of millions who are not, and cannot be, philosophers."

And thus an imaginary picture has been drawn which serves the purpose of contrasting the philosophy of words with the philosophy of works.

"A disciple of Epictetus and a disciple of Bacon are introduced as fellow travellers. They come to a village where small-pox has just begun to rage, and find houses shut up, intercourse suspended, the sick abandoned, mothers weeping in terror over their children. The Stoic assures the dismayed population that there is nothing bad in the small pox, and that to a wise man disease, deformity, death, the loss of friends are not evils. The Baconian takes out a lancet and begins to vaccinate."

But perhaps I hear some one exclaim, What has this to do with ethics? My reply is that the cultivation of ethics, in order to bear fruit, or be something more than the pursuit of an *ignis fatuus*, as it practically was in ancient times, must be based on the Baconian method, or perhaps I might say with more accuracy, on the method of Comte, who has been styled the Bacon of the nineteenth century.

George Lewes, in his *Biographical History of Philosophy*, says: "Before Comte's time, social problems were treated on theological or metaphysical methods, but he insisted on their being treated on the same footing with all other scientific questions; and in order to accomplish this he had to discover the important law of mental evolution." This law may be summarised as follows: "Every branch of knowledge passes successively through three stages: (1) The supernatural or fictitious; (2) the metaphysical or abstract; and (3) the positive or scientific. Take but one illustration, astronomy. In the first stage there was Apollo and his chariot. In the second, or metaphysical, there was an advance to numbers, harmonies, and other abstractions in accordance with the Pythagorean ideas. And in the last, or third stage, there is the solid and sufficient foundation on which it is now settled—the law of gravitation. As we may say that astronomy was the first of the sciences to become positive, so sociology is the last; between these extremes have come physics, chemistry, and biology in successive development."

Well, then, the time is gone by for talking in an exalted strain about the all-sufficiency of virtue and the dignity of human nature, in connection with ethics. "Moral science must be regarded as a practical science which has for its object the cure of diseases of the mind, just as medicine and surgery have for their object the cure of diseases of the body." And hence Bacon long ago advised those who made ethics a study "to note the actual effects produced on the human character by particular modes of education, by the indulgence

of particular habits, by the study of particular books, by society, by emulation, by imitation." Such observations, he thought, might lead to the discovery of the most suitable training for preserving and restoring moral health.

And here I would remind you that we cannot plead as an excuse for taking little or no interest in ethics that it is a subject with which many of us have practically but little to do, or that it is a science, like chemistry or botany, which can be taken up for an hour or two when convenient and then laid aside for the rest of the day. Ethics enters largely into the composition of our lives; indeed, what Matthew Arnold once said, in a higher sense, of religion may also be said of ethics, namely, "Its object is conduct and conduct is three-fourths of life."

In that branch of ethics with which we are more particularly concerned—medical ethics—there can be little doubt that the *lex non scripta* has ever been highly efficient for the guidance of those members of the profession who could be styled in the true sense of the word gentlemen.

But what has been euphemistically called "the difficulties of general practice" (a term which, crystallised into plain language, means too often "the struggle for existence,") has altered the general aspect of medical ethics. Keen competition arising from various causes, among which may be mentioned the overcrowded state of the profession; advanced general sanitation, which lessens the demand for our services; and the tendency among the educated to prescribe for themselves, and among the poorer classes to seek advice gratuitously, or in the cheapest market, have for years been engendering a greater or less amount of moral laxity among our brethren, and so it has come to pass that a medico-ethical code has been framed with the view of correcting the errors of those who, through ignorance, or carelessness, or ambition, might be drawn from the path of rectitude and professional honour. Such a code, or collection of rules and laws, was first drawn up by Dr. Percival in 1807, and this has, with but slight alterations, formed the basis of the subsequent code of the American Medical Association, as well as that of the well-known and excellent work of Dr. Styrap.

Now, it would only be uttering a truism to contend that the ethics of our profession can be made to turn on any other pivot than that which is embraced in the great moral precept, "Whatsoever ye would that men should do unto you, even so do unto them."

I am aware that some of our body affirm that the teaching of ethics, especially to men of mature age, is a visionary undertaking. They say that, as well might we plough the sands of the seashore or sow seed by the wayside, as by laws, however stringent, expect to make "men honourable who are not innately inclined to be so." But such moral pessimists, I apprehend, are not likely to favour us with their presence here to-day, and we, who are hopeful, and believe that it is no mere poetical sentiment

> That men may rise on stepping stones
> Of their dead selves to higher things,

will take courage in the conviction that a good example is often no mean factor for good, and that there is a potency in professional and public opinion that may, and does, check the tendency to sharp practice in those who are unfortunately predisposed thereto by Nature or education.

It may then, I presume, be taken for granted that the civilisation and social development of the nineteenth century have created a platform for practical or applied ethics, and that a code, founded on the observations and experience of those who, by their position in the profession, are worthy of our respect, is not only necessary but likely to be appreciated.

But it goes without the saying that for a medico-ethical code to work or bear fruit it is not only essential that we should acquaint ourselves with its rules and directions, but that we should show a ready allegiance to them while they remain in force; for I take it, as reasonably might we expect a number of artisans or agricultural labourers, who had never seen a compass or studied a chart, to navigate a ship from London to New Zealand, as the members of our profession, in the present complex relations of society, to pursue their course with ethical precision without the aid of the written as well as the unwritten law.

As in physical science Nature must be constantly interrogated or made the subject of experiment, so, in order to keep a medico-ethical code up to date, or make it suitable for ethics viewed as a progressive science, we must interrogate history and society, especially that portion of the latter occupied by our profession, and we must note with an open mind the experience of others as well as our own. By such means we may hope to deduce conclusions from which laws for guidance may be ultimately obtained.

Under the term "medical ethics" is comprised such a large number of interesting questions that the attempt to discuss all of them on this occasion could not fail to be disappointing. In our programme we have selected some of the more prominent ones, in the hope that they may engage your best consideration, and that a friendly and dispassionate consensus of opinion regarding them may be arrived at, which shall have its proper weight and influence on the mind of our large Association and of the profession generally.

In conclusion, gentlemen, I would remark that we are living in a practical age—an age in which few projects are undertaken that have no *cui bono* in them.

Now, what is the *cui bono* of this our Ethical Section? Shall I be too sanguine if I say we hope, through its means, to assist in raising the general status of the profession? In my opinion we shall do so if we can only make it our resolve to uphold, as far as possible, the reputation not only of our friends, but also of our legitimate or qualified competitors, when it is attacked, rather than by significant silence or innuendo to depress them to a level below ourselves. Depend upon it nothing sinks the profession in the estimation of the public more than their observance of the fact that, too often, we are a body pretending to a regard for honour and etiquette amongst ourselves, while our conduct proves that we are far from being at unity within ourselves.

Again, may we not hope, as an outcome of this conference, to stimulate the cultivation of more friendly feelings towards each other, and thereby conduce to that equanimity and satisfaction which every right-minded person enjoys who is on good terms with his neighbour?

I have long thought that many of the misunderstandings we hear of among our brethren would never occur but for the want of a personal acquaintanceship between them. Friendship and even acquaintanceship may be said to imply an ethical court of appeal; the contingent reference to which is often sufficient to lessen, if not annul, the temptation to do to others what we would not like done to ourselves, for the purpose of gaining some temporary advantage. Did time permit it would not be difficult to show the mutual benefit that would accrue from our taking each other into confidence more often than we do. Are we not sometimes called to cases in which prompt action in both diagnosis and treatment is imperative, and yet the course before us is beset with difficulties which a judicious brother practitioner might help to remove, or, failing that, might divide with us the responsibility? But often our ethical relations, arising from jealousy and local rivalry, interpose a barrier to such co-operation, and the result may be similar to what occurred a month or two ago in the Sister Isle, when a medical man was mulcted in a hundred pounds damages for notifying as small-pox a case which turned out to be erythema nodosum.

But to promote a more widespread knowledge of each other in the profession we must be prepared to sacrifice more frequently than we do our individual ease and leisure, so that we may embrace opportunities as they occur of meeting together. I respectfully commend this remark to your attention, because in a district of our Branch with which I have the honour to be connected, and which numbers 162 members, the average acceptance of cordial invitations to attend its meetings is lamentably small. Now I put it to you, gentlemen, as men of the world, can we expect ethics to flourish in our profession if a very large proportion of its members think so lightly of the advantages of social fellowship that they will not give themselves the trouble of meeting their brethren when they have the opportunity, or, as is the case, even care to attach themselves to the Branches of the Association where they respectively reside?

And, lastly, may we not discover a *cui bono* in the very publicity that is given to ethics by the holding of this Section? Is not our meeting together on this occasion evidence of the conviction that a medico-ethical code, to which we can agree, is essential for our guidance in the fulfilment

of those rights and duties which we owe to each other, ourselves, and the public? And should the public learn through the press, as they probably will do, that the doctors are seriously discussing the subject of etiquette, or how they ought to behave in the various relations of life, might it not lead to a desire on their part to be more fully enlightened as to their duties and obligations to the profession? At all events, might they not accept a gentle and loving invitation from us to consider if, in return for anxious and occasionally priceless services we render them, it would be more than a simple act of reciprocity if they took greater pains than they have hitherto done to make a practical distinction between scientific qualifications and the assumptions of ignorance and empiricism, "a consummation devoutly to be wished."

SIXTY-THIRD ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in LONDON July 30th, 31st, and August 1st 2nd, 1895.

PROCEEDINGS OF SECTIONS.

SECTION OF ETHICS.

W. F. Cleveland, M.D., President.

Wednesday, July 31st.

INTRA-PROFESSIONAL ETIQUETTE.

By T. Garrett Horder, M.R.C.S.Eng., L.R.C.P.Ed., Cardiff.

Mr. President and Gentlemen,—The importance of this subject can hardly be overrated. Unless professional men treat each other well they can hardly expect to be treated well by the public. And I here may remark in passing that the ignorance of the public on the subject of medical etiquette is most profound. It is a pity that it is so, for if patients were made acquainted with the general rules that govern our professional life there would probably be fewer opportunities of our having to regret their ignorance. Patients would be less likely to place medical men in strained positions if they had been previously informed of the etiquette which governs our relations to each other. My subject may be conveniently divided into three heads:

1. The etiquette to be observed in private practice.
2. The etiquette to be observed in relation to appointments.
3. The etiquette to be observed between consultants and general practitioners.

The first is naturally the most important, and demands, therefore, the most consideration. It is at the same time one about which we shall find the most diversity of opinion. The golden rule that we should do unto others as we would they should do unto us should be ever present in our minds; and if we all acted up to that rule, we should not hear of so many quarrels and disputes amongst the confraternity. Let us recognise that we are all brethren of a noble profession: let us discard as much as possible everything that tends to degrade our calling into a mere money-making concern, and then we shall probably set up a high standard of morality in our dealings with each other. For the purposes of discussion it will, however, be necessary to enter somewhat minutely into details. We must all recognise in the first place the absolute right of patients to change their medical attendant. We should not, however, encourage by any act of word or deed erratic behaviour on the part of patients. In cases of incurable disease we must recognise the anxiety of patients and their relations to try every possible means of relief; and we must not be too ready to condemn them for adopting measures which we cannot ourselves approve of. And it is in such cases that we find quack doctors (by whom, according to their unblushing statements in the public press, all diseases are easily curable) score very heavily. They have no doubts; their remedies are infallible, and their fees know no limit. For those patients who are blessed with plenty of this world's goods we can have no sympathy when they undergo the fleecing process; but for the poor, whose means are as limited as their knowledge, we have a right to say to the authorities and to the press generally, that it is a cruel thing to allow such gross perversions of the truth to appear in the public prints.

Before we take charge of a patient who has been under the care of a brother practitioner, we should make certain that the patient has actually communicated his intention to change his medical attendant. It should not be considered sufficient for a patient to say that he or she has fully determined to dispense with the services of the doctor who has been in attendance. Before rendering any service whatever to such a patient it would be a good plan to communicate with the former practitioner ourselves, and ascertain that he has received such a communication. In cases where a patient determines to employ a fresh medical man while still suffering from an illness, we should, as a matter of courtesy, suggest to the patient the desirability of arranging a consultation before taking sole charge of the case. By so acting we shall gain the respect of the patient and the confidence of the medical man who has been in attendance. And supposing that we are not successful in persuading the patient to adopt our advice, we should be especially careful in dealing with the case not to say or do anything which may lead the patient to think that he or she has been treated in an unskilful way. We must always bear in mind that the best of us are liable to make mistakes, and also that patients, when dissatisfied with their former attendants, are very prone to make accusations which have no foundation in fact. A case that occurred within my own knowledge some short time since proves the necessity of being very guarded in expressing an opinion. A member of a friendly society was visited by the club doctor, and found to be suffering from orchitis and gonorrhœa, and was informed that he was not entitled either to sick pay or to medical attendance for such complaints. A few hours after the visit the wife of the patient attended a meeting of the club, and informed the officials that the doctor had accused her husband of immorality, and demanded that another doctor should visit him. Acting without forethought, the members of the club gave instructions that a second doctor should visit the man and report to them. This was done, and done without making any communication to the club doctor. The report of the second medical man was to the effect that the man was suffering from orchitis and inflammation of the spermatic cord, and that as the disease was not caused by any act of immorality he was entitled to sick pay. Now it is probable, as so often happens, that the gonorrhœal discharge had temporarily disappeared, leaving only the inflamed testicle; but how a medical man could diagnose the cause of the orchitis is difficult to say. Whether the second medical man was acting in a strictly professional manner in visiting the man without first communicating with the club doctor is a nice point. But at all events it was rather indiscreet to say that the orchitis was not caused by an immoral act simply because no discharge was to be discovered in the urethra. I only mention this case to prove the extreme necessity of using very guarded language in reporting on a case where another medical man has been in attendance. Cases of that description are very apt to destroy the relations which should exist between medical men practising in the same town. That we should do everything in our power to assist each other in emergencies or in illness goes without saying. That we should not take any advantage when we are thus called in to attend the patients of another medical man we shall all agree with.

The etiquette to be observed in relation to appointments and clubs is not a subject which has been much dealt with in codes of etiquette; it is nevertheless one of the highest importance, and about which it is desirable we should come to some definite conclusion.

The difficulties we have to contend with in private practice are great, but they sink into insignificance when compared with the difficulties encountered in club practice. In a large number of instances these difficulties arise from the thoughtless action of some of our competitors. In some cases also the course of action taken by medical men is only intended to lead to one result—namely, the transfer of

the club appointment to themselves. Everyone will agree that no words can be found too strong to condemn what is neither more nor less than a conspiracy to deprive a professional brother of his legitimate earnings. It is, therefore, incumbent on us all that we should avoid, by every means in our power, to say or do anything that is in the least degree likely to undermine the position held by any of our brethren. "Better far an open foe than a secret enemy" applies most strongly to cases of this kind. We may feel perfectly sure that underhanded proceedings are taking place with a view of weakening our position, but the difficulties of proving anything tangible are insuperable; and as long as men are found who will stoop to such dishonourable action, how can we hope to improve the prospects of club practice? "United we stand, divided we fall," and working men nowadays are quite keen enough to discover the weak points in our armour. We should imitate to a certain degree the tactics of the working classes and form a union for the protection of our interests. A case that came under my personal observation some four years since will illustrate the good effect of such a combination. A large Foresters' lodge having determined to increase the number of their medical officers from one to three, the medical officer who had held that position for a number of years called the medical men of the town together to discuss the situation, and, after consultation, it was resolved almost unanimously—one doctor only refusing to consent—to uphold the contention of the medical officer that the change was uncalled-for, and further, that those present would not under any circumstances become candidates for the new appointments. The result was that no medical man of repute could be obtained, and the members of the club had little choice in the selection of their medical attendants.

But what about the gentlemen who were elected to fill the vacancies? Under the present circumstances nothing could be done; but it is a question which I will ask you to discuss to-day whether some means cannot be adopted in the future to prevent such action on the part of our brethren? We seem to want a union or guild which should have power to deal with questions of this sort. And for my part I submit that the Association could very well undertake through its Branches to deal with subjects of this kind. It would be necessary, however, to have certain broad lines of action laid down for us by the Central Council. It would never answer to leave each Branch to draw up rules and regulations; in many cases no action would be taken, and in others there would be too much wrangling on petty details.

To sum up the etiquette of club and other appointments: We should avoid in every possible way doing anything which is likely to disturb the harmony which should exist between the club doctor and his members. We should not try to curry favour with the officials of a club which has a regularly appointed doctor. And where disputes have arisen between the medical officer and a club we should do everything in our power to uphold the position taken up by the medical officer. Club practice at the best of times is most difficult to carry on; it becomes increasingly so when if it is found that other medical men make known their desire to supplant the holders of the office. It is only whispered, but it is whispered so often that one can hardly believe that it is untrue, that medical men are in the habit of bribing the secretaries of clubs to which they wish to be appointed.

Respecting the third part of my subject I must endeavour to treat it as delicately as I can. Everyone will admit that with the large increase in the number of specialists, the relations between general practitioners, their patients, and consultants, has during the past few years undergone a great change. The public nowadays seem to be better acquainted with the names of the various specialists than they used to be, and often consult them without first taking advice from their family doctor. Complaints have been made from time to time in the medical journals of the action of consultants in neglecting to communicate with the private medical attendants of patients whom they have prescribed for. It certainly used to be the custom, not only for patients to consult their ordinary medical attendant before seeking the advice of a consulting physician, but for consultants to communicate the result of the consultation privately to the general practitioner. This custom worked well, and strengthened the relations between the ordinary medical attendant and his patient. I do not understand that this custom has ceased to exist. What happens so often nowadays is this: Patients suffering from some special disease rush off to some well-known specialist without making known their intention to their ordinary medical attendant. The point to be discussed, and if possible decided, is whether under such circumstances the consultant should feel it his duty, not only to find out who is the ordinary medical attendant, but should also advise him of what has transpired. Looking at it purely from a general practitioner point of view, I should feel inclined to say that as a general rule such should be the course to be adopted by the consultant. At the same time, I freely admit that patients themselves would in some cases object to such a proceeding. Then again patients often make up their minds to place themselves unreservedly under the treatment of consulting physicians; in such instances it would naturally be out of place for the consultant to advise the ordinary practitioner of what was going on. Apart from cases of this kind, I understand that complaints have been made by general practitioners of cases where patients have been sent for special advice to consulting physicians, and the patients have been, to use a vulgar but expressive word, "collared" by the consultant. There can be no doubt whatever that such a course is contrary to all medical etiquette, and moreover calls for distinct condemnation. It is for you to say what proceedings should be taken in cases where there is absolute proof that physicians have acted in this way. I can only suggest the desirability of boldly naming any consultant who has so far forgotten the high traditions of the profession of which they are supposed to be the leading lights.

I cannot conclude these remarks without expressing a sincere hope that the Ethical Section will be productive of much good to the profession at large; and that as an outcome of its proceedings we shall come to the conclusion that it is most desirable to form a sort of court of appeal, to which ethical questions may be referred and reported on. The constitution of such a court will require very great consideration; but, if properly constituted, I venture to think it would be the means of solving many knotty points which are constantly cropping up, and for the solution of which we have no constituted authority.

At the same time, we must acknowledge that the codes of etiquette which have been formulated have been productive of much good; and it seems to me a pity that the various medical societies throughout the country have not, with few exceptions, adopted them. It is almost impossible for men when commencing practice to know much about the rules which govern our professional relations with each other. No better way of instructing them on this delicate matter suggests itself to my mind than the dissemination of a code of etiquette through the agency of the Branches of the Association and the medical societies. I have only to add, that the subject I have introduced to-day is not one which I was anxious to deal with, and you must therefore overlook the imperfect way in which I have touched on a subject which required much more skill and much more ability than I possess, to place it properly before such an important gathering.

Dr. Lee (Cork): You all know how we are situated in Cork. I wish to ask, Suppose one of these "blackleg" practitioners is attending a serious case, how are we to act if a patient sends for us?

Dr. Major Greenwood: I think if Dr. Lee would state his own views as to what ought to be done, other gentlemen might give theirs. I do not think we can answer *ex cathedrâ* a question like that.

Dr. Lee: Suppose there was a case of *post-partum* hæmorrhage that one of these men was attending, and the patient sent for a doctor; under existing circumstances we could not go, and the result would be that the patient's life would be in great danger. Great abuses existed in Cork under the club system, and we resigned our appointments because there were persons belonging to the club who were in receipt of about £1,000 a year, and were getting medical attendance from the club for 7s. 6d. a year. The local practitioners combined to stop that sort of thing, and we hail with the greatest satis-

faction the establishment of this Ethical Section which we hope will be able to help us. Four blacklegs were imported, and we are not entitled to enter into consultation with them. Our plan is that if the patient gets rid of the imported doctor, then we will attend. But how are we to deal if the patient's life is in jeopardy?

Dr. Pearse: This question is one which has occurred in many large towns. It occurred in Portsmouth a few years ago. There is in connection with the dockyard an enormous club, which is a disgrace to the whole club system. It only pays its medical officers a halfpenny a week. Some few years ago the medical officers refused to comply with the conditions, and no medical man in the town would take their place. The consequence was some importations occurred of men who were prepared to accept the conditions imposed by the club. The question is, What force can we as a united profession employ to remedy this state of things? It is of no use saying, We will report it to the British Medical Association, or we will turn them out, because men who would do these things would only snap their fingers at us. If we refuse to meet them in consultation that is a matter of very little import to them. The question is, What behaviour should we adopt towards these importations in the case of being called to a patient who is being attended by one of them? We have the honour of our profession at stake, and, although it seems a strong measure, I think our only course is to say, "We shall be happy to meet anybody in consultation, but we absolutely refuse to meet the doctors in question."

Dr. Hemming: There is one point in regard to this question upon which we have not had a word said—that is, the claims of the public. Are our ethics to be so narrowed and confined as to be purely medical ethics, not concerning the public at all? Ethics must have arisen from the very first creation or evolution of mankind. Wherever human beings collect in society they form rules of conduct which they take care shall be beneficial to the general organism, and coercive probably to the individual. In all these discussions where the claims of the profession will be brought forward, we must not forget the public. If a life should be sacrificed on account of any differences on a point of etiquette the rage of the country would be extreme. Let us take the public constantly into our consultations; they do not exist for us, we exist for them. You can hardly help these questions arising out of the struggle for existence, but I do hope that in coming to a decision you will take care that the interest of suffering humanity will not be neglected.

Dr. Harris said he thought Dr. Lee was quite right in his view that interlopers should not be met in consultation under ordinary circumstances, but in cases of immediate and pressing danger they should throw aside all considerations of etiquette and attend at once.

Dr. Hugh Woods said he would not do anything to run the risk of a person's life. In very few cases was it necessary for two doctors to be present, and he would say, "As soon as Dr. —— withdraws from the case, I shall be pleased to attend."

Dr. Major Greenwood thought the subject of Dr. Horder's paper a practical one, and pointed out many defects in their organisation. As a profession they ought to have some means of preventing conduct of the kind mentioned. He suggested that Dr. Lee should bring his point before the meeting in the form of a resolution. Under circumstances where medical men had acted unprofessionally, and violated the rules of etiquette, they should not be met in any way unless the immediate condition of the patient demanded it. In that way no public responsibility would be incurred. While agreeing with Dr. Hemming's remarks about the danger of setting the public against them, he thought they ought not to forget that disunion in their profession was a public danger. Although public danger was a great matter, they must not neglect to look after their own private interests. There was great need for some rules to be adopted. A leading article in the *Times* of that day deprecated that any form of trade unionism should be adopted, but he thought they should unite and come to some decision on the matter, and he hoped Dr. Lee would bring forward a resolution.

Dr. McNab thought the mere fact of such a section being required showed there was something radically wrong in the profession. He was a practitioner of thirty years' standing, and he emphatically declared that the ethics of the profession were degenerating very much. He thought it would be well if the teachers devoted a little time to instilling a knowledge of ethics into the minds of their pupils. He hoped that before the Section concluded they would come to a resolution that a statement should be drawn up and sent to those at the head of the profession, calling their attention to these things.

Mr. Brindley James said he could quite bear out the statements of the last speaker with regard to the unprofessional conduct of some who were at the head of their profession. He agreed that medical students should be taught ethics, but he thought some of the teachers required to learn ethics themselves first. It was of no use trying to teach what they did not practise. If they all practised it there would be less dissension, less trouble, and less fault-finding amongst medical men.

Dr. Young (Liverpool) said he had been in practice twenty-three years, and had noticed the changes that were taking place. The tendency of the present day was to turn out men who were less dependent on the opinions and resources of consultants. There was also a larger number of men rushing in to be consultants. The consequence was that things were being done now which were never thought of in times gone by. No good would be done until they had a court of appeal to which they could go. If they sent their patients to a consultant it not infrequently happened that the consultant got the patient away from them entirely. If they had a court of appeal a person doing anything of that kind could be brought before it. The case could then be discussed on its merits, and the decision of the court would be final. He thought the time was coming when the general practitioners would have an association of their own, which would be able to sustain any case of gross treatment of the kind.

Dr. W. Lattey said, speaking of work in connection with clubs, that one gentleman had said they ought to consider the public, and not look at these matters exclusively from a doctor's point of view. They must remember if they overworked and underpaid a doctor the public would suffer, because the work could not be done properly. Prevention was better than cure. He had been thinking what steps could be taken to stop the present state of things in regard to these matters. Ethics should be taught to students as a part of their curriculum. Another thing was, men ought to serve an apprenticeship before they went into practice for themselves. If a man went into practice straight from the hospital he was more likely to transgress the rules of etiquette than if he had a certain amount of training under an old practitioner. There should also be ethical courts connected with every Branch of the Association, and visitors should be sent round to every village and town so as to get their views.

Dr. Dickinson (Wandsworth) said there appeared to be two classes of offenders in this matter. There was the class at the top of the tree—the consultants; and the class at the bottom of the tree—the importations, as they had been called. He agreed with Dr. Pearse as to the extreme difficulty of dealing with the latter class, but he felt sure there was a powerful means of influencing the former, and that was by forming, in addition to their ordinary medical society, Branches of the Association all over the country having ethical branches attached to them. They had recently formed a medical society in Wandsworth, and they had taken care to have an ethical side to it. The rules were much the same as those laid down in Dr. Styrap's book. Whenever cases of the kind arose they intended to bring the offender before the council of the society, whether he was a member or not, and let him know what they thought of him. That would not affect a man who was working by means of "touts," because he would not care what they thought, but it would affect a consultant.

Dr. W. R. Rice (Coventry) said he did not consider the suggestions for establishing courts of ethics practicable, owing to the fact that a great many members of the profession did not belong to the branch associations. In Coventry they had established what they called a Public Medical Service, somewhat on the lines suggested by Dr. Rentoul. They had tried to amalgamate all the members of the profession in Coventry, and had made an attempt to consolidate all club

and contract work, so that there might be uniformity as to charges. Any applications for appointments in friendly societies and clubs were submitted to this medical service, so that they had an ethical control over the members of this service. They had been fortunate in enrolling almost all the members of the profession outside the Coventry Dispensary, which was one of the biggest institutions of its kind in the country. It absorbed about 25,000 people, but they had been trying to break down the system as far as possible. Experience had shown that it was impossible to control certain members of the profession as individuals, but they must try to amalgamate all, and create a public spirit amongst medical men, and by that means try and exercise some control over them.

Dr. Lee then proposed the following resolution:

That in the opinion of this Section any practitioner who wilfully violates the generally received rules of medical etiquette be not met in any professional intercourse whatsoever, save in a case of very great danger to an individual patient.

Dr. Bridgwater hoped the Section would realise they were there to ventilate the question of ethics generally, and that all things that were special and individual would help them in the long run to come to a right conclusion; but to ask them suddenly to come to a conclusion would be rather out of place, and likely to defeat the ends they had in view.

Dr. Horder, referring to the resolution, said it would be difficult to find out what were the generally approved rules of etiquette amongst the profession. It would be a mistake to be precipitate, and he proposed that the resolution be deferred.

Dr. Campbell Black said he had been thirty years in the profession, and was ignorant of the generally received rules of etiquette; they were very vague. He thought the passing of such a resolution would be attended with no benefit, and he approved of its postponement in order that it might be so formulated as to meet with general acceptance.

After some further remarks by Drs. O'Connor and Parsons, it was decided to again bring the resolution up on the last day of the meeting.

PROFESSIONAL ADVERTISING.

By Geo. W. Potter, M.D.

It may be presumed that the Ethical Committee of the British Medical Association is persuaded that such a thing as professional advertising really exists, and that it is of such a nature and extent as to demand some attention on the part of the Association. We should be helped to a clearer understanding of the case if we could have a definition of professional advertising. What exactly is it? Why is it scandalous? Why may not a professional man advertise as well as any other man? If advertising in many businesses is the royal road to fortune, and the only royal road, why is it a road which the medical man, almost alone in this respect, is rigidly debarred from travelling? For, after all, there appears to be nothing in the nature of the medical man which makes him positively dislike a fortune; nor would there seem to be any reason in the nature of things why he should not secure one if he honestly can.

Let us look this question of professional advertising squarely in the face. If it be very black, let us try to realise the full measure of its blackness. If it be not so black as it is painted, let us also admit that to ourselves. Here is a definition of the subject, which may serve for the moment and for purposes of discussion: "Professional advertising is the public or private praising of a man in his professional capacity, by himself or his agents, for fame or gain."

The definition, as you will perceive, is a pretty large net, and will enclose a good many fish. I do not think it is too large, nor do I think it will enclose a single fish which ought not to be enclosed. If some members of our profession who are caught by it are startled to find themselves in undesirable company, that is their affair.

Perhaps before proceeding further it may be desirable to offer a reasoned justification of this definition. What does any medical man advertise himself for—for fame or for gain? Whether he advertise himself by a card left at his non-professional neighbour's door, or by compiling a pamphlet or a book, the object of which is not to instruct less experienced medical men, but to make himself known, the motive is the same. In each case he is advertising himself for fame or for gain. Some time ago a London medical man had a patient under his care, and at one of their later interviews he persuaded the patient to purchase a copy of a medical work he had written. The price of the book was £1 1s. It was a highly technical work, and ostensibly written for the instruction of professional readers. Now will anyone contend that such a book would be helpful to an uninstructed layman, or that it was sold to him for that purpose? I do not think that any injustice is done to the learned author if we assume that his object was to advertise himself to the patient and the patient's friends. We need not now argue the question whether or not the sale of the book under such circumstances was unprofessional; but I do emphatically contend that in motive and in effect it was as much a piece of self-advertising as leaving a card at your neighbour's door or putting an advertisement into a newspaper.

This incident is typical and probably common. Let us refer it and similar incidents to a general principle. The motive of an action, the object with which it is really done, constitutes the ethical quality of that action—that is the general principle. Can it be seriously argued that all the medical works which are published have been written with the *bonâ fide* object of instructing medical readers? Many of them—may we not say most of them—have been written with a very different object, that object being the making known to as large a circle of people as possible, whether professional or lay, the personality and medical capacity of their authors? This is known to all men, it is recognised, it is hardly blamed; but when tried by the general principle of "motive," it is seen to be professional advertising and nothing else.

I am anxious to insist upon this definition because it is necessary to go to the root of the matter, to see the question in its true light and in its widest bearings. If it be not thus seen no real reforms will be effected; for it is quite certain that the profession as a profession will not be ethically improved by snuffing out the farthing candles and leaving the large gaslights blazing, by trying to make the man who accepts shilling fees ethically precise, and leaving the two-guinea consultant to practise his self-puffery boldly and unashamed.

Accepting this standard for the moment, let us now inquire to what extent medical advertising actually prevails; for if it is a thing of strictly limited extent, a thing practised only here and there by a very small number of very obscure persons, it is obvious that we need not waste time in discussing it. Does professional advertising as thus defined prevail in England? It does. Does it prevail on the Continent, in France and Germany? It does, and probably more than in England. Does it prevail in America? Most certainly it does, and most flagrantly. In that world of new men, new ideas, new manners, and modern practices professional advertising, in Shakespeare's phraseology, is "gross as a mountain, open, palpable."

We have glanced at the two most common forms of professional advertising, namely, the writing of professional compilations intended to make known the personality and medical capacity of their authors; and the leaving of business cards at the doors of the laity. Let us now take a walk in the by-ways of this modern art. In the Court Circular of the *Times* and other newspapers it is customary to publish brief notes of the daily progress of more or less eminent persons who may be ill and under medical care. On a certain day in March of the present year there were three such notes in the *Times*, perhaps more. Two of them contained no reference to any particular medical attendant. The third, which recorded the progress of a person comparatively unknown, might have been written for the sole purpose of "puffing" the medical man in charge. I will read the three notes, omitting names. The first note states that "Mr. —— (a Cabinet Minister) continues to improve generally, but is regaining strength only slowly." There is here no reference to any medical attendant, either by name or otherwise. The second reads thus: "The following bulletin respecting the Earl of ——'s condition was issued at 1 o'clock yesterday afternoon: 'Lord —— is keeping about the same.'" In this case a bulletin was issued, but not signed. No one, therefore, was informed of the name of the

medical attendant, although it may be taken for granted that he was a man of position and capacity. Here is the third note: "Sir —— is going through his severe attack of influenza favourably under the care of Mr. ——, F.R.C.S." In this case it is pointed out that Sir —— had an attack of influenza, that the attack was severe, that notwithstanding its severity he was passing through it favourably, and that he was under the care of Mr. ——, F.R.C.S. Whoever wrote that note certainly "puffed" Mr. ——, F.R.C.S., very much, whether it was inadvertently or of set purpose. One can hardly believe such a note was sent to the *Times* without at least having been first seen by Mr. ——, F.R.C.S.

Turn now to another class of self-advertisers, a most offensive, because a most cunning and tricky class. These gentlemen give testimonials to the vendors of so-called new remedies or improved medicinal foods. It is a study in human trickery to note the artful way in which, whilst they give one word of praise to the new commodity, they give two, three, or half-a-dozen to themselves. Here is a specimen cut from the advertising columns of a popular ladies' newspaper three or four months ago. The advertisement is thus headed: "What the Physician says," and these are his exact words, omitting names: "With regard to ——— (a meat food) I cannot speak too highly, believing as I do, after much experience, that it is superior to any other similar preparation in the market in point of nutritive value and delicacy of flavour. I may just add that I prescribed it exclusively during the recent epidemic of influenza, and although I attended over 700 cases of every form of severity and with every possible complication, I did not lose a single case.

"(Signed) ——— M.D. T.C.D., M.R.C.P., Etc."

Note now a few points about this gentleman which are made prominent in the advertisement. He is resolved that the public shall know he has an enormous practice; so enormous that he has attended as many as 700 influenza cases during one epidemic. That is, if the epidemic lasted two months he had 23 fresh cases every day. Moreover, he is very wishful also to inform the laity that many of his cases have been very severe ones, some of them showing "every possible complication;" yet, notwithstanding this, he has been so watchful, so wise, and so competent that he has not lost a single case. I should doubt if there be one medical man in the whole profession who has attended 700 influenza cases without losing one, except, of course, Dr. ———, T.C.D., etc. Now, what are we to say of this man—that he is quite truthful? That he is fearlessly candid? That he is the sort of man the public ought to trust and the profession to respect? If Dickens could be revived he would probably call him "Charles Bates," A.D., which in this connection would mean, not "Anno Domini," but "Artful Dodger." Professional advertisers of the "Artful Dodger" class are very numerous. They are also, like eels, very difficult to catch, and equally difficult to hold when caught.

A form of medical advertising which is becoming increasingly common, and which looks very innocent, is that of including medical works in publishers' lists, and so advertising them, with the names of their authors, in the lay press. Publishers' lists, including medical works with their authors' names attached, may be seen almost any day in the morning and evening newspapers. Undoubtedly a good many medical men's names are thus made familiar to the public which would not otherwise be heard of. Here is an example taken from the *Times* of March 30th, 1895: "Second edition just ready, Dr. ———'s new work, *Health and Condition in the Active and Sedentary.*" Then follows a laudatory notice from a well-known provincial medical journal. Other advertisements, taken from the same copy of the *Times*, appeared in the lists of different publishers. Here are two or three of them. Please note their titles: "*The Prevention of Consumption*, by ——— M.D., F.R.C.P., Physician and Lecturer in ——— at ——— Hospital;" "*The Spirit of Cookery*, by ——— M.D., F.R.C.P.;" "*Growing Children and Awkward Walking*, by ——— F.R.C.S., Consulting Surgeon to ——— Hospital."

Now if we must be judicial—and we must—it is exceedingly difficult to put one's finger upon the exact points in which such advertisements as these fail to reach a just medico-ethical standard. This their authors know as well as we do; and they give themselves, not their profession, the benefit of the doubt.

Perhaps the grossest and most offensive of all the forms of medical advertising is that which is pursued by needy practitioners in poor neighbourhoods. Men of this class resort to methods of which the better class of tradesmen are ashamed. They send round circulars or cards; they set up what they call "dispensaries," and paint scales of charges in their windows or elsewhere; or they publish scales of charges without setting up dispensaries. They undersell their neighbours, and reduce professional fees to levels at which honest practice is impossible. These men are both feared and disliked by those of their honest professional brethren who are unfortunate enough to practise in their near neighbourhood. They ought to be resolutely suppressed, and if the profession were as united as it should be they could and would be suppressed.

There are two questions which seem to me to be of paramount importance in the practical consideration of this subject. The first point we have to decide is this: Where precisely is the ethical demerit of professional advertising? And the second is this: Assuming that we can put our finger with certainty upon the exact spot in which professional advertising is unethical and therefore deserving of condemnation, how may we most effectually put an end to the practice?

What is it which makes professional advertising unethical? No one pretends that all advertising is unethical. But if general advertising is ethical, and all kinds of special advertising are ethical, why is medical advertising unethical? This question we are bound to answer, and to answer logically and convincingly. We must answer it for two reasons: first, in order that we may do nothing but justice to those members of our profession who advertise; and secondly, in order that we may carry the common sense and conscience of the general public with us in our efforts to put an end to medical advertising in every form.

What, then, are the exact points in which professional advertising is unethical? The answer to this question has two aspects of chief importance, a public and a professional aspect. The public aspect is this, that a medical advertiser can by no means perform with certainty any promises of cure he may make to the public in his advertisements. An advertiser who offers the public soap or tea can supply with absolute certainty tea or soap of the quality and quantity he promises in his advertisement. No medical man can with certainty effect any cures he may promise to make, even of comparatively trifling diseases, much less of diseases of a more serious and dangerous nature. From the standpoint of the public, therefore, medical advertising is not only undesirable but it is fraudulent. It is fraudulent in that it secures money by means of promises which it knows it cannot with certainty perform. Medicine can guarantee services and that is all; results it cannot guarantee; and, just because it cannot guarantee certain and definite results, it cannot, like the manufacturer or the merchant, honestly advertise.

Where now lies the precise demerit of professional advertising from a purely medical point of view? It consists in this, that the professional advertiser tries to take unfair advantage of his professional brethren who do not advertise. He does not play the game of professional life fairly. He is a "welcher" on the medical racecourse; his hand is against every man; and as a necessary consequence every man's hand is against him.

Now if professional advertising be fairly chargeable with these two flagrant demerits—namely, that from a professional point of view it is unfair, and from a public point of view it is dishonest—it surely requires no further argumentation to convince impartial persons of its unethical quality. There are, however, two other, and to my mind almost stronger, reasons than those for its absolute condemnation. The first is this: that, if medical advertising were to become general, medical science would cease to advance, or would advance much less surely and firmly than it does at present; and the second is this: that the community would be attended by medical men who would, like ordinary men of business, put money-getting first and healing second in their scheme of life. But if it ever comes to pass that the well-being of the patient occupies the second and not the first place in the mind of the medical profession, on that very day the profession will be degraded in its honour and paralysed in its

scientific energy. That is what the public who defend medical advertisers entirely fail to understand. But it is what the medical profession must compel itself to understand thoroughly, and what it must drive home deeper and deeper into the public mind at every possible opportunity.

We as medical men are fully convinced of the unfairness, dishonesty, injuriousness, and general inexpediency of professional advertising. We are also quite satisfied that it ought to be rooted out and destroyed. How is this to be done? Reform must come from the highest quarters; it is not likely to grow up from beneath. It must begin with the leaders of the profession, and it must have its roots in the conscience as well as in the instructed judgment. I do not believe any man will behave ethically unless he is by nature of a fair and honest mind. No position, however high, will prevent the selfish man behaving as selfishly as he dares. If such a man thinks self-advertising will pay him, then by hook or by crook he will advertise himself.

What then can we do? Two things: we can punish and we can persuade. Both punishment and persuasion are necessary. Punishment must be meted out to offenders, and that with the strictest impartiality. But it must be punishment, not vindictiveness, and in order that it may be effectual it must visit with the severest penalties those who are highest in professional position among us. To harry the failures and to leave the prosperous alone, to kill the small vermin and to permit the larger beasts of prey to prowl about unmolested, will be to make every effort at improvement futile from the very beginning. Such conduct, indeed, whatever medical body should carry it out, would be more unethical, more offensive, and more injurious than the very professional advertising it was designed to correct.

Persuasion I hold to be a much more potent instrument than punishment in this connection. But in order to persuade successfully we must begin at the beginning. Here is the source and origin of the flood of selfishness and unethical greediness which is now threatening to overwhelm medicine and medical science in every civilised country. We do not begin at the beginning. We do not instruct our students in ethics. We as a profession have thought so little of ethics in the past that now the want of ethics threatens to be our destruction.

With etiquette, mere etiquette, the medical profession has been dosed *ad nauseam*. But with ethics the case is very different. If we wish our practitioners to be ethical we must teach our students ethics. That is the secret. Every medical school should have its chair of ethics, or if that be too much to ask, ethics should be taught systematically from the chair of Medical Jurisprudence. Not only should the student be systematically taught the rules of sound professional behaviour, but he should be instructed in the reasons, in the philosophy, on which those rules are based. Nobody knows better than we do that every effect must have a cause. As well might we expect the chick without the egg as expect ethics from men who have not been ethically taught. Let us be true to science in this matter and to our own science. If we wish to reap we must first sow, and if we desire that the medical profession as a whole shall be intelligently and scientifically ethical we must teach ethics with scientific thoroughness and fulness in every medical school.

Dr. Bridgwater.—In connection with this subject the Council have before them the following resolution:

In the opinion of the Council the granting of testimonials that are used for the purpose of advertising proprietary drugs is inconsistent with the dignity of the profession.

The Council do not express any opinion upon it, but refer it to this Section for discussion.

Dr. J. Brown (Bacup) thought a great deal of this advertising was brought about through neglect to give students an ethical training. It was a great pity that the old system of pupilage was dying out. If a student had one year with a general practitioner before he went to college he would require no teaching in ethics. The present system left students to start in life just where they liked and how they liked. It was a great mistake, and was lowering the profession beneath that of an ordinary tradesman. Those who advertised made most money, whilst those who upheld the dignity of the profession sometimes merely made a bare living, but they preferred rather to maintain their dignity and self-respect than condescend to do the mean, dastardly things that were done; but when a man lost his self-respect he lost that which money could not make up. He hoped the discussion would lead to something being done to stop this advertising, but he feared it would be very difficult to stop it altogether.

Mr. Brindley James said if anything was done he thought they should start with the heads of the profession, who frequently made enormous sums by advertising. He also thought something should be done to put an end to these twopenny-halfpenny dispensaries which were being established in every town in the kingdom.

Dr. Major Greenwood said he thought some parts of Dr. Potter's paper were far too sweeping. The question of literature was far too dangerous a thing for them to interfere with. Who was to say what book was published merely as an advertisement, and what book with an honest idea of instructing others? No court could decide a question of that kind. If they attempted to interfere with publications they would get into endless difficulties.

Dr. Potter said he had endeavoured in his paper to go to the root of the matter, and deal with the spirit of the thing. In discussing these things they must discuss them philosophically, and speak the truth whatever happened.

Dr. James Morris said as a member of the Council he could say that the British Medical Association had always set its face against any kind of advertising in the profession. He thought the older members of the profession should endeavour to keep the younger members from erring in this direction by example as well as by precept, and so put down this sort of thing, which was a blot on the profession.

Mr. Nelson Hardy said that the name of a person elected yesterday was the same as that of a gentleman who had some twenty of these low-class dispensaries in London. He asked whether inquiries had been made to see if it was the same person.

Dr. Bridgwater explained the way in which members were elected, and said that if this man had been elected, and his reputation was such as had been described, it was an oversight on the part of the members of the Branch to which he belonged. The matter would be inquired into.

On inquiry it was proved that the newly elected member was no relation of the practitioner complained of.

Dr. Pearse said there was direct and indirect advertising. The direct advertising, he thought, was the only kind they could deal with, and without drawing any hard-and-fast lines that form of advertisement should meet with the strong disapproval both of that meeting and the profession at large.

Dr. Hemming spoke in support of the resolution which was brought down from the Council by Dr. Bridgwater.

Dr. Eyre (Rome) gave a detailed account of some of the methods of advertising adopted by English medical practitioners living in Continental cities.

Dr. Potter, in reply, moved the following resolution:

That, in the judgment of this Section, advertising in every shape is highly derogatory to the profession, and that the Council be requested to use every effort to suppress it.

It was decided that the resolution should brought up again on the last day of the meeting.

THE MEDICAL PROFESSION IN NEW SOUTH WALES.[1]

By George Lane Mullins, M.A., M.D.T.C.D.,

Physician to the Hospice for the Dying, Sydney; late Assistant Physician to St. Vincent's Hospital, Sydney.

Introduction.

Although it is a long distance from London to New South Wales, the members of the British Medical Association assembled at the annual meeting will, I am sure, be pleased to hear a short account of the medical profession in the colony which possesses the largest colonial Branch of the Association. My objects in bringing such a subject before this important gathering are to spread a knowledge of our colony among those who may be considering the advisability of emigrating to the land of the Golden Fleece, and also to place a

[1] The President read extracts from this paper as the author was unable to to attend the meeting.

statement of the true position of the profession before our well wishers in the mother country.

New South Wales, the oldest of the Australian colonies, was founded in 1788. It is situated in the south-eastern portion of the continent, and is bounded by Queensland on the North, Victoria on the south, South Australia on the west, while the South Pacific Ocean rolls in majestically upon its eastern shores. Its extreme length from east to west is 760 miles, and its breadth from north to south 680 miles. Its area is estimated at 310 700 square miles. Its total population (census, 1891) is 1 132 234.

It is estimated that there are in New South Wales about a thousand duly qualified medical practitioners, of whom about a hundred are looking about for something to do, or are engaged in the profitless task of travelling as referees for life assurance societies. As there is free trade in medicine here, there are large numbers of unregistered practitioners who, under the titles of homœopaths, eclectics, hydropaths, herbalists, medical botanists, electropaths, clairvoyants, etc., treat disease after their own fashion. Some of these persons have amassed large fortunes; indeed, Sir George Dibbs lately announced in Parliament that a "Chinese doctor" had made £150,000 in practice in the Colony during the last few years.

Medical Laws.

New South Wales is singularly deficient in Medical Acts. By the Medical Witnesses Act (1838) every legally qualified medical practitioner is required to attend as a witness at a coroner's inquest, or any inquiry by a justice of the peace touching the death of any person, when called upon by the coroner or justice, as the case may be. He may also be directed to perform a *post-mortem* examination of the body of the deceased, either with or without an analysis of the contents of the stomach or intestines. For these services he is entitled to the sum of one guinea for the evidence, and two guineas in addition for the *post-mortem* examination, with a travelling allowance of one shilling a mile beyond a distance of ten miles. The penalty for neglecting to attend when called upon is not less than £3 nor more than £20.

Under the provisions of the Infectious Disease Supervision Act (1881), the medical practitioner in attendance upon any case of small-pox, or eruptive fever which may reasonably be supposed to be small-pox, must immediately report the matter in writing to the authorities under a penalty of not less than £10. Leprosy also must be reported in a similar manner.

By the Dairies Supervision Act, medical practitioners are bound to notify all cases of infectious diseases occurring in dairy premises or milk stores, under a penalty not exceeding £20. The following are declared to be infectious diseases under this Act, namely: cholera, enteric fever, small pox, scarlet fever, diphtheria, measles, and syphilis. The provisions of this Act apply only to those parts of the Colony where the Dairies Supervision Act has been proclaimed to be in force.

A Lunacy Act, somewhat similar to that in England, is in force here, but there is no Public Health Act.

A Bill "to enable persons requiring medical aid to distinguish qualified from unqualified practitioners" has just passed both Houses of the Legislature, and only requires the sanction of the Governor to become the law of the land.

Medical Education.

Sydney possesses a splendid University, with a large and efficient staff of teachers and well-equipped laboratories. Clinical instruction is provided for in the large general hospitals of the city. The University grants degrees in Medicine and Surgery, and these degrees, which are of a high standard, are recognised and registrable in Great Britain.

Medical Boards.

The Medical Board consists of a President, Secretary, and eleven members of the profession appointed by the Governor, and by an Act "any person being desirous of being declared a legally qualified medical practitioner shall submit his degree, diploma, or other certificate or proof of his being duly qualified for the examination and approval of the said Medical Board, and shall obtain from the said Medical Board a certificate of his being so qualified." It is further enacted that "no person shall be deemed a legally qualified medical practitioner unless such person shall have proved to the satisfaction of the Medical Board that he is a Doctor or Bachelor of Medicine of some University, or a Physician or Surgeon licensed or admitted as such by some College of Physicians or Surgeons in Great Britain or Ireland, or a Member of the Society of Apothecaries of London, or a Member or Licentiate of the Apothecaries' Hall of Dublin, or who is or has been a medical officer duly appointed and confirmed of Her Majesty's sea or land service." A later Act, however, provides that "any person who shall prove to the satisfaction of the Medical Board that he has passed through a regular course of medical study of not less than three years' duration in a school of medicine, and that he has received, after due examination, from the University of Sydney, or or from some university, college, or other body duly recognised for that purpose in the country to which such university, college, or other body may belong, a diploma, degree, or licence entitling him to practise medicine in that country, shall be deemed to be a legally qualified medical practitioner, and shall be entitled to a certificate as such from the said Board."

Medical Societies.

By far the largest medical society in the Colony is the New South Wales Branch of the British Medical Association. This Branch was formed in the early part of 1880, the first President being the Hon. Sir Arthur Renwick, M.D. The Branch has now a roll of membership containing over 300 names, and possesses a journal of its own—the *Australasian Medical Gazette*. During the year 1894 over 120 new members were elected.

Next in point of numbers, though youngest in years, comes the New South Wales Medical Union, the object of which is to render assistance to any member who may be threatened with or involved in an action at law or prosecution arising out of the practice of his profession within the Colony of New South Wales. The Union numbers over 150 members.

In addition to these large societies there are the Medical Section of the Royal Society in Sydney, and also the Western, Eastern Suburbs, and North Sydney Medical Associations in the suburban districts. There are smaller societies in some of the country districts, the principal of which is the Newcastle Medical Society in the Hunter River District.

Hospitals.

There are three large general hospitals in Sydney—the Prince Alfred, the Sydney, and St. Vincent's. The first-named is a magnificent pile of buildings situated within the grounds of the Sydney University, with the medical school of which it is associated. It contains about 250 beds, and is one of the finest institutions of its kind in the Southern hemisphere. The Sydney Hospital is the oldest existing hospital in Australia. It has recently been rebuilt at great cost. It contains about 250 beds. This and the Prince Alfred Hospital receive large grants annually from the public funds. St. Vincent's Hospital, under the care of the Sisters of Charity, receives for treatment over a thousand in-patients every year. The hygienic condition of this hospital is perfect—no case of erysipelas or pyæmia ever occurring within its walls. St. Vincent's Hospital receives no Government aid, and is dependent upon the generosity of the public for its support. It was established in 1857.

In addition to these three large general hospitals there are others for special purposes: for example, the Moorcliff Hospital for Diseases of the Eye (connected with the Sydney Hospital), the Hospice for the Dying, the Sick Children's Hospital, the Lying-in Hospital in connection with the Benevolent Asylum, the Lewisham Hospital for Diseases of Women and Children, the Coast Hospital (a Government institution) at Little Bay, the Quarantine Hospital at North Head, etc. There are also convalescent hospitals at Camden, Concord, and Auburn, and a consumptive hospital at Thirlmere, near Picton. Many of these hospitals have been wholly or partially endowed by private benefactions.

Hospital Appointments.

The medical staffs of the hospitals are usually appointed by the directors or committees, consisting of both medical and lay men. Dual appointments are by no means rare, and it is not unusual to find a physician or surgeon [illegible]

ing a position on the staffs of two of the three hospitals. An instance is not unknown of one practitioner holding an appointment as physician at one hospital and surgeon at another. Naturally such a state of affairs creates a large amount of dissatisfaction among eligible practitioners, who are thus excluded from some of these appointments. Most of the visiting staffs of the Sydney hospitals perform their duties without fee or reward, but in the country districts the medical officers receive small salaries.

Board of Health.

There is a Board of Health for the Colony, but its powers are very limited. There is no Public Health Act, nor is there any indication that such a Bill will be introduced within any reasonable time. The *Australasian Medical Gazette* recently pointed out the necessity for a Public Health Act for New South Wales, and showed conclusively the good effect of such a measure. The Board of Health has the administration of the Quarantine, Dairies Supervision, Cattle Slaughtering, Infectious Diseases Supervision, Leprosy, Diseased Animals and Meat, and the Noxious Trades Acts. It has also limited powers under the Animals Infectious Diseases, Poisons, Nuisances Prevention, and some less important Acts. Recommendations for appointments of all public medical officers is vested in the President of the Board.

Public Appointments.

There are very few public appointments open to medical men. There is a medical adviser to the Government, who also holds the offices of President of the Board of Health, Dean of the Faculty of Medicine, and Professor of Physiology at the Sydney University. There are also a Chief Inspector to the Board of Health, and various Government medical officers throughout the country districts.

Specialists and Consultants.

We have many specialists for diseases of the eye, ear, and throat, and diseases of women, but we have very few consulting physicians or surgeons in New South Wales. Most of the medical men are general practitioners, and may be called upon to act to-day as consultant, to-morrow as medical attendant, and this oftentimes leads to unpleasantness between two or more medical men.

Medical Ethics.

Breaches of medical ethics are not rare. Well qualified medical men, graduates of British universities and Fellows of the Colleges of Surgeons, advertise in the lay press, and well-meaning members of the profession are powerless to prevent them. The New South Wales Branch of the British Medical Association has done much good by appealing to its members to submit their professional disputes to arbitration, and for its action in this regard it deserves the thanks of the profession.

Actions at Law.

Actions for negligence or unskilful treatment are common. Juries have little mercy for medical men, as the following account of a recent trial will show. This is a fair sample of the cases which crop up in our courts of law every few months.

In March last a medical man (F.R.C.S.I.), practising in a country town, had an action brought against him by a patient for alleged unskilful treatment of a fracture of the external condyle of the humerus extending into the elbow-joint, and although some of the leading surgeons in Sydney swore that his treatment was the best possible under the circumstances, the jury returned a verdict for the plaintiff for £200. The jury was influenced in its decision by the evidence of another medical man (M.R.C.S.) practising in the same town, who swore that the defendant's treatment was wrong, and although it was in accord with the teachings of Erichsen, Howard Marsh, Malgaigne, Astley Cooper, Pick and others, he did not agree with these authorities. The defendant in this action had only been about a year in the country when the event took place. In commenting upon this case the *Australasian Medical Gazette* said, "So many medical men are now threatened with actions at law that practice is becoming intolerable. The members of our profession are liable at any moment to be called upon to treat all kinds of injuries and ailments. We are the first to be called in when a patient is in trouble, yet we are the last to be paid. Matters have now come to such a pass that we must consider very seriously whether we are not bound, in justice to our own reputations, when called upon to attend any surgical injuries, to insist upon a consultation with a respectable medical practitioner, or, failing such consultation, to decline to treat the case at all. There is no legal obligation upon us to treat any patient, and self-preservation being the first law of Nature, we must not allow kindly feelings to lead us to destruction."

Lodges.

The lodge system prevails to an alarming extent throughout the Colony. Most young men starting practice are entirely dependent on lodges for their support, and in a country which has been aptly termed "the workman's paradise," where labour is king, the degrading spectacle of a highly educated university graduate begging the vote of a corporation labourer is, alas! only too common. House rents in Sydney are extremely high, lodge pay is extremely low, and there are many deserving men who are unable to make ends meet.

Conclusion.

If our professional brethren in the old country could only see the poverty of many of our members in New South Wales the stream of emigration would soon cease. Almost every ship which arrives from Europe brings one or more newly qualified medical practitioners to our shores to seek the gold that exists only in the imagination of the youth fresh from the examination hall. There is no room here for medical men; the profession is overcrowded. There are few appointments, and fewer still are the possessors of them, and with one or two exceptions they are badly paid.

"Distance lends enchantment to the view," and young medical practitioners who only hear of the immense quantities of gold, silver, and wool exported come to Australia expecting to fill their pockets and retire to England to end their days in wealth and retirement. And yet how few make fortunes in this country. Landing in Sydney or Melbourne with a few pounds in their pockets, the new arrivals look round for something to do, they spend their money, and yet nothing "turns up." At last, penniless, wretched, and homesick, they depart for the country districts as travelling medical referees for life assurance societies. To those unaccustomed to hardship and deprivation such a life is quite unendurable, and yet the steps cannot be retraced. In the end, disappointed, and disgusted, they return to Sydney, beg a passage on a homeward bound vessel, and reach England sadder, if wiser, men.

UNQUALIFIED PRACTITIONERS.

By George Brown, M.R.C.S.

Mr. George Brown, in introducing a discussion on this subject, said that the practice was to be condemned from three points of view: (1) Personal, (2) Professional, (3) Public. In the first case the practitioner was strictly liable for all the acts of his unqualified assistant, and how could he tell what danger might be brought upon himself by his employing them? There were cases well known in which criminal liability had been incurred, and still more in which the unfortunate practitioner had been mulcted in damages. From a professional point of view this employment must be equally condemned, for how could practitioners complain of their younger brethren opening cheap dispensaries and joining medical aid societies if they treated them so unjustly as to put unqualified men into their natural places? Where many newly-qualified men found the utmost difficulty in gaining a livelihood, it would necessarily embitter them against their profession to find unqualified men taking, as it were, the bread out of their mouths, and be the strongest inducement to them to act unprofessionally. Thirdly, it was a distinct fraud on the public to employ an unqualified assistant, except under the immediate supervision of the principal, and in the event of any accident occurring those guilty of such practices would be likely to meet with universal condemnation.

Mr. Brindley James said he had himself employed unqualified assistants in the early years of his practice, but always under his own supervision. He regarded it as alto-

gether wrong to leave an unqualified assistant in entire charge of a place. Now there were so many qualified men in the market, he thought they were doing harm to themselves by employing unqualified assistants, as they were forcing the qualified men to open these 6d. and 1s. dispensaries against which so much had been said.

Dr. Major Greenwood said it was now generally recognised that the principles laid down in Mr. Brown's paper ought to be carried out. If practitioners took unqualified assistants into their service, other members of the profession who had to get their living were really forced into the ranks of the medical aid societies and societies of that kind. Unqualified men ought not to be allowed to perform even minor operations. Another point he wished strongly to deprecate was the practice of some medical men going away for their holidays and leaving an unqualified assistant in charge.

Dr. Brown (Bacup) said that although the unqualified assistant was rapidly dying out, there were still some in existence. He thought that unless something was done to prevent them being left in charge, they would have branch practices starting up in connection with telephones. He knew of such a case, and he thought it was most unfair.

Dr. Bridgwater said the question was one which especially affected the country practitioner. There had been a time when there were most valuable men who were not properly branded by the Examination Board; but times had changed, and the prevailing spirit was that no one ought to be allowed to practise who had not the stamp of the Examining Board. It was the safest doctrine, and in order to support that it was their duty, as the Ethical Section of the Association, to express their feelings very strongly on that point. They must have no half measures. They must stamp the doctrine that no unqualified man under any circumstances should be employed.

Mr. G. Brown, in reply, said he wished to call their attention to two points: (1) That by employing unqualified assistants they were responsible for their mistakes; medical men had had to pay heavy damages for injuries caused by their unqualified assistants; (2) that a medical man could not claim for medical services rendered by unqualified assistants. He proposed to bring up the following resolution on Friday next:

That, in the opinion of this Section, the employment of unqualified assistants in visiting patients is injurious to the interests of the public as well as those of the profession.

Thursday, August 1st.

CLUBS, MEDICAL AID SOCIETIES, AND CONTRACT PRACTICE.

By R. W. Doyne, F.R.C.S.,
Surgeon Oxford Eye Hospital.

It was with very great diffidence I undertook, at the request of the Secretaries, to open the discussion on this important subject. While I appreciated highly the honour that was done me by the request, I feared I should not be able to do justice to the subject, a subject that requires for many reasons most delicate handling. I feared lest my having been engaged for many years in what is commonly known as a specialism might place me out of touch with the requirements and needs of general practice.

But that which has given my position whatever strength it may have is the ready and kindly response to my appeal in the British Medical Journal for information on the part of a large number of medical men whose practical experience has enabled them to put before me views and expressions of opinion of the highest value. To those gentlemen I wish in your presence to acknowledge my great indebtedness. The help that they have given me has made advantageous my position which I before thought was the reverse, because, in so far as I am able to take advantage of it, I can claim a more judicial position, for I possess all the weight of their experience, and none can accuse me of interested motives in my conclusions. I have done my best to deal practically with the subject. My shortcomings, doubtless, are many; but I have the satisfaction of knowing that the gaps I leave will be more ably filled up by those who will follow me in the discussion.

Let me at the beginning generalise, and look at our profession from the broadest points of view, and I propose now to take two points of view which at first sight might seem to be as widely apart as possible, but which I hope to be able to show you are only the two counterpart pictures of a stereoscopic view which serve the one with the other to show up the whole in the greatest relief.

The one I shall call, for want of a better name, the sentimental point of view; the other the commercial aspect. By the sentimental I mean the point of view from which we regard the relief of suffering and the healing of the sick as the work of a noble calling; the commercial aspect being the means by which the exercise of this calling provides a livelihood for those who practise it—certain sums of money paid for certain services rendered that should leave no sense of obligation on either side.

Time was when sickness and death were more rampant, when medical science could not give the relief it can now, when the ranks of the profession were not so crowded with workers as at the present time, and when competition existed mainly for the higher motives as to who could work the best. Then, I say, the profession would be content to look mainly on the sentimental side, and leave the commercial aspect to more or less take care of itself.

The sentimental view is the only one, I think, that is to any extent safeguarded. The General Medical Council have really only the power to deal with this aspect of the case; they can insist on a general knowledge of all branches before allowing anyone to practise any branch; they can, to a certain extent, maintain a standard of honourable behaviour in the discharge of professional duties, but if they attempt to regulate the commercial aspect by these same rules they must necessarily fail completely.

The commercial aspect can only be worked out between the two parties concerned, the general public on the one hand, and the profession on the other. The General Medical Council are bound, I think, by the very position they hold not to support the one against the other, but to hold the balance evenly between the two. If for the sake of the doctors they took action against the payment of unduly low fees, it is also, I think, their bounden duty to protect the public against exorbitant fees; but the truth is they cannot take an active part in this question at all.

Time was, as I said before, when there was no especial reason for regulating the commercial aspect, but nowadays, when competition from force of circumstances has descended from the position I described just now as to who could work the best to the much lower one of who can gain the most, it is abundantly necessary; and though I do not mean to say for one moment that the sentimental aspect must take a second place, yet I do most emphatically say it must be content to take a place side by side with the commercial aspect.

The question, then, must be fought out between the doctors and the public; the latter have organised their forces and are in possession of the field to a great extent at the present time, and if matters are left as they are now, hopeless despair is all that is left to a large portion of our workers. Our one hope of staying the evil is organisation, and the only organisation that has power to help is the British Medical Association. Without such support as an organisation of that sort can give it is quite hopeless to do any real good: here and there in local areas *esprit de corps* has come to the rescue, and by presenting a united front the medical men of a town or district have managed to keep temporarily at bay the sweating trade concerns that are being pushed through the length and breadth of the land. But if we can only induce the British Medical Association to take the question up the victory is assured; we shall be able to make our own terms and insist upon their acceptance, and as victors we well know that the medical profession will not abuse their position in the disgraceful way that has been done by those who are now triumphant.

Let me assume, then, that we have organised our forces and that we have won the victory. How shall we use our victory? To answer this question we must look at the state of affairs at the present time and consider the causes that have led up to it.

I suppose among the earliest forms of contract work was that of the friendly societies in which healthy men paid from 4s. to 6s. a year for medical attendance. This, indeed, was little enough, but they gave the doctor but little trouble, and the work brought in a fixed and regular sum. At this time there were a large number of men, women, and children who habitually sought the help of the doctor, but who never recognised their pecuniary liability; many were willing and able to pay something, but in time of sickness were quite unable to meet even the lowest medical fees. The only way that these could meet their obligations and avoid the stigma of pauperism was by contracting for medical aid, and for this purpose provident dispensaries were organised, and to a great extent met the evil admirably, but very soon they began to bring about the very evil they were intended to obviate; for a class superior to that for whom this relief was organised, by taking advantage of what only was intended for their poorer brethren, clearly pauperised themselves though they were careful to shut their eyes to the fact.

And so the process has gone on developing till we are face to face with these miserable sweating concerns euphemistically termed "medical aid societies," often run by trade societies for their own private ends, wherein the medical officers in the worst of them are obliged to attend anyone who chooses to join, high, low, rich, or poor for the sum of ½d. a week, only a portion of which finds its way into his pocket. It would seem at first sight incredible that the profession could have allowed such a state of affairs, but how has it been brought about? I would wish to press home the answer, for it serves as a splendid illustration of the enormous power of combination, which it is the object of this paper to impress on the profession as the only real means of meeting the difficulty.

The working classes have by their organisations combined for, amongst others, four points—(1) For higher wages, (2) for shorter hours, (3) for more certain work, and, lastly, to pay their doctors less.

Now our case lies in a nutshell. Let us combine for a minimum remunerative payment and show a determined front, and this will compel them in their turn, if they do not already possess it, to demand from the great commercial wealth of the country sufficient in their wages to pay the very humble pittance the doctor asks. So long as we are content to take merely what we can get, so long will the smart business community of this country who look to make their profits in all directions take care that there shall be less and less for us to get. The responsibility for this state of affairs lies really much further than at the door of the artisan or working man; it is really wrapped up in the whole commercial spirit of the country, which has ordained that medical attendance is a luxury, not a living necessity, and if a man cannot pay for it as a luxury, it must be given him as a charity.

We must remember that the profession is greatly increasing in numbers, at the rate, I am told, of a net increase of 600 members a year, and if the number is too great the profession, to put it coarsely, must be starved down to a proper proportion. But if work is to be done really thoroughly, I do not think there are too many workers; the average time and care in examining a patient (and the poor need it as much as the rich) must be far greater than twenty years ago, for the means of examination and research are so enormously greater and more exact; but the number of patients each man has to see in poorer practice in order to earn a livelihood renders it quite impossible for him to attend them as carefully and thoroughly as he would do, and as he desires to do if he could give the time. For, given the conditions I ask, competition could again take the form of working the best, in order that each might create for himself a position to command higher remuneration.

This, then, is the state of affairs we have to meet, and, as I said before, having won our victory how shall we use it? I will sketch the lines on which it seems to me we must work.

The most important I think is elimination of so-called charity from the consideration of the question; when this has been done other difficulties will more readily melt away. The word "charity" is a sort of shibboleth with the public to run some medical scheme for the pecuniary benefit of the working classes out of the pocket of the doctor; and this has been so ground into an unfortunate profession, that it has passively suffered the scheme, and has accepted as a morbid sop to its injured feeling, the application of the shibboleth charity. It requires no words of mine, however, to urge that the word charity is quite inapplicable when it is a question of "needs must when the devil drives." There is no act of charity whatever in accepting ½d. a week for contract medical service when the doctor feels he should receive 2d., and only accepts the smaller sum because he cannot get the larger. I cannot be persuaded that the medical officer to one of these ill-paid medical aid associations accepts the post as an act of charity; he accepts it (and I cannot bring myself to blame him under the circumstances) under the first law—self-preservation; he accepts it because it affords him bread and cheese, and because he knows that there are many others ready to take it if he declines; men who are driven to such posts, not because they desire such work, but because they cannot get other work, through a state of affairs brought about by the apathy of the profession or, on the part of some, the fear of offending their wealthier patients who are running and supporting these schemes of cheap charity. I do not for one moment suggest interfering with the liberty of the doctor with regard to individual cases; I am only protesting against the wholesale prostitution of the word charity to rob the doctor of his hardly earned livelihood. I suppose there is no class of men who have greater opportunities of acts of charity than medical men, and I know I may claim, with pride for my profession, that they act fully up to their opportunities.

Illustrations are only too abundant everywhere, far more gross than the one I am going to narrate; but this one shows how insidiously the evil creeps in and will therefore well serve my purpose. In a village in Buckinghamshire the conditions under which childbearing took place among the artisan and labouring classes left much—indeed, nearly everything—to be desired. A lady resident there—whom I would speak of with the greatest respect, for her true kindness and charity to the poor could not be questioned—conceived the idea of getting up a maternity club which should be self-supporting. The conditions before were that the doctor, though seldom called, got a guinea when he was; the local "wise woman," midwife, midwifery nurse, or whatever you are going to call her, who usually attended, got a certain sum, and the patient, of course, had to pay a certain sum for services rendered. But the maternity arranged that the patient—who paid little enough before—was to pay less; that the wise woman should receive more, and practically the balance was to come out of the pocket of the doctor—yes, and far more than the balance, for henceforth he was to be responsible for all the case.

Hitherto I have only alluded to the most flagrant evidence of abuse of charity, but really the whole question is so saturated with the leaven of false charity that it meets one at every turn. A certain sum (to my mind insufficient) was considered sufficient for a healthy man, who presumably would require but little attendance, to pay to his club doctor, while his wife and children became usually the doctor's patients, and paid such fees as 2s. 6d. a visit; but now very often these are accepted in the sick clubs at a lower rate, while the children of small families at a lower rate still, and of large families at even a reduction on this. Now these women and children in all human probability will require more attendance than men, and the children of large families as much as children of small families. If then formerly, when wages were lower, men paid a certain sum to these club doctors with the unwritten understanding that it carried with it the wives and families as private patients paying visiting fees, how can we reconcile the justice or the charity, if the words are properly applied, of these women and children who made the club system as it existed more profitable and more fair, being received into sick clubs at lower rates than even the healthy men?

Surely it is right that each individual should make a fair individual payment for contract medical service, and not one more and another less. The price of bread is the same to a bachelor as it is to a man and wife with twelve children, and I claim that medical aid ranks in the same way as a necessity of life, and the subject should be treated in the same way.

To pass on to what is proclaimed far and wide as the cure

for the evils into which the profession has fallen—I allude to the wage limit. On this point I am in perfect agreement with Dr. Gilbert, who kindly wrote to me very fully on the subject. In my opinion a wage limit will not help us forward; the idea, though at first sight presenting all that can be desired, has no solid foundation. In the first place, from the very nature of things a wage limit to be fair must vary very widely under different conditions. And in the second place it brings in that objectionable element of charity in disguise. If doctors treat patients at an unremunerative rate the public, or at least that section who are just excluded by the wage limit, will not recognise the element of charity, but will estimate the value of the doctor's services at the rate he is content to be paid for them by those within the wage limit, and looking upon doctors as business men, I think there is very fair ground for the inference.

I think it is recognised and needs no argument that the only way the working classes can meet their pecuniary responsibility for medical services is by contracting for them; and it is for us to fix a minimum remunerative payment for each individual man, woman, or child, and having done so to compel its observance by the power of organisation and combination, and for this power I look to the British Medical Association.

Higher rates of payment or higher fees will settle themselves, as they do at the present time, by the position each man makes for himself to command such increase.

The sum I have suggested is 2d. a week, 8s. 8d. a year, for each man, woman, or child for attendance and medicine at fixed hours, and a minimum (easily capable of increase by the position a man may make for himself) of 2d. more for each visit at the house of the patient.

The advance is, I know, very great on what is considered right by the public at the present time, but I would willingly leave the question in the hands of any impartial observer whether, considering the cost of education, the hardships, difficulties, and responsibilities of a medical man's life, it is one whit too much.

If this were established, and all the working classes, and especially domestic servants, were forced into the system by the impossibility of getting medical aid when ill except by a substantial fine added to the contract rate, a tremendous increase in the income of the profession would result, there would be a really enormous amount of remunerative work opened up to the profession; each man would not have to sweep an enormous number into his club, a number far in excess of what he can properly attend, in order to make a livelihood, but each man would be enabled to thoroughly and scientifically treat a smaller number to the patients' and his own great advantage.

I should not even be sorry to see this contract rate extended into the highest class of practice; it would emphasise the "living wage" the doctor demands; it would make the relations of doctor and patient more intimate; few would take advantage except for trifles of the common consulting hour, and for other times or at their own homes they would pay the ordinary rates of two, three, or four visits for a guinea.

It may with truth be said that many of the working classes could not pay so high a rate; but we have only got to show a determined front that it is a perfectly fair rate that we are entitled to; and the employers of labour will have to recognise that 2d. a week must be part of the living wage for which the working man clamours, and which, I claim, he has a right to expect. And after all, what a trifle the 8s. 8d. a year is in return for what is received for it! At present the doctor's payment is but seldom regarded as a charge on the living wage, but is grudgingly paid over to the doctor out of what remains, instead of to the publican for the price of a glass of beer a week.

But still it may be urged that there will be some with large families who cannot pay this rate. Very well, let the present medical charities be reorganised to help these people, and let the funds (which, mind you, in the true spirit of charity can be subscribed to by doctors as well as others) be used to help them, or else let them apply to the State, which, by its constitution, is bound to give the relief. But here I touch what is almost the keynote: the State must pay the contract rate for each pauper on the book. It is nothing short of a shameful scandal the rate that is paid for this most responsible work. Boards of guardians are blamed, but perhaps all here do not know that the blame lies far higher—with the State itself; for no salary can be paid to a medical officer till it has received the sanction of the State. Surely when the State meditates the responsibility of the medical care of any of its units, it should see that the work can be done properly by paying an adequate sum for those services.

There are many other points I wished to touch upon but which I have had to eliminate from my paper, which is already too long, but I have found it very difficult to condense so wide a subject as this one before us.

MEDICAL ATTENDANCE ON THE PROVIDENT PRINCIPLE.

By W. G. Dickinson, L.R.C.P.

Dr. Dickinson started with the question whether the provident principle had a good foundation, and was properly applicable for the supply of medical attendance. After answering this in the affirmative, he pointed out the advantage to be derived by members of the profession organising in every town a provident dispensary of their own, embracing all the local practitioners who were willing to join, and fixing their own wage limit so as to occupy the ground entirely; for in spite of all that could be said against the provident principle it was a necessity of our times, and had been recognised as such by the people: that we could not get rid of it, and therefore we must make the best of it by purging it of abuse, and moulding it to our standard. This can only be done by placing ourselves at the helm and taking full control. Let the medical men in each district not only combine against evilly-conducted lay associations, but also start a properly conducted medical aid society of their own. He then instanced the Wandsworth Dispensary as a type of the Society he recommended, pointing out the more important of their rules, which were:

1. Management by an executive committee composed exclusively of the medical officers.

2. A general committee of the members, to whom any alteration in the rules must be submitted.

3. Admission of any medical man in the place who is willing to conform to the terms of an agreement defining the lines on which the society shall be conducted, and the mutual relations of the medical staff.

4. Instead of a wage limit careful supervision of the candidates for membership, a list of whom is brought round weekly to each doctor by the collectors.

5. Control of the collectors, who are strictly forbidden to tout or canvass in any way.

6. Management of the finances, and performance of the secretarial duties by one or more of the medical staff.

THE SWEATING OF THE PROFESSION BY VARIOUS FRIENDLY SOCIETIES.

By T. Frederick Pearse, F.R.C.S.

When I employ the term "sweating" in the relation of the medical profession to friendly societies, I do so in the same sense as it has been used with regard to the operatives in certain industrial pursuits. In this way it implies that the labourer does not get the just reward of his exertions, and I shall endeavour to show that the fees paid by the friendly societies are grossly unfair compared with the work done, and that the medical officer is greatly abused by various exacting rules and regulations. Hitherto these various societies have had to make terms with individual members of the profession who have been at the same time competing with each other for the various offices. The consequence has been that the fees have been cut down to a very low scale, and the medical officer has in many cases entirely lost his independence. I will run over what I would urge as the most pressing and just grievances.

1. The fees paid by these societies vary from 2s. to 4s. per annum for each adult member, and are 2s. per annum for each juvenile. Two shillings per annum, or about ½d. per week, is paid by some of the large dockyard clubs. The Foresters and Oddfellows pay from 3s. 8d. to 4s. per annum. The records of sickness of these societies show that about a

week's sickness on the average falls to each member every year, so that on this basis we may very justly assume that at least three visits or three consultations are paid to each member per annum; this is in addition to the numbers of members who consult the doctor but do not go on the club funds. This, therefore, at 2s. 6d. per visit or consultation would require 7s. 6d. per annum per member to pay a fair remuneration for the doctor's services. And this I maintain is the sum which we should demand for the annual subscription of each adult member.

2. Another important grievance is the tenure of office. This is usually at the pleasure of the lodge or court—a very one-sided and unsatisfactory regulation. Without any warning a medical officer is occasionally supplanted by a newcomer or a neighbouring rival. I suggest that three months' notice should be given and required by either side.

3. The admission of members without any medical examination is very unfair, and often gives the medical officers an extra amount of work. I maintain that every member should be medically examined, and that a fee of at least 2s. 6d. be paid for this examination.

4. Compulsory attendance on well-to-do members is a grievance from which our friends in Cork have severely suffered, but it is an abuse of these clubs which exists all over the country. The only remedy for this is the enforcement of a wage limit, say £2 per week for married members, and 30s. per week for single members.

5. A constant source of annoyance is the number of certificates required by members of these societies; not only is the club certificate demanded weekly but some medical men are compelled to give all other certificates that may be asked for free of charge, or otherwise offend the members and perhaps lose the club. A fee of 1s. should be required for each certificate, except those belonging to the particular club.

6. A still further abuse is the admission to medical benefits of chronic invalids from other lodges. These men are simply placed on the medical officers' list without his consent, and often require a great deal of attendance and trouble. The medical officer should have power to absolutely refuse these cases, or only accept them at his own private fees.

7. Lastly, I refer to the juvenile branches. Here a paltry sum of 2s. per annum is paid for attendance, etc., at perhaps the most sickly period of life, and where the club is not jointly the loser by their admission. The compulsory attendance on juveniles is simply making the society a medical club in which the good services and labour of the medical officer are exploited. I maintain that at least the same payment should be made for juveniles as for adult members.

Gentlemen, I am not mentioning all these grievances, which I know are quite familiar to you, without suggesting to you some remedy. I must first draw your attention to two encroachments which are being made at the present time, and which threaten to injure the private practice of every practitioner in the country. The friendly societies have recently decided to give their benefits to children of both sexes under 3 years of age, and they are now requiring their medical officers to attend them on the same terms as the other juvenile branches, namely, at the absurdly low rate of 2s. per annum.

This is so obviously an abuse of power, that it must be strenuously resisted, otherwise the work of the medical officer will be increased twofold, and his annual income seriously diminished by removing those who would necessarily become his private patients.

The other matter is a still more serious one: female lodges are being formed all over the country, and medical men are, without their consent, being required, under pain of dismissal, to take women on the same terms as healthy adult males. The danger of this to the profession is not merely the inadequate remuneration for the services of the club doctor compared with the extra work which will be involved, but the injury to private practice, which must ultimately be felt by every practitioner in the country. The same unfair conditions are likely to be made in these female lodges as have gradually crept into the male societies, and the prospects of the club doctor will then be lamentable indeed.

The growth of all the various clubs, medical aid, and other associations has injured practice throughout the country. Fees have been consequently lowered, and the numbers of private patients have consequently decreased.

Imagine all the working classes in the country, men, women, and children, all under this club system and paying from 2s. to 4s. per head. Look at the amount of work which would be got out of the medical profession at starvation wages, and consider for one moment the loss of all private patients amongst all classes of the industrial population.

This is not an exaggerated forecast; it is to what things are tending, and it appears very near at hand. We in Portsmouth have come to the conclusion that these female lodges should if possible be altogether refused, but that if ultimately circumstances should compel their acceptance under some terms or other, then that they should only be taken under the principles of a wage limit, and by those who are entirely dependent on their own exertions.

I maintain that the basis on which the medical profession accepted attendance on the friendly societies was to give medical assistance to the bread winner of the family among the labouring classes at a nominal sum of 4s. per annum. This was done partly in the spirit of charity, but the growth of these societies, the force of their combinations, and the unfortunate competition amongst medical men themselves have reduced what was originally a more or less charitable contract with a limited class to a gigantic sweating of the industry of the rank and file of the medical profession.

Now, gentlemen, for the remedy. We in Portsmouth have combined to a man to resist the inroads of these societies. We have all signed the following pledge with this object:

> We the undersigned medical practitioners, residing in Portsmouth and the neighbourhood, hereby pledge one another that we will not take the office of medical officer to any friendly society vacated by the discharge or resignation of any medical practitioner in the district on account of his refusal to accept any additional burden to, or new conditions of, his duties as medical officer.

We are thus fairly secure so far as additional abuses are concerned. All we now require is the support of our brother practitioners throughout the country. If we could be sure that we should not have our efforts thwarted and our labour for freedom of contract thrown away by others from outside accepting terms which we had refused, we are, I think, prepared, through our representative committee, to deal with all the grievances which I just enumerated to you.

I suggest that this great work could well be taken in hand by one or more of the recently created medical unions representing the general practitioners. If similar co-operation could be formed, and pledges obtained in every town in the country, we should be enabled to make our own terms with these societies.

It is very certain that nothing will be accomplished except by union amongst ourselves. Parliament may legislate and protect us from illegal practice—it may make us a still more close corporation, but unless we can combine to look after our own interests and stop the insane competition among ourselves, the co-operative collectivist principles of the trades unions will be too strong for us, and we shall become the slaves of the labouring classes.

THE PUBLIC MEDICAL SERVICE AND ITS RELATION TO MEDICAL ETHICS.

By W. Richardson Rich, M.D.

Dr. Richardson Rich read a paper in which he pointed out that the position of affairs existing at present in the medical world was daily becoming more grave and serious, and the condition of the medical practitioner involved in greater peril; that it behoved them as members of a learned profession to discuss their politics on the broad grounds of public and professional utility. He then explained the scheme that a considerable portion of the profession had endeavoured to inaugurate in Coventry, partly following on the lines of Dr. Rentoul's suggestion, to form a Public Medical Service. He showed the difficulties they laboured under, especially the opposition caused by the existence in their midst of a badly conducted provident dispensary with a *clientèle* of 25,000 members. Its medical staff were vainly approached in order to get them to unite with their brethren in an endeavour to raise the position of the profession in Coventry. He said that this dispensary might be taken as a type of the evil

working of some of these institutions from a public and professional standpoint; that it had a medical staff, six in number, men of professional status and in good private practice; that admissions to the staff were not open to the local profession generally; that all classes of society were admitted to the benefits of the institution with scant reservation; that it was tainted with officialism; that unassisted by charitable donations and bequests it would long since have ceased to exist, as the management absorbed a large percentage of the profits. The staff received a snug little income at the expense of their brother practitioners, and according to the graphic description of a local pressman they ground out advice and medicine in wholesale quantities; while they receive but scant courtesy from a committee largely composed of so-called working men, and had practically but little voice in the management of the institution; that in addition to this dispensary there were medical aid societies and private clubs to contend against, but by persuasion they had induced the six practitioners holding appointments in the former to resign them and join their brethren, and had gradually considerably diminished in number the private medical clubs.

He then gave a brief sketch of the Public Medical Service at Coventry as far as related to the medical staff, and said that its object was to provide efficient medical attendance for members of families resident in Coventry whose average annual income did not exceed £2 per week. All additional officers to be appointed by a vote of two-thirds majority of the committee, but in the event of any member selling his practice his vested interest in the service to be transferable. A committee of management to consist of all the staff, including the honorary secretary and treasurer. Meetings to be held quarterly to transact business, and oftener if necessary. A number of chemists to be invited to co-operate by dispensing the prescriptions of the service, and that a payment of 1s. per annum be allowed for each patient on their list, a contract which had been successfully carried out, the profits to be divided quarterly as the committee should decide. Every member of the service to furnish when elected a sum of £2 towards the expenses of the institution, and to further give a guarantee of £3 to be called up if required. Any member of the medical profession commencing practice in Coventry without introduction not to be eligible for election to the service during the first year of residence in the city. A collector to be appointed and paid a salary of £1 per week, and 10 per cent. on all collections over £6 10s. per week; and the committee to have power by a two-thirds majority to expel from the service any member of the staff whom they might consider to be guilty of infamous practice in a professional sense. Further, an additional rule had been passed that in future no member of the medical staff should apply for or accept any appointment which the committee might consider derogatory from a professional point of view, and that all all applications from members of the staff for appointments to friendly societies or clubs should be submitted to the committee for approval.

At the conclusion of Dr. Rice's paper the PRESIDENT made a few remarks on a paper by Mr. Wm. Berry, who was not present, on Contract, Club, and Dispensary Practice, which was on the same lines as previous papers, but too long to read *in extenso*.

The discussion on Mr. Doyne's paper was continued by

Dr. HUGHES HEMMING who said that wherever human beings were in relations with each other they could always frame rules of conduct which were beneficial to the organism, and so far conducive to the benefit of the individual. In these discussions he thought they should, as far as possible, only introduce those subjects which were of a practical nature. If they looked back to what club practice was sixty years ago, they would find that the very name stank. Clubmen and members of friendly societies were, on the whole, treated shamefully. The club patient should be treated exactly in the same way as the private patient. They should regard neither time nor expense in their treatment, and they would gain respect and confidence, and would never regret having had a club practice. He knew very well that during the last twenty or thirty years the greatest amount of kindness, attention, and good medicine had been showered upon club patients, especially in rural districts. A great deal of tact was required in dealing with private patients, but, as a rule, club patients were the easiest they could have to attend. Mr. Doyne, in his paper, recommended that members of clubs and friendly societies should pay not less than 2d. a week, or 8s. 8d. a year but he (the speaker) thought they ought to look at both sides of the question. He thought extra payment should be made in cases of accidents and operation, and he believed that friendly societies and clubs would be quite willing to pay more. The advantage of a club practice to the doctor was great; it was a sort of barometer of all the diseases coming into the district, and the experience gained was very valuable. With regard to medical aid associations he was as bitter against them as anyone. He also found that the amount of work and trouble and expense connected with female medical clubs was not in any way compensated for by the remuneration.

A member asked if he understood Dr. Hemming to say that 2d. a week was too much.

Dr. HEMMING, in reply said that what he said was they were only taking one side. He felt sure that the amount paid to the doctor by the friendly societies in some of the rural districts was, in many cases, fair compensation for his services.

Mr. DOYNE, in reply to a question by Dr. Bridgwater as to what was the amount of their capital at the end of the year, said that the gross income amounted to about £1,200 a year, and 20 per cent. was deducted from that for working expenses, and the remainder was divided among the medical men in proportion to the number of their attendances.

Dr. GOSSE said that he thought organisation was one of the best means of remedying some of the defects existing among the profession. He said the benefits to be derived from a club practice were not great. They introduced one to a low class of practice, and the financial compensation was something like the algebraical symbol x. He quite agreed with Dr. Hemming that if they undertook club practice, they should certainly fulfil their compact. Many people joined clubs when they were poor, and when they got into a better position they still accepted the services of the club doctor, although they were too proud to take advantage of the club in other ways. The great thing for them to do was to support the dignity and traditions of the profession, and he thought that if they worked for inadequate pay they would not be able to hand down the traditions of their profession unsullied to those who came after them.

Dr. ELLISTON said he was a surgeon at a county hospital, and he had long taken an interest in this great and important subject they were considering. At the hospital to which he belonged they took every precaution to eliminate those who were able to pay for medical services. He believed that if these medical aid societies were continued without restriction and restraint, they would practically ruin the position of the medical officer. It seemed to him that this question had been allowed to slide more from want of business capacity and organisation amongst the members of the profession than from any other cause. Medical attendance should be divorced from the question of sick benefit. If that were done in all the existing benefit societies it would be a great point gained. He ventured to suggest that if the profession established medical attendance clubs under their own supervision the difficulty would soon be reduced to a minimum.

Dr. NEWMAN said that a few years ago he was President of the Midland Branch of the Association, and during his term of office he made it his business to find out what he could with reference to this subject. One conclusion at which he arrived was that the average rural labourer or the dweller in a small town was not only able but quite glad to devote one week's earnings for the payment of medical attendance upon himself, his wife, and his family. His weekly wage, taken at a minimum, would probably be something like 14s., and the maximum something like 19s. or 20s. Doctors were apt to treat people of the poorer classes as if they were so limited in money, in choice, and in will power that they could do nothing to improve their position, and they could not make material differences to their income; or, in other words, they were not willing to make sacrifices for special objects. His impression was that they were extremely willing to do so. He knew of a

medical club in Rutland where the people gladly made an average payment to their medical attendant even higher than had been named. The average rate per family ran up to near or over 20s. per annum. Another good which he thought, would follow from dissociating medical attendance from any question of sick relief would be that it would enable a medical man to decline, in the interests of his profession, to have anything to do with the class of men who boasted that the only thing they took from their club was the attendance of the medical man.

Dr. TEMPLETON said there was a gentleman present who was surgeon to the Medical Aid Society of Banbury; he thought before this gentleman (Dr. Raye) left it would be well to give him an opportunity of defending himself.

Dr. RAYE said that certain members of the profession seemed to confound friendly societies and medical associations with so-called medical aid associations. There was a vast difference between them. The association he represented was principally composed of Odd Fellows, Foresters, Rechabites, and the friendly societies of Banbury and their wives and families. In that society there was no touting; he received a fair salary; he had a house to live in, and all his drugs were found him. He was sorry to say outsiders who had no right to be admitted were admitted, and he had always done his best to exclude such persons. If he resigned his appointment to-morrow, there would be hundreds of men only too glad to step into his shoes. No man would be more glad than he to see a wage limit established, but the question was, how were they going to do it? If the Council could devise a means of establishing a wage limit, he thought it would prove a great boon and blessing. In conclusion he hoped they would not think him such a black sheep as he had been painted.

A MEMBER: How much do the members pay?

Dr. RAYE: Adult members 1s. per quarter, and children according to scale. A man, his wife and family would, roughly speaking, pay about from 12s. to 15s. a year.

Mr. DOYNE: What is done with the money that is over? Do they not give tickets for convalescent homes?

Dr. RAYE: No; it goes into the reserve fund to meet a heavy year.

Mr. DOYNE: May I ask the number of members in the society?

Dr. RAYE: About 4,500.

Mr. DOYNE: Do you think that you can treat 4,500 members properly?

Dr. RAYE: I believe I can.

A MEMBER: May I ask Dr. Raye whether he would not prefer being without lay control?

Dr. RAYE: Certainly I would.

The PRESIDENT: I think this discussion must close.

Dr. LEE said as a member of the Cork Branch of the British Medical Association he thanked them for the help they were giving the Cork members. All the medical men in Cork have determined to fight this matter out. Many people in Cork who were in receipt of incomes varying from £500 to £1,000 a year were not too proud to receive the attendance of the club doctors. It was quite necessary that a wage limit should be fixed. Their determination in Cork was so strong that on one afternoon in one little meeting they put down among them over £440, and with the subscriptions from Branches and private individuals it had now reached nearly £600, and they were ready to give that as a nucleus for establishing a fund to enable medical men to fight out these matters. It was very galling to hear of a strong body like the British Medical Association laughed at, as it was in Cork, by these importations, and by the clubs in general as being useless and unable to take any steps in the matter. He earnestly hoped they would give them in Cork their support; he also hoped they would support the resolution standing in his name. The root of the whole matter was that they had not sufficient confidence in each other, and that they would enter into consultation with the "blacklegs."

Mr. BROWN said that one of the speakers stated one reason for his staying in office in connection with a medical aid association was that if he did not do the work some forty or fifty others would. He (the speaker) did not think that was a sufficient reason for any medical man doing that which was contrary to a high standard of professional dignity. He did not consider it derogatory to a medical man, whatever his position, to accept a low fee where people could not afford to pay a high one. The poor needed better medical attendance than the rich, because they could not get the nursing; but they must not attend those who could afford to pay for a low fee. Their only remedy lay in combination. They wanted some means of bringing the profession together, and to get them not to do this work unless they were adequately paid for it.

Dr. MAJOR GREENWOOD said he wished to bring forward the following resolution dealing with medical aid societies for discussion on the following day:

That the Council be requested to take steps to prevent members of the British Medical Association accepting posts in medical aid societies, and that in the opinion of the Section no practitioner who holds office in any Society of this kind should be eligible for membership of the Association; that medical aid societies be defined to be "any lay association which endeavours to obtain pecuniary profit for its members solely out of the labours of salaried medical officers."

Dr. TEMPLETON thought the resolution was not sufficiently comprehensive; and it was finally decided that Dr. Major Greenwood should confer privately with one or two gentlemen and bring the resolution up on the following day.

Dr. BROADBENT (Manchester), referring to the suggestion that they should establish provident dispensaries of their own, said that if they knew what their experience in Manchester had been they would be very slow in instituting any provident scheme, and he hoped they would very carefully consider the matter before anything was done. There were in Manchester about ten dispensaries, and they had a reserve fund sweated out of the profession in twenty years of from £1,400 to £1,600, and the members of the lay committee could always hold that over them as a sort of deterrent. If they (the doctors in Manchester) attempted to do anything the committee had always this reserve fund to fall back upon. They ought not only to establish a wage limit, but also a rent limit. From their experience in Manchester they would advise other medical men to be very slow in adopting any provident scheme.

Dr. LATTEY thought that the public should be made acquainted with the reasons why club doctors asked for increased remuneration; they should be made cognisant of the fact that efficient attendance could not be obtained from any man who was overworked; also the expenses of practice had increased. More instruments of precision were required, and they were constantly getting new and expensive drugs. He thought they should try to secure the co-operation of the public press.

Dr. HENRY said it seemed to him the only possible way to get at this question was through the medical corporations. It was hopeless to rely on the General Medical Council. It had already proved itself of no use, and the medical corporations were not much better, but it was possible for them to do more than either of the other bodies. The Royal College of Physicians in Ireland exacted a pledge from its licentiates that they would not be servants in the sale of drugs, and if they contravened this agreement they forfeited their diplomas. Would it not be possible for all licensing bodies to exact a pledge from their graduates that they would not take office in any medical aid society or not without a wage limit under penalty of forfeiting their diplomas?

Mr. DOYNE, in replying, said he felt sure that no one man was going to suggest a way out of the difficulty, that then this meeting was going to pass it, and then the whole thing would be settled. He thought that Section ought to bring pressure on the British Medical Association to take some action in the matter.

HOSPITALS AND DISPENSARIES.

By HUGH WOODS, M.D.

MEDICAL men attached to hospitals and dispensaries for the most part give their services gratuitously or for a low payment, and therefore in discussing the ethics of gratuitous and cheap contract practice, hospitals and dispensaries must of necessity be considered; indeed, it is through these that a very large part of the gratuitous work of the medical profession is done.

It might be well said that there could be no special ethics

for medical men attached to hospitals and dispensaries other than those ethical rules which should guide members of the profession under all circumstances, and in any mode of practice. Unfortunately, however, we find in this connection, as in many others, that a man who, in his individual capacity, would adhere strictly to the rules of ethics—that is to say, to a right and proper course of conduct—when he becomes one of a corporate body, when he becomes the officer of an institution, seems to think such rules of conduct superseded. It therefore becomes necessary to insist that what is wrong in private practice is not right in connection with a hospital or dispensary.

It is not right for a private practitioner to give his services gratuitously to people who can well afford a fee. It is still more wrong when this is done with the motive of self advertisement, or on the principle of throwing away a small fish to catch a large one. We see occasionally a doctor who, in his desire to attract patients, puts up a notice that he will see patients gratuitously during certain hours of the day, and such a proceeding usually meets with severe reprobation on the part of his medical neighbours. Yet who can disguise the fact that some of the ablest of our profession covet and struggle for the privilege of giving their services gratuitously under the shelter of a large institution, under the cover of a secretary and lay committee, to persons who can quite well afford to pay for high class medical attendance. And who can deny that they do that because they hope through these gratuitous services, and the reputation and advertisement thereby attained, to acquire a lucrative practice and a good position? It is not through any spirit of ill-regulated philanthropy that medical men are willing, at the bidding of half a dozen laymen, to give gratuitous services to all comers; it is from motives of ordinary self interest, such as influence the generality of mankind. It is as wrong conduct on the part of the hospital physician or surgeon to give gratuitous services to the well-to-do as it is in the private practitioner; but I imagine a hospital doctor saying, "If I refuse to do so I shall be called on to resign, and there are hundreds of the ablest men ready at once to take my position without any scruple."

Undoubtedly that is so, whether we speak of hospitals and dispensaries, or medical aid societies and cheap clubs. Therefore it cannot be too often or too strongly insisted on that such conduct is unethical and reprehensible, and ought to be severely discouraged by the profession. All of us who are humane do a great deal of gratuitous work, most of us far too much. We do not care to refuse our services to a patient because he cannot pay us. But it is very different giving occasional help in affliction to a sick fellow creature who cannot otherwise obtain it, and relieving the State or local authority of the duty of providing medical attendance for the sick poor.

We all agree that the poor must not be allowed to die for want of bread, and many a humane baker would give a loaf to a starving man, but the bakers do not form charitable committees to employ them to bake gratuitously for the poor. If they did we should know that it was not done from philanthropic motives, but for purposes of self-advertisement or the like, and such conduct on the part of a few bakers would be regarded by the rest as a violation of the ethics of bakery. Just in the same way I maintain that doctors who become the servants of charitable committees, to be allowed the privilege of giving their services gratuitously, are actuated by selfish and not by philanthropic motives; and I insist, further, that their conduct is a violation of the ethics not of a noble profession only, but even of the meanest trade or business. It is treason to our profession to plunder it in order to relieve the rates and taxes. Do the rates and taxes show any similar benevolence to the medical profession? I trow not.

The promotion of any wholesale system of gratuitous medical services to the poor which relieves the State at the expense of our profession seems to me a violation of ethics just as much as the conduct of the doctor who puts up a notice of gratuitous attendance at certain hours. The underlying motive is in both cases the same, and it is not one of the highest motives. In most cases it has indeed been the custom for hospital doctors to give their services gratuitously to persons for whom the charitable public have been willing to provide gratuitously board, residence, medicines, etc.; and although I think that even in this case the doctors are wrong in giving their services gratuitously, any more than the secretaries and other officers who work for the charitable institutions, yet much might doubtless be said in defence of such conduct, unethical as I certainly believe it to be. When, however, we find doctors giving their services gratuitously to persons whom charitable institutions, notorious for the indiscriminate way in which they distribute their aid, refuse to supply with board or lodging without adequate payment, then I say that these doctors are so grossly violating the ethics of the profession, so openly regardless of the welfare of their profession, that they have become what are vulgarly termed "blacklegs," and their professional brethren should, out of regard to their own dignity and what is due to the profession, refuse to meet them in consultation. I am, of course, alluding to the system of "pay work" in hospitals. Unfortunately this system is spreading, and quite recently at the Great Northern Central Hospital the staff have, in spite of the almost unanimous protest of the profession in the district, meanly consented to give their services gratuitously to patients whom the hospital compels to pay for everything else. Can we wonder if the public infers that medical services are of little value when doctors are so anxious to be allowed to give them for nothing?

Omitting the philanthropic motives which are so largely dilated on in Hospital Sunday sermons and at hospital dinners, the chief motive for undertaking gratuitous work in connection with hospitals, beyond that of self-advertisement to which I have alluded above, is the desire for gaining experience, skill in operating, and the like. Such motive is an honourable one and deserving of praise, but it brings with it special temptations and special dangers to the public. All that the doctor has to gain by his treatment of patients is increase of experience, skill, and reputation. The patients are most of them strangers to the doctor, and the patient, and patient's friends, frequently do not even know the name of the attendant doctor. Hence it arises that we find cases where the treatment is not such as would be adopted in private practice. Undoubtedly, for instance, some surgeons operate in hospitals for the cure of disease when the danger of the operation is so great that it is not justifiable in the interests of the patient. To operate with a death-rate of 10 per cent. for the cure of uterine retroflexion, would seem to me unjustifiable, yet it has been done in a London hospital with a death-rate of over 80 per cent. A patient who had undergone ovariotomy, her left ovary being removed, about a year after still felt some little pain in the region operated on, and she went to a special hospital where she was told she must go in and undergo a second similar operation. She came to me and asked me to do the operation for her at her own home. I at first agreed to do so, but on examination, not at all thinking it a suitable case for operation, I asked her to let me see her in consultation with another doctor. After consultation, we decided that no operation was required.

A little time after that the woman went to a large general hospital, and was taken in and an operation decided upon, though she told me that disparaging remarks were made on the butchering propensities of the staff of the above special hospital. On the morning fixed for the operation the woman, remembering what I had said to her, decided to come out of the hospital without any operation. She subsequently came to me again. Any little cause for doubt which was present before having now disappeared, I told her I thought it would be wicked to subject her to any serious operation, and gave her my card and told her to give it to the doctor at the special hospital who had done the previous ovariotomy, telling him my opinion. He kindly wrote to me, sending notes of the case and describing her condition; that is to say, there were still some remains of the inflammation resulting from the last operation, which had been unsuccessful. He further said: "There can be no call for further operation." The woman is now practically quite well. We are all liable to error, but it was probably not ignorance that led in this case to the advising of a dangerous operation without at all adequate grounds for it.

The above case is typical of a large class of cases. I mention it because I can myself vouch for it. The desire to

be skilled ovariotomists should not lead the hospital surgeon to risk lives needlessly. I could give other cases, but I forbear. As I said above, the ethics of a hospital doctor are identical with the ethics of a private practitioner. It is wrong for a private practitioner to employ an unqualified assistant, and it is wrong for hospital doctors to allow unqualified persons to attend patients without effective supervision. Lest I should be told this never occurs, I will give a specific case which I can prove if disputed. A working woman injured her finger and went to Guy's Hospital. A splint was put on and she was told to come again. She went there again and again, and almost every time saw a fresh young gentleman. After a very considerable time, no improvement being evident, she complained to the young man who saw her that she was hindered from gaining her livelihood, and asked if nothing could be done. The young man then told her that if not better next time her finger should be amputated. Before agreeing to this, however, she went to a qualified doctor, who removed the splint, advised passive motion and rubbing with liniment, and in a week the finger was well. I do not accuse the qualified staff of Guy's Hospital of being ignorant of the ill-effects of keeping a stiff joint too long in a splint. I believe the young gentlemen were students, and Guy's Hospital is not the only one where students treat patients without any proper supervision. This is not in accordance with the ethics of the profession. Even though our work is not paid for, it should not be entrusted to unqualified persons. I have said already that I consider it unethical to work gratuitously for an institution, because it serves as an advertisement and as a means of acquiring skill and experience. When, however, a doctor, with the object of gaining a name in connection with some special branch of practice, starts an institution and induces the charitable public to subscribe to it, without regard to public requirements and reasonable economy in providing for the sick, when he starts a needless and wastefully administered institution from motives of self-interest, he offends against the ethics of citizenship as well as those of the profession. I need not give examples of hospitals started in this way; they are all too common.

Another ethical point to which the attention of hospital doctors requires to be called is the propriety of considering the feelings and interests of outside practitioners whose patients come to them for advice. I hear very many complaints of disparaging remarks and careless jokes at the expense of outside practitioners. The tone which prevails in this respect at some hospitals was amusingly evinced one day when a hall porter of a special hospital pronounced to a patient of mine the opinion that "her doctor probably did not understand her case."

In conclusion, I may mention that I frequently hear of hospital doctors, when they find well-to-do people coming to them at the hospital, urging such persons to consult them at their private address and pay fees. This is very objectionable, because it is using the hospitals as a means of enticing patients away from their usual medical attendants. This practice, perhaps, to some extent explains the reluctance of some hospital doctors to accept any practical method of checking hospital abuse.

I have now said enough to show that there are ethical deficiencies to be found in hospital as well as in private practice. I have spoken plainly, but I trust not offensively. My remarks will, I hope, at least suffice to open an interesting and instructive debate.

Mr. Nelson Hardy said he thought the underselling of Guy's Hospital was as much a question of ethics as sixpenny dispensaries; so again was the employment of unqualified assistants in hospitals, a thing which every right-minded man strongly condemned. Mr. Hardy then exhibited a map of London, showing that by far the greater number of special hospitals were situated in the West End, and not in the East End amongst the poor.

Mr. F. Greaves continued the discussion.

Messrs. Bailliere, Tindall, and Cox have sent us a specimen of an engraving which they have published of the late Sir William Savory. It is a striking likeness. The cost of the picture, including the black and gold frame, is 10s. 6d.

HOSPITAL ADVERTISING AND MEDICAL ETIQUETTE.

By D. Campbell Black, M.D.,

Professor of Physiology, Anderson's College, Glasgow.

Dr. Campbell Black said that he had had considerable experience in these matters, and that in his opinion nothing that was truthful, manly, or straightforward ought to be regarded as a moral or professional crime, nor could he understand how by any possibility any such thing could come in conflict with a reasonable code of morals. It was an unworthy affectation of the day that in order to succeed in medical practice, as in other walks of life, it was absolutely necessary some evidence of capability must reach the public eye. Advertising in some parts of the profession had almost been raised to the dignity of a fine art, but for all that it was none the less dishonest and contemptible. He thought, with Sir James Crichton Browne, that the laws of etiquette to which members of the medical profession owed allegiance required revision from time to time to adapt them to the changing conditions of modern life. He then pointed out what little difference there frequently was between practices regarded as ethical in the profession and others which were allowed to be unethical, and commented on the means for advertising afforded by reviews of books, giving magic lantern lectures, and ambulance classes to the lay public. He very strongly condemned the hospital system as carried on in this country, saying that it disorganised the medical profession, undermined independence, dislocated normal social relations, and corroded the moral stamina of the industrial classes.

Dr. Draper said that the sentiments of the various speakers were those that he had himself entertained for a long time. That Section might be properly called the trade union department of the British Medical Association. They ought to make the consultants the servants of the general practitioners of the country, and neither employ nor recommend them unless they complied with the will of the general profession. They must assimilate some trade union principles in their profession, and by union they could make the heads of their profession do just what they wanted them to do. If they made laws, the heads of their profession must obey them just as the man on the lowest rung of the ladder. They ought to make rules to guide the profession, and they could, if necessary, institute a boycott, and the laws made by the Association must be made to govern all ranks.

Friday, August 2nd.

STATE-AIDED v. VOLUNTARY HOSPITALS.

By W. Knowsley Sibley, M.D.,

Senior Assistant Physician North-West London Hospital.

Dr. Sibley first pointed out how important the question of hospital finance and management was to the medical profession, although it had had comparatively little consideration given to it. He said there were two great hospital systems throughout the world: in one the State provides the necessary funds, in the other each hospital is supported by voluntary subscriptions. The former exists practically throughout the civilised world, except within our own country. On the whole, in the opinion of the speaker, this system was protected from the abuses of the voluntary system. The purely voluntary system exists in the British Isles alone, and the first and most striking feature here is that there is no general control or even supervision by any responsible body, and compared with other nations England abounds in hospital abuses. He considered the following especially as features in our system which compared most unfavourably with those of other countries: (1) Absence of central organisation, (2) difficulty of obtaining sufficient funds, (3) habitual excess of expenditure over income, (4) overcrowding of out-patient department, (5) frequent treatment of patients in these departments well able to pay a private doctor. In order for hospitals to exist in this country an enormous amount of money must be spent on advertisement, and the more badly managed and the more heavily in debt a hospital

becomes the more is the fact advertised in the hope of "raising the wind." Frequently wealthy householders give their one or two guineas a year hoping to get all their servants treated for nothing, and governors of hospitals often claim this as a right.

In consequence of the outcry against abuses of this kind some few of the hospitals have been forced in self-protection to start some sort of inquiry, and have thereby incurred great unpopularity in certain quarters, with the result that a considerable portion of former subscriptions have been transferred to less deserving institutions. The question of raising money on special occasions leads to the most extraordinary devices—concerts, bazaars, dances, lotteries, etc.—the law, under the cloak of charity, being broken with impunity. Nothing except the considerable amount the hospital is in debt catches the eye of the deluded subscriber so readily as the number of patients treated in the year or since the charity was started; and it is a fact that the smaller and poorer the hospital the more does it seek to overburden its outdoor department, and the amount received from the well-intended but misdirected systems known as the Hospital Saturday and Sunday Funds is directly dependent upon the statistics returned by the hospitals as to the number of patients seen, absolutely irrespective of the way in which they are seen. Of one thing there can be no doubt—the public is tired of the everlasting special appeal, and our hospitals must be rescued from the hands of irresponsible individuals and placed under proper control.

In conclusion he asked to move:

That the Ethical Section of the British Medical Association considers that medical officers connected with hospitals should be paid by the State.

THE CHANGING RELATIONS BETWEEN THE PROFESSION AND THE PUBLIC.

By A. W. Williams, M.B.,

The world is confronted generally with the results of trying to keep new wine in old skins, of endeavouring to make new ideas conform to old convention. On all hands we hear heated discussions and one-sided presentation of questions concerning the more general extension of medical aid, as charity or otherwise, to the poorer masses of the people, and the extent and degree to which the other public functions of the profession shall be exercised and remunerated. Daily it becomes less and less possible to reconcile the present and coming relations of our profession to the public, in any of its ramifications, with a continuance of the old social forms and conventions which sustained it under simpler conditions. The profession in the beginning of its history was the servant and benefactor of the people generally in the temples of Egypt and Greece. In the later Roman and on to mediæval times the practisers of medical art became the servants, and even the slaves, of the privileged rich and military classes. This tradition largely continued on both sides down to our own times, and members of the profession were regarded to a great extent as superior servants of the upper classes. The public hospitals, which remain the chief representatives of the material benefactions formerly conferred upon the masses by the religious establishments, provided by the combined charity of the rich and the profession the most efficient help for another selected few. The bulk of the people, however, were unable to obtain medical aid except by the services of unscientific followers of the art, for example, barber surgeons, herbalists, midwives, chemists, etc. As knowledge increased these unqualified practitioners became qualified, their remuneration increased, and their services again became unattainable by the poor.

At the present time a more general extension of knowledge in the community, and its just and growing demand for all its members of rights and advantages formerly monopolised by the privileged classes are breaking up rapidly the old traditions. We are called upon by the modern community to relieve pain, to shorten illness, and prevent disablement and death, not only from motives of humanity, but to prevent the economic loss to society caused by these evils, and the same reason demands that all the members of the community should benefit individually as well as collectively by their removal, whether they are able to contribute towards the cost or not. The results of these changes, not always recognised as consequences in our economic relation to the modern social state, are found on all hands, each presenting its good and its bad side, each ignored or encouraged by some, deplored and resented by some of the profession as knowledge, philanthropy, or self-interest prompts. Thus we have on the part of the bulk of the profession complaints that with the increased expense and labour of preparatory education, general low fees, and long hours are not compensated as heretofore by the larger honoraria and gratuities of the rich, which now go largely to a fortunate few.

Again, our hospitals on the one hand fail to satisfy the needs and demands of the community by their insufficient extent, their want of effective support and control, and their undue privacy. On the other hand, the production within the profession of a privileged class of members not founded upon an equality of opportunity is an evil aggravated by the non-payment of a large portion of the profession's most useful work, and the diversion of much of this ostensible but unreal charity directly upon individuals able themselves to remunerate the profession for the benefits they receive. The evils here indicated and others are all symptoms of loss of co-ordination between the profession and the community, and are largely more or less blind efforts at establishing a new relationship in the place of the old, which shall give the entire community the benefit of the profession as a matter of right and not of grace. The object of the present paper is not so much to propose a remedial scheme as to urge the general recognition of a present state of things which is not temporary and casual, to be dealt with empirically, but as a transitional state in which society, largely disorganised by the evolution of new industrial conditions generally, and the attempt to work them under the old forms, is carrying the profession with it towards more scientific and practical methods of dealing with men's powers and needs, and by such recognition to ensure that proposed changes and reforms in our professional and public relations shall be steps in advance and not retrograde in respect of the interests either of the profession or of the community, which interests can in fact never be antagonistic, but must advance or recede together.

Resolutions.

Dr. Bridgwater said that he believed they had now arrived at the stage of the proceedings when resolutions could be considered, and he felt that those present could not but carry away with them the impression that they were, as a whole entirely in sympathy with the papers which had been read, and would also agree with him when he said that he thought every question had been most temperately treated. The only thing which could prevent them carrying their point was want of unanimity. He was sorry the attendance was not larger, for whatever happened there ought to be no slackness on the part of the profession itself. He felt that, with regard to one of the papers which had been read, the question of precisely what a man with a small income might do which might prove detrimental to the profession at large was a very difficult one to touch upon. He thought that the examining bodies should make it a part of their diploma that those entering for it should follow a certain line of conduct when it was obtained, or forfeit their diploma. This could be suggested to the Council, though he thought the corporations were very difficult to deal with. With regard to ethical questions generally, he thought that more would be done by dealing with two or three important questions than by creating a programme.

The President read the rules as to resolutions being sent up to the Council, and then proposed the first resolution:

That it be a recommendation to the consideration of the Council, in the first place, to include an Ethical Section in the Annual Programme. In the second place to recommend to each Branch the expediency of constituting its executive council and Ethical Committee, to consider all questions arising within its area, and settle them if possible; or failing this to refer them to the General Council of the Association. Thirdly, and it is further suggested to the Council the expediency of their forming an Ethical Committee to receive and report upon such matters as may be referred from the Branches or in other way arising.

It seemed to him that if this resolution was carried, it would then be possible to give a fair and impartial consideration to all the questions that might come up. There were other resolutions, but if they got a consensus of opinion upon this it would enable them to settle all the questions that would come after.

This resolution was seconded by Dr. Broadbent.

Mr. George Brown suggested the desirability of the Council favouring them with a report by the end of June next. It would strengthen their hands if that could be done, as the earlier they saw the result of their recommendation the better.

It was pointed out that the result of the consideration given to the Section's recommendations by the Council would be duly entered as a minute and reported in the Journal, and the resolution was carried *nem. con.*

The President then proposed:

That in the opinion of this meeting the employment of unqualified assistants in visiting patients is injurious to the interests of the public as well as those of the profession.

This was seconded by Mr. George Brown, the reader of a paper on the subject, and the resolution was agreed to *nem. con.*

It was proposed by Dr. Lee:

That in the opinion of this Section any practitioner who wilfully violates generally received rules of professional ethics should not be met in any professional intercourse whatever save in case of urgent danger to an individual patient.

This resolution was supported by Dr. Major Greenwood, who said that though many of the "blacklegs" whom this resolution concerned might not wish to meet them, still he thought it would be as well to let them have an opportunity of seeing this resolution against them put down in black and white.

The resolution was unanimously agreed to.

It was proposed by Dr. Potter, and seconded by Dr. Major Greenwood:

That advertising in every shape is highly derogatory to the profession and that the Council be requested to use every effort to suppress it.

Dr. Bousfield, in supporting the resolution, said references had been made to oblique advertising. Perhaps the commonest form of it consisted in writing to the press on any subject in such a way as in the letter he held in his hand which he had cut from the *Times*, and which was signed by a number of doctors whom he knew to be experts in this form of advertisement.

Dr. Roberts Thomson said that he had had the honour of bringing before the Council a form of indirect advertising which was most disreputable, and should be interfered with. During the winter there were circulated some indecent pamphlets advocating the use of treatment in regard to premature senility. They all knew that owing to the great number of proprietary articles put on the market there were many firms who tried to get the use of names—or, at all events, use the names—of practitioners when promised, or even when not promised. He had himself been compelled to threaten legal proceedings against a firm who were using his name, although he had previously informed them that he never gave his name to anything of the sort.

This resolution was carried unanimously, and Dr. Major Greenwood then proposed.

That the Council be requested to take steps to prevent members of the British Medical Association accepting posts in medical aid or other kindred societies; and that, in the opinion of the Section, no practitioner who accepts office in any society of this kind ought to be eligible for membership of the Association.

In reply to questions from one or two members, Dr. Major Greenwood stated that this resolution had reference to one particular society, and that was the Medical Aid Society, which had branches all over the country. It was an abuse which they wished to attack. The fact was that the idea had occurred to certain members of the mercantile community to run a sort of joint-stock company, of which the medical officer got, perhaps, a paltry £150 a year, and the profits on his work were handed to the members, much as if they were dealing in tea or any similar commodity.

Dr. Bousfield said that he could not help feeling that the Association was wasting its time in passing such a resolution, as it seemed to him to be purely academic, and of little practical use. For his own part, he thought that the Government should be approached with regard to the formation of a society on some such lines as the Incorporated Law Society. What was wanted was power to control those who transgressed, and to mete out sharp punishment to them, and in time it would be found that this sharp action was unnecessary. How very seldom it happened, considering the large number of solicitors in this country, that one of them was struck off the rolls. Their society need not be the same in constitution, but a central organisation of some sort was certainly wanted. He felt most strongly that they were not going far enough, but were wasting their energies over trifles.

Dr. Bousfield having, however, been asked to put his suggestion in the form of a resolution, the resolution concerning the medical aid societies was passed unanimously.

It was then proposed by Dr. Pearse, and seconded by Dr. Lee:

That it be suggested to the Council to open a fund, to be subscribed to by members of the Association, to assist to indemnify bodies of medical men practising in the United Kingdom in their contests against the combined action of the friendly and other benefit societies.

After some discussion as to the societies against which the resolution was directed, and one member had objected to the Council being asked to take up a matter of this pecuniary sort, the resolution was carried with two dissentients.

It was next proposed by Dr. J. P. Henry and seconded by Dr. G. H. Broadbent:

That the Council be requested to communicate with the universities and medical corporations, with a view of discouraging their graduates and diplomates from taking office under medical aid associations or undertaking any engagement or appointment calculated to degrade the profession.

and this resolution was then unanimously agreed to.

The following resolution was then proposed by Dr. Bousfield:

That this meeting is unanimously of opinion that a suitable authority should have powers of control over irregular practice, of the same kind as those exercised by the Incorporated Law Society and the Inns of Court respectively, and urges the Council to approach the Government with this view, with a preference for this Association as the controlling body.

He stated in support of his resolution that he did not think that the General Medical Council knew anything of what the general practitioner required. It was for that reason that he had worded his resolution in this particular way. It was not enough to make laws; they must find a means of enforcing them. There was a good proverb which said that it was wise men who made the laws but it was fools who put them to it, and they would find that they must legislate for the rogues and fools of the medical fraternity.

A member said that it was known that the Incorporated Law Society spent £5,000 a year in prosecutions, and that many solicitors should be prosecuted but were not, and it was known also that the lawyers were taxed for the sake of being protected.

Dr. Major Greenwood agreed with Dr. Bousfield that something should be done, but pointed out that the Incorporated Law Society had not itself the power to exclude solicitors, but had to take the matter before a judge.

The resolution was then put and agreed to *nem. con.*

Mr. McNeil next proposed and Dr. Latten seconded:

That the Ethical Section of the British Medical Association has revealed the urgent need of some practical steps being taken to deal effectively with the present deplorable lack of *esprit de corps* and want of co-operation in the profession generally, and of which so much undue advantage is taken by the public. As it is to be hoped that much of the existing undesirable state of affairs arises more from ignorance than deliberate intention on the part of those concerned, we respectfully urge on the Council to take such steps as may direct the attention of professors and teachers in the various colleges and medical schools to the advisability of pressing on their pupils on every suitable occasion the importance of the subject, not only as regards their own, but their future patients' interests. We also strongly suggest that special provision should be made in every medical teaching centre for inculcating this most important part of the duties of the medical practitioner or otherwise to do as they in their wisdom may think fit.

This resolution was carried after a good deal of discussion.

It was then moved by Dr. Knowsley Sibley and seconded by Dr. Woods:

That the Ethical Section of the British Medical Association considers that medical officers connected with hospitals should be paid by the State.

This resolution, after some discussion, was lost.

It was then proposed by Mr. NELSON HARDY and seconded by Dr. HYRON WOODS:

That, in the opinion of this Section, members of the British Medical Association should not hold office in any hospital which is not really, as well as ostensibly, a public institution; and members of the medical staff at a hospital having pay wards should not gratuitously attend the inmates of such wards.

This resolution was unanimously carried, but a further one, attempting to limit out patients of hospitals to such only as had recommendations from medical practitioners, was declared to be lost.

SECTION OF PHARMACOLOGY AND THERAPEUTICS

SIR WILLIAM ROBERTS, M.D., F.R.S., President.

(Continued from page 449).

ON THE THERAPEUTIC EMPLOYMENT OF THE SUPRARENAL GLANDS.

By GEORGE OLIVER, M.D., F.R.C.P.Lond.,
Harrogate.

In this communication I will merely present a concise outline of the leading conclusions which my observations, physiological and clinical, have enabled me to form in regard to the therapeutic effects of the adrenals, or of an extract prepared from them; reserving a more detailed rendering of the subject to some future occasion. I will first sketch the results of physiological observation, and then present an outline of the clinical side of this inquiry.

I.—CONCLUSIONS DERIVED FROM PHYSIOLOGICAL OBSERVATION.

During the winter of 1893-4, while prosecuting an inquiry as to the agents that vary the calibre of the arteries as determined by an instrument (the arteriometer) which I have elsewhere described,[1] I found that the administration by the mouth of a glycerine extract of the adrenals of the sheep and calf produced a marked constrictive action on the arteries.

From these observations I concluded that in all probability at least one office of the adrenals was to provide some material to the blood, which contributed to the maintenance of tone in the arterial wall.

This position has since been confirmed by a research undertaken by Professor Schäfer and myself in the Physiological Laboratory of University College, London. We have found that the adrenals of man and of animals—for example, the sheep, calf, dog, guinea-pig—produce precisely the same physiological effects, and provide a material which, when injected in even very minute quantity into a vein—for example, of the rabbit, cat, dog, monkey—induces a most energetic contraction of the arterial wall—especially of the terminal arteries—and of the heart—a contraction which raises in a very striking manner the blood pressure in the medium and more central arteries.[2] We have, moreover, proved that this contraction of the muscular tissue of the circulatory apparatus takes place quite independently of the nervous system, and is very much more pronounced than that which we have succeeded in obtaining from drugs, such as digitalis and ergot.

The contraction which invariably follows the injection in from 20° to 25° is shown by a very decisive fall of the lever, which records on the kymograph the size of an organ enclosed in a plethysmograph or oncometer, such as a limb, the spleen, or the kidney; that of the spleen, with its rich endowment of muscular tissue, being the most pronounced of all.

Inhibition of the heart, the result of stimulation of the cardiac inhibitory centre in the medulla oblongata, is a marked feature in the physiological effects; the frequency of the ventricular contractions is in consequence very markedly reduced, even to one quarter or one fifth, and during the acme of the suprarenal effect the auricle is for a time almost or even completely inhibited. Notwithstanding this remarkable slowing of the ventricle the blood pressure within the arteries is raised, and may become even more than doubled. When, however, the vagus action is eliminated (as by section of the vagi or by the subcutaneous injection of atropine) it may even be quadrupled, and then the heart's action becomes also exceedingly rapid and energetic.

This research has shown that the adrenals are undoubtedly secretory glands, and that the area in which the powerful active principle is formed is confined to the medullary portion, and consequently when this part of the gland is destroyed by disease (as in Addison's disease) the adrenals provide an extract which is totally devoid of physiological properties. It has, moreover, demonstrated that the product which the medulla furnishes to the blood has a special affinity to the muscular tissue, whether striped or plain, and is in all probability intimately associated with the production of muscular toxicity. In Addison's disease we know how much the tone of muscular fibre, whether in the heart, the blood vessels, or in the voluntary muscles, fails; and undoubtedly an explanation of this remarkable degree of tonelessness is afforded by the physiological observations which Professor Schäfer and I have recently made.[3]

II.—THE REMEDIAL PROPERTIES OF THE SUPRARENAL GLAND.

The experiments in the laboratory have afforded useful information in four directions bearing on the clinical side of this inquiry. First, they have clearly and decisively shown in what way the product which the blood derived from the adrenals affects the organism, thus illustrating the function of the gland, and suggesting the lines on which it may be rendered useful as a therapeutic agent. Secondly, they have demonstrated that very large doses may be administered to the dog, cat, etc., without apparent injury or loss of life; and it may be inferred from this fact that comparatively large doses may be taken by man without risk of harmful result. Thirdly, they indicate that the stomach may be chosen as the best avenue for administration; for we have found that predigestion by pepsin and hydrochloric acid does not impair in the slightest degree the activity of the extract. This fact in regard to the suprarenal glands agrees, therefore, with the general experience of the effective ingestion of the thyroid gland. And fourthly, our experiments show that the powdered gland dried *in vacuo* is the best preparation; for our results were equally decisive, whether produced by an extract of the fresh gland, or by one derived from the powder of the dried gland, even though the latter had been kept for many weeks.

The Preparation Employed, and the Mode of Administration.—In the earlier part of this inquiry I employed a tincture and a dried aqueous extract; but I now prefer tablets of the dried gland (gr. iii, and v in each), which are equal to about five times their weight of the fresh gland.[4] I have always found it best to maintain the effect by administering a tablet at regular intervals—for example, twice or three times a day within an hour after meals. I have given the adrenal preparation for lengthened periods without observing any injurious effect: for instance, a patient has taken the tincture (= xv=gr. xv of the fresh gland) three times a day for just twelve months. Moreover, in one case of diabetes I did not observe any distressing effect from eight gr. v tablets (each equivalent to grs. xxv of the fresh gland) taken three times a

[1] *Pulse-Gauging*, 1895.

[2] Our experiments have shown that as small a portion of the extract as is equivalent to 0·01 of a gramme of the fresh gland will produce the maximum effect on the heart and the arteries of a dog weighing 10 kilogrammes, or 1 milligramme per kilogramme of body weight. How intensely small therefore must be the proportion of the active principle injected in such a diminutive dose of the gland will be apparent when deductions are made for the water (5), for the cortex (3), which we have proved to be devoid of physiological activity, and for the proteids, which do not pass into solution.

[3] I must refer those desirous of studying the details of the work done on the physiological side of the inquiry to the paper, The Physiological Effects of Extracts of the Suprarenal Capsules, which appears in the last issued number (July 15th) of the *Journal of Physiology*.

[4] The preparations here referred to were made for me by Messrs. Willows, Francis, and Butler, chemists, 151, High Holborn, London, W.C.

day for a week. But this is the only case in which I have given comparatively large doses. I have always preferred to feel my way, guided mainly by a sense of well-being in the patient, and the readings of the arteriometer; and whenever I have observed signs of undue arterial tension and of oppression, or a marked degree of infrequency of the pulse (as in one case a reduction to 54), I have either diminished the dose or given it less frequently. In the majority of cases a 3 grain tablet three times, or after a time twice, a day, or a 5-grain tablet twice a day, has sufficed to maintain a favourable effect.

Clinical Indications for Suprarenal Treatment.

1. *Addison's Disease.*—My opportunities of observation have been limited to two cases. In one, the symptoms were not quite so definite as one could have wished,[3] but in the other they were pronounced, and the diagnosis had previously been made by Dr. Pye-Smith. In this case anæmia, asthenia of the heart and of the muscular system, anorexia and the characteristic pigmentation were present in a marked degree. The bronzing was observed on the temples, sides of neck, the ears, the chest, abdomen, and axilla. There were no pigmentary patches, however, within the mouth. The suprarenal treatment was commenced on July 21st, 1894, and has been continued up to the present. When I saw the patient last December I found the bronzing very much reduced, and the patient was in every respect much improved; her appetite and digestion were good, and the nausea was but rarely felt. Her ability to take her usual exercise was restored. A recent report from her medical attendant, Dr. Mackern, of Blackheath, shows that the improvement continues so long as the suprarenal preparation is regularly taken. Occasionally it has been omitted for a week, when the patient is certain that the pigmentation on the forehead becomes more decided. It must not, however, be supposed that every case—or indeed the majority of cases—of Addison's disease will respond to suprarenal treatment in so striking a manner as in this instance; for it will be remembered that a very large number of the cases depend on tuberculisation. It is, however, not improbable that now and then cases may be met with in which the function of the adrenal glands may become lowered by some temporary cause, or may become impaired or crippled by a pathological state which has ceased to advance, or which may advance but slowly, and the influence of which only becomes more particularly apparent when the general health fails, from whatever cause. Then it may be that the suprarenal material introduced by stomachal ingestion will provide physiological aid of prime importance by merely supplementing the diminished autogenic supply. We have yet to learn whether suprarenal feeding will enable life to be maintained when the secretory function of the adrenals is abolished by disease.

2. *Loss of Vasomotor Tone.*—Inasmuch as the distinctive cardio-vascular effect which invariably follows the injection of even very minute doses of suprarenal extract is undoubtedly the most prominent fact in the physiological action, it does not seem improbable that the adrenals may prove useful in all those clinical conditions in which vasomotor tone is reduced; I have therefore directed my observations somewhat specially in this direction with the view of determining whether or not this therapeutic forecast is verifiable. The conclusion which I have formed is, that a suprarenal preparation is undoubtedly valuable in affording tone to the vasomotor system. I have elsewhere[4] shown that in asthenia and in anæmia the vasomotor tone is as a rule reduced, and as a consequence the blood gravitates into the veins of the abdomen and of the lower part of the body when the patient assumes the upright postures—sitting and standing. In this way blood is withdrawn from the upper part of the systemic circulation in these postures, and returns to it when gravitation no longer operates, as when recumbency is assumed.[5] Hence my arteriometer has shown that the most reliable test of the impairment or loss of vasomotor tone is afforded by the radial artery, the diameter of which falls in the sitting and rises in the recumbent posture, whereas, in a state of health the normal arterial tonus more than counterbalances the effect of gravity and permits a much larger radial calibre to be maintained in the sitting and active postures than obtains in recumbency. I have accepted this reversed radial calibration in posture when habitual as a general clinical guide for the prescription of the suprarenal treatment. I have observed that as a rule in the course of a few days the normal relation of the radial calibre in posture is restored and is maintained so long as the suprarenal preparation is continued. In some cases it was pushed so as to set up a decided degree of plus arterial tension quite recognisable by the finger. Guided by the means of observation I have employed I, therefore, conclude that suprarenal treatment is of considerable value when the tone of the vasomotor system is reduced; as at the menopause, in neurasthenia, and in anæmia. Inasmuch as the administration of the suprarenal gland raises the arterial tension, I have naturally avoided it in all the conditions in which *plus* arterial tension is present.

3. *Anæmia.*—I have observed that suprarenal treatment produces two favourable effects in anæmia; it restores the reversed postural variation of the arteries which as a rule obtains in this condition, and it frequently raises the percentage of hæmoglobin. Perhaps the second effect springs in a great measure from the first; for the maintenance of the larger arterial fulness in the active postures may favour the generation of blood corpuscles in consequence of the blood being thus kept more freely distributed to the red marrow areas and prevented from drifting unduly into the abdomen, where the corpuscles may undergo too rapid destruction. However, whatever the explanation, the fact remains that in certain cases of anæmia I have observed a rapid rise in the percentage of hæmoglobin during the suprarenal treatment. Here are four examples:

	Radial Diameters in Millimetres.		Hæmoglobin Per Cent.
	Sitting.	Recumbent.	
Mrs. A., aged 38:			
...	1·3	1·7	70·0
10 days	1·7	1·3	87·5
15 „	1·8	1·4	90·0
Mrs. M., aged 29:			
...	2·0	2·3	65·0
24 days	2·4	2·0	87·5
Miss W., aged 20:			
...	1·5	1·8	70·0
16 days	2·0	1·5	80·0
20 „	1·9	1·4	83·0
27 „	2·1	1·3	94·0
Mrs. C., aged 39:			
...	1·4	2·1	80·0
14 days	2·0	1·7	70·0

As the inquiry advances I hope to determine whether suprarenal treatment increases the generation of new corpuscles, and whether it is of greater value in some forms of anæmia than in others—positions which my preliminary observations support.[6] I am disposed to think that it is of some promise in the treatment of pernicious anæmia, not merely because of the anæmia *per se*, but because it may

[3] This case, which was observed through the kindness of Dr. Potter, in the Kensington Infirmary, I have lost sight of.

[4] See *Post* [missing].

[5] Experimental proof of these clinically observed facts has been adduced by Mr. Leonard Hill, M.B. Lond., Joint Lecturer on Physiology at the London Hospital. See his most interesting and instructive paper, The Influence of the Force of Gravity on the Circulation of the Blood, *Journal of Physiology*, 1895, vol. xviii., pp. 15-53. Among other things Mr. Hill shows that when a monkey is debilitated by chloroform, or by an operative procedure, the carotid blood pressure in posture becomes the reverse of that which obtains in the normal condition of the animal—being higher in the horizontal and lower in the feet-down position; and that pressure on the abdomen when the animal is placed in the latter position at once restores the blood pressure to its former level. In asthenic and anæmic subjects I have likewise proved that abdominal pressure applied in the sitting posture immediately raises the radial diameter to that which obtains in recumbency. From these observations it is obvious that in asthenic conditions the blood drains by gravitating into the splanchnic area.

[6] I determine the hæmoglobin and the corpuscles by means of a hæmometer which I have lately devised for physiological and clinical purposes. It is a time-saving arrangement, and I am so far satisfied with the very definite and accurate readings it affords. After more thorough testing of its capabilities, I hope to describe it later on.

arrest the multiple capillary hæmorrhages, which are believed by some[9] to play a prominent part in the production of the anæmia. Then, besides, there is a not very improbable connection between some forms of anæmia of obscure origin and impairment of suprarenal function however produced. Dr. Douglas Stanley[10] refers to cases of anæmia in which the red blood corpuscles and the hæmoglobin are markedly reduced, the spleen and sometimes the liver are enlarged, while the white corpuscles remain unaltered or are actually reduced in number, and in which there is pronounced asthenia, and sometimes pigmentation of the skin. In such cases Dr. Stanley has observed that a freshly prepared extract of the suprarenals produces a marked increase in the number of the red corpuscles.

4. *Cyclic Albuminuria.*—I have treated two cases. In one the albumen gradually diminished, and at the end of three weeks disappeared, and returned when the tablets were discontinued. In the other—a much more pronounced case, now under observation—the albumen has greatly diminished, and I am hoping it will completely vanish on the further continuance of the treatment. In both cases the general health improved, and the reversed radial measurements in posture were restored. Cyclic albuminuria probably depends on reduction of vasomotor tone, the reduction being, however, so pronounced in the renal vessels that the mere assumption of the erect posture suffices to determine the transudation of albumen into the urine, which as a rule ceases when gravitation no longer operates, as in the recumbent posture.

5. *Diabetes Mellitus.*—Dr. Pavy is of opinion that "a vasomotor paralysis implicating only the vessels of the chylopoietic viscera, may stand at the foundation of the form of diabetes limited to defective assimilation of ingested carbohydrates."[11] From the observations I have made on the pulse in diabetes, I regard that position as highly probable, with, however, this qualification, that in addition to the paresis of the visceral vessels there is as a rule a reduction of vasomotor tone throughout the whole system. Inasmuch as the suprarenal active principle incites contraction of vessels by direct action on the muscular fibres, it is, I think, just possible it may find an appropriate application in diabetes. Through the kindness of Drs. Bradford, Poore, and Ringer, I was enabled last winter to make observation on the effects of the suprarenal tablets in three cases of diabetes in University College Hospital. In two the reversed radial calibration was rectified, and the glucose was diminished; but in the third case the daily discharge of glucose was not appreciably affected.

The following table, giving the average daily discharge of urine and of glucose and in radial measurements, epitomises the results in one case, a boy, aged 16:

	Average Daily Quantity of		Radial Calibre.	
	Urine.	Glucose.	Sitting.	Recumbent.
	C.cm.	Grains	Mm.	Mm.
Preliminary observation (5 days)	4,380	307	—	—
Fresh milk (6 days) ...	5,795	442	—	—
Antidiabetic diet and pancreatic tabloids (17 days).	4,552	368	0.4*	0.6
Antidiabetic diet and suprarenal (2 days)	3,961	239	1.3†	1.0
Antidiabetic diet without suprarenal (5 days) ...	4,017	447	0.6	0.9

* Pressure of the abdomen raised the radial diameter sitting to 0.7.

† Abdominal pressure did not increase the radial calibre sitting.

These preliminary observations are, I think, sufficiently encouraging to suggest further inquiry in this direction.

6. *Diabetes Insipidus.*—I have one mild case of diabetes insipidus under observation in which the tablets are improving the general health and preventing the reversed radial diameters; but as yet they have produced but little effect on the average daily discharge of limpid urine (100 ounces). A case of diabetes insipidus favourably treated by ingestion of suprarenal glands is reported by Dr. Walter F. Clark, in the British Medical Journal of May 18th, last.

7. *Exophthalmic Goitre.*—From my observations on the effects of the thyroid and suprarenal extracts on the circulation and the blood, I am disposed to regard them as somewhat opposed to each other, the former enlarging the arteries and reducing tension, while the latter produces contrary effects. If therefore the circulatory disturbance of exophthalmic goitre is largely the result of antogenic thyroidism, perhaps the addition of an excess of suprarenal material to the blood may serve to antagonise it. I have had but one opportunity of testing this surmise in a preliminary way in a mild case in University College Hospital under the care of Dr. Bradford. The pulse frequency was reduced, the reversed radial measurements were restored, and the thyroid gland and exophthalmos were lessened. How far these beneficial results arose from mere rest in bed or from the suprarenal treatment, I cannot say.

8. *Heart Disease.*—Inasmuch as there is some resemblance between the physiological effects of the adrenal active principle and those of the digitalis group of remedies, the applicationof the suprarenal treatment to cases of cardiac disease in which the ordinary remedies have failed suggests itself to one's mind. As yet, however, no satisfactory opportunities have presented themselves.

9. *Capillary Hæmorrhage.*—In the earlier part of this inquiry the remarkably pronounced constriction of the arteries and arterioles produced by the extract suggested the possible application of it as a hæmostatic agent. Subsequent observation has, however, led me to somewhat modify that therapeutic forecast; for during the acme of the suprarenal effect on the circulation there is almost always observed an increased flow of blood from the cut surfaces, or the recurrence of hæmorrhage from them which had quite ceased before the injection was made. This effect was of course due to the enormous increase of blood pressure. But the rapid production of the cardio-vascular effect—which indeed may be appropriately termed a cardio-vascular storm—witnessed in the laboratory is one thing, while the more slowly induced clinical influence derived from the ingestion of the gland in the stomach is quite another. Still, the increment of the blood pressure which may follow the exhibition of large doses of the gland would of course contraindicate the remedy in active hæmorrhage, or in hæmorrhage from any but the smallest arteries and capillaries. In all probability, therefore, if the adrenals are found to possess any therapeutic value in this direction, it will be in the limitation and arrest of capillary hæmorrhage, such as occurs in pernicious anæmia, in spenic leucocythæmia, in purpura, scurvy, etc. Clinical opportunities have not yet arisen to enable me to test this matter.

My observations have shown that the therapeutic effects of suprarenal treatment are induced but slowly and gradually; and, moreover, that as a rule they are not so apparent at first to the ordinary modes of observation as to enable the observer definitely to recognise them. Gradually, however, the arterial tension increases until the finger can clearly appreciate it; but I have observed that from the first the suprarenal effect on the arteries may be definitely traced by the pulse instruments—especially the arteriometer—which initiated this inquiry and which have enabled me to study the clinical side of it with much greater precision and satisfaction than would have been possible without their aid.

[9] Dr. Hockaman, British Medical Journal, vol. i, 1895, p. 1098.

[10] British Medical Journal, vol. i, 1895, p. 286.

[11] *The Physiology of the Carbo-hydrates*, by F. W. Pavy, M.D., 1894, p. 263.

A NOTE ON STREPTOCOCCI AND STREPTOCOCCUS ANTITOXIN.

By T. J. Bokenham, M.R.C.S., L.R.C.P.,

Late Research Scholar to the British Medical Association.

In the following remarks I purpose dealing as briefly as possible with the pathogenic relations of streptococci, and with the question of the possibility of the application of serotherapeutics to affections produced by them. It is chiefly to the Scientific Grants Committee of this Association that I have owed the opportunities which I have had for studying the biological features of the streptococci, as this part of my

subject occupied much of my time as one of the Association's research scholars. For laboratory accommodation during that period I also owe a very deep debt of gratitude to the Laboratories Committee of the Royal Colleges of Physicians and Surgeons.

A.—Are the streptococci which are to be met with in connection with different pathological conditions all to be classed under a single species or are they distinct from each other both botanically and clinically? For a long while the view was generally accepted that there were several varieties of streptococci, each of which was capable of producing distinct pathological effects. Thus the S. erysipelatis when inoculated into susceptible animals would only produce erysipelas, while the S. pyogenes produced abscesses, or at any rate pus formation. Cultural differences were also noticed, corresponding with these differences in action, and a difference in size of the individual micrococci, or variations in length of the chains formed by them were also quoted as supporting the above views. These cultural and pathological differences were not, however, sufficiently striking to afford a very firm basis for distinctions, and more extended experimental investigation has cast serious doubt on their accuracy. I have frequently noticed that the cultural peculiarities only hold under a given set of conditions; for instance, if an ordinary laboratory culture of the S. erysipelatis be grown for successive generations in nutrient bouillon or on gelatine peptone it will always have a similar appearance, and if its action be tested on a rabbit it will always give rise either to an erysipelas or to no pathological effects whatever. Alter the nutrient medium, however, and grow the microbe either in artificial serum or in a mixture of blood serum and bouillon, and the characters will become quite altered in many cases. Again, make a still more radical alteration in the cultural conditions by employing for several successive generations only the living tissues of rabbits, and the pathological effects will also become changed. In such a series it is quite easy to obtain at first erysipelas, then later on pus production, and still later a general infection in which there is no evidence either of erysipelas or pus production, but in which the blood and organs teem with streptococci. If the series be sufficiently long the microbes will be of such virulence that a minute fraction of a drop of the blood or exudations of an animal killed by them will suffice to set up infection in a fresh animal running a fatal course in a few hours. At the same time the cultural characteristics have become so altered that a bouillon culture of the microbe no longer at all resembles one of the original cultures. During the three years or more that I have been engaged in studying streptococci I have had abundant opportunities of observing facts such as I have just described, and the observations of others coincide with my own. I can therefore no longer hold the view that the differences observed between streptococci obtained from different sources are in any sense specific in character. Such differences are accidental rather than inherent in the micro-organisms themselves.

I have emphasised this point because it is one of the greatest importance in regard to the possible application of sero-therapeutics to the treatment of streptococcic infection. I am convinced that for the preparation of a streptococcus antitoxin on the same lines as that of diphtheria the source of the microbe is immaterial; the only necessary is that its virulence should be as great as possible.

And here a difficulty at once arises. All who have studied this microbe are painfully aware of the readiness with which it loses its virulence when grown in the ordinary culture media. In the case of the very virulent streptococcus already mentioned cultivation in bouillon will at once lessen its pathogenic powers, and so rapidly that after a few generations all virulence may be lost. Clearly, therefore, bouillon is not a suitable medium to employ when the maintenance of virulence is essential. Culture in the living body is also impracticable, for it does not afford a means of obtaining cultivations in sufficient quantity. One is therefore driven to seek some medium which is more free from these objections. I have successively tried hydrocele fluid, ascitic fluid, decalcified blood plasma (dog), prepared by Professor Wright, who kindly gave me a few tubes, rabbit's serum, and lastly the serum from the horse and the ass. None of these media were entirely satisfactory for the microbes did not grow freely in them, in some cases not at all, and in no case was the virulence maintained during more than two or three generations. The least unsatisfactory of them was serum obtained from the ass. At length, however, it occurred to me to try if I could get a more all-round suitable medium by using a mixture of bouillon (in which the microbe grows well but loses its virulence) and of asses' serum (in which growth is less satisfactory but virulence is less affected). Such a mixture has proved even more satisfactory than I had dared to hope. Not only does the streptococcus thrive exceedingly well in it but it forms a powerful toxin, which varies but little even after several generations. A similar mixture prepared with horse serum is not nearly so satisfactory, but it may be employed in preference to ordinary beef bouillon, as virulence is only gradually lost.

My earliest attempts at immunisation were made on rabbits, but the tolerance of these animals is very slight; and although I succeeded in obtaining in them a condition of comparative resistance for the less virulent streptococci, I was not able to carry the immunity far. Using a culture freed from micro-organisms, the animals exhibited a variety of symptoms: *a*. Under certain conditions they died after two or three days, having greatly lost weight and suffered from profuse diarrhœa. On examination the stomach and duodenal walls were intensely congested in patches, and occasionally hæmorrhages were found of quite recent origin, quite similar to those seen after poisoning with some kinds of snake venom. *b*. Others survived longer, but ultimately succumbed to a species of cachexia. *c*. Others, again, recovered, but exhibited little or no tolerance, even after repeated injections. *d*. In a fourth class death was preceded by well-marked paralytic symptoms, quite comparable to those described by Sidney Martin in his observations on diphtheria albumoses.

Using entire cultures, the risk of losing the rabbits was even greater. For practical purposes I therefore discarded the rabbit, and directed my attention to the ass and the horse. Either of these animals presents the advantage that it is capable of yielding a good quantity of blood without ill effects upon itself, but the ass is particularly suitable, being an animal possessed of great susceptibility, as is the case in the human subject, to the streptococcus. In both the horse and the ass it appears to be necessary to proceed with the greatest caution, as the reaction to even minute doses of filtered virulent cultures is far more violent than with diphtheria toxin, although similar in kind. I hope ere long to give full details regarding this work, but on the present occasion I am loth to take up too much valuable time, and will content myself with the statement that I have already succeeded in establishing a considerable degree of resistance, not only to the streptococcus toxin, but also to the virulent streptococcus itself. Furthermore, while I by no means regard the process of immunisation as completed, I find that serum obtained from this animal [ass] is already possessed of some protective power. I find, however, that although no streptococci can be detected in the blood, serum obtained earlier than two weeks after an injection of streptococci has powerful toxic effects. It is therefore necessary to wait several days longer before attempting to demonstrate any immunising powers, and any serum that may in the future be issued for clinical use will certainly require to be tested with even greater care than is necessary with antidiphtheritic serum in order to ensure freedom from toxic properties.

Similar experiments are in progress on the Continent, both in France and in Germany, and the results which have already been announced by the foreign observers are so highly encouraging as to justify one in the hope that in "antistreptococcic serum" we may have a remedy of no uncertain value in erysipelas, and all other processes which owe their origin to infection with streptococci. A combined "antidiphtheritic" and "antistreptococcic" serum is likely to be of far greater utility than anything we at present possess in the treatment of diphtheria, and such a serum will, I hope, be soon obtainable.

The meeting of the German Association for the Repression of the Abuse of Alcoholic Drinks will be held this year at Munich on September 18th and 19th. Among the papers to be presented are Hygiene and Temperance by Professors Hans Buchner and Max von Pettenkofer; and Beer in the Alcohol Question by Professor Moritz of Munich.

THE INTERCHANGE OF GASES IN THE LUNG AT HIGH ALTITUDES.

By UGOLINO MOSSO, M.D.,
Professor in the University of Genoa.

PROFESSOR MOSSO dealt with the subject with special reference to the influence of climatic stations and high mountains, and discussed the treatment of pulmonary diseases with rarefied air. After having shown the advantages of the abode on high mountains for the respiratory function, he mentioned the different apparatus used for the study of human respiration, and gave a description with a photograph of the one he took with him on Mount Rosa. After giving an analysis of his results, Professor Mosso proceeded to discuss the opinion of physicians and of patients on their choice of high altitudes as a method of cure.

THE THERAPEUTIC VALUE OF CALOMEL FOLLOWED BY SALT AND ACID SUBSTANCES.

By FELIX OTTOLENGHI, M.D.
Genoa.

DR. OTTOLENGHI referred to the possible conversion of subchloride into perchloride of mercury in the alimentary tube. He divided his researches into three classes:

1. Calomel followed by equal doses of chloride of sodium.
2. Calomel followed by diluted chloride of sodium (0.75 per cent).
3. Calomel followed by mineral lemonade (hydrochloric acid, 1 g.; water, 150 g.).

The first results were obtained on 9 dogs (the experiments are now being continued with equal success). To these animals was given from a maximum of 17 centigrammes to a minimum of 3 centigrammes for every kilo. of body weight.

To 3 of the animals were given equal quantities of subchloride of mercury and common salt; to 3 calomel followed by simple mineral lemonade; to 2 the remedy, and afterwards water salted with chloride of sodium (0.75 per cent.), while only 1 underwent a mixed treatment of salt and mineral lemonade.

Of these, 3 dogs died on the 3rd, 7th, and 15th day respectively. In all the 9 cases diarrhœa was observed; in 4 liquid stools mixed with blood. At the necropsy the gastro-intestinal mucosa in all cases showed marked signs of irritation, such as characterise the injection of perchloride of mercury (except when vomiting followed the injection of the remedy). In one case an ulcer was observed in the first portion of the intestine that had fixed itself against the psoas muscle, and in another death followed peritonitis, there being several diphtheritic ulcers all along the intestinal tube. The dogs used, although strong and young, continually lost weight, their appetite gradually decreased, and they were generally depressed.

The most characteristic results were obtained with chloride of sodium; in small doses that substance always poisoned the animals.

ON SEPTENTRIONALIN AS AN ANÆSTHETIC AND SUBSTITUTE FOR CURARE IN THE PERFORMANCE OF VIVISECTION.

By Professor Dr. H. V. ROSENDAHL,
University of Upsala.

DURING the last few years I have isolated three alkaloids, well characterised in both chemical and toxicological respects, from Aconitum lycoctonum L., a plant growing luxuriantly in the North of Sweden. This plant is also called A. septentrionale Koelle, and botanically distinguished from A. lycoctonum Willdenow, which is growing in the South of Europe.[1]

One of these alkaloids—called, after its mother plant, septentrionalin, but from a physiological point of view it might be called "cococurarin"—appears to be of practical use, especially to the experimental physiologist and pharmacologist. I have the pleasure of calling your attention to its chemical and physiological properties in a few words. There are in this aconite of the North, both in the part that grows above the earth and in the underground part—especially in the former—one easily crystallised and two amorphous alkaloids. Characteristic chemical reactions of colours exist for these three alkaloids which are not to be found in any other aconitalkaloids. Two of these alkaloids—lappaconitin and cynoktonin—are strong cramp poisons, and have thus an antagonistic effect to this alkaloid of which I am going to speak.

The septentrionalin is a white or slightly yellowish powder of a bitter taste, producing, after a short time, a local anæsthetic effect. Fusion point, 128.9° C. The alkaloid and its salts are right rotators; the former dissolves in 1.7 parts of alcohol, 2.1 parts of ether, and in 58 parts of water. In fresh furfurol sulphuric acid septentrionalin dissolves with cherry colour. The septentrionalin nitrate, got by precipitating the ether solution of the alkaloid with concentrated acid, forms a snow-white, loose, hygroscopic powder. By substitution with bromine we get tri-bromo-septentrionalin. By heating with caustic soda the following decomposition products are obtained: an amorphous alkaloid easily dissolved in ether (fusion point, 88° C.), an alkaloid with difficulty soluble in ether (fusion point, 105° C.), and an acid free from nitrogen, crystallising in long, very fine needles, which assumes a bluish violet colour with perchloride of iron; the acid begins to sublime at 75° C., and melts at 114° C.

Given *per os* the septentrionalin produces no general poisonous effects. Subcutaneous or intravenous injection is followed by increased salivation and sometimes nausea, never by vomiting. Septentrionalin paralyses the sensory nerve endings, and can for that reason be used for obtaining a local or general anæsthesia. After the paralysing of sensibility there is, either immediately or after a short irritation, a motor peripheral paralysing action, during which the animal lies quite motionless and, if the dose was big enough, free from all reaction during any operations. When the extremities are paralysed and the paralysis has extended to the muscles of respiration, the functions of respiration cease, though the heart is still working. The heart is thus always the *ultimum moriens*. If artificial respiration is employed the animal is kept alive, and will, in consequence of the rapid elimination of the poison, soon recover, without any signs of the animal's health having been influenced in any way by the intoxication. When using the minimum quantity of septentrionalin which is required for "curarisation," the blood pressure sinks immediately, but only for a moment after intravenous injection in consequence of peripheral paralysis of the vessels, while the heart continues to work almost completely unaffected, or the force of contraction of the heart muscle is considerably augmented. If a deep intoxication is maintained by frequent injections, the rate of the pulse is considerably diminished, while at the same time the contractions of the heart continue for a long time with undiminished force. The final inevitable paralysis is preceded by an intermittent and peristaltic action of the heart. In frogs the pulsation of the heart generally begins again after some time, and it begins immediately after administration of atropine into the pericardial sac. The peristalsis of the intestines ceases, and during the climax of the intoxication the vessels of the intestines appear expanded and filled with blood. The alkaloid has but little influence on the pupil; in frogs, however, I have seen a slight contraction, and also in warm-blooded animals first a slight expansion and then a contraction of the pupils. The muscle substance in inferior animals (worms, shell-fish), and the protoplasm are not influenced. The poison is quickly eliminated; even ten minutes after a subcutaneous injection the alkaloid was to be seen in the urine; occasionally it is to be found in the saliva, but not in the liver nor in the intestinal secretion.

From a practical point of view we must in the first place call attention to the power of septentrionalin in replacing curare at vivisection. Septentrionalin is preferable to curare, as it is a pure alkaloid, and thus has a constant dose for its action, besides being an anæsthetic for the animal; whereas curare in its chemical composition and its activity continuously varies in different specimens, and is therefore

[1] H. V. Rosendahl, Pharmakologische Untersuchungen über Aconitum septentrionale Koelle. *Arbeiten des pharmakologischen Instituts der Dorpat* unter Professor R. Kobert, B. xi, all (Stuttgart, 1895).

always a difficult drug to dose in experimental investigations with animals, and one that has to be continuously watched.

Tetanus produced by strychnine yields immediately, both in frogs and warm-blooded animals, by injection with septentrional. If the poisoning by strychnine is very strong, the injection must be repeated at intervals in order to obtain a continuous effect. Septentrionalin ought to be tried also in cramp diseases, such as wound tetanus.

Abnormal *post-mortem* appearances are reduced to subpleural ecchymoses and engorgement of the blood vessels in the abdominal organs.

The toxic dose required for curarisation is pro kilogramme of body weight:

For frogs	...	...	...	0.000174 to 0.0005	grammes.
,, dogs ...	...	...	...	... 0.0070	,,
,, cats ...	...	...	...	... 0.0100	,,
,, rabbits	...	...	...	0.003000 to 0.0050	,,
,, fowls	...	...	...	... 0.0090	,,

Of the basic decomposition products of septentrionalin obtained by heating with caustic soda, the alkaloid soluble in ether retains the poisonous effect of the mother substance qualitatively unchanged, quantitatively diminished; whereas the alkaloid, which dissolves in ether with difficulty, forms a tetanising poison which has about the same effect as cynoktonin.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

THE ETIOLOGY OF APPENDICITIS.

Dr. Armstrong Atkinson's note on the question of heredity in this disease induces me to put on record the following family history. The family in question I have known for about five years, and have treated the diseases mentioned, with the exception of two attacks of rheumatic fever in the son. There is no unusual incidence of rheumatism till the present generation. The house they inhabit is used extensively for laundry purposes, and is damp and sour-smelling, though the illnesses of the sons took place when they were away from home.

The family consists of father, mother, six sons, and two daughters. On the mother's side one brother had rheumatic fever; on the father's side there is no account of rheumatism. During the five years I have known her the mother has had four definite attacks of pharyngo-tonsillitis and one of rheumatic fever. The latter was obstinate and severe, and confined to joints. In the same period the father had a pharyngo-tonsillitis during one of his wife's attacks.

The eldest son has had rheumatic fever four times, two of the attacks being in the period of five years, with pleurisy, endocarditis, and pericarditis, leaving him a very damaged heart.

The second son has had a prolonged attack of appendicitis, and the third a shorter attack. To these I shall allude again.

The fourth, a small boy, had some endocardial signs, of which I have no note, but which were sufficiently marked to induce me to stop his attending school.

One of the daughters, at that time about 18 years of age, had a severe attack of pleurisy, followed by painful swelling of each leg in succession, recalling the condition of phlegmasia dolens. The rest of the family are said to be healthy.

Of the attacks of appendicitis, to which I specially wish to call attention, the first was very severe and prolonged. The distension of the abdomen was enormous, the pain great, though held in check by laudanum, to which the youth, alone in lodgings, helped himself freely, and in spite of the opium there were attacks of diarrhœa calling for treatment by astringents. At times it seemed as if he had no chance of recovery, and death threatened from peritonitis. He recovered, however, perfectly, and is at the present time following his occupation. The second brother some time after this had an attack of the same disease, beginning quite typically, but learning from the previous case the possibility of the rheumatic nature of the disease, I treated him with salicylate of sodium, and in a week or ten days' time he was about again.

These two cases, occurring in a family with numerous manifestations of rheumatism, are strongly confirmative of the rheumatic or catarrhal nature of many cases of appendicitis; but the differential diagnosis of such from the forms due to ulceration and perforation or sloughing of the appendix seems a matter of considerable difficulty.

Sevenoaks. James E. Blomfield, M.B.Oxon.

COAL-GAS POISONING: LENGTHENED COMA: RECOVERY.

Some time back I was called at 5.45 A.M. to see a man reported to be dying of coal-gas poisoning. At 6 A.M. I found him perfectly insensible. The pulse was irregular, and when I could count it, it averaged 120 a minute. The respiration was sighing and stopped at intervals; the mouth was firmly closed with froth on the lips; the pupils varied; generally they were contracted, but answered to the stimulus of a bright light.

Putting the patient in a thorough current of fresh air, I applied friction to the extremities, and for a few minutes used artificial respiration. As soon as he seemed breathing fairly well I left him, having drawn off about a pint of high coloured urine. All that day he continued absolutely insensible to any stimulation I tried, and there was no change except that about 2 P.M. grinding of the teeth and twitching of the arms and legs began. He passed urine and twice vomited about half a pint of what seemed to be mucus, with a little bile on the second occasion. He continued quite unconscious till 4.30 A.M. next day, when he seemed to wake up, spoke a few words, and took some brandy and milk. There was nothing further of interest in his convalescence, and he went back to his native place in Bulgaria about a week after the accident.

The cause of the accident was a tap that turned right round instead of half a revolution; so, though he turned out the light he allowed the gas to again flow from the pipes. He went to bed at 8.30 P.M., and was found at 5.30 A.M. next morning, so that the exact duration of time he was insensible is unknown. As far as I can learn the longest recorded period of unconsciousness is 40 hours. The patient was probably under the influence of the gas about 28 to 32 hours. Being a mountaineer he was in splendid health, which may have been the main factor in this recovery.

St. John's Park, N. J. Agar Matson.

STRANGULATED HERNIA IN AN INFANT: HERNIOTOMY: RECOVERY.

I was called to see a male infant twin, aged 16 days, at 6 30 P.M. on May 14th, 1895. He had been quite well until that morning, when he was very fretful. The mother noticed a swelling in the right groin. I found a complete irreducible inguinal hernia on the right side. Neither fæces nor wind had been passed since morning. During the course of the next morning vomiting became stercoraceous. I decided that the only thing to be done was to try taxis under chloroform, and this failing, to perform herniotomy. Taxis failed; I then operated. Making the usual transverse incision, I came upon the sac almost at once. The latter—which was the tunica vaginalis—was thickened, and on opening it about half an ounce of thickish red fluid escaped. I found that the gut was very tightly constricted by the outer pillar of the inner ring. It was with the greatest possible difficulty I was able to introduce the hernia knife beneath the constriction, but eventually succeeded. The bowel had a suspicious look, but was returned. During the operation I had some difficulty owing to hæmorrhage. After the operation there was great shock, and the child became almost moribund on the table. Breathing at one time ceased, and I had to use artificial respiration for twenty minutes. After a time it rallied, but for the next fourteen hours remained in a very collapsed state. Towards the following morning favourable symptoms began to show, and the child rallied well during the succeeding day. At about 5 P.M. on that day the bowels were slightly moved; it passed a good night, and next morning the bowels were well moved. Since then everything has gone on well, and the child is quite well now.

Remarks.—That the rupture was present at birth but that it went unnoticed until it became strangulated I have very little doubt. It is a remarkable case owing to the tender age of the little patient, and it was with a good deal of misgiving that I proceeded to operate. It is also remarkable from the rapid manner in which the case developed. Stercoraceous vomiting setting in very early, and the gut had a suspicious look although constricted for so short a time. The latter shows all the more the danger of delay in operating, even if it be only for a few hours. Had the little patient been a year or two old I would have operated when I saw it first if taxis had failed.

F. J. Lambkin,
Newcastle, Jamaica. Surgeon-Major A.M.S.

FRACTURE OF A FALSE RIB.

On the evening of June 2rd I was called to see a man, aged 36, who had been assaulted, receiving a kick in the left loin; he complained of pain and a crackling sensation locally when he moved about or coughed. I found no bruising, but on placing my fingers over the middle of the eleventh rib on the left side I made out slight emphysema, and on pressure distinct crepitus, pressure to any extent causing him great pain. I then strapped him firmly and put on a good calico bandage. The next day he said he had no pain except on pressure and on turning over in bed; he had no cough, and nothing abnormal was found in the urine. During the progress of his recovery he complained of pain only on the major movements.

The interest attaching to this case is that a sharp kick caused a fracture of a floating rib—the eleventh—without any seeming injury to the tenth; that there was slight penetration of the pleura, as shown by the emphysema; and, lastly, that the kidney on the side injured was in no way affected so far as could be ascertained by inquiry into its action and by examination of the urine, which is remarkable considering the great force of the kick.

Bootle. W. N. Clemmey, M.R.C.S.

HYPERPYREXIA IN PNEUMONIA.

In connection with the case of hyperpyrexia reported in the British Medical Journal, July 6th, the following may prove of interest. It is remarkable that, although the case seems to have been one of acute lobar pneumonia, influenza was epidemic at the time, and a certain proportion of cases of he latter were complicated by pneumonia.

S. T., a strong and robust male aged 25, an ironworker, had been in the army, but suffered from no illness during his service. His foreign service was limited to Gibraltar. On the morning of February 20th he woke in a severe rigor, which was followed by pain in the side, rusty sputum, and profuse perspiration for two days.

When I first saw him at 11 P.M. on February 23rd he had been violent but was getting quieter. The pulse (150°) was of extremely low tension, and respiration was about 36. Both were very irregular, the skin pungent, the pupils contracted, and the face livid. The temperature in the groin was 108.8°. There was well-marked consolidation of the lungs at the left base. Fortunately there was plenty of ice, and after giving 10 minims of liquor strychninæ subcutaneously, the trunk and limbs were rubbed continuously with lumps of ice for 45 minutes, when the temperature in the groin was 106·5°. The application was continued for another 20 minutes, when the temperature in the rectum had fallen to 102·4°. Ice was then discontinued, and 5 ounces of brandy were given as soon as the patient was able to swallow. In a short time the temperature in the rectum had fallen to 99.2°.

The patient was quite rational at 2 A.M., and the pulse was steady and full (105).

	Temperature.
February 24th, 10 A.M.	100°
,, ,, 8 P.M.	101.8°
February 25th, 10 A.M.	100.2°
,, ,, 8 P.M.	100.4°

This was reduced by ice to 99.2°. The whole of the left side was now dull, and there was œdema at the right base.

On the morning of February 26th the temperature was 103.6°. Death took place at 2 30 P.M. without any further rise. He had been delirious since midday on February 25th.

Coseley. W. M. Clendinnen, M.R.C.S., L.R.C.P.

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LATENT ULCER OF THE STOMACH IN RELATION TO GENERAL PERITONITIS.

In the principal textbooks of medicine, so far as I can find, no reference is made to the probability of acute general peritonitis, other than that due to perforation, occurring as a complication of ulcer of the stomach. The following case will, I think, lend support to the view that such an origin of acute or subacute peritonitis, even in connection with latent ulcer, may not be uncommon.

The "margin of safety" becomes indeed small when the peritoneal floor of the ulcer is the only barrier separating the patient from a sudden death, and yet too often quite unconsciously this is the frail security which she carries with her to the tennis field or golf links. With such a recognised cause of peritonitis, the number of cases of this disease having their direct origin from so called "cold," becomes still more limited.

The probable cause of peritonitis occurring in a patient who has been, or is already, suffering from typical symptoms of gastric ulcer is apparent enough, and it was after seeing such a case that I was called to a girl, aged 17, very tall, of slight build, and rather anæmic. With the exception of trivial attacks of indigestion, she had suffered from no distinct ailment during the three years I had attended her. The present illness began with general abdominal tenderness and pains, the temperature was 101·2°, the pulse quick; she experienced a feeling of nausea and slight chilliness. The attack of peritonitis was attributed to a chill caught whilst sitting on the rocks the preceding day, and was treated in the ordinary way. Careful examination, however, of the area of tenderness from day to day elicited the fact that this gradually diminished from below upwards until it was limited to a spot about half the size of half-a-crown situated over the anterior surface of the stomach, and nearer its cardiac end, a situation where, as recently pointed out by Mr. Barling, perforation more commonly occurs, partly because from mobility this surface of the stomach rarely becomes adherent, and partly because the symptoms of ulcer are in this position less marked, and occasionally even quite wanting. This tender spot was well defined for about a month, and had become so gradually localised that it certainly seemed likely to be the centre from which the peritoneal inflammation originally radiated. Struck with the similarity of symptoms between cases of apparent and latent ulceration when regarded as the probable cause of peritonitis, I advised complete abstention from all exercise involving sudden changes of position for six months, with great care in diet, and for a time a powder of subnitrite of bismuth. The tenderness had then entirely disappeared as well as the slight indigestion. I trust I may thus have prevented one sad catastrophe in addition to learning the lesson of the need for making a careful examination of the epigastrium, not only in cases recovering from peritonitis, but also in those of apparently trifling indigestion when this is continuous or recurrent.

Tenby. Ernest Knowling, M.B.Cantab.

RUPTURE OF THE BLADDER.

W. H., aged 18, was brought into Eureka at 9 P.M. on December 29th, 1894, having travelled a distance of eighteen miles over a rough bush road. He was quite conscious, and stated that a 3 P.M. that day he was riding a race with another boy, when his horse stumbled and fell with him. He got up to catch his horse, but fell down within a couple of yards, feeling "as if his stomach had fallen over his left leg." His shirt was saturated with blood and urine, the bleeding having been encouraged by a woman into whose house he had been carried applying hot fomentations to the abdomen.

When I saw him he was suffering from slight shock, the pulse was feeble, and the temperature half a degree below the normal. There was great suggilation of blood into the left groin and iliac fossa, extending down the inner side of the thigh with a distinct bulging in the left ilio-inguinal region. There was blood also in the right groin, but not reaching down the right thigh. There was no apparent extravasation of blood into the scrotum or perineum. On proceeding to pass a catheter I found the meatus represented by a groove with an orifice only at the posterior extremity of the groove, with a calibre the size of the body of an ordinary pin.

A No. 1 catheter was passed into the bladder with much difficulty, and what appeared to be pure arterial blood was discharged.

The injury was evidently an extraperitoneal rupture of the bladder. In this diagnosis Dr. Günst coincided when he saw the boy with me at 11 P.M. Owing to want of assistance, we thought it advisable to delay operation till the morning, and administered ergot. The next morning the boy's condition was splendid; he had completely recovered from shock, but had a slightly subnormal temperature. On opening the space along the pubes, I found the peritoneum pushed up almost to the umbilicus, and was met by a gush of mixed venous blood and urine.

There was a large rent in the anterior wall of the bladder an inch and a-half long, the lower extremity of which reached almost into the neck. This was the source of the large amount of venous hæmorrhage which distinguished the case, the rent having completely torn across the prostatic plexus. The last few sutures were extremely difficult to deal with at the base of the cavity, and occupied half the time of the operation. While still under chloroform the boy had a convulsion, which lasted about two minutes, but rallied splendidly on being put to bed. His temperature rose in the evening to 100·5° F., and towards midnight he became slightly delirious, but was easily roused to complete consciousness. He had a uræmic convulsion at 4 A.M. the next morning, and another at 8 A.M., in which he died.

An hour after the operation he passed a clear stream of urine into the bed, and again just before death he voided a large quantity of clear urine a foot into the air as I was about to pass a catheter. The mistake made in this case was undoubtedly the deferring of the operation until the morning of the day after the injury, as the cause of death was suppression of urine. That this suppression was not permanent was conclusively shown by the re-establishment of secretion before death, in fact immediately after operation, and the poisoning was therefore due to the earlier absorption of urinary solids. The seat of the injury was, I think, an unusual one, which is my reason for reporting the case.

George Fox, M.R.C.S.E.,
Euroa, Victoria. Late Resident Surgeon to the Sydney Hospital.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

NEWCASTLE-UPON-TYNE ROYAL INFIRMARY.

CASE OF OXALIC ACID POISONING.

[Under the care of Dr. Oliver.]

Although oxalic acid poisoning is said to be more frequent in England than in any other country in Europe, it is not of common occurrence in the North of England. W. M., aged 34, was admitted at midnight on January 3rd, alleged to have taken oxalic acid in tea at 9.30 P.M. He was pale and sallow, and only able to walk with assistance. He smelt strongly of alcohol, was quite rational, but somewhat excited and talkative. His pupils were dilated. The pulse (80 per minute) presented nothing abnormal. His breathing was hurried, and was interrupted now and again by a peculiar spasmodic inspiration. There was great pain and tenderness on pressure over the epigastrium. The tongue was white and dry. The temperature was 98°. About an hour after his admission the house-physician, Dr. Watson Ogden found him suffering from twitchings of the lower extremities. The knees would be suddenly jerked up, whilst the spasmodic respiratory movements already alluded to had become more frequent and troublesome. He vomited a small quantity of frothy, yellow liquid.

When seen by Dr. Oliver next morning the patient had not slept well, and he looked ill. The pupils were unequal, the left being smaller than the right, although both were dilated and did not respond well to light. The tongue was dry and white; the pulse 72, small and compressible. Vomiting had ceased. The heart and lungs were healthy. The abdomen was distended and tympanitic. As he lay rolled on his side in bed he was observed to be the subject of peculiar "startings," accompanied by snorting expirations evidently due to sudden contractions of the diaphragm. These snortings, as well as the tremors, could be induced by pressing the epigastrium. There was less complaint of pain over the stomach than on the previous night, but the pain still radiated over the upper part of the abdomen and down the sides. Firm pressure upon the trachea, œsophagus, and along the course of the vagi in the neck was extremely painful. His respirations were 22 a minute. Any attempt to raise himself in bed was followed by considerable tremor of the muscles generally. The knee-jerk was exaggerated on both sides, and amounted almost to clonus. The plantar reflex was also exaggerated. Simple irritation of the skin in front of the leg was sufficient to bring on the general tremor accompanied by sudden deep and irregular inspirations. The urine, sp. gr. 1002, contained neither sugar nor albumen. While lying undisturbed in bed his breathing was perfectly quiet and rhythmic for a time, and then, without any apparent cause, there occurred a sudden, deep, and prolonged inspiration, which was noisy compared to expiration. The blood on microscopical examination presented nothing abnormal. The urine was not examined for oxalate of lime crystals. In a few days the patient was quite well. The urine for the short period he was under observation contained only about one-half the normal amount of urea. On the third day after his admission the temperature reached 100.8°, but with that exception remained normal. He was treated by large doses of bismuth.

One of the principal points of interest in the case was the general tremor accompanied by noisy inspirations, at other times expirations.

BETHLEM ROYAL HOSPITAL, LONDON.

CASE OF CAMPHOR POISONING.

(By Maurice Craig, Assistant Medical Officer.)

The number of recorded cases of camphor poisoning in adults is very few, and in many of these camphor liniment has been taken. The following, which is one of eating pure camphor, may be of interest. The case is that of a gentleman, J. A., who was in Bethlem Hospital suffering from hypochondriasis. In the same ward was a general paralytic, who had obtained some camphor from his friends. This he gave to J. A., who, from no suicidal intention, but believing that it might do him good, ate about 3 drachms. The patient thus described his feelings during the next three-quarters of an hour:

"About half an hour after swallowing the camphor I was seized with giddiness and nausea. On rising from the chair on which I was sitting I staggered a good deal and expected to fall every moment. I went to the lavatory with a strong inclination to vomit, but was unable to bring anything up. I took a little water, which relieved me at the time, and then lay down on the couch with a drowsy singing in my ears. I was quite free from pain. When the dinner bell rang at 1 P.M. (three-quarters of an hour after taking the camphor) I got up feeling very queer, but nausea and giddiness had gone. I had an extraordinary sensation as though I must be taken from my feet and carried through the air. I sat down and began my dinner; then quite suddenly a blank ensued, and I have not the faintest recollection of what happened until I found myself lying on the bed with two attendants watching me. Then ensued horrible agony, restless irritation, with fever and chills strangely combined. My feet and legs were like ice, whilst my head throbbed and burned. The doctor had a hot bottle put to my feet, and I swallowed some brandy and milk. This soon brought relief, and I felt a strong inclination to sleep, but could not. At night I had a succession of strange dreams and fancies [he does not usually have visions or visual hallucinations], but no pain. On waking up in the morning I felt no pain, but from time to time I had singing in my ears."

I saw the patient within two minutes of the "fit" commencing. Convulsions (which had been general) had just

ceased, except for some twitching of all the limbs. There was no deviation of the eyeballs; the pupils were equal and small, but did not react to light. The knee-jerks, usually sluggish, were exaggerated. Breathing was rapid, and he was cyanosed. The pulse was rapid, but regular. As the cyanosis passed off he became intensely pale. Absolute unconsciousness did not last beyond five minutes, as he began to resist, and opened his eyes upon his name being called. At this time it was not known that he had taken the camphor, and there was no odour of it in the breath. He was put to bed. He gradually became colder and more collapsed. Hot flannels and hot water bottles were freely used, and a hypodermic injection of 5 minims of brandy given. At 2.30 P.M. (two hours and a quarter after taking the camphor) he vomited copiously. The vomited consisted of mucus, camphor, and some food, but no blood. From this time consciousness rapidly returned, and he became warmer. His memory was most markedly affected for about an hour after. He had no retention of urine commonly observed in such cases.

REVIEWS.

THE INSANE AND THE LAW: A PLAIN GUIDE FOR MEDICAL MEN, SOLICITORS, AND OTHERS. By G. PITT-LEWIS, Q.C., R. PERCY SMITH, M.D., F.R.C.P., and J. A. HAWKE, B.A. London: J. and A. Churchill. 1895. (Demy 8vo, pp. 448. 14s.)

IT is becoming a daily increasing necessity for medical men to understand the law of lunacy, and if progress is to be made in the law it is as necessary that lawyers and others should be instructed in the principles which govern the relationships of society to the insane. In this book we have the certain knowledge that the medical questions and the medical terms will be properly used, and the guarantee that the law of the subject is correct should be high when we know that a distinguished Queen's counsel and another barrister are responsible for that part of the subject.

The book covers a very large field. Not too much space is allotted to the historical part of the subject, for although this is important and interesting yet it is less practically useful than the essentials of the Lunacy Acts. The book is divided into four parts, which treat of: (1) Detention and Treatment; (2) Maintenance; (3) Responsibility; and (4) Capacity. To these are added two appendices, one of which gives the Regulations of the Board of Visitors as to Persons found Lunatic by Inquisition, and the other on the Lunacy Acts 1890 and 1891, the Idiots Act and the Rules of the Commissioners in Lunacy. We believe the book will be a great help to medical men, and we find a freedom from those medical errors which are not uncommon in legal textbooks on insanity.

The first part gives clearly the directions as to the relations of the insane to the Common Law as well as to the Chancery Court. Certification, its duties and responsibilities, are made clear. In Chapter 4 the violations of the Lunacy Laws and their consequences are given; the subject is so well up to date that on p. 132 will be found notes on Reg. v. Sherrard. In the division on the Responsibility of the Insane much matter of interest is to be found, and knowing as we do the part taken by Mr. Pitt-Lewis in the discussion at the meeting of the British Medical Association at Bristol, we are not surprised to find that he is for reform. Anyone specially interested in the part of the subject would do well to compare this division with the article on Criminal Responsibility which was written by Dr. Orange in Tuke's *Dictionary of Psychological Medicine*, to which Mr. Pitt-Lewis has obviously referred.

In the fourth part of the book capacity is considered from the two aspects: first as to the capacity of the insane to give evidence, and next as to the capacity to make or revoke wills. It is this latter question which is most frequently brought before the medical man and we commend this chapter to those who may be interested as witnesses or observers in such cases. The book fills a well-occupied want, and we believe it will be found to be a trustworthy guide to the conduct in legal matters of those medical men who are interested in insanity.

A GROANING CREATION. By JOSIAH OLDFIELD, M.A., Barrister-at-Law. London: The Ideal Publishing Union. (Cr. 8vo, pp. 100. 1s.)

THIS is a book of horrors, the horrors of the slaughterhouse; and these are described with a wealth of detail which undoubtedly will impress those who read it with a lively disgust for existing methods of slaughtering animals and a strong desire for reform. Certainly reform is necessary; but that does not appear to be the object of the author. The aim of the book is to show that reform is impossible, that slaughter in any form must be cruel, and that, instead of mending the methods, we ought to end the practice altogether. The corollary is obvious—we ought all to be vegetarians.

This, however, is hardly practical advice. We have before us what the author calls "the brutal fact" that before we can have a steak for dinner an animal must be killed, and it is reasonable to believe that we shall more quickly lessen the cruelty involved in killing by entering upon a crusade against cruel methods of slaughter than by maintaining that cruelty can be abolished only by abolishing the steak. That will not happen for many a long day.

LA PRATIQUE DE LA SÉROTHÉRAPIE ET LES TRAITEMENTS NOUVEAUX DE LA DIPHTÉRIE. [The Use of Antitoxic Serum and other New Treatments in Diphtheria.] Par le Dr. H. GILLET, Ancien Interne des Hôpitaux de Paris et de l'Hospice des Enfants Assistés, Chef du Service des Maladies des Enfantes à la Policlinique de Paris. Paris: Librairie J. B. Baillière et Fils. 1895. (Cr. 8vo. pp. 300. Fr. 4.)

DR. GILLET, in his small work on diphtheria, has brought together in a convenient form much of what is known concerning the treatment of this affection. He gives a summary of the results of serum therapeutics as applied to diphtheria, and also, very fully, the statistics concerning the operations of tracheotomy and intubation. The book is essentially practical, but a sufficiently full historical sketch of the disease and of the various methods of treatment is given to enable those who take an interest in the subject to follow with ease the *rationale* of the various methods of treatment.

The first section is devoted to an account of serumtherapy, and contains a fairly full account of M. Martin's lecture given in the Institut Pasteur, and illustrated by the same drawings; these will prove useful to those who are commencing to make examinations for the diphtheria bacillus and for the other microorganisms usually met with in the throat. The methods of preparing and injecting the serum and the instruments required are fairly completely described and the indications for the use of the serum as laid down in France and Germany are noted. The effects of antitoxin on the human subject in health and in diphtheria are given, and it is pointed out that as a result of the treatment in diphtheria the general condition of the patient is considerably ameliorated; if tracheotomy or intubation is necessary, the chances of recovery appear to be considerably greater when antitoxic serum is used than under any other form of treatment. The conditions of temperature, pulse, and respiration are described and the relation of injected blood serum to diphtherial [illegible] is discussed. The action of the serum on the diphtheritic membrane is stated to be most marked. The unfavourable conditions and symptoms induced in certain cases are also fully discussed; the eruptions, arthropathies, epistaxes, the special intolerance of poisonous substances, and the effect on the heart are all carefully detailed.

One point is incidentally mentioned which should be borne in mind in determining the propriety of exhibiting this reagent in cases of diphtheria. The antitoxic serum appears under certain conditions to have the power of stimulating

into greater activity any tuberculous lesions that may be present in the patient; it should therefore be a matter for careful consideration whether diphtheria in a tuberculous patient is likely to be so severe that the physician is justified in subjecting his patients to the risk of stimulation of the tuberculous process.

As regards the operations of tracheotomy and intubation, which the author describes fully, it is concluded that intubation can never completely replace tracheotomy; on the other hand, it enables the surgeon to avoid tracheotomy in a relatively large proportion of cases, whilst it may be resorted to at a considerably earlier stage than is usually considered necessary than in the case of tracheotomy. It appears to be conclusively proved that with the serum treatment intubation may be used in a large proportion of cases of laryngeal stenosis, and that when tracheotomy does become necessary the results are much more favourable than under any other system of treatment.

Anyone who wishes to work up recent statistics and observations, not only in France but in Germany and England, will find this little book a very complete guide, and we heartily commend it to the attention of all who take an interest in the treatment of diphtheria, whether general or special.

Recherches Cliniques et Thérapeutiques sur L'Épilepsie, L'Hystérie, L'Idiotie et L'Hydrocéphalie. [Clinical and Therapeutic Studies of Epilepsy, Hysteria, Idiocy, and Hydrocephalus.] Par Bourneville, Médecin de Bicêtre, avec la collaboration de MM. Boncourt, Cornet, Lenoir, Jules Noir, et P. Sollier. Vol. xiv, avec 89 figures dans le texte et une planche. Paris: *Progrès Médical*. 1894. (Demy 8vo, pp. 376. Fr.5.)

The book is divided into two parts. The first gives an account of the work that has been done at the Bicêtre and Fondation Vallée during the year 1893; the second consists of eight essays by Dr. Bourneville and his assistants. Various improvements have been made in the mode of teaching the children, especially with reference to the education of the eye, the hand, and the faculty of attention. The Fondation Vallée is overcrowded, and contains 131 children, but a project is on foot for increasing the size of it by building a pavilion capable of accommodating 100 more patients. In this institution too, various improvements in the mode of teaching have been made, and exercises for improving the power of the hands and legs have been added.

One of the most important clinical essays is that by Dr. Bourneville himself, who contrasts the surgical with the educational treatment of idiots and imbeciles. He analyses 82 cases in whom craniectomy had been performed, and comes to the conclusion that the results have been slight or doubtful, while 14 died. Dr. Bourneville discusses carefully the cases of 22 patients, in 3 of whom craniectomy had been performed. After examining the crania and corresponding brains, and finding no sign of premature synostosis, he concludes that Lannelongue's theory is not borne out by pathological anatomy. Moreover, lesions of the brain which are often found cannot benefit by the operation. More good may be expected from education than from craniectomy.

An essay by Bourneville and Cornet on epilepsy treated by subcutaneous injections of testicular fluid contains particulars of 26 cases injected with the fluid for a period of six weeks to two months. According to M. d'Arsonval, if at the end of six weeks there are no good results in this treatment of epilepsy, it is useless to prolong it. Of the 26 patients, 8 had a slight diminution in the number of their fits, while the remaining 20 had more than before. In no case had there been amelioration of the mental condition.

In a long essay of nearly 200 pages on some forms of hydrocephalus, written by Drs. Bourneville and Noir, the authors distinguish three forms—simple hydrocephalus, scapho-hydrocephalus, and symptomatic hydrocephalus. According to the authors, in most cases the effusion of fluid takes place some months after birth, and the child is suddenly taken ill with meningitis or convulsions. Gradually the head increases in size until the age of 4 or 5 years, when its greatest dimension is reached. Death usually takes place between the ages of 3 and 6 years from broncho-pneumonia or meningitis. All cases of chronic hydrocephalus have as predisposing causes nervous diseases, mental maladies, and alcoholism; the chief exciting causes are chronic inflammation of the intraventricular meninges, or compression of the vessels of the brain by the development of a tumour. The authors do not recommend treatment by trephining and drainage, as the result in most cases is fatal; treatment by compression of the head, daily friction with mercurial ointment, and the administration of calomel, aided by massage of the limbs, salt baths, and tonic medicines, is far more successful.

The book contains a number of engravings of skulls and brains, and shows clearly that Dr. Bourneville and his assistants do much excellent work in their department of the Bicêtre.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE NIBESTOS POCKET FILTER.

This pocket filter, manufactured by the Nibestos Filter Company, 126, Charing Cross Road, W.C., consists of a bright metal case from 4 to 5 inches in diameter, which can usually be passed into a moderately large waistcoat pocket. The outer casing is formed of nickled brass. The upper cover is perforated at its margin and half way to its centre by a series of circular apertures, and is fixed on to the lower cover by means of a bayonet joint. On removing the upper cover we find a movable top disc of thin copper wire, which is covered with a coating of rough asbestos cloth and fitted with a handle. Fixed to the lower half of the cover a similar disc of metal with rough asbestos cloth is permanently fixed, and from below this the filtered water passes out by means of a metal tube to which a piece of india-rubber tubing with a mouthpiece is attached. A film of asbestos is placed on the top of the lower asbestos frame, and moistened, after which the upper disc is pressed home. This filter may be either used by means of direct suction, through the mouth, or indirectly by siphonage to supply water for general purposes. Used directly with suction sufficient water can be obtained without much exertion for drinking; by means of siphonage, with a fall of less than 2 feet, clean water is filtered at the rate of a pint in about three minutes. The asbestos films, which are the real filtering medium used in these filters, keep back all the usual suspended materials with which filters are usually tested, and will no doubt accordingly convert any muddy or turbid water into a clear and transparent fluid. The statements, however, which are printed on the boxes of films make the further claim for these filters that they are "germ proof."

Such a filter, if its claims could be substantiated, would be most useful, inasmuch as we are most frequently exposed to the dangers of drinking from suspicious sources of water supply under circumstances when a small filter such as this could conveniently be taken advantage of. We have accordingly tested this filter as regards its permeability to disease germs. The filter after being sterilised in boiling water was fed with water which contained an emulsion of cholera bacilli. The first sample, which was taken soon after starting, was free from cholera germs. A second sample, however, which was taken after about half an hour's continuous running, showed the presence of from 6 to 10 cholera germs per c.cm. of water. These experiments show that, although the unfiltered water contained several thousands of cholera germs per c.cm., the filtered water was at first quite free from them, but later on revealed their presence: this indicates that a certain time is required for the germs to be washed through the film into the filtrate, but that no doubt under continuous use the consumer would ultimately get the benefit of them all. This is brought out still more clearly in a series of experiments carried out with staphylococcus pyogenes aureus. The first sample, taken after the filter had been running for half an hour, showed the presence of 25

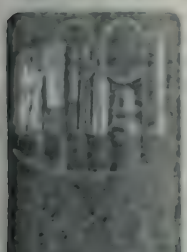
to 30 organisms per c.cm. of the filtrate, while a second sample, taken after the filter had been in action for from two to three hours, showed the presence of from 230 to 280 colonies per c.cm. It will thus be seen that at first very few of the germs appear in the filtrate, but that these gradually increase in number in the filtrate under continued use of the filter. This is no doubt due to the fine nature of the film, its thickness, and the slight pressure exerted in the siphonage, causing a certain time to elapse before the germs are dragged through into the filtrate. These results accordingly plainly demonstrate that this filter affords no guarantee against the communication of waterborne disease. As a mechanical filter it works very efficiently in removing all visible suspended matters from water, and the fact that the film can be readily replaced is without doubt a great advantage; it is very probable also that such a filter would constitute a safeguard against the risk of imbibing the ova of tapeworms which may be met with in "pond" and other such waters. But the claims which are apparently made for these films in the statement "patent Nibestos germ-proof films" cannot from these experiments be upheld. It has recently been pointed out in our columns that filter makers who claim for their wares the power of preventing the transmission of infective disease are incurring a very heavy moral responsibility unless such claims can be substantiated, inasmuch as they prevent the consumers from taking the natural precaution of boiling the water when this happens to be of a dangerous nature.

SEAMLESS ENEMA SYRINGE.

Messrs. Bailey and Son (38, Oxford Street, W.) have submitted to us their new "holdfast" seamless enema syringe, with patent "anchor" suction end. This new suction end consists of a concave india-rubber disc, which when pressed against the basin adheres (on the principle of the sucker) so firmly that the end cannot possibly slip out. There is thus no danger of wetting the bed linen or admitting air to the syringe, accidents which when the ordinary syringe is used often make a recommencement of the operation necessary. It is particularly suitable for perchloride of mercury injections, there being no fear of precipitation, as is the case with the old metal ends. The india-rubber suction end makes no noise. There is no need to hold the end under water; it cannot leave the bottom, so the solution can be used to the very last. This improved syringe is not more expensive than the ordinary form.

THE "WATCH POCKET COMPACTUM" INSTRUMENT CASE.

Messrs. Maw, Son, and Thompson have prepared for Dr. S. H. Appleford (17, Finsbury Circus) a "watch-pocket Compactum" instrument case, which he has had in constant use for some five or six years. Though taking up very little room in the pocket, and causing no inconvenience, being perfectly flat, it contains all the instruments one is likely to be called upon to use in the common round of visits, and dispenses with the usual unwieldy pocket case. The contents are: Thermometer, which runs less chance of disaster there than when carried loose in the pocket; caustic case, forceps, probe director, and grooved needle, scissors, knife with Paget and Syme's blades—a pocket at back for needles and sutures or cards. The total dimensions are 4½ by 2½ inches, the total weight 2½ ounces.



ITROSYL.

Spiritus Etheris Nitrosi is defined in the *British Pharmacopœia* to be a spirituous solution containing nitrous compounds, aldehyde, and other substances. This solution is very unstable, for the ethyl nitrite evaporates, and the aldehyde has a great tendency to become converted into acetic acid by the absorption of oxygen from the air, and pharmacists are obliged to neutralise the acid generally by bicarbonate of potassium before adding it to medicines containing iodides, etc. Messrs. Fletcher, Fletcher and Co. (North London Chemical Works, Holloway) have devised a method of preparing small quantities of spiritus etheris nitrosi as required for use, so that the loss of ethyl nitrite is reduced to a minimum. They prepare the entire constituents of spirit of nitrous ether in a concentrated form, so that one fluid ounce is sufficient to produce by mixing with rectified spirit one pint of spiritus etheris nitrosi *B.P.* This concentrated spirit of nitrous ether is termed itrosyl. It is put up in hermetically sealed amber glass tubes or cartridges, each containing one fluid ounce. We have prepared a pint of spirit of nitrous ether from the contents of one of these cartridges, and find that it answers in every respect the requirements of the *British Pharmacopœia*.

PREPARATION OF DUODENAL SECRETION.

Messrs. Oppenheimer, Son, and Co., Limited, 14, Worship Street, E.C., propose to apply the name "duodine" to the prepared secretion of the duodenum of the ox. They state that from experiments made in their laboratories it has been found that the secretion of the duodenum has a similar action to the collected enzymes of the pancreas, in that it will, when prepared by the Webber process—a process they employ for the preparation of pepsin and pancreatin—act very powerfully upon coagulated egg albumen, casein of milk, and farinaceous foods as a digestive agent. The duodine is enclosed in Messrs. Oppenheimer, Son, and Co.'s well-known palatinoids. Each contains 10 grains of fresh duodenal substance. This remedy has been suggested for administration in impaired nutrition and emaciation.

CHLORIDE OF AMMONIUM INHALING PIPE.

Mr. W. Toogood, Burlington Buildings, Heddon Street, Regent Street, W., is the manufacturer of a very simply constructed instrument for the inhalation of the vapour of chloride of ammonium. It consists of a glass cylinder about 4 inches long, with a mouthpiece at one end and two bowls at the other. When in use it is held in the hand as an ordinary pipe. There is a sponge inside the cylinder which is wetted so as to fit closely. Two drops of liquor ammoniæ are dropped upon absorbent material in one bowl, and two drops of hydrochloric acid in the other. The vapour is then inhaled by the mouth and exhaled by the nostrils. The pipe, which is called "Stainer's Chloride of Ammonium Inhaling Pipe," is packed in a box containing an amber-coloured bottle of acid and a white one of ammonia, and is sold for 3s.

CHAMPAGNE VITALITE: VIN DIGESTIF.

This champagne has been introduced by Messrs. Henri Laurence et Cie of Ay, for the use of dyspeptics and others who are debarred from drinking ordinary champagne. This wine is claimed to be of a high-class vintage, and to be highly peptonised and prepared in such a manner as in no way to impair the natural qualities of the wine. The analysis of the sample sent to us shows it to be a dry wine of good quality having an alcoholic strength amounting to 12.4 per cent. of alcohol by measure, extractive matter 3.3 per cent., and 0 8 per cent. total acidity expressed in terms of tartaric. The specific gravity is 998 7. Experiments with coagulated albumen carried out according to the method described by the *British Pharmacopœia* showed, however, hardly any digestive action, a result not to be wondered at considering the retarding action of alcohol in pepsin digestion. We cannot, therefore, endorse the claims made for this preparation. The London agents are Messrs Maxton and Co., 35, Walbrook, E.C.

MILK STERILISER.

This apparatus—introduced by Mr. Hawksley, 357, Oxford Street—consists of a water bath and a receptacle to contain the milk to be sterilised, which fits therein. The operation of sterilising consists in heating the milk by means of the bath to 155° F. (68 8° C.), and then leaving to cool in the hot water for half an hour, after which it is to be quickly cooled and kept in a cool place. It is true that a partial sterilisation is thus effected; in fact, all those bacteria which die below a temperature of 68° C. will be killed, but as there are

many which cannot thus be disposed of, it is evident the complete sterilisation cannot be effected. Still, such sterilisation as it does afford is a great advance on no sterilisation, and its use in nurseries and hospitals would undoubtedly cause a great diminution in the rate of infantile intestinal troubles. It must not be forgotten that all such methods which make use of heat as a means of sterilisation must alter the composition of the milk—to an extent depending on the degree of heating—and until some method is discovered which can obviate this disadvantage artificial feeding will never be free from risk.

CINCHONA PREPARATIONS.

Some time ago we reported upon a very excellent preparation of cinchona bark (Liq. cinchonæ hydrobrom.) made by Messrs. Fletcher, Fletcher, and Co., Holloway. This liquor is almost neutral in reaction, contains 5 per cent. of the total alkaloids of red cinchona bark, is perfectly miscible with water, and can be combined with bromide of iron without causing blackening in colour or decomposition. Messrs. Fletcher, Fletcher, and Co. now prepare the above in the form of syrup (syrupus cinchonæ), and also combined with bromide of iron (syrup. cinchonæ et ferri hydrobrom.). The latter syrup is especially worthy of notice as an agreeable and elegant method of prescribing cinchona bark with iron. Fletcher's cinchona wine is a very palatable preparation. It may be relied upon as representing the whole of the active matters of cinchona bark in solution in a red Spanish wine, and in a form which can be readily taken by patients.

PURITAS HEALTH SOAP.

The Diana Manufacturing Syndicate, 15, Blossom Street, E., has sent us samples of dry soap bearing this designation. It is described as being applicable either for disinfecting or for laundry purposes. It is a dry powder, having a slight terebenthine odour. Our analysis shows the presence of nearly 8 per cent. dry soap with 23 per cent. dry sodic carbonate, the remainder consisting chiefly of sodic sulphate and combined water. The disinfecting property claimed is, therefore, not indicated by the results of analysis, but it would no doubt be useful for ordinary laundry and cleansing purposes to the extent of the amount of soap and sodic carbonate present.

SMALL-POX, VACCINATION, AND QUARANTINE, IN AND AROUND BRIGHOUSE, 1892-93.

XIX.

Dr. Meredith Young has been good enough to furnish us with an account of the small-pox prevalence which affected the district of the Brighouse joint hospital in 1892-93, and also with some valuable tabular matter relating to the 150 cases of the disease, as to which he had cognisance. The facts seem worth recording.

The sanitary areas in question were Brighouse, Rastrick, Hipperholme, Southowram, and Halifax rural; in the latter of which quarantine was given up after a few months' trial because the expenses attending it were declared to be illegal. In Southowram it was given up as a complete failure, but in both Hipperholme and Brighouse it was carried on throughout the entire epidemic; the *modus operandi* being to quarantine for a fortnight every invaded household, allowing the family provisions for the period, and keeping the house under daily medical supervision. People were informed that their employers would be little likely to take them on with such a disease possibly clinging to them, and shopkeepers were told that it would be all the better for them to have been under supervision for the usual period of incubation, thus giving the public greater faith in their wares, knowing the premises to be free from danger. And thus but little opposition was encountered. But how about the auditing of the accounts? This is to us an interesting question. Added to this precaution, there was plenty of vaccination and revaccination accomplished, and prompt isolation was resorted to, at any rate after a time as regards some of the constituent districts.

The 150 cases of small-pox classify themselves into the following:

103 vaccinated cases, 5 deaths = 4.85 per cent.
36 unvaccinated cases, 11 deaths = 30.6 per cent.
4 doubtful as to vaccination, 2 deaths = 50 per cent.
7 revaccinated cases, no deaths.

Of the revaccinated cases, we may say at once that the youngest person was aged 17 years, the rest being 18, 22, 22, 29, 29, and 35 respectively. The worst case—all being cases ending in recovery—had seven spots. Thus we see the absolute prevention of fatality in the revaccinated patients. Moreover, in all cases the revaccination had been performed only on the discovery of small-pox in the patients' families, and thus, probably, after the small-pox poison had got into the system.

For the rest, the accompanying table tells its own tale, and from its data we have eliminated 3 unvaccinated children under three months of age, 2 of whom died, thus leaving facts as to 136 primary and unvaccinated cases. It is to be noticed how few were the cases in vaccinated persons under 20 years of age, and how death was absent up to 30 years; whilst in the other class the bulk of the attacks were at ages under 10 years, and 7 out of 9 deaths at like early ages. At all ages the mortality was in the latter class more than five times that of the vaccinated. Moreover, in the vaccinated the discrete cases were in proportion to the whole, in double ratio to such mild cases in the unvaccinated, the confluent attacks in the latter class being nearly five times greater in proportion than among the vaccinated.

The 3 hæmorrhagic cases in vaccinated persons were in individuals aged 43, 45, and 59 years, 1 showing no marks of vaccination, however, whilst the only one having any foveation of scars recovered. All were thus in advancing life.

Brighouse Joint Hospital: Small-pox Cases, 1892-93.

Ages.	Once Vaccinated.			Unvaccinated.			Once-Vaccinated Cases.			Unvaccinated Cases.	
	Cases.	Deaths.	Per Case Mortality.	Cases.	Deaths.	Per Case Mortality.	Discrete.	Confluent.	Hæmorrhagic.	Discrete.	Confluent.
0 to 1	2	—	0.0	4	2	50.0	2 [100]	—	—	2 [50]	2 [50]
1 to 5	2	—	0.0	12	4	33.3	2 [100]	—	—	5	7
5 to 10	2	—	0.0	6	1	16.6	2 [100]	—	—	3 [50]	3 [50]
10 to 15	3	—	0.0	5	—	0.0	3 [100]	—	—	2 [40]	3 [60]
15 to 20	6	—	0.0	2	—	0.0	5 [83]	1 [17]	—	1 [50]	1 [50]
20 to 30	31	—	0.0	2	2	100.0	29 [94]	2 [6]	—	—	2 [100]
30 to 40	38	2	5.3	1	—	0.0	33 [87]	5 [13]	—	—	1 [100]
40 +	19	3	15.8	1	—	0.0	11 [58]	5 [26]	3 [21]	—	1 [100]
Totals	103	5	4.8	33	9	27.3	87 [84]	13 [13]	3 [3]	13 [40]	20 [60]

The figures in brackets denote the percentage.

Australasian Association for the Advancement of Science.—The seventh session of the Australasian Association for the Advancement of Science will be held in Sydney from January 3rd to the 10th, 1897, under the presidency of A. Liversidge, M.A., F.R.S., Professor of Chemistry, University of Sydney. The Presidents and Secretaries of the Sections dealing with matters of medical interest are as follows:—Biology: T. J. Parker, B.Sc., F.R.S., Professor of Biology, Otago University, Dunedin, New Zealand, President; W. A. Haswell, M.A., D.Sc., F.L.S., Professor of Biology, Sydney University and J. H. Maiden, F.C.S., F.L.S., Curator, Technological Museum, Sydney, and Superintendent of the Technical Education, N.S.W., Secretaries. Ethnology and Anthropology: A. W. Howitt, F.G.S., Secretary for Mines, Victoria, President: John Fraser, B.A., LL.D., Sydney, Secretary. Sanitary Science and Hygiene: Hon. Allan Campbell, M.L.C., L.R.C.P., South Australia, President; J. Ashburton Thompson, M.D., Chief Medical Inspector, Board of Health, N.S.W., Secretary. Communications and papers for the meeting or inquiries may be addressed to the Permanent Honorary Secretary, the Chemical Laboratory, the University, Sydney, N.S.W.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 14TH, 1895.

SERUMTHERAPY.

Professor Bouchard, in an inaugural address given to the Second French Congress of Medicine, held at Bordeaux on August 8th, gave an exceedingly interesting sketch of the treatment of specific diseases by means of bacteria or their products, claiming in passing that his experiments of May 30th, 1890, published in the *Comptes Rendus de l'Académie des Sciences* on October 27th of the following year, wherein he pointed out that a curative power rested in the serum rather than in the leucocytes of the blood, was the first published contribution on serum therapeutics, although Hankin in his paper on defensive proteids has practically the same idea.

Bouchard insists that when an infectious disease is treated by injection of the bactericidal serum of a vaccinated animal we are not to apply the term bacterio-therapeutics; we are using an antiseptic substance in which, however, there is this peculiarity, that the antiseptic substance has been manufactured not by the chemist but by the vaccinated animal. He points out that we do not act upon the tissues, etc., of the sick person, but rather on the attacking microbe. In the course of infective diseases the serum of vaccinated animals acquires not a bactericidal power, which exists to a certain extent in serum of all animals, but distinct antitoxic properties, which properties have been conferred by the action of the cells of the vaccinated animal whose nutrition and secretion have been profoundly and more or less permanently modified by the temporary action upon them of vaccinal bacterial substances.

Having stated his own position as regards the history of the subject, Professor Bouchard points out that Behring and Kitasato in December, 1890, showed that antitoxic serum acts in doses so minute that we have an additional argument that it does not exert a bactericidal action. Antitoxic serum does not kill the microbes, nor does it interfere with their multiplication or even with their production of poison, nor is it yet proved that it can destroy or neutralise these poisons; rather it aids the tissue cells to resist the action of these poisons, many of which appear to act by paralysing the ordinary defences against bacterial invasion.

The antitoxic action does not belong to a substance which is found in the blood nor to a particular chemical condition of the blood plasma. But the blood, or its plasma, or some of the constituent substances of this plasma may acquire the property of setting into action the organic processes which naturally protect the economy against certain poisons. These normal protective processes, which may be impeded by certain poisons or exalted by the presence of certain substances in the blood, are of two kinds: (1) the destruction or chemical transformation of the toxic substances, (2) a stimulation at a distance of portions of the nervous system which the poisons tend to paralyse.

After reviewing the proteid products of metabolism, Bouchard points out that many of them possess powerful physiological action; they possess a certain degree of toxicity which is destroyed by heat; they are therefore of a proteid nature. The primary products of metabolism have been termed toxalbumins, and their unfavourable influence only has been studied, but their benign effects when acting in moderate quantities have been ignored. They differ in their physiological activity and in their effects, even those derived from the same cell, according to the variation in the functions and activities of such cell. By these products each cell influences its fellow, both as regards their nutrition and function, either temporarily or permanently, whilst beyond, and more important than this, the effect may be transferred to other animals, and even to different species. He goes so far as to say: "It is by the soluble products which the cells elaborate, much more than through the nervous system that vital equilibrium among the cells is established." Such equilibrium is unstable. The opposition of antidote to poison, of antitoxin to toxin is constantly going on. The cells react against the poisons coming to them from other cells, whilst even the primary products of metabolism may have their molecules divided into two sets—hemialbumose or hemipeptone, and antialbumose or antipeptone; the products of the two sets may differ from the originals, but they have not different properties, although when acting on the organism they may have different or contrary effects.

Taking a pancreatic cell as an example, Bouchard points out that it secretes a ferment which passes out from the cell, and which certainly interferes with the process of coagulation. At the same time the cell manufactures a ferment which remains in the cell, but which, if set at liberty—by death or weakness of the cell—actually induces this same process of coagulation. It is, he argues, a matter of little importance whether the organism produces an antidote at the same time and place at which the poison is produced, but it is important that the presence of poison, naturally or artificially brought about, should be followed very closely by the formation of a counter poison or antidote.

The protective substance may be (1) a ferment which destroys the poisonous substance, for example, in the liver; (2) an internal secretion which may become more active in the formation of substances for the purpose of stimulating those tissues which are specially exposed to the attack of the poison, or which are specially necessary to the well-being of the organism.

The merit of Behring's great work lies in the fact that he has been able to prove that the serum of an animal exposed to the action of certain bacterial poisons acquires the property of neutralising the effect of the action of these same poisons, although he is probably in error in assuming that

the antitoxic substances are of bacterial origin; they are really dependent on a permanent modification of the tissues of the animal in which the poisons are acting, in which case the theory of serumtherapy exalts the functions by which we naturally defend ourselves against microbic invasion. The agent which prevents the paralysis of nutrition and function is manufactured by the tissues themselves as a kind of protective reaction against the action of the organised toxins or poisons.

Professor Bouchard's paper is instructive not only for what it contains, but also for what it suggests as regards the building up of serum therapeutics on a rational basis.

INFECTIOUS DISEASES IN LODGING HOUSES.

The recent decision of the Court of Appeal in the case of Sarson *v.* Roberts (1895, 2 Q.B., 395) must be of interest to everyone whose fate it is to live in lodgings. In this case a gentleman named Sarson engaged furnished apartments for himself and his family at Bettws-y-Coed, in North Wales. While the Sarson family were occupying these lodgings a grandchild of Mr. Roberts, the landlord, developed scarlet fever. Mr. Roberts concealed this fact from his lodgers, who remained quite unconscious of the risk they were running. The result was that Mrs. Sarson and her children caught the infection, and not only was their summer holiday spoilt, but heavy expenses were incurred for medical attendance and nursing. All this might have been prevented if the landlord had informed his lodgers that there was a case of fever in the house. Under these circumstances it was not unnatural that Mr. Sarson should feel aggrieved, and should conceive that he had grounds of action against his landlord.

It is well-established law (although the fact is not generally known) that when unfurnished lodgings are let, there is no warranty on the part of the landlord that they are in a sanitary state. In the case of furnished lodgings, however, there is an implied assurance that they are sanitary on the day on which the tenancy commences. The grounds for implying this condition in the contract between landlord and tenant is that it must have been in the contemplation of both parties. If the landlord at the time of letting was cognisant of circumstances which would render the rooms insanitary during the term (although at the time they were not unhealthy), it is conceived that this would come within the condition. For instance the landlord might know that a drain was in such a condition that, though at present innocuous, it would shortly become insanitary. On the other hand, it would be unjust to make the landlord liable if the house became insanitary through circumstances over which he had no control, and which at the time of letting he could not reasonably have anticipated. In Sarson *v.* Roberts the Court of Appeal held that there was no implied condition that the rooms should be fit for habitation during the whole of the tenancy.

There remained, however, a second point, namely, whether it was not the duty of Mr. Roberts to inform his lodgers that there was a case of scarlet fever in the house, so as to give them an opportunity of leaving when the lodgings became insanitary. It was argued that when a landlord lives in the same house and himself attends to the wants of his lodgers, a confidential relation is established, and such a duty does exist. The Court of Appeal, however, refused to accede to this view. It is presumed that the Infectious Diseases (Notification) Act has not been adopted in the Bettws-y-Coed district. With regard to common lodging houses, there is a provision in Section 84 of the Public Health Act, 1875, that immediate notice of an infectious disease must be given to the medical officer of health. In the case of lodgings of the better class, however, the lodger has no such protection. It is true that the sanitary authority for the district has power under Section 90 of the Public Health Act to make by-laws *inter alia*) "for the giving of notices and taking of precautions in case of any infectious disease." In pursuance of suggestions from the Local Government Board, however, lodgings of the better class are usually excluded from the operation of these by-laws. Even when these enactments are in force they are not always complied with, and it is small satisfaction to a lodger who has contracted an infectious disease to know that his landlord has been fined £5 for neglecting to notify to the medical officer. It must, therefore, be a cause of regret to every lodger that the Court of Appeal has been unable to discover any legal duty on the part of a lodging-house keeper to inform his tenant that the house has become insanitary.

LONG HOURS AT GREAT SCHOOLS.

The cry for shorter hours of work, cropping up as it does on every side, often from quarters the strangest and least expected, now takes the form of a protest against the long hours of the public schoolboy's work.

It is well recognised on the one hand that a low standard of health in a school is distinctly provocative of a low standard of efficiency, and on the other that ill health does not come of itself but is the outcome either of the boys' surroundings or of the methods of their work. In regard to their surroundings, the sanitary condition of the houses, the comfort of the meals, the care taken to maintain the healthiness of the rooms, all in fact that comes under the domestic side of school management, there can be no doubt that in many schools considerable improvement has been made in recent years. It is much to be feared, however, that on the masters' side not only has there been no improvement, but in many cases there has been actual retrogression. The pressure of competition forces fresh subjects into the course of study, and thus it happens that, in the endeavour to bring average boys up to examination level, the hours of work have become unduly long.

The *New Review* gives the Upper School time table at a well known public school, which works out to nine hours a day, besides two attendances at chapel; and although some deductions must be made from this in regard to half holidays, and although some boys do not require all the time which is allowed for preparation, yet on the other hand, many additions must be made to this estimate of the working hours to cover the time spent in impositions and on extra work, undertaken perhaps voluntarily, but which, once undertaken, becomes part of the daily task.

Now there can be no doubt that for growing boys to devote anything like this length of time to hard work must be full of injury to them, and that, however good are their surroundings, and however judicious their feeding may in some cases happen to be, the long hours during which they have to exert that one-sided effort which is spoken of as head

work must go far to produce that condition of lag and want of elasticity so often observed in boys towards the end of term, even if they do not cause actual breakdown before the term is ended. To put the matter in its true light, it must be pointed out that, however possible it may be for adults to undergo monotonous toil, and to exercise one portion only of their powers, it is certain that such one-sided effort during the years of growth is detrimental to complete development. If, then, one asks what amount of bodily exercise should be allowed as the proper and due complement of the nine hours' exclusive exercise of mind, what amount of mixed nerve and muscle work must be added to the nerve work already done to give the true balance to each day's influence on the boys' development, we see at once how enormous is the overwork involved in nine hours' exclusive mental exercise.

Either in the direction of overwork or in that of one-sided, ill-balanced development, the victim of long school hours must suffer in the end—as, in fact, he often does. Parents often grumble at the long holidays, and are shocked at the inane manner in which their sons' minds lie fallow during those long stretches of mental vacancy; may be, however, it is only by long holidays that mind and body can regain their balance. But the expedient is a clumsy one, and in view of the increasing number of town-bred lads, whose holidays are by no means so useful to them as they are to country boys, some better plan of apportioning the work should be devised.

The Honorary Librarian has to acknowledge, with thanks, the receipt of several cases of medical books from Mr. H. C. Martin, of Reigate, which that gentleman has kindly sent for the Library.

The following is the programme of lectures at the Royal College of Physicians for the coming year: The Goulstonian Lectures will be delivered by Dr. Patrick Manson; the Lumleian Lectures by Sir Dyce Duckworth; the Croonian Lectures by Dr. George Oliver in 1896, and by Dr. Greenfield in 1897. The Bradshaw Lecture will be delivered by Dr. Bradbury on November 7th, 1895.

BERI BERI AT NETLEY.

Some Lascars from H.M.S. *Clio* have been under treatment for this disease at the Royal Victoria Hospital, and one death has taken place.

TEMPERANCE TEACHING IN PRIMARY SCHOOLS.

By the Narcotic Institute Law, which came into operation on August 1st, the State of New York requires that not fewer than four lessons per week, for ten or more weeks in each year, shall be devoted to instruction in the nature of alcoholic liquors and other narcotics and their effects on the human system, in all grades of schools below the second year of the high school. If the law be evaded, the Superintendent of Public Instruction has the right to withhold public school appropriations from any city or town. The Minister of Public Instruction in France has approved of the proposals of the Inspector-General of Primary Education for combating alcoholism by school instruction, and has issued a circular to prefects and clerics recommending the initiation of the new teaching on the reassembling of the scholars. Most stress is laid on the importance of anti-alcoholic instruction in the primary elementary schools, where the facts concerning alcohol are to be stated in the present curriculum under the various chapters of Practical Morals, Zoology, Chemistry, Alcohols, etc. By the Ministerial circular directing the anti-alcoholic instruction to be thus interwoven with the existing course, a beginning can be made without delay.

THE ANDREW CLARK MEMORIAL.

A quarterly court of the governors of the London Hospital was held on September 4th, Mr. J. H. Buxton, the Treasurer, presiding. In the report, the House Committee stated that the amount subscribed to the Sir Andrew Clark Memorial Fund was close upon £3,000, and it had been determined to recommend the governors to adopt a scheme for the building of a female erysipelas ward and accommodation for cases needing isolation, and additional rooms for the porters. To carry that scheme into effect a further expenditure of £1,500 would be necessary, and the Board asked the governors to sanction that step.

THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD AND WORKHOUSE NURSING.

From reports in the daily press we gather that the new President intends to give some consideration to the reform of the Poor Law; indeed at question time he admitted that the nursing of the sick in the union infirmaries ought to receive his careful attention. We are glad to see that the authorities are turning their attention to this most important matter; we have published our reports on the country unions, with the hope of drawing attention to the condition of the sick poor in these infirmaries, and when the reform in the administration of the Poor Law is effected we shall have the gratification of knowing that our work has not been in vain.

THE LATEST "CURE" FOR INEBRIETY.

According to the *National Temperance Advocate*, the discussion, in several State Legislatures in America, of the passage of laws compelling the administration of a proprietary secret "cure" to drunkards in State institutions at a cost of £5 per head to the State is rendered unnecessary by the discovery of a new, open, and cheap "cure." The directions for the preparation and application of this cure are thus given by the Buffalo *Courier*, which furnishes the experience of "a prominent citizen of Dunkirk," who narrates the immediate disappearance of a drink crave that had not been diminished two months after taking the pledge of abstinence: "Get a bowl of ice-water and a raw potato, peel and cut down one end of the potato to a size convenient to take in the mouth; dip the potato in the ice-water, and suck it every time you think you must have whisky."

CHITRAL RELIEF FORCE.

The health statistics of the Chitral Relief Force do not seem from the accounts in the papers to be satisfactory. Separate returns, it appears, are kept of the sick with the force and those who have been sent to the base hospitals. It is stated that if the total number of deaths and sickness treated in these hospitals, as well as in the field, were compiled together with the returns of men invalided to India, the figures would be unsatisfactory. "Although sites were carefully selected for standing camps, and every reasonable measure has been taken to lighten work, lessen exposure, and generally to keep the men healthy, fever and dysentery and enteric have prevailed. The Bedfordshire Regiment has suffered much from the last-named disease, more than 150 cases having occurred, with many fatal cases; and although other British regiments have had their share of cases, the one noted seems to have suffered most." It is stated that the Bedfordshire started on the campaign in good health, and have been quartered for some time on a hill about 7,000 feet high. But the use of Pasteur filters and the boiling of the

drinking water were alike neglected, and hence the troops were severely damaged, and the efficiency of the enterprise compromised. The neglect of these simple precautions should be made punishable. We are glad to hear that since Mr. Ernest Hart's plain speaking on the subject of typhoid, the outcome of neglect of the drinking water, there has been a great stirring of the dry bones of official sanitation. From Mian Mir a correspondent writes: "Typhoid fever broke out here, and was becoming epidemic. Mr. Hart's advice immediately to boil all water was followed, and the epidemic ceased. The same thing happened quite lately at Bangalore. His policy of the teakettle and the Pasteur filter is rapidly making its way in the army, and once thoroughly adopted, I believe that we should hear no more of these disgraceful and costly outbreaks of typhoid fever among our troops."

TIGHT NECKTIES.

THE fussy attempts of well-meaning people to apply "first-aid" according to the precepts so diligently taught in ambulance classes have been the subject of a good deal of not altogether undeserved ridicule. Yet there is a middle course in all things, and probably the greatest sceptic as to the benefit of first aid would admit that an undue extreme in the direction of non-intervention was reached by that intelligent member of the police force who recently picked up in Regent's Park an apparently dead child, and carried it off to the parish mortuary without even thinking of undoing its necktie. When, however, the child had been duly deposited in the abode of the dead, the keeper, on loosening the scarf round its neck, noticed that the lividity of the face diminished. On taking further measures to restore animation the child came round, and seemed none the worse for its adventures. In many cases it is best to to let the sick man lie until the doctor comes; but there are limits to this system of *laissez faire*, and we think that these are overpassed when bystanders hesitate to unfasten the necktie of anyone found apparently dead. It is much to be wished that custom as to clothing allowed the neck to be left more free, and that, especially in children, some of the wrappings by which it is encircled could be abolished. In the mean time it is worth remembering that any malady by which consciousness is even momentarily abolished, the smallest epileptic attack or the slightest faint, may by the intervention of a tight scarf or necktie become fatal, and that the very first aid which can usefully be given to an unconscious person is to loosen everything by which the veins of the neck may be constricted.

THE IRISH WORKHOUSES.

A CORRESPONDENT in the *Irish Independent* draws attention to the condition of these workhouses, and he asks with reason why, when all other branches of the civil service are so splendidly worked, that of the Poor Law is a disgrace to the country? That question presses for an answer, and we are glad to read that the Irish Medical Association at a special meeting of the Council held on August 29th, to which all workhouse medical officers were invited, passed the following resolution: "That the Committee of the Council be directed to arrange for a deputation to the Chief Secretary on the question of workhouse hospital reform, and to take such other steps as may seem to them advisable." The reform of the administration of the Poor Law calls for immediate attention, and when the matter is brought under the notice of the Chief Secretary by so influential a body as the Irish Medical Association, we believe that he will give the matter his most earnest attention. We have during the last few months caused a personal inspection to be made of the condition of the Irish workhouse and provincial infirmaries by a skilled commissioner thoroughly accustomed to such work. We have a considerable series of reports now in hand, which we shall begin to publish at an early date. The details will be found to present a very striking picture of a state which ought no longer to be allowed to continue. We have every hope that the information thus furnished will prove to be of considerable utility, and will supply information to the Local Government Board and to the general public which will ensure early and considerable reform.

TRURO UNION.

THIS Board has lost a great opportunity of initiating a radical reform in the nursing of the sick when the post which had been so long held by an officer of the old style became vacant. We sympathise with a Board which hesitates to cashier an old and tried servant even though more advanced methods approve themselves; but now the field was clear before them, and they have passed by good candidates to appoint as nurse a candidate who had received no public training. We are glad to see that this matter is attracting attention in the local press.

THE BLOCK AT NEWTON ABBOT.

IT is some months now since we recorded with satisfaction that the plans for the new infirmary had been drawn up, and were under the consideration of the Board; we have reason to believe that those plans are now pigeon-holed in some remote corner in Whitehall, and may see the light of day in the next century. In the meantime the official delay is causing discomfort to the unhappy patients, and friction and annoyance to the officers. The medical officer is now blamed because he places the children among the adults; a little while ago he was asked to explain the distribution of the isolated patients in various odd holes and corners of the building; to all these complaints there can be but one answer, and that—necessity. No doctor would place the children among the adults; the arrangement is most undesirable from a medical or social point of view, nor would he place patients in need of isolation in holes and corners, if a children's ward and small separation wards were provided. The cause then must be sought for in the old infirmary, which has been condemned long ago, and it seems to us that the best policy is the pushing on of the new plans, and on this point it would be well to concentrate the energies of the Board, even to the extent of worrying the department until in self-defence it disgorges the plans.

PROFESSIONAL SECRECY.

DR JESSOPP, like Mr. Lang, is one of the few scholars who write often and for the world without any attenuation of scholarship. It would be well if some other writers could remember that no more can be got out of themselves than they put in. In the *Illustrated News* of August 24th "the Shepherd of Arcadia" lectures medical men, and not them only, for their leakiness in respect of matters known to them in the practice of their profession. We will enter upon no defence; it is sufficient that suspicion has rested upon us. In his kindly way Dr. Jessopp lays part of the naughtiness upon the "many-headed beast" the public. He tells us that the great sinner is the country doctor; yet town doctors must not be unchivalrous enough to shelter themselves under this dispensation. It is, we fear, only a matter of size. Let the victim be but big enough, and urbans can babble as incontinently as any pagan of them all. Shall we wonder if the affairs of the village Sir Roger are canvassed with such keenness as to drag even the village doctor into the cry? Now we are ungallant enough to hint that the error often begins by the doctor telling his wife. The partner of his bosom too often makes it a test of the loyalty of her husband that he tells her everything. It is an old saying that a secret can be kept by three men if two of them are dead, but a woman conceals—what she does not know. A wise man will make it a rule never to speak to his wife of professional matters, never even to tell her the names of those who consult him. But we will not be mean enough to let

the matter lie there; if the new woman be no better than man she will stand in need of much repentance. To not a few men the consciousness of being trusted by important persons surprises their discretion, and they forget that to give up a bit of a matter of secrecy is to give up the whole; and to not a few there is the temptation to self-advertisement. No line is to be drawn between matters which seem important and those which seem indifferent. It is the habit of reticence which is to be cultivated; and the character for reticence which is to be won. He who is willing to gossip with the doctor about his neighbour will be among the first to avoid the gossiping physician when his turn comes. What saith the great lexicographer? "To tell our own secrets is generally folly, but folly without guilt; to tell those which are entrusted to us is always treachery, and treachery for the most part combined with folly."

NEW HOSPITAL FOR INFECTIOUS DISEASES FOR GLASGOW.

Some time ago the Corporation of Glasgow acquired by purchase a portion of ground in the extreme north-western district of the extended city. Part of it is being laid out as a public park, and a portion is set aside for a fever hospital, now in course of erection. The memorial stone of the building was laid last week by the wife of the Lord Provost of the City. The Corporation has already accommodation for 1,000 patients, between the great fever hospital at Belvidere in the extreme east of the city, and the old hospital in Parliamentary Road. But the latter is in a very crowded district. It is used as little as possible, and only when the resources of Belvidere are strained to the utmost; and, as soon as the new hospital is opened, it will be closed for ever. Ruchill Fever Hospital, as the new building is to be called, will provide accommodation for between 400 and 500 beds. Since the adoption by Glasgow of the Notification of Infectious Diseases Act, the pressure upon the provision for treatment of infectious disease, made by the Municipality, has gone on steadily increasing till now, when 75 per cent. of all cases of infectious disease occurring within the municipal area are treated in the public hospital supported by the rates. The old popular prejudice against the public hospitals is rapidly dying out, no doubt owing to the pleasant situation of Belvidere and the excellence of the buildings and of the arrangements there; and in its place there is a growing trust in the public mind in the care and treatment of the municipal hospital. This feeling will be increased by the perfection of the buildings of the new hospital; and the Corporation is to be congratulated on the broad lines on which they have undertaken this new work.

THE ATMOSPHERE OF THE UNDERGROUND RAILWAY.

Although there may be probably no immediate prospect of Government interference in such a matter as the state of the atmosphere in the underground railway, still it is a subject for congratulation that this important question should have once more been raised and attention directed to it in Parliament. Everybody is aware of the highly irritating nature of the atmosphere through the presence of sulphurous acid, but probably the other products of combustion which are freely discharged into the limited space which the tunnels afford are of a still more devitalising character. The inhalation of such an exhausted atmosphere cannot fail to produce a deleterious effect on the thousands of City men who daily exchange the vitiated air of an office for a more or less prolonged sojourn in this subterranean prison. With our present knowledge of the manner in which disease is warded off by the healthy system, we should be more than ever alive to the necessity of avoiding all conditions which tend to depress vitality, and we cannot conceive anything more calculated to bring about this result than the regular submission to a daily journey in the underground railway. There is, however, no doubt that all those who can eschew this means of locomotion, selecting by preference the less comfortable and more leisurely penny 'bus. Putting the matter on a commercial basis only we think the underground railway companies should realise by this time that the omnibus companies are paying their substantial dividends at their expense, mainly in consequence of the repulsive and unwholesome atmosphere which they still, after so many years' experience, inflict upon their patrons. Improvements have from time to time been made, and notably Baker Street Station has been converted from a sulphurous den into a commodious and comparatively airy space, but much yet remains to be done. Whether additional ventilation will remove the evil or whether a different source of motive power must be substituted for that at present in use we know not, but the general public have a right to demand that the present state of affairs should not be permitted to continue, and it remains with them to take such united steps as may put an end to what can only be regarded as a disgrace to the wealthiest city of the world.

THE "PECULIAR PEOPLE."

A test action has been brought by the Society for the Prevention of Cruelty to Children against the father of a child who lately died without medical attendance; the defence at the inquest being that it was against the religious belief of the parents that medical aid should be called in. This is an important step, and we trust that the Society will carry the case as far as may be necessary. Section No. 1 of the Prevention of Cruelty to Children Act, under which action is taken, provides that the not providing of "medical aid," etc., is "neglect" within the meaning of the Act. Action can be taken against any person who is in a responsible position with regard to the child; under the now repealed section of the Poor-law Amendment Act, 1868, action could only be taken against the parents, and it was necessary to prove that the injury to health was likely to be, or was, serious. The present Act, in addition, raises the limit of age of the child from 14 to 16 years, during which time the parents or guardians are made responsible. We shall watch with interest the progress of this action.

EXPERIMENTAL MARCHING.

Some practical and interesting experiments in marching have recently been carried out at the request of the German War Office by some students of medicine of the Friedrich Wilhelm Institute in Berlin, who for the purpose wore the regulation uniforms and carried the full field service equipments. The marches performed varied from 22 to 33 miles, and were executed in all kinds of weather. The weights or loads carried varied from 48 to 68 lbs., the full service equipment of the German infantry soldier averaging 70 lbs. That of our own infantry does not usually exceed 60 lbs. The conclusions arrived at by the medical officers in charge of the experimental observations were practically as follows: When the load is not excessive and does not exceed 48 lbs. a march of 25 miles executed in cool weather (60° F.) is readily performed and has no deleterious effects upon the men, even if continued for some days consecutively. With a mean temperature of 70° F. a similar load carried the same distance has a considerable temporary effect upon the organism, necessitating a rest of at least ten hours in the twenty-four. A load of 68 lbs. could not be carried 25 miles without inducing grave physiological disturbance, necessitating a full day's rest on the following day. This weight was not readily carried day by day without derangement of health over greater distance than 15 miles. A weight of 60 lbs. was the maximum weight which could be carried on consecutive days for 25 miles by a man weighing 11 stone during ordinary summer weather consistently with health. It is not stated whether the men by whom these experiments were made were picked individuals or what was their

dietary. The general conclusions drawn do not present any very novel features, but emphasise the unfavourable exhibition of marching powers recently displayed by some of our own infantry in Hampshire, when the average load carried by men did not exceed 50 lbs. Without precise details as to age, weight, and dietary it is difficult to make a just comparison, but the probability is that the German students were physically better adapted to their task than the immature young men who constitute so large a proportion of our home army.

QUEEN'S COLLEGE, BELFAST.

The President (Rev. Thomas Hamilton, D.D.) has presented to the Queen his usual annual report, which is a very satisfactory document. In the past session 117 students entered the College for the first time, as compared with 112 in the previous year and 97 the year before. The total numbers enrolled in the various faculties were: In the Faculty of Arts, 145; in the Faculty of Medicine, 212; in the Faculty of Law, 26; and in the School of Engineering, 13. The number of female students who attended lectures was 15, as compared with 13 in the previous year. As regards the nationality of the students, 360 were Irish, 12 English, 5 Scotch, 2 came from Spain, 1 from India, 2 from Australia, 1 from Japan, 2 from the United States of America, and 1 from Canada. The only change in the professoriate which took place during the year was the appointment of Dr. J. Lorrain Smith as Lecturer in Pathology, in succession to Dr. W. H. Barrett. Dr. Smith had a most distinguished career at Edinburgh, and has devoted himself to research and teaching in pathology at Oxford, Cambridge, Strassburg, and Copenhagen. At the recent examinations of the Royal University the students of the Queen's College carried off a total of 23 first classes and 22 second classes in the several Faculties of Arts, Law, Medicine, and Engineering, together with 15 exhibitions. At the autumn examinations the two junior fellowships offered by the Royal University were both carried off by students of the College. At the spring medical examinations all the candidates placed by the examiners in the upper pass division were Belfast men, and all the honours conferred were won by the Belfast men. The College attains its jubilee this year, and the Council have resolved that the occasion shall be fittingly celebrated. It has, however, been found expedient to postpone the celebration until next year. It is hoped that many *alumni* of the College from different parts of the world will join in this function.

CRUELTY TO CHILDREN BY HABITUALLY DRUNKEN PARENTS.

Little attention seems to have been directed to the last Act of Parliament obtained at the instance of the National Society for the Prevention of Cruelty to Children. It may, therefore, be of service to explain the powers which have now been obtained over the liberty of habitual drunkards with families of young children. The definition of an habitual drunkard is that of the original Habitual Drunkards Act of 1879, namely, "a person who, not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to him or herself or to others, or incapable of managing himself or herself, or his or her affairs." Cruelty to children by parents who are habitually intemperate comes under the words "to others." The court, on a charge being proved against any person having the "custody, charge, or care" of a child of acting "in a manner likely to cause the child unnecessary suffering or injury to its health," can inflict a sentence of six months' imprisonment, with the alternative (in the case of a convicted prisoner who is an "habitual drunkard") of detention for twelve months in a retreat licensed under the Inebriates Acts 1879 and 1888. This alternative reformative procedure can be adopted only (*a*) when the prisoner, after due notice of the intention to allege habitual drunkenness, consents to the order being made; (*b*) if any objection made by the wife or husband at the hearing of the case has been duly considered by the court; (*c*) if the court is satisfied that, to such extent as it deems reasonably sufficient, provision will be made for defraying the expenses of the person's detention in a retreat. Though this new alternative of therapeutic seclusion to time-honoured punitive imprisonment has, to meet objections which would have been fatal to the Bill, been restricted to such offenders as consent and are able to pay for it, this additional power, if wielded by magistrates, will constitute a great boon to many subjects of the disease of inebriety, by in all probability exercising such a curative influence as will restrain them from the commission of future offences. We trust, therefore, that the members of the medical profession will inform magistrates with whom they are acquainted of the grounds for this new departure in criminal jurisprudence. No clearer proof of the value of modern medical research and of the work of the British Medical Association, the Inebriety Society, and other bodies could be adduced than this enlightened recognition by the Society for the Prevention of Cruelty to Children and the Legislature of a diseased condition in a considerable class of offenders against the defencelessness of childhood.

THE INJECTION OF ANTITOXIN BY THE RECTUM.

Dr. Gordon Sharp, in a letter published elsewhere in our columns, takes exception to the considerable quantity of antitoxic serum that has to be injected subcutaneously at a single dose, and suggests that this material should be injected into the rectum. Dr. Sharp somewhat exaggerates the difficulties of subcutaneous injection. The fluid, if placed in the loose connective tissue, gives rise to comparatively little external swelling, whilst such swelling as there is disappears in a very short space of time—usually in half an hour or even less. The pain involved in the operation is practically *nil*. On the other hand, there appear to be very considerable objections to the use of serum by the rectum, where, as is well known, the process of absorption, though it undoubtedly goes on, goes on comparatively slowly, and long before the whole of the serum could be absorbed it would be subject to very considerable decomposition by the organisms that are present in the lower bowel. Anyone who has had experience of the injection of bullock's blood, in such cases as gastric ulcer, well knows why the method was discontinued, and we imagine that some similar results would ensue in the case of serum. In order to obtain the results that are given by subcutaneous injection much larger quantities of serum would have to be used, the effect would not be nearly so rapid, and the treatment would have to be very much longer prolonged—all of which appear to be objections to the method suggested. It is possible, however, that these objections are not so great as they at first sight appear, and we should be glad to learn whether this method has yet been tried and with what results.

CANON WILBERFORCE ON VIVISECTION.

The editor of an evening paper contrasts the reasonable views of Father Rickaby, of Stonyhurst, on the subject of the lawfulness of experimental physiology with what it describes as an utterance of Canon Wilberforce in Westminster Abbey last month: "I would rather die than owe my recovery from disease to discoveries made by vivisection." If Canon Wilberforce said this, which we have no reason to doubt, for it corresponds with many other of this excellent man's utterances on this subject, then Canon Wilberforce cannot in any way be complimented on his consistency, inasmuch as the physician whom he has publicly and widely eulogised, in whom he placed his personal confidence, and to whom he professes his deepest obligation—Sir Andrew Clark—was himself a vivisector, and supported a most accomplished

experimental physiologist to assist him in his work, and openly avowed the enormous and inestimable debt which he, in common with all other physicians, owed to discoveries made by vivisection, not only in the more recent progress of medicine, but in the establishment of the very foundations of the art of healing. Neither Bishop Barry nor Canon Wilberforce, nor any other of the episcopal and canonical fulminators against experiments on animals, has any particular knowledge of modern medicine, or practically have ever attempted to justify this personal relation of their creed.

NURSING AT THE BRISTOL WORKHOUSE INFIRMARY.

There was some discussion upon this subject at the last meeting of the Bristol Board of Guardians, when it was proposed to appoint a candidate as assistant nurse of the infirmary. While admitted by all speakers to be otherwise suitable, one member argued that one on whom the full responsibility would fall in the absence of the chief nurse ought to possess a certificate showing her qualification to deal with midwifery cases. This was omitted from the advertisement the Board had issued. Another member said that in future the advertisement should state that preference would be given to one with knowledge of the kind, but he would not go so far as to require the possession of a certificate. Others did not think such a qualification was necessary, the head nurse being generally at hand, and the doctor being at the house daily. The Board decided to make the appointment, and a committee was requested to consider the appointment of an additional probationer at the infirmary.

THE ARTHUR DURHAM MEMORIAL.

Some weeks ago we called attention to the effort which is being made to endow two beds in the wards of Guy's Hospital as a memorial to the late Mr. A. E. Durham. We are glad to be able to announce that of the £2,000 required for this purpose, no less than £1,650 has been already raised amongst old Guy's men, private patients, and other friends of the deceased. It is intended to close the fund at the end of the present month, and those who wish to subscribe, and have not already done so, should therefore lose no time in remitting their contributions to Mr. C. H. Wells, the Secretary to the Treasurer at the counting house of the hospital. Subscribers of not less than one guinea will receive an excellent mezzotint portrait of Mr. Durham, and such a reproduction of his well-remembered features many will be glad to possess.

THE HUXLEY MEMORIAL.

The Prince of Wales has been pleased to become President of the Committee of the Huxley Memorial. The General Committee will probably hold its first meeting some time in October. There are many well known medical names on the list of the General Committee, among them being Sir Henry Acland, Professor Clifford Allbutt, Dr. Bastian, Dr. Beddoe, Sir Wm. Broadbent, Sir Richard Quain, Professor Gairdner, Dr. Champneys, Sir Joseph Fayrer, Sir Wm. Flower, Professor Michael Foster, Sir Russell Reynolds, Mr. Ernest Hart, Surgeon-General Hooper, Mr. Jonathan Hutchinson, Professor Klein, Dr. McLeod, Sir Douglas Maclagan, Dr. Ransome, Sir Wm. Roberts, Dr. Semon, Sir Wm. Turner, Sir Henry Thompson, Mr. Tomes, Sir Spencer Wells, Dr. Brunton, Dr. Ferrier, and many others.

THE CHOLERA.

According to a telegram from Vladivostok to the *Novoe Vremya*, published in St. Petersburg, cholera is raging in China, 2,000 deaths occurring daily in Pekin. The *Daily News* Odessa correspondent telegraphs that since the last official bulletin was issued there has been a rapid increase of cholera in the Government of Volhynia, and the deaths are now stated to be about 250 a day. Part of the neighbouring Government of Podolia is also seriously affected. From Tiflis it is reported that the epidemic has broken out at Erzeroum, and stringent precautions are being adopted on the Caucasian frontier to prevent the infection being imported into that province. Four fresh cases of cholera are reported to have occurred at Tangier on September 10th.

CHOLERA RUMOURS IN PARIS.

The rumour of the presence of cholera in Paris has been authoritatively denied, and notwithstanding the great heat and bad smells prevalent in the city, the normal health of the French capital remains unaltered, and diarrhœal diseases are not on the increase. This is no doubt due to the supply of pure water, which, since the inauguration of the new water works, the city largely enjoys. As long as the Seine water was drunk, and the supply of the water works was taken from a polluted source, cholera and typhoid were almost invariably present during the autumn season. This is another testimony to the value of acting upon the water-borne theory of cholera and typhoid.

IRISH MEDICAL ASSOCIATION.

A meeting of the Council of the Irish Medical Association was held on August 29th in the Royal College of Surgeons, to which all the workhouse medical officers in Ireland were invited. The meeting was convened for the purpose of considering the steps to be taken in workhouse hospital reform. Dr. Moorhead, of Cootehill, read a digest of the reports sent by workhouse medical officers to their Board of Guardians. After discussion the following resolution was unanimously passed: "That the report now read be adopted, printed, and circulated; and that the Committee of Council be directed to arrange for a deputation to the Chief Secretary on the question of workhouse hospital reform, and to take such other steps as may seem to them advisable."

UNTRAINED NURSES FOR SMALL-POX.

A Correspondent writes: The medical superintendent on hospital ships is advertising for assistant nurses for duty on their ships. We fully sympathise with the difficulties that beset the authorities in obtaining the staff necessary for working these hospitals; but we protest against this method of filling up the vacancies. It is a great wrong to the patients to force them into these hospitals, and then pretend to nurse them with unskilled service; it is a great wrong to the charge nurses to hamper them with a number of women who are ignorant of the details of hospital work; and it is a great wrong to the young women, who are called to a service of risk and danger to themselves, without the equipment of special knowledge which might protect them.

AN EDUCATION IN WASTEFULNESS.

The water famine in East London ought to draw attention to a matter which affects the supply in every part of the metropolis. Gradually and by degrees, but very gradually and by very slow degrees, a so-called "constant" supply of water is being extended throughout London, but it is to be feared that the supply is of such a character as not only to minimise the benefit to be derived from it, but to educate the people in habits of wastefulness which will make it every year more difficult to introduce into London such a supply as would deserve the name constant, as that term is understood in other parts of the country. Major-General Scott, in his report to the Local Government Board, says: "Intermittent service obviously entails the necessity for the storage of water in houses, to meet the demands throughout the day. In the poorer class of houses the arrangements for this purpose are often of the very worst description, and the water is too generally subject to contamination." He also points out that intermittent charging of the pipes favours the indraught of foul air or foul water into the pipes. The great and preponderating sanitary reason for demanding a constant water supply is that the necessity of

storing water in cisterns shall thereby be avoided, yet on every side the water companies protest against the public being allowed to derive this great sanitary advantage from it. Speaking of cisterns, Major-General Scott says "the weight of the evidence given before the Commissioners by whom the regulations were drawn up was against their retention in houses of the smaller class, where they are most liable to be neglected," and he goes on to say, "Generally speaking, the water companies, relying on clauses in their private Acts, have insisted on the retention of cisterns and regard their removal as illegal." On this question of cisterns a good deal hinges. On the one hand it is only on the hypothesis that the cistern is to be retained that the dribbling supply given by so many companies is in any way to be excused; and, on the other hand, it is on the dribble that depends much of the waste. If the people could get the water freely and quickly when they wanted it they would not let it run away. It is stated that even at the present time more water per head of population is being pumped into the mains in East London than is supplied per head by many of the large municipalities in the north, and that the mass of this water is being allowed to run to waste. The fact is that the waste is largely due to the meagreness of the supply. Doubtless there is waste from bad fittings; that, however, can always be overcome by a little energy. The provision of fittings is landlords' work, and landlords are open to legal persuasion. The waste that cannot be controlled is that which arises directly from the poorness of the supply. So long as the companies persist in giving a so-called constant supply, which consists of a mere dribble, so long will every housewife place a tin under the tap and let the water run. The tin and the running tap are the real cause of waste in many parts of London, and for this the companies are directly responsible. No one will spend the time necessary to fill a can or a pail at the dribbling tap which constitutes a constant supply as this is understood in London, so the tap is allowed to run continuously. This is an education in wastefulness, and it is this which is no doubt the prime cause of that waste of water to which the companies attribute the deficient supply. Where there is a real constant supply, as in some northern towns, the turning of a tap gives water in full stream; except in the form of waste preventers, and in connection with hot water supplies, cisterns are unknown; at any moment water can be had, not in a gentle tantalising dribble, but with a rush and a roar, flowing *pleno rivo* whenever it is wanted. No one with such a supply would think of leaving his tap running; why should he when he knows that the water is always there? So constant, in fact, is the supply in some towns that if it is necessary to cut it off, to make a junction or for repairs of any sort, a crier is sent up the street to give notice to the inhabitants. That is what is meant by a constant supply, and that such a system is economical is shown by the wails of the London water companies, who state that these great northern towns are supplying less water per head than is now being pumped into the East of London. The fact is the London system of constant dribble, instead of constant supply, is a mere education in wastefulness.

PAYMENT OF MEDICAL WITNESSES.

The vexed question of the proper fees payable for medical evidence seems to be as far as ever from being settled. Reports from two different courts in the metropolis show that their practice is absolutely divergent. The Lord Mayor's Court judge seems to think that the medical officers of a hospital should give evidence gratis in favour of a poor plaintiff; and a County Court registrar has advised that in his court a medical witness is only required for the ordinary guinea fee to give evidence as to fact, and that he may be allowed a further fee for giving scientific evidence. This is as it should be, but such further fees are not generally allowed by taxing officers; and neither they nor the medical profession have come to an agreement as to what should be paid. It has been suggested that the hospitals should settle a scale of fees to be paid to their officers when summoned as witnesses. But this suggestion, if adopted, would not end the controversy. If the scale was a low one the court officials would no doubt gladly adopt it, to the discontent of the medical profession; but if it was more liberal, the taxing officers would probably refuse to follow it. It must, moreover, be remembered that the amount of the fees payable to medical witnesses from hospitals forms only a small part of the question. Such witnesses are no doubt summoned more frequently than their brethren in general practice; but the individuals who are so liable to be summoned are comparatively few in number. The hospital authorities may, if they choose, make it part of a house-surgeon's duties to give evidence gratis or for less than the usual fees, or may allow him to supplement his small stipend by taking whatever fees he can get for his evidence. That is merely a question between him and them. And it should be remembered that, where a house-surgeon is waiting to give evidence in court, he cannot at the same time attend to his hospital work. If his evidence can be got for nothing it will certainly be wanted more frequently than evidence which costs money; so the hospital staffs must be increased, or the efficiency of the hospitals diminished. At the present time all medical witnesses are entitled to a fee for giving any evidence, except medical officers of hospitals, when summoned to a coroner's inquest; and all, without exception, can refuse to give scientific evidence unless paid for giving it. A hospital or a principal may sometimes, by arrangement, be entitled to claim the fee paid to a house-surgeon or an assistant. But as regards the party who requires the evidence, all medical witnesses alike are entitled to demand and receive their fee. What the amount of that fee may be is sometimes uncertain. The scale should, if possible, be settled, so as to remove this uncertainty; and the efforts of those who represent the profession may usefully be directed to securing such a settlement.

THE INTERNATIONAL CONGRESS OF OTOLOGY.

With regard to this Congress, which begins on September 23rd, we have to state, in answer to numerous inquiries, that the reductions on the railways are only granted to the *congressista* when he goes to, and returns from, Florence by the same route, and that one the shortest. Those who wish to make a tour of several Italian cities will find the *biglietti circolari* the most economical, while visitors who wish to obtain the fullest benefit of their Congress ticket would be well advised to take a return ticket from London to Milan, and from the latter point secure the ticket to and from Florence at the rates specially granted to those taking part in the gathering. These reductions are also granted to ladies accompanying members. The end of this month is one of the most delightful periods of the year for visiting Venice and the Italian lake land. Intending visitors who wish to have rooms secured for them *sur place* can apply to Dr. St. Clair Thomson, at 10, Via Panzani, Florence, after September 18th.

THE TREATMENT OF INEBRIATES.

The movement favoured by the British Medical Association for the compulsory therapeutic restraint of habitual drunkards can only gain influence and impetus from correspondence such as has recently appeared in the *Times*. Too drastic proposals, however, tend to hinder and delay the steadily increasing popular demand for such curative seclusion. Of such a repellent and obstructive character is the proposal to incarcerate for life young females addicted to drink, which is gravely made by one writer. All such practically punitive and vindictive procedure is based on an erroneous view of the etiology of habitual drunkenness, which is in many cases a phase or effect of either congenital or acquired mental deficiency or perversion. It is satisfactory to note the general trend of opinion towards the

seclusion of true habitual drunkards. With appropriate safeguarding of the rights of the individuals by a close definition of the class of persons desired to be dealt with, by due regard to the provision of legal defence, redress, and appeal for the alleged inebriate, and by adequate inspection, there need be little difficulty in framing measures for the involuntary detention and care of habitual drunkards, which would restrain only such inebriates as required restraint, while in no degree impairing the liberty of the subject.

MEDICAL AID FREE! WITH A POUND OF TEA!

The latest phase of the "medical aid schemes" is the most discreditable which we have ever come across. A firm of grocers, named Bryan, of Dale Street, Liverpool, has issued a circular to the customers in which they state that, "should you at any time be in need of a doctor or medical attendance, we will provide you with such, entirely free of charge. All we ask in return for this is for you to take not less than one-quarter pound of our famous tea every week. . . . . Several of our customers have already received medical aid, and they express themselves to be perfectly satisfied. Letters to this effect may be seen at 146A, Dale Street. We must ask all intending customers to hurry up, and place your orders with us at once." One of the rules of this precious scheme is that "Every customer's name must be upon our books for four weeks before they are entitled to call upon the medical officers." Another rule is: "Bryan Bros.' medical officers do not give attendance in accouchements unless paid by the customer such extra charge as they the (medical officers) (*sic*) may make." A blue card is given to the customer who having fulfilled the above conditions, applies for the services of one of "Bryan Bros.' medical officers," and this card is headed "Bryan Bros. Free Medical Aid Scheme; Bryan Bros., Tea Merchants, 146A, Dale Street." Then follow the name and residence of the "customer," and then a "list of medical officers for this district," with names, qualifications, and addresses. On the back of this card appears, "Rules relating to the delivery of tea," and the last of these is: "Customers not taking their tea for two weeks in succession will forfeit all right to the services of our medical officer." It is difficult to refrain from expressing in the strongest terms the disgust which we feel at finding duly qualified medical men associated with a scheme which has no philanthropic character whatever, but is simply and solely an advertising dodge on the part of a tradesman to increase the sale of his special wares. We trust that the names given are used without authority or permission, or, if otherwise, that the medical men who have so far forgotten their own dignity and that of the profession to which they belong, will at once sever the connection with the firm and "scheme" in question.

UNPROFESSIONAL ADVERTISING IN HIGH PLACES.

A correspondent in Birmingham sends us a copy of the *Irish Field* of August 24th, in which we find an article entitled "Some reminiscences of riding accidents, hunting and schooling, with some practical hints on the treatment to be adopted at the time, if surgical aid is not at hand." The author describes himself as Past President of the Royal College of Surgeons in Ireland, Senior Surgeon to the City of Dublin Hospital, etc. We are bound to express the opinion that this article is a serious violation of professional rule. Embodied in these so-called reminiscences and hints are stories about a "well-known country squire" with paralysis of both arms, who was cured; of "a noble lord" who had concussion of the spine, who became paraplegic—"the advice he got at first was not of much value"—who got well; and of the Hon. Mrs. —— who had a compound fracture, which was healed in a month, thanks, among other things, to "all the care I could bestow." It takes our breath away as a specimen of plain unadulterated advertising. How can we protest against the issue of touting circulars by the owners of sixpenny dispensaries if those who hold high positions in the profession are permitted to indulge in nauseous public self laudation? Publications of this kind have a most mischievous effect. They set a bad example to beginners, and they help to degrade professional tone. We must express our severest condemnation of the whole article, and we hope that the profession in Dublin, which is very pure in this regard, will, through the Colleges of which this gentleman announces himself as a member, express its opinion fearlessly, and in a form that will prevent any repetition or imitation of such conduct.

THE ADVENTURES OF A SCIENTIFIC PAPER.

In consequence of his communication on the serum treatment of tuberculosis presented to the recent annual meeting of the British Medical Association Professor Maragliano, of Genoa, has had an amount of greatness, or at any rate celebrity, thrust upon him which he is probably beginning to find somewhat inconvenient. Though the paper was professedly intended for the British Medical Association, it seems by a mysterious process of thought transference to have been brought immediately to the knowledge of the Editor of our esteemed contemporary the *Berliner klinische Wochenschrift*, who published it *in extenso* in his issue of August 12th, before we ourselves had had the opportunity of seeing the document. Almost simultaneously it appeared in the *Gazzetta degli Ospitali*, the *Riforma Medica*, and other Italian journals, and copious extracts from it were given in the leading political papers of Europe. Immediately after the London meeting the Professor's philanthropic zeal appears to have led him to Bordeaux, where he presented the same communication to the Congress of Internal Medicine which met in that city. Several of the French medical journals are angry with Professor Maragliano for having offered a second-hand article to the Bordeaux Congress, and have therefore declined to let the paper appear in their report of the proceedings. The editor of the *Revue Médicale*, having asked Professor Maragliano for an explanation of the bewildering rapidity with which a knowledge of his discovery had been diffused throughout the world, has received a reply to the effect that only a mere abstract of his paper was read in London. His words are: "The text of the communication was given only to the secretary, but, I repeat, the communication was not read." As the Editor of the *Revue Médicale* went on to invite us to make a statement on the subject, we have communicated with the reporter of the Section, Dr. H. J. Campbell, and he informs us that the English translation of Professor Maragliano's paper was read by Dr. Herringham, one of the Secretaries of the Section, who condensed it somewhat in reading. Dr. Campbell adds that during the reading of the paper he believes Professor Maragliano stood by Dr. Herringham. It appears to us that the matter has little more than a psychological interest. Professor Maragliano has the fervid conviction of an apostle, and, therefore, doubtless believed it to be his mission to spread his gospel as widely as possible. We should be glad, however, to learn some more precise details than he has yet vouchsafed us as to the preparation of his specific.

NICOTINE POISONING FROM EATING GRAPES.

A paragraph has been going round the papers drawing attention to the poisonous nature of grapes gathered from vines to which nicotine has been applied as an insecticide, it being stated that several alarming cases of illness had been so caused at Dorchester. In answer to our inquiries, Dr. Fisher, of Dorchester, has furnished us with some particulars of the occurrence alluded to. It appears that about six weeks ago a vinery was fumigated several times with a preparation described as containing "the pure nicotine of tobacco in a highly-concentrated form." The grapes were

not syringed or touched in any way afterwards. A bunch of these grapes was partaken of by a lady and her daughter. The daughter soon afterwards became deadly pale, felt ill, vomited, and, after lying down for some hours, recovered. The mother was more seriously affected. She felt giddy, turned white, and, after lying down, became quite cold, sweated profusely, and thought she was dying. After vomiting, however, she slowly recovered, but remained much upset for the rest of this day. Another bunch of these grapes was given to a lady and her child, soon after which the lady fainted and the child was sick. A strong young man ate a bunch in the train on his way to London, and he also was most violently sick and ill. Another lady ate three bunches on different occasions, and after each felt giddy and had to "hold on to the table"; she neither felt sick nor turned cold, but it should be mentioned that she is accustomed to smoke. The cook also "felt very queer" after eating a bunch. In three of the above cases the symptoms were alarming, and all suffered considerably. Dr. Fisher says it is manifestly difficult to explain these cases on any other theory than the one advanced—namely, that the symptoms were due to nicotine poisoning. The victims were all people in robust health, never given to such attacks, and they did not live in the same house. The importance of the subject is increased by the fact that this preparation has recently found great favour with gardeners and others on account of its great insecticide powers, and that although it is definitely stated on the label that it contains the concentrated nicotine of tobacco, it is equally definitely stated that "the proprietor wishes it to be clearly understood that it contains no injurious ingredient whatever." Perhaps not injurious to plants, but the phrase is open to a double meaning. To state on the label that the compound should be kept in a safe place out of the reach of children is perhaps a roundabout way of saying it is a poison, but we prefer the shorter term.

BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

DR. RUFFER will not be able to deliver the course of lectures as announced, as he has, we regret to hear, an attack of diphtheritic paralysis, and will not be able to do any work for some time.

DANGEROUS TRADES: FURTHER OFFICIAL INQUIRY.

WE are happy to be able to state that the Home Office having had under consideration the injurious effects of several of our industries upon the workpeople, the new Secretary of State has appointed a Special Committee to Inquire into the Conditions of Work and their Effects upon the Health of the Operatives so Employed, and to report upon the same. Several industries are scheduled. The Committee is composed of Mr. H. J. Tennant, M.P., as chairman; Miss Abraham, Captain Smith, with Professor Oliver, M.D., of Newcastle-upon-Tyne, as medical expert, and it is understood that their investigations will be proceeded with forthwith.

HOSPITAL LIBRARIES.

At the meeting of the Library Association of the United Kingdom held at Cardiff, an interesting paper was read by Miss Dorothy Tyler on this subject. These libraries may be divided into three classes—namely, those for the use of the medical staff and students, those for the use of nurses, and, lastly, books for the benefit of patients. It was to the two last classes that Miss Tyler chiefly directed her attention. To get at the desired information circulars were sent out to seventy hospitals and infirmaries in London and our chief provincial towns. The statistics show that at the present time there exist twenty-five organised libraries for the use of patients, varying in size from 100 to 4,000 volumes, seven of these containing over 1,000 volumes. In no one case has information been received of any endowment being in existence for this purpose, though in some hospitals there is an endowment for a library for the use of students. Books are chiefly obtained by subscription and donation, but in seven cases grants have been made from the House Committee or from the institution itself. Miss Tyler drew attention to the necessity of books which are sent to hospitals for this purpose being light to hold, of good print, and not too long. Bindings, too, should be cheap, so that there may be little loss if it become necessary to destroy the book through fear of infection. A plea was made on behalf of patients for magazines and periodicals fairly up to date, it being pointed out that these are too frequently allowed to accumulate before being sent to a hospital; this fact lessens very considerably the value of the gift. The returns as to nurses' libraries show that the one at Charing Cross was given by Mr. Passmore Edwards; at Middlesex the library was originated at the instance of the late Chairman, Lord Sandhurst; at St. Bartholomew's it has been provided by the nurses themselves; at University College a sum of money was invested for the purpose in memory of a nurse by a benefactor of the hospital; and at St. George's the library was materially increased by a grant made in jubilee year. The discussion which followed the reading of the paper showed that in nearly all large towns the practice obtains of sending from the public library to the hospital the illustrated papers and magazines when done with in the reading room. Speakers pointed out the difficulty there often is of sending from private houses to hospitals, and suggestions were made of a systematic collection in country towns by means of "a small boy and a tricycle." No doubt much is often wasted in private houses which would be of great value to the sick in hospitals and infirmaries, and Miss Tyler will have accomplished a good work if, by drawing attention to the subject, she in any way increases the supply of literature for whiling away the hours of sickness.

THE INTERNATIONAL ALCOHOL CONGRESS AT BASLE.

THE fifth International Congress on the Abuse of Alcoholic Drinks, which was held at Basle last week, presented one striking new feature. At previous congresses the advocacy of abstinence has rested with the English delegates, but at the recent Congress a phalanx of Continental medical scientists dealt vigorous blows at "moderate drinking." Among those who avowed themselves to be abstainers were Professor Forel, of Zurich University and Asylum for the Insane, and Dr. Bode, of Dresden; while Professor Gaule, who occupies the chair of Physiology at Zurich, as a result of his own experiments, declared that the admission of alcohol into the system tends directly to lower the vitality of the most minute organisms, disturbing first the more complex and after the simpler. Dr. Smith, of the Marbach (Lake Constance) Home for Inebriates, explained by diagrams the results of a number of experiments made in the Heidelberg University Physiological Laboratory to ascertain the effects of alcohol, in various doses, on the mental processes of (1) learning by rote, (2) simple arithmetical calculations, (3) the association of ideas. All the experiments showed that the consumption of alcohol, in small and larger doses, exhibits a tendency to paralysis of the mental faculties. Dr. Fürer, of Heidelberg, corroborated these statements, and explained how, by an electrical clock dividing the minute space into 1,000 parts, he had ascertained that the ingestion of even 7 grammes of alcohol suspended or tended to paralyse muscular activity. The sleep from alcohol did not act as a mental tonic, but left the mind next day weaker. Dr. Legrain, of the Ville Evrard Lunatic Asylum, when treating of "Alcohol and Mental Disease," laid down that insanity in France has increased in proportion to the amount of alcohol consumed; that the chief cause of the increased insanity has been drink, the increase in the number of admissions into lunatic asylums having been most marked where there has been the greatest alcoholic consumption.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

President's Address:

Bacteriology.—Sewage Purification.—Smoke Abatement.

In his Presidential address, Sir Douglas Galton, K.C.B., D.C.L., F.R.S., at the opening meeting of the British Association at Ipswich on September 11th, touched on various matters connected with medicine and the prevention of disease. Speaking of bacteriology, he said the sciences of medicine and surgery were largely represented in the earlier meetings of the Association, before the creation of the British Medical Association afforded a field for their more intimate discussion. It was interesting to contrast the opinion prevalent at the foundation of the Association with the present position of the question. A report to the Association in 1834, by Professor Henry, on contagion, said: "The notion that contagious emanations are at all connected with the diffusion of animalculæ through the atmosphere is at variance with all that is known of the diffusion of volatile contagion." Whilst it had long been known that filthy conditions in air, earth, and water fostered fever, cholera, and many other forms of disease, and that the disease ceased to spread on the removal of these conditions, yet the reason for their propagation or diminution remained under a veil. Leeuwenhoek in 1680 described the yeast cells, but Schwann in 1837 first showed clearly that fermentation was due to the activity of the yeast cells; and, although vague ideas of fermentation had been current during the past century, he laid the foundation of our exact knowledge of the nature of the action of ferments, both organised and unorganised. It was not until 1860, after the prize of the Academy of Sciences had been awarded to Pasteur for his essay against the theory of spontaneous generation, that his investigations into the action of "organised" ferments enabled him to show that the effects of the yeast cell were indissolubly bound up with the activities of the cell as a living organism, and that certain diseases, at least, are due to the action of ferments in the living being. In 1865 he showed that the disease of silkworms, which was then undermining the silk industry in France, could be successfully combated. His further researches into anthrax, fowl cholera, swine fever, rabies, and other diseases proved the theory that those diseases are connected in some way with the introduction of a microbe into the body of an animal; that the virulence of the poison can be diminished by cultivating the microbes in an appropriate manner; and that when the virulence has been thus diminished, their inoculation will afford a protection against the disease. Meanwhile it had often been observed in hospital practice that a patient with a simple-fractured limb was easily cured, whilst a patient with a compound fracture often died from the wound. Lister was thence led, in 1865, to adopt his antiseptic treatment, by which the wound is protected from hostile microbes. These investigations, followed by the discovery of the existence of a multitude of micro-organisms and the recognition of some of them—such as the bacillus of tubercle and the comma bacillus of cholera—as essential factors of disease; and by the elaboration by Koch and others of methods by which the several organisms might be isolated, cultivated, and their histories studied, have gradually built up the science of bacteriology. The President then alluded to the later development of bacteriology and to the discovery of antitoxins, and speaking of microbes he went on to say: But notwithstanding our knowledge of the danger arising from a state of low health in individuals, and of the universal prevalence of these micro-organisms, how careless we are in guarding the health conditions of everyday life! We have ascertained that pathogenic organisms pervade the air. Why, therefore, do we allow our meat, our fish, our vegetables, our easily contaminated milk, to be exposed to their inroads, often in the foulest localities? We have ascertained that they pervade the water we drink, yet we allow foul water from our dwellings, our pigstyes, our farmyards, to pass into ditches without previous clarification, whence it flows into our streams and pollutes our rivers. We know the conditions of occupation which foster ill-health. Why, whilst we remove outside sources of impure air, do we permit the occupation of foul and unhealthy dwellings? The study of bacteriology has thown us that, although some of these organisms may be the accompaniments of disease, yet we owe it to the operation of others that the refuse caused by the cessation of animal and vegetable life is reconverted into food for fresh generations of plants and animals. These considerations have formed a point of meeting where the biologist, the chemist, the physicist, and the statistician unite with the sanitary engineer in the application of the science of preventive medicine.

Passing to the subject of sewage purification, he said that the purification and the utilisation of sewage occupied the attention of the British Association as early as 1864, and between 1869 and 1876 a Committee of the Association made a series of valuable reports on the subject. The direct application of sewage to land, though effective as a means of purification, entailed difficulties in thickly settled districts, owing to the extent of land required. The chemical treatment of sewage produced an effluent harmless only after having been passed over land, or if turned into a large and rapid stream, or into a tidal estuary; and it left behind a large amount of sludge to be dealt with. Dr. Frankland many years ago suggested the intermittent filtration of sewage; and Mr. Baldwin Latham was one of the first engineers to adopt it. But the valuable experiments made in recent years by the State Board of Health in Massachusetts have more clearly explained to us how by this system we may utilise micro-organisms to convert organic impurity in sewage into food fitted for higher forms of life. To effect this we require, in the first place, a filter about five feet thick of sand and gravel, or, indeed, of any material which affords numerous surfaces or open pores. Secondly, that after a volume of sewage had passed through the filter, an interval of time must be allowed in which the air necessary to support the life of the micro-organisms was enabled to enter the pores of the filter. Thus this system was dependent upon oxygen and time. Under such conditions the organisms necessary for purification were sure to establish themselves in the filter before it had been long in use. Temperature was a secondary consideration. Imperfect purification could invariably be traced either to a lack of oxygen in the pores of the filter, or to the sewage passing through so quickly that there was not sufficient time for the necessary processes to take place. And the power of any material to purify either sewage or water depended almost entirely upon its ability to hold a sufficient proportion of either sewage or water in contact with a proper amount of air.

The President next dealt with smoke abatement. He said fog was caused by the floating particles of matter in the air becoming weighted with aqueous vapour; some particles, such as salts of ammonia or chloride of sodium, had a greater affinity for moisture than others. Fog would affect us so long as we kept refuse stored in towns to furnish ammonia, or so long as we allowed street surfaces to supply dust, of which much consisted of powdered horse manure, or so long as we sent the products of combustion into the atmosphere. Therefore, when mechanical traction had been adopted for vehicles in towns, one cause of fog would have been largely reduced; and if black smoke were diminished, black fogs would be diminished. In manufactories, the President proceeded, you may prevent smoke either by care in firing, by using smokeless coal, or by washing the soot out of the products of consumption in its passage along the flue leading to the main chimney shaft. The black smoke from your kitchen may be avoided by the use of coke or of gas. But so long as we retain the hygienic arrangement of the open fire in our living rooms I despair of finding a fireplace, however well constructed, which will not be used in such a manner as to cause smoke, unless, indeed, the chimneys were reversed and the fumes drawn into some central shaft, where they might be washed before being passed into the atmosphere. Electricity as a warming and cooking agent would be convenient, cleanly, and economical when generated by water power, or possibly wind power, but it is at present too dear when it has to be generated by means of coal. I can conceive, however, that our descendants may learn so to utilise electricity that they in some future century may be enabled by its means to avoid the smoke in their towns.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

The fifty-fourth annual meeting of the Medico-Psychological Association of Great Britain and Ireland was held on July 25th and 26th, 1895, under the presidency of Dr. Nicolson, at the rooms of the Association, 11, Chandos Street, Cavendish Square. Dr. Rayner was elected Editor in place of the late Dr. Hack Tuke, and it was decided that the Association should be incorporated.

In the afternoon the President took the chair, and, after presenting an illustrated memorial and silver bowl to Dr. Paul, who had been Treasurer of the Association for thirty-one years, delivered an address on Crime, Criminals, and Criminal Lunatics. From his experience as a prison doctor many years ago, he was of opinion that, though there were a certain number of weak-minded criminals who in the face of temptation were unable to resist it, and thereby became criminal, yet in the large majority of cases criminality showed itself as a positive propensity to evil-doing. He agreed with a large part of the phraseology and descriptions which Lombroso and others had given, but these descriptions applied to a minority of criminals only. He denied that there was such a thing as a criminal neurosis, or instinctive criminality, that belongs to a group of persons who make themselves amenable to the law.

Sir Edmund Du Cane and Drs. Orange, Clouston, and Conolly Norman discussed the views set forth in the address, and the President replied.

Dr. Rivers then read a paper on Experiment Psychology in Relation to Insanity, illustrated by an apparatus for measuring choice time.

On July 26th, Drs. Clouston and Batty Tuke opened a discussion on Rest and Exercise in the Treatment of Insanity. Dr. Clouston was strongly in favour of exercise. Rest, in the sense of staying in bed for twenty-four hours, he had seen do harm; it was applicable as a therapeutic agent only in cases of extrema neurasthenia in exhausted conditions, such as the puerperal state, and in those suffering from bodily diseases and exhausted from over-exertion. Dr. Batty Tuke referred to the condition of the brain cells found in the honey bee in the evening after a hard day's work, contrasted with the conditions which are seen in the morning, and maintained that what is wanted in the treatment of the insane is to give rest, so that the congestion may be diminished, and the cell renourished and return to its original condition. He quoted statistics of 40 cases of incipient insanity, half of whom recovered within three weeks, and the rest within six weeks, under his treatment.

The President, and Drs. Rayner, Blandford, Rivers, Cooke, Drapes, Yellowlees, Andriezen, Urquhart, Savage, Conolly Norman, and Robertson discussed the papers, the conclusion being come to that the means of treatment are to be used with reference to the individual patient; and Dr. Clouston replied.

Dr. Turnbull read a paper entitled Some Remarks on the Forcible Feeding of the Insane. He was of opinion that it was a mistake to wait until the patient became exhausted, and thought the best apparatus for feeding was the œsophageal tube.

The President, Drs. Briscoe, Drapes, Clouston, Yellowlees, Macdonald, Merson, Robertson, Urquhart, Cooke, Carlyle Johnstone, Hayes Newington, Finegan, Outterson Wood, Tuke, A. S. Newington, Gramshaw, and Soutar discussed the paper; and Dr. Turnbull replied.

Dr. W. F. Robertson read a paper On the Pathology of Milkiness, Thickening, and Opacity of the Pia-Arachnoid in the Insane, and exhibited numerous microscopical specimens as an illustration to the paper.

Dr. Shuttleworth read a paper on Provision for Pauper Idiots and Imbeciles. He referred to the want of accommodation for this class of cases, and mentioned that besides the rate-supported institution at Darenth, there were in England only five other training schools, which were all kept up by voluntary contributions. A block for idiots had been erected at the Northampton Asylum, and similar blocks were contemplated at two other asylums, but further accommodation was urgently needed. He advocated the erection of institutions, if necessary, by a combination of counties, or the erection of separate blocks in connection with the existing county or borough asylums.

Dr. Fletcher Beach made some remarks on the paper.

Dr. Clouston read for Dr. Bruce a paper on Thyroid Feeding. The author advocated its use in (1) cases of melancholia whose improvement had been arrested; (2) cases of mania showing signs of dementia; and (3) cases of stupor at an early stage, in which the effect was to wake them up. The treatment had also been tried on general paralytics, and on dements of forty years' duration. Burroughs and Wellcome's 5-grain tabloids were used, but the heart's action had to be watched and the patient kept in bed all the time, in case of heart failure.

Dr. Dawson read a paper on a Very Rare Case of Ecchymosis following Insane Excitement, which was discussed by the President, Dr. Urquhart, and Dr. T. W. McDowall.

On July 25th the annual dinner took place at the Hôtel Metropole, Dr. Nicolson, President, in the chair. The loyal and patriotic toasts having been duly honoured, the toast of "The Medico-Psychological Association" was proposed by the Speaker of the House of Commons, who remarked that in the course of the present century enormous steps had been taken in the humane treatment of lunatics. He was glad to hear that the Association had specially taken in hand the training and education of competent nurses and attendants on the insane. The President responded. Other toasts followed.

On July 27th the President invited the members to Broadmoor, where the wards and manner of treatment of the patients were fully described.

On the following Monday the members paid a visit to the Holloway Sanatorium, on the invitation of Dr. Rees Philipps, some of the members afterwards paying a visit to Windsor.

Dr. and Mrs. Chambers gave a garden party at the Priory, Roehampton, on July 30th, thus closing a very interesting and successful meeting.

THE CASE OF MR. R. B. ANDERSON.

On August 29th, at the House of Commons, Mr. Cohen, M.P., Mr. Dalziel, M.P., Mr. Albert Lewis, M.P., Mr. McKenna, M.P., and Mr. W. Jones, M.P., received a deputation from the Civil Rights Defence Committee, consisting of the President (the Earl of Stamford), Major-General G. F. I. Graham, Mr. A. Ross Clyne, Mr. W. C. Copeland, Mr. Greenbergh, Mr. H. Anderson (the solicitor to the Committee), Dr. Ward Cousins (President of Council), and Mr. Francis Fowke (General Secretary of the British Medical Association), and Mr. R. B. Anderson, with reference to the judicial injuries sustained by Mr. R. B. Anderson, and the civil rights of medical men and British subjects involved in them.

The Earl of Stamford, in introducing the deputation, said that Mr. R. B. Anderson had been subjected in Tobago to what had been officially characterised as a judicial persecution, and had been unable to obtain any redress. The primary purpose for which the Civil Rights Defence Committee was formed was to enable Mr. Anderson to make an appeal to the Privy Council against the illegal judgments of the Colonial Court given in his case, which he had not yet been able to do for lack of funds. Mr. Anderson had also sought to gain redress by bringing an action for damages against the judges. A Middlesex jury found a verdict for him, and awarded him £500 damages, but Lord Chief Justice Coleridge directed that a verdict should be entered for the defendants on the ground that no action could lie against a judge for acts done in his judicial capacity. The judgment was affirmed by the Court of Appeal, and in order to exhaust all his legal remedies, Mr. Anderson now wished to push on an appeal to the House of Lords. It might be readily gathered that the question to be brought before the House of Lords involved very grave problems indeed, including the doctrine of judicial immunity, and hence there was need of awakening far more public interest and sympathy than had hitherto been awakened, and forming a strong committee to deal with those very grave and important questions. Lord Stamford said he would like to bear emphatic testimony to the *bona fides* of the movement, and to dis-

possess the minds of any whom he could influence of the idea that Mr. Anderson was a mere agitator and a disagreeably pertinacious man, who was pressing forward claims which were not justified by the actual facts. Mr. Anderson was in need of very much more practical support and sympathy than he had yet been able to secure, and he and his friends would value very much the assistance of older Parliamentary hands to advise him as to the exact manner of pressing his claims upon Parliament and upon the public generally. His Lordship mentioned that he had received letters from Mr. H. M. Stanley, Dr. Farquharson, Mr. Leigh, and Bishop Mackinnon, regretting their inability to attend with the deputation.

Major-General C. F. I. Graham read an address setting forth the facts of the case; the illegal judgments of the West Indian courts, under which Mr. Anderson was committed to prison and refused a writ of habeas corpus; the result of the investigations of the Royal Commission in 1892; the action brought by Mr. Anderson in England, in which the jury gave him a verdict for £500, but upon which verdict Lord Coleridge entered judgment for the defendant, on the ground that an action did not lie against a judge; and the confirmation of Lord Coleridge's decision by the Court of Appeal, there being at the time Lord Esher pronounced such confirmation an action of a similar nature pending against him, so that the judgment he then pronounced might and did become a precedent in his own favour in his own action. The address stated that the Committee had been advised that his lordship was rendered incompetent by reason of interest to adjudicate in Mr. Anderson's case, and that the decision was not a valid one according to the law of England. As the Committee was advised, the judgment as it stood was a formal declaration that for acts, however illegal, in direct violation of Magna Charta and the Bill of Rights, depriving the subject of his right to earn his living by his calling or profession, depriving him of his lawful charges for work and services, inflicting penal damages upon him for the lawful exercise of his calling or profession, and maliciously and contrary to Magna Charta and the Bill of Rights enforcing those illegal judgments by illegal imprisonment, by the imposition of excessive bail which Lord Coleridge called "unmitigated unlawful tyranny," and by every species of oppression, including malicious criminal prosecution for petitioning the Sovereign, the subject had no right of remedy whatever. If that were the law, the Committee would urge that in the interest of the rights and liberties of the individual it was necessary that some remedy for such abuses, and some redress for such wrongs, should be devised, including redress for Mr. Anderson, who had at great disadvantage so long maintained an unequal contest in defence of rights that were of common and mutual interest to himself, to his profession, and to every British subject. The Committee appealed with confidence to the representatives of the people in Parliament to co-operate with the Committee in the movement for the defence of those ancient and invaluable rights and liberties.

Mr. Cohen, M.P., said that although it would be folly to conceal that Mr. Anderson's action was incidentally for the purpose of obtaining redress for those wrongs, he (Mr. Cohen) considered he was doing a public and national service in vindicating the rights of a British subject against persecution, by whomsoever levelled. He knew sufficient law to be aware that a judge was, and ought to be, protected, and occupied a position of impregnable immunity for any action which he committed in his judicial capacity; but was that to be interpreted for the first time as a protection and as an immunity against actions which it was a perversion of terms to call in any sense of the word judicial?

Mr. Anderson: Thank you, Mr. Cohen, for that expression, which will live in our history.

Mr. Cohen, continuing, said he had risen from a perusal of what he was sure was a straightforward, unexaggerated statement of the case, with the conviction that Mr. Anderson was standing up, not so much for the vindication of his own rights but for the vindication of the rights of the British subject—and the fact that it was at a remote portion of the globe made his action all the more public-spirited—for protection against acts which would be properly described as outrageous were they brought to the light of public criticism. He felt sure that such things could not take place in England. Mr. Anderson was entitled to all the support and assistance which he could possibly obtain for the vindication of his rights and the prosecution of his litigation. Personally he (Mr. Cohen) was afraid he was a little too much occupied to offer any very active co-operation, but as far as he was able he should consider it a privilege to associate himself with any steps which Mr. Anderson's advisers might suggest should be taken. One of the most energetic and competent persons to associate himself with the matter was Mr. Dalziel, and he welcomed his presence on that account, and should be glad to support him whenever he liked to bring those wrongs under the notice of Parliament.

Mr. Anderson thanked Mr. Cohen for his kindness in being present, and also for the way he had expressed himself on the subject.

Mr. Dalziel, M.P., said that it was most unfortunate that such a time should have been chosen for the deputation to attend, as it was the most important period of the day in the House. He would be compelled to leave almost immediately, but would like to say that he should be glad to examine into all the aspects of the case. It was not exactly a good period of the session to go into big questions, and he would suggest, as a practical outcome of the conference, that a small committee of the Civil Rights Defence Committee, consisting of four or five members, should be appointed to consult with members of Parliament, after all the facts of the case had been mastered by them.

It was agreed that such a conference should be held at an early date.

Mr. McKenna, M.P., Mr. W. Jones, M.P., and Mr. Albert Lewis, M.P., promised their support in the matter, and apologised for having to leave.

Mr. Anderson having thanked the members for their attendance,

Dr. Ward Cousins, President of Council of the British Medical Association, stated that the members of that Association generally took a deep interest in the case, and desired to express their extreme sympathy with Mr. Anderson for the wrongs which he had experienced in the past, and felt that the injustice which had been done him was really a disgrace to British administration. There were many questions involved in the case which affected the medical profession as a whole, among them being their right to determine how their services should be administered, and their right to retire under circumstances when they thought retirement was desirable. He was quite sure that the questions involved in Mr. Anderson's case deeply affected the whole medical profession and its rights and privileges, but they went further still, and touched the civil rights of every British subject. There was no doubt that the sympathy which Mr. Anderson had received from the medical profession would strengthen his case, and ultimately lead to a victorious issue. Already the Council of the British Medical Association had passed resolutions in which they desired to express their great regret at the treatment Mr. Anderson had received in Tobago, and they had authorised the Journal to be used for the purpose of ventilating his case. The Branches of the Association had also taken up Mr. Anderson's case, and many subscriptions, he believed, had been forwarded to the Committee. He hoped that the sympathy arising throughout the length and breadth of the Association would greatly aid in carrying on the work, which not only touched Mr. Anderson, but touched the whole of the medical profession. The medical men at Tobago, he believed, also deeply sympathised with Mr. Anderson, and the most eminent members of the profession had taken an interest in the case. Mr. Anderson was well known to the medical profession, and was a distinguished member of it, being a Fellow of the Royal College of Surgeons of England, and also holding medals for distinguished examinations. He had practised very largely and for many years in the Colonies, and had held most important Colonial appointments, and had been a Justice of the Peace. He (Dr. Ward Cousins) felt that the battle which Mr. Anderson was fighting was one in which he had the sympathy of the whole medical profession. The action of the profession had been somewhat slow; it was, he thought, generally slow in moving, even in the right direction, but the British Medical Association was a large body of men, and he could assure Mr. Anderson that he had their entire sympathy. He hoped the

few words he had had the honour to say, as representing the British Medical Association, would be of some little service to Mr. Anderson in his fight.

Lord Stamford said the meeting had been one of the utmost importance in the vindication of the rights of Mr. Anderson and the great rights which lay behind Mr. Anderson's case. They were particularly thankful to Dr. Ward Cousins, holding the position he did, for having, as it were, thrown the whole weight of the medical profession behind Mr. Anderson. The assurance of that support was a great comfort and strength to the committee.

The proceedings then closed.

At a meeting of the Civil Rights Defence Committee on September 2nd the following resolutions were passed:

That the thanks of the Civil Rights Defence Committee be, and they are hereby, tendered to Messrs. Benjamin L. Cohen, M.P., James H. Dalziel, M.P., W. Jones, M.P., J. Herbert Lewis, M.P., and Reginald McKenna, M.P., for their reception of a deputation of this Committee on Thursday, August 29th, 1895, at the House of Commons, to Dr. Ward Cousins, as President of Council of the British Medical Association, for the very welcome assurances of entire sympathy and hearty support which he gave on behalf of the Association; to Mr. Cohen for the forcible and convincing eloquence with which he stated Mr. Anderson's claim to the support of his fellow citizens on the ground that he is vindicating rights which are of general and common interest to every British subject, and in which he assured the deputation of his very highly appreciated and valued co-operation and support, until the defence of these rights is carried to a successful issue; and to Messrs. Dalziel, Jones, Lewis, and McKenna for the cordial promises of interest and help which, in the short time at their disposal, owing to the incidence of questions in the House, they kindly gave.

That, as a matter of special interest, and as the fullest publicity is essential in order that the members of the British Medical Association, the medical profession, and the general public may be informed of the nature of the questions and of the rights involved in Mr. Anderson's cases and the vast interests which depend upon them, the Editor of the British Medical Journal be asked to give space in his widely-read journal for the above votes of thanks, and to the shorthand reports of the proceedings herewith or as much as possible thereof.

THE PROBLEM OF VENTILATION.

The perennial question of ventilation is again upon us. The House of Commons is still not perfectly supplied with pure and invigorating air, and people still grumble at the atmosphere of the underground railway. From what has lately occurred in Parliament, the President of the Board of Trade admits both indictments, but at least, as far as the underground railway is concerned, pleads want of power to compel the company to supply purer air in their tunnels. It seems to us that the difficulty does not lie in want of power in either case, but in want of knowledge. With regard to the House of Commons, we confess this case does not appeal to us as strongly as the case of the Metropolitan Railway, but we note and desire to emphasise the fact that, if the late statement be correct, here is a building which should in every way be perfect in its ventilation, for even at the time of its construction—and this is remarkable—the ventilation was not ignored. Since then, considering the number of experts who from time to time have tried their hands upon it, and the large amount of money they have expended, it is sad to think that it has not reached a state which, if not perfection, is at least beyond that which gives rise to constant complaints.

With regard to the Metropolitan Railway, possibly it is a still more difficult case to deal with, for it is highly probable that the ventilation of the tunnels did not much trouble the engineer who designed them, but it certainly cannot be said that the Company have not been willing to hear and to try, even without compulsion, what experts in ventilation have had to suggest. Whence arise, then, these unhappy failures? It seems to us that the answer is not far to seek. Ventilation rests on a principle so simple and so obvious, that everyone thinks he understands all about it, and feels justified in stating exactly how every case can be dealt with. In fact, as we see every day, there is no end to the number of ventilating experts, each one of whom has a patent cowl or contrivance which is to produce perfect ventilation under all conditions, and each one would with the greatest pleasure draw out elegant plans of how the air is to circulate and produce a most agreeable atmosphere. But, alas, there always seems to be a difference between the direction which the currents are to take and those which they do take; for instance, in the drawing the air is told distinctly to go upwards, whereas in practice it insists in coming downwards. After all, air does not do this merely to confuse and and bother ventilating experts, but it has certain very definite laws which it is compelled to follow, and as it is not likely to deviate from these laws it only remains for the change to be made on the part of the experts; in a word, the subject of ventilation has to be treated as any other branch of experimental physics. The laws of the flow of gases are now well known, instruments for determining the rate and direction of such flow are at hand, and what is required is that persons who have had a training in science and know how to set about a physical investigation should undertake these problems of ventilation. They will not find them easy of solution; the main principle is simple enough, but each case has its own complication and has to be dealt with on its own merits. Chemical considerations enter the problem in addition to the purely physical ones, and each case becomes a scientific investigation which certainly those who have not had the benefit of a good scientific training are utterly unable to deal with. Scientific men have rather shirked the practical teaching of the subject of ventilation in their laboratories, possibly feeling it a little beneath their dignity, but surely this is not so; it is a physical problem, and one not devoid of pure scientific interest, and at the same time is one of great practical importance.

ARCHÆOLOGICA MEDICA.

XV.—A SEVENTEENTH CENTURY TEACHER OF ANATOMY AND SURGERY, DR. ALEXANDER REID.

It is the hard fate of teachers that they are soon forgotten. Few now remember Carpue or Dermott; even the Powers are no longer known to the present generation of medical students, though their years of drudgery are still remembered by practitioners scattered far and wide over the face of the globe. If oblivion has fallen upon the tutors of our own century, how much more deeply must it envelop those of past ages. Dr. Alexander Reid, however, can still be recalled from his obscurity, and a short time is well spent in considering the man and his works, as he was for many years the chief teacher of anatomy and surgery in London.

A cadet of the Reid family of Aberdeen, Rhaedus was born between 1580 and 1590, the third son of the first minister of Banchory. He took his arts degree in the University of Aberdeen, and then proceeded to France to study medicine. He afterwards settled in London, no doubt attracted by the fact that his brother Thomas was Secretary for Latin and Greek to James I, and he became a foreign brother of the Barber-Surgeons Company, perhaps through the good offices of Dr. Matthew Gwinne, to whom the Company were then much indebted. Dr. Gwinne was also a *persona grata* at Court after his successful disputation with Sir William Paddy, "An frequens suffitus nicotianæ exoticæ sit sanis salubris?" in which he took the side known to be upheld by King James. On May 28th, 1620, Reid was incorporated M.A. at Oxford, and on the following day he was created M.D. by letters patent from King Charles I. He was admitted a Fellow of the College of Physicians in 1634, and later in that year he was incorporated at Cambridge. He appears to have lived for some time in Little Britain, and on December 28th, 1632, he was appointed a Lecturer upon Anatomy at Barber-Surgeons' Hall in succession to Dr. Andrews, who held the reversion to Harvey's post of Physician at St. Bartholomew's Hospital, although he did not live to occupy the office. Reid lectured at an annual stipend of £20 on every Tuesday throughout the year until 1634. He died early in October, 1641, leaving a considerable sum of money, a part of which he bequeathed to his native universities in Aberdeen.

Reid's works are numerous, and they give us the facts which were taught publicly to students during the first half of the seventeenth century. The teaching of sur-

gery and anatomy at this time were entirely in the hands of the Company of Barber-Surgeons, and very well they carried out their trust. They obtained the best teachers available, and made attendance upon the lectures compulsory under pain of a fine. The freeman who "out his lecture" paid vj d., the foreign brother viij d., and the Straunger (that is, he who had no qualification from the Company, but who was nevertheless practising his profession in London) xij d. The high officials of the Company were fined 3s. 4d. every time they failed to attend, and there is added to the rule the very wise proviso, "provided, also, that all come well and decently apparelled for their own honesty and also for the worship of the Company."

The lectures which they came to hear we have preserved to us in Dr. Reid's tiny *Manual of Anatomy*, published in 1634, which was reissued in 1637, and reprinted in 1638, 1642, 1650, 1653, and 1658. The lectures on Surgery, too, we still possess in the *Chirurgicall Lectures on Wounds*, 1634, and the *Chirurgicall Lectures on Tumours and Ulcers*, 1635. Dr. Reid's collected works were published in 1650, 1659, and again in 1687, forty-six years after his death, as the *Chirurgorum Comes, or the Whole Practice of Chirurgery, Continued and Completed by a Member of the College of Physicians*.

His numerous lectures are clear and short treatises upon the various subjects with which they deal. He devotes 11 lectures to tumours, 29 to ulcers, 34 to wounds, and 31 to the muscles of the body. His little manual of *Anatomy* is of particular interest, for it contains a frontispiece by William Marshall, showing Dr. Reid in the act of lecturing upon a dissected subject, with his demonstrators, provided with scalpels, upon either side of him.

The *Anatomy* is most interesting reading, for it gives a summary of the science which is fairly correct, and an account of physiology which is absolutely incorrect. Reid either disbelieved in the circulation of the blood or was ignorant of it, though the *Exercitatio Anatomica de Motu Cordis et Sanguinis*, by William Harvey, had been published for six years when the first edition of Reid's *Manual of Anatomy* appeared. This neglect of a great discovery is interesting to us now, as we have a clear account of the physiology taught before the true function of the heart was recognised. Reid, speaking of the heart, says that "the greatest motion is felt in the left side, because the vital spirits are most plentifull there;" whilst the systole of the heart occurs, "first, that the vitall spirit may be thrust from the left ventricle of the heart into the aorta; secondly, that the arteriall bloud may be thrust into the lungs by arteria venalis"—that is, the pulmonary artery.

Throughout the work he often uses good English words where we are now accustomed to employ the classical forms; thus he speaks of the carotid arteries as the soporall vessels, so called because if they be stopped "sleep doth immediately follow," thus recalling the etymological meaning of the word *carotid* and for him the pericardium is the "swadler" because it envelopes the heart.

His lectures on surgery in like manner are full of quaint conceits, which still render them readable to the surgeon whose mind is inclined towards such subjects. The quaintest perhaps is the heading under which the editor of the collected works, assuredly a forerunner of Malthus, has chosen to place the obstetrical portion of the work. Book VII is headed "Of taking away Things Superfluous," and the first chapter is "Of Things Superfluous in general: and concerning Womens Labors." This portion of the work, however, is a summary of the Chamberlain's work, and Dr. Reid had nothing to do with it.

The late Mr. John Alexander, of the firm of Messrs. William Baird and Co., Limited, has bequeathed £90,000 to Cambridge for the purpose of erecting a hospital there.

Lepers in South Africa.—The Cape Town correspondent of Reuter's Agency, writing under date of August 14th, states that the Colonial Secretary is carrying into effect his promise made to Parliament with regard to the recommendations of the Leprosy Commission. The reforms to be introduced include the establishment of licensed leper houses on the mainland, to be conducted under strict rules and under medical supervision.

ASSOCIATION INTELLIGENCE.

NOTICE OF LAST QUARTERLY MEETING FOR 1895. ELECTION OF MEMBERS.

A meeting of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

South Midland Branch.—The autumnal meeting of this Branch will be held at Olney on Thursday, October 3rd. Gentlemen wishing to bring forward communications at the meeting are requested to intimate their intention without delay to the undersigned.—Charles Jewel Evans, Honorary Secretary, Northampton.

South-Eastern Branch: West Kent District.—The next meeting of this District will take place at St. Bartholomew's Hospital, Rochester, on Friday, October 18th, Mr. J. Holroyde, of Hamond Hill, Chatham, in the chair. Gentlemen desiring to read papers or exhibit specimens are requested to communicate with the Honorary Secretary, E. Ground, M.D., 1, Ashford Road, Maidstone, as early as possible.

South-Eastern Branch: East Kent District.—The next meeting of this District will be held at the Deaf and Dumb Asylum, Victoria Road, Margate, on September 19th, at 3 P.M., Mr. Bertram Thornton, in the chair. Agenda:—The Chairman: The Education of Deaf Mutes, followed by a Demonstration on Children in the Asylum. Mr. Treves: Notes of (1) Abscess of Liver opened through chest wall, (2) Abscess of Lung, opened and drained. Mr. E. G. Morris: Concurrent Diphtheria, Varicella, Influenza, and Parturition under one roof. Dr. Halstead will read notes of and show a case illustrating the advantages of Cock's operation in Extravasation of Urine due to Stricture. The Chairman kindly invites members and visitors to luncheon at his residence, 14, Cecil Square, from 1.30 to 2.30 P.M. Members intending to avail themselves of Mr. Thornton's hospitality are requested to send acceptances by Tuesday, the 17th, or they will not be expected. Tea and coffee will be served after the meeting.—Thos. F. Raven, Honorary District Secretary, Barfield House, Broadstairs.

South-Eastern Branch: East Surrey District.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 5.45 P.M., Mr F. B. Hallowes, of Redhill, in the chair. Dinner at 6 P.M., charge, 7s., exclusive of wine. Agenda: Minutes of Croydon meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Discussion on Diphtheria.—Introduced by Dr. Sidney Martin. Speaker: Mr. H. G. Plimmer, who will show some cultures and slides. Medical: Dr. Washburn. Speakers: Dr. Holman, Dr. Galton, Dr. Adeney, Dr. J. G. Ogle. Surgical: Mr. C. J. Symonds. Speakers: Dr. Walters, Dr. Hodges, of the South Eastern Fever Hospital. In its Relation to Public Health: Dr. R. D. R. Sweeting, Local Government Board. Speakers: Dr. Prichard, M.O.H. Croydon; Dr. Jacobs, M.O.H. Reigate. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—Henry J. Phangley, Honorary Secretary.

North Wales Branch.—The autumnal intermediate meeting will be held at the Castle Hotel, Ruthin, on Tuesday, September 24th. Members having any papers to read are requested to intimate to the Honorary Secretary before September 17th. Drs. Judson Bury, Brinkwater, Lloyd Roberts (Denbigh), and Messrs. Theiwall Thomas, Bowcott, and Lawson Tait have promised papers.—W. Jones Morris, Honorary Secretary, Portmadoc.

Lepers in the United States.—According to Dr. J. Nevins Hyde, there are now 569 lepers in the United States, California heading the list with 158.

SPECIAL CORRESPONDENCE.

PARIS.

A Congress of Tobacco Factory Hands.—Sanitation of Workshops.—Country Holidays for Poor Children.—Infant Mortality Statistics.—Prize Essays.—General News.

At the recent Congress of employees in tobacco factories it was stated that when any of them are injured it is against the rules to call in any doctor but the one appointed by the management. One of them related that in consequence a factory worker who was seriously injured waited two hours without being attended to. A resolution was passed that in cases of illness or injury the doctor residing nearest to the factory should be called in. The delegates were also opposed to the practice now in force of allowing the management to decide as to the indemnities granted for injuries, and passed a resolution that in such case where hands are incapacitated the wages should be continued and the medical expenses paid. At Maintes, Limoges, and Tonneins many sanitary reforms have been effected, but in other tobacco factories the sanitation is very unsatisfactory: the law concerning the sanitation of factories is not observed. Rheumatism and inflammatory ailments are common among the tobacco hands, and abortion is frequent among the women. It was stated that infant mortality among the female hands is 65 per cent. The delegates demand that bath rooms be provided, that perfect ventilation be secured, and all refuse immediately removed; that the floors be made impermeable and the walls of the workrooms be often washed.

The number of school children sent every year by the Municipal Council to the country steadily and considerably increases. This year it was 3 344. The zeal of the members of the Caisses des Ecoles has also helped to swell the number of the temporary emigrants in search of health and strength. The following figures give an idea of the increase in weight and height that take place during these holidays:

Sex.	Weight.	Height.	Chest.
	Kilos.	Mil.	Mil.
Boy...	1 450	6	—
Girl	1 397	37	59
Boy...	1 462	13	18
Girl	1 384	66	22
Boy...	1 350	—	10
Girl	1 283	—	20
Boy...	0 964	14	42
Girl	1 301	5	30
Boy...	1 380	9	34
Girl	1 270	8	7
Boy...	1 070	6	13
Girl	1 106	13	26
Boy...	3 100	—	14
Girl	2 850	—	10

M. Hirsch has placed at the disposal of the City of Lyons an estate, to be utilised for a "holiday colony" for poor sickly children; in the building, surrounded by woods and fields, sixty persons can be accommodated.

The Superior Statistical Society has met at the Ministry of Commerce, and has adopted the conclusion contained in Dr. Jacques Bertillon's report on the drawing up of statistics on infant mortality. The statistics relating to children in public asylums, boarded out or otherwise under protection, are all to be drawn up on a definite and uniform plan.

The Labour Office has just published an interesting volume on the sanitary conditions and security of hands in the factory workshops in France and abroad. This work consists of two parts: the first is an analysis of sanitary legislation; the second is a complete manual of information concerning child labour, that of female hands under age, and adult female hands, also of the laws and penalties framed in connection with labour.

La Société de Médecine Publique et d'Hygiène Professionnelle offers a prize for an essay on the following subject: Preventable Diseases: Means of Preserving Oneself from them and Preventing their Diffusion. The prize is open to competitors of all nationalities. The essays, which must be written in French, must be sent in—with the usual precautions as to anonymity—before October 10th to M. Cheysson, 115, Boulevard St. Germain, Paris. The first prize is of the value of £48, the second of £32. The sum of £20 will be distributed among "honourable mentions."

The bacteriological laboratory organised at the Loban Barracks causes anxiety to a section of the Parisian population because it is very near to the rooms where a number of girl candidates pass what is termed their *fin d'année* examination. The danger is said to be imaginary because the laboratory and the examination rooms are separated by a long corridor, which is never used either as a passage or for storing specimens. Nevertheless, the Minister of Instruction has decided to isolate M. Miquel's laboratory by means of a wall.

The administration of the Assistance Publique will organise at Auteuil a girl's orphan school in a house and ground bequeathed to it for that purpose. Twelve inmates can be received in it. According to the desire of the testator, M. Parent de Rosan, the boarders will be chosen among the children of men of science—writers and artists born in Paris. The ages will be from 8 to 12.

ST. PETERSBURG.

The Cholera Epidemic in Volhynia.—The New Director of the Women's Medical Institute.

There can no longer be any doubt that Volhynia is the scene of a severe epidemic of cholera. Fortunately it is up to the present the only Government in Russia where cholera has made its appearance this summer, but the disease appears to be making up in local intensity for its lack of geographical extension. The earliest cases this year occurred in the month of May, but towards the end of June the epidemic appeared to be dying out, and did, in fact, almost disappear. With the beginning of July, however, it suddenly took a new lease of life, particularly in the districts of Kremenetz, Ostrog, and Zaslav, all in the southern part of the Government, and not far from the borders of Podolia. Subsequently cholera spread to the more central districts of Dubno, Starokonstantinof, Novogradvolynsk Rovno, and Lutzk. In the town of Dubno it was particularly severe; this unfortunate town was the scene a few weeks ago of one of those large fires which have been so frequent this summer in Russia. A great part of the town was destroyed, and now the Jews of the poorer class, who seem to constitute a large proportion of the population of Dubno, are more closely packed than ever before the fire. Single rooms are said to be occupied by several families. Something like a general panic prevails. The rumours, which seem to be inseparable from a cholera epidemic among an ignorant people, that the "doctors" are in some way responsible for the outbreak, and that they poison all patients who go to the hospitals, have had the usual effect. The sick refuse to enter the hospitals, a large percentage of the cases are hidden from the police authorities, and a general stampede from the town is carrying the infection to the country round. The Medical Department has sent a number of medical men, *feldschers* and *sanitars*, a hospital of 25 beds has been opened, and it is now officially declared that the panic has subsided, and that the epidemic is being got under by a fully organised medical service. At the beginning of the epidemic, an attempt was made to raise a sum of money by general subscription to cope with the epidemic. Only 400 roubles (about £40) could be collected however, although, at the same time, the Jews had subscribed 500 roubles towards another means of extinguishing the epidemic. This was the solemnisation of a marriage in the Jewish cemetery. In accordance with Jewish superstition this is a certain method of putting a stop to a cholera epidemic. In July of last year when cholera was reappearing in Poland, the *Radom Gazette*, a Polish newspaper, published an account of one of these ceremonies which took place in the town of Przhedborz. The occasion was made a public holiday; there was singing and dancing in the streets from morning to night; the rabbi rode on horseback to the cemetery, where a poor deaf and dumb girl was married—to whom it was not stated—while the whole population, over 2 000 in number, danced and played on musical instruments. The present epidemic is said to be distinguished from those of the last two years in that it affects not only the Jews in densely populated towns, but also the peasants in small vil-

lages. In this connection, the following facts are of importance. There has been intense heat in Volhynia since the beginning of the epidemic, amounting sometimes to 40° R. (122° F.). The epidemic has come just at harvest time, and the peasants, though they drink mostly boiled water at home, quench their thirst while at work from the nearest river or stream. The streams in the whole district stricken by cholera are sluggish, and have low marshy banks; their water is said to be of very bad quality. Further, the water supply in the villages is extremely bad; water is taken mainly from shallow wells, the level of water in which is said to be rarely more than 1 *archin* (28 inches) below the level of the surface. The spread of cholera in such a district can scarcely be wondered at. Since the spring there have been over 4 000 cases of the disease in Volhynia. The last bulletin published reports, as occurring between July 30th (August 11th) and August 5th (17th), 2,025 cases of cholera and 718 deaths. In the previous week the return showed 1,004 cases and 322 deaths. In this connection the statistics of cholera in Volhynia during the last three years are of interest. In 1892 the Government was by no means severely visited; there were in all 1 162 cases with 453 deaths, or in proportion to population 49 cases and 18 deaths per 100 000 inhabitants. In 1893 there were 5,895 cases with 2,302 deaths. In 1894 the cases numbered only 462 and the deaths 183.

Professor von Anrep has been appointed Director of the Women's Medical Institute, which is expected to be opened in 1897. The choice is in every way admirable. Professor von Anrep has held many important appointments; he was for some time Director of the Imperial (Aldenburg) Institute of Experimental Medicine; in 1892 he was sent to Nijni Novgorod to take measures against the cholera epidemic, and he has recently been appointed as the Government representative on the Commission formed to look after the sanitary interests of the great Pan-Russian Exhibition to be held in Nijni Novgorod next year.

CORRESPONDENCE.

THE LIMERICK FOOD POISONING CASE.

SIR,—Having been on a holiday trip I did not see until a few days ago the BRITISH MEDICAL JOURNAL of July 27th, 1895. It contains a leading article referring to the notes on the Limerick poisoning case which appeared under my name in the previous number. The writer of the leader says that my statement exonerating the meat used by the patients is an "example of the commoner errors often found in official reports," and he further points out that the poison in meat "is not necessarily diffused throughout the whole substance of the meat, but may be collected at one or other parts." Now nothing was more clearly established in this sad case than the fact that the meat used at the fatal dinner on July 3rd was not the cause of the illness. The carcass from which the meat was supplied was sold to a large number of persons throughout the city of Limerick, but careful inquiries carried out by the police proved that none of the persons who ate it suffered from any kind of illness except the ladies at the convent. Seventy-six persons partook of the meat, and of these 74 became ill, the illness in 4 cases terminating fatally. These 74 persons partook of the custard. The two persons who ate the meat but were not sickened did not use the custard.

If the theory of probabilities were applied in this case, it would prove that it was many million times more probable that the custard and not the meat contained the poison. The first improbability is—why should all the poison in the carcass be concentrated in the fragment of it supplied to the convent? Second improbability—why should the only morsels of wholesome meat in the part of this carcass (assuming it to have been, as suggested by the leading article, poisonous only in "some part or parts") be used by the two persons who did not partake of the custard? Whilst the evidence produced at the inquest held in this case convinced the coroner and the jury that the meat was not at fault, it satisfied them that the custard was. I regret that I was not able to ascertain whether or not the severity of the symptoms exhibited by the patients was in proportion to the quantity of custard used, but it appears that some of the young ladies did not relish the custard, which, as I have already shown, was prepared from stale eggs, practically uncooked. Since the publication of my notes on this case in the BRITISH MEDICAL JOURNAL, I have learned that a portion of the custard after dinner was given to pigs, which soon after suffered from severe diarrhœa.—I am, etc.,

Dublin, Aug. 31st. CHARLES A. CAMERON.

THE INJECTION OF ANTITOXIN BY THE RECTUM.

SIR,—Since it falls to my lot to have to treat a comparatively large number of cases of diphtheria, I am naturally much interested in the treatment of that dire disorder, and for this reason I have read with eagerness the various papers and notes which have appeared in your columns during the past twelve months. I have not as yet employed the antitoxin, partly because I have been fortunate in following other lines of treatment, and partly also, perhaps, because I was prejudiced against antitoxin for reasons which need not be stated at present. But I now feel that I cannot longer abstain from trying this new form of treatment for myself. However, since I have seen the size of syringe employed, and the large amount of fluid which has to be injected into the intracellular spaces, I feel that it will be difficult to get the consent of parents, especially of the class who object to have their children "suffer punishment," as they express it; and I myself think I should not like to have a child of my own so treated except under chloroform. Now, chloroform means another assistant, more expense, and, under the most favourable conditions, its use introduces a fresh element of danger. In hospital assistants can be had, expense counts for less, and the danger is less, and then there is not the parent to deal with, but in private practice the whole thing is different, and often the parents, from the purest motives, cannot quite appreciate our desire to do the best for their child. Considering these difficulties then I purpose injecting the serum by the rectum, and I cannot see why it should not succeed, for the juices secreted by the glands of the lower part of the alimentary canal, so far as I am aware, are nearly bland, and have little action on proteids; in fact I should think they would have no greater action than the serum of the intercellular spaces.

Professor T. R. Fraser expressed the opinion that his antitoxin of snake poison may be effectual if introduced by the stomach. If this be so, I do not see that the antitoxin of diphtheria is likely to lose in efficacy when introduced into the rectum. The question of its retention, however, must be borne in mind. Still I think this should not be so difficult, for we find a small starch enema and small nutrient enemata can be kept in by the exercise of a little skill.

An expression of opinion on this point by experts would be of great service to those of us in the ranks of general practice.—I am, etc.,

Leeds, August 26th. GORDON SHARP, M.B. Edin.

THE BRITISH MEDICAL ASSOCIATION AND MEDICAL DEFENCE.

SIR,—I am one of those who believe that there are no great difficulties in the way of the Association taking up the *rôle* of defender of the interests of general practitioners. The Council are bound to admit that the Association has, through its Branches, spoken with no uncertain voice on the question. That the Council will have to get the Articles of Association altered admits of no doubt, and it is sincerely to be hoped that they will without delay devote their time to the accomplishment of this.

I venture to remind them that one of their Colonial Branches has framed by-laws which admit of their spending money on the suppression of unqualified practice, and it is interesting to note that, after spending no less a sum than £105 on this object, the Branch recovered back £100 in the shape of penalties from the offenders. What has been so well done by one of the Branches can surely be done also by the parent Association. I venture to think that many of the Branches would be prepared to bear a part of the expenses incurred in the prosecution of quacks who resided within their districts.

"It is to be hoped that the General Practitioners Committee will confine their attention at present to the devising of a scheme by which the monies of the Association could be legally used for medical defence work. No one wishes them to ruin their health by "spending anxious days and nights" in the consideration of such a number of subjects as they appeared to have done during the past session. "In what way can the Articles of Association be so altered so as to allow the Council to spend monies in the suppression of quackery?" is the vital question which they should give their consideration to; all other subjects can well remain unsolved until they have presented us with a workable scheme for the accomplishment of this most desirable object.

I venture, in concluding, to make one suggestion, and that is that the Committee should seek the assistance of those gentlemen who are conversant with the routine work of medical defence societies.—I am, etc.,

Cardiff, Aug. 31st. T. Garrett Horder.

A QUESTION OF CONSCIENCE.

Sir,—In cases of doubtful diagnosis it is granted to us to take counsel of colleagues older and wiser than ourselves in order that our diagnoses may be corrected or confirmed. May I, through the courtesy of your columns, invoke the aid of such now in a problem of intricate differentiation? I have caught my foot in the rut of conventional professional procedure, and have stumbled forward into the province of moral obligation. I shall be grateful for a helping hand, lest I grope further into darkness where I seek light.

I was called in some few weeks since to a case of threatening abortion. The diagnosis was indubitable. The patient—a wreck of a young woman—told a history of early marriage, succeeded by three abortions in rapid succession, a child which from her description was typical, two subsequent abortions, and after an interval of eight months the present threatening one.

She had learned in the school of untoward experience, and when I found her was already in bed with the foot of her bed raised, and was sipping iced lemon water. I supplemented the treatment, and after a day or two hæmorrhage and all other threatening symptoms ceased. The danger was averted. The small life (she was some four months advanced in pregnancy) having been thus preserved from rushing headlong into a sphere for which it was not yet equipped, I bethought myself of antidoting according to custom that poison of which this undue haste to be born was a symptom. I was conducted to a handsome library where everything stood convenient for writing. I was penning my mercurial prescription, when a slight noise in a distant corner of the room attracted my attention.

On a low stool with its head supported heavily on long, lean-fingered hands, a child of some four or five years was sitting, watching me out of mournful eyes. As my look met it, it stretched an elfish hand up, and, clutching the corner of a chair, made a laborious effort to rise. Three times it strove, and each time fell heavily back. I rose to the poor little creature's assistance, but, with an aged pathetic patience, it had tried a fourth time and succeeded. It gave a deep drawn sigh of relief, and, still leaning with one hand on the chair, with the other lifted a fold of its frock, and patiently wiped the sweat of effort from its forehead. Then it stooped, and, clutching a leg of the stool on which it had been sitting, set out upon a journey across the room, dragging its burden after it.

You could read the ache of bones in the way it set its feet down; you could hear the patience of hopelessness in its laboured breath. But it toiled on, picking its halting steps across the room, still dragging its burden after it, making a cautious detour of all obstacles, as children do who are not quite sure of their distances, tables and chairs being foes for heads and limbs to come into painful conflict with.

It found me at last, and, planting its stool as close as possible against my skirts, sat down beside me with a sigh of thankfulness, and leaned its great heavy head against me with an air of having waited for some half-century at least for human companionship. I stopped short in my prescribing, and looked down on the bulging head and thin hair, the sunken nose, overhung by prominent brows, and the dull, joyless eyes. The child was crooning a melancholy monotone, like an old woman mumbling a dirge.

I made some slight movement; the poor little creature thought I was going. It struggled up with a cry, and caught hold of my dress. Tears rolled down its earthy face. It looked into my eyes with the lonely desolateness of a clouded mind—a mind whose clouds isolate it from its fellows. I soothed it as well as I was able, but it was a melancholy little creature.

Then I tore up my prescription and went home thinking. It was borne in on me that in that mother's womb lay a child like that I had seen—a maimed thing, a thing defrauded of its child right of health and joyousness, of its human right of brain integrity, a thing which Nature, abhorrent, was striving to cast off. I thought of those other abortions, and pictured the room peopled with some half dozen terrible little wrecks like that one I had seen. I thought of those children growing up, and to all time tainting the human stream in an ever-widening output. Then I thanked Heaven that Nature has still a conscience, though I had often before had cause to doubt it. But Nature, tolerant because she has all the wide bosom of eternity on which to nurse wrong back to right, patient and tolerant for the reason of her vast reparative power, even Nature is abhorrent of syphilis, and in a spasm of anger thrusts the abhorred thing from out of its mother's womb.

It was true I had mercury. But who nowadays has faith in "cures"? Who, having seen the overthrow of specific after specific, believes yet in specifics? Was it possible that a mere metal should undo that which disregard of great human laws had done? Could mercury remodel the bulgy head, reorganise the degenerated tissues, rebuild the deformed frame?

I could not so console myself. Mercury might in some way not understood so modify the evil that it should not show eruptive on the outside, but the whole range of medicine has no such phenomenon as a "cure."

Salicylic acid, vaunted as a cure for rheumatism, without doubt alleviates immediate symptoms, but the patient suffers later for such temporary relief in a protracted and asthenic convalescence, and subsequent greater liability to chronic rheumatic pain.

Bromide of potassium is a reputed "cure" for epilepsy, but who, having seen the pitiable brain deterioration consequent on a bromide course, can be satisfied with such "curing"?

Quinine suppresses malarial symptoms, but it shatters the nervous system. And so on *ad infinitum*. Nobody can doubt but that the sooner the doctor frees himself of a fetish faith in "cures" the better for the world of patients. We may indeed assist the system in its methods, but to claim that we can "cure" is to depart from scientific truth.

Opium may be said to cure pain, but opium at the same time dulls the senses to the fact of injury, so removing that very stimulus which excites the brain to muster and despatch its ambulance corps to the seat of injury.

Nor can mercury by any possibility so affect the evolutionary impulse of an embryo as to carry it beyond the type Mongolian. For it would seem that the effect of syphilis is to retard evolution in such wise that from Caucasian parents an offspring characteristically Mongolian results—and that not a healthy but a maimed Mongolian.

Do we well when we combat Nature in her effort to abort so monstrous a "degenerate?" Will somebody advise me if I did well in this case when I withheld mercury and left Nature to the promptings of her conscience, instead of abetting a crime so great as that of the birth of such a child as laid its dull misshapen head against my knee that morning?

I could not persuade myself that the prevention of abortion by mercury argues that mercury is capable of bringing an embryonic child up to the desired human standard. I could not hope that its administration would do more than so enfeeble the mother's physical conscience, and render it so insensate that it would fail to repudiate that which it was the bounden duty of its evolutionary instinct to repudiate.—I am, etc.,

Watford, Herts. Arabella Kenealy, L.K.Q.C.P.I.

THE SERUM TREATMENT OF TUBERCULOSIS.

Sir,—In addressing you in regard to Professor Maragliano's serum treatment of tuberculosis, I shall endeavour to write from the standpoint of a rational medical man, without prejudice and, it is to be hoped, with an intellect sufficiently trained to look, in the search for truth, in the direction of probabilities.

Is it probable that Professor Maragliano has discovered a serum remedy for tuberculosis, as reported in the British Medical Journal of August 17th? I think not. Let me tell you why.

Professor Maragliano has taken "procedures different from those hitherto adopted, absolutely discarding cultures of living bacilli, and availing myself exclusively of the highly toxic principles extracted from these." Why not mention the nature of these "procedures?" He uses an extract of living bacilli to secure immunity in animals whose blood serum then constitutes the serum remedy for tuberculosis. Are not animals that are suffering from the actual disease continually subjected to the influence of extract of living bacilli? Do they become immunised? They never do. Is it probable then that Professor Maragliano has succeeded even in the first step of the process, the immunising of animals? To me it is incredible.

Professor Maragliano tries to gain credence for his "procedures" by alluding to the curability of tuberculosis as witnessed in the *post-mortem* room. Every medical practitioner finds cases of cured tuberculosis in the living subject as well as in the *post-mortem* room. But I have never heard of any man that believes these to be cases of serum cure. Curability does not always mean antitoxic curability. Successful treatment is not synonymous with antitoxic treatment. Some diseases (infectious diseases, too) are still cured without the administration of an antitoxic serum. Syphilis, for example, is a disease whose history points more hopefully in the direction of antitoxic treatment than does the history of tuberculosis, yet syphilis can be cured with ordinary drugs. If we do not clamour for an antitoxic remedy for syphilis where there is a probability of success, why do we clamour for such a remedy for tuberculosis where the probabilities are against success? Great is industry, but great achievements cannot be attained by industry that has its eyes bandaged with one fact or one theory.

> Mysterious even in open day,
> Nature retains her veil despite our clamours;
> That which she doth not willingly display
> Cannot be wrenched from her with levers, screws and hammers.

What is the nature of the spontaneous cure of tuberculosis? Probably mechanical. We know the value of complete excision of tuberculous glands; we know the value of rest and the danger of spreading the disease by surgical trifling in the case of tuberculous knee-joints. Spontaneous cure seems to result from the cutting off of the infected area by a local pathological process to which, of course, the whole animal economy may contribute. The tuberculous area is thus lowered to the level of an isolated foreign body containing tubercle bacilli. If the isolating barrier happens to break down before the bacilli have died the chances are in favour of an extension of the disease—in the case of the lung, miliary tuberculosis, acute fatal phthisis. This ought not to be the case if the tubercle bacillus manufactures its own antitoxin. If the tubercle bacillus manufactures its own antitoxin, a person that has suffered for years from hip-joint disease ought to be immunised—for a short time at least—against pulmonary consumption. The reverse is the case. If the tubercle bacillus manufactures its own antitoxin, or if its ptomaines make the infected animal manufacture this antitoxin, we should expect tuberculosis to run a more or less definite course, killing some and curing others within a reasonable time. Tuberculosis follows no such course.

We may expect a serum remedy, or prophylactic, for every disease in which one attack secures immunity—such as smallpox, measles, scarlet fever, diphtheria, syphilis, snakebite, etc. The essential facts of tuberculosis are against the expectation of a serum remedy.

To "look before and after," to discover, to invent, to generalise, to prophesy—these are the fruits of intellect; but intellect still remains rooted in the perception of resemblances and differences. It is possible to reason from differences as well as from resemblances. There are essential and non-essential points of comparison. To forget this leads to false generalisation, false prophecy. The idea seems to prevail in some quarters that germ causation, if not the chief essential point, is at least a sufficient one on which to base the expectation of a serum remedy. Facts are against that idea.—I am, etc.,

Bath, Aug. 26th. William Cairo.

THE DISCUSSION ON DIPHTHERIA IN THE SECTION OF MEDICINE.

Sir,—In answer to the letter of Dr. Brownlow R. Martin, in the British Medical Journal of August 31st, it is evident that if it were possible to so rapidly destroy the diphtheria bacillus in the membrane as to prevent the formation in the body of a lethal amount of the poisons, the proper treatment of diphtheria would be a local one. But is it possible? Although there are a few practitioners who would say that certain local remedies act as specifics in the disease, yet the majority would, I think, speak to the contrary. There are cases, of course, in which the separation and disappearance of the membrane have rapidly followed the use of local remedies. But it is an important fact that many of these patients die (from cardiac syncope or failure, from paralysis, and from suppression of urine) after the membrane has disappeared, and they may die even if the local treatment has commenced on the second or third day of illness. The cause of their death is the presence of the diphtheria poisons in the body—in the blood, spleen, and other tissues. Moreover, the secondary symptoms—paralysis, etc.—of which Dr. Brownlow Martin speaks are, so to speak, the acme of the pathological changes produced by the poisons—changes which are progressing throughout the whole course of the disease. I did not, in opening the discussion of diphtheria at the annual meeting, discuss the value of local treatment, as the question to be dealt with chiefly concerned the diphtheria antitoxin; but it appears to me that the crux of the treatment of the disease lies in the counteraction of the effects of the diphtheria poisons, the fatal accumulation of which is not prevented by merely local treatment.—I am, etc.,

Mansfield Street, W., Sept. 7th. Sidney Martin.

FACTORY LEGISLATION AND SANITARY ADMINISTRATION.

Sir,—I was extremely pleased to observe in the paper on a National System of Notification of Sickness, contributed to the British Medical Journal of August 31st by Dr. Newsholme, his animadversions on Section 29 of the Factory and Workshop Act, 1895, in which he detects a "new departure"—namely, compulsory notification of disease to a layman. It is very much to be desired that other medical officers of health of equal eminence and acumen should direct their attention to the "new departure" in the matter of sanitary administration with which this Act is permeated, and of which the compulsory notification of certain diseases to the Chief Inspector of Factories is merely a detail. Unfortunately the "departure" was taken in previous Factory Acts unnoticed; but the further developments in the present Act are so serious and so likely to be carried to still greater excesses that I seize the occasion of Dr. Newsholme's reference to ask attention to the whole subject.

I can best do so by the following extract from a statement submitted by the Police Commissioners of Glasgow to Mr. Asquith during the Committee stage of the Bill:

> The Commissioners are, as local authority, responsible to the Local Government Board for Scotland for the due and proper performance of their duty. The Commissioners have observed with regret that in recent Factory Acts some confusion has been created between the jurisdiction of local authorities and factory inspectors as regards the general conditions of health in factories and workshops. In the Bill for the amendment of these Acts presently before the House there are proposals which, if passed into law, will increase this confusion. The Commissioners are at one with the Government in their desire to procure for those who labour in factories and workshops the physical conditions of health, but they do not think that the method hitherto followed, and now proposed to be extended, would eventually promote the interests of the community at large, or even of that limited portion of it to which these Acts apply. In respect of cleanliness, ventilation, overcrowding, and conveniences, they can discover no adequate reason for exempting, on account of their employment, any part of their constituency from the scope of the powers they possess, for conferring sanitary powers upon factory inspectors which the Commissioners themselves do not

possess, or for subjecting their actings to the review and control of the Home Office, instead of the Local Government Board. Further, they take exception to such interference with their functions, on the ground of the administrative difficulties which will, in their judgment, inevitably ensue. In applying a statute which deals with standard measurements of space, with precise durations of time, with definite conditions of structure of machinery, etc., there can be no room for difference of opinion; but cleanliness, ventilation, overcrowding, and conveniences, all involve more or less matters of opinion. The Commissioners have been exercising the powers they possess in these regards in factories, workshops, warehouses, offices, dwelling houses, etc., for many years, advised by competent experts, principles have been laid down; precedents have been established. While they welcome from any quarter information as to places, whether dwelling houses, factories, or workshops, which seem to require the application of these powers, they foresee frequent friction and unseemly conflict of opinion if they are required to submit their actings thereon to the review of factory inspectors. If special control of their actings in these regards in factories and workshops is thought to be necessary, the Commissioners respectfully submit that it ought to be exercised by the Local Government Board. If special powers are required to deal with those elementary matters of health in factories and workshops, they respectfully submit that these powers ought to be conferred upon them, and be exercised subject to the supervision of the Local Government Board. Although the Commissioners have stated their own case as against the Bill, they believe that their position represents a sound general policy, namely, that there ought to be no division of authority or responsibility as to the primary conditions of health. If local authorities have been found to neglect their duty as regards factories and workshops, the presumption is that this is only a fraction of their negligence, and it is certain that no general reform can be effected by a system of transferring the proper functions of local administration to independent officials acting under Government control. Indeed, the Commissioners believe that much of the indifference to the sanitary clauses of the Factory Acts, which is said to exist on the part of sanitary authorities, is confirmed, if not occasioned, on the one hand, by the freedom with which matters for which they are responsible are from time to time interfered with and so far taken out of their hands; and, on the other, by the cultivation in the minds of a powerful section of the ratepayers of the idea that their health is an affair of the central Government rather than of their local representatives. The Commissioners take exception to Clause 10 of the Bill from the same point of view. Fire-escapes do not seem naturally to fall within the scope of the functions of a sanitary authority, but since it has pleased the Legislature to think otherwise, the Commissioners submit that this section and Section 7 of the Act of 1891 ought to be brought into harmony either by making the factory inspector or the sanitary authority solely responsible for fire-escapes. Having stated their general objections as a local authority to the Factory Bill, the Commissioners respectfully suggest certain amendments which would so far remove those objections and facilitate their endeavours to improve the sanitary condition of all premises in which persons are employed.

With the amendments suggested upon the Bill I shall not encumber your valuable space. Suffice it to say that to not one of them was the slightest heed paid, although as regards Scotland they were of vital importance to the utility of the Bill. I shall merely quote the criticism upon the 29th Section which has attracted Dr. Newsholme's attention. Apart from the principle, the method of the Act is absurd.

"The medical practitioner will form an opinion that his patient suffers from poisoning or anthrax before he arrives at any conclusion as to its cause. This presumes an inquiry into circumstances, and the conclusion may possibly not be one which will make the practitioner any more popular in the locality if he promulgates it. Let every such case be notifiable to the medical officer of health of the district as if it was an infectious disease. Let the medical officer of health make the inquiry, and, if he believes the disease was "contracted in any factory or workshop," let him at once inform the local factory inspector.

There never was a better illustration of the extreme danger to the best interests of the country when a Bill so complicated and demanding so much absolutely dispassionate discussion as the Bill under review happens to be hanging in the balance on the eve of a general election. Had any member raised any such discussion regarding any clause in this Bill after the resignation of the Ministry, it would have been as much as his political life was worth. The working classes in his constituency would have been told that he had sacrificed their interests by making it impossible to pass the Bill.—I am, etc.,

Glasgow, Sept. 10th. JAS. B. RUSSELL.

THE APOTHECARIES' HALL OF IRELAND AND ITS LICENCE.

SIR,—May I call your attention to an error in stating "the Apothecaries' Hall of Ireland does not now grant its licence except to qualified practitioners whose names appear on the *Medical Register*, and wish to add this to other qualifications?"

The exact position in which the Hall now stands is that by the cessation of its junction with the Royal College of Surgeons, Ireland, the Hall has no surgical examiners; such must be appointed by the General Medical Council, which will not meet till November, when it is hoped they will nominate them. This Hall will then be in a position to conduct independent examinations the same as the Society of Apothecaries, London, but the tenour of your observations in publishing the curriculum would lead the public to believe that we had lost power to grant licences by the recent action of referring the Conjoint Board to the Privy Council.—I am, etc., ROBERT MONTGOMERY, M.R.C.S.,

Dublin, Sept. 9th. Secretary.

*** We fail to see wherein our statement was erroneous. The Apothecaries' Hall of Ireland cannot now grant a qualification entitling its holder to primary registration. Whether the General Medical Council will grant the Hall the additional examiners in surgery necessary under the Medical Act of 1886 to enable it to hold independent qualifying examinations is a question which we do not venture to prejudge. It is, however, to be noted that the defects in the examinations of the Conjoint Board, which were recently reported to the Privy Council, had reference to medicine, not to surgery.

THE CONTAGION OF SCARLET FEVER.

SIR,—In the report of the discussion on "The Disinfection of Patients," I see Dr. Boobbyer, of Nottingham, expresses his doubts whether the desquamating cuticle of a convalescent from scarlet fever is a source of contagion; and you have a short article in the BRITISH MEDICAL JOURNAL in which the question is pressed upon our notice.

As a contribution towards solving this question I beg to state that in a considerable practice for the last twenty years I have acted on the conviction that in a desquamating skin after scarlet fever there is no danger to others; and that if the throat and nose are quite sound again isolation of the patient is not necessary for more than a month; and that nevertheless I have uniformly succeeded in preventing the spread of the disease, although often children with free desquamation still going on have mixed and played freely with others who have never had the disease.

I must add that during the isolation I have had the skin smeared daily with a weak solution of carbolic acid in oil, and during the last week of it they have had three good scrubbings with hot soap and water, immediately after the last of which they have left their rooms, leaving all their belongings behind them.—I am, etc.,

Tunbridge Wells, Sept. 2nd. EDW. G. GILBERT.

SEWER VENTILATION.

SIR,—Will you kindly allow me to make a criticism on Dr. Neech's thoughtful and valuable paper? The following apparent inconsistency escaped my notice when I heard the paper read: In the first part of his paper Dr. Neech gives it as his opinion that defective sewers should be ventilated, using the word in its thoroughgoing sense, as contrasted with mere vent. He evidently makes the two usual assumptions that sewer gas cannot be shut in, and that ventilation can render it innocuous. But towards the end of the paper he quotes with approval Mr. Baldwin Latham's dictum (quoted by me in my last year's paper: "That if large volumes of pure air are allowed to pass through a sewer in contact with sewage, large volumes of foul air will escape at some point, and that the great secret in sewer ventilation is not to encourage these currents of air through sewers." This is simply saying that ventilation, instead of being the remedy for, is the cause of, foul emanations.

Dr. Neech's suggestion of ventilation by sections is ingenious, and would doubtless diminish the existing nuisance, but on the theory of vent—not ventilation—it is unnecessary.

The same assumptions—that ventilation can render sewer gas innocuous, and that it cannot be shut in—were made by Mr. Parry Laws. And yet the simple evidence of our olfactory organs contradicts them, and the former is supported by no evidence.—I am, etc.,

Plumstead, Aug. 31st. SIDNEY DAVIES.

THE International Congress of Physiology opened at Berne on September 9th. Some 80 papers were on the programme, and there was a large attendance of members, Great Britain sending the largest number next to Germany.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A SURGEON MAJOR serving in Bengal wishes for an exchange which would give him about three years at home. Address, stating terms, to S. L. H., care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

THE following appointments have been made at the Admiralty: ALEXANDER L. CHRISTIE, Staff-Surgeon to the *Camperdown*, September 2nd; ERNEST E. GRAY, Staff-Surgeon to the *Boscawen*, September 2nd; JAMES MOWAT, Surgeon, to the *Albacore*, September 2nd; JAMES P. KNIGHTLEY, Surgeon, to the *Camperdown*, September 2nd; EDGAR R. DIMSEY, Staff-Surgeon, to the *Sappho*, September 24th; SAMUEL W. JOHNSON, Staff-Surgeon, to the *[illegible]*, undated; EDWARD J. BIDEN, Staff-Surgeon, to the *[illegible]*, undated; DONALD T. HOSKYNS, Staff-Surgeon, to the *[illegible]*, September 6th; WILLIAM J. COLBORNE, Surgeon, to the *Icarus*, September 24th; SIDNEY H. YOUNG, Surgeon, to the *Ruby*, September 24th; EDWARD C. [illegible], Surgeon, to Devonport Dockyard, September 24th; WILLIAM E. DAWSON, to be Surgeon and Agent at Walton-on-the-Naze, September 9th.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN ARTHUR L. H. DIXON retires from the service receiving a gratuity, September 11th. He was appointed Surgeon-Captain, August 1st, 1885.

Surgeon-Captain J. E. TRASK is seconded for service with the Egyptian Army, August 23rd.

Surgeon-Captain BROOKE O. W. NORFOR died at Nowshera, India, on August 26th. His commission dated from January 31st, 1885. He served with the Soudan Frontier Field Force in 1885-86, and had the Egyptian medal and the Khedive's bronze star.

INDIAN MEDICAL SERVICE.

THE Queen has approved of the following admissions to be Surgeon-Lieutenants in the Indian Medical Service, dated July 29th:—*Bengal*: JOHN STEPHENSON, FRANK N. WINDSOR, WALTER B. TURNBULL, ERNEST E. WATERS, ASHER LEVENTON, PHILIP F. CHAPMAN. *Madras*: FREDERICK L. BLENKINSOP, ALFRED MOORE, EDMUND M. ILLINGTON, THOMAS E. WATSON, CHARLES G. WEBSTER. *Bombay*: ALFRED HOOTON, ARTHUR F. W. KING, ROBERT F. STANDAGE, ANDREW A. GIBBS, and HENRY A. F. KNAPTON.

Brigade-Surgeon Lieutenant-Colonel ANDREW BARRY, M.D., Bombay Establishment, has retired from the service, August 1st. He was appointed Assistant Surgeon, March 31st, [illegible], and became Brigade-Surgeon Lieutenant-Colonel, February 26th, [illegible]. He was engaged in the operations of the Kattywar Field Force, in the Burda Hills, during the expedition against the Wagheers in [illegible], in the Abyssinian war in [illegible] (medal), and in the Afghan war in 1880, when he took part in the march to Candahar with the Force under Major-General Phayre (medal).

Surgeon-Colonel L. D. SPENCER, M.D., Bengal Establishment, has been awarded a good service pension, from March 29th, in place of Surgeon-Major W. R. Rice, M.D., C.S.I., who has retired with the special additional pension of £[illegible].

The Secretary of State for India has approved of the proposal that the number of good service pensions allotted to the Madras Medical Service shall be fixed at one for the present. The Government of India reserves to itself in the future the right of selection of officers for good service pensions, but in the case of the Madras Medical Service it has agreed that the Madras Government be consulted before any bestowal of the pension is made.

THE YEOMANRY AND RIFLE VOLUNTEERS.

SURGEON-LIEUTENANT G. T. K. MAURICE, Royal Wiltshire Yeomanry (Prince of Wales's Own Royal Regiment), has resigned his commission, September 11th.

Mr. JOSEPH ROBINSON is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Worcestershire Regiment, September 11th.

Surgeon-Lieutenant C. [illegible], M.B., 9th Lanarkshire Rifles, has resigned his commission, September 11th.

Surgeon-Major W. BALL, 1st Cheshire and Carnarvonshire Artillery, has resigned his commission, retaining his rank and uniform, September 4th.

Mr. JAMES BROWN BIRD, M.B., is appointed Surgeon-Lieutenant in the 1st Cumberland Artillery, September 4th.

Surgeon-Lieutenant T. Johnston, 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), has resigned his commission, September 4th; he is permitted to retain his rank and uniform.

It is announced that in future the appointment of Adjutant to the Volunteer Medical Staff Corps is to be three years only, and is to be held by a Surgeon-Captain with not less than six years' service.

EXCHANGES.

THE *United Service Gazette* notices that officers of the Army Medical Staff with less than seven years' service may in future be allowed to exchange with officers of the Indian Medical Staff. It is not very clear what meaning is to be attached to this statement.

A correspondent draws our attention to an important article in the late edition of the *Pay Warrant* ([illegible]) which, we believe, touches an entirely new departure, that of exchange between the Medical Staff and the Indian Medical Service. The article reads as follows:

Exchanges between officers of Our Army Medical Staff under the rank of Surgeon-Major and medical officers of Our Indian Military Forces, and transfers of such officers from either of the above services to the other, shall only be permitted subject to the approval of Our Secretary of State for India in Council, and on the following conditions:

1. That the officers have less than seven years' service.
2. That the senior officer exchanging takes the place of the junior on the Departmental list, and shall not be promoted under Article 359, 360, or 361, until the officer next above him has been so promoted.
3. That the junior officer exchanging is placed for seniority next below all medical officers whose commission have the same date as his own.
4. That the officer transferred is placed for seniority below all medical officers holding the same rank at the time of his transfer and shall not be promoted under Article 359, 360, or 361 until the officer next above him has been promoted.

We do not imagine that many exchanges will take place under this Article, because the loss of seniority will probably effectually deter the negotiation of such exchanges. Under the old regimental system, when combatant officers exchanged, those exchanging went to the bottom of their rank, no matter what the length of service. This was a safeguard against supersession; but in a large departmental list, with practical promotion by service seniority, it matters little whether A. or B. is above a man. These exchanges are limited to officers under seven years' service. We do not profess to see the wisdom of (4) of the Article; if the transferred officer took his place according to the date of his commission on the new list, we cannot see how it would have affected seniors or juniors. Perhaps this provision for exchanges foreshadows a new departure in the relations of the two services.

VOLUNTEER BRIGADE BEARER COMPANIES.

INQUIRER states that, of the thirty-three Volunteer brigades, eleven are still without bearer companies. Those which have made no such provision for sick and wounded are: Aberdeen, Clyde, Forth, Essex, Highland, North London, South London, West London, Surrey, Tyne, Tees. These brigades cannot be held fit for service.

THE QUEEN AND THE ARMY MEDICAL SERVICES.

A CORRESPONDENT points out that on the late visit of Her Majesty to Aldershot, the Surgeon-Major-General, among others, dined with her—the first occasion, it is stated, on which such an honour has been conferred on an army medical officer. Can the new departure, he asks, have arisen from the kindly feeling which H.R.H. the Duke of Connaught has always shown towards the medical profession?

CHANGES OF STATION.

THE following changes of Station amongst the officers of the Army Medical Staff have been officially notified to have taken place during the past month:

		From	To
Surgeon-Colonel	W. Taylor, M.D.	—	Dover.
Brig.-Srg.-Lt.-Col.	R. de la C. Corbett, D.S.O., M.D.	Bengal	Punjab.
"	J. Macnamara, M.D.	Dublin	Fermoy.
Surgeon-Lieut.-Col.	R. Blood, M.D.	Winchester	Punjab.
Surg.-Major	H. H. Johnston, M.B.	Leith Fort	"
"	F. H. M. Burton, M.B.	Birmingham	"
"	W. B. Thomson	Strensall	York.
Surg.-Capt.	J. J. C. Donnet	Madras	Bombay.
"	J. R. Barefoot	Trowbridge	Portsmouth.
"	J. F. Bateson, M.B.	Alnwick	Halifax.
"	R. H. Hall, M.D.	Devonport	Pembroke Dock.
"	H. V. Dillon	Gosport	Trowbridge.
"	A. P. H. Griffiths	Morecambe	Chester.
"	F. T. Skerrett	Warwick	"
"	H. H. Brown, M.B.	[illegible]	Glasgow.
"	H. W. Austin	Pembroke Dock	Devonport.
"	W. Dowman	Dublin	Bury.
"	S. Macdonald, M.B.	Portland	Portsmouth.
"	M. P. C. Holt	—	Aldershot.
"	H. I. Pocock	Monmouth	Devonport.
"	J. E. Trask	Bombay	Egyptian Army.
"	A. J. Luther	Cahir	Dublin.
"	G. E. Hughes	[illegible]	Cahir.
Surg.-Lieut.	C. E. Pollock	Gosport	Bengal.
"	B. W. Longhurst	Portsmouth	Madras.
"	J. H. Rivers	Devonport	Bombay.
"	H. W. Vaughan-Williams, M.B.	Kilkenny	Cork.

ARMY MEDICAL OFFICERS AND SANITARY REFORM.

SINCE Mr. Ernest Hart's address in the section of Public Medicine several medical officers have written to express their gratitude for its outspokenness and accuracy as regards the army medical services. It is regrettable to say—but of the fact there can be no doubt—that the various reports received from army medical sources point to the intense difficulty, if not impracticability, of medical officers getting their sanitary representations carried out. "These representations," writes "Lieutenant-Colonel," "are often thwarted and [illegible] in every conceivable way. Administrative officers of the medical service do not always afford the aid they should to the junior and executive ranks when the latter move in sanitary matters; with the administrative officer it is not infrequently a policy of keeping well and popular with the military authorities, and such a position is best achieved by forwarding as little sanitary correspondence as possible which entails expense, even although it be that such expenditure would be repaid by increased health and

efficiency. It is, indeed, not too much to say that many a medical officer has suffered in promotion and prospects by being a sanitary reformer; how, then, under such conditions, zeal and the conscientious discharge of duty by medical officers is possible is a problem still awaiting solution?

THE UNITED STATES MARINE HOSPITAL SERVICE.

The report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the year ending June [illegible], [illegible], recently issued, contains some interesting statistics relating to the diseases that affect the seamen under the charge of the department. The Service is divided into geographical districts. There were treated in hospitals under the supervision of the medical officers 14,[illegible] patients. Among these there were 4[illegible] deaths (3.21 per cent.). The average number of days' relief given each patient was [illegible]. There were treated in the dispensary and office [illegible] cases. As bearing upon the frequency of gonorrhœa among this and similar classes, it appears that of 5[illegible] patients who applied for medical relief, [illegible] were affected with gonorrhœa—[illegible] per cent. of the whole number; [illegible] had secondary syphilis, and 1,[illegible] were treated for ulcer of the penis, only [illegible] of the patients were treated for valvular disease of the heart. Of the [illegible] applicants for admission into the Marine Service as seamen, pilots, and officers, 171 were rejected for physical disability. There were 43 rejections for colour blindness; only 7 for valvular disease of the heart; 4 for pulmonary tuberculosis, and 20 for genito-urinary troubles, gonorrhœa causing 4 rejections and ulcer of the penis 8. Of [illegible] candidates who presented themselves for examination into the medical corps, only 3 received the required grade mark of 80 per cent.

REDUCTION IN THE ARMY MEDICAL STAFF.

Rumours are in circulation that further reduction in the administrative ranks is in contemplation. It is scarcely credible that such further alteration in the administrative ranks meets with the approval of the Director-General. The administrative ranks have already undergone depletion enough. But no efforts will be spared to reduce the number of surgeon-major generals; the title is anathema itself to general officers; that, and that alone, is shrewdly supposed to be at the bottom of these attempts at reduction. If the evil title cannot be eliminated, it can be reduced to a minimum!

THE CAMBRIDGE HOSPITAL, ALDERSHOT.

The cases sent in from the field column, says the *Aldershot News*, are for the most part of ordinary illness. There are none of sunstroke, but of the 8 men admitted (August 18th), about half were suffering from the effects of the heat. On the 20th some 17 men of the 2nd Division and 5 men of the 1st Division were brought in. On August 23rd more patients arrived.

THE DEPÔT MEDICAL STAFF CORPS.

There will shortly be a vacancy in the command of the Depôt and Training School at Aldershot, owing to Brigade-Surgeon-Lieutenant-Colonel W. H. Macnamara being placed under orders of readiness for service in Egypt. The retiring Commandant has filled the position with credit to himself and the department, and we trust his successor will fill the post with equal success.

THE MANŒUVRES IN THE NEW FOREST.

The reports of the manœuvres show that some 80 cases were admitted from the field columns into the Cambridge Hospital at Aldershot; this number is exclusive of those sent to the Royal Victoria Hospital at Netley, where there were some [illegible] admissions—chiefly abrasions of the feet, a few cases of pneumonia and diphtheria, the last probably connected with the cases which have occurred at Aldershot. The bearer companies of the Medical Staff Corps have had facilities for practice in the field, the men of two companies being assisted by the sections of trained stretcher-bearers with battalions. The Army Medical Staff and the Medical Staff Corps have worked efficiently, although, according to the *Aldershot News*, they have met with not a little unfavourable comment.

SANITARY PRECAUTIONS, CHITRAL RELIEF FORCE.

Representations have been made to the Government by the Principal Medical Officer, Her Majesty's forces in India, relating to precautions connected with the withdrawal taking place before October 1st. The allotment of British troops to railway carriages to be fixed at four per compartment. The troops to be allowed 1 lb. of ice per day per man until they reach their destination. Pakhals to be taken in the train to supply drinking water in addition to such water as will be obtainable at each station during the movement of the troops. The Government of India has sanctioned the proposals. The most important of these recommendations is the one to obviate the excessive overcrowding of troop trains which is so common in the movement of corps by rail.

SANITATION OF INDIAN CANTONMENTS.

Brigade-Surgeon-Lieutenant-Colonel W. H. Climo, M.D., Retired List Army Medical staff, contributes to the *United Service Magazine* for September an article on The Sanitary Conditions of Indian Cantonments. After summing up the views advanced by him in the papers which appeared in the April and July numbers on The Scourge of India (already noticed in the British Medical Journal), he proceeds to show that very early in his career he recognised the need of sanitary duties being carried out by men possessing special knowledge of the subject, working under one central authority, and expresses the opinion that "under the present relations of the Army Medical Staff to the army, satisfactory results will never be obtained until this reform is carried out." In referring to an outbreak of cholera at Mian Mir in 1872, he points out how at that time he represented local insanitary conditions—namely, a polluted soil resting on a bed of kunkur (amorphous lime), which stopped subsoil drainage and caused the soil to become waterlogged during the rains, and the contamination of the water supply to surface drainage, and even in all probability by cases of cholera itself, which seemed to account for the greater incidence of the disease at Mian Mir compared with most other Punjab cantonments; but that yet tainted water as a probable cause of the disease found no place in the reports. Brigade-Surgeon Climo fully supports the views so persistently urged by Mr. Ernest Hart as to the causation of cholera and enteric, and the want of acknowledgment or recognition of sanitary work by the department itself; more than this, the article gives emphasis to Mr. Hart's remarks on medical reports dealing with cholera and enteric, and pronounces these reports in the departmental blue or yellow books to be "crammed with feeble explanations, crude opinions, and hasty generalisations entirely at variance with the scientific thought of the day."

THE ARMY MEDICAL SCHOOL.

The failure of four candidates (two A.M.S. and two I.M.S.) to qualify at the close of the seventeenth session has been taken up by the *Army and Navy Gazette*, which comments on this subject in its issue of August 17th. Our military contemporary says: "There must be something radically wrong in the discipline, supervision of studies, or instruction when 11 per cent. of the probationers fail, after a four months' course, to obtain one-third of the total marks in each subject necessary."

This comment is warmly taken up in a letter to the Editor, *Army and Navy Gazette*, which appeared on August 24th, and in the issue of August 31st further correspondence appears disputing the position of the Army Medical School at Netley as a thorough and satisfactory educational institution for candidates for the Indian Medical Service—whatever it may be for the Army Medical Staff. One writer advocates a stricter supervision of the Netley candidates' studies out of working hours.

P. M. O. ALDERSHOT.

The offices of the Principal Medical Officer Aldershot have been removed to the new headquarter offices, Stanhope Lines, from the Cambridge Hospital.

MILITARY ASSISTANT SURGEONS.

The Government of India has been pleased to continue the employment on the personal staff of the Lieutenant-General Commanding the Forces, Madras and Bombay, of the military assistant-surgeons formerly authorised for the army headquarters of these commands. Lest the titles in the heading be misunderstood in any quarter, it is as well to say that they refer to officers of the subordinate medical department.

THE VOLUNTEER MEDICAL SERVICE.

Surgeon-Captain R. R. Sleman, Artists R.V., writes: I feel sure that many Volunteer Medical Officers will be glad to know that the representations made to the War Office authorities by Surgeon-Lieutenant-Colonel Baines and others, have been successful in producing a modification of the S.B. badge for regimental stretcher bearers of volunteer corps. I cannot, however, agree with the description of the modified badge which Surgeon-Lieutenant-Colonel Baines gives in his letter published in the British Medical Journal of August 31st, in which he states that the ground work is to be of the same colour as the tunic. Reading from the memorandum issued by the War Office to all commanding officers of Volunteer corps, I find that the ground work of the new badge is to be white. If it was of the same colour as the tunic the badge would be visible at a very short distance only.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL GRIEVANCES AND THE GENERAL PRESS.

It is always a matter for regret when medical men are found writing to the general press in regard to their professional differences. Such letters are always open to misinterpretation, and people are generally only too ready to suggest reasons for their publication far from complimentary to the profession as a whole.

In the *Western Independent*, August 31st, for example, a letter appears from a surgeon in Devonport inquiring as to "the law—if any—relating to the appointment of medical men to examine and verify the certificates of other medical men in lunacy cases." Surely this is not a matter to be discussed in the general press, nor does it appear seemly that a professional brother on the bench should be accused of receiving "perks," whatever may be meant by that term. If the writer of this letter really does not know the law as to the certification of lunatics, reference to a manual would give him the information required, or if he wishes to know what is the professional custom as to the choice of the medical man by whom the certificate is to be given, an inquiry in a professional journal would elicit the information. In neither case can we admit that a letter to the local general press is a proper proceeding.

MIDWIFERY DIPLOMAS.

Fully Qualified writes: Is a man whose name figures on the *Medical Register sine* midwifery diploma entitled to recover fees in that department? He was registered before 1886, but not for the above.

*** We think that the practitioner referred to, though not registered since the Act of 1886, is entitled to recover midwifery fees.

FEES TO MEDICAL WITNESSES.

M.D. (Lond.) writes: A few weeks ago I attended a London County Court to give evidence as to damages. The solicitor engaged in the case refusing to pay me more than a guinea for my evidence, etc., I consulted the clerk of the court, who told me that one guinea was allowed for my evidence as to the facts of the case, and a further fee, ranging from one

to three guineas (at the option of the taxing master) for my professional opinion. He stated that should the solicitor refuse to pay me more than one guinea, the Court could only compel me to give evidence as to fact. Under the circumstances of the case he advised me to accept one guinea for my evidence, and one guinea for my opinion, which was paid me.

DEATH CERTIFICATES.

INQUIRER writes: Is it legal for anyone to sign a certificate of death, supposing the person who does so is present at the time; or must it be signed by a doctor?

"*" No certificate of the cause of death is recognised, unless given by a practitioner whose name is on the *Medical Register*. A person merely present at the time cannot give a certificate of the cause of death; and if an unregistered medical practitioner give a certificate, it is regarded by the registrar merely as a part of the information tendered by the "informant."

AN INCAPABLE *LOCUM TENENS*.

A VICTIM writes: I left a few days ago rather hurriedly to go for a holiday leaving my dispenser to engage a *locum tenens*. The gentleman he engaged was quite incapable, and suffering from a state bordering on delirium tremens, alternating with intoxication. I have ample evidence of this. Three patients stated to me that he was drunk; one said, "she never saw a man so drunk." This is corroborated by the nurse and husband of one patient. I have no doubt that others whom I have not yet seen saw him in this state. The three patients above mentioned refused him admission when he paid another visit. He has done me a great amount of harm, and I had to be summoned by telegram from the North of France, where I was staying. Now he threatens me with his lawyer, because I refuse to pay him one penny for his "services." Am I in the right when I refuse to pay?

"*" In reply to "Victim," the case will entirely turn on whether the *locum tenens* is able to rebut the evidence brought against him; and, even supposing some of the charges proved, still if he did do any work while acting as *locum tenens*, he might be held entitled to some *quantum meruit*. If proceedings are instituted by him, "Victim" should consult a solicitor; until they are, he should refuse to recognise the claim.

CONSULTANTS AND THE WIVES OF MEDICAL MEN.

A MEMBER AND SUBSCRIBER writes: Has a consultant a professional right to charge a medical man's wife a full consulting fee of £2 2s.? The lady resides in the country, and visited the consultant in London by appointment. The lady's husband was out for a change for health.

"*" If our querist will consult the rule—the first and more essential part of which we quoted—referred to in our private note, he will find that, although not in conformity with traditional precedent nor existing general custom, a practitioner—consultant or otherwise—is at liberty to charge a medical man or his wife, if he thinks well so to do—a procedure, however, which is not, in our opinion, to be commended.

A TOUTING CARD.

ALTHOUGH much pressed for space, we deem it right, in the interest of the profession, to accord insertion to "Dr. Fisher's" exceptional card, with its significant "N.B." in the hope that it may attract the attention of the diploma-granting bodies therein mentioned.

CHARGES FOR ATTENDANCE ON CHEMISTS.

T. O. H.—In reply to our correspondent's query, we have no hesitation in stating that it is neither the rule nor the general custom of the profession to accord gratuitous attendance and advice to chemists and their families, in relation to which we may quote the following extract from *The Young Practitioner*, p. 158:

"If any pharmacist volunteers to supply a practitioner and his own immediate family with medicine either free or at a nominal price, or with such proprietary articles as he needs, at cost, the privilege can be conscientiously accepted; but inasmuch as such an arrangement must naturally entail, more or less, reciprocal professional attendance on the pharmacist and his family, it becomes a question for consideration as to its acceptance or otherwise."

M.D. BRUX.

IN reply to "Radius," we assume that he refers to the above title as acquired after test, though he does not say so. If so, our reply to his questions is that the M.D. Brux. ought not to style himself "Dr.," and that such a title not being registrable cannot be legally used.

IN reply to "Registrar," we think that the medical man in question is not correct, holding a Brussels degree acquired after test, in signing himself "M.D." on death certificates, and that "Registrar" would be right in calling his attention to the subject.

CONSULTANTS AND THE AFTER-TREATMENT OF PATIENTS.

A., a general practitioner, calls in B., a consultant, to see C., suffering from vomiting in pregnancy. Premature labour is induced and C. recovers. A. learns accidentally that, since he left off attending her, C. has been going up to B., and is being treated by him for neurasthenia. Is it correct conduct on B.'s part to subsequently treat A.'s patient without his knowledge?

"*" In reply to our correspondent's natural question, we would note that it is clearly laid down in the *Code of Ethics*, chap. ii. sect. 4, rule 19, as follows: "N.B.—Should the practitioner who has been called in consultation be subsequently requested to take sole charge of the patient, he should courteously but firmly decline."

WHAT IS A *POST-MORTEM* EXAMINATION?

A MEMBER OF THE BRITISH GUIANA MEDICAL SERVICE writes: In the colony of British Guiana a fee of 10 dollars—equal £2 1s. 8d., is paid for a *post-mortem* examination, with dissection and written report of same. When a *post-mortem* examination is made without a dissection, the sum allowed is 2 dollars for the external examination and report. In accounts sent to coroner for the higher fee it must be stated that a dissection was made.

OBITUARY.

FELIX HOPPE-SEYLER.

THE news of the death of Professor Hoppe-Seyler will have come as a surprise to most of his fellow scientists, for his life continued to be such an active one until he died, that one was apt to forget that he was nearly 70 years old. He was born at Freiburg in 1825, and died suddenly on August 10th at his summer residence on the Lake of Constance. In the early part of his life he was a physician and pathological anatomist. His studies were pursued in Halle, Leipzig, Berlin, Prague, and Vienna. Among his teachers—the two Webers, Erdmann Marchand, Oppolzer, Lehmann, and Johannes Müller must be especially mentioned. He took his doctor's degree in 1850, and in 1854 became prosector at Greifswald; two years later he became Virchow's assistant at the Berlin Pathological Institute, where he took charge of the chemical department. In 1860 he received the title of Extraordinary Professor of Chemistry, and the next year that of Ordinary Professor at Tübingen. Here he remained till, in 1872, he was called to the newly-founded University of Strassburg, and it is in connection with the physiologico-chemical institution there, which was built under his immediate superintendence, that his name will be chiefly remembered, and here he worked until the end of his life.

Though he was not a man of exceptional brilliancy or striking originality, he possessed an infinite power of taking pains. He got through an enormous amount of o iginal work, devoted himself to directing the work of numerous pupils, and in fact made his laboratory the principal centre of research in the domain of physiological chemistry. He attracted to the University numerous students, including a goodly number from foreign lands; his textbooks were recognised as authoritative; he was one of the principal pioneers in making physiological chemistry the important branch of science it has now become, and at the time of his death he was universally recognised as the leading exponent of that department of physiology. His place will be a difficult one to fill, because those who are acquainted with medicine and with chemistry too, though not so rare as when Hoppe-Seyler began his work, are still somewhat difficult to find. Among his numerous pupils, however, there should be several who, inspired by his example, will be able to carry on the work he so successfully inaugurated.

Among his earlier writings we find some of a distinctively medical character, such as investigations on the theory of percussions, and of vibrations in the thorax. Soon, however, his contributions to science took a more chemical turn, and papers on chondrin, on serous transudations, on the influence of cane sugar on digestion, on abnormal pancreatic

juice, made their appearance. In 1857 he published a short paper on the action of carbonic oxide on blood, and this proved the prelude to a number of others of far-reaching importance relating to the same fluid, and particularly to its pigment. The outcome of these investigations was a complete knowledge, not only of the chemical and physical characters of hæmoglobin, but an accurate conception of the uses of this pigment as an oxygen carrier. Since then the subjects that Hoppe-Seyler worked at have included all the branches of medical chemistry: bile, pus, urine, lecithin, nuclein, the proteids—which he was the first to arrange in an orderly manner—fermentation, polarisation of light, and vegetable physiology are a few only of the many subjects he attacked.

Among his pupils it will be sufficient to mention the names of Liebreich, Salkowski, Miescher, Thierfelder, Göthgens, Baumann, Herter, Jüdell, Zaleski, Diakonow, Plósz, and Sutoli to show how widespread his influence was, not only in Germany but in other countries as well.

A captious critic might complain that sometimes his work was too chemical, and bore but little upon medicine. If this was the case in some instances, it must always be remembered that Hoppe-Seyler's principal work had most important practical bearings. The process of oxidation in the body was a subject that possessed a special attraction for him, and among his most recently published papers will be found one on the mode of respiration in deep-sea fishes, and several (with Araki) on the disordered metabolism that follows a deficiency in oxygen supply.

Hoppe-Seyler's exhaustive treatise on *Physiological Chemistry* was completed in 1881, but a second edition has never appeared. His *Practical Handbook* has, however, reached its sixth edition, and many of the methods there described are those which we owe to the distinguished author himself. In 1871 he collected together the works by his pupils and himself which had been carried out in his Tübingen laboratory, and published them under the title of *Medicinisch-chemische Untersuchungen*. In 1877 he started his now well-known journal, *Der Zeitschrift für physiologische Chemie*, and at the time of his death this had reached its twentieth volume.

A mere enumeration like the foregoing hardly does justice to the many-sided activities of the man whose loss we have to deplore, but may serve to indicate that he was *facile princeps* in the special branch of science to which he devoted a long and busy life.

By the death of Mr. Frank Marsh Wright, on August 23rd, the medical profession has lost a valuable member. Having arranged to go with some friends for a day's outing, and in ignorance that the train agreed upon started four minutes earlier than formerly, he reached Bottesford Station just in time to see the train steaming away. Seeing his friends in the last compartment of one of the carriages, he attempted to get in and grasped at the carriage railing: but missing it, fell in between two carriages, and was so terribly injured that he died within a few minutes. Mr. Wright, who was a native of Bottesford, received his early education at Derby School and subsequently began the study of medicine as a pupil at the Nottingham General Hospital. Thence he passed, in 1881, to St. Bartholomew's Hospital, where he pursued his studies with credit and distinction. He was Foster prizeman in anatomy in 1883, and Prosector of Anatomy to the Royal College of Surgeons in 1883-84. He obtained the L.S.A. in 1884, and in the following year became a Member of the Royal College of Surgeons. Having fully equipped himself for the work of a general practitioner, he returned home to Bottesford, and joined his father, Mr. James Wright, who had carried on a very extensive country practice there for many years.

Mr. James Carter, F.R.C.S., F.G.S., who recently passed away at the age of 81, was for the greater part of his life in practice at Cambridge. He studied at Guy's and St. Thomas's, passed the "Hall" in 1835, and the "College" in 1836, becoming a Fellow of the latter in 1876. He devoted his spare time to the study of geology, and especially palæontology. He contributed a large number of papers to the *Geological Magazine* and the *Quarterly Journal of the Geological Society*. The *Athenæum* speaks of him as follows: "Mr. Carter was recognised as an authority on the fossil decapod crustacea, and for several years past had been engaged in collecting materials for a monograph on that group. It is believed that a considerable part of the manuscript which he has left is in a sufficiently complete state for publication. Until a few months ago Mr. Carter was always extremely active and bright, so that, in spite of his advanced years, the news of his death will come as a shock to many of his friends. For several years he served on the Councils of the Geological and the Palæontographical Societies, and of the latter he was also a local secretary. Mr. Carter presented his geological collection, consisting mainly of local fossils, to the Woodwardian Museum a few years since."

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are: Dr. Louis Deschamps, a member of the Paris Municipal Council and a former President of the Council General of the Seine Department; Dr. Charles Gros, a leading practitioner of Boulogne, aged 89; Dr. L. Calassi, Professor of Medical Pathology in the University of Rome; Dr. Friedrich Miescher, some time Professor of Physiological Chemistry; Dr. von Sury, Professor of Forensic Medicine in the University of Basel; and Dr. Jakob Baumann, one of the oldest practitioners of Berlin, aged 81.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.

Diphtheria in Aldershot Camp.—Mr. Pierpoint asked the Under-Secretary of State for War how many cases of diphtheritic sore throat had been admitted to hospital in the camps at Aldershot during the last six months.—Mr. Brodrick, in reply, said that during the last six months there had been admitted to the hospitals at Aldershot 137 cases of diphtheria and 525 cases of sore throat. In the latter the returns did not differentiate septic sore throat. In the diphtheria cases the type had been that known as "benign," and they had already yielded to the antitoxin treatment. Only one death had resulted from this complaint. Although full investigation had been made, in none of the cases could the origin of the disease be definitely traced. Some medical officers, however, were inclined to ascribe its prevalence and that of septic sore throat to the recent necessary opening up of the old drains for the purpose of reconstruction. The question was engaging most careful attention.

UNIVERSITIES AND COLLEGES.

APOTHECARIES' HALL OF IRELAND.

Preliminary Examination in Arts.—The following candidates passed this Examination on September 6th and 7th, 1895, and received Certificates of Proficiency in General Education:

Second Class.—F. G. Cross, O. B. Gauntlett, F. S. S. George, C. I. Graham, G. W. Greene, J. W. Harrison, M. Muirhead, D. S. Saudiland, F. W. Smith.

The following passed in one or more subjects:

N. Hodgetts, Algebra and Geometry; S. C. Jellicoe, Latin; A. E. Muscott, Algebra, T. Richards, Algebra; S. Rogers, Algebra; E. Tilbury, Geometry.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,331 births and 4,042 deaths were registered during the week ending Saturday, August 31st. The annual rate of mortality in these towns, which had been 19·1 and 19·9 per 1,000 in the two preceding weeks, was again 19·9. The rates in the several towns ranged from 14·2 in Bristol, 15·0 in Halifax, and 15·9 in London and in West Ham to 31·8 in Hull, 34·1 in Bolton, and 35·6 in Burnley. In the thirty-two provincial towns the mean death-rate was 22·8 per 1,000, and exceeded by 6·9 the rate recorded in London, which was 15·9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 5·3 per 1,000; in London the rate was equal to 3·3 per 1,000, while it averaged 6·7 in the thirty-two provincial towns, and was highest in Sunderland, Bolton, and Burnley. Measles caused a death-rate of 1·3 in West Ham, and 4·1 in Blackburn; whooping-cough of 1·4 in Bradford; and diarrhœa of 3·6 in Blackburn, 9·2 in Norwich, 11·7 in Sunderland, 13·0 in Hull, 13·5 in Bolton, and 13·6 in Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 56 deaths from diphtheria in the thirty-three towns included 40 in London, 4 in Birmingham, and 3 in

Liverpool. Four fatal cases of small-pox were registered in London, 1 in Oldham, and 1 in Preston, but not one in any other of the thirty-three towns. There were 341 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, August 31st, against 273, 336, and 342 at the end of the three preceding weeks. 36 new cases were admitted during the week, against 84, 79, and 65 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital which had been 2,511, 2,539, and 2,507 at the end of the three preceding weeks, had increased again to 2,512 on Saturday, August 31st; 304 new cases were admitted during the week, against 276, 357, and 306 in the three preceding weeks.

In thirty-three of the largest English towns, including London, 6,329 births and 4,050 deaths were registered during the week ending Saturday, September 7th. The annual rate of mortality in these towns, which had been 19.9 per 1,000 in each of the two preceding weeks, was again 19.9 last week. The rates in the several towns ranged from 11.1 in Plymouth, 12.4 in Swansea, and 12.5 in West Ham to 35.6 in Hull, 37.1 in Wolverhampton, and 40.5 in Sunderland. In the thirty-two provincial towns the mean death-rate was 22.6 per 1,000, and exceeded by 6.5 the rate recorded in London, which was only 16.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 5.3 per 1,000; in London the zymotic rate was equal to 3.2 per 1,000, while it averaged 6.7 in the thirty-two provincial towns, and was highest in Blackburn, Sunderland, and Hull. Measles caused a death-rate of 1.0 in West Ham and Salford, and 4.5 in Blackburn; whooping-cough of 1.4 in Bradford, 2.2 in Bolton, and 3.0 in Wolverhampton; "fever" of 1.1 in Sunderland; and diarrhœa of 11.5 in Burnley, 13.3 in Sunderland, 13.4 in Preston, and 16.8 in Hull. The mortality from scarlet fever showed no marked excess in any of the large towns. The 52 deaths from diphtheria in the thirty-three towns included 28 in London, 4 in Birmingham, and 4 in Leeds. Five fatal cases of small-pox were registered in London, 1 in Manchester, and 1 in Oldham, but not one in any other of the thirty-three towns. There were [illegible] cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, September 7th, against 336, 342, and 341 at the end of the three preceding weeks; 25 new cases were admitted during the week, against 79, 65, and 36 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,539, 2,507, and 2,512 at the end of the three preceding weeks, had further increased to 2,600 on Saturday last, the 7th inst.; 338 new cases were admitted during the week, against 357, 306, and 304 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, August 31st, 904 births and 499 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 16.6 per 1,000 in each of the two preceding weeks, rose again to 17.3, but was 2.5 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.3 in Paisley to 24.0 in Perth. The zymotic death-rate in these towns averaged 4.1 per 1,000, the highest rates being recorded in Dundee and Leith. The 241 deaths registered in Glasgow included 31 from diarrhœa, 8 from "fever," 7 from whooping-cough, 3 from measles, 3 from scarlet fever, and 3 from diphtheria.

During the week ending Saturday, September 7th, 830 births and 504 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 16.6 and 17.3 per 1,000 in the two preceding weeks, further rose to 17.5 last week, but was 2.4 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.6 in Dundee to 23.5 in Greenock. The zymotic death-rate in these towns averaged [illegible] per 1,000, the highest rates being recorded in Leith and Dundee. The 223 deaths registered in Glasgow included 28 from diarrhœa, 7 from whooping cough, 4 from scarlet fever, and 2 from "fever." Two fatal cases of diphtheria and 22 of diarrhœa were recorded in Edinburgh, and 2 of scarlet fever in Leith.

PROVINCIAL WORKHOUSE INFIRMARIES: APPOINTMENTS OF NURSES.

WE are pleased to hear that the Board of the Nottingham Union has materially increased the nursing staff in the infirmary. The male nurses are by degrees being superseded by female trained nurses in the sick wards, the men's services being still retained in the male lock and infirm wards. There are seven nurses working at present in the hospital, some of whom are supplied through the Workhouse Infirmary Nursing Association; a proportion of this staff is for night duty. We are indeed glad to note this progress on the part of the Board; when the time comes for starting the work in a new infirmary there will be the nucleus of a well-disciplined staff for the new wards.

Tonbridge Union is advertising for three nurses for the hospital. In reading the advertisement we feel that the authority who worded it has not stated distinctly enough what are the desired qualifications of the nurses; any woman who has been in a private nursery, or indeed any servant wishing to change her occupation can answer the advertisement, and may we conclude be accepted for the responsible work of nursing the sick paupers. We trust that there are some wise councillors on the Board who will see the mischief of such a selection.

We note as a sign of the movement which has followed the publication of the BRITISH MEDICAL JOURNAL on Provincial Workhouse Infirmaries that various unions are increasing their staff of nurses. Macclesfield is appointing probationary nurses to work under a certificated nurse. Bolton Union is requiring three charge nurses; Poplar Union is appointing a fully trained nurse; South Molton is looking for an experienced nurse; Eton has recently appointed a fully trained nurse, and we judge by the salary offered that the guardians will be satisfied only with the best. Newport (Mon.) is requiring a probationer nurse at the workhouse hospital; she will be trained under the head nurse and the medical officer, and her engagement is for two years. In Ireland it is pleasant to note that trained nurses for the workhouse hospitals are increasingly advertised for; and from comments that we see in the press we judge that the question of pauper nursing is coming well to the front.

The Guardians of the Stoke-on-Trent Union are advertising for a trained nurse and midwife; the salary they offer is £[illegible] 10s. Such sum, we hold, is insufficient to secure the services of a thoroughly competent candidate. These nurses know well enough that £30 is the usual market value of these qualifications, and the first-class nurses will hold aloof, suspecting that there is some reason for the low salary offered.

In looking through the list of vacancies we are glad to see that the Biggleswade Union is advertising for a night nurse; the Board were for a long time adverse to employing a proper nurse at night, but we see now that there are signs of moving with the times. Another notice of vacancy augurs well for the happiness and comfort of the aged and sick. We refer to the appointment of a new master and matron at [illegible] Union; these officials have so much power in their hands that it is of great importance that a wise choice should be made of those who are in sympathy with the various efforts being made to introduce humanity into the Poor Law.

We are glad to see that the Guardians of the Bradford Union are increasing the nursing staff; the advertisement is for seven nurses having had three years' training in hospital, to act as assistant nurses in the Union Workhouse. We have had to comment adversely on the inadequacy of the number of nurses in this infirmary, and we welcome the increase which we hope will eventually supersede the pauper help. At Wakefield also we note that the guardians are seeking for a trained nurse to take night duty; but we regret to notice two things which are very faulty in the conditions prescribed: the nurse is only required to hold a one's year's certificate of training, besides that of midwifery, and she is to be placed on permanent night duty. The salary offered is good, so that the guardians could command the services of a fully trained nurse.

THE SANITARY CONDITION OF EXETER.

THE city of Exeter has been somewhat recently visited by one of the Inspectorate of the Medical Department of the Local Government Board, in the person of Dr. W. W. E. Fletcher, for reasons which are, we hope, unique—namely, a disregard by the local Town Council of the repeated efforts of the Board at Whitehall to elicit information as to the steps taken "to effect the necessary improvements" in respect of the sanitary circumstances found to be prevailing in 1885 by the late Dr. Spear, and again in 1894 by Dr. Bulstrode in the course of his "General Cholera Survey." But there is a certain amount of satisfaction in reading Dr. Fletcher's report, as we find that the Town Council have apparently not been so unmindful of their obligations to their city as in their correspondence. Indeed, Dr. Fletcher credits them with some advance in various directions, such as main drainage and the like, but their action in the matter of dealing with insanitary property is described as apathetic and wanting in firmness, and constant supervision is called for with a view of guarding the river Exe, the source of domestic water supply, from dangerous pollution, the report showing that in its upper reaches the river is at present subjected to contamination by the ingress of untreated sewage and other deleterious matters.

Other needed action by the Town Council is referred to, especially as to the dwellings of the labouring classes, many houses being now "so dilapidated, ill ventilated, badly lighted, damp, or dirty as to be unfit for habitation." But perhaps the most curious part of Dr. Fletcher's report is that in which he describes the manner of health officering of the city, namely, by what are practically four medical officers of health, though virtually there is stated to be one chief officer and three assistants. The latter are said to have had no special training in public health work, and it is pointed out that the combined salaries of these four gentlemen would go far to secure the whole-time services of one properly trained and qualified officer. Divided responsibilities such as are now in operation in Exeter must needs be detrimental, we think, to the proper administration of the health department, and we shall hope shortly to learn that the Town Council have decided to adopt the scheme by which they shall command the entire attention to the duties of his important office of a single health officer of the standing necessary for a city of the character of Exeter.

THE HYGIENE OF PARCEL WRAPPING.

MONTPELLIER is the first town in France—or, as far as we are aware, in any other country—which has dealt with the wrapping up of parcels from the sanitary point of view. By a decree of the Municipal Council, passed some time ago, the use of coloured paper for parcels containing food stuffs of any kind is absolutely forbidden. Printed papers or manuscripts may, if unsoiled, be used to wrap up vegetables, but every other kind of eatable must be done up in new white or straw-coloured [illegible] paper. Under this enlightened ordinance Montpellier offers one special advantage as a place of residence to minor poets: the offspring of the Muse cannot be degraded to the vile uses of the butterman, but at worst can only be made to serve as coverings for the pastoral potato and the harmless necessary cabbage.

SANITARY ASSOCIATION OF SCOTLAND.

THE annual Congress of the Sanitary Association of Scotland was held recently in Greenock, under the presidency of Sir Michael Shaw Stewart and Professor Mathew Hay. Sir M. Shaw Stewart reviewed the work of county councils in Scotland since their establishment in 1889, in the construction of main systems of sewerage, in the provision of pure water supply, and hospitals for infectious disease. Professor Hay discussed the rates of mortality in Scotland in relation to sanitary progress. Dr. Wallace, medical officer of Greenock, gave an exhaustive historical sketch of the sanitary condition of Greenock, and the means by which it has been improved. Dr. Campbell Munro submitted a paper on Infectious Diseases in Scotland: their Relative Prevalence, Fatality, and Hospital Isolation, mentioning that approximately [illegible] in each 1,000 of the burghal population of Scotland, and [illegible] in each 1,000 of the rural population were

now under the operation of the Notification Act. Dr. Mackenzie, of Leith, read a paper on Diphtheria and its Prevention; and Dr. Nasmyth, of Fife, sent a paper on Diseases of Occupation. Papers by laymen on Public Baths and Washing Houses and on the Housing of Submerged Tenth, were also read. Very elaborate successful arrangements for the comfort and entertainment of the visitors were made by the Corporation of Greenock in the person of Dr. Clurkie, and private hospitality was freely and generously accorded, so that a highly successful meeting was the result.

BACTERIOLOGICAL EXAMINATION OF DIPHTHERIA CULTURES AT BRISTOL.

A REPORT of considerable interest has just been presented by Dr. D. S. Davies to the town council of Bristol, but emanating from the pen of Dr. W. Dowson, one of the assistant health officers of the city, on the results of the bacteriological examination of diphtheria cultures undertaken by the public health department of the city during the first half of the current year. It appears that in all 71 cases of diphtheria came to the knowledge of the health officer in the six months, 47 of these being presumably accepted as true diphtheria without recourse to bacteriological examination; of other 11 notified as diphtheria, in 6 the specific (Klebs-Loeffler) bacillus was found, and in the remaining 5 it was not recovered. Again of 38 cases suspected as probably diphtheria, in 18 the bacillus was found. Thus, of 11 cases held to be the true disease, nearly 50 per cent. were found to yield negative results, whilst of 38 attacks where the malady was only suspected, nearly 50 per cent. turned out to be the grave malady thought of. Testing cases by second and third examinations of swabbings from patients' throats to ascertain at what period the affected part became free from the specific bacillus, Dr. Dowson found instances in which the bacillus was present after 17, 25, and 29 days and also cases in which the bacillus, having been present on the first test, was 20 and 26 days later. He very wisely refuses to accept absence of the bacillus on test as evidence of non-diphtheria, preferring rather to regard possible accident or absence from the particular material submitted only, as accounting for the fact, and in all such cases precautions are urged as if true diphtheria were in question. Two extremely interesting sets of cases were met with as follows:

A patient of a medical man suffered from an indefinite form of sore throat, and three weeks later the doctor's two children attended a party at the lady's house and were fondled by her. At intervals of eleven and sixteen days the children developed nasal membrane without other disturbance of health, and, portions of the membranes having been found by Dr. Dowson to contain the true bacillus, material was also submitted to Dr. Klein, who also found the disease to be diphtheria of a virulent type. Active local antiseptic treatment had been employed for some two months, when the children were declared practically free from the disease. But at the end of other two months their mother sickened with a disease which also proved to be true diphtheria, and the bacillus was again recovered from the children's nasal membrane. The malady in the mother ran a mild course, and at the end of another month no bacilli could be recovered from any one of the three patients.

The second case of unusual interest referred to by Dr. Dowson had startling results, inasmuch as a boy of 11, who had a patch on one tonsil, was attended by a medical man, who, not thinking of diphtheria as at all likely, nevertheless sent material from the patch, and was astonished to learn that an almost pure culture had appeared within twenty hours of incubation, and this was corroborated by Professor Roy and Dr. Louis Cobbett, at Cambridge, who found the growth to be one of the most virulent ever worked with.

We think these series of cases are of significance as showing how easy it is for unrecognised diphtheria to give rise to serious epidemics. Space forbids us from further following Dr. Dowson through many instructive pages of matter concerning diphtheria in the lower forms of life, and other cognate subjects. Enough has been said to demonstrate the importance of the work being undertaken at Bristol on the lines of the New York Bacteriological Department.

THE STEPNEY BOARD OF GUARDIANS AND MEDICAL RELIEF.

WE are pleased to see that the Stepney guardians have resolved to pay any registered medical practitioner resident in the union who may be called to a case of urgent illness in any destitute person a fee of 7s. 6d. for attendance given between 10 P.M. and 8 A.M., and 3s 6d. between 8 A.M. and 10 P.M. This is an innovation in reference to medical relief which we hope to see followed by other Boards. It is possible, however, that without some regulations in reference to this new system some abuses may crop up, but these, it is probable, can easily be guarded against, and we should suggest, in order to make the system work smoothly for all parties, that the guardians should ascertain what medical practitioners resident in the district are willing to give their services on the terms offered, and these having formally accepted the terms should be held responsible to give attendance when applied to either by night or day. It would scarcely do to let the question be so far open that any medical man could attend if he liked, or without any reason whatever could refuse attendance, as under such circumstances night cases might be systematically accepted from 10 to 11 P.M. and declined during the mid hours of the night. It would surely be best to have a distinct agreement, and if any of the residents decline the terms these should not be applied to; if, on the other hand, they accept them, it should be on the understanding that they do not at any time decline attendance except for some very special or cogent reason. With some such regulation as this we believe a great boon would be conferred on the poorer classes.

DISCUSSION AT THE AUCKLAND BOARD OF GUARDIANS.

WE much regret to be obliged to note the decision given at a recent meeting of the above-named Board, when a report of a Committee was presented which recommended the increase of the medical officer's salary on the ground that the work and responsibility had enormously increased, and that the office was considerably underpaid. The presentation of this report appears to have given rise to considerable discussion, and notwithstanding the statement that the Committee were agreed upon the subject, when the vote was taken on the resolution, nine only voted for it, and nineteen against it. This decision, so directly adverse to the report of the Committee, ought to be sufficient to warn all members of the profession against undertaking any duties under the Auckland Board of Guardians, as it is evident that their intention is to cut down all expenses to the very lowest, and this without any regard whatever to equity or justice.

EXCESSIVE DIARRHOEA MORTALITY.

ACCORDING to the most recent weekly return of the Registrar General, a very excessive mortality from diarrhoeal diseases prevails in most of our large northern towns. Although the warm weather has had but little effect in raising the diarrhoea death-rate in most of the southern towns, it is a remarkable fact that of the twelve towns having the highest diarrhoea rates last week, no fewer than ten are in the counties of Lancashire, Yorkshire, and Durham. In these ten towns the death rate last week from diarrhoea was equal to an annual rate of no less than 9.9 per 1,000, while in the remaining twenty-three of the thirty-three towns dealt with by the Registrar General it did not exceed 2.6 per 1,000. The rate was as high as 11.5 in Burnley, 13.3 in Sunderland, 14.4 in Preston, and 16.8 in Hull; while in London it was only 1.5 per 1,000. In Hull nearly 50 per cent. of the total deaths were referred to diarrhoea, and in Burnley, Preston, and Sunderland nearly 40 per cent. were attributed to this disease.

NOTIFICATION AT MIDDLEWICH.

WE have read with much regret the following paragraph which appears in the *Winsford and Northwich Guardian* as part of a report of the proceedings of the Middlewich Urban District Council:

"The Nuisance Inspector reported that there had been a death from scarlet fever at Newton. A second child had been notified as suffering from the disease, as well as a child in Leadsmithy Street. Dr. McJannet said it appeared in the paper that he and Dr. O'Kell had been in attendance at Newton. He had attended no case of scarlet fever, and he felt that they were being imposed upon. He did not speak as a medical man, but as a member of the Council, and he had a duty to perform. He advised the Council that on receipt of the next notification they should appoint an independent medical man to see that the case really required notification. They had had more cases of infectious disease since the payment of 2s. 6d. for each notification than they ever had before. They never heard anything about measles now, although it used to be so prevalent in Middlewich. They did not hear about it because there was no half-crown for notifying measles. (Laughter.) He spoke advisedly, and asked them on receipt of the next notification, no matter what doctor it came from, to send an independent doctor to examine the case. Mr. Haddon: That will cost more than half a crown. Dr. McJannet: But it will save a good many, and if it goes forth that we are to have someone I am certain that we shall not have so many notifications as in the past. The subject was not further discussed."

Surely the speaker cannot have realised the gravity of the charge which, according to the local press, he has publicly made against his professional brethren. That more cases of scarlet fever and fewer of measles are heard of at one time than at another is nothing to the point, but the suggestion that the Council were being imposed upon, followed by the assurance that there would be fewer notifications and fewer halfcrown fees to medical men if the cases were verified, amounts to a charge of deception which ought neither to be lightly made nor lightly passed over. The proposed systematic verification is inadmissible, even if it were desirable, and the District Council were well advised in declining to entertain the suggestion.

THE CASE MORTALITY OF MEASLES.

A CORRESPONDENT of the *Newcastle Daily Chronicle*, who signs himself "A Bachelor of Medicine," pleads for the notification of measles, and supplements the usual array of arguments by figures which tend to show that the disease is one of steadily increasing malignancy. He quotes from the Report of the Newcastle Dispensary for 1893 the following statistics:

From 1854 to 1863, of every 100 cases of measles 4.2 died.
" 1864 " 1873 " " " 5.9 "
" 1874 " 1883 " " " 6.7 "
" 1884 " 1893 " " " 6.9 "
During the year 1893 " " " 6.2 "

The case mortality of scarlet fever, as calculated from the City Health Report, during the decade 1884-93, was 3.7 per cent., which is considerably less than that of measles for the like period, as shown above.

NEW INFIRMARY AT BRAINTREE.

IN passing through Braintree the other day we noted with pleasure that the infirmary buildings were rising apace. They appeared to be well situated as regards light and air, and we congratulate the guardians at having at last commenced the only workable scheme for the nursing of the sick. It may be remembered that our Commissioner severely commented on the inconvenient wards and antiquated style of the nursing in the infirmary of the Braintree Workhouse.

CONFIRMATION OF MEDICAL APPOINTMENTS BY LOCAL GOVERNMENT BOARDS.

INQUIRER writes as follows: A. and B. apply for a vacant Medical District. A. is appointed by the guardians; he runs a cheap practice, and is not recognised by the other medical men in the locality. Will the Local Government Board confirm A.'s appointment if they are informed of the facts stated, or will they recommend the appointment of B., who is recognised by his fellow practitioners?

⁂ There is no reason to suppose that the Local Government Board would, solely for the reasons stated by our correspondent, decline confirm the appointment made by the guardians.

MEDICAL NEWS.

Illinois is about to try the experiment of an industrial colony for epileptics on the plan of the Craig Colony of New York.

Vaccination Grant.—Dr. Clement Pound, Public Vaccinator of the Odiham (Hants) District of the Hartley Wintney Union, has received the Government grant for efficient vaccination.

A medical society has been founded at Bahia under the title of *Sociedade de Medicina e Cirurgia da Bahia*. The President is Dr. Pacheco Mendes, Professor of Clinical Surgery in the University of Bahia.

Professor Schede, Director of the Surgical Department of the Hamburg General Hospital, has been appointed to the chair of Surgery in the University of Bonn, in succession to Professor Trendelenburg.

A Select Committee to inquire into the question of food products adulteration has recently issued its report. The Committee state that they have taken further evidence, but have not had sufficient time to conclude their investigation. They therefore recommend that a Committee on the same subject should be appointed in the next Parliament.

Medical Practice in the United States.—A Bill for the regulation of medical practice in Kansas has been thrown out by the enlightened Legislature of that highly civilised State. A "Populist" is reported to have opposed it in the following terms: "We Western people can't support your play at doctors. We've got a lot of old women who are better than any of them." Some of these intelligent females would seem to have got into the Legislature.

We regret to record that Mr. Frank Henry Hodges (M.R.C.S.Eng., 1869, F.R.C.S.Edin., 1877), a well-known ophthalmic surgeon of Leicester, committed suicide on Saturday, September 7th. For some time he had been suffering from nervous depression consequent on sunstroke and overwork. Mr. Hodges had but recently returned from a holiday. Some medical friends spent the evening of September 6th in his company, but on the following morning he was found by a servant hanging on the staircase of his residence quite dead.

American Dermatological Association.—The nineteenth annual meeting of the American Dermatological Association will be held at Montreal on September 17th and two following days, under the presidency of Dr. S. Sherwell, of Brooklyn. There will be a discussion on the Value and Limits of Usefulness of Electrolysis in Dermatology. Among the communications promised are the Infected Scratch and its Relations to Impetigo and Ecthyma, by Dr. H. G. Klotz; a Contribution to the Study of Mycetoma, by Dr. J. N. Hyde; the Prevalence of Germ Dermatoses, by Dr. J. C. White; Symbiosis of Cutaneous Eruptions, by Dr. J. Zeisler; and Sleep in its Relation to Diseases of the Skin, by Dr. L. D. Bulkley.

The Humanitarian League.—From the fourth annual report of the Humanitarian League, we gather that the printing of publications, etc., has cost £111 16s. 2d., while the sale of publications has brought in the curiously small amount of £24 0s. 5d. It must be obvious to everyone that a body which can only induce the public to invest this trivial sum in its publications can in no way be looked upon as representative of the sentiment of humaneness or kindness to others, whether animals or men, which is expressed by its title and we cannot but recognise that by the position of antagonism to all scientific progress which it has taken up, the League has definitely alienated the sympathy of those well-wishers of both animals and men who are to be numbered by the million in these islands alone.

Registration of Chiropodists.—All sorts and conditions of men and women, are following Lord Beaconsfield's advice, "Register, Register!" though in a somewhat different sense. It was to be expected that the corncutters would not care to be left behind in the general movement for registration, and we therefore learn without surprise that the chiropodists of New York have organised themselves into a society under the law of the State. A recent enactment of the New York Legislature gives the society power to appoint a Board of Examiners, to consist of three members. This Board will grant licences of competence in the chiropodic art. The fee for a certificate is fixed at 15 dollars (£3), and the holder will be entitled to have his name placed on the register of legally qualified chiropodists. We shall probably soon hear of the hairdressers and shampooers insisting on being registered.

Quackery in Bavaria.—Official statistics which have recently been published show that the total number of persons practising the healing art without a legal qualification in Bavaria at the end of 1894 was 1,168 as against 1,152 in the previous year. Of the number 896 were men and 272 were women. With the exception of 17 Austrians, 2 Americans, 1 Italian, and 1 Swiss, the whole of this noble army of quacks was a home product. As regards the special form of quackery, the statistics show some curious features. Thus 12 philanthropists devote themselves to freeing their fellow creatures from tapeworms, 12 practise "electrohomœopathy"—whatever that may be—while 84 are set down as apostles of homœopathy pure and simple; 129 offer to sufferers—for a consideration—"secret remedies and sympathy," and 3 deal in uroscopy.

Psychological Medicine.—In the article on the teaching of psychological medicine at the London Hospital, which appeared in the Students' Number of the British Medical Journal (September 7th), it should have been stated that Dr. Fielding Blandford delivers lectures on that subject at St. George's Hospital. St. George's is, we believe, the first of the metropolitan schools in which lectures on psychological medicine were ever delivered. In connection with this subject, it may be mentioned that, in addition to the institution named at p. 607 of the British Medical Journal of September 7th, the demonstrations on lunacy given by Dr. Will at the Bethnal House Asylum, London, and by Dr. W. Julius Mickle at Grove Hall Asylum, London, are recognised by the Conjoint Examining Board for England.

Aristocratic Doctors.—According to the *Gaulois*, Count de Goyan, a prominent Royalist, and formerly a member of the Chamber of Deputies, has taken the degree of Doctor of Medicine at the Paris Faculty, with the object of giving himself up to the treatment of the sick poor. In this, Count de Goyan has followed the example of the Duc de Rivoli (also a former Deputy), Count de Sinéty (a member of the Jockey Club), and M. Rembielinski (well known in Paris Society). All these gentlemen began the study of medicine after the age of 30, and went through the prescribed course, passing their examinations and taking their degree in the ordinary way. Baron Henri de Rothschild, who is also preparing for the medical profession, entered himself as a student when very young. He has a pronounced taste for surgery, and his present intention is said to be to found a surgical hospital at his own expense.

South African Medical Congress.—The third South African Medical Congress was held at Durban from July 12th to 19th. The Congress was formally welcomed by His Excellency Sir Walter Hely-Hutchison, the Mayor, and Town Council. An Address in Medicine was delivered by Dr. W. T. F. Davies, Johannesburg; one on Surgery by Dr. A. McKenzie, Durban; one on Gynæcology by Dr. E. Sinclair Stevenson, Capetown; one on Ophthalmology by Dr. Daumas, Maritzburg; and one on Public Health by Dr. A. J. Gregory, Capetown. Among the papers on the programme were the following: Medical Journalism in South Africa, by Dr. G. G. Eyre, Claremont; The Climate of Harrismith and its Place in the Treatment of Tuberculosis, by Dr. Wilson, Harrismith; Evolution of Antitoxin Treatment with especial reference to Diphtheria, by Dr. Walter H. Haw, Rustenburg; Cases Illustrating the Surgical Treatment of Middle Ear Disease, with Dissections showing the steps of the operation, by Dr. William Rogers, Johannesburg; Postnasal Growths, by Dr. G. E. Neale, Johannesburg; Puerperal Septicæmia, by Dr. H. A. Dumat, Durban; Notes on Two Cases of Uterine Myomata, by Dr. Sinclair Thompson, Verulam; and Two Cases of Malingering in Eye Disease, by Dr. S. G. Campbell Durban. Entertainments were given by the Mayor and other prominent residents, and the Congress was altogether a great success.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street, S.W.—House-Surgeon. Board, fuel, and lights provided. Applications, endorsed "House-Surgeon," to the Honorary Secretary at the Hospital by September 20th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by September 30th.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer, unmarried. Salary, £100, with board, lodging, and washing. Knowledge of Welsh desirable. Applications to B. Spivey, Secretary, Barns Row, Carmarthen, by September 24th.

CARNARVON JOINT SANITARY DISTRICT.—Medical Officer of Health, must be between 25 and 40 years of age, doubly qualified. Must devote his whole time to the duties, and have a knowledge of the Welsh language. Appointment for five years. Salary, £294 per annum, to cover all expenses, except those incurred for such books, stationery, and apparatus required in the performance of the duties. Applications, endorsed "Application for Office of M. O. Health," to J. H. Thomas, Clerk to the Joint Committee, 14, Market Street, Carnarvon, by October 10th.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield. Resident House-Surgeon, tenable for two years. Salary, £60 per annum, with board, apartments, and laundries. Applications and testimonials to the Secretary before September 19th.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House-Surgeon, registered and unmarried. Honorarium, £40 per annum, with board, lodging, and washing. Applications, with not more than three recent testimonials to the Honorary Secretary, Clayton Hospital, Wakefield, by September 23th.

COUNTY OF BRECON.—County Analyst. Retaining fee, £10 10s., and a fee of 10s. 6d. for the analysis of every sample. Applications to H. Edgar Thomas, Clerk to the County Council, County Hall, Brecon, by October 2nd.

DURHAM COUNTY ASYLUM.—Junior Medical Officer. Salary, £100 per annum, with board and lodging. Applications, with not more than three recent testimonials, to the Superintendent, Durham County Asylum, Winterton, Ferryhill, by September 25th.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon, doubly qualified. Salary, £— per annum, with board and lodging in the hospital. Applications to the Committee by October 15th.

GENERAL HOSPITAL, Birmingham.—Two Assistant House-Surgeons, must possess a surgical qualification. Appointment for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House-Governor, by September 28th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 146, Buchanan Street, Glasgow, by November 4th.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, near Birmingham.—Resident Medical Surgical Officer, doubly qualified. Salary, £100 per annum, with board, residence, and washing. Applications to Howard J. Collins, House-Governor, General Hospital, Birmingham, by September 28th.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician, must be qualified and registered under the Medical Act. Applications to G. Q. Roberts, House-Governor, by October 14th.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary, £150 per annum, with practice, free house, and garden. Applications to Robert Sutherland, Inspector of Poor, Durness, by October 19th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by September 23rd.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Doubly qualified and registered. No salary, board, lodging, and washing. Applications and testimonials to the House-Surgeon by October 1st.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—Assistant Demonstrator of Chemistry. Applications to Thomas W. Shore, Warden, before September 21st.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House-Surgeon. Salary, £—, with board and residence. Applications to J. Walter Wilson, Honorary Secretary, by September 17th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon, doubly qualified, unmarried, and when elected under 30 years of age. Salary not exceeding £50 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by October 2nd.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Surgeon. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary Superintendent, by September 25th.

MEDICAL APPOINTMENTS.

ALLDEN, Sidney J., M.B., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Third District of the Bridport Union.

CLENDINNEN, W. M., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health to the Cosely District Council, *vice* J. G. Clendinnen, L.R.C.S.I., deceased.

CRAWFORD, Alexander D., M.B., C.M.Glasg., appointed Medical Officer for the Marston Green Cottage House of the Parish of Birmingham, *vice* Dr. H. W. Thomas.

DAY, Edward Irving, L.R.C.P., appointed Medical Officer and Public Vaccinator for the 4th District, Risbridge Union, *vice* M. J. Doidge, M.R.C.S., resigned.

DICKINSON, Emily Winifred, M.B., B.Ch., appointed Assistant to the Master of the Coombe Lying-in Hospital, Dublin.

EYCRES, C. A., L.R.C.P.Edin., L.R.C.S.Edin., appointed Medical Officer for the Helperby District of the Easingwold Union.

FREEMAN, Dr. J. F. W., appointed Medical Officer for the 5th District of the Andover Union.

HALL, Gilbert C., L.S.A., M.R.C.S.Eng., appointed Medical Officer for the Amblecote District of the Droitwich Union.

HALL, Sidney H., M.B., C.M.Edin., appointed Medical Officer of the Fusehill and Harraby Hill Workhouses of the Carlisle Union, *vice* C. S. Ball, M.R.C.S.Eng.

HARVEY, R. J., L.R.C.P.I., L.R.C.S.I., appointed Assistant Surgeon to the Richmond Hospital, Dublin.

HEAD, John H., B.A., M.D., B.Ch., B.A.O.Dubl., appointed House-Surgeon to the Meath Dispensary.

HILL, G., L.R.C.P.Edin., L.R.C.S.Edin., appointed Medical Officer of Health to the Holme Cultram Urban District Council.

JAGO, E. O., M.R.C.S.Eng., L.S.A.Lond., appointed Medical Officer of Health to the Iream Urban District Council.

JENKINS, T. J. P., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the South Eastern District of the Freebridge Lynn Union.

JOHNSTON, G. Jamieson, M.A., M.B., B.Ch., B.A.O., appointed Assistant Surgeon to Richmond Hospital, Dublin.

LAWS, W. G., F.R.C.S.Eng., appointed Honorary Surgeon to the Nottingham and Midland Eye Infirmary, *vice* Dr. E. Beckit Truman, resigned.

MACDONALD, John A., M.B., C.M.Glasg., appointed Medical Officer for the Denton District of the Grantham Out relief Union.

OSBORN, Ernest C., L.R.C.P.Lond., appointed Assistant Medical Officer to the Kensington Workhouse and Infirmary, *vice* B. Cooper, M.R.C.S., L.R.C.P., resigned.

SALT, A. H. D., L.R.C.P.Edin., L.R.C.S.Edin., appointed Medical Officer for the Sturry District of the Bloar Union.

SAUNDERS, A. L., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of the Workhouse and the Eastern District of the Freebridge Lynn Union.

SHAW, Harold, B.A., M.B.Camb., D.P.H., appointed Medical Superintendent of the County Asylum of the Isle of Wight.

STEVENS, R. C. J., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Devon and Exeter Hospital, *vice* M. H. Lloyd Patch, resigned.

STYLE, F. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the South Brent District of the Totnes Union.

TAYLOR, Dr. J., appointed Medical Officer of Health to the Chester-le-Street Rural District Council.

THOMAS, Thomas W., L.S.A.Lond., M.R.C.S.Eng., appointed Medical Officer and Public Vaccinator for the Caerphilly Urban District of the Pontypridd Union, *vice* Dr. Llewellyn, deceased.

THURSON, Dr., appointed District Medical Officer to the St. George's Union, *vice* Dr. Heany, resigned.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGES.

GALLETLY—MITCHELL.—At Summertown Congregational Church, Oxford, on September 4th, by the Rev. Dr. Adamson, Edinburgh, assisted by the Rev. B. M. Eason, B.A., William Gloag Galletly, M.B., C.M., F.R.S.G.S., Northwold, Norfolk, to Mary Kate Mitchell, second daughter of the late Rev. Robert Mitchell, Greenock.

MOORHOUSE—HOWAT.—At Culldoras, Onich, on September 6th, by the Rev. John Chalmers, M.A., Stirling, assisted by the Rev. John Macaskill, Onich, and the Rev. Arthur Moorhouse, B.D., Forest Hill, London, brother of the bridegroom, J. Ernest Moorhouse, M.D., M.A., B.Sc., Stirling, to Jane Hyslop, second daughter of William Howat.

PLOWMAN—HILL.—On September 10th, at All Saints, Langport, by the Rev. J. Stubbs, assisted by the Rev. Edwin Lance, vicar, Tom Alexander Barrett Plowman, of Eagle House, Clapham Common, youngest son of the late Thomas Plowman, of North Curry, to Elizabeth Scott Gould (Lily), youngest daughter of the late W. J. Hill, of Langport, Somerset.

DEATHS.

GROSVENOR.—On September 9th, 1895, Greville Place, Maida Vale, N.W., Elizabeth, the beloved wife of William Grosvenor, L.R.C.P., late of Hanley, Staffordshire, and second daughter of the late Daniel Witshaw, of Talk-o'-th'-Hill, Staffordshire, aged 60 years.

ROBERTSON.—On September 7th James D. Robertson, of the Friarage, Penrith, aged 54.

RUXTON.—At 10, Albert Terrace, Blackpool, on August 23rd, Evelyn Douglas, only and much-loved child of John Ruxton, M.D., late 17th Regiment, and A.M.D.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.D. would be glad for any information as to any opening for medical or dental work in Johannesburg or any populous district near.

M.R.C.S. will be obliged if any member could inform him whether there is a home for male epileptics in the Southern counties at which they can be admitted at a moderate cost, say, £1 or £1 10s. per week.

L.R.C.P.E. asks if there are any universities in Canada that allow a holder of British qualifications to enter for the medical degree examination without requiring a term of residence.

M.B., M.A. writes: Can any of your readers inform me whether there is any society for relief of widows and orphans of medical men, and if so what are the fees?

A MEMBER OF A NORTHERN BRANCH asks if any reader of the BRITISH MEDICAL JOURNAL can give him a list of the best literature on the diseases of the pancreas, their symptoms, diagnosis, and treatment.

M.B.EDIN. writes: I intend spending three months in Paris this winter, from the beginning of October to Christmas, and am going primarily for study. Can any of your readers give me any information as to the best quarters to live in to be near the schools, when the classes take up, and how to set about entering them? I would like specially to study gynæcology and obstetrics, and eye and ear. My French is fair, but nothing very great.

INCOME TAX.

MR. F. H. THOMPSON (Cleobury Mortimer) writes: Am I liable to pay tax of 1*s.* for a boy aged 13, whose primary duties are to clean bottles, deliver messages, clean knives and boots, carry coal, fetch cow? His other duties are to go out in the trap with me instead of the groom, to hold the horse, sweep out the stable, and on an emergency harness the horse. The boy is now on a month's trial.

**** A boy who has to perform the many duties mentioned by our correspondent would certainly be considered by the Excise as a male servant, and he is liable to the tax.

KALA-AZAR AND BERI-BERI.

DURHAM writes: Kindly let me know what works or pamphlets are published on the diseases known as kala-azar and beri-beri, and from what firm I could obtain them?

**** Giles's *Report of an Investigation into the Causes of the Disease known in Assam as Kala-Azár and Beri-beri*, 1s., 1890. As regards beri-beri, Davidson's *Hygiene and Diseases of Warm Climates*, 1893 (Young J. Pentland), *Die Beri-beri Krankheit*, by Dr. M. Schenke (Jena, Gustav Fischer, 1894), *Beri-beri*, Pekelharing and Winkler, translated by Dr. J. Cantlie (Young J. Pentland, 1893), *Beri-beri*, by Dr. Arthur J. M. Bentley (Young J. Pentland, 1895).

ANSWERS.

DR. VALENTINE KNAGGS AND OTHERS.—The address of the maker of the Burgess Cycle Seat is Mr. H. J. Burgess, 38, Preston Road, Brighton.

INTERNATIONAL RED CROSS CONFERENCE.

A. B. C.—The *Transactions* of the International Conference of Red Cross Societies, held in Rome in 1892 (not 1894) were published by Messrs. Forzani and Cie., Rome, from whom, or from the Secretary of the Italian Red Cross Society, no doubt a copy can be obtained.

"A DISGRACE TO OUR NATION."

DR. BOND (Gloucester).—We see no objection whatever to the reprinting for circulation of the article in the BRITISH MEDICAL JOURNAL of August 31st, headed "A Disgrace to our Nation," as an aid to the education of the public in regard to the importance of sterilising milk.

CLIMATOLOGY OF AUSTRALIA.

MEMBER.—The Library of the British Medical Association does not possess a copy of Hardy's *Medical Notices of Climates, Diseases, &c., Australia*, but it contains Bonwick's *Climate and Health in Australia and New Zealand* (1856) and Northwick's *Topography of South Australia* (1865), in addition to the better known books on climatology in general.

COLONEL HAIG'S "SANITATION AND HEALTH."

BRIGADE SURGEON-LIEUTENANT-COLONEL F. HOWARD writes: P. P. I., in the BRITISH MEDICAL JOURNAL of September 7th, should apply to Wm. Clowes and Sons, who are the publishers of Colonel Haig's other work, *Reflections on the Art of War*, which was reviewed in *The Pioneer*, early in the year.

UNDERCLOTHING FOR SENSITIVE SKINS.

DR. CAREY COOMBS (Castle Cary) writes: In answer to Ripwood: (1) Underclothing of fine linen material is best; woollen clothes can be worn outside this layer. (2) There is no electric belt which is of any therapeutic value.

DEATH CERTIFICATES.

DR. R. R. RENTOUL, in reply to M.S., M.A., would refer him to his paper in the BRITISH MEDICAL JOURNAL of April 6th, 1895, on "The Proposed Compulsory Inspection and Registration of Stillborn Children," and to its Appendix, which gives the names of some twenty publications relating to this subject.

BELGIAN INSTITUTES FOR DIPSOMANIACS.

E. G. W.—We are unable to supply particulars. The placing of any British subject under compulsory restraint in a foreign country involves a serious responsibility. No compulsion in such a case can be legally employed in England.

THE APOTHECARIES' HALL OF IRELAND.

N. M.—Under the Medical Act of 1858 the Apothecaries' Hall of Ireland ceased to have power to hold by itself examinations qualifying for registration. By its combination with the Royal College of Surgeons of Ireland it became capable of holding a joint examination, and the two diplomas thereby conferred were jointly registrable. That combination came to an end by the withdrawal of the College of Surgeons in August last. Prior to 1858 the Hall issued a registrable licence, which was a "single" qualification.

MEDICAL GRADUATES IN CANADA.

J. M. COCHRANE, M.D., C.M., L.R.C.P.Lond. (Weymouth Street, W.) writes: In reply to "Cantab," the degrees granted by McGill University, Montreal, are considered among the best in Canada. Montreal also offers the best opportunities for clinical and practical study. Equally high degrees are obtainable at the University of Toronto, and at the University of Trinity College, Toronto. In Toronto also are excellent hospitals, and opportunities for the highest scientific education. All the Canadian medical colleges accept British preliminary examinations and medical examinations, as far as they may have been taken. I have by me an announcement of one of the Canadian medical schools containing course of studies, fees, etc., which I should be happy to send to "Cantab," and to direct him to sources of full information regarding the Canadian Universities.

MIDLAND also mentions McGill College, Montreal, where he says the 2nd M.B.Cantab. would be accepted as equivalent.

NOTES, LETTERS, &c.

THE AIRD JOLLY FUND.

THE following additional subscriptions have been received:

	£	s.	d.		£	s.	d.
Sir William Jenner, F.R.S., Physician in Ordinary to the Queen	2	2	0	Leonard Bidwell, F.R.C.S., London	1	1	0
Bilton Pollard, F.R.C.S., London	1	1	0	George Harley, M.D., London	1	0	
Sir Henry Littlejohn, M.D., Edinburgh	1	1	0	Edward Woakes, M.D., London	1	1	0
Anand Routh, M.D., London	1	1	0	J. B. Ball, M.D., London ...	1	1	0

Further subscriptions will be gladly received by the Treasurer, Mr. G. A. Garry Simpson, 7, Churchfield Road, East Acton, W.

THE JENKS PRIZE.

THE William F. Jenks Memorial Prize of 100 dollars has been awarded to A. Brothers, M.D., of New York, for the best essay on "Infant Mortality during Labour and its Prevention." Authors of unsuccessful essays can have them returned to any address they may name by sending it and the motto which distinguished the essay to the Chairman of the Prize Committee, Horace Y. Evans, M.D., College of Physicians, Philadelphia.

REMOVAL OF A TOOTH FROM THE FLOOR OF THE NOSE.

MR. J. SEXTON SEWELL (Cavendish Square, W.) writes: The case recorded in the BRITISH MEDICAL JOURNAL of August last[1] of a tooth removed from the floor of the nasal cavity is, from a dental point of view at least, of considerable interest. The non-eruption and malposition of teeth, although in many cases the true explanation of the irregularity is not fully understood, is and has been for many years recognised and

[1] BRITISH MEDICAL JOURNAL, August 31st.

described by writers on the surgery of the jaws and authors of text-books of dental surgery. Heath, in his *Injuries and Diseases of the Jaws*, has figured several plates illustrating some of these cases, and other illustrations may be found in the textbooks of Messrs Tomes, Henry Sewill, and Salter. Generally, an explanation can be found for these cases of misplaced teeth embedded in the jaws or in their vicinity in crowding of the teeth, due to reduced size of the arch of the jaws so frequently seen in practice. The canines and bicuspids are deeply placed in the jaws at the earlier period of their development, and the wisdom teeth at a comparatively late date will be found in the tuberosity of the upper or the ramus of the lower jaw.

Eruption of a tooth may be interfered with or even prevented by the presence of supernumerary teeth or temporary teeth retained in position beyond the period when they should in the natural course of things be shed. Teeth may be developed in such position that they can never become erupted, though space may exist in the dental arch. The College of Surgeons Museum contains specimens illustrating every variety of this type of irregularity.

Occasionally teeth which have been embedded in the jaws for many years suddenly commence to erupt, and may make their appearance within the jaws in their normal position, or may force their way through the soft tissues, and appear on the face or neck. The occurrence in edentulous jaws of eruption of a long buried tooth explains what is from time to time described by patients as the cutting of a third set of teeth, pressure of artificial teeth causing absorption of alveoli and consequent liberation of the imprisoned member. In the vast majority of cases, however, the misplaced tooth gives rise to no symptoms, and is only discovered by accident, or may remain undiscovered throughout life, but the possibility of the condition holding must be remembered in all cases of deep-seated inflammation about the jaws or inflammation of obscure origin. Occasionally tumours of a cystic nature are found in connection with these unerupted and misplaced teeth. On incision the cause of the mischief becomes evident.

The Carbolic Acid Treatment of Enteric Fever.

Surgeon-Lieutenant James E. McNaught (A.M.S.) writes: In the British Medical Journal of July 13th there is a note by Surgeon-Lieutenant-Colonel R. H. Quill, A.M.S., on the Carbolic Acid Treatment of Enteric Fever, with special reference to the fact that it has been experimentally proved that the enteric bacilli develop in the presence of carbolic acid.

Roberts, in his *Practice of Medicine*, Ed. 1891, p. 140, states that typhoid bacilli are said to be capable of developing in the presence of carbolic acid (2 to 1,000), and it is laid down in the textbooks that a solution of carbolic acid powerful enough to disinfect typhoid stools, ought to be of a strength of 1 in 20 (Parkes's *Hygiene*, Ed. 1891, p. 451; Moore, *Eruptive and Continued Fevers*, 1892, p. 433). In whatever way carbolic acid acts when given internally it appears certain that it cannot reach the affected region of the bowel in anything like sufficient strength to prevent the growth of the typhoid bacilli. For example, in Surgeon-Lieutenant-Colonel Quill's cases, 3m pure carbolic acid combined with chloroform were given immediately after 9 oz. of fluid (4 oz. milk, 2 oz. soda water, 1 oz alkaline mixture) had been administered to the patient. Obviously the carbolic acid even on reaching the stomach would be so diluted as to have no germicidal action on the typhoid bacilli, judging the action of the acid by experiments made outside the body. Its beneficial action may be due to its preventing the secondary septicæmic infection from the bowel which occurs in the more advanced stages of severe cases of enteric fever, but on reading Surgeon-Lieutenant-Colonel Quill's paper I should be inclined to attribute the success of his treatment to the careful dieting, nursing, and attention to detail insisted on by him.

Dry Gangrene after Snake Bite.

Mr. James Sommerville, L.R.C.P.Ed., L.F.P.S.Glasg. (Medical Missionary, Todhpur, Rajputana) writes: In the British Medical Journal of July 6th, there appears under Notes, Etc., an account of a case of Dry Gangrene after Snake Bite. Immediately before the Journal reached me, I had had a similar case which I treated by amputation. I subjoin notes of it taken by my native assistant:

"On the 16th July, 1895, a youth named Ameda belonging to the potter caste, and of about 15 years of age, was brought to the Mission Hospital, and gave the following account of the injury from which he was suffering. He said that about 17 days previously, having finished his day's work in the fields, he was proceeding homewards when, as he was crossing a field, he was bitten by a snake over the instep of the right foot, the beast escaping into a hole near by. The lad then along with a companion who was with him, went off to a small hamlet which was near, and did not feel any effects of the bite until he had arrived at this place, when on sitting down he became slightly insensible, for which condition the villagers made him swallow a quantity of *ghi*, or clarified butter, and the effect of which was to produce copious vomiting, which continued for three or four days, diarrhœa also supervening. Besides this the villagers bound lightly round the leg a small cord, while they invoked the name of a local saint, and kept the boy awake through the whole night. In the morning when he was sufficiently recovered, he noticed that his foot was swollen, discoloured, and blistered. He was then taken away on a native bed to his own house, where he found that the blisters had burst, and were discharging a watery fluid mixed with pus. From that date the foot continued to become more and more offensive, and to discharge, sloughs at the seat of injury as the gangrene proceeded, some applications of the ashes of calcined plants being used to destroy the fœtor. The gangrene extended steadily over the whole foot, until at last the entire ankle sloughed away, and the foot was held only by the tendo Achillis, the ends of the tibia and fibula and all the bones of the ankle-joint being exposed and abraded. 'Finally, the boy adds, 'in this hopeless condition I came to the hospital in hopes of getting relief here.'"

The foot was found in a condition of complete gangrene; those ligamentous tissues at the ankle which had not already sloughed away were soft and shreddy, and the ends of the bones, as above described, were completely exposed and denuded.

I amputated through the leg at the upper third, as extensive sinuses had formed along the course of the sheaths of the muscles, and the tissues of the leg generally were in an unhealthy condition for a considerable distance above the ankle. The boy has made an uninterruptedly good recovery, and has much improved in health, being now almost ready for discharge from hospital.

Dr Lindsay suggests a doubt whether the gangrene was in his case due to the snake bite or to the barber's ligature used. In the case above detailed I have no doubt whatever that it was due to the snake bite, as although a ligature was used, it was one of a very light sort, and quite insufficient to produce gangrene.

A Case for Diagnosis.

Dr. Reginald Farrar (Stamford, Lincs.) writes: It seems probable that Dr. W. F. Macfarlane's case, reported in the British Medical Journal of August 24th, is one of aggravated hysteria, resembling cases of anorexia nervosa recently communicated to the Journal. If this be so, the prospect of recovery under home treatment is almost *nil*. What is needed is a complete change of moral and social atmosphere. The following treatment has been remarkably successful in a very similar case that has lately been under my care. I admitted the girl to the Stamford Infirmary, and, forbidding all intercourse with friends or relatives, placed her under the sole charge of a kind but firm nurse. She received a tumbler of milk every hour while awake, taking about three quarts daily, no other food; half an ounce of cod-liver oil three times a day, and night and morning she was sponged with cold water, and afterwards rubbed dry with a rough towel. Symptoms of improvement were rewarded by a very gradual relaxation of the dietetic discipline until the patient was able to take ordinary food, and assume the life of a convalescent. The patient, who was admitted imbecile, paralysed, and apparently at death's door, left the infirmary in about six weeks with the character of a good docile patient, cheerful, and generally useful. She had been under the treatment of an excellent surgeon for eighteen months in her own home.

Registration and Pensions for Nurses.

The *Hospital* does not seem to regard with favour the resolution on this subject recently carried at the annual meeting of the British Medical Association. It writes in its issue of August 31st:—Registration and pensions for nurses having become matters of public interest for the last seven or eight years, it is refreshing to find anyone to whom these subjects are new. A gentleman writing from the Isle of Wight to a medical contemporary seems to think nothing has yet been done in either direction, for he remarks: "I believe that a simple system of registration of nurses by the medical profession is the only method of obtaining control," and appears to imagine this can be easily managed by the Branches of the British Medical Association. He owns that serious additional labour might be involved in judging credentials of candidates for registration, and possibly a study of the methods of training schools for nurses would still further impress this on his mind. The difficulties which individual institutions find in keeping a register of their own nurses alone, and the unremitting care needed to keep these registers up to date, are very great. The Royal British Nurses' Association has struggled bravely for years, officered by a large professional executive, to supplement these existing registers; but their own members are obliged to own that, after all their trouble, names stand on their register which ought not to be there. If the voluntary labour of years in this direction has resulted in comparative failure, the "District Branches" of the British Medical Association can hardly be expected to sift credentials with any prospect of immediate success. As regards the question of control, it was settled in the earliest days of training, and the primary lesson taught to every probationer is that of implicit obedience to a doctor's orders. Neither is State registration likely to find general favour. After all, nursing is merely the handmaid of medicine; and, in a good nurse, qualities are demanded which can be no more registered than those of good home daughters, wives, or mothers. Neither in the matter of pensions is the gentleman in the Isle of Wight in touch with the times, otherwise he would hardly consider it incumbent on him to suggest that the medical profession should raise £200 a year for the future provision of nurses found worthy of a place on this ideal register, while a Royal National Pension Fund for Nurses already exists, and possesses an invested capital of £200,000.

Evaporated Milk.

Dr F. G. Gardner (Warwick) writes: I have lately had under my care a case of long standing in which there was great difficulty in getting the patient to take a sufficient amount of food, which was chiefly fluid, milk predominating. It occurred to me that the milk might be evaporated to half its bulk with advantage. This was done, and the result was most satisfactory. As only water was driven off in the operation, 1 pint of the evaporated milk was equal in food value to 2 pints of ordinary milk. It was digested perfectly, although severe vomiting and the passage of undigested milk had been unpleasant features of the case earlier in its history. I was able to keep the patient up for a long time with this evaporated milk as the chief article of food.

The Sanitary Condition of Pimlico.

A deputation of tradesmen and residents of Rochester Row, Westminster, waited, on September 9th, upon Mr. De Rutzen for his advice as to sewage overflows into the basements of their houses. One of the applicants, a coffee-house keeper, said that on the occasion of a recent storm he had 18 inches of sewage in his kitchen, and the stench was the direct cause of the death of one of his children. He had been obliged to send the remainder of his family away, and if nothing was done he could not see how he could continue to conduct his business. He and his neighbours had experienced no fewer than five inundations of sewage in a year and nine months, through exceptional storms. He had complained to his landlords—the Ecclesiastical Commissioners—and they could do nothing. He did not know whether remedial measures were with the County Council or the vestries, but to the latter body he complained two months ago, and he had had no answer

Mr. De Rutzen referred the applicants to the sanitary inspector. If they got no satisfaction from him they could renew their complaint. The applicants thanked his worship, who further remarked that he hoped some measure could be devised to stop the nuisance they complained of.

"I OUGHT TO HAVE BEEN SENT FOR BEFORE."

Mr. Baring-Gould tells some good stories anent the old fashioned country doctor in a well-known and fashionable contemporary. He speaks of one whose medical knowledge was old and well worn, dating back probably to [illegible]. This doctor had a reputation in the country district for profound learning and miraculous skill, which he maintained by a simple and astute formula of practice. When sent for by a patient he at once took a gloomy view of the case. "My dear fellow," he would say to the patient, "this is a very aggravated malady. I ought to have been sent for before. If you die, it is your own fault. I ought to have been sent for before. A stitch in time saves nine. If now by a desperate struggle I pull you through, then it will teach you a lesson in future not to delay sending for me till the time is almost over in which medical assistance can avail. I ought to have been sent for before." The advantages of this method are obvious. If the patient died the friends were blamed for not having sent for the doctor earlier; if he recovered then the doctor was exalted and his skill vaunted. Mr. Baring-Gould tells one other story to the discomfiture of doctors. He says that, talking once to a yeoman in Essex, he said: "What: nine - ten miles from a doctor?" "Well, sir, yes, it is ten. Thank heaven we all in this parish mostly dies natural deaths." But these are a layman's stories, and we all know the difference between a layman sick and a layman well.

MEDICAL EDUCATION.

Four-and-Twenty writes: I was greatly interested in the article about the course and expenses of medical students in the British Medical Journal of September 7th, as I am one of those who, partly from family reasons and partly from plunging into studies as a mere boy from school without knowing clearly what resources I had or the result of failure, find myself with very little hope of being able to qualify at an age when I am debarred from almost everything except the army. Too much was expected of me at the beginning, and I was entrusted to the care of distant relatives, who thought to start me out with notions of obtaining a London M.D. or fellowship. I was placed in a general hospital where I learnt surgical dressing, dispensing, etc., but entirely got out of the way of school work, and obtained an idea of the easiness of the practice of medicine and surgery, but learnt nothing of the difficulties of the true path. After leaving the general hospital for a medical school, I found that to get a London university M.D. was an exceedingly difficult task, and after trying for two years without getting beyond the Prelim. Sci., I found it was time to attend to my college exams. or give up medicine. I passed my first with difficulty but was far behind in status, which so disgusted me that I gave it up for a business enterprise, in which with my inexperience (for medical study does not fit for business) I was naturally swindled, and lost the little money I had left, and now I am forced to return as a hanger-on to medicine, that is, as a dispenser or an unqualified assistant. Now I believe that had I gone directly from the classical to the medical school I should be earning my fees by this time instead of being debarred by my age from almost everything, and worse than all set down as a failure by my friends. I trust that you will publish this letter, so that some of the students from whom too much is being expected by their friends may be able to think over it again before they spend any great outlay on their professional studies.

AN OBSCURE CASE OF HÆMATURIA.

James G. Robertson, M.D.Ed. (Ashwell, near Baldock) writes: I have ventured to send you a short account of the following case, which I think very interesting seeing that Bristowe's *Practice of Medicine* mentions only paroxysmal hæmaturia and hæmaturia, and this case comes under neither of these divisions as yet.

About the middle of April, [illegible], I was called out to St. M—— to see an old woman. I found her seated in the kitchen, and on inquiry I ascertained that for some time back she had been passing what she took to be blood with the urine. She did not pay any attention to it at first, thinking that it would soon pass away, but when it showed no signs of disappearing she was at last forced to obtain medical help. On questioning her carefully I made certain that the blood was passed *per urethram* and not *per vaginam*. There was no pain on passing it nor after it. Pressure over the bladder and over other parts of the abdomen elicited not the slightest indication of pain. She did not feel particularly weak, but as I was afraid she would become so I sent her straight away to bed, and to the best of my power for the next four or five weeks tried to diminish the amount of blood in the urine; but give what I liked, there was no perceptible difference in the amount of blood passed. She stayed religiously in bed, and, strange to say, maintained her strength all the time. Feeling rather alarmed I ventured to call in consultation Dr. Clifford Allbutt, of Cambridge, who pronounced it to be a very doubtful case, and wanted her to go to the Infirmary at Cambridge to be thoroughly examined. To my astonishment, however, the patient utterly refused to leave her home, and in a short time, seeing myself unable to benefit her, I left her to her own devices. Two months afterwards, as I happened to pass her door, I looked in to see how she was, and was surprised to see her going about the house quite well, and totally freed from her hæmaturia.

REFUND OF INCOME TAX.

The Income Tax Repayment Agency (Chichester Road, Paddington, W.) write: The time for giving notice of claim for a refund of income tax on account of decreased profits or of losses incurred in trade, occupation, or farming has almost expired, and if notice is not given immediately, the claimant will forfeit all right to a refund. We have been very successful this year, and in the case of three companies have recovered [illegible], [illegible], and [illegible], in addition to numberless small claims. As a fact, we have not failed in a single instance. It may be well to explain that if a company or person can prove a loss, income tax can be recovered not only when it has been paid on estimated profits, but also when it has been deducted from other income. Say that a person in business or occupied in farming has been assessed and paid on profit estimated at £200, but in reality has made a loss of £100, and that he, or his wife, have other income from property or investments amounting to [illegible], he would be entitled to a refund of income tax on [illegible], and this would entitle him to a further refund of income tax on exemption, and he would thus recover the whole of the income tax paid or deducted. In this case it would amount to [illegible]. We are at all times glad to give gratuitous information as to whether a claim can be validly made, and, on receipt of a stamped addressed envelope, will send a form of notice of claim. Applicants should inform us whether the notice of claim is on account of actual loss or on account of decreased profits, as the notice is different.

A LEECH IN THE THROAT.

Surgeon-Lieutenant T. A. Granger, M.B., C.M., I.M.S., writes: Several days ago I received a note from the political sirdar, asking me if I would see a man who said he had a leech in his throat which he was unable to get rid of. I was somewhat sceptical, and thought that possibly the man might be labouring under a delusion. On going outside the fort to see the case, I found an old Pathan greybeard waiting for me. On seeing me, he at once spat out a large quantity of dark, half-clotted blood to assure me of the serious nature of his complaint.

His history—mostly made out with the aid of interpreters—was that eleven days ago he was drinking from a rain-water tank and felt something stick in his throat, which he could not reject. He felt this thing moving, and it caused difficulty in swallowing and occasionally vomiting. On the following day he began to spit up blood, and this continued until he saw me. He stated that he once vomited blood, and that he frequently felt that he was going to choke.

On examining his throat, a large clot of blood was found to be adherent to the posterior wall of the pharynx. On removing this clot of blood, no signs of the presence of a leech could be detected. However, on account of the symptoms complained of by the patient I introduced a polypus forceps into the lower part of the pharynx and towards the œsophagus, where a body, distinctly moving, was felt. This body I seized with the forceps, and with considerable force managed to remove. It was a leech between 2½ and 3 inches in length, and with a body of the size of a Lee-Metford bullet. No doubt during the eleven days it had remained in the man's throat the leech had increased in size. Nevertheless, it must have been an animal of considerable size when the man attempted to swallow it. I send this case as a typical example of the carelessness of natives of the class from which we enlist our Sepoys, as to the nature of the water they drink. This man had drunk the pea-soup-like water of a tank dug in the side of the hill, rather than go a few hundred yards to a spring where the water is perfectly clear and pure. Though I have not met with another case of leeches being taken with drinking water, I am assured that such cases are occasionally met with about Agra and other towns in the North-West Provinces. This great carelessness as to the purity or impurity of their drinking water shows the difficulty medical officers must experience in their endeavours to prevent the Sepoys of a regiment from drinking water from condemned or doubtful sources during a cholera or typhoid epidemic.

SUPERFŒTATION (?)

Dr. Dezso Khóor (Hadjú-Nánás) calls our attention to a case which he published in the *Wien. medizin. Presse* for 1892, p. 1324, and which he considers presents points of resemblance to Dr. Wright's case.[1] Dr. Khóor's patient was delivered (by a midwife) of a healthy and fully-developed girl; twenty-seven hours later Dr. Khóor removed from the vagina a sac about 5 inches long by 3 inches broad containing a male embryo, somewhat macerated, 7 inches long, with a head 4 inches in circumference. The embryo was connected with its placenta by a string-like, impermeable umbilical cord. The placenta of the girl was delivered soon after her birth, and was described by the midwife as natural but small. Dr. Khóor points out that the interest of the case lies in the fact that the presence of the dead and macerated embryo did not hinder the growth and development of the living fœtus. He considers that in this case either two ova were fertilised at the same time, one dying early from disease or accident, or, with rather more reserve, that superfœtation occurred, the one fœtus being older by four or five months, and causing the death of the younger by pressure.

This case can hardly be accepted as one of superfœtation considering the great difference which such an explanation would presuppose in the ages of the two embryos. Dr. Khóor's first suggestion is far more in accordance with probability and the records of observed cases.

"A CURIOUS POULTICE."

Dr. J. John Arcarius (Beyrout, Syria) writes: With reference to the cow dung poultices, they are in vogue among the natives of certain parts of Mount Lebanon not so much for abscesses as for erysipelas. It matters little whether the erysipelas is facial or otherwise, a red hot iron is taken, the patient cauterised freely all around the inflamed surface, and cow dung poultices obstinately applied until the patient gets better or dies. Of course, as might be expected, no internal medication is used, the popular belief being that cow-dung poultices are cooling.

THE BUNKUM ABOUT THE SOLDIER'S BOOT.

An eminent medical military expert, to whom we have referred all the current literature about the soldier's boot, writes: Much of the recent correspondence in the press re Tommy's marching is bunkum; the early days always are trying. The men have done well enough coming home now they are in good condition. The fact is they are all young and out of training. I have discussed the question to-day with two line officers returning from the Forest, and they assure me the whole thing has been much exaggerated.

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[1] British Medical Journal, July 6th, 1895.

POSTAGE FOR NOTIFICATION RETURNS.

C. J. H. calls our attention to the columns of the BRITISH MEDICAL JOURNAL of May 20th, 1893, p. 1085, under Correspondence, and of December [illegible], p. [illegible], under Compulsory Notification, where the facts of a legal decision in the above matter are stated.

TREATMENT OF VARICOCELE.

MR. JAMES COULDREY, M.R.C.S.Eng., etc. (Scunthorpe, near Doncaster) writes: I had recourse the other day to an old method of treatment for the radical cure of hydrocele. After tapping I reinjected some of the fluid and allowed it to escape. I told the patient that probably the scrotum would be big again in a few days, which was the case. He kept his bed, the swelling subsided and has never returned, although more than six months has now elapsed, whereas formerly I used to have to tap him every two months.

THE LATE DR. REESE, OF YSTRADGYNLAIS.

THE very sudden death of the late Dr. Reese, who was instantaneously killed by lightning while on his way to visit a patient, has created such an amount of sympathy and kindly feeling, not only among the workmen to whom he acted as medical attendant, but also among the public at large, that a general desire has been expressed that funds should be collected for a memorial stone to be erected upon his grave, and for a testimonial in money to be presented to his widow. On August 7th a public meeting was held, and a committee for the purpose of collecting funds was formed, at which Mr. John Rees, M.E., Seven Sisters, Neath, was appointed Chairman, and Mr. Thomas Watkins, Castle Bank, Ystradgynlais, Honorary Secretary, for the purpose of collecting funds, and they have every confidence that their appeal will receive a liberal response when sympathisers know that the late Dr. Reese had not insured his life, and that his widow and eleven children, four of whom are quite young, have been left unprovided for. The Rev. E. L. D. Glanley, Rector of Ystradgynlais, has kindly consented to act as treasurer.

THE TREATMENT OF TAPEWORM.

DR. J. RENSHAW (Stretford) writes: Reliable remedies for tapeworm are so few that an addition to their number must be welcome. Croton chloral is safe, efficient, pleasant to take, in pill form; and is not followed by irritating after-effects. A light, digestible meal should be taken at 6 P.M., and at 10 P.M. four of the following pills. On waking in the morning four more are to be taken, and one hour after breakfast a mild aperient, such as the accompanying draught: ℞ croton chloral, gr. 12; pulv. tragacanth, gr. 1½; pulv. acaciæ, gr. 4; syrup, m25: M ft. pil. xxiv. ℞ mist. sennæ comp. ℥j; spt. chloroform, mxv.; M.ft. haust. I have followed this with capsules of male fern without any further result.

THE DISCOVERER OF MATCHES.

THERE has just died at Saint Lothaire, in the Jura, a country doctor, named Sauria, aged 84, said to be the inventor of lucifer matches. In 1831, when a pupil at the College of Dole, Sauria had the idea of making matches with chlorate of potash, phosphorus, and sulphur. But he was unable to patent his discovery, as he lacked the 1,500 frs. necessary to do so. He talked with M. Nicolt, his professor of physics at the College, and that gentleman lectured on the subject some time after when visiting Germany. The Germans remembered the formula, made the matches which came back to France and were called Allemandes. When M. Grévy was President of the Republic, Dr. Sauria, then a worn-out old man, got a Government appointment as the keeper of a tobacco shop.

THE CHEMISTRY OF DIGESTION: A SUGGESTION.

C. R. ILLINGWORTH, M.D. (Ventnor) writes: If any regard must be paid to acidity and alkalinity in the economy, when prescribing for intestinal complaints and others, the chemical state of the secretions of the stomach ought surely to be taken into account. Orthodox medicine states, if I remember rightly, that alkalies should be given after, and acids before meals. For myself, I argue that the reverse order, although quite heterodox, should be observed, for the reason that the secretions are alkaline before meals and acid afterwards; and we have nowhere any reason for nullifying our own medicinal efforts, by encouraging chemical antagonism.

Again, in passing, during the treatment say of pneumonia, from ammonia and soda preparations, it is better to pass through treatment with acetate of iron before coming upon pure astringent tonics, rather than to pass suddenly from soda and other alkaline salts to such drugs as iron perchloride. For by such sudden transitions in medication I have frequently seen urgent diarrhœa caused.

EQUIFEX DISINFECTING STOVES.

D. P. H. LONDON.—We sent our correspondent's queries on to Messrs. Defries of London, who are the makers and exhibitors of the equifex appliances at the recent meeting. They write as follows:—The cost of disinfecting stoves varies with the size, construction, and pressure of steam used, from £40 to £[illegible], for ordinary sizes. The type of equifex disinfector which has been taken as a standard in most countries, may be seen in our lists. Where a stove working at 10 lbs. pressure is beyond the means of an institution, a low-pressure stove may be used; but in such case no safety-valve must be employed to control the pressure of steam, or accidents may occur. It is desirable to have with such stoves a self regulating boiling pan, into which infectious linen should be plunged immediately on removal from bed or table.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) A. E. L.; Mr. R. H. Allpress, London; A.M.S.; Dr. F. J. Allen, Birmingham; Mr. J. G. Alexander, London; F. S. Arnold, M.B., Manchester; Mr. C. E. Ady, London. (B) Mr. E. Brook, Blackburn; Mr. E. M. W. Bourke, London; Mr. J. W. H. Brown, Holbeck; Dr. G. F. Blandford, London; Mr. W. Browne, Cork; Mr. A. Bethell, Bridgnorth. (C) Dr. H. Cooper, London; Mr. J. Couldrey, Scunthorpe; Mr. W. E. Collins, London; Chagrin; Cockade. (D) Dr. F. A. Dixey, Oxford; Mr. E. Day, Haverhill; J. H. Dawe, M.B., Westcott. (F) Four-and-Twenty; Mr. J. Furley, London; Mr. C. Forbes, London; Mr. F. B. Fisher, Dorchester; Dr. J. Fallows, London. (G) Mr. S. G. Grew, Birmingham; Dr. A. R. Galloway, Aberdeen. (H) Mr. T. C. Harmer, Kintyre; Dr. W. M. Hutton, Edinburgh; Dr. E. W. Hope, Liverpool; Dr. J. Braxton Hicks, London; Mr. F. Haydon, London; Messrs. A. Haacke and Co., Berlin. (I) Mr. J. Iredale, Mablethorpe; Mr. G. W. Isaac, Clifton; Inquirer. (J) J. L. C.; J. P. M.; J. H. P.; C. J. Johnston, M.B., Dublin; Mr. W. A. Jolly, London; W. L. Jones, M.B., Treharris. (K) Dr. James Kerr, Bradford; Messrs. Krohne and Sesemann, London; Dr. W. V. M. Koch, Trinidad; Mr. J. T. Knight, Nottingham. (L) L.R.C.P.E.; Mr. J. R. Liston, Gloucester. (M) Mr. T. C. Maguire, London; M.B., M.A.; Member of the Northern Branch; M.B.Edin.; Mr. T. T. Marks, Llandudno; J. B. McLaren, M.B., Manchester; Member of the B. G. Medical Service; Mr. E. J. Moffett, Mullingar; Dr. Marshall, London; Member; Dr. S. Martin, London; M.R.C.S.; M.A., M.B. (N) Norwegian Milk Condensing Company, London; Numas de Cognay; N. M.; Nemo. (O) Mr. W. H. Orton, Brighton; Officer of Health. (P) Mr. T. F. Pearse, Southsea; Mr. E. J. Pryse, Keighley; Mr. N. Porritt, Huddersfield; T. W. Parry, M.B., Youlgreave. (Q) Mr. T. J. Quicke, Hull. (R) Mr. E. E. Russell, New York; Mr. T. P. Roberts, Harrogate; Mr. T. F. Raven, Broadstairs; Mr. N. B. Robinson, Hambledon; W. Reeve, M.B., London; Mr. W. M. Russell, Glasgow; Mr. C. H. G. Ramsbottom, Queensbury. (S) Dr. M. Sympson, Lincoln; Mr. E. A. Segundo, London; Southsea; Mr. W. G. Stevens, Renfrew; Mr. L. Scott, Invergarry; Dr. A. Sheen, Cardiff; Mr. R. C. J. Stevens, Exeter; S. A. C.; H. Shaw, M.B., Fareham. (T) T. O. R.; Dr. E. A. Tracey, Boston, U.S.A.; Dr. P. Thomas, Cardigan. (V) Mr. A. H. Vernon, Bournemouth. (W) J. W. Wilson, M.B., Plymouth; Mr. T. E. Williams, Talgarth; Mr. W. J. Walsham, London; Dr. A. A. Warden, Glasgow; Mr. G. Walker, Belfast. (X) X. Y.; X.Y.Z.; etc.

BOOKS, Etc., RECEIVED.

The Insurance File, containing Reproductions of the Annual Reports and Balance Sheets of the Principal Insurance Offices of the United Kingdom. London: W. J. West. 1s.

Eyesight and School Life. By Simeon Snell, F.R.C.S. Bristol: John Wright and Co. 1895. 2s. 6d.

The Student's Practical Materia Medica. By Grace H. Giffen, L.R.C.P. and S.E. Edinburgh: E. and S. Livingstone. 1895. 2s.

The Origin of Plant Structures by Self-adaption to the Environment. By the Rev. George Henslow, M.A., F.L.S., F.G.S. London: Kegan Paul, Trench, Trübner, and Co. 1895.

The Two Thrones, etc. By John A. Goodchild. London: Kegan Paul, Trench, Trübner and Co. 1895.

Studies in the Evolutionary Psychology of Feeling. By Hiram M. Stanley. London: Swan Sonnenschein and Co. 1895. 7s. 6d.

Analytical Key to the Natural Orders of Flowering Plants. By Franz Thonner. London: Swan Sonnenschein and Co. 1895. 2s.

Ueber die Autointoxicationen des Intestinaltractus. Von Dr. Albert Albu. Berlin: August Hirschwald. 1895. 5 m.

Modern Medicine and Homœopathy. By Dr. J. B. Roberts. Philadelphia: The Edwards and Docker Co. 1895. 75 cents.

The Growth of the Brain. By Professor H. H. Donaldson. London: Walter Scott. 1895.

Illustrations of Pathological Anatomy: with descriptive text. By Dr. A. Kast and Dr. T. Rumpel. English edition, revised and edited by Dr. M. A. Ruffer. Parts 9, 10, 11, and 12. London: Baillière, Tindall, and Cox.

Orotava as a Health Resort. London: Street and Co. 1s. 6d.

Die Erkrankungen des Rückenmarkes und der Medulla Oblongata. Von Dr. E. Leyden und Dr. Goldscheider. I Allgemeiner Theil. Wein: Alfred Hölder. 1895. M. 4.20.

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SIXTY-THIRD ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in LONDON July 30th, 31st, and August 1st, 2nd, 1895.

PROCEEDINGS OF SECTIONS.

SECTION OF DISEASES OF CHILDREN.

JOHN H. MORGAN, M.A.Oxon., F.R.C.S., President.

WEDNESDAY, JULY 31ST.

THE PRESIDENT'S ADDRESS.

BY JOHN H. MORGAN, M.A.Oxon., F.R.C.S.,
Surgeon to Charing Cross Hospital and to the Hospital for Sick Children.

GENTLEMEN.—It has been very wisely ordered that the presidents of Sections at this meeting shall refrain from giving introductory addresses, as has been the custom at some former meetings. But whilst this ordinance relieves me of what would have been a very difficult task, and allows you to spend the time which you might have been kind enough to devote to listening to an address on some subject connected with the diseases of children in the far more profitable occupation of taking part in the interesting series of discussions which have been selected for this Section, yet I cannot refrain from alluding to the work that has been done in this department in former years.

The first time that the diseases of children were considered to deserve a Section to themselves was in 1883, when it was presided over by Dr. Gee, and discussions were held upon summer diarrhœa, upon epiphysial necrosis and its consequences, and upon rheumatism and its allies in childhood. For the following five years there was no meeting of this Section, but in 1888, at Glasgow, Dr. Cheadle presided over discussions upon diphtheria and rickets. Again there was an interval of two years, but since 1890 this branch of study has regularly found a Section devoted to it at each annual meeting, and the subjects of empyema, infant feeding, the treatment of severe clubfoot, acute croupous pneumonia, whooping-cough, the tuberculous diseases of joints, abdominal tuberculosis, the treatment of enlarged cervical glands, and heart disease in children have all been considered, many of them in their surgical as well as their medical aspects. No one can read the reports of these discussions and the papers on which they were founded without feeling that our knowledge of each and all of the subjects has been greatly added to by the comparison of the various teachings and views which are to be found in the different schools of this empire, and my only object in giving this short retrospect is to show you that although many subjects have already been considered and elucidated, yet that there still remain many problems and phases of the diseases peculiar to children upon which more light must needs be thrown before they can be adequately dealt with or understood, and to ask you by your efforts on the present occasion to assist me in my earnest endeavour to make the meeting of this Section memorable in the annals of the British Medical Association, and so to establish its value and utility that the Section over which I have the honour to preside on this occasion may never again be absent from the programme of the meetings of the Association, and may not cease to contribute in the future, as it has done in the past, to the acquirement and concentration of knowledge on the many difficult and intricate problems which are every day brought before those who study the diseases of the young.

In consequence of the outbreak of rabies in Surrey, Cheshire, the West Riding of Yorkshire and the administrative county of London, the Board of Agriculture has issued a special list of instructions to all local authorities affected, at the same time asking that special efforts shall be made to carry out the Board's recommendation.

A DISCUSSION ON CONGENITAL SYPHILITIC MANIFESTATIONS IN BONES AND JOINTS.

I.—JOHN H. MORGAN, F.R.C.S.,
President of the Section; Surgeon to Charing Cross Hospital, and to the Hospital for Sick Children, Great Ormond Street.

Our knowledge of the clinical features of these manifestations is fairly accurate, and has been gathered by the labours of many workers in recent years; for although in 1856 Diday, in his work on *Infantile Syphilis*, barely alludes to the existence of any lesions of bone, yet the first description of this condition was given by Valleix in 1834, and although the history of syphilitic inheritance is imperfect, the case resembles in many features those which we now recognise as due to this taint. But more accurate observations were made in 1870 by Wegner, and later by Waldeyer and Köbner, and the writings of M. Parrot on this subject are so familiar as to need no further reference. Professor Abelin, of Stockholm, gave in 1879 an elaborate account of the syphilitic inflammation of the ends of the long bones, but, curiously enough, he dismisses the bone changes in the skull in a single sentence with the assertion that they cannot be demonstrated during life. The whole subject is carefully discussed in a series of elaborate papers by Dr. R. W. Taylor, of New York. In this country many observers have helped to formulate our knowledge on the subject, foremost amongst whom stand Jonathan Hutchinson, and my colleagues Drs. Barlow and Lees. In the *Transactions of the Pathological Society* will be found the details of many forms in which these affections of the bones have been observed, and in the pathological collections of many of our museum specimens are to be found, by the study of which a fairly accurate knowledge of the processes may be obtained.

From these various sources we may conclude that the bones are affected in the first place by a form of osteoplastic periostitis, which commences often *in utero*. This produces a thick layer of porous osseous tissue between the osteophyte and the surface of the compact tissue which is to be seen in the newborn infant, and which increases as age advances. In the case of children who are born at full term, and in whom syphilitic manifestations of the skin and mucous membranes are developed later, the bones are similarly affected in the first instance, and in a later stage show alterations in their substance. This is particularly manifested at their epiphysial margins, and is not infrequently accompanied by suppuration. The disease is never confined to a single bone, and, as a rule, a number of bones are affected at the same time with more or less symmetry. There is some doubt as to the frequency with which various bones are implicated, but it seems established that the changes take place more frequently at the distal than at the proximal ends, and that the upper bones of the limbs are less often affected than the lower. According to Parrot, the humerus and tibia are most often and most markedly affected. In the hands one phalanx, most frequently of the thumb or index, is involved; the bones of the feet are seldom implicated, though I have seen gummata affecting the tarsal bones in more than one instance, and those of the face generally enjoy immunity.

In the patients who die at an early age—fourth to sixth month—marked changes are found at the growing ends of the bones. There is generally a softening of the diaphysis above the epiphysial line, which is the result of endosteal change in the growing end of the shaft, and occasionally but not often results in suppuration. The microscopic characters have been thus described by Mr. Eve:

"The epiphysial cartilage was found normal. The lamellæ of bone at the extremity of the diaphysis were thin, and presented evidence of unusual absorption in the very large number of Howship's lacunæ containing osteoclasts. There was a hyperplasia of the elements out of which the osseous tissue is formed, with a deficient power of ossification and deficient deposit of bone salts."

Parrot characterises these changes occurring in the long bones as of two varieties—the atrophic and the osteophytic. The former occur on the diaphysial side of the epiphysial cartilage. Ossification is checked by excessive deposits of lime salts in the cartilaginous matrix, and overgrowth of the

gelatinous medulla takes place in the ossiform layer next to the cartilage, the tissue becoming much more friable than normal bone and leading to a separation between the two portions. This yields to treatment, but the result of the separation or displacement of the epiphysis may occasionally be seen in the malposition which afterwards occurs. The osteophytic form he subdivides into two varieties: (1) the osteoid, occurring at all ages, and (2) the rachitic, developing only after five or six months.

The clinical aspects of such changes are a general thickening of the bone, especially towards its distal extremity, and when the changes take place at the epiphysis there often exists the pseudo-paralysis to which Parrot first called attention. This is seldom accompanied by much pain, unless there be suppuration, and is due not to any affection of the nerves and muscles but to the loose connection between the diaphysis and epiphysis, which is further evidenced by the grating which may often be detected when their surfaces are moved upon one another. When the joints become involved, it is by hyperæmia induced by contiguity or by suppuration at the site of the lesion.

A different type seems to prevail in those older patients in whom the earlier manifestations of the poison is exhibited but slightly or not at all on the skin and mucous membranes. In the former class the affections of the bones and of other parts resemble, as pointed out by Hutchinson, the secondary lesions of adults. In the latter, on the contrary, nodes are occasionally developed on the surface of the long bones, and necrosis often takes place. There is a tendency to general hypertrophy and induration, and the separation of sequestra exposed by suppurative periostitis occurs with extreme slowness, often lasting for years. It is in such patients that necrosis of the palate and bones of the nose is occasionally seen. These nodes occur more often in the bones of the upper than in those of the lower extremity, are much more extensive than is usually the case in adults, are accompanied by very little nocturnal pain, and are not nearly so amenable to the influences of iodide of potassium as those occurring in the tertiary manifestations of adults. These resemblances to the phenomena of tertiary disease occur in patients after the second dentition, when the teeth present the typical notches and interstitial keratitis has appeared.

It is due to such forms of osteitis that changes may occur in the shape and length of the bones, giving rise to curving, with its consequent effect upon the joints, to thickening of the implicated bones, to lengthening, and, when the epiphysial growth is arrested, to actual shortening of the limb.

This difference in the period and character of the manifestation opens an interesting question which it ought not to be impossible to unravel. To what condition of the poison in one or both parents is due the fact that the virus may be of such intensity in the offspring that in one case every tissue including the bones may be affected, whilst in another instance it may be so slightly inoculated as to require long periods, even up to the age of puberty or later, to make its presence known, and then it is manifested apparently in only one or two situations.

Passing from the condition of the bones of the limbs to those of the cranium, we come more directly in face with the relations that congenital syphilis bears to rachitis, and those who have had large experience in the out-patients' rooms of a children's hospital in this country will not consent to go to the length of M. Parrot and attribute all rickety lesions of bone to hereditary syphilis. Speaking of the investigations on craniotabes made by himself and Dr. David Lees, Dr. Barlow sums up the question by stating (1) that this condition is not common in pure rickets, (2) not at all special to rickets, (3) very common in congenital syphilis.

In an interesting paper in *St. Thomas's Hospital Reports*, vol. xix, Mr. G. Carpenter analyses 100 cases of craniotabes. He found that in one half of the cases the parietal eminences were alone involved. In 35 per cent. the parietals were involved together with the squamous, temporals or occipitals, or both. The occipitals alone in two cases only. In 74 out of 100 cases the diagnosis of syphilis was certain. The evidence of syphilis was strongest from birth up to 6 months. Treatment by mercury showed that while craniotabes disappeared the rickety symptoms continued. Speaking roughly, 50 per cent. of syphilitic cases of infants show craniotabes.

With these views I am in entire accord after careful investigation of a very large number of cases which occurred in my practice in the out-patient room at Great Ormond Street Hospital, for though I am of opinion that the main cause of rickets in this country is the improper feeding of children, I believe that hereditary syphilis is frequently a predisposing cause of the condition. At the same time much evidence is wanted as to the relations which exist between the atrophic conditions of the skull which so often coexist with osteophytic hypertrophy and the amount of causative relation which inherited syphilis bears to one or the other or both.

With regard to the osteophytic condition which produces what are generally recognised as Parrot's bosses the history of the cases from which most of the specimens contained in the London museums have been collected leaves little doubt that the majority at least are due to hereditary syphilis. Drs. Barlow and Lees have shown several specimens which corroborate this assertion. "Cranial syphilis," they say, "in infants in its early stages is marked by local thickening of the bones of the skull causing firm rounded bosses, very evident to touch and often to sight. These thickenings are found especially along the cranial sutures, and often arranged symmetrically around the anterior fontanelle. The centres of ossification are usually spared at first. In a later stage the bosses coalesce into a uniform thickening of a large part of the skull. Dr. Barlow demurs to calling the condition seen in these skulls a periostitis, and says that although no doubt originating in the deeper layers of the periosteum, it is really a hyperostosis depending on an altered pattern of nutrition, and not in the ordinary sense an inflammation." I confess that on comparing the section of these swellings with the specimens of the long bones such as those in the Museum of the College of Surgeons, I can see little difference between hyperostosis in the one case and periostitis in the other. The coincidence of craniotabes with bosses in the same skull is difficult to explain, and the absence of the more usual symptoms of rickets in many of the patients whose skulls are affected in one or both ways makes it probable that the syphilitic influences may override those of rachitis, but does not preclude the probability that syphilis may act as a cause of the rachitic changes in bone.

I have thus endeavoured to epitomise the views so far announced of various writers on this form of disease of the bones. Time does not permit me to enter into the details of the pathological changes which have been described with such minuteness by M. Parrot and others, but I would commend to this Section as a result of the discussion on this subject the full consideration of the relation which hereditary syphilis bears to the causation of rickets and of other abnormal conditions of the bones and joints of young children.

The points of difference are many and clinically are fairly defined, the times of appearance of the more characteristic features are different, and the lesions produced are distinctly at variance. Can we say more than that syphilis, by impairing nutrition and acting as a debilitating factor, is prominent among many others as a cause of rachitic changes?

Turning to the other section of our subject—the congenital syphilitic manifestations in joints—we are met by the fact that we have but very rarely indeed the opportunity of investigating the pathological changes which clinically we occasionally observe as due to this cause. The specimens from a youth aged 16, and which Mr. Bowlby described and figured in the *Medico-Chirurgical Transactions* of last year as probably of syphilitic origin, are the only ones which I have been able to find in London.

In his lecture in the Royal College of Surgeons in 1892, Mr. J. Hutchinson, jun., states that forms of tertiary disease of joints, such as synovitis, perisynovitic gummata, arthritis due to osseous nodes, chronic synovitis, syphilitic chondro-arthritis (Virchow), all may occur in the later stages of inherited syphilis. But the forms in which the joints are most frequently affected are (1) syphilitic epiphysitis, in which, as already mentioned, the synovial membrane is affected by contiguity; and (2) chronic effusion into one or more joints, especially the knees, generally occurring sym-

metrically, though not always simultaneously, and usually concomitant with interstitial keratitis, and therefore noticed between the seventh and nineteenth year. Of the latter class of cases, Mr. Clutton has described in the *Lancet* particulars of eleven which had come under his notice. The average age of the patients was 13, most being between 8 to 15 years. The prominent symptoms were the symmetry of the affection, its long duration, and the absence of pain. The movements of the joints were free, and there was an absence of swelling in other joints. Some interval occurred, in one case two years, between the affection of one and of the second knee. All the patients presented signs of hereditary syphilis. The joints were never tense, but gave the sense of flaccid fluctuation. The bones were not enlarged, and the joints were not tender. In four cases there were nodes on the tibia. The swelling persisted for three to six months, in one case for twelve, and treatment by rest and splints was of no service. Perfect recovery followed the use of antisyphilitic remedies. All the patients but one had interstitial keratitis, which appeared at about the same time as the affection of the knee. Mr. Collier has kindly supplied me with the notes of a similar series of such cases which he has observed in the out-patient room at Great Ormond Street, and I have myself noted a few cases which exhibited all the characteristic features detailed by Mr. Clutton.

Here, then, is a peculiar set of phenomena seen in the knee-joints of syphilitic patients, which, occurring, as they do, in more advanced age, resemble the later developments observed in the bones, and bear a nearer resemblance to the tertiary manifestations of adults. To these developments of the inherited taint many others might be added, and more careful investigation will doubtless reveal to us further varieties, but we still have to seek for an explanation for the variations of the phenomena of this disease in children, and I look forward to hearing the views of those who will discuss this subject with the hope that some light may be thrown upon this interesting subject. Meanwhile I hope that in the foregoing remarks I have laid the matter as it stands in our present knowledge fairly before you. I have carefully refrained from repeating in detail many of the views brought forward by M. Parrot and others with which no doubt you are all familiar, and I anticipate that the views expressed to-day by those who have large practical experience in these obscure and difficult cases will greatly help to throw light upon the subject which we have to consider.

II.—Frederic Eve, F.R.C.S.,
Surgeon, London Hospital.

Mr. Eve said that though it was very common to find rickets and syphilis associated in children, he thought that the view that rickets was in some cases a stage of syphilis was not borne out by experience. With regard to cranial bosses on any part of the skull, in his opinion they were always rachitic and never syphilitic in origin. With regard to craniotabes, Mr. Carpenter stated that in 100 cases collected by him the diagnosis of congenital syphilis was certain in 74, and the view that craniotabes was essentially a syphilitic lesion was also his own. It was to be remembered that some of the lower grades of syphilitic disease were like rickets, and in this way confusion had arisen. He agreed with the view that congenital syphilis is a determining cause of rickets, owing to its depressing effects on general health and nutrition. It was reasonable to think, with Kassowitz, that rickets being essentially an irritative lesion of the bones, the irritation inducing a hyperplasia of the osteogenetic tissue, that the syphilitic virus was itself, in certain cases, the irritant. In ordinary cases of rickets it might be suggested that the absorption of products of decomposition from the alimentary canal resulting from chronic gastro-intestinal catarrh furnished the irritant. Mr. Eve quoted cases bearing out his views, and added an interesting account of a rare sequel to congenital syphilis, namely, fragilitas ossium. In this case greenstick fracture of the ulna occurred three times in succession, accompanied the third time by fractured radius, with little or no attempt at union. Cure was effected by large doses of iodide. It was remarkable how late in life the bone lesions with interstitial keratitis might appear, sometimes not before 20 or 25. A common syphilitic lesion was bowing of the tibia, in which the bone was not really curved, but heaped up in the centre of the shaft.

III.—D'Arcy Power, M.B., F.R.C.S.,
Surgeon, Victoria Hospital for Children.

Mr. D'Arcy Power said that he thought the question of the relationship between syphilis and rickets was a purely academic one, at any rate for those who were practising in large towns. Such a distinction could, however, be made in country places, for he had seen very bad cases of rickets in the west of Ireland, where syphilis was practically unknown, but the children were very badly fed. Mr. Power thought that the more important question was that to which the President had drawn attention in the second part of his most interesting paper. The diagnosis of syphilitic joint disease from tuberculous synovitis was of great importance. Mr. Power illustrated his remarks by showing a boy, aged 11 years, who had been under his care for an attack of synovitis in the left knee, with an eruption which appeared to be tuberculous. This boy was improved by small doses of grey powder, but he was not cured until iodide of potassium had been administered. Except for a fortunate accident which led Mr. Power to recognise the nature of the affection, he would certainly have treated the case as one of tuberculous disease.

IV.—H. Betham Robinson, M.S., F.R.C.S.,
Assistant Surgeon, East London Hospital for Children.

Mr. Robinson said that of the various forms of joint disease in congenital syphilis, there were two which might be at once dismissed from consideration because they were frequent; these were the cases of symmetrical effusions occurring between about the ages of 8 to 15, often in conjunction with interstitial keratitis and the acute epiphysitis of young children.

With regard to the other forms they must remember that the same pathological processes held good in congenital as in acquired syphilis. The disease might occur primarily in the bone ends with secondary involvement of joints, the change in the latter being shown by effusion only or with gummatous infiltration of synovial membranes as well, or the lesion to begin with might be strictly localised to the synovial membrane in the form of discrete gummata or as a more or less extensive infiltration. The form which had origin in the synovial membrane was fairly common, if not the more frequent, in acquired syphilis as seen in adults, but in the experience of the speaker to have bone lesions at the commencement, with the other changes secondary was much more frequent in children.

He quoted several cases illustrating his remarks, and concluded by commenting on the extreme difficulty in some cases of diagnosing between tuberculous and syphilitic joints in children, and by insisting on a careful general examination, especially of the eyes, and a study of the family history before definitely deciding between them.

V.—Thomas Barlow, M.D., F.R.C.P.,
Physician, University College Hospital, and Hospital for Sick Children.

Dr. Barlow thought it was quite true with regard to cranial bosses that syphilitic children do develop them in a luxuriant manner, other signs of rickets not being very marked. But at the same time, both in children and in the lower animals, bosses were found in cases where there was undoubtedly no syphilis. It was reasonable to admit that syphilis was an important factor, as anything that tended to lower the nutrition of children was apt to produce rickets; and syphilis was known to modify the nutrition of the child to a great degree. It was true that craniotabes was often present when other signs of rickets were not. On the other hand rickets in animals and children, as well as antenatal rickets, showed clearly that craniotabes could be of rickety origin. He considered that late effusion into joints was accompanied by some damage to bones. The massive nodes to which Mr. Eve referred were associated with interstitial keratitis. He thought an important point, and one not mentioned in books, was in reference to the curious malpositions that occurred in limbs that had been the subjects of epiphysitis. In the early stage the epiphysis becomes softened, and, after getting

shifted, union takes place on one side again. Diseases of the cranium in syphilis were now very rare, but he had seen three cases of ulceration extending to the dura mater. This occurred usually in quite small areas. Examples of sclerosis of the whole skull due to hyperplastic osteitis were also not uncommon.

VI.—J. STANSFIELD COLLIER, F.R.C.S.

MR. STANSFIELD COLLIER gave an account of two or three cases bearing on the discussion. In 3 cases, aged respectively 6, 5½, and 6, all had interstitial keratitis, followed in all by effusion into joints. The joints were symmetrically affected, but the effusion occurred some weeks or days in one before the other was affected. The joint last invaded was the first to clear up. None of these cases showed any other bone disease. They improved more rapidly upon iodide and mercury than on mercury alone. Another case was one of pseudo-paralysis in a child aged 2 years and 4 months. There was separation of the lower epiphysis of the right humerus, no rigidity of the elbow, no fluid in the joint, and little pain. When the splints were removed twelve days later it was noticed that the lower epiphysis of the right radius had also separated. The pseudo-paralysis in this case came on before the epiphysis separated, and was probably due to loss of tone, the deep afferent nerves being in all likelihood affected. Mercury was given and in two weeks the child was cured.

A DISCUSSION ON THE TREATMENT OF HERNIA IN CHILDREN.

I.—RUSHTON PARKER, M.B., B.S., F.R.C.S.,

Professor of Surgery in University College, Liverpool; Surgeon to the Liverpool Royal Infirmary.

IN the treatment of hernia in children there is presumed to be the employment of a truss in the first instance, and in fortunate cases the hernia is relieved, and not infrequently disappears entirely. The presence of phimosis, which is frequently in male children the subject of hernia, is thought to be sometimes contributory, owing to the straining in micturition often attending it. When using a truss, therefore, the relief of phimosis by incision or circumcision may be advisable. In a few cases I have operated for phimosis at the same time, in others shortly after, the operation for hernia. Since the adoption of herniotomy, with special treatment of the sac, for the purpose of radical cure, the success obtained in some quarters has been such as to somewhat relax the efforts made with trusses, and to a certain extent to supersede the latter by operation. It so happens that operations upon children for this purpose have latterly been somewhat frequently undertaken by me, and I have endeavoured to ascertain and to state how this gradually came about.

It is quite unnecessary to utter any of the arguments that exist in favour of trusses. It stands to reason that when a hernia can be satisfactorily kept up with a truss, no further surgical interference is necessary; and there seems to be no doubt that herniæ, well trussed in childhood, have a strong tendency to become cured. A careful analysis of the facts accessible to him has been made by Mr. Macready in his treatise on ruptures, and he estimates that more than one-third of the inguinal herniæ under 11 years of age fail to become cured by truss, though what fraction under two-thirds actually does become cured is not known.

My observations have not been such as to throw any fresh light on the matter, and not having met in children with femoral hernia at all, or with umbilical hernia that resists a simple binder, all that I have to say relates to inguinal hernia.

My first operations on children were not very encouraging. They commenced in 1881, when I performed herniotomy on three boys, aged 7, 8, and 12, for the purpose of radical cure. Ligature of the neck of the sac was done in each with yellow catgut; but recurrence took place in two of them, and the third was lost sight of without the later result being known, though successful so far as seen. One of the herniæ was very large, and all were urgently in need of remedy. The disappointing result in two, however, led me to feel somewhat shy of similar cases for a while, and to regard ligature of the sac as insufficient for them.

The fourth case, two years later, was an infant aged 7 weeks only, in feeble health, and suffering from double inguinal hernia, of which one was relatively enormous, and was alone subjected to operation. After great and prolonged difficulty, owing to descent of the entire small intestine, the bowel was reduced and the neck of the sac tied. Peritonitis, however, ensued, and the child died on the tenth day.

The only herniotomy I have ever performed for strangulation in a child was in 1884, in an infant aged 4 weeks. After a precarious course for two or three days the child recovered, and the hernia was radically cured and remains so now. Ligature of the neck of the sac was performed with green catgut, but the ligature escaped before the wound healed, without, however, impairing the result. No truss was ever worn.

Then three cases in which a truss had proved inconvenient were sent to me in 1886 for operation, and the result showed that herniotomy was well borne by children and infants, and that a radical cure seemed easy of attainment, even by ligature of the sac, which I thus performed in the first eight cases. When, however, I came to learn the details of Macewen's operation, described in the BRITISH MEDICAL JOURNAL of December 10th, 1887, it appeared to me that failure must be very unlikely in children, even in moderately severe cases. On adopting this operation my highest expectation has been realised.

The first case in which I employed it was in 1889, in a boy aged 12, in whom all went well at the time, but of whom I have not been able to learn the subsequent progress. In one child of 3½ years, the truss answered well as long as the patient was moderately still. But on going about the truss became annoying, and he was forced to take it off. This led to the discussion of operation with a medical relative of the child, and a disposition on my part to view with increased favour the selection of infancy and childhood for herniotomy. Other cases were sent by medical men on the distinct ground that if the operation were reasonably safe, and likely to cure the hernia, it could hardly be worth while going to the trouble of a truss which might fail. Accordingly, for the last four years I have readily operated on children, and sometimes young infants, if thriving and vigorous.

My cases have been 40 in number, some double, in 33 patients, all males except one, and all inguinal; 2 were of 12 years; 7 were from 5 to 10; 16 from 1 to 4; 7 were under a year (2 of 9 months; 1 each of 7, 6, and 4 months; 1 of 7 weeks, and 1 of 4 weeks). The child of 4 weeks was operated on from necessity, for strangulation; while in that of 7 weeks a desperate attempt was made to cure a state which made life useless.

In the case of the child 4 months old, the mother remained in hospital with it, and took it home healed after a week. The operation was done not quite three years ago, and the child is well and free from hernia now. The patient, though so young, was well and hearty, and there seemed no need of postponement. As a general rule, I should probably not be disposed to operate before the age of six months or even a year, unless the inconvenience of the hernia or other circumstances specially suggested it.

The two important questions that arise are those of the risk to life and the amount of success to be expected. In my list there have been 3 fatalities in 40 operations—2 from peritonitis and 1 from bronchitis. One case of peritonitis has already been mentioned, and the other occurred last year in a child aged 15 months, without any difficulty or complication to account for it. Earlier in the same month I postponed operation in a child aged 2 years, on account of bronchitis which had set in since admission, but operated the same day upon a second child, of the same age, that appeared healthy. This child died next day of bronchitis, while the first was safely operated on a fortnight later, after recovering from its illness.

As regards the amount of success, I have mentioned the only 2 failures that I know of—1 in a boy of 8 and the other in one of 12. They were submitted to herniotomy, and ligature of the neck of the sac with yellow catgut. The herniæ were large and wide-necked, and the failure was probably due to imperfections in the details of the operation, which have undergone great improvement in the fourteen years that have elapsed. After writing to the relatives of 27 out of the

33 patients, I have had replies quite recently from 25, recording the fact that not a single case has had a return of hernia so far. Two had died, two years after operation, from other disease, but free from hernia. About a dozen of them have been operated on within the last year and a-half, perhaps too recently to pronounce positively on the result; but others have stood the test of three, four, and five years, one nine, and one, already mentioned, eleven years.

My cases have been dealt with as they came, and no doubt extra risk has been sometimes incurred by operating in winter, and perhaps upon children not sufficiently robust, while the first fatal case was one that many would have regarded as unfit for operation altogether. But with the exercise of due prudence, and some selection, I am inclined to recommend operation in children.

Since the preparation of this paper I have received an interesting communication from Mr. William Eddowes, of Shrewsbury, containing a list of all the herniotomies performed by himself and colleagues at the Salop Infirmary in a period of about eleven years, ending December, 1894. Out of 81 operations, 45 were in 43 children and infants of 12 and under (2 being double operations); 25 were from ½ to 2 years; 10 from 2 to 4; 10 from 5 to 12. The only fatal case died from pneumonia, the wound having healed. In none of the children had strangulation existed, and the hernia is not known to have recurred in any.

I quite expect that other surgeons will be able to produce reports which, like this of Mr. Eddowes, are more favourable than my own, and add confirmation to the favour with which I regard herniotomy in children.

The procedure is sometimes easy enough, and accomplished in less time and with less trouble than in adults; but at others it is rendered difficult by the diminutive parts concerned, and by the great tonicity and close attachment of the peritoneal sac. When once done, however, I believe that the chances of success are far greater than in the adult. In order to deal thoroughly with the sac and to close its neck most effectually, it is useful to expose it well, and generally to see the interior. Occasionally the sac is thick enough and loose enough to be stripped easily with the fingers, and so obviously empty as to require no opening to certify the fact; but in congenital hernia, and in cases where there is adherent omentum or intestine, the sac must be opened to strip it or to detach its contents. In any case there is no object to be served in abstaining from opening it. As regards its closure and the prevention of a return of the hernia, it is evident that ligature of the sac's neck is often perfectly effectual in small hernia and in very young children; but in my opinion Macewen's method of dealing with the sac is at once the most rational and in practice the most secure. No doubt it is not quite so easy as ligature of the sac, but quite worth the while of anyone to thoroughly understand and practise, and this can be done by studying the illustrated published description.

In the case of infants in arms the patient is kept under observation until healing is accomplished, which not infrequently occurs in a week or so, after which, if from a distance, the child is taken home without further attention or precaution. In older cases the patient is kept in bed for several weeks to ensure a firm resisting scar. This item in the treatment is one of the most important in the case of adults, and has been strongly impressed upon me by Mr. Chauncy Puzey of Liverpool, who has paid great attention to it in all his operations with much success. Dr. Macewen has also strongly advised a period of recumbency of not less than six weeks after adult operations, a practice which I have adopted strictly of late. In active children of from 6 to 12 I think it wise to enforce this rule, though it may be tedious; while in younger children, not in arms, it is still carried out, though sometimes to a less prolonged extent. In the event of double hernia in children I have always done both operations the same day. One of these was a girl aged 4.

It is evident, Sir, that I might have gone into the whole question at much greater length, but I have resolutely abstained from any attempt at being exhaustive. The treatment of hernia in children is our topic, and I have confined myself to little more than the mention of the treatment with which I have been chiefly concerned, and have given a sketch of the circumstances under which I have been led to adopt it. I have not thought it necessary to dwell upon the details of operation and dressings, which are conducted upon ordinary antiseptic principles. The skin of patient and surgeon, and all instruments are soaked in carbolic lotion, while I use more and more hot water for the wound. My dressings are usually cyanide gauze moistened with carbolic lotion 5 per cent. Sutures are used, not too numerous or close, without drainage tubes, and I generally have the satisfaction of procuring union by first intention in a very few days after one or two dressings.

II.—C. B. Lockwood, F.R.C.S.,

Assistant Surgeon, St. Bartholomew's Hospital.

Mr. Lockwood said he had not had many opportunities of doing this operation in children, but had done a fair number. He avoided the operation in infants because they might be cured by trusses, and also there were certain anatomical difficulties and dangers. It was difficult to separate the sac from the spermatic cord without injuring the cord and without the resulting ill-consequence to the testis. A very suitable class of cases was that of inguinal hernia in little girls. These were very easy to operate on, and results were very good. Trusses were very ill tolerated by these cases. At first he tried as far as possible to do Macewen's operation; afterwards he opened the canal more boldly, as otherwise he was never quite sure that he had stripped up the sac as far as the internal ring. It was said that the aponeurosis of the external oblique was not a firm support, but he had never met with a case of failure from this cause. For suture of the sac and external oblique twisted silk was the best material.

III.—John Langdon, F.R.C.S.,

Surgeon, St. Bartholomew's Hospital.

Mr. Langdon said that it was known that 25 per cent. of all hernia occurred in the first decade, and 10 per cent. in the first year of life. He himself had, during his work as surgeon to the London Truss Society, seen 25,000 cases. With regard to children not being able to wear trusses, he had never yet met with a child who could not; the fault lay with those who adjusted the truss if it was not comfortable. Hospital statistics were always unsatisfactory, but taking cases from his private practice of the last twenty years, he would instance 100 which occurred in the first year of life. Of these 47 per cent. were cured during the first three years; there were only 8 in which treatment by truss was not satisfactory. There were cases where this treatment did not suffice, for instance, cases of hydrocele, which trusses never kept up. Adherent omentum with fluid was another form which was only satisfactorily treated by operation. There were large hernia which, however well they were kept up by trusses, might require operation because of the extreme discomfort caused to the child when the hernia was kept up. Notwithstanding these, he had rarely seen cases that needed operation.

IV.—William Macewen, M.D.,

Regius Professor of Surgery, University of Glasgow.

Professor W. Macewen said his experience was that treatment by truss, however possible in private practice, was impracticable among hospital out-patients. Adults very much preferred not to wear trusses, however well adjusted, and the same was probably true of children. The bulk of his cases had been among adults, but he had operated on 20 or 30 children, all cases in which there had been great difficulty in keeping up the sac. His results had been absolutely perfect. There was certainly some difficulty in separating the cord from the sac. The conjoint tendon was thin, but all these tissues, though delicate in children, were reliable and better to depend on than the cicatrix. He always used catgut prepared by himself. He found it resisted the action of the tissues for two or three weeks before it was absorbed. He never used drainage, and never had suppuration as a result.

V.—J. Ward Cousins, M.D., F.R.C.S.,

Senior Surgeon, Royal Portsmouth Hospital.

Dr. Ward Cousins said he preferred to operate at the age of 1 year or over, provided the child was in good health and

every exciting cause had been removed. He seldom operated on children under 1 year. Some cases were cured by careful truss treatment, but many parents among the poorer classes could not carry it out, and a few cases were quite unsuitable, either from the size of the protrusion or the difficulty of keeping it up. As regarded the operation, he found an occasional difficulty in separating the sac right up to the internal ring and detaching the cord. He considered the essential steps of the operation to be the complete division of the sac in all congenital hernias, the formation of a new tunica vaginalis and the securing of the sac firmly within the canal. Since the year 1890 he had performed 90 operations, and as far as he could trace them afterwards they had been completely successful. Three unfortunately died, one from scarlet fever, one from measles and bronchitis, and one from acute septicæmia contracted, he feared, by careless nursing. He always employed a specially trained nurse, and carefully protected the seat of operation with an india-rubber material. Rest after the operation for some weeks in the recumbent position was absolutely essential, especially in cases of double hernia.

VI.—JONATHAN MACREADY, F.R.C.S.,
Surgeon, Great Northern Central Hospital.

MR. J. MACREADY said it was a good classification to divide hernias into those controllable by truss and those not controllable. If we extended the practice of the operation to include controllable cases, we might obtain flattering results, but we overstepped the bounds of necessity. Many cases were cured spontaneously, or a large minority by truss. Hernia was, as a rule, of no urgency in childhood, and the danger of strangulation infinitesimal. He preferred to postpone the operation, at any rate till about puberty.

VII.—F. A. SOUTHAM, M.B., F.R.C.S.,
Surgeon, Royal Infirmary, Manchester.

MR. SOUTHAM advocated, in addition to treatment by truss, a very careful regulation of diet. He found in infants under 9 months old that a Berlin wool truss was sufficient; after the child walked, a spring truss was best. After a fair trial of a truss, and when there was no tendency to spontaneous cure, he would operate. He advocated a very small dressing painted on with collodion.

VIII.—HORATIO P. SYMONDS, F.R.C.S.Edin.,
Surgeon, Radcliffe Infirmary, and Lichfield Lecturer on Surgery, University of Oxford.

MR. SYMONDS said he only operated in cases in which treatment by truss had failed. He used Macewen's operation, and drainage for forty-eight hours afterwards. He used catgut sutures prepared by himself.

IX.—REGINALD LUCY, M.B., F.R.C.S.,
Assistant Surgeon, South Devon and East Cornwall Hospital, Plymouth.

MR. LUCY agreed with Mr. Southam on the question of diet, and pointed out that all straining should be prevented. Phimosis should be treated by circumcision. Straining often continued after this was done, owing to congenital smallness of the meatus. For this he passed a small glass rod the size of a No. 6 catheter for several days. This usually stopped the straining.

X.—DAMER HARRISSON, F.R.C.S.Edin.,
Honorary Surgeon, Liverpool Northern Hospital.

MR. DAMER HARRISSON said that he had operated in about 20 cases, all successfully done. In 14, done now for six years, there had been no return. The simpler the operation in children the better, and as they stand sutures badly the minimum quantity will do.

XI.—HERBERT WATERHOUSE, F.R.C.S.,
Surgeon for Out-patients, Victoria Hospital for Children.

MR. WATERHOUSE expressed surprised at the way in which every speaker had excluded the question of strangulation. He had himself operated four times for strangulated hernia in children under 2 years, and had assisted at two or three others. He advocated small dressings secured with collodion, Professor Macewen's operation and the recumbent position for even young children for about six weeks after the operation.

XII.—JOHN H. MORGAN, F.R.C.S.,
Surgeon, Charing Cross Hospital, and Hospital for Sick Children.

THE PRESIDENT said that his own experience of hernia in children was considerable. Of recent years he had had a great many cases of strangulation in children. He preferred in ordinary cases to operate when the child was older than a year, as there was considerable difficulty in separating the sac from surrounding parts. He had found great difficulty in selecting a suitable suture, none of those in general use being quite satisfactory.

MR. RUSHTON PARKER'S REPLY.

MR. RUSHTON PARKER, in replying, said with regard to the deep-buried sutures he relied entirely on the green sulphurised and chromicised catgut. He never used the common yellow catgut for this purpose, though he generally used it for the skin. The green catgut was strong, and took several weeks to absorb. With regard to recumbency, he considered infants in arms sufficiently recumbent. Older children should be kept for some time after the operation in bed. Undoubtedly the difficulty which had been mentioned with regard to the spermatic cord existed, and it was far from easy in some cases to separate it from the processus vaginalis. He thought it better not to open up the canal, and that it was usually not necessary. He generally, though not always, sutured the pillars of the ring. He agreed with Dr. Ward Cousins that in children an imperfect operation often succeeded. With regard to treatment by truss in hospitals, they were all agreed it was difficult and very often a failure, and even Mr. Langton had brought good reasons against relying upon it. With regard to dressings, he used cyanide gauze and in its application followed the method adopted by Sir Joseph Lister, and described with illustrations in the works of Watson Cheyne. He covered not only the wound, but the region round about, using a double spica bandage crossing the perineum. A mixture of urine with the dressings was no more harm for a few hours than serum from the wound, but there was generally no great difficulty in keeping them clean.

THURSDAY, AUGUST 1ST.

A DISCUSSION ON THE NERVOUS SEQUELÆ OF INFECTIOUS DISEASE.

I.—HENRY HANDFORD, M.D., M.R.C.P.Lond.,
Physician to the General Hospital, Nottingham.

NEARLY half a century ago Dr. Baly remarked: "A book on the diseases of convalescence might be one of the most valuable that any physician could write." But between then and now the precise knowledge of diseases of the nervous system has increased so enormously that the nervous diseases of convalescence alone would supply material for a large book.

The occurrence of paralysis during convalescence from the continued fevers was known to Hoffmann, Cullen, Sauvages, and many of the older authors, but it was not until the time of Landry and Gubler that the doctrine of post-febrile paralysis assumed a definite form. Since then much has been written, but the references to it in medical literature are very scattered, and the subject has been studied rather by the neurologist than by the general physician interested in infectious diseases or in the diseases of children. But infectious diseases, though predominating in childhood, are by no means confined to that age period; and it is an interesting question how far the nervous sequels in childhood differ from those in adult life.

Since the development of the nervous system is far from complete in the young child we should expect any severe illness to result sometimes in arrest of development of the brain or spinal cord, and to produce imbecility, mental dulness or actual dementia, and sensori-motor anomalies. And much more should we expect the process of development to be interfered with when to the shock of a severe illness is added the influence of the virus of a specific fever. But the

wonderful vitality and developmental energy of the nervous system in the young render such results fortunately rare.

In adults and those descending the declining plane of life we expect degenerative lesions to predominate, and so we find melancholia, dementia, neuritis. In children inflammatory diseases are more frequent, and so among the sequels of infectious disease meningitis and myelitis more commonly occur. Diphtheritic paralysis has been long known and so widely studied that I do not propose to refer to it again except etiologically and by way of comparison. Nor will it be profitable to pursue further the subject of cerebral abscess which so commonly results from ear disease, itself a sequel of scarlet fever, measles, or some other infectious disease.

Tuberculous meningitis occasionally follows many of the infectious diseases, but the specific cause is too definite for us to include the disease in the present discussion. Similarly I do not intend to discuss the vascular lesions such as hæmorrhage, embolism, or thrombosis, which may lead to various forms of paralysis or to epilepsy. Though not uncommon and of great importance, they must be looked upon as accidents, and not the direct result of the specific virus of the fever.

It seems useful to divide the sequelæ into those affecting (1) the brain and its membranes, (2) the spinal cord and its membranes, (3) the nerves, and to consider in regard to each division, first, the changes which may occur after all or most infectious diseases; and, secondly, the special qualities of the changes resulting from particular diseases—that is to say, first generically and then specifically.

First, then, the brain and its membranes. It would indeed be strange in a complex machine like the organ of mind, the orderly working of which is so readily disturbed during the pyrexia of fever, especially in children, if it did not sometimes as a result of that disturbance become permanently deranged. And so we find, but such cases are rare except when the brain is by inheritance weak and unstable.

I recollect a man convalescent from enteric fever in whom active mental derangement with delusions came on many days after the temperature had remained normal night and morning. The attack lasted a week or ten days, and the patient eventually got quite well.

My friend Mr. Evan Powell, Superintendent of the Nottingham Borough Asylum, tells me he has had in the asylum several cases of insanity due to fever. They are as a rule unfavourable as regards prognosis. The prevailing condition is mental enfeeblement, but some cases have had delusions and hallucinations. "Quite recently," he says, "I had a case in a man after typhoid fever, which closely resembled alcoholic insanity. He made a good recovery."

Professor Osler[1] out of 229 cases of enteric fever, reports 3 cases of profound depression and melancholia, arising during convalescence.

Dr. Clouston gives 10 cases of insanity after fever out of 1,000 admissions, 4 of them arising after scarlet fever.

Convulsions usually precede and accompany attacks of the specific fevers rather than follow them. Therefore, fatal though they are to young lives, we need not consider them further at present. But the almost indistinguishable condition, epilepsy, has resulted from attacks of most of the specific fevers, especially scarlet fever, measles, and typhoid fever, in that order of frequency. More cases of epilepsy are said to be consecutive to scarlet fever (apart from the influence of nephritis) than to all the other acute diseases put together. Chorea occasionally follows scarlet fever, but the connection between the two is not clear.

After any of the acute diseases, brain lesions, such as thrombosis of a surface vein, embolism or one of the many accidents which result in hemiplegia, sinus thrombosis, thickening or adhesion of membranes, etc., may arise, and some of them may be followed by epilepsy. But excluding such secondary causes, the scarlet fever poison itself seems to have a special action on the nervous system. This is further shown by the fact that optic neuritis may follow scarlet fever without any organic change in the brain to cause it.

A condition of speechlessness, not a true aphasia, arises not uncommonly during convalescence from enteric fever, especially in children. It is always temporary, and is evidently not due to any coarse brain lesion. It appears rather to be a "paralysis from exhaustion"—exhaustion in part affecting the nerve cells of the cerebral cortex primarily and consequent upon the intense excitement and delirium of the height of the fever, aided probably by the toxic effect of the fever poison; but largely owing to the insufficient blood supply during convalescence from the enfeeblement of the circulatory apparatus.

But, in some cases, definite changes in the cortex have been described, especially by Popoff, after typhus and enteric fevers. They consist principally in aggregations of leucocytes and closely resemble similar changes found in the liver, stomach, and other organs. They are evidence of persistent hyperæmia, and possibly of the local irritation of bacilli. No special symptoms can be associated with them; but they may help to explain the mental enfeeblement, loss of memory, and general imperfect working of the brain, which frequently persist so long after fevers, particularly typhoid; and which sometimes remain as a permanent defect.

Meningitis may occasionally arise in the course of any of the acute specific diseases, more especially small-pox, measles, and scarlet fever. Its presence is more often suspected without sufficient cause than overlooked. In children with typhoid, meningitis is often suspected, but very rarely found. I recollect a case under the care of a colleague, where optic neuritis was present and there seemed to be sufficient ground to diagnose meningitis; but on *post-mortem* examination a cerebral tumour was found. Needless to say the association was an accidental one, and cerebral tumour is not one of the many sequels of typhoid fever.

There is reason to think that when meningitis follows an attack of one of the acute specific fevers, it is more often than not septicæmic in character, and not due to the specific virus of the fever.

Secondly, the spinal cord and its membranes. Both myelitis and spinal meningitis are occasionally produced by attacks of infectious disease. Sometimes the affection appears to be of septicæmic origin; but in many cases the specific poison of the fever seems to be the exciting cause. Acute myelitis especially follows small-pox, measles, and scarlet fever. It may arise in the course of the fever, during convalescence or a month or more after the disease is over. In 1885, Dr. Barlow gave an admirable description of a remarkable case of disseminated myelitis after measles.

Numerous cases of anterior poliomyelitis have been described after acute infectious diseases. But no doubt in some of them the muscular wasting has been primary, and in others due to peripheral neuritis. Nevertheless a residuum remains where the wasting has in reality been caused by an affection of the nerve cells. In 1884 Dr. Ormerod[2] reported three cases of the juvenile form of progressive muscular atrophy in members of the same family occurring after measles.

More recently, 1890, Dr. Donkin[3] has published 3 cases of a hereditary form of progressive amyotrophy, which are probably of the same nature. The cases consisted of a father and two children. In the children, aged 9 and 17 respectively, the disease commenced at 7 years of age in each instance, and after a second attack of measles also in each case.

In 1886 I had a case of pseudo-hypertrophic paralysis in a boy, aged 9. (See Figs. 1 and 2 on next page.) The illness commenced at the age of 5, immediately after a severe attack of "fever." He had ten brothers and sisters, but none were similarly affected.

Last year I had under my care a boy, aged 11, suffering from general muscular wasting following attacks of enteric and scarlet fevers. It appeared to be an example of Erb's juvenile form of progressive muscular atrophy. All the voluntary muscles were wasted except the muscles of expression, which acted fairly, and the face looked plump and natural. On the trunk and limbs the emaciation was extreme. The scapular muscles and the calves were not so much wasted as the rest, but there was no real pseudo-hypertrophy. He was unable to stand or to rise in bed. The nutrition of the skin and subcutaneous tissues was good. The sphincters acted properly, and there was no alteration of sensation. The knee-jerks were absent, but the abdominal

[1] *Johns Hopkins Hospital Reports*, vol. iv.

[2] *Brain*, October, 1884.

[3] *Brain*, part 52.

and epigastric reflexes were well marked. The electrical reactions were diminished quantitatively but quite unaltered qualitatively. He has one brother and two sisters, but no other member of the family has been affected. At 5 years of age he had an attack of enteric fever of only average severity, but for two months after convalescence was established he was unable to walk, and had to be carried about. At first it was supposed that the loss of power was only the temporary weakness following an exhausting illness. But though he improved so as to be able to walk he fell down if he attempted to run, and never regained his former power. On the contrary the upper extremities, too, gradually became involved. At the age of 9 years he suffered from scarlet fever; since then the muscular wasting has made very rapid progress, and for a year past he has been unable to stand. The absence of sensory change excludes neuritis as the cause, while the uniform progress, together with the general affection of the whole of the voluntary muscles, render anterior polio-myelitis extremely improbable.

Fig. 1.—Pseudo-hypertrophic paralysis in a boy, aged 9, following immediately upon an attack of "fever."

Although in the juvenile form of progressive muscular atrophy, as well as in the closely allied pseudo-hypertrophic paralysis, no constant change in the nervous system has been demonstrated, and the opinion prevails that the muscular system is primarily at fault, I have followed the usual custom in including the disease among the nervous sequelæ. The exact influence of the two infectious diseases from which the patient suffered in determining the onset of the muscular atrophy is difficult to define. The usual occurrence of the disease in several members of a family shows that a congenital tendency must be called into activity by the virus; but the numerous instances where the disease has followed immediately upon one of the acute specific fevers also show that the influence of the fever poison cannot be altogether neglected. Yet the cases must be distinguished from those in which a pure neuritis is induced by the influence of the poison of a specific disease.

This seems to be the proper place to allude to the neurosis following enteric fever known as "the typhoid spine," originally described by Dr. Gibney, of New York, and of which Dr. Osler has published two cases in the *Johns Hopkins Hospital Reports*, vol. iv. It is characterised by pain in the back and hips, usually of a shooting kind, and paroxysms of pain in the abdomen. It arises quite late in convalescence, and may again confine the patient to bed, sometimes for weeks. It seems to be associated with general neurasthenia, and to end in recovery. Dr. Osler mentions the case of a young officer, invalided from India after a prolonged fever, who had for many months on the slightest movement attacks of the most severe pain in the back, which incapacitated him completely, though when seen he looked strong and robust, and had a good appetite. He subsequently got quite well.

Dr Jacobi thinks that it is either a neurosis or spondylitis. Dr. Pepper has suggested a periostitis of the front of the spinal column. Dr. Osler, in his cases, could find no evidence of organic disease of the spine, and considers it a neurosis.

According to Dr. Gowers,[4] in some cases the weakness due to an attack of typhoid fever seems to persist in the legs; and, some months after the onset, defect of power may remain with excessive knee-jerk and foot clonus. In other cases actual paraplegia comes on more rapidly, but not suddenly,

Fig. 2.—The same boy in the characteristic action of "climbing up himself."

and may increase to a considerable degree of weakness, although there is rarely absolute loss of power. The onset may be attended with spinal tenderness and with hyperæsthesia or various subjective sensations in the legs, and these may be followed by defects of sensation. It is probable that the symptoms are due to disseminated myelitis of slight intensity. They usually pass away in the course of a few weeks.

Dr. Gowers also states that poliomyelitis is more frequently secondary to typhoid fever than to any other acute specific disease. In acute cases of limited atrophic paralysis the lesion is probably always spinal—anterior poliomyelitis. Although a considerable amount of recovery always occurs, there may be permanent atrophy. In one case of such acute atrophic paralysis, affecting only the extensors of the wrists and fingers, with rapid loss of all irritability, Shore[5] found acute inflammation of the anterior cornua from the third to the eighth cervical nerves. The onset was three weeks after typhoid, and the patient died of pneumonia two weeks later.

The muscular tremor, which is occasionally so conspicuous

[4] *Manual of Diseases of the Nervous System*, vol. ii, 2nd edition, p. 895 *et seq.*
[5] *St. Bartholomew's Hospital Reports*, xxiii.

during the course of typhoid, may continue during convalescence, and it has been known to persist and to be followed by symptoms of disseminated sclerosis.

Lastly, we have the affections of the nerve trunks and of the peripheral nerves.

So long ago as 1843, Graves suspected that the cause of certain forms of generalised paralysis was to be found in inflammation, not of the spinal cord or higher nerve centres, but of the nervous cords themselves. In 1859 Landry published several cases of paralysis, and in one of them, which proved fatal, no lesion of the brain or spinal cord could be discovered. The nerve trunks were not examined, but the author gave reasons for believing that they were the seat of the disease.

In 1864 Dumenil, of Rouen, published the first case in which the presence of neuritis was verified by a necropsy. Later, in 1872, Nothnagel made peripheral neuritis the subject of a special memoir, and, mentioning among other forms strabismus, paralysis of the portio dura, motor paralysis of individual spinal nerves, such as the ulnar or peroneal, and local anæsthesia, suggested that the cause was similar to that of diphtheritic paralysis.

Murchison[6] says, "Now and then these attacks of paralysis, particularly in the legs, terminate in atrophy of certain of the muscles. One of my patients, a girl aged 18, had all the signs of paralysis of the right third nerve in a marked degree throughout an attack of enteric fever; this had first occurred fourteen years before, after an attack of measles, but for many years had almost disappeared until the seizure from enteric fever, on convalescence from which only slight ptosis remained."

Gubler reported the case of a boy, aged 16, who during convalescence from enteric fever spoke with a nasal twang, which was found to depend on paresis of the palate. A little later the same patient could not see to read clearly, and was found to have paralysis of accommodation. "This," says Dr. Bury,[7] in his excellent monograph on *Peripheral Neuritis*, "is the only case known to me of paralysis of accommodation following typhoid."

In 1888 I reported,[8] with full details, 3 cases of neuritis following enteric fever, and affecting in each instance the ulnar nerve. The patients were aged 15, 21, and 23 respectively. In each case there occurred extensive anæsthesia in the distribution of the ulnar nerve (preceded in 2 of them by pain and tenderness), wasting of the small muscles of the hand sufficiently extensive to be easily demonstrated by photography (Figs. 3, 4, 5), reaction of degeneration in the affected muscles, paralysis of motion, together with local fall of temperature, and nutritional changes in the skin.

In one of the three, and in several other cases also, I observed a remarkable "tenderness of the toes," which I described in the same paper.[9] Professor Osler, of Baltimore, has recently called attention to it afresh. In many cases the toenails cannot be cut on account of the pain caused by the operation in the nail bed and in the pulp at the end of the toes. In other instances the tenderness has been so great that the toes have had to be protected from the pressure of the bedclothes by a cradle. In one case the arms also were tender. The tenderness was no doubt due to a neuritis, but in none of my cases did local muscular wasting follow, nor could I detect definite loss of sensation. I have also noticed occasionally in enteric fever a remarkable hypersensibility of the skin both to touch and more especially to cold. In such cases cold sponging is positively painful. Professor Osler,[10] in an analysis of 229 cases of enteric fever, mentions 3 cases of neuritis—2 of the ulnar alone and 1 of the ulnar and peroneal.

Professor Ross[11] (McGill University, Montreal) reports 2 cases of very extensive paralysis after enteric fever, simulating cord disease, but probably due to a lesion of the nerve trunks. During apparent convalescence there occurred severe pain in the limbs, marked tenderness of the skin and muscles, no anæsthesia, diminution of the superficial reflexes, loss of electrical contractility, extensive bedsores, loss of power to a great extent, but never complete, contractures, no disturbance of sphincters. Complete recovery ensued.

The common deafness of typhoid is apparently produced

Fig. 3.—Wasting of the small muscles of the thumb and little finger, with paralysis of the little finger after enteric fever.

Fig. 4.—Second case of wasting of the small muscles of the little finger, and slight loss of bulk of the thumb, with partial paralysis of the little finger from ulnar neuritis after enteric fever.

[6] *Continued Fevers*, 3rd edition, p. [illegible].
[7] Buzzard and Bury on *Peripheral Neuritis*, 1895.
[8] *Brain*, Part 42.
[9] *Brain*, loc. cit.
[10] *Johns Hopkins Hospital Reports*, vol. iv.
[11] *International Journal of the Medical Sciences*, January, 1889.

by a special incidence of the poison on the auditory nerve. Dr. Bury,[12] from an analysis of a large number of cases, sums up as follows:

1. The paralysis is usually partial in extent and degree.
2. The muscles are wasted as well as weak.
3. The paralysis is almost invariably preceded or accompanied by some form of sensory disturbance.

It will have been observed that the cases of peripheral neuritis to which I have referred have all followed enteric fever; and probably, excluding diphtheria and influenza, more cases of peripheral neuritis follow enteric fever than all the other acute infectious diseases put together. As regards scarlet fever Dr. Bury says, "No case is known to me in which paralysis occurring in connection with scarlet fever could be attributed with any certainty to peripheral neuritis; and it is highly probable that recorded instances of more or less generalised paralysis depended on diphtheritic rather than on scarlatinal poison." Spinal symptoms, also, are rare after scarlet fever, but cerebral sequelæ are more common than after any other acute infectious disease.

Fig. 5.—Third case of the same condition in a very powerful man. The little finger could not be fully extended nor adducted so as to touch the ring finger.

Out of 1,500 cases of scarlet fever in the Nottingham Borough Fever Hospital, Dr. Griffiths tells me he has had 2 cases of chorea, 1 of disseminated sclerosis, and 1 of spastic paraplegia (probably functional) lasting only a few weeks.

As regards measles, up to 1893, Dr. Bury says, "About 60 cases of paralysis developing during the course of, or in early convalescence from, measles, are to be found recorded in medical literature. The large majority of them were of cerebral or spinal origin; and as regards the remaining cases of paralysis, some were probably due to multiple neuritis, although a study of the clinical histories does not yield absolutely certain evidence of the existence of neuritis."

Influenza is, no doubt, an infectious disease, but it has been discussed so exhaustively during the last few years that I do not propose to refer to it further, although the nervous sequels are both numerous and varied.

There are still several extremely difficult, though important, problems awaiting solution. Among them are: The nature of the poison, which, circulating in the blood or lymph, acts immediately upon the nervous tissue and causes paralysis; whether there is one virus or toxalbumin, or whether there are many; whether the resulting lesion is inflammatory or (mainly) degenerative; and whether there are specific differences in the sequels of each infectious disease.

In a short communication relating chiefly to some of the surgical sequelæ of typhoid fever Sir James Paget asked, many years ago, "whether each fever has, as seems probable, its own proper sequels, and in this sense, though perhaps in less degree, as specific as in its fever period?"

Although there is scarcely any acute infectious disease, a severe attack of which may not be followed by a lesion or disorder of some portion of the nervous system, yet, with such various antecedents, there is a very strong general resemblance between the sequelæ. The chief reason of this resemblance, no doubt, consists in the fact that the manifestations of the nervous disease depend almost entirely upon the organ and tissue affected and very little upon the virus producing the lesion. A myelitis following measles depends for its symptoms upon the organ—namely, the spinal cord—affected and upon the distribution of the lesions in it, and only to an infinitesimal degree, if at all, upon the measles poison. The symptoms of a neuritis, though not the course and tendency to recovery, depend much more upon the nerves affected than upon the nature of the poison. I should doubt if it is possible to distinguish a peripheral neuritis following enteric fever from one following small-pox or measles. But just as in the toxic neuritis due to lead, arsenic, or alcohol, there is evidence of selection, and some nerves are much more frequently attacked than others. And as in diphtheria the toxin very rarely indeed attacks the spinal cord, while it affects the nerves in 25 per cent. of all cases, and has a special affinity for the nerves of the palate, even when the primary disease did not affect the throat, but was confined to a wound on the surface of the body; so in the nervous disorders which follow the other acute infectious diseases there is likewise evidence of selection. After some diseases the brain is most frequently affected, after others the spinal cord, and after yet others the peripheral nerves.

But why do not the nervous sequelæ which depend on the toxic influence of the fever poison follow every severe attack? As Herschel remarked many years ago "most of the phenomena which Nature presents are very complicated." And so we shall probably find in the case of the nervous sequels of infectious disease. The organisms which produce the toxin produce also the antitoxin; and the affection of the nervous system may depend on the proportion of one to the other. Or there may be several toxins in the same infectious disease, only one of which causes degeneration of nervous tissue; or it may be necessary for various adventitious circumstances to coexist, such as pressure, stretching, malnutrition, etc. And lastly, does the same toxin attack the various portions of the nervous system—brain, cord, or nerves—indifferently? Does the same poison induce diseases so different as focal myelitis, poliomyelitis, and peripheral neuritis? I cannot say.

II.—THOMAS BARLOW, M.D., F.R.C.P.,

Physician, University College Hospital, and Hospital for Sick Children.

DR. BARLOW said the period during or after the disease in which the nervous symptoms arose was a highly interesting question. These nervous manifestations might be divided into groups, for example: (1) Those produced by the toxins of the disease; (2) those produced after the fever had subsided as in diphtheritic paralysis; (3) those produced by secondary infections and due to micro-organisms such as might occur through the skin lesions of small-pox; (4) those produced by the primary virus, but these might be called complications rather than sequelæ, though the nervous storms so produced might lead to permanent conditions of disease such as anterior poliomyelitis or disseminated changes resulting in insular sclerosis. Infectious diseases would also be found to reinforce a pre-existing nerve lesion; he recalled a case of this kind in which a child with infantile paralysis of the lower limbs contracted measles, and, after the paralysis had become general, died comatose during the infective period.

[12] *Loc. cit.*

III.—W. B. Cheadle, M.D., F.R.C.P.,
Physician, St. Mary's Hospital and Hospital for Sick Children.

Dr. Cheadle said that with the exception of diphtheritic paralysis, nervous sequelæ in children were exceedingly rare. He had seen very few. He had had seen a case similar to Dr. Barlow's with almost complete paresis, get slowly well again. He had seen no nervous sequelæ in children after influenza, though he had seen numbers in adults.

IV.—Professor Dr. Von Ranke,
University of Munich.

Professor Von Ranke agreed with Dr. Cheadle that nervous sequelæ were very rare. He was impressed with the fact that since the institution of the serum treatment there seemed to have been more of these cases, possibly because more cases than formerly now recovered. He had seen very marked nervous sequelæ following pneumonia. Polyneuritis generally recovered; chronic cases were dependent on myelitis and insular sclerosis. Diphtheritic paralysis could attack either the peripheral or central nervous system. The question of the generation of poisons by the formation of albumose was a highly interesting one, which he hoped to see worked out.

V.—W. P. Northrup, M.D.,
New York.

Dr. Northrup made a few remarks on the cell changes found in the kidneys following acute fevers, and pointed out that they were due to degenerations, and not to neuritis.

VI.—Fletcher Beach, M.B., F.R.C.P.,
Late Medical Superintendent, Darenth Asylum.

Dr. Fletcher Beach remarked that he was going to treat the question from a different standpoint from that of the previous speakers. His point of view was the relation of idiocy, imbecility, and feeble-mindedness to the infectious diseases. On examining 2,000 histories which he collected, he was surprised to find only 37 cases, namely, 25 males and 12 females, that could be attributed to this cause, or about 2.0 per cent., thus bearing out Dr Cheadle's remark that the nervous sequelæ were not common. The diseases which caused it were measles (11 cases), scarlet fever (9 cases), whooping-cough (8 cases), typhoid fever (6 cases), small-pox (1 case), and diphtheria—the common cause of paralysis—(1 case). A family history of consumption was present in 18 cases, of intemperance in 3 cases, and of consanguinity in 3 cases. In most of these cases there was a predisposing cause, such as a history of insanity, imbecility, epilepsy, excitability, extreme nervousness in the parents, and the infectious fevers then acted as an exciting cause. The immediate cause was no doubt inflammation of the brain membranes, for in a large majority of the cases convulsions followed the fever. There was also in some cases a family neurosis present, for in 8 cases, 15 other children had had convulsions. He had seen one case of slight hemiplegia following scarlet fever since his connection with a hospital for nervous diseases, and that child recovered under treatment by galvanism and massage.

VII.—E. Mackey, M.D., M.R.C.P.,
Assistant Physician, Sussex County Hospital; Honorary Physician, Royal Alexandra Hospital for Sick Children, Brighton.

Dr. Mackey pointed out that convulsions were liable to set in early in an acute attack of fever, and to cause death, probably from the effects of the toxins produced. He instanced cases of his own in illustration.

VIII.—W. S. Colman, M.D., M.R.C.P.,
Assistant-Physician, Hospital for Sick Children.

Dr. Colman asked whether anterior poliomyelitis ought not to be regarded as in itself an acute specific disease rather than as a sequel of any other? He considered the histories of infectious fevers given by parents often extremely doubtful especially in cases of so-called measles. He might quote as "negative sequelæ" two cases of mentally backward children who both began to improve after measles.

IX.—C. E. Beevor, M.D., F.R.C.P.,
Physician, Hospital for the Paralysed and Epileptic.

Dr. Beevor made a few remarks concerning thrombosis of the cortex, with hemiplegia following infectious fevers. He considered neuritis very rare.

X.—Judson Sykes Bury, M.D., F.R.C.P.,
Senior Assistant Physician, Manchester Royal Infirmary.

Dr. Bury suggested that the vascular changes found in the acute cases related by Dr. Barlow afforded an important clue to the paralysis which ran a more chronic course. Probably many cases of so-called peripheral neuritis were really secondary to slight central lesions. For example, impairment of the functions of the anterior cornua produced by slight vascular or other lesions was often first referred to the terminations of the peripheral nerves; the former might pass away completely, but the neuritis, once started at the periphery, might spread along the branches towards the trunks of the nerves, and give rise to symptoms of well-marked multiple neuritis. Moreover, central vascular lesions, when of less intensity than those described by Dr. Barlow, might, when widely disseminated through the central nervous system, gradually produce insular sclerosis, which sometimes developed after one of the acute specific fevers. Dr. Bury then referred to syphilis as a specific fever, and contrasted the prevalent types of paralysis which occurred after syphilis with those which occurred after measles and typhoid.

XI.—Isaac Mossop, F.R.C.S Edin.,
Honorary Surgeon, Bradford Children's Hospital.

Mr. Mossop described a case of a boy who died in fourteen days of an acute febrile attack, at first simulating rheumatism, but afterwards proved to be due to idiopathic septic thrombosis. Acute mania of a violent character set in early in this case.

Dr. Handford's Reply.

Dr. Handford, in replying, said he agreed with the majority of the speakers and with Dr. Cheadle as to the rarity of nervous sequelæ of children. He thought it was difficult to say where an adult began and a child left off, but it was true that age conditions modified all diseases.

PERNICIOUS ANÆMIA IN CHILDREN.

By Professor Dr. A. Baginsky,
University of Berlin.

Professor Baginsky reported 2 cases of pernicious anæmia in children aged respectively 10 and 3½ years. The examination of the blood proved beyond doubt the nature of the disease, and both children succumbed quickly. Although a few cases had already been published, he thought that if we were more accustomed to examining the blood microscopically, we should find that such cases were more common than was generally supposed. The bacterium coli was found in the blood, and it was an interesting question whether it had any connection with the disease. There was no history of syphilis in either case.

THE MATERNAL FACTORS IN THE CAUSATION OF RICKETS.

BY

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and

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The various factors which are concerned in the causation of rickets present a very complex and difficult problem for solution. Whereas in some cases a single cause seems sufficient to account for the whole of the observed effects, in the majority of instances investigation shows that several different and often independent factors are simultaneously at work. The dietary errors which, in this country at any rate, have received most attention, often mask more deeply-lying influences, which are in consequence liable to be overlooked.

Of two children equally unsuitably fed, one will develop the disease in a severe form, whilst the other may present few or no traces of it. Bearing in mind the fact that in comparatively few cases can a single cause be assigned, we may nevertheless make the attempt to classify roughly the various factors at work in the causation of rickets.

1. Influence of Locality and Race.

It is extremely difficult to obtain a satisfactory knowledge on this point, and such statistics as are forthcoming do not always bear out the general statements which are made as to the comparative immunity of certain parts of the earth's surface. Nevertheless, it seems to be established that in colder regions rickets is more common than in the warmer zones.

Quisling,[1] in an elaborate statistical paper, shows that the prevalence of the disease does not widely differ in various European capitals, and even in Philadelphia the percentage of children seen at the hospitals that are rickety is approximately equal to that at Manchester, London, and Frankfort, and this is especially interesting, as it is opposed to the view often held in England that rickets is a comparatively rare disease in the United States and in Canada. As the result of inquiries from a number of medical men practising in those countries we are led to believe that, in the rural districts and small towns at any rate, the disease is comparatively infrequent, and there seem grounds for thinking that, except in so far as its occurrence is modified by the struggle for existence in densely populated regions it will not be found to be conspicuously more common in one part of the temperate zones than in others. The influence of density of population and the stress of life is certainly very great, and is well seen in the contrast, in this respect, between our large cities with their teeming lower class populations and our rural districts.

The same difficulty is met with in estimating the liability of different races, but it has not seemed to us that Jews and members of the Latin races resident in London show any less tendency than English children. The suggestion that their liability is even greater may arise from the fact that as a rule their circumstances are often more adverse than those of our own poorer compatriots.

2. Influence of Seasons.

Various Continental authors[2] have studied this factor, and their results show an increased prevalence in the earlier summer months, and a minimum in December. Kassowitz[3] ascribes this to the confinement to the house during the earliest months of life of children born in winter-time.

3. Influence of Infantile Maladies.

Any cause which diminishes the vitality and impairs the nutrition of the child, may give rise to, or further the progress of rickets. Among such may be mentioned exanthemata, pulmonary diseases, dyspepsia, and diarrhœa. We are inclined to believe that these more often act as adjuvant than as truly exciting factors.

4. Dietary Causes.

Errors of diet play so conspicuous and obvious a part in this connection that one is not surprised to find that they have concentrated upon themselves most of the attention that has been given to this subject. Undoubtedly this is the greatest factor of all. Such errors may be grouped as follows:—

a. Unsuitable Articles of Food.—The too early administration of farinaceous foods, the employment of condensed milk, to the exclusion of the fresh article, are the commonest of errors of this class.

b. Excess of Food.—We are inclined to believe that under certain circumstances the excessive administration of good cow's milk, beyond the amount which the child is able to assimilate, may produce rickets even in the absence of obvious digestive disturbance.

c. Defects in the Mother's Milk.—Such defects coming within the range of our subject proper will be treated among the maternal causes.

[1] Quisling, *Archiv f. Kinderheilkunde*, IX, 1888, p. 253.
[2] Quisling, *loc. cit.*
[3] Kassowitz, *Wiener med. Woch.*, XXXIX, 1889.

5. Hygienic Causes.

Children brought up in sunless, airless, and often overcrowded rooms and seldom taken out into the fresh air, often develop rickets, even when receiving a diet beyond reproach. A practitioner who had lived for nine years in Auckland, New Zealand, informed us that the only case of rickets that he had seen during that period occurred in a child aged 2 years that was practically never in the open air. Under the same heading may be included want of personal cleanliness.

6. Unexplained Causes.

There are a few cases of rickets in which all the above causes, as well as those presently to be discussed, can apparently be excluded, the existence of such cases is probably due to the deficiency of, or to the erroneous character of, the information obtained.

7. Parental Causes.

This is the group of causes to which we particularly desire to direct attention to-day. We believe that, setting aside syphilis, to which we shall return later, the state of health of the father has little or no obvious effect in the causation of rickets in his offspring. At any rate we have never been able to satisfy ourselves that such is the case. On the other hand such authorities as Ritter von Ritterhain, Senator,[4] and others, consider that phthisis in the father is an important predisposing cause of rickets in the child, but our experience would lead us to doubt the frequency of their association.

In confronting such a problem as that of the maternal elements in the causation of rickets, the statistical method cannot be relied upon. Trustworthy results are only to be obtained by careful observation of numerous individual cases in which, to all appearances, other factors may be excluded, and in which this element stands out predominant. Accordingly we do not propose to bring forward statistics, but to quote examples illustrating the various points that are raised.

This maternal element has received comparatively little attention from authors either here or elsewhere, and although almost all authors, and especially Sir William Jenner,[5] in our own country, have laid some stress upon the state of the mother's health, few have dealt with the individual factors in any detail.

In this connection it is necessary to discuss the usual period of onset of rickets. In a large proportion of cases the earliest traces of the disease, such as beading of the ribs, may be detected if looked for at about the completion of the first six months of life, and our experience agrees with that of Quisling,[6] and most other Continental authors, that the maximum number of cases commence between the 6th and 18th months. As Pfeiffer[7] points out, most cases only come under medical treatment at a later period, when deformities of bones or late dentition excite the anxiety of the parents.

As regards the occurrence of rickets in newly-born children, its frequency has certainly been exaggerated owing to the inclusion in this category of cases of other forms of bone disease, such as syphilitic affections and osteomalacia and cretinism.

Schwarz[8] even states that among 500 newborn children in Vienna 75.8 per cent. showed distinct signs of rickets—figures which are entirely at variance with our experience. Even Henoch[9] looks upon the question of such occurrence as still an open one, although he considers that it may occur, and Cheadle[10] enunciates similar views. If congenital rickets does occur it is certainly extremely rare, and our experience does not warrant us in giving a decided opinion upon this point. On the other hand there can be little doubt that there are most important causes at work prior to the birth of the child which may lead to the development of rickets at an early period of life, and these form the first group of maternal influences, the *ante partum* causes. After discussing these we shall proceed to speak of a second group

[4] *Ziemssen's Handbuch*, XIII, erste Hälfte, 1879, p. 178.
[5] Jenner, Eustace Smith, *Diseases of Children*, p. 137; Quain's *Dictionary of Medicine*, 1894; article, Rickets, Pepper, *Textbook of Medicine*.
[6] Quisling, *loc. cit.*
[7] Pfeiffer, *Jahrbuch f. Kinderheilkunde*, XXIV, p. 243.
[8] Schwarz, *Medicinische Jahrbuch*, VIII, 1887.
[9] Henoch, *New Sydenham Soc.*, II, p. 403.
[10] Cheadle, *Artificial Feeding and Food Disorders of Infants*, 1889.

in which the maternal influence is exerted through the milk, and which may be called *post partum* or lactation causes.

The *ante-partum* causes may be grouped as follows:

1. Ill health, malnutrition, or disease of the mother during pregnancy.
2. Want of fresh air and exercise during pregnancy.
3. Numerous and rapid pregnancies.
4. Multiple pregnancy.
5. Age of mother at birth of child.
6. Lactation during pregnancy.
7. Heredity.
8. Syphilis.

Group 1.—One of the most important causes of malnutrition on the part of the mother is phthisis concurrent with pregnancy, and we have met with numerous examples of rickets in children born under such circumstances. From amongst these we select the following examples.

A female child, aged 11 months, was brought to the out-patient department at the Hospital for Sick Children, Great Ormond Street, exhibiting marked signs of rickets in the skull, ribs, and in delayed dentition. The infant had been fed on good cow's milk and water since birth; no farinaceous food had been given. The mother had had six confinements, but three children were said to have died of "consumption" in infancy. She herself had had hæmoptysis, was found to have tuberculous laryngitis, and was much wasted.

A male infant, aged 17 months, exhibited well marked rickets. It was suckled for five weeks, and was then given cow's milk and water, and no farinaceous food before eight months. The mother died of consumption thirteen months after the birth of the child. She was known to have had the disease for two years before her death. Her only previous child, born ten and a half months before the patient, and only suckled for five weeks, died at the age of 15 months.

It will be noticed that in both the above cases although the children were brought up by hand, their diet had been as good as possible under the circumstances.

In the following case the nature of the mother's illness was uncertain, and the child was breast-fed: A female infant, aged 16 months, with well-marked rickets, was suckled for eleven months, and had had in addition cow's milk in a bottle. When seen it was having two pints of good milk daily. The mother had poor health, and at the seventh month of pregnancy was confined to bed for four weeks, and also for the fortnight before delivery with what was described as "abdominal inflammation." In this case the influence of numerous pregnancies cannot be excluded, as the mother had borne seven children in the course of fourteen years.

We have also collected other examples in which the mothers have suffered from want of food, excessive vomiting, as well as from various more or less ill-defined illnesses during pregnancy, and their children have developed rickets apart from any recognised dietary cause.

We are convinced of the truth of the following statement of Sir William Jenner: "The health of the mother has a decided influence upon the development of rickets in the offspring; of this much I am sure, that when the mother is in delicate health, in a state of which anæmia and general want of power form the prominent features, without being the subject of disease usually so called, there the children are often in a very decided degree rickety, although the father is in robust health, and the hygienic conditions in which children are placed most favourable."

Group 2. *Want of Fresh Air and Exercise during Pregnancy.*—Cases belonging to this group probably occur more frequently in private than in hospital practice, but we have seen examples in which signs of rickets have appeared in the child when the mother had been obliged to maintain a recumbent attitude, and was therefore confined to the house during some months of pregnancy, although there had been no concurrent disease, the feeding of the infants was above reproach, and previous and subsequent children have been quite free from rickety manifestations.

Group 3. *Numerous and Rapid Pregnancies.*—We imagine that no one will be disposed to question the liability of the youngest children of large families to rickets, or that such liability is increased if the successive pregnancies have followed rapidly upon each other. Out of a series of such examples we may quote the following typical cases:

A male child, aged 13 months, exhibited marked rickets. It had been brought up upon good cow's milk from birth, and had been given no farinaceous food. It was the fourteenth child. The mother had been married twenty-five years, and the previous child was twenty months old at the time of the patient's birth. No other child was known to be rickety. Both parents were healthy, and there had been no miscarriages.

A male child, aged 10 months, with marked rickets was the youngest of eight children all born at full term and suckled. Inquiry failed to elicit any account of rickets in the other children. The mother, who was in good health during and after pregnancy, had been married fifteen years. Her milk was abundant, and had formed the sole diet of the child. Hygienic conditions were good.

Group 4. *Multiple Pregnancy.*—The following case illustrates the influence of twin pregnancies, and we may suppose that just as during lactation the one twin may get more than its fair share of milk from its mother, so in their intrauterine existence the nutrition of the more weakly one may suffer in comparison with that of the other.

A female twin, aged 19 months, exhibited marked rickets. Both children had been breast-fed for three months and afterwards given a good supply of cow's milk and no farinaceous food under the age of twelve months. The other child was very slightly rickety. There had been one previous confinement a year before the birth of the twins.

Group 5. *Age of Mother at Birth of the Child.*—It is a recognised fact that a mother advanced in life, even though she has not had numerous previous confinements, is more apt to produce rickety children than a younger woman. The following are examples of this:—

A male child, aged 10 months, was decidedly rickety. It had been suckled entirely. The supply of milk was plentiful. The mother, aged 42, had been married twenty-two years, and had had eight children, of whom the eldest was 21. No previous child had been rickety. The previous child was aged 4 years, and the mother was in good health.

A male child, aged 2½ years, had been brought up on good fresh milk to the age of 1 year, and had had good diet ever since. It was a second child after an interval of eighteen years without any intermediate conceptions. The signs of rickets were conspicuous.

It is possible that pregnancy at an unduly early age has a similar influence upon the nutrition of the fœtus, but we are not able to bring forward examples illustrating this point.

Group 6. *Lactation during Pregnancy.*—We believe lactation during pregnancy to be a very important and often overlooked factor in the causation of rickets.

A male child, aged 3 months, showed distinct beading of ribs. The mother, aged 22, had been married four years and had two children. The first child was being suckled throughout the first five months of the second pregnancy. The labour and puerperal period were natural. The child was entirely breast-fed, and the supply of milk was abundant.

A second patient, a male, aged 4 months, with definitely beaded ribs, was a ninth child, and none of the others had been rickety. The previous child had been suckled at least the first three months of the last pregnancy. The mother was healthy, but, having little milk, had supplemented the breast with good cow's milk and barley water. Here again the influence of numerous pregnancies cannot be excluded. Such examples might be multiplied almost indefinitely.

Group 7. *Heredity* has long been looked upon as having a share in the causation of rickets, and its influence has been recognised by Ritter von Rittershain, Pfeiffer, Henoch, and others. We do not propose to discuss this subject here, as we are not in a position to make any very definite statement about it, but we may point out that any estimation of the influence of heredity in this connection is rendered extremely difficult by the fact that parent and child may alike suffer from rickets, not because of any inherited tendency, but because both were exposed in infancy to similar unfavourable conditions of diet or hygiene.

Group 8. *Syphilis.*—The subject of the relation of syphilis to rickets has an extensive literature of its own. Parrot has maintained that hereditary syphilis is the chief if not the sole cause of rickets; but, in common with most of those who

have written upon the subject, including such authorities as Henoch, we are quite convinced that such a view is untenable, although prepared to rank syphilis among the predisposing causes, as a disease tending to impair the nutrition both of mother and child. Monti states that he has never seen a case of hereditary syphilis in which rickets was not present. Baginsky found evidences of syphilis in 6 per cent. of all rickety children. Cheadle, who admits that this disease modifies rickets, mentions in opposition to Monti that many cases of congenital syphilis are not rickety.

Post-partum or Lactation Factors.

The influence of the condition of the mothers in favouring the development of rickets does not cease with the birth of the child, but lasts throughout the period of lactation.

Breast-fed children are not, as is so often held, by any means immune from rickets, and whilst their liability is in part due to the causes which have already been discussed, there can be no doubt that it is also in part due to a deficiency in the mother's milk of these elements which are necessary for the proper nutrition of the child.

Gumplowitz,[11] at Prague, found signs of rickets in 28 per cent. of breast-fed children attending the Klinik, whilst 50 per cent. of the hand reared children suffered in the same way. Moreover the hygienic factors affect breast fed as much as bottle fed children. The recognition of this liability is of extreme importance and one to which we consider that far too little attention has been paid, since lactation errors are easily controlled, whereas the *ante-partum* causes admit of much less regulation.

The lactation causes may be classified as follows:

1. Deficiency of milk supply, due to:
   (*a*) Abnormalities of mother, for example, retracted nipples; single available breast, owing to abscess, new growth, etc.
   (*b*) Abnormalities of child, for example, hare lip, cleft palate, etc.
   (*c*) Sharing of supply by twins.
   (*d*) Deficient activity of gland.
2. Deficient quality of milk supply, due to:
   (*a*) Mother's health during lactation.
   (*b*) Menstruation during lactation.
   (*c*) Pregnancy during lactation.
3. Excessive duration of lactation.

1. *Deficient Milk Supply.*—This group hardly requires further discussion, since the enumerations of the conditions referred to will almost suffice. The cases in which the abnormality is confined to the child, although falling into this group, can hardly be referred to as a maternal cause. We may mention that we have seen cases in which the occurrence of rickets could only be ascribed to the difficulty experienced in obtaining the natural supply. In the case of twins the conditions are complicated by other causes also, and it appears to be especially the weakly twin that tends to develop the disease, partly because it obtains less nourishment, and partly from inferior nutrition *in utero*.

2. *Mother's Health during Lactation.*—The influence of the mother's health upon the constitution and quantity of the milk is well recognised; concurrent illness, overwork or worry and confinement to the house, are all active factors in this connection.

We may quote the case of a male child, aged 14 months, the youngest of seven children, who exhibited well-marked rickets. The infant was suckled only for six months, and after that had good cow's milk, a pint and a half *per diem*. During lactation the mother had an attack of either gout or rheumatism, lasting for two months, and felt very ill during that period. The quantity of milk was diminished. In this case the influence of numerous pregnancies and of the age of the mother cannot be excluded.

Menstruation during Lactation.—Although numerous Continental authors have studied the effects of this cause, we believe that, except in a paper by the late Dr. Tilbury Fox,[12] attention has not been seriously called to it in this country.

Menstruation appears to be no uncommon occurrence during lactation, at any rate among the lower orders. Schlichter[13] found that among 424 suckling women at a lying-in hospital no fewer than 50 menstruated during the first two months and a-half. Tilbury Fox considered this one of the most important of all the causes of rickets, and gives as his experience that, with very few exceptions which can be otherwise explained, "wherever the rachitic child is entirely dependent upon the mother's milk, the mother will be found to have menstruated during lactation, regularly for several months, and the degree of rachitis to be in direct ratio to the frequency, duration, and amount of the menstrual flow. If the child is partly fed upon food other than the nurse's milk, the disease is lessened in degree or altogether prevented." He quotes a series of 39 cases to illustrate these points.

As regards the changes taking place in the milk during menstruation, Bouchut, Bequerel and others found an excess of fat and a diminution of lime salts, and especially of phosphates, but there has been considerable disagreement in this matter, and the most recent careful analyses of Schlichter show that the changes are very slight, and he looks upon them as insufficient to cause rickets. Schlichter also, unlike earlier observers, was unable to detect any marked change in the general condition of the child during the occurrence of the menstrual flow, although he carefully watched 52 infants under these circumstances. He concludes that the occurrence of menstruation after the sixth week is neither prejudicial to the child or mother. Our clinical experience, however, tends to support the view that this has an important influence in the causation of rickets, and from amongst a series of cases bearing upon this question we select the following:

A male child, aged 12 months, with marked rickets, was suckled entirely for ten months, and had no farinaceous food. For two months it had had fresh cow's milk. It was the first child. The mother, aged 25, but looking ten years older, was evidently not a person of robust health, had never had any serious illness, and stated that she was quite well during pregnancy. The supply of milk was abundant during the whole lactation period, but the menses returned three months after the birth of the child, and continued regularly but somewhat more copiously than usual from that time. The child was not in any way upset during the periods.

A male child, 13 months old, with marked rickets, had been suckled entirely to 12 months. The mother, who was weakly-looking, had borne five children in ten years, the previous child being 4 years old at the time of the patient's birth. One at least of the previous children had rickets. She always menstruated during lactation, generally from the fourth month after delivery. The loss was much as usual in amount, and no change was noticed in the children during the periods.

Pregnancy during Lactation.—It may easily be supposed that when pregnancy occurs during lactation, this event will not be without influence upon the child at the breast by affecting the quality of the milk. We believe that this is not a very uncommon factor in the causation of rickets, especially among the lower orders, in which lactation is so often prolonged to an undue extent, and we have already discussed this as a cause of future rickets in the unborn child. The following is a case to illustrate this:

A female child, aged 2 years, with conspicuous rickets, was the second of a family of three. The mother, aged 28, had been married five years. Neither of the other children were known to have rickets. She was pregnant with the third child six months whilst she was suckling the patient. The child had the breast for nine months, and was afterwards given fresh cow's milk in sufficient quantity, and later other suitable articles of diet.

3. *Over-lactation.*—Too prolonged lactation is so well recognised a cause of rickets that it is not necessary to quote any of the numerous examples which have come under our notice.

The cases which we have quoted have been carefully selected to illustrate particular points, with as few disturbing factors as possible. Syphilis was excluded in every case which has been quoted, and in all the evidences of rickets were conclusive. Nevertheless, we are conscious that where so many interacting influences are at work, it is extremely difficult to bring forward scientific proof that any single one of them is responsible in any particular case. Our statements are rather based upon impressions derived from the examina-

[11] Gumplowitz, *Prager med. Wochenschrift*, xiv, p. 89, 1889.
[12] Tilbury Fox, *Trans. Obstet. Soc.*, London, 1883, xv, p. 289.
[13] Schlichter, *Wiener klin. Wochenschrift*, ii, 1889, 51 and 52; iii, 1890, 4 and 5. Summary, Schmidt's *Jahrbucher*, vol. 225, p. 55.

tion of numbers of cases than upon particular selected instances such as have here been quoted.

It is interesting to note how in some instances an intricate tangle of maternal factors may come into play, apart from any obvious dietetic or hygienic causes. We may quote a case in which a mother affected with exopthalmic goitre had borne seven children within twelve years, all of which were suckled for about sixteen months, and during her last pregnancy was suckling the previous child for some months. Here we have illness of the mother, rapid childbearing, over-lactation and pregnancy during lactation combined. The seventh child, aged 13 months, had beaded ribs, curved spine, enlargement of the epiphyses, and rickety skull. The mother exhibited marked signs of Graves's disease, dating from twelve months previous to the birth of the child.

We have now enumerated what we believe to be the most important of the maternal factors in the causation of rickets. We think it very desirable that attention should be called to them more strongly than has hitherto been the case. When recognised, it is obvious that they have important bearings upon treatment, seeing that all the *post-partum* or lactation influence are amenable to control, as, for example, by substituting artificial feeding when menstruation occurs during lactation, and by controlling the duration of lactation when necessary for other reasons. Even when such causes as rapid childbearing, delicacy on the part of the mother, etc., which are beyond the control of the medical attendant, are present, it is probable that special care in matters of diet and hygiene may serve to counteract the innate tendency to the disease.

EROSION OF THE TEETH IN CHILDREN.

By J. Kingston Barton, M.R.C.P.Lond.

Mr. Kingston Barton defined this as an absence of enamel in different degrees with varying appearances according to the resistance of the exposed dentine to the destructive processes of micro-organisms. Various causes had been assigned to this condition, such as syphilis or convulsions; but it became evident on closer examination that it was an error in development taking place in the suckling period to which the disease was really due. Out of 202 children he had found 10 cases of well-marked erosion of the permanent teeth, and 5 cases of erosion of the milk teeth. These latter occurred out of 67 hand-fed children. Of the 202 cases 24 were fully breast fed, and there was no case of erosion among them. Two cases of very early and severe decay were associated with very bad artificial feeding.

In one case in which there had been temporary bad feeding with a patent food in an infant 6 weeks old, the permanent teeth showed a horizontal line marking the period at which the nutrition of the child had suffered. The development of the milk teeth took place so early that probably only errors in the mother's health during pregnancy could affect them.

The development of the permanent teeth began 3 months before birth, and ended with the development of the second molar soon after the third year. As this last tooth never exhibited erosion, the cause producing it was certainly antecedent to the third year. All the evidence went to show that bad feeding was the main cause; and with regard to convulsions it was probable that the bad diet causing them caused also the erosion.

He added a short scheme of diet for children up to the third year.

Mr. Sidney Spokes, in commenting on the paper, said that erosion did not now mean as much as it used. He was not prepared to hear that 2½ per cent. of children had their permanent teeth affected.

CONGENITAL DISLOCATION OF THE SHOULDER BACKWARDS TREATED BY OPERATION.

By Frederic Eve, F.R.C.S.,

Surgeon, London Hospital.

Mr. Eve showed a child of 9 months upon whom he had operated for a congenital dislocation of the shoulder backwards. The delivery had been with instruments, and paralysis of the arm noticed on the following day. On admission movement was limited, and the head of the humerus was dislocated backwards on the dorsum of the scapula. An operation was performed in which the deltoid was reflected and the capsule opened freely. The head of the humerus could not be replaced, owing to its elongated and flattened shape, but after the part of the articular surface had been excised it was easily reduced. The wound healed quickly, and in ten days' time the child was allowed to use the arm. Mobility was now almost equal to that of the other arm. There was no deformity of the glenoid cavity, and the irregular shape of the head of the humerus was obviously a result of its abnormal position.

A CASE OF SPINA BIFIDA SUCCESSFULLY TREATED BY EXCISION OF THE SAC.

By Frederic Eve, F.R.C.S.,

Surgeon, London Hospital.

Mr. Eve showed a case of spina bifida in which he had successfully treated by excision of the sac. At birth the tumour was about the size of half a crown, but it rapidly increased, and at the age of 5 months was the size of a large orange. The usual operation was performed. It was found that the communication with the spinal canal was very small, being not larger than a shilling. The termination of the spinal cord was found as a small nodule at the bottom of the sac; after excision of the sac the cut edges were sutured over this. Collected statistics showed that this operation was certainly less fatal than the method of injecting Morton's fluid, while the results were infinitely more satisfactory.

CONGENITAL HYPERTROPHY OF THE PYLORUS AND STOMACH WALL.

By John Thomson, M.D.,

Extra Physician, Royal Hospital for Sick Children, Edinburgh.

The patient, an infant, died on the twenty-sixth day after birth; of uncontrollable vomiting with resulting emaciation. On *post-mortem* examination, all the thoracic and abdominal viscera were normal with the following exceptions: The œsophagus was very much dilated; the stomach was greatly distended; the pylorus was much thickened, and on moderate pressure did not allow of passage of fluid into the duodenum; the muscular layer of the stomach wall was much thickened, especially at the pyloric end, which on microscopic examination proved to be three times its normal size. The hypertrophy was probably occasioned by a derangement (possibly from faulty development of the nervous mechanism which regulates the contraction and relaxation of the pylorus under appropriate stimuli), throwing great strain on and calling for over-use of the muscular coat. The nature of the stimulus remained an open question, though several suggestions for its solution were made.

Mr. D'Arcy Power thought that the specimen exhibited showed an undue proportion of fibrous tissue, and could not be considered a pure myoma.

BENIGN STREPTOCOCCI AND STAPHYLOCOCCI OF THE UPPER AIR PASSAGES IN CHILDREN.

By Dr. Jules Comby,

Paris.

Dr. Comby read a paper on the necessity of a bacteriological examination for distinguishing benign forms of sore throat from the more malignant varieties. There often exist in children, apart from the acute infectious fevers, forms of primary rhinitis, pharyngitis, or laryngitis simulating diphtheria, which are due not to the Loeffler-bacillus, but only to staphylococci or streptococci. A differential diagnosis is impossible without the aid of bacteriology, but can be arrived at by means of cultivations in serum. In three cases of apparent diphtheria in his private practice he was able to make a diagnosis in this way, and so avoid for parents and children the inconvenience of inoculation with antitoxin,

notification, prolonged isolation, and disinfection. He advocated the establishment of public bacteriological laboratories similar to those which had worked so admirably for the past three years in New York.

A CASE OF SCIOPEDY.

By D'Arcy Power, M.B., F.R.C.S.,
Surgeon, Victoria Hospital for Children.

Mr. D'Arcy Power showed a case of a child, aged 5 years, with very large feet. The condition was exactly symmetrical and was congenital. The patient had been under his care since she was 3 weeks old. The relative increase in size between feet and legs was less marked now than at first, because the legs had become hypertrophied owing to the increased work they had had to do in lifting the feet. The hypertrophy was limited to the anterior part of the foot, for the heel was not involved. Mr. Power hesitated to call the condition one of acromegaly, but suggested the neutral term of sciopedy, in allusion to the description given by Mandeville of the inhabitants of the torrid country who shaded their heads and bodies with their large feet.

The late Sir George Hornidge Porter, of Dublin, who died in June last, left personalty valued at £57,366 14s. 7d. Subject to an annuity to Lady Porter, and other bequests, the residuary estate is left upon trusts in favour of the testator's son, the present baronet.

THE CONSTITUENTS OF THE BILE IN CHILDREN.

By Professor Dr. A. Baginsky,
University of Berlin.

Professor Baginsky gave an account of a series of analyses undertaken with a view of estimating quantitatively the constituents of the bile in children. The bile in children who had died of infectious fevers was excluded, this being well known to differ in several important respects from normal bile. It was however proposed to pursue this question separately. The paper contained a comparative table of the analyses of several observers, together with a detailed account of the method pursued by the author.

DISEASES OF INFANCY AND ANTENATAL CONDITIONS.

By J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S.Edin.,
Lecturer on Midwifery and Diseases of Infancy, School of Medicine, Edinburgh.

Dr. Ballantyne contributed a paper on the diseases of infancy and antenatal conditions, in which he pointed out that there were many means of investigating antenatal states and of connecting them with diseases or malformations occurring in infancy. Prominent among these was examination of the placenta, membranes, and liquor amnii, which was in general greatly neglected. Bacteriological and histological examination of the fœtal annexa were of the highest importance. Fœtal variola and syphilis had long been recognised, and within recent years cases of antenatal measles, scarlet, typhoid, yellow fever, malaria, erysipelas, and influenza had been recorded. Recent researches had also thrown much light on the inheritance of tubercle. It was possible that pathogenic organisms might pass to the fœtus through the liquor amnii, many abnormal conditions of the skin being connected with abnormalities of this fluid. The excess over or absence of the vernix caseosa and epitrichium in relation to subsequent diseases of the skin was also a point of great interest. Experiments had been made proving that by variously altering normal incubation conditions monstrosities could be produced in the embryo chick. Anomalies of all kinds in children were frequently associated with a history of alcoholism, syphilis, or tuberculosis in the parents. It seemed reasonable to conclude that poisons circulating in the blood of the pregnant woman or present in the ovum or spermatozoon might so influence the development of the embryo and fœtus that malformations might be produced.

Friday, August 2nd.

A DISCUSSION ON DOSES OF VARIOUS REMEDIES AT THE SEVERAL AGES.

I.—J. Kingston Barton, M.R.C.P.Lond.

An official *Pharmacopœia* can only lay down general rules for dosage in drugs, the doses given being those applicable to adults. The usual deduction for age answers safely when one is in doubt, or has had no experience. On the other hand, individual experience in the use of particular drugs, when properly recorded, may be of service to others.

I take it that if in this discussion it appears that many with experience have positive observations upon the doses of certain drugs that do not harmonise with ordinary ideas, then at a future time the Section can recommend an extended report; or, if thought fit, the experiences given to us to-day by those who have kindly promised to speak can be forwarded, if not too late, to the Committee sitting upon the new *Pharmacopœia* that is to be published.

Sir Alfred Garrod, quoting Gaubius, gives that children of 1 year and under should have one-twelfth of the adult dose. The adult is taken at 25 years, and he further gives half adult doses as appropriate for 14 years, two-thirds at 20 years, equal gradations being made between the various periods

named. I would say further that the dose given for 1 year should be divided by twelve for each month.

Children so rapidly pass at times from a slight state of illness into, perhaps, a most alarming condition, yet they equally, fortunately, very often quickly recover. Hence in administering drugs of any potency it is a good rule to give the medicine in frequent small doses, diminishing the dose as the symptoms improve, and leaving off the medicine directly the symptom has yielded. In this way harm is avoided.

A medicine of any marked power seems to do little harm whilst its potency is being used upon a definite symptom, its harmful tendencies being for the time almost suppressed, morphine in affections of the peritoneum being a good example of this. I have seen children in acute peritonitis bear adult doses without harm if watched in the manner mentioned. I would add that a diagnosis of the probable cause of the peritonitis should, if possible, be first made before giving such large doses.

That the drugs administered to children should be of excellent quality goes without saying, and if patients cannot afford to go to first-class chemists, rather than use inferior drugs the medical man had better depend on treating his patient by bed, milk, broth, and water, which will carry children safely through most diseases.

1. *Ammonii Acetatis Liquor.*—The ordinary dose is too large. In large doses it causes sickness and considerable depression (cardiac and nervous). This action makes it valuable in the treatment of pyrexia. By giving drugs at frequent intervals in small doses one gets much better results than by large doses at longer intervals. Adult dose 2 to 6 drachms; ½ to 1 drachm for children is given as ordinary dose. By preference give 1 drachm to a child of 12; 5 minims for 1 year, and so on up to 12 years. This dose may be given each hour for six doses, then each two or three hours according to the febrile symptoms.

2. *Ammonii Carbonas*, although valuable is not tolerated well by children in the stomach, causing sickness easily. Dose 5 to 10 grains. For children of 1 year, ¼ grain; for children of 12 years, 2 grains. This drug is more useful during recovery from pneumonia or bronchitic affection than in any other condition in children.

3. *Ammonii Bromidum.*—Dose 2 to 20 grains. This drug is much more useful than bromide of potash, as being less depressing. Children bear it in big doses if epileptic from reflex causes. A child 1 year old can tolerate gr. v easily, say each four hours, but none of the bromides are good to persist with owing to nervous depression and tendency to bromide rash which they produce.

4. *Anethi Aqua* is very valuable in flatulence in infants. It is best given before breast feeding, or with the child's bottle; but the usual doses are taken well; ℥j to ℥ij dose given for infants; half this, and diluted, is a better dose.

5. *Antipyrin* is only to be mentioned to be condemned. By reducing temperature as quickly as it undoubtedly can, it more often than not complicates diagnosis. When clinical thermometry first came in we were encouraged to study the natural rises and falls of temperature in all the specific diseases. Seeing that in cold sponging or ice baths we have the only reliable remedy for hyperpyrexia, it is far safer to use the other diaphoretics whilst watching the early stages of febrile attacks, so as not to mask the well-known early characteristic temperatures. The modern craze for the reduction of temperature, utterly ignoring every other point, has flooded the market with a series of dangerous antipyretics.

6. *Arsenatis Liquor Sodii*, is perhaps the most useful and safe way of administering this drug to children, chiefly because the affections requiring its use are generally the accompaniment of the neul diathesis, and hence it may be combined and taken with alkalies; ♏v to ♏x being for adults, one might be disposed to order more than would be borne well; a child of 12 years will bear ♏iij in water three times a day very well; a child of 1 year old bears ♏j very well.

7. *Ecbolic Confectio.*—Excepting the fresh-made confection, the usual preparation is unreliable; for chronic intestinal catarrh it is very valuable, ℈ss to ℥j being sufficient for adults; it is chiefly useful to those from tropical climates.

8. *Ipecacuanhæ, Pulvis Comitans et Tinctura.*—As this drug so often fails in its repute for curing enuresis or pertussis, and as its full doses are so extremely unpleasant, excepting in small doses frequently repeated, it is wise not to employ it. The extract is apparently more potent than the tincture. The dry throat and the restless nights (semi-delirium) are the chief distressing symptoms.

9. *Boracis Glycerinum.*—This is a most valuable preparation. Sucked or painted freely in the mouth, it quickly cleanses the mouth of all aphthous affections, and in young children is the safest and simplest, if not most efficacious remedy in diphtheria. The dangers of ramming brushes down struggling infants' throats is great; detached membranes are likely to be pushed into the larynx or swallowed into the stomach or pushed up behind the palate, only to sow fresh areas of disease; whereas, if 10 to 60 drops, according to age, are sucked every hour or two a throat may be nearly quite clear in twenty-four hours. If it is used in this way in surgical cases, the raw surfaces of tonsils, etc., never become white or semi-diphtheritic looking as they are wont to do when on milk diet after throat operations. As it produces no bad signs internally, and as it is chiefly eliminated by the kidneys, further good may be done if the urinary secretions themselves are in any way contaminated. A child of 10 years can take ℥j glycerine boracis six or eight times in twenty-four hours without harm; a child of 6 months can take ♏x every two hours for several days without any harm.

10. *Bismuthi Carbonas.*—Most valuable in the diarrhœa of infants from all causes, but requires to be given in large doses, combined with or without opium, as may seem necessary; also, being palatable, it is easily administered. The dose for an adult is 5 to 20 gr.; infants of 6 months will take 5 gr. quite easily each three or four hours with no harmful effect.

11. *Calomelas.*—The adult dose ½ gr. to 5 gr., excluding the consideration of syphilis. Other preparations of mercury are more useful where there is indication for a thorough clearing out of the intestinal tract. Where there is a thick-coated or furred tongue nothing can equal calomel. For children under 1 year, 1 gr.; 2 years, 2 gr.; under 7, 3 gr.; followed in four hours by a mild saline-magnesia citrate, may be suggested as suitable. The idea that calomel causes injury to the teeth can be absolutely contradicted, and yet it is constantly quoted as a cause of deterioration, which can really be traced to bad feeding, or to the bad health that called perhaps for the use of calomel. The occasional extreme faintness that is noticed after the administration of calomel may be due to some impurity in the drug. In commencing laryngeal catarrh with the harsh croupy cough, if given in large doses it cuts short the attack as nothing else can. The frequent administration of smaller doses of calomel for the liver or to bring colour to the stools is very useless and probably very harmful.

12. *Chloral Hydras.*—Adult dose, 5 gr. to 30 gr.; for 1 year ½ gr. to 3 gr. is suggested. Its chief use in infants is for convulsions, which if due to any reflex cause can be controlled and stopped by steady administration of fairly large doses. Two grains each two hours for six doses were given in an infant eight weeks old without any ill effect. In asthma this drug is also very useful. Asthma being rare under 1 year, but not rare between 1 and 12 years, doses of 2 gr. to 5 gr. should be repeated each hour during the asthmatic fit, which is generally worse at night.

13. *Chloroformum.*—For surgical operations on very young children (under 7) it is certainly the most comfortable anæsthetic for the operator. Infants in arms do not seem to suffer so readily from chloroform sickness. There is less hæmorrhage as a rule than with ether administration. In children under 3 who have any signs of rickets, chloroform is apt to bring on very unpleasant respiratory difficulties. Children with asthma do not bear chloroform well (differing in this respect from adults). The American plan of administering chloroform for convulsions is not so simple as the administration of large doses of chloral intestinally.

14. *Camphoræ Aqua* is very objectionable to children in taste; it is best administered diluted when there is any special reason for its being given.

15. *Ferrum Redactum.*—The adult dose is 1 to 5 gr.; children ½ to ½ gr. However, infants under 1 year can easily take 2 gr.

three times a day. If there is any constipation ½ to 2 gr. of powdered liquorice root can be added to the iron powder with advantage, and sugar of milk may be added as a vehicle. In true anæmic states, this preparation reddens the blood sooner than any other. It is extremely useful in the anæmias of hand-fed and rickety children. It is less likely to disagree than any other form of iron, and has less ill effects. The teeth may be blackened but not in any way spoilt, as they may be when t. ferri perchlor. in acid solution is given.

16. *Ferri Iodidi Syrupus* is a most unpalatable mixture for children, and also more often than not seems to disagree with the function of the liver and stomach; it is better tolerated in very small doses. For children who can swallow pills: pot ferri iodidi is much more easy of administration.

17. *Hyd. c. Cret.*—In gastric and intestinal irritation, when the alterative action of mercury is desired. This remedy is most valuable. Small doses repeated at intervals till the stools are altered, is perhaps the most effective way of giving this drug. For children under 2 years ½ of a grain every four hours until 1 grain has been taken is a suitable dose. Children bear the drug well, and it is not likely to be followed by the faint condition that is sometimes induced after calomel. Between 2 and 12 years, 3 to 5 grains may be given as a single dose when required.

18. *Ipecacuanhæ Vinum* is very apt after a few doses to produce nausea, even in doses of 5 minims. On the other hand, ℥j very often fails to produce vomiting. The adult dose is 5 to 40 minims; as an expectorant, 3 to 6 drachms, hence for 1 year old half a drachm should be drastic. If larger doses are given there is much prostration and some traces of irritation of intestines. Dose for infants under 1 year, 1 to 3 minims; 1 to 12 years, 2 to 10 minims, or ½ a minim a year. For emesis ½ to 13 minims for children under 1 year, followed by frequent teaspoonfuls of warm water, and then tickling the throat gives the best results. Especially night and morning for loaded bronchial tubes.

19. *Ipecacuanhæ et Morphinæ Trochisci.*—Extremely useful in spasmodic irritable cough after acute stages have passed off, especially if the cough is not accompanied by much phlegm. Children under 2 rarely require opiates for cough. For a child from 2 to 12 years old with irritable cough, worse at night and keeping the child awake, ¼ to ½ of a lozenge each fifteen minutes will, after two or three doses, give much relief, and the small dose produces but little ill-effect upon digestion.

20. *Opium.*—Excepting in peritoneal or enteric affections it is important to be very careful in the administration of opium or its compounds. The congestion of the pulmonary circulation, as well as that of the cerebrum, being with constipation its chief baneful effects. In peritonitis or troubles outside the bowel, but requiring quiet of the neighbouring parts, hypodermic injections of morphine are undoubtedly most satisfactory, and the doses must be given at regular intervals to prevent the morphine sickness. In tuberculous peritonitis a child of 8 will bear ¼ grain of morphine each three or four hours, and, although delaying the action of bowels, it does not cause the hard lumps of faces that collect when opium is administered by the mouth.

21. *Opii Liquidum Ext.* is the best preparation for internal administration. Combined with bismuth it is the most reliable means of controlling violent diarrhœa in children. The old dictum, one drop for each year, is a very fair division for all conditions which require decided dose of opium, and $\frac{1}{12}$ for each month under 1 year. For controlling cough the most minute doses are sufficient, even doses of t. camph. co. being sufficient. If excretions in the bowel or lung which ought to be expelled by evacuation or by expectoration are retained by the holding effect of opium, then serious harm is done. A minute dose of morphine more quickly controls the sickness of morphine than anything else. Tea, coffee, caffeine, or an effervescing saline best relieves the sickness of opium itself.

22. *Potassi Chloras.*—In all throat and mouth affections this drug, with potassi citras, given each hour for numerous doses gives quick relief. The effect is depressing on the heart, chiefly in slowing the heart's action together with some tension of arteries. A child of 1 year can take 1 grain per hour for twelve hours and then every two or three hours. A severe tonsillitis will be nearly gone in forty-eight hours with this treatment. The potas. cit. is double the dose of potassium chlorate. If the drug is required for a longer time, liq. strychninæ can be added with good effect.

23. *Potassii Bromidum* is the same as ammonii bromidi; if continued long it increases hysteria.

24. *Sennæ Confectio* is the most certain of laxatives for continued constipation, only it must be given regularly, the actual dose being gauged by test, ½ to ℥j will suit for 1 year to 5 years.

25. *Sennæ Syrupus* is extremely uncertain; many children take the adult dose without effect.

26. *Sulphuris Confectio* is most unreliable in its effect.

27. *Sulphur Precipitatum vel Sublimatum* is the best way of administering this drug when required. A child of 1 year requires gr. 5; 6 months, gr. iij; 12 years, gr. xxx. It is most useful in boils, lichen, or urticaria; in fact in all skin affections of childhood.

28. *Sodii Phosphas* is practically useless, its effect is so uncertain.

29. *Sinapis Cataplasma*, although so useful, is very difficult to apply to children. By diluting with a full equal part of wheat flour, the intensity of rubefacient action is diminished and made bearable.

II.—John H. Morgan, F.R.C.S.,
President of the Section.

The President congratulated himself that it did not fall to his lot to have to administer many drugs. With regard to anæsthetics, he infinitely preferred ether for even the youngest children, whenever the nature of the operation made it possible to give it.

III.—Arthur Foxwell, M.D.,
Physician, Queen's Hospital, Birmingham.

Dr. Foxwell said that, speaking generally, the doses given to children were too small; calomel, belladonna, and arsenic, for example, could, he believed, be given in absolutely larger doses than to adults. He had frequently given 1-grain doses of calomel every few hours for a week without observing any poisonous effect. Indeed this was his routine treatment for acute laryngitis, membranous and non-membranous. Liquor sodii arsenicalis was another drug which children bear remarkably well; the dose could often be quickly raised till it reached 10 or 15 minims, given thrice daily without producing any ill effect. Belladonna was often successful in enuresis when given in a simple large dose every night, say 20 to 30 minims in a child of 10. He had known this to succeed when doses of 10 minims given thrice daily have been without result.

IV.—Dawson Williams, M.D., F.R.C.P.,
Physician, East London Hospital for Children.

Dr. Dawson Williams agreed that doses given to children were often too small. He was disposed altogether to doubt the age theory of dosage. Certainly in those cases in which it was necessary to give antiseptics large doses only were of any service. With regard to mercury, he did not believe there was any danger of giving too much. If syphilitic children did not improve upon the drug it was a sign they were not having enough. He gave it in large doses, and had never seen an infant salivated. He believed in large doses of belladonna also, and had found it of the greatest value in whooping-cough. With regard to what they should ask the Pharmacopœia Committee of the General Medical Council to do, he thought they might, perhaps, ask them to give a table of doses which might protect them in a sense from accidents. But they could only ask for an empirical table, and not a weight-for-age table.

V.—D. J. Leech, M.D., F.R.C.P.,
Senior Physician, Manchester Royal Infirmary.

Dr. Leech said that in giving a table of dosage for children, such as had been suggested, great difficulties would arise. In the *Pharmacopœia* the doses given were meant to be average doses, and in any table which could be drawn out relating to doses for children only the average for various

ages could be given. The dosage for children might be indicated by physiological considerations or by certain arithmetical calculations, but could only be determined by experience. The tissues which are most recently developed are always most readily affected by physically active agents; hence it is, perhaps, that opium has such a powerful effect on the brain of young children, and in the case of new drugs the sensitiveness of the tissues must be borne in mind when the dose is considered. If any adult took antimony and ipecacuanha experimentally and a full dose, they would be able to contrast easily the difference between the long-abiding depression and nausea caused by the former, and the slight effect the latter left when the nausea had passed off. Children must feel the same as adults, though in illness they could not express this. Dr. Leech expressed surprise at the statement of the reader of the paper concerning the value of belladonna and the effect of this drug in large doses in the enuresis of children. Children of 7 years old will often take doses of Green's belladonna, gradually raised to 30 drops, three times daily without showing signs of any discomfort. No grave evils had ever, as far as he knew, followed from the heroic use of belladonna in enuresis or any other ailment. Quinine was another remedy which might be given in large doses without any fear of evil. A child of 18 months suffering from severe whooping-cough would derive only benefit from 3- or 4-grain doses of quinine three times daily. The calculation of Clenk, Cauling, and Young as to the relation in proportion between the doses proper for various ages and the average dose for an adult could not be relied on as a safe guide for dosage in children, though doubtless they gave an idea as to the dose which might be suitable for any particular age, such calculations required to be modified by physiological views and experience. Generally speaking, it may be said that substances which depress the nervous system powerfully, directly or indirectly, cannot be given to children in large doses without danger. Hence it is necessary to be cautious in the administration of opium, brisk purgatives, antimony and apomorphine in doses which approach in any way near that given to adults. Antimony is a drug capable of doing much harm in such doses. The evils of antipyrin have been overdrawn. Four gr. or 5, to a child of 5 or 6, repeated, if necessary, in an hour, would often produce most marked benefit in cases of catarrh with high fever, in which slight twitching of the muscles pointed to the possibility of an impending convulsive attack, and in many other conditions also, but he would not advise antipyrin as a continuous remedy. The marked action of moderate doses in depressing the circulation, both in children and adults, had been only suspected but never proved. Bromide of potassium, too, had been unduly blamed for causing depression. The idea that the potash had the smallest effect in depressing the nervous or muscular system in such doses as 2 to 10 gr. was a myth founded on an erroneous inference from experimental pharmacology. Potash in enormous doses will depress all the tissues, but in medicinal doses it is free from such effects, both in children and adults. Concerning chlorate of potash in full doses, it was well to remember that under some conditions, but little understood, it powerfully influenced the blood corpuscles, destroying them and leading to hæmaturia. If acetate of ammonia does produce sickness or depression, it does so by a slight irritant action which all strong salines may cause in the stomachs of children.

VI.—Nestor Tirard, M.D., F.R.C.P.,

Professor of Materia Medica and Therapeutics at King's College.

Dr. Tirard pointed out that in adults the doses of remedies employed must necessarily be regulated by the nature of the drug employed, by the nature of the disease for which it was employed, the condition of the patient and the purpose of employment. In dealing with adults it was often difficult to find practitioners agreed upon the dose to be employed. He remarked that it was common to meet with practitioners who thought the *Pharmacopœia* doses too large, while others thought them too small. Where so much variance of opinion obtained with regard to adults, was it possible to formulate general rules for the dosage of children? While admitting the great differences in effects upon children and adults relating to such drugs as mercury, opium, belladonna, and many others, he thought from his own experience that it was absolutely futile to attempt to draw up tables indicating the doses for varying ages, when practically the dose invariably had to be determined by the condition of the child and the nature of the disease as well as by the age. He believed the best guide to be experience.

Mr. J. Kingston Barton's Reply.

Mr. Kingston Barton, in replying, proposed the following resolution:

That this Section should petition the Council that a list of maximum and minimum doses should be added to the *British Pharmacopœia*, especially with regard to children under two years old.

Dr. Leech pointed out that the existing doses given were average, and not maximum and minimum doses.

After some further discussion Dr. Dawson Williams proposed the following resolution, as suitable in form for conveying the views of the Section to the General Medical Council:

That this Section thinks it desirable that in the new edition of the *British Pharmacopœia* the maximum doses of powerful drugs suitable for children at various ages should be indicated.

Mr. J. Kingston Barton seconded the resolution in this form, and it was put to the meeting and carried.

ON THE VALUE OF TREPHINING IN TUBERCULOUS MENINGITIS.

By Edmund Cautley, M.D.Cantab.,

Physician, Belgrave Hospital for Children.

The author commenced by giving an abstract of a case of acute meningitis under his care. The patient was operated on by trephining with temporary relief but, dying shortly after, the *post-mortem* examination revealed that the meningitic affection was part of an acute general tuberculosis. Two cases of acute meningitis in children, who recovered after operative treatment, are also referred to. One of these was under the care of Dr. W. W. Ord and Mr. Waterhouse, and the other under the care of Dr. C. A. Greaves.

To contrast with these, reference is made to a case of acute basal meningitis in a boy in whom coma supervened and lasted for a week, and yet the patient recovered without operative interference; and to a case of pseudo-meningitis occurring in a child as a sequel of influenza.

The theory, on which trephining for meningitis is based, is that the coma and death of the patient are dependent upon the pressure consequent on effusion of fluid. On the other hand many cases occur in which no evidence of effusion, sufficient to cause the symptoms and result, is found on *post-mortem* examination. The softening of the brain tissue, so commonly present, is not due to compression by effused fluid, but is due to the interference with the blood supply.

The coma is dependent upon the amount of softening, and is exaggerated by the pressure in cases where there is much effusion. The onset of coma is of very serious import, but that it may be occasionally recovered from is evident from the result in one of the cases referred to. At present we have a certain amount of evidence to show that in some cases the degree of coma is lessened by the relief of intracranial pressure.

It is probable that the amount of effusion in a case of meningitis depends partly upon the cause of the disease and partly on the regions affected.

If operative interference is of value, it is only so in cases of considerable effusion. Large effusions are more common in cases of acute simple meningitis than in those due to tuberculous infection. Cases of tuberculous meningitis sometimes recover without operative interference. As a rule, such cases generally lack absolute proof that they are tuberculous in origin. Operative interference should only be undertaken when there is evidence of intracranial pressure. The difficulties of obtaining such evidence in cases of tuberculous meningitis are very great, and many of the symptoms in the late stages are not those usually associated with cerebral compression. It is advisable to operate before the supervention of coma, during the stage of irritation. Operation at such a time must only be undertaken after the most careful consideration, on account of the great liability to error in

diagnosis at this stage of the complaint. Thus symptoms of basal meningitis may occur in cases of acute croupous pneumonia and other febrile disorders, in middle ear disease apart from any actual extension of the inflammation to the meninges, in cases of basal irritation following influenza, and in cases of reflex irritation consequent on the presence of worms in the alimentary canal.

In conclusion, it is pointed out, first, that tuberculous meningitis is almost always part of an acute general tuberculous infection, generally secondary to breaking down caseous glands at the roots of the lungs or in the mesentery, and that operative treatment in such cases is unlikely to result in more than a temporary amelioration of the symptoms.

Secondly, that in view of the fatal issue of these cases, and the fact that cases operated on, and supposed to be tuberculous, have recovered, it is justifiable to operate in those cases which present signs of cerebral compression.

Thirdly, that the operation produces temporary improvement, and is more likely to result in a successful issue than the expectant treatment generally adopted.

Mr. Power congratulated Dr. Cautley upon his instructive paper. He alluded to the animus often displayed against the operation of tuberculous meningitis with effusion. He pointed out that it was necessary to select cases of basal meningitis with great care, as only a few were fit for operation. No case of infective meningitis should be trephined—at any rate early—for they often recovered. Those cases of tuberculous meningitis should alone be operated upon when the onset was acute, and there were no symptoms of general infection. The diagnosis of the disease was easy by means of Quincke's puncture of the vertebral canal between the laminæ of the lumbar vertebræ. Mr. Power said that he had trephined several cases of tuberculous basal meningitis during the last year. He had unfortunately never succeeded in saving life, but the result of his experience was that life was prolonged for three to ten days in a child who was apparently moribund at the time of the operation. The most remarkable result of the operation was a permanent and very marked depression of temperature. This defervescence was a result of lowering the intracranial pressure. On one or two occasions, whilst the lateral ventricles were being drained, the flow of cerebro-spinal fluid became arrested, and the temperature again rose, falling as soon as the flow was re-established. No harm was done to the cerebral substance from the adoption of a horsehair drainage, as he had recently examined a brain in which the track of a bundle of horsehair which had been in position for several days, and had been removed ten days before death, could not be detected at a carefully conducted necropsy after the brain had been hardened in Foá's solution. The cerebro-spinal fluid was not very prone to support pyogenic organisms, and it was therefore easy to keep the intracranial cavity aseptic. Mr. Power had trephined and drained the subarachnoid space in some cases, whilst in others he had trephined and drained one or other lateral ventricle. The foramen of Majendie was usually patent. A bundle of twelve to twenty horsehairs was preferable to tubes for the purposes of effecting drainage, and it was better to bring the bundle through a hole cut in the centre of the horseshoe skin flap, than to bend it so as to bring it out between the edges of the flap.

Mr. Herbert Waterhouse said he was very glad to take part in this discussion, as the successful case upon which he operated in October, 1893, had, he thought, encouraged operations on cases of tuberculous meningitis. Whilst he felt sure that in the majority of cases tuberculous meningitis must be fatal, still he held that in few cases the operation of trephining and draining of the subarachnoid space might be expected to give a favourable result. He thought that when a child with tuberculous meningitis had symptoms of cerebral compression and is becoming comatose, it is not only justifiable but necessary to trephine and drain to ward off death by cerebral compression. There was little doubt that occasionally tuberculous meningitis recovered without operation. This view was supported by the not infrequent presence of calcified tubercles in the meninges months or years after an attack of apparent tuberculous meningitis. It might be readily understood that the relief of pressure by withdrawal of fluid in meningitis could not be otherwise than salutary. In these cases the foramen of Majendie was always patent. Drainage must be continued for several days, puncture alone was insufficient. A noticeable and immediate improvement, even if only temporary, always resulted on removal of the fluid. It is essential to operate before the stage of coma had been reached, that is, before damage has been done to the cerebral substance. It was, of course, useless to operate in cases of general tuberculosis. With regard to operation the large collection of cerebro-spinal fluid between the central lobe of the cerebellum and roof of the medulla was readily reached and drained by the method he adopted in his first case. Successful cases must be few and far between. He only urged operation in cases where there were signs of cerebral compression.

Dr. Cautley said in reply he had included non-tuberculous cases because the diagnosis was often difficult. Optic neuritis might occur without intercranial pressure. Small calcified tubercles might be found in cases in which there had been no true meningitis.

OSTEOCLASIS.

By Nicholas Grattan, F.R.C.S.I.,
[Senior Surgeon, Cork Hospital for Diseases of Women and Children.

Mr. Grattan showed a powerful steel apparatus for osteoclasis. He had operated by means of it in 220 cases. He used it not only for operating on the femur in knock-knee, but also for fracturing curved bones in the legs, and for correcting many forms of club-foot and flat foot. He had had one case of tetanus which had recovered in a week, and one case of delayed union following its use, otherwise his results were exceedingly good. It was important not to press on any large artery or nerve. Skin wounds were easily avoided by taking care that the fold of skin beneath the instrument was kept very loose.

HERNIA OF THE OVARY IN AN INFANT WITH TORSION OF THE PEDICLE.

By C. B. Lockwood, F.R.C.S.,
Assistant Surgeon, St. Bartholomew's Hospital.

The child was brought to the hospital with an oval swelling about 3 inches long in the right inguinal region, having the local characters of an inflamed strangulated inguinal hernia. An incision along the course of the inguinal canal exposed a bluish red cyst with walls ⅛ inch thick. When this was opened the ovary, full of blood, and the deeply engorged fimbriated end of the Fallopian tube came into view. About ½ inch from the internal abdominal ring the pedicle had made a half turn upon itself, thus causing the vascular engorgement; when the ovary was pulled out of the sac the half turn disappeared. The pedicle was transfixed and tied, the ovary and tube were removed, the sac was excised, the stump fixed beneath the internal oblique and transversalis, and the inguinal canal sewn up; recovery was uninterrupted. It seemed, as a rule, that as the broad ligament with its contents turned the corner of the internal abdominal ring to get into the inguinal canal, the position of the ovary was reversed. It kept its position with regard to the Fallopian tube, but became anterior instead of posterior. In the present instance the ovary was highest, having ascended in front of the Fallopian tube. The latter seemed to have fallen behind the ovary so as to be hidden from view except its fimbriated end. There was nothing to show how this displacement had occurred, but the end of the broad ligament was quite loose within the hernial sac, so that considerable mobility must have been allowed.

AFTER-HISTORY OF TWO CASES OF CRANIECTOMY.

By Telford Smith, M.D.,
Medical Superintendent, Royal Albert Asylum, Lancaster.

After reviewing the various opinions held on the question of brain development in relation to the growth of the cranial cavity, Dr. Telford Smith said though results had not justified the operation, the hopeless outlook in these cases had certainly justified the experiment. The two cases cited

were very favourable ones for the experiment, and seemed fair instances from which to form a conclusion as to its advisability. The first was a well-marked case of microcephalic idiocy, otherwise healthy and well developed, and with apparently nothing but the microcephaly to account for his mental deficiency. He had in five operations an ample amount of the bony brain case removed, and had since had every advantage of special training and education. He had since the operation ceased to knock his head as he had previously done; but though this was a distinct improvement in his condition, it hardly seemed an adequate result for the risk run. His mental state remained very much as before, and any slight improvement there was would probably have been obtained by educational methods alone.

The second patient was a good test case as to the advisability of the operation in congenital idiocy, being a profound instance of this condition. In this boy it was impossible to see any mental improvement or sign of brain development, and he thought in a similar case the operation would now rightly be considered unjustifiable.

Dr. Shuttleworth confirmed the account given by Dr. Telford Smith of the craniectomised patients, having formerly had them under his observation when medical superintendent of the Royal Albert Asylum. He mentioned also another case, the child of a medical man, in which craniectomy had been done for the relief of microcephalus with but very slight mental improvement, and deterioration of his general health. There seemed to be no *rationale* for such an operation in the majority of cases of microcephalus, which as a rule depended on prenatal defect of brain development, not upon abnormal covering of bone. At any rate, cases of premature synostosis causing microcephalus were very exceptional, and it was only on clear evidence of absence of fontanelles that surgical treatment was appropriate. Special training was of much more service in promoting mental improvement.

A PROTEST AGAINST THE USE OF THE TERM "CONSUMPTIVE BOWELS" IN THE WASTING DISEASES OF INFANTS.

By J. Walter Carr, M.D.,
Assistant Physician, Royal Free Hospital.

The term "consumptive bowels" is still in common use, both amongst the laity and medical men, in marasmic conditions of young children. It may be supposed to cover one or more of three conditions—tuberculous peritonitis, tuberculous enteritis, and caseation of the mesenteric glands.

Of these, tuberculous peritonitis is almost unknown under two years: out of 257 consecutive necropsies on children under that age there was only one example of the disease (in a child of 1½ year). Tuberculous disease of the intestines and mesenteric glands is far more common, but in nearly every case is slight and recent, and not likely to give rise to any symptoms, being either merely a part of a general tuberculosis or else occurring in cases in which mischief in the lungs is evidently the primary and more important lesion, both pathologically and clinically. But of the 257 necropsies mentioned (including 53 in which tuberculous mischief was found) in only 3 were there intestinal ulcers of large size or old standing, and in only 1 did it seem at all likely that the tuberculous process had started in the bowel; in two or three other cases in which children had died from entirely different causes early caseation was found in the mesenteric glands, but in such a stage as to have been entirely incapable of diagnosis during life.

On the other hand, in practically all cases in which children die from what is commonly called marasmus, associated usually with more or less diarrhœa and vomiting, no tuberculous lesion is found on *post-mortem* examination, or at any rate none sufficient to account for the symptoms during life, still less to cause death.

Such conditions of marasmus are due in the immense majority of cases to improper feeding, and are not attended with any gross lesion whatsoever.

The improper use of the term "consumptive bowels," is calculated to lead to serious laxity in treatment, especially amongst the lower classes, the child's recovery being regarded as quite hopeless; whereas most conditions of marasmus, if dealt with sufficiently early, are perfectly curable, if only proper lines of treatment—mainly dietetic—are adopted.

From every point of view therefore the term "consumptive bowels" ought not to be used, except in very rare cases, in connection with children under 2 years of age; as, if the wasting be due to tuberculous disease, there will almost certainly be well marked signs of pulmonary or disseminated lesions to account for it, and, if there be no distinct evidence of tubercle, and no other obvious cause, such as congenital heart disease or prematurity, the wasting is almost certainly due to improper feeding, aided perhaps by general unhygienic conditions.

A MILK STERILISER.

By C. W. Cathcart, M.B., F.R.C.S.,
Assistant Surgeon, Royal Infirmary, Edinburgh.

Mr. Cathcart showed a simple form of milk steriliser for infant feeding. After laying great stress on the importance of properly sterilising the milk given to children in order to avoid the various diseases that might be communicated through this channel, he pointed out that the plan of boiling milk had many disadvantages, and was in many houses an impossibility, while the sterilisers already in use are somewhat cumbrous and too expensive to be within the reach of all. A sterilising vessel should have a capacity of 50 to 60 ounces. It must be easily heated in a convenient-sized pot; it must provide some mechanism for stirring the mixture, so as to prevent the cream coming to the top. The quantity required for each meal should be capable of being withdrawn without risk of contamination. Every part must be easily cleaned, and it must be so simple that any unskilled person could use it, and so cheap as to be within the reach of all. The simple apparatus described met all of these requirements, and he had found it in his own experience altogether useful and reliable.

REVIEWS.

The Recent Evolution of Surgery. By A. Pearce Gould, M.S., F.R.C.S. London: Kegan Paul. 1895. (12mo, pp. 63.)

Mr. Pearce Gould has done well to publish in this form his oration to the Medical Society. He tells the triumph of modern surgery with true love of his art, and he gives a new turn to the story, taking for his subject not the technical aspect of surgery, but the aim and ideal and principles of the good surgeon. His discourse is not of new instruments and methods, but of new duties and responsibilities. His address is indeed the natural expression of a good surgeon, proud of his art, astonished at the speed of its advancement, and oppressed by the demands that it makes on him; but he is wrong in speaking of the "recent evolution of surgery." There is no such thing as recent evolution, any more than recent space or recent gravitation. And he does not do justice to the great surgeons who lived in the days before antiseptic surgery. He would apply to Lister that fine high-flying saying of Pope's:

> Nature and Nature's works lay hid in night—
> God said, "Let Newton be," and there was light.

But not even to honour Lister should he speak lightly of those who preceded him, the "*fortes*" who "*ante Agamemnona*." He thinks that their "brilliancy" was a poor sort of thing that we have done well to leave behind us, but it is really a lost art, and a little more of it would not be a bad thing in these days when everybody operates, whether Nature meant him to do so or not. Nor did our forefathers sacrifice a limb by amputation without regret and abhorrence as deep and strong as those which move the surgeon of to-day; and in general their aims and ideals were more like ours than Mr.

Gould implies: when we consider the stupendous difficulties of their task we can only admire their work.

Nevertheless this oration is full of thoughts that deserve to be remembered. He looks at his art from a lofty standpoint, and yet it is plain that what he preaches he also practises, and that the conventional oration demanded by the habits of a venerable Society has been this time illuminated by true enthusiasm.

Traité Pratique des Maladies du Système Nerveux. [A Practical Treatise on Diseases of the Nervous System.] Par J. Grasset et C. Rauzier. 4me. Edn., 2 vols. Paris: G. Masson. 1894. (Imp. 8vo. Vol. i, pp. 900; Vol. ii, pp. 1,092. 33 plates, 122 figures.)

Lehrbuch der Nervenkrankheiten für Aerzte und Studirende. [Handbook of Nervous Diseases for Practitioners and Students.] Von Professor Dr. H. Oppenheim. Berlin: S. Karger. London: Williams and Norgate. 1894. (Roy. 8vo, pp. 870, 220 fig. M. 22.)

We need, perhaps, do little more than announce to our readers the appearance of the fourth and enlarged edition of Professor Grasset's well-known work, which has had the reception at the hands of the medical profession which it well deserves.

The author, finding the task of keeping pace with the rapid strides of neurology during the last eight years a severe one has called to his assistance the able hand of Professor Rauzier, of Montpellier; and the collaboration has resulted in the production of a work which would have been monumental were any work a monument in these changing times. But we fear that no literary or scientific merit will save a book from oblivion nowadays, so fast is the pace. Happily this consideration does not discourage men like these authors from putting forth their best.

In the present edition nine most important chapters are entirely new, others are so far rewritten as to be practically new, and others again are brought up to date by liberal additions. Many new illustrations have been added, some original others borrowed from acknowledged sources.

To review this work, which perhaps may almost be called a new one, is far beyond our opportunities in this place, but we may make a special reference to certain sections which have attracted our attention, either on account of their able handling or of the freshness of the contents. Among these are the chapters on Aphasia, Jacksonian Epilepsy, Thrombosis of the Sinuses, Chronic Chorea, and Pseudo-bulbar Palsies.

Besides these special chapters there are a number of sections taking a wide view of this or that aspect of general pathology or nosology, which kind of stimulating survey is always well done by our neighbours. In a word, the work is as readable as it is complete, and the excellent illustrations are very helpful. The admirable system, bright style, and clever exposition of the best French books are conspicuous in this, and a young reader could not have a more attractive introduction to the difficult and abstruse subject of which it treats.

On their first page the authors pay a heartfelt tribute to the memory of Charcot, who inspired their earliest efforts in this field of science. English authors, save in a few important places, do not seem to receive all the credit they deserve, but as there is no index of citations it is not easy to be sure of this.

The work of Professor Oppenheim is of a very different character. The very diffuseness of Professor Grasset's work makes it easy to read. Professor Oppenheim's has the opposite virtue of concentration. There are no coloured plates, but the cuts in the text are many—some excellent, others less admirable. Still the more important are, on the whole, the best. The masterly manner in which the author has contrived to pack every fact of importance into his fewer pages is really wonderful. We have tested this repeatedly by looking up new points, and have invariably found that which we searched for. Moreover, condensed as is Professor Oppenheim's style, yet it is not crabbed and involved as is the case with too many of his countrymen. It is not the purpose of this volume to dilate upon the whole subject of nervous diseases as is done in the larger work of which we have previously spoken; it is less discursive, less chatty, but as a portable handbook of sound learning for ward use and the like, it is perhaps the best which can be recommended to the student of to-day.

The Opium Habit in the East: a Study of the Evidence given to the Royal Commission on Opium, 1893-94. By Joshua Rowntree. London: P. S. King and Son. 1895. (Demy 8vo, pp. 108.)

Mr. Joshua Rowntree appears to have procured an early copy of the five volumes containing the testimony of 300 persons, in reply to 28,000 questions, elicited by the Opium Commission. In anticipation of the Commissioners' report, he set himself to analyse the mass of evidence presented in "2,000 pages of double columns of close print" from the anti-opium point of view. To handle such a mass of evidence and extract the truth out of it is no light task; and it would appear to be proper and becoming to postpone a study of the evidence until the judges who had heard and weighed it had delivered their decision; "but the past history of Royal Commissions does not warrant the placing of any high sanction on the conclusions they finally express." Therefore it is well to educate the public mind in advance. A proceeding of this sort in a judicial case would incur that terrible thing—contempt of court; but Royal Commissioners are evidently fair game.

The whole thing, according to Mr. Rowntree, has been mismanaged. The scope of the inquiry was, through Mr. Gladstone's mischievous intervention, unnecessarily widened. The British Parliament had pronounced the opium cultivation and traffic undertaken or permitted by the Government of India to be "morally indefensible"; and the only points remaining to be decided were, how the revenue hitherto derived from opium was to be made good, and what compensation for its loss was requisite. Instead of that, the Commissioners were actually instructed to inquire whether and to what extent the consumption of opium is prejudicial to health and morals, and whether the people of India wish its cultivation and sale to be restricted or suppressed. The constitution of the Commission was faulty; it was stuffed and staffed by Indian officials and led by the nose throughout by the interested Indian Government. The right witnesses were not brought forward; some members had the audacity to cross-examine an official who had indited a strong report against opium; and the police actually shadowed "our Mr. Wilson," who took a little trip into the district of Gya in order to obtain some really sound unbiassed evidence on his own account. Nevertheless it is possible to extract some gems of truth from the unfathomed depths of tainted testimony offered in these portly volumes, and Mr. Rowntree discovers, to his own satisfaction, that two Ministers of the Crown have committed "grave errors of language" in asserting that the policy of the Indian Government has been to diminish the cultivation of the poppy in India, and that China may refuse Indian opium if she does not want it; that the Indian peasant is compelled to cultivate opium against his will and interest; that the system of putting up licences for the sale of opium to public auction creates a class strongly interested in maintaining and extending its consumption; that the opium habit is in many districts and towns of India "deeply rooted and widely spread, and is the accompaniment of vice and demoralisation;" that the alleged beneficial effects of this habit as a prophylactic against malaria and an assuager of pain, fatigue, and misery are problematical; and that "the evil effects of the habit are both great and unquestioned; it is only maintained in India at the price of a ceaseless toll of wrecked and shrunken lives at one end of the human scale and of infants sacrificed at the other, a toll of vast numbers of suicides and of nameless debauchery." The remedy is suppression—deprivation of liberty imposed by the few on the many otherwise than at the instance and request of the latter. Whether a policy of this sort is likely to make for self-restraint and virtue admits of question, and we doubt much that even the partial "study" presented in these pages justifies it.

Leçons Cliniques sur les Maladies des Voies Urinaires Professées à l'Hôpital Necker. [Clinical Lectures on the Diseases of the Urinary Organs delivered at the Necker Hospital.] Par J. C. Félix Guyon. Troisième Edition. Revue et Augmentée. Avec Figures et Planches Intercalées dans le Texte. Tome I. Paris: J. B. Baillière et Fils. 1894. (Roy. 8vo, pp. 670, 2 vols. Fr. 25.)

This new edition of M. Guyon's well-known work has been so much enlarged that it has been found necessary to divide it into two volumes, the first of which is now before us. The volume is divided into two parts. The first part is headed On Functional Symptoms, and comprises eleven lectures in which the various disorders of micturition are successively dealt with. The subject of retention of urine alone occupies nearly 200 pages, and under this heading are discussed in turn the several diseases of which retention is a symptom, the chief of them being of course stricture of the urethra and enlargement of the prostate. In the second part, on Pathological Modifications of the Urine, the examination of the urine both in health and in disease is considered in detail, not only from a clinical point of view in relation to the various diseases which give rise to changes in the urine, but also with regard to histology, bacteriology, and chemistry. All these matters are dealt with in the fullest and most elaborate manner. In illustration of this it may be mentioned that over twenty large pages are devoted to the various theories which have been advanced in connection with the ammoniacal changes which take place in the urine. This part of the work also contains numerous illustrations of urinary deposits, some of which show fairly well, whilst others are indistinct, partly owing perhaps to their being printed on the same paper as the text.

The work, if the standard of this first volume be maintained, will, without doubt, be very valuable. Like all M. Guyon's writings, it affords instant evidence both of the author's careful methods and of his large practical experience in the diagnosis and treatment of urinary diseases. The book will certainly be highly valued by those, whether physicians or surgeons, who are specially interested in the subject. The general practitioner, on the other hand, will probably find it too large and too elaborate for ordinary use. But there is another drawback to its general usefulness as a work of reference which cannot be overlooked, and that is the absence of an index. From the manner of its arrangement, it will easily be understood that the book is one which essentially requires a complete index, and it may be that the second volume will to some extent remedy this defect by providing an index for both volumes; but it is, in our opinion, indispensable for the proper use of any work of this size that each volume should have its own index, more especially when the volumes are published separately, as in the present case. We must not omit to add that M. Guyon gracefully acknowledges the valuable assistance rendered him in the preparation of his important work by MM. Campenon, Noël Halle, Chabrié, and Alcarran.

Blood Serumtherapy and Antitoxins. By George E. Kreigher, M.D. Chicago: E. H. Colegrove. 1895. (Cr. 8vo, pp. 70. 1 dollar.)

For those who wish to read a short sketch of the history and application of serum therapeutics, Dr. Kreigher's book will prove of some interest. He has gone into the question especially after reading German and some Italian literature on the subject; but, so far as one can gather, his own investigations have been confined to clinical and microscopic observations. Perhaps this does not detract much from the value of the work, as for this reason the author is able to give an unbiassed opinion on many of the points raised. Some of the photographs illustrating the various organisms are exceedingly good and are well reproduced.

On completing the perusal of the work, however, the feeling arises that many gaps have been left which, had they been filled, would have added considerably to the value of the work as a whole. This is the more to be regretted when it is considered that the part of the book that has been done is not only accurate, but interesting; the incompleteness of this work, indeed, is its main drawback, though there are points as regards the clinical history—as, for example, the statement that the tonsils, and not the posterior surface of the uvula, is the position in which the first indications of the diphtheria process are usually manifested—which appear to be somewhat loosely expressed. These, however, are merely minor details.

The Female Offender. By Professor Cæsar Lombroso and William Ferrero, with an introduction by W. Douglas Morrison, Her Majesty's Prison, Wandsworth. London: T. Fisher Unwin. 1895. Illustrated. (Demy 8vo, pp. 340. Price, 6s.)

We have got into a habit of using towards women a language of conventional compliment, and ostentatiously giving up all points in their favour. This is often taken up seriously by men who derive their opinions from what they hear and read and not from what is presented to actual experience. In this way in disputes between men and women injustice is sometimes done to the stronger sex. From such weakness Dr. Lombroso is entirely free. He does not conceal his low estimate of ordinary women. They are big children; their evil tendencies are more numerous and more various than those of men but they generally remain latent. They are less sensitive than men; they feel pain less; they feel grief less; they are less active. They are more vindictive than men; they are crueller when they can get revenge; they are more avaricious in household matters, and more inclined to cheat and to blab secrets, and to commit petty thefts. Women have a latent antipathy to one another, and are very prone to jealousy. Their eminent virtue in Lombroso's eyes is their maternal affection. Female criminals are less common than male criminals, but then the female born delinquent is worse than the male. The authors have studied female offenders by the usual methods of criminal anthropology, and, adding the published observations of others to their own inquiries, they have accumulated a heap of facts, many of them of trifling value. The female criminal has a smaller skull and less cranial capacity than the normal female. The face is more irregular and the lower jaw heavier; the senses are duller. The female criminal presents fewer marks of degeneration than the male. Occasional female offenders are more numerous than habitual ones. For five males in civil prisons in England there is but one female. The authors range prostitutes with born criminals, but most of the former class are the victims of unhappy circumstances and social conditions. They are simple and feeble rather than wicked, and most of them would be glad to renounce their miserable trade and have a permanent male protector. The authors have collected many anecdotes about wicked women, but probably worse stories could have been raked together to show the depravity of the male delinquent.

It seems strange that this work on "female criminals" should have been translated into English when Lombroso's *L'Uomo Delinquente*, a much superior book, has not been so distinguished. The female offender hardly deserves a separate treatise.

Elektrophysiologie. [Electrophysiology.] Von W. Biedermann, Professor of Physiology in Jena. Erste Abtheilung. Jena: Gustav Fischer. 1895. (Royal 8vo, pp. 448. M.9.)

Turning over the pages of this bulky tome, which is only the first volume of a work to be completed within the next few months, we are at once struck with the contrast between the electrophysiology of to-day and that of forty-three years ago, when Bence Jones introduced to English readers, in a little volume of 214 pages, the painstaking researches of Du Bois-Reymond. Looking into the contents of the volume a little more closely, the conclusion forces itself upon one that it is likely to hold its place for many years to come in the laboratory as well as in the library, embodying as it does a very clear and complete account of electrophysiology in general, and of the Haring school in particular.

It may confidently be predicted that the volume before us (and still more the companion volume that is to follow) will in the near future serve as a frequent base of operations, gathering together as it does within a convenient compass

the building materials of hypotheses that have already been proved to be extremely palatable; and, what is perhaps of still more permanent value, inviting the further endeavours of actual workers at point after point of the demarcation boundary between positive and subpositive phenomena, between what is known and what is supposed.

In several important respects Biedermann's book marks clear and definite advance, the subpositive of yesterday is to-day, a positive position beyond which a subpositive "reconnaissance" impossible yesterday is made possible and lawful to-day.

Biedermann, while fully recognising the true value of Du Bois-Reymond's lifelong labours, roundly rejects his "molecular hypothesis," and, taking his stand upon the "alteration theory" of Hermann, protrudes the tentacles of intellectual imagination a little further along the line of current brought into being by his master Hering; and in more than one instance it would appear as if a tentacle had caught on. The "positive Nach-Schwankung" of Hering, Du Bois-Reymond's anomalous polarisation current—proved by Hermann to be due to an after-anodic action current—Biedermann's own antimotor effects on veratrinised muscle and upon unstriped muscle, the familiar excitatory action of the kathode at make and of the anode at break, and the reversed or "inhibitory" action of the anode at make and of the kathode at break, are all utilised by Biedermann in support of the conclusion (p. 375) that the excitation of nerve gives rise to two simultaneous and opposite processes in muscle—excitatory or dissimilatory, and inhibitory or assimilatory.

Gaskell's positive variation by vagus excitation, Bayliss's and Bradford's submaxillary variations, the results of Biedermann's own observations on the secretory variations of the skin and of mucous membranes, are also invoked in favour of the same or of a similar conclusion, "that a given epithelial cell may be electromotive now in one and now in the opposite direction;" ..... "that each cell must be regarded as the seat of two different chemical processes," one giving a positive variation, the other a negative variation of the normal current, which last must in fact be regarded as an action current due to the greater effect of one or other of the two opposite chemical changes alluded to. It must be confessed that this conclusion as presented by Biedermann appears very probable, and that the weight of his evidence in its favour goes a long way in the direction of proof. The further question whether this opposition of nerve effects upon glands may be extended to muscle, whether in point of fact we may admit the obviously opposed processes of tissue integration and of tissue disintegration to be administered by different and functionally opposed nerve fibres—anabolic and katabolic according to the designations promulgated in this country—is left open by Biedermann, and we may expect evidence and argument in favour of such a conclusion to be forthcoming in a second volume.

It is not possible to do justice to Biedermann's work within the compass of a brief notice of the first moiety. The work must be read slowly and carefully. We have only briefly alluded to one or two positive points, the comparative novelty or interest of which happened to give us pause in going through the volume.

An excellent bibliography is given at the end of each section. As might have been expected, the work is well up to date, not only as regards German labours, but also French and English contributions, in illustration of which may be mentioned the observations of Cash, Yeo, and Burdon Sanderson on the latent period and duration of contraction of the heart; of Page and Burdon Sanderson on the electromotive action of the frog's heart; of Waller and Reid, Bayliss and Starling on the electromotive action of the mammalian heart; of Waller, Bayliss, and Starling on the electromotive action of the human heart: of Morat and Toussaint, of Chauveau, of Bradford and Bayliss, and of Reid, on electromotive action attendant upon secretion; of Reid and Tolputt on the electromotive properties of the skin of the eel.

Presentation.—Dr. G. F. Aldous has been presented by the members of the Plymouth Public Dispensary with a combined barometer and thermometer as a mark of appreciation.

NOTES ON BOOKS.

Health Notes for the Seaside, with Special Reference to Whitby and District. By C. A. Dutt, B.A., M.B.Cantab. (Whitby: Horne and Son. Fcap. 8vo, pp. 61. 6d.)—These health notes on such subjects as habits, clothing, food, etc., though no doubt useful, are not very novel. That we should breathe through our noses and "keep our mouths shut," that "garters should never be worn," that "Dr. Jaeger's woollen clothing are good," that "invalids should not stand about in the open air," that "a contented mind is conducive to refreshing slumber," that "the drainage of a house must not flow *towards*, but *away* from it," that "sea bathing is most healthful in suitable cases," are statements, the truth of which is not likely to be called in question. Certain other statements made by our author are not quite so self-evident. We doubt, for instance, if the Registrar-General would admit that "cold weather always lessens the mortality!" "Pipes are more injurious than cigars and cigarettes; a pipe after breakfast, one after lunch, and two before bedtime will not do any harm;" that alcohol causes "contraction of the visceral blood vessels," "never drink on an empty stomach," "alcohol and tobacco are in a certain sense antagonistic, that is the one counteracts the evil effects of the other," are statements even more open to controversy.

Affections Chirurgicales des Membres: Statistique et Observations. Par le Dr. Polaillon. Chirurgeon de l'Hôtel Dieu, Professeur Agrégé à la Faculté de Médecine de Paris, Membre de l'Académie de Médecine. (Paris: Octavo Doin. 1895. Royal 8vo, pp. 810; figures 24. Fr. 12.)—This is a statistical record with comments here and there on cases of special interest, of the work done by M. Polaillon during the past fourteen years, first at the Hôpital de la Pitié, and more recently at the Hôtel Dieu. The volume, which deals only with the injuries and affections of the limbs, will be followed, it is stated, by another of similar scope on the surgery of the trunk. The statistical matter has been carefully compiled and arranged, and the observations on the more important cases will be found instructive. This book, from the amount of clinical material treated by the author and his large staff of assistants, and from the able manner in which he has reviewed the results of his experience is likely to prove useful to those engaged in hospital work and surgical teaching.

Diabetes and its Treatment. By A. Vintras, M.D. (London: Baillière, Tindall, and Cox. 1895. Cr. 8vo, pp. 24. 2s. 6d.)—This small book may perhaps be best described as a series of notes on diabetes, as it does not deal at all exhaustively with any single part of the subject. The treatment is the part most fully described, half the book being given to it. Dr. Vintras strongly advocates Dr. Martineau's treatment, consisting of lithia and arsenic. He has used this treatment during the last five years, and it has given him such unexpected and unhoped-for results that he desires to make it more widely known. The author concludes with a series of diet rules, which take into consideration not only the articles of diet permitted to the diabetic, but also the varying degrees of digestibility of these articles.

Heart Inflammation in Children. By Octavius Sturges, M.D., F.R.C.P. (London: John Bale and Sons. 1895. Cr. 8vo. pp. 88. 3s. 6d.)—These Lumleian Lectures, which were published in the British Medical Journal at the time of their delivery by the late distinguished physician, treat of a subject of considerable interest, as heart disease in children presents points of difference from the disease affecting adults. The first lecture deals with the various forms of heart disease seen in children, the second with its physical indications, and the last with diagnosis and treatment. The term carditis is employed by Dr. Sturges as synonymous with endopericarditis. He observes that rheumatic heart inflammation in children is almost always, as the evidence of morbid anatomy shows, both endocardial and pericardial, the myocardium being also frequently involved in late stages. Acute and chronic carditis are both described; the former, rare in

adults, is important on account of its sudden onset, rapid course, and high mortality in children. The author endeavours to ascertain the earliest signs of endocarditis in children—a point of considerable interest and difficulty. He also shows by *post-mortem* evidence that mitral stenosis is a lesion too frequently diagnosed at the present time. Dr. Sturges agrees with Dr. Cheadle that subcutaneous nodules are of bad prognostic omen. In treatment salicylates are useless. The ice treatment proposed by Dr. Lees is discussed at some length, but no definite conclusions are drawn. These lectures are of great practical value. They plainly show that there is still much to be learnt in this important subject when it comes under the analysis of an experienced and observant physician.

Kurzer Abriss der Percussion and Auscultation [Short Summary of Percussion and Auscultation]. Von Dr. Hermann Vierordt. 4te verbesserte Auflage. (Tübingen: Franz Pietzcker, 1895. Demy 8vo, pp. 80. M. 1 40.)—This small work describes auscultation and percussion as applied to the various organs of the body in health and disease. The section on percussion deals first with the lungs, then with the heart, and finally with the abdominal organs. It includes a short discussion on the various theories of percussion, and under it the different organs are mapped out on the surface of the body. Under auscultation the lungs are chiefly dealt with. The information obtained by percussion and auscultation in diseased conditions is detailed and the significance indicated. No mention is made of auscultatory percussion. The work also includes sections on the special differential diagnosis of pulmonary diseases and on physical diagnosis as applied to the heart and aorta. The subject matter is always treated in a succinct and satisfactory manner.

The Tippler Pigeon Up to Date. By Archibald F. Hepworth, M.A., L.R.C.P., L.R.C.S. (London: King, Sell, and Railton. Cr. 8vo.)—The breeding of several varieties of pigeons has, Mr. Hepworth contends, all the essential qualifications to be considered in the selection of a hobby. In the first place, he says, it must be within your means; in the second place, it must differ as much as possible from your daily routine work; and, lastly, it must be instructive and amusing. He might have added that it is a very good thing when your hobby is of such a nature as to take you out of doors, and make you indulge in fresh air. Tippler pigeons resemble tumbler pigeons in a good many respects. Their speciality is that they will remain on the wing and apparently immobile to the eye for as many as eleven and sometimes fourteen hours. They are probably a cross of the almond cock and the black and mottled tumbler hen. Mr. Hepworth, who was one of the leading breeders and patrons of tumblers, gives in this little handbook a very good account of these interesting pets and the way to breed and manage them. There are some good illustrations showing the points of the best types, among them two of the tipplers belonging to Mr. Ernest Hart, who holds at present the champion cup for all England. Darwin would have delighted in the tippler pigeon, for none is more beautiful and few display in a more remarkable way the evolution of a new and prominent type, and the adjustment to environment and selection. In many of the varieties of special pigeons, medical men hold prominent positions as successful breeders, and there can hardly be a more agreeable and interesting hobby.

St. Bartholomew's Hospital Reports. Edited by Samuel West, M.D., and W. J. Walsham, F.R.C.S. Vol. xxx. (London: Smith, Elder, and Co. 1894. Demy 8vo, pp. 430.)—As usual, the senior members of the staff of the great city hospital are in a minority amongst the authors of contributions to this volume. Dr. Gee has prepared a report of a case in which an aneurysm of the ascending part of the aortic arch took the natural position of the heart. From Dr. Lauder Brunton's paper it would seem that hydroxylamine hydrochlorate is preferable to nitroglycerine and the nitrites in the treatment of angina. Mr. Thomas Smith contributes a remarkable report of a case in which a large sarcoma was successfully removed from the middle of the thigh of an adult male. Mr. Butlin affords us a good summary of a second Year's Surgery at St. Bartholomew's Hospital. The most valuable passages in this memoir refer to the radical cure of hernia. Among the contributions of younger men we must give an honourable mention to Mr. M'Adam Eccles for his monograph on the great omentum. Dr. Hubert Roberts writes on the History and Present Position of Symphysiotomy. The essential value of his memoir lies in a series of investigations made on dead subjects as to the effects of dividing the symphysis. Dr. Herringham's article on Primary Cancer of the Pancreas is, perhaps, the best type of paper for a work of this kind, since the writer has ransacked the *post-mortem* and clinical notebooks of his hospital for cases of the disease in question and unearthed no fewer than 17, all under treatment since 1882.

Medical Electricity. By H. Lewis Jones, M.A., M.D., Medical Officer in charge of the Electrical Department, St. Bartholomew's Hospital. (Second Edition. London: H. K. Lewis. 1894. Cr. 8vo, pp. 448, 100 illustrations. 10s. 6d.)—We welcome the second edition of this excellent manual of which Dr. Jones now assumes sole authorship. Medical electricity occupies a humbler position in applied therapeutics than it deserves. The difficulties connected with the management of the apparatus, and a certain want of general knowledge as to what can and what cannot be accomplished by its use, and its certain inability to work miracles have caused many to shut their eyes to the whole subject, or to look upon it with coldness. Dr. Jones's manual will go a long way to remove all these difficulties, and especially those on the last count. His elucidations are clearly and temperately given, and he is not afraid of disclaiming the merits of any particular treatment. His introductory chapters on apparatus and general principles will be welcome to the less technical of his readers. For its size and general scope it is certainly the best textbook with which we are acquainted.

The Volunteer Surgeon's Guide. By Surgeon-Captain R. R. Sleman. Artists R.V. (London: Wm. Clowes and Sons. 1895. Fcap. 8vo, pp. 95. 3s. 6d.)—This little book contains a great deal of information that volunteer medical officers will find very useful. In a concise and intelligible way are brought together all the regulations affecting the volunteer medical service, and the duties and responsibilities of all ranks are fully explained. We notice on page 37 that the badge of the stretcher-bearer is described as a white web band with "S. B." upon it, to be worn on the left arm. According to the present regulation, the badge consists of the letters "S. B." in a monogram in red and blue upon a white ground enclosed within a red circle an inch and a half external diameter, worked in worsted on the same material as the tunic, and it is to be worn on the right arm above the elbow. This error is probably due to the book having been published before the issue of the regulation, as otherwise it is quite up to date.

Poisons: their Effects and Detection. By A. W. Blyth. Third Edition. (London: Chas. Griffin and Co. 1895. 8vo, pp. 701. 21s.)—This edition bears evidence of careful revision throughout, and is as complete a treatise on the subject as anyone need wish to read. It appeals, no doubt, more especially to the chemical expert, but still, in the frequent references to pathological specimens in one or other of the London museums and in the sections on treatment, there is abundant material to interest the student or busy practitioner. That it has been brought well up to date is evident from the fact that the report on opium eating in India which appeared in our pages not long since is quoted, whilst full notice is taken of the treatment of morphine poisoning by permanganate of potash, and the *post-mortem* imbibition of arsenic is discussed. We do not find, however, any mention of the treatment of snake poisoning by strychnine which has been used in some of the Australasian colonies. The only mistake we have come across is that Lamson is said to have murdered his victim in 1881, whereas the deed took place in 1881. In the appendix some concise directions for treatment in the different forms of poisoning are given.

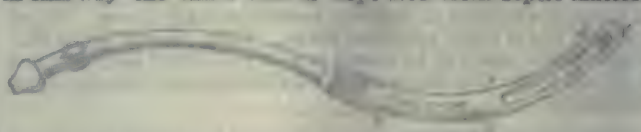
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A NEW UREAMETER.

MR. C. J. MAYHEW, student of medicine in King's College, London, claims that a new ureameter which he has designed possesses the following points of advantage: It is extremely portable and simple, but it nevertheless estimates the amount of urea in urine with accuracy, moreover, only a small amount of sodium hypobromite solution is required for each estimation. The accompanying illustrations show the shape of the instrument. It is held in the position shown in Fig. 1, and about half filled with hypobromite solution. One c.cm. of urine is put into the little test tube, which is then placed in the larger open end of the ureameter, and this is corked up. By turning over the whole thing in the direction of the hands of a clock to the position shown in Fig. 2, the urine is mixed with the hypobromite solution and the whole of the nitrogen given off is registered by the level of the liquid in the graduated tube. After reading the indication by turning round the instrument still further in the same direction as before, all the hypobromite solution which has not been in contact with the urine may be emptied back into the stock bottle. It is evident that with this ureameter none of the nitrogen escapes into the open air, and the amount of hypobromite solution used is very small. The instrument is made by Messrs. Mayer and Meltzer, 71, Great Portland Street, London.

AN IMPROVED INTRAUTERINE CATHETER.

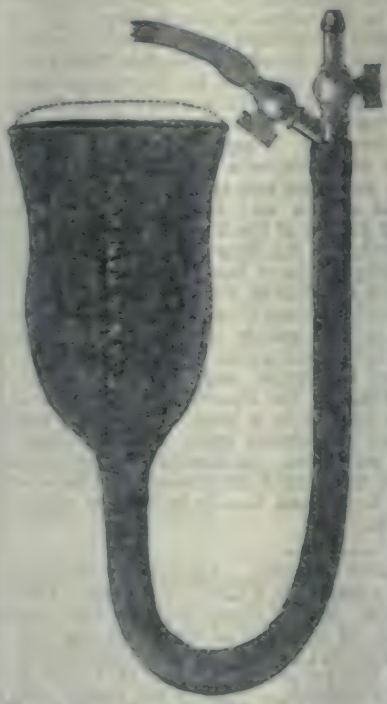
MR. JOHN EDGAR, M.A., B.Sc., M.B., C.M., Clinical Assistant to the Gynecologist, Glasgow Royal Infirmary, has introduced a modified form of Bozemann's intrauterine catheter, which he considers presents certain advantages. As in the original form, the solution passes into the uterus by a small inner tube, shown at *e d* in the drawing, and, after circulating through the uterus, it enters the outer tube by the two side openings *c d*, and escapes by the lower opening *a b*. The catheter as shown is more easy to keep aseptic, because the openings *a b* and *c d* are longer and wider, and, as the outer tube is shut off by an oblique partition at *a*, it can be very easily and thoroughly cleaned. While the catheter is being introduced, and while being withdrawn, as well as while in the uterus, a stream should be kept flowing through it, and in this way the inner tube is kept free from septic matter.



Another advantage claimed for this pattern is that freer egress is given for shreds of membrane, owing to the openings being so wide and owing to the fact that the inner tube, being formed by fixing a strip of metal to the one side of the tube, it takes up very little space. Further, the end *b c* has been made conical to facilitate introduction into the uterus, and the side openings are of such a length as to show how far the catheter has been passed into the uterus. Mr. Edgar finds that the three most convenient sizes are: small, *c c*, 2½ in., *b* No. 15, English catheter size, and at the point No. 10; intermediate, *c c*, 2¾ in., *b* No. 20, and point No. 12½; large, *c c*, 3 in., *b* No. 24, point No. 17. The large size is useful in cases of abortion, polypi, etc., the two others in curetting the uterus. The smallest size can be passed without preliminary dilatation. The instrument is made by Messrs. Young and Son, of Edinburgh, who charge 7s., 8s., and 9s. for the several sizes.

A NEW BAG FOR THE INDUCTION OF PREMATURE LABOUR AND OTHER OBSTETRIC OPERATIONS.

THE use of Champetier de Ribes's bag is attended with certain drawbacks. In the first place, its size when distended within the uterus must displace the fœtal head, and very probably the placental circulation is also frequently disturbed. Secondly, the dilatation effected is entirely dependent on the onset of the uterine contractions, and these sometimes do not commence for twenty-four hours after its introduction. To remedy these drawbacks Messrs. Allen and Hanburys have made for Dr. John Shaw, obstetric physician to the North-West London Hospital, a dilating bag, which is represented in the accompanying figure. It will be seen that the bag is really a double one, in shape resembling a Barnes's bag, but with a disc at its uterine end which is capable of separate distension. The bag is introduced into the uterus by means of Champetier de Ribes's forceps and the distal disc injected with fluid, which prevents the bag slipping out of the uterus. Into the larger bag water can now be injected from a douche reservoir, and this will at once begin to dilate the os with a force dependent on the height the reservoir is raised above the patient, whilst the rhythm of pains can be imitated by alternately raising and lowering it. Dr. Shaw believes that the bag will be found of use not only in the in-



duction of premature labour, but also in the treatment of placenta prævia and malposition where it is important to close the mouth of the womb in order to gain time for the rectification of the fœtal axis.

SANITARY POWDERS AND SOAPS.

We have received from the Jeyes' Sanitary Compound Company samples of some of their newer preparations for all of which it is claimed that they contain in a perfectly harmless form the active principle of their well-known disinfectant. A surgical dusting powder containing boracic acid and 10 per cent. of creolin seems likely to be useful, it being proposed as a substitute for iodoform, and for use in the same class of cases. It certainly does not possess the same strength of odour as the older substance, but as the properties of creolin are as yet by no means well known, it would seem advisable that further researches should be made before stating definitely its properties.

Of greater general usefulness are the various sanitary soaps made by the same firm among which we may mention their eucalyptus soap. It possesses a pleasant odour, is superfatted, and contains an appreciable quantity of the oil. Sanalin soap is another which is claimed to be of the highest quality and triple milled.

It certainly seems probable that the continuous use of mild disinfectants by rendering the skin soft and clean at the same time would be followed by good results. But in the absence of any scientific data it is not possible to make any stronger statement.

A NEW VACCINATOR.

Mr. J. Iredale, Mablethorpe, sends us a description of a new vaccinator which has been made for him by Messrs. Arnold and Sons. Fig. 1 shows the instrument closed ready for use. Fig. 2 shows the part with grooves and needles *in situ*, raised from a hinge joint. The other end is a blunt lancet with a shallow groove for the reception of lymph.

Fig. 1.

Fig. 2.

As needles can be had in every house, the advantage of this vaccinator will be easily seen, this being a great improvement on the old type of vaccinator of this description when the needles are permanently fixed and the great difficulty is keeping the points clean.

LITERARY NOTES.

Messrs. Digby, Long and Co. will publish almost immediately *Perfect Womanhood: a Story of the Times*, by Frederick J. Gant, F.R.C.S. The types of womanhood described, which include a nurse, a "Lonesness Associate," a female medical missionary, a ritualistic maiden, and others, are presented as the products of the social development which distinguishes the reign of Queen Victoria. The book is dedicated by permission to H.R.H. Princess Christian.

Another instalment of the English translation by Dr. A. F. Hoernlé of the *Bower Manuscript*, the origin and character of which were described and illustrated in the British Medical Journal of June 1st, p. 1216 has been published. This includes leaves 14-13 of the Sanskrit medical work *Nâmanâkâ*. The translation has been executed on the same plan as that of the earlier leaves, and with equal ability and care.

On the recommendation of the Indian Government, a good service pension has been conferred on Surgeon-Colonel D. Spencer.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The Bacteria of Diseases.—Steps in Discovery.—A Commercial Development.—Aboriginal Inhabitants of Jamaica.—Oysters and Typhoid Fever.—Abnormal Children.—Measurements in Schools.—Future Meetings.

On Monday evening Professor Percy Frankland gave an address on the work of Pasteur. After an introductory statement dealing with his earlier work, the Professor reviewed Pasteur's connection with the foundation and development of the infant science of bacteriology and his contributions to our knowledge of infectious diseases.

The Bacteria of Diseases.

Soon after he had commenced to study the bacteria of particular diseases he was impressed by the fact that often in the course of cultivation in artificial media outside the body their virulence became diminished to such an extent that they ceased to be fatal on inoculation into susceptible animals, but the most important discovery in this connection was that the animals inoculated with such enfeebled or attenuated cultures were found to have become protected from the disease even when subsequently inoculated with the most virulent cultures of the same organism. This discovery at once enlarged the scope of Pasteur's investigations, which now included not merely the study of infectious diseases and their exciting causes, but embraced also the artificial protection of the individual against their attack. The most varied methods were devised and elaborated for attenuated viruses of different kinds, and multitudes of domestic animals were protected from some of the most destructive plagues with which they are afflicted. Pasteur next proceeded to grapple with a disease affecting both man and animals, that is, hydrophobia. This problem was surrounded with special difficulties, over which, however, the genius of Pasteur triumphed, and the attenuated virus of hydrophobia was successfully prepared, and by several different methods. As a testimony to the faith which experience has built up in the efficacy of the treatment we find centres for carrying it on in almost every civilised country in the world, whilst at the Institut Pasteur in Paris it is carried out on an enormous scale. The great problem of securing immunity from disease, which thus occupied the later years of Pasteur's activity, has, however, now entered upon an entirely new phase. For while Pasteur's methods depended essentially upon submitting the individual to be protected to the attack of the disease-producing organism itself in a weakened form, the new methods of conferring immunity do not involve any contact whatever between the individual and the virus in any shape or form.

Steps in Discovery.

The cardinal step in this new method of treatment is the discovery that the artificial cultures of pathogenic bacteria may be entirely freed from the micro-organisms and yet produce their characteristic poisonous effects; the symptoms of a particular infectious disease can be obtained through the injection of the toxic or poisonous products elaborated outside the body by the particular micro-organism associated with that disease. By this discovery the toxins of diphtheria and of several other diseases have been rendered as specific poisons as are laudanum or the extract of nux vomica. It was further found that animals can be gradually accustomed to these specific toxins, and the question then arose as to how such animals which had undergone this gradual habituation to a particular toxin would behave on being subsequently inoculated with the disease-producing organism itself. It was found that such animals were able to withstand or were protected from the attacks of such virulent bacteria. This important step we owe to the labours of Salmon, Roux, Chamberland, and other investigators. The next step was the discovery that the blood of an animal thus artificially protected from a particular disease contained materials which can be transferred to other animals and protect them also from the same disease. This astounding property of the blood serum of artificially immunised animals was first discovered by Richet and Héricourt, but to Behring and Kitasato is due the credit of having first shown in the case of

diphtheria and tetanus that, by means of such serum, animals may be cured even after the disease has been actually contracted, provided the injection of the antitoxic serum is not postponed until too advanced a state of the malady has been reached. Again, to Behring is due the merit of having extended these benefits in connection with diphtheria to man himself. The lecturer then referred to a diagram showing the diphtheria death-rates per one million living in the principal cities of the United Kingdom during the years 1883-1892 and 1893 respectively. In commenting upon these statistics it was pointed out how in London the figures had risen from 300 in 1883-92 to 760 in 1893, whilst in West Ham, virtually a part of London, an increase from 250 to 420 in deaths from diphtheria had also been recorded. As indicating the value, so far ascertained, of the serum treatment of diphtheria, he quoted Kossel's recent figures giving the mortality from diphtheria in Germany before the introduction of the new treatment as 34·7 per cent., and since its application as 11·1 per cent. A fact of great importance to be observed in this new treatment of diphtheria is the circumstance that its efficiency is greatly dependent upon the time which elapses between the first manifestation of the disease and the application of the curative serum. The shorter the period which intervenes the better the results which are obtained, and this condition applies equally to the treatment of other diseases, such as tetanus, by means of antitoxic serum, whilst it has also been established as a cardinal principle by Pasteur in his treatment of hydrophobia.

A Commercial Development.

So great is the demand for the therapeutic serum for diphtheria that its production is already a commercial undertaking of great magnitude in Germany, where coal-tar colour manufacturers, with their numerous staffs of skilled chemists, have still further enlarged their works by undertaking the elaboration of diphtheria antitoxic serum on a most extensive scale. The possibilities of securing protection by means of the serum of immunised animals extend even beyond the boundaries of infectious disease, for Calmette, in France, and Fraser, in Edinburgh, have been able to gradually accustom animals to larger and larger doses of snake venom, and have found the blood serum of such animals endowed with the power of protecting other animals into which the venom is injected. When we remember, said the lecturer, that 20 000 of our Indian subjects perish annually from snake bites and that the new method of treatment extends the prospect of saving many, if not all, of these, it is obvious that we are here again face to face with a subject of stupendous importance and which affects us above all the other nations of Europe. In conclusion Professor Percy Frankland pointed out the widespread influence which Pasteur had exercised upon the progress of science during the latter half of the present century, and that this extraordinary influence wrought in so many different departments of science must be attributed in the first instance to the possession of a singularly active, clear, and original mind matured under the strict discipline of an early training in mathematics and the exact sciences, which enabled him to submit biological phenomena to such a rigid, logical, and uncompromising criticism, such as they had never previously received. But even this rare combination of natural and educational endowments would have availed but little had there not been united to them an almost superhuman industry, an almost limitless capacity for work. It would be difficult also to find a better illustration of the manner in which one science can benefit from contact with another than that which is furnished by the results which have attended the digression of the specially trained chemist into the fields of biology and medicine. To Louis Pasteur belongs the glory of having set in motion that great medical revolution which has been well sketched by a modern French writer:

"When man learnt how to protect himself from the wild beasts he made the first step in civilisation. To-day man is learning how to defend himself from microbes; it is a step of equal importance. A day will come when in Berlin, in London, in Paris, man will not die of diphtheria, of typhoid, of scarlet fever, of cholera, or of tuberculosis, any more than he dies in these cities to-day of the venom of snakes or of the tooth of wolves."

Aboriginal Inhabitants of Jamaica.

In the Section of Anthropology Sir W. H. Flower read a paper descriptive of the remains of the native inhabitants of Jamaica who existed previous to the invasions of the Spaniards, which were discovered recently in a cave by the Rev. W. W. Rumsey on the Halberstadt estate belonging to Mr. B. S. Gossett. This cave, which was of small size, was situated in a wild rocky part of the Port Royal Mountains, about 2,000 feet above the sea level and two miles from the shore. The bones found belonged to people of both sexes and all ages, from children of 5 years up to very old persons, the proportion of the latter being very remarkable. The skulls of nearly all showed evidence of that remarkable custom of developing the forehead in infancy, which even up to our own time prevailed through so large a part of the American continent. There was evidence that this practice of flattening the skull was done to improve the appearance. From observations made on the few remaining races among which this custom prevails there was reason to believe it had no deleterious effect on the brain, and was probably not so injurious to health as the tight lacing to which fashionable ladies of the present day were addicted.

Oysters and Typhoid Fever.

In Section D, Zoology, Professor Herdman and Professor Boyce presented a report upon Oysters and Typhoid: an experimental inquiry into the effect upon the oyster of various external conditions, including pathogenic organisms. The report opened with a statement of motives, objects, and methods, and gave the following summary of the results obtained so far: "Our experiments demonstrate: (1) The beneficial effects of aëration (*a*) by the addition of air only; (*b*) by change of water; pointing to the conclusion that the laying down of oysters in localities where there is a good change of water, by tidal current or otherwise, should be beneficial. (2) The diverse results obtained by feeding upon various substances, amongst which the following may be noted: The exceedingly harmful action of sugar, which caused the oysters to decrease in weight and die. The oysters thrive best upon the living protophyta and protozoa. Those fed upon oatmeal and flour after a time sickened, and eventually died. (3) The deleterious effects of stagnation, owing to the collection of excretory products, growth of micro-organisms, and formation of scums upon the surface of the water. (4) The toleration of sewage. It was found that oysters could, up to a certain point, render clear sewage-contaminated water, and that they could live for a prolonged period in water rendered completely opaque by the addition of fæcal matter; that the fæcal matter obtained from cases of typhoid was more inimical than that obtained from healthy subjects; and that there was considerable toleration to peptonised broth. (5) The infection of the oyster by the micro-organisms. The results of the bacteriological examination of the water of the pallial cavity of the oyster, and of the contents of the rectum, showed that in the cases of those laid down in the open water of the bay the colonies present were especially small in number, whilst in those laid down in proximity to the drain pipe the number was enormous (for example, 17,000 as against 10 in the former case). It was found that more organisms were present in the pallial cavity than in the rectum. In the case of the oysters grown in water infected with the bacillus typhosus, it was found that there was no apparent increase of the organisms, but that they could be identified in cultures taken from the water of the pallial cavity and rectum fourteen days after infection. It is found that the typhoid bacillus will not flourish in clean sea water, and our experiments seem to show so far that it decreases in numbers in its passage along the alimentary canal of the oyster. It would seem possible, therefore, that by methods similar to those employed in the "Bassins de dégorgement" of the French ostreiculturist, where the oysters are carefully subjected to a natural process of cleaning, oysters previously contaminated with sewage could be freed of pathogenic organisms or their products without spoiling the oyster for the market. It need scarcely be pointed out that if it becomes possible thus to cleanse infected or suspected oysters by a simple mode of treatment which will render them innocuous, a great boon will have been conferred upon both the oyster trade and the oyster-consuming public. We

desire to acknowledge the kind help of Mr. W. I. Beaumont in making some of the observations at Port Erin, and of Mr. Andrew Scott at Liverpool.

Abnormal Children.

Dr. Francis Warner read in the Section of Anthropology the third report, drawn up by himself, of the Committee on the Mental and Physical Deviations of Children, which, since its formation in 1888, has examined and reported upon 100 000 children. In the third report are given the results of research among 8,941 children, 5 112 being boys and 3,829 girls. Defects in development of the body were found to be more frequent among boys than girls, the proportion being 8 7 to 6 8. A marked exception to this rule was in the case of small cranium, which were much more frequent among girls. This defect appeared to some degree endemic in the neighbourhood of large buildings, and was less frequent among Irish children.

Measurements in Schools.

Dr. Garson read the report of the Committee on Anthropometric Measurement in Schools. He said it was desirable that this work should be done on a common basis, and if schools in any particular locality were willing to undertake it Professor Windle, the secretary of the committee, would be pleased to supply forms and explain the system adopted.

Future Meetings.

At the General Committee Meeting the President was in the chair, and amongst those present were Sir F. Bramwell, Mr. W. H. Preece, Sir H. Trueman Wood, Sir C. Tupper, Sir John Evans, Dr. Fream, and Mr. Conrad Cooke. Mr. Griffith, the assistant secretary, had certain formal matters to bring forward, but the principal business was to fix the place of meeting for the year after next, and elect officers for the Liverpool meeting next year. The invitation to visit Toronto in 1897 was renewed, the matter having been fully entered into last year. Communications were now read from learned societies in British Columbia, Montreal, and Manitoba, strongly urging the Association to go to Toronto. In the absence of the Mayor of that City, at present ill in Yorkshire, Sir Charles Tupper made the necessary explanations as to the character of the arrangements that would be made in the Dominion, and he was followed by Mr. Cody, the City Treasurer of Toronto. On the motion of Sir F. Bramwell, seconded by Professor Hicks, supported by Mr. Vernon Harcourt, it was unanimously resolved to go to Toronto in 1897. Bournemouth and Dublin were mentioned as possible towns for 1898. Sir Joseph Lister was, with general acclaim, elected President for Liverpool next year, and Lord Kelvin, in making the motion, said that the mortality in hospitals had been largely reduced by the labours of this great representative of biological science and medicine. Professor Schafer, the successor to Sir Douglas Galton, as general secretary, seconded the resolution; and amongst the Vice-Presidents appointed were the Lord Mayor of Liverpool, Lord Sefton, Lord Derby, and Sir H. Roscoe. The date of meeting will be September 16th.

THE GERMAN TRIALS OF WATER FILTERS.

The Prussian War Office has recently published an interesting report by Dr. Plagge, on investigations on which he has been engaged during the last ten years in respect to the capacity of water filters to prevent disease. So far back as 1886 Dr. Plagge tested all the then available filters. He found, as all other observers have found, that the German carbon, natural stone, gravel, sand, cloth, sponge, paper, and asbestos filters were entirely useless. In the case where he examined filters from England, as with spongy iron, and the Maignen carbon filter, he obtained the same result. During the last four years he has undertaken a renewed investigation of modern forms of filters, and it is to the results of this investigation that the present report owes its chief interest.

Beginning with the carbon filters of Bühring and other German makers, he remarks not only the same incapacity to prevent the passage of organisms as he had found previously, and as has been repeatedly indicated in the columns of the British Medical Journal, but also the same tendency on the part of the makers to make false claims for their apparatus as unfortunately exists at present in this country. The Maignen Filtre Rapide, composed of a carbon preparation and asbestos, had been tested by Dr. Plagge's predecessor, and found entirely useless in the prevention of disease. The paper, cellulose, and asbestos filters, including the well-known Austrian filters of Breyer and numerous other makers, were equally found permeable to disease organisms.

The Pasteur filter was only examined incidentally. The author, while describing it as in the fullest degree satisfying all sanitary requirements, and as necessarily the standard for all later constructions, was attracted to the exceptionally large output yielded by some of its later imitations. The imitations of the Pasteur filter in porcelain in Germany have been numerous, but, according to Dr. Plagge's results, hitherto unsuccessful—a circumstance which is interesting to us in this country, where the advent of such imitations may be expected to follow on the increasing use of the Pasteur filter.

The chief body of the report is devoted to the experiments with the Berkefeld filter. Dr. Plagge was attracted by the enormous output of this filter; and, apart from a preliminary investigation, of which he thinks the results cannot be at present fairly considered as final in the light of the improvements which were subsequently made in the filter, he has had them at work and under bacteriological observation for three years. The preliminary observations were sufficiently hopeful to warrant the experimental use of specimens of them in an African expedition. They were found to be unsuitable for this service; and in the present year, being again tried in the portable form, were still found to altogether fail. We must say that we think the circumstances under which these filters were used, while necessarily conclusive as to the unsuitability of the filters for army purposes, were considerably more trying than many in which the use of a filter is indicated. It is in the tables of the experiments made by Dr. Plagge in his laboratory, where the conditions of manipulation by competent persons and treatment of water less difficult to filter than that which was used on the field trials, were at least as favourable to the filter as those which would occur in ordinary domestic use, that we find the materials for pronouncing a definite judgment on the practical value of this filter.

The tables extend over sixty pages, and relate to the examination of 38 specimens of Berkefeld filter tubes. Of these, 37 were put into actual use, and examined after periods varying from five days up to six or seven months. The output was in almost all cases found not only to be initially very high, but also with periodical cleaning at short intervals to remain so for long periods. In respect, however, of capacity to arrest microbes, and of mechanical strength, the results obtained may be thus summarised. Of the 37 filters successively set to work, 4 passed microbes directly, and were consequently not further examined; 5 did so before the end of the trials, varying from five days up to three or four months; 1 during the trials passed microbes within eight to ten hours from the time of sterilisation; 3 did so from the outset within twenty-four hours. Of the remainder, 16 passed microbes within twenty-four hours from sterilisation at some time previous to the termination of the trials, varying from five days up to seven to eight months. In 2 such cases the filters were examined hourly, and it was found that the organisms passed within the fourteenth and eighteenth hours respectively.

From these circumstances Dr. Plagge concludes that it is indispensable for the Berkefeld filter to be cleaned and thoroughly sterilised by boiling either once or twice in twenty-four hours, according to the extent to which it is used. During his own examinations the cleaning and boiling were at irregular intervals, but amounted approximately to the same extent of treatment. The net result was that of the 37 filter tubes used, no less than 27 got broken during their respective trials, varying from nine days to seven to eight months from their commencement. These results, obtained in the case of tubes submitted by the makers for experiment, and handled by persons accustomed to the manipulation of sensitive apparatus, are probably at least as favourable to the filter as those which would be obtained by persons to whom the care of filters would ordinarily be entrusted in

practice. While these experiments were going on six Pasteur tubes were under similar examination for eight months but none were broken.

It therefore appears that, out of the 37 filters 20 first or last passed microbes within twenty-four hours of sterilisation or less, 7 at once directly, while 27 were in a more or less short time broken. Apart from the expense of renewals of filter tubes which such breakage would cause, it is impossible to entertain the adoption of a filter which in many cases is incapable of giving any protection at all against the passage of microbes, and is liable after use to lose its further capacity to arrest such passage within a few hours of sterilisation.

The results obtained by Dr. Plagge confirm and extend those of Dr. Johnson's research on the same subject, and appear to show definitely that the larger output of the Berkefield filter is obtained at the expense both of mechanical strength and of capacity to resist the passage of microbes. There is the less reason at the present time to seek for these exaggerated outputs, as the installation of Messrs. Debenham and Freebody visited by members of the Public Health Section of the British Medical Association at their last meeting, showed in a practical way that any desired daily output can be very simply obtained from the Pasteur filter itself. Dr. Plagge's report shows clearly the risks which may be incurred in dallying with alternatives of less efficiency than that of the rigidly adequate standard which Pasteur has supplied.

RECLAMATION OF WOMEN DRUNKARDS: THE EXPERIENCE OF THE PAST YEAR.

The fifteenth report of the Inspector of Retreats under the Inebriates Acts for the year 1894 was published on September 17th. Respecting the work done at Fallowfield, the Manchester Retreat for Inebriate Women, the inspector gives the following remarks of the licence:

"The Grove is one of the largest retreats for women open under Government licence. It is visited by an inspector appointed by the Crown. Rich and poor patients are received; the former paying for their board, the others paying smaller sums and employing themselves in useful and remunerative work. There is abundant need for such retreats. Among the well to do alone, no domestic miseries are more hopeless, and few more frequent, than those which are caused by the father or mother being a drunkard; probably the drunkenness of the mother is the saddest of all. Again, it is painfully common for a woman to be brought before the Bench scores and hundreds of times for being drunk, and punished over and over again with short terms of imprisonment. Imprisonment in such cases is the most futile of resources; the poor creature is released just when the pains of debauch are over, and the craving for drink has returned, but too early for any cure of her disease, moral or physical, to have been made. The fact cannot be too frequently reiterated that nothing short of prolonged restraint from the use of stimulants—until the craving has died away, and the constitution recovers its normal condition of health—is of any avail as a remedy. Even the twelvemonth prescribed by law proves not a day too long.

"The following figures will describe the work of the Grove during the year ending December 31st, 1894:

Number of applications	...	...	128
Number admitted ...	...	...	24
Left after a year's stay	...	...	23
At present in the Retreat	...	...	25

"The methods adopted at the Grove are simple and natural. They are immediate and entire abstinence from strong drink, strict regularity of life, constant and cheerful employment, gentle firmness, and unfailing sympathy, and a religious influence always present and often directly urged. The Grove and its beautiful grounds form bright and healthful surroundings, while skilful and kindly medical help is always at hand, thanks to the unfailing kindness of our honorary medical advisers. It may be of interest to note that among the patients we have had one in whom the habit of cigarette smoking was combined with inebriety; another case was complicated by the opium habit. It may be added that our experience has confirmed what has often been proved before that even in the case of the worst habitual drinkers, no harm, but the reverse, is done to the health by the sudden and complete disuse of all alcoholic drinks.

"It is a common opinion that when once a woman has taken to drink recovery is impossible. It is therefore natural for the question to be asked, How far has the Grove achieved success? Do the patients who leave us stand firm? Before answering this question it should be remembered what sort of patients we receive. They are not persons who have just begun to drink to excess, and have suddenly awoke to their peril. Such persons do not seek refuge in a licensed retreat; they try, often vainly, to recover themselves by easier methods. The patients who come to the Grove are those who have run their course, and come to utter misery. They are often destitute and outcast from their friends, broken down in health and self-respect, and utterly degraded. They are the wreck of womanhood. They are among the worst cases that can be dealt with. If, then, we find that 25 per cent. is the average proportion of patients who give evidence of permanent recovery, we need not express either wonder or regret. The wonder is that so many should stand firm, considering the abundant temptations which meet them upon leaving the Grove in the allurements of the ubiquitous liquor trade and the pernicious customs of society. And it should further be mentioned that if one of our old patients is known to take stimulants in ever so small a quantity she is recorded in our books as relapsed, although she may not be known (as yet) to have become an inebriate. It is, meantime, an enormous comfort to the committee and workers at the Grove to receive frequent letters and visits from former patients, who testify to the blessings they have received. Four women who left in 1891 (our first year) still remain steadfast abstainers, and are doing well in their several stations in life. Six who left in 1892 have stood firm; nine from 1893."

The inspector strongly urges the necessity of the Government making the admission to such institutions compulsory, and not voluntary as at present.

DEATHS UNDER ANÆSTHETICS.

Chloroform.

Dr. C. E. Salt has forwarded to us the following particulars of a case of death under chloroform which occurred at the Salop Infirmary on September 10th:

J. F. P., a patient admitted on September 7th to the Salop Infirmary for treatment under Mr. Eddowes, the senior surgeon. He was suffering from cancer of the penis complicated by enlarged glands in the penis. He had nothing abnormal in heart or lungs, but was considerably emaciated by his disease, and apprehensive of his safety under operation. On the following Tuesday, September 10th, chloroform was administered in the usual way from a drop bottle, and at first the patient took it well, but after three or four minutes' inhalation, one of the surgeons who was holding the patient's pulse informed the anæsthetist that it had suddenly become very poor, and immediately the chloroform was removed. He was only slightly under the influence of the anæsthetic, and up to this time his breathing and appearance had been good, the first sign of danger being the flagging pulse. Paralysis of the respiratory centre followed almost immediately on cardiac failure. On the first alarm the patient's head was brought over the end of the table and artificial respiration at once commenced and continued for an hour, but the patient showed no signs of resuscitation, and it is believed that he died almost immediately. Faradism, ether, and strychnine subcutaneously, ammonia and amyl nitrite to the nose were also made use of, but without effect. It is the opinion of the medical men present that death was due to cardiac failure, while partially under chloroform, induced by a nervous apprehension of the operation.

The Exchange Telegraph Company have issued a *Poll Book* giving the results with figures for the last four general elections. Owing to the numerous changes which have taken place recently, such a volume is likely to be extremely convenient. The Company have long been well known for the accuracy as well as the speed of their work, so that the statements may be relied on. The book is to a small extent a literary curiosity, since it has no title page, and we must therefore perforce, in spite of Mr. Bailey's recent denunciation of such a practice, quote it by the title on the cover.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 21st, 1895.

INOCULATIONS AGAINST CHOLERA.

Professor Haffkine's system of inoculation against cholera has had another year's trial in India, and he is now returning to Europe. His results have been published by Dr. Simpson, M.O.H. of Calcutta, in a report to the Chairman of the Corporation of Calcutta (see page 735).

From the time the Haffkine system was first introduced into Calcutta till July 15th, 1895, 4,397 persons have been inoculated in that city with the following remarkable results. In 36 houses in which cholera appeared a certain number of the inhabitants were inoculated, but the majority remained uninoculated. These houses furnished valuable means of observation as to the definite value of inoculation as a preventive against cholera in times of epidemic. The total number of the inmates of the 36 houses was 521; of this number 181 were inoculated and 340 not inoculated. Among the uninoculated there were 45 cases with 26 deaths, or 11.64 per cent., and among the inoculated there were 4 cases with 4 deaths, or 2.2 per cent. Of these 4 cases none of the patients had undergone a second inoculation and 3 of them contracted cholera and died from 1 to 4 days after the first inoculation and before the protective influence of the vaccine had had time to assert itself. In spite of this, however, the figures show that the not inoculated were 5.08 times more liable to attack and 5.27 more liable to death from cholera than the inoculated.

During the First Eight Days.

	Average Number Present at Date of Attack.	Cases.	Per Cent.	Deaths	Per Cent.
Not inoculated ...	75	6	8.00	4	5.33
Inoculated ...	52	3	5.77	3	5.77

After Eight Days.

	Average Number Present at Date of Attack.	Cases.	Per Cent.	Deaths	Per Cent.
Not inoculated ...	269	39	14.72	35	13.21
Inoculated ...	140	1	0.71	1	0.71

It must be remembered that two injections, one five days later than the other, are necessary for full protection, the first with the weak vaccine, and the second with a stronger vaccine which requires another five days to secure complete action. The figures in the table showing the results of inoculation before and after the first eight days are very remarkable.

Dr. Simpson adds that "after eight days, and in fact after five days, the difference in liability to attack becomes very marked, the inoculated living in the same houses in Calcutta being 20 times safer from attack, and 18 times securer from death, than the not inoculated should cholera enter the house. This is protection of a very decided character. No case of cholera occurred among those who subjected themselves to both inoculations."

The facts regarding the Gya Gaol, the Cawnpore and Lucknow outbreaks and anti-choleraic inoculations are recapitulated, and a number of new facts are given as to the inoculation of large numbers of coolies in the Assam tea gardens by Professor Haffkine.

The work undertaken in Assam by Professor Haffkine has been simply colossal, and it has been carried out with a devotion, a singleness of purpose, and an expenditure of private means, unusual even in the domains of medicine and science. In the Karkuric Tea Garden there were among the uninoculated 5 cases and 2 deaths, among the inoculated 1 case and 1 death. In the Kalain Tea Garden there were among the uninoculated 22 cases and 10 deaths, and among the inoculated 2 cases and 1 death. In the Chargola Gardens among the uninoculated 3 cases and 1 death, and among the inoculated no case. In the Kalachera Garden among the uninoculated 4 cases and 3 deaths, and among the inoculated 1 case and 1 death. In the Pallarbund Garden, among the uninoculated 2 cases and 2 deaths, and among the inoculated no case. In the Degubber Garden, among the uninoculated 2 cases and 1 death, and among the inoculated no case. In the Adam Tilla Garden, among the uninoculated no case, and among the inoculated 2 cases and 1 death.

Summarising the observations made on the gardens on coolies inoculated once, that is, before the second inoculation was applied, the results are—among the uninoculated 38 cases and 19 deaths, and among the inoculated 5 cases and 3 deaths.

The original report, which we publish in full on page 735, must be consulted in detail to ascertain the value of these figures, and also of the 36 observations made on houses in Calcutta.

Dr. Simpson concludes the report, urging the Commissioners to make a further grant of 10,000 rupees, in order to prosecute the inquiry, and to place anticholeraic inoculation on a thoroughly satisfactory basis. He adds: "By granting facilities to carry out this important work in the capital of India, which is regarded as the centre of the 'home of cholera,' and the city of all others in the East, to which Government turns for information concerning this disease, as indicated in the scientific missions of Koch from Germany, Klein from England, Zahn from Geneva, and Shakespeare from America, the Commissioners will not only be conferring a public benefit on the inhabitants of Calcutta, who are so subject to cholera, but they will also be leading the way to the introduction of a prophylactic measure which, either in its present or in a modified form, may be expected to effect an enormous reduction in the ravages of cholera among Eastern and Western populations."

THE MEMORIAL TO SIR ANDREW CLARK.

In the *Times* of September 13th appeared a lengthy extract from the *Hospital*, headed "Mismanaged Memorial." In this extract is given what purports to be the history of this memorial, setting out that the expressed determination to raise £12,000 for the erection of isolation wards and a new pathological department at the London Hospital, as a memorial to its late distinguished consulting physician, and President of the Royal College of Physicians, had issued in the collection of barely £3,000, and that at the quarterly court of governors of the London Hospital, held recently, those responsible had abandoned the form of memorial originally set forth, and had substituted an erysipelas ward for women, another for isolation cases, and increased accommodation for the porters. It adds that those responsible for the decision ought to feel heartily ashamed of themselves that they should propose to erect a building for the accommodation of the male servants of the London Hospital as a memorial to Sir Andrew Clark. This article was followed on the next day by a letter in the same paper from "A Subscriber," adding: "Several of us considered that the memorial was being mismanaged, but we never thought that it would degenerate into the perpetuation of Sir Andrew Clark's name by means of a building for the accommodation of the male servants of the London Hospital." The letter reflects, also, on the manner in which the business of the memorial had been mismanaged. Extracts from the article in the *Hospital*, with comments thereon, have also appeared in the *St. James's Gazette* and other papers.

These statements and animadversions have been met by a letter which appeared in the *Times* of September 17th, signed by Mr. Hale, the Chairman of the House Committee, and Mr. John Henry Buxton, the Treasurer of the London Hospital. In this, amongst others, two things are pointed out: In the first place, that the sum actually raised falling so far short of that necessary for the original idea agreed upon by the subscribers' Committee, the question was how best to carry out, as far as the funds permitted, the intention to erect a block of isolation wards to bear Sir Andrew Clark's name and to be of permanent benefit to the suffering poor for whom Sir Andrew Clark laboured at the London Hospital for so many years. Something of the aims of the memorialists had to be sacrificed, and something had to be added to the sum collected to enable the project to be carried out in any way. The governors of the hospital—who had, it may be mentioned, already contributed handsomely to the fund—were therefore asked at the recent quarterly meeting to sanction the expenditure of £1 500 for the foundations and half basement which would necessarily have to be constructed before any wards could be built on the site proposed. Were this not done very little could be done for the £3 000 collected for the memorial. In the basement accommodation will, if the plan is carried out, be provided for the male servants of the hospital; and this is the only ground for the statement that the memorial to the late Sir Andrew Clark had degenerated into provision for the accommodation of the hospital porters. It was a hearty desire to help to carry out the wish of the memorialists that led the House Committee to get the permission of the governors to the expenditure of £1,500.

In the second place, it is made quite clear by the letter of the authorities of the London Hospital that whilst they have been doing their best to give facilities to carrying out the wishes of the subscribers to the Andrew Clark Memorial, the final determination does not rest with them. They say that directly the governors had given their approval to the expenditure of the £1,500 for the foundations and basement, on September 4th, the architect was instructed to work out plans. "These," they add, "must be fully considered, and, if suitable, will of course be submitted to the Andrew Clark Memorial Committee, with whom, as the representatives of the subscribers, the approval or otherwise of the memorial must rest, and not with the House Committee."

It must, of course, be a matter of deep regret to the friends and admirers of the late Sir Andrew Clark and the subscribers and Committee of the memorial that the sum actually raised falls too far short of that necessary for fully carrying out the original plans, and so inadequate to the recognition of the work and worth of the late Sir Andrew Clark. It would not be profitable at the present time to enter into the circumstances which, in the opinion of those best acquainted with the facts, have led to the failure of the hopes of those who have taken the most active share in promoting the memorial. H.R.H. the Duke of Cambridge most graciously, on the first intimation of the proposal, desired to associate himself with the intention to honour the memory of Sir Andrew Clark, and Mr. Gladstone and his family did all in their power to promote it. Mr. Gladstone addressing a large public meeting when scarcely physically equal to the task is most gratefully acknowledged, and Mr. Gladstone's estimate of Sir Andrew Clark's life and work, and his generous testimony of the aims and labours of the medical profession, remain on permanent record. The Committee, we believe, has striven its best to make the Andrew Clark Memorial worthy of the great physician whom it was desired to honour, and it is not obvious that it has failed in any legitimate efforts, whilst it is to be regretted that these efforts have not been attended with a greater measure of success.

THE FOREST GATE DISTRICT SCHOOLS.

We regret to have to record that these hapless schools are again suffering from an epidemic of scarlet fever, which has already assumed serious proportions, something like fifty children having been attacked in the last three weeks. The managers seem to be doing all that is possible to isolate and remove the patients and thus minimise the danger of infection, but when so many children are congregated under one roof the conditions are not only specially favourable to the spread of disease in the ordinary way, but the children themselves are peculiarly liable to contract it. As we have more than once pointed out, there is no material at hand from which conclusions could be scientifically adduced as to the value of different methods of bringing up those of the young who by inheritance or early neglect necessitate special consideration if they are to be made fit to be self-supporting. On entering one of these large institutions the children are neither weighed nor measured. The angry mother or the disappointed philanthropist may affirm, as they frequently do, that the child has wasted to a shadow while he was under the guardians' care, but that body has no facts by which the statement can be refuted. Whether

children physically develop best when drilled, fed, housed, and washed in barrack schools or whether they grow and strengthen more when subdivided into groups is still a matter of opinion only.

The Local Government Board has never seen fit to give its medical officers instructions to observe and tabulate facts with an accuracy that could enable them to form a judgment sufficiently supported to countenance action. But the general consensus of opinion among those who have had experience with institution children is that they do not grow, strengthen, and develop with the same rapidity or freedom as children brought up under natural conditions, and the extent to which epidemics spread if once they get a footing is a factor which goes far to support this opinion. At this season of the year, when every sandy bay and rocky beach gives abundant examples of the undivorceable union between health and interest, it is not difficult to realise that young creatures whose lives are necessarily divided from every natural interest and excitement should lose one of the first and most essential aids to robust vigour.

Exercise is most effectively taken when it is taken pleasurably: but the games that can be played in the playing yards of such a school as Forest Gate are at the best but a dull amusement, and their monotony soon robs them of such stimulation to energy as they might have originally possessed. The children rarely walk beyond institution boundaries, and when they do the large numbers necessitate semi-military marching at a pace suitable to the youngest and feeblest, and therefore inexpressibly wearying to the elder and stronger.

We have mentioned only the absence of varied and interesting exercise as a reason why institution children should be less robust than those living under normal conditions. But we argue without data—data which could be readily supplied by the medical officers of the pauper schools if the Local Government Board would furnish them with instructions to weigh all children on admittance, three months after they enter, and at period intervals during their residence within the school. The normal size, weight, and strength capacity of an ordinary child is an ascertained datum, and could be compared with the institution-bred child; thus, or only in similar ways, can it be ascertained whether the dietary tables, the sleeping accommodation, and all the other details of the large organisation are suitably arranged to promote the health of the children of the State. Without such information we can but go blundering along, probably making mistakes of vital importance to the child which closer watching could have remedied without trouble or expense.

INSANITY AND CRIME.

The trial of Robert Allen Coombes, a lad aged 13, upon an indictment and coroner's inquisition charging him with the wilful murder of his mother, was concluded at the Central Criminal Court in London on Tuesday last. The jury found that he was guilty of the act charged but that he was insane at the time he did the act so as not to be responsible at law for his actions. Whereupon Mr. Justice Kennedy, before whom the case was tried, ordered the youthful matricide to be detained in strict custody as a criminal lunatic until Her Majesty's pleasure should be known.

As far as one may rely upon the press reports of the trial the jury could not well have come to any very different conclusion, and, on the whole, the outcome of this sad case is about as well as could have been under the circumstances.

Perhaps the necessarily condensed reports of the trial are misleading on the medical aspects of the case, and therefore the little we say is expressed under reserve.

The lad had been clever at school and well behaved; "he was a very good boy;" was the testimony of his teachers. Complaints of headache at times, the condition of excitability observed on occasions, the statements that he had heard noises at night, the fondness for sensational literature and for criminal trials; harbingers perhaps of mental disorder, as in some cases, are not necessarily so; and, by themselves, as a previous history, are merely suggestive.

The defence chiefly rested on the medical officer's observations made on the youth in prison since his arrest for the crime, on which was based evidence to the effect that he was insane, or at all events recurrently so, with lucid intervals. Mental excitability, changeability, and peculiarity were manifested; an erratic letter was written; and, to a leading question whether he heard voices, he reply was that voices at night told him to "kill her, kill her, and run away."

Accepting as valid the conclusion that he was insane, one still would like to know how it came about that in prison and on trial for murder a lad of 13 years and of his station in life hit upon the formula "that he felt an irresistible impulse to kill" his mother. And, in fact, according to his own statements the murder was premeditated and skilfully planned, as well as cold-blooded and callous in its execution and concealment.

Sensational criminal literature is most pernicious in its influence on the weak-minded or the lunatic at large, and there is some evidence that in the present case it was harmful.

INEBRIETY AND INSANITY.

The large part played by alcohol as a cause contributing to insanity receives fresh confirmation in the fortieth report of the Commissioners in Lunacy. For the five years ending 1893 alcoholism was the predisposing or exciting cause in 20.8 per cent. of male and 8.1 per cent. of female lunacy. Intemperance is credited with 25.6 per cent. of male and 19.9 per cent. of female general paralytics.

JENNER CENTENARY IN RUSSIA.

It is announced by the Russian National Health Society that next year it is intended to commemorate the centenary of Jenner's first experiments in a special way. It proposes (1) to offer four prizes for the best works on vaccination; (2) to collect and publish materials for a history of the practice of vaccination in Russia and a short history of the same in Western Europe; (3) to publish a Russian translation of Jenner's works, accompanied by his biography and portrait; (4) to organise an exhibition of objects connected with vaccination, and to hold a commemorative meeting on the day of the centenary.

ENGLISH SURGERY IN BURMAH.

Among the benefits which the Pax Britannica confers on those Eastern races who become constituent members of the British Empire not the least is the introduction of Western methods in the treatment of injuries and diseases. The antiquated theories and crude appliances which have persisted in the changeless East for countless generations are contrasted with the most advanced methods of the practical

West, and the natives are not slow to read the object lesson. A striking instance is afforded by the success of the General Hospital, Burmah. During recent years there has been a wonderful increase in the number of patients applying there for treatment, due not to increase of population or of sickness, but to the realisation by native sufferers of the fact that they are sure within the walls of the hospital to meet with kindly and skilful treatment. The hospital is well found, its floors are polished, and its wards furnished with excellent system of bath, douches, etc., with cold and hot water. The number of operations performed in one year in the last report is stated to be 209, of which 170 were major operations. There was only one death after operation out of this number—a fact which reflects the greatest credit on Brigade-Surgeon-Lieutenant-Colonel Hugh Johnstone, and goes far to account for the growing popularity of the hospital.

CALISAYA DRUNKARDS.

Calisaya drunkards are stated to be rapidly increasing in number in New York. It is said that there is very little calisaya in the mixture, and that the drinker is practically drinking alcohol and quinine. There seems to be a general ignorance of what this beverage really is, persons sometimes resorting to it in the hope of a cure for alcoholic drunkenness. This calisaya drink is, however, more injurious than a purely alcoholic liquor when taken to excess—then the drunkard really suffers from the effects of an overdose of both drugs. The tinnitus aurium of the quinine is accompanied by the circulatory riot of the alcohol. It is much the same concoction as the spirit and bark which, under the name of "Peruvian," was much affected in the city referred to a quarter of a century ago.

THE REVISION OF THE "INDIAN ARMY MEDICAL REGULATIONS."

The sixth volume of the *Indian Army Regulations*, which pertains to Medical Services is undergoing revision, as is also the *Field Service Manual*; to bring both up to date, is a very necessary step. We believe that the new *Army Regulations for the Treatment of Cholera*, sharply satirised by Mr. Hart at the Indian Medical Congress, and recently at the Public Health Section of the British Medical Association in London, forms part of this volume. It undoubtedly needs much revision.

BURIED ALIVE.

The subject of the alleged burial of persons who are still alive has recently proved as fruitful as ever of barren correspondence; not one shred of evidence in support of their belief has been proved by those who write so glibly of what would certainly be, if there were any truth in their assertions, an unspeakable horror. We would make an earnest appeal to require from correspondents some sort of proof before inserting letters on this subject. When a man writes: "How often are careless doctors censured by coroners for giving certificates without seeing the body?" and "In how many cases in ordinary practice is the examination merely perfunctory?" we ask ourselves what can the man who penned such sentences be thinking about? He never can have seen a death certificate or he would know that it is not necessary to see, much less to make any examination, however perfunctory, of the dead body, and we hope that no coroner ever yet censured a doctor for not doing that which he has no obligation to do; of course if a medical man gives a certificate in the case of a person he has never attended during life he would lay himself open to a censure from which no amount of looking at the body after death could save him. We see no objection to the death certificate being made more stringent, as this would imply greater accuracy in our statistical tables of the cause of death, but if the Home Secretary should see fit to take any steps in this direction, we think that the time would be a fit one to institute payment by the State for death certificates, seeing that there is no reason why medical men should perform this service for the State gratuitously. The question of cremation which is raised is an entirely separate one.

THE COST OF A CRIMINAL FAMILY.

Improvement of the social status of our population, and attempts to lessen pauperism and criminality, are matters of general and widespread interest. Practical measures are needed to counteract inherited tendencies in certain families, as well as in cases of habitual drunkards and frequent offenders. The suggestion of such measures is generally met with the objection of their costliness to the public, without regard to the expenses thrown upon the public purse by the existing degraded portions of the population, as well as in other ways. The chief constable of Chester has given the record of John Ogden, recently dead, who made 130 appearances before the city justices; 86 being for drunkenness, and 44 for assaults. Ogden's father appeared before the bench 35 times, a sister 67 times, and another sister 29 times. The father, son, and two sisters, were charged 347 times; it has been estimated that in the expenses of prosecutions, prisons, and Poor-law maintenance, the Ogden family have cost the City of Chester £2,000. Such cases are frequently met with, and demonstrate the grave importance of accurate inquiry as to the physical and mental conditions of the population. Inquiries conducted by a committee of the British Medical Association, show that many such cases may be detected in our schools; which provision for their proper care in early years and subsequent provision might prevent much evil. The consideration of the mentally and morally feeble portions of the population claims the early attention of the Government.

THE GUARDIANS' GUARDIANSHIP OF THE POOR.

Our oft-repeated contention that the poor suffer because the nursing provided in the workhouse infirmaries is inadequate is enforced by the experience of the past week. At Yarmouth, notwithstanding the protests of lady guardians, "there is only one room set apart for the nursing of sick children, no matter from what disease they are suffering," and "that single room, which is used as an infirmary for children, has also to serve as a nursery for babes." A correspondent signing herself Ethel Leach writes to the *Eastern Daily Press*, drawing attention to the "cruelty" of sending "children with sore heads to be nursed in the same room with measles and whooping-cough." The medical officer has, it seems, asked in vain that further accommodation may be provided. From Coventry comes the familiar tale of a letter from the Local Government Board, reiterating the opinion already expressed to the guardians on more than one occasion, that the number of nurses in the house, both as regarded imbeciles and the ordinary sick, was "insufficient," followed by the equally familiar remark, "the communication was ordered to stand over." Finally, the *Thanet Guardian*, in the report of an inquest on the death of a pauper in Eastry Workhouse, tells how, in the absence of a nurse, a patient fell and struck his head; how the nurse, being summoned, was again called away; and how at last the patient died with only a neighbouring patient at his side, and without having seen the doctor. The nurse's excuse was that she had to "attend a child in the women's ward." The jury condemned the nurse; but when shall we hear of a jury brave enough to condemn guardians who overwork the staff, or refuse to supply necessary accommodation? It is astonishing that such things should happen, and it is clear to our mind that the public conscience is ignorant of the facts. Good well-meaning people who pay their rates, and who feel pity for the sick and are tender over children's weakness, do not conceive how officialism

hardness the guardians' action. They cannot understand how men who are kind to their own children and thoughtful to their own sick can be so "cruel" as to use the nursery as an infirmary, or to leave the dying to die untended. But that it is so, these, among many other instances, serve to prove; and that it will be so until the present class of guardians are superseded by cultivated as well as kind-hearted people who will come forward to give the time and take the trouble which is involved in becoming a guardian of the poor. Medical men and workmen are needed on such Boards, but they, as well as business men, can hardly be expected to join until the hours fixed for the meetings are beyond working hours. To change the hour of meeting would be a simple reform, but one which might have some far-reaching results.

NUNS AS NURSES IN IRISH WORKHOUSES.

The question of the nursing arrangements in the Irish workhouses, of which we shall have to speak from personal investigation in the next few weeks, is just now occupying a good deal of public attention. The *Irish Independent* contains many letters on the subject, and the circular of the Local Government Board has agitated the Boards of Guardians considerably. The want of trained nurses has aroused a discussion as to the qualifications of the Sisters of various Roman Catholic orders, who in many cases manage the workhouse hospitals. At Athlone the Local Government Board have refused to sanction the appointment of one of these ladies as night nurse on the ground that she is not trained. The guardians proposed to have her trained in a Dublin Hospital; the Local Government Board assented, but the Bishop refused to permit the arrangement, because it is against the rules of the order to undergo training in the manner required. The guardians then declared that they would adhere to the appointment of the lady mentioned, in spite of the threat of the superior Board to dissolve them. At Ballinasloe the guardians have agreed to appoint a night nurse who has received the requisite training. We shall be able to bear testimony to the good services of the Roman Catholic sisters in the Irish workhouses; but we must strongly declare that they should be required to undergo the full ordinary training that is now required in every hospital. A peasant can suffer just as much as a town patient; he requires just as much skilled nursing, and he ought to get it. When our reports on the various workhouses come to be published, it will be seen that the present system is a very bad one, and that the guardians and the Local Government Board in Ireland must face a big public question, no matter how unpleasant it may be.

THE SMALL-POX EPIDEMIC IN DUBLIN.

In the report of the Local Government Board for Ireland for the year ending March 31st, 1895, Mr. T. T. Stafford, the medical inspector for the Dublin district, presents an interesting and important paper on the small-pox outbreak. He notes that between 1871 and 1881 there were 2,988 deaths from small-pox, while from 1882 to 1893, both inclusive, only 5 deaths occurred. The outbreak of 1894 was undoubtedly caused by a casual admitted to the North Dublin Union, who was, within four days of his discharge, admitted to the Hardwicke Hospital. This person refused to give any information as to the places at which he had stayed or where he had come from, and the authorities were therefore unable to deal with the lodging houses in which he resided. Cases from the workhouse and from the city soon began to drop in, until on March 31st, 1895, 1,251 cases had been treated in hospitals, with 38 deaths, or 11.03 per cent. Thirteen deaths occurred outside, which would represent about 143 persons attacked, or, in all, 1,394 cases. In 1813 Dr. Watt declared that, before 1800, 20 out of every 100 children born perished from small-pox. In the present epidemic no vaccinated child under 9 years died of the disease, the effects of primary vaccination upon the child population being thus strikingly apparent. In 47 vaccinated cases where death resulted, 53 per cent. had only one scar; 6·3 per cent. had three, but in no single case was it recorded that death resulted in a person vaccinated in accordance with the standard laid down by the Local Government Board. During the period of the epidemic about 40,000 persons were revaccinated. Of these 20 were subsequently admitted to hospital suffering from small-pox, but in not one of these cases had revaccination been performed more than 14 days previously to the onset of the disease, so that it may be said that no successfully revaccinated person contracted small-pox. The total staff of doctors, nurses, and attendants who were in direct contact with small-pox in Cork Street, Hardwicke and Kilmainham Hospitals numbered about 110; of these all save two had been recently revaccinated or had had small-pox. Both of the nurses who had not been revaccinated contracted small-pox, and not one of the rest of this large staff, although living for months in an atmosphere of small-pox, was attacked. This report establishes again the advantages to be obtained from revaccination, and Dr. Stafford has proved his conclusions by carefully compiled figures which cannot be controverted.

SICK POOR IN PROVINCIAL WORKHOUSES: BASINGSTOKE.

It seems that the Board of Guardians of the Basingstoke Union is aware of some of the defects in their present treatment of the sick and infirm in their workhouse, defects which our Commissioner's report show to be sufficiently glaring. But we also learn from that report that a certain number of guardians incline to the adaptation of the old infectious hospital as sick quarters, instead of the right and proper course of building a new infirmary. It is clear that before this old building could be made even tolerably suitable, much money must be spent on it, and then it would be but a makeshift, as the situation is bad. The ratepayers should look into this, since a loan for a thirty years' term could be obtained from the Local Government Board for new buildings, while no such help would be given for adapting the old ones; and as the public conscience is really waking up at last, the adaptation would probably be condemned in a few years' time, and the money spent on it thus absolutely wasted. Nurses' quarters for a sufficient staff will, it is to be hoped, form part of the improvements. The present staff is largely supplemented by pauper help, and the post of the night nurse who died recently has not been filled, presumably because there is nowhere that she can sleep out of hearing of the wards.

MATRICULATED STUDENTS AT SCOTTISH UNIVERSITIES.

Paragraphs about Ordinance No. 147, which contains the regulations as to matriculated students, have been going the round of the papers, lay and professional, and they have been printed in such incomplete form as to give rise to misapprehension. It has been supposed that the effect of the ordinance on men coming up for the M.D. degree, for example, would be to compel them, not only to matriculate for the year, but to be in actual attendance on one or more classes in the university. To medical practitioners this, of course, would be an impossibility. We have had several anxious inquiries sent to us on this point. For answer it is only necessary to print the ordinance in question in full. The second clause clearly settles the question. "No person shall be deemed to be a matriculated student in any university or shall enjoy any of the privileges of a matriculated student unless, in addition to paying the matriculation fee, he is enrolled as a student in attendance in one or more classes in the university, and has paid the fees entitling him to such attendance: Provided that nothing herein con-

tained shall affect the right of the University Court to exact a fee in lieu of and not exceeding the matriculation fee from any candidate for any examination or for graduation, not being at the time a matriculated student, in addition to the fee payable for such examination or graduation."

THE NATIONAL HEALTH SOCIETY.

This Society will commence its special training course on Tuesday, October 1st. This special training is intended to qualify ladies for posts as factory or sanitary inspectors, lady lecturers, etc., and consists of lectures on elementary anatomy and physiology, first aid, nursing, domestic and personal hygiene, sanitation, and public health. Examinations are held on the various subjects, all students being required to satisfy the examiner in each subject before receiving the diploma of the Society. Students not requiring the full diploma can attend the lectures on any of the above subjects and will receive certificates on examination.

WASTEFUL BURIALS.

We have often drawn attention to the reckless extravagance indulged in by the poor over the burying of their dead. The subject was recently brought before the notice of the Middlesbrough guardians, in consequence of applications for relief being made by widows who were known to have received considerable sums from clubs on the death of their husbands only a short time before. In one case, according to the *Poor-Law Officers' Journal*, a widow had £12 from clubs at her husband's deaths, and she spent £7 10s. over the funeral, having one mourning coach and five cabs. In a second case a widow with four children had £11 from the club, and spent £7 4s. on the funeral, having two mourning coaches and three carriages. A third case was that of a widow with four children, who got £12 6s. from clubs. She spent £7 15s. over the funeral, having one mourning coach and three carriages. Three weeks after the funerals most, if not all, of these people had neither food nor money. It would seem as if the arrangements for these funerals were largely left in the hands of friends, who considered it their duty to get rid of the club money as quickly as possible, and to hand the people over to the guardians to be taken care of.

THE MEDICAL COLLEGE AT TIENTSIN.

We are pleased to observe that the war in the East has not put a stop to the Chinese Imperial Medical College at Tientsin. The examinations, which were held on July 8th and 9th, evidenced a remarkable amount of proficiency on the part of many of the students, numbering at the time, apparently, 22. The war will not be an unmixed evil if it should lead to a more active cultivation by the Chinese of European sciences, even though they are cultivated as aids to war.

PROVIDENT DISPENSARIES.

There can be no doubt it is very necessary for members of the profession to be cautious in their dealing with these institutions. They should never forget that, if conducted on faulty principles, they are one of the most powerful of the many influences in their midst which tend to undersell their services. It cannot be denied that a certain number may be necessary for the public welfare, but it might be safely reckoned that a large number of existing ones are quite as much employed for cheapening medical labour, that is, sweating the profession, as to relieve any very pressing public want. An influential committee at Plymouth has been advertising recently for a second medical officer for a newly-established provident department of the Plymouth Public Dispensary, and the remuneration offered is all the contributions of members *minus* a deduction for expenses. If the contributions are on the ordinary scale this must leave but a bare pittance for the medical officers, and it is a pity that in our large towns some stand is not made by the local profession to prevent the formation of provident departments in connection with the medical charities, except under the strictest regulations to exclude improper members. These institutions, especially if not well regulated, tend largely to damage the private practice of nearly all the medical men in the locality. We do not know what are the particular rules and regulations of this institution, but from the curt wording of the advertisement, for example, that the officer selected shall be liable to removal at pleasure of the committee, presumably without notice, it may reasonably be conjectured that medical influence is not very strong on the Committee of the Plymouth Public Dispensary, or, at any rate, has not been utilised to safeguard the interests of the profession.

THE CAUSE OF DEATH IN ELECTRIC SHOCK.

A valuable contribution towards the elucidation of this question has lately been made by Dr. Bleile, of America, based upon experiments with twenty-seven dogs. He has once more shown that it is not the failure of respiration, but the arrest of the heart beat, which is the immediate cause of death, thus confirming the results published recently by Dr. Lewis Jones in the British Medical Journal. His figures further show the importance of the duration of the contact in determining a fatal result when the currents are not far removed from the margin of safety. In working near this limit he found that amyl nitrite seemed to increase the animal's power of resistance, and therefore advances the theory that death is not so much due to direct injury of the heart itself, as to the a stoppage of the heart following upon a tremendous rise of blood pressure from vasomotor constriction. Dr. Bleile has published no blood pressure tracings in support of his view, and those which accompany the paper quoted above are sufficient to disprove his theory. Atropine did not appear able to avert a fatal result, and this seems to negative the view that the arrest of the heart is due to the effect of the current upon the cardio-inhibitory fibres of the pneumogastric nerve. It is still probable that the current acts directly on the heart by destroying its power of beating rhythmically.

THE SEASON AT CARLSBAD.

The season which is now on the point of completion is perhaps the most remarkable in the history of this famous Bohemian health resort. The aggregate of "cure guests" registered in the books of the municipality since the beginning of the year has been no fewer than 40,000, a number which has taxed even the remarkable resources of Carlsbad in the way of hotel accommodation and lodgings. The local authorities have done, and are doing, their best to meet the rapidly increasing needs of the town as a cure place for the crowd of visitors who come annually from all parts of the world to drink the waters. A considerable number of fine new villas, fitted up with all modern comforts and the electric light, have been built during the last year in the neighbourhood of the Schlossberg, known as the English quarter. In this part of the town a new park has been laid out, and having been dedicated to the public on Independence Day, under the auspices of a number of Transatlantic visitors, has been called the American Park. A quantity of old houses that stand opposite the Muhlbrunn Colonnade on the other side of the river Tepl are doomed to destruction during the coming winter; and the municipality will thus be enabled not only to widen the carriage road and improve the course of the stream, but to give a much wider avenue in front of the Colonnade for the perambulations, during the early morning water drinking, of the hundreds of visitors who now flock to the Muhlbrunn and other springs. The most important improvement of the year has been, however, the opening of the magnificent Kaiserbad for the further accommodation of the patients who are ordered sprudel or mud baths. The three bathing establishments already existing for this purpose having proved insufficient, the municipality bought the site

of a brewery not far from the famous Hotel Pupp, and on it have erected from the designs of the Vienna architects Fellner and Helmer a building which is one of the most magnificent bathing establishments in the world. Its exterior is in the style of the French Renaissance; is strikingly handsome in effect. Inside, all the newest and best devices that experience could suggest have been utilised to make the bathing cabins complete and luxurious. In addition to the ordinary cold douche, sprudel, and mud baths, there are electric and steam baths, and there is, moreover, a very complete installation of Swedish hygienic gymnastic apparatus on the Zander system, under the charge of a resident physician. In these and many other respects Carlsbad is keeping abreast of the times, and is maintaining its world-wide reputation as a health resort of the highest type.

SHELTERS AND COMMON LODGING HOUSES.

Although the extent of the operation of the Common Lodging Houses Acts must depend on the construction put on that description, there is no statutory definition of such houses. In Section 116 of the Towns Improvement Clauses Act, 10 and 11 Vict., cap. 34, public lodging houses were defined as those in which persons were "lodged for hire for a single night, or for less than a week at one time," or, "of which any part was let for less than a week." This description would, on the face of it, apply equally to every hotel in the kingdom. In the Common Lodging Houses Act of 1851, as originally drafted by Lord Ashley, was a clause in practically identical terms, but with addition of the words "not being a licensed victualling house," and "in which any room is let for hire to be occupied by more than one family at one time," but it was struck out as incorrect, incomplete, or superfluous. The Local Government Board, in their Model Bylaws and Orders, seem to accept that given by the late Sir A. E. Cockburn and Lord Hatherley, when consulted in 1853 as the law officers of the Crown, in which they make no mention of payments, and attach no importance to the period for which the lodgers are taken in, but insist, as the essential distinction, on the fact that "persons being strangers to one another, that is, not being members of the same family, and promiscuously brought together are allowed to occupy the same room," with the saving clause as regards hotels, inns, and taverns. The General Board of Health, in their supplementary directions and regulations issued on October 12th, 1853, as to the application of the Common Lodging Houses Act of that year, expressly exclude all consideration of the period for which the lodgings are let or lodgers taken, with a view to meet the attempts at evading the Act by longer terms than a night or a week, thus leaving the fact of persons not belonging to one family occupying the same rooms as the sole and sufficient character. The exemption of the charitable or quasi-charitable establishments, subsequently opened by various religious bodies, rests upon a decision in the case of Booth *v.* Ferrett in 1890, 25 Q.B.D., 87. We have not the report before us, but can only suppose that it turned on the assumption that these so-called shelters are presumably not conducted for profit, though the question of profit must depend on the ratio subsisting between the receipts and expenditure, quite irrespective of the amount of the outlay or the payments. Since the Salvation Army shelters are not, or not wholly, free, some charge, be it but a penny, being made, we can see no essential point of difference between them and the licensed common lodging houses to justify their claim to exemption from control and inspection by the sanitary authority. For the better prevention of the spread by their means of infectious disease, these "shelters" must be brought under the Common Lodging Houses Acts, whether by an amendment of the law, a statutory or authoritative definition, or a further judicial decision on a test case. But the most satisfactory and shortest method would, we think, be for the Local Government Board to issue an order or memorandum defining a common lodging house, on the single point of common occupation of the same room by strangers, promiscuously brought together, excluding only the case of parties conducted and paid for by one of their number, as, for example, a football team or theatrical company on tour. The exemption of a house in virtue of the possession of a licence for the sale of intoxicating liquors is an outrage on common sense. But as regards the Salvation Army shelters, the fact of such overcrowding and the part they have been playing in the present epidemic of small-pox call for prompt and energetic interference. In the four weeks July 7th to August 3rd the patients admitted to the Asylums Boards Hospitals were 209, of which 48 or 49, equal 23 per cent., had resided for the fortnight or more immediately preceding in one or other of the Salvation Army shelters. In the third week no fewer than 106 cases occurred, and of these the Salvation Army shelters contributed 31, equal 29 per cent., that at 272, Whitechapel Road, 22, or 20.7 per cent.; that in Blackfriars Road 10, and others in different parts of London the remaining 12. They are thus seen to be answerable for 23 per cent., and one alone for 14 per cent., of all the cases in the metropolis. It is a public disgrace that such dens should be allowed to exist in the "brighter" London at which all are aiming, and to exist uncontrolled on the pretext of charity or religion, and that an irresponsible and arrogant individual, calling himself "General," with his "majors" and "captains," should be permitted to defy the law and to offer forcible resistance to the authorities even when armed with a magisterial order, in a course of action in which the doubtful good is certainly outweighed by the positive evil and the evident danger to the community at large.

NOTIFICATION IN AMERICA.

An Act of the Pennsylvania Legislature passed this summer increases the stringency of the law in that State as to the notification of infectious disease and the powers of the municipal authorities for preventing the spread of epidemics. The diseases the notification of which is compulsory are "cholera, small-pox, diphtheria, membranous croup, scarlet fever, typhoid fever, typhus fever, yellow fever, cerebro-spinal fever, relapsing fever, leprosy, varioloid, or diphtheric croup." The maximum penalty is a fine of 100 dollars or in default sixty days imprisonment. Children living in a house in which a person has suffered from diphtheria, small-pox, scarlet fever, cholera, varioloid, diphtheric croup, leprosy, typhus fever, yellow fever, or relapsing fever, or children or other persons who have suffered from one of these diseases are forbidden to attend any kind of schools, Sunday schools being specifically named, until thirty days after the recovery, removal to hospital, or death of the person last affected, and the thorough disinfection of the premises. The Act gives power to a municipality to appoint a special person by whom alone a certificate of fitness to return to school may be given, and this power has been exercised in Philadelphia. Very extensive powers are given also to make rules as to isolation of individuals, and as to the mode of disinfection employed, so much so that the *Medical News* states that the health authorities would have it within their discretion to order the destruction of a house if they considered it infected, and to enter "sweat shops" and destroy the articles found therein whenever they deemed it necessary, and without compensating the owners for the loss of the articles destroyed.

THE SANITARY NEEDS OF INDIA.

An Indian correspondent writes to us: An account of Mr. Ernest Hart's address at the opening of the Public Health Section of the British Medical Association meeting was telegraphed at some length to India by Reuter, which no doubt has selected only the strongest and most sweeping of its propositions. Not unnaturally the publication of the summary has caused a considerable stir among the heads of the

sanitary service in India. I hope when we get the full text we shall find that Mr. Ernest Hart has credited the Indian Medical Service with being a splendid body of men, that have immense influence with the natives, and no one who has not lived in India, and especially up country, can realise what an important part of the Government they practically are owing to this influence with the natives. Most men here agree with him, however, that it is nonsense to call the Indian medical civil doctors a reserve for war times, as it would be simply impossible to carry on the government of India without them as civil servants. The whole subject is one of which the complexity is hardly less than the importance, but the two things which Mr. Hart has plainly indicated and laid great stress on in his addresses here and in those which have since reached us are obviously urgent as matters of reform. In the first place the British Medical Service in India and the Indian Medical Service need to be brought under the same head; for while the British medical officers are demoralised and pining for want of work and want of pay, the Indian medical officers are overwhelmed with work, and get all the plums of the service. Again, the present system of putting the sanitary work of India on army medical officers who are not specially trained for it, and making promotion go by purely military rules, and shifting men about in the most anomalous manner, all this is destructive of real efficiency or economy. Great curiosity is felt to see what will be the result of the radical criticism from an outsider, and, with the exception of a certain minority to whom the multiplication of offices at nominal salaries is mainly a question of income, there is a general hope that the whole question may be thoroughly considered by the Secretary of State for India and by the Government of India in the direction which Mr. Hart suggests.

THE PUBLIC HEALTH CRITIC.

The *Daily Chronicle*, through one of its leader writers, takes great exception to the last issued report of the medical officer of the Local Government Board, on the ground of its "five hundred pages of microscopic portents;" its pages "teeming with bacilli, metabolic products," etc.; and because the writer of the article when seeking "for visits paid to crowded districts," for problems relating to "pestilential areas," could find none. Indeed, he says "no allusion is made to any one of these things;" and then he qualifies the statement by adding "so far as we can see." The article is written with a view to condemn experimental and "morbid research," and if its facts had some approach to truth, we should not care to cavil at the writer's views. But anyone reading the article in question will hardly credit the fact that in a volume of 526 pages, only the last 69 are given to matters of scientific pathology and cultural experiments such as are referred to. Neither would they believe that the remaining 457 pages are almost exclusively given up to the administration of the vaccination law, to lengthened accounts of epidemics of typhoid fever, to the dangerous pollution of rivers with sewage and specific excreta, to diphtheria, to the obscure epidemic of skin disease which has been so prevalent and fatal in some of our workhouses, to the conditions associated with lead poisoning of moorland waters, to cholera at home and abroad, and to the question of quarantine as affecting our relations with foreign countries. And yet this is the fact. Indeed, it becomes difficult to understand how far the writer did see the volume which he reviews "so far as" he "can see." Then he complains that all was so different in the days of Sir John Simon, whose reports on local conditions showed a "fine crusading spirit abroad;" but he seems ignorant of the fact that this crusading spirit has, with increase of staff, so enormously extended since Sir John Simon's days that the parallel reports are now issued separately, and that the annual volume, which could no longer contain them, only gives an abstract of documents which have already been printed and issued both locally and to the public. This abstract alone covers many pages; indeed, we would advise the writer to look at the volume again in a somewhat less superficial manner, and however much he may object to experimental research, he will find that the report contains evidence of more administrative and practical public health work than is performed or recorded by any other public health department in the world.

WELL-VACCINATED LOCALITIES.

In the frequent and often amazingly imbecile discussions which occur now at Boards of Guardians where antivaccinationists prevail, a sort of commonplace formula appears to be generally employed which satisfies the guardian intellect. It is that small-pox outbreaks are most frequent in what are described as "well-vaccinated localities." Of course there is no such thing as vaccinating a locality, but what is probably meant in localities in which there is a good deal of vaccination, or in which vaccination is not altogether in abeyance. Even in this form the statement is untrue, and for the most part deliberately fraudulent. The towns which have suffered most from small-pox epidemics are those in what is known as the heavy woollen districts, Bradford, Keighley, Dewsbury, Leicester, etc., where vaccination has been most neglected. Marylebone is pointed to as a well-vaccinated district in which small-pox epidemics have occurred, but it is precisely in the parts of Marylebone where the population is well vaccinated that small-pox was least prevalent, and there, as everywhere else, it was the unvaccinated population who had not been revaccinated after attaining adult age, which suffered from small-pox deaths. We need not recapitulate the figures in detail, for they tell the same story as everywhere else, but we may point to two examples in illustration: Thus, between May, 1892, and March, 1893, Warrington, with a population of 54,000, had 598 cases of small-pox, with 60 deaths; 57 of them were under 10 years of age, and of these 24 were vaccinated, of whom none died; 32 were unvaccinated, of whom 13, or 40·6 per cent., died; 1 case was doubtful. Of those over 10 years of age, however, 506 were vaccinated, of whom 32 died, a case-mortality of 6.3 per cent., while of the 34 who were unvaccinated, 13, or 38·2 per cent., died. Glasgow, again, tells the same tale. In 1892-93 there were 10 cases of small-pox in patients under 10 years of age who had been vaccinated; of these none died; and 2 who had not been vaccinated, both of whom died. Of the cases over 10 years of age, 238 had been vaccinated, and of these 11, or 4·6 per cent., died; while 9 were unvaccinated, of whom 5, or 55.5 per cent., died. The lesson is uniform and the deductions in favour of vaccination inevitable, and only those who are densely obtuse or prejudiced can fail to read the moral. Unhappily the majority of the antivaccinators are either one or the other, or frequently both. They are impervious to facts, figures, or to reason. The scandalous dishonesty of the papers which give unlimited space to the utterly false statements of the antivaccinators and deliberately and incessantly refuse publication of the facts proving the enormous efficacy of vaccination against small-pox is largely responsible for criminal concealment of the true facts and the diffusion of this death-dealing delusion to which some of the conductors of these papers are firmly wedded. Whatever their opinions may be, it is in the highest degree dishonest and dangerous to suppress, as they habitually do, the facts which from week to week come to hand proving the life-saving powers of vaccination. Papers like the *Star* and the *Echo* are largely responsible for the small-pox deaths which are occurring on so many sides, and for the expenditure of money and life due to these entirely preventable local epidemics.

The Chair of Pathology in the Faculty of the Jefferson Medical College in Philadelphia is vacant.

INOCULATIONS AGAINST CHOLERA IN INDIA.

Report of Dr. Haffkine's Results up to Date.

From a report to the Corporation of Calcutta made by Dr. W. J. Simpson, the health officer of the city, on August 16th, we obtain the following interesting statement of results of the Haffkine inoculations against cholera up to the present date. Dr. Simpson reports:—

Now that a year has passed since the Commissioners granted the sum of Rs. 7,500 for the purpose of carrying on anti-choleraic inoculations in Calcutta he has the honour to submit a report on the work done and also a summary of the results obtained, not only in Calcutta, but in other parts of India in the period in which these inoculations have been practised in this country.

In the note which he had the honour of presenting to the Commissioners in May of last year, recommending an extended trial of Professor Haffkine's system in Calcutta, he brought particularly to the attention of the Commissioners the remarkably favourable results which had followed this system in the case of Katal Bagan Bustee. The events connected with Katal Bagan Bustee will be still fresh in the minds of the Commissioners, for they produced a deep impression on all who were interested in the prevention of cholera. A group of people, living under similar conditions in a bustee with cholera among them, were subjected to an experimental test. The test, which was of peculiar importance as it marked an advance on the laboratory experiences, consisted in the inoculation of 146 persons out of a localised group of 200, among whom 2 fatal cases of cholera and 2 cases of diarrhœa had already occurred, and in comparing the liability of the inoculated and uninoculated to the prevailing disease. The continuance of the disease in the bustee permitted of this comparison, and it was found that no cases occurred subsequently among the inoculated, whereas 10 cases, of which 7 proved fatal, occurred among the not inoculated.

From the time the Haffkine system was first introduced into Calcutta till July 15th, 1895, 4,397 persons have been inoculated, which is more than double the number of vaccinations performed annually in this city twenty-five years after vaccination against small-pox had been introduced. Of the 4,397 persons inoculated, 1,060 were Mohammedans, 25 Europeans, 10 Eurasians, and 3,302 Hindus, including 363 Brahmins. The following statement gives further details:

Hindus.					Mohammedans					Other Classes					
Adults.		Children under 12 years.		Total.	Adults.		Children under 12 years.		Total.	Adults.		Children under 12 years.		Total.	Grand Total.
M.	F.	M.	F.		M.	F.	M.	F.		M.	F.	M.	F.		
1,000	600	700	602	3,302	500	20	502	38	1,060	20	6	5	2	35	4,397

The number would undoubtedly have been greater and the observations which follow probably more numerous had not the events connected with the Lucknow outbreak in the East Lancashire Regiment lessened public confidence in the efficacy of the prophylactic. This decline in public estimation was mainly due to the manner in which the facts relating to the Lucknow epidemic were distorted, and to the virulent attacks by ignorant people on the inoculations, which were stigmatised as being everything that was evil, and the source of the most loathsome diseases and of every ill to which man is heir. The distrust engendered by these misrepresentations and fulminations was, however, only of a temporary nature, and when the exact circumstances connected with the Lucknow outbreak came to be known and understood, and it was seen that the inoculated had in reality suffered less and had fewer deaths proportionately than the not inoculated, the confidence created by the Calcutta experience began to be considerably restored.

The observations made during the period under record may be divided into those of a negative and positive character. Of the negative kind it has several times been observed that, when the inoculations were introduced into an infected locality, the cholera ceased in the course of a few days; it has also been noticed that in some localities notorious for their recurring cholera, and where on account of this large numbers have been inoculated, cholera has during the year been particularly absent. In the case of a small bustee in which the people petitioned to be inoculated because they were constantly suffering from cholera, not a single case has occurred since the inoculations last year.

Evidence of a more convincing and more direct nature exists, however, in the observations of a positive kind collected during the period under review.

Opportunities for comparing the liability to cholera of inoculated with uninoculated living under similar conditions in the same houses presented themselves no fewer than thirty-six times—once in Seebpore across the river and thirty-five times in Calcutta. These opportunities arise from the circumstance that cholera during its season will, sooner or later, appear in some of the huts in the bustees of Calcutta. When this happens in huts in which no previous inoculations have been performed no materials for an observation are forthcoming; but when it happens in huts in which some of the inmates have been inoculated and the others have not the essentials necessary for observation and comparison are existent. There were thirty-six such occurrences in thirty-six houses, and they are of the utmost importance, for they furnish 36 observations, separate both in time and locality, and they allow of conclusions being drawn regarding the value of the inoculations. In the 36 houses the total number of inmates was 521; of this number, 181 were inoculated and 340 not inoculated. The uninoculated members of these houses had altogether 45 cases with 39 deaths; the inoculated had 4 fatal cases, of which one occurred 459 days after the first inoculation in a child who had not been brought for the second inoculation; and the 3 others from one to four days after the first inoculation before the protective influence of the vaccine had time to assert itself, and therefore before the second vaccine could be applied. Including all cases without reference to their occurrence in time, the percentages were as follows:

336[1] uninoculated	45 cases (13.43 per cent.)	39 deaths (11.64 per cent.)
181 inoculated	4 cases (2.21 per cent.)	4 deaths (2.21 per cent.)

The difference in these figures shows that the not inoculated were 6.08 times more liable to attack, and 5.27 times more liable to death from cholera than the inoculated.

Analysis of the figures and classification of the occurrences according to time demonstrate the results to be even more strikingly favourable. It will be borne in mind that there is in the treatment two injections, one five days later than the other; the first is made with the weak vaccine, and requires five days for its full protection, and the other with the stronger vaccine, which requires another five days to secure complete action; a similar period of eight or nine days is necessary for the full protective power of vaccine against small-pox.

The figures are as follows:

During the First Eight Days.

	Average Number Present at Date of Attack.	Cases	Per Cent.	Deaths	Per Cent.
Not inoculated	32	6	9.09	6	9.09
Inoculated ...	33	2	3.77	2	3.77

[1] Deaths from cholera at the time of the observations reduced the original number of 340 uninoculated to an average of 336.

After Eight Days.

	Average Number Present at Date of Attack.	Cases.	Per Cent.	Deaths.	Per Cent.
Not Inoculated ...	265	39	14.72	35	13.21
Inoculated ..	140	1	0.71	1	0.71

The above figures show that during the first eight days before the vaccines have time to protect the system, the inoculated and not inoculated present a similar liability. This similar liability disappears after the first vaccine has been in the system for five days, the three deaths among the inoculated occurring previous to the fifth day. After eight days, and in fact after five days, the difference in liability to attack becomes very marked, the inoculated living in the same houses in Calcutta being twenty times safer from attack and eighteen times securer from death than the not inoculated should cholera enter the house. This is protection of a very decided character. Further, the single death among the inoculated was 459 days after the inoculation in a child who had not undergone the full treatment, that is, she had only been inoculated with the weak vaccine. No case of cholera occurred among those who subjected themselves to both inoculations.

There are some very remarkable cases, and he would invite the special attention of the Commissioners to four of these. They are cases in which the proportion of inoculated living in the house or room was much larger than that of the not inoculated, and yet when cholera appeared it picked out the not inoculated, leaving the inoculated free. They are the houses marked on the list 3, 8, 16, and 36.

In No. 3, which is Isoo Mistry's house Begbagan, 4 persons out of 6 were inoculated in March, 1894, and fatal cholera appeared in the house in June of the same year, and selected for attack one of the two not inoculated, the 4 inoculated remaining free of the disease.

In No 8 on the list, which is Ramdhone Dutt's house at Kataibagan Bustee, 6 persons out of 8 were inoculated in March, 1894, and fatal cholera entered the house in the following April, and attacked one of the two not inoculated, leaving the 6 inoculated unaffected.

In No. 16, which is Gonessee Bewah's house at 16, Jorabagan Street, 4 persons out of 5 living together in one room were inoculated in May, 1894, and fatal cholera showed itself in the room in the next July, and attacked the only one not inoculated, the 4 inoculated keeping quite healthy.

In No 36, which is the house of Baboo Banikanta Mookerjee, Kalikumar Mookerjee's Lane, Shibpore, 6 members of a family of 7 were inoculated in July, 1894. In March of 1895 the only one not inoculated was affected with cholera and died, the inoculated remaining quite well.

Were there no other instances than these 4, he would feel justified in recommending the Commissioners to continue the cholera grant, but with the list which he had presented he had no hesitation in saying that it was his duty to do so in order that the benefits of the inoculations may be brought within the reach of the poorer inhabitants of Calcutta, and of all those even of the better class who may desire to be inoculated. That cholera is no respecter of persons in the endemic area even under conditions which appear to be satisfactory in their sanitary aspects, the sad death of Sir Henry Harrison, the late highly respected Chairman of the Municipality, and the more recent death of Brigade-Surgeon-Lieutenant Colonel Coates, the former Principal of Calcutta Medical College, are instances which will recall themselves to everyone in Calcutta.

The grant was asked for last year as an experiment; now it is asked as a means of affording protection against cholera to those inhabitants of Calcutta who may wish to avail themselves of the measure. In doing this he would place before the Commissioners the observations corroborative of the efficacy of the inoculation which have been obtained independently in other parts of India, and which, together with those in Calcutta, form such a mass of evidence in their favour as to remove all objections based on preconceived opinions, imaginary theories, or prejudice.

In his last memorandum on the subject, dated October 1st, Dr. Simpson recorded the cases at Gya, Cawnpore, Dinapore, and Lucknow, and he recapitulates the principal facts connected with these observations.

At the Gya Gaol inoculations were performed during the progress of an epidemic and after 6 cases and 5 deaths had occurred. Half the prisoners were inoculated, the remainder being left not inoculated. The incidence of the disease on the two groups was as follows:

	Not Inoculated.		Inoculated.	
	Cases.	Deaths.	Cases.	Deaths.
During first 5 days after second inoculation	7	5	5	4
During 3 days after second inoculation	5	3	3	1
After 8 days from first inoculation ..	8	2	—	—
Total	20	10	8	5

It will be observed from this statement that there was a gradual diminution of cases and deaths among the inoculated, and after eight days there were no cases or deaths among the inoculated, while there were among the not inoculated 8 cases and 2 deaths. It is further to be noted that the mortality among the not inoculated was twice that among the inoculated. In connection with this reduction of mortality it may be stated that the antitoxin treatment of diphtheria, which has caused a commotion throughout the civilised world, does not reduce the mortality from diphtheria more than that secured by the anticholeraic inoculations applied at the time of an epidemic of cholera in the Gya Gaol.

In Cawnpore, when cholera broke out among the troops 13 months after the inoculations, the results were:

	Numbers.	Cases.	Per cent.	Deaths.	Per cent.
Uninoculated ..	797	19	2.38	13	1.63
Inoculated	75	—	—	—	—

At Dinapore, in the Manchester Regiment the inoculations were applied during an epidemic after 13 cases and 9 deaths occurred, with the following result:

	Numbers.	Cases.	Per cent.	Deaths.	Per cent.
Uninoculated ..	729	6	0.82	3	0.41
Inoculated	1[illegible]	—	—	—	—

In Lucknow, in the East Lancashire Regiment, a part of which had been inoculated fourteen to fifteen months previously, cholera broke out in July, 1894, with the following result:

	Number Present.	No. of Attacks.	Per cent. of Strength.	No. of Deaths.	Per cent. of Strength.
Not inoculated..	640	120	18.75	79	12.34
Inoculated ..	133	18	13.53	13	9.77

This table shows only a small proportion in favour of the inoculation, probably due, as was explained at the time, to the weakness of the vaccine used, and the effect still further lessened by the lapse of time.

To these observations he had now added those recently collected by the medical officers and managers of the Assam Tea Gardens, and which had been kindly given him by M. Haffkine. They confirm the general results obtained elsewhere as to the protective influence of the inoculations.

OBSERVATIONS IN THE KARKURIE TEA GARDEN, NORTH-WESTERN CACHAR TEA CO., KALAIN P. O.

(Collected by Dr. Arthur Powell, Medical Officer.)

The inoculations in Karkurie (North Cachar) with the first vaccine were done in the beginning of February, 1895; the inoculations with the second vaccine at the end of April. The annexed tables refer to cases of cholera which occurred on the garden in the interval between the first and second inoculations, with the exception of 3 which occurred later.

Out of the 14 cases of cholera recorded up to the end of May, 8 were in new coolies, who had contracted the disease within a fortnight after their arrival. As the new coolies are, as a rule, more susceptible to cholera than the old ones, and, moreover, present in some cases the possibility of having contracted the disease on their way, and as there were no inoculated amongst them for a comparison with the uninoculated, they are excluded from the calculations below.

On the dates of the attacks in the 6 other cases the total number of uninoculated on the garden was; April 17th, 180; April 18th, 194; April 21st, 194; April 26th, 194; May 25th, 225; May 28th, 230, making an average of 203 people; the total number of inoculated on the same dates was 420, 420, 420, 420, 391, 382, or, on an average, 409. All the cases occurred in two lines, one of which had 38 uninoculated and 67 inoculated inhabitants, and the other 64 uninoculated and 62 inoculated, giving a total of uninoculated in the two lines of 102, and of inoculated 129. The affected houses contained 3, 3, 0, 1, and 4, total 11 uninoculated inhabitants, and 0, 1, 5, 2, and 1, total 9 inoculated. The uninoculated had 5 cases with 2 deaths, the inoculated 1 death. The death in the inoculated was in a dysenteric woman of 40, who had been inoculated only with the first vaccine, and had been refused the second inoculation a week before her death, because of her dysenteric illness. The subjoined table gives the percentage of occurrences:

	Cases.	Per Cent.	Deaths.	Per Cent.
Uninoculated:				
On the whole garden, 203	5	2.46	2	0.98
In the affected lines, 102	5	4.90	2	1.96
In the affected houses, 11	5	45.45	2	18.18
Inoculated:				
On the whole garden, 409	1*	0.24	1	0.24
In the affected lines, 129	1*	0.77	1	0.77
In the affected houses, 9	1*	11.11	1	11.11

* Inoculated once.

OBSERVATIONS IN THE KALAIN TEA GARDENS, KALAIN P. O.

(Collected by Dr. A. Powell, Medical Officer.)

The cases recorded in the annexed returns, except 4, occurred in the interval between the first and second inoculations, which in this instance also were separated by a period of two to three months. Out of the 35 cases of cholera recorded, 11 were in coolies who had arrived on the garden within a fortnight before the attack, and are excluded from the calculations.

On the dates of attacks the population of the whole garden was: uninoculated, 1,609 (10-3-95); 1,608 (11-3-95); 1,609 (12-3-95); 1,509 (17-3-95); 1,609 (18-3-95); 1,609 (19-3-95); 1,612 (26-3-95); 1,620 (2-4-95); 1,634 (10-4-95); 1 (in an isolated hut) (15-4-95); 1,160 (4-5-95); 1,076 (9-5-95); 1,080 (12-6-95); giving an average of 1,375 uninoculated.

Inoculated, present on the same dates, 606, 605, 606, 606, 606, 505, 605, 606, [illegible], giving an average of 681 inoculated.

The population of the affected lines was:

Uninoculated 37 (an average) 50 (an average) 1, 17, 19, 2, 9.—Total 105.

Inoculated 13, 31, 2, 25, 19, 0, 17.—Total 97.

The population of the affected houses: uninoculated, total, 46; inoculated, total, 19.

The percentages of occurrence were as follows:

—	Cases.	Per Cent.	Deaths.	Per Cent.
Uninoculated:				
On the whole garden, 1,375	20	[illegible]	10	[illegible]
In the affected lines, 105	20	[illegible]	10	9.52
In the affected houses, 46	20	[illegible]	10	20.[illegible]
Inoculated:				
On the whole gardens, 681	2*	[illegible]	1	0.15
In the affected lines, 97	2*	[illegible]	1	1.03
In the affected houses, 19	2*	[illegible]	1	5.26

* Inoculated once.

OBSERVATIONS IN THE CHARGOLA GARDEN, RATABARI P.O.

(Collected by Dr. A. Allen, Medical Officer, and Mr. E. Todd Naylor, Manager.)

Two lists of cases have been communicated from Chargola, one referring to cases of undoubted cholera, another, cases of what is called in those districts "choleraic diarrhœa," but which, judging from their occurrence during the cholera season, might have been cases of mild (all non-fatal) attacks of cholera.

All cases occurred in the interval between the first and second inoculation, which, in this garden, was a period of 5 months.

Cases of Undoubted Cholera.—There were 4 cases, with 2 fatal issues, all occurred in the uninoculated coolies. One of the fatal cases was in a coolie who arrived on the garden on the same day, and is excluded from the calculations below:

The percentage of occurrences was as follows:

	Cases.	Per Cent.	Deaths.	Per Cent.
Uninoculated:				
On the whole garden, 1,007	3	0.30	1	0.10
In the affected lines, 23	3	13.04	1	4.[illegible]
In the affected houses, 10	3	30.00	1	10.00
Inoculated:				
On the whole garden, 291	None	—	None	—
In the affected lines, 11	"	—	"	—
In the affected houses, 5	"	—	"	—
Cases of "Choleraic Diarrhœa."				
Uninoculated:				
On the whole garden, 1,007	8	[illegible]	"	—
In the affected houses, 26	8	[illegible]	"	—
Inoculated:				
On the whole garden, 291	3	[illegible]	None*	—
In the affected houses, 8	3	[illegible]	None*	—

* Inoculated once.

OBSERVATIONS ON THE KALACHERA TEA GARDEN, RATABARI P. O.

(Collected by Mr. E. Todd Naylor and Mr. J. C. Tristram, Managers, and Dr. A. Allen, Medical Officer.)

At this garden, contiguous to the Chargola Garden, cholera occurred two days after it appeared in Chargola. There were in all four cases, with 3 deaths, all in uninoculated coolies. About two months previously, while there was no cholera in the district, an inoculated woman was attacked with pains in the abdomen, which lasted for nine hours and a-half; she was then attacked with vomiting and purging, and died in two hours and a-half, without presenting any other symptoms. Her death was attributed at the time to some poisonous substance swallowed by accident. As the managers were asked to get recorded all cases inoculated in which any choleraic symptoms should be observed, this case was put down in the return, and is included in the calculation below. Percentages of occurrences in Kalachera:

—	Cases.	Per Cent.	Deaths.	Per Cent.
Uninoculated:				
On the whole garden, 520	4	0.77	3	0.58
In the affected lines, 13	4	30.77	3	[illegible]
In the affected houses, 11	4	[illegible]	3	27.27
Inoculated:				
On the whole garden, 211	1*	0.47	1	0.47
In the affected lines, 4	1*	[illegible]	1	0.25
In the affected houses, 1	1*	100	1	100

* Inoculated once.

OBSERVATIONS IN THE PALLARBUND TEA GARDEN, BANSKANDI P. O.

(Collected by Mr. W. Mason, Manager.)

There were two deaths from cholera in uninoculated coolies. The percentages were as follows:

	Cases.	Per Cent	Deaths.	Per Cent.
Uninoculated:				
On the whole garden, 1,139	2	0.17	2	0.17
In the affected lines, 70	2	2.85	2	2.85
In the affected houses, 7	2	28.57	2	28.57
Inoculated:				
On the whole garden, 441	None.	—	None.	—
In the affected lines, 63	,,	—	,,	—
In the affected houses, 1	,,	—	,,	—

OBSERVATIONS IN THE DEGUBBER TEA GARDEN, KALAIN P.O.
(Collected by Dr. A. Powell, Medical Officer, and Mr. H. Chamney, Manager.)

There were 2 cases in Degubber; 1 fatal. Both cases occurred in uninoculated coolies. The percentages of the occurrences were as follows:

	Cases.	Per Cent	Deaths.	Per Cent.
Uninoculated:				
On the whole garden, 299	2	0.66	1	0.44
In the affected lines, 64	2	3.12	1	1.56
In the affected houses, 5	2	40.00	1	0.20
Inoculated:				
On the whole garden, 302	None.	—	None.	—
In the affected lines, 62	,,	—	,,	—
In the affected houses, 3	,,	—	,,	—

OBSERVATIONS IN THE ADAM TILA TEA GARDEN, CHANDKHIRA P. O.
(Collected by Mr. H. A. Brown Constable, Manager.)

Two cases with 1 death are reported from Adam Tila, both in people inoculated once, two and two and a-half months after inoculation. The percentages of occurrences are:

	Cases.	Per Cent.	Deaths.	Per Cent.
Uninoculated:				
On the whole garden, 657	None	—	None	—
In the affected lines, 7	,,	—	,,	—
In the affected houses, 3	,,	—	,,	—
Inoculated:				
On the whole garden, 317	2*	0.63	1	0.31
In the affected lines, 3	2*	66.62	1	33.33
In the affected houses, 2	2*	1.00	1	0.50

* Inoculated once.

CASES IN THE BURNIE BRAES (HAILIKANDI P. O.), LOOBACHERA (ATGRAM P. O.), KALAINCHERA (KALAIN P. O.), AND SANDURA (KALAIN P. O.) TEA GARDENS.

No returns have been as yet received from these gardens further than a communication that, since the date of the inoculation, there occurred 2 cases with 1 death in the Burnie Braes, 3 cases with 1 death in Loobachera, 4 cases with 2 deaths in Kalainchera, and 2 cases with 1 death in Sandura, all in uninoculated coolies. Of these gardens in Burnie Braes and in Kalainchera a large proportion of the population had been inoculated (449 and 145 respectively, making one-fourth to one-half of the whole population); in the 2 other gardens the proportion of inoculated was from $\frac{1}{20}$ to $\frac{1}{4}$ of the total.

Summarising the observations made on the gardens on coolies inoculated once, that is, before the second inoculation was applied, the results are as follows:

*Total of Uninoculated on all the Affected Gardens.**

	Cases.	Per Cent	Deaths.	Per Cent.
In the whole population, 4,293	28	0.73	19	0.36
In the affected lines, 389	38	10.16	19	5.08
In the affected houses, 95	38	40.00	19	21.00

* Exclusive of the 19 cases with 11 deaths in now uninoculated coolies, and 11 cases with 5 deaths in old uninoculated coolies, but regarding which the returns have not yet arrived.

Total of Inoculated on all the Affected Gardens.

	Cases	Per Cent.	Deaths.	Per Cent.
In the whole population, 2,741	5	0.18	3	0.11
In the affected lines, 389	5	1.28	3	0.20
In the affected houses, 60	5	12.50	3	7.50

To this information Dr. Simpson has added that contained in two letters addressed to him recently by two influential mercantile firms in Calcutta, in whose gardens inoculations have been carried out. They are additional observations to those already mentioned, and improve the results given by M. Haffkine to a considerable extent.

TO HEALTH OFFICER.

We have pleasure in communicating the under-noted extract from a letter from Mr. H. Weir, Manager of Kalline Tea Estate, Cachar, dated 3rd instant, on subject of Dr. Haffkine's experiments in inoculation for cholera.

Calcutta, 12th July, 1895. MACNEILL AND CO.

Our results here since I last wrote you on the subject are all most favourable. As regards inoculation I mean, we have had 4 cases in all. No. 1 died had not been inoculated; 5 other people in his house had been, and escaped any attack.

No. 2 recovered; had not been inoculated.
,, 3 died ,, ,, ,,
,, 4 ,, ,, ,, ,,

I hope Dr. Simpson will be successful in getting the Municipal Commissioners to give a decent grant to try Dr. Haffkine's system properly. We have a very elaborate and complete register we keep for the professor here. The Professor took enormous pains and trouble, working far into the night examining every tube microscopically, and this for week after week, so it was only fair to do what we could in return; again only by careful comparison and record of inoculated households *versus* non-inoculated, and households in which half were inoculated and half not inoculated could we fairly test his system. The professor is a gentleman of most charming and gentle manner, and it is quite a pleasure to me to be able to do him any slight service. His work is exceedingly laborious, and it must be a great strain, besides involving a very heavy expenditure from his private fortune. No one who has met the professor can fail to wish success to both the cause (science *versus* disease) and the man.

We have received from the local Manager of the North-Western Cachar Tea Company a statistical statement of the results of Professor Haffkine's cholera inoculation on the Company's estates. As we believe this statement to be of value to you, we have pleasure in herewith submitting a copy.

Calcutta, July 24th, 1895. DUNCAN BROTHERS AND CO.

At Degubber we had 5 cases of cholera, 2 of which were inoculated and both recovered; the 3 uninoculated cases all died.

At Kurkoorie we had 16 cases; uninoculated 14, of which 11 died and 3 recovered, one case twice inoculated recovered, the other case only received the first inoculation and died, but there is some doubt if death was not caused as much by a long attack of dysentery.

Kurkoorie Tea Estate, July 14th, 1895. H. CHAMNEY.

These letters indicate the interest that is being taken in the subject, while their contents furnish strong proof of the value of the inoculations.

At the Indian Medical Congress, when the observations of Assam had not been made, and when the observations in Calcutta were only 13 instead of 36 as now, the medical profession received the results with much favour, and were unanimously of opinion that the inoculations should be tried on as extensive a scale as possible. More recently, at a largely attended meeting of the Calcutta Medical Society, when similar figures to those now brought to the notice of the Commissioners were laid before the members, they were so impressed with their value that they unanimously passed a resolution that the inoculation ought to be continued.

With this report before them Dr. Simpson trusts the Commissioners will not hesitate to sanction a grant of Rs. 10,000. This sum is needed to place the inoculations on a satisfactory basis. By securing more than one trained vaccinator, the inoculations can be spread with greater facilities, and much can be done which it was impossible to do this year owing to a very limited establishment. By granting facilities to carry out this important work in the capital of India, which is regarded as the centre of "the home of cholera," and the city of all others in the East to which Governments turn for information concerning this disease, as indicated in the

† At Kurkoorie over 400 were inoculated, and only 200 left uninoculated.

scientific missions of Koch from Germany, Klein from England, Zahn from Geneva, and Shakespere from America, the Commissioners will not only be conferring a public benefit on the inhabitants of Calcutta who are so subject to cholera, but they will also be leading the way to the introduction of a prophylactic measure, which, either in its present or in a modified form, may be expected to effect an enormous reduction in the ravages of cholera among Eastern and Western populations.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.[1]

[First Notice.]

The report of the Medical Officer of the Local Government Board for the year 1893-94 fully maintains the interesting characters of the series of which it forms part, and is indeed a valuable contribution to the State literature on waterborne typhoid fever, a subject treated at some length by Dr. Thorne Thorne in his introduction.

Vaccination.

Dr. Thorne has nothing good to say concerning the state of vaccination as regards the children born in 1891, the latest year for which returns are in a condition for publication. The percentage of infants not finally accounted for in respect of their vaccination was 13·4, the greatest increase in default of recent years having set in during 1889, the year in which the Royal Commission on Vaccination was appointed. In the metropolis the default in 1881 was only 5.7, and has continuously increased, until ten years later it was 16.4, as against 12.9 in the provinces, the proportions being higher than during any of the preceding twenty years. Thus is stational, and indeed all vaccination, falling off in England, and an ever swelling number of unvaccinated persons growing up to increase the small-pox death-rates of coming years.

Insusceptibility to Vaccination.

Dr. Thorne very properly looks with sceptical eye on the so-called "insusceptibility" to vaccination which finds so large a place in the returns from time to time. He proceeds to show that out of 81,500 persons submitted to vaccination at the hands of vaccinators connected with the Board's Vaccine Department during a series of years not a single case of "insusceptibility" has been chronicled; whilst, on the other hand, of 98,871 children submitted to the operator's lancet in London in 1891 alone, 432 were certified to be "insusceptible." The comparison is striking and instructive.

Waterborne Typhoid Fever.

The inquiries undertaken by the Medical Department during the year under review, and which had for their object the tracing out of the causation of epidemics of enteric fever, as the result proved, to the agency of polluted public water supplies, were both numerous and interesting. Dr. Thorne passes under review the principal reports made to the Department, and in this way places on record an instructive summary account of the epidemics at Worthing, Chester-le-Street, Ryedale, and Malton, and in certain Trentside villages. As these have already been the subject of comment in the British Medical Journal, we need say nothing more concerning them here. Neither need we refer again to Dr. Copeman's reports on epidemic skin disease, which are reproduced *in extenso*, with some summary remarks by Dr. Thorne.

Notification Returns.

We are glad to see these returns claiming an increased amount of attention and space in the report, and the year 1893 contributes not only the returns in respect of 81 sanitary districts (London being a unit) quarter by quarter, and for the year, in respect of small-pox, scarlet fever, and diphtheria, and the several "fevers," but also weekly, quarterly, and annual returns for each sanitary area in London, the deaths too being given. The data thus collated will become more and more valuable as time goes on; and we trust they are but the beginnings of larger things.

Lead Poisoning by Moorland Waters.

Mr. W. H. Power's forecast of 1887 as to the relation of the plumbo-solvent ability of moorland waters to the agency, direct or indirect, of low forms of organic life, finds confirmation in the doings of the year 1893-94, the experiments conducted with samples of one and another moorland water, showing that variations in the lead-dissolving properties of a water were always associated with corresponding variations in the amount of its acid; further, that the addition to either moorland water or a sterile decoction of peat of a minimal amount of moist peat soil will cause bacterial growth, with increasing development of acid reaction and plumbo-solvent ability; and in addition that there are only two species of microbes found in peat which have the power of producing acidity when added to a sterile decoction of peat. Mr. Power's report on the progress thus far made, and voluminous data in addenda, are included in the volume.

Cholera.

Dr. Barry contributes a short report on three prevalences of cholera in Germany which may be regarded as belonging to the 1892 series, namely, at Hamburg, 1892-93, with 91 attacks and 17 deaths; at Altona, with 45 attacks and 24 deaths; and at the Nietleben Lunatic Asylum, with 122 attacks and 52 deaths in a community of 991 persons. For the rest, a short account is given of some other occurrences in Europe; but the next annual volume is to contain in detail the history of European cholera prevalences in 1893. We are told that the results of the elaborate cholera survey of the coast are to furnish a further volume by themselves, and one that will doubtless afford much valuable information. The steps which led to the present attitude of the State towards rags *quâ* cholera are set out by Dr. Thorne in his account of the proceedings of the International Sanitary Conference at Dresden in 1893. The English practice is now that which was formally adopted in the Convention signed as the outcome of the Conference.

[1] Report of the Medical Officer of the Local Government Board for 1893-94. Sold by Messrs. Eyre and Spottiswoode, East Harding Street, London; Messrs. Menzies and Co., Edinburgh and Glasgow; and Messrs. Hodges, Figgis, and Co., Grafton Street, Dublin. [C.—7565.] Pp. 360. 1s. 6d.

THE BLESSINGS OF VACCINATION.

Dr. Charles Steele, of Clifton, writes to us:

I was lately conversing with my friend Canon Kissack in his rectory at Ballaugh, and he read to me several interesting facts from the old church register which he had carefully copied. Amongst others these items, which I took down at the time, as they show what an immense blessing vaccination has been, and I hope that you may like to insert them as a record of this fact:

Parish Register, Ballaugh Church, Isle of Man.

Date.	Deaths.		
	small-pox.	Other Causes.	Total.
1701—July 2nd to October 10th	17	4	21
1712-14—September 8th to April 31st... ...	26	3	29
1726	30	17	47
1764-5—December 13th to March 31st	28	6	34
1772-3—July 16th to April 30th	33	11	44
1789—February 8th to June 11th...	22	9	31

Presentation.—The Mayor of Bangor, Alderman R. Langford Jones, M.R.C.S., has been presented by the police of the Bangor division with a silver-mounted malacca and ivory walking stick as a memento of the services rendered by him as lecturer to a successful ambulance class of police officers during last winter. The presentation was made by Lieutenant-Colonel Ruck, chief constable of the county, who at the same time distributed to the members of the class present the certificates of the St. John Ambulance Association. The presentation bears the following inscription: "Presented by the City Police to the Mayor of Bangor, 1895."

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

INTRODUCTION.

The condition of the Irish workhouses is attracting much attention at the present time, and the action of the Irish Medical Association, which has approached the Local Government Board on this matter, has brought the question to a focus. In the circular issued by that body, the Association requests the Local Government Board to inquire into the truth of the charges of mismanagement, insufficient nursing and neglect, which have come under its cognisance through the action of certain members of the profession, themselves medical officers of the various unions all over the country.

Dr. Moorhead, a Poor Law medical officer, incited thereto by reading the reports on the English workhouses published in the British Medical Journal, addressed a letter to his colleagues asking for information concerning the conditions under which the poor were treated in the hospitals under their care. The answers which were received induced him to seek for more definite information in the form of replies to queries relating to structure, sanitary appliances, domestic furniture, and the care of the idiots. Answers were received from 79 doctors. The whole of this correspondence was treated as confidential, but on the basis of the facts thus collected, Dr. Moorhead read a paper before the Irish Medical Association in January of this year on the condition of the Irish workhouses. The result of these inquiries showed that the union medical officers were fully alive to the state of affairs in the hospitals under their care, but were powerless to bring about any material improvement in the condition of the sick pauper. A tabulated statement of the answers showed that in all cases the nursing was insufficient in quantity and quality, and that it was practically in the hands of the paupers; in 36 infirmaries the proportion of trained nurses was as one nurse to 36.2 patients; 43 infirmaries, having a population of 2 694 sick, have no trained nurses; sanitary appliances are almost non-existent, 59 infirmaries having privies or pails; in 50 no water is laid on; in 47 there are no cooking stoves; in 61 the idiots are in the charge of pauper inmates; and structural shortcomings are very evident.

Wishing on our own part to ascertain in detail the condition of the Irish workhouses, we sent our Commissioner to visit and report on the actual state of the case; and from the reports made on 28 houses selected from all parts of the country, we are of opinion that the case of the Irish Medical Association has been proved up to the hilt. Indeed there is one of the subjects—the circumstances surrounding the aged paupers in the body of the house—which has hardly received the attention that it deserves. Their condition has come out in almost darker colours than that of the sick.

To make the subject clear to our readers, we would refer them to the accompanying view and plan of a workhouse,[1] premising that the ground plan of the country workhouses is, with very few exceptions, invariable, and that the distribution or classification of the inmates is the same, even when the structure is slightly different. We have then the three sections, the lodge or entrance, the body of the house, and the hospital or infirmary. To this plan the fever hospital, standing in the grounds, has been more recently added, sometimes behind the hospital, sometimes to the side of it. The Irish workhouses in this respect differ from those in England. The hospital, forming part of the original plan, was built at the same time—1839 to 1842—as the rest, so that the doctor carries on his work in buildings and with appliances fifty years behind the times. The English sick pauper, on the contrary, has only recently been treated apart from the able-bodied, hence the infirmaries are of more modern construction.

The plan of the Irish workhouse, as the sketch shows, was drawn at a period in the history of the country when the able-bodied quite outnumbered the sick and infirm; the result is that the sick quarters are now overcrowded, that certain infirm patients are kept in the infirm wards who would fare better in the hospital, and that the large space allotted to the able-bodied is half empty. The aged and infirm are placed in the two wings of the central block, and occupy the ground floor, unless, as some of the reports show, they have overflowed upstairs; they are thus at some distance from the officers' quarters in the middle of the block, and separated from them by the intervening portions of the children's dormitories or schoolrooms. When these wards are locked on the outside at 7 P.M. the inmates are left with only such help as they can render each other, and the only conveniences for the eleven or more hours of their imprisonment are the open pails and buckets, which remain unemptied until the morning. When to this we add that these wards are frequently without any light during the night, it will be seen how it is possible for the old people to fall out of their narrow beds or even to be found dead on the floor, as has been asserted by credible witnesses.

In the various comments made on the circular of the Irish Medical Association, either by the guardians or by the public press, this point has been overlooked, and yet in our opinion it is one which calls for immediate attention. Until it is remedied it reflects great discredit on the authorities who are responsible for its continuance.

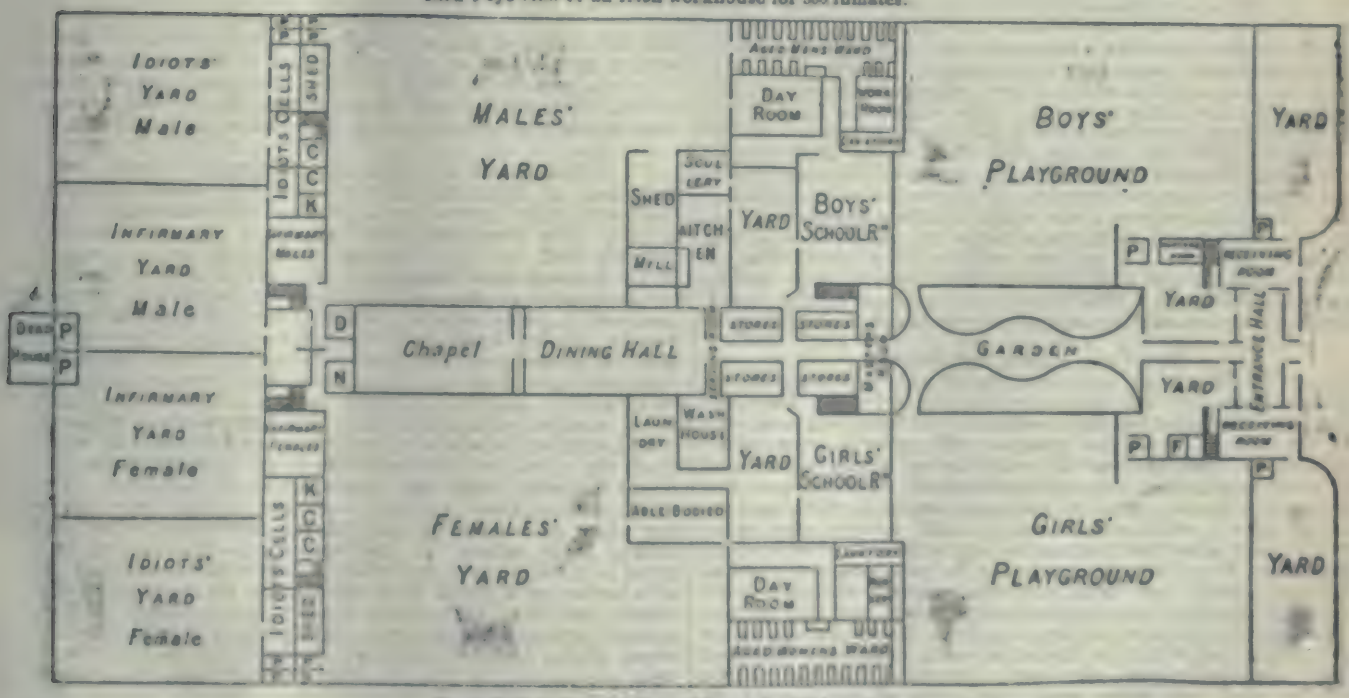
The reports which lie before us are sad reading, and reveal a condition of things which our readers will scarcely credit as existing in the nineteenth century. The surroundings of the idiots and the infirm sound more like a chapter in the history of a Siberian exile, the notes of a visit to an *étape*, than the matter of fact statement of sights seen in a workhouse in this kingdom. The poor old people lie untended through the long hours of the night on their narrow wooden frames and straw ticks, being locked up in the dark to breathe an atmosphere fouled with excrementitious emanations, the mud or brick floor at times the receptacle of the dejections. The aggregate which this picture presents of human misery and suffering is hard to realise. Once they enter this house they can only go out by taking their discharge; each class takes exercise in its own yard (the size of that attached to the infirmary can be seen on the plan), but the leave day for the well-conducted, according to our English custom, is unknown in Ireland. When we add that our Commissioner saw in some houses the hapless idiots kept in cells that differ in no way from those of a prison—cells condemned by Lord Shaftesbury in 1843 as being architecturally unfit for occupation by this class—we feel that it is quite time to arouse the country to a state of righteous indignation over their treatment.

The nursing of the sick is complicated by the religious difficulty. We are aware that it must be faced, and we trust that the Local Government Board will handle the matter with decision. In many of the unions the sick wards are nursed by the nuns. The fullest justice is done by our Commissioner to the excellent work of these devoted ladies; but they are hampered by certain restrictions which limit their usefulness and must tend to invalidate the treatment of the medical officer; we refer to their lack of hospital training, to their difficulty with some of the male patients, and to their non-performance of night duty. It is certain that until trained nurses, whether nuns or otherwise, are appointed, and in sufficient numbers to supersede the pauper help, the public conscience cannot be satisfied.

In appointing the trained nurse the Local Government Board will be asked to define her position. She does not exist in the General Orders; she has not even the modest

[1] Copied by kind permission of the authorities of the British Museum.

Bird's eye view of an Irish workhouse for 500 inmates.



Ground plan of an Irish workhouse for 500 inmates.

three paragraphs in which the English General Orders recognise her existence; if referred to incidentally, it is as an assistant to the matron. When the General Orders were framed there were no trained nurses, but now their necessity is recognised and their omission should be supplied.

It is evident from the foregoing remarks that the Local Government Board has a hard task before it—no less than bringing the Poor Law into harmony with the spirit of the times. There are stubborn inelastic structures to deal with, buildings that were constructed in accordance with social requirements that have passed never to return; prejudices and traditions to fight, which will die hard; local poverty to

consider, which will resent additional burdens; a state of indifference about the welfare of the pauper, which it is hard to move. All these obstacles, and many others, lie in the path to reform; but we are convinced that when once the attention of the public is roused, it will be ready to run ahead of cautious officialism. We judge that much might be done with the existing machinery to ameliorate the condition of the pauper, giving a better class of officer armed with a wider discretion in dealing with the well-conducted and respectable class of pauper, and more humanity in the interpretation of the general orders.

Taking into consideration the circumstances of the country districts, we feel most strongly that the workhouse hospital should be the centre of medical relief for the neighbourhood, and that the sick should be encouraged to enter its walls. Thus many an illness might be successfully treated, and the chronic stage averted, which often throws the man and his family on the rates. But the independent labourer shrinks from the badge of the pauper, and from the sordid surroundings in which he finds himself; moreover, the tender mercies of the pauper nurse are cruel. It will be found the truest social economy to improve the equipment of the workhouse hospital, so that the sick of all classes who cannot be efficiently treated in their own homes may seek healing there.

There are many other matters treated incidentally in the reports on which we should like to touch: The construction of the fever hospitals and the decline of fever in the country; the absence of baths, and the antiquated condition of the domestic offices; the monotony and poor quality of the diets; the hardships of the Act of Settlement. But space fails us, and on these points we must let the reports speak for themselves; we feel sure that when we have laid the facts in our possession before the public, it will rise up and demand a revision of the Poor Law.

LIII.—BASINGSTOKE WORKHOUSE.

We found the workhouse situated about a mile and a-half from the town; it really stands in the parish of Basing, which at the time the workhouse was built was the town, Basingstoke not then being in existence. The union buildings stand on a hill having a fine view over the country; the ground-plan is in the form of a Latin cross, the head of the cross forming the entrance hall, the chapel and some of the wards being in the upright and other wards in the arms; the administrative block is in the centre of the cross where the arms intersect the upright. The exterior of the building has a forbidding aspect; the small windows, sparsely placed in the high brick walls, were more suggestive of a prison than a workhouse; it was not until we were inside that we noticed that a few sash windows had been broken out in some of the rooms. The master and matron kindly placed their services at our disposal to take us round the building.

The Sick, Aged, and Infirm

are to be found all over the workhouse, for there is no infirmary proper, but certain wards are set apart for their use. The number on the medical relief book was low, due to the time of year—the summer: 60 patients were under treatment, 17 females and 21 males being in the wards, and of these about half were confined to bed. The bulk of the cases were chronic, such as old age, paralysis, blindness; a male patient with carbuncles, a most severe case, now recovering; abscesses; injury to leg by the wheel of a cart, leg placed in splints, and reported to be doing well; rheumatism; small boy with phthisis; ulcerated legs; heart disease; besides these we saw several infirm men and women who were able to be up during the day. Many of these latter were occupied with the Brabazon work; one man crippled with rheumatic gout was most expert in the use of his fingers and had some good specimens of needlework to show.

The Wards

are located on the ground, first, and second floors. On the female side we found some of the able-bodied women on the first floor, the infirm wards being beneath and above; on the men's side some of the wards are on the ground floor, the able-bodied occupying the two storeys above, and other wards above the chapel were assigned to the male infirm. We were shown a large empty ward holding 15 beds used by infirm men in the winter; indeed we were informed that the officers are at their wits' end to find accommodation for this class in the winter, and that they have to be placed anywhere. The wards structurally are most unsuitable for sick wards; they are low pitched (8 feet), the small windows, placed near the cornice, opening on a pivot, and regulated by a toothed bar, are insufficient for light and air; the fireplaces, in most instances of an obsolete pattern, are placed in a corner, and do not suffice for heating; the master told us that with a modern grate the thermometer at the opposite end of the ward barely registered 60°. It was easy to picture to ourselves the condition of these wards in the winter when crowded with patients, the windows being shut to husband such heat as the fire gave off, with the emanations from the various vessels, unemptied until the morning, and from the bodies of the old people. the conditions for the treatment of the sick cannot be considered favourable. The wards varied in size, the largest occupied holding 10 beds and the smallest 5; the beds stood less than 2 feet apart, and between every pair was a commode or chair. We noticed a very few armchairs scattered among the wards; a long deal table and benches completed the furniture; indeed, the master said that it was no good asking for chairs or lockers as there was no space for them. The only dayroom is a small one on the top floor for the old women, so that there is no relief to the wards except that of the yards or garden, in many cases inaccessible to the infirm. The walls are brick-surface painted, and a liberal supply of pictures relieves their monotony. The bedsteads are of ancient date, low iron frames and laths, over which is a cocoanut mat and a tick filled with oat fly, pillows of the same, and flock pillows. Water or air mattresses are supplied where required, and any other appliance on the doctor's request. There are two spring beds, one on the male and one on the female side; we should like to see many more. There are no wards for isolation, nor for the sick children, nor for purposes of restraint.

The Lying-in Ward

is a slice taken off one of the female wards; it has two beds, is very small, has no separate offices or any appliances for its work, and it is much too near the general ward, from which it is separated only by a slight partition. The average cases are five in the year. One of the nurses is a midwife.

There are Two Trained Nurses by Day,

but none at night, the only service being such as may be rendered by the inmate in charge of the ward, he or she being in bed. The guardians have had a night nurse, but she has recently died, and her vacancy has not yet been advertised. She, poor soul, used to say she could get no rest, nor get out of the hearing of the patients, and when we saw the nurses' quarters, in one case sliced out of a ward, in another immediately off the ward, we were not surprised. The nursing must be carried on under great difficulties, for the wards are scattered, and there are so many stairs. Pauper nurses are employed in this house, most of those on the female side being women with illegitimate children; we saw one such with her infant in the ward, and wondered which was sacrificed, the infant in that close atmosphere or the patients who might interfere with the woman's care of her infant. The whole system is bad, and it is useless to endeavour to supply the place of nurses by multiplying inefficient helps, and calling them nurses. In the winter time the nursing staff must be far too small, especially as the matron said that the able-bodied were not in sufficient number for the work of the house, and that labour was hired in the laundry. It does seem to be a curious perversion of intellect to retain the services of the inmates in a department where they are worse than useless, and to hire labour in another department where their work would be of value.

In Sanitary Arrangements

the workhouse is quite behind the times; on each landing we found a space partitioned off where there was a small sink and hot and cold taps an earth closet, and some pails; in no case were these places in a clean condition, they appeared to be the receptacle of litter and rubbish, and some

of the closets were insanitary. There is no water-closet in the building, nor are there any baths except a large movable bath, unwieldy to fill or empty. In the infectious block we saw a zinc bath, having a plug, but on inquiry we ascertained that the plug was not over a drain, and was, therefore, of no use. The only fixed baths were attached to the schoolrooms; all ward vessels, therefore, are carried out of doors to the outside closets. The hot water supply is of quite recent date; until it was put in all water was heated in kettles or the copper.

The Nursery

is on the ground floor, close by the matron's staircase; it is divided into sections by dwarf partitions, originally intended, so we were informed, for the married quarters; the result is a square room spoilt. The cubicles are very crowded, 3 or 4 infants in cots, and an inmate being allotted to each. The remainder of the room is the day nursery; here we found 5 infants and 2 women; they had come in from the yard, and were being washed before dinner. We noticed a basin of scalded milk on the table, and the matron assured us that she superintended their meals every day. There was a long trough in the room and a cold water tap, and that was all the apparatus for bathing that we saw. We were informed that a bath was brought in for their use. We did not observe any toys or amusements for these little ones, and certainly the nursery would be a dreary place in the winter, when the children could not go out-of-doors. The bedding is the same as that used in the wards, and those cots that we turned up were quite clean and sweet.

The Infectious Hospital

stands on rising ground, behind and very close to the main building. A row of chimneys belonging to some of the offices discharge themselves on a level with the ward windows; this alone, to our mind, would make this hospital quite unsuitable for occupation by the sick; another objection is that the most light and air is by the north aspect. We note these defects, because we read that there is a wish on the part of some of the Board to utilise this building for the sick wards. The arrangement of the building is six wards, each for 4 beds, on two floors; there is a kitchen, laundry, nurses' rooms, and disinfecting closet. This hospital used to be used for such cases of infectious disease as occurred among the inmates; but we understand that a conjoint scheme is in contemplation between the town authorities and the guardians for the treatment of such cases, and hence some of the Board are in favour of patching the sick department by making use of this block. We have noted the condition of the bath room, and we also noted that there was no convenience of any description inside the building.

The Kitchen

is in process of improvement; the antiquated coppers are to give place to a cooking apparatus heated by steam, and coincident with this we hear that the dietary is to be recast. We saw the dinners which were being served at the time of our visit—roast mutton, potatoes, and long beans; it appeared to be well cooked, and we were pleased to see that very rare dish—green vegetables out of the workhouse garden. There is no provision for carrying the food; however carefully the plates may be warmed, the food must be chilled in its passage from the kitchen. We also noticed that some of the old people were scarcely able to masticate the meat; we would suggest that the food were minced for them, as the nurses cannot have time to feed the patients individually.

Recommendations.

It must be obvious to our readers that there is but one course open to the Board offering any solution of the difficulties with which they are confronted; that course is a new infirmary. This is the only hospital for the immediate neighbourhood with the exception of a small cottage hospital, and is therefore the centre of medical relief for the union, but we find an antiquated building, no appliances for the nursing of the sick, no sanitary system, no wards for the separation of offensive or troublesome patients, or for the children, who must be placed with the adults, no proper accommodation for the nursing staff; and, moreover, the present wards are so overcrowded as to make them dangerous both to the patients and those who nurse them. Cleanliness and efficiency are not compatible with the state of the present wards, and we only wonder that any presentable work is accomplished by the nurses.

We would also suggest that an ambulance be provided for the removal of the sick; as matters now stand it is the duty of the relieving officer to bring the patients to the infirmary. That he naturally does in any vehicle of the neighbourhood. We were told that the man injured by the cart was brought in a cab, a step which might have converted a simple accident into a dangerous or fatal injury.

THE ST. GEORGE'S WORKHOUSE INQUIRY.

Once more the Local Government Board have shown their astonishing capacity for leniency—a leniency which we have no hesitation in affirming allows them to perform acts of grave and gross injustice to the poor. It will not be forgotten that, as we have already reported, the St. Saviour's Board of Guardians being dissatisfied with the conduct of the master of St. George's Workhouse, brought certain charges against him which became the subject of a Local Government Board inquiry. Mr. Lockwood, one of the inspectors, held the inquiry, and Mr. Thompson, the master, whose actions were called in question, was suspended from his office pending the decision of the Local Government Board. The allegations which the guardians made against the master related to the stores and provisions, which it was asserted had been wasted, and the ratepayers' interests not properly looked after, because the master had delegated his duties to others, and had taken frequent and prolonged absences from the workhouse. It was also stated that the orders of the medical officers were neglected, the master having in some cases used his own discretion in not conforming to the dietary provided by the Board. The inquiry was concluded on August 10th, and the decision of the Local Government Board reached the Board of Guardians last week, so that the charge which we have frequently made of official delay cannot in this instance be repeated, but the decisions themselves deserve thoughtful consideration. With regard to the first charge, "the delegation to inmates of the workhouse of work in connection with the stores," the Board consider that "the master has not properly supervised the work devolving on his assistants, and that he has not devoted sufficient personal attention to the issue and receipt of workhouse stores;" or, in other words, they assert that the accusation made is a true one. The second complaint made against the master "that he was frequently and for prolonged periods absent from the workhouse," the Board consider to have been established, the master, in their opinion, having been absent in the evenings far too frequently and for too long periods. In reference to the third charge, "that the master made an entry in his books that forty-seven tons of stone had been used in the repair of the yard, while it was acknowledged that no such quantity had been used for the purpose," the Board consider that Mr. Thompson acted "most improperly in making an entry in his books not in accordance with facts, although they are satisfied it was not made with any fraudulent intent." In every particular it will be noticed, excepting that which concerns the medical officer, the Local Government Board have found the master to be in fault, and that the accusations made by the guardians have been abundantly substantiated, and yet they conclude their report with this remarkable sentence: "The Board consider that the master's conduct in the matters referred to as being very reprehensible and deserving of severe censure; but looking at his long period of service and to all the other circumstances, they have decided not to adopt the extreme course of requiring his resignation." As a result of this decision, we learn that the suspension imposed on Mr. Thompson was removed, and he was directed to resume his duties forthwith.

We can conceive few actions more disastrous to the right development of progressive philanthropy than this. It requires but even a cursory glance through our Commissioner's reports on workhouses and infirmaries to see that in too many instances the guardians are indifferent to the welfare of the poor whom they profess to guard, or else that they are dominated by their chief officials. But the St.

Saviour's guardians had fallen, so far as their workhouse is concerned, into neither of these errors, but with due regard to official procedure have sought the help of the supreme Board to move their delinquent official. Had they shown themselves wrong in their judgments the decision of the Local Government Board would have been comprehensible, but in every instance the result of the inquiry is to confirm their opinion, and yet they are submitted to the indignity of seeing the officer who has defied their authority reinstated in his position. Such a step is sure to result in a crop of insubordination. Who will obey the Board which has been publicly snubbed? And what will be the spirit among the officers and servants who are likely to serve under a master who having proved himself untrustworthy with regard to the stores, neglectful concerning the inmates, and capable of falsifying his books, is yet counted worthy to be again put at the head of a large institution? Such leniency is, we affirm, criminal, and all the more so because it has a deeper root than mere kindness to the accused official or the desire to curb what may be considered to be a too progressive Board. We have not space to enlarge, but in a sentence we affirm that the system by which the Local Government Board inspector becomes the judge in such inquiries is the cause of these lax judgments. The Local Government Board dare not declare that the master is unworthy to hold his position, because, if it did, it would be equivalent to affirming that the inspector had disgracefully neglected his inspector's duty in allowing him to retain it.

THE DRUG, CHEMICAL, AND ALLIED TRADES EXHIBITION.

The Agricultural Hall last week was occupied by a trades exhibition at which the leading chemists and druggists showed their various specialities.

The Chemists' Aërated and Mineral Water Association, Limited, exhibited many examples of table waters, both of the ordinary and of the medicinal strength. They also had siphons containing piperazin. Mineral waters were also exhibited by the Catley Abbey Natural Seltzer Water Company.

J. Defries and Sons showed the now well-known Pasteur filters in various forms with tests illustrating their proved efficiency. They also had on their stand cultures from the water which had passed through various other forms of domestic filters proving how inoperative these had been in preventing the transit of micro-organisms and disease germs.

There was a very good exhibit by Robinson and Sons, Chesterfield, of all kinds of antiseptic and other dressings, and at the same stall were also shown the bandage and pill-box shoots devised by Messrs. Reynolds and Branson, of Leeds, together with their new "Non-run-away" bandages, all practical and useful inventions.

Leslies, Limited, also had a very good display of dressings and bandages with tape and other plasters in every variety.

A very interesting stall was that in which Messrs. Cresswell Brothers and Schmitz, sponge importers, exhibited all sorts of sponges in various conditions, among which were some very fine examples of the flat Turkey sponges now so commonly used in abdominal section.

The stand of Messrs. Burroughs, Wellcome, and Co., was well stocked with the various preparations for which they are so well known. Kepler extract of malt with cod liver oil and without, "tabloids" of every kind, including the various animal substances now used in medicine, such as thyroid, thymus, suprarenal capsule, etc; ophthalmic "tabloids," tea "tabloids," anti-diphtheritic serum, all sorts of inhalers, and samples of many of the newest drugs were to be found at this stall.

Messrs. Parke, Davis, and Co., also were not behindhand, having an extensive collection of drugs and medicinal specialities with many excellent novelties.

Messrs. Oppenheimer, Son, and Co., showed to what an extent the system of administering drugs in the form of "palatinoids" or "bi-palatinoids" may be developed. Among others were the different forms of animal substances used in medicine. A bi-palatinoid containing the ingredients for making Fehling's test seems likely to be of much service in bedside urine testing.

Among the exhibits shown by B. Kühn were various digestive preparations of papain, together with specimens of the fruit and seed of the carica papaya.

Messrs. Hockin, Wilson, and Co., showed many druggists' sundries.

Tidman and Sons, besides their well known sea salt, had specimens of the various soaps which they manufacture.

H. Silverlock exhibited every sort of label, and in fact almost every requisite made of paper, from account books even to fly papers.

The Sanitas Company exhibited sanitas in all its forms, as well as sulphur fumigating candles and other disinfectants.

Jeyes' Sanitary Compound Company showed their "fluid" and also specimens of "creolin" and "lano-creolin."

ASSOCIATION INTELLIGENCE.

NOTICE OF LAST QUARTERLY MEETING FOR 1895. ELECTION OF MEMBERS.

A meeting of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

East Anglian Branch.—The autumn meeting will be held at Thetford on Thursday, September 26th, under the presidency of Mr. G. E. Jeaffreson. Programme of proceedings:—12 noon. Meeting of Council at Town Hall. 12.30 P.M. General meeting at Town Hall. Dr. Pembroke Minns and Dr. Harris will welcome the members on behalf of the medical men of Thetford. Dr. Pembroke Minns will read a few Antiquarian Notes on Thetford. Report of Committee on Midwives Registration Bill. 1.30 P.M. Luncheon at Town Hall: tickets 3s. 2.30 P.M. Resumed general meeting. Papers:—Dr. W. S. A. Griffith (London): The Early Diagnosis of Cancer of the Uterus and the Cases suitable for Operative Treatment. Dr. Mary Scharlieb (London): Our Duty towards Women who suffer from Abnormal Discharges or Pains, especially about the time of the Menopause. The following lady and gentlemen have promised to take part in a discussion on the above papers: Dr. Garrett Anderson, Sir F. Bateman, Mr. Cadge, Mr. W. Crowfoot, Mr. Morse, Mr. Mayo, Mr. Burton, Mr. Walker, Mr. R. H. Lucas, and Dr. Beverley. Clinical demonstrations will be given and specimens shown by Dr. Barton, Dr. Burton Fanning, Mr. Morse, and Mr. D. D. Day. 4.30 to 6.30 P.M. Reception by the medical men of Thetford in the grounds of St. Mary's House, kindly lent by Mr. Charles Burrell, J.P. Members wishing to visit some of the chief places of interest in Thetford are requested to communicate with Mr. Allan Simms, either before or at the meeting.—Edgar G. Barnes (Eye), Michael Beverley (Norwich), Thomas Carr (Braintree), Honorary Secretaries.

North Wales Branch.—The autumnal intermediate meeting will be held at the Castle Hotel, Ruthin, on Tuesday, September 24th, at 1 P.M. After the general Branch business the following papers will be read:—Dr. H. Drinkwater (Wrexham): A case of Trephining for Jacksonian Epilepsy. Dr. Judson S. Bury (Manchester): Some Points in the Investigation of Diseases of the Nervous system. Mr. J. Lloyd Roberts (Denbigh): Cases of Hernia. Mr. Thomas H. Bickerton (Liverpool): Mules' Evisceration of the Eye. Mr. W. Thelwall Thomas (Liverpool): Recent cases of Bone Surgery. Dr. Hugh R. Jones (Liverpool): The Bacteriological Diagnosis of Diphtheria. Mr. Hugh E. Jones (Liverpool): Case of Complicated Ear Disease in a Baby. Mr. Frank Imrondt (Liverpool): The Treatment of Localised Eczema. Mr. Lawson Tait will call attention to several motions passed at the last annual meeting and move a resolution thereon.—W. Jones-Morris, Honorary Secretary, Portmadoc.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at Olney on Thursday, October 3rd. The following papers have been promised:—Mr. R. A. Milligan: Two cases of Intestinal Obstruction successfully treated by Abdominal Section. Mr. George H. Percival: Some cases of Ovariotomy. Mr. W. H. Bull will bring forward a proposal: "That a provident medical association be formed, in conjunction with the South Midland Branch, to combat the growing evil of commercial 'medical aid societies' in the South Midland Counties."—CHARLES JEWEL EVANS, Honorary Secretary, Northampton.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Friday, October 4th, at 5 P.M. Dinner at 6.30. The subject as settled by the Council for discussion after dinner will be Club Practice, and the discussion will be opened by Mr. Abbott. Short papers or cases may be taken before dinner, and others afterwards. The Honorary Secretary will be glad to receive notice of any case or paper to be communicated to the meeting in the course of the next three or four weeks.—W. M. KELLY, M.D., Honorary Secretary, Taunton.

NORTH OF ENGLAND BRANCH.—The autumnal meeting will be held at the Hydropathic Establishment, Hexham, on Thursday, October 3rd, at 4 P.M. The Honorary Secretary will be glad to receive notice of communications. The dinner after the meeting will be at the same place, at 4.45 P.M.; 3s. 6d. each, wine extra.—G. E. WILLIAMSON, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held on October 8th, at 4.15 P.M., at the Crown Hotel, East Grinstead. Members are requested to send notice of papers, etc., to J. W. BATTERSHAM, Bank House, Grand Parade, St. Leonards, Honorary District Secretary.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 3.45 P.M., Mr. F. B. Hallowes, of Redhill, in the chair. Dinner at 6 P.M.; charge, 7s., exclusive of wine. Agenda: Minutes of Croydon meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Discussion on Diphtheria.—Introduced by Dr. Sidney Martin. Speaker: Mr. H. G. Plimmer, who will show some cultures and slides. Medical: Dr. Washbourn. Speakers: Dr. Holman, Dr. Gallon, Dr. Adeney, Dr. J. G. Ogle. Surgical: Mr. C. J. Symonds. Speakers: Dr. Walters, Dr. Hodges, of the South-Eastern Fever Hospital. In its Relation to Public Health: Dr. R. D. R. Sweeting, Local Government Board. Speakers: Dr. Philpot, M.O.H. Croydon; Dr. Jacobs, M.O.H. Reigate. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—HENRY J. PRANGLEY, Honorary Secretary.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will take place at St. Bartholomew's Hospital, Rochester, on Friday, October 18th, Mr. J. Holroyde, of Hamond Hill, Chatham, in the chair. Gentlemen desiring to read papers or exhibit specimens are requested to communicate with the Honorary Secretary, E. GROUND, M.D., 1, Ashford Road, Maidstone, as early as possible.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

A MEETING was held at the Swansea Hospital on Thursday, September 12th, at 4 o'clock. In the unavoidable absence of the President (Mr. Lock, of Tenby), the chair was occupied by Mr. EVAN JONES, of Aberdare.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—Dr. W. Williams (County Offices, Cardiff), W. G. Thomas (Bridgend), W. Ll. Jones, M.B., C.M. (Treharris), Edgar G. Evans (Pontypridd), and S. Wallace (Cardiff) were elected members.

Papers, Cases, and Specimens.—Dr. LATIMER (Swansea): 1. On Apomorphine as an Emetic, with a Personal Experience; 2. Case of Sporadic Cretinism two years old, Treatment by Thyroid Extract followed by marked improvement.—Dr. HERBERT COOK (Cardiff) showed for Mr. COLLINS, of Cardiff, a specimen of Enlarged Wandering Spleen simulating Ovarian Tumours, and read the notes.—Dr. LANCASTER (Swansea) read notes of a case of Varix of the Stomach, Death from Hæmorrhage; specimen.—Mr. G. HERBERT HOPKINS (Swansea): 1. Photographs of case of Lipoma Nasi before and after operation, and explained that the masses had been dissected off. 2. Patient on whom he had performed Double Amputation below the knee-joint; patient can walk without any support, and ride a bicycle with artificial limbs. 3. Patient in whom he had trephined in occipito-parietal region for Epilepsy, following an injury to that part of the skull three years ago; fits had occurred every eight or nine days before operation; since operation six weeks ago he had had one fit (the day after the operation). 4. Notes of a case of Ovarian Tumour with Twisted Pedicle; operation, recovery. Mr. Hopkins also showed the following specimens: 1. Uterus removed by Vaginal Hysterectomy for Malignant Disease; patient recovered. 2. Uterine Appendages and two large Subperitoneal Fibroids removed from one patient; recovered. 3. Huge Ovarian Cyst; patient did well.—Mr. BROOK (Swansea): 1. A case of Double Harelip, in which to overcome flattening of the nose, the result of bringing the intermaxillary bone into position, the columella had been lengthened by a V-shaped incision and the septum by division. 2. A successful case of Laminectomy for Paraplegia caused by pressure by an abscess involving the theca, and situated at the apex of an old angular curvature. 3. A case after complete Erasion of the Ankle-joint by a modification of Arbuthnot Lane's method; the external malleolus being divided instead of the external lateral ligament. 4. A case of Excision of the Shoulder-joint for Osteo-arthritis. Mr. Brook also showed the following specimens: 1. Imperforate Rectum and Congenital Stricture of Sigmoid Flexure. 2. Multilocular Ovarian Cyst and Cystic Ovary.

BORDER COUNTIES BRANCH.

THE twenty-eighth annual meeting was held at the County Buildings, Dumfries, on August 30th. The chair was taken by Dr. CONNEL, of Peebles, and there were about thirty members and visitors present. A vote of condolence was passed upon the death of Mr. Hall, of Carlisle, an original member and past President of the Branch.

Report.—The report of the Council was read and adopted. It was decided to hold a meeting at Kendal in the autumn, at Carlisle in the winter, and at Galashiels in the spring.

Election of Officers.—The following gentlemen were elected to fill the various offices:—*President:* Dr. Smith, Dumfries. *President-Elect:* Dr. Altham, Penrith. *Representative on the Council of the Association and Parliamentary Bills Committee:* Dr. Somerville, Galashiels. *Councillors:* Dr. Parker, Kendal; Dr. Lockie, Carlisle; Dr. Maclaren, Carlisle; Dr. Macdonald, Carlisle; Dr. Ross, Dumfries; Dr. Kerr, Dumfries; Dr. Huskie, Moffat; Dr. Menzies, Galashiels; Dr. Hamilton, Hawick. *Honorary Secretary and Treasurer:* Dr. Helm, Carlisle.

Benevolent Grants.—A sum of 10 guineas was voted to the Royal Medical Benevolent College at Epsom, and a similar amount to the Medical Benevolent Fund, from the accumulated funds of the Branch.

Vote of Thanks.—Dr. SMITH then took the chair, and, on the motion of Dr. SOMERVILLE, seconded by Dr. BARNES, a hearty vote of thanks was accorded to the retiring President (Dr. Connel), and he was elected a Vice-President.

President's Address.—Dr. SMITH then delivered his Presidential address, for which a vote of thanks was accorded by acclamation.

Dinner.—The dinner was afterwards held at the restaurant.

SPECIAL CORRESPONDENCE.

PARIS.

Dangers of Electrical Lighting.—General News.

THE numerous deaths among the staffs employed in the electrical lighting works has attracted the attention of the Minister of Public Works, who has asked the Paris Medical Academy to draw up directions concerning the treatment of those injured by contact with the wires, and also concerning the technical precautions to be taken. The medical treatment formulated by the Academy is the same for injury from electrical shock, no matter what is the nature of the current inflicting the injury. But the technical precautions differ according to the nature of the current. If the person injured remains in contact with the electrical conductors, the assistant who extricates the injured must be careful before commencing operations to have dry hands and wear a pair of thick flannel or stuff gloves, and not to take hold of the injured person by a region in perspiration. In non-interrupted currents the electrical conducting wires must not be cut. When the wire is cut it must be cut in two places. The medical treatment consists of placing the injured person where there is plenty of air, loosening the clothes, rhythmic traction of the tongue, rubbing the body, etc. M. Dupuy Dutemps has forwarded these directions to

the Prefects, urging them to make them known especially among engineers and staff of the Ponts et Chaussées entrusted with the electrical lighting of streets, to the directors of electrical stations, municipal authorities, medical men, and dispensing chemists. The instructions corresponding to the respective currents will be pasted on the wooden structures to which the poles are fixed.

An inquiry is being carried on at Sainte Mondane, a village in the Canton of Carleix, concerning a series of cases of poisoning, resulting from eating unhealthy meat. One death has occurred, and several people are ill.

Dr. Berlioz, Chef of the Grenoble Sanitary Service, states that the epidemic among the soldiers garrisoned in that city is not typhoid fever, but influenza of the gastro-intestinal form.

The substitution of Seine water in the Paris supply for spring water did not last long. Spring water was supplied on September 17th to those districts deprived of it on September 11th. On September 14th the third and fourth districts were supplied with spring water.

CORRESPONDENCE.

THE PROPOSED REORGANISATION OF THE INDIAN MEDICAL SERVICE.

Sir,—The suggestions of Mr. Ernest Hart for reconstruction and reform of the Indian Medical Service are founded, not only on his personal experience while in India, but receive the support of almost every administrative medical officer serving in India. Nor should this important fact be lost sight of, that the present system of promotions in the Indian Medical Service has given rise to feelings of discontentment and injustice on the part of several medical officers of that very service, in witness of which the *Civil and Military Gazette*, published at Lahore, wrote so long ago as December 10th, 1894. The absurdity was then pointed out, and has since been repeated elsewhere, of a "purely military medical service employed on civil work," and civil institutions officered by military surgeons, as also of the anomalies in promotion. Correspondence in the *Pioneer* during August, 1894, after the celebrated occasion of the speech at Simla of Principal Medical Officer of the Indian Medical Service showed that the military branch of the Indian Medical Service was rapidly going from bad to worse, and had no reason to congratulate itself on the future outlook. In short, Mr. Hart's suggested reform would set at rest jealousy, dispel friction, and allay discord, all of which exist at present, proved by the expression of public opinion before quoted. The British Medical Journal has adverted to these matters in past issues, and the military press at home has commented in adverse terms on existing arrangements.

It is generally believed that it is only in the civil branch of the Indian Medical Service that Mr. Hart's remarks have stirred up anger, for it sees in the necessary reform and reconstruction the destruction of a monopoly and the end of advancement to administrative military billets after years and years of purely civil experience, and acquisition of a competence in the latter practice.—I am, etc.,

Brigade Surgeon-Lieutenant-Colonel I.M.S.

A QUESTION OF CONSCIENCE.

Sir,—You are properly of opinion that if views such as those of the above letter be in the air, it is better to publish them: thus whatever is sound in them may survive, and the unsound be winnowed away. You are good enough to ask for my opinion on Miss Kenealy's letter, and to ask me to publish it: although I do not pretend to choose the good and avoid the evil better than my neighbours, yet, after some hesitation, I will express my fallible judgment on the matter.

One great difficulty meets me at the outset—namely, that Miss Kenealy, of set purpose, writes in a figurative and rhetorical style, which is out of my habit and far beyond my powers. It is natural to one who has so little of the poet in him as myself to try to drag down other people to his own level. At any rate, it must be forgiven to me, especially by the accomplished authoress, that I can only plod after her in a humdrum fashion, and with my narrow vision attempt to define her position and my own.

After reading the letter many times I have endeavoured to reduce it to my own understanding. It seems to mean something as follows:

A physician is called in to a pregnant woman in whom abortion threatens. The disturbance is found to be due to syphilis. The physician retires to another room—the description of which seems to me to be unimportant—to write a prescription. There she sees a child of the same woman which she finds to be diseased. The diagnosis, so far as it is given to us, is very hazy, which is to be regretted, as the point is of some importance. One would, moreover, be glad to know why the mother was a "wreck." The loneliness of the child and its yearning for sympathy from a stranger seem irrelevant, unless we are to suppose that maternal instincts are atrophied in the face of inherited syphilis. However, the physician, finding the child an uncomfortable object, deprives the mother of the antidote prepared for her in order that the fœtus *in utero* may abort. Uninspired as I am by higher motives, this seems to me a strong proceeding. Miss Kenealy will no doubt admit that it is constructively the same thing as to procure abortion.

Lacking the aid of my "conscience" and the moral support of "Nature" in these difficult places, I should have felt it my duty to seek a consultation if I thought that abortion were the thing to bring about. A consultation was, perhaps, less necessary in Miss Kenealy's case as she has communion with an intelligent agent whom she calls "Nature." Nature had gone for abortion, and was officiously attempting the deed without waiting for Miss Kenealy. "Nature" is a being visible only to the poet, and I am therefore deprived of her services. In my blind way I can only see a series of phenomena of which these syphilitic events form as much a part as more convenient events. I remember some other poet speaks of "Nature," and says that there is no mean in Nature but Nature makes that mean. However poets, like doctors, differ.

Miss Kenealy goes on, with some inconsequence and looseness of statement, to throw doubt upon antidotes as a class—perhaps mercury after all is not an antidote! Can it be that she was beginning to feel a little uncomfortable, and wanted to reassure herself?

Here, however, Miss Kenealy does enter the walks of science, had but one time to follow her. I presume that to call the poor child a Mongolian is also scientific? The small range of my own studies does not enable me to discuss this point. We are all such specialists nowadays. Sir H. Howorth will, I trust, throw some light on the dark saying.

A point more within my own knowledge is that so far from syphilitic children "tainting the human stream in an ever-widening output," these children for the most part, like rickety children, grow up strong enough; and so far from intensifying the pest, probably convey some degrees of immunity to their descendants. One of the most syphilitic children I ever saw is now a cultivated and distinguished man, one whom his devoted parents, his friends and his country could ill spare. Personally I congratulate myself, and a large circle of society, that Miss Kenealy was not at hand in the "handsome library" when his mother bore him.

Nature is no beneficent godmother; she is cruel and wasteful enough, and our progress consists in a steady defiance of her. The physician is called in to minister, in his blind way but to the best of his powers, to the relief of suffering; and to preserve the flame of life, which he is bound to regard as sacred, even in its tiniest sparks. We are the Vestals of this fire. What are we to think of a physician who, called in to fulfil his office, destroys hope of offspring and extinguishes the child-life within the mother's womb? And this, so far as it appears, in secret: the mother is not told of the plot, nor does the physician consult even the bishop of the diocese. Miss Kenealy may say that the whole story is a parable, and that she has not the smallest desire to explain her views of Nature's wishes under cross-examination in a court of law. Even the Solicitor-General might demur to the artificial abortion of a potential thief.

May I, in conclusion, advise Miss Kenealy to tread the humble path of the mediciner apart from speculative philan-

throphy and from casuistical ethics which belong to priests and philosophers. I would not for a moment appear to turn a hard face to moral sympathy or moral indignation. Miss Kenealy appears in her letter in an amiable light, however startling her rush into the most difficult and ancient of ethical problems. But it is a truth older than Hume that a "moral sentiment" contains a feeling and an opinion; moreover, that the feeling may well be right but the opinion may well be wrong. To have humane feelings is good, and happily to many persons easy; but the sense of satisfaction they give to the possessor is no measure of the fitness of their application, which depends upon an intellectual process. It is in this analysis that I think Miss Kenealy's attitude is defective.—I am, etc.,

September 16th. T.C.A.

THE DISCUSSION ON DIPHTHERIA IN THE SECTION OF MEDICINE.

SIR,—I have read in the BRITISH MEDICAL JOURNAL of September 14th Dr. Sidney Martin's reply to my letter of August 31st. It is with considerable pleasure that I find that on the majority of points we are in complete agreement, the main issue between us being whether the fatal accumulation of the diphtheria poisons is prevented by merely local treatment or is not. It is true that the local application of germicides have not, for the most part, met with such good results as we should have desired, but of their ultimate success I am most sanguine. Only in 1884 was the bacillus diphtheriæ revealed by Loeffler; therefore there is only a period of eleven years since a sure foundation was laid on which we could securely commence to work. Prior to this, although germicides were successful sometimes and were failures at others, we knew not why they succeeded or why they failed. That is not the case now, and I have no hesitation in saying that the failure must be attributed to our want of an early accurate diagnosis and not to any inefficiency on the part of some at least of the germicides.

What we, the practitioners, under whose care the majority of cases of diphtheria come *ab initio*, must clamour for is the establishment of centres, under a staff of able bacteriologists, to which we may be entitled to send specimens gratis, so that, at the earliest possible moment, we may know whether we have diphtheria to deal with or not when cases of septic and membranous sore throats present themselves before us. Then shall we be in a position to test the capabilities of germicides, and to prove their efficacy in diphtheria, and I, at least, am convinced that the result will not be unfavourable to them, or, at any rate, some of them.—I am, etc.,

Shaftesbury Road, W., Sept. 15th. BROWNLOW R. MARTIN.

THE SERUM TREATMENT OF TUBERCULOSIS.

SIR,—While not professing conviction that Professor Maragliano's serum treatment of tuberculosis will not share the fate of Koch's tuberculin, and yet commending the enthusiastic manner in which he has published his paper abroad I should like to say a few words in reply to Mr. William Catto, and to mention a few salient points which he seems to overlook.

It has been shown, to the satisfaction of the bulk of the medical world, by Hankin, Kitasato, Behring, and many others, that a normal animal organism can produce within itself when occasion requires a garrison of defensive proteids with which to repel the attacks of bacterial toxins. That we have not in every case yet been able to isolate these defensive proteids, or whatever else it may please us to call them, by no means disproves their existence.

We all know that some animals have natural immunity from the toxins of the anthrax bacillus. To what is this immunity due if not to a defensive proteid? And does it not seem within the bounds of feasibility that this substance might be isolated and used to confer immunity on other animals?

Mr. Catto says: "Are not all animals that are suffering from the actual disease continually subjected to the extract of living bacilli? Do they become immunised? They never do." Arguing from that premiss is, in my opinion, where he admits a fallacy into his reasoning. Let me put it in this way. Why do these animals have tuberculosis at all? They are not born with it. No, in most, if not all, cases it is acquired. That is to say they are born with or may have acquired the predisposition to this particular disease, or, in other words, when attacked by the tubercle bacillus their tissues do not have the power of producing this peculiar defensive proteid which would enable them to resist the dread disease. May not that also be the reason they do not, as he states, become immunised?

It may be asked—Do we know of any analogous case in which, on account of some deficiency in the organism the therapeutics of Nature cannot be brought into play? We do, in the case of the well known hæmorrhagic diathesis, where from some as yet unknown cause Nature fails to arrest hæmorrhage owing to the absence of all the essentials to coagulation of the blood.

It seems probable that when a normal healthy animal is inoculated with a specific bacillus producing a specific toxin its tissues at once set about producing antitoxin to antagonise this toxin. The healthier the animal and the greater the number of inoculations the more antitoxin would be produced.

More wonderful things have been achieved by human science. Why should we not try to isolate this antitoxin and administer it to animals not having the power of producing it for themselves?

No need to let us go blindly with eyes bandaged with one fact or theory, but let us at least follow up our theories until they are upset by some stronger reasoning than that of the writer of the letter referred to.—I am, etc.,

Bradford, Sept. 16th. WILLIAM MITCHELL.

PROFESSIONAL ADVERTISING.

SIR,—The BRITISH MEDICAL JOURNAL of September 14th[1] is rather uncomfortable reading for some of us. But surely the profession is becoming too tender as to publicity for its members. We are now told that lantern lectures, ambulance lectures, and the writing of popular scientific books for the use of the unlearned, are means of committing this sin of "professional advertising." I suppose that these things will one day come under the ban of the all-powerful General Medical Council as being "infamous conduct in a professional respect."

But who so fit as a medical man to give the public scientific instruction, supposing that he possesses literary taste or the power of using language well for lecturing? And why are doctors to be the only men who may take no part in the general advance in popular science as a recreation which is going on round us to-day? It is rather hard upon the men who have such gifts, and who enjoy using them, and I maintain that every man so situated is bound to make use of his talents for the public good, just as much as a member of any other profession.

As to popular lecturing being effective as an advertisement, I can speak from some exceptional experience. For many years I have delivered lectures to working men's clubs in connection with Oxford House and other institutions, and I have as frequently given lectures to more favoured audiences in the way of wealth and social position; but I can distinctly say that my doing so has rather detracted from my success as a practitioner. I should have done better to employ my leisure hours in those social tricks and koo-tooings amongst the well-to-do, which the profession strangely allow to pass as perfectly free from suspicion of "professional advertising."

If we treat the public as beneath our notice, and avoid taking them into our confidence in matters scientific; and if we refrain from publicity upon grounds of ethical sensitiveness, the public will only put us down as a set of pompous beings who hide their want of knowledge under an appearance of mystery akin to that used by the medicine men of savage tribes, and to the methods of the old-time quacks.

Perhaps the high priests of medical ethics will allow us to take part in public scientific work if each man wears a disguise of some sort, and uses an assumed name? In what way can a lantern lecture—say, upon the microscope or some other popular scientific subject—be classed as a professional advertisement? Or who is to give ambulance lectures if for a doctor to do so is "professional advertising"? Who is to write popular books upon hygiene, physical education, and

[1] Report of Section of Ethics.

similar topics, if medical men are forbidden? The whole thing is an absurdity.—I am, etc.,

September 14th. HERETIC.

SIR,—I read with great interest in the JOURNAL of September 14th, the report of the proceedings in the Section of Ethics at the late annual meeting, and more especially the paper read by Dr. Potter on Professional Advertising. Every medical practitioner must cordially endorse the greater portion of what was so well advanced by Dr. Potter, and also the opinion so generally expressed by members taking part in the discussion, that instruction in medical ethics should form part of a medical student's education. This system of instruction is without a doubt the proper course to pursue, but how can it be carried out when the extramural teachers, who are supposed to be our present and future leaders, are such sinners in their methods of advertising? What value can their teaching by precept possess, when they set such a bad example?

Is it not the case that the neighbourhood of all our large teaching hospitals is placarded over by bills, some printed in red, others in black, intimating that Dr. ——— is to open a class here, and Mr. ——— there, all with the very innocent purpose of being intended for, and read by medical students alone?

Is this the sole object of these advertisers? If so, why do they distribute their bills broadcast to be pasted on boards provided by all the instrument makers, and exhibited in all the druggists' windows throughout the city?

If their objects were so innocent, would it not be enough to put up their bills at the beginning of a session in those places where medical students congregate or pass, that is, within the hospital gates, and within the vestibules of the various class rooms, and where they could not be read by the general public?

I am afraid, however, that looking at the question fairly, most people would be inclined to attribute a different motive to their action. I would, therefore, heartily support the opinion expressed by several members at the meeting, that we should begin with the heads of the profession in putting down this unfair and iniquitous advertising habit, and not be constantly striking at the poor "strugglers for existence," who are practically only doing in their own way what the so-called leaders are doing in theirs, twice every year.

Until the teachers show a better example by confining their advertisements to places easily accessible to students, but shut off from the general public, it is hardly possible to expect the fringes of the profession to walk in the straight path.—I am, etc.,

Edinburgh, Sept. 16th. MICHAEL DEWAR, M.D.

THE MIDWIVES' BILL.

SIR,—I will thank you for space for some remarks on the above. If midwives are allowed to take charge of cases whether natural or not independent of doctors, their usual modesty may be relied on to make short work of the claims and the interests of the faculty. Dr. Smyly is hardly acquainted with the state of things existing in the country, when he states that there is little or no friction in Ireland between doctors and midwives. I am sorry to be obliged to state that this is not the fact, and the Rotunda and Coombe Hospitals are responsible for this, as they never exercise any control over them once they are qualified. In order that they should be able to do this they should give conditional qualifications, and publicly withdraw them where the midwife would undertake duties beyond her sphere. I am personally aware of loss of life by their presumption. The proposal to make them subordinate to, and in the leading strings of the district health officer would be an excellent proposal, if the latter were not allowed to practise.

To sum up, I would allow no midwife to attend to any case whatever without a doctor looking in, at all events; and, too, I would enforce this by the withdrawal of her certificate, or, as they are encouraged to call it, their diploma. It is not clear to me but that there ought to be an inquest in every case of death in childbirth, as well as in every case of still-born infants. A case occurred to my knowledge where the intestines were dragged out by a clumsy practitioner, and where the case was hushed up by the midwife; and another case where a midwife allowed the patient to die from a piece of retained placenta, hæmorrhage continuing off and on for three months after the birth.—I am, etc.,

Cashel, Sept. 16th. THOMAS LAFFAN.

ANTI-STREPTOCOCCIC SERUM.

SIR,—I have read with interest the paper by Dr. Bokenham on anti-streptococcic serum. As Dr. Ruffer is for the present incapacitated from work and as Dr. Bokenham mentions that similar work has been carried out in Continental laboratories, may I point out that Dr. Ruffer and I, as early as the beginning of this year, immunised horses against both the diphtheria bacillus and the streptococcus pyogenes, and other horses against the streptococcus erysipelatis, for the production of therapeutic serum.

In fact Dr. Ruffer was, I believe, the first to publish the method of immunising horses against the streptococcus, and an abstract of his lecture appeared in the BRITISH MEDICAL JOURNAL of August 3rd, page 306.

The horses were shown to the members of the British Medical Association who visited the Institute farm at the last meeting.—I am, etc.,

WILLIAM ROBERTSON, M.R.C.V.S.,
Assistant British Institute of
Sudbury, Sept. 17th. Preventive Medicine.

MEDICAL AID FREE! WITH A POUND OF TEA!

SIR,—Some kind friend has afforded me the opportunity of disclaiming my connection with "Bryan Bros. Medical Aid Scheme," by sending me a cutting from the BRITISH MEDICAL JOURNAL of September 14th.

Unfortunately, being one of the medical men whose names appeared on the card such as you describe, I hasten to inform you how it was I became associated with the scheme. Some time about the end of last June, I was waited upon by an agent of Bryan Bros., who pointed out to me the great advantage such a scheme would be to the poor. I accordingly accepted the appointment, and a few days after went away on my holidays.

On my return the very great mistake which I had made was explained to me, and on July 24th I sent in my resignation, copy of which I now enclose. In a few days after, the agent called to see me, and we arranged that I should refund the money paid to me in advance, deducting whatever amount I was out of pocket, and thereby cancelling my agreement at once. I have much pleasure in likewise enclosing for your perusal the receipt given me for the money which I returned.

I hope, Sir, you and your readers will be satisfied with the above explanation, and believe that I am not—and have not been since the end of last July—in any way connected with Bryan Bros.' Medical Aid Scheme.—I am, etc.,

Liverpool, Sept. 17th. A. PAUL SWANSON, L.R.C.S.I.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 2s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A MEDICAL OFFICER of field rank, who expects to go to India in January, desires an exchange with an officer who will have about two years or longer to remain at home. Liberal terms. Reply, stating date of arrival home, to A. M. S., care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

A SURGEON-MAJOR serving in Bengal wishes for an exchange which would give him about three years at home. Address, stating terms, to S. L. H., care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

A SURGEON-MAJOR, with two years to complete Indian tour, is desirous to exchange home.—Address No. 456, BRITISH MEDICAL JOURNAL Office, Strand, London.

THE NAVY.

THE following appointments have been made at the Admiralty: ALFRED E. WRIGHTMAN, Surgeon, to Haslar Hospital, September 13th; FREDERICK J. LILLY, Surgeon, to the *Katoomba*, September 13th; WILLIAM A. WHITEHOUSE, Surgeon, to the Royal Marine Division, Portsmouth, September 23rd; RICHARD F. BATE, Surgeon, to the *Briton*, September 28th.

THE ARMY MEDICAL STAFF.

Deputy Surgeon-Lieutenant-General R. T. Beaun officiates as Principal Medical Officer, Rawul Pindee District, *vice* Brigade-Surgeon-Lieutenant Colonel C. F. Pollock.

INDIAN MEDICAL SERVICE.

The promotion of Surgeon-Lieutenant-Colonel C. J. W. Meadows, Bengal Establishment, which has been already announced in the British Medical Journal, has received the approval of the Queen.

Surgeon-Lieutenant-Colonel J. A. Laird, M.D., Madras Establishment, has retired from the service, September 7th.

Brigade Surgeon-Lieutenant-Colonel A. B. Seaman, Bengal Establishment, officiating as Principal Medical Officer, Peshawur District, *vice* Brigade-Surgeon-Lieutenant-Colonel H. T. Brown, Army Medical Staff.

Brigade-Surgeon-Lieutenant-Colonel A. L. Hackett, late Madras Establishment, has been granted the extra pension of £100 per annum due to the Madras Establishment.

THE YEOMANRY AND RIFLE VOLUNTEERS.

Mr. Oliver Lilley Machell is appointed extra Surgeon-Lieutenant in the Royal Wiltshire Yeomanry (Prince of Wales's Own Royal Regiment), September 18th.

Surgeon-Lieutenant J. S. Forrest, 2nd Northumberland (Percy) Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Captain, September 14th.

Mr. James Black Milne, M.B., is appointed Surgeon-Lieutenant to the 4th West Riding of Yorkshire Artillery (Western Division Royal Artillery), September 14th.

Surgeon-Lieutenant J. Anderson, M.B., 8th Volunteer Battalion the Royal Scots (Lothian Regiment), is promoted to be Surgeon-Captain, September 14th.

BANGALORE WATER SUPPLY.

Epidemics of Typhoid Fever.

The notoriety that Bangalore has acquired as a very hotbed of enteric fever owing to the bad water supply for the troops (which is provided from a tank supplied by an open channel passing through a native bazaar, while forming part of the wall of the supply channel[1], is the main sewer from the same area) has received recent notice through a correspondent to the *Pioneer*. He writes under date August 11th, as follows: "That a water supply is a need of the first importance for this large civil and military station cannot be gainsaid, and the dwellers in the Cantonment feel all the more impatient that the matter shall be settled, inasmuch as the Mysore durbar is fast completing its own scheme for bringing water to the Pettah and the humblest of its subjects. It is impossible also not to regard this dearth of a good water supply as being in part responsible for the terrible amount of sickness and mortality which has this year, and especially during the past month or so, carried off so many British officers from our midst. The tank from which the majority of our troops are supplied is a natural reservoir in which weeds, duck, fish, and, worst of all, sewer drainage and catchment offices all play their part. It is nothing less than scandalous that the very rudiments of municipal hygiene should be neglected in this way, but so it is. We have had three or four deaths among British officers since I wrote last."

We have since been informed that somewhat tardily Mr. Ernest Hart's suggestion that all such epidemics should be promptly met by boiling the drinking water under supervision has been carried out, and with the happy result of putting an end to the epidemic. We see it stated that it is in contemplation to systematically employ the Pasteur filters as in the French military stations, and we may hope that the general application of this system in India, and pending the introduction of pure water supplies which may be costly and difficult, typhoid fever, which has for the last few years been increasing in the British army in India, may be completely stamped out.

THE SUBORDINATE MEDICAL DEPARTMENT, INDIA.

The administration of the Military Assistant Surgeon and Military Hospital Assistant branches in the Subordinate Medical Service of Madras and Bombay has been transferred from Government Presidencies to the Surgeon-General with the Government of India, with effect from October 1st, 1895. The Surgeon-General will dispose of all questions concerning recruitment, pay, pension, promotions, and disposal for duty of medical subordinates with army or local Government. Efforts will be made to detail subordinates to territorial areas from which they are drawn, but in emergency they may be employed in any part of India. This arrangement has been approved by the Secretary of State in view of improving the mobility and general efficiency of this class of public servants.

I.M.S. UNIFICATION.

The unification of the Indian Medical Services in the three Presidencies will shortly be carried into effect. It is part and parcel of the army reorganisation scheme, says the *Pioneer*, and only awaits the formal sanction of the India Office. The three services will be amalgamated, and will be worked as at present through the Surgeon-General with the Government of India.

ALDERSHOT INSANITATION.

At present inspections having received frequent notice in our columns, and subsequent Parliamentary questioning, it is gratifying to find a technical paper, the *Builder*, of September 7th, delivering its views as follows: "The recent questions in the House of Commons as to the sanitary condition of Aldershot have elicited very unsatisfactory information from the responsible officials. It is admitted that there have been a number of cases of diphtheria, and a very large number of sore throats (some cases of diphtheria and instances of sore throat the latter most probably of septic origin). All that the officials can say as to these diseases is that it is thought they have arisen from the opening of old drains for the purpose of alterations and improvements. It is obvious (says the *Builder*) that if the opening of old drains is the cause of these attacks, that the state of the drains is a disgrace to the nation. Edifices under Government control are in a worse sanitary condition than ordinary private buildings."

[1] *Vide* Parliamentary Report, *Times*, August 20th, 1895.

THE ARMY MEDICAL SERVICE.

A.M.S. writes: The fact that there were only ten candidates for fifteen vacancies at the last competitive examination of the Army Medical Service proves that the repetition of adverse and injudicious criticism exercises a most pernicious influence. In these days of competition in which the majority of medical men find a difficulty in earning a moderate income, far more a comfortable independence, you incur a great responsibility in lending the weight of your opinion and authority against service in the Army Medical Staff as a means of livelihood. There does not exist any better field for the average medical man as regards both pay and experience. I undertake to be able to show conclusively that service in the Army Medical staff actually compares most favourably with any other opening in private practice but that the advantages are unequalled. I venture to predict that when young medical men realise the true facts that there will be one hundred and not ten candidates for every fifteen vacancies. I may add that with ordinary care and prudence a man can live comfortably on his pay, and that his pay in India, provided he does not wish to remit money to England, is practically more than the equivalent of his promised pay on appointment at home, by which I mean that he can enjoy more comfort and indulge in more pleasures in India on his rupees (which only suffer depreciation by the exchange) than he can in England on his pay. I will with pleasure give the fullest information to anyone who may desire it either privately or through your columns.

. We print this letter verbatim because it is altogether singular in the mass of communications on the same subject that reach us. We notice some inaccuracies. We understand there were upwards of twenty candidates for the thirteen or fifteen vacancies in the late competition, but only ten obtained sufficient qualifying marks, now 50 per cent. instead of 30 formerly.

Whether our criticism on the Army Medical Service have been "adverse and injudicious" we leave to the better judgment of our readers; they have, however, always been made with the sole object of elevating the status and advancing the best interests of the officers. We are glad to find even one of the latter content with his lot; but we would ask him to consider what that lot would have been without the disinterested advocacy of the British Medical Journal and the intervention of the Parliamentary Bills Committee of the British Medical Association. Our correspondent has promised to demonstrate the "unequalled advantages" of the Medical Staff, which hitherto have never been apparent either to us or our numerous correspondents. It is not fair to accuse us of spoiling the late competition. Very little has lately appeared in these pages on the Army Medical Service, and nothing surely to cause a sudden running dry in the supply of candidates.

But from what we can learn there are not a few "pernicious influences" at work in the schools which have brought about the result, and will soon tend to bring about another crisis in the department. Among the causes which prevent candidates coming forward are the continued denial of equal rank to medical officers compared with other army officers; the social boycotting and ostracism to which they are often subjected in garrison towns, and the disgraceful blackballing in certain military clubs; the hard conditions of foreign service, by which a maximum tour in the tropics is succeeded by a minimum at home; the present of their best years to the Indian Government on a minimum rate of depreciated rupees; the continual cutting off of administrative appointments, or the reduction in prospective prizes, etc. These are among the causes which bring about a dearth of candidates and prevent them coming forward in their "hundreds," and not the "adverse and injudicious criticisms" which our correspondent blames.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL LIBEL CASE.

The acting Under-Sheriff for Warwickshire, Mr. H. W. Blenkinsop, and a jury, had an inquiry on September 14th, to assess damages in the libel case of Dr. Henry Stone, of Walsall v. D. S. Jenkins, photographer's artist, of the same place. Mr. Parfitt, who appeared for the plaintiff, according to the report in the *Birmingham Gazette*, explained that the libel complained of—in the hearing of which defendant had allowed judgment to go by default—was one calling for substantial damages. Dr. Stone attended defendant's mother until her decease. Death was due to complicated, but plaintiff had reason to believe that there had been an accident, and did not feel justified in giving a certificate without the facts having first come before the coroner. An inquest was held, and the publicity seemed to have given defendant serious annoyance, as he wrote a letter to the *Walsall Observer*. This letter contained the libel complained of, and in respect of which the damages were claimed. The charges contained were of a kind likely to do a professional man serious injury. A paragraph in the original draft letter, struck out by the editor of the paper, but still seen by him and the printers, was as follows: "The only conclusion I can come to is, firstly, that she was in a medical aid society, and I suppose the doctor was dissatisfied with the amount they pay to him; and secondly, the inquest fee of £1 1s. proved too great a temptation for him when he thought there was the least

possible chance to obtain an inquest." That paragraph was crossed through, and the following words substituted: "Such inquests are brought about for the sake of the inquest fees. The doctor, I believe, receives a guinea."—The plaintiff then gave evidence, asserting that he told defendant that if he (Dr. Shore) gave a certificate, he would have to put down as the cause of death "erysipelas, caused by an accident," and that would be sufficient to refer the matter to the Coroner. There was no foundation for the suggestion that he wanted to bring about an inquest in order to get the guinea fee. It was the modern idea that where erysipelas prevailed there must have been abrasion beforehand.—Defendant expressed the desire to put in the depositions taken at the Coroner's inquest.—Mr Partridge: If Mr. Johnson would take my advice, he would try to prove that Dr Shore has not suffered much damage.—In answer to defendant, plaintiff said his father paid him a weekly salary. This allowance had not been reduced or his practice stopped.—The Under-Sheriff said it was not necessary to prove any specific damage; it was self-evident to suppose that a professional man must suffer damage from statements like those defendant had made of the plaintiff.—Defendant said that an apology had been offered, and that the statement concerning the guinea had not appeared in the paper. The statements there appearing were correct, and he was prepared to stand or fall by them.—The Under-Sheriff said that defendant, having chosen not to avail himself of his right to defend the action brought against him, must be taken to have admitted all the statements in the plaintiff's claim. The jury should give a sufficient sum to vindicate the plaintiff's character. He was bound to say that the defendant, by still persisting in the truth of this libel, had made matters considerably more serious.—The jury assessed the damages at £20.—The Under-Sheriff (to defendant): I think you are a very lucky man.

MEDICAL ETIQUETTE IN QUEENSLAND.

TOWNSVILLE, QUEENSLAND.—Assuming, as we do, that Dr. H. F.'s statements in relation to Mr. E. H. and Drs. J. and N. convey a fairly just version of the respective facts, and that personally he has given no cause therefor, we would observe with reference to the alleged procedure of Mr. E. H. that, if it be as represented, such conduct was exceptionally unethical and indefensible; and the same condemnatory remark also applies more or less to the action of Dr. N. At the same time, we are of opinion that Dr. H. F. erred in not asserting his position and retaining the patients.

With regard to Dr. J., the case as related indicates a regrettable lack of professional courtesy, and of a due sense of his moral obligation to do unto others as he himself would wish to be done by, and leads us to infer that an extended knowledge and practice of the principles laid down in the *Code of Medical Ethics* are highly desirable in the locality in question.

We deem it well to add that willingly as we would otherwise give insertion to our Antipodean correspondent's communications, their undue length render it impracticable in view of the unavoidable limited space accorded to medico-ethical questions.

PROFESSIONAL ADVERTISING.

W. E. R. writes: I enclose herewith two cuttings from to-day's (September 17th) *Telegraph*. When Members of the College of Physicians are reduced to paying guineas for advertisements of this sort, we can scarcely be surprised at the cheap dispensary touts. Surely the College of Physicians ought to be able to control its members.

"Dr. Mortimer Granville, who has been paying some visits to Cornwall, has returned to 14, Hanover Square."

"All Society and Fashionable Paragraphs inserted in *The Daily Telegraph*, except those relating to official incidents, will be charged at a minimum rate of one guinea for two lines, each succeeding line 10s. 6d. additional."

*** We have received a number of other letters by the same post calling attention to this advertisement, and denouncing it.

ANOTHER correspondent sends us the following extract from the *St. Pancras Gazette* of September 14th:

"Dr. Richard P. Long has returned to his residence, 69, Queen's Crescent, Haverstock Hill, N.W., after a five weeks' holiday in Switzerland. The many friends and patients of the popular and esteemed physician, who, by the way, is one of our most assiduous vestrymen, will learn with pleasure that he has derived great benefit from his well-earned rest in the charming region of Lausanne."

HOSPITAL APPOINTMENTS.

M.A., M.B.—Our correspondent's statement is not sufficiently exact to enable us to offer other than a contingent solution of the difficulty referred to. He has omitted to furnish us with two important factors in the case, namely, as to the rule which governs the appointment of honorary physician to the local infirmary, and the respective ages of A. and B. Assuming, however, that B., the senior surgeon to the out-patient department, is legally qualified to hold the appointment, we are distinctly of opinion that, *ceteris paribus*, B.'s claim to the vacant office is superior to that of A., who has never in any way been associated with the institution.

OUTDOOR ASSISTANTS AND HOLIDAYS.

MAC.—A correspondent asks what length of holidays an assistant is entitled to without loss of salary. Strictly speaking, it could hardly be argued that he was entitled as of right to any, but most practitioners allow an assistant who has been with them a year or more a week or a fortnight, provided of course it is the intention of the latter to stay with his principal at least another year. No one would be expected to allow an assistant who was going to leave him in a few months a holiday however long he might have been with him.

PHYSICIAN AND SURGEON.

ZED.—In reply to a correspondent we would refer him to an editorial article on the subject which will appear shortly in the BRITISH MEDICAL JOURNAL.

UNQUALIFIED PRACTICE AND COVERING.

ASTERION.—The proper course for dealing with medical practitioners who cover unqualified men is to bring their conduct before the General Medical Council. To prove practice by unqualified men there should be evidence of visiting and prescribing, and not merely visiting and dispensing.

ASSISTANTS AND THE "COURTESY CALL."

S. A. C. will find in the *Ethical Code*, under the heading of Intraprofessional Etiquette, chap. iv, rule 2, the following appended note:

"N.B.—It may be prudent to note, in passing, that practitioners in the position of 'assistants' are, as a rule, exempt from making or receiving the call, and in either case it should be omitted."

Z. Y. X.—We cannot answer the question without full copy of the agreement referred to being sent to us.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF DURHAM.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the Examiners:

Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany.—A. A. Bolton, College of Medicine, Newcastle-upon-Tyne; J. W. H. Boyd, College of Medicine, Newcastle-upon-Tyne; J. Scott, Middlesex Hospital; R. F. Richardson, Westminster Hospital.

Chemistry with Chemical Physics.—E. G. E. Arnold, M.R.C.S., L.R.C.P., St. Thomas's Hospital; E. C. Bailey, King's College Hospital; T. Streatfeild, M.R.C.S., L.R.C.P., University College Hospital, London.

Chemistry with Chemical Physics, and Botany with Medical Botany.—J. H. Martin, College of Medicine, Newcastle-upon-Tyne.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE (NEW REGULATIONS).—The following candidates have satisfied the Examiners.

Elementary Anatomy and Biology, Chemistry and Physics.—Honours, First Class: J. Milligan, College of Medicine, Newcastle-upon-Tyne. Honours, Second Class: E. Golton, College of Medicine, Newcastle-upon-Tyne; J. Muirhead, College of Medicine, Newcastle-upon-Tyne; N. C. Bailes, College of Medicine, Newcastle-upon-Tyne; N. Roberts, College of Medicine, Newcastle-upon-Tyne; H. B. Fawcus, College of Medicine, Newcastle-upon-Tyne; W. Sisam, Mason College, Birmingham; J. T. Johnson, College of Medicine, Newcastle-upon-Tyne. Pass List: G. O. M. Dickenson, College of Medicine, Newcastle-upon-Tyne; R. H. Garbutt, College of Medicine, Newcastle-upon-Tyne; W. J. Harrison, College of Medicine, Newcastle-upon-Tyne; C. T. Holmes, College of Medicine, Newcastle-upon-Tyne; W. J. Symes, Sheffield School of Medicine.

Elementary Anatomy and Biology.—L. J. Blandford, College of Medicine, Newcastle-upon-Tyne; C. H. Brookes, College of Medicine, Newcastle-upon-Tyne; E. H. Cooke, St. Thomas's Hospital; J. J. French, College of Medicine, Newcastle-upon-Tyne; A. Hines, College of Medicine, Newcastle-upon-Tyne; E. Swainston, College of Medicine, Newcastle-upon-Tyne; T. B. Watson, College of Medicine, Newcastle-upon-Tyne.

Chemistry and Physics.—J. R. Halliday, London Hospital; E. Inman, College of Medicine, Newcastle-upon-Tyne; R. A. R. Lankester, University College, London; J. Macfadyen, College of Medicine, Newcastle-upon-Tyne; R. F. Moorshead, Bristol Medical School; A. C. Ney, College of Medicine, Newcastle-upon-Tyne; G. B. Pleton, College of Medicine, Newcastle-upon-Tyne; J. E. Sidgwick, College of Medicine, Newcastle-upon-Tyne; D. H. Weir, College of Medicine, Newcastle-upon-Tyne.

Physics.—A. M. G. Walker, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy, Chemistry, and Physics.—R. H. Vincent, St. Bartholomew's Hospital.

REGULATIONS OF THE UNIVERSITY OF BRUSSELS.

DR. WALTER REEVE (28, Victoria Street, Westminster) writes with regard to the regulations of the University of Brussels,[1] that materia medica and pharmacology are now taken in the 1st Doctorate. These subjects were presumably before included under the head of General Therapeutics. He states, also, that ophthalmology has been removed from the 2nd and been placed in the 3rd Doctorate. Another alteration appears to be that rejected candidates must present themselves for re-examination within the academical year, or otherwise they will be required to pay the matriculation fee over again. Dr. Reeve will supply copies of the regulations and answer the inquiries of intending candidates in this country.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next examination for the certificate of competence in nursing and the attendance on the insane granted by this Association will be held on Monday, November 4th. Candidates can obtain from the Registrar, Dr. Spence, Burntwood Asylum, near Lichfield, a schedule, which must be filled up, signed, and returned to the Registrar not later than Monday, October 7th.

[1] BRITISH MEDICAL JOURNAL, September 7th, p. 611.

OBITUARY.

LOUIS RALSTON HUXTABLE, M.B., C.M.Edin.

The death is reported of Dr. L. Ralston Huxtable, of Sydney, New South Wales. The deceased, who took the degrees of M.B. and C.M.Edin. in 1881, was honorary physician to the Sydney Hospital, the Sick Children's Hospital, and the Walker Convalescent Hospital, and also held the appointment of Visitor of Asylums for the Insane. He had been for the last three years Honorary Secretary to the New South Wales Branch of the British Medical Association. The death of Dr. Huxtable at the early age of 39 has caused wide regret throughout the profession and the extensive circle of his acquaintance. The cause of death was pneumonia consequent on diphtheria. The funeral was very largely attended by the members of the medical profession, the general public, and the personal friends of the deceased.

JOHN M. FOX, M.R.C.S.Eng.

The death is reported of Mr. John M. Fox, of Lymm, at the age of 64. Mr. Fox, who obtained the diplomas of M.R.C.S. Eng. and L.S.A. in 1854, was Medical Officer of Health for the Mid-Cheshire Combined District. Prior to receiving this appointment he was Medical Officer of Health for the Cockermouth Combined Sanitary District. Latterly the deceased had been in failing health and had been unable to attend to his professional duties. He seemed to derive but little benefit from a recent stay at the seaside, and, despite medical skill, he gradually grew weaker and died on September 12th, the cause of death being pneumonia.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,156 births and 3,917 deaths were registered during the week ending Saturday, September 14th. The annual rate of mortality in these towns, which had been 19.9 per 1,000 in each of the three preceding weeks, declined again to 19.3 last week. The rates in the several towns ranged from 11.7 in Plymouth, 13.1 in Norwich, and 13.6 in Croydon and in Nottingham to 32.7 in Blackburn, 33.5 in Burnley, and 37.5 in Sunderland. In the thirty-two provincial towns the mean death-rate was 22.0 per 1,000, and was 6.6 above the rate recorded in London, which was only 15.4 per 1,000. The zymotic death rate in the thirty-three towns averaged 4.9 per 1,000; in London the rate was equal to 2.9 per 1,000, while it averaged 6.3 in the thirty-two provincial towns, and was highest in Blackburn, Hull, and Sunderland. Measles caused a death rate of 2.0 in Blackburn; whooping-cough of 1.2 in Bradford and 1.8 in Bolton; "fever" of 4.1 in Sunderland; and diarrhœa of 7.9 in Bolton and in Manchester, 7.4 in Blackburn, 8.4 in Burnley, 11.4 in Sunderland, and 13.0 in Hull. The mortality from scarlet fever showed no marked excess in any of the large towns. The 75 deaths from diphtheria in the thirty-three towns included 55 in London, 5 in West Ham, 2 in Birmingham, and 2 in Burnley. Two fatal cases of small-pox were registered in London, and 1 in Manchester, but not one in any other of the thirty-three towns. There were 307 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, September 14th, against 342, 310, and 329 at the end of the three preceding weeks; 42 new cases were admitted during the week, against 65, 36, and 28 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been 2,[illegible], 2,[illegible], and 2,600 at the end of the three preceding weeks, had further increased to 2,674 on Saturday last, the 14th inst.; 363 new cases were admitted during the week, against [illegible], [illegible], and 325 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, September 14th, 921 births and 489 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from [illegible] to [illegible] per 1,000 in the three preceding weeks, declined to [illegible] last week, and was [illegible] per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.7 in Perth to 20.9 in Paisley. The zymotic death-rate in these towns averaged [illegible] per 1,000, the highest rates being recorded in Paisley and Greenock. The 233 deaths in Glasgow included [illegible] from diarrhœa, [illegible] from whooping-cough, 6 from "fever," and [illegible] from diphtheria. Two fatal cases of diphtheria were also recorded in Edinburgh.

DUAL NOTIFICATION.

There is a view of the Notification of Diseases Act which is far too much neglected at the present time. The tendency is to throw the responsibility of notification upon the doctor and entirely overlook the fact that it lies equally upon the householder. The medical profession is in fact looked upon as an easy-going beast of burden on whom all such matters may be thrown, while the householder, being a slippery [illegible], who will always plead ignorance and from whom "costs" are with difficulty extracted, is allowed to go scot free. We are pleased therefore to be able to record that at the last meeting of the Droxfield District Council it was resolved that public notices should be posted in Shedfield stating that people neglecting to notify infectious diseases would be prosecuted.

CARLISLE WORKHOUSE INFIRMARY.

The medical inspector, Dr. Fuller, whilst praising the work done by the nurses in the hospital, condemns in no measured terms the accommodation provided in the hospital. The sum and substance of what he says is that the structure is antiquated, the wards admitting of no classification; there is no maternity department, no wards for sick children; the pressure on the space is in excess of requirements for ventilation or management; the nurses' quarters are insufficient; the nursery administration is defective. After reading this we are glad to see that the question of the extension of the hospital is under the consideration of the Board, and we hope that this will result in a new building and not in another example of patching, so cheap in the present, so costly in the near future.

NIGHT-NURSING AT THE COVENTRY WORKHOUSE.

We fail to understand the motives that influenced the action of the ten members who voted against the motion to appoint a night-nurse in the above workhouse; the resolution as moved by Mr. Stevens was emphasised by the report of a case of ill-usage by an inmate in charge of the ward, and by the fact that many deaths occurred in the infirmary during the winter, a large proportion at night. The discussion was very warm, the stock phrases—no complaints of neglect; why make a change? only infirm and chronic patients to wait on, and the like—being freely thrown about. Ten men—for we note with pleasure that none of the lady guardians supported the inhuman vote—carried their way against eight who were in favour of this necessary addition to the nursing staff.

THE BELFAST CORONER'S JURY ON THE TREATMENT OF EPILEPTICS.

At an inquest held on the death of an epileptic in the above workhouse the jury appended to their verdict the rider "that in their opinion epileptic patients should be treated apart from lunatics, and that the association of epileptics with lunatics not only retarded their progress but accelerated their death; and further said that in their opinion lunatics in workhouses should be sent to properly equipped lunatic asylums." The treatment, or rather absence of treatment, of these unfortunates in the Irish workhouses is a matter which demands immediate attention on the part of the central authority, and we trust that every means will be taken by the press and the medical profession to draw public attention to the misery of these unhappy lunatics all over the country.

THE BISHOP AUCKLAND BOARD OF GUARDIANS.

We noted in the British Medical Journal of September 14th, page 690, the fact that this Board had declined to act upon the report of its own Committee, which recommended an increase of salary to the medical officer, on the ground that his work and responsibility had enormously increased and that the office was considerably underpaid. We see by the *Newcastle Leader* that Dr. Wardle, the medical officer in question, has written to the guardians, expressing his astonishment that the Board declined to accept the recommendation of the Committee. Dr. Wardle stated as a fact that his remuneration was on a scale of two-thirds only of that paid to the barber for occasionally shaving the patients, and he found it impossible to believe that any true guardian of the poor could deliberately wish such a system to be continued. The decision of the Board seems to point to this not being altered for six months at least, unless the Local Government Board take the matter completely out of the hands of the guardians, and this we hope to see done. It is very evident that this Board must be influenced by some higher authority, as other matters which they are supposed to control appear to require immediate attention. The placing of 26 inmates in quarters only adapted for a smaller number—namely, 18—is a matter which can no longer be permitted when once this fact is before the public.

THE STATUS OF MEDICAL OFFICERS OF HEALTH.

Mr. Elliot Daunt, D.P.H., advocating the exclusion of medical officers of health from private practice, writes:

> Of course this would entail a considerable increase in the money spent by local authorities in giving adequate remuneration to the officers in question, and doubtless I shall be met by the retort that in these days of heavy taxation, the local rates could not stand such an increase. But, is it on any grounds whatsoever fair or equitable, that any local authority should have to bear the burden of the expense attending this branch of the profession, which, while it doubtless confers great benefit on their district, is doing a work which, nevertheless, confers a service, not second in importance, on the country at large? I think not—and if not is it not time—that the whole work and expenses attending it should be controlled and paid for by the State? I have little doubt that it is because public authorities take their views that they screw the medical officer of health's claim down to a mere pittance, and allow him to court and engage in private practice.
>
> Something further is necessary on the part of the Legislature to place the efficient working of such essential duties as the medical officer of health has to perform on such a sound footing that the country as a whole shall have the full benefit of this highly important work, and I must strongly advocate that all duties connected with public health should be under the direct and supreme control of the Medical Department of the Local Government Board, and that all professional men engaged in such work should belong to a staff attached to that department, and paid by the Imperial Exchequer. Were this

so, all appointments to the various districts, whether rural or urban, would be made by them and without the interference from any of the existing sanitary authorities. The duties of the medical officer of health would be defined as now, by the Public Health Acts and by the by-laws in force in the several districts; and where the authority under whose control the medical officer of health would work would be the Local Government Board only, he would, of course, work in unison with the various sanitary authorities. It is by such a system alone that the work of public health reform can ever be thoroughly accomplished, and the extra burden on the Exchequer would be money well spent. Of course, to bring about this change an Act of Parliament would be necessary, but there is ample time to get it done during the session of 1896. I shall be pleased to go further into details of the scheme with any of your numerous readers.

CRITICISM OF NOTIFICATION CERTIFICATES.

OFFICER OF HEALTH writes: A. is a legally-qualified practitioner, and was called to see some children, whom he found they were suffering from scarlet fever. He then reported the cases to the officer of health for the district in which the cases existed. B. is a medical man, and is also a member of the district council whose officer had received the notification, and at one of their meetings stated he had seen the cases reported by A., and that he found they were not scarlet fever, and that A. had only reported for the sake of the 2s. 6d. fee. Will you say whether the statement is not inconsistent with his duties as a councillor—although he may have been acting according to his belief—and whether such a statement is not libellous and therefore actionable at law? Is it not settled that the notification as sent by a medical man must be accepted by the officer of health, and he himself must take it as certified?

*** Whether the words used were actionable or not under the circumstances we cannot undertake to say, but there seems to be no room for doubt that they were unwarranted, and the occasion chosen for their utterance does not lessen the offence. A notification is an expression of professional opinion not to be lightly controverted, and only under exceptional conditions would even the medical officer of health to whom it is sent be justified in questioning it. These conditions do not extend to members of public bodies as such, medical or otherwise, and a public attack on the part of one medical man upon the good faith of another is a matter which calls for earnest protest.

CLUB PATIENTS AND NOTIFICATION FEES.

MEMBER wishes to know what is the fee payable for notification of infectious disease in the case of club patients.

*** This is one of the many points which the Notification Act fails to make clear. In the absence of any authoritative decision, club patients may be assumed to rank in this respect as private patients, in which case the notification would carry the full half-crown fee.

NOTIFICATION OF INFECTIVE DISEASE.

ENQUIRER asks for replies to the following questions:

1. Is transmission of the disease certificate by post a sufficient fulfilment of the provision that notice be given to the medical officer of health "forthwith?" (This in a town of over 50,000 population, with several deliveries daily.)

2. Can the medical officer of health insist on the certificate being sent by special messenger immediately. If so, who should bear the expense, the sanitary authorities, the doctor notifying, or the householder?

3. Is the fee of 2s. 6d. paid for "early information;" is it meant to cover expense of special messenger or of postage, or is it simply the remuneration due to the doctor notifying for his written expressions of opinion that the disease is what he certifies it to be?

4. Where can a copy of the Act relating to infectious disease and its notification be obtained or consulted?

*** 1. Yes.

2. No.

3. For the written expression of opinion, with the further conditions that it is to be given to the medical officer of health, and "forthwith." The post is regarded as a sufficiently speedy mode of communication, and the trifling cost of postage may reasonably be paid by the notifier who elects to make use of it.

4. The Infectious Disease (Notification) Act may be obtained at a cost of a few pence from any Parliamentary bookseller; but some few towns derive their notification powers from local Acts. There would probably be no difficulty in obtaining full information either at the health office or from the Town Clerk.

THE BERTILLON SYSTEM IN ACTION.—At the trial of a burglar at the City of London Sessions this week the Bertillon anthropometric system came into action for the first time in this country. The prisoner after conviction denied his identity with a burglar who had been convicted four times before. The measurements, however, and the thumb and finger marks, taken in July last when he had been discharged on a ticket of leave, corresponded exactly, leaving no doubt of the burglar's identity.

INDIA AND THE COLONIES.

INDIA.

IT has been decided, says the *Times of India*, that the Boards of Survey on hospital equipment, stores, etc., are to be composed of medical officers, but where the number of medical officers present at a station will not admit of this being done, the Board may, at the discretion of the officer commanding the station, be composed of military and medical officers with a medical officer as president, or solely of military officers with a medical officer in attendance.

NURSING IN THE NATIVE HOSPITALS OF BOMBAY.—A fund has been started for nursing the native hospitals of Bombay, and certain influential Parsee gentlemen have subscribed. As yet, says the *Times of India*, no Hindu or Mussulman gentlemen have done so, but as the members of these communities most largely benefit by the hospitals, it is expected that there will be no difficulty in getting them to give to the fund. Lord Sandhurst has kindly promised his assistance in the matter, and most probably a meeting will be held later with the object of advancing the scheme, at which he will preside.

ANKYLOSTOMIASIS IN CEYLON.—In a paper on ankylostoma duodenale, read at the Indian Medical Congress, 1894, Dr. H. Thornhill supplies some very interesting information concerning the prevalence and importance as a disease factor of that parasite in Ceylon. So prevalent is ankylostomiasis in this island, that he regards it as second only to malarial fever as a destroyer of life and labour, and as being in the aggregate infinitely more important than cholera, and he advocates the institution of vigorous measures for restricting its ravages. He supplies some excellent hints on prevention and treatment. His remarks on the mode of administration and the dangers of thymol should be borne in mind by everyone who essays to use this useful, but when incautiously used most dangerous, drug. He says: "I would wish to add a word of caution regarding the administration of thymol in spirituous solutions, and as to the giving of brandy or spirits shortly after its administration. One of the fatal cases was a man who had received 30 grains of thymol suspended in water at 7 A.M. He experience no special symptoms after it, and at 8 A.M. the nurse gave him the second dose of 30 grains. As this man was supplied with arrack as an extra, and as in such cases a portion of the arrack was usually given at 9 A.M., the nurse gave it to him just after giving the second dose of thymol. The result was that intense collapse set in almost at once, and notwithstanding all efforts the man died within twenty four hours, the collapse manifestly being due to the arrack dissolving the thymol, which was thus absorbed." Some time ago we reviewed in these columns a work on African diseases, in which the author actually recommended the administration of this drug in spirituous solution; it is to be hoped that his recommendation has not been acted on. Dr. Thornhill seems to prefer male fern to thymol. Of the former he says: "Male fern is certainly a most disagreeable medicine, but my experience is that it is less objected to than thymol, and that the giddiness, fainting, vomiting, and collapse which it produces are milder and far less frequently produced by it than by thymol." He mentions oil of peppermint, kerosine oil, and carbonate of guaiacol as possibly effective, less dangerous, and more agreeable substitutes for thymol or male fern.

WESTERN AUSTRALIA.

THE CUE HOSPITAL.—We have received a voluminous correspondence in regard to the management of the Cue Hospital. Without entering in detail into the numerous changes which have been made, we may say that although traces of personal animus are not difficult to discover, it is clear that there have been defects and irregularities both in the administrative and the professional departments. It is to be hoped that the exhaustive report of the inquiry into the management of this hospital, which has been made by Dr. Giles, Royal Commissioner, and was laid on the table of the House of Representatives on August 2nd, will have the effect of introducing into its administration much-needed reforms.

SANITATION OF CALCUTTA.—Dr. Simpson, the medical officer, in a recent report to the Calcutta Municipality, bitterly complains that Mr. Baldwin Latham's recommendations as to the sewerage have been neglected. It seems that the outfall is obstructed by tidal influences, and there is serious pollution of the soil, owing to leakage. The result is that the death-rate is leaping up alarmingly. It is certainly of little use to secure the advice of an expert like Mr. Latham, and then to neglect to follow it. At Bombay the medical officer also addresses a plaint to the Municipal Council as to their sloth in carrying out reforms. He demands immediate attention to such details as disposal of refuse, the connection of buildings with sewers that have been built years ago, surface drainage, prevention of waste of water, and the abatement of overcrowding. The drainage engineer finds the greatest difficulty in keeping the sewers clear, owing to the want of water for flushing purposes, while all the time the soil is being converted into swamps, owing to waste. There is no doubt about it—the municipalities of our great Eastern empire requires a good deal of stirring up.

DR. JOHN SYER BRISTOWE, Consulting Physician to St. Thomas's Hospital, who died on August 20th last, has left personal estate valued at £15,734 2s. 3d. He appointed as sole executrix his wife, Mrs. Miriam Isabella Bristowe, and left to her all his real and personal estate absolutely.

MEDICAL NEWS.

The distribution of prizes and the presentation of the Hanbury gold medal by the President of the Pharmaceutical Society of Great Britain will take place on October 2nd, at 3 P.M., and Professor F. T. Roberts, M.D., F.R.C.P., will deliver the inaugural sessional address.

Pension to a Poor-law Officer.—At the meeting of the Camberwell Board of Guardians, held on September 4th, Dr. Partridge moved: "That Dr. Herbert Chabot, medical officer of the infirmary, having resigned his appointment on account of permanent infirmity of body, after twenty-one years' service, a superannuation allowance be awarded him, and that three years be added to his period of service, such superannuation allowance to be £200 16s. per annum, subject to the approval of the Local Government Board." The motion was carried by 17 against 1.

Retreats for Inebriates in Austria.—The Austrian Government has prepared a Bill for the treatment of habitual drunkards. The measure proposes to empower the authorities of the State, the provinces, the districts, and of the various towns or communes severally to open retreats for inebriates. Those who enter voluntarily will not be able to leave at will, but are to be treated exactly like the compulsory inmates. The term of detention will be generally for two years, but the inebriate may be released on leave after one year, but will be confined again in case the trust reposed in him should prove to have been ill-placed. After the two years' term he must be released, but if he should afterwards come under the provisions of the measure he may be sentenced again and again for fresh terms of two years, and eventually given over to a lunatic asylum or to a hospital, as the case may require.

Millionaires' Charities.—Mr. Barnato has just devoted £2,000 to the endowment of two cots in the children's ward of the Kimberley Hospital; £3,000 have been put in trust for the endowment of three annual scholarships of £50 each for boys connected with any school in the Diamond Fields. Johannesburg owes to Mr. Barnato the public school intended for the children of the poor, to which he has devoted £10,000 to be expended in building and providing an efficient staff of teachers. All such generous gifts are, however, belittled by the unprecedented donation of 2,000,000 dollars by Mr. J. D. Rockefeller to the Chicago University. Mr. Rockefeller's fortune is said to have reached the enormous figure of 150,000,000 dollars, namely £30,000,000. One of his daughters is married to Mr. Charles Strong, Professor of Psychology in the Chicago University, hence his interest in this, the youngest of America's universities. Never has mind more successfully influenced money.

Operations on Wild Animals.—To the existing list of operations on wild animals in menageries must now be added one on a lion. Many years ago Mr. White Cooper couched the white bear for cataract, and Mr. Ernest Hart removed the eyeball of the emu in the Zoological Gardens in London. From Chicago now comes the story of an inflamed molar being extracted from the jaw of the lion known as "Major" in the Lincoln Park Menagerie. The legs of the lion were secured by ropes, a stout stick was thrust into his mouth, and his jaws held open by strong cords. Veterinary Surgeon Burns poured chloroform down his throat till the lion lay quiet, and with an immense pair of forceps, said to be 2 feet long, the inflamed molar was successfully extracted.

The Cholera.—According to a telegram from Odessa, Asiatic cholera is spreading so seriously in the South-Western Provinces, that the Government has opened additional cholera barracks near the railway stations at Petchanokva, Krivin, Edelbounovo, and Dunbo. Several doctors and nurses have been ordered to those places. The regiments now stationed in the parts worst affected have been ordered to Jitomir. In the Province of Volhynia there were 2,497 cases of cholera and 941 deaths from August 18th to August 24th, and 3,362 cases and 1,190 deaths from August 25th to August 31st. In the Province of Podolia 34 cases and 20 deaths occurred from August 21st to August 24th, and 67 cases and 25 deaths from August 25th to August 31st. Cholera has broken out among the natives at Honolulu. Forty cases and 31 deaths occurred between August 18th and September 4th. Eight fresh cases of cholera and 6 deaths were reported at Tangier on September 11th. Six fresh cases of cholera and 9 deaths were registered at Tangier on September 17th.

Centenarians.—Mrs. Margaret Anne Neve, a resident in Guernsey, who has just celebrated her 103rd birthday, has always led an active, busy life, and even now she works in her garden every day for an hour and a-half, and reads for some time. She is an accomplished linguist, and understands French, German, Italian, Spanish, and Greek. In earlier life she was a great traveller, and when 92 years of age she went on a journey to Cracow in Poland, to see Kosciusko's monument, accompanied only by her sister, who was 89. In Cabul there is said to be an old woman 140 years of age. Her age is computed by the number of Ameers she has known. This old lady is a favourite with the present Ameer, and she often goes to Court to amuse the King with stories of his ancestors. She has double cataract, and the Ameer was anxious that Miss Hamilton, M.D., should operate on her before she came to England in the suite of the Shahzada, but the matter was wisely deferred.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street, S.W.—House-Surgeon. Board, fuel, and lights provided. Applications, endorsed "House-Surgeon," to the Honorary Secretary at the Hospital by September 28th.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants; doubly qualified; appointment for six months. Apartments, rations, washing, and attendance provided. Applications, endorsed "Clinical Assistantship," to the Treasurer at Bethlem Hospital before October 1st.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by September 30th.

BRIGHTON THROAT AND EAR HOSPITAL, 23, Queen's Road, Brighton.—Non-resident House Surgeon. Salary at the rate of £52 per annum. Applications to the Secretary by September 30th.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer, unmarried. Salary, £100, with board, lodging, and washing. Knowledge of Welsh desirable. Applications to B. Spivey, Secretary, Barns Row, Carmarthen, by September 28th.

CARNARVON JOINT SANITARY DISTRICT.—Medical Officer of Health, must be between 25 and 40 years of age, doubly qualified. Must devote his whole time to the duties, and have a knowledge of the Welsh language. Appointment for five years. Salary, £80 per annum, inclusive of all expenses, except those incurred for such books, stationery, and apparatus required in the performance of the duties. Applications, endorsed "Application for Office of M. O. Health," to J. H. Thomas, Clerk, to the Joint Committee, 14, Market Street, Carnarvon, by October 16th.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House-Surgeon, registered and unmarried. Honorarium, £40 per annum, with board, lodging, and washing. Applications, with not more than three recent testimonials to the Honorary Secretary, Clayton Hospital, Wakefield, by September 30th.

COUNTY OF BRECON.—County Analyst. Retaining fee, £10 10s., and a fee of 10s. 6d. for the analysis of every sample. Applications to H. Edgar Thomas, Clerk to the County Council, County Hall, Brecon, by October 2nd.

DURHAM COUNTY ASYLUM.—Junior Medical Officer. Salary, £100 per annum, with board and lodging. Applications, with not more than three recent testimonials, to the Superintendent, Durham County Asylum, Winterton, Ferryhill, by September 30th.

DURHAM COUNTY HOSPITAL.—House Surgeon; doubly qualified; appointment for two years, but eligible for re-election. Salary, £100 per annum, with board and lodging. Applications to V. S. Cooper, Honorary Secretary, 16, South Bailey, Durham, by September 27th.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon, doubly qualified. Salary, £80 per annum, with board and lodging in the Hospital. Applications to the Committee by October 15th.

GENERAL HOSPITAL, Birmingham.—Two Assistant House-Surgeons, must possess a surgical qualification. Appointment for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House Governor, by September 30th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 1st, Buchanan Street, Glasgow, by November 5th.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly Hill, near Birmingham.—Resident Medical Surgical Officer, doubly qualified. Salary, £80 per annum, with board, residence, and washing. Applications to Howard J. Collins, House Governor, General Hospital, Birmingham, by September 28th.

LONDON FEVER HOSPITAL, Liverpool Road, Islington, N.—Assistant Resident Medical Officer. Salary, £100 per annum. Applications to the Secretary by October 1st.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician, must be qualified and registered under the Medical Act. Applications to G. Q. Roberts, House-Governor, by October 12th.

NORFOLK AND NORWICH HOSPITAL.—Dispenser; must be registered Pharmacist. Salary, £100. Applications to the Secretary by October 1st.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary, £150 per annum, with practice, free house, and garden. Applications to Robert Sutherland, Inspector of Poor, Durness, by October 19th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Resident Medical Officer. Appointment for four months. Salary at the rate of £60 per annum, with board and residence. Applications to the Secretary by September 23rd.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Doubly qualified, and registered. No salary, board, lodging, and washing. Applications and testimonials to the House-Surgeon by October 1st.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road, Brighton.—House Surgeon; doubly qualified. Salary, £80 per annum, with board, lodging, and washing; no stimulants. Applications to the Chairman of the Medical Committee by October 6th.

SAMARITAN HOSPITAL FOR WOMEN, Nottingham.—Junior Surgeon. Applications to the Honorary Secretary, J. A. Simpson, Solicitor, South Parade, Nottingham, by October 1st.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon, doubly qualified, unmarried, and when elected under 30 years of age. Salary not exceeding £30 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by October 2nd.

THORNTON URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £37 per annum. Applications to Raywood M. Stansfeld, Clerk to the Council, by September 23rd.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Surgeon. Appointment for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by September 25th.

MEDICAL APPOINTMENTS.

ADAMS, Dr. J., reappointed Medical Officer of Health to the Runcorn Rural District Council.

ADDENBROOKE, E. H., M.R.C.S.Eng., reappointed Medical Officer of Health to the Kidderminster Rural District.

BATTLE, E. Wharmby, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Manchester Royal Infirmary.

BROWN, C. Kelly, M.B., M.C.Edin., appointed Senior House-Surgeon to the Cumberland Infirmary, Carlisle.

CHARPENTIER, A. E. L., M.D.Durh., L.R.C.P.Lond., appointed Medical Officer for the Uxbridge District of the Uxbridge Union, *vice* W. Rayner, M.R.C.S.Eng., deceased.

CLARKE, Dr., appointed Medical Officer for the Aston District of the Rotherham Union.

CRAN, R. D., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Manchester Royal Infirmary.

DAWSON, W. E., L.R.C.P.I., L.M., L.S.A., appointed Admiralty Surgeon for Walton-on-the-Naze and Handford Waters.

DOUGHTY, William, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the No. 7 District of the Kingsbridge Union, *vice* O. Eaton, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

EVANS, William O., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the No. 1 District of the Hawarden Union, *vice* A. L. Evans, L.R.C.P.Lond., M.R.C.S., deceased.

FITCH, Frederick, M.D.St. And., M.R.C.S.Eng., reappointed Medical Officer of Health to the Kidderminster Rural District.

GREENHALGH, John, L.R.C.P.I., L.M., appointed Medical Officer for the Fylinglees District of the Whitby Union, *vice* G. H. Carrington, M.R.C.S.Eng., resigned.

HALL, J. P., M.B., Ch.B.Vict., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Manchester Royal Infirmary.

HARCOURT, G. R., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer at the Lambeth Union Infirmary.

HASWELL, N. Richard, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Helston Rural District Council.

HILLIER, R. J., M.R.C.S., L.R.C.P.Lond., appointed Senior House-Surgeon to the West Ham Hospital, *vice* S. R. Blake, L.R.C.P., L.R.C.S.Edin., resigned.

KENNY, J. D., M.D.R.U.I., M.Ch., appointed Medical Officer for the Treeton District of the Rotherham Union.

LINDE, Theodor, M.D.Edin., appointed Medical Officer for the No. 5 District of the Westbury-on-Severn Union, *vice* N. F. Searancke, L.R.C.P.Edin., M.R.C.S.Eng.

MCDOUGALL, Alexander H., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Birmingham Parish Workhouse.

MINTER, Leonard J., M.D.Brux., M.R.C.S., appointed Medical Officer to the Uxbridge Union Workhouse, *vice* W. Rayner, M.R.C.S.Eng., deceased.

MOORE, F. C., M.Sc., M.B., Ch.B.Vict., appointed House-Surgeon to the Manchester Royal Infirmary.

MORSE, Edward, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health to the Torrington Town Council.

NUNNS, Herbert FitzStephen, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Clun District of the Clun Union.

PARTRIDGE, Samuel, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Darlaston District Council.

PEARCE, John P., M.R.C.S., reappointed Medical Officer of Health to the Lewes Town Council.

PICKERING, Dr. George W., appointed Medical Officer for the No. 9 District of the Hexham Union.

PINNIGER, Walter Augustus, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the No. 6 District of the Brighton, Hove, and Preston Provident Dispensary, *vice* J. H. Humphreys, M.D.Lond., resigned.

REYNOLDS, H. D., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the Pembroke Dock Town Council.

ROBERTS, Edward B., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the No. 1A District of the Hawarden Union, *vice* A. L. Evans, L.R.C.P.Lond., M.R.C.S., deceased.

ROUSE, E., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the Bideford Rural District Council.

SANDFORD, H. V., L.R.C.P.Lond., L.F.P.S.Glasg., reappointed Medical Officer of Health for Herefordshire.

SHARMAN, Mark, M.B.Glasg., M.R.C.S.Eng., appointed Divisional Surgeon to the Herts County Constabulary.

SKINNER, E. W., M.D.Edin., reappointed Medical Officer of Health to the Rye Rural District Council.

SPURRELL, Charles, F.R.C.S.Edin., L.R.C.P.Lond., appointed Medical Superintendent to the Poplar and Stepney District Sick Asylum, *vice* W. H. Pearse.

STERN, R. H., M.B.Lond., appointed House-Physician to St. Mary's Hospital, W.

SWAINSON, J. A., M.B.Cantab., L.R.C.P., L.R.C.S., L.M.Edin., L.F.P.S. Glasg., appointed House-Surgeon to the Hulme Dispensary, Manchester.

SYLVESTER, Kirwan F., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer of the Melksham Union Workhouse, *vice* G. M. Sylvester, M.R.C.S.Eng.

TAGGART, J. Scott, M.B., Ch.B.Vict., appointed House-Physician to the Manchester Royal Infirmary.

THOMSON, Dr., reappointed Medical Officer for the Buckland Brewer District of the Bideford Union.

TUXFORD, James E., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Boston Town Council, *vice* Walter Clegg, M.R.C.S., resigned.

VIGURS, Chambre C., M.B., B.C.Camb., appointed Medical Officer for the No. 5 District of the St. Columb Major Union, *vice* N. A. Norway, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

WARRINGTON, R. J., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Physician to the Manchester Royal Infirmary.

WEBBER, H. W., M.D., M.S.Lond., M.R.C.S.Eng., appointed Second Medical Officer to the Provident Department of the Plymouth Public Dispensary.

WILKINS, Dr., appointed Medical Officer for the Third Liskeard District of the Liskeard Union.

WILKINSON, J., M.B., C.M.Edin., appointed Medical Officer of Health to the Boston Rural District Council, *vice* Walter Clegg, M.R.C.S., resigned.

WOOLLRIGHT, A. Philip, L.S.A.Lond., appointed Junior House-Surgeon to the West Ham Hospital.

YOUNG, A. G., M.B., appointed Medical Officer for the Rillington District of the Norton (Out-Relief) Union.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BENJAMIN.—On September 17th, at The Old Hall, Dorrington, near Shrewsbury, the wife of J. K. Kinsman Benjamin, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

HILL.—On August 3rd, at the Church Mission Hospital, Pak-Hoi, South China, the wife of Leopold G. Hill, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

MARRIAGES.

HARRIS—HOWE.—On September 11th, at St. John's Church, Monkstown, by the Rev. S. W. Howe, brother of the bride, assisted by the Rev. H. Hawkins, William James Harris, M.B., M.A., F.R.C.S., of Shaftesbury, Dorset, to Kathleen Emily, eldest daughter of the late Lieutenant-Colonel Wm. Howe, of Monkstown, co. Cork.

SIMPSON—HALLEY.—At Broomhall, Broughty Ferry, N.B., on September 12th, by the Rev. Lewis A. Muirhead, St. Luke's, Broughty Ferry, assisted by the Rev. W. Lewis Robertson, M.A., St. Thomas Free Church, Greenock, Surgeon-Major R. J. S. Simpson, Army Medical Staff, to Jane Mary, elder daughter of George Halley, Merchant, Dundee.

THOMSON—BENNETT.—On September 12th, at St. Clement's, Bournemouth, Mulville Thomson, Manvers House, Bradford-on-Avon, Wilts, to Mary, eldest daughter of the late Edward J. S. Bennett, Esq., J.P., of Cobham, Surrey, and Ingledene, Hants.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

TRICHY, M.D., would be glad to know the best way to improve and strengthen the growth of hair in young healthy children.

RHEOSTAT would like to know if it is possible to obtain on hire and terms a battery such as recommended in Dr. Geo. Herschell's work on *Indigestion.*

M.B.LOND. would be glad of a list of the most suitable works to read for the "Mental Physiology" examination of the London M.D. He has plenty of time and does not wish to "cram" the subject.

HORSE FLESH asks to be recommended a book on the more common defects in horses, not one to do away with the services of the veterinary surgeon, but to enable one to pick out a horse that would be worth going before a veterinary surgeon.

MR. JAMES H. DAWE, M.B. (Westcott) asks whether there is any institution in Bath where a lady patient with limited means suffering from chronic rheumatism and who is quite incapable of walking could be received for a course of baths at a payment of about 30s. to 50s. a week inclusive.

STORAGE OF RAIN WATER.

DR. J. H. POTTER (Porlock) writes: Should rain water stored in tanks for drinking be exposed to the air or covered in? Is galvanised iron and cement suitable for such storage? What is the least expensive and efficient filter for separating as it flows from tank any soot or sand that may be in suspension? Lastly, where can the apparatus be procured which prevents the first rain washings of the roof from entering the tank?

INDURATED SCAR AFTER BURN.

SAP asks for advice in the treatment of the following case: Four months since I was sent for to a child who had fallen into the fire and burnt the anterior portion of his right thigh. I treated him with carron oil, and subsequently ung. zinci, and he made a good recovery. Yesterday I was called in to see him, and found the greater portion of the scar (some 4 by 3 inches) raised some ¼ inch from the surface of the skin, red and glazed, very hard to the touch, but no indication of suppuration though somewhat hot. The only information I could get was that the child had been rubbing the place, which had been in this state for some weeks. I ordered cold water dressings to be applied, and should be glad of any further advice.

ANSWERS.

G. W.—It is illegal to practise as a dentist unless registered as a dentist by the General Medical Council. A dental qualification is now necessary before registration is possible. A duly qualified medical man can practise as a dentist upon the strength of his medical registration.

DR. M. D. O'CONNELL.—The discussion on which Dr. O'Connell desires to enter would be better deferred until Surgeon-Colonel Lawrie's views are authentically published. If Dr. O'Connell could personally communicate with Dr. Patrick Manson (21, Queen Anne Street, W.) he would probably be convinced in five minutes, from actual preparations from malarial blood, that the body under discussion is a genuine parasite, and has nothing to do with white blood corpuscles or their nuclei.

THE COCKADE.

COCKADE.—All commissioned officers of Her Majesty's forces are entitled to put a cockade on their coachman's hat; therefore a surgeon-captain is certainly entitled to do so.

BOOKS ON OPHTHALMOLOGY.

IN answer to X. Y., who wishes to study the eye, he should read, as an introduction on the optics, some elementary treatise like Ganot's *Elements of Physics.* This should be followed by Landolt's work on the *Refraction and Accommodation of the Eye,* or by the optical part of some treatise like Berry's *Handbook on Diseases of the Eye.* For diseases the best of the smaller books are Swanzy's and Nettleship's, and of the larger ones Berry's and the translation of Fuchs's textbook are very good.

DISINFECTING STOVES.

MR. BETHELL (Medical Officer of Health for the Borough of Bridgnorth) writes to us that he has lately had a disinfecting chamber erected at a cost of something under £70, and that he will be pleased to give "Z. Y. T." any details he may require.

RESIDENCE IN PARIS.

DR. F. W. LYLE (Castle Hill, W.) writes: The admirable project of resuscitating the Scots College in Paris has never been carried out; under these circumstances M.B. Edin. will find it best to live in the Latin Quarter in the Rue des Écoles or some of the streets in the neighbourhood of the Saint Michel Boulevard, in all of which he will find numerous *appartements garnis* to choose from. The Secretary of the Association des Etudiants in the Rue des Ecoles will doubtless be glad to give him all particulars as to classes, clinics, etc.

RESIDENCE IN SOUTH AFRICA.

MR. R. STEVENSON, M.B. (Prince Albert, Cape Colony) writes: In reply to "Q.S." in the BRITISH MEDICAL JOURNAL of July 27th, I may state that the following towns in Cape Colony are large enough to have banks, and, being in the "Karroo," are therefore the best places in South Africa for phthisical cases: Beaufort West, Victoria West, Richmond, Willowmore, Murraysburgh, Oudtshoorn. Cradock, in the Eastern Province, is also an excellent place, and so is Bloemfontein in the Orange Free State.

HYPODERMIC TREATMENT OF SYPHILIS.

SURGEON-CAPTAIN W. S. PRIDMORE, I.M.S. (2nd Burma Battalion, Mandalay) writes: In the BRITISH MEDICAL JOURNAL of June 29th, under "Queries," "C. I. K." asks for information relating to hypodermic medication in syphilis. He will find a paper referring to the subject in the Army Medical Department *Report* for 1895. Surgeon-Major Love, M.D., A.M.S., Station Hospital, Darjeeling, in 1894 gave the treatment a fair trial with great success. He says: "I am satisfied that this method of administering mercury is followed by better results than any other method." The prescription he used was as follows: ℞ Hydrarg., ʒj; lanolin, ʒij; ol. oliv., ʒij. The olive oil should be sterilised by heat, allowed to cool, and then the three ingredients should be rubbed up in a mortar for from two to four hours. Surgeon-Major Love's method is to inject mx of this paste the first time, and also the second if the disease is recent and of a virulent type; afterwards to inject mv every week till the disease has disappeared or the gums become spongy. The needle should be inserted to the hilt into the muscles of the hip. I hope shortly to communicate the results of my own experience. At present I have not treated a sufficient number of cases to enable me to come to a conclusion.

NOTES, LETTERS, Etc.

ERRATA.—In Dr. J. G. Robertson's letter headed "An Obscure Case of Hæmaturia," which was published in the BRITISH MEDICAL JOURNAL of September 14th (p. [illegible]), for "hæmatoma," in the fourth line, read "hæmaturia."—In Dr. George Oliver's paper on "The Therapeutic Employment of the Suprarenal Glands," in the BRITISH MEDICAL JOURNAL of September 14th, on page [illegible], column 2, [illegible] lines from top, read "muscular tonicity" for "muscular tension," and on page [illegible], column 2, second line from foot, read "disturbing effects" instead of "*distressing* effects."

A BEGGING LETTER IMPOSTOR.

DR. D. S. LONG (York) writes: May I state through your columns that it has come to my knowledge that a certain individual, unknown to me, has been sending begging letters signed with my name to various medical men, stating that I have been suffering from nephritis and albuminuria, and am in straitened circumstances, and asking that money should be sent to me at Great Ilford, Essex? The whole story is a fabrication, and I hope no one has been taken in by it.

DIPHTHERIA STATISTICS.

W. M. H. writes: In Dr. Dixey's most valuable paper in the BRITISH MEDICAL JOURNAL of August 31st, page 531, should not the average diphtheria deaths for the first 26 weeks of 1895 be compared with those of a corresponding period in former years—namely, 1891, [illegible]; 1892, [illegible]; 1893, 51.[illegible]; 1894, 51.[illegible]; 1895, [illegible]—and not with 52 weeks?

*** We have referred this letter to Dr. Dixey, who writes as follows: "W. M. H." is undoubtedly right in suggesting that the average weekly number of deaths for the first half of any year is more properly compared with the average for a corresponding period of other years than with that for the whole 52 weeks. But my object in the passage to which he refers was to summarise as briefly as possible the general facts of diphtheria mortality since the beginning of 1891. For this purpose it seemed best to give the complete weekly average for each of the four available years, 1891 to 1894, the average for 1895 being added so far as the figures were attainable at the time when my paper was finally put into shape—namely, early in July. Further and more minute comparisons might have been introduced, but would have tended to somewhat unduly lengthen the paper; they can, moreover, be easily supplied from the materials given in the tables. It is, of course, highly probable that the weekly average for the whole of 1895, when we are in a position to record it, will exceed that of the first 26 weeks.

BACTERIOLOGY AND CHEESE.

PROFESSOR CONN'S bacillus No 41 is being applied very extensively in America, and, from all accounts, with great success. At the Biological Laboratory at Long Island, New York, it is being cultivated with the view of supplying it to the dairies and butter factories of the neighbourhood. Its application to butter making has been attended with great improvement in the industry, and, according to an American contemporary, is revolutionising the business. Its introduction into the cream giving it a finer flavour and keeping properties. This is, indeed, practical bacteriology, and, unless our American cousins are very careful, they will run very grave risks of earning the approval of the "anti" party for putting the science to useful ends.

POSTURE IN CYCLING.

AN M.R.C.S., TWENTY-FIVE YEARS CYCLIST gives some useful rules as to the details of relative position of seat, handles, and pedals on the safety bicycle. With the laudable intention of gaining an upright posture many riders raise the handles until they are above the level of the seat, or even of the hips, whilst the seat is placed so low that the knees are never extended. This is a most inefficient and comfortless posture; all control is lost over the machine, and no pulling power obtained for the arms. The arms must be straight and the handles so placed that pulling with the arms shall aid the thrust of the leg without disarranging the steering or shifting the rider on the seat. The seat must be far enough back to maintain a steady hold of the driving (fixed) wheel on the road and to place little weight on the front wheel.

The following rules apply to all normal individuals: The seat should be placed over a point about half way between the hub and front rim of the hind wheel. The height of the seat should be such that the pedal at its lowest point can be easily reached with the ball of the foot, the foot being horizontal: this means full ankle play. The handles should be as far back as a line passing through the main axis of the driving cog (bottom bracket, bar hand-to-bar must be wide enough to clear the thighs freely and to carry the arms clear of the sides. The handles should be at the level of the seat, or at least in such a position that the arms shall be straight downwards and only slightly in advance of the body. The point of the handle should reach about half way up the thigh when the pedal is at its highest point, but wide enough to avoid touching the thighs in steering. The only alteration needed to any modern safety cycle in order to secure these positions is that the handle bar should be some inches longer than the general make. The weight of the body should fall exactly upon the tuberosities of the ischia on to the centre of the pads of the seat (Burgess's or similar seat), the thigh not falling to a perpendicular position at the lowest point of the stroke, so that there may be no tendency to slip off the seat forwards; the pads of the seat should be well cupped and not tightly buttoned.

Long experience shows that these points constitute the most efficient, comfortable, and healthy posture in ordinary road cycling. To the racing man or the "road scorcher" no advice is offered.

THE MEDICAL DIRECTORY.

DR. W. ALLEN STURGE (Nice) writes: I think it well that attention should be drawn to a new departure on the part of the publishers of the Medical Directory. Appended to the customary circular issued to "Practitioners resident abroad," is a note this year to the effect that no particulars other than the name and diplomas will be given of any practitioner who does not become an annual subscriber to the directory. The meaning of this is that anything more than the bare name and diploma will in future be charged for as an advertisement. This is a change of such importance in the management of this valuable directory that I have thought it right to protest by withholding a subscription for the coming year that I was about to make.

"I OUGHT TO HAVE BEEN SENT FOR BEFORE"

A MODERN COUNTRY G.P. writes: I was much amused to see in the BRITISH MEDICAL JOURNAL of September 14th the amusing story of Mr. Baring Gould's, "Why was I not called in before, etc.," and regret to tell you that it is my own cry weekly, if not daily, now in the year 1895, and I expect of a great many general practitioners also. I was not qualified in 1851, but only in the last ten years, and introduce every modern advantage and drenching and remedy into my practice. The average countryman either tries to cure himself by all the quack remedies too largely advertised or procures something from the local chemist, and puts off calling in the doctor until the last minute, often losing valuable time in acute and inflammatory cases, and why? because of the supposed expense. I should like to know if this is the experience of others, and whether instead of being a good joke it is not really a serious calamity.

AN EASY METHOD OF GIVING AN ENEMA.

DR. R. NEALE (South Hampstead, N.W.) writes: At page 663 of the BRITISH MEDICAL JOURNAL is the description of a holdfast enema syringe, and certainly it is a very ingenious plan. An easy method, however, of administering enemata is not generally known. If the fluid to be injected be poured into a small decanter with a lipped orifice this can be held between the two fingers of the left hand and the thumb keeping the lower tube of the enema apparatus in place, and all can be easily carried to the bedside or to the closet as wished.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Dr. J. H. Abram, Liverpool; Dr. G. E. Adams, London. (B) Messrs. Burroughs, Wellcome and Co., London; Dr. C. H. Bond, Banstead; P. Boobbyer, M.B., Nottingham; Dr. E. G. Barnes, Eye; Mr. M. G. Biggs, London; Dr. O. Baker, Norwich; Mr. E. W. Battle, Manchester; Dr. J. M. Barnett, Belfast; Bullseye; Mr. J. B. Blackett, London; Mr. J. W. Bolton, Scarborough; Messrs. Baillière, Tindall, and Cox, London; Dr. G. Brown, Atalanta, U.S.A.; J. W. Batterham, M.B., St. Leonard's-on-Sea; Mr. W. L'H. Blenkarne, Leicester; B.; Mr. H. J. Buck, London. (C) Mr. A. D. Cameron, Edinburgh; Dr. Caverhill, Edinburgh; J. J. Cowan, M.B., Malvern; Dr. E. Cureton, Shrewsbury. (D) Mr. G. De'Ath, Buckingham; Messrs. T. Dunlop and Co., London; Dr. M. Dewar, Edinburgh; D. A. Davies, M.B., Swansea; Mr. G. De Clive-Lowe, Edinburgh. (E) Enquirer; Mr. H. S. Elworthy, London. (F) R. A. Fox, M.B., London; Dr. K. Franks, Dublin; Professor P. Frankland, Birmingham; Fenx. (G) Dr. W. R. Gowers, London; Dr. T. Graham, Paisley; Gamma; Mr. H. Greenway, Plymouth. (H) Mr. J. A. Howe, Kew; Dr. W. W. Hardwicke, East Molesey; A. Hodgkinson, M.B., Manchester; H. R.; R. Howdon, M.B., Newcastle-on-Tyne. (I) Mr. C. Irvine, London. (J) Mr. H. A. Jackson, Coventry; Mr. R. L. Jones, Bangor; J. N. C.; Mr. F. J. Joynes, Dursley. (L) Mr. B. Locking, Napier, N.Z.; W. S. Lazarus-Barlow, M.B., Cambridge; Dr. F. W. Lyle, London; Mr. T. Laffan, Cashel; Dr. D. S. Long, York. (M) Mr. J. MacMunn, London; Dr. C. M. Moullin, London; Dr. J. Monteith, Cue, W.A.; M.D.; Dr. J. MacKie, Newton Stewart; Dr. R. R. Martin, London; M.R.C.P.; Mr. J. A. Murphy, Sydney, N.S.W.; M.B.Lond.; Dr. J. Mc Namara, London; W. Mitchell, M.B., Bradford; Professor Mosso, Genoa; Mr. J. W. Moore, Manchester; Dr. W. A. Michie, London; Dr. S. Mackenzie, London; Medical Officer of Health; Dr. T. H. Moorhead, Cootehill. (N) Dr. J. Neil, Oxford; Dr. R. Neale, London. (O) Dr. T. Oliver, Newcastle-on-Tyne; On Patrol; Mr. G. E. Oldacre, Daventry; Dr. G. Oliver, Harrogate; Omnis Sanitas; Professor Ottolenghi, Genoa. (P) Mr. H. J. Prangley, London; G. S. Perkins, M.B., London; Dr. J. H. Potter, Cullompton; Mr. T. E. Price, Wisbech; Mr. W. J. D. Preston, Rotherham. (R) Dr. R. Richmond, Braintree; Mr. S. H. Robey, London; Dr. R. R. Rentoul, Liverpool; R. E; Dr. E. S. Reynolds, Manchester; Dr. W. E. Risdon, London; J. Ross, M.B., Edinburgh; Dr. T. Rennie, Foochow. (S) Messrs. Street Brothers, London; J. A. Shaw-Mackenzie, M.B., London; Senex; Mr. J. A. Swainson, Manchester; Mr. G. Smith, London; Dr. W. K. Sibley, London; Dr. W. A. Sturge, Bristol; Dr. G. A. Simmons, London; M. E. H. Stayley, M.B., Delhi; Straddles; Mr. W. G. Stevens, Renfrew; R. H. Steen, M.B., London; E. A. Snell, M.B., London. (T) T. F.; Trichy; S. G. Toller, M.B., London; Mr. F. W. Tunnicliffe, Berne. (W) Mr. V. Wood, London; Mr. E. C. Whitefoord, London; Mr. G. Wray, Nottingham; Mr. J. C. Wilson, Philadelphia; Mr. M. Wardle, Bishop Auckland; A. G. Welsford, M.B., Dover; Mr. D. F. Williams, Liverpool; Mr. W. Wynne, Beckley; Mr. B. Wiggins, Barnsley; G. E. Williamson, M.B., Newcastle-on-Tyne. (X) X; etc.

BOOKS, ETC., RECEIVED.

Principles of Forensic Medicine. By W. A. Guy, M.B., F.R.S., and D. Ferrier, M.D., LL.D., F.R.S. Seventh Edition. Revised by W. R. Smith, M.D., D.Sc., F.R.S. London: Henry Renshaw. 1895.

The Origin and Nature of Man. By S. B. G. McKinney. Elliot Stock. 1895.

Mental Physiology, especially in its Relation to Mental Disorders. By Dr. T. B. Hyslop. London: J. and A. Churchill. 1895.

Bibliographie der klinischen Helminthologie. Von Dr. J. C. Huber. Heft 9. Munich: J. F. Lehmann. 1895. M. 3.60.

Outlines of Practical Physiology. By Dr. W. Stirling. London: Charles Griffin and Co. 1895. 9s.

Diseases of the Joints and Spine. By Howard Marsh, F.R.C.S. London: Cassell and Co. 1895. 12s. 6d.

Dod's Parliamentary Companion. 71st Edition. London: Whittaker and Co. 1895. 4s. 6d.

Examination of Water for Sanitary and Technic Purposes. By Henry Leffmann, A.M., M.D., Ph.D. Third Edition. Philadelphia: P. Blakiston, Son and Co. 1895. 1.25 dollar.

Handbuch der speciellen Therapie innerer Krankheiten. Herausgegeben von Dr. F. Penzoldt und Dr. R. Stintzing. Jena: Gustav Fischer. 1895.

Fred C. Roberts of Tientsin; or for Christ and China. By Mrs. Bryson. London: H. R. Allenson. 1895. 3s. 6d.

*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-THIRD ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in LONDON July 30th, 31st, and August 1st, 2nd, 1895.

PROCEEDINGS OF SECTIONS.

SECTION OF PSYCHOLOGY.

W. Julius Mickle, M.D., F.R.C.P.Lond., President.

Wednesday, July 31st.

THE PRESIDENT'S ADDRESS.

By W. JULIUS MICKLE, M.D., F.R.C.P.Lond.

ABNORMAL FORMS AND ARRANGEMENT OF BRAIN CONVOLUTIONS.

I.—The Theme.

I speak of a few points in brain architecture, as manifest in the conformation and relations of folds and fissures of the brain cortex; and they are taken in reference to mental states, and particularly to the stigmata of hereditary mental degeneracy.

Though long pursued, my studies on this subject have been irregular and intermittent, partly because, at necropsies, attention was more potently occupied with the pathological and histological conditions of the brain and of the whole frame; and partly because other worked pressed, and the limitations of time were rigid.

The accepted standards of gyral conformation having been meditated on at first, my subsequent studies on the subject were largely independent of the results of other observers; and thus the mind was purposely kept free from prejudice and preconception. For this abstention there were two reasons: First, one's dissatisfaction with some details of the then-accepted standards of convolutional form (to this subject I will recur); and, secondly, and later on, the appearance of a certain doctrine on the brain in relation to criminal anthropology, involving a special ascription of particular deviations from type as being distinctive of criminals; a doctrine which, at the time, appeared to be incorrect as gauged by what I had seen in brains of the insane: a doctrine which has been partially or fully abandoned, since then, by those or most of those who held it in that sense, or were inclined to do so.

II.—Analysis of Necropsies.

The general impressions received in the course of my investigation into convolutional brain architecture having been, in some respects, corroborated, in others modified, by a recent minute analysis of the results of many necropsies—some of them made far back in time—I will touch lightly, and in a brief and summary way, on one or two out of the many points on which this investigation has been instructive to myself, has been a gathering in of new knowledge, a modification of old.

III.—Unsatisfactory Standards of Normal Brain Form.

We may take it for granted, and need not tarry to prove, that a different normal standard of brain form obtains in different stages of individual life, in different races of mankind, and, as a logical inference, must obtain also in different ages of the world and epochs of time; for what practically concerns us at the moment is the normal set of standards for modern British brains. The standards of the normal, hitherto chiefly in use and with which I began, were unsatisfactory, defective, incomplete, insufficient in range and even misleading. For their unsatisfactoriness there are several reasons. One is that some of them have been diagrammatic or schematic, thus unduly accentuating some features and minimising or omitting others. Another is that the brains from which certain figures and descriptions are drawn have been taken from dissecting-room subjects or from patients—most of them "incapables" of various kinds, dying in rate-supported or State-supported institutions—of whose life-history little or nothing is known in many instances; who often are failures in life—waifs and strays—broken fragments of the wreckage of civilisation, the indication of degeneracy and breakdown. And such failures, waifs, and wreckage are they very often—most often, indeed—because of their mental defect or perverted aberrant type of mind, which not infrequently has as its accompaniment sometimes pathological brain change, but sometimes also, or solely, has an abnormal brain development and aberrant gyral conformation. Indeed, knew we their ancestral and life-history fully we would search such subjects for some of the most interesting forms of convolutional deviation from type. And still more would this be the case if, especially in the past and in some countries, dissecting-room subjects have been largely recruited from the criminals dying in prisons and the mentally decayed and defective dying in asylums. Therefore it is not surprising to find that sometimes the brains taken from the sources previously referred to and published as typical, are what I do not hesitate to declare and describe as being brains of deranged or of defective development and utterly misleading if taken as normal. If the blind lead the blind they shall both fall into the ditch; and the ditch to which I refer is not an ancient and musty moat; it is well filled with modern mud. Let us see to it that we be not swamped therein.

And therefore at an early date I had to modify in details what I had learned from the standards in use as representations of normal conformation of brain.

IV.—Their Full Significance to be Assigned to Other Coexisting Conditions.

At the threshold we are met by the question how far we may rightly attribute any significance to these deviations of brain architecture in elucidation of the subject of mental defect and disorder. And, if we decide that they do possess a meaning in this relation, we next encounter the inquiry what precisely their significance is. In reference to this there are many fallacies into which we may wander, many pitfalls into which we may stray. To dwell even lightly upon these would occupy the whole of the time available for this address. Therefore, one must be content with bare mention of some of the most important of them, and thus at least take the precaution of guarding against misconception as to the purport, scope, and implications of what will presently be stated.

To begin with, there is a number of conditions to which due weight must be given and their full importance and significance assigned. Such, for example, are: The pathological, brain changes found, both macroscopic and microscopic; the diseases of parts and organs other than the brain; disorders of blood and lymph circulation, with all their possible local and general states and effects; alteration of the blood constitution in itself; addition to the blood of morbid deleterious materials in, of, or derived from food, drink, drugs, and pathogenic microbes; either transitory or diathetic autotoxic states, of abundant multiplicity of form and origin; practical starvation of brain or, again, its perverted nutrition, however brought about; the strain and stress of life, social, affective, occupational; the physiological evolutional and involutional crises and changes of the organism. There are also such considerations as the relative size of the brain to the whole body or to standard weight of race and age; the relative proportion of grey and white in the brain; the richness of the grey, its depth—actual as well as relative—its natural minute structure, in a word, the more important part of the finer architecture of the brain; and finally, the outcomes other than those mentioned in this address of a comparative evolutionary elaboration or evolutionary simplicity of a brain, as the case may be.

Giving due place to all the considerations just mentioned, I conclude that there still remains over a body of evidence as to the existence of particular conditions and details of brain architecture, which are indications and marks of low type of brain and mental organisation: of defective and deviating types of brain development, correspondent to de-

fective aberrant types of mental action and of outward conduct.

Within a certain definite range, I find an agreement between brain conformation and clinical psychiatry. I refer to my observations on the brains examined in an institution for the insane. Of these observations a large number were recently subjected to detailed analysis and comparison; namely, those concerning between 200 and 300 cerebral hemispheres. Numerous conditions of mental disease and defect were represented in the persons of the original owners of these brains.

V.—New Points of Inferiority, or Deviation of Type of Convolutions and Sulci.

I will now briefly consider some more or less new points of defective or aberrant development of gyres and fissures which I observed; which were new at the very least in the sense that they were not known to me as being noted by others. Recently, searching for prior observations (if any) in publications not previously seen, I found that certain of these points had place in some detailed description or figure of an individual brain, but, like other unheeded details, had not been the subject of special attention.

Of the special points learned from my observations I place in the front rank (1) those with greater claim to anomalous characters: in the second rank (2) those with lesser claim. (1) To begin with the former: (*a*) In the first place I have found anomalies of the cortical architectural conformation decidedly more frequent in the right than in the left cerebral hemisphere, even after making allowance for the fact that at least according to my observation the normal standards of right and of left cerebral hemispheres differ somewhat between themselves in Man. (*b*) Another of the points of *more general* kind expresses itself in irregularity of gyri, and much irregular division and subdivision of them by the unusual aberrant course, depth, length, forking, or reduplication of ordinary sulci or the existence of unusual ones. It is, perhaps, more characteristically marked in the parietal lobe than elsewhere, and especially so in certain forms of mental disease. It is essentially dissimilar not only on the one hand from an inferior type marked by few and simple gyri and sulci, but also on the other from a normal type of highly-endowed brain, rich in folds and anfractuosities.

Coming to the *more local* points, they are as follows:

The formation of what I have termed a præcuneolus. It consists in the superficial insulation or peninsulation of a portion of the quadrate lobule, usually its upper posterior area, triangular or squarish in shape, or its posterior strip: either on the one hand, and as usually occurs, by a forking or by a reduplication of the inner limb of the parieto-occipital fissure, or on the other, as occasionally is the case, by a fissure, chiefly a displaced transverse parietal, cutting through from the upper to the mesial hemispheral surface.

This condition has important relations to the annectent gyres, and the island or peninsula is (usually at least) apparently formed by a depressed and unbending mesially-directed anterior continuation fold of the first external parieto-occipital annectent gyrus.

More or less connected or associated with this quadratic anomaly are some of several aberrant states of both limbs of the parieto-occipital fissure and of the neighbouring annectent gyri, whether superficial or sunken.

The next condition to mention is the close proximity in their somewhat parallel course of the transverse occipital sulcus to the external limb of the parieto-occipital fissure, so that these are only separated from each other by a narrow ridge or very slender fold.

Another is a "reversed occipital operculum," as I term it, in which the simian opercular type is reversed and the occipital lobe takes on somewhat or slightly the aspect of a buttress, a sort of curved abutment, under the beetling brow and backward crest of the parietal. Of course a tendency to a conformation somewhat resembling that of the simian occipital operculum is a deviation from type long ago observed.

Next is an abnormal variant of the normal issue of the deep temporo parietal annectent gyri and deep temporal fissure from the first temporal gyre; so that the external surface substance of the latter, or a large portion of it, turns from forming part of the lateral aspect of the temporal lobe, twists sharply, plunges into, and entirely disappears in the Sylvian fissure, and therewith the parallel fissure apparently becomes continuous with the deep temporal fissure, and loses its way in the Sylvian gutter. In such case a variety of aberrant conditions may concern the isolated representative of the true posterior continuation of the parallel fissure, which restarts immediately behind an interrupting, bridging, anastomotic, gyral fold.

Next are furrows from the Sylvan fissure, ploughed vertically part (occasionally two-fifths) of the way up the middle of the external surface of the central gyri (more often of the posterior one). In some examples these may, perhaps, mark an unusual extent, and somewhat aberrant or less favourite position or duplication of the insertions of the parietal and frontal opercula. (I am less inclined to think they ever may represent duplication of post-central or pre-central fissure.)

(2) Those of less anomalous character are:

The tendency to an irregular, complete (or almost complete) circle of fissures girdling the temporal, parietal, and occipital regions, from temporo-sphenoidal tip back again to the same (parallel; interparietal, or not; external and internal limbs of parieto-occipital; the "stem"; lingual; and collateral fissures).

And I am inclined to attribute some significance to what I term the formation of a cuneolus, inasmuch as I find it associated with an aberrant, defective, and inferior type of conformation of adjacent and other parts. It consists of an unusual form of the now sunken superior internal parieto-occipital annectent gyrus, and of the cleft bordering it posteriorly, which last now drives deeply into the cuneus, ploughing off the upper anterior triangular area of its surface. In some examples, indeed, there is what practically amounts to a forking of the internal parieto-occipital fissure. In transition cases between this and the more usual and normal arrangement, the triangular cortical area (cuneolus) between the forks is somewhat sunken, lying below, that is to say, externally and laterally to the general mesial surface plane.

And, again, an upper and posterior and irregularly triangular part of the cuneus may be cut off by a transverse occipital fissure, or other and unusually developed fissure, incising the cuneus to the calcarine fissure, or almost so.

The validity, here, of the following, relating to temporal gyri and fissures, is not assured, and judgment on it is reserved; but in brains with marks of inferiority I occasionally found the first temporal gyrus partly divided by fissurets running upward and backward, the first temporal fissure being in segments so disposed, or giving off branches in that direction; and much more often the second temporal gyrus, partly divided by fissurets directed downward and backward, such practically representing the second temporal fissure, or part of it, in a segmented form. Thus the sections of the latter gyrus and fissure are in a direction at about a right angle to those of the former.

Then there are anomalies of the quadrate lobule, other than that already described above, as, for example, its invasion by extra up curves or branches of the calloso-marginal fissure, or it may be much split by vertical or oblique fissures, or may be the area of conjunction of rami of calloso-marginal and parieto-occipital, or of calloso-marginal and transverse parietal sulci. Extraordinary irregularity may mark the quadrates' fissures, which, as well as the parts of the calloso-marginal anterior thereto, may take the most bizarre arrangement. (In one case, with defective history, a subparietal fissure, very low down, completely isolated the fornicatus from the præcuneus, until, after being joined by the transverse parietal, it sank into the sinus of the corpus callosum, very near to the posterior border of the præcuneus.) The mesial surface above the fissura calloso-marginalis may present an unusual appearance of two distinct tiers of convolutions, and there are other abnormalities relating to that fissure, to the fornicatus, etc., which have hitherto received but little notice.

Again, the parietal gyres, especially the lower tier, may be much and irregularly split and divided by bi- and trifurcation, or by an unusual branching, or by unusual and prolonged extension of fissures, of the first temporal especially; also by irregularity and zigzag state of interparietal fissure, and of unusual fissures, as, for example, a far-descending and

perhaps forking external limb of parieto-occipital fissure, or sulcus intermedius of Jensen, or even transverse parietal or other fissure from the great longitudinal interhemispheral cleft. Important, here, is the first temporal fissure with its abnormally zigzagging extensive course branchings and spurs, also its numerous confluences with many sulci.

Similarly the upper parietal tier may be affected, and one, two, three, or four fissures may partly divide the superior parietal lobule into several gyres running obliquely backward and inward to the hemispheral edge, and thence over the cliff, and often descending more or less on the mesial quadratic surface in the abyss of the great longitudinal chasm.

The frontal gyres, particularly the third frontal, may be channelled by fissures, not only by the vertical limb of the Sylvian and by the inferior precentral fissure, but also by an unusual fissure, or more than one, between those two. These occasionally may ascend high up, even to the first frontal fissure or to the great longitudinal. They may send off a backward spur. Occasionally there is a fissure in front of and parallel with an upper precentral fissure; or, again, a far extension of an upward and forward line of the trunk of an inferior precentral sulcus.

The second and third frontal gyri (and partially the first) are sometimes unusually twisted in their forward course so as to trend forward, upward, and inward, taking a diagonal direction (as if the two former sought the frontal tip, the last the mesial aspect); a deviant line of direction and oblique thrust of the frontal gyri. Therewith the frontal convolutions may more than usually be ploughed or subdivided by short fissurets directed forward, upward, and inward.

An islet of cerebral cortex is occasionally formed by unusual aberrant forking of principal fissures, the spurs fully reuniting after enclosing an islet of cortex; for example, by the central, interparietal, or parallel fissure.

But, besides this, and as previously described by others, large islands of cortex may be insulated by communications of sulci, chiefly of primary ones, that is to say, the shores of the irregular islands are formed by conjunction of several different sulci, of which some may be either supernumerary or unusually developed secondary fissures.

And, besides as in this last, I would redirect attention to several points which have been published by others: as, for example, a false appearance as of two or of three fissures of Rolando, owing to extremely bold definition either of the precentral or of the postcentral fissure or of both. Or, again, for example, the fact that the supero-lateral frontal surface may be divided more or less into four tiers of convolutions. A division into four tiers was one of the departures from type which my early neuroscopical investigations taught me. But it was published by Benedikt at an earlier date. Differing from him, I found the division into four tiers to be rather often due to division of the second than of the first frontal gyrus. Some anatomists, indeed, admit a sulcus of the second frontal gyre, and an abnormal development of this would give rise to the appearance referred to. Benedikt, who deals skilfully and acutely with the subject of fissural anomalies, seems to lose sight of this in his strong support of the relatively predominant importance here of the division of the first frontal gyrus. And I have observed several examples of more or less marked division of this frontal surface into five tiers of convolutions.

VI.—Deviations from Type Published by Several Observers.

Other observers have found a number of deviations occurring in brains of a low order, as, for example, those of certain kinds of criminals, those of some persons of weak intellect or insane. Of these deviations I found reason to accept some as being significant, to reject others, and to accept still others in a partial manner only; only partially accepting these inasmuch as they are valid only when in conjunction with other specific conditions, diagnosed from which they cease to have the same significance; in some cases, indeed, bear an entirely different meaning. Like words in a sentence, their meaning varies with their context.

Conjoining the deviations adopted from other observers with the new ones already described, the material is provided for standards or criteria of various forms of defective or aberrant brain development. Therefore, the standard to which I shall presently advert has material derived from two factors, the one being what has been accepted from other observers, the other being what I have found for myself as anomalous; the standard is directly drawn from certain brains.

But it is in relation to one great group of mental diseases that these peculiarities of brain architecture are especially valid and enlightening. I refer to the great group of mental diseases which are essentially based in hereditary mental degeneracy, that group in which there are more or less the recognised signs of degeneracy of mind and body, in the family or collaterals, in the individual or in the stock from which he springs.

These factors of heredity and of degeneracy, of course, do not play an equally important part in all of such forms of mental disease as are subsumed here.

VII.—Reference to a Standard of Aberrant Conformations of Gyres and Fissures framed as a Test, and constituting a Stigma, of Hereditary Mental Degeneracy.

Throughout the above large group of mental diseases the somatic and psychic stigmata of degeneracy obtain more or less, but their form and grade differ much in the different members of it. In points of detail this subject is one of contention; but as to the broad general fact of the existence of such signs or indications of hereditary mental degeneracy, I do not entertain the slightest doubt. And I have formed a composite and sufficiently elastic standard of abnormal superficial brain architecture—that is to say, of configuration of gyres and fissures—to use as the test and criterion both of the existence and of the degree of the degenerate, defective, and aberrant developmental peculiarities found in the brain in the several forms of predominantly hereditary mental diseases.

It is not drawn from profound idiocy with its prevailing record of pathological disaster, or of gross teratological malformation; for there are weighty reasons why such a standard not seldom would be defectively applicable, and even misleading. But it is drawn from cases in which, with more or less of the somatic and psychic signs of hereditary mental degeneracy, there are innately defective and weak mental powers, with mental peculiarities or mental perversions (degrees and forms of imbecility and original paranoia and allied states).

Broadly and summarily viewed it amounts to a somatic indication, a sign-group or stigma of the insane neuropathic diathesis or of hereditary mental degeneracy. As such it is valid when applied to the other forms of mental disease constituting the large group already mentioned, inasmuch as each of them (speaking in generals and in summary) is found to present a brain configuration differing from this standard one approximately about as much as the form of mental affection itself differs clinically and nosologically from the cases yielding the standard conformation of brain. And indeed, while confirming the general accuracy of my classification, the application of this standard has solved or confirmed doubts on one or two points on which judgment had previously been held in suspense.

From other of these forms of mental defect and disease a standard might have been taken and used with various degrees of success: the one I have selected I believe to be far the best and most useful. The standard is one of mobile applicability and not of cast-iron rigidity, and affords due room for differences in detail. Not every brain of a given psychosis of the group concerned presents the same features or the same combination of them: just as, clinically, not every case of a given disease presents the same set of symptoms, or every symptom, typically present and full-blown. Precisely as with other somatic stigmata, such as the deviations from normal manifest in teeth, palate, or skull; so here the deviation is far from being always one and the same; and, moreover, certain combinations of deviations have stigmatic value.

There is not time to pursue this part of the subject further. For the present, it suffices to announce the framing of the standard. Full description of the standard and of the results of its application is reserved for future communication to the profession.

A DISCUSSION ON THE TREATMENT OF MELANCHOLIA.

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The treatment of disease is the primary object of medicine, and this objective I believe will be approached by a separate consideration of those states in which abnormal mental depression or melancholia is a common factor.

The argument may be advanced that these states do not constitute a pathological entity; that they are associated with widely differing forms of disease and of causative conditions. Melancholic states, however, have so much in common in relation to their treatment, and even in other respects, that by grouping them together from a therapeutic aspect, no risk need necessarily arise of adopting erroneous pathological views or of ignoring the varying associated phenomena.

I desire not to raise any pathological question, but I cannot avoid allusion to the intimate connection which must exist in the cortical physical substrata of abnormal mental states, even when presenting widely differentiated emotional and volitional symptoms; a view long since held by Dr. Sankey, who insisted on the pathological unity of insane states.

Clinically this is demonstrated by transitions from mania to melancholia or stupor, by sudden alternations of these states, by their occasional and partial coexistence in the same case, and in many other ways. Pathologically, owing to the recent advances in the histology of the cerebral cortex, due to Golgi, Ramon y Cajal, Bevan Lewis, Hodge, Batty Tuke, Andriezen, and others, the close relationship of these conditions has become still more obvious.

The suggestion may be made that the emotional differences and variations may possibly be due to the reaction of the organism as a whole on the local abnormal condition. This may be neural or vasomotor, or a combination of these. On so complex a subject I have no intention to enter.

Emotion has been shown by Sollier and others to be closely related to the general peripheral sensibility, especially to the visceral esthesia or coenæsthesia; and it has been asserted by Dumas that a lowered coenæsthesia is the invariable antecedent in melancholic states, whether of somatic or mental origin, and this view is of interest in considering the mutual reactions of brain and body.

Local peripheral irritation has been frequently found to develop marked emotional changes, which have instantly ceased on the removal of the irritation. Emotions centrically originated, even in health, markedly affect all the bodily processes, and in disease these results are still more strikingly manifested.

In melancholic states this reaction of the body on the cerebral function and of the cerebral condition on the body establishes a vicious cycle of nutrition, which should never be lost sight of in their treatment.

The defect of assimilative power in melancholics is another marked characteristic. Hereditarily predisposed melancholics manifest a want of balance between assimilation and function not merely in deficiency of fat but by the slightness of their osseous development, and probably also by the smallness of their chylopoietic viscera and of their organs of circulation. The nutritional inadequacy is manifested functionally by nervous irritability and rapid exhaustion throughout life. Acquired predisposition often adds to defective assimilation defect of excretory power, manifested by a special susceptibility to all toxic conditions, and characterised by the habitually low specific gravity of the urine. Depressed emotional disorder exaggerates such defects when present, and hence in treating these conditions, whatever the associated disease, the defective assimilation and the defective elimination have also to be kept prominently in view.

Prophylaxis is the most important point of treatment. Unfortunately it is, as regards these disorders, a social rather than a medical question. Holding as I do the view that insanity should be ranked amongst the list of preventable diseases, I could wish that the State should take an active share in prevention. Legislative interference with the marriage of neurotic persons is certainly not within the sphere of practical State medicine. The only method open to our profession, therefore, is the spreading amongst society of correct views on this and allied subjects—a very difficult matter, since harm as well as good may thus be done.

The public is fairly fully impressed with the danger of inheritance of insanity—is, indeed, inclined to over-exaggerate it, classing all degrees of heredity on a level; but it is not alive to the danger of intensifying a slight neurotic predisposition by intermarriage—for example, with phthisically predisposed persons or with those having a tendency to degenerative diseases. The danger of immature marriage in neurotic persons is also probably unknown, and is certainly disregarded amongst the lower classes, whilst the influence of rapidly-recurring gestation to the same end is ignored by the whole community.

The prophylaxis of melancholia, as far as the physician is concerned, practically begins with the management of inherently predisposed children, and his first duty is to avoid the causation of undue anxiety in regard to the family predisposition. The fear of heredity is frequently exaggerated in melancholic families, and may even become an exciting cause of the latent tendency.

The improvement of the defective assimilation powers and the avoidance of excessive centric nerve function are the two chief factors in the physical management of such children. The assimilative functions may be greatly improved by a preponderance of muscular over mental work.

The muscular development may well be aided in early childhood by systematic massage, and later by the approximately passive exercise of riding, both of which may be made to combat the tendency to constipation so often present. The essential training however should be of a monotonous unexciting kind, gymnastics, swimming, and games of skill from which competitive excitement should be excluded. The object should be the cultivation of regular habits of exercise and of the power of endurance, avoiding sudden spurts of energy or exhaustion at any time.

The development of respiratory power should be a special object of muscular training, and this can be greatly aided by the systematic practice of deep respiration. The circulatory power should also receive special attention, not only during special activity but by the use of those gymnastic exercises devised for this end by Schott and others.

Assimilation should also be aided by the sedulous cultivation of the power of developing heat. This is aided by out-of-door life, by the habitual use of light clothing except over the viscera, by the exposure of the extremities, and by the use of cold water in baths or swimming. Thoroughness of assimilation should be cultivated by regularity of meals, but especially by the intervals between these being of sufficient duration for the complete rest of the digestive cells. The food should be plentiful and digestible, rich in fats and in vegetable salts. Meat, except in the form of meat juice, etc., should not be given before the second dentition. Alcohol, tea, coffee, and tobacco should be avoided.

Mental training should be directed to the development of the powers of complete attention, memory, and observation; to completeness and thoroughness of mental function, avoiding the excitements of competition and emulation. Stimulation of the imagination should not be permitted, and the reasoning powers should be developed by suitable studies. The religious and moral training should avoid as far as possible excessive emotionalism.

Altruistic feelings should be kept well within bounds, while social habits should be cultivated as the best means of counteracting the hypersensitiveness and egoistic tendencies so often present. Timidity both moral and physical has to be guarded against and combativeness encouraged. Self-reliance often needs to be cultivated, while the love of approbation, which is apt to be in excess, requires to be checked. I believe greatly in education of the hands in definite mechanical employments in which the habit is developed of carrying a piece of work to completion. Habits of thought control should also be inculcated, and the evils of day dreaming or desultory thought should be taught. Dr. Clouston also insists on the necessity of watching over the order of development of the mental functions.

Sleep habits should receive the most careful consideration, and the hours of sleep, not the mere number of hours spent in bed, should be as prolonged as possible. Regularity is of primary importance, and attention to all details of sleep promotion. My experience inclines me to consider these children sleep best in moister atmospheres than in higher and drier airs; but idiosyncrasy has to be observed even in this. Such persons should be directed to occupations which are free from sudden or periodic stress, and which are regular or unexciting. Sedentariness should be avoided. A mere bucolic life is not always to be recommended. The mental power being often great, danger arises from the cravings of unsatisfied activity.

Great care should be exercised at the approach of puberty against the premature development of sexual ideas or habits of masturbation. These dangers are best guarded against, I believe, by definite instruction and warning. On this point, however, differences of opinions exist. Full occupation of time in mental and physical employment is the best safeguard. In women excess of brain work at this period is especially contraindicated.

Marriage in women should be delayed until the full development of the twenty-fifth year, for the sake both of mother and offspring; and the puerperal condition should be carefully guarded from unfavourable influences.

Melancholic states when established are remarkable for the complexity of their causation. In the same case may be found hereditary predisposition, ill habits of living, peripheral irritations, organic disorders, with toxic conditions and mental causes; and to these are sometimes added the complications of drug treatment.

In early stages the removal of one or more of these contributory conditions will advantageously affect or even completely arrest the progress of the case. Later, when the disorder has become fully established, the vicious cycle of action and reaction of the bodily conditions on the cerebral, and *vice versâ*, will carry on the disorder in spite of the removal of causes which exercised a great share in its development. This view emphasises the value and importance of early treatment, especially in the pre-asylum stage, and is one in which I hope to be supported by the observations of others.

The primary step in treatment, then, is an exhaustive investigation of the patient's history, habits, and environments; a thorough examination of every bodily organ, together with the adoption of the best means for the removal or relief of any abnormality. This for the most part falls within the scope of general medicine, and requires no comment. I would specially insist, however, on the necessity of discovering and removing peripheral irritations in the early stages of disorder.

In treating the conditions directly related to melancholia those connected with functions have practically to be considered before the theoretically primary processes of nutrition. Motor activity constitutes so important a form of expenditure of energy as to need separate consideration. Within due limits it is the most potent auxiliary in the restoration of health, promoting assimilation and excretion while affording the greatest amount of diversion of mental attention with the least expenditure of cortical energy.

Muscular exertion, on the contrary, when carried to excess, may exhaust nerve centres, not easily repaired, under the existing conditions of nutrition, and which may be further embarrassed by the toxic products of waste. The old practice of walking a patient about until utterly exhausted to produce sleep was, I believe, harmful in this way. Abstention from exercise by rest is an equally potent factor for good under certain conditions. Rest, however, does harm when wrongly used just as exercise does.

The question, therefore, that I wish you to consider is not the goodness or harmfulness of rest and exercise, but the conditions under which they are beneficial, and should be respectively employed.

Dr. Batty Tuke in a recent debate on rest and exercise advocated rest in bed as advisable in a large proportion of melancholics, and gave some very striking statistics of the result of such treatment.

The melancholic state being essentially one of nervous exhaustion and malnutrition, this mode of treatment would commend itself as being rational; but we have to remember that although the muscles may be at rest, the mind may still be painfully active, and that therefore rest of body does not include rest of mind which these states specially need. Rest in bed and isolation as in the Weir Mitchell treatment has been found distinctly harmful in melancholic neurasthenics, but I have certainly seen such cases advantaged by rest, without isolation, accompanied by carefully arranged means of diverting the mental attention. The conditions of the rest in bed have therefore also to be considered.

My observation inclines me to the opinion that it is wisest to decide the question of rest or exercise on the merits of the individual case rather than by any fixed rule relating to the class or form of disorder. I have always used rest in bed freely, and have considered it to be necessary in cases of great physical weakness and in cases in which there was great trophic disorder where the patients emaciated rapidly. In complete insomnia, in sitiophobia, or in acutely suicidal cases I have always found it advantageous.

In all conditions, in fact, in which there appears marked depression of the innervation of the organic functions I consider rest in bed to be indicated. Sleeplessness, refusal of food, and acute suicidal impulse in my experience all subside more rapidly under this than under any other conditions. The loss of muscular activity should be met by massage, which should be made as protracted as possible so as to afford diversion of attention to the sensory impressions. The attention should also be diverted and the skin action improved by baths and hydrotherapeutic applications. Mental diversion should be furnished also by reading aloud, music, games, and every means which the mental state tastes of the patient and the circumstances admit. Supervision and companionship should be constant, and little of the day should be left without some attempts at diversion of the attention. The diet requires careful consideration; an excessive diet is commonly indicated, but in some cases even a milk diet is necessary. I have seen great harm result from excessive feeding when combined with rest.

Rest in bed with isolation is indicated in cases of extreme sensory irritability. It is specially contraindicated in erotic cases and in cases having sensory hallucinations or illusions. The return to activity must be gauged by the subsidence of the special symptoms for which it was adopted, by improvement in sleep, nutrition, and especially by improved vascular tone. In resuming activities the results of the earliest efforts must be keenly observed, and short periods of activity should be sandwiched with periods of rest. Relapses constantly occur from too great haste, and nothing taxes the judgment of the physician more than in advancing the patient to that Mecca of the melancholic—a full day in the open air.

The limitation of cerebral function, that is, of cortically developed nervous energy, is the next question for consideration. The mind is more or less active in all conscious states; absolute mental rest is only possible, healthily in sleep, abnormally in stupor and similar conditions. To those engaged in the most complex mental work a change of subject, even to one equally arduous, in health may be a pleasure. A change to a less complex or more familiar subject may be an absolute rest. So that to highly developed minds engaged in complex affairs a change to mathematics or classic translation is a rest and refreshment, while still greater rest results from occupations which are more and more automatic or amusements involving mere sensory attention.

The power of persistence of function varies remarkably in individuals, so that both in quality and quantity of function we find that what is hard work for one man is idleness for another. Regulation of functional output from their point of view is therefore very difficult, and no general rule for guidance can be given.

In pure melancholic states the painfulness of all mental exertion, with other causes, tends more and more to the limitation of intellection and the consequent concentration of attention. In the extreme this is absolutely fixed in the basal most organic emotion—fear, often expressed in one idea, from which no external impression, however forcible, can for a moment divert the mind. I would suggest that the degree in which the power of attention is affected offers a good basis for guidance in our efforts to limit and direct functional expenditure.

It is also a good measure of the intensity of the disorder and a good test of progress. By the diversion of attention—where this is possible—to lower forms of mental action the functional expenditure can be definitely and systematically lessened, and this diversion probably implies comparative rest in those cerebral structures whose nutrition is specially affected.

The relation of the emotions in melancholia to their lowest form of expression must be remembered, and the painfulness of premature attempts at reviving the higher forms should be avoided. The greater the fixation of the attention the lower the scale of mental effort must we descend in our attempts to divert it. Where no voluntary attention is possible our efforts are limited to mere sensory diversion. The appeals to sensory attention may be effected in common sensation, by effleurage, massage, etc., by cutaneous Faradisation or Franklinisation, and by hydrotherapy, in which, by variations of warmth and force of jet, pressure and temperature sensations are added to those of touch. The hot air and vapour bath, the wet pack, and similar means act also in the same direction.

Monotonous sounds, too, were recommended by Burton, such as the sound of falling water. The diversion of attention by these means, though incomplete, is sometimes demonstrated by their producing sleep. A more powerful means of diversion is found in passive sensory impressions involving the lower forms of emotional feeling, for example, of familiarity or novelty, as in viewing new or familiar scenes, listening to music, etc. In this way even the surroundings of an asylum are often beneficial.

Volitional diversions of attention or occupation must also be employed whenever practicable, and in using these we should ascend from those that are merely motor and almost automatic to those demanding sensory attention in addition; next to those involving intellectual, sensory, and motor effort; and, lastly, to purely intellectual work. By thus arranging occupations in our minds in the order of the functional expenditure involved the estimation of their value is more easily made, as well as the extent to which they should be employed.

In order of use they should advance from the most simple and automatic to the most complex, from pulling a roller to the highest intellectual operations. In cultivating the higher forms of volitional occupation patients should be taught and encouraged to break off at the first feeling of imperfect attention, resuming after a few moments of brisk muscular exercise sufficient to stimulate the circulation; in this way the duration of attention may be gradually developed from a few minutes to hours. The greatest efforts, too, should be made in the earlier part of the day. After the last meal the attention should be diverted by the most automatic occupation or by mere sensory diversions.

The attention in melancholia is often directed to some special area of consciousness, to the entoperiphery, the epiperiphery, to the mental operations, or even to volitional side, and I would suggest that benefit is obtained by diverting attention from the affected to the comparatively unaffected activities. Thus where the attention is entoperipheral, as in the hypochondroid and hypochondriac, its diversion should be specially attempted through motor and intellectual appeals. Where the attention is concentrated on the environment appeals to the motor side are especially indicated. The hallucinated insane are amongst the most industrious of our patients, often seeming to obtain relief in the most incessant occupation.

Where introspection predominates appeals to sensory attention and motor activity are, I believe, specially indicated, such cases being specially benefited by change of scene and variety of surroundings. I believe I have found valuable guidance in the management of developing and convalescent cases from these considerations. We shall all agree, I believe, that the whole of the patient's time, as far as practicable, should be occupied by attempts at diversion of the attention, by occupation, amusement, and means of treatment. Melancholics left to their own thoughts are assuredly deepening the mill round of their disorder.

Environmental changes, with the passive influence they exert in directing attention and otherwise affecting health, demand a separate consideration.

The stereotyped statement that all melancholics should be removed from home must not be too readily accepted. Like every other means of treatment, it should only be adopted on good and sufficient reasons. Unless these are present, in the early stages, cases can often be treated to advantage at home until they are sufficiently improved to leave without suffering from the disadvantages which such a change commonly entails. Where the relations are the drawback to home treatment it is always a question whether they or the patient should leave.

These questions of change from home, travelling, asylum treatment, etc., turn on the means, the habits and experiences of the patient, the condition of bodily health, the mental state, and the prognosis—questions so complex that each decision must be arrived at on its own merits.

Those patients in whom attention can still be controlled can therefore be at times treated without removal from home surroundings (when other means of treatment are also practicable) by the revival of accustomed or even novel occupations. Usually, however, change of scene and of social surroundings is indicated both for reasons of bodily and mental health.

When attention is more engrossed by troubles, worries, etc., in the environment, change from home, family, and friends, under careful supervision becomes absolutely necessary. The effects of a simple change of locality should as a rule be tried before venturing on the complex changes of travelling or committing the patient to prolonged unfavorable conditions on board ship. The danger of sending patients travelling without preliminary trial of the effect of change is very great. We must be assured that noisy hotels, irregularity of sleeping, unaccustomed or unsuitable food, and the worries of travelling, will not affect our patient unfavourably. However able the travelling companion, it is difficult to save the patient from some of these and from questions of decision of action which are often trying. Incipience and convalescence are the special stages for this remedial measure.

The social change may be limited to the companionship of a carefully selected person, medical or lay, to the society of a single household, or to the larger society of a boarding-house, hotel, hydropathic, or spa. Usually the social surroundings may be advantageously increased in this order, frequency of change of place being regulated by results. Amongst the poor little can be done in this direction, and resort to more stringent means of supervision is consequently often necessary even in this state.

When the attention is volitionally directed to the self-feeling, where there is uncontrolled expression of the predominant feeling, delusive idea, or impulse, constant supervision and control becomes necessary, either in an asylum or suitably arranged home, with a much greater monotony of environment. The form of supervision is of course mainly dependent on means, but that method is always to be preferred which brings to bear on the patient the greatest amount of individuality of skilful attention. The influence of the discipline and routine of a large asylum is undoubtedly beneficial in later conditions, but in the early stages individual attention and consideration is all important. On the care and skill brought to bear on the early stages of the condition much of the result of the case depends. Attendants and companions therefore should be chosen with very great judgment, and changed without delay if found unsuitable. As a rule the more intelligent the companion the better, but the physician has no nicer duty than the selection of the individual best fitted to deal with a given case.

Defective assimilation is always present in melancholic states—I believe it to be the fundamental defect. To inherent assimilative deficiency are commonly added bad teeth, bad mastication, bad habits of food taking, and improper or insufficient food. Such patients, from the fear of indigestion or from injudicious advice, have often limited their diet in quantity and quality until starvation has resulted. This is one of those conditions the removal of which will often produce a rest in the early stage.

Mouth disinfection is the first step in treatment. The swallowing of the salivary secretion, contaminated and even deprived of its digestive powers, is a most serious matter. The next step is the relieving, if present, of any condition of

retention of food in the stomach by lavage; in hyperacidity with disinfectants and alkalies; in fermentative conditions by disinfectants followed by acids.

The quantity of food must often be, not only in excess of appetite, but in excess of actual nutritional requirements. In the young this latter limit may be largely exceeded with impunity, but later in life, with defective eliminative power, the quantity of meat food and alcohol has to be carefully regulated. Apart from the toxic reabsorption in the intestines from undigested and decomposing meat food, the assimilation of a large quantity of meat extractives may introduce an additional toxic element. Alcohol, too, useful in many forms in early life—yet always to be used sparingly—in later life must be avoided or used only for its stimulant effect at the commencement of digestion. In the later stages it impedes this function. Digestion is not only weakened in power, but slowed in process, so that provision has to be made that the food is specially assimilable, and is taken at such intervals that the stomach is not kept continually loaded.

With milk or artificially digested food, feeding may be very frequent, but with returning strength intervals of three and a-half hours or more should be aimed at. The Kneipp cure is not without its lessons in this respect. In digestibility the food must range from milk or peptonised pancreatised food, to the most *recherché* productions of the *cuisine*. In quality the food should be rich in fats from milk, cream, butter, and eggs. Albuminous food should be limited in elderly persons, and in this quaint old Burton's prescription may be followed. He advises "mountain birds, partridges, pheasants, quails, hens, capon, mutton, kid, and rabbit, with fish that live in gravelly waters, as pike, perch, trout, and also sea fish, solid and white, with plentiful supplies of vegetables and fruit, eaten sparingly, and not overmuch of one dish."

The mode of origin of the abeyance of appetite is, I think, worthy of consideration. Does it arise, for example, from peripheral anæsthesia from lowered nutrition, from defective transmission of impressions from the periphery, from neural defect, or from toxic conditions affecting the pneumogastric centre, or from combination of these conditions?

Fear, the basal emotion in extreme melancholia, not only reduces excretion, but has been credited with producing toxic results by the arrest of metabolism. Eliminative treatment should on this view form the basis of treatment, and is I believe often effective.

The appetite is rarely in excess; toxic conditions and states of arrested digestion are probably the most frequent source of this anomaly; I should like to hear the views of the meeting on this point. The abeyance of the food appetite and the consequent avoidance or absolute refusal of food is one of the most important facts common to all states of melancholia. The basis of the objection to food must in all cases be carefully inquired into in order to exclude such causes as the unaccustomed quality of food or physical conditions of the mouth, throat, or stomach.

When the refusal is undoubtedly of psychic origin, I trust you will agree with me that we should not admit even tacitly the truth of the delusive idea by allowing patients to steal their food or to take food prepared for others, etc.; these procedures may save some trouble at the outset, but are, I believe, bad for the patient and productive of greater trouble in the end. When there is not complete control of the patient such devices may of course be temporarily adopted.

In the minor degrees of refusal much of the success in administering food turns on the skill of the administrator. Some nurses constantly fail, whilst others are almost invariably successful; the result depends, I believe, on the fact that the successful skilful feeder divides the patient's attention by appealing simultaneously to sight, hearing, and common sensation as well as to emotion by sympathetic kindness of manner or facial expression, and to the intellect by kindly talk. Such procedure with a very moderate amount of force and insistence will generally prove successful. At times a few drops poured through the nose will be effective.

Every alienist should practise feeding so as to be able to instruct attendants and to prove in each case the necessity of forcible feeding. The physician should not rely merely on the statement of an attendant, but should verify the condition by observation.

With rest in bed and skilful insistence in feeding actual forcible feeding by the nasal or œsophageal tube may be often avoided. Some observers have insisted that feeding by these means need never be resorted to. In my own practice I largely avoided its use, but in reviewing the question I believe that I undoubtedly erred on the wrong side. I therefore strongly advise that it is better to err on the side of feeding too early and too often rather than in the opposite direction. Absolute refusal therefore should be met by prompt resort to forcible feeding. This is now pretty evenly divided between the nasal and œsophageal tubes. The stomach pump is now almost universally superseded by the chalice.

At a recent discussion on this subject opinions were very equally divided and each method found strenuous advocates. The advantages claimed for the œsophageal tube are the greater rapidity of administration, the power of giving a greater variety of nutriment in a less watery form, and the absence of risk of passing the tube into the larynx. On the other hand the nasal tube has the advantage in cases where there is very determined resistance.

The danger of cultivating the habit of refusal by directing the patient's attention to it is one to be strongly insisted on; the oppositeness and tendency to concentration of attention in melancholia makes this a real danger. To avoid this preparations for feeding should not be made in the patient's sight; active resistance should be overcome by such an amount of force that no struggling or delay can occur, and as little importance as possible should be given to the fact by those engaged in it. The patient's eyes should be closed during the process, which should be conducted with as little talking as possible. The frequency of feeding should be at intervals of not less than three hours and a-half, and from two to five times in the day.

It is scarcely necessary to insist on the advantage of adding lime, lemon, orange juice, or pulped green vegetables, or on the advantages of peptonising and pancreatising the food, or to direct attention to the danger of too great excess of meat extractives. Pounded meat is always preferable to beef-tea. A due proportion of the various elements of food should be aimed at. The position in which the feeding is administered and the precautions to be observed in passing the tubes are too well known to need special comment. Rectal alimentation is the last resort when feeding by the mouth becomes impracticable from exhaustion or other causes. Defibrinated blood has been found of special value in this respect.

The treatment of sleeplessness in melancholia is a point on which considerable divergence of opinion exists, and to which I would ask special attention. Narcotics, hypnotics, or sedatives are vaunted as important curative agents by some observers, but are utterly condemned by others. The history of these remedies is against them. Every year, almost every month, some new drug is brought out, with loud asseverations of its harmlessness, only to fall into desuetude on the appearance of a newer and more fashionable rival.

The nervous and mental disorders resulting from the protracted use of these drugs, where we have known them sufficiently long, are generally recognised, these disorders too being almost invariably accompanied by grave defect of bodily nutrition. Their most enthusiastic admirers will not claim that their beneficial action results from improvement of the general health.

The experiments of Binz, of Bonn, seem to indicate that the action of many narcotics is directly on the brain cells, not on the vessels, and this action is certainly not in the direction of improving nutrition, but corresponds rather to a pathological change.

The question may fairly be asked, In what way do these drugs affect the cerebral nutrition so as not only to avoid producing the ill effects which result from their continued use, but even to relieve abnormal conditions often of long standing? The inquiry may also be made whether the state of insensibility produced by them is identical with normal sleep. In the latter nutritive repair and active reabsorption take place. Do the same changes occur in insensibility from drugs? The experiments of Hodge make it possible to hope that this question will soon be answered on the physical side, and the investigations of Kraepelin in regard to their

effects on mental reactions will probably give a solution from the mental aspect. In the meantime we must be content to rest on observation and experience. The phenomena involved are so complex and little understood that the briefest presentation of them would occupy all the time at my disposal. I would ask, therefore, for expressions of experience and observation rather than for discussion of theory of action. In the past many eminent men have expressed opinions in favour of the curative influence of these drugs. The balance of opinion, however, has I think steadily shifted, and of those who still believe the belief is limited to some one drug or to some special limited form of disorder. The opinion, not of inutility merely, but of their harmfulness and deleterious effects is, I believe, also growing.

My personal observation has led me to the conviction that narcotics and sedatives are often pernicious in melancholia; that they almost invariably protract and intensify the disorder, and their systematic use is to be avoided by every means in our power. Only under conditions in the environment of the patient which preclude other means of treatment do I consider them even temporarily admissible. They are dangerous, not only by exaggerating the condition, but by leading the physician to neglect the more legitimate means of combating sleeplessness and disorder. They are dangerous also to the public, who too readily obtain them under cover of the physician's prescription in their belief of the harmlessness which attaches to the latest novelty.

My opinion is based on results in cases treated by myself, in the great improvement following on omitting their use even where other conditions remain unchanged, on the expressions of those who have been subjected to their influence and on the symptoms of mental confusion and stupor sometimes introduced into otherwise simple cases.

Sleeplessness due to peripheral irritation, as, for instance, in the presence of undigested food in the stomach, must be met by removal or avoidance of these conditions. On this I need not dwell.

The sleeplessness of melancholia is probably due in most cases to the arterial supply not being sufficiently inhibited to reduce it to the level which obtains in normal sleep. Occasionally, however, the sleeplessness appears to be due to excessive inhibition or anæmia. In the majority of cases, therefore, the object must be to divert blood from the cerebral area to other areas of the body, especially, of course, to the abdominal; or where this is for any reason undesirable, to the limb areas. Primarily we should remember that the condition of defective vasomotor inhibition is probably due to the cry of the ill-nourished cerebral cells for nutriment. The first sleep in insomnia usually follows on the taking of food: in slight degrees this occurs directly on the ingestion of nutriment by the mere diversion of blood, but in more severe cases sleep follows later when it is probably due in part to the added supply of nutriment. The return of sleep at the accustomed hour should be promoted by making this correspond with the completion of the digestion of the last meal; this should not give any cause of peripheral irritation, but should be as nutritious and digestible as possible. The brain should also have rest by the avoidance of intellectual effort or emotional excitement during the latter hours of the day.

The diversion of the blood to the abdominal area may be affected by hot fluid food, hot fluids, or a small amount of stomachic stimulation. The general diversion may be accomplished by stimulation of the cutaneous surface by warm baths, the warm pack, abdominal compresses, etc. Stimulating applications of mustard in various ways may also be used. Cold to the feet followed by brisk rubbings is at times efficacious.

No trifle in the environment is too minute to be taken into consideration in the struggle for sleep. The temperature of the air, clothing, exclusion of light and sound, and many minutiæ must receive thoughtful attention. In toxic conditions free action of the skin by the warm pack, etc., is specially successful. Where anæmia is suspected, stimulation of the circulation by a hot bath of short duration or by stimulants is sometimes successful. I have found ergot succeed in some cases of this kind. Digitalis has been advocated by Dr. Batty Tuke in the ordinary conditions. Absolute rest in bed is indicated in extreme cases, but the best narcotic in our pharmacopœia is a day spent in the open air with exercise short of actual fatigue.

Sleeplessness dependent on associated conditions of disease must be met by appropriate treatment. The suicidal tendency common to most melancholic states has to be met by the familiar methods of removing means and avoiding opportunities. The danger of directing the patient's attention and exciting opposition is here also to be feared. *Ars est celare artem*; the patient should be as little conscious as possible that supervision is being exercised, and this, as far as practicable, should be ascribed to other reasons. Rest in bed, or in restless cases in a padded room, is necessary in the most acute stage, but life in the open air is the condition to be aimed at. The actual manual control by an attendant or attendants is always to be avoided; the constraint of a padded room under continuous observation or the freedom of a meadow are always preferable. The relaxation of supervision is a question which must be decided on the merits of each case.

In the moral treatment of melancholia the first step is to gain the confidence of the patient. The most careful and exhaustive inquiry into the feelings and ideas of the sufferer is absolutely necessary. Until we have discovered the fundamental melancholic idea complete confidence is not gained, and the physician's personal influence for good is greatly weakened. In the earlier stages of disorder I consider this influence of the utmost importance. With the complete confidence of the patient reason and volition may often be actively enlisted, and the suggestions of the physician under these conditions have a great influence on the progress of the case. Hypnotic suggestion can rarely be employed in melancholia, and I consider that it should be avoided, since by it volition is weakened rather than strengthened. The confidence of the patient must be retained by absolute truthfulness, by sympathy and firmness. Persistent hopefulness, too, is not without its effect on these patients, however strongly they may deny its influence.

Arrest or recovery in melancholia sometimes follows physical or mental shock, or the excitations of strong emotions. Thus sympathy for friends in sickness and trouble, or the pressure of a real anxiety, will sometimes result in cure. Emotional influences can rarely be brought into play therapeutically. Religious emotion has been tried, but in my experience it is a dangerous means of treatment. Fear also is a double-edged instrument, although at times successful.

Against established delusions all direct reasoning is hopeless, harmful, and to be avoided; those founded on illusion and hallucination may however be excepted. In the stage of doubt, whether in the inception or retrocession of delusion, reasoning and kindly ridicule, especially when indirect, are not without their effect. Fears and obsessions in the early stages may be combated by systematic volitional efforts made at the suggestion of the physician.

Treatment aiming at directly affecting cerebral nutrition is of great importance. Massage of the head, specially with a view of emptying the veins of the head, is of great service; the downstroke of the hands over the head and neck should be accompanied by deep respiration, which more thoroughly empties the veins and probably also the lymphatics. The patients readily learn to do this and should, where possible, practise it frequently during the day. The practice of deep respiration alone, I am assured by a competent observer, has been found of marked benefit in some cases.

Hydrotherapy is of great service. The most beneficial results are, I believe, obtained from alternations of heat and cold by showers, douches, or even cans of water over the head. The alternations should be as extreme as can be borne, to obtain the most marked effect. In women with whom the wetting of the hair is a difficulty, a stream or jet of water directed over the cervical sympathetic may be used. In the young, cold shower baths are of the greatest use; in less robust persons, cold showers to the head may be given with a warm bath. This is of a special use also in some toxic conditions.

Electrotherapy offers, I believe, much scope for aiding the restoration of local nutritional disorder. Especially should this result from galvanism of the sympathetic since the cerebral circulation can be most markedly affected by this

means. With a positive pole in the auriculo-maxillary fossa and the negative on the chest, determination of blood to the head is effected; with the poles reversed, pallor, feeling of emptiness of the head, and vertigo result.

The alternations of these actions, by increasing the cerebral vasomotor activity, might favourably influence nutrition. At present however no conclusive results of treatment are on record.

Galvanism of the brain is of much more difficult application and of much less definite results. It has been specially recommended in conditions of restlessness and excitement.

Faradisation and Franklinisation are chiefly of use, I believe, in directing sensory attention to the cutaneous surface. They should be prolonged in use and varied in locality. Benedikt, Arndt, and others credit peripheral Faradisation with a reflex action on the nervous centres. Counter-irritation is much out of fashion, but I have often found it of advantage in cases verging on stupor, when uncomplicated with toxic conditions. The counter-irritation should not as a rule cover more than the area of a florin, and should be repeated every few days in a fresh locality. Derivation by setons, etc., I have rarely tried, but it is quite possible that they might be found useful adjuncts to treatment in toxic conditions.

Intercurrent febrile conditions have often been observed to restore mental health in the more stationary conditions of melancholia, and in the thyroid extract we appear to have a means of inducing artificially a controllable febrile condition which may imitate these results. The effects of this treatment in the hands of Dr. Clouston appear to have been very striking, but time and further observations are needed to formulate conclusions, both as to results and mode of action.

General treatment must be directed to the promotion of elimination by the skin, kidneys, and bowels. On the best means of effecting these objects I need not dwell. I would, however, insist on the vast importance of making all melancholics ingest large quantities of water or watery fluids, not necessarily with meals, when they often cannot be digested. The habitual use of the hot air and vapour baths is also an important means of treatment especially indicated when there is a toxic condition or suspicion of defective elimination. The warm pack, too, is very beneficial under similar conditions.

Medicinal treatment in uncomplicated cases should be tonic from the outset. Stomachic vegetable bitters and stimulants, such as cardamum and capsicum, are useful. Nux vomica, cascara, and other intestinal tonics are indicated to aid in overcoming constipation. Constipation must be relieved by the usual dietetic and regimenal means, avoiding the use of purges. Iron, where it can be borne, is usually required, administered in small doses largely diluted in effervescing water. Various spas may be visited for this, but the most important point for the assimilation of iron is the taking it largely diluted before food on first rising. Preparations of phosphorus are also useful, but from most of the so called nervine stimulants I have obtained little advantage.

Increase of weight is usually a safe guide in progress in the treatment of melancholia, and in the prophylaxis of relapse stringent watch should be kept on any decrease in this respect or any return of sleeplessness. In other respects the rules for prevention may be applied in the prophylaxis of relapse.

This brief and imperfect summary has necessarily involved allusion to many facts which are so familiar as not to have needed any repetition to such an audience. I trust, however, I have touched on some points which may lead to interesting and useful discussion, and I beg to thank you for the patient attention you have accorded me.

The PRESIDENT thought that the overfeeding of melancholics was too universal, and that in some cases of melancholia the stuffing method of feeding was not good treatment, the object required being to get introduced just as much for nutriment as can be assimilated, as, for example, in cases with renal disease and cardio-vascular degeneration.

Dr. FIELDING BLANDFORD said it was impossible to go through the treatment of melancholia in ten minutes, but he wished to touch on one or two points chiefly concerning patients in the early stage. The question arises, Shall the patient be treated at home or away? If away, where shall he go? He was of opinion that to recommend a sea voyage was bad advice; it was monotonous, there is always the danger of suicide, and there is little to distract the thoughts. Change of scene with appropriate companions was useful, and the majority had to go, but here and there we find a man, whose business is unexciting, who benefits by remaining at his regular occupation. He thought great improvement followed the use of hypnotics in the early stages where six or seven hours' sleep might be substituted for two or three.

Professor VON BENEDIKT (Vienna) touched on the etiology of some special forms of melancholia. The first, he said, was what we might name the "female conjugal melancholia" which is caused by the absence of *libido sexualis* in time of conception, gravidity, and birth. One must guess the reason, as patients will not speak of it, and are not conscious of the reason of their state. The second form he called the "melancholia of the *fiancée*," which arises from the fear of not being a pure virgin. This usually occurs in the most innocent girls. He then went on to say a few words about electrotherapy in melancholia. He considered Faradisation and the Frankline douche most useful in producing sleep where patients are not degenerated by the use of narcotics. He thought that by the continued use of narcotics cases were often aggravated and prolonged, but their occasional use was sometimes beneficial. In cataleptics, he said, the application of galvanic currents with voltaic alternatives along the spine often had the desired effect. He often gets good results from the use of cocaine (3 or 4 milligrammes daily) in melancholia.

Dr. LIONEL WEATHERLY (Bath) thought that Dr. Rayner's paper had been so exhaustive that but little remained for one to say, but there were a few points of practical value which could not be too strongly or too often accentuated. First, he thought the question of gaining the confidence of your patient a most important one, and also that of getting our attendants to do the same; moreover, we should insist that the attendants never attempt to get the patient to obey their wishes by false promises or any process of deception. With regard to rest and exercise, his old friend, Dr. Milner Fothergill, used to insist that there was a fatigue point varying in each individual and at different times, and that beyond this point, whether in rest or exercise, we must not go. He did not think Dr. Rayner made quite enough reference to those cases of melancholia caused by some peripheral irritation, such as hæmorrhoids, papillomatous growths of the rectum, etc. It was most important that these causes should be discovered as early as possible, and by early treatment hopeless hypochondriacal melancholia be prevented.

Dr. NORMAN KERR (London) called attention to the considerable part played by alcohol in the etiology of melancholia as probably due to alcoholic disturbance and perversion of the digestive process. He had often found that restoration of the digestive function had removed the disease. He quoted a case, however, of an abstainer, aged 85, who was cured for a time, after all other remedies had failed, within a fortnight. Dr. Kerr had often found the hot and cold pack useful in procuring sleep, and amongst drugs phenacetin, without any injurious effects. He thought a long sea voyage risky, but a tour with sea and land alternating he had frequently seen most beneficial.

Dr. CLOUSTON (Edinburgh) asked what is the immediate cause of the painful consciousness that is the essence of the melancholic? To obtain this we have to ask its physiological correlation—namely, What is the source of pleasure? He replied unhesitatingly the performance of function is the great source of pleasure; and, in the typical melancholic, the performance of function causes pain, not pleasure. The mechanism through which pleasure arises must, he said, be referred to the sensory cells and the mental sensory cells in the cortex. He believed that in melancholia it was the katabolic process of this cell that had gone wrong, and that it had become too sensitive and too affectively explosive. Were that cell in a normal static condition, no mental pain would result from the toxic poisonings or the reflex irritations that

stand as causes of melancholia. He believed most strongly that the vessels and lymphatics, the neuroglia and the membranes, were the servants, and not the masters, of the cortical cell. He quoted the case of a man who had periodic attacks of sane melancholy, which was always cured by ½ grain of morphine. He thought this sudden cure due to the morphine increasing the static, and diminishing the hypersensitive and explosive condition of the cell. As hypnotics he believes morphine the least applicable, and mentioned paraldehyde, sulphonal, antipyrin, and chloralamid as being of immense value. He believed exercise to be more beneficial than rest, but that both measures were applicable at different stages and in different cases. He thought that by far the best thing we could do was to fatten the patient by every means in our power.

Dr. Batty Tuke (Edinburgh) agreed with Dr. Clouston that the vessels were the servants of the brain, but thought that the latter might go wrong, and that the morbid state of the nerve cell was not necessarily primary but might be secondary to a disordered vascular system. He had long laid down that it was not work but worry that was the more important factor in the production of melancholia. He believed in the efficacy of rest in bed in the treatment of this disease.

Dr. Nicolson (Broadmoor) also thought that the circulation should not absolutely be left out of the question of causation. Indeed, Dr. Clouston's case of the gentleman whose melancholia was repeatedly cured by one hypodermic injection of ½ grain of morphine, it appeared to Dr. Nicolson either the case was not one of melancholia, or else the cell structure could not have been very seriously deranged. Dr. Nicolson's experience as to melancholics whose melancholia came to a climax in the commission of a homicidal act, pointed to a number of cases where the act being of the nature of an explosion the mind settled down with remarkable quickness, and the patients described it as being like a cloud passing away. In some, however, this is not the case, and lasts longer. As to the treatment of melancholics at Broadmoor, the greatest and most potent curative influence was that exerted by convalescent and improving patients, who were at great pains to help the new arrivals in the hospital in every way in their power.

Dr. Eliza Walker Dundar (Bristol) remarked that the early stages of melancholia came before the family doctor, who meets with many special difficulties in treatment. First, the public are ignorant of nerve physiology, and cannot understand that nerve tissue requires rest, time, and favourable conditions to recover; and, secondly, the patients themselves, who do not rightly appreciate the causes of their depression, and fail sometimes to mention them. As regards prophylaxis she thought the appointment of doctors to watch over the pupils at schools might have some good effect.

In reply, Dr. Rayner agreed with Dr. Blandford in reference to the sea voyage, and with Dr. Weatherly, in that the attendants should aim at gaining the confidence of their patients. Hypnotics, when continually used he believed harmful, and agreed that the removal of peripheral irritation was most important. In reply to Dr. Clouston he thought the nerve cell rather deified, and that we must take into consideration the blood and lymph supply.

MENTAL SYMPTOMS IN RELATION TO EXOPHTHALMIC GOITRE.

By A. Maude, L.R.C.P.

Mr. A. Maude read a paper on this subject in which he contended that there was a very definite form of mental change, only lacking in one of his 20 cases, characterised by extreme motor restlessness, extreme insomnia, and occasional sensorial illusions of sight or hearing, but it is doubtful whether some cases of auditory illusions are not dependent on Eustachian catarrh, which Mr. Maude has found common in Graves's disease. He found that the more peculiarly psychical changes were irritability, incapacity for mental application, loss of memory, and untruthfulness, and Sir J. Russell Reynolds has described a condition quite common as "chorea of idea." Another common condition is a morbid sense of duty akin to religious melancholia, but not accompanied by definite melancholia. If definite alienation, which occurred in only one case of the author's 20, does take place, the commonest form is melancholia; delusions of persecution are also frequently seen. Mania occurring in the course of exophthalmic goitre is of bad augury.

MENTAL SYMPTOMS OCCURRING IN BODILY DISEASES.

By Ernest Septimus Reynolds, M.D.Lond., M.R.C.P.,

Senior Physician to the Ancoats Hospital, Manchester; Physician to the Manchester Workhouse Infirmary and Lunatic Wards.

It would be impossible in a single paper to adequately treat of the mental symptoms occurring in bodily diseases, so this communication will only include the results of personal experience during four years' residence in the Manchester Royal Infirmary and five years' work as visiting physician to the Manchester Workhouse Infirmary, which contains over 800 medical beds.

Mental symptoms occurring in bodily diseases may be at the outset divided into those slight mental changes in the feelings and emotions not amounting to actual certifiable insanity, and secondly actual insanity occurring in bodily diseases.

The slight mental states may be roughly subdivided into pleasurable feelings, depressed feelings, conditions of mental dulness, abnormal irritability of temper, and feelings of terror.

Pleasurable feelings, as might be expected, are uncommon, but are seen in some cases of phthisis (spes phthisica), in the early stages of certain poisons (alcohol, chloroform, cannabis indica, and opium), and occasionally in the dying, especially where there is a deep religious feeling.

Mental depression is by far the commonest slight emotional state met with, and may be a natural feeling caused by pain or actual personal inconvenience, or it may be an entirely unnatural depression quite incommensurate with surrounding circumstances. It is found proverbially in abdominal diseases, excepting, curiously enough, in splenic disorders; for the old expression "fits of the spleen" for lowness of spirits and irritability of temper does not seem to be borne out by clinical observation. Contrary to the usual statements, mental depression and more or less hypochondriasis are very common in phthisis, especially as it is observed in the wards of a workhouse infirmary. Intense depression accompanies, and sometimes follows, various fevers, such as rheumatism and influenza. In the interparoxysmal periods of epilepsy depression and hypochondriasis are often marked features, and the after-effects of poisons, such as cannabis indica, opium, alcohol, and carbon bisulphide, are those of depression. Alcoholic paralysis is accompanied by great depression, especially in women, more often by exaltation in men. Vague dragging abdominal pains and hypochondriasis in women should always lead one to examine for movable kidney. The presence of hair on the face in women causes great depression, which may lead on to true melancholia and even suicide.

Mental dulness (which must, of course, be distinguished from unconsciousness) is found in cerebral tumour, in intense headache, in phthisis, in cyanotic states, in disorders of the liver such as cirrhosis and cancer, in cancer of the stomach, and especially in myxœdema.

Irritability of temper, common enough in sick children, is especially common in two diseases of adults, namely, phthisis and diabetes; it is also seen in the gouty, in various forms of dyspepsia, and may accompany painful conditions such as toothache or sciatica. Feelings of terror occur in hydrophobia, delirium tremens, and possibly in chorea and Graves's disease.

Actual insanity occurring in bodily diseases should not include the insanities connected with mental bodily changes such as those of puberty, childbirth, and the climacteric and senile periods. Insanity may occur in any of the following classes of disease: (1) Organic disease of the nervous system, whether cerebral or spinal (including Graves's disease); (2) disease of the heart; (3) disease of the lungs (excluding phthisis); (4) disease of the digestive organs; (5) disease of the urinary and generative organs: (6) certain general

diseases, such as gout, diabetes, and myxœdema; (7) diseases caused by germs, including tuberculosis and rheumatic fever; (8) vegetable and mineral poisons; (9) traumata, including surgical operations. A few remarks only will be made on some of these subdivisions.

Insanity may be found in cerebral hæmorrhage or softening, and may take the form of acute mania, with incoherent and noisy raving and dirty habits; there may be melancholia or mere simple-mindedness, lapsing into complete dementia; some of the early acute maniacal cases recover after a few days or weeks. In the majority of chronic hemiplegics the mental symptoms may only consist of slight emotional changes, slowness of comprehension and judgment, and slight loss of memory; but beyond this there is often but slight mental change. An examination of the testamentary capacity of about eighty hemiplegics showed that those with left-sided hemiplegia were almost all capable of making a will, and it was only amongst those with right-sided hemiplegia that I found any large proportion who were not mentally fit to do so; a result which might have been imagined *a priori* from the presence of the speech centres in the left hemispheres. I have on several occasions known patients suffering from sensory aphasia (word blindness or word deafness) sent to asylums as insane, because of their apparently irrelevant answers to questions, or because of their loss of memory of names, but a careful distinction must be drawn between this condition and actual insanity, and, as a rule, these patients are not proper subjects to be detained in asylums.

In cerebral tumours mental symptoms as a rule come on late, and may be those of steadily progressing dementia, of melancholia, or of hallucinations, with maniacal excitement.

Insanity associated with Graves's disease is in my experience very rare. I have only seen one case in an asylum (acute mania), and another case with mental depression with slight delusions of suspicion. Insanity secondary to organic spinal disease is not common. It may occur as a melancholia or a dementia in disseminated sclerosis (but only when the brain is also affected) and also in locomotor ataxia which very rarely passes on to general paralysis of the insane. I have at present under my care two cases of pure locomotor ataxia who have had delusions of persecution and hallucinations of hearing, the mental disturbance having, however, recovered in about three months.

Occasionally one meets with insanity in valvular disease of the heart. It is sometimes impulsive in nature, as in two aortic cases who both suddenly committed suicide by jumping from heights. More frequently it takes the form of delusions of suspicion and persecution, and a similar condition may be seen in lung affections associated with dyspnœa and cyanosis, the symptoms generally beginning or being chiefly present at night. Very rarely ideas of grandeur are seen in heart disease, but from numerous cases seen in the last twelve years I have been unable to differentiate various forms of insanity as peculiar to various forms of heart disease.

In the terminal stage of gouty kidney, there may appear a wild delirium, or more commonly a noisy acute mania with possibly homicidal impulse and delusions of persecution and poisoning, the immediate friends being often the subjects of attack.

Amongst the diseases caused by germs we find a comparatively large amount of mental disease. Very rarely pneumonia is accompanied by true acute delirious mania (to be distinguished from delirium tremens, so commonly seen in the pneumonia of alcoholics). After pneumonia and typhoid fever a stuporose demented condition, or a melancholia with delusions of suspicion and poisoning, may occur, these cases almost invariably recovering in a few days or weeks. Influenza may set in with very acute mania, with great excitement, delusions, and hallucinations, recovery occurring as a rule; or there may be suicidal attempts in the early stage; after influenza melancholia may set in; less frequently, mania.

The question of so-called phthisical insanity, as judged from the general hospital and not from the asylum point of view, leads me to the opinion that a very small proportion of the phthisical become actually insane; certainly not more than ½ to 1 per cent. The mental symptoms generally present themselves as delusions of suspicion and poisoning occasionally with suicidal attempts, but the type of insanity has appeared to me to be in no wise different (except in the prognosis) from the insanity occurring after pneumonia or typhoid fever. My experience, then, does not lead me to believe that there is a type of insanity peculiar to phthisis, or that phthisis predisposes to insanity in any more marked degree than the other fevers.

I have never seen actual insanity in acute rheumatic fever, but quite recently had a case of gonorrhœal rheumatism who developed very acute mania which recovered within a month.

The ordinary insanities due to alcohol are well known, but in alcoholic paralysis there is very often a peculiar loss of memory of time, and the whole of the mental symptoms seem often to depend on this one factor. In other cases of alcoholic paralysis we occasionally see a peculiar delusion that the patient has a child abed; and this idea is found, not only in women, but sometimes in men.

Within the past few years a process has been used in making macintosh garments for taking away the adhesiveness of india-rubber, and in this process large quantities of carbon bisulphide vapour were inhaled by the workers. (The workrooms are now much better ventilated than they were formerly.) Under the influence of the gas the workmen became very talkative and incoherent, they had vivid hallucinations, became very excited, and performed curious antics, such as turning somersaults, etc. After a few minutes in the open air the mental symptoms gradually passed off. In several cases, however, the mania was lasting and the patients had to be sent to an asylum as they were quite insane, sometimes permanently so.

Although many cases of lead poisoning are seen in a large industrial population, I can only recall three cases of insanity associated with it—one a case of acute mania with delusions of suspicion, and two others with symptoms very like those of general paralysis of the insane (tremors, slurring speech, and partial dementia), but with depression instead of exaltation.

As regards mental symptoms following closely after injuries or operations, I should like to corroborate the opinion of Mr. Clinton Dent that true delirium tremens is more often diagnosed than seen. In the majority of such cases which I have seen in surgical wards the mental condition present was one of acute mania, often very noisy in character and associated with very vivid hallucinations of hearing and sight. Usually the excitement is of a pleasant character, sometimes, however, being accompanied by depression.

As a summary of these very discursive remarks, my own experience leads me to conclude as follows: 1. It is a comparatively rare occurrence for actual insanity to develop during the course of bodily disease. 2. In general hospitals mental disease most commonly occurs after fevers, poisons, injuries and operations, and heart disease (in about this order of frequency). 3. In the early stages of fevers and after injuries and operations mania is the common form of insanity, but in other conditions depression is more common; but the commonest form is an insanity with marked delusions of persecution (often associated with hallucinations of hearing), such as one sees in phthisis and heart disease and after typhoid fever. 4. There is no special form of insanity connected with special bodily disease, so that it is impossible to diagnose the bodily disease from the mental symptoms present (except the peculiar mental state of alcoholic paralysis). 5. Insanity occurs with unusual frequency in bodily diseases associated with peripheral neuritis, as in poisoning by alcohol, carbon bisulphide, and lead; pellagra, typhoid, typhus, scarlet, and rheumatic fevers, influenza, pneumonia, phthisis, syphilis, septicæmia, rheumatism, gout, and diabetes. Is it possible that in these conditions the factor which causes the changes in the peripheral nerves causes also some similar changes in the multitudinous intranumidal fibres in the brain, and so produces disturbances in the normal cerebral reactions which go to make up a healthy mind? 6. Where the cause is not continuous—such as the poisons, the fevers, and the traumata—the mental symptoms in the great majority of cases disappear; in heart disease and phthisis they may disappear and reappear from time to time; but in some cases, such as the insanity connected with gouty kidney, they only disappear with death.

Dr. URQUHART said it was a treat to hear the work done by others not so intimately connected with mental work, and it was fortunate to have men struggling with the lesser forms of mental disease. He briefly alluded to a few points in Dr. Reynolds's paper.

The PRESIDENT thought that mental symptoms were often associated with spinal disease.

Dr. CLOUSTON quoted some figures proving that there most certainly was a phthisical insanity.

SOME MENTAL STATES ASSOCIATED WITH VISCERAL DISEASE IN THE SANE.

By HENRY HEAD, M.A., M.D.

THE mental changes which accompany disturbances may be classified under two groups, as follows: (*a*) Those changes which accompany the disease directly, and are associated with the presence of some abnormal product or tissue change produced directly by the disease (for example, myxœdema). These may be called the direct mental effects of visceral disease, and will be neglected in this communication. (*b*) Certain mental changes which are only present in those cases where the visceral disturbance causes what is known as referred pain associated with tenderness of the superficial structure of the body and scalp. Now this pain and tenderness are due to changes in some part of the central sympathetic system caused by disturbance of the internal organ to which sensory sympathetic nerves are supplied. Thus the mental changes of this group may be said to be indirect, for they are associated with visceral disturbances through the mediation of the sympathetic system.

II. In this communication only the sensory and emotional changes of this group are considered, and the marked changes which may be present in attention and memory are reserved for the fuller communications in a future number of *Brain*.

1. The first change to which I wish to draw attention is a melancholia coming on with extreme rapidity, and lasting a variable time (from a few minutes to several hours). These attacks are completely causeless and may occur with such suddenness as to interrupt a conversation. Under such circumstances the patient leaves the circle with all the appearance of a person leaving the room to vomit. He sits in some room apart weeping uncontrollably, without any idea of the cause of his sorrow. He may be sitting quietly and controlling himself with difficulty when a kind word from a passer-by will set him crying with even greater ease than a sharp speech. Music is intensely disagreeable, and such people will shun any ward or place where singing or playing is going on. During these attacks the patient has an intense feeling that something ill is going to happen, but is unable to say definitely to whom or what the nature of the ill may be. It is a vague but intense feeling of impending ill which makes him write home to know if anything has happened, or leave the hospital and go home. In one case a man with phthisis was so certain something was going to happen that he wrote his name and address on a card and pinned it into his coat before leaving the workshop. All patients in this condition sit apart in some unfrequented part of the wards, and if spoken to give a short answer and then get up and go away. At the time of the attack it is exceedingly difficult to get any information from them, and one is forced to wait till the attack has passed off or is lessening to obtain an account of their feelings. Those patients who can visualise strongly are haunted throughout their attacks by a constantly recurring picture of their home, "dark and miserable, as if in a fog." All colours have disappeared from the room and become grey or black. There is no fire in the grate, no lamp on the table, no sunshine coming in at the window; everything is dark, dull, and dreary. But not only are the colours absent, but everything in the picture of home appears out of place; the tables and chairs are in disorder or upside down. One man described it as "just as if the brokers had been in." This condition of mind may be accompanied by a distinct impulse to suicide, but the impulse is diffuse and not specialised. The reason apparently that it is so seldom acted on is the rapidity with which the emotional disturbance disappears, and the curious fact that the locomotion necessary to carry out the impulse to self-destruction tends to abolish the desire for suicide.

Compare with this what may be called causal melancholia as it occurs in the sane, especially in certain cases of phthisis. The patient perhaps begins the day not feeling quite well, and he begins to think of his wife and family and the possibility he may not work again. His cough is a little worse and he thinks he is losing weight. He becomes increasingly miserable until someone rouses him to take part in conversation or some game, or perhaps he visits a theatre or concert hall. He then loses his misery. This is a totally different condition from the paroxysms causeless melancholia described above, with its sudden onset, feeling of indefinite impending ill, distaste for the society of friends, hatred of music, and causeless weeping.

2. *Hallucinations.*—These may be of sight, hearing, or smell. Probably hallucinations of taste occur, but the mouth is usually in such a condition that it is impossible to be certain that the taste experienced has not an objective basis. All the hallucinations are of a low type. Those of vision consist of a figure or head, either black or white, but never markedly coloured. The figure is draped and not clothed. Intelligent patients of the lower classes have difficulty in explaining this difference, and more than one has volunteered the statement, "They are draped like statues, not dressed in proper clothes." The faces are black, white, or frequently the head is draped "in a sheet," as the women patients usually say. The figures occasionally have long dark hair, and yet the patient is always in doubt about the sex. Sometimes the figure appears at a distance and approaches; at others it flits across the room and out by the opposite wall. In no case are the limbs evident, except only in those rare cases where the hallucination takes the form of a hand appearing through some opening. The figure never speaks, but occasionally seems to grimace.

Of 16 hallucinations of vision in sane patients suffering from visceral disease, 13 were figures wrapped in a sheet or draped. (Of these, 9 were "dark" or "black," 4 "light" or "white." In 7 the face was expressly stated to be "covered." One was said to have a black face, and 1 a very pale face.) Two hallucinations consisted of a face at the bottom of the bed. One took the form of a black hand coming round the half-opened door.

Hallucinations of hearing are not articulate voices. Rarely they take the form of inarticulate voices speaking together or singing "all together and out of tune," but no words are heard, and these patients never think they are spoken to, as is usual amongst the insane. Sometimes the hallucination takes the form of a bell or bells, which grow fainter, and then return, to again grow fainter. Sometimes a noise of knocking is distinctly heard, and the patient will get up three or four times to open the door, so certain is he of the knock in spite of the protests of bystanders. One man sent his wife down in the middle of the night to see why they were mending the road. Taps are heard on the outside of top storey windows. Of 17 hallucinations of hearing, 7 took the form of a bell or bells, 7 knocking or tapping, 2 the sound of a whistle, and 1 of loud breathing under the bed.

Hallucinations of smell are much more difficult to investigate, but seem to occur with considerable frequency. They are uniformly offensive drains, rotten fish, "deathly smells," burning rags or oil, escape of gas are some of the forms assumed by these hallucinations. Now, it is obvious that these are all closely akin to objective smells which may occur in a hospital, and I have therefore exercised a most rigid censorship in all cases of supposed hallucinations of smell. No hallucination has been counted unless the possibility of an external cause could be excluded, and unless the nose had been examined at the time. These hallucinations differ from smells depending on an objective cause in that they are almost always associated with nausea, and occasionally followed by vomiting. A patient may be in the middle of a meal when the hallucination occurs, and the meal is then at an end, and he is obliged to leave the table. I have seen a patient put the remainder of the supposed stinking food aside, certain from previous experience that she would be able to eat it when the smell passed off.

3. The next mental change to which I wish to call attention is a form of delusion of suspicion.[1] These patients fancy that their friends are against them, and when they see

[1] Physical exaltation also occurs, but I must leave the consideration of this form of delusion to the complete paper, as it is too complicated to treat in a short communication.

two people talking together they imagine that these people are talking about them. They always deny that they actually hear what is said, but they are certain all the same that they are being talked about. Just as we found that the hallucinations were of a low type, so here the delusion is broad and ill formed. They believe their friends "want to get rid of them," that "their fellow workmen want to get them sent away," that the master or mistress or superior officer think them "lazy and idle." If they think people are talking about them, it is always that they are lazy, idle, good for nothing, ought to be got rid of. Under no circumstances do they ever imagine a definite charge of fraud, impiety, or immorality, but only of laziness, idleness, physical incompetence. So vivid is this delusion, that these patients frequently accuse their friends, fellow workmen, or employers of desiring to get rid of them; but though impelled to make the charge, they have a sort of feeling that it is not true, and are ready to accept a simple denial.

4. The changes in attention, memory, and temper which occur in these patients will be treated in the full paper, as the conditions under which they occur are much more complicated than those necessary for the production of the changes mentioned above.

III. These changes are associated with the presence of referred pain.

Disturbance of the various organs of the thorax and abdomen may cause pain which is what is called referred as opposed to local. This pain, if sufficiently intense and of sufficient duration, will be accompanied by tenderness of the superficial structures of the body.[2] Whenever any of the areas on the neck, chest, or upper abdomen are present (third cervical to subumbilical inclusive), they tend, if sufficiently intense, to be accompanied by tenderness of the scalp, as I showed in my second paper.[3] In most cases the presence of body tenderness without scalp tenderness shows that the disturbance is not very profound, and thus the presence of scalp tenderness, with any disturbance of the thoracic or abdominal viscera, assures us that the disturbance in the nervous system is well marked.[4]

1. On classifying 169 cases of visceral disease of which I have complete and careful notes, we find that 87 cases suffered at one time or another from referred pain associated with superficial tenderness. Of these 87 cases 60 showed the typical depression I have described above, 31 had hallucinations during their stay in the hospital, 19 gave a history of hallucinations before admission, and 32 showed the delusion of suspicion. Of the 82 cases without referred pain or tenderness, none showed the depression, and none had hallucinations during their stay in hospital; 3 gave a history of hallucinations before admission; none showed the delusion of suspicion.

2. The mental disturbance seems to stand in direct relation to the intensity of the pain and tenderness; for if from the first group (87) we subtract 17 cases in which the scalp tenderness only occurred once during their stay in hospital and 8 in whom tenderness was present on the body, only 62 cases remain in which the disturbance of sensation was well marked. Of these 62 cases 59 showed the typical depression and 3 were doubtful; 31 had hallucinations in hospital and 15 gave a history of hallucinations before admission; 32 showed the delusion of suspicion, and 3 were doubtful. On the other hand, of the 17 cases who only showed scalp tenderness once during their stay in hospital, 1 showed the depression, none had hallucinations, 3 gave a history of hallucinations, and none showed the delusion of suspicions. Of the 8 who exhibited tenderness of the body only, none showed the depression, none had hallucinations, 1 gave a history of hallucinations, and none showed the delusion of suspicion.

3. Local pain, whether associated with deep tenderness or not, is not associated with these mental changes. Eight cases of pleural pain showed none of the above-mentioned mental changes. One case passed through a pleurisy without mental change, but some weeks after developed the typical mental changes in association with definite referred pain—not local, like the pleural pain—accompanied by superficial tenderness—not deep tenderness, as with the pleurisy—caused by the implication of the lung itself by the tuberculous disease. In the same way the local pain of peritonitis causes none of the mental changes I have described above.

4. The depression seems to be associated mainly with the presence of areas over the lower part of the chest and over the abdomen. The hallucinations are only present where scalp tenderness is a marked feature of the sensory disturbance.

5. The clinical conditions which lead to the development of the referred pain and tenderness in phthisis, cardiac disease, anæmia, etc., and why one case suffers from referred pain and mental changes from which another case remains free were hastily treated before the Section, but can only be described in the full paper.

IV. The method of work was then described. Each case was either in the Victoria Park Hospital for Diseases of the Chest or under my own constant supervision for a considerable time (six weeks or more). An elaborate system of notes was adopted, including a careful present state of the nervous system and special senses. All the notes were taken by myself, and the diagnosis of the physical condition assured by the valuable aid of my colleagues, to whom I wish to return my sincere thanks. Charts of the sensory changes were repeatedly taken. The occurrence of any fresh mental change was the basis of a careful present state, whilst the special senses were re-examined with every hallucination.

I wish to return my sincere thanks to the medical staff of the Victoria Park Hospital for the extreme liberality with which they permitted me to use their cases not only during my period of office as house physician, but also after my official connection with the hospital had ceased. My especial thanks are due to Dr. Sainsbury, Dr. Chaplin, and Dr. Colbeck for the infinite pains they took to assure the correctness of the description of the physical condition in different cases.

[2] Brain, 1893.
[3] Brain, 1894.
[4] In my two first papers I treated these areas of tenderness mainly from the territorial aspect, giving only such cases as threw light upon the topography or connections of the different areas. The consideration of the clinical significance and value of large groups of areas, together with a full discussion of the part played by cachexia, etc., in their production, will form the subject of the third of the series.

A DISCUSSION ON INSANITY IN RELATION TO CRIMINAL RESPONSIBILITY.

Introduced by Henry Maudsley, M.D., F.R.C.P.,
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In opening a discussion on insanity in relation to criminal responsibility, I cannot help feeling that the task which I have undertaken is as likely to be as barren of profit as of novelty. There is little, if anything, to be said that has not been said over and over again, and will not have to be said over and over again. For, in spite of its proved unscientific basis and its condemnation from time to time by eminent judges, the legal criterion of responsibility is still in full vigour.

There are few, if any, medical men having practical knowledge of the insane who would assent to the proposition, understood in its natural sense, that an insane person is fully responsible for what he does when he knows the nature of his act, and that it is a wrong act. The saddest cases of melancholic anguish to be seen are those in which the sufferer is tormented with a horrible impulse to do, and perhaps does, what he knows and loathes as wrong; the driving impulse in him so strange and contrary to his true nature and desire, so repugnant yet so compulsive, that in olden times it seemed explicable only as a positive possession by the devil or other evil spirit. As I have said of it elsewhere, the basis on which the legal criterion rests is simple enough—that a man in convulsions is a strong man, and is culpable if, being conscious of them, he does not stop them. Consciousness of is assumed to mean power to control, the mad impulses of a deranged mind: a will insensible to the influence of legal sanction to be the same thing as a will capable of being influenced by it. The theory would have enacted from the man who knew himself possessed by the devil, and thus dispossessed of himself, that he should possess himself all the same and master the devil in him, or else suffer punishment for the devil's doings. A rather unequal contest that; the man against the devil, with the devil in possession of the citadel of the man's being. Put the word disease in place of the word devil, and you have the exact situation of the modern madman in relation to the legal test.

The test has its foundations, however, only they are laid in wrong observation and bad psychology. The observation

is self-observation by sane minds, and its natural result is the fixing of a sane standard of feeling and action as the measure of insane feeling and action. Could anything be more absurd? Surely the right method would be self-observation in abnormal, not in normal, mental states—in dreams, in hypnotism, in allied disintegrate states; their mental disintegrations furnish the proper standard of comparison for the vagaries of insane thought and feeling. Now I venture to say that no one who reflects sincerely on his own experience in dreams, remembering how strangely he thinks and feels in them, and how entirely he loses possession of himself, can believe that a madman is responsible for what he feels and does in the waking nightmare which madness sometimes is.

Then again the psychology of the legal test is at fault. It assumes, at any rate its defenders sometimes assume, that reason is the motive force of human action—that is to say, for example, that people fall in love from reason, and, when in love, embrace from reason, and after due embraces, proceed further in the business from reason. Is not that again a pretty absurdity? How many times has feeling its reasons which reason cannot fathom. The driving impulse by which men are moved to act comes from feeling, not reason; disordered feeling, therefore, is quite capable of actuating the most disordered action without consent of, perhaps directly against, reason. Had mankind been moved by reason in their travail through the ages, they would not have been where they are now. For it is in the heart, not in the head, that their deepest faiths are rooted; and he does an ill service to religious faiths who strives to base them on the feeble apprehensions of human reason. A psychology which finds the motive power of action in knowledge might be likened to a science which should find the cause of the tidal movements not in the moon but in the moonshine.

But it may be contended that reason, though it supply not the motive force of action, can still control and guide it. That is so no doubt within measure. Let reason and feeling be wed in fit harmony, if possible, since they are the two elements of will, and cannot do without one another, reason without feeling being impotent to act and feeling without reason being tyrannical in act. It is not true, however, that reason can always control the desire when it knows its good or bad quality and can appreciate the right or wrong of it. A mad desire is sometimes mad enough to have its convulsive way in defiance of reason. Nevertheless, though that is what experience says plainly, legal theory will not have it so; it maintains that when reason fails to check a mad desire it is not sound reason really, knows not then truly what it seems to know and thinks it knows; the person had not actually the untainted consciousness of right and wrong in the particular case on the particular occasion. His act fell short of being a full crime, not because reason did not consent, but because reason was so infected itself without knowing it as not to dissent effectually. To save a beloved theory we are asked to give a large and liberal interpretation to the word "know," to make it mean what, on the face of it, it does not mean, and to read into a person's consciousness a vitiation of which there is no evidence—to say, as the late Sir James Stephen would have us say, that if a man cannot control himself he does not properly know the nature of his act. So far as this somewhat strained subtlety of interpretation serves to prevent a madman from being punished for a crime which not he but his madness has done, it deserves praise; but when it operates to get him punished for what his madness does, to get him hanged perhaps for being mad, it is not so praiseworthy. The test is too metaphysical for use, even if it were true.

No person, however acute, can dive into the depths of another person's mind and know, what he does not know himself, how far his consciousness of right and wrong is vitiated on a particular occasion; and it is certain that when a common jury is asked to make the delicate appreciation they are not likely to trouble themselves with a subtle metaphysical interpretation. They will understand it in rough-and-ready fashion to mean that if he knew what he was doing, not the quality of what he was doing, he was responsible.

Why, then, maintain a test so hard to understand and so easy to misunderstand, so false in science and so uncertain in application, so often interpreted in different ways by different judges, and not always interpreted twice in the same way by the same judge? Why wrongly bias the judgment of the jury by an express prejudgment of facts which ought to be left impartially to them to weigh and judge? Such a prejudgment is essentially prejudice and the legal reverence which it receives no better than superstition.

Moreover, it is a procedure of doubtful legality. For what right in law has the judge to lay down a particular test of disabling mental disease? Is not that a usurpation on his part, an abuse of law? Are not all the symptoms of mental disease and all the tests of its existence and of its degree of existence in a particular case properly facts for the jury? If so, the express imposition of a special test is an interference with the province of the jury, and, as Mr. Justice Maule foresaw when he dissented in the famous conclave of the judges, prejudicial to a fair trial. What the judge does by imposing his test is to instruct the jury wrongly on a matter of fact which it is their function, not his, to judge; by an allegation of fact which is not fact, he gives false evidence as a witness without submitting himself to cross-examination. A particular test of disabling insanity is no more a matter of law than the test of a particular poison; it is rightly a matter to be proved in evidence in the particular case, like other relevant facts.

So far from being a help to the jury in a difficult inquiry then, the judicial dictum confounds and misleads them. Were the court sincerely minded to help, it might do it in a better way than by a difficult and dubious test of disabling mental disease. It might take means to inform the jury fully and truly concerning the nature of the particular form of mental disorder in question and the extent of its damaging effects on the mind, either by providing them with impartial and competent scientific evidence, called by the court itself, or by appointing a competent scientific authority to assess the value of the scientific evidence given. To a body of men who understand not even the terms used, the opinions of opposing experts which a competent assessor would easily estimate at their proper value, are equally valuable or valueless. What an absurdity it would seem, had not custom made it seem natural, as custom will make anything natural, to expect a judge and jury, ignorant of the very elements of chemistry and electricity, to be so adequately instructed by what they hear during the course of a trial as to decide rightly a difficult question of chemical or electrical science. If it be a question of navigation when two vessels have come into collision, about which every juryman who has been in a boat might be expected to know something, the services of a skilled assessor are called in; but if it be a question of complex science, of which the jurymen know absolutely nothing, it is left to the intuition of ignorance to give understanding. What is the result? That the issue would be decided quite as justly, perhaps more justly on the whole, by the toss up of a penny, without the tedious solemnity of wasted talk and time.

Of the judicial test of responsibility in particular, and of the method of legal procedure in general, we may justly say that they are very ill-fitted to find out the truth, very well-fitted not to find it out. In summary, the charges against them are these:—

1. The court has no more right in law to set up a special test of responsibility in a case of mental disease than to set up a particular chemical test in a case of poisoning.

2. To do that is really to give important evidence to the jury without permitting the evidence to be cross-examined or contradicted.

3. The evidence so given is bad, for the test is wrong in fact, and based on unsound psychology.

4. It can be made decently workable only by construing it in a non-natural sense, and ordaining that words which say one thing clearly shall mean another thing obscurely.

5. The court makes no provision to obtain impartial scientific evidence, but requires or allows the parties in the case to ransack the medical highways and byways in order to obtain contradictory evidence with which to confound a jury ignorant of its meaning.

This condemnation of the present system of procedure may claim the assent not of medical men only, but of the common sense and conscience of the community, which, after all,

is actually in a sort of tacit rebellion against it. For what happens now when a person about whose mental state there is some doubt is condemned to death? Why, that the competent medical knowledge is summoned to give the impartial help which ought to have been given at the trial—perhaps to undo quietly in private the wrong which has been done with all the pomp of justice in public. Nay, more; I notice from time to time nowadays that an insane person accused of crime is not put on his trial at all, but that someone in authority has, or usurps the right to have, him examined medically and sent to an asylum. Thus is the Englishman robbed of what he cherishes as his blessed privilege—the right to be tried by a jury when he is charged with crime. On mere medical evidence that he is mad he is shut up for life because of an offence for which he can never get himself tried.

So much by way of criticism from the medical standpoint. Now let me try to look at the matter from the legal standpoint. Lawyers think that medical men are too ready to discover insanity when crime has been done and to claim irresponsibility for everybody who suffers from any sort and degree of insanity—in fact, to make all crime insanity, not entirely without excuse. They judge by what they see in courts of justice; and what they see is that there is no case, however weak and indefensible, that does not, for some reason or other, obtain medical support. They put down, therefore, to unsound medical theory what is really unsound medical evidence—which, obtained, perhaps, by hook or crook under the present fashion of procedure, any competent medical authority would assess and reject as worthless. They hear the opinion of him who presses forwards to give it; they do not hear the opinions of those who, having been urgently asked, refused to give it. Naturally therefore they conclude one of two things: either that there is no such thing as exact medical science or no such thing as exact medical honesty. The result is that expert scientific evidence, which should be decisive, has the least credit of any kind of evidence given in a court of justice. For this discredit the law is not to blame; its blame is that, knowing the weakness of human nature, it maintains a system of procedure which makes it inevitable.

Another circumstance which justifies legal criticism is the common medical habit of discussing the question of responsibility in relation to insanity in the abstract, as if insanity were some definite and constant entity, something which is altogether or not at all, and, being there, ought rightly to exculpate entirely. One might just as well discuss whether bodily disease in the abstract ought to prevent a man from walking ten miles a day. The truth, of course, is that there is no such definite morbid entity as insanity—that there are really as many insanities of mind as there are degrees and kinds of derangement of it. It is with insanity in the concrete and particular that we have properly to do; and, just as one bodily disease ought and another ought not to prevent a man from walking, or from doing one thing while he may do another, so one insanity of mind abolishes entirely a responsibility which another does not. The right question is the disabling effect of the particular mental disorder in the particular circumstances—a question to be decided by full, impartial, and competent consideration of all the facts of the case, by a consideration, that is, fitly instructed to appreciate their nature and bearing, not as now by incompetent consideration expressly misinstructed.

Time would not serve now to discuss the degrees of disabling moral and intellectual damage done by the various forms of mental disorder, some of which after all are not so much states of actual disease as bad habits of thinking and feeling grown into deformities. What I venture to make here is a protest against the assumption that insanity in the abstract, meaning thereby all insanities of whatever sort and degree, should of itself be deemed irresponsible. And I take or make the occasion to utter another protest—a protest against the lamentable extravagances into which the latest school of criminology has been betrayed. I should be loth to say a word to discredit the scientific method of studying crime and criminals or to disparage for a moment the good work which has been done; but of undigested observations and sensational theories I hope it is not too much to say that, though they make the vulgar stare, they make the judicious grieve. Science on the platform, like philanthropy on the platform, runs no little risk of demoralisation; the performers are under a strong temptation to play to the gallery and to burlesque science.

To say that there is a criminal nature which is degenerate is one thing, but to go on to say that all criminals are degenerate and bear the stigmata of degeneracy is another and, I think, quite false thing. I do not see why crime should necessarily be degeneracy. I can conceive a murderer being a nobler animal than a saint of the Peckaniffian sort. A murderer on a big enough scale, big enough to despise the fools whom he uses and sacrifices for his ambitious ends, is he not a hero? Criminals there are certainly who are defective in structure and conformation of body and mind, beings who, if not protected against themselves, must go wrong. There are criminals, again, who are more or less insane in the statutory sense, and are explained or excused by their insanities; but there are criminals also who, in other circumstances, might perhaps have been as great saints as in the changes and chances of things they became great sinners. For assuredly the external factors of circumstances count for much in the causation of crime; time and chance happen to all men, and no criminal is really explicable except by a full and exact appreciation of his circumstances as well as his nature, and of their mutual interaction. For my part I sometimes wonder whether the new school of criminology would have found the stigmata of degeneracy present in Saul, the fiery persecutor of the early Christians, and found them gone when, transformed from iniquity to holiness, he became Paul, the great apostle of the Gentiles.

Has not the theory of degeneracy been abused of late? As used by Morel the term had scientific meaning and value, but much has been done to rob it of definite meaning by stretching it out to cover all sorts and degrees of deviations from an ideal standard of feeling and thinking, deviations that range actually from wrong habits of thought and feeling to the worst idiocy, and some of which are no more serious marks of morbid degeneracy than long legs or short legs, long noses or short noses. Moreover, as often happens with big-sounding words that have no definite meaning, but are used habitually as if they had meaning, the meaningless name has been converted into a quasi-metaphysical something, so that many persons think, when the word degeneracy has been spoken, that all has been said that need be said, though nothing actually has been said.

To me it seems that the conflict between law and medicine might soon end if words and theories were swept aside, and the facts dealt with on their merits. Let the lawyers renounce unreservedly their discredited test of disabling mental disease, and submit all the facts in a particular case impartially to the jury. Medical men on their side should discard the notion of insanity in the abstract, and leave off talking of it as if it were something definite and constant, which annulled all responsibility. To place before the court as plainly as possible all the facts of the particular form of mental derangement in the case; to explain what they mean according to the best scientific information, and how far they affect the mind; and to leave it to judge; that is our proper medical function.

The question of legal responsibility is a legal, not a medical, question. As witnesses, we have nothing to do with the right or wrong of the law, though we may properly criticise it as citizens. The business of every society is to protect itself, and it has the might, which is the right, to make what laws and to inflict what punishments it thinks best for its own protection—to hang for theft or flog for fornication, if it likes. Naturally each society will think its own laws and punishments the more right, other laws and punishments less right. But be the enacted law right or wrong, the individual, in whatever social medium he is placed, must obey it or suffer the penalties of disobedience: he lives for the society, not the society for him, and, living for it, he must die for it, even though he be mad, if it think fit.

What, then, as the conclusion of the whole matter, is there left for us to do? So far back as I remember we have been criticising the legal test of responsibility, condemning it by formal resolution, petitioning for commissions of inquiry into it, demanding its abandonment; yet we are still voices

crying in the wilderness and doomed apparently to go on crying. However, we have made some way; we have seen it condemned by the best, magnified only by the worst, judges; and we have had an interpretation of it by the late Sir James Stephen which, if it does not radically change its meaning, makes it include practically all we ask for. If it really include not only (1) knowledge of the nature of the act, and (2) knowledge that it is wrong, but (3) control of conduct, it is a pity that all judges do not understand it properly; a pity, too, that Sir James Stephen did not take steps to have his construction of it tested, as he might have done in a way suggested by himself, that is, by expressly directing the jury according to it in a particular instance and then stating a case for the Court for Crown Cases Reserved. Perhaps, knowing the conservative tenderness of the judicial mind, he feared to jolt but hoped to infiltrate it. One may suspect that he himself, though direct and thorough in thought about some things, still in legal matters loved the good old way of the English mind—to keep the old names when the meaning has been taken out of them or a quite new, perhaps opposite, meaning put into them, to accept the gradual dissolution of the substance of a belief so long as the label of it is left intact.

The President said they must all be delighted at the intellectual treat which they had just had, and proposed a vote of thanks to Dr. Maudsley, which was carried by acclamation.

Dr. Nicolson said this was an occasion on which to be congratulated at Dr. Maudsley coming out amongst us once again. In him we have an expression of the soundest judgment. He looks the matter straight in the face unbiased, and has put our position and views in a nutshell. What he has put before us leaves little to argue about; it is so fraught with common sense and judicial consideration that it must have its effect on all of us. Dr. Nicolson thought we could not be too careful in dealing with each individual case separately. He thought that there would be great danger in allowing prisoners to be examined and cross-examined in their cell, and he deprecated the admission of the wife's evidence as to the prisoner's guilt or sanity. He considered the tests given to the jury unsatisfactory, but entered a word of warning against any alteration in the present mode without due consideration.

Dr. Urquhart was glad that Dr. Maudsley had not laid down any new law. He was of opinion that the question of the prisoner's state of mind would be better left to the Court for Crown Cases Reserved.

Dr. Mercier said if they wanted the law altered reason would have to be given and special cases quoted in which actual injustice had been done, and he challenged those present to show a single case in which actual injustice had been done. As a member of a special committee to inquire into it he had come to the conclusion that there had been none for many years past. Under the present conditions he considered that actual facts were submitted to the jury. He quoted a case, lately before the Court, to show the latitude medical witnesses are given at least before one judge, and thought medical men were seldom tied down to the mere word of the law.

Dr. Weatherly characterised the address as being one of the ablest ever given before the British Medical Association. He thought that each case should stand on its own merits. It should not only be proved that the man is a lunatic, but that his act is the outcome of his lunacy. He holds that if justice is done to the man it is done in the condemned cell, but as it is done there, and not till he is there, it shows that injustice was done to him in the court of law. A man insane at the time might be quite sane after he is condemned. Much has been said on capital charges, but there are many persons found guilty of minor offences and punished, in which there was a total absence of moral responsibility. He thought it too often largely depended on the judge before whom the prisoner was tried.

Dr. Norman Kerr said that up to 1867 persons who had committed a crime while under the influence of delirium tremens were hanged, but quite recently Mr. Justice Hawkins had allowed this to justify exemption.

Dr. Savage said: "I think more attention might have been paid to the scientific part of Dr. Maudsley's paper. I quite feel that man is as much or even more a feeling than a reasoning animal. Lawyers rather want to gauge actions the outcome of feeling by the rule of reason. We all seem agreed as to the importance of getting rid of the definition or test of knowledge of right and wrong as the test of responsibility, but do not let us substitute any other definition. With Dr. Orange, I do not believe in criminal insanity but in criminal lunatics, and each person must be measured by his own standard, and not by a standard of what is insanity in the abstract. English society will never admit medical assessors to take the place of English juries, and the one important thing for us to aim at is to get the facts indicating insanity fully laid before judge and jury, not as partisans but as witnesses of truth; judges will differ, and we must put up at present with their peculiarities in accepting expert evidence, and I agree with Dr. Weatherly that much is to be desired on this point. I do not agree with Dr. Norman Kerr that all, even temporary, insanity will ever be accepted as a saving clause of all acts done by a patient. That a person believes the moon to be made of green cheese will not be accepted as a reason for murdering his grandmother; yet if sufficient evidence is given some relationship may be traced, and the medical witness ought to be able to lay clearly before the jury his views. We doctors are not infallible, and we must be prepared to let the jury fulfil their function. We have had an admirable paper and a good discussion."

Dr. Clouston differed from Dr. Mercier in that no case of injustice had been made out. He thought that about half of all criminals solemnly tried and condemned to be hanged were afterwards made out insane, and relegated to Broadmoor. He described the method gone through in Scotland, and said that a murderer found insane was sent to an ordinary asylum. He thought if gaol surgeons were properly instructed in insanity, fully half the scandals would be avoided. He agreed that the personal equation of the judge should be left out altogether. Thought criminal lunatics should not be sent to Broadmoor during her Majesty's pleasure, as many cases were curable in a few months, whereas they were now detained for the rest of their lives.

Dr. Nicolson took exception to this last remark, and said that they did not remain at Broadmoor their whole life, and that they had from six to eight discharges in the course of the year. Also, after looking up the point, he said that instead of 50 per cent. of those committed for murder being reprieved, the actual percentage was 5.6 for a period extending over 30 years.

Dr. Shuttleworth wished to make a few remarks on cases of arrested brain and mental development involving the mental faculties. Dr. Shuttleworth had experienced no difficulty in bringing under the notice of the judicial authorities the abnormal mental condition of the accused, and he quoted a case in which Sir James Stephen put it to the jury whether the accused was capable of pleading or not, and on his (Dr. Shuttleworth's) evidence discharged the boy to the care of his father, binding him over to produce him for trial when he should become capable of pleading. The difficulty in these cases was that with great moral deficiency there is sometimes but little intellectual deficiency; and it might be a question as to the degree of knowledge of right and wrong a patient possessed. Dr. Shuttleworth did not hold the view that a slight degree of imbecility should exempt from all punishment. He urged that much depended on surroundings and training, and many cases of imperfect and arrested development drifted into crime because their environment was unfavourable, and the necessities for special training not understood.

Professor von Benedikt referred to the place alcoholism and sexual perversion took in reference to crime. The question was, Should the man be treated by a medical man or a judge? There were many people, he said, who committed crimes over and over again, and were punished for them, and were not morally responsible. Insanity is a matter of degree, and he believed in partial insanity, which he thought should be recognised.

Dr. Usher referred to the mode of procedure in Australia, and said it was not uncommon for a criminal convicted to call for a Board to examine him as to his mental condition. He can also ask for an examination before his trial.

Dr. Oscar Woods thought the law very uncertain, and gave an instance.

Dr. Douglas did not agree with Dr. Mercier in that the law was all that it should be. He thought that it was out of conformity with the views of to-day.

Dr. Rayner thought that undoubtedly injustice was done in many cases by condemning a man, and then letting him off; and he suggested that the Home Secretary should be asked in Parliament in reference to each case as it occurred. He thought it impossible to eliminate personal equation and the prejudices of the judge.

Dr. Maudsley, in reply, said he thought they were all agreed that the facts should be put straight before the court without prejudice. If judges were only uniform, much difficulty would be removed. He agreed that injustice was undoubtedly done by a parade of justice, condemnation, and afterwards removal to Broadmoor. He thought that judges, as they got older and gained experience, abandoned the right and wrong theory, and placed the facts straight before the jury.

THE SURGICAL TREATMENT OF IDIOCY.

By G. E. Shuttleworth, M.D.

Formerly Medical Superintendent of the Royal Albert Asylum, Lancaster.

Craniectomy in microcephalus having been much referred to both in the medical and lay press as serviceable in promoting brain development in that form of idiocy, it became necessary to examine the evidence upon which such an opinion rested. Tracing the history of the operation with which since 1890 the names of Lannelongue of Paris, Keen of Philadelphia, and Victor Horsley were specially associated, Dr. Shuttleworth argued that the experience of five years did not sustain the sanguine expectations of early operators. As microcephalus was indeed not (as a rule) dependent on premature synostosis, but on original faulty brain development, the operation was never a promising one; and though it was now contended that in some cases a conflux of blood and consequent improved brain pulsations were produced by it, the after-history of cases operated on some years ago did not show more mental improvement than would probably have occurred independently of the operations. Bourneville (of Paris) indeed had demonstrated that such operations in the long run tended to diminish cranial capacity, as exuberant bone growth was apt to take place where bone had been excised. In microcephalic cases more benefit was to be expected from training than from operation. In cases of mental deficiency with pressure symptoms—as in traumatism and hemiplegic cases—there were good indications for operating, and in hydrocephalic and hypertrophic cases of imbecility tapping or trephining might be beneficial. A remarkable case of syphilitic imbecility (inherited) with epileptic symptoms, much benefited by trephining, had lately been reported by Mr. Anderson, of St. Thomas's Hospital. Operative procedures followed by special training might indeed be of use in some forms of mental deficiency in childhood, though not in ordinary microcephalus.

Dr. Fletcher Beach agreed with Dr. Shuttleworth that craniectomy is of no use in microcephalic idiocy, and pathological anatomy has shown us that the theory on which it was originally based rarely exists. He believes it of use in those cases of traumatic origin and in those cases of hydrocephalus and hypertrophy of the brain.

Dr. Telford-Smith gave the after-history of a case quoted by Dr. Shuttleworth in which the improvement was very slight, if any. He also said that Professor Cunningham, of Dublin, had found that arrest of development of the brain leading to microcephalic idiocy takes place at fourth month of intrauterine life.

INSANITY OF CONDUCT.

By Geo. H. Savage, M.D., F.R.C.P.

Formerly Medical Superintendent of Bethlem Lunatic Asylum.

Dr. Savage brought forward a number of cases to show that there are many insane conditions in which the conduct of the patient must be the gauge of the disorder, and that, though we do not ignore intellectual and sensory disorders, yet besides and apart from these the conduct of the patient must be studied and recorded. There is, he said, often more disorder of the conduct than of the speech or writing in the insane. An act may be the symptom of insanity quite apart from any apparent intellectual defect. The law does not recognise this enough. In legal certificates and in the evidence of medical men most stress is laid on words said, and greater latitude should be given for the admission of the history of insane actions. Moral insanity has a real existence, and is a division of the insanity of conduct. Dr. Savage then quoted cases showing that insanity of conduct is well seen in some so-called hysterical cases, in which a young girl sent anonymous letters to a cousin who got engaged, and to other young men, with vague threats and suggestions. She also got untruthful, and had a curious skin eruption, proved to have been produced by herself. It is seen at times in the highly intellectual, in poets, inventors, and in many geniuses. It is seen as a stage of other mental disorder, such as in mania and melancholia. It is seen in degenerative and senile cases. It is seen as a result of chronic insanity. It may occur with some form of so-called monomania, such as kleptomania. On the other hand, he quoted cases to show that there are certain persons whose conduct is perfect, and yet who are defective intellectually. One case, that of a lady, heiress to considerable property, who had been placed under the most favourable conditions for education, was at 21 unable to do the most simple sum or even read, but passed in society as quiet and shy, but not evidently mentally defective.

Dr. Mercier read a paper on the same subject and quoted a case in which insanity was evidenced mainly—practically entirely—by conduct, and in which disorder of mind, though not entirely absent, occupied an altogether subordinate position. A gentleman, who had had a brilliant career and distinguished himself at college, entered a profession, rose high in it, and displayed abundant evidence of exceptional intellectual attainment. At length something happened which compelled him to retire from his profession. He now eschewed the society of his equals, alcoholic debauches became more frequent—had from his college days been addicted to drinking in a sottish manner—and accompanied by manifestations of sexual perversion. He would leave his home again and again and be found in some disreputable haunt surrounded by youths of the lowest class, and again and again his associates extorted large sums of money by way of blackmail. Upon the most careful examination he was quite uncertifiable. A few facts were, however, important. He wrote numerous letters describing his practices; some he posted to his associates in vice, some he left about the house for anyone to read; and, secondly, in writing a letter on the simplest matter he would fill sheet after sheet. After one of these debauches he was admitted on an urgency order, but the magistrate refused to make a reception order. Subsequently he became the subject of an inquisition in lunacy, and was found insane by the master, there being no real opposition on the part of the patient, whose alternative was a conviction at the Old Bailey. Dr. Mercier maintained that insanity was not a disorder of the mind; that there might be disorder of the mind without insanity; and that in insanity there was much besides "disorder of the mind." At the same time he did not wish to be understood as saying that there can be insanity without disorder of the mind.

Dr. Hicks spoke of the tendencies of some towards acts of misconduct in early life, almost amounting to congenital, and thought more pains should be taken in the bringing up of these cases.

Dr. Bedford Pierce failed to follow Dr. Mercier in making a sharp distinction between disorder of conduct and disorder of mind. He thought the case quoted would be more correctly described as one of disorder of mind in which the disorder was manifested by extraordinary conduct.

Dr. Conolly Norman also questioned whether Dr. Mercier's use of the word "mind" was not too limited. He would prefer to substitute the term "intellect" or "intellectual powers." Dr. Norman referred to a case in which perpetually repeated acts of bigamy constituted the main evidence of mental aberration.

Dr. Hayes Newington thought a great test of sanity was whether they could rightly take in what went on around them in everyday life.

A DISCUSSION ON THE RELATION OF EPILEPSY AND INSANITY.

Introduced by W. R. Gowers, M.D., F.R.C.P., F.R.S.,
Physician to the National Hospital for Paralysed and Epileptics.

In undertaking to open the discussion on the relation which exists between insanity and epilepsy I have regarded the task in the literal sense of the words which designate it. That which I felt I could safely undertake to do and that which I propose to do is to break the pre-existing silence, which must be broken in some way, by some person, that discussion may occur. Although a discussion is proposed I conceive that I am also safe in saying that the object in view is not discussion but information. It is fortunately not necessary for me to give information; if I can indicate some points on which knowledge can be supplied by others I shall feel that I have done my duty. That which we need to know cannot be discerned from the side of epilepsy. Mental derangement, for the most part, at once withdraws a patient from the eyes of those who observe the disease from the other side. The essential facts regarding the epilepsy associated with insanity are for the most part within the reach of those under whose notice the insanity brings the patients. It is from them and from them alone that the needed knowledge can come, for the facts regarding the insanity are outside the range of vision of those who can study the associated malady. Hence, from the side of epilepsy, we can see what knowledge is needed, we can feel keenly the want that can only be supplied to us, and I conceive that the most useful result this discussion can have will be to promote the collection of such facts from an area sufficiently large to give them the strength which extent and combination alone can secure. This result may seem to be trifling. In truth it is all-important. For information to be gained by seeking it is essential that the search should be definite. The object must be in view to make observation useful. To gather at random is to waste the energy that might yield precious facts.

We must, I think, restrict our consideration of the subject to idiopathic epilepsy, and exclude from our view all the cases in which organic brain disease, in early or adult life, produces both convulsions and mental derangement. Within this limit there is enough, and more than enough, to be discerned. I hope some definite addition to our knowledge may be forthcoming to-day from those who bring here their asylum experience, but I hope that far more extensive knowledge will be gained by future prearranged observation. The information that is needed can only be obtained from many observers. Associated effort, such as may be the result of our meeting, can alone yield the knowledge that we need.

Epilepsy and insanity are alike disorders of the cortex of the brain, the result of changes in finer nutrition which have yet to be discovered, if their discovery is possible. I speak thus hesitatingly, because I am satisfied that, as regards epilepsy, no alleged pathological observations are true, and least of all those which at one time led the name "epilepsy," in the reports of the Vienna Hospital, to be changed to "disease of the cornu ammonis." If the recent extension of our knowledge and of our conceptions of the central nervous system is trustworthy, and trustworthy it seems to be, we have never yet looked in the right place for the morbid changes which may underlie either the one disease or the other, and we have not yet reached even the position whence we can attempt to look for them. According to these conceptions, it is in the spongy grey matter, in the interlacing network of fibrillæ which intervenes between the cells, in which their branching processes end, it is in this that all nerve energy is elaborated, that all ordered action arises, and that all disordered action is produced. Pathological anatomy must be relegated to a future day, and, for the present, we must study the subject, and can study it only, from the clinical side.

The first great fact of the relation between two diseases is their family interchangeability. This is less remarkable perhaps than it seems to be when we think of epilepsy only as a motor symptom. If we consider the frequency with which a sensory aura shows that it is in the sensory structures that the discharge begins, and if we consider the extreme frequency of minor attacks in which only loss of consciousness reveals inhibition of the structures related to psychical processes; if we consider also the elaborate psychical character of many of the higher sensory warnings, I think it will be felt that the range of functional disturbance of epilepsy must include some part of the functions, the derangement of which, in another way, causes insanity. The extent to which insanity is to be traced in the families of those subject to epilepsy is approximately known. The extent to which epilepsy can be traced in the families of the insane is, I think, not yet known. It can only be known by combined observation, and this is one of the points which I think deserves combined effort—to ascertain facts upon an adequately large scale. We need to know, not only in what proportion of cases epilepsy can be traced, but also in what proportion in the different forms of insanity, and we need further to know its relation to a history also of insanity in the family, and also if any relation can be discerned between epilepsy as a family antecedent, and the course of the forms of insanity in which it occurs.

I can only offer you some facts regarding the extent to which insanity can be traced in the families of the epileptic; but I would impress strongly the importance of taking heed to the source of all information regarding inheritance, and indeed of separating the facts according to their source. The importance of this has been impressed on me in an emphatic manner by investigation of an additional series of cases of epilepsy for a new edition of my book on the disease. There is a tendency to concealment of hereditary disease among the upper and middle classes which is definite, but its influence is small compared with that of simple ignorance among the lower classes, who constitute the bulk of our hospital patients. The statistics I published in the first edition were almost exclusively drawn from hospital cases. Of the second series, almost the same in number, now investigated, about a third were seen in private. The comparison of these with the rest is instructive.

Inheritance, epilepsy or insanity, was traceable in the first series in 35 per cent. In the second series the proportion was 44·5 per cent., but in the cases of this series seen in private the proportion was 48·4 per cent., or nearly half. But this, we may be confident, is below the truth, and that at least in one-half of the cases there is inheritance. The lesson is that statistics regarding inheritance taken from cases in lower classes are at least 30 per cent. below the truth, that one-third ought to be one-half, and that it is essential that the cases collected should be separately considered according to the position in life of the patients.

I mention this general fact on account of its importance, but we are now concerned with insanity only as an antecedent of epilepsy. It is an interesting fact that, in my second series, although inheritance was traceable in so much larger a proportion of the whole, the proportion of the cases with heredity taken separately in which insanity could be ascertained is almost the same as in the first series. In each insanity had occurred in the relations of one-third of the cases in which there was evidence of heredity; while epilepsy existed alone in two-thirds. In the first series inheritance was traced in 439, in the second series in 457. These two sets of cases, with inheritance 439 and 457, are nearly equal. In the 439 cases, insanity was heard of in 157; in the 457 cases, insanity was heard of in 170. The proportion in the first series was 33 per cent., in the second 37 per cent. I think that the fact that the great increase in the proportion of heredity, due to better information, is only attended with a slight increase in the proportion of insanity, is a striking indication of the general trustworthiness of these facts. This is the more satisfactory, because we are absolutely dependent upon the statistical method for such knowledge.

I am sorry that I can give no information regarding the features of epilepsy as it occurs with or without insane heredity. The converse facts, the character of the insanity in the cases with epileptic history in relation can be given, I doubt not, from asylums in the course of time, by carefully collected and carefully sifted observations.

The actual association of epilepsy and insanity in the same individual, as a subject of observation, requires careful limitation, and I think that one object of this discussion should be the discernment of the limits within which information may be wisely gathered. The simple mental fail-

ure which results from epilepsy, or which is due to the defective development of the brain, qualitative or quantitative, which is the cause of epilepsy, should, I think, be left out of consideration. Only the cases of definite mental derangement should be admitted, and it is not generally difficult to draw the line between the two.

Post-epileptic mania constitutes an entirely separate form, and it is most important to keep it distinct. It seems to represent the post-epileptic hysteroid state which is so common, and which I long ago described as resembling, in its rapid changes from manifestations of terror to those of aimless rage, as "compressed mania." But it is a transient incident in the course of the disease, definitely related to the epileptic attack. It urgently needs study—study it can obtain only from the asylum side, because there alone the severer cases are observed. We need to know more of its causal conditions, of the age of its development, of its constancy, whether it occurs in women in definite form, and its relation to a social position. We need a large number of facts, compared, digested, and combined. I can myself recall no case of post-epileptic mania in a woman, such as that with which you are so familiar, and such as was illustrated by the case I mentioned at the annual dinner of our hospital, in which our valued colleague, Dr. Ferrier, was an involuntary subject, happily with impunity, of a homicidal demonstration. Moreover, I can recall no case of post-epileptic mania seen in private, common as is harmless automatic action.

The explanation of attacks of epileptic mania which is commonly accepted is that given by Dr. Hughlings Jackson, that they are the result of the unrestrained activity of lower centres, consequent on the temporary withdrawal, by the slight epileptic discharge in the higher centres, of the normal control. While accepting and adopting this explanation, I have always felt hesitation in regarding it as the whole truth, or indeed as more than a recognition of the superficial relation of the phenomena. I have met with cases in which it seemed impossible to recognise epileptic phenomena preceding the mental state. I think the study of these cases from the side of insanity will confirm the position taken by Dr. Jackson that the slighter the epileptic discharge, that is the more extensive the function undischarged, the more manifest and elaborate is the post-epileptic automatic action. But we cannot, I think, separate these cases from those in which hysterical convulsion succeeds the epileptic fit, the sequence which, in our own country, is all we can discern as the equivalent of the so-called "hystero-epilepsy" of the French. Moreover, we cannot distinguish minor attacks of epilepsy which are followed by such symptoms, and those in which a normal state is instantly resumed.

This justifies the inference that there is a predisposition on the part of the lower centres to pass into a state of morbid activity. Indeed the same inference is justified by the fact that the hysteroid symptoms which follow such attacks occur almost exclusively in women during the first half of life and males during the first third of life—a proof that a powerful predisposition, a state of arranged latent energy, underlies the symptoms. But we can go further. The commencement of many epileptic fits, especially of minor fits, consists of a psychical disturbance, often associated with activity of a special sense centre. I have mentioned elsewhere the case of a patient whose warning was a sudden vision of the whole of London in ruins, of the River Thames emptied to receive the rubbish, and of she herself being the sole survivor of the inhabitants. We have here a mental state only distinguishable by its brevity from delusional insanity and from the mental state which may succeed a fit. Although it is customary in epileptic fits for the less elaborate to precede the more elaborate, instances of the opposite order are not uncommon. If the epileptic discharge can thus begin by an elaborate mental process, we should be prepared for any evidence that it may consist solely in such a process, and that brief insanity may sometimes be truly epileptic and not merely post-epileptic.

Next to inheritance, the aspect of the relation of insanity and epilepsy which seems to me to be of most definite importance for consideration is the occurrence of insanity in the course of epilepsy. Some epileptic patients pass into a state of definite insanity, usually transient, generally, I think, taking the form of subacute mania, although occasionally presenting a form of dementia with or without delusions. I use these words with hesitation, but that very hesitation is my justification, because it illustrates the need for information that can only come from asylums. It is especially in these cases that the mental derangement at once withdraws the patient from our observation. I cannot help suspecting that the cases of this character are not adequately studied in asylums.

During my twenty-five years' work at the Queen Square Hospital a considerable number of my out-patients have had such attacks, but never once have I received a letter of inquiry from the asylums in which they were placed, and if I have heard of the attack it has only been when attendance was resumed long afterwards. I wish much that there were more co-operation between those of us who are fortunate or unfortunate enough to be outside asylums and those within them. But the hand must be stretched out from the inside, because for the most part we never know when our hospital patients pass into seclusion, and the opportunity for minute personal observation such as we can never have, is possible only to asylum workers. We miss them for a few months, and then learn to our surprise that there has been an acute attack of insanity. I am quite sure that there is not a single physician, at least at the Queen Square Hospital, who would not be most glad to give to the medical officer of an asylum to which a patient had passed all particulars of the case, and thankful to receive in return some information regarding the attack. These cases seem to me those to which attention should specially be turned, and we need to know the character of attacks, the character of heredity, the relation to age, and especially the relation to previous post-epileptic disturbance.

Another feature needs discernment. It is the precise features of the epileptic attacks in those who undergo these attacks of insanity. It is of extreme importance, because if a definite relation can be ascertained the danger can be to some extent foreseen. I can speak with no confidence on the subject for the reasons just mentioned. But I have a conviction that these attacks of insanity occur especially in those patients whose epileptic fits, true and characteristic, are preceded by psychical or psycho-sensory aurae. I have described instances of this elsewhere and need not detain you with them. The instances which have come under my knowledge make me suspect that a considerable number of cases of which I have seen with such aurae have, since I took the notes, come under the care of my alienistic brethren. Here again it could only be through their help that this could be ascertained.

Of permanent insanity in cases of epilepsy I know nothing from personal knowledge. Here also the same cause is manifestly effective; but, at the same time, I feel that my own ignorance may be my own fault. It may be that many facts of the class I have indicated as needful have been already gathered and published, and that I might be familiar with them had I taken the necessary trouble to search for them and to find them out. The knowledge that it is so will be welcome. Yet such questions as those to which I have referred illustrate at every turn the truth of the law that observations have little weight that are not specially observed.

You may remember how universally the relation of syphilis to tabes was denied at first on the strength of statistics from old case books, made in routine way without thought of the special point; and you may also remember how those who, on such ground, were most strenuous in their denial of the relation found that facts specially ascertained were absolutely convincing. So it is ever. An object can seldom be reached that is not in view from first to last from the path that leads to it; and I shall deem this discussion rich in result if from it the object to be gained becomes distinct and the footsteps of many tread down a path thereto.

The PRESIDENT congratulated the meeting on having such a distinguished exponent of the subject. He asked them to pass Dr. Gowers a vote of thanks for his able paper, which was carried with acclamation.

Dr. FLETCHER BEACH thought that on going carefully into

the histories it would be found that inheritance alone was not sufficient to produce epilepsy or insanity, but that many causes acting together produce the result. He agreed with Dr. Gowers that the statistics obtained from the lower class were not so reliable as those from the class seen in private practice. He also agreed with Dr. Gowers on the importance of co-operation between neurologists and alienists. From the want of this various facts are, no doubt, overlooked, and he was of opinion that means should be taken to bring these two classes of the profession more together. He attributed the fact that patients had been admitted into asylums without it being known to the Superintendent that they had formerly been under the care of Dr. Gowers, due to their being often brought by the relieving officer.

Dr. Hyslop said he thought there was danger in making one's notion too wide as to what was meant by epilepsy. At the present day many conditions of an epileptiform nature were included as forms of epilepsy. From Dr. Hughlings Jackson's scheme of evolution and dissolution it is difficult to understand the nature of the positive psychical symptoms met with in epilepsy. We can, he said, readily conceive that brain disturbances may determine losses of local memory, and this would correspond to the negative lesions of Hughlings Jackson, but the mere existence of a negative lesion does not in the least explain the nature or origin of the positive morbid symptoms which are thought to be due to evolution going on in the undamaged remainder. When we confine ourselves more particularly to the consideration of the negative lesions and their effects we find that we have to deal with disorders of memory and, synonymously, therefore, with the comparing faculty. From a clinical point of view, however, we cannot reconcile or adopt the possible existence of a negative brain lesion with the mental symptoms of the insane. In epileptic states of the slighter variety we can readily conceive that local brain disturbances may give rise to temporary or local amnesias, but we do not in the least understand the methods whereby the positive psychical symptoms come to have their origin and abnormal character.

Dr. Mercier said there were 1,300 epileptics annually admitted into the asylums of England and Wales. He remarked on the cases rarely seen outside asylums, cases of *petit mal*—cases in which the fit is preceded by elaborate aurœ or followed by elaborate automatic actions. A sister society had recently resolved to make an investigation into the facts of epilepsy by the combined method, and he suggested that it would be of immense advantage if Dr. Gowers would indicate the lines on which an investigation could be profitably conducted.

Professor von Benedikt said he saw many cases which were not recognised as epilepsy, but rather as a vice or passion. It was those cases out of the common which were overlooked. He quoted a case of a man who had a fit whenever he took alcohol. He considered the question of an aura a very important point as, if there is a definite one, they do not require such constant supervision.

Dr. Hughes thought enough clinical observation had already been made to prove the unvarying kinship between all epileptoid states and what we have been accustomed to regard as true epilepsy. He considered epilepsia mitior and gravior practically the same though clinically varying in their symptomatic expressions. He thought Dr. Hughlings Jackson had done much to elucidate the obscure cases of *petit mal*.

Dr. Conolly Norman was surprised to hear that Dr. Gowers had not seen cases of post-epileptic mania in women. The speaker had seen several such, and in one woman recently under his care attacks of epileptic mania regularly followed attacks of petit mal. He said that epilepsy with highly organised aurœ are probably followed by insanity with undue frequency. He had seen in an asylum the case referred to in Dr. Gowers' early edition of his book on epilepsy, and he was suffering from what Korsakoff had called dysnoia, and which the speaker had described as acute confusion. He remarked that 500 or 600 patients are annually admitted to asylums in this country virtually without a history.

Dr. James Taylor briefly referred to the possible connection of certain mental failure in epileptics with the administration of some drugs, and especially bromide of potassium, and he thought this was prevented in some degree by combining strychnine.

The President briefly touched on the mental states in epileptics as recognised in asylums.

Dr. Nicolson said that the usual form of epileptic insanity was mania with confusion, and emotion, and occasionally melancholia.

Dr. Gowers briefly replied.

At the close of the discussion the Section passed a resolution appointing a small committee to deal with the subject, the proposals to be submitted to the Council of the Association.

A COMPARISON BETWEEN THE BREAKING STRAIN OF THE RIBS OF THE SANE AND INSANE.

By Alfred W. Campbell, M.D.,
Pathologist, Rainhill Asylum, Lancashire.

This paper forms a sequel to one entitled "The Breaking Strain of the Ribs of the Insane," read at a meeting of the Medico-Psychological Association in London on November 15th, 1894, and published in the *Journal of Mental Science* for April, 1895. In the former investigation the breaking strain of the eighth pair of ribs of 58 unselected patients dying in the Rainhill Asylum was tested with an instrument specially devised by Dr. Mercier, and a microscopic examination of portions of the tested ribs was effected. In the former investigation the eighth ribs of 50 sane persons dying in the Royal Southern Hospital[1] have been tested and examined on precisely similar lines, and the following is an epitomised comparison of the results obtained from the two researches.

The difference between the average breaking strain of the ribs of the insane and that of the ribs of persons free from mental disease is not so great as one would anticipate. There is a preponderance on the side of the latter, but the excess is not a great one. Thus the average breaking strain of the ribs of the 58 insane patients was, for the males, 41·01 lbs. against the convexity, and 42.14 against the concavity; and for the females, 20.68 lbs. against the convexity, and 20·90 against the concavity; while the 50 cases from the Royal Southern Hospital yield an average breaking strain of 42·73 lbs. against the convexity and 42.63 against the concavity for the males; and 23 lbs. against the convexity, and 23.3 against the concavity for the females.

Since in hospital cases one is enabled to practically eliminate the effect of mental deterioration as an agent in the causation of osseous frangibility, the effect of bodily disease *per se* in the production of bone weakness can be more accurately studied. This point, therefore, I have specially gone into, and find that the average breaking strain of the ribs of those cases who died of some chronic and at the same time wasting disease is lower by about 6 lbs. than that of cases dying of some chronic but not wasting affection, and again that the average breaking strain of the ribs of cases coming in the latter category is lower by about 6 lbs. than that of cases succumbing to acute diseases or meeting their death by accident. My figures, therefore, tend to show that the influence of chronic wasting diseases in the production of weakness of the bone is probably equivalent to if not greater than that of mental deterioration. In general paralysis of the insane we have a disease in which we may unequivocally state that the mental and nervous degeneration act powerfully in producing bone degeneration. Though this disease generally terminates at an age when the ribs should be at their maximum strength, still their breaking strain is some 20 lbs. below the normal standard.

In both sane and insane there are certain cases—the number is a small one—in which the breaking strain of the ribs is exceedingly low indeed. In these ribs not only are pronounced architectural defects present, but also their density and elasticity are so much diminished that they can be readily sliced through with a knife, and also bend without snapping. In short, a reversion to the osseous condition which obtains in childhood appears to occur. I believe the

[1] I am deeply indebted to Dr. F. H. Barendt, Pathologist to the Royal Southern Hospital, for supplying me with material for this investigation.

change to be a chemical one, but its exact nature and the cause of the increased frangibility in these cases remains problematical. The ribs of two women from the Royal Southern Hospital furnish excellent examples of this condition; one aged 60 died of senile decay, the other, aged 53, succumbed to malignant disease of the uterus, and both yielded the extraordinary low breaking strain of 5 lbs. (so far as I have gone in my experiments a record for frangible ribs). The ribs of a man from the same hospital, aged 59, with aortic disease as the certified cause of death, were similar; they had a breaking strain of 18 lbs. against the convexity and 22 lbs. against the concavity, and the case compares well with No. 57 of the table in my previous paper, a man aged 53, whose ribs only required a strain of 20 lbs. against the convexity and 15 lbs. against the concavity to break them, and who a few days before death fractured eight of his ribs by simply falling on his side.

In the sane as well as in those mentally afflicted the influence of sex, age, and stature bear an important relation to the breaking strain. This is to say (1) the male rib possesses, roughly speaking, double the strength of the female; (2) after the age of 35 the fragility of the ribs in both sexes increases progressively with the advance of years, and senescence is likewise accompanied by a metamorphosis of the red marrow of the rib into fat; (3) the breaking strain is more or less proportional to the skeletal and muscular development of the individual.

Microscopic examination discloses architectural deficiencies in all those ribs which break at a low strain. These are alteration in the shape of the rib, mainly flattening; a diminution in the thickness or density of the investing rim of compact bone; an absorption of or a simplification of the arrangement of the cancellous trabeculæ.

THE RELATION OF DIABETES TO INSANITY.

By C. Hubert Bond, M.B., C.M.,
Pathologist and Assistant Medical Officer, London County Asylum, Banstead.

Dr. Bond read a paper on this subject, in the course of which he said that, taking the total number of cases in our asylums, sugar in the urine of the insane is not of frequent occurrence, but when limited to recent cases a larger proportion is found. In the following cases all known fallacies have been eliminated, and the corroborative fermentation test used. In the urine of 175 cases examined within forty-eight hours of admission, sugar was found in 12—that is, 6.85 per cent. The following table shows the distribution of these cases:

Form of Mental Disorder.	Total Number of Cases.	Instances of Glycosuria on Admission.
Epileptic insanity	16	—
General paralysis	30	3
Mania	43	—
Melancholia	55	6
Delusional insanity	5	—
Organic dementia	6	2
Senile insanity	16	1
Congenital cases	2	—
	173	12

In these 12 cases most of them show an absence of many of the chief signs of diabetes. The temperatures of the patients was almost invariably subnormal. In 2 melancholics who recovered the improvement in their mental condition was coincident with the gradual disappearance of glycosuria. The frequency of a previous history of alcoholic excess is notable.

VOLUNTARY BOARDERS IN ASYLUMS.

By Percy Smith, M.D., F.R.C.P.,
Medical Superintendent, Bethlem Royal Hospital.

Dr. Percy Smith read a paper on the above subject, in which he said that the practice of admitting patients as voluntary boarders without certificates had grown largely of late years.[1] He then gave the following examples of patients who had applied for admission as voluntary boarders into Bethlem Hospital:

1. Recurrent cases, where the patient is conscious of a return of the malady.
2. Mild cases of melancholia, perhaps with suicidal feelings, for which the patient—often in this matter wiser than his relatives—desires to be under care.
3. Occasionally patients with homicidal feelings.
4. A patient who had had a series of epileptic fits and was conscious of the onset of maniacal excitement.
5. Some early cases of general paralysis where the physical signs largely precede the mental.
6. Some cases of partial weak-mindedness.
7. Cases of morphinism, cocainism, alcoholism; in the latter condition some patients prefer to go voluntarily to an asylum rather than to a retreat under the Inebriate Act.
8. Patients suffering from hallucinations which they recognise as such.
9. In one case a certifiable patient insisted on coming in voluntarily during the delay his friends experienced in getting a justice to make a reception order.
10. Cases in whom no marked symptoms of insanity have been observed after admission or whose reception order cannot be renewed, but who wish to remain for convalescence to be established. One certified patient with a very complete remission remained as a voluntary boarder for three years, till it was necessary to recertify him.
11. In some patients especially, medical men and nurses, it seems desirable for their future to avoid certification, and admit them voluntarily if they understand what they are doing.

Certain difficulties are met with—patients are sometimes sent up by medical men for admission who are quite unfit to be admitted without certificates. The writer always adopts the practice of asking the patient if he understands the nature of the hospital, as it seems quite indefensible to disguise this fact till after admission, and it is equally wrong to admit as voluntary boarders those who have lost their will power and will consent to anything. Every voluntary boarder admitted to Bethlem Hospital signs an agreement to conform to the rules and his friends sign an agreement to remove him or take other steps for his care when notice is given.

It is possible patients may simulate the milder varieties of insanity. To obviate this the history should be as carefully taken and the notes as carefully kept as is done with certified patients. At present there is no arrangement for the possible admission of voluntary boarders of the poorer class to county asylums, and it is worth considering whether some provision of this nature is not desirable.

Dr. James Stewart (Clifton) said the alcoholic prefers to go to an institution like Bethlem as a voluntary boarder because he is free to leave without let or hindrance when he pleases. During an experience of eighteen years in the treatment of inebriates he has observed that the greatest obstacle to the permanent cure of such cases is the difficulty of persuading them that general health may be apparently perfectly restored and yet the physical condition of the brain be such that the will-power cannot be exercised effectually when exposed to temptation when protection from king alcohol is removed.

Dr. Bonville Fox said there was one class Dr. Smith had not mentioned, namely, that a friend or relative might be admitted as a voluntary boarder for the sake of companionship to a patient.

Dr. Percy Smith briefly replied and pointed out that at Bethlem Hospital they did not admit friends or relations unless themselves suffering mentally.

[1] It is now legal for any person who is desirous of voluntarily submitting to treatment to be admitted into asylums and hospitals for the insane, under certain restrictions, the most important being the previous consent of Commissioners in Lunacy in the case of a patient who desires to go to a private asylum. The Commissioners decline to give consent for the voluntary admission of a patient who, though reasoning his illness and desiring to be under care, may yet be certifiable, but the reading of the Act does not seem to require such a rigid reading

THE LAW IN RELATION TO SINGLE PATIENTS.

By Lionel A. Weatherly, M.D.,
Bath.

Dr. Weatherly read a paper on this subject, in which he said that not only is the system of placing single cases of insanity in private houses without certification and its consequent supervision becoming more and more general, but we have now constantly brought before our notice unlicensed houses in which several persons of unsound mind are boarded in direct violation of the law; and to such a pass has failure of the prosecution in these cases arrived, that he believed it is an open secret that "the authorities that be" have given out that they do not intend to bother themselves any more about such defiance of the law. He then put forward three suggestions:

1. Educate your public to recognise that insanity is no crime but a disease; that it is nothing to be ashamed of, and that the certification of insanity does not in any way mean publicity.

2. In those cases in which certification may be difficult, that it should be insisted upon that a report should be sent to the authorities stating that So-and-so has been placed in a certain house for care and treatment, but that the unsoundness of mind is not sufficient to admit of certificates being signed.

3. To admit of proper supervision of all these cases that district officials be appointed to act, as it were, as subcommissioners.

Dr. Hayns Newington remarked that the chief difficulty in enforcing the law in this matter was, as in other matters, in the extraordinary view that judges took of law. The law was plain enough, but a question had of late been left to the jury, which seemed to be quite outside the law. This question was, Did So-and-so receive a patient for treatment in the same manner as patients are received into asylums? It was much to be regretted that where such a point had been left, the question was not at once asked, What is the difference between the treatment in a private house of a certain case and that which the same individual would have received in an asylum?

Dr. Hyslop said that before a medical man or other person was allowed by the Commissioners to receive more than one patient into an unlicensed house, it was necessary to prove that the one would benefit the other, which was generally very difficult to prove.

Dr. Douglas said he thought that rule was made so that, for instance, a sister might be received as a companion to her insane sister, but he thought that this point was often stretched. He agreed with Dr. Weatherly that nothing could be done without educating the public.

Dr. Weatherly briefly replied, and said that he could not agree with Dr. Douglas that the Commissioners often stretched the point, as he considered them much against private patients.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CASES OF POISONING BY LABURNUM SEEDS.

Cases of laburnum poisoning are apparently not of common occurrence, and the following cases which recently came under my notice may perhaps be of interest as showing its poisonous properties.

On Saturday, August 10th, I was sent for hurriedly to see three children who had been suddenly taken ill.

On arrival I found the eldest, a boy of 11 years of age, very much collapsed, deathly pale, cyanosed, and vomiting. The pupils were dilated and equal, pulse quick and feeble, and the skin cold.

On making inquiries, I found that he and his brothers had been during the morning at a pleasure park about a mile away, and had had eaten what they believed to be tares, and of which they had brought some home. On examination I found them to be the pods and seeds of the common laburnum (*cytisus laburnum*).

I promptly administered an emetic (zinc sulphate, grs. xx), producing free vomiting, following it up with copious draughts of warm water, which was soon returned, bringing with it a large number of laburnum seeds.

He was then placed in bed with hot bottles to his feet, and, on account of his collapsed condition, I gave him several doses at short intervals of chloric ether and salvolatile followed by the administration of strong hot coffee.

Under this treatment he speedily rallied. When I saw him again several hours later his pulse was quieter and stronger and his general condition considerably improved although slight sickness continued for several hours afterwards. Slight diarrhœa supervened some twelve hours later.

He has since told me that mistaking the laburnum for tares he eat the seeds of some 18 or 20 of them, and about an hour later whilst returning home he felt sick and giddy, his head ached, and he could scarcely see, in fact he felt so weak and ill he could hardly walk home. On arriving home he was very sick and was in the condition above described when I first saw him.

The other two children, ages nine and six years, both presented similar symptoms, though in a less degree, and speedily recovered after the administration of emetics; though very exhausted for a short time, and complaining of feeling very sleepy. On visiting them the following day they had all fully recovered and in fact seemed none the worse for the previous day's experience.

The chief points of interest appear to be:

1. That laburnum is an active poison capable of producing, even when taken in small quantities, severe symptoms of depression.

2. That its action is not merely irritant, but producing when absorbed into the system narcotic symptoms, thereby entitling it to be placed in the class of narcotic irritants.

3. Entire absence of the symptoms, foaming at mouth, pain in abdomen, and convulsions.

4. The rapid subsidence of the symptoms on removal of poison and the administration of diffusible stimulants.

Hedley Tomlinson, M.R.C.S.Eng., L.R.C.P.Lond.
Gateshead-on-Tyne.

Two children, aged respectively 4 years and 20 months, were found in possession of laburnum pods about 4 p.m., but they said they had eaten none of them.

Two hours and a-half later I was called. They had asked for food about 5 o'clock, and begun to eat when the older one turned sick and got up and tried to walk, when he remarked, "I can't stand; I'm drunk." They both vomited then, and the vomit contained laburnum pods.

When I saw them at 6.30 I found the older one lying down, not caring to be roused. He seemed inclined to sleep. The pulse was slow and the beat weak but not irregular. The younger one could be more easily roused.

I gave both a full dose of zinc sulphate with emesis as the immediate result. They both vomited chewed laburnum pods mixed with food. In five minutes I gave them more zinc sulphate, and again they vomited, but there were no pods this time in either. They seemed to have got rid of most of the pods before I saw them, and to be suffering from the active principle which had been absorbed.

They complained of no pain in the bowels, and there had been no purging. The older one was now pale, and in a very depressed state, and I injected 5 miniums of ether. This I repeated every thirty minutes, sometimes oftener, being guided by the pulse. Between these doses they had both whiskey and hot coffee.

They were kept up in this way for three hours, when I was joined by a consultant; and I then got tannic acid and gave each 5 grains, with the object of reducing the active principle to an inactive state. By this time the heart of the older one was again flagging, and we douched the chests of both alternately with hot and cold water. This improved the pulse very much, and this improvement being kept up, we felt that by 10.30 P.M. they could be with safety allowed to sleep, especially as I was within easy call.

Twelve hours later they were almost as bright as ever, and crying for solid food.

Arbroath, N.B. [J. G. McNaughton, M.B., C.M.Edin.

CASE OF DIPHTHERIA TREATED BY ANTITOXIN.

A. R., a boy, aged 4 years 3 months, was first seen on August 19th, 1895. The child had been ailing for a fortnight previously, but began to get worse on August 15th, with cough and croupous breathing. He suddenly got worse on the night of the 18th. I was called in on the 19th. On examination I found both tonsils enlarged, the right being covered with a dirty-looking yellow membrane; the uvula was elongated, and the throat generally congested. On the evening of August 19th the temperature was 99·8°, pulse 144, breathing rapid and stridulous, urine loaded with albumen. The throat was painted with tr. ferri perchlor.

On August 20th, temperature 98°, pulse 140, throat just the same. The child had had a very restless night. Breathing stridulous and quick. Six c.cm. of antitoxin serum were injected between the scapulæ, the skin being previously rendered aseptic by turpentine and carbolic, and a carbolic pad placed over the puncture. At 1 P.M. the pulse was 132, the temperature 98·4°, patient very restless, breathing rapid and stridulous. At 9 P.M. temperature 98.4°, pulse 120, the breathing was much quieter, and the patient had slept most of the afternoon.

On August 21st, at 10 A.M., temperature 99°, pulse 132; 6 c.cm. of serum were injected about the same place as before. The patient looked much brighter and the breathing was quieter. The membrane on the right tonsil looked smaller and thinner; there was a small patch on the left tonsil. On August 22nd, at 10.30 A.M., temperature 98.4°, pulse 130. The boy had had a good night; breathing was much more regular and easy; the cough had almost disappeared; the membrane had nearly gone from the right tonsil, but there still remained the small patch on the left one: the throat generally was slightly congested. The child was much brighter and had taken some nourishment (milk and soft biscuit). Albumen was still present in the urine, but much less in quantity. On August 24th the child had had a good night; breathing was regular and almost normal; temperature 98.4°, pulse 98; the throat was quite clear, and there was no congestion. The patient continued to improve, taking food, sleeping, and breathing normally. The urine was free from albumen on August 26th, and on the 28th the patient was quite well.

Holbeck. J. W. H. Brown.

BLUEBOTTLE LARVÆ IN THE EAR.

On August 16th a patient came to this hospital at 10 P.M. complaining of bleeding from the left ear, which came on directly after a fall from a horse the same afternoon. When seen, the man had a blood-stained discharge from the left ear, said he had noises in his head, and complained of giddiness and deafness. On examining the meatus by reflected light, I saw several white bodies moving about in front of the tympanic membrane, and, on extracting one with forceps, found it to be a full-grown gentle (the larva of the bluebottle fly); I then removed five others of the same size and syringed out the ear. On again examining the meatus, the membrane was seen to be quite intact, but of an opaque white colour; there was an ulcerated surface on the posterior wall of the canal immediately external to the membrane. I saw the patient on the following morning, when all his ear symptoms had disappeared.

On being questioned, he owned to having suffered for some time with deafness and noises in the head on the left side, but he noticed no discharge till his fall on the head that afternoon.

The case is interesting on account of the unusual situation for the deposit of the fly's eggs; the little discomfort occasioned by the presence of six lively gentles in the meatus; and lastly, the sudden bloody discharge after a fall on the head, accompanied by giddiness and deafness, which made one at first suspect a fracture of the base of the skull.

Salisbury General Infirmary. H. L. E. Wilks, House Surgeon.

CASTRATION IN ENLARGED PROSTATE.

H. H., aged 82, an old Hungarian, had suffered for some years from retention of urine and cystitis, necessitating the almost incessant use of catheters. For six years past he had been unable to leave his cottage, and when admitted to hospital was in a miserable condition, getting no rest night or day from the pain and distress caused by the continual desire to micturate, the bladder being intolerant of urine about every quarter of an hour. The urine was in a stinking condition, viscid and ropy. Rectal examination showed an immensely enlarged prostate, the finger being not long enough to reach its boundaries. On April 18th, after a preliminary hypodermic injection of a quarter of a grain of morphia, the operation was performed under chloroform, as described in the British Medical Journal of January 5th, the testicles being removed through a median incision of the lower part of the scrotum. Immediate relief was obtained, the patient retaining his urine four hours, and passing it free of pain.

One or two attacks of cystitis recurred requiring irrigation of the bladder occasionally, and convalescence was retarded by an acute attack of hysteria. He was discharged early in July quite free of all his troubles, having gained rapidly in weight and strength, and, according to his own statement, as well as he was thirty years ago. He can now walk three or four miles, and only complains of being always hungry.

Before his discharge examination per rectum showed that though the prostrate had diminished considerably in size it had by no means disappeared, as described in some previous cases.

H. W. M. Kendall, M.R.C.S., etc., Superintendent, Hokitika Hospital, N.Z.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ROYAL NAVAL SICK QUARTERS, YOKOHAMA.

ABDOMINAL ABSCESS: LAPAROTOMY: RECOVERY.

(By Staff-Surgeon H. J. McC. Todd, R.N.)

[Communicated by the Director-General of the Medical Department, R.N.]

J. F., aged 19, was admitted into hospital on February 21st, suffering from sores on the prepuce, and an abscess over the left sacro-iliac synchondrosis, which was opened next day. The patient was confined to his bed. On February 23rd, at 7 P.M., he experienced very severe pain in the right iliac region, rendering respiration difficult. The temperature was 98°; the bowels were open. He was ordered a hypodermic injection of morphine and fomentations, and a milk diet. On February 26th the bowels were confined, and an enema was administered, followed by a natural motion. There was no nausea, but great tenderness and persistent pain, aggravated by the slightest movement, in the right iliac region. The respiration was thoracic. There was a slight increase of dulness in the iliac region and hectic pyrexia. On February 28th the bowels had only acted after an enema; the motion contained clear mucus, and was followed by much pain in the lower half of the abdomen. There was dulness and extreme tenderness in the right iliac region, and the hectic fever persisted. On March 1st a diffusive tender swelling in the right iliac region was made out. On March 3rd a formed stool was passed after an enema. There was some tenesmus, and mucus was passed later. The iliac swelling was more pronounced, and on March 5th it had attained about the size of a cocoa-nut, and occupied the entire right iliac region. Its margins were fairly defined; there was no superficial redness or œdema.

At 10 A.M., assisted by Staff-Surgeon Barnes and Dr. Munro, the region having been previously shaved and rendered aseptic, chloroform was administered, and I made an incision over the most prominent part of the swelling 2 inches internal to the right anterior superior iliac spine and parallel to Poupart's ligament. After division of the abdominal muscles, an exploring needle was thrust into the swelling and pus withdrawn. The opening was now enlarged with a probe pointed bistoury, and half a pint of thick rather fetid pus escaped; on introducing my finger into the abdominal cavity, the intestines within reach were found to be

matted together by soft adhesions which readily broke down, and allowed of a further escape of pus; the appendix was not found to be altered; the wound was gently irrigated with hot boric lotion, and a large drainage tube inserted; the patient was propped up so as to lie on his right side, a dressing of lint soaked in boric lotion, and marine tow was applied. On recovering from the anæsthetic, the patient expressed himself as greatly relieved.

The subsequent course of the case was almost uninterrupted; the temperature the evening of the day of operation was 99°. There was retention of urine for two days, necessitating the use of a catheter. The bowels acted naturally two days after the operation, and the drainage tube was removed on the third day. On March 20th, the wound being now soundly healed, the man was allowed up, wearing a pad and bandage. On April 10th the wound was quite sound; there was no protrusion of the cicatrix on coughing.

I may mention that there was no history of injury or previous abdominal trouble.

THE INFIRMARY, MACCLESFIELD.

THE DANGERS OF COCAINE.

(By J. H. Marsh, M.R.C.S., L.R.C.P., Senior House-Surgeon.)

The advantages of cocaine as a local anæsthetic are so generally admitted that there seems to be a danger lest the risks attendant on its use in certain individuals should be overlooked. I have recently on three separate occasions had these dangers brought forcibly under my notice whilst using cocaine as a local anæsthetic preparatory to dilating strictures of the urethra with Lister's sounds.

Twenty minims of a 10 per cent. solution of hydrochlorate of cocaine, freshly prepared and free from turbidity, were injected with a small glass syringe down the urethra, care being taken not to injure the mucous membrane. In all three cases within five minutes of the application alarming symptoms of collapse manifested themselves. The patients first complained of dimness of sight, became intensely pale, the pupils dilated, the forehead was covered with cold clammy perspiration, the respiration was gasping, and the pulse quickened. Twenty minims of ether were injected hypodermically, hot bottles were applied, and as soon as the patients could swallow diffusible stimulants were freely administered. In two of the cases nitrite of amyl in 3 minim capsules was used in addition, and recovery in consequence was much more speedy.

These three cases are, I think, interesting as showing how in certain individuals toxic symptoms arise from the absorption of a very small quantity of cocaine by unbroken mucous membrane.

REVIEWS.

La Fièvre Typhoïde [Enteric Fever]. Par MM. Brouardel et Thoinet. Paris: Baillière et Fils. 1895. (Imp. 8vo, with 24 Figures, pp. 400. 9 francs.)

This very complete work on enteric fever answers well to the modern notions of what a full study of an infection should be. It differs mainly from the descriptions hitherto usually given by its elaborate account of the etiology of the disease as caused by Eberth's bacillus, by a section on general pathogeny, and by one on prophylaxis. The history of the disease is summarised in a few words, and the older theories of its mode of origin are shortly dealt with. In Section 3 there is an admirable and almost exhaustive account of the morbid anatomy of the organs involved, followed in each case by a description of the symptoms arising from such lesions.

The next section gives shape and completeness to the preceding one by its description of the various clinical types of the disease, including the mode of termination, complications, and sequelæ.

Section 5, on general pathogeny, includes an account of experimental typhoid fever, and a pathogenic analysis of the principal localisations of the disease: this is followed by what is aptly termed a "pathogenic synthesis" of the whole morbid anatomy, including bacteriology.

The following sections deal satisfactorily with diagnosis, prognosis, and treatment. The last named is fully discussed. Very little space is given to the antiseptic treatment, but it is held that the mortality has been reduced by the cold bath treatment.

The section on prophylaxis includes that of the individual and of communities, whether aggregated together in towns, or in more compact masses in barracks, etc.

This work is based upon an extensive acquaintance with the disease, and a thorough knowledge of the writings of workers in this field, such as Murchison in this country, Louis in France, and Griesinger in Germany. It may confidently be recommended as containing an excellent account of enteric fever.

The Cambridge Natural History. Volume III, comprising "Molluscs," by the Rev. A. H. Cooke, M.A., Fellow and Tutor of King's College, Cambridge; "Brachiopods (Recent)," by A. E. Shipley, M.A., Fellow of Christ's College, Cambridge; and "Brachiopods (Fossil)," by F. R. C. Reed, M.A., Trinity College, Cambridge. London: Macmillan and Co., 1895. (Demy 8vo, pp. 554. 17s.)

This volume is the first instalment of a series which is to consist of ten volumes, each of about 500 pages complete in itself. It treats of the natural history of molluscs and brachiopods. We are glad to be able to welcome this first instalment, and the more so as the great expectations we have been led to form have in this volume at least been realised. The series has many distinctive characters. It is intended, in the first place, for such persons as have not had any special scientific training and who are not necessarily acquainted with scientific language. At the same time it combines popular treatment with the latest results of modern scientific research, so as to make the work useful to those who may be regarded as serious students of the various branches of which it treats. From this latter point of view the work may be considered as a scientific treatise on one aspect of zoology, and an aspect, moreover, that has not received that share of attention of late years that its importance deserves—modern zoological work dealing largely with laboratory, as opposed to field research. One of its most interesting features is the amount of space devoted to the various animal groups. In most works with a similar purpose the vertebrates receive by far the larger share of attention; and yet they are but one group, equal only in morphological interest to one of the subdivisions of that vast heterogeny of forms loosely termed invertebrates. In this work the individual groups are allotted space in the order of their importance—a decided advance on previous treatises. Within the short limits of a brief notice it is impossible to do justice of a work of such importance. We can only point out that it is the product of the united labours of the leading men of a great zoological school, and as such must take a high place among the vast number of works attempting to deal with the same subject.

The Practice of Massage: its Physiological Effects and Therapeutic Uses. By A. Symons Eccles, M.B. Aberd. London: Macmillan and Co. 1895. (377 pages; 7s. 6d. net.)

The general arrangement of this work is on familiar and strictly orthodox lines. The author commences with a description of the various manipulations, and relates with commendable care and minuteness the methods usually adopted in applying massage to different parts of the body. The customary chapter is devoted to an account of the physiological effects of massage as far as they are known, and then follow in due course the usual articles on diseases of the joints, the disorders of digestion, the affections of the nervous system, and so on. We gather from statements made in the preface and elsewhere throughout the book that Dr. Eccles is himself a practical masseur, and that he has the requisite skill and knowledge to carry out his own prescrip-

tions. This is the plan almost universally adopted on the Continent, and it has many advantages, although its general adoption by busy practitioners with other demands on their time and energies would present insuperable difficulties. To thoroughly massage even half a dozen patients in the course of the day would be a severe strain on the physical strength of the operator, especially as we are told that from three quarters of an hour to one hour and a quarter is the time usually required to thoroughly manipulate every part of the body in general corporeal massage, and that even this will not suffice if vibrations and active movements are to be included. The author states that in his experience remarkably different results are obtained in the same case when massage is administered by an expert, well instructed conscientious rubber at one time, and by the physician conducting the case in another. "Both equally endowed with mechanical dexterity, the one tries to carry out intelligently his instructions while the other does himself what he knows to be required."

One of the best articles in the book is that devoted to the value of massage in the treatment of skin diseases—a subject which, according to the author, has received very inadequate attention at the hands of the dermatologists. He complains that in a recent work on skin affections the subject is dismissed in five lines, two of which are devoted to the statement that "it has been quacked as usual, having been put forward as a preventive of wrinkles of the face." Dr. Eccles points out that the obliteration of wrinkles has been observed, not as the result of facial massage, "but following on the redeposition of fat and the better nutrition of the skin after a course of general massage in many cases of malnutrition in which the skin of the face has participated in the general aggrandisement of the tissues."

A fairly exhaustive account is given of the value of massage in fractures, a method of treatment originally advocated by Lucas-Championnière in 1886. In connection with the subject reference might have been made to the cases recorded by Dr. Arvid Kellgren in his well-known *Technic of Ling's System of Manual Treatment*, a work which seems to have escaped the author's notice.

A useful feature of the book is the painstaking care with which the various references to papers and works dealing with different branches of the subject have been worked up, the titles of many of them being given in an appendix. Dr. Eccles, perhaps wisely, avoids all reference to what may be called the ethical side of the question, and to the existence of the immoral massage establishments which occupied recently a good deal of attention.

Organic Chemistry. By W. H. Perkin, jun., Ph.D., F.R.C.S.; and F. Stanley Kipping, Ph.D., D.Sc. London: W. and R. Chambers. (Part i, 1894, pp. 302. 3s. 6d. Part ii, 1895, pp. 257. 3s. 6d.)

This elementary textbook of organic chemistry is a distinct departure from the ordinary type. Both authors are well known original workers in their subject, and hence not only is the work thoroughly up to date, but the practical way in which the facts are represented, accompanied by such a laboratory course as is here indicated, cannot fail to give the student a real insight into organic chemistry. Even the student who is so unfortunate as not to have access to a laboratory cannot fail to see by what laborious work the science is built up.

Considering the importance of the physical side of organic chemistry, however, it is disappointing to find so little attention given to it here. Even such physical methods as are required for molecular weight determination might have been revised with advantage. Thus, in the example of the cryoscopic method worked out, we are told that 4.9818 grammes of cane sugar dissolved in 96·94 grammes of water caused a depression in the freezing point of 0.295. Seeing that here the magnitude to be measured cannot be known to be nearer than, at the best, 1 part in 300 (0.001 being the outside limit of the temperature measurement), it might surely have been indicated that to carry the weighings of the sugar beyond the second place, and of the water beyond the first place of decimals is pure waste of time. Taken as a whole, however, the work is undoubtedly one of the best elementary textbooks on organic chemistry written in this country.

The Use of Shorthand by the Practitioner, with Examples. Issued by the Society of Medical Phonographers, and sold by Sir J. Pitman and Sons, 1, Amen Corner, E.C. (Fcap. octavo, pp. 31. 8d.)

This forms the sequel to the *Use of Shorthand by the Student*, already noticed in these pages. The writer affirms that, compared with longhand, shorthand enables a given amount of record to be made in one-third the time and with less than one-third the trouble, whilst at the same time it promotes accurate observation and exercises upon the practitioner's work an educational influence of the highest value. The different methods of keeping the notes taken, based upon the experience of the writer and other medical phonographers, are given, and suggestions made for the preservation of isolated observations and the record of facts met with in reading. The best forms of notebook, and the best pens, ink, and paper are mentioned, but, most important of all, how to index the accumulating mass of notes, so that any of them is available for immediate reference, is clearly described. Practitioners who keep notes of their cases will find this publication very helpful.

Report on Yaws in Tobago, Grenada, St. Vincent, St. Lucia, and the Leeward Islands; addressed to the Right Honourable Lord Knutsford, G.C.M.G., Her Majesty's Principal Secretary of State for the Colonies. By H. A. Alford Nicholls, M.D., F.L.S. London: Her Majesty's Stationary Office. 1894.

In his admirable report Dr. Nicholls points out that yaws, originally introduced by West African negroes, after being kept in check in the olden times by the slave owners, has increased and spread since emancipation permitted the negro gradually to revert to a state of semi-savagery; so that now this loathsome disease has become a veritable pest in many parts of our West Indian colonies. Many laws have been enacted with a view to its limitation and ultimate suppression, but, from the squalor, ignorance, and superstition of the people, from indifference on the part of the executive, and because in many instances they proved to be of an unworkable character, these laws have become practically a dead letter, and, in spite of them, in nearly every one of the islands the disease is gaining ground. All this Dr. Nicholls points out in great detail; at the same time he indicates methods of a practical nature by which this spread might be effectually checked and the disease itself in time exterminated.

Besides fully discussing these matters the report contains much valuable clinical material, and also a very carefully prepared systematic description of the symptoms, course, histology, bacteriology, and treatment of yaws. Dr. Nicholls points out very clearly and convincingly that the view that yaws is but a form of syphilis—a view which, in his preface to Mr. Numa Rat's well-known memoir, Mr. Jonathan Hutchinson seems to favour—is absolutely erroneous. He shows that yaws is a disease *sui generis*, quite distinct and in no way connected with syphilis, unless in certain cases by accidental concurrence. In this view he is supported by most of those recent writers who have themselves enjoyed a practical acquaintance with the subject. Correct views on this point are not only of theoretical interest; they have a very practical and manifest bearing on treatment and prophylaxis.

Dr. Nicholls does not favour the now generally accepted opinion that yaws and the paranghi disease of Ceylon are identical. He has similar doubts about the coko disease of the Fiji Islands; in fact, he seems to think that hitherto yaws was confined to Africa and America. In this we submit that he is wrong, for not only are Kynsey's and Macgregor's descriptions fairly decisive on the point, but recent testimony—such as that supplied by Surgeon-Captain F. Smith for North Borneo[1] and Mr. Arthur Powell[2] for Assam—distinctly proves the existence of yaws in these countries, and if in these countries why not in other parts of Asia and Polynesia?

Dr. Nicholls has found a micrococcus in the characteristic

[1] *Lancet*, October 26th, 1895.
[2] *Ind. Med. Gaz.*, September, 1895.

fungating skin granulomata of the disease as well as in the peripheral parts of certain of the viscera. This micrococcus he has succeeded in cultivating, but his attempts to inoculate the lower animals with his cultures proved a failure.

Not the least valuable part of this report is the appendix, in which will be found many excellent microscopic drawings illustrating the histology of yaws. Besides these there are some fairly executed chromo-lithographs of the eruption which cannot fail to prove acceptable to dermatologists.

We notice allusions in the body of the report, under the names "Coolie itch" and "dermatitis orientalis," to a disease about which we should like to have a little more information. He speaks also of a form of endemic lupus common in certain parts of Dominica. What are these diseases?

Dr. Nicholls would confer a great boon on all interested in dermatological and tropical matters if he would condense and systematise the great mass of valuable material he has so laboriously accumulated. In its present shape, however useful it may prove for official purposes, it is practically lost to the reader who may wish to get at the principal facts without the labour and waste of time necessary for their extraction from these 300 and odd closely printed pages.

Autobiography, James Beart Simonds. London: Adlard and Son. 1894. (Demy 8vo, pp. 92.)

Though written in a somewhat prosy style, not uncommon to a generation whose living representatives are very few, this little reprint from the *Veterinarian* contains much that cannot fail to be of special interest to the veterinary profession with which its author has been so long and so honourably connected. The detailed narration of a long association with the diseases of the domestic animals offers attraction to the student of comparative medicine.

Qualifying as a veterinary surgeon in 1829, when the Examining Board of the Royal Veterinary College included Sir Astley Cooper, Sir E. Home, Sir B. Brodie, Abernethy, Joseph Henry Green, Charles Bell, Babbington, and Coleman, Mr. Simonds spent the few succeeding years in provincial practice. In 1842 he was called to the Chair of Cattle Pathology at the Royal Veterinary College, a position which he held for half a century, during the last decade of which he was also Principal. In addition to his duties in connection with the College, Professor Simonds was intimately associated with the Royal Agricultural Society, of which he was an original member, and with the Veterinary Department of the Privy Council as its first professional adviser, also with the *Veterinarian* as its editor. This autobiography, which gives many details of the writer's work in connection with the several departments named, is a valuable addition to the history of the veterinary medicine in this country, and tells more authoritatively of the incursion of exotic cattle diseases, and the means adopted to prevent and eradicate them, than could be told, as the result of personal experience, by anyone else. The manner of narration may possibly be tedious. The speculative genealogy of the Simonds's family, which occupies the first few pages, fail to interest any except the biographer, but to those who desire information on the history of contagious diseases of animals in Great Britain and the inception of the State Department which deals with them, this pamphlet will be acceptable.

NOTES ON BOOKS.

A Textbook of Organic Chemistry. By A. Bernthsen, Ph.D. Translated by G. M'Gowan, Ph.D. Second Edition. (London: Blackie and Son, Limited. 1894, pp. 396. 7s. 6d.)—This is a translation from a well-known German textbook of the ordinary type. After a short introduction on the methods of determining the constitution and physical properties of organic compounds, the subject is developed upon orthodox lines, beginning with the hydrocarbons; these being completely dealt with before considering the haloid compounds and alcohols, and so on. It is doubtful, however, whether this plan is the most suitable for beginners, the alternative method of starting with a few well-known organic substances and deriving from these examples of all the chief types of compounds is probably preferable with elementary students. The present work will be chiefly valuable as a handy reference book for students past the rudiments of the subject. The introductory chapters on Constitution, Isomerism, and Physical Properties of Organic Compounds might be enlarged with advantage.

Climatologie Médicale de la Republique Argentine et des Principales Villes d'Amerique. [Medical Climatology of the Argentine Republic and of the Principal Towns of America.] Par Dr. Samuel Gache. (Buenos Ayres: Imprimerie "Mariano Moreno." 1895. Roy. 8vo, pp. 984.)—This large and imposing volume presents an elaborate and painstaking compilation of such observations as were available to the author on the subject he undertook to treat. It has the merits and the defects of a work conceived and executed on such a plan. It is a monument to the industry of the author, but it is dry and tedious to read, and its accumulation of facts, of no remarkable novelty or interest, is unrelieved by any bright passages of description or any original or interesting discussions. The book also lacks an index, though it is provided with a table of contents, and, strange to say, in a work assuming so pretentious a form, there is not a vestige of a map in the whole 917 pages. There is a vast amount of quotations from works and papers familiar to the European reader which seems somewhat irrelevant to the main subject of the book, as they have no special reference to the climate of the Argentine Republic; while, on the other hand, much information that we should expect to find here is absent.

Therapie der Harnkrankheiten. [Treatment of Urinary Diseases.] Von Professor C. Posner. (Berlin: A. Hirschwald. 1895. Demy 8vo, pp. 144, with 11 illustrations.) Last year we had occasion to review an excellent small work by Professor Posner on the diagnosis of urinary diseases; this is a companion volume of ten lectures on the treatment of these diseases. The first four lectures are given to the treatment of gonorrhœa, both acute and chronic, including complications. Urethral stricture is dealt with in Lecture V. Under new growths in the urinary passages bladder tumours and enlarged prostate are taken. A short account is given of prostatectomy (McGill's operation), and also of castration, the chief credit in the latter case being attributed to American and Italian surgeons. Under the changes in the chemistry of the urine gravel, phosphaturia, oxaluria, etc., are described. In Lecture VII renal calculus, including colic, are dealt with, as well as vesical calculus. The various operations for stone in the bladder are here given, suprapubic lithotomy, with the after-treatment, receiving special attention. The lecture on functional nervous disease also includes sexual functional disorders in the male. The last lecture deals with infections and intoxications starting from the urinary organs. This book contains a practical and judicious account of the treatment of these various diseases.

On the Relation of Diseases of the Spinal Cord to the Distribution and Lesions of the Spinal Blood Vessels. By R. T. Williamson, M.D. (London: H. K. Lewis. 1895. Roy. 8vo, pp. 43, 2s.)—In this pamphlet, which has been reprinted from the *Manchester Medical Chronicle*, Dr. Williamson calls attention to the somewhat neglected subject in neurological pathology. He gives an admirable account of the distribution of the blood supply, and affords from his own pathological observations good evidence that in many cases of acute poliomyelitis, of acute myelitis, and syphilitic cord disease; arterial obstruction, either by embolism or thrombosis, is the effective cause. The illustrations are somewhat rough, but sufficient to indicate the author's meaning.

Descriptive Catalogue of the Pathological Specimens in the Museum of Guy's Hospital. 3rd edition. Vol. I. Morbid Conditions of the Respiratory Organs and Alimentary Tract. By Lauriston C. Shaw, M.D., Assistant Physician and Curator of the Museum, and C. Cooper Perry, M.A., M.D., Assistant Physician and Demonstrator of Morbid Anatomy. (London: J. and A. Churchill. 1894. Roy. 8vo, pp. 460.)—In issuing this edition of their *Museum Catalogue*, the authors have been guided by the belief that the study of a pathological specimen is made at once more interesting and of greater practical

utility when combined with a study of the history during life of the case from which the preparation has been derived. Hence we find that in nearly all cases there has been appended to the description of the specimen a short clinical history of the case from which the specimen was derived. This is a principle which is at once sound and of great practical utility in its accomplishment. The thanks of all Guy's students are due to Drs. Shaw and Perry, as well as those of the profession at large who may wish to use the museum for research or record.

Short and Easy Book-keeping, a Concise System of Double Entry. (A Handbook for Traders and Students). By S. W. Flint, Chartered Accountant. (Published by Effingham, Wilson, and Co., Royal Exchange. 6d.)—This little book, which has reached its twenty fifth thousand, contains within the compass of its 44 pages all necessary information for the keeping of accounts in a clear and satisfactory manner. Mr. S. W. Flint's method has the recommendation of extreme simplicity.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

APENTA WATER.

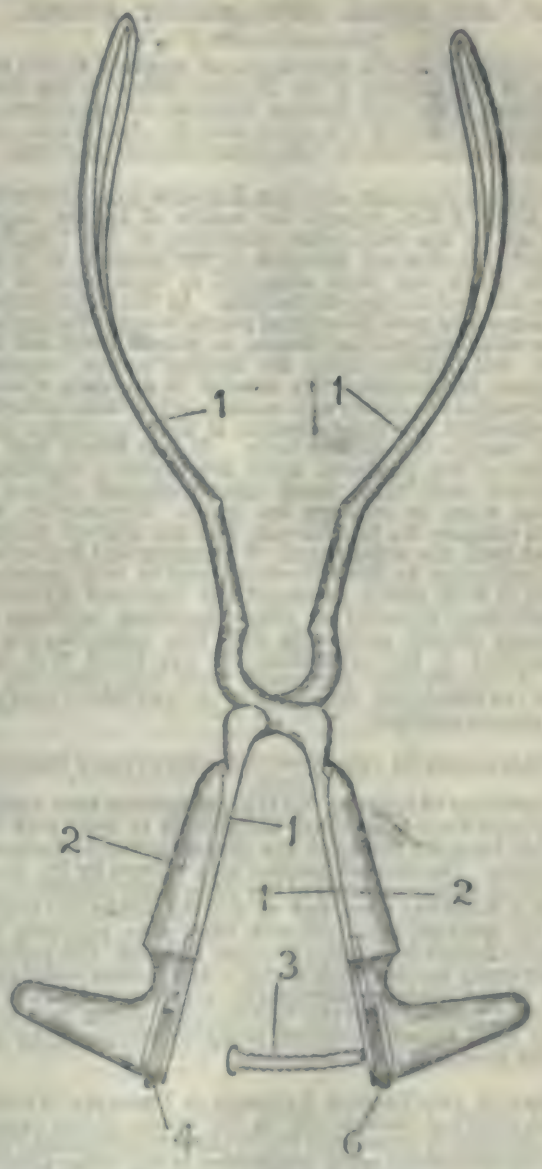
We have received from the Apollinaris Company specimens of the new Hunyadi water which they are about to introduce under the name of "Apenta." Apenta is a natural aperient water drawn from the Uj Hunyadi springs, near Buda-Pesth. It affords those guarantees of uniform strength and composition which have long been wanting in the best known Hunyadi waters. The chemical composition of the water, according to the analysis of Professor L. Liebermann, Director of the Royal Hungarian State Chemical Institute in the Ministry of Agriculture, Buda-Pesth, is as follows:

Sulphate of soda	15.4320
Sulphate of magnesia	[illegible]
Sulphate of lime	1.0989
Chloride of sodium	[illegible]
Bicarbonate of lime	0.8843
Bicarbonate of protoxide of iron	0.0169
Silicic acid	[illegible]

Besides these constituents, the water contains traces of lithium and potassium. The specific gravity, at 15° C., amounts to 1011.4. Professor Liebermann states that "in view of the fact that both the quantity of the solid constituents and also their relative proportions in the bitter water Uj Hunyadi, correspond generally to the proportions found also in other Ofen bitter waters; for instance, in Hunyadi Janos, the same considerations are guiding from a medicinal point of view in forming an opinion of water of the Uj Hunyadi springs. What is striking in the Uj Hunyadi water is the proportion between the sulphate of soda and the sulphate of magnesia which is favourable for a bitter water. The quantity of the latter is the greater. According to all this, I do not hesitate to declare that I know of no stronger or more favourably constituted natural bitter water than the natural bitter water Uj Hunyadi." "Apenta" is agreeable to the palate, can be taken with impunity, and is an exceptionally efficacious aperient.

AN ADJUSTABLE LOCK FOR OBSTETRIC FORCEPS.

This addition to the ordinary forceps has been devised by Mr. Edmond McW. Bourke with the object of enabling the obstetrician to fix or lock the forceps after they have been applied. By its means it is possible, by the turning of a milled head in the one handle, to lock or unlock the forceps in a moment, while by the turning of a similar milled head in the other handle the apparatus can be adjusted to any extent of separation of the blades which may be desired. The forceps can thus be at once fixed in any position, so far as the relation of the blades to one another is concerned, and with equal rapidity released without any assistance and without any relaxation of the grip with which they are being held.



The locking arrangement consists of a flattened metal bar, which when not wanted lies buried in the handle. On turning a milled head or wheel, through a screw-grooved hole in the centre of which it passes, the bar can be protruded towards the opposite handle, into which its head can be made to lock by a quarter turn of a similar milled wheel on that side. These small wheels only protrude from the handles sufficiently to enable them to be easily turned. The accompanying woodcut sufficiently explains the apparatus. Mr. Bourke's idea has been carried out by Messrs. Arnold and Sons, West Smithfield, from whom the forceps can be obtained.

RHINODYNE.

Rhinodyne, which is recommended as valuable in the treatment of hay fever, is a modified form of the snuff recommended by Dr. Ferrier as a remedy for cold in the head. It contains bismuth subnitrate with a cocaine salt in place of the morphine of the original recipe. It also contains a little menthol and nearly 40 per cent. of lycopodium powder.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

[Second Notice.]

The auxiliary scientific investigations reported in the new volume of the Reports of the Medical Officer to the Local Government Board (see British Medical Journal, September 21st, p. 729) occupy less space than for some years past. They are concerned chiefly with bacteriological questions.

The Typhoid Bacillus and the Bacillus Coli Communis.

Dr. Klein, F.R.S., reports the results of further experiments as to the pathogenic properties of the "typhoid bacillus." He directed attention to the question as to the relation which has been supposed to exist between the bacillus coli and the typhoid bacillus. In the last volume of these Reports he gave differential points between the typhoid bacillus obtained from the tissues in enteric fever, and the bacillus coli obtained from the healthy human intestine. Subsequent investigation was directed to ascertain whether the differential characters were modified when these microbes were submitted for equal lengths of time to similar conditions outside the human body. It was found that no modification was produced under the observed conditions. The bacilli were thus tested after prolonged sojourn in sterilised water or ordinary tap water. Opportunity was taken to compare the bacillus coli and the typhoid bacillus obtained from the water supply of Worthing and Rotherham during epidemics in those localities, and in both instances cultures of both bacilli presented the described *differentia*. Intraperitoneal injection of either organism produces in guinea-pigs intense peritonitis with free multiplication of the microbes in the exudations. It was found that in a series of inoculations performed from one guinea-pig to another the differential characters of the two bacilli were not in any respect modified.

The Cultivation of the Typhoid Bacillus from Drinking Water.

The difficulty of isolating the typhoid bacillus from a water supply, even when from other evidence it is clear that the water has been the means of the dissemination of disease is well known. The method adopted with success by Dr. Klein was to drive a large quantity of the water (1,600 to 2,000 c.cm.) through a Berkefeld filter, and to use the particulate matter left on the filter for plate cultures, each plate receiving the particulate matter from 150 to 250 c.cm. of water. The gelatine was previously treated with carbolic acid, which retards the growth of the ordinary saprophytic organisms, but not of the typhoid bacillus or of the bacillus coli, which thus have time to form colonies without being overwhelmed by the luxuriant growth of other organisms.

Survival of the Typhoid Bacillus in Drinking Water.

It was observed incidentally in the course of the experiments mentioned above that the typhoid bacillus could survive in distilled water much longer than in tap water, whether sterilised or unsterilised before the introduction of the bacillus. In flasks containing distilled water the bacillus, after gradually decreasing in number until the sixteenth day, began again to increase, until at the end of a month colonies could be obtained as readily, and in as large numbers, as on the first day after the introduction. On the other hand, in the flasks containing tap water (sterilised or unsterilised) few or no colonies could be obtained after the sixteenth day. The same phenomena were observed with the B. coli. Dr. Klein proposes to pursue this investigation further, with the object of ascertaining the behaviour of these two microbes in waters of various characters under various conditions.

Inoculation of Typhoid Fever.

Certain experiments were made by Dr. Klein to test whether typhoid fever could be conveyed to monkeys by feeding or inoculation with artificial cultivations of the bacillus. The feeding experiments gave negative results, as did also subcutaneous injection, except in one of the eight monkeys used. In this monkey, which was also at the same time inoculated (accidentally) with erysipelas, of which it died, the typhoid bacillus was found to have become established and to have multiplied in the spleen. In the case of four calves inoculated with typhoid cultures by subcutaneous injection in the groin, it was found that the neighbouring lymphatic glands contained the typhoid bacillus in considerable numbers when the animals were killed 10 to 14 days after inoculation.

The Antagonism of Microbes.

In the last number of these Reports Dr. Klein showed that the substance of the bodies, the protoplasm, of certain bacteria were poisonous. To this poison he applied the term "intracellular poison," and pointed out that it was to be distinguished sharply from the toxins produced by the same bacteria as the result of their growth and multiplication in the human body or in artificial media. The intracellular poison of the vibrio of cholera, of Finkler's vibrio, of the typhoid bacillus, of the bacillus coli, of proteus vulgaris, and of staphylococcus aureus produced similar or identical symptoms, whereas those produced by their toxins differed widely. Continuing this research, he found that the intracellular substance of the bacillus anthracis, the bacillus diphtheria, and the bacillus of fowl cholera is not poisonous, and does not confer on the animals (guinea-pigs) used for the experiments any immunity.

The Chemical Pathology of Tetanus.

Dr. Sidney Martin, in continuation of his admirable researches on the chemical pathology of certain infectious diseases, now presents a preliminary report on acute traumatic tetanus. The blood, the spleen, and the spinal cord from cases of tetanus were examined chemically, but the present report deals with the blood and the spleen only. From them were obtained albumoses and acid organic bodies. The albumoses were found to produce fever but not tetanic contractions. The acid organic bodies which were contained in the alcoholic extract were divided, roughly, into two classes according as they were soluble or insoluble in ether. The material soluble in ether was found to produce tetanic muscular spasms, and death in certain doses. Dr. Martin concludes, therefore, that the ether extract—that is, the part of the alcoholic extract soluble in ether—contains the substance or substances which are the direct excitant of the muscular spasms in tetanus. The separation of the toxic substance or substances and the determination of their nature will be the subject of further inquiry.

The Bacteriology of Vaccinia.

Dr. Klein contributes a report on the bacteriology of vaccinia, in continuation of that published in the last number of these Reports. Further research has only confirmed the conclusion that, though human and calf vaccine lymph, as well as the clear lymph obtained from human small-pox on the third or fourth day of the eruption, all contained a short bacillus, present in great numbers in early lymph, yet these bacilli cannot be cultivated in any media which has yet been tried. Following on subcutaneous inoculation of active calf vaccine lymph, the lymphatic glands become enlarged in guinea-pigs and calves, and it was thought possible that the bacilli might be present in these enlarged glands and in a state more favourable for cultivation. Experiments were accordingly made in this direction, but again with negative results.

The Bacteriology of a "Common Cold."

Dr. Edmund Cautley has examined bacteriologically ten cases of "cold in the head" occurring at a season when influenza was not prevalent. In no case did he find the influenza bacillus, and the microbes found were not constant. In cases examined during the early stage staphylococci were cultivated, but it was not possible to determine the species, in later stages, in addition to staphylococci, moulds and sarcinæ were cultivated.

Microbes in Lymphatic Glands.

Dr. Cautley has also made some investigations as to microbes present in lymphatic glands under various conditions in man. In some instances death had been due to accident, in others to acute, and in others again to more chronic disease. Neither in the bronchial nor in the mesenteric glands were large numbers of microbes found;

they were far from being "crowded with organisms." Further, not all of those present were living. In only two instances was the tubercle bacillus seen (in the bronchial glands) and in both instance there were caseous glands in the neighbourhood. The organisms found in the mesenteric glands were such as are found commonly in the alimentary canal, but "their number and variety" were "surprisingly small." The bacillus coli commune was found in 2 cases only (out of 25 examined). In the bronchial glands the variety of microbes found was somewhat larger, but the number in any case was small, and in a large proportion of cases none at all were discovered. The bacillus coli was present in 5 out of 10 cases in which microbes were found.

Psorosperms and Cancer.

Dr. Klein contributes an interesting critical review of the theory which would trace some causal relationship between psorosperms and cancer. The article is one which hardly bears condensation and should be read by everyone interested in this obscure, but most interesting question. Dr. Klein's arguments, founded as they are mainly on histological considerations, will be received with the utmost respect, even though he calls in question many, in fact the vast majority, of the observations which, it was hoped, might afford some clue as to the etiology of this terrible scourge. In concluding his report he writes:

"All that therefore remains, and cannot be placed to the account of either epithelial cells or their nuclei, or of leucocytes, are the large pedunculated protoplasmic bodies with a nucleated knobbed enlargement, contained within epithelial cells, that were first seen and described by Korotneff, rhophalocephalus carcinomatosus. These seem to me to be large amœbæ-like bodies, which, by reproduction bring forth small nucleated protoplasmic amœbæ generally also contained within epithelial cells. Such small amœbic offspring, just like the parent amœba, are conspicuous by their staining, and by their apparent direct connection with the pedunculated large amœbæ. Whether many of the nucleated cells enclosed within the epithelial cells of cancer, seen and described by other observers (Soudakewitch, Ruffer, and others) as conspicuous by their staining are or are not the young amœbæ in question, cannot be easily determined.

"Lastly, it has to be mentioned that the above pedunculated amœbæ have been found by myself in one case only, that of cancer of the œsophagus; I could not find them in many other cancers. It is quite possible that this condition, namely, that of the pedunculated form, may be more difficult to meet with, or may be more rare; the form of smaller, rapidly dividing amœbæ being more frequent. But at all events, even these latter forms are in many cancerous epithelial growths only sparingly to be met with: in some I have missed them altogether, while in others several sections had to be examined in order to find one or the other nucleated bodies resembling them. From this it would appear hazardous to assign to them a definite causative relation to the rapid growth and multiplication of the epithelial cells constituting carcinoma."

DEATHS UNDER ANÆSTHETICS.

Chloroform.

Dr. F. Hugh Snell has furnished us with the following case of death under chloroform which occurred at the Greenwich Infirmary on September 11th, 1895: E. L., a woman, aged 54, was admitted to the Greenwich Infirmary on August 7th, 1895; on September 11th she required an anæsthetic for an abdominal section to be performed by Mr. W. J. C. Keats, Assistant Medical Officer. She had been suitably prepared for the operation, and everything that could possibly be required in the event of any untoward symptoms arising from the anæsthetic was at hand. No organic disease of the lungs or heart could be detected by physical examination; there was no albumen in the urine; there was a history of chronic alcoholism. This latter fact, together with a consideration of the nature of the operation, suggested chloroform as the most appropriate anæsthetic, which was accordingly administered. It was given him on a folded lint with left hand under the lint, the fingers extended, the ring and little fingers supporting the chin. The right pupil was dilated and irregular on account of old iritis, and it was disregarded during the anæsthetisation; the left was small and reacted to light. The patient held her breath at first and began to struggle; afterwards she talked irrationally; this continued during the whole of the preliminary stages. The pulse at the right wrist was not felt to vary, and was fairly strong and regular. The conjunctival reflex and the delirious conversation disappeared together about seven minutes after the first application of the chloroform; she was then fully anæsthetized, and the lint was withdrawn and not again applied; the breathing was then regular, immediately afterwards it became noisy and then stertorous; the operation had not been commenced. The face began to become livid. The tongue was immediately drawn forward and the chin further upwards; the breathing then ceased altogether, and the face was more livid. Artificial respiration was then resorted to, and the patient made five or six irregular respirations herself. Venesection was performed on the right median cephalic and median basilic veins; only about half an ounce of blood flowed; the breathing not continuing, the artificial respiration was again started, Sylvester's method being employed; amyl nitrite was held to the nose, ether and strychnine were injected hypodermically, heart puncture and inversion were tried, and the artificial respiration was continued for half an hour, but all to no purpose; life was then seen to be extinct, and further efforts hopeless. About 2 drachms of chloroform (Duncan and Flockhart's) had been used, though since the two sides of the lint had been used alternately this is largely in excess of that which had been inhaled; the pulse was felt until the respiration ceased; during the efforts at resuscitation its beats were not felt for, nor the heart listened to, until the lapse of some ten minutes, when the pulse could no longer be distinguished nor the heart heard. The method of death appeared to be due to asphyxia; five medical men who were present concurred in this opinion. Necropsy on September 12th: The deceased was a very stout woman; meninges congested, brain normal; a large amount of dark fluid blood escaped from the cut cerebral vessels. Heart flabby, 10½ ounces, walls soft and fattily degenerated; mitral orifice admitted three fingers easily, and the valves were slightly thickened at the edges; the tricuspid orifice admitted four or five fingers; the subpericardial tissue contained extensive deposits of fat. All the cavities of the heart were quite empty of blood-clot or blood, the lungs were very much engorged with blood, otherwise normal; the larynx and trachea were free, containing no foreign body; liver fatty, kidneys very slightly granular, some cystic tumours connected with one ovary. At an inquest held on September 13th, the jury returned a verdict that "death was due to asphyxia brought on by chloroform, properly administered, for the performance of a necessary operation."

Mr. E. V. R. Fooks, M.R.C.S., L.R.C.P., Acting Medical Superintendent to the Infirmary, East Dulwich Grove, London, S.E., has favoured us with the following notes on a case of death under chloroform which occurred in that institution: C. H., aged 14, was admitted on June 5th suffering from tuberculous glands of the neck, which had broken down. These had partly healed, but broke down from time to time, leaving an intractable sinus which would not heal, so that on September 11th it was deemed necessary to scrape the sinus, for which purpose the patient, after being examined and no organic lesions found, was put under chloroform at 11.35 A.M., having been prepared in the usual way. The chloroform was administered on lint by the gradual method. The patient took it very well at the commencement, but after nearly 2 drachms had been administered began to struggle and got slightly blue at the lips. The chloroform was immediately stopped; the pulse was found to have become very weak, and soon afterwards imperceptible; respiration still continued. At the first sign of heart failure strychnine was injected hypodermically, and as no improvement took place she was suspended by the legs. Respiration getting weaker ether was injected, and artificial respiration was commenced and the battery applied over the vagus and præcordial region. These means proved of no avail, and respiration ceased altogether. From the time of starting the anæsthetic until

respiration ceased was about twenty-five minutes. Artificial respiration was continued for one hour and twenty minutes, during which time the patient made one feeble respiratory effort. The pupils reacted well until shortly after cyanosis commenced, and then became dilated. The operation had not been commenced. Owing to a misunderstanding between the sister and one of the medical officers consent to perform the operation had not been obtained from the parents. On a *post-mortem* examination being made the right ventricle of the heart was found dilated and full of fluid blood, cerebral vessels congested, and a few old adhesions at the bases of both lungs; otherwise all organs were healthy.

THE MASSACRES IN CHINA.

The Wounded Survivors of the Hoa Sang Massacre.

Dr. T. Rennie sends us from Foochow the following account of the wounded survivors of the Hoa Sang massacre, which took place between 6 and 7 of the morning on August 1st:

Nine adult British subjects were brutally murdered, and of the eight European survivors seven were more or less seriously injured, whilst only one, who lodged in a native house situated some distance from the two English cottages, escaped unhurt. This gentleman, the Rev. H. S. Phillips, was thus fortunately able to staunch bleeding and in great measure alleviate the sufferings of the wounded until medical aid could be procured. About 8 P.M. on August 1st Dr. Gregory, of the American Methodist Mission, Kucheng, arrived to treat the wounded. After this had been done, owing to difficulties in procuring chair bearers, it was not till 4 P.M. on August 2nd that Dr. Gregory with his charge could leave Hoa Sang for Foochow. Three hours after commencing the journey H. S., a boy of 6 years, died. Besides being severely wounded about the upper parts of his body he had received several severe wounds on the head, one of which clove the occiput and exposed the brain.

At 8.30 A.M. on August 3rd, after travelling in native chairs for 30 miles, Dr. Gregory with his charges reached Chwi Kau, a village on the left banks of the river Min. There the wounded were transferred to native boats, and at 2 P.M. on August 4th Foochow was reached. Miss H., an American lady, was taken to the American Methodist Mission Hospital, whilst the rest of the wounded, five in all, were placed under my care in the private wards reserved for Europeans adjoining the Foochow Native Hospital. Their condition on admission was as follows:

Miss C. had a sword wound across the vault of the cranium 1 inch behind the anterior margin of the hair, 4 inches long, and extending down to the bone. The edges of the wound, except at two points where thick sanious pus exuded, were healed. Through the openings rough bare bone could be felt with the probe. Dr. Gregory told me that when he dressed this wound at Hoa Sang, on the evening of August 1st, he had removed several loose fragments of the external table of the skull. An incised wound 7 inches long commenced at the left angle of the mouth, passed downwards and backwards over the lower jaw on to the neck, cutting through the whole thickness of the lip, and exposing the inferior maxilla. Good union had taken place throughout the greater extent of the wound; but a large scar will remain. The thrust that had inflicted this wound had broken off the left upper lateral incisor tooth at the margin of the gum, leaving the sensitive dental pulp exposed. Of other incised wounds of importance one, five inches in length, ran across the bridge of the nose under the right eye; whilst another, four inches long, ran along the lower border of the right inferior maxilla. There was considerable ecchymosis of the right eyelids, much photophobia of the same eye was complained of, and the episcleral vessels were deeply injected. Generally, over the head, there was much pain and discomfort, and when the head was shaved two punctured wounds of the scalp and numerous contusions were exposed to view. In other parts of the body ten shallow punctured wounds were counted. Miss C. was suffering from insomnia and slight symptomatic fever.

M. S., aged 12, had a sword wound 6 inches long, which commenced an inch and a-half to the inner side of a point 3 inches above the middle line of the right patella, passed outwards and downwards, and ended at the junction of the inferior and middle thirds of the outer edge of the patella. The wound had a slanting direction outwards and backwards, was very deep for its lower four inches, and passed through the outer two-thirds of the rectus femoris, part of the crureus, and the greater part of the lower attachment of the vastus externus. I did not see any opening into the joint, but Dr. Gregory told me that when he first dressed this wound he had clearly seen part of the articular surfaces of the joint. Excepting for about two inches at the upper part, the wound had not healed. The whole joint was considerably swollen. A cavity from which thick sanious pus welled out, about the shape and capacity of an average-sized middle finger, extended upwards from the lower part of the wound just external, I think, to the lower aponeurosis and deep fascia of the vastus externus. There were besides two punctured wounds—one on the left leg and another on the left foot. When the head was shaved two punctured wounds and several contusions on the hairy scalp were discovered.

Her temperature was 102° F., but as there was no suppuration in the cavity of the joint it was deemed advisable to attempt, by treating it on antiseptic principles, adopting means to render the joint immovable, and to reduce the inflammation present to save the articulation.

K. S., aged 11, had, on various parts of her body five punctured wounds and several superficial bruises.

E. S., aged 4, had an incised wound on the left buttock, a punctured wound on the left arm, and was much bruised about the head. His wounds were not of a serious nature; but he suffered much from insomnia and nervous prostration.

H. S., aged 13 months, had a punctured wound about the middle of the left frontal bone one inch anterior to the margin of the hairy scalp. Thin sanious pus was exuding from the opening which, on examination, was found to enter the cranial cavity by an incised wound in the skull. Judging from the extent of the external wound and the formation of a native spear the contents of the cranium could not have been punctured more than one-half inch. A severe blow had been inflicted on the right eye. The upper eyelid was much ecchymosed and swollen. The palpebral conjunctiva at the inner part of the lower eyelid was torn from the adjoining scleral conjunctiva. The pupil was widely dilated, insensible to light, and the iris was lacerated. Backwards and upwards for several inches from the right ear there was an extensive contusion. A severe bruise ran diagonally across the right chest from the shoulder to the lower end of the sternum. The child's temperature on admission was 103° F. An attempt was made to render the cranial wound aseptic, and measures were taken to subdue and prevent extension of inflammation in the cranial cavity. In all the wounds seemed to have been inflicted by means of spears, swords and sticks.

Ambulance Instruction for Sailors.—At a large gathering of merchant sailors in the Mission to Seamen's Institute at Poplar, on September 19th, a presentation of St. John Ambulance certificates was made. In the uncertain intervals of their voyages hundreds of seagoing men have, during the first year of the existence of the Seamen's Institute, received partial instruction in first aid to the injured from Dr. Radford, of the London Hospital, assisted by Mr. Noble, the Missions to Seamen reader. Fifty-nine of these sailors have been long enough ashore to complete the prescribed course of ambulance instruction, and to pass successfully the examinations held by Dr. Tunstall, of the volunteer forces. Already many of the certificated men who have gone to sea have had many occasions of putting their ambulance training into practice in consequence of severe accidents on board ship.

The report of the Harvard Medical School issued recently states that the influx of students has not been appreciably diminished by the extension of the course to four years. There were altogether in the academic year 454 medical students, of whom 182 belonged to the first year's class. The resources of the class rooms and laboratories are, it is said, likely to be strained if the new entries continue to be as numerous or to increase, and it is seriously proposed to meet this difficulty, not by increasing the accommodation, but by extending the curriculum to five years.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, SEPTEMBER 28TH, 1895.

THE SIGNS OF DEATH.

The question of the possibility of the interment of living beings has recently been exercising the minds of a portion of the public, whose fears have found expression in a series of letters to some of the daily papers. It is a matter of regret that so much irresponsible nonsense and such hysterical outpourings should find a place in the columns of our great daily press. No attempt at the production of evidence in support of their beliefs or fears has been made by the majority of writers, whilst the cases mentioned by the few are either the inventions of the credulous or ignorant, or are destitute of foundation. It cannot be said that the few medical men who have joined in this public correspondence have either contributed any useful information or have seriously attempted to allay the fears of the public. One medical gentleman managed to earn for himself a cheap notoriety by employing, with very scanty acknowledgment of the source, copious extracts from Dr. Gowers's article on Trance in *Quain's Dictionary of Medicine*.

The possibility of apparent death being mistaken for real death can only be admitted when the decision of the reality of death is left to ignorant persons. We are quite unprepared to admit the possibility of such a mistake occurring in this country to a medical practitioner armed with the methods for the recognition of death that modern science has placed at his disposal. Moreover, even by the ignorant the reality of death can only be questioned during the period preceding putrefaction. During this period various signs of death appear which, taken collectively, allow of an absolute opinion as to the reality of death being given. To each of these, as a sign of death, exception may perhaps be individually taken, but a medical opinion is formed from a conjunction of these signs, and not from the presence of an individual one.

The various conditions or forms of disease which may occasionally to the casual observer closely simulate death are syncope, coma, concussion, hysterical spasm, catalepsy, and exhaustion; but in these cases the warmth of the body is retained, and the heart and lungs continue to act, although perhaps but feebly. Catalepsy or trance, and profound sleep lasting for a lengthened period, are conditions somewhat similar to the hybernation of animals. To a casual observer a hybernating animal would appear to be dead, but the vital functions are not arrested, but are reduced to a low ebb; the pulsations of the heart and the respiration still occur, though feebly and at lengthened intervals. In like manner the authenticated cases of catalepsy and prolonged profound sleep that have been recorded by medical men, though presenting to the ordinary observer the appearances of death, have always yielded on careful auscultation evidence of the action of the heart and lungs, although the heart's action may have been very slow and feeble, and the respirations reduced to only four or five per minute. The very exceptional case of Colonel Townshend, who apparently possessed the extremely rare power of partially suspending, by an act of volition, the action of the heart, cannot even be taken as an exception to what has been stated above. It appears that Colonel Townshend possessed the power, by a mere effort of will, of so suspending the action of the heart that he was able to pass into a profound sleep, or condition of stupor, in which no radial pulse could be felt, no beating of the heart was perceptible by palpation, and no moisture condensed on a bright mirror held to his mouth. These, however, were but rough tests of the existence or not of respiration and circulation. It must be remembered that, at that time, the stethoscope was not invented, and that Colonel Townshend's heart must, in all probability, have been beating, although but feebly, and his respiration continuing, during the time he was in the senseless condition, a period which usually extended over half an hour. A few hours after one of these experiments, however, the Colonel died.

The signs on which a medical man should rely as furnishing the best evidence of the reality of death, prior to the commencement of putrefactive changes, are: (1) The absence of circulation and respiration; (2) the gradual cooling of the body, the extremities cooling first and the trunk last; (3) gradual supervention of rigor mortis; (4) the production of *post-mortem* stains or ecchymoses. The auscultatory test was first proposed by Bouchut, to whom the French Academy awarded a prize in 1848 for the discovery of this proof of death. Bouchut found that in all cases of apparent death, although the contractions of the heart were reduced in force and frequency, auscultation enabled him to detect the pulsations of the heart, and so to distinguish apparent from real death. The careful use of the stethoscope by a medical man will enable him to distinguish a living from a dead body.

The statement is occasionally made that certain forms of rigidity that may occur during life may be mistaken for rigor mortis. Rigidity during life may occur from tetanus, apoplexy, catalepsy, syncope, asphyxia, and hysterical spasm, but presents these three striking differences from cadaveric rigidity: (1) The warmth of the body is preserved. (2) The whole of the body becomes equally rigid at the same moment, due to the occurrence of a general muscular spasm; whereas, in connection with rigor mortis, the rigidity usually commences in the muscles of the neck and lower jaw, and then gradually affects the other parts of the body. (3) If a joint be forcibly bent, such as the arm at the elbow, the limb will, if in a state of spasm from disease, return to its original position when the bending force is removed, whereas if it be in a state of rigor mortis it will not.

From time to time the public mind is agitated by the fear of premature interment, and undoubtedly in past times, when medical men did not have at their disposal the

methods for the recognition of death which they now possess, living individuals may have been consigned to the grave. But in recent times all cases of alleged premature interment in this country have, upon close examination, proved to be nothing more than the delusions of superstitious or ignorant people, with a considerable amount of exaggeration added. The fact of an exhumed body being found turned in the coffin is no proof of premature interment, since such movement may have been caused by tilting or turning of the coffin during its conveyance to or lowering into the grave, or may be the result of gaseous distension of the corpse from putrefaction. The pressure exerted by the generation of the gases of putrefaction is responsible for many phenomena which are apt to be regarded as vital ones by the uninitiated. Thus the pressure of the gases of putrefaction within the alimentary tract may cause a *post-mortem* escape of alimentary and fæcal matters from the outlets; and, in the cases of women who have died during labour and undelivered, the gases of putrefaction have even accumulated with sufficient force to expel the contents of the uterus on certain rare occasions. Again, various blood displacements may occur from the pressure of the gases of putrefaction generated within the heart and blood vessels causing *post-mortem* hæmorrhage from wounds, or changing the pallid face of a corpse to a red and rosy colour.

As burial is carried out in this country, and assuming that a person still living has been screwed down in an air-tight coffin, it is quite impossible to believe that such a person could ever recover consciousness, since speedy asphyxia must result from the accumulation of the products of respiration in the small amount of air within the coffin. With regard to the recorded cases of alleged death where the individuals supposed to have died have yet retained consciousness so as to overhear conversations, although unable to make any movement at the time, these have proved on investigation to be cases in which the reality of death has been wrongly assumed by ignorant persons and in which no examination as to the occurrence of death has been made by medical men. There is no certain and simple sign which would be of use in guiding ignorant persons to decide on the reality of death soon after it has occurred, nor is it, perhaps, desirable that such should be discovered, as it would be always dangerous to leave the decision of such a question to ignorant people. It is better that the rule should be strictly enforced that nobody should be buried without a medical certificate of death and its causes. To avoid the possibility of hasty interment of the living as dead no burial should be allowed to take place until after the lapse of twenty-four hours at least from the time of the supposed death, and only then upon the certificate of a medical practitioner who has examined the body.

If a proper interval be allowed to elapse after the supposed death there should be no difficulty in deciding the question of the reality of death prior to the commencement of putrefactive changes. If the signs of death, previously detailed, are observed, then, quoting the words of Taylor and Stevenson, "these changes are as certainly the forerunners of putrefaction as the process of putrefaction is itself the forerunner of the entire destruction of the body."

A "Syphilidological Congress" will, it is announced, be held at St. Petersburg in November, 1896.

THE PARLIAMENTARY COMMITTEE ON ADULTERATION.

The second report of the "Food Products Adulteration" Committee of the House of Commons consists chiefly of a record of the evidence given by representatives of various trades and trade organisations, and, although, as might have been anticipated, it contains a not inconsiderable amount of matter of very doubtful accuracy and value, the report, taken as a whole, and intelligently read by those who may be able and willing to separate the wheat from the chaff, must be regarded as a most important public document. The adulteration question is one upon which profound and widespread misconception exists, and even among those who have given life-long attention to the subject there are still great differences of opinion as to the best methods of dealing with it.

The technical details, scientific and legal, which the matter involves, the complicated commercial questions which are affected, the vast commercial interests which are at stake, and the undoubted, but by no means always clear connection between adulteration and the health and well-being of a community are considerations which may well make any would-be legislator pause before setting about the production of any ameliorating legal scheme, until the subject has been threshed out to a far greater extent than can at present be said to be the case. As we have repeatedly urged, fresh and comprehensive legislation dealing with the adulteration, both of food and of drugs is absolutely necessary, and although the Parliamentary Committee's report does not contain much information as to adulteration practices beyond that which has been reported for years past by public analysts in this country and abroad, it is satisfactory to find our frequent contention thoroughly justified by the facts recorded in a Blue Book upon which forthcoming legislation must be partially based.

The Committee have had placed before them a number of facts relating to the adulteration of milk by the admixture of separated milk, the addition of water, the direct abstraction of fat, and the addition of colouring matters and "preservative" chemicals, all points upon which we have frequently animadverted and in regard to which a recent investigation carried out for the British Medical Journal has thrown considerable light. The adulteration of butter with margarine, and the substitution of the latter for the former, together with the methods employed to accomplish these ends to the satisfaction of the cheating wholesale and retail dealer; the sale of "filled" cheese, of chicoried coffee, of exhausted ginger, refuse pepper, diluted spirits, salted beer, aniline-dyed sugar crystals, factitious olive oil, and spurious drugs are all matters which have engaged the attention of the members, albeit these subjects have been presented to them in a somewhat incongruous jumble, and in some instances have been dealt with by witnesses whose evidence was too obviously influenced by personal considerations, or who were not very thoroughly acquainted with the matters upon which they were desirous of enlightening the Committee.

The Committee of the House of Commons, upon whose report the Sale of Food and Drugs Act, 1875, was principally based, came to the conclusion that in regard, at any rate, to the adulteration of food, the public were cheated rather than

poisoned; and that the same conclusion may be drawn from the report now before us is so far satisfactory. But it must be remembered that this could not be said about the adulteration practices of thirty or thirty-five years ago, and the state of things which then existed may well be taken as an earnest of what the public may expect in the complete absence of deterrent legislation; although it is only fair to say that the grosser and actually poisonous adulterations of those days were in some cases as much the result of ignorance as design. But while the deterrent effect of the existing law, imperfect as it is, and the great good done by its stringent application, and even by but little more than its mere existence where it is scarcely applied, were freely acknowledge before the Committee, the complaint was made that in many counties and boroughs the Act is a dead letter; and it was strongly urged that fresh legislation should make the taking of an adequate number of samples compulsory in every county and borough throughout the country and in every district in the metropolis. That this should be so no one can doubt, nor can there be any question as to the desirability of bringing the wholesale dealer and manufacturer within the operation of the law, a thing which cannot be satisfactorily accomplished under the existing Acts.

It is gratifying to find, from the evidence given by representatives of some of the largest and most important trading and manufacturing firms in London and the provinces, that the work done by the English public analysts is acknowledged to have been of great value, and almost invariably fair and accurate, by those persons who would necessarily be the first to complain were the facts different. At the same time it is contended, and very properly so, by witnesses whose high commercial positions lend considerable weight to their remarks, that care should be taken that all appointments should be held only by highly qualified men, and that in all cases at least the qualification granted by the Institute of Chemistry should be insisted upon as a *sine quâ non*.

We propose to deal in a more detailed manner with certain points of the report upon a future occasion. In the meantime we think it may be confidently asserted that the work has been well begun, and that the first step has been taken towards the framing of such legislation as will enable a really firm control to be exercised over the adulterator of food and drugs and over both the wholesale and retail vendors of his products.

SO-CALLED "TEMPORARY INSANITY" IN RELATION TO SUICIDE.

In cases of suicide it is a very common occurrence that the coroner's jury acting in the matter returns a verdict of "suicide during temporary insanity," when there is practically little evidence to bear out the fact of the existence of temporary insanity, and in some instances no evidence to that effect worthy of the name. That this, often at least, is done out of amiable motives and in order to spare the feelings of the relatives of the deceased is undeniable, but is not a satisfactory reason for the course in question being pursued. The jury is empanelled to make and give a true verdict and according to the sworn evidence brought before the coroner's court, and the jurymen themselves are under oath to perform their duties just in that way. The verdict found by the jury, therefore, should be a true one and based solely on the evidence brought forward and established in a satisfactory manner. No verdict should contain an allegation of the "insanity" or of the "temporary insanity" of the suicide, unless or until the fact has been fairly established.

Next, as to the legal relations of suicide and attempts at suicide. Various propositions have been made on this subject, and some of them recently in the *Westminster Gazette*. It would be too much to hope for unanimity on a topic of this kind. On the whole we do not think any very sweeping changes in the law on the subject would be likely to have good effect. But it is eminently desirable that each case of suicide, and of attempted suicide, should be dealt with on its own merits or demerits.

To do away with the legal criminal bearings of suicide would be to loosen or remove the chief check on suicide, in at least some instances; and the time is not yet ripe for ceasing to view suicide as a crime.

And on the other hand, to treat every suicide or suicidal attempt as proof of dangerous insanity; to be followed, in every case of unsuccessful attempt, by reception into a lunatic asylum; is a suggestion which does not commend itself as advocating a proceeding at all adapted to secure the necessary discrimination which should be exercised in the disposal of such cases; and if carried into effect it would turn the asylum into a prison for the reception of such would-be suicides as are not insane.

A PORTRAIT bust in bronze of the late Dr. Robert Brown, the famous botanist, who by Humboldt was termed "*botanicorum facile princeps*," has just been handed over to the Montrose Town Council, the memorial being the gift of a kinswoman of Dr. Brown, Miss Paton. It has been placed in a niche in the house where Dr. Brown was born in 1773. For long Dr. Brown, who died in 1858, was Curator of the botanical collection in the British Museum, and was President of the Linnean Society.

DR. HUGHLINGS JACKSON will be presented with the portrait, which has been subscribed for by many friends and admirers of his eminent services to neurology, on Tuesday next, October 1st, at 3 P.M. The ceremony, which will take place in the Library of the London Hospital Medical College, will be performed by Sir James Paget, who will subsequently distribute the prizes to the medical students and nursing probationers.

THE artificial preparation of human milk is of such moment to the many children fed on that of donkeys, goats, and cows that the reported success of Dr. Backhaus in concocting it is of importance. Cow's milk is fermented by means of rennet and the serum obtained carefully sterilised and enriched as required for different individuals by the addition of cream. The sterilising of milk before distribution is insisted on by Dr. Backhaus. But we should imagine that in Berlin, at least, ordinary cleanliness is required quite as much. If his calculations are even approximately correct that the milk supplied to the Prussian capital is so foul as to compel the Berliners to consume in this way 300 cwt. of cowdung per diem. This amounts to more than the conventional "pound of dirt in a lifetime."

THE LISKEARD BOARD OF GUARDIANS.

IN January of this year the Local Government Board sent a condemnatory report from its inspector to the guardians, and requested them to set their house in order. At the Sep-

tember meeting of the Board we read that the Board is still in consultation how to avoid doing that which it is their duty to do, and as we cast our eye back upon the progress of events since the January meeting it is one tissue of reference backwards and forwards from one body to another in the most approved style of obstruction. We wonder that public bodies do not put a little more energy into their conduct of business, remembering that money is not the only commodity to be saved. A new infirmary will have to be built sooner or later, and surely it is true economy to set about it at once.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

THE new hospital on the south side of the meadows is now fast nearing completion, and it is hoped that it may be possible to open it next month. Her Royal Highness Princess Henry of Battenburg has been pleased to undertake the opening ceremony.

POISONING BY LABURNUM SEEDS.

EVERY summer a certain number of children are poisoned by eating the pods of the laburnum tree. We publish on p. 778 interesting notes of such an occurrence by Mr. Hedley Tomlinson, of Gateshead, and by Dr. McNaughton, of Arbroath, and it was recently reported in the public press that more than thirty of the younger scholars at the Melvin Road Board School, Penge, were recently more or less seriously affected by eating laburnum seeds. The report adds that the prompt administration of emetics obviated danger. We have heard nothing further of the occurrence and suppose that the consequences have not been serious, but it might have been otherwise. It cannot be too widely known that every part of the laburnum is poisonous, and many deaths have occurred among children both in this country and on the Continent through eating the seeds or the flowers. A single seed is sufficient to cause violent vomiting, and a dozen flowers have the same effect if chewed. The young shoots are strongly purgative, yet it is said that they are a favourite food of rabbits and hares. The deleterious properties of this plant are due to the presence of one or more alkaloids, cytisine and laburnin. Chevalier and Rassaigne have the credit of discovering the former and Husemann and Marmé the latter.

INSANITARY BOARD SCHOOLS.

DURING a recent School Board election in London much political capital was made out of the discovery of gross defects in the construction of drains and the proved connection therewith of sundry outbreaks of diphtheria, especially in the case of the Yarborough Street Schools, the blame being laid on the late architect, the contractor, or the officials of the Board according to the predilections or prejudices of the several parties. The question of the sanitary arrangements of public elementary schools seems to be in a very unsatisfactory position. Plans and estimates for the erection of new or the enlargement of existing schools are, indeed, submitted to the Education Department, which retains the services of an architect, at a salary of £800 a year, presumably for the purpose of examining and approving such plans, though he probably confines his attention to the accommodation proposed and the number and cubic space of the class room. Her Majesty's inspector, at his annual visit, is supposed to satisfy himself as to the sanitary condition of the schools, by which he probably understands outward cleanliness and decency. In either case the arrangements seem to be left very much to the discretion of the builder as beneath the notice of the Board or their architect. In the recent outbreak of diphtheria at Bedlinog near Merthyr, there can be no doubt as to its origin in, as well as its diffusion by means of, the new Board schools. With the exception of twenty old wooden cottages, damp and confined, with privies and cesspits in their rear, the village, with its industrial and mining population of 1,500, consists of substantial and airy stone-built houses, with a good sewerage system and water supply; but though incidence of the epidemic, which lasted from April to August, was heaviest among the occupants of the "huts," it was by no means limited to that locality, and the sporadic cases occurring between December and March were all in other streets. In every instance the first cases in a house or family were children attending school, those among older or younger children being invariably subsequent or secondary. In all, excluding occasional cases during the previous winter, 78 cases were reported, 61 of these being children attending school. The schools themselves are spacious modern buildings, and in every respect, save one, leave nothing to be desired; but the sanitary conveniences consist of two series of trough closets, with an automatic flushing cistern and an untrapped drain leading to cesspits hewn out of the pervious sandstone rock, with no cement lining or aperture for emptying or even ventilation. They are, in fact, so constructed as not to need emptying, the fluid part of the sewage soaking away into the rock. But, in the absence of any exit, a volume of the foulest gases, displaced by the flush, finds its way into the closets connected with the schools every time the cistern discharges itself. Such "bottomless pits" were once general in sandstone and limestone districts; but, even supposing that the local architect knew no better or was overruled by an ignorant Board, we have a right to know, in the interest of the millions of children in public elementary schools, whether the control claimed by the Education Department over these buildings does or does not extend to their sanitary arrangements, and, if it does, how such a place—and we know not how many more of the kind may be in existence—could pass or be allowed to pass the architect's department at Whitehall.

APPOINTMENTS OF NURSES.

As a sequel to our discussion on this subject, it is evident from the advertisements for trained nurses that some of the metropolitan workhouses are either increasing the nursing staff or adding the trained nurse to their list of officers. St. Matthew's, Bethnal Green, is making large additions to the staff, and we gathered that a nurses' home forms part of the scheme; but we are sorry to see that the nurses seem to have entire freedom in the selection of their lodgings, which is hardly a wise arrangement on the part of the Board. Hackney Union also is advertising for nurses, which is a move in the right direction; this infirmary having been somewhat behind in this particular. Poplar and Stepney are appointing a sister for the Sick Asylum at Bromley, also staff nurses; we fear, however, that the Board will experience some difficulty in filling these posts, the salaries offered—£24 for the sister, £20 for the nurses—being quite below the usual standard.

DOCTORS AND THE LAW.

UNDOUBTEDLY the medical curriculum embraces a wide range of study, and we would be the last to suggest the addition to it of any unnecessary subjects. We would, however, urge upon young practitioners that after qualification they might well fill up that superabundance of leisure with which they are credited while waiting for patients by a careful study of their relations to various officers of the law and of their duties in those positions of medico-legal responsibility which are sure sooner or later to be thrust upon them. Such a study would often save a man from ridicule and from placing himself in a false position. For example, he would find among other things that a coroner can call what medical evidence he likes, subject to the jury being satisfied on the subject. Yet it is clear that numbers of medical men do not understand this simple fact, and feel aggrieved when others are called in cases in which they have been engaged. So far does this misunderstanding go that in

a case reported in the *Daily Telegraph* of September 24th a medical man who was the first sent for to a case of suicide, but not the first to arrive, when summoned to the inquest offered the fee to the other man. Courteous no doubt, but quite unnecessary. Still more unnecessary, although not so courteous, were the remarks made by the other medical man on the subject. A little study of the duties of witnesses and the functions of the coroner would have saved this gentleman from an unpleasant rebuff. It cannot be too carefully remembered that a medical man called to a coroner's court has no status except as a witness, first, as to facts, and, secondly, as to opinion in regard to such facts as are given in evidence. Directly a medical witness goes beyond this duty, or enters upon extraneous matters, he exposes himself to unpleasantness, any attempt to illustrate his evidence or explain his words being fatal; yet this is just what many men love to do.

THE EAST END WATER QUESTION.

The stars in their courses appear to be fighting against the East London Water Company. A baby was recently found drowned in a water tub in a backyard in Mile End. The mother of the child stated at the inquest that she was obliged to fill the tub because the water was cut off at night, and there was no storage cistern on the premises. Whereupon certain gentlemen of the jury seemed inclined to attribute the death of the child to the breakdown of the constant supply of water. This somewhat far-fetched view has not been allowed to pass without criticism, and in a letter to a contemporary a correspondent defends the water company, and insists that it is the duty of landlords to fix cisterns in houses let to tenants, and that poor people waste a great deal of water, and so on. The moral of all this appears to be that it is desirable some understanding should be arrived at as to what constitutes "a constant supply." It has been supposed that given a constant supply, there is no need for a storage cistern. Now we are told that this view is absurd, and that whether the supply be constant or not, a cistern is necessary to meet cases of emergency. The official inquiry which is to be instituted, will perhaps enlighten the people of East London and Londoners generally on this point.

NUNS AS NURSES IN IRELAND.

We referred last week to the circumstances of the dispute between the Local Government Board and the Athlone Board of Guardians, who refused to have one of the Roman Catholic sisters trained in a Dublin hospital before taking up the duties of a night nurse. The Local Government Board has acted with promptness, and has dissolved the Board of Guardians by sealed order. Two vice-guardians will now be appointed at a salary of £250 a year, so that the ratepayers will have to pay £500 a year until a new election takes place. There are no fewer than sixty-seven workhouses in Ireland where the nursing is controlled or carried out by the nuns. These ladies, excellent in their devotion to charitable work, have not as a rule received what is understood as hospital training. We are extremely sorry that any difficulty has arisen in regard to them; but we hope that wise counsels will prevail, and that their advisers will see how necessary it is that modern requirements in regard to nursing must be met.

THE BRITISH ASSOCIATION IN CANADA.

A Correspondent writes: Toronto is jubilant over the decision that the British Association for the Advancement of Science should hold its annual meeting in 1897 in that city. If the British Association can successfully hold its annual congress in Canada, why should not the British Medical Association do the same? In Canada we have flourishing Branches in Montreal, Toronto, and Winnipeg. Though separated by a wide strip of ocean, Canada and England are one country, and the British Medical Association there and here is one body. There is nothing which draws together more closely the bonds of union than meetings, out of which grow personal friendships and mutual understanding and respect. Distance is now nearly abolished by steam, and the old dangers of travel have been swallowed up in the comfort and ease with which a journey is undertaken in one of the big liners. We might even anticipate meetings in our distant Branches in Australia, India, Canada, and the Cape, so that the British Medical Association may become not only coextensive with the great British empire, but may extend the aid and support of membership and corporate existence to medical men toiling solitarily in remote colonies and dependencies. The British Medical Association is not confined in its members, and should not be in its annual meetings, by the narrow limits of Great Britain and Ireland.

THE SICK POOR IN IRISH WORKHOUSES.

SOUTH DUBLIN UNION.

Our Special Commissioner reports that the South Dublin Union Workhouse is regarded as a model to other institutions of the kind. Is it that size is considered as in itself a merit? The advantage of crowding over 3,000 paupers of all classes into a single group of buildings, with insufficient air space round them, is more than doubtful. These barrack-like buildings, even when not overcrowded, are now known to be a mistake. The various classes of inmates should be separated and treated according to their needs under distinct administration, not herded under one indiscriminate and cast-iron rule. Moreover, we refer our readers to the report itself that they may judge how far this self-complacency is justified in detail. The whole workhouse is disgracefully overcrowded and understaffed; there is no trained nursing except in one department, and in all departments pauper help is extensively used; the infirm are locked in at night without any attendance at all; there are no wards for isolation; the sanitary arrangements are insufficient; the nursery sordid and lacking proper control and supervision. And this is a model workhouse! Truly the guardians and the Irish Local Government Board are easily satisfied.

THE BARIUM WATERS OF LLANGAMMARCH.

The barium spring of Llangammarch Wells, Central Wales, deserves to be more widely resorted to than is yet the case, though it has been for some years growing steadily in favour. The water, which is from a deep spring, contains a little over 6 grains of chloride of barium to the gallon. This salt, when taken internally, reduces the frequency and increases the force of the heart's action, without raising arterial tension to the same extent as digitalis. As the waters are also rich in other salines (chiefly chlorides of sodium, calcium, and magnesium) they can be used with advantage for baths in those cases of heart disease which are likely to be benefitted by a course of the Nauheim waters combined with the exercises employed by Dr. Theodore Schott and his brother the late Dr. Augustus Schott of Nauheim. A course of baths, combined with a moderate internal use of the water at Langammarch and the special exercises, is likely to be of great use in cases of inefficient cardiac action, whether associated with obvious valvular disease or not. The effect of the baths of saline water is to produce a degree of cutaneous stimulation affecting the cutaneous nerves, and also the vasomotors in such a way as to produce a dilatation of the capillaries over the whole surface of the body. The stimulation of the cutaneous nerves, which probably exercises its beneficial action in a reflex manner, appears to have a persistent effect. However this may be, there can be no doubt that in many cases of cardiac disease accompanied by dilatation, the slowing of the heart, the increase of its force, and the general improvement in the efficiency of the circulation, which are very marked during the bath, do not pass away entirely at its completion, but that after each bath a certain proportion of the improvement

remains as a permanent gain. This is evidenced by the diminution of the pulse rate, and by a decrease in the area of cardiac dulness. The influence of the barium salt taken internally in slowing and strengthening the heart comes in to reinforce the beneficial action of the baths. Cases of cardiac debility secondary to influenza have been treated at Llangammarch during recent years with much success. Llangammarch lies in a broad valley, some 600 feet above the sea, between which and it is mountainous country. The air is thus fresh and invigorating, so that invalids and persons suffering from overwork commonly regain appetite and quickly recover strength. The surroundings are agreeable. There is a picturesque lake on which boating can be enjoyed; the river Irfon affords salmon and trout fishing, and the pump house and hotel have been built with due regard to modern sanitary requirements. It should be added that the water appears to be very constant in composition, analyses made at an interval of ten years showing only very slight differences. As the quantity of chloride of calcium is considerable (about 85 grains in the gallon), the water has been tried in cases of strumous enlargement of the glands, and has yielded good results. Altogether Llangammarch is an interesting spring, which is likely to become better known in the near future.

THE INTERNATIONAL CONFERENCE OF RAILWAY AND MARINE HYGIENE.

We publish in this issue a report of the above conference held last week at Amsterdam. While selecting a distinguished ophthalmologist as President it was the desire of the promoters not to limit the scope of their inquiry to the question of eyesight, and it will be observed from our report that other topics received consideration. All that was desired on this occasion was an opportunity for discussion, and no attempt was made to frame international codes or postulate demands. The Conference, though small, was thoroughly representative, and produced a valuable interchange of opinion. The transactions will shortly be published, and intending purchasers would do well to apply early to Dr. Pijnappel, Stadhouderskade 60, Amsterdam. It would be unfitting to conclude this brief note without heartily acknowledging the very great kindness shown to the members of the British Medical Association who took part in the conference by the Dutch physicians and surgeons, who spared no pains to promote the comfort of their visitors and provide for their entertainment. To M. Callisch, the President, and to the Committee of the World's Exhibition, as well as to Professor Snellen, Dr. Pijnappel, the indefatigable Secretary, and the members of the Committee of the Conference a special meed of thanks is gratefully accorded.

MEDICAL PRACTITIONERS, REGISTRARS, AND CORONERS.

A REGISTERED medical practitioner, who feels aggrieved because a registrar of births and deaths frequently refers to the coroner cases in which the cause of death has been duly certified, asks whether there is anyone in authority over the registrar to whom a complaint can be made. We have good reason to know that if a registered medical practitioner has any ground to complain of the manner in which medical certificates are dealt with by registrars such a complaint would receive immediate and careful consideration from the Registrar-General at Somerset House. We should, however, point out that the responsibility for deciding whether an inquest is necessary in any case rests entirely with the coroner, and that the decision of the coroner in any given case that an inquest is unnecessary affords no proof that a registrar exceeded his duty in reporting the case to that official. It is obviously desirable that too many rather than too few doubtful cases should be reported to the coroner; and it is therefore undesirable that a medical practitioner should regard as a personal affront the reporting of a case to the coroner respecting which he has given a medical certificate. It is clear, moreover, that such an excess of zeal on the part of the registrar as is complained of by our correspondent would not justify a registered medical practitioner in refusing to give a medical certificate in a subsequent case in which such practitioner was in attendance during the last illness of a deceased person. The duty of furnishing these certificates is statutory and compulsory, and can therefore be enforced.

THE ISOLATION OF INFECTIOUS DISEASES IN LONDON.

MANY adverse comments have been made during the week in regard to the arrangements of the Metropolitan Asylums Board for the reception of patients suffering from scarlet fever. The facts of the case which have given rise to the discussion are sufficiently simple. A child attacked with scarlet fever was taken to the London Hospital on the night of September 9th, two days after the rash had appeared. The authorities at the London Hospital of course could not receive her, but sent at once for the ambulance to remove her to the Asylums Board Hospital. On the arrival of the ambulance, however, the nurse in charge said there was no bed vacant, and that the child would have to be taken home. This was accordingly done. Then came what appears to have been a misunderstanding. The parents waited, thinking that so soon as there was room the child would be fetched, whereas the Asylums Board officers took no further notice, waiting for renewed application. We have no doubt that this was quite in accordance with rule and precedence, and that the Asylums Board officials are quite free from blame according to the peculiarly limited view of their functions entertained at Norfolk House. It would appear from the official letter which has been published that if at the moment when application for admission is made no beds are available the case is at once refused, and that there is an end of the matter unless renewed application is made. This is a weak spot in the management of fever in the metropolis. There are splendid hospitals and a splendid ambulance service, but there is no proper selection of cases for removal, and apparently the only way to secure admission is to stand importunately at the telephone until a bed is empty. As a shining example of how to remove such cases of fever as it does remove with the greatest celerity, and to treat such cases as it does treat with the greatest perfection, the Asylum Board deserves great praise, but there is but small common-sense in its distribution of its favours. If it were true that the ambulance service did in fact clear out the cases as they arose, and so stopped the distribution of infection it would be something to be proud of, but to remove in hot haste trivial cases that have been ill for days, to the exclusion of others of far greater urgency, is of small service in restricting the spread of epidemics.

BERI-BERI IN LUNATIC ASYLUMS.

IN view of the outbreak of epidemic peripheral neuritis in the Richmond Lunatic Asylum, Dublin, and of a similar and more recent occurrence in an English asylum, Dr. Oswald Baker's experience of an epidemic of beri-beri in Rangoon may have some interest for our alienist readers. In his admirable reports, Dr. Baker informs us that the Rangoon Lunatic Asylum, which had been in existence for twenty-three years, had hitherto enjoyed immunity from this disease, although beri-beri may be said to be endemic in the district. Its presence in the asylum was recognised for the first time on October 4th last year. On that date three of the patients were found to be affected with extensive œdema of an undoubtedly beri-beric character, and on examining the rest of the inmates, some 250 to 260 in number, several others were found to be similarly affected,

though to a slighter extent. On October 14th, the number of cases having risen to 30, it was thought advisable to transfer 18 of the invalids to Moulmein. On October 24th a careful examination of every lunatic in the asylum was made, when it was found that out of the 233 patients remaining, 84, or 36 per cent., had more or less œdema. The disease continued epidemic till November 25th, and in this short space of time 211 of the lunatics became affected in various degrees. Seven of them died, and when Dr. Baker's report was written there were several about whose recovery there were still grave doubts. All the cases were of the "wet" or œdematous variety. Bad cases suffered from breathlessness and other signs of respiratory and circulatory embarrassment. Paretic conditions were not observed; nor was anæsthesia noticed, though, of course, such symptoms may very well be present in lunatics without attracting observation. In discussing the etiology of this disease Dr. Baker remarks: "Beri-beri, as already stated, is a specific malady, and, like other diseases of its class, cannot exist in the absence of its particular virus. But the presence of the germ alone is often insufficient to give rise to any of the symptoms of beri-beri. Under hygienic conditions the disease may remain latent for long periods, or the tendency to it may become altogether eradicated. Given, however, persons with debilitated constitutions or lowered vitality, resulting from insanitary surroundings, especially overcrowding and bad ventilation,"—and, we may add, damp and a high atmospheric temperature—"the potentiality of the beri-beri virus then makes itself manifest, and symptoms of the disease are produced. And it is under circumstances such as these that the development of beri-beri takes place, and epidemics of it are produced." These remarks we thoroughly endorse; we commend them to those responsible for the health of our overgrown, overcrowded asylums in England, in too many of which the constant presence of endemic dysentery is standing testimony to persistent grave hygienic defects. That ordinary insanitary conditions are not alone responsible for beri-beri, or that they are in every instance necessary for its development, however much they may favour its epidemic explosion, is evident from Dr. Baker's statements as to the condition in these respects of the Rangoon Asylum. The hygienic conditions were excellent, he says, and he concludes that the outbreak was the consequence of the prevalence of a widely distributed epidemic affecting the population of the entire district in which the asylum stands. In several cases in which removal was tried the results were not invariably encouraging, or such as might have been expected judging from the experience of this measure elsewhere. Considering the extensive character in a geographical sense of the epidemic in and about Rangoon, we question if the patients were really removed from the endemic area, and we would hesitate, on the strength of Dr. Baker's experience, to lose our faith in this valuable and proved measure. Dr. Baker reports very favourably on the effect of blood-letting in the attacks of dyspnœa which are so painful and so fatal a feature in beri beri; he says he has seen it give great relief, and in several instances save life.

THE SANITATION OF HEALTH RESORTS.

On many occasions for many years past opportunities have been taken in these columns to direct public attention to the question of the sanitation of health resorts, and to insist that the sanitary authorities of such towns were under a peculiarly strong obligation to make the amplest use of the powers conferred upon them by the Public Health Acts. Too many instances have shown that necessary precautions are frequently neglected, until some epidemic outbreak has roused public indignation, with the consequence of bringing temporary ruin to the affected locality. We shall not be suspected of desiring to shield health resorts which are backward in their sanitary affairs, but at the same time the greatest discrimination should be exercised in making charges of the sort, and it is to be feared that the kind of war dance which Mr. Russell Endean has been executing in the public press will not have the effect of strengthening the hands of sanitary reforms. *Non tali auxilio nec defensoribus istis!* we may well exclaim. The charges which he has made against Paignton, a seaside resort on the coast of Devon, appear to be incapable of proof, and the statistics published by the medical officer of health show that the number of deaths from zymotic disease has been during the last quinquennial period exceedingly small. An extensive outbreak of measles is quoted by Mr. Endean as a proof of the insanitary condition of Paignton, but this is a very speculative opinion, since there is little or no proof that the spread of measles—a disease which is intensely infectious at an early stage—is directly related to bad drainage or insanitary conditions of a similar nature. Mr. Endean's want of acquaintance with public health questions is further shown by the fact that he goes out of his way to make a shameful attack upon the honour of the medical profession. Founding himself upon a strained interpretation of a passage in Dr. Cleveland's Presidential Address to the Section of Ethics at the recent annual meeting of the British Medical Association—an interpretation which Dr. Cleveland has emphatically repudiated—Mr. Endean asserts that it is the opinion of medical men that improved sanitation is, in the interests of the medical profession, undesirable. The implication is clear, and a more outrageously false and unhistorical charge could not be made. The history of improved hygiene in this country is the history of the unselfish struggles of the medical profession for better public health laws and better administration of these laws when obtained. Scandalous imputations against an honourable profession, and rash assertion, for which public apology has subsequently to be tendered, only hinder the cause of public health reform.

LOURDES AND ITS MIRACLES.

No doubt it is distressing to believers in the miraculous to find flaws in the character of those for whose benefit great miracles have been performed; nevertheless, those whose faith is less robust will find a certain satisfaction in the news that the investigations of the law courts have brought one more example of that asserted intrusion of the occult in the affairs of life which goes by the name of a miracle down to the humbler and more sordid level of a fraud. With the phenomena of faith cure and the tricks of hypnotism before us it would be idle to deny to Lourdes a share in the efficacy of suggestion on the human mind. Cases, however, here and there crop up which are admittedly difficult to explain, and in regard to some of them people have been found who think it simpler to believe in a miracle than to accept as possible the double improbability involved in the explanations given by those who reject supernatural interference. It appears that a man named Delanoy, who was once a hospital attendant, was admitted to the Salpêtrière Hospital many years ago, where his case was diagnosed by Charcot as one of incipient locomotor ataxy. In 1884 he entered Dr. Callard's ward at the Hôtel Dieu. In 1886 he was at the Necker Hospital, where Dr. Rigal applied the actual cautery to the spine. Later he came under the care of Dr. Bull, in whose ward he stayed a whole year. He left the hospital apparently cured, but subsequently returned, and was afterwards in several other hospitals in Paris, and on several occasions underwent the treatment by suspension, having been hung up fifty-eight times, it is said, in the course of two months, which we venture to think is an exaggeration, and only another example of the sympathy-seeking devices to which this neurotic subject continually had recourse throughout his strange career. At length he went to Lourdes, where among his other adventures he came under the notice of M. Zola, who mentions him as being, to him, an inexplicable case. He arrived at Lourdes in the most pitiable con-

dition, and was carried to the grotto, where suddenly he had an extraordinary feeling of an inner force that impelled him to drop the crutch by the aid of which he had before hardly been able to crawl and to stand unsupported and walk. The next day he was medically examined in the presence of persons whose veracity and good faith are beyond question, and found to be cured of his ataxy, and on returning to the Charité Hospital in Paris the chaplain telegraphed to the fathers at Lourdes: "Doctors here staggered by cure of Delanoy. Have seen him four times this week. Walks like a country postman." Now here was a good miracle. There was no doubt that, so far as the ataxy was concerned, the man was well, and to explain the cure the non-believer in miracles had to form two extremely improbable hypotheses. First it had to be admitted that, for no very apparent object, a man should sham a disease, and persist for years in his deception, notwithstanding that it led to his having to undergo treatment of the most disagreeable character. Next the confession had to be made that all these eminent medical men had been mistaken; and although to some that may seem quite in the natural order of events, to others it seemed extremely unlikely. Now for the sequel. The *miraculé* was made an overseer of a home for invalids awaiting the cure at Lourdes, but in 1891 he decamped after robbing the fathers of 400 francs. He then returned to Paris, and again took up his career of malingering, being admitted to Saint Anne's Asylum as suffering from persecution mania. Six months later he was there again for a few months, being certified as suffering from mental debility, but left after stealing 1,800 francs from the hospital pharmacy. In May, 1894, he was arrested by the police, when he endeavoured to play the part of one suffering from paralysis and insanity. He was, however, declared by the medical men who examined him to be malingering, and being found guilty was sentenced to four years' imprisonment and ten years' police surveillance. Now, we would be far from crying "*ex uno disce omnes.*" The human mind is far too great a tangle, and the spurs to action in different men are far too varied for us to suggest that these phenomena can be explained so simply. But when we find a case which had been for so long regarded as inexplicable explaining itself in such a very simple way, it is worth while drawing attention to the importance of not calling Heaven to witness as to the miraculous nature of "inexplicable" phenomena just because we cannot explain them without accepting hypothesis repugnant to "common sense."

INDIVIDUAL LIBERTY AND SOCIAL DEGRADATION.

There are many optimistic people who profess to think that we are much over-ridden with laws and sanitary regulations, and that, in view of the general progress of the race, legislation might well hold its hand, and leave the future of mankind to the beneficent guidance of individual effort. Such people must often receive uncomfortable shocks when they rub shoulders with the disparity of actual life. The evidence given at a recent inquest at Croydon, for example, shows well the tendencies of unruled, unregulated, natural man, and proves that however greatly we endeavour to elevate the normal standard of living among the masses, there is always present a substratum of humanity so indifferent to decency and ordinary comfort as to be amenable only to the firm administration of sanitary law. It appeared that a man, having obtained permission to place his furniture, such as it was, in an unused stable, took up his abode there with his wife and children, and was ultimately joined by another family, so that in a stable measuring little more than 14 feet by 18 feet there were living four adults and thirteen children. There were two beds occupied by the two couples, and the remainder of the population appear to have slept upon the straw or in the mangers. In this predicament one of the women was confined of twins, and though the doctor urged her to go to the infirmary she persistently declined, saying that it was all right in the stable, as the rain did not come in. At first she did well, but on the tenth day she went out and returned very wet and very drunk, after which she became so ill that she had to be removed to the infirmary, where she died. It is not a pleasant story, and does but illustrate the necessity for the rigid enforcement of sanitary law on the very poor, and the constant inspection of their dwellings by sanitary officials. For the fact has to be faced that the tendency of the lowest stratum in our towns is not upwards, and that one of the first directions in which the pinch of poverty shows its degrading influence is by producing indifference to overcrowding and carelessness about the decencies of home. These are matters that affect others besides themselves, for fever nests are thus developed. While then the community offers help, may be by charity, may be by the Poor-law, to those who are in poverty, the community may justly exact some return by enforcing submission to sanitary law.

ENZOOTIC DISEASES AMONG COWS AND MARES.

In an article appearing in a recent number of the *Journal of Comparative Pathology*, Professor Penberthy draws attention to the above subject. In Great Britain, in common with many other countries in which horse and cattle breeding is extensively carried on, a plague-like form of abortion causes serious losses. The affection amongst cows has been recognised for many years, but appears of late to be on the increase. On appearing in a herd, it frequently happens that 95 per cent. of the cows abort. Usually this condition of affairs obtains for two or three years, but, as a rule, after this period the cases of abortion become fewer, and in a year or two spontaneously cease. This, however, it is pointed out, largely depends on whether or not new animals for breeding are imported into affected herds. Expulsion of the fœtus occurs at all periods of gestation, and evidence of putrefactive change in the abortion is by no means constant. The health of the cow is rarely appreciably affected, fresh conception is however often delayed, and when this occurs gestation is usually interrupted in the early stages. Though the most widely varying opinions have been expressed as to the cause of these abortions from the earliest records, it is gathered that the view of contagion has been held by some stock owners. Some narrated experiments by M. Nocard on the identical or a similar affection occurring in France give support to the view that it is a contagious disease and that the contagium enters by the external genital passages. Though the details of M. Nocard's experiments have not been corroborated, the writer of the article adduces as evidence in favour of a contagious nature the results of experimental cases, the fact that he has traced the affection to the introduction into previously healthy herds of cows from affected herds, and the favourable results of disinfectant treatment in cutting short outbreaks of the malady. Particular attention is drawn to the disastrous effects on some of our most valuable breeding studs. So serious has become the affection amongst cows that the Minister of Agriculture has been asked to include it in the Contagious Diseases (Animals) Act; while the Royal Agricultural Society has appointed a special committee to inquire into its nature and the best way of dealing with it. Professor Penberthy, referring to the maintenance and spread of the malady, attributes the greatest danger to the introduction of cows and mares, particularly animals which have aborted, from herds and studs in which the affection exists, the introduction of healthy pregnant animals into herds or studs where abortion is obtaining, and a disregard for thorough disinfection.

One of the strongest proposals for legislation which has been made for some time is to be discussed at the annual congress of the German Social Democratic party, to be held at Breslau next month. It is that the State should prohibit wet nurses. The reason assigned for the proposal is hardly less strange—the advantages attending the use of sterilised milk!

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

I.—SOUTH DUBLIN UNION.

As the city of Dublin is divided by the river into north and south portions, it has two unions corresponding to these divisions; that in the south being the larger, and regarded by the authorities as somewhat of a model to other unions. The group of buildings stands on the outskirts of the city, on the road to Inchicore; they are clustered round an old Foundling House, which, with the old Houses of Industry scattered over the country, were taken over by the Poor Law Commissioners when in 1840, the Poor Law was introduced into the country. The blocks of varying size and character, are built of grey stone, which gives a prison-like aspect to the exterior, and the whole forms a large establishment capable of accommodating 3,000 or more inmates; these include able-bodied, infirm, sick, lunatics (that is, feeble-minded and idiots), and children. The government of the establishment is in the hands of the master and matron.

The Sick Department

is divided into "Catholic" and "Protestant" Hospitals, and there is a separate hospital for the children. The Roman Catholic patients are nursed by the nuns (Sisters of Mercy) and the Protestant by deaconesses, some of whom have been trained in the Tottenham Hospital, and formed part of the body under Dr. Lazeron. The nuns are untrained as nurses; they also nurse in the Children's Hospital.

The hospitals are supervised by a resident medical officer, who has 1,000 or more patients under his care, and there are three visiting doctors, each of whom has charge of one department. The matron who, in the absence of the master, kindly accompanied us round the building, gave us every facility for inspection, and all the information in her power. The wards gave us the impression of being

Overcrowded,

an impression which a closer view confirmed. They are long, narrow rooms, not lofty, and as the windows are small, and not carried up to the cornice, the ventilation is imperfect; the beds are placed side by side, with only enough space between them to stand in, and that amount of space is not always possible; in some of the wards the rafters are uncelled, and on the top storeys the roofs are pitched. The walls have a smooth surface painted in two colours. As these wards are occupied by the patients without the relief of a day room, and as in winter they would be more crowded, with less ventilation than on a summer day, and with more artificial light, we felt convinced that the cubic allowance was insufficient. The ground plan of the hospitals forms three sides of a square, the Protestant Hospital taking one side, with the male patients on the top floor and the females on the two lower floors. The Children's Hospital stands adjacent and accommodates over 100 patients; among these are the delicate children, and those who are unfit for school life.

The Patients

are classified as medical, surgical, and phthisical. Besides these a few female lock patients are kept apart and retained under treatment because they have children, but the bulk of these cases are sent to the Government Lock Hospital. Mild cases of epilepsy are treated in these wards; simple idiots are also brought into the wards for treatment. A small bed card was over each bed; it was the regulation card, giving no clinical information. We noticed also a few temperature charts. The class of cases are such as would be found in any general hospital; indeed, there could be no difference except that there were more cases of hopeless paralysis and senility. We were glad to see that these sad cases were being nursed in the general wards. The wards were fuller than usual; the medical officer, Mr. MacNamara, mentioned that many of the general hospitals had some of their wards closed for cleaning. The special wards for phthisis (this disease being very prevalent and fatal in Ireland) are kept at a higher temperature; we noticed several patients in advanced stages of the complaint.

Each patient was supplied with a small high table between the beds for food; there was a long table down the middle of the ward with benches, a few arm-chairs and ordinary chairs; a few commodes and lockers completed the furniture. The bedsteads are mostly of iron, with wire-wove and hair mattresses for special patients; otherwise cocoa fibre and straw is in use, and the matron informed us that some wood-wool shavings had been sent for trial in the ticks. We did not observe that any of the beds were provided with pulls. This is a great omission, especially in a workhouse hospital where so many of the patients are helpless, and where the assistance is so scanty.

The Nursing

in the part under the nuns is carried on under the triple disadvantage of being done by an untrained staff, of the nursing of the male patients being confined to supervision only, and of the night nursing being in the hands of a different staff. We noticed at once the difference between the work of the trained and untrained nurses, though the nuns brought system and order into their wards, their work was just lacking in that attention to details of nursing which can only be learnt in a hospital. Pauper help is very largely used in nursing the sick; the supply of nuns or of deaconesses is about one to each large ward containing from 45 to 50 beds, or to a group of smaller wards, so that too much reliance is placed on the inmates, or "deputies" as they are called. These paupers receive extra rations, and have some privileges, besides such bribes in kind or money as they may receive from the patients. On the female side most of the deputies are women of indifferent character, retained in the house because of their children; on the male side we noticed some able-bodied deputies who ought to have been earning their living outside, and off the rates. We omitted to mention that there is a wardmaster—an officer responsible for the control of the ward under the nuns.

At night there is one nurse for the male side and one for the female side, assisted by a staff of deputies, one or more of whom sit up in each ward. By this arrangement a large and important hospital is practically nursed by paupers, especially at night.

The patients in the separation ward appeared to be looking after themselves, or at best were in charge of an inmate. It is hard to conceive a more dismal hole than that in which we found these cases—a small, dark ward, crowded with women and children of a very low type, dirty and untidy in their persons and clothing, the unfortunate infants uncared for except by their mothers; the whitewashed walls, dirty floor, and pitched roof, small windows, low wooden frames, and straw beds, presented a picture of official neglect which we shall not soon forget. The door is locked on these inmates from 7 P.M., and they are left to get through the night with such decency and cleanliness as can be obtained by the use of pails, etc., and under no vestige of control.

The Children's Hospital

is a bright and cheerful spot among these dreary surroundings; the wards are large, walls painted in two colours, cots down the middle, and small bedsteads round the walls, with toys, pictures, and plants giving it a pleasant appearance. The boys' and girls' wards duplicate each other on the ground floor. There is also a good playground, but no dayroom to relieve the wards in bad weather. The children are treated here until the age of 14 or 15. The hospital is nursed by the nuns and the inmates. The cases include every variety—the chronic hip joint, or spinal case, with cases requiring active surgical treatment, or of acute medical diseases; some convalescents were running about.

The Nursery

for healthy infants under 2 years occupies two floors, that for the day being on the ground floor, and above is the room

where the mothers sleep with their infants. In the day nursery there was a large number of babies, some in wooden cradles or being nursed by their mothers. The cradles are filled with straw, covered by a sheet and blanket; some of the cots that we looked into had wet sheets and straw; in some the food had been upset and not cleansed; many of the infants were untidy and ill cared for, the whole nursery showing want of control and supervision. The atmosphere, in spite of cross ventilation, was very close; there was no sense of freshness, but a very powerful odour of uncleanness. There is an officer over the nursery, but she is much handicapped in her work by the ignorant mothers, who are very difficult to manage. The lavatory and bath room attached to this department was littered and untidy, and anything but wholesome.

Besides these two departments for children, there is a probationary ward for the detention of fresh admissions without their parents for ten or more days at the discretion of the medical officer before they are sent into the schools.

The Aged and Infirm,

as is the case in all Irish workhouses, form a separate class, and are located in blocks quite away from the hospitals. That for women was one of the best parts of the house; they are in small huts which run three sides round a garden where are seats, flowers, and grass, all of easy access from the wards. The wards themselves had a bright, home-like appearance, the cross-lights and the distance from the high buildings allowing of plenty of sunshine. The old men are not so well placed; they are in one of the stone blocks, their wards are dark and low-pitched, are crowded, and altogether are destitute of the comfort that one looks for for the aged. Here we were introduced to the "harrow" bed, which is quite a feature in an Irish workhouse; it consists of five parallel wooden bars supported at the foot on an iron cross-bar and two iron legs, and at the head it rests on a continuous rail fixed on iron uprights about 6 inches from the wall, or, failing the rail, its place is taken by two legs; there is no bed head, the tick and pillows resting against the wall, and there are no sides. The bed is 2 feet 3 inches wide, stands about a foot from the ground, and on this is placed the straw tick. A variation of this bed is two low trestles, supporting two or three planks (see illustration.)

These old people are under the care of inmates, themselves only one remove from the stage of infirmity; no one is supposed to be in these wards who requires any help during the night, and that is as well, taking into consideration that the infirm are locked in their wards at 7 P.M., with only such assistance as they can render each other; and also that the only sanitary appliances are the commodes or pails in the wards. We did not notice anything but benches for the old men, either in their day room or wards.

The Lunacy Wards

are beyond these blocks, and separated from them by locked gates. The wards are large, but very full, the beds being placed in double rows back to back down the middle of the ward, as well as down the sides, an arrangement that appeared to us to be an unusual one for that class of patient. Some of the more helpless cases were in crib or box beds filled with straw; the wards were distinctly overcrowded, for the ceiling was low-pitched and the windows small. Several of the inmates were in the court, but many were in bed. One recent admission, the victim of puerperal mania, was dis-

Infirm Ward, Cootehill Workhouse, showing the "harrow" bed.

turbing the whole ward by her cries, and arousing some of the patients to restlessness; this patient was restrained in bed by the usual lunatic's nightgown, and the matron was going to put on extra pauper assistants for the night. We were informed that there is no padded room, as violent cases are sent at once to the asylum; but in this case, the attack being recent, the doctor wished not to send the woman to the asylum. There is a great want all through the various departments of small wards for isolation. These wards are under the charge of officers, but they are not trained in lunacy work, and the number of patients under their care, amounting sometimes to 60 or more, makes it quite impossible for the attendants with only the help of the deputies to do more than keep these unfortunates in their places; indeed, it appeared to us that neither in their accommodation nor treatment was much done for these unhappy patients. The male lunatics are similarly circumstanced, if possible more crowded.

The Maternity Block

is near the gate, and is a small self-contained house, accommodating 40 beds in four wards. On the ground floor there are two wards for the labour cases; the wards are used indiscriminately, there being no separate room for the confinement, and above are the wards for pregnant women. There is no day room. The walls are whitewashed, and there is a want of light, the block being overshadowed by taller buildings. The number of confinements varies from 80 to 100 per annum. The women are attended by a midwife, who at the time of our visit was incapacitated from duty by a poisoned hand: her place was taken by a midwife from outside. Here also there is no small ward for the isolation of an infected case, which, considering the large number who pass through the wards, must sometimes present itself.

We were surprised to learn that there are no sanitary appliances in this block. The matron showed us a privy at some little distance, to which everything has to be carried. There is no bath room, slop-sink, or any of these adjuncts to nursing; and as there appeared to be structural space for the addition of these offices, we are at a loss to discover the cause of their absence.

Heating and Ventilation.

The wards are heated by open fireplaces; many of them are old-fashioned and wasteful of heat and coals. In the winter there are besides steam-pipes running round the skirting of the wards; these pipes are of very large diameter. The windows throughout the buildings are small, set in heavy frames, and they do not reach the cornice. Sometimes they open on a pivot, and otherwise the upper half of the sash falls inwards, on a toothed bar; as the frames are heavy, these are awkward to manage. Gas is used throughout the workhouse.

The Sanitary System

is in course of alteration, many new closets are being added to the wards, and additional bath rooms with hot and cold supply are being fixed; these will be a great improvement. The new closets are fitted in the modern style with the flush, and they are on the landings near the wards; this situation appeared to us too near to be sanitary, as the space did not admit of an intercepting lobby. There are some closets outside the male wards that are flushed automatically. We were informed that the cistern discharges itself every four hours, but, whatever may be the interval, it is evidently insufficient, as the trough was full of filth, and the fittings, floor, etc., were in a dirty state. There also appeared to be a deficiency in the arrangements for the disposal of foul clothing, as we came across a soiled tick hung over the railing outside a ward, making the air quite insanitary; we were informed that it was on its way to the laundry.

The Laundries and Kitchens

are attached to each hospital, and are under the control of the officers; some of them were well appointed kitchens, with suitable appliances for expeditious and economical cooking. There are, besides, the main kitchen and laundry for general service. This union kills its own meat; we saw the victims in a paddock close to the building awaiting their turn of sacrifice. The bread also is baked in the house. The sick diet is in the hands of the medical staff; the children are largely fed on eggs and milk. The inmates were assembling for dinner at 2 o'clock; this is surely a long interval for the old and young, the breakfast hour being 8 o'clock.

Recommendations.

The impression that we carried away was that there are too many departments crowded into the space, and that it was quite impossible for efficient control to be exercised over such a heterogeneous establishment. The hospitals alone outnumbered several of the general hospitals in the city, for whose government a far more generous staff is considered necessary. It is a counsel of perfection to suggest the removal of the sick to more modern quarters and sanitary surroundings on the outskirts of the city, but that would be the most satisfactory solution of the difficulty, and such a move is bound to come in time. The staff in attendance on the sick is quite inadequate—13 nuns and less than half that number of deaconnesses for the nursing by night and day of 1,000 sick, for the "deputies" cannot be reckoned on the nursing staff; and then we must take into consideration that the nuns are untrained. We yield to none in our admiration for the devotion of these religious ladies to their work, for the order and system that they have introduced into the wards, and for the care with which they minister to the poor committed to their care; if only to these qualities they could add the hospital training their efficiency would be increased, but as it is, too much of the nursing is in the hands of the "deputies." This union should take its place as one of the large training schools for the workhouse nurses, but until the entire staff is trained and until the deputies are swept away this cannot be done. We would also suggest that the attendants in the lunacy wards should be trained in the asylum, and that their number be increased; that attendants be provided for the infirm wards, whose quarters should be placed close to these wards, for assistance at night in case of emergency; and that the nursery officer should have better assistants: that the infants be placed under her entire charge, the mothers only having access to their infants at stated times. We fear encountering the wrath of the Board as it reads our suggestions, but they are made with an earnest desire to place before the guardians the impressions that we carried away, and we do not hesitate to say, from long experience in these matters, that, after the first outlay, the work would be done with greater economy and efficiency, and the South Dublin Union would take the position that belongs to it of right—that of the pioneer in the matter of workhouse reform.

VACCINATION AND SMALL-POX AT BRISTOL IN 1893-94.

XXI.

Dr. D. S. Davies, the health officer of Bristol, and his two assistants, have now issued their conjoint report on the epidemic of small-pox that visited the city in parts of 1893-94, and very interesting and instructive reading it is. The report deals first with the history of the disease in earlier times in Bristol, but space does not allow of our touching this portion; and then it proceeds to relate the difficulties as to hospital accommodation, and the successive steps taken in regard of the matter, the result being that not a single claim for admission had to be refused. But at one particular period only one bed was vacant.

Dealing with 360 cases occurring in sequence in the epidemic, Dr. Davies states that the total deaths among these numbered 36, or just 10 per cent. Of this total, 288 were of once vaccinated persons, with 19 deaths, or 6·6 per cent.; 15 revaccinated, with 1 death, or 6·6 per cent.; and 41 unvaccinated persons, with 11 deaths, or 26·8 per cent. of cases. Of the remaining cases, 7 had had previous small-pox, none dying, and concerning the rest no reliable information as to vaccination was forthcoming.

In the first ten years of life there were 7 attacks in vaccinated children, all being mild, and no death occurring; and 23 in unvaccinated, 16 being severe, and 6, or 26·1 per cent., proving fatal. Thus vaccination at this age-period gave absolute protection against fatal attack. In the next quinquennia there were 25 vaccinated cases, 1 death, and 4 unvaccinated, none fatal. At ages 15 to 30 there were 169 vaccinated cases, 2 deaths, or 1·2 per cent; and 10 unvaccinated,

with 2 deaths, or 20 per cent.; at greater ages 97 vaccinated cases, 16 deaths, or 16.5 per cent.; and 4 unvaccinated cases, 3 deaths, or 75 per cent. These data show the increasing tendency to attack and death in the vaccinated as age advances and the effects of the primary vaccination wear away; while the disproportionate fatality rate in the unvaccinated class is equally striking in the earlier years of life. Looking to the age periods of all cases, we find the per case rates of mortality were as follow:

	0 to 10.	10 to 15.	15 to 20.	20 and over.	All ages.
Vaccinated ...	0.0	4.0	2.1	16.4	6.6
Unvaccinated ...	28.1	0.0	20.0	78.0	28.8
All cases ...	2.0	3.4	3.5	20.4	10.0

The single death in a vaccinated child under 15 years of age is phenomenal in Dr. Davies's experience of 687 cases of the disease, among which 96 were in children under 15 years of age. In one instance he relates that a baby born while its mother was recovering from small-pox did not catch the disease, and was also proof against vaccination.

Treating of the data culled from study of invaded houses, Dr. Davies shows that in Bristol vaccination conveyed, when set against non-vaccination, a twenty-three fold immunity from attack and absolute immunity from death as against 11.5 per cent. fatal in the unvaccinated, at ages under 10 years, and a three-fold immunity from attack and a ten-fold immunity from death at ages over 10 years. Of 59 unvaccinated persons found in invaded houses, 23 were vaccinated on or before the fifth day of exposure to infection, and not one took small-pox in any degree; but of 32 persons remaining unvaccinated and exposed to infection, no fewer than 19 (59 per cent.) contracted small-pox. Of 468 persons thus exposed and successfully revaccinated only 8, in whom the disease had already begun to incubate, were attacked by small-pox, all recovering, and only 5 per cent. of other 859 exposed persons once vaccinated were attacked.

Of 62 persons on the hospital and ambulance staff, 3 contracted small-pox, namely, 1 primarily vaccinated only, 1 revaccinated fourteen years back, and 1 (fatally) who had been revaccinated twenty years back, the deceased being a hospital laundress who had on previous occurrences of small-pox also washed the clothing of patients without ill-effect. She was accidentally omitted from the list of those set down as requiring vaccination in the present epidemic.

There is other matter of interest in the report which, for considerations of space, we are reluctantly compelled to pass over.

THE INTERNATIONAL CONFERENCE ON RAILWAY AND MARINE HYGIENE.

[FROM OUR SPECIAL CORRESPONDENT.]

OPENING CEREMONIES.

THIS Conference, which took place in Amsterdam on September 20th and 21st, owes its origin to the initiative of the Committee of the "World's Exhibition" now being held in the Dutch capital to illustrate the progress of modern travelling facilities. Through the kindness of the promoters each member of the Conference received a free ticket of admission to the Exhibition, and at a reception held on the evening of September 19th the members were cordially welcomed by the Exhibition Committee, and conducted over the buildings.

PRESIDENT'S ADDRESS.

The special work of the Conference commenced on the morning of September 20th, when from forty to fifty gentlemen assembled in one of the salons attached to the Zoological Society's Gardens, under the presidency of Professor Snellen, the eminent ophthalmic surgeon of Utrecht, and consulting oculist to the Dutch State Railways. In his opening address, the PRESIDENT pointed to the fact that by the increase of travel for business or recreation, many questions of great hygienic importance to the public and the various traffic-conducting organisations had been raised. These demanded more attention than had yet been paid to them at the International Medical Congresses. Referring to the necessity for efficient eyesight in traffic conductors, he traced the development of the movement for securing better control which originated with Wilson of Edinburgh in 1859, and was supported by Favre in France, Holmgren in Sweden, by Cohen, and specially Donders in Holland, as well as Joy Jeffries in America, and he generously acknowledged the importance and the stimulating influence of the work done by the British Medical Association's Committee in recent years. With evident pleasure he quoted from the Appendix to the Committee's First Report (1892) the statement that the arrangements for the control of railway servants' eyesight are more complete in Holland than in any other country. This is undoubtedly the case. The examinations are entrusted to a limited number of competent medical men, the refraction is measured. Emmetropia and normal vision (¼ Snellen) are required for the locomotive service, the colour sense is estimated qualitatively and quantitatively. Every man is re-examined at regular intervals, and all doubtful cases are referred to the consulting oculist for a special opinion.

OFFICIAL BUSINESS AND REPORTS.

After the presidential address, Dr. PIJNAPPEL, as Secretary of the Organising Committee, gave some details of the preliminary work which had been done prior to the assembling of the Conference, not the least valuable part having been the preparation and distribution of a summary of the hygienic measures adopted in the Dutch railway and marine service.

The Organising Committee was then constituted the "Bureau définitif," and the following gentlemen were elected Vice-Presidents: Mr. BERRY (Great Britain), Dr. Créquy (France), Dr. Zeitlmann (Germany), Dr. Wyrouboff (Russia), Professor Nuël (Belgium), Dr. Joy Jeffries (*in absentia*) (America), and M. Mahieu (Holland). In the programme of the Conference ten subjects were submitted for discussion.

EXAMINATION OF RAILWAY SERVANTS.

In the first place an expression of opinion was sought as to whether the examinations in sight and hearing and general fitness ought to be entrusted exclusively to medical men, and in conformity with fixed standards. Information as to the regulations existing in different countries was also requested.

Mr. BERRY (Edinburgh) made a brief statement of his views, and, while deprecating any alarmist attitude, thought that the examinations should be conducted by the ordinary railway surgeons.

Dr. GEORGE MACKAY (Edinburgh), Honorary Secretary of the British Medical Association's Committee for Promoting the Efficient Control of Railway Servants' and Mariners' Eyesight, presented a paper dealing with the present position of the Railway Servants' Eyesight Question in Great Britain and Ireland. He stated that since the publication of the Royal Society's and the British Medical Association's Committee's reports in 1892, a considerable improvement had taken place in the methods of examination employed by the railway companies in the United Kingdom. Most of the largest now entrust their eyesight examinations to medical men, but fully one-third of the railway servants are still accepted merely on the judgment of lay officials. The tests are not uniform. A few demand V = ¼ Snellen. Many use the Army dot test at 15 feet, which is equal to $\frac{1}{5 \cdot 4}$ Snellen. Refraction is rarely estimated. Holmgren's wool test is now largely used for the colour sense, but there is little control over the competency of the examiners to apply it. Quantitative estimations are practically unknown. He submitted the recommendations published in 1892 by the two above mentioned Committees, and supported the proposition of the day in the affirmative.

Dr. CRÉQUY (Paris) thought it was more practical that the sight should be tested with models of the actual signals instead of letter type, and presented a set of the coloured test cards which are employed by the Compagnie du Chemin de Fer de l'Est.

Professor NUËL (Liege) lamented the insufficiency of control on the Belgian lines, and favoured an international standard.

Dr. LANTSCHEERE (Brussels) gave some striking personal experience of defective eyesight among Belgian railway servants and strongly supported the opinion that a thorough medical examination should be required of all candidates at the time of entrance.

SEAMEN'S EYESIGHT.

At the afternoon sitting Mr. BICKERTON (Liverpool) read a

communication on the History of Ships' Sidelights and Screening, the indifference with which the English Board of Trade have permitted colour-blind and defective-sighted men to enter the mercantile marine, and the utter neglect of the eyesight question in Board of Trade inquiries into shipping disasters, etc. Mr. Bickerton's paper dealt with some of the serious results which have followed from the Board of Trade's misguided efforts to control the eyesight of officers in the mercantile marine,[1] and he illustrated with diagrams the fresh danger which has arisen from the insufficient screening of the red and green sidelights recommended by the latest Board of Trade regulations.

On the second morning of the Conference a very interesting discussion was initiated by Dr. Mayweg (Hagen) as to the extent to which spectacles are admissible for railway employees. In 1887 he advocated their use. In Baden, Saxony, and Bavaria they had been used without complaint; at one time in Prussia also, but not now. Dr. Mayweg thought that new applicants for service requiring spectacles to secure normal vision should not be accepted, but that men found to have refractive errors after admission to service should be allowed to wear glasses.

Professor Snellen said that it was the custom in Holland not to admit men with abnormal vision, but that if at re-examination spectacles were needed they were supplied by the company. Hitherto locomotive men had not been allowed to wear glasses, but he was at present trying them experimentally in a hypermetropic driver of long experience and exceptional trustworthiness.

Dr. Lantscheere objected to spectacles for men exposed to snow, rain, frost, smoke, oil, and dust; and was supported in that opinion by Professor McHardy (London), who emphasised the difficulty of keeping not merely the front but the back of the glasses clean.

The general opinion seemed to be that glasses were not advisable for locomotive men, though permissible for other ranks.

The Measurement of Acuity of Vision.

In introducing the question of the best method of measuring acuteness of vision, an important communication was made by Professor Snellen. After passing in rapid review all the the best known modes of form-vision testing, he discussed the merits and disadvantages of various type tests. He admitted that his own test-type letters were open to the objection that the letters in any row were not equally discernible through inherent difference of shape. Exactitude of expression had become very necessary, for cases had arisen (for example, in courts of law) where a very precise estimate of the visual power was of the gravest importance. For ordinary purposes he considered that his familiar Ш-shaped test figures were at once accurate and convenient, but that if any other types are to be employed their value should be stated in terms of three parallel lines of black, each subtending a visual angle of one minute at a given distance, and separated from one another by white interspaces of the same breadth.

Quantitative Estimation of the Colour Sense.

Professor Snellen also made an interesting communication on the various methods of estimating the colour sense quantitatively. He mentioned a modification of Donders's lantern which he had lately devised with the assistance of Professor Enthoven of Leyden, but admitted that a good method was still a desideratum.

Acoustic Signals and Acuteness of Hearing.

Another communication of considerable interest and practical importance was that presented by Dr. Zwaardemaker (Utrecht), on acoustic signals and acuteness of hearing, who, after supplying the results of an original inquiry into the hearing of a large number of railway men, urged that applicants for railway service should have at least one ear possessing normal acuteness for the whispered voice at one metre, and recommended that the test should not be limited to one tone, but applied over the whole chromatic scale of Bezold.

His contention was supported in an able speech by Professor Guye (Amsterdam).

[1] British Medical Journal, May 18th, 1895, p. 1112.

Railway Hygiene.

Papers dealing with the organisation of medical aid on railways were read by Drs. Blum and Crequy (Paris), Dr. Dentz (Helmond) and Dr. J. Menno Huizinga (The Hague) described the excellent arrangements made under his directions by the Compagnie Néerlandaise-Américaine de Navigation for accommodating emigrants from the Hague.

Dr. G. Waller (Amsterdam) gave a communication on Overwork and other Conditions which lead to the Invaliding of Railway Servants; Dr. Blum contributed one on Traumatic Hysteria; and Dr. Dozy (Amsterdam) discussed the Disinfection of Stations, Restaurants, etc.

Next Meeting.

It was agreed to hold another Conference at Brussels in 1897, under the presidency of Professor Nuël, with Dr. Lantscheere (Brussels) as Secretary.

INTERNATIONAL CONGRESS OF PHYSIOLOGISTS, BERNE, 1895.

Opening Ceremonies.—Goltz and Ewald on the Spinal Cord and the Functions of Defæcation and Urination.—Langley on Sympathetic Areas.—Effects of Hypnotics on Cortical Cells.—The Physiology of Digestion.—Tigerstedt on Respiration.—Professor Kronecker's Garden Party.—The Physiology of the Circulation.—Cathedral Concert and Illumination.—Excursion to the Scheinige Platte.—Gamgee on Hæmoglobin.—Cold Baths in Fever.—Banquet.—Mosso on Circulation and Respiration at High Altitudes.—Next Congress to be held at Cambridge.—Exhibition of Apparatus.

[FROM OUR SPECIAL CORRESPONDENT.]

All physiologists should rise early. In Berne they were true to their principles; the valley of the Aar was still misty when at 8 A.M. on Monday, September 9th, the physiologists began to collect in the magnificent new institute which after the great Berne professor is named the Hallerianum. A plaister relief of Ludwig, surrounded by a wreath of laurels, and a bust of Helmholtz served to remind the members of the Congress of the activity of the hand of death during the past year. A speech of welcome from Professor Kronecker (Berne) and the Swiss Minister of Education, and the election of Professors Bowditch and Chauveau as Presidents, opened the proceedings.

To those who were on the look out for facts of value to practical medicine or surgery, the most interesting paper of the morning would be that of Professors Goltz and Ewald, of Strassburg. These physiologists showed a dog all of whose spinal cord had been removed from the middle dorsal region downwards, including the cauda equina. The removal had been performed at three stages during one year and a-half, and the animal had survived the last operation two years. Its voluntary muscles below the line of the lesion had undergone complete degeneration; it however retained the power of perfectly normal defæcation, and practically normal urination. The external sphincter ani was perfectly normal. The bitch since the last operation had given birth to young ones, and suckled them normally.

Upon this demonstration of Ewald's by an almost anatomical sequence followed that of Professor Langley on the functions of the sympathetic system. Professor Langley showed in a striking manner the erection of the hairs in skin areas, corresponding to the distribution of the sympathetic fibres stimulated.

Dr. Demoor (Brussels) showed the interesting fact that an actual anatomical change takes place in the processes of the cortical nerve cells in animals to whom a strong dose of morphine or chloral hydrate has been given.

In the afternoon the two papers of medical interest were those of Professor Herzen (Lausanne) and Professor Tigerstedt (Stockholm). Herzen showed a specimen of pure gastric juice collected by a fistula from the isolated stomach of the dog, which was capable of digesting its own weight of cooked proteid; he further brought evidence to prove that the spleen exerts an important influence on pancreatic digestion. By comparing the digestive power of two pancreatic infusions to

which the same quantity of ordinary arterial blood and blood from the splenic vein had been respectively added. Professor Tigerstedt described an apparatus for research on respiration in man. The point of the apparatus was that it was perfectly ventilated, and that the chamber was of sufficient size to allow the author to work on several men at the same time.

After a hard day's work an evening's pleasure did not come amiss, and nearly everybody availed themselves of Professor Kronecker's invitation to an evening garden party. Music, dancing, and a most excellent supper gave ample sources of enjoyment, and the delightful friendliness of the host and hostess gave a charm to the whole which it is seldom one's lot to experience.

Tuesday morning was devoted to the physiology of the circulation. Professors Hürtle and Mosso each showed a new apparatus for the determination of the blood pressure in man. In Hürtle's apparatus the arm, rendered bloodless by an Esmarch's bandage, was introduced into what was practically a plethysmograph, and this was connected with a tambour, the movements of which were registered on a recording cylinder. In Mosso's apparatus two fingers of each hand were introduced into gloves, which were contained in a metal tube filled with water and closed except at one place, where it was connected with a mercurial manometer, on the distant limb of which a pen floated, and this wrote on a cylinder. In the tracing produced by each apparatus the individual pulsations as well as the respiratory curves were clearly reproduced. Professor Kronecker showed a most striking experiment on a dog's heart. He injected paraffin having a melting point of 39° C. into the descending coronary artery; the heart entered at once into a condition of fibrillary contraction, from which, according to Kronecker, it never, except in very young animals, recovers. The great sensitiveness of the structures which produce the rhythmic contraction of the heart to sudden anæmia is greatly in favour of the view which regards them as being of the nature of ganglia.

Two papers of general interest were read in the afternoon, one by Dr. Dastre (Paris) which showed that strong neutral saline solutions will produce the same effects on fibrin as the gastric juice; and one by Professor Gotch (Oxford) on the nature of the discharge of certain electric fishes. On Tuesday evening the "congressists," on pleasure bent, met in the cathedral, where an excellent concert, in which the famous organ took an active part, was provided for them; afterwards, the tower of the cathedral was illuminated in their honour.

Wednesday was a whole holiday at the Congress, and an excursion was organised to the Scheinige Platte. Unfortunately the day was not a very fine one, and a good view of the Jungfrau was not obtained.

On Thursday morning M. Arthus (Paris) defended the view that the oxalates remove the coagulability of the blood by removing the calcium salts against the view of Alex. Schmidt, who holds that they have a specific action, and that calcium salts are not absolutely necessary to coagulation. M. Arthus was followed by Professor Gamgee, who gave the result of his researches on the violet and ultra-violet spectrum of hæmoglobin and its derivatives. He showed that the broad absorption band produced by this substance, and situated between the lines G and H, was in reduced hæmoglobin, in NO hæmoglobin, and in CO hæmoglobin, displaced to the less refrangible end of the spectrum. Dr. Jacquet (Basle) read a paper on the influence of cold baths on the circulation in fever. He showed that in fever the red blood cells disappear from the systemic veins and collect in the loin and abdominal veins, and that cold baths prevent this, while antipyrin does not. On Thursday evening a large banquet took place. During dinner speeches were made by Professors Kronecker, Kocher, Mosso, Hegir, Langley, Burdon Sanderson, Dastre, and Bowditch.

Friday was devoted to physiology and business. Professor Mosso read a paper on his researches on the respiration and circulation in man at high altitudes. These researches were made on Mount Rosa at a height of 5,600 metres. Mosso found that at this altitude during repose respiratory exchange is less, and this he regards as due mainly to two factors—a diminution in the tension of the carbonic acid in arterial blood, and the physical effect of low pressure on the nervous system.

The business proceedings of the Congress included an invitation from Professor Michael Foster, which was accepted, to hold the next congress at Cambridge.

An exhibition of physiological apparatus, in which mechanicians from nearly all the Continental laboratories took part, brought to a close a work which was most full both of pleasure and instruction.

BERI-BERI IN AUSTRALIA.

We have received a very interesting communication from Dr. Cyril Ernest Corlette on the subject of beri-beri in Sydney, N.S.W. We regret that the demands on our space preclude us from giving his paper *in extenso*, and that we must content ourselves with little more than recording the fact of the endemic existence of this important disease in our Australian Colonies.

Dr. Molloy, of the Melbourne Hospital, in the *Transactions* of the third session of the Intercolonial Medical Congress of Australia, 1892, asks the question, "Is beri-beri endemic in Melbourne?" He mentions that in March, 1888, nine Chinese were brought from a particular shop to the Alfred Hospital, all of them suffering from symptoms of peripheral neuritis and œdema; and he further states that subsequently a series of similar cases cropped up in Melbourne.

Dr. Graham describes[1] a form of peripheral neuritis epidemic among the Chinese in Sydney, and Dr. R. T. Paton[2] who has seen beri-beri in its recognised haunts in the East, has concluded that these cases of peripheral neuritis are really of this nature. Some time ago[3] we recorded the occurrence of an epidemic of this disease among some aboriginal Australians at Wyndham, East Kimberley, Western Australia. It is evident therefore that an endemic form of peripheral neuritis is extensively distributed in Australia, seeing that we have accounts of it from three widely separated points; and now Dr. Corlette's account, based on an experience of 60 cases, does away with any doubt that may have existed as to its true nature and significance. The symptoms, the progress of the disease, the mode of death, the pathological anatomy, and the hygienic conditions under which the cases develop distinctly point to beri-beri. Hitherto only Chinese and other Orientals have been attacked, and from this circumstance it might have been conjectured that the cases were imported, but on inquiry it is found that many of those attacked had been resident in the Colonies for years. Moreover, it was ascertained that the disease tended to occur in little epidemics, several cases coming from one house, a fact distinctly pointing to the existence of local endemic foci.

Dr. Corlette's description of the symptoms and pathological anatomy coincides in the main with the accepted descriptions of beri-beri. He points out one or two symptoms not alluded to by other writers, which, should the observation be confirmed, may prove of great use in diagnosis and differentiation. He says, "Patients suffering from this disease are very subject to attacks of sweating, most frequently confined to the head, face, and trunk, but sometimes general." In some instances it is profuse, in others more moderate, and it is not influenced by atmospheric temperature. He further says that he has almost constantly found two very acutely tender spots on the foot—one about the middle of the dorsal aspect of the first metatarsal space over the bifurcation of the internal branch of the anterior tibial nerve, the second on the outer side of the foot at the prominence of the cuboid corresponding to the external saphenous nerve. He believes that these tender points are peculiar to beri-beri.

It is difficult to say how long beri-beri has existed unrecognised in Australia—probably for many years. There is evidence of its presence there at least 15 years ago, although the true nature of the cases was unsuspected at the time; they appear in the hospital records as "ataxia," "rheumatism," and so forth. Although hitherto, so far as known, confined to Chinese, there can be little doubt that sooner or later Europeans will be attacked, and that we will hear of outbreaks of beri-beri in Australian

[1] *Australasian Medical Gazette*, No. 146, November 15th, 1894.
[2] *Australasian Medical Gazette*, No. 156, November 15th, 1894.
[3] British Medical Journal, October 27th, 1894.

gaols, poorhouses, lunatic asylums, and similar institutions. In future the possibility of the case being of this nature must be borne in mind by the Australian practitioner when he approaches the diagnosis of peripheral neuritis.

Dr. Corlette's remarks on treatment are judicious; he very properly dwells on the paramount importance of removal of the patient from the endemic locality. He says nothing, however, about the employment of bleeding, nitrite of amyl or nitroglycerine and purgatives, measures which have been found of service elsewhere in relieving the attacks of orthopnœa from overdistended right heart, so common and so dangerous an occurrence in bad cases of beri-beri.

The sanitary authorities in Australian towns will doubtless take note of the appearance of beri-beri in the colonies, and institute measures calculated to improve the hygienic conditions under which their fellow Chinese colonists elect to live.

THE RETIREMENT OF PROFESSORS.

The report of the Committee appointed by the Treasury to consider the question of the desirability of a fixed age for the compulsory retirement of professors serving under the Crown has been published as a Parliamentary paper. The Committee consisted of Lord Playfair, Lord Welby, and Sir M. W. Ridley, M.P.; Mr. C. L. Davies was secretary. The report, which was addressed to the Lords Commissioners of Her Majesty's Treasury, was in the following terms: The Commissioners have taken the evidence of presidents and professors of the Queen's Colleges in relation to their retirement upon superannuation at fixed ages, as determined by the Order in Council of August 15th, 1890. They were of opinion that the Commission of 1888, upon the report of which to some extent that Order in Council was based, did not intend that the limitations of age applied to Civil servants generally should be deemed applicable to presidents and professors of colleges who are appointed and serve under different conditions from those which prevail in the Civil Service. These presidents and professors were appointed at a maturer age, and have, by the nature of their employment at seats of learning, less tendency than civil servants to become inefficient at the age of 65. Indeed, up to that age it was often found that their efficiency increased by experience in teaching as their age progressed, though undoubtedly a time does arrive when advancing age weakens the receptivity of the professor to new discoveries in science, and diminishes the inclination to alter his instruction in order to adapt it to these changes. When this occurs the students are the sufferers. In the German Universities this well-known degeneration of intellectual activity among the aged is partly compensated by the appointment of active young "extraordinary professors," who, though not on the ordinary staff of the colleges, are allowed to give competing lectures within their walls.

In Edinburgh an extramural competition is encouraged, and in each Scotch University, when professors show diminished efficiency through age, it is the duty of the University Court to superannuate the professor under a pension scheme, which is charged upon a fixed Parliamentary vote for all the Scotch universities.

The Queen's Colleges in Ireland are in a different position, for they are only to a small extent dependent upon votes in Parliament, being mainly supported out of the Consolidated Fund. They are in consequence of this peculiarity in more intimate connection with the executive Government, with which the presidents are in frequent communication as to the working of the college and the efficiency of the professors, who are appointed by the Crown and can be dismissed by the Crown.

The statutes which govern the colleges also emanate from the Crown, and are not like those of other colleges, the product of academic autonomy. Under these circumstances the Commission are of opinion that there should be fixed rules as to superannuation of presidents and professors, and that they should be made by college statutes and not by an Order in Council. They are of opinion that when a professor reaches 65 years of age the president of the college should be bound to report to the Government the condition of efficiency of the teaching. If these are, and continue to be, satisfactory, the professor need not be superannuated till 70, but at this age his retirements should be absolute. In regard to presidents, they are of opinion that the age of 70 should be the period of retirement, but should the visitors of the college formally report that the college would suffer by the loss of the experience which the president has acquired, they think that the treasurer and not the Irish Office, should have power to continue him as president for a certain number of years, not exceeding five, so that at the age of 75 the retirement of the professor should be absolute. They are quite aware that there are cases where professors at 70, and presidents at 75, are fully competent to discharge their duties, but the advantages derived from superannuation would be seriously diminished if to meet these rare cases there were uncertainty in regard to the application of a general rule. They have observed with regret that the alumni of the Queen's colleges do not seek to go back to them as professors, and it was explained to them that one reason for this was that it was useless for them to prepare for a professorial career in these colleges while so much uncertainty prevails as to when the chair would become vacant. They also took the evidence of Professors Lockyer and Rucker as to the conditions which prevails in the Government School of Science in South Kensington, and they found that the age of 70 for professors was considered a proper age for retirement under ordinary circumstances. In their opinion, as the professors are not appointed till middle life, the addition of seven years to their period of service in calculating the amount of their superannuation obviously tends to secure eminent specialists as candidates for office. The power of voluntary retirement at the age of 60 has also much to commend it in this sense.

The report is followed by the minutes of evidence taken on June 17th, 18th, and 19th, during which nine witnesses were examined.

THE TITLE OF PHYSICIAN.

Who is a Physician, and Who Has the Right to Call Himself by that Title?

This is a question to which some time ago the medical profession and the public would have given the same answer, but now it is evident that a large section of the medical profession is desirous of extending to the title a meaning which outside the profession is either not recognised, or at any rate very imperfectly understood.

We are not for a moment contending that the way in which the public regard the title of Physician can in the slightest degree affect the legal aspect of the question, and we admit that the courts of law in dealing with that question may have regarded it from a too academic point of view.

But we have yet to learn that the Fellows and Licentiate Members of the Royal College of Physicians of London regard those Licentiates to whom there has been granted a diploma to practise medicine, surgery, and midwifery, and who are allowed to compound and dispense medicine for patients under their own care and to practise in partnership, as equally entitled to call themselves Physicians with the Fellows and Licentiate Members of the College.

It certainly appears that beyond the fact that such Licentiates receive their diploma from the Royal College of Physicians there is nothing as regards their legal status to imply that they stand in a different position than the Licentiates of the Society of Apothecaries as to whom Lord Coleridge and Mr. Justice Wright in their observations in the case of Regina *v.* Baker expressed an opinion adverse to their right to call themselves Physicians. The question at issue is still further complicated by the fact that the Licentiates of the Royal College of Physicians of Ireland are by the terms of their diploma styled Physicians, and, if they are so styled, it seems an anomaly that Licentiates of the Royal College of Physicians of England, who are not Members or Fellows of the College, should be in any worse position. What effect this circumstance, if it had been brought to the knowledge of Lord Coleridge and Mr. Justice Wright, would have had we do not know, but, so far as our opinion is of any value, we doubt whether a Licentiate of the Society of Apothecaries or a Licentiate of the Royal College of Physicians of London at the present moment could be successfully proceeded against for assuming the title of Physician. At the same time, if our view of the legal position is correct, it follows that the

title of Physician will cease to have the special value it formerly possessed. This may be a matter of comparatively little importance, but it is the logical consequence which flows from the wish that the distinction between the pure physician and the general practitioner should no longer be accentuated as heretofore.

THE BARBER-SURGEONS' HOLBEIN.

A short time ago[1] we called attention to the endeavour which was being made to purchase the Holbein, now in the possession of the Barbers' Company, for the purpose of placing it in one of the public galleries, where it would be safe from fire. The urgent necessity of ensuring its safety has again been emphasised by the large fire which occurred in Monkwell Street, within two doors of the Barbers' Hall. The conflagration was fortunately kept within bounds on this occasion, but the great city fires spread with such tremendous rapidity that it is often impossible to arrest their course.

Sir J. C. Robinson, Her Majesty's Surveyor of Pictures, in an interesting letter to the *Times*, suggests that the same precautions should be adopted in regard to the Holbein as have already been adopted for the Mantegna cartoons at Hampton Court. He claims that by his system great pictures can be detached from the walls and can be taken bodily out of a building and placed in safety in the course of a very few minutes. He thinks that the position of the Holbein upon the ground floor of the Barbers' Hall would render this removal easier than in the case of the Hampton Court cartoons, which are upon the first floor. These are so awkwardly placed that it has been necessary to cut a slit in the floor, through which the pictures, whose frames are on wheels, can be lowered. It should be remembered, however, that the Holbein is placed in a particularly unfortunate position, for the forecourt of the Barbers' Hall is surrounded by high buildings and is approached by a narrow gateway, which would probably become impassable at a very early period in case of fire. Monkwell Street, too, is very narrow and the turnings out of it are rectangular.

Sir J. C. Robinson has examined the picture with the experience of an expert, and he says that it "cannot be taken as a masterpiece of the great German painter. All indications seem to point to the fact that it was originally a somewhat hasty conventional performance, its composition and arrangement being dictated by the worthy citizens, not specially enlightened in matters of art, who commissioned the work, and that it was left unfinished at the death of the painter from the plague in 1543. Furthermore, that at a subsequent period a very inferior hand or hands completed the picture in a perfunctory manner.

"The changes induced by time and by injudicious treatment from century to century under the pretence of 'restoration' have resulted in further deterioration, rendering it difficult on any casual and cursory examination to decide on the manner and measure in which Holbein's original work has been distorted and defaced.

"The principal conclusion to which my recent examination has led me is that when the hand of Holbein was paralysed by death, it had nevertheless worked more or less over every part of the great panel—very elaborately and minutely in some parts, and very slightly in others: but that nowhere had the finishing touches and work required to give final truth and perfection of representation been bestowed. Nevertheless, had the picture remained in the condition in which it was left at the death of the painter, it would have been of infinitely greater value than at present. We should then have had invaluable insight into the great painter's *technique* and mode of procedure, and the truth to Nature and suggestive excellence of every unfinished line or vaguely impressed tint would probably have had a charm for us scarcely less potent than would have resulted from months or years even of patient elaboration by the artist himself.

"This, however, was not to be. It was decreed that fools should rush where angels might have feared to tread. Cunning and mighty indeed should have been the hand which dared to lay a touch on Hans Holbein's work: but, as it happened, it was those of rameless daubers of a low type. I think it most likely that an interval of some twenty or thirty years elapsed before the Barber-Surgeons, in an inauspicious moment, determined on the completion of their picture. For the style of execution—if style it can be called—of the superadded work seems to be that of a somewhat rather advanced Elizabethan period. Probably the worthy guildsmen thought it unseemly that the lineaments of some of their number should stand out conspicuously in the corporate picture whilst those of others were seen as mere ghostly shadows, and it would seem that when the principal range of figures received the finishing touches from the post-Holbein improver there was still a relay of entirely unrepresented claimants, for the upper row of portraits on the right of the picture were obviously painted at a still later period, and by an even weaker hand. These last are so entirely devoid of artistic merit and are so awkwardly placed in the composition that they were probably not even indicated on the panel by Holbein, and, in fact, formed no part of his original scheme. This, however, requires further verification and consideration. It is unfortunate that the picture should not have been sent to the Guildhall Gallery, if even only for a brief period, as there would then have been an opportunity for the minute examination of the picture which is almost impossible in the half light of the Hall. So far as I could judge, considerable portions of the work, notably the draperies and many of the hands of the principal kneeling figures on the right, were the portions most advanced by Holbein himself, and these portions appear to me almost free from repainting or other injury by so-called restorers. Of the heads two only remain, I think, much as Holbein left them, somewhat abraded and thinned, but not materially painted over; but these even, though far advanced, do not seem to have been quite completed by Holbein."

This criticism is extremely valuable, and is certainly fairer than the wholesale condemnation passed upon it in Wornum's *Holbein and his Times*, and in Woltman's *Life of Holbein*. It appears that the Barbers' Company, after due consideration, have decided not to send the picture to the Guildhall Gallery. It will therefore remain for the present where it is, and where it has been since it was painted in 1540 1.

[1] British Medical Journal, 1895, 1, p. 1459.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 23rd day of October next, at 2 o'clock in the afternoon.

Francis Fowke, *General Secretary.*

September, 1895.

NOTICE OF LAST QUARTERLY MEETING FOR 1895. ELECTION OF MEMBERS.

A meeting of the Council will be held on October 23rd, 1895. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the meeting—namely, October 2nd, 1895.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the

Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

SHROPSHIRE AND MID-WALES BRANCH.—The annual general meeting will be held at the Salop Infirmary on Tuesday, October 15th, at 3 o'clock. Members who wish to bring forward any business, to read papers, to show cases or specimens, or to propose any new members, are requested to communicate with the Honorary Secretary not later than Saturday, October 5th.—H. WILLOUGHBY GARDNER, Honorary Secretary, Swan Hill, Shrewsbury.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—Amended notice of meeting. The next meeting will be held at the Crown Hotel, East Grinstead, at 4.15 P.M., on October 8th, Mr. P. E. Wallis, in the chair. Dinner at 6.15. Charge 6s., exclusive of wine. Notice of communications, etc., should be sent to the District Secretary, J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 3.45 P.M., Mr. F. B. Hallowes, of Redhill, in the chair. Dinner at 6 P.M.: charge, 5s., exclusive of wine. Agenda: Minutes of Croydon meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Discussion on Tuberculosis—Introduced by Dr. Sidney Martin. Speaker: Mr. H. G. Plimmer, who will show some cultures and slides. Medical: Dr. Washburn. Speakers: Dr. Holman, Dr. Galton, Dr. Adeney, Dr. J. G. Ogle. Surgical: Mr. C. J. Symonds. Speakers: Dr. Walters, Dr. Hodges, of the South-Eastern Fever Hospital. In its Relation to Public Health: Dr. R. D. R. Sweeting, Local Government Board. Speakers: Dr. Philpot, M.O.H. Croydon, Dr. Jacobs, M.O.H. Reigate. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—HENRY J. PRANGLEY, Honorary Secretary, 161, Anerley Road, S.E.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will take place at St. Bartholomew's Hospital, Rochester, on Friday, October 11th, Mr. J. Holroyde, of Hamond Hill, Chatham, in the chair. Gentlemen desiring to read papers or exhibit specimens are requested to communicate with the Honorary Secretary, E. GROUND, M.D., 1, Ashford Road, Maidstone, as early as possible.

SOUTH-WESTERN BRANCH.—A very kind invitation has been received from the President and members of the Dorset and West Hants Branch to the South-Western Branch to the next meeting, which will be held at Bournemouth, on Wednesday, October 16th, when Dr. Radcliffe Crocker, Physician to the Skin Department, University College Hospital, will give an address on The Treatment of Inflammations of the Skin. Those members who purpose attending are requested to send their names before October 8th to the Honorary Secretary, W. V. Lush, M.D., 19, Frederick Place, Weymouth, who has kindly promised to forward the agenda and other particulars.—W. GORDON, Honorary Secretary, Barnfield Lodge, Exeter.

NORTH OF ENGLAND BRANCH.—The autumnal meeting will be held at the Hexham Asylum, Hexham, on Thursday, October 3rd, at 4 P.M. The Honorary Secretary will be glad to receive notice of communications. The dinner after the meeting will be at the same place, at 4.45 P.M.: 5s. 6d. each, wine extra.—G. E. WILLIAMSON, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The autumnal meeting of this Branch will be held at Olney on Thursday, October 3rd. The following papers have been promised:—Mr. R. A. Milligan: Two cases of Intestinal Obstruction successfully treated by Abdominal Section. Mr. George H. Percival: Some cases of Ovariotomy. Mr. W. H. Bull will bring forward a proposal: "That a provincial medical association be formed, in conjunction with the South Midland Branch, to combat the growing evil of commercial 'medical aid societies' in the South Midland Counties."—CHARLES JEWEL EVANS, Honorary Secretary, Northampton.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Friday, October 25th, at 5 P.M. Dinner at 6.30. The subject as settled by the Council for discussion after dinner will be Club Practice, and the discussion will be opened by Mr. Abbott. Short papers or cases may be taken before dinner, and others afterwards. The Honorary Secretary will be glad to receive notice of any case or paper to be communicated to the meeting in the course of the next three or four weeks.—W. M. KELLY, M.D., Honorary Secretary, Taunton.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE 153th meeting of this District was held at the Deaf and Dumb Asylum, Margate, on September 12th, at 3 P.M.; Mr. Bertram Thornton, Medical Officer to the institution and Surgeon to the Sea-bathing Infirmary, in the chair. Twenty members and visitors were present.

Business.—The minutes of the last meeting were read and confirmed.

Election of Chairman for Next Meeting.—It was resolved that Dr. Wilks, of Ashford, should be invited to take the chair at the meeting to be held at Canterbury in November.

The Education of Deaf Mutes.—The CHAIRMAN (Mr. Thornton) introduced this subject by pointing out that about 1 in 2,000 of the population of England were deaf mutes, and he argued that the subject did not receive from medical men the attention it deserved. After describing the two classes of deaf-mutism, brief allusion was made to the etiology and pathology of the condition. The "sign" and the "oral" systems of education were then described at some length, the relative merit of the two methods was discussed, and Mr. Thornton strongly favoured the pure "oral" system as more suitable for the majority of cases. In conclusion, emphasis was laid on the early recognition and active treatment of ear disease in young children in order that, even when the organ has suffered serious lesions, every possible remnant of hearing and speaking power should be preserved. He also pointed out the importance of beginning the training of deaf mutes at an early age and especially insisted on the necessity of systematic examination of all children with regard to their refraction and on the desirability of correcting all errors of vision by means of the ophthalmoscope at as early an age as possible.—Mr. Thornton's paper was discussed by Dr. SHUTTLEWORTH (London) and Dr. ELLIOTT, Superintendent of the asylum.—Dr. ELLIOTT then gave a most interesting demonstration on some of the children in the institution, taking separate groups, according to the severity of the cases, and showing the wonderful results that had been obtained even under the most unpromising conditions.

Faucial Sequelæ of Scarlet Fever.—Dr. LATTER (Folkestone) read a paper on the Faucial Sequelæ of Scarlet Fever. These were chiefly post-scarlatinal diphtheria, cocco-diphtheria, and ulcerative stomatitis. The connection of these diseases with undue aggregation of convalescents from scarlet fever was illustrated by an account of an epidemic at Gore Farm Convalescent Hospital. A short account was given of pseudo- or cocco-diphtheria. The variety met with by Dr. Latter exhibited a thin pellicle on the fauces, soft palate, or uvula, accompanied with great physical prostration, slight elevation of temperature, and, occasionally, rapid wasting. Clinically, it was hard to distinguish from true diphtheria, and differed only in the absence of sequelæ. Bacteriologically, the pellicle showed strepto- and staphylococci, but never the Klebs-Loeffler bacillus. Dr. Latter urged the importance of ample air space for scarlet fever convalescents, and the absolute necessity of bacteriological examination in all cases of doubtful sore throats.

Cock's Operation.—Dr. HALSTEAD (Ramsgate) read notes on, and showed a case of recovery after Cock's operation done for impassable stricture and extensive extravasation of urine with cystitis. The patient was 76 years of age, and since the operation he micturates through the opening in the perineum every three hours, without any discomfort or soreness, or wetting of the clothes.

Votes of Thanks.—Tea and coffee were served in the asylum at the termination of the meeting; and hearty votes of thanks were given to Dr. Elliott and to the Committee of the Asylum for their kindness and hospitality.

SPECIAL CORRESPONDENCE.

PARIS.

Hysteria in Marshy Districts—Vaccination and the Influence of Weather—Music and Therapeutics—The Detection of Horseflesh in Sausages—Money and Microbes—Stays and Health—A Patient Sued—General News.

Dr. TERRIEN published some time ago in the *Archives de Neurologie* a paper on hysteria in the Vendée which attracted the attention of the medical men of that department. It seems clear that in the marshy part of this province paludism plays a certain part in provoking a series of morbid phenomena impossible to class under any other neurosis. At the present moment events are in process of evolution in the marshy part of La Vendée which indicate the connection of paludism with nervous trouble. A young girl sees in visions the Virgin Mary and people flock to her to be cured. It is stated

that this visionary, who is delicate and ailing in appearance, has entered a hospital to be treated.

Dr. Marty, an army surgeon, states that the time of year has an influence on the success of revaccination. It is generally believed that vaccination direct from the heifer is not influenced by the season, whereas vaccination with vaccine lymph should be practised in cold weather. Dr. Marty has observed that under these circumstances vaccination has a slower evolution. The following table gives the exact results:—

Date.	Cases.	Successes.	Per Cent.
January	279	124	44 44
March	848	502	59.19
April	597	184	30 82
May	948	336	35 44
August	767	89	12 44
September	820	74	9 02
October	635	135	21.25
November	2,685	1,128	42 48
December	1,932	856	51.84

The most favourable months for vaccination are November, December, and March.

Dr. Ferraud in his paper read before the Paris Medical Academy on the physiological influence of music, states that it powerfully modifies the activity of the nervous system, and should be classed in therapeutics among the antispasmodics. Music, according to its character, can act as a simple antispasmodic, as a stimulant to the nervous system, or the reverse. In treatment, the character of the music prescribed must be stated.

M. Nocard, at a meeting of the Conseil d'Hygiène, recommended the following method for detecting the presence of horseflesh in sausages, etc. Boil the substance for half an hour or an hour in four times its weight of water, or steep it in cold water during twenty-four hours and filter. Then add, when the fluid filtered is cold, 5 per cent. of hydrochloric acid; filter again, pour a few cubic centimetres into a tube, then drop on the inside of the tube a few drops of water saturated with iodine. A brown-red-violet ring appears. Instead of a saturated solution of iodine, Gram's liquor can be used, and the coloration is more intense. This coloration appears also when cows' fœtus is used in sausages, or of sheep.

M. H. Vincent, in the *Revue Scientifique*, states that certain precautions ought to be observed in handling pieces of money. They teem with microbes, especially those of suppuration, the bacillus of tetanus and of tuberculosis. Gold pieces are less infected, probably because their circulation is more limited. Not long ago the dangers of medical fees was pointed out, and it was suggested that medical men should receive their golden fees in hermetically closed boxes, and that they should be subsequently disinfected by the receiver. When in bank notes, these should be handed to them already disinfected in an antiseptic solution. How to disinfect change given by omnibus conductors is a more difficult question.

Madame Gaches Sarraute at a recent meeting of the Medical Sanitary Society, read a paper on the hygienic results of wearing stays. Her conclusions were as follows: If stays are necessary for the comfort of women, they ought to be made on the following principles: They ought not to be high that the stomach cannot expand freely, the upper edge of the stays should be loose and soft, so as not to incommode the ribs. The waist in the stays should be well marked in the back, and in front this should not be so in order that the abdominal viscera should not be incommoded. According to Madame Gacher Sarraute, the lower border of stays should reach the pubic bone, and offer the same support as an abdominal belt.

A patient has been sued by a medical man under the following circumstances. From 1883 to 1886 attendance was given for a fee of 4s. 8d. a visit. In 1886 the patient underwent a very serious operation performed by a celebrated surgeon for a fee of £80. After the operation the doctor in general attendance paid 27 visits, and charged 10 francs a visit. The patient refused to pay more than 5 francs. The Court decided that the visits subsequently to the operation involved more care and skill than those previous to it, ordered the payment of the said fees to the plaintiff, with interest and costs.

M. Abbadie and M. Viollet, members of the Institute of France, and M. Isaac, Senator, have in the name of the "Société de Protection des Indigenes" asked the War Minister to extend to the natives of Madagascar the privileges of the Geneva Convention. The War Minister replies that the wounded Malgaches are tended and treated like the French soldiers and allies.

The President of the Republic has visited the hospitals at Havre; at the General Hospital he left a donation of £12, and at the East Hospital £8.

A hair cutter and cupper at Paulin, practising as a dentist without any diploma, whilst drawing a tooth sawed away with it a piece of the jaw. He has been fined for practising illegally. He pleaded he learned hair-dressing in Germany, and there all hair-dressers take out teeth. The excuse was rejected by the court, and Dr. Brouardel is commissioned to examine the plaintiff.

MELBOURNE.

The Melbourne Hospital Election.

The election of surgeons and physicians to the Melbourne Hospital is over, and the result has been declared. There were 31 candidates for 18 places, 8 of these being for the in-patient staff, these being naturally, and perhaps only properly, those most sought after. In this department the old members of the staff have been re-elected, namely, Drs. Williams, 2,674 votes; Springthorpe, 2,481; MacInernay, 2,331; Moloney, 1,962. Surgeons: Messrs. Stirling, 2,632; Fitzgerald, 2,310; Bird, 2,272: Ryan, 2,249. The subscribers also re-elected the whole 10 of the old out-patient staff, namely, Drs. Nihill, Boyd, Daish, Howard, and Lawrence, and on the surgical side Messrs. Noyes, Syme, Rennie, Moore, and Langlands.

In mentioning these names it may be assumed that if the voters had had the choice of the whole profession in this metropolis they could not have made a better selection. But the truth is that many eligible men recoiled from the indignity of having to encounter the degrading work of canvassing and advertising apparently required of those who seek the honour of a connection with this charity. Perhaps, to most of the candidates in this late competition the opportunity afforded of self-adulating advertisement was eagerly seized upon. They had proclaimed themselves for several months before the day of election both by direct announcement and by newspaper paragraphs obtained by various kinds of influence. They had thus, a double chance, they might be elected which was what they hoped for, or if not elected, they were certain to be much talked about. It may be concluded, therefore, that none of the candidates in this scramble have been entirely disappointed.

Everyone has got something of value to him. They are all happy, although in various degrees. They have not all hit the target in the centre, but they have all hit it somewhere. And the public who know nothing of medical ethics, and who, if they did, would not care anything, have had the amusement of witnessing thirty-one members of what is theoretically supposed to be an ennobling profession engaged in a scrimmage which, perhaps, has its aptest parallel in a football match, with this difference, that in the hospital fight it has been every man for himself. But the moral of this contest, so far as the collective medical profession is concerned, is this: that medical ethics represent an exploded sentiment; that to refrain from announcing oneself as a great deal wiser and cleverer and better qualified than one's fellows is a weakness to which only old world delicacy clings, and that *sauve qui peut* and "the devil take the hindmost" are the aphorisms worth adopting. Of course the defence offered for this charlatanic quacksalverism is the old one that the mode of electing the Melbourne hospital staff renders such appeals unavoidable. He who blows his trumpet loudest, and beats his big drum most incessantly, is, say they, heard the furthest. These conditions, they insist, are the conditions essential to success, so they are

complied with; and until a different method of election is adopted, it is not likely that there will be any alteration in the methods resorted to by candidates to obtain the support of those to whom they appeal. An incidental and by no means improbable consequence of this disregard of professional amenities is a general extension of the practice of advertising; for the competition among medical men is now so great, owing to the steady increase in their numbers in this colony, that, on the "needs must when the devil drives" principle, we may presently be all placarding the hoardings with autobiographical notices of ourselves, accompanied by more or less fearsome portraits, for it is quite certain that this kind of self-laudation pays.

If advertisement and puffing paragraphs may help a men on to the hospital staff, why may they not also fill his consulting room with patients, and so enlarge his bank balance? Out of 5,700 voters on the list about 87 per cent. voted. It is now virtually agreed upon that the present method of election is not only degrading to the profession but demoralising all round. The tenure of office is only four years, and there exists no reason why it should not be longer. The revenue of the hospital is about £21,000, the Government contributing of this £12,000 and £1 subscribers about £3,500. It is these latter, with the life-governors, who decide and control the elections. The Government, strange to say, exercises no voice in the matter. Some little while ago Professor Elkington proposed a scheme of election which at the time found favour with many, which was to the effect that a body consisting of certain members of the medical profession, of the University Senate, and of the committee of the hospital should form an elective committee. The subscriber knew nothing of the merits of the candidate, and was therefore not considered, but although the scheme showed weaknesses it was still preferable to the present mode of election. A very much simpler mode, and which at the present moment seems the most popular, is to allow the members of the present staff to retain office for either a period of fifteen years or until the age of sixty is reached. The vacancies as they occur in the in-patient department to be recruited from the out-patient staff, and vacancies in the out-patient staff to be filled up by an election of the subscribers. This is the scheme which the staff will shortly endeavour to induce the committee to adopt. It is sincerely hoped that this election is the last of its kind, and that the whole profession will resent any further attempt to render it ridiculous, to lower its prestige and destroy its ideals by dragging its traditions through the mire.

CORRESPONDENCE.

SANITARY PROGRESS IN INDIA.

SIR,—Mr. Ernest Hart is making a great effort on behalf of Indian sanitation. He is heavily handicapped, because in the entrance examination for the Indian Medical Service in London no marks whatever are given for sanitary knowledge. A man might be a D.P.H., and yet not gain any advantage from having it.

Surely this is wrong, and in a medical preventive service sanitary science should count for much. If Mr. Ernest Hart will get the India Office authorities to offer 1,000 marks for sanitary science, as they now do for anatomy, he will soon see good results. Anatomy may be overmarked in such examinations.—I am, etc.,

Sept. 17th. TWENTY YEARS IN INDIA.

MEDICAL MISSIONARIES AND PRIVATE PRACTICE.

SIR,—If the "protest" published under the above heading in the BRITISH MEDICAL JOURNAL for August 17th is to lead to any useful discussion, "Vindex" ought first to furnish us with precise data. Rajputana is a very wide word, will he favour us with the exact whereabouts of himself and the peccant medical missionaries?

Then, again, there is no "Colonial Missionary Society" at work in India.

Several missionary societies, and a number of medical missionaries are at work in Rajputana; but it is not possible to discuss the protest of "Vindex" until we find the range of his guns.—I am, etc.,

H. MARTYN CLARK, M.D., C.M.Edin.,
Medical Missionary, Church Missionary Society,
Sept. 2nd. Umritsur, Punjab.

THE THROAT HOSPITAL, GOLDEN SQUARE.

SIR,—While we thought it expedient to announce publicly the severance of our connection with the Throat Hospital, we did not think it necessary in the interests of the institution to state at the time our reasons for so doing. As, however, others think differently, we now ask you to publish the following statement.—We are, etc.,

SUTHERLAND.
R. COURTENAY WELCH.
GRENVILLE MACDONALD.

STATEMENT.

At the annual general meeting of the governors and subscribers of the Throat Hospital, held on April 10th last, after Mr. Courtenay Welch and two others of the retiring members had been unanimously re-elected, four other gentlemen (Dr. Norris Wolfenden, a former member of the honorary medical staff of the hospital, Major Probyn, Mr. Allom, and Mr. Osborne) were, after opposition, elected to serve on the Committee of Management. A few days later it was discovered that among those who had voted in support of these gentlemen were several persons who, in order to obtain a colourable qualification to vote under By-law 16 ("No annual subscriber shall be entitled to vote until after the payment of his subscription for the second year"), had, a few days before the meeting, paid to the secretary a subscription, with the request that one moiety should be entered as a subscription for 1894 and the remainder as for 1895; one of the four gentlemen thus elected having himself in this manner obtained his qualification to vote. Although some of these payments were made just before the monthly Committee meeting of April 2nd, the Secretary made no mention to the Committee of this unusual procedure; nor did he at the annual general meeting, when the qualification of one voter was challenged, give any hint that anything irregular had taken place.

At the next Committee meeting, held on May 7th, Dr. MacDonald proposed, and Mr. Welch seconded, a resolution to the effect that a special general meeting of the governors and subscribers should be called to reconsider the opposed resolutions passed at the annual meeting. When this proposal was rejected, and the Committee thus refused to allow the question to be reopened and the facts laid before the subscribers, Dr. MacDonald and Mr. Welch at once resigned.

The Duke of Sutherland, at the earnest request of Mr. G. H. Pember, the new chairman, and of Dr. MacDonald, who, acting independently of each other, pointed out the irreparable injury which his Grace's resignation would inflict upon the hospital, consented to defer any definite step until it could be ascertained whether the four gentlemen, the validity of whose election had been called in question, would voluntarily retire. A deputation from the Committee subsequently waited upon the President; but as the arrangement he had suggested was not carried out, he had no alternative but to resign.

"A QUESTION OF CONSCIENCE."

SIR,—In the BRITISH MEDICAL JOURNAL of September 14th Dr. Arabella Kenealy asks for help in deciding how to act in a "question of conscience" under circumstances very interestingly and graphically narrated, which may be thus abbreviated. Dr. A. Kenealy was called to the wreck of a young woman early married. She had had three abortions, then one living child, two other abortions follow, and the third is threatening to occur. Whilst considering the case downstairs she sees the only outcome of this marriage—a miserable fragment of humanity—and she asks herself, though not in these words, if the fœtus now threatened to be expelled is to be a repetition of the one then before her, would it be wise to save it? In addition she asks, if we can save it from expulsion, can we cure it? and further discusses the power of mercury over syphilis, and also of other remedies, and the nature of cures.

Thus there are many separate points raised which it would be impossible to go into in a single letter; but the essence of the "question of conscience" has doubtless occurred to most thoughtful minds both within and without the medical profession. It is this—supposing we have the power of checking abortions, so endeavouring to bring the fœtus to maturity, are we wise and therefore right in exercising it? Of course we have now only regard to the fœtus: the fact that we know the one or both parents are syphilised does not affect the question, and before we can answer it we ask other questions. Do we know the actual condition of the ovum and, particularly, of the fœtus, how far it is damaged? Is the uterus rebelling against an unwholesome thing or influenced by reflex agencies only from mind or body? Is every fruit of a syphilitic parentage so far affected as to render it useless to others and a misery to itself? How far does our most penetrating glance, our keenest vision, enable us to determine the actual use or value of any human being?

When called to cases of this kind these questions naturally crowd themselves on my mind, and recognizing the impossibility of answering them satisfactorily, with the occasional exception of uterine action caused by mental or bodily reflexes and cases where the signs of the death of the ovum are manifest I have had to draw rules for guidance from my previous experience, and it may be thus briefly stated—that in those cases of threatened abortion the symptoms subsided and pregnancy continued, that the children in a considerable proportion turned out satisfactorily. Of course some were weakly. Though in my early life I felt that theoretically the expulsion of the ovum was not to be regretted, yet afterwards I learnt that those that arrived at maturity were worth preserving.

It must not be concluded that every child of syphilised parents will turn out a blighted life, far from it, a large number make excellent and valuable citizens.

In view, therefore, of our uncertainties and of our defective insight as to the present and of our absolute blindness as to the future I would say, that if we have the power of checking these abortions, it will be wise, and therefore right to exercise that power. And that we do possess by various means such a power, I have no doubt in a considerable number of cases.

But the principle underlying our rule of action here discussed is of far wider application than to the case of abortions, for, if it be right to suspend treatment in what we guess to be Nature's wisdom, so we should, in the event of Nature's apparent failure, be wise in interfering in the opposite direction, and to this end adopt measures to cause and assist Nature to expel its contents, which we guess to be in a damaged condition; but this, my experience has shown, would in the long run be destructive of a considerable number of fœtuses that might, for ought we know, have become ornaments and useful members of society.

And so, how can we logically limit this principle to the treatment of abortions alone? Why not apply it to the newborn infant which to us seems to be ineligible to live, and in the poor morsel of being, described only too truly, why not refuse it succour; and why not assist it out of its troubles in a dream of euthanasia? and the limit cannot rest here; we must apply the principle through all medicine and surgery; and not least in mental diseases. Where can we stop? And all this on the assumption that we have a perfect or sufficient knowledge of the future to guide us to such momentous issues. The principle goes yet further before we can arrest our trembling steps. Shall we save a life in danger, which life we know to be base, villanous, dangerous? Shall we let such a one drown whilst we stand by with folded arms though with power to save?

When I first began my professional life the goal placed before us was this: To relieve suffering humanity and to prolong life by every means possible, though but for a minute, even at the risk of our own, leaving the event to Providence. Is this rule dead? If not, then it is clear that even with the fears before us it would be not possibly unwise and therefore not wrong in doing what we can to enable the uterus to tolerate the presence of its contents till we have proof of their death or the jeopardy of the life of the mother.

There is not space to discuss now what "cures" we can effect on the syphilised fœtus, or whether the poison affects the fœtus so much as the apoplexies which it causes cuts off its nutriment: nor the other points raised; yet the "conscience questioner" may somewhat console herself when she thinks of the ever-widening stream of taint that as it widens it becomes shallower, and that this stream has "Nature's vast reparative power" as its sandbanks.—I am, etc.,

George Street, W., Sept. 18th. J. BRAXTON HICKS.

SIR,—I have just read Miss Arabella Kenealy's letter and would like to tell her a story; albeit not in her poetic style, which may be of use to her. In 1870 I entered into partnership with an old practitioner in a town in Worcestershire, and one of my first patients was a handsome young woman, the wife of a tradesman, whom I was called on to attend in labour.

She gave birth to a dead syphilitic macerated fœtus, at about eight months. I was informed that the same thing had happened twice before. I could not venture to speak. I consulted my partner, and he informed me that he had treated this woman for syphilis some years previously before she married, but she was only under treatment a few weeks. I had just read Diday's book.

In the following year she came to me saying she was pregnant four months, and asking me the cause of her sorrow, inquired could nothing be done that she might have a living child. I explained to her the cause and said "You will have another dead child, then I shall treat you and you shall have a living one."

Now comes the question of conscience. "Why not now?" she asked. "Because it is not expedient that the child at present in your womb should live." I considered that no treatment could make such a change in it as to make life anything but a curse.

Between seven and eight months she was again delivered of a dead child. I then put her under mercurial treatment. In twelve months she had a perfectly healthy son. I put this son under mercury for twelve months, keeping up the mother's treatment uninterruptedly for three years. She had three more perfectly healthy children in rapid succession, which were not treated separately.

Two years ago I visited the town and found them out and four better grown, better looking (they had all their mother's beauty) or more intelligent young men and women you could not find in their station in life, two were married and had healthy children. The husband does not know till this day.

Some lessons are to be learned from this case:

1. Women are not the only ones who are wronged and deceived.

2. Miss Arabella Kenealy will have to modify her views as to the mercurial cure, and (in parenthesis) she will also modify her others with experience.

3. What effect the same treatment would have had upon the four months fœtus and its future fate I cannot tell, but I dared not try, and Miss Kenealy's conscience and mine, I think, are at one on the question.—I am, etc.,

Dover, Sept. 21st. JOHN ORMSBY, M.D.

SIR,—Dr. Kenealy raises certain questions which must interest us all, and as she asks for criticism I trust she will accept my remarks in the spirit of one who is merely anxious that the well-understood principles of our action as medical men should not be eclipsed by vague generalisations, for ours is a severely practical profession.

It seems to me that the first mistake is in mixing up abstract speculation with what should be the practical considerations of a healer of the sick. When one takes up the latter *rôle* surely the one duty and responsibility is to do the very best for our patients, even although, as everyone must admit, we have very often but a farthing rushlight wherewith to work instead of the clear light of noonday, still the moral burden is on us to do all we can under the special circumstances, however little it may be, and it will be a bad day for our profession if ever we depart from this.

Taking the concrete cases on which Dr. Kenealy bases her remarks, it seems, if I understand her aright, that because she cannot do everything therefore she will do nothing, and in so doing she departs from first principles which should have guided her. The case is quite a clear one of threatened

abortion due to syphilis, and her conduct of the case up to the library scene is what all of us would have done.

The sight of such an unfortunate child could not fail to produce the deepest compassion, and even indignation, when one records the fact that syphilis is a preventable disease, but when this induces Dr. Kenealy to tear up her prescription surely it is mere continentalism, and also a running away from the bounden duty of relieving the unhappy mother and yet unborn child, to save whom she was called in.

Dr. Kenealy goes on to excuse herself on the ground that to interfere with the natural course of the case is to violate a "physical conscience." Now, what are the facts embraced in this term? Merely, that when a woman is suffering from syphilis she is very liable to abort. We know as a matter of practical experience that mercury carefully administered, or in some cases iodide of potassium, will not only prevent this, but will have a most beneficial influence on the mother, restoring her health, and preventing future abortions, enabling her to bear fairly healthy children, and also that the unborn babe will be equally benefited. There can be no question, I imagine, that it is our bounden duty to, at least, aim at this end.

Dr. Kenealy allows the argument from analogy—a most fruitful source of error—to cloud her mind, and blind her to the practical side of the question, acting as an abstract moralist, a part she was certainly not called in to play. As to the ill effects of mercury, may I, in all humility, not say that these are due to want of care and inattention to the general health.

I feel sure Dr. Kenealy's action will be condemned by the general sense of the profession. Arguing as Dr. Kenealy does, I think she was bound from a logical point of view to procure abortion, in order that the "physical conscience" might not be violated.

The general statements which occupy the latter part of the letter would, in my opinion, not stand the test of destructive criticism. I should be very sorry if anything in this letter led anyone to suppose that any medical man can see such cases without deeply sympathising with the unfortunate sufferers, but the remedy is social, and lies outside our profession; nevertheless, it is our duty to do all we can, both morally and physically, to render syphilis an unknown disease, and so confer on our race an incalculable benefit.—I am, etc.,

London, S.W., Sept. 14th. M. G. Biggs.

Sir,—Miss Kenealy is a lady who possesses the courage of her convictions, for few of her brother practitioners will regard her action as anything but morally indefensible. To purposely refrain from interfering to prevent abortion does not differ in principle from actively bringing it about, and the question she has raised resolves itself into whether it is justifiable in the interest of the child to procure abortion when the parents are syphilitic. If we admit the justifiability of abortion in these cases, we must also admit that it is justifiable when the parents are phthisical, for phthisis is far more loathsome and more painful than syphilis; and if justifiable in these cases, it is also justifiable in other diseases which may entail future suffering on the offspring. The logical conclusion is that preventive treatment must consist in procuring abortion whenever there is a chance that the child will inherit any tendency to disease—a radical method of eliminating unhealthy strains in the race. As doctors we must regard life as sacred, and it is our plain duty to strive to save or prolong life as long as we can, when we have to treat our patients, and only when another life is threatened are we justified in contemplating any measure which will destroy life. Whether the life we are striving to save is or is not of value has nothing to do with us.

If we allow exceptions to this golden rule the thin edge of the wedge is inserted. Allow a doctor the right of deciding whether he shall kill or cure, according as he deems the particular life to be of value or not, and the most terrible abuses will most certainly follow.

In a world in which pain and suffering are the only realities, if anything indeed is real, it is not for us to decide the question of existence. However much Miss Kenealy's emotions may have been affected by the sight of the syphilitic child previously born of the same parents, she took upon herself a grave responsibility when she indirectly helped to bring about abortion by refraining to give the proper remedies. Her duty obviously was to have done her best to enable the birth to have taken place at the proper time, and by judicious treatment to have mitigated the ills to which the child was heir, seeing that she was called in and paid by the parents for this purpose.

Lately much hysterical rubbish has been issued to the world in the pages of semi-erotic novels on this subject of syphilis; and although works such as *The Heavenly Twins* are calculated to disturb the equilibrium of their lay readers, members of our profession should at least be above that weakness. Even if the evils of syphilis were as great as they are represented to be in these pernicious books, nothing can justify a doctor in breaking the golden rule of his profession, and in destroying life because his emotional faculties have been strongly affected.—I am, etc.,

Dover, Sept. 15th. A. G. Wrexford.

Sir,—The writer of the letter headed "A Question of Conscience" has not, I take it, caught her foot in a rut of conventional professional procedure, but has rather, with eyes wide open, though blinded by auto-suggestion, walked along the dirty gutters of morbid sentimentality and more than doubtful morality, and now calls out for us to admire her mudstained boots.

The doctrine that we may determine who are fit to live and who are not—for this is what her practice really comes to—has for some time past been abandoned by civilised nations, and although the race would doubtless be improved if the doctrine could be successfully applied, it is, apart from other considerations, too dangerous a one, for man and woman too is prone to err.

Why if one child has been stamped with congenital syphilis, possibly without any attempt to prevent it, should we withhold such relief as we possess, even if, "in some way not understood, it only so modify the evil that it should not show eruption on the outside"? We are told because there is no such thing as "cure" in medicine, and therefore forsooth we are to withhold the admitted chance of preventing the outward sign of disease; in other words, because we cannot do everything we may not do anything.

Surely our civilisation is a failure, and the Caucasian is played out when we descend to cutting off other people's noses to spite our own feebleness; and the Caucasian had better give place to the Mongolian if we must hesitate to relieve pain by opium because it dulls the senses to the fact of injury, which is often the very thing we ought to do—for example, in severe burns.

The Caucasian is learning now, and the Mongolian in Japan is helping him, that disease, when prevention has failed, is to be attacked not directly, but indirectly; and that, as is shown by the ideas of antitoxin and defensive proteid treatments, our remedies do good only in so far as they enable the tissues to resist morbid processes. Still, if on this account there are, strictly speaking, no such things as specifics, we should not refuse to administer remedies which are of some service. To quarrel with mercury because its administration is not always followed by the desired success, or, what is more likely, because, although it is a constant, the individual to whom it is given is a variable, quantity, savours not of wisdom, but of "visions about."—I am, etc.,

September 16th. J. N. C.

Sir,—The writer of the letter in the British Medical Journal for September 14th, entitled "A Question of Conscience" opens up the very important question as to how far any individual has the right to make himself the judge of whether or not another human being is fit to live, and to withhold from him his chance of living. To do so is to accept a responsibility which to my mind is far beyond that which any man or woman individually should assume.

The mother of the fœtus in question trusts to the honour of her medical attendant to give both her and her child the best chances of life and health available; and whatever may be the opinion of Miss Kenealy of the exact degree of value of mercury as a "cure" for the disease, being convinced, as she seems to be, that it is the one drug offering any chance

of improvement, however little, she will in my opinion be neglecting an obvious duty both to her patient and to society if she fails to make use of it.

General experience shows that a syphilitic mother often gives birth to a child who afterwards becomes a useful member of society; that the syphilitic virus becomes attenuated so that the children of successive pregnancies are less and less affected, and that a practically healthy child may be born where mercury has been given during pregnancy, while in the next pregnancy abortion may occur, or a child with marked syphilitic lesions be born, if no treatment is adopted.

Miss Kenealy says that no such phenomenon as a cure is known in the whole range of medicine. But if the above be true—and I think it represents the experience of most—may we not say that, for practical purposes, a cure has been worked, and that the growing tissues have been so influenced as to lead to the production of an organism too good to be thrown away? At all events, no person to whose honour a patient entrusts her life and that of her child ought to answer that question in the negative.

The writer, in a pessimistic mood, calls in other drugs as parallel instances to support her views. I venture to think, however, that, if space permitted, arguments might be adduced to prove that, at all events in the cases of salicylic acid and quinine these statements are incorrect.

In conclusion, I ask her to again reconsider the question before taking a course of which the general body of practitioners cannot but disapprove, and which, if generally adopted, would justly shatter the confidence of society in our profession.—I am, etc.,

September 17th. R. E.

THE EDUCATION OF THE STUDENT IN PRACTICAL MIDWIFERY.

Sir,—In the British Medical Journal of August 17th and 24th Drs. Divine and Don object to my remarks and to those of Mr. Wheelhouse relating to the dangerously inefficient training of students in the above subject. The present requirements are disgraceful and disease producing.

The present Recommendation of the General Medical Council is: "No. 18. Every student should be required to attend for three months the indoor practice of a lying-in hospital, or to have been present at not less than twelve labours, at least three of which he should have conducted personally under the direct supervision of a registered practitioner." This infamous recommendation means that a student, before coming up for his final examination, has to show he has "personally conducted" only three labours. This death-dealing recommendation of the thirty practitioners who form the General Medical Council has been sent to many members of the Commons by those in favour of the so-called registration of midwives, and has reflected grave discredit upon us.

In November, 1890, at the session of the General Medical Council it was moved:

> That it is urgently necessary for the examining bodies to require of candidates for their diploma additional guarantees of practical education in obstetrics, and that candidates at the Final Examination be required to produce proof that they have personally attended at least thirty cases of midwifery and been attached as pupils for three months to a lying-in hospital, or attendance on the lying-in department of a general hospital or a maternity institution with arrangements for clinical teaching approved by the examining body granting the diploma.

This motion was defeated by 12 to 10 votes. It is disgraceful further to note that it was defeated by the Scottish vote, as Dr. Struthers (Aberdeen University), Sir W. Turner (Edinburgh University), Dr. Leishman (Glasgow University), Dr. H. Watson (Royal College of Surgeons, Edinburgh), Dr. Tuke (Royal College of Physicians, Edinburgh), Dr. Pettigrew (St. Andrews University), Dr. Cameron (Faculty of Physicians and Surgeons, Glasgow), Sir G. H. B. Macleod (Crown nominee for Scotland) voted dead against it. Even Dr. Bruce, the Scottish direct representative, refused to vote, although present.[1]

Perhaps Drs. Divine and Don will explain this solid Scottish vote. My advice would be, not to excuse their Scottish representatives, but to urge them to vote differently. They take objection to our criticism of the obstructive tactics of the late Dr. Leishman. When we consider Dr. Leishman's then position, and the advice he gave the members of the General Medical Council, we can readily see why Mr. Wheelhouse considers it so absolutely misleading. Dr. Leishman's words were: "I could communicate more sound instruction in practical details at the bedside in one case of labour than the student would pick up haphazard in the course of a casual attendance on twenty."[2] If his statement was not directly antagonistic to the proposed improvement, then I do not know what words mean.

Let us hope the General Medical Council at its next session will take the subject up in a statesmanlike, and not in a pettifogging, narrow, medical school manner. If there be not a sufficient number of lying-in cases in Scotland for students, then let the hospital staffs cease training pupil midwives. Or does it pay better to train pupil midwives? Also, their Poor Law infirmaries should be utilised, while practitioners should take senior students as pupils. Or do the staffs of hospitals fear that the fees of students may pass to other practitioners?

I have looked carefully into this question before I petitioned the General Medical Council to recognise that it has a national duty to perform, besides seeing that the fees of students should not be deflected to other sources. I found that the following table showed the actual requirements of the various (and too numerous) medical examining bodies:

Examining Body.	Lectures in Midwifery.	Clinical Instruction.	Number of Labours to be Attended.
R.C.P. and R.C.S. Eng.	3 months	and 3 months	and 20
Soc. of Apoths., Lon.	3 ,,	,, 3 ,,	,, 20
Univ. of London ...	1 course	,, 0 ,,	,, 20
,, Oxford ...	0 ,,	,, 0 ,,	,, 0
,, Cambridge ...	1 ,,	,, 0 ,,	,, 20
,, Durham ...	6 months	,, 3 ,,	,, 20
,, Victoria ...	6 ,,	,, 3 ,,	,, 20
R.C.P.E., R.C.S.E., and F.P. and S.G. ...	3 ,,	and 3 months with 6 labours	or 12
Univ. of Edinburgh ...	6 ,,	,, ,, ,,	,, 12
,, Glasgow ...	6 ,,	,, ,, ,,	,, 12
,, Aberdeen ...	6 ,,	and 3 months	,, 6
,, St. Andrews ...	6 ,,	,, 3 ,,	,, 6
R.C.P.I. and R.C.S.I.	6 ,,	,, 6 ,,	,, 20
R.C.S.I. and Apoth. H.	6 ,,	,, 6 ,,	,, 30
Univ. of Dublin ...	6 ,,	,, 0 ,,	,, 0
Royal Univ.	6 ,,	,, 6 ,,	and 20

The course of lectures for the London University is optional; while the University of Oxford, since June, 1895, requires attendance upon 20 labours.

At the last annual meeting of our Association, a resolution was unanimously adopted calling upon the Council of our Association to (*a*) petition the General Medical Council to increase the number of lying-in cases required from 3 to 30; (*b*) to take steps to having the law altered so that the Poor-law infirmaries may be opened for the clinical instruction of medical students in practical midwifery; and (*c*) to petition the committees of the three lying-in hospitals in London to cease excluding male medical students from clinical instruction in midwifery.

If the General Medical Council and the Council of our Association do their duty, then this present disgrace will soon be wiped out.

Liverpool, Sept. 13th. Robert R. Rentoul.

THE UNIVERSITY GRIEVANCE IN LONDON.

Sir,—I am an unfortunate London diplomate with six years' experience in public health work, but my application for the post of medical officer of health to the West Kent Combined District is declined by return of post. The advertisement states that a preference will be given to graduates of London, Oxford, Cambridge, Edinburgh, and Dublin, and this apparently means that all candidates not possessing a degree from one of these Universities are struck out at the first selection.

[1] See Minutes, General Medical Council, November, 1890, p. 38.

[2] British Medical Journal, December 6th, 1890, p. 1306.

That an English authority in the neighbourhood of London should prefer a Scotch or Irish graduate to a London diplomate is only another sign of the usual lay ignorance on medical matters, but why graduates of other English Universities should be ruled out I do not know.

May I venture to suggest that every London diplomate having qualified as M.R.C.S., L.R.C.P., L.S.A., and D.P.H. should be allowed to apply for the Lambeth degree of M.D.? This degree would not interfere with the vested interests of any university. The fees would be very acceptable to the Church, and the degree would give London men that title of doctor, the want of which tells against them so strongly in their struggle against the, to say the least of it, no better informed graduates of all the other universities, that of London excepted.—I am, etc.,

Sept. 17th. MEDICAL OFFICER OF HEALTH.

THE QUALIFICATION OF FEMALE PRACTITIONERS.

SIR,—I read with great interest the admirable article in your Educational Number, by Dr. Elizabeth Garrett Anderson, on the Qualification of Female Practitioners. It is full of valuable information to girls who contemplate entering on a medical career, and points out the various schools of medicine where they may attend the necessary classes in England, Scotland, and Ireland. But she unfortunately omits any mention of the Faculty of Medicine organised in connection with University College, Cardiff. The Cardiff Medical School has only existed for two winter sessions, and at present only provides for the first three of the five years of the medical course, that is, until the student has passed his Intermediate M.B. Examination of the London University, or its equivalent in the other British universities, or the Second Examination of the Conjoint Board. But up to this point all the arrangements are excellent, and the staff of professors leaves nothing to be desired. I believe no student who wishes to be prepared for the Preliminary Scientific Examination of the University of London could choose a better school than one of the three Welsh Colleges. Each has a very highly qualified staff of professors, whose main business is to prepare students for this examination, and admirable laboratories fitted up with all necessary appliances. Youths of 17 or 18 are far more likely to get a good start in their student career by being sent to such places as Aberystwyth, Bangor, or even Cardiff, than by being sent into the huge metropolis, with its manifold snares and distractions. But Cardiff carries its students on to the stage of passing the intermediate M.B.Lond. Lectures are given in anatomy by Professor Alfred Hughes, F.R.C.S.Eng.; and in Physiology by Professor Haycraft, M.D., D.Sc.; and in materia medica by Dr. Paterson; whilst in the dissecting rooms and laboratories, fitted with all the most recent appliances, every opportunity and encouragement are given the student to help him in his studies. I have recently returned from an inspection of the medical school, and have been delighted with the completeness of the arrangements, and the facilities offered the students. Clinical experience, clerkships and dresserships, etc., can be obtained at the Cardiff Infirmary. There are about thirty students at present in the medical faculty, and the fees are very moderate, whilst lodging and living are much cheaper than in London. And the success of the students of these Welsh colleges at the London University is very marked. At the last Intermediate Arts Examination Aberystwyth passed 27, and Cardiff was fourth in the list, passing 6; whilst Bedford College passed 5, and University College, London, 4. In the Preliminary Science list of thirty-three hospitals and colleges Cardiff has the eighth place; whilst three of its students passed also the Intermediate Science Examination, which includes all the Preliminary Science subjects *plus* mathematics.

And one special feature of the Welsh Colleges has been the mingling of the sexes in education. In the University of Wales every post is expressly open to women—even to that of the Chancellor. Sex is no bar to any professorship, or examinership, or office of any kind. And the Cardiff Medical School throws open all its classes, and offers all its advantages, to men and women on equal terms. Both Professor Hughes and Dr. Haycraft will heartily welcome women medicals, and having determined to send my own daughter to be under their able teaching, I thought other fathers might like to know that such a medical school exists for their girls, and so make further and fuller inquiries for themselves.—I am, etc.,

September 17th. T. J.

HOSPITAL ISOLATION AND THE DISINFECTION OF PATIENTS.

SIR,—In Dr. Boobbyer's address at the last meeting of the British Medical Association Public Health Section he says: "The same sort of thing is now occurring in another suburb of Nottingham. The presence of an epidemic of scarlet fever is practically ignored by the sanitary authority having supervision of the district, and we on our side are left the unprofitable task of baling a sieve. There are more than sixty cases of scarlet fever in one short street of this suburb, which closely approaches our boundary."

Now, from correspondence which has subsequently taken place between the Town Clerk of Nottingham and the Carlton District Council, I have no doubt that Dr. Boobbyer referred to this district for which I am medical officer of health. In the first place, my means of information enable me to assert that, scattered over the whole district with a population of about 7,000, there were not more than sixty cases of scarlet fever, with no especial concentration in any one street—his statement that there were sixty cases in one street having been absurdly inaccurate. Secondly, directions for isolation at home and disinfection were given in all known cases, and the houses were fumigated after recovery, either privately or gratis by an experienced servant of the Council. The schools were also closed for about six weeks, and the epidemic rapidly abated.

But I quite agree with Dr. Boobbyer that adequate means have not been taken for most effectually coping with infectious outbreaks, inasmuch as there is no infectious hospital and no compulsory notification in force. In my humble opinion, a good central permanent infectious hospital for two or more districts would be more satisfactory than a small one for each district, and that the County Council might undertake the task and, if necessary, call upon each district to contribute proportionately towards its maintenance; or a town like Nottingham might do something in the same direction as a protection against the dangerous epidemics of its suburbs.

I should not have troubled you, Sir, respecting this matter but that Dr. Boobbyer appears to have ignored the Carlton District Council and its officers in procuring information respecting the outbreak previous to giving his address. Whether he thought that information procurable from this source would be biassed and less reliable than that which he gleaned elsewhere I cannot say, but I do think such an omission in the first instance in case of an outbreak in a suburb contiguous to his district is not most conducive to effectually battling with it, as any communication or advice from so excellent a source would always, I am sure, be appreciated and respected by those with whom I work and by myself.—I am, etc.,

J. T. KNIGHT,

Nottingham, Sept. 9th. Medical Officer of Health, Carlton.

PLAGUE HONOURS.

SIR,—I observe in the BRITISH MEDICAL JOURNAL of July 20th, 1895, that reference is made to the two men who stand out pre-eminently before the community of Hong Kong as having devoted themselves to battling with the epidemic of plague in 1894. One, the chairman of the permanent committee, Mr. Francis, Q.C., directed the whole of the work and was elected to the post as the foremost citizen, and the most capable man we had for the work in hand. Yet Mr. Francis is asked to be satisfied with a school-boy reward of "a handsome inkstand." The residents in Hong Kong felt the insult keenly and hope that the Government will yet redeem their position and in justice and common fairness request a more fitting reward.

The other worker who has been neglected in the list of awards has been Dr. J. A. Lowson. Dr. Lowson was in medical charge of the hospital during the entire period of the epidemic. He was indefatigable in his work, and for three long months was on duty night and day.

In the BRITISH MEDICAL JOURNAL of Sept. 8th, 1894, your correspondent wrote: "Dr. J. A. Lowson has earned a lasting name for his fearless devotion and untiring exertions during the whole period of the epidemic. Upon him fell the work of organising and maintaining the sanitation of the hospitals, and very earnest and well were his duties performed." Then follows a request that the work of Surgeon Penny, R.N., and Surgeon-Major James, M.S., be recognised. "The latter officer, Surgeon-Major James, has performed most laborious sanitary duties. He was elected a member of the sanitary board, a member of the permanent committee, and inspecting medical officer for the board during the long trying period whilst the epidemic held the city in its clutches. A colony of limited means with its exchequer bled to the last dollar to cope with the enormous losses incurred by the plague epidemic cannot award nor even pay their officers anything extra for their unsavoury work. It is hard to stand by and see unrequited labour of the high character these medical men have performed without being able to move a finger whereby to obtain some recognition of their services. Surely some channel will be opened whereby true merit and devotion to work in this most trying time may be acknowledged and stamped with a people's approval." I would repeat these statements, and again repeat, can we not get some recognition? The medical men of the Colony, naval, military, and civil, subscribed their names to a petition that the Albert Medal should be bestowed on these three men, but it fell into the wrong channel. May I ask the editor of the BRITISH MEDICAL JOURNAL to take this matter in hand and endeavour to obtain the Albert Medal for our medical fellows?—I am, etc.,

Hong Kong, Aug. 21st. JAMES CANTLIE.

CLUBS, CHEAP PRACTICE, AND UNDERSELLING.

SIR,—There has been a good deal written in the BRITISH MEDICAL JOURNAL lately on the subject of medical clubs, aid societies, etc. The question opens up a very wide field for reform, and not before it is sadly needed; but as long as the medical profession is so disunited and ready to "cut each other's throats," so long shall we have to work at the present low rate of remuneration. The remedy is in our own hands.

I do not know what the experience of other members may be, but mine is such as to cause me each day to feel more and more disgusted with a body of men who, though belonging to a noble profession, are by their conduct fast making it most ignoble.

Some little time ago a graduate of a northern university purchased a practice in a neighbouring village. He called on me, and afterwards dined at my house. Over our post-prandial pipe I innocently told him the fees I was in the habit of charging. The next thing I heard of this member of our honourable profession was that he had been going round to my clubs offering to take them for fourpence a head less. He is also in the habit of going—accidentally of course—into my patients' cottages and telling them that if he were treating the case he could bring about a speedy cure.

Is there nothing that can be done to check this sort of thing? Cannot our great Association bring forward some scheme to stop it, and thus make themselves of some real service to the general practitioner? Other professions have their remedy for such base conduct, and why cannot we? The regular quack will do us but little harm—it is within our own ranks that the purging is required, and then when we are clean the rest will easily follow.—I am, etc.,

Wyke, Bath, Sept. 18th. C. PENRUDDOCKE, M.R.C.S.

"THEY KNOW NOT THE MANNER OF THE GOD OF THE LAND."

SIR,—In recent issues of the BRITISH MEDICAL JOURNAL, August 24th, page 502, and August 31st, page 529, two letters have appeared under the above heading, to which I trust you will permit me to reply.

In the first letter Staff-Surgeon Kirker attributes the prevalence of enteric fever among British soldiers and sailors abroad to their want of knowledge of the manner of living as compared with that of the natives. I think that anyone who knows the manner of living of native will agree that their mode of life, from a sanitary point of view, is in no way superior to the Englishman's, except as regards dietetics, and those are, first alcoholic drinks, and, secondly, a larger meat diet.

With regard to the first, it is notorious that total abstainers suffer at least equally with non-abstainers, and with regard to the second it cannot be contended that the Englishman of the present day abroad is a larger meat eater than he of two or three decades ago, yet at that time enteric fever was practically unknown.

In the second letter Surgeon-Colonel Davy apparently attributes this disease to "defective personal hygiene," that is, to want of personal cleanliness. I think all will agree that there is no more cleanly person in existence than the British officer, yet he suffers from enteric fever equally with his comrades in the lower ranks, and I presume no one would advance the idea that the soldier of to-day is less cleanly than he of thirty years ago.

The cause, I consider, must obviously be sought elsewhere, and the factors something that was non-existent twenty or thirty years ago.—I am, etc.,

W. L. CHESTER, M.B.,
Surgeon-Lieutenant-Colonel, A.M.S.

Cairo, Sept. 14th.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A MEDICAL OFFICER of field rank, who expects to go to India this trooping season, desires an exchange with an officer under orders for a colony. Apply, A., Phayre, General Post Office, Dublin.

A SURGEON-MAJOR serving in Bengal wishes for an exchange which would give him about three years at home. Address, stating terms, to S. L. H., care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

SURGEON MICHAEL O'BRIEN, M.D., has been placed on the retired list of his rank, with a gratuity, September 17th. His commission was dated August 17th, 1887.

The following appointments have been made at the Admiralty: EDMUND CORCORAN, to the *Comus*, October 1st; HILARY C. ARATHOON, Surgeon, to the *Royal Arthur*, September 24th; GERALD T. S. SICHEL, Surgeon, to the *Research*, September 24th.

THE ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL JAMES MCGANN retires on retired pay, September 25th. He was appointed Surgeon, September 30th, 1871; Surgeon-Major, September 30th, 1886; and Surgeon-Lieutenant-Colonel, September 30th, 1894. He was in the Boer war of 1881, and was present in the engagements at Lang's Nek and the Ingogo River, for both of which he was mentioned in despatches.

Under instructions from the Horse Guards, the under-mentioned officers of the Army Medical Staff, whose tour of foreign service will expire during the trooping season of 1895-96, will proceed to England and will be detailed by the principal medical officer, Her Majesty's forces in India, for duty with troops on the homeward voyages. Medical officers requiring passage for their families should apply to the general officer commanding the district in which they are serving, who will arrange with the officer commanding at the port of embarkation for allotment of the authorised accommodation in the troopship to which they will be detailed:—

Punjab Command.—Brigade-Surgeon-Lieutenant-Colonel H. T. Brown, M.D.; Surgeon-Lieutenant-Colonels G. Corry (on exchange with Surgeon-Lieutenant-Colonel J. McNamara), W. Donovan and G. T. Laugridge; Surgeon-Majors N. Leader, H. L. W. Barrington, T. B. Moffat, G. F. A. Smythe (in exchange with Surgeon-Major J. F. Williamson), and J. Harran, W. Dugdale (in exchange with Surgeon-Major R. E. R. Morse, who exchanged with Surgeon-Major J. G. MacNeece), L. W. Swabey, and T. E. Noding (in exchange with Surgeon-Major C. A. Webb).

Bengal Command.—Brigade-Surgeon-Lieutenant-Colonels M. Knox and A. A. Macrobin, M.B.; Surgeon-Lieutenant-Colonel B. M. Blennerhassett; Surgeon-Majors W. Keays, H. A. H. Charlton, J. Wilson, M.D., A. O. Cockburn, M.D., A. P. Hart, M.B. (in exchange with Surgeon-Major J. L. Peyton, who exchanged with Surgeon Lieutenant-Colonel H. Stannard) and E. Butt; Surgeon-Captains E. G. Browne and J. W. Bullen, M.D.

Madras Command.—Surgeon-Lieutenant-Colonel J. Martin (in exchange with Surgeon-Major W. P. Feltham); Surgeon-Majors L. B. Emerson, A. W. Carleton, M.B. (in exchange with Surgeon-Major J. E. Dodds), W. T. Johnston, M.D., R. O. Cusack, W. D. A. Cowen, G. W. Robinson, G. F. Poynder, and C. R. Woods, M.D.; Surgeon-Captains M. Kelly, M.D., R. J. D. Hall (in exchange with Surgeon-Captain E. O. Wight), J. W. Cockerell, and W. L. Gray, M.B.

Bombay Command.—Surgeon-Lieutenant-Colonel R. H. Quill, M.B.; Surgeon-Majors E. H. Myles, M.B. (in exchange with Surgeon-Major J. C. Culling), A. E. J. Croly, E. L. Maunsell, R. F. Adams, M.B., C. G. D. Mosse, J. Macnaughie, and T. A. Dixon.

ARMY MEDICAL RESERVE.

THE promotion to the rank of Surgeon-Major of Surgeon-Captain G. MIDDLEMISS, M.D., is antedated to October 20th, 1894.

The following Surgeon-Captains, 1st Banff Volunteer Artillery (Southern Division, Royal Artillery), to be Surgeon-Majors, September 25th:—W. [illegible], M.D., and W. L. [illegible], M.D.

The following officers to be Surgeon-Captains, September 25th:—Surgeon-[illegible] F. W. GRANT, M.D., and Surgeon-Lieutenant W. BEDDIE, M.B., 1st Banff Volunteer Artillery (Southern Division, Royal Artillery); Surgeon-Captain J. ADAMS, M.B., 1st Volunteer Battalion the Prince of Wales's Volunteers (South Lancashire Regiment).

Surgeon-Lieutenant A. B. L[illegible], M.B., 1st Banff Volunteer Artillery (Southern Division, Royal Artillery), to be Surgeon-Lieutenant.

INDIAN MEDICAL SERVICE.

DEPUTY INSPECTOR-GENERAL GEORGE BAILLIE, M.D., late Madras Establishment, died at Gloucester Walk, Campden Hill, Kensington, on September 14th, aged [illegible] years.

THE VOLUNTEERS.

THE Volunteer Officer's Decoration has been conferred upon Surgeon-Lieutenant-Colonel ISAAC MOSSOP, 2nd West Riding of Yorkshire Artillery (Western Division Royal Artillery); Surgeon-Lieutenant-Colonel THOMAS M. DOLAN, 1st Volunteer Battalion the Duke of Wellington's West Riding Regiment; Surgeon-Lieutenant THOMAS JOHNSTON, retired, 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment); and Surgeon-Lieutenant-Colonel PHILIP E. HILL, 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers.

Surgeon-Lieutenant R. L. JONES, 1st Cheshire and Carnarvonshire Artillery, is promoted to be Surgeon-Captain, September 25th.

Honorary Assistant-Surgeon R. T. VIVIAN, 1st Cornwall (Duke of Cornwall's) Artillery (Western Division Royal Artillery), has resigned his commission, retaining his rank and uniform, September 25th.

Surgeon-Lieutenant F. W. SINCLAIR, M.B., 3rd Durham Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Captain, September 25th.

Surgeon-Lieutenant W. J. M. BARRY, 3rd Volunteer Battalion the King's Liverpool Regiment, has resigned his commission, September 25th.

Honorary Assistant-Surgeons J. MACKENZIE and J. MACGOWN, M.D., 1st Argyll and Bute Artillery, have retired, September 25th.

Surgeon-Major R. MUNRO, M.D., 1st Volunteer Battalion the Royal Scots Fusiliers, retires, September 25th; he is permitted to retain his rank and uniform.

THE CONTAGIOUS DISEASES ACT AND THE INVALIDING IN THE INDIAN ARMY.

LORD MALMESBURY, Lieutenant-Colonel late 2nd Battalion, Royal Irish Rifles, writing to the *Times*, states that the papers are full of letters giving different reasons why Tommy Atkins cannot march. Some blame the boots, some blame the equipment, some blame the weather, and others the training, and a court of inquiry has been formed to inquire into the matter; but, with every respect for said court of inquiry, "now, I believe, sitting," have or will the British public ever realise the real cause of the demoralisation of our boy-soldiers? I have no hesitation in saying that we have only to thank the absurd prudery and noisy shouting of a body of narrow-minded fanatics for the real cause by which not only our young soldiers, but young England, is being demoralised, namely, the repeal of the Contagious Diseases Act; and a letter from a soldier friend now in India tells me of the awful ravages caused by said repeal in our army, and of the numbers of bright, smart young soldiers who are annually invalided from India, and whose life is made a burden to them from the same cause. Let us look the matter in the face. Bring in again the Contagious Diseases Act and help the struggling humanity of the rising generation to be able to defend our shores and keep Englishmen as they were in olden days. It is sometimes well to acknowledge facts and take the necessary steps, however nasty it may appear to be.

With reference to the amount of invaliding in the European army of India and to the losses from venereal disease since the abolition of the Contagious Diseases Act, the official report of the Sanitary Measures in India for 1893-94 states that:

Venereal diseases came first in the list of causes of admission to hospital, and also in the causes of invaliding. They were the cause of 33 per cent. of the total admissions during 1893, and 15 per cent. of the invaliding of the European army of India. The ratio of admissions from venereal diseases per 1,000 of strength was 466, or 56 above that of 1892. In Bengal the admission rate rose from 413 to 462 per 1,000, in Madras from 415 to [illegible], and in Bombay from [illegible] to [illegible]. As regards the amount of non-efficiency due to venereal diseases, Dr. [illegible], the sanitary commissioner with the Government of India, says: "Again and again medical officers insist upon the after-effects of venereal disease subsequent to the men's discharge from hospital. They speak of permanently impaired health, and remark very [illegible] that a large number of these men, although able after a [illegible] to get through their garrison duties, would inevitably break down under the conditions of active service and become an encumbrance to the force. A man who has had constitutional syphilis feels the effects of it for years, indeed, some authorities on this subject go so far as to state that syphilis is never eradicated from the system. However this may be, in the case of our short service army one may reasonably expect that a man who has once contracted constitutional syphilis is not likely to be equal to the rigours of a prolonged campaign [illegible] service. Some idea can be formed of the amount of inefficiency due to this cause when it is considered that throughout the European army in India during 1893 there were, excluding the [illegible] cases of 'other' venereal diseases and the 15 cases of venereal disease amongst troops of [illegible] service (because in neither of these can the average duration be stated), 32,0[illegible] cases of venereal disease, each of which remained in the hospital for an average of [illegible] days, amounting to a total loss of service of [illegible] days. During 1893 there were 2,[illegible] men, or the strength of nearly three regiments, constantly in hospital for venereal diseases."

A RECORD MARCH.

A PARTY of the Argyll and Sutherland Highlanders, consisting of nine, including two officers, covered the distance between Aldershot and Hyde Park Corner, a total distance of 34 miles, in 9 hours, the halts 3 hours and 30 minutes, the rate of actual marching 15.88 per mile, including halts 21.76 per mile; the total time on the road 12 hours 30 minutes. It is stated that as a record for marching and physical endurance it has not been surpassed. The party left the North Camp at 4.30 A.M., and arrived at Hyde Park Corner at 5 P.M.

THE INFECTIOUS HOSPITAL, ALDERSHOT.

IT will be noticed that the Government are at last recognising the importance of an infectious hospital for Aldershot. Although they are not prepared to give the Council a site, they are willing to assist in its selection—and that, save the [illegible], is something. At the meeting of the Aldershot District Council on September [illegible] it was ultimately arranged to select three sites and submit them to the Government as being suitable for the purpose, one being that opposite the Lock Hospital, the second at Hale, and the third at New Town. Colonel Waller, on the part of the Government, pointed out that his instructions were to consult the Council as to eligible sites both on and off Government land.

THE RECONSTRUCTION OF THE INDIAN MEDICAL SERVICE.

THE *United Service Gazette*, September 21st, 1895, has the following: Mr. Ernest Hart's address at the British Medical Association meeting has, so far as it dealt with the need of reform and reconstruction of the Indian Medical Service, raised quite a tempest in India among the officers of that Service, who have resorted to much acrimonious correspondence in the Press. However, Mr. Ernest Hart has no need to be disheartened, as his views receive strong support from those who have experience and are in a position to judge of the necessity of doing away with present anomalies. We have given this subject attention in the past, both in a leading article, so far back as February 2nd, and in comments since that time. The appointment of *de facto* civilians to military administrative billets is wrong in principle and practice, and so also is the utilisation of the officers of a purely military medical service for civil work. The Secretary of State for India is bound to take the matter in hand, and that without further delay. Mr. Ernest Hart is to be congratulated on plain speaking. The surgeon to the Indian Viceroy is appointed to officiate as Inspector-General of Civil Hospitals in the Punjab in addition to his own duties. It may be assumed from this that the duties of the surgeon to the Viceroy are so much of a sinecure as to permit of his undertaking other and much more responsible work. How can it be possible to perform these dual duties efficiently? it may well be asked.

MEDICAL ARRANGEMENTS AT THE MANŒUVRES.

THE *Broad Arrow* of September 14th has the following comment, on which no doubt the medical department will have something to say:

"The medical arrangements were not equally satisfactory, and should be improved. Young non-commissioned officers, who had little or no control over the men, were sent into Ringwood with ambulances and 'details' for Aldershot. The natural consequences followed—the men were seen straying into public-houses. This sort of thing should not be permitted to go unchecked. In time of war such *laches* would be serious indeed, and the sooner the Medical Department realises this fact, the better it will be for its own reputation and that of the army generally. It would be a grave misfortune if in emergency the medical arrangements were found to be out of gear."

RECASTING THE ARMY.

UT PROSIM.—We are not prepared to endorse all our correspondent's views, but fully concur with him that the interests and efficiency of the army medical service must be pressed on the Council of Defence. In the proposed reorganisation of our War Office we have never so much as seen the medical service named. It seems nobody's child and outside the pale. We trust the direct responsibility placed upon the new Commander-in-Chief will induce him to forget his past and do something to rehabilitate the army medical service.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL WITNESSES AND INQUESTS.

INQUIRER asks: Is a coroner legally justified in ignoring a medical man who has been called in to see a person who on his arrival is found to be dead, and summoning to give evidence at the inquest and make *post-mortem* examination another practitioner who has no knowledge of the deceased?

⁂ It is the usual practice for the coroner to summon the practitioner who last attended the deceased during life or saw the body first after death, but he is legally justified in summoning at the first inquiry such medical man as he may select. The Act says: "If it appears to the coroner that the deceased was not attended at his death or during his last illness by any legally-qualified medical practitioner, the coroner may summon any legally-qualified medical practitioner who is at the time in actual practice in or near the place where the death happened."

H. R.—In matters connected with inquests our correspondent should write to the Lord Chancellor, House of Lords.

CHEAP MEDICAL ATTENDANCE.

MR. BARCLAY W[illegible].—It is lamentable to think that any member of the profession can be found to contract to attend a man and his family up to 16 years at 7s. 6d. per annum. This is such a wretched pittance that

it is really to be hoped our correspondent is mistaken, as it could scarcely pay any practitioner to give his services at this rate. In cases of this kind it is usually found that it is "the poverty and not the will" of the practitioner that consents to such miserable payment, so it is difficult to conceive that anything of the kind could be done by a respectable practitioner in easy circumstances.

B.—Our correspondent, having omitted to communicate his name, we are constrained to defer a reply until he has conformed to our essential and invariable rule.

PROFESSIONAL ADVERTISING.

DR. RICHARD P. LONG (99, Queen's Crescent, Haverstock Hill, N.W.) writes: As I am neither directly, nor indirectly, responsible for the paragraph in the *St. Pancras Gazette* (see BRITISH MEDICAL JOURNAL, September 21st, p. 760), I hasten to inform you of the fact. People who know me are well aware that I am in no need of advertisement, and that to do so would be both reprehensible and superfluous. In conclusion, I may add, that as a member of the St. Pancras Vestry, and consequently a public man, I am as powerless to restrain the local press from recording my movements as I am to prevent them from criticising my votes.

TOUTING SOCIETIES AND PERSONAL ADVERTISEMENT.

JUAN DE F.—The London and Manchester Assurance Society does, we believe, carry on a system of "touting," so that we cannot recommend our correspondent to accept office in it; he may be quite sure his brother practitioners in his neighbourhood will look askance at him, if agents of a society of which he is one of the medical officers, endeavour to entice away their patients for his benefit.

With regard to the label forms enclosed, they are discreditable to the persons whose names they bear, and afford a striking proof of how medical men of this kind are made use of for purposes of advertising. We print one of these as an example of what a medical man ought not to do:—

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF DURHAM.

SECOND EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the examiners:

Anatomy, Physiology, Materia Medica.—First Class Honours: G. G. Turner, College of Medicine, Newcastle-upon-Tyne; E. G. E. Arnold, M.R.C.S., L.R.C.P., St. Thomas's Hospital. Second Class Honours: V. Burrow, St. Mary's Hospital; R. F. Moorshead, Bristol Medical School; T. Streatfield, M.R.C.S., L.R.C.P., University College Hospital, London; H. C. Coxon, College of Medicine, Newcastle-upon-Tyne. Pass List: J. E. Baker, College of Medicine, Newcastle-upon-Tyne; F. A. Cooke, College of Medicine, Newcastle-upon-Tyne; W. W. Deans, Yorkshire College, Leeds; C. E. Fern, King's College; J. M. Gover, College of Medicine, Newcastle-upon-Tyne; C. Johnson, College of Medicine, Newcastle-upon-Tyne; R. A. R. Lankester, University College Hospital, London; W. H. Lister, College of Medicine, Newcastle-upon-Tyne; W. B. Milbanke, College of Medicine, Newcastle-upon-Tyne; G. W. Middlemiss, College of Medicine, Newcastle-upon-Tyne; F. Pope, Mason College, Birmingham; H. C. Reguart, Guy's Hospital; H. C. Stevens, St. Thomas's Hospital.

OBITUARY.

PROFESSOR FRIEDRICH MIESCHER.

DR. MIESCHER, the Professor of Physiology in Bale, died at Davos on August 26th. To Davos he went in the hope of recovering from a severe pulmonary affection, which was, however, tuberculous in its origin and proved fatal. Miescher was born in Bale on August 13th, 1844, so that he was only 51 at his death. He studied at Bale, and in 1867 became Doctor of Medicine. His bias, however, was towards natural science—a bias strengthened by the example of his father and by his uncle and teacher Professor His.

From an early period he devoted himself to the study of physiology, and as his father had been a pupil of Johannes Müller, so Miescher early learned to regard the great master as his ideal, and it was ever his wish and endeavour to follow in his footsteps. About this time the Leipzig School of Physiology under C. Ludwig was the great centre of physiological investigation, and thither Miescher went.

Under the inspiration of Ludwig, Meischer studied the course of sensory impulses in the spinal cord, and in Ludwig's *Arbeiten* (V, 1870) has published "Zur Frage d. sensiblen Leitung im Rückenmark." But Miescher's bias lay rather in the investigation of chemical problems, so that he perfected his chemical knowledge under Hoppe-Seyler, who was then in Tübingen; and he also spent some time in Strecker's laboratory. As the result of his work in Tübingen he published the discovery of a new phosphorus-containing body—nuclein, which forms the chief part of the cell nuclei. In 1871 Miescher began as *Privat-docent* of Physiology in Bale. When Professor His in 1872 was called to Leipzig to the Chair of Anatomy there, Miescher became Professor of Physiology in Bale, a port which he held until his death. In the head of spermatozoon he discovered a new organic base—protamin. This research lead him to the study of the life-history of the Rhine salmon. The salmon pass from the sea to the fresh water of the Rhine, where they remain several months, but during all the time of their sojourn in fresh water Miescher found that they took no food. Nevertheless, during all this time, the reproductive organs developed enormously, increasing in weight over 100 times. Miescher succeeded in explaining how, in spite of the absence of food, the development of the reproductive organs took place at the expense of other organs, especially the muscles. In later years he studied the relations of the respiratory and circulatory systems. In 1893 he sought to explain the *rationale* of the restorative effects of a sojourn at high altitudes. Miescher was much beloved by his pupils, and to all of them he was the type of a noble, true, and unselfish friend. He is succeeded in the Chair of Physiology by his friend and pupil R. Retzner, who lectured for him during the last year of his professorship, when he was too weak to continue to fulfil the duties of the office.

PROFESSOR BARDELEBEN.

A REUTER telegram from Berlin announces that Professor Bardeleben, the eminent surgeon, died there on September 24th, at the age of 76. Professor Bardeleben was born at Frankfurt-on-the-Oder in 1819. He received his medical education in Berlin, Heidelberg, and Paris, and after some years spent as assistant and professor at Giessen and Griefswald was, on the outbreak of war in 1866, appointed Surgeon-General, acting as consulting surgeon to the field hospitals of the Gitschin district. In 1868 he became Professor of Surgery in Berlin University. When the Franco-Prussian war broke out Professor Bardeleben again took the field, being attached to the First Army Corps as consulting surgeon. For his services he was created Surgeon-General *à la suite*. His literary fame rests principally upon his *Lehrbuch der Chirurgie und Operationslehre*, which was at once accepted as a standard work both at home and abroad.

WE regret to have to record the death of Surgeon-General JOHN IRVINE, M.D., Honorary Physician to the Queen, who died in Kensington on September 21st. Dr. Irvine graduated M.D. of Aberdeen University in 1849, and in the same year obtained the qualification of L.R.C.S. Edinburgh. He entered the Army Medical Department as Assistant-Surgeon in 1850. He served throughout the operations with Havelock's column in 1857 in medical charge of the Royal Artillery (Maude's), and was present at a number of actions and at the relief of Lucknow, being mentioned in despatches. He was with Outram's force in the Alumbagh from November, 1857, to March, 1858, and at the siege and capture of Lucknow by Lord Clyde. He was awarded in this connection the medal with two clasps and a year's service. He also received a medal with clasp for service with the Burmah expedition in 1886. In 1869 he was promoted to be Surgeon-Major, and he became Deputy Surgeon-General in 1876, and Surgeon-General in 1883. He was appointed Honorary Physician to the Queen in 1885, and was placed on the retired list of the army in 1888.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,278 births and 4,028 deaths were registered during the week ending Saturday, September 21st. The annual rate of mortality in these towns, which had been 19.9 and 19.3 per 1,000 in the two preceding weeks, rose again to 19.8 last week. The rates in the several towns ranged from 9.1 in Croydon, 12.3 in Plymouth, and 14.8 in West Ham, to 30.5 in Salford, 31.8 in Hull, and 32.9 in Sunderland. In the thirty-two provincial towns the mean death-rate was 21.4 per 1,000, and exceeded by 6.6 the rate recorded in London, which was only 14.8 per 1,000. The zymotic death rate in the thirty-three towns averaged 4.8 per 1,000; in London the death-rate did not exceed 3.7 per 1,000, while it averaged 6.3 in the thirty two provincial towns, and was highest in Sunderland, Salford, Blackburn, and Burnley. Measles caused a death-rate of 2.2 in Oldham, and 2.0 in Blackburn; whooping cough of 1.9 in Sunderland, and 2.7 in Gateshead; "fever" of 1.2 in Blackburn, 2.1 in Derby, and 4.2 in Sunderland; and diarrhœa of 7.2 in Sunderland, 7.5 in Salford, 8.6 in Blackburn, 9.1 in Hull, and 9.4 in Burnley. The mortality from scarlet fever showed no marked excess in any of the large towns. The 65 deaths from diphtheria in the thirty-three towns included 37 in London, 4 in West Ham, and 4 in Burnley. Two fatal cases of small-pox were registered in London, and 1 in Oldham, but not one in any other of the thirty-three large towns. There were 271 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, September 21st, against 346, 324, and 327 at the end of the three preceding weeks; 23 new cases were admitted during the week, against 38, 25, and 42 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had increased from 2,507 to 2,674 in the four preceding weeks, had further risen to 2,732 on Saturday last, the 21st inst.; 341 new cases were admitted during the week, against 344, 398, and 345 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, September 21st, 881 births and 534 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.5 and 14.9 per 1,000 in the two preceding weeks, rose again to 18.5 last week, but was 1.3 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 10.3 in Perth to 23.5 in Greenock. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Greenock and Dundee. The 262 deaths registered in Glasgow included 10 from diarrhœa, 9 from "fever," 6 from whooping-cough, and 2 from diphtheria. Three deaths were referred to "fever" in Greenock.

THE EAST LONDON WATER INQUIRY.

It is to be hoped that in the inquiry which is about to be held in regard to the deficiencies of the East London water supply sight will not be lost of the great danger which accrues to the public from an intermittent supply when the pipes are leaky. It has been stated, as an excuse for cutting off the water for many hours a day, that there were 50,000 leaky pipes, and that many of these were underground. Now, as a matter of mere health, so far from this being an excuse for intermittency of supply, it is the very reason for keeping it constant. We know what the subsoil of London is, and how it is permeated in every direction by drains that are far from faultless; and it should never be forgotten that every pipe that leaks into the subsoil when the pipes are full sucks in the puddle so produced whenever the pipes are empty. The existence of a leak is a good reason for cutting off the supply entirely until it is made good, a stand-pipe being provided in the meantime, but it is no excuse for giving an intermittent supply by which at any moment typhoid poison may be sucked into the mains, and epidemics may be produced in East London as they have again and again been produced in other places from exactly the same cause.

THE NEGLECT OF VACCINATION IN LONDON.

We commented last week upon the finding of a "Public Health Critic," who could discover in the recently issued report of the Medical Officer of the Local Government Board nothing but "five hundred pages of microscopic portents." It is a welcome relief to turn from the asininities of this critic to an article which recently appeared in the *City Press*, in which attention is drawn to some very important statements made in the annual report in question. The writer of the article in the *City Press* refers to the growing neglect of vaccination in London, and quotes from the medical officer's report the statement that the percentage of infants finally unaccounted for in London has risen from 5.7 in 1881 to 14.4 in 1891; the corresponding figure in 1891 for the provinces being 12.9 per cent. The percentage in question in London is at its true far exceeded in the case of such towns as Leicester, Northampton, and Bedford. The importance of so considerable an extent of neglect among the huge aggregation of persons in the metropolis cannot, however, be over estimated, and our contemporary does valuable service in directing the attention of its readers to what we quite agree in regarding as "one of the most serious statements" in the annual report of the medical officer of the Local Government Board.

UNVACCINATED CHILDREN IN LONDON.

There is a passage in the Report of the Medical Officers of the Local Government Board which deserves particular attention, in view of the prevalence of small-pox in London in districts where vaccination is much neglected. It appears that nearly 17 per cent. of the children born in the metropolis are now unprotected by vaccination, a very large increase indeed. The law seems to have become pretty nearly a dead letter, and the reason assigned is instructive. It began to be generally set at naught in 1889, and that was the year when the Royal Commission on Vaccination was appointed. This has largely been interpreted as a practical admission that the value of vaccination is an open question, and has had the effect of making local authorities reluctant to enforce the law.

MEDICAL NEWS.

THE next meeting of the German Association of Naturalists and Physicians will be held at Frankfort.

PROFESSOR E. A. SCHÄFER, F.R.S., has been nominated as one of the General Secretaries of the British Association for the Advancement of Science.

THE Viennese Medical Council has adopted a resolution condemning strongly the resort to advertisement by medical men.

THE metric system will become the sole legal system of weights and measures in Mexico on and after September 16th, 1896.

THE prizes of St. Thomas's Hospital will be distributed in the Governors' Hall at the hospital by Sir Edwin Arnold, K.C.I.E., C.S.I., on October 2nd, at 3 P.M.

THE introductory lecture at the Royal Veterinary College will be delivered by Professor Penberthy, F.R.C.V.S., on Wednesday, October 2nd, at 1 P.M.

VACCINATION GRANT.—Dr. Fred. W. Lewis, Public Vaccinator of the No. 1 district, Llandovery Union, has received the Government grant for efficient vaccination for the eighth time.

THE opening of the winter session at the University of Durham College of Medicine will take place on Tuesday, October 1st, when the prizes and scholarships will be distributed by the Very Rev. the Dean of Durham, Warden of the University.

The fifth Congress of the German Dermatological Society was held in Graz from September 23rd to September 25th. The first discussion was on pemphigus, and was opened by Professors Kaposi (Vienna) and Rosenthal (Berlin). The second day of the Congress was devoted chiefly to questions connected with the treatment of syphilis, and the third to demonstrations.

NEW FEVER HOSPITAL FOR EDINBURGH.—At a meeting of the Edinburgh Town Council on September 24th the Public Health Committee recommended the purchase of the farm of Colinton Mains, at a cost of £20,500, as a site for a hospital for infectious diseases. The site had been reported on favourably by Sir Henry D. Littlejohn and the City Superintendent of Works.

CHARGE OF MANSLAUGHTER.—Dr. George Wight, of Holloway, was brought up on a charge of manslaughter before the magistrate at Clerkenwell on September 25th. The charge arose out of the death of a woman after childbirth which had been the subject of a coroner's inquiry at Folkestone, concluded on the previous day, when a verdict of manslaughter was returned. It is alleged that Dr. Wight was under the influence of a narcotic at the time he attended the deceased woman.

CONGRESS OF POLISH SURGEONS.—The seventh Congress of Polish Surgeons was held at Cracow on July 16th and 17th, under the presidency of Professor Rydygier of that University. There was a large attendance of practitioners from different parts of Poland and Galicia and a sprinkling of foreigners. Among the communications were papers by the President on a Modification in the Procedure of Resection of the Pylorus, and on the Treatment of Actinomycosis; by Dr. Th. Drobnik, on the Operative Treatment of Cysts of the Pancreas, etc. Dr. Jasinski showed five patients on whom laminectomy had been performed; Dr. Stepinski showed eight cases in which the skull had been trephined; and Professor Obalinski presented a female patient from whose brain he had removed a tumour.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHLEM HOSPITAL.—Two Resident Clinical Assistants; doubly qualified, appointment for six months. Apartments, rations, washing and attendance provided. Applications, endorsed "Clinical Assistantship," to the Treasurer at Bethlem Hospital before October 1st.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by September 30th.

BRIGHTON THROAT AND EAR HOSPITAL, 23, Queen's Road, Brighton.—Non-resident House-Surgeon. Salary at the rate of £40 per annum. Applications to the Secretary by September 30th.

CARNARVON JOINT SANITARY DISTRICT.—Medical Officer of Health, must be between 25 and 40 years of age, doubly qualified. Must devote his whole time to the duties, and have a knowledge of the Welsh language. Appointment for five years. Salary, £200 per annum, inclusive of all expenses, except those incurred for such books, stationery, and appliances required in the performance of the duties. Applications, endorsed "Application for Office of M. O. Health," to J. H. Thomas, Clerk, to the Joint Committee, 14, Market Street, Carnarvon, by October 15th.

COUNTY OF BRECON.—County Analyst. Retaining fee, £10 10s., and a fee of 10s. 6d. for the analysis of every sample. Applications to H. Edgar Thomas, Clerk to the County Council, County Hall, Brecon, by October 2nd.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—Assistant Physician to see out-patients. Must be Fellow or Member of the Royal College of Physicians of London. Applications to Thomas Hayes, Secretary, by October 10th.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon, doubly qualified. Salary, £60 per annum, with board and lodging in the hospital. Applications to the Committee by October 15th.

GALWAY HOSPITAL.—Resident Medical Officer. Appointment tenable for six or twelve months. Board, lodging, fire, light, and washing provided. Applications and testimonials to the Registrar, Galway Hospital, by October 3rd.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 146, Bothwell Street, Glasgow, by November 6th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications and testimonials to W. Theobald, Secretary, by October 10th.

LONDON FEVER HOSPITAL, Liverpool Road, Islington, N.—Assistant Resident Medical Officer. Salary, £120 per annum. Applications to the Secretary by October 1st.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician, must be qualified and registered under the Medical Act. Applications to G. Q. Roberts, House-Governor, by October 10th

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant Surgeon. Must be Fellow of the Royal College of Surgeons of England. Applications and testimonials to Charles H. Byers, Secretary, by October 7th.

NORFOLK AND NORWICH HOSPITAL.—Dispenser; must be registered Pharmacist. Salary, £100. Applications to the Secretary by October 1st.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary, £150 per annum, with practice, free house, and garden. Applications to Robert Sutherland, Inspector of Poor, Durness, by October 15th.

PARISH OF ST. MARY, Islington.—Resident Assistant Medical Officer for the Workhouse and Infirmary. Salary, £80 per annum, with rations, apartments, and washing, or an allowance in lieu of same. Applications to Edwin Davey, Clerk, by October 8th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Doubly qualified, and registered. No salary; board, lodging, and washing. Applications and testimonials to the House-Surgeon by October 1st.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road, Brighton.—House Surgeon; doubly qualified. Salary, £60 per annum, with board, lodging, and washing; no emoluments. Applications to the Chairman of the Medical Committee by October 9th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Resident Medical Officer (House-Physician); doubly qualified. Appointment for six months but eligible for re-election. Board, residence, and washing provided. No salary. Applications to the Secretary by October 14th.

SAMARITAN HOSPITAL FOR WOMEN, Nottingham.—Junior Surgeon. Applications to the Honorary Secretary, J. A. Simpson, Solicitor, South Parade, Nottingham, by October 1st.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House-Surgeon. Salary, £60 with board and residence. Applications and testimonials to J. Walter Wilson, Honorary Secretary, by October 12th.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant House-Surgeon, doubly qualified, unmarried, and when elected under 30 years of age. Salary not exceeding £80 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by October 2nd.

MEDICAL APPOINTMENTS.

BATEMAN, Dr., appointed Medical Officer for the Workhouse and the Walsingham District of the Walsingham Union, *vice* F. W. Bayes, M.R.C.S.Eng., L.S.A., resigned.

DENDLE, Frank, M.B., C.M.Edin., appointed Medical Officer for the Glencraig Colliery.

DODGE, M. J., B.A.Camb., M.R.C.S.Eng., appointed Medical Officer for the No. 3 District of the Wells Union.

FOSTER, William, B.A., M.B., D.P.H.Camb., M.R.C.S.Eng., appointed Medical Officer of Health for the Whitney Urban District, *vice* J. J. Rutherford, M.D.St.And., L.R.C.P.Edin.

FOX, J. A., L.R.C.P.Lond., L.R.C.P.Edin., L.R.C.S.Edin., L.F.P.S.Glasg., L.S.A.Lond., appointed Medical Officer and Public Vaccinator for the No. 1 District and Workhouse, Penzance Union, *vice* A. W. T. Steer, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

GARMAN, J. C., L.R.C.P., L.R.C.S., appointed Medical Officer and Public Vaccinator for the No. 3 (Warbleton) District of the Hailsham Union, *vice* R. Clarke, M.R.C.S.Eng.

GIRVAN, David W., M.B., C.M.Glasg., appointed Medical Officer for the Cardiff South District of the Cardiff Union, *vice* A. Rees, L.R.C.P. Lond., M.R.C.S.Eng., resigned.

GOODNOS, William, M.B., appointed House-Surgeon to the Salisbury Infirmary, *vice* E. L. Wilkes, resigned.

HELBY, E. H., M.R.C.S., L.R.C.P., D.P.H., appointed Resident Medical Officer to the Croydon Borough Hospital.

MACDONALD, James, M.A., M.B., C.M.Edin., appointed Medical Officer of Health for the Carlisle Rural District, *vice* C. S. Hall, M.R.C.S.Eng., resigned.

MACGREGOR, Duncan A., M.B., C.M.Edin., reappointed Medical Officer of Health to the Clapton Park Urban District Council.

MACINTYRE, H., M.B., C.M.Glasg., appointed Senior Assistant Medical Officer to Shoreditch Infirmary, *vice* P. J. Probyn, M.R.C.S., L.R.C.P., resigned.

MASON, Arthur H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Walton and Oatlands District of the Chertsey Union, *vice* G. W. Drabble, M.A., M.B., B.C.Camb., resigned.

MATTHEWS, Dr., appointed Medical Officer for the Sixth District of the Mansfield Union, *vice* W. A. Stamford, M.R.C.S.Eng.

PARR, J. W., M.D., C.M.Edin., L.D.S., appointed Lecturer on Dental Anatomy and Physiology to the National Dental Hospital, *vice* Sidney Spokes, M.R.C.S., L.D.S., resigned.

SHARP, Dr., appointed Medical Officer for North Marine.

WALKER, Allan, M.B., C.M.Glasg., appointed Medical Officer of Health for the Westslade Urban District.

WARD, Francis, M.B., C.M.Edin., appointed Second House-Surgeon to the East Suffolk Hospital, Ipswich.

YELF, Robert, M.B., C.M.Edin., appointed Medical Officer and Public Vaccinator for the Moreton District of the Shipston-on-Stour Union, *vice* L. K. Yelf, M.D.St.And., resigned.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M. Lecture at 4.

WEDNESDAY.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown by Dr. Duncan and others. Papers:—Dr. T. G. Stevens and Dr. Griffith: Notes on the Variation in Height of the Fundus Uteri above the Symphysis during the Puerperium, the Conditions which influence it, and the Practical Conclusions which may be drawn from such Observations. Dr. G. D. Robinson: On Certain Micro-organisms of Obstetrical and Gynæcological Interest.

FRIDAY.

WEST KENT MEDICO-CHIRURGICAL SOCIETY, Greenwich, 8.15 P.M.—The "Purvis Oration" on Changes in Medical Examinations and Education—a personal retrospect, by Professor John Curnow, M.D.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

MCAULAY.—On September 15th, at Hoylake, Cheshire, the wife of Matthew McAulay, M.D., of a son.

POWER.—September 22nd, at 3, Hoe Park Terrace, Plymouth, the wife of Surgeon Major E. R. Power, Army Medical Staff, of a daughter.

MARRIAGES.

LAW—PRIKLER.—On September 19th, at St. John's Church, Blindley Heath, Surrey, by the Vicar, the Rev. F. G. Deedes, Robert Redman Law, B.A., M.B., B.C.Cantab., of The Maples, Sidcup, son of the late R. H. Law, Esq., of Heslington, York, to Adah Mary, eldest daughter of William Prikler, Esq., of Godstone, Surrey.

POLLARD—GILLETT.—On September 14th, at Felstead, Walter H. Pollard, M.B., of Tollesbury, Essex, to Ethel Maude, daughter of the late Joseph Gillett, of Charlbury.

DEATHS.

STACEY.—August 21st, at Durban, Port Natal, William Henry Waterhouse Stacey, M.R.C.S.Eng., L.R.C.P.Edin., recently of Grimston, King's Lynn, only surviving son of the late William Stacey, of Holly Lodge, Newmarket Road, Norwich, in his 33rd year.

TYLECOTE.—On September 15th, at Oare, Haywood, Staffordshire, Edward Thomas Tylecote, M.D., aged 65.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

SURGEON wishes to know if any member can inform him where an articulated skeleton could be hired for use at two or three courses of lectures in connection with the St. John Ambulance Association.

MEMBER would be glad to know if the third toe being overlapped by the second toe would disqualify a boy in the medical examination for a clerkship in the Royal Navy. If so, would he be eligible if the toe was straightened by operation?

DR. HARRY CAMPBELL (20, Devonshire Street, Portland Place, W.) writes: I should be greatly obliged if any of your readers could give me instances (1) of an individual enjoying better health after an illness than before, (2) of one disease diminishing the intensity of, or actually removing, another disease.

L. W. asks if there is any institution where the sons of a medical man in adverse circumstances can be educated at reduced terms. The children are under eight years, and consequently ineligible for Epsom College.

NEMO asks for a list of books to be read for the First Examination of the F.R.C.S. Eng. by an M.R.C.S., L.R.C.P. Lond.

**** If our correspondent took his qualifications within the last ten or twelve years, we advise him to make use of the books which he studied for the membership examination. If he were qualified many years since he should consult the present teachers at his medical school. It is useless to attempt to pass the primary examination for the Fellowship on book study alone.

TARIFF writes: Can any reader advise in the following matter? A bill, strictly made up according to the scale of fees recommended in the *Medico-Chirurgical Tariff*, is refused on the plea that the charges are too high. The patient belongs to the farmer class, and is in very comfortable circumstances, but expects to be charged at the same rate as the working classes. The fees charged are the same as those in the lowest scale in the *Tariff*—namely, on a rental of £20 per annum. Has any reader sued according to the fees in the *Tariff*, and can this be looked upon as an authority in the question of fees?

ECZEMA AT THE SEASIDE.

P. P. writes: We have always been taught that cases of eczema do badly at the seaside. But is this really so? I have lately had an obstinate case of eczema of the face and scalp which went to the sea (against my advice), and came back in two months nearly cured, no treatment having been used there.

FLEA-BITES.

CLINIC writes: A lady is a constant victim to flea-bites. The house in which she resides with her family and servants is clean and in good repair; no other member of the household ever suffers the same inconvenience in the slightest degree. If she but enter a railway carriage or omnibus, or caress a dog or cat, persecution follows, ending in the discovery and annihilation of the marauder. The following remedies have already been tried. Carbolic baths, sulphur inunction, pediculicide sachets, but all to no purpose. As this selective persecution is becoming a serious irritation to an already nervous individual, I should be grateful for suggestions.

INLAND REVENUE.

HARD LINES writes as follows: I have recently entered into partnership with my late principal. Am I liable to pay taxes for a manservant and a cart for this year, although my late principal has already paid for them? With the half share of the practice I have bought two ponies and a cart.

**** If we understand the question correctly, we think our correspondent is liable to pay the taxes in question. Licences to keep a male servant or carriage cannot be transferred to any person other than the widow or legal personal representative of the person to whom such licence was originally granted. In this case our correspondent has purchased the cart or carriage, and we gather also that he now employs and pays the manservant.

ANSWERS.

NEMO (Harrogate).—Unless the patient be certifiable as insane, she can be sent to, and detained in, a retreat only with her own consent.

BULL'S EYE.—Steam broughams are at present subject to the same restrictions as to the use of bridges, etc., as traction engines. The Government is understood to be pledged to introduce a short Bill next session to modify the law in this respect.

A. C.—We advise our correspondent to apply to the Secretary of one of the Colleges (Physicians or Surgeons) in the United Kingdom. The case is exceptional, but we doubt if any examining body is empowered to admit a candidate to its qualifying examination when he has passed the elementary professional examinations elsewhere. The case is quite different from that of the candidate who has passed in "Arts" as a preliminary subject. He is thereby qualified to offer himself as a candidate before several well-known examining boards without any fresh "Arts" examination.

PSYCHOLOGY AND THE M.D. LOND.

X. writes: In answer to M.B. Lond., who wishes to read for the London M.D., to refer him to Hyslop's *Mental Physiology*, which is adapted to the requirements of this examination. There are also the following well-known works: Professor Ladd's *Physiological Psychology*, Professor James's *Principles of Psychology*, Professor Sully's *Outlines of Psychology*.

NOTES, LETTERS, Etc.

ERRATUM.—Mr. D'Arcy Power asks us to state that "Sciopody" in the title of his paper, published in the BRITISH MEDICAL JOURNAL of September 21st, was a misprint for "Sciopody."

A WARNING.

VICTIM writes: A short, shabbily-dressed, bearded man, aged about 30, and dark, is calling upon medical men in Newcastle-on-Tyne and neighbourhood soliciting books (unbound) for binding, and asking for part payment "in advance." Although feeling certain I was about to be duped I advanced money a few months since, and, of course, I have neither seen books nor money. He calls himself Watson, but must not be confounded with the *bond-fide* bookbinder of that name, William Watson, of High Friar Street, Newcastle. To-day I hear he has taken in several other doctors.

A CURIOUS POULTICE.

M.R.C.P. writes: I am surprised at several letters re the above, and alluding to dung poultices as a novelty. For years past they have been generally used in many parts of England, and serious results sometimes follow the application of cow or other animal dung to abraded surfaces. Of one case, occurring in Warwickshire several years ago, I have a vivid remembrance; a child having broken chilblains, the wise woman of the locality was consulted; she advised a sheep's dung poultice. A few days after the application blood poisoning followed, and the child died. The late Mr. Samuel Cox, of Birmingham, visited the case in consultation, and it was afterwards ascertained that the sheep from which the dung was procured had the disease known as "the rot," the animal having liver fluke no doubt in an advanced stage of the disease.

"MEDICAL BOOK KEEPING."

DR. W. WRIGHT HARDWICKE (East Molesey) writes: Permit me to draw the attention of members of the profession to an addition made to my system of medical book-keeping. A want was felt that some means of making notes on cases ought to be provided, but it was impossible to make this addition to the book itself without great additional expense in interleaving and increasing the size unduly. To meet the requirement and to obviate the difficulty I have designed "memoranda leaves," alphabetically arranged to correspond with the Ledger and Day Book pages for temporary insertion each month. At the end of the month these are placed in a box file and fresh ones inserted, so that a record of each case can be found in a moment. The dates, which follow each other successively, and the names are arranged in columns at the end of each page with printed headings, so that in referring it is only necessary to turn over the pages in the same manner as the page of a book is sought for. The "leaves" are sent out duly lettered, in sufficient number to last the six years that the book lasts, and each box file thus contains the notes of all cases during that period. They can be obtained bound as a separate volume, but the loose leaves are more convenient in a busy practice.

A MEDICAL AUTHOR.

A FEW years ago Dr. MAX SIMON NORDAU was, says the *Echo*, comparatively speaking an unknown quantity, but now, as the author of *Degeneration*, he has acquired a fame throughout the world that only a few can claim. Dr Nordau is of Jewish parentage, and was born July 29th, 1849, in Buda-Pesth. In 1872 he took his doctor's degree at the University in his native city. After travelling from the legendary North to the romantic South, he settled down as a medical practitioner at Buda-Pesth, and remained there until 1880, when he removed to

Paris, where he has since lived engaged in the practice of his profession. Dr. Nordau has been a voluminous writer. He commenced his literary career in connection with the press, editing in turn the *Pester Lloyd*, the *Pesther Zeitung*, and the *Vossische Zeitung*. His first book was entitled *Paradoxes*, and *Bitter*, and mainly consisted of criticisms of social and political conditions. He subsequently published a volume of short stories, a study in social pathology, four novels, four comedies, and four dramas. His works on *Degeneration*, *Paradoxes*, and *Conventional Lies of Society* have been translated into the English language.

THE BENZOBORIDE OF MERCURY.

DR. C. R. ILLINGWORTH (Ventnor, I.W.) writes: For many years I have striven to point out the value of the benzoboride as a germicide and destroyer of toxins, but with little success compared with what should have been the result. It only remains for me to give cases as they occur. A little girl was stung on the neck by a wasp two days ago. The benzoboride (1 in 500) was applied, and in two hours the redness, swelling, and pain, which were considerable, had completely subsided. The solution invariably acts in this rapid manner in all poisoned wounds.

EROSION OF THE TEETH IN CHILDREN.

MR. SIDNEY STOKES, M.R.C.S., L.D.S. (Queen Anne Street, London) writes: May I be allowed to correct the remarks attributed to me in the BRITISH MEDICAL JOURNAL of September 21st, page 711. Dr. Barton read a paper on "Erosion." I tried to point out that this term, borrowed from the Continent to describe the condition of the teeth he discussed, was a bad one, not only because, even according to the paper, the cause was not due to erosion, but also because the same term is applied by English dentists to a totally different lesion.

Again, I was made to say that I was not prepared to hear that 2½ per cent. of children had their permanent teeth affected. What I did say was that my own observations of children's mouths inclined me to agree with the 5 per cent. mentioned in Dr. Barton's paper.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE TITLE OF "DR."

CHAGRIN writes: I am a Licentiate of the Royal College of Physicians of London. I came to F—— as an assistant, my principal put me up a plate "Dr."—Eventually I bought up my business and started in practice on my own account. I did not dare to change the wording of my door plate. Five years after my starting for myself the Royal College of Physicians demand that I shall alter my door plate. I find I had signed a by-law bearing on this point. So I immediately obey their orders. Though, so very careful have I always been to cultivate the best class of practice, that I have never taken any club or such-like appointments. I have not even indulged in a red lamp. Nevertheless, my former principal who lives only eight doors away from me put "Dr." on his plate apparently without hindrance. He is L.R.C.P.Edin., L.M., only. In this neighbourhood are many Scotch and Irish licentiates, all of whom do the same as my former principal does.

CARBOLIC ACID POISONING.

DR. A. W. SHEPHERD (Cowbridge) writes: The case with which this poison can be obtained, and its cheapness, I presume, accounts for the number of cases we read of in which persons have ended their lives by swallowing it. It appears strange that no antidote is given for it in books. Emetics is made of using oil, and on a chemist's label I read "In cases of poisoning give large doses of olive oil and white of egg." Now I can quite see the good of oil, but especially of the egg to allay the pain in mouth, but I should be sorry to give large doses of oil, my reason being that I always thought carbolic acid was very soluble in oil, consequently I should only hasten death. I remember a case of a gentleman asking for a black draught in a country chemist's, and quickly swallowed what was handed him; at once he said "It is carbolic I have taken." Oil, and, I think, glycerine were given, with the result that he died. Now, if the chemist had only given, instead of the oil, a strong solution of magnesia or soda sulphate, the result would have been different, as a chemically soluble and non-poisonous substance would have been formed, which could have been siphoned out of stomach. The case with which this method can be applied, the minimum of trouble and inconvenience and danger recommends itself before the stomach pump, glass tubing or even feeding bottle tubing, though small, can be quickly procured; then if either a glass or tin funnel cannot be found, one can be made of paper.

A MEDICAL MILLIONAIRE.

IT is not often, says the *Deccan Budget*, that anybody in Hyderabad awakes to suddenly find himself in El Dorado, revelling amid piles of silver, nor is it often that anybody meets with a windfall such as Dr. Dyce, the medical attendant to Nawab Fakr-ul-Mulk, has come in for, or rather expects to come in for. We have had the pleasure to witness a genuine document by which Dr Dyce is entitled to inherit £800,000 in England and Rs. 20,00,000 in India.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Mr. G. J. Auburn, Morpeth; Alpha. (B) Mr. W. Berry, Wigan; Mr. F. O. Bell, Kingston-on-Thames; Mr. C. Bell, New York; D. J. M. Bone, M.B., Horuby; Mr. J. Bird, Basingstoke; Mr. J. W. Brown, Sheffield; Dr. F. Beach, Kingston Hill; Mr. J. M. Bennett, Nottingham; Dr. D. C. Black, Glasgow; Dr. M. A. Bamby, Chapeltown; Dr. J. W. Batterham, St. Leonard's-on-Sea. (C) Mr. H. E. C. Corkery, Stafford; Claremont; Mr. W. N. Clemmey, Bootle; W. C. Chester, M.B., Cairo; Dr. H. M. Clark, Amritsar; Dr. C. Coombs, Castle Carey; W. R. Centre, M.B., Aberdeen; Mr. W. Catto, London; Dr. H. Campbell, London; Dr. E. Cassy, Windsor; Clinic. (D) Doctor; Dr. H. Drinkwater, Wrexham; Dr. J. Dawson, London. (E) Mr. C. Ellaby, London. (F) Mr. E. V. B. Fooks, London; F.R.C.P.; Mr. E. R. Fothergill, Hoddesdon; Mr. J. A. Fox, Penzance. (G) Dr. W. Graham, Middleton; Dr. W. Gordon, Exeter. (H) Mr. J. S. Hooker, Hastings; Mr. R. H. H. Haydon, Liverpool; Mr. H. Heald, Ormskirk. (I) Dr. W. W. Ireland, Wrexham; Dr. F. Isdell, London; Dr. C. R. Illingworth, London. (J) Mr. T. Jackson, Thornton Heath; Mr. R. S. Jaques, Oldham; Dr. C. L. Jones, London; Mr. A. E. Jones, Crickhowell. (K) B. C. Kelly, M.B., Edinburgh; K. D. (L) Mr. R. P. Long, London; Mr. C. A. Lapthorn, Gosport; Mr F. W. Lewis, Llandovery; L. W.; Mr. R. Love, Bradford. (M) Mr. A. G. S. Mahomed, London; H. Macintyre, M.B., London; Dr. Moorhead, Cootehill; Member; Mr. E. D. McNicoll, Southport; M.R.C.S., L.R.C.P.I.; M.D.; Mr. J. A. Marsden, Wigan. (N) Numas de Cugnay; Mr. F. Newcombe, Grantham; Mr. J. T. Neech, Tyldesley; Nemo. (O) Mr. E. C. O'Gorman, London; Dr. J. Ormsby, Dover. (P) Mr. C. Penruddocke, Bath; Mr. T. Potter, London; Mr. B. Pullin, Sidmouth; Mr. J. J. W. Pearcey, Burnley; P. P.; Mr. G. D. Pollock, London; Dr. J. W. Pare, London; Dr. S. R. Philippa, Virginia Water. (R) Mr. W. Robertson, Harrow; Rheostat; Dr. F. W. Ramsay, Bournemouth; Mr. T. F. Raven, Broadstairs. (S) Mr. A. P. Swanson, Liverpool; Straight; Dr. A. W. Sheperd, Cowbridge; Mr. W. H. Spurgin, Newcastle-on-Tyne; W. H. Stephen, M.B., Rishton; H. Scott, M.B., Curragh Camp; Mr. A. Sutcliffe, Burnley; Stretcher. (T) Thesis; Mr G. W. Thomson, Lichfield; Dr. M. Todd, Edinburgh; S. G. Toller, M.B., London. (V) Victim; J. M. Vallance, M.B., Glasgow. (W) Dr. H. W. Webber, Plymouth; Mr. F. F. Westbrook, Cambridge; F. Ward, M.B., Ipswich; Mr. H. C. Wilkins, Coventry; Mr. V. Wood, London; Mr. C. Wallis, London; W. J. R.; G. E. Williamson, M.B., Newcastle-on-Tyne; Mr. J. W. Wilson, Plymouth. (X) X.; etc.

BOOKS, Etc., RECEIVED.

Meralgia Paraesthetica. Von Dr. W. K. Roth. London: Williams and Norgate. 1895. 9d.

Zur Lehre von den angeborenen und erworbenen Verwachsungen und Verengerungen der Scheide sowie des angeborenen Scheidenmangels mit Ausschluss der Doppelbildung. Von Dr. F. L. Neugebauer. London: Williams and Norgate. 1895. 6s.

Trattato di Patologia e Terapia Chirurgica Generale e Speciale. Professor F. Durante. Vol. I, Puntata 3. Roma: Società Editrice Dante Alighieri. 1895. 5 lire.

Functional and Organic Diseases of the Stomach. By Sidney Martin, M.D., F.R.S., F.R.C.P. London: Young J. Pentland. 1895.

Elements of Chemistry. By C. A. Wurtz. Fifth edition. Revised and enlarged by W. H. Greene, M.D., and H. F. Keller, Ph D. London and Philadelphia: J. B. Lippincott and Co. 1895.

Geschichte der jüdischen Aerzte. Von Dr. R. Landau. London: Williams and Norgate. 1895. 3s.

The Indian Textile Journal Directory, 1895. Edited by J. Wallace, C.E. Bombay: *Indian Textile Journal* Office. 8s.

Official Drill Manual for Members of the St. John Ambulance Brigade. Compiled by R. R. Sleman and W. J. C. Brazier. London: St. John Ambulance Association. 6d.

Notes, Autobiographical and Otherwise; being some of the Experiences of the First Ten Years of his Professional Career. By Dr. Parish. London: The Savoy Press. 1s.

De l'Action du Salophène dans le Rhumatisme Articulaire Aigu, dans la Chorée, et dans les Nevralgies. Par Dr. A. Huot. Paris: H. Jouve. 1895.

The Harveian Oration, 1894, delivered before the Royal College Physicians, October 18th, 1894. By T. Lauder Brunton, M.D., F.R.S. London: Macmillan and Co. 1894. 2s.

Plea for a Simpler Life. By F. S. Keith, M.D. London: A. and C. Black. 1895. 2s. 6d.

Clinical Lectures on Diseases of the Nervous System. By W. R. Gowers, M.D., F.R.S. London: J. and A. Churchill. 1895.

*** In forwarding books the publishers are requested to state the selling prices.

THE INAUGURAL ADDRESS

ON

THE ART OF WRITING IN RELATION TO MEDICAL AND SCIENTIFIC WORK.

Delivered before the Society of Medical Phonographers.

By W. R. GOWERS, M.D., F.R.S.,

President of the Society.

Gentlemen,—I have the pleasure and the privilege of welcoming you to the first meeting of a Society which is the first of its kind. No systematic effort has before been made to promote the work of a profession by the special means we employ. These means are the immediate reason for our existence, but they are means alone. I would emphasise at the outset the fact that the object of our Society is to promote medical knowledge, to facilitate its acquisition, and especially to augment its application. Beyond this, as beyond all the work of our profession, is the ultimate object—the welfare of others. The fact that the effort to achieve these results can be aided by a special means—the use of shorthand—is the immediate reason for our existence, but it is not our ultimate object.

Why, however, does this reason exist? Why is there a need for our Society, at least sufficient to have induced its formation and to have produced a bright promise of success?[1] Because a hindrance exists to the best and highest work of our profession, a hindrance that is not essential in the nature of things. It is one of the many elements of our life and work that have come to us from the past. The past holds the present firmly in its grasp. With the vast change of modern progress, there is persistence of much that has changed little or not at all. To such persistence we owe indeed the stability of the present; this depends on the permanence of that which is beneath us; that which, upon the surface, remains unaltered amid the changing elements of progress, often involves a hindrance to action and to work.

Why should a surface hindrance persist and thus retard? That is, indeed, our own question. The answer, however, is instructive and interesting. However firm is the grasp of the past on the present, it is seldom felt. Wordsworth has told us in a familiar line that

Custom lies upon us with a weight
Heavy as frost.

But the weight of custom, like that of the atmosphere in and under which we live, is all unfelt. "Use and wont,"

Old sisters of a bygone day,
Grey nurses, loving nothing new,

do not allow us to see clearly that which they have charge of. Habit, personal familiarity from early life, perhaps augmented by influences transmitted through many generations, blinds us to the imperfection of that which is familiar. It likewise distorts the image of that which is novel, and makes it impossible for definite superiority to be duly perceived.

Custom gave us mechanical writing and stopped all change. Through the centuries since, the sounds of speech have been presented to the eye by symbols that have undergone no essential alteration. They are now, indeed, little less clumsy than when the Phœnicians and Egyptians first gave alphabetical writing to mankind.

Consider our present system of writing as a new invention. Conceive the reception that would be given to it as a nineteenth-century device for presenting to the eye the sounds of speech, for symbolising the movements of articulation by movements of the hand. Its defect is only in slight degree a matter of spelling. The reformation of our present "orthography" (as it is termed by an inverted metaphor) would leave untouched the cumbersome symbolism of current writing. It is not only cumbersome, but laborious. About five different movements of the hand are required to represent each simple movement of speech, and often this number is doubled or trebled. Writing can only be easy and simple when the movements of the hand that symbolise each movement of speech and its resulting sound are the fewest compatible with secure and ready perception by the eye. Such simplicity is the basis of phonetic shorthand. It is the facility thus obtained that we desire to extend in the use of the art of writing essential for the work of our profession. Our object is to promote that work by the use of a method of writing that needs at the most only one-third of the time and one third of the trouble of longhand, and yet has an average legibility more prompt and more secure.

The need for writing in medical work will be self evident to most, but, perhaps, not to all. Yet its grounds are sufficiently conspicuous. The knowledge has been obtained by observation, and is increased through life by personal observation, and by reasoning based thereon. But in every science that rests on observation, the need for written record is absolute. No memory, whatever its capacity, can be trusted. Immediate record alone can make observation effective. That which is secured by the use of shorthand, even at a low speed, is this: in a given time there can be twice the amount of record that is possible with longhand, and yet twice the time in which to observe. For the greater amount of record observation must be more minute, more precise. Description at once reveals unsuspected uncertainties, and the greater the amount of record the more accurate is the observation, the more valuable is the result. The effect of the use of shorthand is, and must be, on the quality of scientific work so far as observation is concerned. Nor is it alone a matter of quality. Many of the facts observed are changing, passing. In these the effect of the use of shorthand is not merely qualitative; facts can be described which longhand could not possibly record. It must be remembered that shorthand enables, when necessary, not twice, but three and four times the amount of record, and thus transient phenomena can be adequately described which would elude entirely the slow pursuit of longhand, however abbreviated. The difference is thus absolute; observations can be secured that would otherwise be lost. These facts are true of our work as a branch of natural science.[2] I emphasise them because the statements are true of every science which rests on observation, and in all natural sciences the art we advocate would of necessity increase the capacity of every worker, and augment the value of his work. We venture to hope, indeed, that the influence of our Society may ultimately extend the use of shorthand in many other branches of intellectual work and especially in natural science.

But no effect on the quality of work is limited thereto; the worker is influenced as well as the work. If a man habitually observes more fully, more precisely, and more carefully, he must become a better observer, able to perceive more accurately, more minutely, more adequately, and to attain precision more readily. This influence, moreover, whatever its degree must be progressive. We might take as our motto the words "Writing maketh an exact man."

The use of shorthand in science does not stop at the record of observation. It is equally available, with the same saving of time and labour, in the processes of comparison of observations, of epitomising the facts observed by others, and in all the preliminary work of composition. Indeed, I have frequently written the final copy in shorthand; typewriters transcribe it with accuracy, and it is only a question of demand for shorthand MS. to be accurately put up directly in ordinary type.

These remarks have special reference to the work by which medical science is increased and improved. It may be thought that they have little application to the work of the practitioner. Such an idea is a mistake, and, like most mistakes, is instructive by its error. The capacity of shorthand to promote the work of our profession attains its maximum in the aid it can give to the practitioner. Further, the aid it can give the practitioner does not essentially differ from that which it affords to higher scientific work, and the fact is worth noting.

For what is the work of the practitioner of medicine? Of

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[1] The Society was started in December, 1894, with sixty members, and [illegible]. Information regarding it and the shorthand medical periodical and other publications that are issued can be obtained from the Honorary Secretary, Dr. Neil, Warneford Asylum, Oxford.

[2] This point was well expressed in a letter read to the meeting from the Bishop of Hereford (Dr. Percival), formerly head master of Clifton and of Rugby: [illegible]

all those who toil in the busy hives or barren deserts of this earth of ours, he stands in one respect alone. His daily work is to apply science to human need. He avails himself of the knowledge that we have of the processes of Nature without and within the human frame, to strive to avert or arrest disaster to life. He starts equipped with a certain amount of knowledge—as much as he can receive from those who teach him. But he learns more from each day's work. Facts come before him every hour, facts sometimes new, and often new to him. His ability depends on his use of them, on the exactness of his observations, on his adequate retention of their lessons. No practitioner can do his daily work with any competence without constantly observing for himself, constantly reasoning from his observations. The work of the medical practitioner, high or low, is personal science, as that of no other worker is.

Cavil as we may at the word "science," no distinction can be drawn between the work of the medical practitioner and that of the highest scientist, save in degree and in the fact that the knowledge is gained chiefly for application. The latter is, indeed, rather a spur than a hindrance. It involves special risks of error, but these are not inevitable. The point to which I would lead you, however, is that for each one of us in our daily work precise record is as necessary as for the advanced investigator. Without the use of writing the facts that pass before him will leave only a transient furrow on the sands of unaided memory, vanishing for the most part when new facts disturb the surface, obliterated by the first of the strong gusts that come and change and go, or at most leaving but a slight modification in mental tendency. Without record there can be no precision; without precision there can be no certainty either of inference or of action. The vague effect of unrecorded—and therefore unconsidered—"experience" is too often a warping of judgment by the influence of some striking but exceptional fact, conspicuous in vague outline in the memory, while the conditions essential to its interpretation are forgotten. Only habitual, immediate record can preserve from these dangers the "personal science" on which depends the work of the practitioner and the welfare of his patients. For this result the record of that which is observed must of course be utilised and so arranged that its value shall not be lost. Yet the mere process of record gives, as we have seen, precision to observation and secures retention, not otherwise to be obtained.

For all this personal use of writing, phonetic shorthand is available with unmixed advantage. Properly written at three times the speed of swift longhand, it can be read as fast as the lips can move, even if written by another person. To teach the mode of employing it to most advantage, and the method of adapting the record to subsequent use, are among the objects of our society, and information on these subjects has already been published by it. I would add, moreover, that the persistent and increasing help to the practitioner's work, obtained through the facility of record that shorthand affords, is a matter of personal experience to which many members of our society can bear the strongest testimony. We have among our members those who have used it with great advantage during forty years, although we cannot produce a rival to Dr. Hall Gladstone, whose use of it in science dates from 1846.

I have said nothing yet of the value of shorthand to the student in gaining the knowledge which the collective wisdom of the profession decrees that he shall obtain by the ear. Shorthand enables a student to make a perfect epitome of his lectures, more useful than any textbook, and yet give more attention to the subject than if he took no notes. To attempt to secure a full report of the superfluous verbiage with which almost every lecturer conveys knowledge is a profound mistake. It is an instance of the misuse of the facility in writing which shorthand affords. There is no useful thing, however precious, which may not be misused.

The student's training comprises also the acquisition of knowledge by personal observation—a method of learning which has to continue through life. On his skill in this much of his future ability depends. Here shorthand is of peculiar value. It renders the help already described, and, in addition to record of facts, he is able to secure the comments on them given by his teachers, which it is scarcely possible to secure at the bedside by longhand. Properly used, the influence of shorthand on the student's academical career is certain and not small, but far more important is that which it exerts on his future work. He starts on a higher level, with the means of a more rapid rise to thorough practical power.

During the two months long vacation a student can easily acquire a knowledge of shorthand sufficient to make it serviceable and to insure its increase by use. But the object to be desired is that it should be acquired before the medical education is commenced. Many students are now using it to the utmost advantage who learnt it before the commencement of their medical studies. No greater service can be done to any intending student than to secure this acquisition. It is now taught in a large number of public schools, but unfortunately when a knowledge of it is gained it is allowed to drop. Its use is not inculcated, and the lad has forgotten so much of it when he begins his medical career that, without special motive, he does not revive it. The remedy is simple. Shorthand should be an extra, mark-bearing subject in the preliminary examination for the profession. It would displace nothing. Competence in all other subjects would be untouched. The effect on a large number of future members of the profession, on all their work—practical and scientific—would be vast. Some years ago this subject was brought in vain before the General Medical Council, in whose hands the decision lies. But our thanks are due to Sir Dyce Duckworth and Mr. Wheelhouse for their initiation of an effort which must sooner or later be successful.

Although the use of shorthand through life can best begin with the student's work, it has been repeatedly learnt some years after practice was commenced, and its service has been quickly and effectively obtained.

It is a prevalent idea that shorthand can be written but cannot be read. But no writer who has a moderately good knowledge of phonography will fail to confirm my statement that, written at the rate I have mentioned, at three times the average speed of longhand it can be read with far greater security than the longhand, whether the reading is by the writer or by another person. The popular error that it is illegible is due to the immense number of shorthand writers who learn only to write and to immediately transcribe and who have taken no pains to secure the ability to read. Because reading is not a spontaneous result of writing it is assumed to be impossible. The ability to read shorthand can indeed be acquired perfectly without any ability to write it, and is sometimes acquired.

With respect to the time needed for the acquisition of shorthand, this can be much reduced if the learner chooses to give more time each day and does avail himself of the help of lessons. The art of teaching shorthand has been of late years developed to a remarkable degree. An interesting experiment has been lately carried out on some members of our profession by Mr. Hayns, of the Westminster School of Shorthand, which shows that if a man chooses to give to the study two hours a day, with a lesson each day, in a fortnight he will be able to write it at the same speed of longhand, and at the end of a month will have secured its practical use.

Although the swiftest writing ever achieved has been by this system, for our purpose moderate speed and perfect ease are all we need. With three times the speed of longhand, more than three times the ease of writing, and a definitely greater legibility, we may be reasonably content, and it is this we desire to promote in our profession.

If such a combination of speed, ease, and security is at the disposal of anyone who chooses, why do not more avail themselves of the help? Because, like so many other things, it needs a present sacrifice for future good. It needs the power to make that which may be, as potent a motive as that which is. To each man comes, by choice or by necessity, the daily task. The present is actual, the future is only possible, or at most probable. That which depends on the imagination, excited by the assurance of others, is seldom an influence comparable to those motives which are at hand and directly conspicuous to consciousness. Hence it is that so few acquire our art, even if they give an abstract assent to the assertion that they and the patients whom they help will be the better for it. They may believe the assurance that the daily hour devoted to the study for a few weeks will be regained within

a year, but there is the present work, ever pressing, and this claims the time and gains it. We talk of the power of the imagination, but bring it in relation to action, and it is seen to be feeble compared with the power of that which is a present reality. What influence on the mind is excited by narrated suffering compared with that produced by witnessed agony? The one is as real as the other, but the intense distress of indignation excited by that which is seen is never equalled by that which is imagined. The difference in motive power is the great hindrance to the acquisition of shorthand as an aid to work that can be done without it, if less adequately. The time that is required to gain the greater power has to be taken from present work; it has to be taken on the assurance of others, and the effect of the assurance fades under the pressure of the present. It may be influential for a week or two, but then the path begins to seem long. The daily time is shortened, then a day passes without study, and soon there comes the realisation of the statement of Whately, that "that which ceases to be habitual, soon becomes habitual in its ceasing." The result is that the attempt is given up, or the knowledge that is acquired is so imperfect as to induce an impression of its capacity, inadequate and erroneous, or a quite mistaken idea of personal inability.

Yet it should not be so. The facts I have dwelt on can be testified by scores of members of our Society, and those who will trust the testimony will not long need such assurance. They will soon have personal experience that will make them altogether independent of the testimony of others.

But it will be asked, Are there no drawbacks to the use of shorthand? One alleged drawback is this: it has been said that the constant practice of making notes weakens the memory, lessens the power of retaining facts without notes.

Without doubt the more the unaided memory is depended on, and cultivated, the greater is its retentive power. But I believe that, as a drawback to the use of shorthand, this impression is an illusion. It is due to the comparison between the extent and precision of the facts secured by record with the small extent and uncertain character of those which are, and alone can be, retained by the memory. The result is a comparison in which the memory seems far more inadequate than it is. The inadequacy of memory is realised as it cannot be by those who trust to it alone, and is ascribed to the use of shorthand. But, if shorthand is properly used, it will involve the retention of a greater amount of knowledge by the memory. If the recorder is not content with a mere mechanical record, but notes mentally while he records; and especially if he, as he should do at the end of his day's work, reviews the record and considers the lessons of the facts, it will be found that far more is remembered, and that this is remembered better than would otherwise be possible. But even if the opinion were true that the practice of noting all important facts has an influence on the retentive power of the memory—and I am not at all disposed to grant the truth of the opinion as regards the proper use of shorthand—there can be no question of advantage of the two habits thus placed in comparison. To permit this to deter from the acquisition and use of shorthand is, in a degree of more than usual accuracy, to be "penny wise and pound foolish."

For all this, shorthand must be properly known. The great pitfall for medical phonographers is the fact that it can be used for personal purposes when inadequately known, and that the user does not discern how great is the difference in degree, even of personal service, which is entailed by imperfect knowledge. This is, of course, only the assertion that no machine can be properly used until it is thoroughly mastered. Unless some initial trouble is given to bring the knowledge of shorthand to definite adequacy, its full value will not be obtained. Moreover, in accordance with a general law, the absence of that which has not been gained will not be realised. The loss of that which has been is keenly felt, the loss of that which might be, however great the real misfortune it entails, is unperceived.

If we can accomplish these objects, in whatever degree we are successful in our efforts we shall in that degree do more good than we can realise, more than we can see or learn. But this is not all. No good can be done, or, for the matter of that, no evil, which has not its own indirect results of the same character. Such an influence as I have spoken of gives increased knowledge, which, as I have said, is above all the "knowledge that is power." No man can gain more knowledge without obtaining at the same time more power of acquiring other knowledge. The increased opportunity to learn, which the use of shorthand gives us, causes of necessity an increased ability to learn, and the process of increase in ability goes on and on.

Lastly, whatever our Society can achieve is, like all the work of the profession to which we have the honour to belong, for the good of others. Our immediate object, indeed, may be to our own existence and that of those dependent on us. We can claim no immunity from that mysterious blessing which, in the guise of a curse, accompanied our far-off ancestors in one of the changes they passed through, when labour became the price of life. But the work which we do, by which we live, is that by which as far as may be others live. Whatever good we can achieve, who are here banded together for a common object, is for the benefit of those who in their need depend on our profession. Save for the rare occasions when the use of shorthand can secure some precious words of wisdom that would otherwise be lost, its service to men is greatest when it facilitates, increases, makes more effectual the work that is for others. What the work of our profession is I need not tell you. But this I may tell you, that whatever is the degree of the special help we give to the work of our profession, that help will not be transient, will not be narrow, will not be doubtful. It will endure as long as the science and the art of medicine; it will be wide as the disease we combat; it will be certain as the death we endeavour to postpone.

OPENING OF THE MEDICAL SCHOOLS:

INTRODUCTORY ADDRESSES.

ST. GEORGE'S HOSPITAL.

THE HISTORY OF ST. GEORGE'S HOSPITAL, WITH SOME REMARKS ON IDIOSYNCRASIES.

By G. D. Pollock, F.R.C.S.,
Consulting Surgeon to the Hospital.

After a few introductory observations Mr. Pollock said:

It may interest you to learn something of the early life of our school and of the arrangements formerly provided for the teaching of anatomy and other subjects. I need not dwell long on the past history of our hospital. Those interested in the question may refer to an account drawn up in 1866 by Dr. Page, then one of our physicians. The hospital was originally Lanesborough House, the private residence of the nobleman who held that title. It was purchased by the governors of the hospital, and opened for the reception of patients in 1733. But it was found ill adapted for the wants of such an institution; patients suffering from disease and accidents increased so greatly in number that the accommodation was soon found to be insufficient, and it was at last decided by the governors to rebuild the hospital, and this was effected in 1833-34.

But, at that more recent period, the requirements of a thoroughly efficient and convenient hospital, perfect in all sanitary arrangements, were but little understood. The defects of the building, as originally constructed, have been a source of constant and yearly expense in the endeavours to meet the demands of sanitary efficiency and other necessary arrangements. I need not enter into details, but there are still some marked drawbacks, which I hope hereafter may be remedied by the rebuilding and considerable extension of the hospital in the direction of Hyde Park Place. I am sanguine enough to hope and believe that sooner or later—but the sooner the better—the governors will see the importance, if not the necessity, of carrying out such a scheme, and I am glad of the opportunity of thus publicly ventilating the question.

In the rebuilding of the present hospital but little provision was made for the conduct of a medical school. A small lecture room adjoined the original museum. There was not any accommodation for teaching anatomy. The

lectures on anatomy were conducted in a private school in Windmill Street, near Golden Square. Here Hunter and Brodie worked and lectured. The teaching of anatomy was then conducted under many difficulties. The school was dependent for the supply of subjects on men known as "body snatchers." Graves of the recent dead would be opened at night, the body removed and conveyed in a sack to the dissecting room; not rarely a body would be taken to the school under suspicious circumstances; and it was this temptation to supply material for dissecting which led to the execution of Burke and Hare for the murder of a man in Edinburgh. Since then the Anatomy Act was passed, which provides that unclaimed bodies may be used for purposes of dissection, in duly licensed schools, under the supervision of the Inspector of Anatomy.

When I entered here as student—1837—there were two anatomical schools, with lectures on certain subjects, not connected with the building. The lectures on Chemistry were delivered at the Royal Institution in Albemarle Street by Brande and Faraday; and many a cold and wet walk have I had to get there at nine in the morning in winter. One anatomical school was in a narrow roadway which ran past the south side of the hospital to Tattersall's Yard, which then occupied a large space of ground in our rear upon part of which this theatre, with the museum and dissecting-room now stand. This alteration was the result of the removal of Tattersall's stables, and for which we have to thank his Grace the Duke of Westminster, one of our vice-presidents and liberal supporters.

The other dissecting-room was in Kinnerton Street, at the back of Wilton Place, and there the lectures on Anatomy, Physiology, and Chemistry were conducted. For several years I lectured there on Anatomy, often hurried to be in time, after a long attendance in the out-patient room.

Not only in this respect are the arrangements for your instruction and comfort materially improved, you have now far greater facilities for clinical work and study, clinical work being, after all is done and ended, the most important subject to devote your time. You cannot give too much attention to the aspects of disease, or disorders, by the bedside with notebook in hand, or if fatal under treatment to follow the case to the *post-mortem* room, and record there the havoc wrought by disease. Here you will find help and instruction from our curator. The study of disease by the bedside, and the investigation of its results when fatal, will lead you to high results, only to be attained by persevering labour amidst many difficulties and oft-repeated discouragements, by labour that chooses its localities as well as its object, and refuses to produce its fruits unless it be pursued amidst the sufferings and sorrows and dangers attendant on sickness and death; by labour that sometimes seems hardly to have begun, until we are called upon to follow it in the dead house, amidst the perishing relics of our fellow men. But see how morbid anatomy, itself a modern science, enables us to look back, as it were, through an avenue upon the countless paths through which death has made its approach; see how we can track him in his progress, and mark how step by step he has gained is territory, and at last has achieved his final victory. But each such victory, if only rightly used, weakens him, while it strengthens us. We learn his wiles, and, increasing our defence, may hope to keep him from life's citadel, until at last those three score years and ten be passed, beyond which life is too often only a prolonged sorrow, whilst death, it is our glorious privilege to know, is the opening of that bright world where disease and pain are known no more.

Formerly two house-surgeons were appointed for twelve months annually, and two house-physicians under similar conditions. Lately the Governors have provided accommodation for four house-physicians and four house-surgeons to reside in the hospital at one time. They are appointed on the recommendation of the Medical School Committee, with this proviso, that at the termination of six months each house-surgeon is transferred to the office of house-physician for another similar period, so that each has the advantage of six months' surgical and medical practice. This arrangement is a most important benefit to those who can take advantage of these appointments, especially so to those who enter the public services, as they carry with them a good knowledge of their profession with much practical experience not often obtained by many who enter the medical services of the army and navy. It also ensures to those who hereafter may practise surgery alone good practical experience in medicine. I say it with all due respect to our medical staff that a surgeon is, or should be, a physician, and something more.

Let me advise you to devote yourselves chiefly during the first winter session to the study of anatomy and physiology. Steadily occupy your time in the dissecting room, and with the assistance of the demonstrations you should almost master your anatomy to such an extent the first winter as to render dissection almost unnecessary subsequently, at any rate with some work on anatomy, with good illustrations such as may be found in *Quain's*, you should be able to perfect your knowledge of the human body without difficulty. But work, constant, steady work, is essential to the attainment of this thorough knowledge of the anatomy of man.

The study of the structures of the human body when compared with the varieties of similar tissues in comparative anatomy is of such interest that it justifies me in commending it to you for your consideration as one of great interest and intellectual pleasure.

I have congratulated you on your choice of St. George's as the field for all your exertions, mental and physical, to perfect your professional education. You come to the school where Baillie worked, and where he found the material for his accurate illustrations and well-known work on *Morbid Anatomy*, and which rendered his name famous as a pathologist. He had not the advantages of modern years in carrying out his investigations, but nevertheless his work is one which for correct observation and accuracy of detail could not well be surpassed; you may all refer to it with interest and benefit.

John Hunter, too, was surgeon here. It would be presumptuous on my part to say much in his praise. His works tell of his wondrous industry, accuracy, and insight into all that pertains to surgery and its kindred subjects. The Museum of the College of Surgeons contains the results of most of his work in natural history and pathology, and is a lasting monument to his fame. "The range of Hunter's work," says Paget in his Hunterian oration, "matched with its quantity and the time devoted to it; never before or since—I think I am safe in saying this—never before or since has any man been at one time a thorough student and investigator in so wide a field of science. He was an enthusiastic naturalist; as a comparative anatomist and physiologist he was quite unrivalled; among pathologists of his time he was by far the first; among the few geologists and students of vegetable physiology he was one, if not chief; and he was a great practical surgeon, surgeon to a large hospital, and holding for some years the largest practice in this town. In all these subjects at one time no one but Hunter has ever been eminent and active."[1]

What Hunter did here is surely a noble example to you all. Endeavour to your utmost to be guided by his work, and endeavour, however distantly, to follow in his footsteps, if your ambition be success in your profession.

> 'Tis not in mortals to command success;
> But we'll do more, Sempronius, we'll deserve it.

I had the privilege and good fortune to commence work here when Sir Benjamin Brodie was surgeon to the hospital. I may truly say that a more industrious, thorough in all work, painstaking and accurate in detail, or a more truthful man could not be met with. He was most particular in the notes taken of his cases; and nothing pleased him more than to find a student at the bedside of a patient with notebook in hand, recording the particulars of a case. If you will investigate the contents of our museum you will find in it much that relates to his work in surgery and pathology. Great industry, great intelligence, great good common sense, and perfect truthfulness were the leading characteristics of his life, and the secret of his success as one of the most eminent surgeons of his time.

Lastly, of those gone from us and surgeons here, I should not do justice to St. George's or to my own feelings, were I not to speak of Cæsar Hawkins. His work here did honour to him, and to us. Honest, industrious, truthful, accurate in his observations, and in his teaching he was one of the most clear-minded and well-informed in his profession that it has

[1] Paget, Hunterian Oration, 1877.

been my good fortune to know. It was my privilege to attend him in his last illness. On communicating his death to Sir James Paget, who had known him long, not only in practice but also as a member of the Council and President of the Royal College of Surgeons, I received the following reply, which I feel sure all will be pleased to listen to: "We have lost, I think, the clearest mind in our profession, the mind in which accuracy was least swayed by imagination, or temper, or desire for renown, and I have never known one more completely honest, or discreet in council, or less influenced by self than Cæsar Hawkins was. We who knew him well may think ourselves, in this at least, more fortunate than our juniors." Nothing could be more true or more just than these observations. Especially would I draw your attention to the remark made as to Cæsar Hawkins being free from all self-interest when consulted during his long professional life. Remember that this is a very great quality, not a very general one. It has been well said: "When self the wavering balance shakes, it's rarely right adjusted." Take the example of Cæsar Hawkins, and put selves out of court when called into council, or to deal with questions of conduct, or when your advice is sought.

I was much struck by an observation of Mr. Balfour's, made not long since at a meeting of scientific men, which bears strongly in support of what has just been referred to: "Truth, not profit," he remarked, "must necessarily be the motto of every body of scientific men who desire to be remembered by posterity in their discussions."

Gentlemen, your work must be stimulated by honest purposes and rightly-directed ambition—ambition for success and a good name—ambition to succeed, if not to excel, in whatever department of your profession your future may be cast.

> Hundreds before me vain ambition cry,
> Thousands behind me common sense reply.

Let your ambition be tempered with common sense—rather a rare quality—backed by industry and supported by honest and right-minded conduct; and it is few, indeed, who need fail to gain that success, which such conduct, in most instances, will not fail to secure. But bear in mind still more strongly that it is only too true—"Ambition is a lottery in which there are many prizes, but in dissipation every man draws a blank."

Now in the practice of your profession there are many circumstances which help towards success. One not to be neglected is your personal conduct in your intercourse with your patients. Some men possess the happy gift to impress favourably all with whom they come in contact. All do not inherit this valuable quality, but all may endeavour to acquire some portion of it. There can be no doubt that courteous and refined manners have as much influence in practice as great talent; especially is that success secure when they are combined. Bear yourselves with consideration and kindness towards all with whom you have to deal. Ever remember that in sickness or weakness from disease a patient will appreciate sympathetic attention much more than one in health. A story once told me is, perhaps, as good an example of the benefits derived from amenity of manner as I can relate. A grand uncle of mine, who had amassed a large fortune, was asked by my father what was the great secret of his success in life. He was a charming old man, of most benevolent and lovable disposition. His reply was very simple, but much to the purpose: "I have always found honey catch more flies than vinegar"—a hint that applies to your intercourse with patients equally to that of its adoption in any other call of life. The *suaviter in modo* is a motto ever to be remembered at the bedside of the sick, and should always influence your conduct towards the invalid.

Gentlemen, in the practice of your profession you will meet with a great variety of tempers, constitutions, and idiosyncrasies, which will require all your care, much judgment, and not infrequently much caution to deal with. Of temper and constitution you will judge best how to manage by careful and judicious observation as cases present themselves to you. But of idiosyncrasies I must say something more. The eccentricities of idiosyncrasies in a large number of individuals would require more attention to-day than time will allow. I must, however, bring to your notice some few instances, that you may fully appreciate the importance, nay the necessity, of treating all such as come under notice with respect, not ridicule.

The following instance is remarkable, related to me by the late Dr. Roupell. A relative of his could not partake of rice without most alarming symptoms. You would say with truth one of the most innocent productions of the vegetable kingdom, one upon which thousands of the natives of India and China almost entirely subsist. Some friends of the person referred to wished to test the truth of this peculiar or supposed effect of rice, and knowing that he was fond of biscuits had some prepared with one grain of rice in each. These biscuits were placed near him after dinner, and he partook of two or three. He became uncomfortable, and had to leave the table, observing at the same time that if he were not morally certain he had not partaken of rice at dinner, he was being poisoned by it.

Another amusing instance is that of a man who could not eat gooseberries without their producing an eczematous eruption on some part of the body. When dining with a fashionable party, soon after the champagne had been handed round, he observed to a friend sitting next to him—and from whom I heard the facts—that the wine was not champagne, but gooseberry wine, and pulling up his shirtsleeve, showed him the specific eczematous rash appearing. But what applies to the rice in the one case, or to the gooseberry in the other, also applies to many drugs in our Pharmacopœia.

Be careful in prescribing whenever your patient may tell you that a certain drug does not agree with him. Sir Russell Reynolds has sent me the following notes: "An elderly lady and patient known to me was highly susceptible to the influence of opium in any form, even to the minutest dose, its use inducing symptoms like Asiatic cholera. Many years before I had witnessed these effects she had casually mentioned this peculiarity to me. In prescribing for her when suffering from bronchial catarrh I put in 10 minims of compound tincture of camphor. About half an hour after I was summoned, and found that she had been vomiting and purging, and was in a state of collapse. I had entirely forgotten the peculiarity with relation to opium, and in prescribing scarcely realised that in ordinary paregoric I was prescribing opium. In this case the dose of opium must have been $\frac{1}{4}$th of a grain." Mercury will salivate rapidly in some instances, whether given internally or applied in the form of ointment. The importance of this fact in practice is illustrated by a case which occurred to me when surgeon here. I had operated on a young woman for cleft palate. The parts were satisfactorily brought together with every prospect of early and complete union. In almost all operations in the mouth the tongue often becomes much coated. The house-surgeon of the day considered it desirable to order a dose of calomel in consequence of the state of the tongue the day following the operation. The patient became most freely salivated, with the result that all union of the wound was arrested, and for the time being the operation proved abortive. I could refer to other instances of idiosyncrasies with respect to the influence of opium, belladonna, and other drugs, but I think I have said sufficient to convince you of the importance of treating all idiosyncrasies with careful consideration. No doubt several of you can recall instances of idiosyncrasies in your intercourse with relations and friends, but what I wish to impress upon you is the importance of not ignoring, in practice, cases you may have brought before you. Treat them with respect, not with incredulity or contempt.

Lord Byron in his reported conversations with the Countess of Blessington remarked to her that "medical men do not sufficiently attend to idiosyncrasies on which so much depends, and often hurry to the grave one patient by a treatment that has succeeded in another. The moment they ascertain a disease to be the same as one they have known, they conclude the same remedies that cured the first must remove those of the second, not making allowance for the peculiarities of temperament, habits, and disposition, which last has a great influence in maladies." These remarks are simply exaggerations of feeling and fact. Byron was not one enamoured with the medical profession more than he was with professors of divinity, but he was an acute observer, and

it was interesting to me to read his views respecting idiosyncrasies. He judged rightly—very rightly—of their importance in connection with the practice of medicine.

Observe, gentlemen, that he makes use of the word "cure" to denote "treatment," a word too frequently used without reflection by the world generally, and quite inapplicable to the circumstances of our successful attendance on the sick. The empiric proclaims that the administration of certain drugs, or a combination of them, is essentially a "cure" of such and such a complaint, but the rightly thinking and experienced medical man will tell you to bear in mind that "cure" is not a term to be used by the educated practitioner. What can or do we "cure" in disorders or disease? Nothing I fear. We treat and watch with care "all the ills that flesh is heir to."

By judicious treatment we may sometimes shorten an attack of illness, and probably do so in many cases of sickness; but the mysteries and course of disease are influenced much more by causes over many of which we have absolutely no control. Take for instance the eruptive diseases of childhood or mature life. Do we by treatment cut short the progress of scarlet or typhoid fever, or other disorders which need not be enumerated? The late Dr. Wilson, physician to this hospital, a great scholar and a man of great observation and reflection, was ever strongly opposed to the use of the word. It was he who first impressed me with the importance of discarding it as incorrect in all our views with respect to the action of medicines. Patients, he would observe, may "recover" under treatment, but we do not "cure" them. "Some credit must be given to Nature for her assistance in the recovery." "Cure" is the motto of the empiric.

There is another point of practical importance, gentlemen, to which I particularly wish to direct your attention. You will have to listen to many a tale, or history of a case, from a patient, or one who in practice may require your co-operation. Listen to all that may be told you with attention and consideration; but whatever be told you, be sure to satisfy yourselves that you have facts and not mere statements to guide your decision, and upon which you have to form your diagnosis and decide your treatment. Take nothing for granted. Take every precaution to establish in your minds the absolute truth of all related to you, and seek for yourselves the symptoms to establish that truth. I heard it once said, and it has remained engrafted in my mind, "that in medicine, as in most other callings, taking a thing for granted, without satisfactory evidence, was often the cause of more mistakes than ignorance."

UNIVERSITY COLLEGE, LIVERPOOL.

THE EXAMINATION SYSTEM.

By Jonathan Hutchinson, F.R.C.S., F.R.S.
Emeritus Professor of Surgery in the London Hospital Medical School.

My Lord Derby, Ladies and Gentlemen.—In searching round for some topic which should prove of general interest on the present occasion, I have hit upon that of Examinations. It is one which concerns us all. We have all of us been examined, most of us expect to be examined again, some of us are examiners now and others will be in the future, and finally a few of us are ex-examiners looking back upon our own careers, and reflecting with much interest upon the whole machinery of modern education, of which examinations form such a prominent part. I am thinking not solely of our professional education, but am venturing for the moment to glance over a wider field. Examinations are the order of the day, and, without much regard of sex or station in life, we now see the youth of the whole community offer itself as so much subject-matter for the examiner's scrutiny. The motives for this vary in different cases. With many it is the necessity of obtaining a certificate or diploma essential to success in life, with others merely a desire to be honourably distinguished, and with yet others a conformity with custom and an unwillingness to be in any sense left behind.

Various, however, as may have been the motives which have drawn students to the Examination Room, of one point there will have been uniformity, and it is most important. It is this, that the scope of the examination in prospect has been of all importance in determining that of the previous course of study. "This I shall want;" "That I shall not be asked," has been the ever present thought in the selection of subjects for reading and thought. Whatever was deemed not likely to be asked for has been ruthlessly put aside, whatever its intrinsic interest. The demands of the examiner set the pace of study, and the breadth of the examination determines the narrowness, or otherwise, of the student's education. Such being the facts, and the probability being that they will increase in cogency as years go on, it is obviously of the utmost importance to the community that careful consideration should be given to the perfecting of our examination system. It may be a hindrance to the spread of knowledge and the development of the mental powers, or it may if carefully managed become a powerful aid to both.

The aim of sound education should be to convey to the coming generation as much as possible of the knowledge already acquired by its predecessors, and in doing this to still leave the faculties untrammelled and the memory not overburdened. The teacher, whilst seeking to create and to satisfy the appetite for knowledge, must above all things be on his guard lest his well-intentioned endeavours may repress it and cause disgust. I fear it is not very likely that pass or pluck examinations can ever be made to do much to foster the love of knowledge. Here and there it may by chance happen that a mind is led to see the attractiveness of some subject which would have escaped his attention had it not been thus forced upon him, just as a sportsman may see the beauty of a wild which he would never have visited but in pursuit of game. In the main, however, it is all the other way, and the fag of preparation and the innate dislike of giving reasons on compulsion create distaste rather than otherwise for the subjects concerned. Against this—it is to be feared the natural result of compulsory examinations—it is wise to take all possible precautions. Examinations should be made as little distasteful as possible.

To this end it is essential, in the first place, that the element of uncertainty should as far as possible be eliminated. The candidate ought to feel throughout his studies that in presenting himself to an examiner he does that which is equivalent to placing himself in a weighing machine, and that the verdict recorded will be in exact relation to his deserts. In proportion as the hope is indulged that success may be attained by good luck will the thoroughness of study be neglected, and just as it may be possible to suspect that the mood of the examiner, the complexity of a question, or some other accidental circumstance may have influenced the result, will be the disappointment and vexation of a pluck.

These considerations bring us at once face to face with details. It has been, I believe, the steady tendency of all Examination Boards to dispense with personal contact between the examiner and the examined, to trust more and more to written questions and answers. To take as instance our own College of Surgeons, the time is not so very long ago when Sir Astley Cooper and a few of his colleagues met together after dinner and in a very short space of time and with very little formality indeed decided the fates of a batch of candidates. If a student were a man of gentlemanly bearing, if he had studied at the proper schools, and did not display gross ignorance, he was in no sort of danger. The examiner might ask his name and place of birth, and possibly send a kind message to his father or uncle. All this has been changed now, and so much for the better, that a feeling akin to reluctance arises in asking you to entertain the question as to whether further improvements are possible. A large part of the examination is now in writing; it is divided into various departments, and occupies probably as many quarters of an hour as the old one did minutes. To be personally known to an examiner is possibly now a disadvantage rather than otherwise, and the responsibility for the result is now shared by a dozen or more of conscientious men acting to a large extent in independence of each other, but never singly. Yet, in spite of these improvements, we still hear complaints—sometimes loud ones, and coming from those who have a right to make them—that the scales of the College do not always weigh correctly. A man may be rejected who was the pride of his teachers, and one may be passed whom they much mistrusted.

That I may avoid the ungracious position of appearing as

the critic of a special institution, and at the same time that I may escape the necessity for repetition I will now venture some general suggestions applicable to all examinations. The personal element, that of the examiner, should be eliminated as far as possible. To this end *viva voce* examinations should as far as practicable be avoided. I have heard a self-confident examiner allege that he could tell better what was in a man by five minutes' conversation than by reading any number of his written papers, and I did not doubt that he thought so. This judgment of men as it were by personal inspection is often most fallacious, and should be permitted only with the utmost circumspection. Most certainly the impression so formed by any single examiner, or any two associated examiners, ought never to be permitted to override that of their colleagues. In other words the result of the examination ought always to be determined by the sum of the marks gained, and no rejection should take place in consequence solely of the adverse vote of a single table. This applies to all departments of the examination but with special emphasis to the *viva voce*, in which no individual examiner ought to possess the power of rejection. A candidate may be at great disadvantage in *viva voce*, especially in the hands of an examiner who thinks it his duty to pin him to some subject in which he appears weak. The dawning perception of the possibility of rejection may deprive a good man of his resources, and ensure for him a wholly undeserved fate.

Another great objection to *viva voce* examination is that the decision must be recorded hurriedly, on the spur of the moment, and that there remain no data in evidence to which to recur. Few indeed are the subjects in which a candidate is not most likely to do himself justice (whether to his advantage or otherwise) in a quiet half-hour with pens and ink.

It by no means follows that the disuse of *viva voce* would throw us back wholly on set verbal questions. There remains the extensive field of objective examination. Under this head we have the identification of specimens and the use of the microscope and of chemical tests, and the diagnosis of disease in the living patient. This kind of examination it is which conduces most of all to sound matter-of-fact objective teaching. It is perhaps the most important of all modes, and is one which in the future is destined to receive more and more attention. Although it may be admitted that the diagnosis of disease in patients can never be suitably done excepting in the presence and under the supervision of an examiner, yet it is better that the latter should not interfere by question or suggestion, and that the candidate should be permitted at his leisure to write out the opinion which he has formed.

We come next to the consideration of papers and of paper setting. Here I have an innovation to suggest. It is that examiners should not be allowed to extemporise their questions, but should be furnished with lists of approved ones out of which to select. It is impossible to deny that of those now set, many are ill expressed and some wholly unsuitable. It is no legitimate part of an examination to take the candidate by surprise, or confound him with the unexpected. Nor should half of the time allowed be taken up in the effort to understand what the terms of the question are intended to mean. Yet obscurities of this kind are inevitable under the present scheme of question setting, which involves the preparation of them by men under much pressure of other engagements, and with but little time at their disposal. Questions suitable for examination purposes should be devised at leisure, and expressed in the clearest possible language.

Under this plan each separate examination should have its own catechism of questions to which the examiner should be restricted. Of this a revised edition should be published every five years. It should be a rule that a third of the questions selected should be of the objective kind, and should necessitate the recognition or description of something. By this precaution the evils of cramming might be forestalled for the crammer must perforce become the teacher of sound knowledge.

One great collateral advantage of systematic and exclusively of written examinations of the kind suggested, would be that those conducted by different bodies might be brought more nearly into uniformity. The written answers should be preserved, and in the case of our own profession ought to be producible at any time on the demand of the General Medical Council. Nor would there be the necessity which is now supposed to exist for the employment of seniors in the profession as examiners. Younger men having leisure, and working under the supervision of an experienced chief, might do the work not only as well but much better. It must be noted as a distinct drawback in our present system that those employed in it are men whose time and thoughts are very fully engaged in other matters, and who came to their examination work already wearied with that of the day. A never failing answer to all projects of reform is that the time of the examiners must be considered, and proposals which would involve either extension of time or addition of work are sure to encounter determined opposition. The machinery of examinations will, however, never work satisfactorily until considerations of time and trouble are put wholly aside. Nothing is more essential to just conclusions than that the process should be conducted with leisurely quiet; nor, let me add should it be in the hands of those who, in consequence of frequent changes and short periods of office, are more or less inexperienced. It is the fashion to hold that anyone who knows his subject can examine in it, but in truth it is not so, and the art of examining is one which, like other arts, needs to be learned. The man who has been some years at work makes, I feel sure, other things being equal, a far more trustworthy examiner than a novice. To some extent, especially in some departments, examining should be a profession in itself.

I am aware that there are differences amongst those well entitled to their opinions as to the advantages of subdivision in examinations. It is sometimes sought to throw mild ridicule on divided examinations by speaking of them as "taking your dose in teaspoonfuls." It is thought that by allowing a man to come up in one subject at a time you encourage cramming and voluntary forgetting. I may confess that my own impressions are very strongly in favour of subdivision. In their favour it may, I think, be, in the first place, urged that a much more detailed and practical knowledge may be suitably exacted at a special examination than would be demanded at one which included a great variety of topics. If, for instance, a candidate were allowed to present himself whenever he liked for his examination in ophthalmic medicine and surgery, and to take that subject by itself, he would certainly get it up in a very different fashion from what would probably be the case if he were only going to encounter the risk of a stray question or two as part of an examination in general surgery. He would, in all probability, have attended as an eager and attentive learner at some special institution. Are we to believe that he would forget what he so learnt sooner than he does the scraps of book information with which but too often he is obliged to be content under our present system. He would know well that at such a special examination a much higher standard would be demanded. Having obtained his certificate for eye disease he would proceed with cheerfulness and with a less-burdened mind to other subjects. Undoubtedly much will be forgotten. That is inevitable under every plan. It is not, however, so much the mere change of the attention from one topic to another which tends to obliterate knowledge as the fact that the thing had never been really learned at all. We all remember Dr. Johnson's retort to the man who pleaded that he had "forgotten his Greek."

In support of the principle of divided examinations, it may also be urged that it would permit of the restoration of certain subjects, such as botany and zoology, which have been for well known reasons left aside, and even of the insertion of others. I am here possibly on delicate ground. Permit me to say, however, that I do most certainly hold that a medical man ought to be a well educated gentleman, and that he ought not to wholly omit from his training at any rate an elementary knowledge of those branches of natural science which are cognate with his special calling. It is quite true that it is no longer necessary to have studied botany in order to prescribe drugs; but there are other and yet more cogent motives for its pursuit. As a branch of the great science of biology it presents us with lessons which are full of interest and instruction. The same is to be asserted

of zoology, and with perhaps only little less cogency of geology, climatology, and some other topics. The attainment of knowledge in all these is not difficult, if it be sought in the right way. To that end divided examinations—not perhaps compulsory, but resulting in certificates which should be contributory—would be of great assistance.

The advocates of inclusive or comprehensive final examinations—and amongst these are, I believe, some of our leading authorities on education—urge with plausibility that they are better tests of a man's memory and mental powers. To some extent this may be admitted, but their superiority in this respect is probably very limited. By no means can it be alleged that those whose memories have sufficed to carry them through an examination in half-a-dozen different subjects on one and the same occasion will subsequently retain the knowledge which they then displayed. The diploma or certificate is, unfortunately, no talisman which will secure us against the treacherous influence of the world's pursuits in obliterating the record of the labours of our student days. Some confession of weakness on the part of the present system is, I think, to be found in the limitations which it has been found needful to impose upon the scope of these many-subject examinations. Students are informed beforehand that only such and such topics will be taken. This is, perhaps, not done so much in our medical examinations as in those of general education. Thus, in botany a candidate at South Kensington is informed that fourteen natural orders only will be questioned in, and that he need not know anything of Papaveraceæ, for example, and a host of others. At Cambridge he must add Papaveraceæ to his repertory, but may still leave aside almost all the rest. At most of our examinations the important subkingdom of Fungi may be left out of consideration altogether. I mention these merely as examples; the same principle will be found to pervade other departments, and the result is a sort of patchwork education, the incompleteness of which is much to be regretted. Our children are taught one reign in English history, for instance, or one short period in that of Greece or Rome and do not obtain, as I think their forefathers did, a general, though it is to be admitted a superficial view, of the whole. Modern education, in its zeal to avoid the charge of being superficial, incurs, as it seems to me, that of being merely fragmentary. It aims at thoroughness, but is obliged at once to admit that it can attain it only in certain subjects which, compared with the sum of human knowledge, are but few and small. Let those of us who advocate wide study, and as a consequence wide examinations, face at once this charge of encouraging a merely superficial acquaintance with things. There is much to be said in its favour. Excepting a very few of us, we are all mere smatterers as regards almost all that we think we know. It is not possible to be otherwise excepting at the cost of being wholly ignorant in many directions, and as regards fitness for the affairs of life, better by far a general acquaintance with all that is around us, though it be not very deep, than slices of profound knowledge placed sandwich-wise between thick layers of utter ignorance. In the medical profession more especially is this alternating method of education to be shunned. We cannot afford to allow attainments in one direction to counterbalance vacuity in another. Hence I think a very strong reason for allowing our students to subdivide their studies and take one at a time, with the understanding that they do that thing for the time, well.

I must now, my Lord and Gentlemen, attempt a brief summary of what I fear has been a very discursive address, and then conclude. If I have given to any the impression that I am in favour of increased stringency or of increased leniency in medical examinations, let me hasten to remove that idea. My plea has been rather that our examinations should become more and more an integral part of our educational system, and that by making them more exact and more definite we should enable them to better assist the labours both of teacher and student. The latter especially should be brought to feel that his examinations, so far from being sources of harass and worry, are really his best friends; in guiding his work and at the same time gauging his attainments. I have advocated frequent examinations, but at the same time have urged that the student should be allowed to take one thing at a time, and thus, as it were, to have the pleasure of counting the milestones in his journey. With the hope of reducing to a minimum the uncertainties of examinations, I have ventured to suggest some curtailment of the privileges of examiners, more especially that they should no longer be invited to exercise their ingenuity in devising extempore written questions, but should have supplied to them carefully prepared lists of suitable ones, which lists should also be accessible to the candidates.

If on some matters I have ventured upon detail which may be thought better suited for a Board of Examiners than for the present audience, my reply is clear. It is time that the public—in the case of our medical examinations I mean, of course, the professional public—should interest itself in this matter. It is one of the widest possible importance, and for reasons which need not now be mentioned it is one in which only reforms of a certain class should be looked for from within. No one conversant with human nature will expect from those actually holding office reforms which might be thought to reduce the dignity of that office. As to *viva voce* examinations, I have suggested that they should give way to written ones. Surely we are behind the day when we keep up the custom of putting specimens into the hands of nervous students and demanding impromptu recognition, when with less expenditure of the examiner's time a quiet hour with half-a-dozen such preparations might be allowed. Who can doubt as to which would best test the pathological knowledge of the candidate? It is the same with the diagnosis of disease in patients.

Many of you listened not long ago, and I believe in this hall, to an address from one whose name stands, I may say without offence to any, as the foremost representative of surgery in Liverpool during the present generation—my friend Mr. Mitchell Banks. He took for his text "the overcrowding of the profession." I will not attempt to epitomise an address which was throughout racy with humour and yet solid with sense. With most of what Mr. Banks told you I thoroughly agree. More especially we are entirely at one in his conclusion, which was that the safety of the profession lies not in new legislation of any kind, but in its own examinations. His chief proposal was to increase the stringency of the matriculation, and thus prevent at once the entrance of the illiterate. In what I have said to-day I have taken up the same idea, but have carried it a little further, suggesting that arrangements should be made throughout the whole course of study which should encourage the industrious and choke off the incompetent and idle. The key to the whole situation is in the hands of the examiner. Curricula of study are worthless without his aid, and certificates of study granted without examination are of no avail whatever. If our examinations were developed we might almost wholly dispense with both, and leave the student almost at his free will to choose and to change his places of study. Only make our examinations trustworthy and thorough, and we need no other safeguards.

Amongst those who hear me, I doubt not there are representatives of different interests in this matter. The student has been much accustomed to regard the examiner as his enemy, and looks upon any suggestion which he thinks would make the test more stringent almost as unmitigated hardship. Paterfamilias, who has sons to pass, takes the same side with perhaps added warmth, on account of a keen recognition of the probable increase of cost. Striving practitioners who have neither sons nor nephews are, on the other hand, willing enough that the portals of the profession should be more strictly guarded. To one and all let me earnestly say that we are all in the same boat. The student of to-day will be the practitioner of to-morrow. It is possible that the supposed evils of overcrowding have been exaggerated, and I am sure that none of us would like to restrict, were it possible, the number of students to that of the supposed needs of the public for medical practitioners. We put a higher estimate on the value of medical training than would allow of our desiring any such protection. From men educated in the schools of medicine have sprung naturalists, men of science, explorers, and those foremost in every branch of knowledge. This has been our boast in the past, let us take care that we do nothing to frustrate it in the future. Let us put no artificial impediments in the way of entrance to our ranks. Let us, however, at the same time, by careful attention to the

details of our examinations, make sure of this—that if we are to be overcrowded, it shall be by well-educated gentlemen.

MASON COLLEGE, BIRMINGHAM.

PASTEUR AND HIS WORK: THE DEBT OF MEDICINE TO CHEMISTRY.

By Professor Percy Frankland, F.R.S.,
Professor of Chemistry in the College.

The general public, although occasionally interested in striking scientific discoveries, is rarely concerned with the causes which have led up to them; they are attracted, so to speak, by the discovery of America, by the prospect of wealth and other advantages to be gained from the achievement, but they trouble themselves little about the previous labours and speculations of Columbus and his predecessors. It is obvious, however, that in reality the causes leading to discovery are in many respects deserving of more attention than the discovery itself, as it is only by carefully studying these antecedents that we can hope to obtain guidance as to how similar success may be achieved in the future. The causes leading to scientific discovery are probably best ascertained by pursuing the historical method, and by following the career of some individual whose achievements have made themselves felt amongst all sorts and conditions of men.

In order that scientific investigations shall become thus widely known, it is, of course, necessary that their results should bear directly upon matters which are of practical interest and importance to the average man. It is but rarely the case that the results of scientific investigation can be immediately applied to the problems of practical life, and hence some of the ablest and most distinguished men of science have worked in comparative obscurity, their patient labours only bearing practical fruit perhaps many years after they themselves have passed away.

In our own time we have had a most striking example of the opposite phenomenon. For nearly half-a-century there has been before the scientific world an investigator who, whilst certainly not courting publicity, has nevertheless achieved a celebrity which has hardly been approached, and I think assuredly never surpassed, by that of any *savant* in any age. I think it may be said without exaggeration that there is no scientific name which is so universally known, and in so many different connections, as that of the man whose work forms the basis of my discourse to-day.

Chemist, physicist, biologist, and medical man each recognise in Louis Pasteur the author of some of the most important and fruitful departures in their several branches of knowledge; but, more than this, large sections of the industrial and agricultural worlds look up to him with gratitude and veneration for having placed many of their most uncertain and apparently capricious processes on a sound scientific basis, which has tended to largely increase their profits and in some cases to save them from actual ruin.

As M. Pasteur has now passed the age of three score years and ten, he may be said to have joined the ranks of the grand old men of the day, and it is in no way detracting from his prestige to say that his productive life has closed, for, like so many men who have exerted enduring influence on the world, M. Pasteur's fertility is shown in old age not by new labours of his own, but by the ceaseless toil and brilliant achievements of those numerous disciples who owe their success to the inspiration which they have received from the master, and it is this continuous advance of such children in science which is the true philosopher's dearest immortality.

It appeared to me, therefore, that this would form a fitting occasion to review what this great master has himself accomplished, and to trace the influence which his rare and versatile genius has exerted and is still exerting in various directions.

If a novelist were portraying the life of a *savant*, I venture to think that he would in general represent him as passing with increasing years from comparatively simple to more and more abstruse themes, becoming less and less intelligible to the general public, and pursuing investigations of more and more purely scientific and less and less practical bearing. It is, however, of only too frequent occurrence to find the man of letters going astray when he attempts to enter the world of science, and in respect of Louis Pasteur such portraiture would be fundamentally wrong, for with each succeeding year his work has become less abstract, and has appealed to a wider and wider public, until at length even those who systematically shun science and everything that is connected with it, have been perforce compelled to sullenly receive and heed his teaching. The first researches with which Pasteur made his *début* nearly half-a-century ago, at the age of 25, were of such an abstract character, that had his career terminated with their completion the general world would never have known his name, and yet the initiated few would have been able to recognise one of the shrewdest scientific observers of this or any age.

The strict mathematical as well as chemical training which Pasteur had received as a student at the Sorbonne and at the École Normale, not unnaturally led him to be fascinated with those wonderful geometrical forms which are assumed by solids in what is known as the crystalline state. Now, amidst the marvellous and varied phenomena of crystallisation Pasteur had the remarkable intuition, or perhaps good fortune—for there is luck in the laboratory as well as at cards—to at once select for detailed study almost the only one of these phenomena which even up to the present time has been of much value to scientific progress.

The phenomenon which attracted the attention of young Pasteur was, as all chemists know, the existence of two tartaric acids apparently identical in chemical composition, in chemical properties, in crystalline form, and, in fact, in every detail excepting alone that the solution of one of these tartaric acids had no effect on polarised light, whilst the solution of the other turned the plane of polarisation to the right.

These two all but identical tartaric acids had been examined by some of the most accomplished crystallographers of the day, by Mitscherlich, by Biot, and by M. de la Provostaye, but the younger and keener eyes of Pasteur detected a minute point of difference which had escaped those of these skilled observers. Submitting these crystals to the most searching scrutiny, Pasteur found that there were some minute faces on the crystals of the tartrate which was active to polarised light, which faces were absent from the crystals of the tartrate inactive to the polarised beam, and such importance did he attribute to these little faces, that he recognised that their presence relegated the substance possessing them to an entirely different class of objects from that to which belonged the substance possessing them not.

For whilst the crystals of the inactive tartaric acid, which were destitute of these little surfaces, he found were symmetrical, the crystals of the optically active tartaric acid he found were unsymmetrical or *dissymmetric*, as he called it. Now to the symmetric character of the crystals of the one tartaric acid he attributed the inactivity of this tartaric acid to polarised light, whilst with the dissymmetric character of the crystals of the other tartaric acid he connected its action on the polarised beam.

The intrinsic and fundamental difference between these two classes of bodies—the *symmetric* and the *dissymmetric*—is perhaps most easily realised by placing them before a mirror, when in the case of the symmetric body the image will be identical with the object, whilst in the case of the dissymmetric body the image and object are not identical, but bear the same relationship to each other as the left and right hands do, which are perhaps the most familiar instances of dissymetric objects. Thus placing the crystal of active tartaric acid in front of a mirror, the reflection obtained is not the same crystal as the original, but related to it as the left hand to the right hand; but on placing the crystal of the inactive tartaric acid before a mirror, the image is in every respect identical with the original crystal.

In studying these apparently insignificant details, Pasteur found that by crystallising the inactive tartaric acid in a particular way he obtained two different kinds of crystals, the one set being identical with those of the active tartaric acid already known, whilst the other set were the mirror images of these, and had never been seen by the eye of man before. The young philosopher at once drew the conclusion that if the dissymmetry of the known tartaric

acid caused it to turn the plane of polarisation to the right, the dissymmetry of this new tartaric acid would turn it to the left.

With infinite pains Pasteur picks out from the mixture the individual crystals belonging to each of the two types, and arranges them in two heaps; each of these heaps of crystals was then separately dissolved in water, and the two solutions submitted to polarised light. In accordance with his anticipation, whilst the solution of the crystals of the known form was found to turn the plane of polarisation to the right, the solution of the new crystals, the mirror images of the old, was found to turn the plane through precisely the same angle to the left. This might have appeared to many a trivial discovery only, but such was not Pasteur's opinion of it, for rushing from the laboratory in a fever of excitement and meeting a fellow assistant in the corridor, he embraces him, and exclaims, overcome with emotion, "Je viens de faire une grande découverte!" And such in truth it was, although almost his first discovery, and the one which has the least contributed to the general celebrity of its author, it is nevertheless almost impossible to overestimate its importance in view of the remarkable fertility of the researches to which it has directly and indirectly given rise.

Although Pasteur pointed out that the differences in optical properties and in crystalline form exhibited by these two oppositely active tartaric acids were doubtless dependent on the two molecules having a different arrangement of their constituent atoms, the arrangement in each case being dissymmetric, and clearly indicated that whatever the dissymmetry of the one tartaric acid might consist in it must be related to the dissymmetry of the other tartaric acid in the same sort of way as the dissymmetry of the left hand is related to the dissymmetry of the right hand; still at the time organic chemistry was not sufficiently advanced to make any immediate use of these speculations. The remarkable progress and development of organic chemistry which characterise the latter half of the present century, before long led to the further interpretation of these phenomena exhibited by the tartaric acids. For some years later (1870) Wislicenus was confronted with similar phenomena in the case of lactic acid, and with the more perfect knowledge which had then been gained as to the grouping of the atoms in the molecule, he was led to hazard the suggestion that the difference between the two lactic acids was due to a difference in the arrangement of the atoms in the molecule which could not be represented by the ordinary plane formulæ of chemists, but required a consideration of the arrangement of the atoms in the three dimensions of space.

This suggestion, giving as it did further substance to Pasteur's previously expressed views of dissymmetry, was the foundation of that most fascinating and fertile field of chemical science which is now known as stereochemistry, the guiding principles of which were elaborated in 1874 with such rare skill and prescience by Van't Hoff and Le Bel, and which, like nearly all new and original departures in science, met at the outset with the most scathing criticism and even scornful ridicule from some of the conservative and fossil professors of the time.

These views, concerning the spacial arrangement of the atoms within the molecule, have, however, long since passed their probationary stage, and their provisional acceptance at any rate has become absolutely indispensable to a proper understanding of recent advances in our knowledge of the carbon compounds. The fertility of these views in stimulating successful researches has been almost limitless: thus some of the most brilliant achievements of modern chemists, such as the artificial synthesis by Ladenburg of the alkaloidal poison *Coniine*, which forms the deadly instrument of execution concealed in the cup of hemlock, and the wonderful series of investigations, which in the able hands of Emil Fischer, has culminated in the preparation of some of the principal natural sugars, these investigations owe their success entirely to the guidance of those theories of stereochemistry, which are the direct outcome of Pasteur's fundamental researches on the tartaric acids.

The theory of the arrangement of the atoms in space has, however, also been applied with great success to substances which have no action on polarised light at all. Amongst the enormous number of carbon compounds prepared and accurately studied during the past fifty years it has repeatedly been found necessary to assume that in some the atoms are arranged in a closed chain or ring, as opposed to the open chain arrangement which must be assumed to exist in many others. Now one of the most striking things about these closed chains is the fact that they almost invariably consist of either five or six atoms; a vast number of these ring compounds are in fact derivatives of the well-known hydrocarbon benzene, in which chemists have long recognised the presence of a ring consisting of six atoms of carbon. This remarkable predisposition to form five or six atom rings finds a ready explanation when Van't Hoff's tetrahedral arrangement of the carbon bonds and the relative positions of the atoms in space are taken into consideration.

The fertility of these speculations has led to chemists constructing similar hypotheses with regard to the arrangement in space of the groups attached to nitrogen atoms, the investigation of which is being eagerly prosecuted by numerous workers at the present time, whilst others still more imaginative are extending stereochemical views even to some of the compounds of platinum, cobalt, and other metals.

By these first researches we see, then, that Pasteur became the father of one of the most wonderful departments of modern chemistry, namely, the one which has for its ambition the discovery of the spacial distribution of the individual atoms in the molecule. Thus, Pasteur's first researches possessed in themselves purely theoretical interest; they were, however, masterpieces of thoroughness, and exhibited so much experimental skill, intuition, and power of careful observation combined with clear judgment, that, even had his career been cut short at this stage, we should have had no hesitation in recognising in him one of the most remarkable and exceptionally gifted of investigators. From these early researches, however, we should have had no positive indication of the man's power of harnessing science to the problems of practical life. His genius was, however, not long to be retained in the exclusive service of abstract science, and it is interesting to follow the circumstances which led him to find scope for the practical side of his abilities. It was not, as many might suppose, that he had suddenly set himself some definite problem of great practical moment to work out, for in scientific investigation it almost invariably happens that one step leads to another; the experience gained in one piece of work qualifies the worker to see how on in some definite direction and not to plunge into the unknown at random. Thus, in Pasteur's case the great practical work of his life followed almost as a necessary consequence on his achievements in the purely scientific domain to which I have already referred.

In the course of his experiments on the different kinds of tartaric acid, he was led to try the effect of submitting them to fermentation, for it was already known that ordinary tartaric acid underwent a process of fermentation when left in contact with dirty water.

Submitting this process of fermentation to his penetrating scrutiny, he made the remarkable discovery that whilst ordinary right-handed tartaric acid suffered complete fermentative decomposition, the inactive tartaric acid (known as racemic acid, and which he had shown, as we have seen, is a mixture in equal parts of left and right-handed tartaric acids), was only partially fermented away, the unfermented residue proving to be left-handed tartaric acid.

In plain language this means that whilst right-handed and left-handed tartaric acids are chemically identical, and are distinguishable only by their crystalline form and opposite action on polarised light, they are, nevertheless, utterly different from a physiological point of view; for the right-handed tartaric acid is alone taken up and transformed by the fermentative bacteria which refuse to have anything to do with the left-handed tartaric acid. Thus the apparently trivial difference in the arrangement of the atoms in space in the case of these two tartaric acids makes an overwhelming difference in their physiological character.

This phenomenon, which is undoubtedly one of the most striking in the whole domain of chemical science, appears to be a very general one in the case of bodies admitting of two or more different arrangements of their atoms in space. Although not further pursued by its discoverer, this physi-

ological difference has been largely utilised by subsequent investigators for the preparation of optically active compounds.

The study of these optical properties of the tartaric acids had thus by accident as it were drawn Pasteur from the inanimate world of pure molecular chemistry into the vortex of the world of life, and to the study of vital phenomena practically the whole of his genius and energy was subsequently devoted.

If, as I have endeavoured to show, his influence on molecular chemistry has been of the most profound and far-reaching character, in the domain of biology his influence has been no less remarkable and stimulating. The frontier line, which Pasteur crossed from chemical on to biological soil, was at the time as undefined, and as much a matter of debate, as is the line of demarcation between the spheres of British and Russian influence in Central Asia. For the phenomena of fermentation which Pasteur had attacked were, in fact, not generally regarded as vital phenomena at all. For, when Pasteur crossed what proved to be this Rubicon in his career, the dominant opinion concerning the fermentation processes was that of Liebig, who viewed the classical transformation of sugar into alcohol as a purely chemical process, and depending not upon the living yeast cells which the microscope revealed, but upon the dead yeast undergoing *post-mortem* decomposition. Every foreman in a brewery to-day is better instructed on this subject than was the great Liebig thirty years ago. It will, however, be easily understood that the firm conviction of this brilliant man of science was not to be overthrown in public estimation in a day nor by the mere enunciation of a counter dogma. It required years of patient labour, in which almost every form of fermentation was submitted to careful experiment, before the old ideas which rested upon such high authority as that of Liebig were finally abandoned and made to disappear.

Not only was the fermentation of the grape juice in the production of wine, the fermentation of malt liquor in the brewing of beer, the souring of wine in the manufacture of vinegar, the souring of milk, and other fermentation processes of less general interest shown to be the work of micro-scopic organisms, but each fermentation process was shown to be the work of distinct organisms, and that the work of one set of organisms may be interfered with by the presence of another set of organisms, as the crop of wheat may be interfered with and choked by the proverbial tares of the enemy.

It was here that the practical value of Pasteur's researches first began to assert itself. The results of his fermentation experiments, embodied in his imperishable *Etudes sur la Bière, sur le Vin, et sur le Vinaigre*, were not merely of high theoretical importance; they did not only appeal to the philosopher, but had to be studied by the man of pounds, shillings, and pence, engaged in producing those commodities which are the result of fermentation processes. Knowledge and appreciation of his laboratory results has meant wealth to the brewer, the distiller, and the wine grower, whilst ignorance of his work and inattention to his teaching has with even greater certainty meant bankruptcy and disaster. It is indeed no exaggeration to say that the modern brewer is able to almost cheerfully endure the relentless taxation of the late Chancellor of the Exchequer as much through the labours of Pasteur and those who have succeeded him as through the unquenchable thirst of the British proletariate.

Extensive as were Pasteur's researches in the domain of fermentation, there were problems of this nature which time did not permit him to investigate before he was lured on into other fields of scientific interest and practical utility. His intuition, however, led him to foreshadow some of the subsequent achievements in this direction. Thus, he boldly put as a probable fermentative process—that is, a process dependent on the vitality of micro-scopic forms of life—that chemical change known as nitrification, which consists in the conversion of ammonia into salts of nitric acid, and which takes place on such a gigantic scale in all the fertile soils of the earth. This process, which had always been regarded as a case of direct and simple oxidation, was a number of years later shown, indeed, to be entirely due to the agency of bacterial life, whilst it required the further span of time before the methods of bacteriological research were sufficiently advanced to admit of the isolation and study of the particular micro-organisms responsible for this important nitrification-process, upon which depends not only the fertility of the soil, but also the production of gunpowder, as well as of nearly all the more modern explosives of peace, anarchy, and war.

But almost still more remarkable revelations in connection with agriculture have resulted from the careful study of bacteria during recent years. For it has been shown that, contrary to the general opinion of some of the most careful and competent experimenters of the last generation, certain green plants are apparently able to obtain the nitrogen which they require for their nutrition from the atmosphere, but that this assimilation of free nitrogen only goes on when the soil is infested with certain micro-organisms which provoke the formation of nodular excrescences on the roots, and that, when these micro organisms are carefully excluded, neither do the root nodules make their appearance, nor is the assimilation of free nitrogen accomplished.

Uncertainty long prevailed as to the respective parts played by the plant and the microbe in this nitrogen assimilation, but the comparatively rough experiments of Berthelot, and the more recent researches of that accomplished bacteriologist Winogradsky, clearly show that this nitrogen assimilation can take place by particular bacteria alone in the absence of any green plant whatever, provided these bacteria are supplied with the necessary quantity of sugar or other carbo-hydrates, and that the fixation of free nitrogen goes on *pari passu* with the destruction of the carbo-hydrate. These researches of Winogradsky are of the very highest interest, as they clearly show that, with the exception of the few direct syntheses of nitrogen compounds from free nitrogen which can be effected by purely chemical means, we must now recognise in these bacteria the silent, invisible, but mighty transformers of free nitrogen, which in its inertness is [illegible] only to argon itself, into those multitudinous nitrogen compounds, the wonderful metamorphoses of which are the foundation of the whole scheme of living Nature on our globe.

Thus the systematic study of fermentation phenomena inaugurated by Pasteur in 1857 has proved wonderfully fertile; in his own hands it led not only to a strict demonstration of the dependence of the chemical changes involved on the vital activity of different forms of microscopic organisms, but he was able also to indicate how those industries which are dependent on such fermentative processes could be materially improved by attention to the principles which his researches had established. Some of his successors in this field have shown how still further refinements may be advantageously introduced into the practice of the fermentation industries, whilst others, again, have proved that some of the most important processes going on in Nature are brought about by the vital activity of these low forms of life. This wonderful concatenation of discoveries, illuminating the impenetrable darkness which had for thousands of years surrounded the mysterious phenomena of fermentation, shows the wisdom and sagacity of the French Academy in awarding to Pasteur the prize for experimental physiology already in the year 1859, and at a time, therefore, when he had but forged the first links of this chain.

The researches of Pasteur with which I have so far dealt have in every case formed the groundwork on which subsequent investigators have been attracted to assist in raising up a vast and imposing edifice, but I have now to briefly refer to a piece of work of great importance, which put, so to speak, the last stone in a structure which had been centuries in building, and the foundations of which must have been laid in the very earliest dawn of civilisation.

No system of philosophy can make any pretensions to completeness without taking into account the problem of the appearance of life on the earth, and this problem has greatly exercised the minds of men in all ages. The history of this subject is of great interest in many ways, chiefly perhaps on account of the proof which it furnishes of the danger of accepting evidence on authority.

Some of the greatest thinkers and observers of past ages have had very definite views on this subject of the generation of life. Aristotle categorically affirms that "every dry body becoming moist, and every moist body becoming dry, engenders animals." Virgil is more specific still in asserting

that bees originate within the putrefying carcass of a young bull. "Aspicunt liquefacta boum per viscera toto stridere apes utero, et ruptis effervere costis."

Again, Van Helmont, the great alchemist and physician of two centuries ago, actually gives the recipe for the production by spontaneous generation of the domestic mouse. His formula consists in squeezing some soiled linen into the mouth of a vessel containing some grains of wheat, which arrangement gives rise to the transmutation of the wheat into mice in the course of about twenty-one days. The mice so generated are said to make their appearance in the adult state, both sexes being duly represented.

In the present century the advocates of spontaneous generation had abandoned their ground as regards such tangible forms of life as bees, frogs, and mice, and had restricted their views to those minutest of organisms which the microscope had rendered visible. The intimate contact in which Pasteur had lived with these microscopic forms during his researches on fermentation naturally led him to take a deep interest in this controversy, into which he plunged with the full vigour and resources of his critical mind, although strongly dissuaded by many of his scientific friends, who feared that nothing but loss of time would come of his venture.

Time will not permit me to describe the experiments, as remarkable for their extreme simplicity as for their clinching force, which were carried out by Pasteur to settle once and for all this question of transcendent importance. His conclusions, which have since been accepted by a whole generation of scientific men, are best summarised in the following incisive words of his own.

"No, there is to-day no known circumstance which permits us to affirm that microscopic beings have come into the world without germs, without parents like unto themselves. Those who hold that they do have been the plaything of illusions, of experiments badly made, tainted with errors which they have not known how to perceive, or which they have not known how to avoid. "*La génération spontanée est une chimère.*"

It was only after this decision, obviously, that the exact study of microscopic life could be proceeded with. Not only does the whole modern science of bacteriology hinge upon this conclusion, but it is the basis of numerous industrial processes for the preservation by so-called "sterilisation" of the most varied articles of food and other putrescible materials which were supposed by the advocates of spontaneous generation to be in themselves the *fons et origo* of a teeming world of microscopic life.

In spite of the unanswerable character of Pasteur's researches, the doctrine of spontaneous generation died hard, and it will be within the memory of some here to-day that the last flicker of the candle took place in our own country, where this remarkable chimera was revived by a distinguished London physician, whose views met with no little favour until they were again confuted and finally demolished by the late lamented Professor Tyndall, whose arguments were based on a brilliant series of experiments, from which even the most obdurate of our countrymen could not appeal.

But, it will be asked, how is it that the name of Pasteur is by the general public only associated with the study of diseases and their attempted prevention and cure when during such a large part of his career he has had nothing whatever to do with medicine? The explanation of the phenomena of disease, and still more their prevention and cure, can surely only be attempted by men who have devoted their lives to medical study and practice. Pasteur, on the contrary, has been spending his best years in studying the crystalline forms of obscure chemical compounds, in unravelling the chemical changes taking place in the brewer's vat, in the wine cask, and in the vinegar factory, he has been devoting years to discredit and overthrow the ridiculous doctrine of the spontaneous generation of life—all of them subjects entirely outside the perspective of the medical practitioner or of afflicted humanity in general.

Plato, in one of his paradoxes, says: "If we wish to become thoroughly acquainted with astronomy, we will let the heavenly bodies alone," and history has abundantly demonstrated at any rate the partial correctness of his prediction, for what is modern astronomy but celestial mechanics and celestial chemistry, the principles of which have been arrived at not through star-gazing but by experiments in the laboratory and calculations in the closet. Still more to the point is the remark of Robert Boyle in the seventeenth century: "The man who shall probe to the bottom the nature of ferments and of fermentations will doubtless be much more capable than any other of giving a true explanation of the divers morbid phenomena, both of fevers as well as of other affections." Or if I may venture to put his meaning into the terser and perhaps more exaggerated language of Plato, he virtually says: "If we wish to become thoroughly acquainted with medicine, we will let diseases alone and pursue the study of fermentations."

Boyle's words, pronounced 200 years ago, are almost prophetic, so exactly have they been fulfilled in the person of M. Pasteur. Not until the long apprenticeship, which I have endeavoured to outline, had been served was it possible for Pasteur to deal with the still more complex phenomena of disease, and into this vortex he was slowly but surely drawn by his fermentation studies, some of the results of which became immediately available for medical purposes.

It is almost needless for me to remind you that what has hitherto been the greatest and most far-reaching application to medicine of Pasteur's researches on fermentations was made in our own country, for there is no room for doubt that since the discovery of the use of chloroform and other anæsthetics no greater boon has been conferred on suffering humanity than the introduction of the principles of asepsis and antisepsis into the practice of surgery.

That this advance owed its origin entirely to the previous discoveries of Pasteur in connection with fermentation we know, from the graceful tribute paid by its great author, Sir Joseph Lister, on the occasion of the Pasteur jubilee meeting in 1892 when, in the presence of the President of the Republic, the great officers of State, and a brilliant gathering of savants of all nationalities, Sir Joseph Lister, as the representative of our Royal Society, rose, and addressing M. Pasteur, pronounced the words as remarkable for their impressive truth as for their beautiful modesty:

"Truly there does not exist in the entire world any individual to whom the medical sciences owe more than they do to you.

"Your researches on fermentation have thrown a powerful beam which has lightened the baleful darkness of surgery and has transformed the treatment of wounds from a matter of uncertain and too often disastrous empiricism into a scientific art of sure beneficence. Thanks to you, surgery has undergone a complete revolution, which has deprived it of its terrors and has extended almost without limit its efficacious power."

Of M. Pasteur's connection with the foundation and development of pathological bacteriology, and of his contributions to our knowledge of infectious diseases, it will be impossible for me to do more than refer in passing. In this part of his career, however, we are again confronted with that marvellous, apparently intuitive, sagacity which has always led him to investigate such problems as are ripe for successful study, and so to build up the scaffolding from which the more inscrutable, though often more generally attractive problems, can afterwards be attacked. Thus in his pathological researches Pasteur has throughout almost exclusively restricted himself to the study of the infectious diseases of animals, knowing full well that just as progress with infectious diseases was impossible until an accurate and extensive study had been made of fermentation phenomena, so there was no hope of penetrating far into the mysteries of human disease until the more accessible maladies of the lower animals had received thorough experimental attention. But although Pasteur's own researches on infectious disease were principally confined to the disorders of the lower animals, the results of these investigations in many cases at once threw the most valuable light on the nature and mode of propagation of the zymotic diseases of mankind, and gave the most important indications for the carrying out of far-reaching hygienic improvements.

It was well said by Dr. Burdon Sanderson in his presidential address at the Nottingham meeting of the British Association, two years ago, that "the history of scientific progress is largely the history of scientific method," and so the extension of the principles of bacteriology established by Pasteur

to the investigation of questions of practical pathology and hygiene was enormously facilitated by certain improvements in the methods of bacteriological study which originated on the other side of the Rhine, and with which the name of Robert Koch will always be associated. By the simplifications and improvements in bacteriological methods effected by Koch and his pupils, a much larger number of workers were at once attracted into this field of study, which from 1880 onwards has developed with a rapidity almost unparalleled in the history of science.

Time prevents me from dwelling upon the innumerable advances made in every department of bacteriology during the past ten or fifteen years, and upon the manner in which it has risen in public estimation. From being ridiculed as the latest ephemeral fad of scientific men, the public are at length beginning to realise that it is indispensable to the proper appreciation of countless phenomena in almost all departments of science and of practical life. Soon after Pasteur had commenced the study of the bacteria of infectious diseases, he was impressed by the fact that often in the course of cultivation in artificial media outside the body the virulence of these bacteria became diminished to such an extent that they ceased to be fatal on inoculation into susceptible animals. This diminution in virulence, moreover, could, he found, be accelerated or retarded by varying the conditions under which the organisms were cultivated. But the most important discovery in this connection was that the animals inoculated with such enfeebled or attenuated cultures were found to have become protected from the disease even when subsequently inoculated with the most virulent cultures of the same organism. This was the starting point of a long series of researches which have formed, so to speak, the crown to M. Pasteur's labours, and the practical utility of his results, appealing as they do, even to the most unscientific and ignorant, has served to spread his fame throughout the peoples of the entire globe; whilst his successors in this line of investigation have branched out into new fields of discovery almost still more remarkable, and giving promise of even still greater benefits to mankind.

The discovery of this artificial attenuation of virus at once enlarged the scope of Pasteur's investigations, which now included not merely the study of infectious diseases and their exciting causes, but embraced also the artificial protection of the individual against their attack. The most varied methods were devised and successfully elaborated for attenuating viruses of different kinds, and when the utility of attenuated viruses had been adequately demonstrated by laboratory experiments, they were employed for giving protection to multitudes of domestic animals from some of the most destructive plagues with which they are affected.

Pasteur next proceeded to grapple with a disease affecting both man and animals; a disease not remarkable for the frequency of its occurrence, but almost without an equal in the terrible nature of its symptoms. This disease, as you all know, was hydrophobia or rabies. From the manner of its communication from animal to animal and from animal to man this must be a parasitic disease although the actual exciting cause has even still escaped detection. In searching for a method of counteracting this terrible malady Pasteur was taking an entirely new departure inasmuch as in his previous work of a similar character he had always first isolated and cultivated the exciting organism. In the present instance, however, he trusted to his great past experience in preparing attenuated viruses to guide him in the production of an attenuated virus of a disease, the exciting cause of which was still shrouded in darkness. In overcoming the difficulties of this problem the genius of Pasteur triumphed, as it had done in surmounting countless obstacles before. The attenuated virus of hydrophobia was successfully prepared and by several different methods.

Fresh difficulties, however, attended its application, for human beings would not be likely to submit to wholesale protective inoculation in anticipation of the highly improbable event of their being bitten by a rabid dog, and the remedy to be of any practical service to man must be available after the bite by the rabid animal has been inflicted. In this respect the treatment for hydrophobia differed from any attempt which had hitherto been made to counteract infectious disease by means of attenuated virus.

This difficulty has also been overcome, excepting in those cases in which the disease has actively taken root before the protective treatment is begun.

Much controversy has raged over this crucial point as to whether protection can really be conferred by inoculation with the attenuated virus after the bite by the rabid animal has taken place, but in the opinion of those best able to judge in this matter, the statistics, which are now of the most extended character, answer this question in the affirmative.

The conviction that such is the case has led not only to the treatment being continued at the Institut Pasteur on an enormous scale, but centres for carrying it on have been founded in almost every civilised country in the world except our own, although numbers of our countrymen annually cross the Channel to take advantage of the treatment, and during the past year the number of Englishmen who went to Paris for this purpose actually exceeded the number from any other State.

The great problem of securing immunity from disease, which thus occupied the later years of Pasteur's activity, has, however, now entered upon an entirely new phase; for whilst Pasteur's methods depended essentially on submitting the individual to be protected to the attack of the disease-producing organism itself, albeit in an attenuated or weakened condition, the new methods of conferring immunity do not involve any contact whatsoever between the individual and the living virus in any shape or form.

As might be expected, this transition was neither accomplished in a single bound, nor by the efforts of a single investigator, and it is not surprising that the prestige of being the predominant partner in this great achievement should have been claimed not only for several different individuals, but that it should have actually become a matter of dispute between the two great rival nationalities of the Continent. Had it been a dispute in which England were concerned, and which unfortunately it is not, we might perhaps have been reminded of the well-known couplet—

> Seven Grecian cities vied for Homer dead
> Through which the living Homer begged his bread.

It would be unprofitable to enter into the details of this controversy; suffice it to say that the first distinct step in the transition was the discovery that the artificial cultures of pathogenic bacteria can be entirely freed from these bacteria, or sterilised, and yet produce their characteristic poisonous effects on injection into animals. Thus the poison or toxin of the diphtheria bacillus was discovered by Loeffler, who, it will be remembered, also discovered the diphtheria bacillus itself, whilst this toxin was more fully investigated by Roux and Yersin, as well as by Dr. Sidney Martin. By this discovery the toxins of diphtheria and of several other diseases have been rendered as specific poisons, as are laudanum or the extract of nux vomica; for it is now possible to produce some of the characteristic symptoms of these diseases by the administration of these sterile toxins, just as we can produce laudanum poisoning without resorting to the living poppy.

It was further found that animals can be gradually accustomed to these specific toxins, just as human beings can be gradually inured to laudanum or to tobacco, and the question then arose as to how such animals which had undergone this gradual habituation to a particular toxin would behave on being subsequently inoculated with the disease-producing organism itself. On submitting this point to experiment, it was actually found that the animal which had survived a graduated treatment with the bacterial poison was capable of withstanding the subsequent attack of the virulent bacteria themselves.

Here, then, was a novel achievement indeed—immunity secured for an animal without its having had any contact with the disease-producing organism itself. This important step we owe to the labours of Salmon, Roux, Chamberland, and other investigators.

The next step, which is assuredly the most surprising of all, consists in the demonstration that the blood of an animal thus artificially immunised against the toxin of a particular disease contains materials which can be transferred to another animal with the result that this animal also becomes thereby protected from the same malady. This astounding

antitoxic property of the blood serum of an artificially-immunised animal was first discovered by Richet and Héricourt in respect of animals immunised against the staphylococcus aureus—one of the common abscess-producing organisms.

To Behring and Kitasato, on the other hand, is due the credit of having shown, not only that the blood serum of animals artificially immunised against diphtheria and tetanus respectively is capable of protecting from these diseases other animals into which this serum is injected, but that even after these diseases have been actually contracted they may be cured by the subsequent administration of the antitoxic serum, provided the quantity used be sufficient and its injection not postponed until too advanced a stage of the malady has been reached. Finally, to Behring is due the merit of having extended these benefits in connection with diphtheria to man himself. To indicate the importance of this newly-discovered therapeutic agent I would, in order to save time, merely draw your attention to the following figures, which speak most eloquently for themselves:

Diphtheria Death-Rate per 1,000,000 Living.

	1862-1872.	1893.
London	300	780
Manchester...	200	300
Liverpool	160	120
Birmingham	120	180
Leeds	80	100
Sheffield	100	180
West Ham	250	420
Bristol	100	220
Bradford	50	100
Nottingham	110	70
Hull	80	110
Salford	220	260

These figures are taken from the Annual Report (1893) of the Medical Officer to the London County Council.

The mortality in Germany from diphtheria previous to the introduction of the serum treatment has been recently shown by Kossel to have been 34.7 per cent., whilst since the application of the new treatment it has sunk to 11.1 per cent.

Kossel has also drawn up an interesting table showing the importance of introducing the serum treatment as early as possible after the commencement of the disease. It will readily be understood how this discovery has stimulated experimentalists in all parts of the world, whilst the supply of the therapeutic serum for diphtheria is already a commercial undertaking of some magnitude.

It is worthy of note that in this production of serum again chemical science has come to the aid of medicine. It is obvious that the preparation of such serum on any scale must involve the employment of a large staff of highly skilled and scientifically trained persons who are not to be collected into any ordinary manufacturing establishment at a moment's notice. Those great industrial organisations, which are principally to be found in Germany, and in the works of which coal tar is converted into all the colours of the rainbow, into the perfumes of Arabia, and into many of the most valued drugs of the modern physician, some of these coal-tar colour manufacturers, with their numerous staff of scientific advisers, have seen their way to still further enlarge their works by adding to them vast stables, in which numbers of superannuated horses are passing a comfortable and useful old age in furnishing the antitoxic serum which is to alleviate the sufferings of thousands of young victims to diphtheria.

But the possibilities of securing protection by means of the serum of immunised animals extend even beyond the boundaries of infectious disease. If the serum of an animal rendered insusceptible to a particular disease can counteract the poisons manufactured by the specific bacteria of that disease, may it not also be possible to counteract in the same way poisons that have a non-bacterial origin altogether? Now, it is this that has recently been done in respect of snake poison by M. Calmette in France and by Professor Fraser in Edinburgh. Proceeding on exactly the same lines, these investigators have found it possible to gradually accustom animals to larger and larger doses of the venom, and the blood serum of such animals is then discovered to be endowed with the power of rendering similarly resistant other animals into which it is injected. When we remember that 20,000 of our Indian subjects perish annually from snake bites, and that the new method of treatment extends the prospect of saving many if not all of these, it is obvious that we are here again face to face with a subject of stupendous importance, and which affects us above all the other nations of Europe.

The brief sketch which I have endeavoured to present firstly of Pasteur's work, and secondly of the further developments to which it has given rise in the hands of others will, I hope, convey some faint idea of how enormous has been his influence on the progress of science during the latter half of the present century. If we come to inquire what are the special circumstances which have led to Pasteur exerting this extraordinary influence on so many different departments of science and of practical life, we must attribute his unique position in the first instance to the possession of a singularly active, clear, and original mind matured under the strict discipline of an early training in mathematics and the exact sciences, which fitted him to successfully prosecute the profoundest researches in molecular chemistry, whilst by this severe exercise, in which he was exclusively engaged until his thirty-fifth year, and by means of his marvellous powers of accurate and minute observation, he was in his later investigations enabled to submit vital processes to such a rigid, logical, and uncompromising criticism as biological phenomena had not hitherto received. But even this rare combination of natural and educational endowments would have availed but little had there not been united to them an almost superhuman industry, an almost limitless capacity for work, for when we contemplate what Pasteur has accomplished and the overwhelming mass of labour on which his achievements rest, we are indeed forcibly reminded of the French proverb: *Le génie c'est la patience.*

It would be difficult also to find a better illustration of the manner in which one science can benefit from contact with another than that which is furnished by the results which have attended the digression of the specially trained chemist, Pasteur, into the fields of biology and medicine. Unfortunately such digressions, even when they are attended with mighty consequences like those which I have been endeavouring to set forth, do not always receive the welcome that they should command, for it is surely significant that as late as the year 1888 it should have been possible for a Paris correspondent to write: "Pasteur is a Commander of the Legion of Honour, possesses fifteen other decorations, is a member of eighty-three foreign learned societies, and holds the honorary doctor's degree of nearly every foreign university, and yet he is not a Doctor of Medicine of any faculty."

Whether or not he has been made a doctor of medicine since 1888 I do not know, nor is it a matter of any consequence, for it was assuredly without any such qualification that he set in motion that great medical revolution which has been well sketched by a modern French writer:

"When man learnt how to protect himself from the wild beasts he made the first step in civilisation. To-day man is learning how to defend himself from microbes—it is a step of equal importance. A day will come when in Berlin, in London, in Paris, man will not die of diphtheria, of typhoid, of scarlet fever, of cholera, or of tuberculosis any more than he dies in these cities to-day of the venom of snakes or of the tooth of wolves."

GUY'S HOSPITAL.

OUR PROFESSION, OUR PATIENTS, OUR PUBLIC, AND OUR PRESS.

By G. H. DE'ATH,
Medical Officer of Health for Buckingham.

It may seem to many, but I hope not to all, to be somewhat a waste of time to consider the relationships between the profession, the press, and the public. I would ask you, in the first place, to beware of appearances in all that concerns us, and especially in the apparent relationship between the public and ourselves, particularly at a time when too many of us while boasting of our power, popularity, and know-

ledge, leave the diagnosis of every "serious" case to a consultant, and its treatment to a trained nurse. Popularity has its dangers, and I well remember being told by the late Dean Stanley, "Popularity is all very well if you can get it, and if it comes to you, but you must never run after it." Public support is fascinating but fickle. In times of war soldiers are the pets of the people (and, however strange it may sound, I include all classes in that term), but in times of peace "doctors" are the fashionable craze. Society, "forsaking even military men," throws her charms to great wealth, successful humbug, the drama, and the medical profession. We should warn ourselves against judging by appearances, especially those which are nearly always deceptive. Let me take a somewhat out of the way instance to show what I mean. It is often said, "He does not know his own mind." Of course not. No one knows his own mind. It is one of life's purest pleasures to make its acquaintance. We know the existence of our own minds and we infer the existence of mind in others. Far, far away from actual consciousness there appears to be a laboratory in which the influences of our environment and the impressions from and in our organisms are received. Much is there stored and some is poured out into the mind, and oozes therefrom as we think, and speak, and write.

It is, indeed, delightful to find out by thinking, writing, or speaking what is "in our minds." It is a useful habit to acquire, because it cultivates the rarest and best characteristics of a medical man, namely, observation. I submit it is necessary for us to see what we are and to see what we are doing, but how rarely we do see. We look but we do not see. We do not see our work, nor ourselves, nor how others see us. Again, look over a landscape of undulating country, with its varied forms of green, its play of colours lit with the great, grand, golden glory of the sun. What do we see? Is what we are looking at merely the veil that covers a continuous crusade or a continual competition? Is the peace of its intense loveliness a mere film hiding the presence of everlasting war? Is the beauty of Nature only the expression of successful cruelty?

Again, turn for a moment, and ask yourselves if the apparent calm of humanity is only what covers, but does not really conceal, the constant and, may I add, cruel struggle for existence? Is it true nowadays when every man poses as the friend of all men, that man's inhumanity to man makes countless thousands mourn? Now you will ask me, What are you driving at? Simply that we must beware of our relationship to the public, and see to it that it is a true and honourable position for us to occupy, simply that we should learn not merely to look, but to see men and women and all things as they actually are and not only as they appear to be, for "All things are not what they seem," and no man and no thing is what he or it appears to be.

So, indeed, and too often, the appearance of hypocrisy or of honesty in our lives resembles the appearance of Nature where peace is but war and beauty but hidden ugliness. We do not only require lucidity in our view of the outside world, but lucidity of expression in the use of medical terms. Surely we must learn to see men and their maladies as they are. Who can say that there is a scientific uniformity of meaning in the medical terms which we use, and I think too freely use, to the public? Or even in that process of labelling symptoms with a name which is the plan by which we cheat ourselves that we are misleading others? Do you expect to find the same illness—if such a thing ever occurs—treated in the same way at different hospitals? Perhaps, however, that is only because one star differs from another star in glory. The expressions of medical science are characterised not by their lucidity but by their looseness. Let me give you an illustration. Think of the inconsistent, unscientific, contradictory, and frequently silly position ascribed to "cold" as a factor in the production of disease. Cold is given by a modern writer as the "predominant partner" in the causation of the following maladies (among others): Croup and tetanus, acute rheumatism and locomotor ataxia, diabetes and pneumonia acute nephritis and infantile paralysis. Again, a distinguished London doctor, *magnum atque venerabile nomen*, writes to me by one post to say that a certain person is suffering from eczema, and that the treatment must be directed "towards its microbic causation," and by the next post advises me to tell my patient to avoid exposing her beautiful face to the sun, as that exposure "may produce an attack." We need not pretend that we do not value public esteem and confidence, but what steps do we take to deserve either when we hide our ignorance or our knowledge under loose terms? The fashion has not yet died out of labelling as "hysterical" any group of symptoms which are inexplicable on known physiological grounds, and this at a time when we do not know with certainty either the real effect of a poultice on the skin or the functions of the liver. The modern student, especially if recently qualified, regards as "neurotic" all the symptoms which do not come within the range either of his reason or his remedies. How do too many treat the conditions which they call "neurotic" or "hypochondriacal," meaningless epithets that are used either with that haughtiness which is a proof of ignorance, or with that pity which is only another form of the same narrowminded contempt? First of all they deny the existence of the malady, then they say "there is nothing the matter," and when the patient recovers under the treatment of a man who is a physician without being a fool, they then sneer at the successful colleague as a man "who humbugs his patients." A section of the profession, notwithstanding all its post-prandial sentiment, is jealous of success. Surely it is utter nonsense because it is absolutely unreasonable and deplorably unscientific for a person to be ill and well in the ordinary senses of the terms, or that anyone (apart from very definite conditions of malingering) can "imagine himself ill." People who are ill are ill even if we do not understand the illness, and even if we cannot treat it.

Let me give one more instance, because it is one which more obviously affects our relationship to the public and our patients. I refer to our unfortunate habit of separating "functional" from "organic" maladies. Function is the expression of organic change and functional disorder is inconceivable without organic disturbance and change, and the latter is not the least but the most important factor, even if unrecognised, in those disturbances of health so stupidly called "only functional." It is more conceivable to think of organic change without functional disturbance than of functional disturbance without organic change. Why is all this? Why do we talk thus to the public, and to our patients, and to ourselves? Why do we rely on appearances and vague terms? Why do we thus lose, or deserve to lose, public confidence? Because in hospital life and training we fail to note the value of seeing life as it is, people as they are, or the true meaning of terms. In hospitals we learn about disease, but in practice we have to treat a person with an illness. Large numbers of "cases" (or diseases occurring in persons) pass under our observation in hospital life, but we only see the diseases not the persons, not only that, but both the person and the malady are removed from the conditions which would otherwise act on both. Not only that, but the greater part of our hospital life is spent in studying just those maladies, which, however important as types, are least often seen in general practice. In hospitals we see, or rather look, at others treating an illness in a person, but in practice we have ourselves to treat a person with an illness. We rarely see those deviations from what we call health which we have to treat in general practice.

We thus do not see before we get into practice our work as it really is but only as it appears to be. Our teachers, to whom no one is, or ought to be, more grateful than I am, are men who are what they are because they have been successful in hospital practice or distinguished for successful industry, and these men pass, and perhaps rightly, from the hospital to Harley Street, but they see little or nothing of ordinary general practice or the "cases" which we as general practitioners have to treat. They teach hospitalism and practise it. Men who have, therefore, to deal with patients, or the public, that is to say, start in practice are lost to some extent, have no power—because they have not the knowledge, which is power—to conduct a case, know not how to treat their patients or their patients' friends, cannot even behave themselves in a sick room—in fact many men only go into a sick room for the first time after they are qualified. We must remember that the proper study for the medical man at all events is man. A hospital is no more and no less the place to learn the diseases of mankind, so far as the rela-

tionship between patients and medical men are concerned, than are the zoological gardens the proper place in which to learn or to study the natural habits of animals. Much can be found out at either place, but, as at the zoological gardens we see animals under unusual or unnatural conditions, so in hospitals we see illnesses and people separated from the conditions by which they are both surrounded when we as medical men have to treat them. These considerations affect the public as a body and the public individually, or as our patients as we call them, and I would speak of the latter first. A patient expects that his medical man should be something more than a mere medicine man, that his doctor should be more than a detective to discover some pathological flaw in his health, something more than an accountant to bring out the balance of a diagnosis from the "complicated accounts" of his symptoms.

The public also expect much, and perhaps too much, from its public professional men in the protection of "health." To us, of course, health is only a relative term, but to the public it is an attainable reality. I have never seen a case of health, and I should like to see a really healthy man, woman, or child. And it is, by the bye, in the detection of the insignificant departures from an indefinite standard that the skill of a "doctor" lies. We do not treat the public fairly in the matter of health. For instance, we say "disinfect," but there is no reliable standard either of disinfection or a disinfectant. Again, people want to know what to do "in cases of illness," emergencies, and "epidemics." What do we do? What does the profession do? It supplies the public with scientific beef-tea not in tins but in lectures; it attempts to boil down the hard bones of science to suit the digestion of the public intellect, it floods the press not only with watery but adulterated solutions of science, while essences of surgical treatment and tabloids of medical knowledge are manufactured wholesale for general consumption. We want to appear to know and to make others like unto us. This is what is called and appears as the popularisation of knowledge, but in reality it is the prostitution of science. No doubt a knowledge of the laws of health can be taught (the means by which homes should be kept clean and filth removed from the person and the house, the advantage of light, air, and the diet of children), but amateur medicine and surgery are less reliable than the professional articles.

We think we are to teach our patients and the public what we know. If so, they must learn as we do. If our methods of teaching the public are right, then our own methods of learning are both wrong and useless. We allow the public to think we can dispense clinical therapeutics for them. People demand the knowledge how to treat illness, and we supply "a lecture" or a "course of lectures." I have often, and I do again beg to protest against such "apparent teaching," against the policy of sprinkling the community (by means of a more or less oratorical pepperbox) with tit bits of knowledge, whether pathological, physiological, obstetric, or hygienic. There are no such short cuts to knowledge. The appearance is not the reality, and as we learn so should we teach, and not otherwise. A desire to know is admirable, but the public are nowadays too inquisitive about illness. Our national manners show a deplorable lack of taste and good feeling in the presence of illness. If a man consults his lawyer, he does not find all his friends asking him, "What is his business?" or "Why did he seek legal advice?" Let such a man, however, consult his doctor, and at once all his friends and acquaintances—sometimes, perhaps, out of kindness, but oftener out of curiosity, or in the case of a celebrity out of a feeling of snobbery—at once rush to know what his business was with his doctor, and why he sought medical advice. It is sad to have to add that even the doctor himself is asked "concerning the case," and it is a shameful thing to have to admit that the information is often granted. The near relations of a patient may be told the nature of an illness, but without the express sanction of the patient or his closest relation no medical man has any right to make any sort of communication to anyone else, or even, I submit, to the medical press. The so-called upper classes, or certain sections, have, let us not forget, brought advertisement to an art. It is time we did something to protect the privacy of the home, especially of the sick room. To publish clinical details, or to throw the sop of a temperature chart to the gossiping wolves, to make the sick room a market for advertising, are practices which are too disgusting and far too common. We all know the twaddle which is talked in the profession about advertising, especially by the sort of man who, swearing he would ne'er advertise, advertised. Our medical press bids fair to become the mouthpiece of the would-be successful traders and of the professional Pecksniffs and Chadbands. For instance, the contribution of cases is intended to advance knowledge, not to puff practitioners. We must look up to our press, but it should represent all that is most dignified and all that it is best. Look at the view which is taken by the medical press (and of course I am only speaking of some papers) on any subject of general interest, such as vaccination. The coarsest, the rudest, the most insulting language, is considered too good for those who, though supported by men of science and undoubted honour, feel a conscientious objection to compulsory vaccination. Dictation is not dignity, and the policy of kicking your opponents to death should hardly be the characteristic of the wonderful and advanced medical knowledge of the nineteenth century. We must bear in mind that the lay press is ever struggling to get personal details. It is, I submit, a national calamity to see the honour, purity, and responsibility of the press stained, and even in some instances washed away, by the muddy waters of competition. The necessity for paragraphs begets inaccuracy, and belief in the papers is becoming a sure sign of credulity. It is sad, indeed, to see the reckless manner in which that pompous person, "our own correspondent," not only endangers the peace of nations by his highly-coloured and self-imagined crises, but violates the privacy of home life by the publication of details of illness which are generally inaccurate and always inexcusable. We as a profession must not worship the golden calf of the "press" too much. From what I see and hear in London, not only the press but the profession is giving way before the rising and surging waves of competition.

I may point out that although some say competition creates commerce, yet others say it curses it. Must we, however, use such an argument? We must, I fear, if it is true that men who ought to know better, and who occupy "high positions," are not ashamed to steal other men's patients, or to be consultants at one part of the day, physicians another, surgeons another, specialists another, general practitioners another, while all the day long they violate those rules of professional honour to which they do homage only with their lips and not with their lives. These are the men who undermine confidence with "all the kind mendacity of hints," or with a silence more suggestive than speech. When people ask for "another opinion," what they want oftentimes is a "different opinion": and they very often get it, for how many men allow themselves to be privately interviewed by "friends," and receive fees for such interviews when the conversation turns on "the recent consultation?" These are the men who undermine our press and our patients, and force so many of the public to look upon us as money-grubbing humbugs. These are the men who "get practices" by a "swagger turn out," by grand-looking houses startlingly painted, by large parties, by gorgeously-dressed wives, or by pandering to the barefaced snobbery of modern society. We must not imitate the methods by which sycophants succeed. We should value public confidence but we should also deserve it; we should wish for respect, but we should not get it under false pretences.

All the world is filled with loud praises as to "the advancements" in the prevention and treatment of suffering; but novelties are not necessarily improvements, as revolutions are not always reforms or reforms always revolutions. The light which competition in the press throws into the privacy of the home also finds its way into the laboratory, and the discovery of yesterday is trumpeted as the mark of an epoch. We are thus apt to follow fashion and fads rather than facts. I well remember, only about ten years ago, when I had the great privilege of being a student at Guy's—and I think every medical man should be a medical student all his life—that the profession was suffering from a very acute attack of the "spray." I know one distinguished surgeon who was almost "cut" by his colleagues for not using it. How different now!

The profession is now suffering from convulsive attacks of

bacteriology. When I left Guy's the spray ruled surgery; now we all worship germs. In the interests of truth we should appreciate and not exaggerate the relative value of all parts of science. I will only simply allude to "the importance of serum therapeutics," or of the policy of quieting the pathological Paul by extracts from the immunised Peter.

Every problem is discussed in the press, and, owing to the habit of pseudo-philosophical generalisation from insignificant details which now characterises modern journalism, the public and our patients are misled. In these days, when the fierce light of publicity beats around a test tube, we must not so quickly take the public into our confidence, especially in the press. Our duty is to look for the truth, not to encourage competition. Our patients are led to think they know so much, and therefore, when an illness arises, they now make the diagnosis and decide on the treatment and the proper specialist to consult. The first question a lady asks when she hears her servant has got rheumatic fever is, "Can she take salicylate?" We know very little, but the public knows less. People now have one medical man for every organ, and I know a lady who consults one man for her eyes, another for her throat, another for her "chest," another for her menstrual troubles, and she herself decides "what is wrong," and then asks me to reconcile the contradictory pieces of advice which she gets from "her London doctors."

The false relationships of our public and our press and our patients to our profession are our own fault. Let us think less of our successes and more of our failures. Less of the possible glory of the future and more of the darkness of the present, less of our modern advances and more of our modern helplessness, less of the possibilities of science and more of its simplest theories. Are the foundations of our knowledge sure? Do we know for certain the functions of any organs of the body? Are we adding to or lessening human misery and woe? Is our science a tower of Babel? I believe we shall do best if we do right and we shall do right if we recollect every hour of our professional lives not merely our advanced knowledge but our appalling and lamentable ignorance. I want to show that we should not fix our eyes only on the advancing waves, especially as waves have a knack of receding, that we should not be led away by our apparent popularity and power, that we should simply do what is right and not ostentatiously act as if we knew so much more than we do. Our knowledge is vast but our ignorance is vaster. It is easier to explain away a symptom on the principles of a sort of 4 o'clock tea kind of physiology than to treat the conditions to which the symptom may be a guide. As a profession we must not puff nor be puffed up. We are getting too proud. The ruling monarch of the world, namely, ignorance, has ever had dogmatism and cocksureedness as his equerries-in-waiting permanently on duty. We rush like a lot of sheep at every new therapeutic fad, and sneer at the wary and wiser public for their indifference.

Science loses nothing and gains much when it combines with sense, and the medical man does not know less of diseases if he knows something of human nature. Those who have to treat people who are "ill" should study those who are "well." We should value character more than a certificate and a real success more than an apparent victory. We should be as men treating other men not as hospitalised beings treating patients. In all our relationships we should remember that kindness, gentleness, and sympathy add to the true value of skill and that though the powers of the head are great the powers of the heart are greater. We can do much by our abilities but more by our affections, and although we now have "to live in wearied hope," yet it is not the possible only but the perfect we should live for, ever bearing in mind that "greatness is to take the small things of life and walk grandly among them."

Swiss Sanatorium for Phthisis.—It is hoped that the sanatorium for poor phthisical patients at Davos may be ready to receive from fifty to sixty patients in July next. The subscription list now amounts to over £13,000. The municipality of Bale intends also to erect a sanatorium in the neighbourhood of that city for phthisical patients applying at the hospitals.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

THE MEDICAL PROFESSION AND UNHEALTHY TRADES.

By A. P. Laurie, M.A., D.Sc.,
Late Fellow of King's College, Cambridge.

After some introductory remarks Dr. Laurie said that it had been his good fortune to be appointed a member of the Home Office Committee, which inquired two years ago into the results produced on the health of the operatives by pottery manufacture. Most of the local doctors of the district who gave evidence had little information to give. Evidently their attention had never been specially turned to the question and they had missed the opportunity afforded them of making a most interesting series of investigations. There were, of course, many noble exceptions. The name of Dr. Arlidge would always be remembered as a pioneer in this department and the researches of Dr. Oliver into the poisoning in white lead manufacture had pointed the road to be followed by others. But in spite of these men little had yet been done in the way of scientific inquiry with the view of remedying the evils produced under modern conditions of industry.

The laws protecting the labour of women and children and the regulations requiring cleanliness and ventilation had been of incalculable benefit to the industrial population, but the questions now arising were more difficult and did not the less press for a solution. The whole of the problems involved in the handling of poisonous substances and in the breathing of a dust-laden and vitiated atmosphere and in the working in excessively high temperatures were still in most cases awaiting solution. The Home Office had made vigorous efforts to deal with some of them by special inquiry and special rules but the result of these inquiries had been to state clearly the problems awaiting solution but not to solve them.

In order to make clear the present state of affairs the history of factory legislation was sketched briefly, starting with the great Consolidating Act of 1878. This Act may be roughly divided into three portions: (1) The portion regulating the hours of employment of women and children and young persons, the ages at which children might be employed, and their proper education. There was nothing in this portion which could not be efficiently administered by good inspectors. (2) The portion dealing with the notification of accidents and the fencing of machinery. Here some expert knowledge would be advisable, and many mistakes had been made by inspectors for want of it, but the principles to be applied were simple, and no serious difficulty had arisen. (3) The clause dealing with the sanitary condition of the factories and workshops was as follows:

> A factory shall not be so overcrowded while work is carried on therein as to be dangerous or injurious to the health of the persons employed therein, and shall be ventilated in such a manner as to render harmless, so far as is practicable, all the gases, vapours, dust, or other impurities generated in the course of the manufacturing process or handicraft carried on therein that may be injurious to health.

This clause laid down a most important principle, but on the other hand was so general as to make it most difficult of application to particular cases, and to make the task of the inspector required to enforce it a most invidious one. This seemed to have been already recognised, as special rules as to privies and as to cleansing and whitewashing factories were introduced; and, furthermore, certain definite industries were mentioned in the Act. There were special rules with reference to bakehouses, and the inspector was empowered to require mechanical ventilation in the case of dry grinding, and to require proper protection from wet for the spinners in flax mills. Furthermore, certain unhealthy trades were scheduled, in which young persons under 16 must not be employed, and in other trades meals were forbidden in places where certain processes were carried on.

The next step in advance was the Act of 1883, which laid down special rules for the regulation of white lead factories, and additional rules were made for bakehouses. Gradually the vague recommendations were being replaced by definite rules to meet specific cases.

The next step was taken in 1889 in the Cotton Clothes Act. Here for the first time the condition of the air breathed was

dealt with definitely. Under this Act a table of percentages of moisture in the air for each temperature was laid down. This extraordinary interference had apparently been most beneficial. It had necessitated the artificial ventilation of the weaving sheds on the most scientific principles, and apart from the questions of health involved, had actually, as Dr. Laurie had been assured by a large Lancashire mill-owner, improved and increased the output of the looms. In the Act of 1891 two further important alterations were made. The sanitary condition of workshops as apart from factories was removed from the charge of the factory inspector and put under the local sanitary inspector, an alteration of doubtful utility, and another advance was taken in the detailed regulation of the health conditions. Under the dangerous trades clause of this Act the Home Office was given the widest powers. It had no longer merely to administer definite clauses in an Act; it was made directly responsible for the health of the workers, and was called upon to devise means for their protection, while, on the other hand, it was given powers that might prove most harassing to industry. Just after this Act was passed Mr. Asquith became Home Secretary, and found himself face to face with the problem of administering this clause, and with an outside agitation in favour of its enforcement. To attempt to draw up special rules for various dangerous industries was impossible without expert advice. He therefore appointed mixed committees of factory inspectors, medical men, and men of science to report on certain industries. The industries first selected were: White lead, soda and bleaching powder, pottery, colour, linen manufacture, and stone quarrying.

On the reports of these committees special rules were devised and applied to these industries, while it was furthermore found necessary to include certain of their recommendations in a further Act of Parliament passed this year.

This Act extended the control of the Factory Department to new industries, stiffened up the regulations of former Acts, defined accurately conditions formerly left vague, extended the regulations as to humidity and as to artificial ventilation to new industries, required proper regulation of temperature, and finally gave the Home Secretary power to forbid or limit employment in dangerous trades. All these provisions increased the responsibilities and difficulties of the Home Office in dealing with these sanitary questions.

The Home Office, Dr. Laurie continued, had been rapidly acquiring very heavy responsibilities and complex duties with reference to protecting the health of the workers, and these duties were of a kind which could not be satisfactorily fulfilled by the ordinary staff of inspectors.

The reports of the Special Committees were worthy of study by all medical men interested in public health questions, and contained a great deal of interesting information, but the information obtained was inevitably imperfect, and the proposed remedial measures were in many cases of a tentative character. In fact, in the report by the Potteries Committee, this was brought out very clearly by the Committee themselves. They asked "to be empowered to continue their investigations as to the composition of glazes and colours with a view of finding out how far it is practicable to make a glaze that shall be harmless to those employed, and at the same time shall not injure the ware." In another paragraph they said: "Further information is also required as to the temperature of potters' workshops and of stoves at the time of drawing the ware." Further on, speaking of the same subject, they said, "We have already in Rule 7 attempted to deal with the temperature of workshops, but do not consider the rule in its present shape as final," and so on. Similarly, the reports of the other committees were full of suggestions as to modifications of machinery and processes which would result in far more benefit than many of the special rules, and which, when adopted by manufacturers, should be carefully watched and reported on from time to time, with a view, if successful, to their ultimate universal adoption.

Zealous and efficient as the factory inspectors are, Dr. Laurie continued, they cannot be expected, overburdened already by the increasing number of duties they have to perform, to be able to observe what the effects of the special rules are on the health of the operatives, or to discover which are of value or what modifications are necessary; for, apart from the fact that they are already overworked, such observations require a medical training.

As an example of a case where scientific observation is required, Dr. Laurie took the Cotton Cloth Act, requiring the regulation of the temperature and humidity of the air in the weaving sheds. This Act has produced a complete revolution in the methods of ventilating the weaving sheds, and gives the opportunity of studying on an enormous scale, the results of artificial ventilation on the health of thousands of people, and the value of the new methods as compared with the old.

A careful recording of this experiment would be of the utmost importance in guiding us in the ventilation of factories and schoolrooms, and yet, as far as I am aware, no one is watching and recording the results; or, if it is being done, some private enthusiast is engaged in the work, and the Home Office having instituted this interesting alteration on the air supplied to thousands of operatives, with a magnificent carelessness does not even watch and record the results of its own experiment. The same criticism applies to the special rules which have been applied to other trades, for they all involve regulations introduced to affect the health conditions under which the operative works, and yet no observations by experts are being made to see if they effect their purpose. We have, therefore, most valuable experiments being made upon this most important subject without any proper record or criticism of the results.

Questions are arising and will arise in connection with these special rules and the various modifications of manufacturing processes which are always taking place which the Factory Department of the Home Office, having no experts to apply to, are incapable of solving. I know of one case where a manufacturer applied to the local inspector to be relieved from certain special rules because of certain modifications in processes of manufacture, and the question was referred by the inspector to the Factory Department, referred by the head of the department to the Home Secretary, and by the Home Secretary to the local inspector, and by the local inspector to the manufacturer, who, being the only expert in the whole chain, gave judgment on his own application.

What is required to enable the department to deal with these questions of increasing difficulty, and to advance further in its battle with disease and death? There are two proposals which I should like to make, proposals dealing with the central and the local organisation respectively.

In the first place, to deal with the local organisation. There is a body of men to whom I referred in the beginning, the certifying surgeons, of which sufficient use is not being made. The certifying surgeon is appointed by the factory inspector of the district. He has to examine all children and young persons in his district who are about to be employed in factories, and without his certificate of fitness they cannot be employed. For this duty he receives from 2s. 6d. to 7s. 6d. for each visit, and 6d. for each child examined over five in number, when the examination is made at the factory, and 6d. for each child when at some place appointed by him. This is done only in cases when the number of children is under five.

In the second place, accidents must be notified to him, when he must make an inquiry, and has a right of entry into the factory for this purpose. A special fee is paid for this also. Would it not be possible to employ the certifying surgeon to make continuous observations on the health of the operatives and the effects of new regulations and report to the Home Office on the same, and would not the money so expended be well spent, and is it not worthy of consideration whether the status and method of payment of the certifying surgeon could not be improved? I know of one certifying surgeon who has received exactly 2s. 6d. in fees in three years. In return he had to fill up innumerable forms and reports to the Home Office. This can hardly be regarded as a lucrative appointment. In fact, we have here an expert staff already in touch with our factory system and responsible for the fitness of the operatives at the beginning of their career which might, if properly encouraged, supply us with invaluable information; and furthermore, in the Factory Act of 1895, a clause has been introduced giving power to the Home Secretary to call on the certifying surgeons to make special inquiries, which opens the door to my proposal.

But it is not only locally that the expert is required; the work done by the temporary expert committees appointed by Mr. Asquith has shown the value of expert advice. Why should not the Home Office have an expert consultative committee attached to the Factory Department consisting of doctors, manufacturers, men of science, and engineers, who should have power to inquire into and report on and advise on questions affecting the health of the operatives? In this way much useful work could be done.

I am sure the manufacturer would welcome my proposal. He too often feels now that he is subjected to vexatious regulations involving trouble and expense, but which do not go to the root of the matter, by a department which, though well meaning, is ignorant. Such an expert committee would give him more confidence in the Factory Department, and make him submit to their conditions with better grace.

It is therefore in this direction that I venture to think the next step in advance is to be made: and in conclusion I would wish to press upon our future doctors the importance of these questions. Noble as the work of curing disease undoubtedly is, that of preventing disease is nobler, and there are many thousands in our great manufacturing cities the victims of our industrial conditions, living lives of hopeless ill-health, who are looking for deliverance, a deliverance which is only to be obtained for them by men who combine the calm, clear intellect of the man of science with a burning compassion for the sufferings of their fellows, a combination of qualities which is to be found most frequently in the medical profession.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.

ON THE METHODS OF MEDICAL STUDY.

By W. Julius Mickle, M.D., F.R.C.P.Lond.,
Lecturer on Mental Physiology and Mental Diseases to the Hospital.

The address was chiefly devoted to discussing the manner in which our knowledge of a simple external object is obtained and in drawing from that conclusions as to the only proper, natural, and fitting methods of medical study.

In the first place it was shown that in the mental development of children the acquirement of a knowledge of a simple object is a gradual affair, and only succeeding after many attempts. That simple as it may appear, it is only arrived at gradually, and after failure of the earliest attempts, so that only little by little is the knowing achieved; and any very early error must be corrected by subsequent experience, so that there is a process of learning, and of overcoming difficulties, in order to know the simplest object.

Applying this to medical studies, it was pointed out that, in order to be natural and fitting in method, the process must be gradual; that it must begin with the most simple, which must be thoroughly mastered before the study of the more complex is undertaken.

In the second place, in knowing a simple object of a certain class there must be a synthesis of the evidence derived from each sense concerned and a conjunction of that of the several senses co-operating in the process of knowing. The importance of the sensations of sight, of touch, and of those attending movement was indicated, and the inextricable manner in which the feelings of movement are bound up with the visual and tactile was insisted upon. The importance of the movements of the eye and hand in vision and in active touch was referred to, and the sensations derived from other senses, such as hearing, taste, and smell were shown to have their part in the process of perception of the particular object which was made use of in illustration of this part of the address.

In the application of this to medical studies it was maintained that in them it is necessary, as far as possible, to use all the activities of mind, and in co-operation. In relation to this the importance of great width of culture in medicine was asserted, and the characters were mentioned which any sound specialism must possess, and especially that it must be built on the firm foundation of a wide and complete study of medical and other sciences. In relation to this, and as examples to follow, were mentioned the wide bases on which were built the medical acquirements of two eminent members of the profession recently lost by death—namely, Mr. Hulke, who, besides profound knowledge of general surgery, was also an expert in ophthalmic science, was of great repute in palæontology, and of very considerable attainments as a linguist. The other was the late Dr. Bristowe, who to a profound knowledge of general medicine had added a special knowledge of pathology, and of diseases of the nervous system, abdomen, and skin.

In the third place, for accurate knowledge of the simple object it was shown that there is a process of search for accuracy, a process (so to speak) of working towards truthfulness, so as to secure a truthful mental representation of the object, and to correct any error of sense by the truthful evidence of other senses. And, moreover, that what is true with regard to these simple products of mental activity is true also of the outcomes of all the higher, and the highest, activities of mind, and their collateral results, and involves the accuracy therefore of the highest thoughts or ideas.

This proved the necessity of using, in medical investigations, the utmost fidelity, the honest intention of truthfulness to Nature, and the necessity of correcting any error that may arise by the critical operation of other forms of mental action.

And, pursuing this part of the subject, the predominant importance of making medical study as faithful as possible to Nature was urged, as well as that in medical research and study there should be a perfectly unbiased, fair, consistent, judicial frame of mind, employing in its service all the modes of mental action, and honestly seeking to attain that which is true; that, in a word, medical study should be an honest, consistent, persistent search for truth, and made with all the powers of the student and practitioner.

Other topics relating to the main theme were briefly discussed.

THE WESTMINSTER HOSPITAL MEDICAL SCHOOL.

ANTITOXINS AND OTHER ORGANIC REMEDIES.

By S. Monckton Copeman, M.A., M.D.Cantab., M.R.C.P.,
Medical Inspector Local Government Board, and Lecturer on Public Health in the Medical School.

Dr. Copeman commenced his address by paying a tribute to the memory of the late Dr. Octavius Sturges, who at the time of his death was Senior Physician to Westminster Hospital, and who had formerly held the position of Dean of the Medical School. Reference was also made to the still more recent death of Dr. Bristowe, a former teacher and colleague of the lecturer, and Consulting Physician to St. Thomas's Hospital. Between Dr. Bristowe and Dr. Sturges he said there was this point in common, that it had been asserted of both of them that they were wont to pay too little attention to the therapeutic treatment of disease. It was pointed out, however, that both were great believers in the value of good nursing and of hygienic surroundings; treatment by drugs, especially in absence of exact knowledge of the pathology of any particular case, being considered of secondary importance. Yet both were ever ready to accept and employ any method of treatment which could be shown to possess a scientific basis. Such methods were for the most part the outcome of experimental research during the last few years; and it seemed that a fitting subject for the remainder of the lecture would be a brief discussion of some of the more important developments of modern medicine, with special relation to the treatment of disease.

In this connection attention was directed more particularly to the employment of preparations of an organic nature, usually in the form of extracts of certain organs, in diseases in which these particular organs are affected, and to the bearing of bacteriological research on the diagnosis and treatment of specific infectious disorders. As the best known instance of the first method mention was made of the use of preparations of the thyroid gland in myxœdema—a disease in which the thyroid was specially affected. This organ was one of the group of so-called "ductless glands," concerning the exact functions of which, until recently, but little was known. Investigation had shown, however, that all these organs were, under normal circumstances, continuously elaborating substances, which are taken up directly into the

blood stream as it courses through the vessels of these organs. It has been shown by experiment that in animals deprived, for instance, of the thyroid gland, symptoms akin to those noticed in the disease termed myxœdema supervened. Implantation of portions of the gland of another animal was therefore tried in cases of the disease in man and with satisfactory results. Later it was found that injections of extracts of the gland were equally useful, and, more recently still, it had appeared that simple feeding with the gland might be substituted for anything in the way of operative measures. Indeed, through the efforts of pharmacists, simplicity of treatment combined with accuracy of dosage had been brought to such a pitch of perfection that an ample supply of the medicament for several days' treatment could now easily be carried in an ordinary pillbox. Extracts of several other organs had been employed in somewhat similar fashion in the treatment of disease involving those particular organs, but as yet experience of their use was insufficient to enable any very definite opinion to be expressed as to whether they might eventually prove of equal value, but there appeared good reason for believing that such might turn out to be the case.

With regard to the aid afforded by bacteriological research in the diagnosis, and more particularly in the treatment of disease, it was worthy of mention that since it became known, through the labours of Pasteur, Koch, and others, that certain of the specific infectious diseases were related to invasion of the system by definite micro-organisms, it had been found possible to diagnose the presence of such diseases as diphtheria, pneumonia, and tuberculosis, often at quite an early stage, by demonstrating the presence in exudations or secretions of a particular bacillus or other microphyte. The attempts at specific treatment of bacteriological diseases had advanced by three very definite steps. The first of these was the inoculation of attenuated cultures of the organism concerned: a method introduced and successfully employed by Pasteur for the preventive treatment of anthrax and chicken cholera. Although, of course, not appreciated as such at the time of its introduction by Jenner, vaccination was, in all probability, an instance of the application of this method. Next it became known that the morbific action of bacteria was, in many cases at any rate, due to the manufacture by them of poisonous matters or toxins from the pabulum on which they lived. By employing these toxins, previously freed from organisms, for inoculation instead of the actual bacteria themselves, it was found that the dose was capable of more accurate estimation, while at the same time the protection afforded was in some cases equal to that resulting from the use of an attenuated culture of the organism itself. By far the most important, as well as the most recent stage was that which has been marked by the introduction of an antitoxin for certain of the diseases in question. Behring, in the case of diphtheria, discovered that when an animal had by repeated inoculations with the toxin been rendered fully resistant to the disease, the blood-serum of such animal, when injected into the system of another, conferred on this second animal also a power of resistance against the disease. On similar lines antitoxins had been devised against tetanus and against that numerous class of diseases which—like erysipelas, for instance—were believed to be due to invasion by streptococci.

The lecture concluded with a short account of Dr. Copeman's own work in connection with small-pox and vaccinia. The results obtained appeared to show that the specific organism in both these diseases was a small bacillus, which stained with great difficulty. It could also be cultivated in a special medium, though with even greater difficulty, and calves had been successfully inoculated with such cultures. It seemed not unlikely, therefore, that in the future we might, in addition to the protection afforded by vaccination, have a means of combating the inroads of small-pox when the system had actually become invaded by the disease.

The new interim Governor of the Rio Negro territory of the Argentine Republic is Mr. George Humble, a son of Dr. Humble, medical missionary at Viedma. Mr. Humble, who is only 27 years of age, was born in Viedma, and, though an Argentine, is said to retain all the characteristics of the Welsh stock from which he comes.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

THE STUDENT'S CAREER.

By Charlotte Ellaby, M.D.,
Ophthalmic Surgeon, New Hospital for Women.

Miss Ellaby began by reminding the students of the legend of the House of Busyrane, comparing the treasure of knowledge to Love's prisoner, well guarded within the House by three iron doors, for which each one must find the key for himself. She said: Over each door was an inscription—over the first, "Be bolde;" over the second, "Be bolde, be bolde, and everywhere be bold;" but over the third came a sudden check, "Be not too bold." In the search after medical knowledge, students would do well to adopt these mottoes as emblems of the courage, tempered by wisdom, required to seize and to put to its best use this treasure when found. But "Life is short, Art is long," so, in addition, haste was needed, but with the same check, not too great haste—*Festina lente*, make haste slowly. This triple armour—courage, wisdom, and speed—would prove all-sufficient for any battle. The study of medicine should, like all other kinds of education, be "brave and preventive." For this the all-round development of the whole nature was needed, which would give the power to grasp all details of a question, and to approach it from a higher level; in this way the judgment would be divested of every personal element, and the physician would be enabled to act without vacillation or delay. Very close to this came the question of relation with other people or manners. These should be "the happy way of doing things," and this "happy way" helped towards the cultivation and possession of a real sympathy with others, one of the keys with which to unlock the secrets in Nature. This sympathy also renders us tolerant and large minded enough to appreciate other people's opinions and judgments even when they differ from our own. On the importance of health, especially in connection with the bugbear of overwork, "others' follies teach us not," and each must fight her own battle; provided only that the experience gained did not come too late, and that the precious Pegasus of health was inside the stable and not outside when at last the door was shut. There was a temptation besetting every earnest student at the outset to spend too many hours consecutively in work. The attempt to accumulate many facts was only satisfying for the moment, for facts must sink into the mental soil and not lie on it. The object of study was the cultivation of reason as well as of understanding; the mind, therefore, should not be overloaded with facts, but the facts should be regarded as a means to an end and not the end itself. Above all, the time spent in recreation and outside work should not be grudged, for it was then that the larger and fuller views of life came. The advice the Emperor Alexander gave to the Poles, "Above all, no dreams," was not good for general application, for in the somewhat prosaic details of daily life they came as a help and not as a hindrance, if they were kept in a right proportion to work or action. Time should be given to recreation, thought, and meditation, and even dreaming. It had been said that the tragedy of all souls lay in the gulf which separated ambition from its realisation. Opportunities must not be let slip, but seized at the right moment; for "Occasion," says Bacon, "turns a bald noddle after she hath presented her locks in front and no hold taken..... There is surely no greater wisdom than well to time the beginnings and onsets of things." It is perhaps too fatalistic to say that "character is destiny," but it is nevertheless true that destiny is very much what character makes it. It was not in the power of everyone to be a genius, or to make a mark in the world, but it rested with each to make, as Jean Paul Richter had said, "as much of ourselves as could be made out of the stuff." This was only to be done by steady all-round work, and patient humble searching after truth. In this way each might endeavour to contribute her mite, not only to the use, but also to the beauty, of life, for "All things are for the sake of the good, and it is the cause of everything beautiful." In conclusion, Miss Ellaby quoted the words of one of the greatest of philosophers, specially applicable, perhaps, to the student in medicine: "And, generally, it is good to commit the Beginnings of all great

Actions to Argos, with his hundred eyes; and the Ends to Briareus, with his hundred hands: First to Watch, and then to Speed. For the Helmet of Pluto, which maketh the Politicke Man goe invisible, is, Secresy in the Counsell, and Celerity in the Execution."

YORKSHIRE COLLEGE, LEEDS.

OUR FOREFATHERS.

By D. J. Leech, M.D.Lond., D.Sc.Viet., F.R.C.P.,
Professor of Materia Medica and Therapeutics at the Owens College, Manchester.

In his introductory remarks, Dr. Leech pointed out the high position of the medical profession in the body politic, and acknowledged our indebtedness to our earlier predecessors not only for a considerable amount of actual knowledge, but also for the initiation of those high ideas with regard to conduct which have happily become an abiding tradition with us. As to the origin of the medical profession, Dr. Leech referred to Mr. Herbert Spencer's article in the June number of the *Contemporary Review*, where this writer claims for the medical profession a sacerdotal origin. He points out that the union of the functions of doctor and priest is a normal trait of early societies. Ideas of the supernatural in connection with disease would naturally lead to the priest taking the function of physician as one who deals with ghosts not antagonistically but sympathetically. The priestly caste, he says, in an early state of civilisation, develops culture, and from part of this culture, having its origin in preceding stages, comes greater knowledge of medicinal agents, which gradually cease to be considered as acting supernaturally.

Mr. Spencer thus seems to be of opinion that treatment by remedial agents owes its introduction to ideas concerning the supernatural, that the priesthoods added to medical knowledge thus initiated, and that medicine and the medical profession of the present time have originated from the bases thus established by them. Dr. Leech considers this view open to some objections. Doubtless a very close connection has existed from very early times between medical treatment and the belief in the efficacy of supernatural means for the cure of disease. Indeed, save in the most civilised people, it still to some extent exists. But there is little to indicate that the initiation of the treatment of disease developed chiefly from such beliefs. Nor is there proof that the earliest practitioners of medicine were priests, or held views concerning the supernatural other than those which seem common to the early stages of man's development in all countries and in all times. The association of the priesthood with medical treatment does not seem to have been beneficial to the progress of medical knowledge but rather the reverse.

The origin of treatment of disease by remedial agents has been the subject of speculation from very early times. It has been thought by some to have sprung from the same instincts which seem to lead animals under certain conditions to eat, when ill, substances they usually avoid; others, for example, Schmiedeberg, have suggested that man has imitated the habits of animals in this matter.

In the treatise on ancient medicine included in the works bearing the name of Hippocrates, and which Littré believes were written by the Father of Medicine himself, the belief is expressed that medicinal treatment arose from observations on the different influences of foods and their properties in health and disease. In connection with this view, it is interesting to note that in the earliest works relating to treatment, dietetic substances play a leading part in remedial agents. The oldest document bearing on medical matters we possess was discovered in 1889, at Kahun, near the Pyramaid of Illahun, in the ruins of an ancient town which had been apparently inhabited by the builders of the pyramid. It dates from the twelfth dynasty, B.C. 2700 to 2500, more than 1,000 years before the Exodus. A translation of it by Mr. Griffiths, of the British Museum, will be found in the British Medical Journal of June 2nd, 1893. It consists of instructions for midwives and [illegible] prescriptions for treatment. Into these articles of diet largely enter—beer, cow's milk, oil, dates, and other fruits, herbs, sweet beer, honey, onions, etc.

In the prescriptions of the medical papyrus obtained by Ebers at Thebes, and usually bearing his name, the same feature is well marked. This most ancient of Pharmacopœias—for such it is—was found between the legs of a mummy. There is a general consensus of opinion that it was compiled about 1500 B.C., though some of its contents date from an earlier period. It consists of formulæ for the treatment of a large number of ailments, both external and internal, some very simple, consisting of one or two ingredients only, others more complex, containing twelve to fifteen drugs, and directions more or less precise are given for their preparation and use.

Most of the drugs are derived from indigenous plants, but a few minerals, such as alum, salt, nitre, and sulphate of copper, are also found in them. Some of the ingredients cannot be recognised.

In the prescriptions of the Papyrus Ebers dietetic substances largely predominate; honey, milk, bread paste, several cereals, fruits, such as figs, plums, grapes, melons, and dates, and like substances are found in a very large proportion of the prescriptions, and that they were not used simply for flavouring purposes seems evident from the fact that some of the medicines are entirely composed of them; thus, for example, the second prescription consists of figs, plums, and sweet beer, and the third milk, bread, and honey in definite proportions.

It is probable, too, that in addition to the large number of substances in this Pharmacopœia which we recognise as foods, many of the other components which we look upon as drugs were used in ancient times for culinary purposes. Thus, for example, the leaves and seeds of the castor oil plant are present in very many of the prescriptions; so, too, is the astringent sycamore fig. But Maspero points out that in the time of the Pharaohs castor oil was probably taken regularly in food; indeed, it is yet a favourite condiment amongst the Egyptian *fellaheen*, who flavour their salads with it. The fruits, too, of the sycamore and many of the substances we regard as nauseous were in former days eaten. Maspero thinks that the Egyptians "began by eating every kind of food which the country produced. Many of these, when their therapeutic virtues had been learned by experience, were gradually banished as articles of food, and their use was restricted to medicine; others fell into disuse, and only appeared at sacrifices and funeral feasts."

In the drugs used by savage tribes, foods and substances capable of being used as such, predominate as they did in Egypt of old, and as was the case in Egypt, active poisons are comparatively rarely used as medicines.

As medical knowledge has advanced, foods have been for the most part replaced in the treatment of disease by more active agents, but they have not yet entirely disappeared. The lettuce and pearl barley with its preparation, decoctum hordei, are to be found in the list of remedial agents in the present edition of the *British Pharmacopœia*, and constitute a connecting link between the medicine of the present day and its origin in the dim past. It is not difficult to account for the prevalence of foods and the absence of active poisons in primitive medicine. The favourable change in certain forms of disease which follow vomiting or excessive action of the bowels, skin and kidneys, must have attracted the attention of man in the earliest stage of his development. In his search for food he would note in the first place the substances which when taken cause death soon, and these he would entirely discard. His attention would also be drawn to certain animal, vegetable, and mineral products, giving rise to vomiting, purgation, diaphoresis, or diuresis, and even the most untutored mind would infer that advantages might follow their administration in those diseases in which emesis or an increase of the secretions had been found beneficial.

It seems probable that most of the earlier medicines were substances first tried as foods, and those which when taken in large quantities or in special conditions influenced the functions of the body; these, together with others, found to be too potent for dietetic use constituted for the most part the primitive Pharmacopœias.

The general employment in early societies of drugs which have definite effects on the organs and secretions is worthy of note. From the document bearing on medicine which was

written some 2,000 years B.C. It is evident that emetics were then given, whilst in the Papyrus Ebers there is a distinct recognition of the value of substances which cause purging, vomiting, and increased secretion of urine, and a recognition of such groups of agents is often a well-marked feature in the rudimentary therapeutics of uncivilised peoples. Now a medicine springing entirely out of magic, witchcraft, and the like, would not concern itself largely with foods, nor with such prosaic proceedings as purging and vomiting.

Though it seems probable the use of natural remedies originated for the most part from observations on the phenomena of disease, and the influence of substances tried in the first place for food, many other circumstances have, of course, led to the introduction of remedial agents. The cravings of patients during sickness for articles of diet not ordinarily taken, no doubt in earlier times led to their employment as remedies, as they do at times even now, and many other incentives to the trial of remedies in disease might be named.

The extent to which observation has led to the use of natural remedies in uncivilised countries varies much. The combination of fanciful ideas and superstitions with the use of natural remedies likewise varies greatly; these are everywhere present, sometimes they predominate. Nevertheless there seems no sufficient ground for the assumption that the use of natural remedies amongst savages is the outcome of the superstitious ideas which accompany it. It is easy to imagine that the definite effects which a drug is found to produce may be attributed to a spirit, but that the aperients and emetic drugs so often used by rude tribes have been originally given on the view that they possess a spirit seems hard to believe. The character of the earlier formularies and of those of uncivilised peoples points to an origin of medicinal treatment from observation, and it is from this that the medicine of to-day has sprung.

The earliest practitioners of medicine, Mr. Spencer seems to think, were the priests, but Dr. Leech considers that such scanty information as we can glean from the history of the earlier stages of society does not point in that direction. As we go back into Egyptian medical history we do not find evidence of a greater influence of the priesthood in medicine, but rather the reverse. The document discovered by Mr. Flinders Petrie only contains one incantation. It is true it concerns domestic medicine, and only one department of this, but Dr. Leech's contention is that medicine of to-day owes its origin to a domestic medicine which is, and has been from earliest times, practised everywhere, and which did not arise from the magicians or priesthood. Anyway it is interesting to note that in the most ancient document relating to medicine, amid many old women's tales we find scanty allusion to the supernatural.

The Papyrus Ebers, compiled 1,000 years later, shows a greater intermixture of religious and medical views, but there is no evidence that the priesthood and superstition dominated as they probably did many centuries later. Medical knowledge at the time it was composed would seem to be the outgrowth of a highly cultivated domestic medicine, influenced, though but little injured, by a belief in gods and supernatural forces. There are some indications that domestic medicine was largely practised in Egypt in early times. The treatment of disease by drugs was widely diffused there. Ladies probably had their medicine chests as they now have. The domestic medicine chest of the wife of Pharaoh Mentuhotep, about B.C. 2500, is now in the Berlin Museum. It was found to contain six vases, one of alabaster and five of serpentine, with dried remnants of drugs and some roots.

A sentence in Homer's *Odyssey* is supposed by some to allude to the widespread knowledge of medicine in Egypt in early times amongst the laity. In alluding to Egypt it is described as a land producing many drugs, some good some bad:—

> ἰητρὸς δὲ ἕκαστος ὑπερφίαλος παρὰ πᾶσιν
> ἀνθρώπων· γένος γάρ περ παιήονός εἰσι γεγῶτες.

"Each one is a physician skilled beyond all men." There is, of course, not much evidence in all this, but as far as it goes it seems to indicate that from earliest times a knowledge of the action of remedial agents was widely spread and not confined to a priestly caste. There were also at very early periods physicians who had a more special knowledge of disease and drugs. The grave of one, living from 3,000 to 3,500 years B.C. has been found.

In later times, especially in the decadent days of Egypt, medicine was in the hands of the priesthood, and superstitious practices prevailed. Domestic medicine was no doubt still largely practised, but orthodox practice was apparently regulated by the priests.

In Greek literature the earliest allusion to the healing art is found in Homer, who represents it as derived from the gods, indeed, but in the hands, not of priests, but of warriors, and to a certain extent of women. The only two doctors named in the Greek army are Machaon and Podalirius, who were also warriors, and led thirty ships to the siege of Troy. Their father, Esculapius, is represented as a chieftain to whom Chiron taught the healing art, as he did to Achilles. There is no allusion to temples open for the sick or to priestly medicine.

As might be expected from the nature of the subject the doctors are represented in the *Iliad* as exercising surgical functions. On occasion, indeed, all the warriors seemed to be capable of giving "first aid."

Dr. Leech here gave several quotations from Homer in illustration of these points.

According to the traditions concerning early Greek life it would seem as if those who first practised the healing art in Greece on the surgical side at least, were not connected with the priesthood, and there is no indication that medicine was then in the hands of a separate class. Later on, indeed, though when we know not, the chieftain versed in medicine of Homeric times was deified. Temples were erected to Esculapius in many parts, and thither patients flocked to them for cure. But, as far as is known, treatment employed here was almost entirely connected with the supernatural. However, it is quite certain that contemporary with the theurgic medicine of the temples of Esculapius, there was amongst the Greeks from earliest times a practice of medicine different from it, and not in priestly hands, and that in Greece, as well as in Egypt, two kinds of medicinal treatment were in vogue at the same time, one consisting chiefly of spells, charms, and other supernatural means, another in which natural remedies were for the most part given, though drugs originating in superstition were also doubtless at times used.

How early a distinct medical class was developed out of the primitive system of medical practice which the Homeric poems delineate is not known. Pythagoras (580–510) and other philosophers mixed up a little practical medicine with their speculative doctrines. At the end of the sixth century we hear of a famous Greek physician, Democedes, curing the King of Persia when the Egyptian physicians failed, and in the fifth a Greek, Ktesias, was physician to the Persian Court, and Hippocrates wrote his famous works.

It is impossible, under these circumstances, to suppose that Greek physicians did not exist till five centuries B.C. Indeed, we have much earlier allusions to them, though none are named. Moreover, the fulness of knowledge of drugs and disease from which Hippocrates wrote could not have been derived from his own experience. How far he obtained this information from the knowledge accumulated by previous physicians, or how much he owes to Egyptian medical lore, is not known. Hippocrates himself never speaks of Egyptian medicine, nor does he, though said to be connected with the priests of the Asclepian of Cos, allude to priests or their teaching, and he attributes, as I have said, the origin of medicine, not to the priesthood, but to a natural cause, the different influence of food in health and disease. There is reason to believe, therefore, that in Greece, long before the time of Hippocrates, medical treatment unconnected with the temples and priests had been cultivated; that starting from a time when the chief of a tribe or a family practised medicine, a class of physicians had gradually developed.

Of those who in earliest times exercised the healing art in Assyria, Babylonia, Phœnicia, India, and China we know nothing. This defect in information, however, with regard to these countries is of the less importance, since we must look upon the Greeks, and perhaps the Egyptians, as our medical forefathers. From them alone has medical knowledge come down to us.

How far in prehistoric times the medical practice of Egypt and Greece resembled that now met with amongst uncivilised people it is of course impossible to say. In almost all, if not in all, countries there are practitioners of medicine. Statements with regard to the absence of medicine men and the use of drugs in wild tribes must be accepted with reserve unless the reporter has lived with them. In the Andaman Islands there seems hardly any indication of a medical class, and often medical treatment is undertaken by some member of the household. Amongst the old Peruvians, too, the old women acted, at least in the case of the common people, as their medical attendants, and in South Australia, in smaller ailments at least, each one is his own doctor, but these are exceptions. Almost everywhere we find medicine men. Sometimes, as in New Guinea, they are hardly differentiated from the other people. In most tribes, however, they form a distinct class, and often they hold a high position, as amongst the Dacota Indians, the aboriginal tribes in Victoria, and in Samoa.

In rude tribes, as in Egypt and in Greece, there is evidence that at times two kinds of medical treatment co-exist. In Schoolcraft's work on the North American Indians it is pointed out that besides those who treat by magic and the invocation of spirits there is a class of medicine men not to be confounded with them who treat disease by natural remedies, using emollient applications externally and drugs internally. From what we can learn of the past and what we can observe among uncivilised peoples of the present day it seems probable that a knowledge of the influence of drugs on external or internal ailments has tended everywhere to accumulate in the hands of certain individuals; usually, perhaps, in those of the chief of the tribe, sometimes in those of his wife, but not infrequently other members become the special depositories of medical knowledge. Eventually differentiation of function occurred and a distinct medical class was formed. Doubtless this was a gradual process and was accomplished in many ways. At times it may be that the priesthood took part in it, but there is no evidence that this was always or even often the case.

The connection between medicine and the supernatural is easily explained. From the very first, ideas with regard to the action of drugs must have been combined with those concerning supernatural agencies, for spirits seem everywhere in man's primitive state to have been accepted to a greater or less extent as a cause of the phenomena of Nature, and being regarded as forces separate from the matter they influenced, they became soon looked upon as definite entities capable of producing good or evil apart from the material with which they were connected. Disease being due to an evil spirit, to cast it out was equivalent to curing the disease, and the means used to cast out spirits were by no means always ineffective in curing disease.

We know that at the present time many ailments are due not to tissue changes—at least, not to such as are capable of physical recognition—but to what, for want of a better name, we call neuroses. We know those neuroses are often little influenced by ordinary remedial agents; they may be removed by moral management. But we know, too, that they may often be cured by powerful impressions on the nervous system. This is especially well seen in hysterical paralyses of all kinds. The cures effected in nervous conditions by "faith healers" is well known. We cannot wonder, then, that in an early stage of society, when these conditions were perhaps even more common than at the present day, such treatment as would follow from belief in spirits and demons would have at times a curative effect and lead to a belief in its general efficacy; and this is the reason why everywhere we have two kinds of treatment used, one consisting of remedial agents having a physical effect, the other of agencies acting on the nervous system.

Real remedial agents, too, were often used with spells, or spells were employed to strengthen their effect. When the young men bound up the wound of Ulysses they

> The blood stream red
> Staunched with the singing of a potent spell.

In some uncivilised countries, as in Babylonia of old, the effect of drugs is largely attributed to spells associated with them.

The early and close connection of medicine with the priesthood and of doctors with priestly functions is readily accounted for without assuming that one is developed from the other. Religious functions, as Mr. Spencer points out, not infrequently centred in the heads of families and tribes, and when the priestly class was initiated it would naturally tend to assume to some extent the medical function.

It is well known that the power to deal with bodily ailments is a great advantage to those who minister to spiritual wants. Moreover, if the supernatural method of healing were in the domain of the priest, it would be only likely that he should also take upon himself the use of natural remedies, the more so because he would often have special opportunities of acquiring all the known information concerning natural remedies.

In process of time changes would occur, differing in various countries with the modifications in their religious and social life. In some, as in Egypt, the priesthood would absorb more and more of the medical functions and supernatural treatment would increasingly prevail. In others, as in Greece, the medical class would develop, and *qua* medicine, the sacerdotal element would lose ground. And there would be times, too, when medicine would be equally practised by priests and physicians.

As is well known, tradition in Egypt, Greece, and India gives a divine origin of medicine, and this has been pointed out as an indication of the origin of the medical profession in the priesthood. That it is in part due to an early connection there is no doubt. Medicine was a valuable addition to the social class that it should be represented as originating from the gods. It was with the priests, no doubt, that the tradition originated of the more than human origin of medicine.

In reviewing the progress of medicine Hippocrates stands out prominently as a landmark in our medical genealogy. In his writings we find an astounding progress in medical knowledge on anything which had previously been produced which has come down to us. We find, too, the lines correctly set forth on which medicine must be studied in order to advance, and rules of professional conduct which are an important feature in medical ethics of the present time.

Hippocrates, in the first place, absolutely denies the supernatural origin of disease. "No one disease," he says, "is either more divine or more human than another, and none arises without a natural cause." This was in direct opposition to all we know of priestly teaching. Throughout his works we find not the slightest indication of belief in popular superstitions; amulets, charms, etc., he never mentions. He shows a contempt for charlatanism. He advocates the exclusion of all purely speculative theories, yet he does not oppose the use of hypotheses, for he employs them himself. He teaches the necessity for careful observations of the natural history of disease, and the conduct of treatment in accordance with them. He points out the importance of knowing the nature and course of diseases, prognosis that is, in order to treat them properly. "He will manage the cure best," he says, "who has foreseen what is to happen in the present state of matters." It is to Hippocrates that we trace the system of casetaking, and he has recorded in a concise and clear manner the summaries of forty two clinical histories. In none of his works do we find any indication of self-laudation. He certainly did not select his successful cases for record, since more than one-half o' these cases he reports died. In the oath which he or one of his successors drew up for candidates wishing to enter the medical profession, each had to swear by Apollo as follows: "With purity and with holiness I will pass my life and practise my art," and "Whatever in connection with my professional practice, or not in connection with it, I see or hear in the life of men which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret." He lays down as a general rule for the physician to do good, or at least no harm. He issues caution against exposing patients unduly during examination and operations, and suggests that it is better for a physician to go without his fee than to trouble a sick man for it.

The medical progress in the Hippocratic era was indeed immense. It would have been fortunate for mankind if it had continued on the lines laid down in the Hippocratic works. For many centuries after Hippocrates there was a

great activity in medical research and an enormous number of drugs were introduced. Dioscorides in the first century of the present era described 500 medicine-yielding plants, besides 90 earths and metals.

Theories as to disease and the action of drugs were continually brought forward, and though for the most part false, they were incentives to continued investigations. Much advance in knowledge was doubtless made, and if you read the Celsus who wrote on medicine and surgery in the latter part of the first century, you will be surprised to find how far advanced was the knowledge in certain parts of both of these subjects. But for several reasons the advance was not what it should have been considering the great industry displayed. Attention was almost wholly directed to finding out remedies for each ailment by simple observation, and little attempt was made to determine the cause of the ailment. Of theories concerning these causes there was an abundance, but of direct search for them there was little or none.

Physiology and pathology were non existent. Then, again, very soon after the Hippocratic era superstition and the connection of disease with the supernatural began to thrive, and these do not initiate but are fatal to progress in the healing art.

As we descend from Hippocrates to Galen, who lived in the second century, charms and amulets figure more largely in the remedies for disease; then, too, it would appear as if the physicians were more anxious to have their names connected with some new remedy or theory than really to add to knowledge. There was a great falling off from the high standard of the ethics of Hippocrates. With Galen we reach the high-water mark of progress of the Greek school. He added to real knowledge indeed, but his very pre-eminence was an evil, for he adopted a false theory with regard to causes and cure of disease, and his name was sufficient to secure its adoption in medicine for nearly 1,500 years. After Galen medicine rapidly deteriorated, superstition increased, and physicians seemed simply engrossed in trying to ticket each ailment with a series of remedies. The horizon darkened, and in the Middle Ages medicine fell to a very low estate. Many causes contributed to this, but the most potent were the spread of superstition, and the ideas promulgated by many clerics that diseases were due to supernatural causes for it followed that cures must also be of supernatural origin, and in the Middle Ages we find supernatural agencies largely relied on in treatment, whilst the knowledge concerning the use of natural remedies was far less than in the first century.

Dr. Leech concluded his address by pointing out some lessons to be derived from the history of our fathers. He advised his hearers above all things to cultivate exactness in observation, and to beware of accepting unproved observations, and of accepting hypotheses as facts. The art of healing could not advance far by simple observation of what did good in individual ailments. A knowledge of collateral subjects was requisite, and not until anatomy, physiology, chemistry, and pathology became subject to study could great progress be made. What is true in regard to the progress of medicine is also true in regard to the individual. A wider knowledge of the scientific collateral subjects—physics, chemistry, anatomy, physiology—will tend to make the student a better medical man, and will stand him in good stead in the practical work of his profession. For the advancement of medicine they are absolutely essential.

Finally, Dr. Leech reminded his audience of the teaching of Hippocrates with regard to conduct 400 years B.C. It was considered essential that a medical man should pass his life in purity and holiness, that he should respect the confidence of his patients, and that he should be careful of their feelings; that he should be ever on his guard lest what he prescribed should do harm; that he should avoid all kinds of charlatanism. These and many other injunctions should press on those living in the nineteenth century even more strongly than on those who lived before the present era. We should never forget in this respect the teachings of the great Father of Medicine.

A Bill has been passed by the Massachusetts House of Representatives, making mandatory the establishment of a State hospital for tuberculous patients.

REVIEWS.

Gunshot Injuries: Their History, Features, and Treatment. By Surgeon-General Sir T. Longmore C.B. Second Edition. London: Longmans, Green, and Co. 1895. Royal 8vo, pp. 880. 31s. 6d.)

Although this is nominally a second edition, it is so entirely recast and rewritten as to be practically a new book. Sir T. Longmore has long been known not only as a high authority on all that pertains to gunshot injuries, and the duties of the military surgeon both in the field and in the hospital, but as a writer of power and grace. The work before us fully comes up to his high standard, and it is a matter for congratulation to be able to point to this veteran of the professions of arms and of surgery, who is not only willing, but able, to spend so much labour on a fit presentation of his matured views upon a subject which has acquired a large amount of interest during recent years.

When we recall the fact that it is some seventeen years since the first edition of the book appeared, and that during this period most remarkable changes have been carried out in the firearms and projectiles of all the leading armies of the world, it is not surprising to find that the subject-matter has necessitated material alterations. The earlier pages are devoted to a consideration of the means by which gunshot injuries are produced. This portion of the work is quite up to date, and is followed by chapters dealing with the causes which influence the nature, characters, progress, and ultimate issue of these injuries. The characteristic features, primary symptoms, and complications of gunshot wounds are also fully considered; in this section a reluctance is noticeable on the part of the author to accept a specific micro-organism as the essential parent in the production of tetanus among those wounded on a battle-field. The ulterior consequences and general treatment of gunshot injuries in field practice are systematically discussed, though perhaps the student may think somewhat inadequately so. The chapters upon the administrative arrangements for the care and treatment of wounded soldiers in time of war are excellent. The statement of statistical facts is good so far as it goes, but loses much of its value from being based mainly upon returns relating to the Crimean war, the United States war of the rebellion, the Franco-Italian and Prusso-Danish wars, and the great war of 1870.

For a standard work of this kind it is regrettable that the author has not been able to gain access to reliable statistical facts, if such are available, regarding our more recent expeditions, such as those in Egypt, Burmah, Chin Lushai Hazara, and Waziristan, in which weapons of greater range and velocity were employed. These would have been of incalculable value, and their omission constitutes a defect in what is otherwise a good book.

On the whole this new issue of Sir T. Longmore's standard work fully maintains its character as a worthy representative of British military surgery. The book is one which we strongly recommend to the notice, not only of naval and military surgeons, but also of those engaged in civil work, since it contains a succinct account of our present knowledge of facts and of questions in regard to gunshot injuries, available in no other form. The book is printed in excellent type and well illustrated.

A German-English Medical Thesaurus, etc., and German and English Indexes for Physicians and Medical Students. By Rev. Henry Losch, M.D. Philadelphia, Pa.: Published by the Author. 1895. (Cr. 8vo, pp. 323. 2 dols. 50 c.)

That some knowledge of German is a very great advantage in these days to any medical man, and almost essential to one who desires to keep abreast of any special study or department of medicine or physiology will not be denied. We are disposed, therefore, to welcome any work which professes to smooth the path of the student. The plan of this work is somewhat cumbrous, though it is true that a learner who worked conscientiously through Dr. Losch's pages will have gained a very copious vocabulary. The plan is to take in

succession the German words connoting various parts and organs of the body and then to enumerate the derivative and qualifying words in use.

The chief defect in this portion of the work is a certain degree of redundancy, especially in the direction of the retention of words which are practically obsolete so far as modern medical writers in the German language are concerned. On the other hand, some words in common use are omitted. German-English and English-German indexes are appended. They form in fact a dictionary of the two languages, with the drawback that the reader is referred back to the word in the vocabulary, but with the advantage that when it is found he finds also a collection of related words and of synonyms. The volume contains also a table of the irregular verbs, and of the declensions, and also a series of short dialogues.

Dr. Losch states his reasons for the inclusions of these grammatical forms in the following sentence, which is worth quoting, also, because it will serve to make plain to the inexperienced why it is that the Englishman accustomed to short sentences and clear arrangement of ideas sometimes finds German writing so extremely difficult of comprehension. "The reason for making this addition arose from the conviction that if persons studying or having studied the German language, on the one hand, can classify a noun at sight by looking at the schedule of the terminations of each declension, inasmuch as there are four different classes of declensions in German, after which the nouns must be declined wherefore every representative noun in this work has attached the number of the respective class of declension to which it belongs; and, on the other hand, such persons also know the irregular verbs, and can readily refer by looking at the schedules of conjugations of these verbs, to the various changes they undergo in the process of conjugation in the various tenses, etc., they certainly have overcome two of the foremost difficulties in the study of this language." The sentence will serve to prove that still another difficulty will remain.

Dr. Losch does not mince matters with his pupils, for the very first word in his vocabulary is *Brust-schlusselbein zitzenfortsatz-muskelschwund*, perhaps as appalling a specimen of a compound word as man could desire. However, Dr. Losch did not invent the German language, and cannot justly be blamed if some of its products are a little clumsy. His English is sometimes at fault, as where, for instance, he makes a patient ask: "May I eat something, or must I remain jejune, on an empty stomach?" The phrases are meant to be alternatives, but either would be apt to raise an untimely smile on the face of an English physician. Had the book been revised by an Englishman having some acquaintance with German it might have been much improved in other respects also; but, on the whole, we can recommend it as a means of becoming familiar with something of the spirit of the language, and more particularly with the mode in which compound words are formed.

Cambridge Natural Science Manuals: The Elements of Botany. By Francis Darwin, F.R.S., etc. Cambridge: University Press. 1895. (Cr. 8vo, pp. 235, 94 illustrations. 6s.)

This is a very useful little book for the beginner, being very plainly and intelligibly written. The author commences with a brief account of yeast (saccharomyces), describing its unicellular structure, reproduction, nutrition, and the resultant fermentation. He also describes the composition of Pasteur's solution for the artificial culture of the yeast plant and the determination of its constituents. He then proceeds to the more complex spirogyra, dwelling particularly on its nutrition, especially in relation to that of yeast, and the assimilation of carbon. This chapter finishes with a few further particulars of the vegetable cell, illustrated by examples from the root of maize, the hairs of tradescantia, and the cortex of ranunculus. One defect we find in this and succeeding chapters is the absence of dimensions or approximate and comparative size of the different organisms under discussion. The figure of yeast represents it under a "high power;" the figure of spirogyra shows a single cell, enlarged to about two inches in length and three-quarters of an inch in diameter, without any indication whatever of size.

The second chapter treats of the seeds of the bean and pumpkin and of tubers and bulbs with reference to germination, vegetation, and growth, the production and storage of "reserve material," and its subsequent utilisation. In this chapter some of the figures are of natural size and some are reduced—a fact which the student is left to discover for himself. Generally speaking, the figures are intelligible and afford a good idea of what they are intended to represent, but there are some exceptions, that, for instance, on page 61 intended to show collenchyma in the stem of a clematis. Apart from these defects, however, this is one of the best little books on rudimentary botany. Each of the fourteen chapters contains a mass of information presented in the simplest language, with a good selection of examples to illustrate the various facts and phenomena. Why the bean flower, which is so easily obtained, should be replaced by the sweet pea (p. 148), is difficult to understand, though one is just as good as the other to illustrate the papilionaceous type. Only, why not have at once taken the sweet pea as the type? Following the introduction to botany are some thirty pages of instruction in practical work on the types described. We note the old error (p. 223) in describing the seed vessel of the shepherd's purse (capsella), where the replum is confused with the septum. "Numerous ovules are found supported on a flattened central dividing wall—the replum." The ovules are borne on the replum, or frame, not on the septum or partition.

Formulaire des Spécialités Pharmaceutiques. Par Dr. M. Gautier et F. Renault. Paris: J. B. Baillière et Fils. 1895. (Fcap. 8vo, pp. 300. Fr. 3.)

This pamphlet is intended to give information in regard to French pharmaceutical specialities, of which it is stated there are 1,500 at present laying claim to the favour of French physicians. In the first part the different specialities are described—their dose, use, and composition, but the information in regard to the latter is frequently conspicuous by its absence, although this would have been of the greatest service to the prescribers. For example, under Cigares de Joy, Cigarettes Espic, Eau de Suez, etc., no hint is even given of their composition. Again, the work in parts is carelessly done—lanoline Lichwitch is given as a synonym for vaseline, and in the index, or *Mémorial Thérapeutique*, lanoline is stated to be a speciality of Knorr.

The second part contains a Therapeutic Index, or *Mémorial Thérapeutique*, in which the specialities are allotted to an alphabetical list of diseases. In the third part or *Mémorial Pharmaceutique*, the makers' names are affixed to an index of the specialities, and finally there is a similar list of *specialistes* or manufacturers of specialities.

In the preface M. le Sénateur Cornil explains some of the defects in the French law in regard to the practice of pharmacy and the sale of specialities, showing that in many cases a trade mark confers more protection to a manufacturer than a patent, that it does this without possessing merit, and often not in the interests of public health. There is much information given in regard to French specialities in this little work, which it would require a wide search to obtain elsewhere.

A Textbook of Physiology. By M. Foster, M.D., F.R.S., Professor of Physiology in the University of Cambridge. Sixth Edition. Part II. The Tissues of Chemical Action with their respective Mechanisms. Nutrition. London: Macmillan and Co. 1895. (Demy 8vo, pp. 379 to 911. 33 illustrations. 10s. 6d.)

This part of Professor Foster's well-known textbook treats of secretion, digestion, absorption, respiration, the elimination of waste products, and general metabolism. It is very little different from Part II of the fifth edition. The rapid appearance of successive editions indicates that Foster's *Physiology* continues to hold its own against numerous competitors. We note that a separate index has been added to this part; this will prove a most valuable and useful addition.

A MANUAL OF BOTANY. By J. REYNOLDS GREEN, F.R.S., etc. Vol. I, Morphology and Anatomy. London: J. and A. Churchill. 1895. (Crown 8vo, pp. 398. 7s. 6d.)

THIS is another of the very few reliable guides to botany offered to students, for, although the author was at the outset considerably hampered by conditions, it is evident that he possesses a thorough knowledge of his subject, and that he has conscientiously performed his task, in spite of the difficulties under which he started. Professor GREEN, it will be remembered by many, succeeds Professor Bentley as Professor of Botany to the Pharmaceutical Society, and it was at first intended that the present work should appear as the sixth edition of Bentley's *Manual of Botany*, but the death of Professor Bentley gave the author more freedom. This he has wisely exercised, yet the result is not quite so satisfactory as it might have been had Professor Green been free from the beginning. The fundamental alteration is the separation of the anatomy of plants from the morphology, the former having been practically rewritten and illustrated by numerous new figures, some original and some borrowed from the best sources. So far as general morphology is concerned, the old figures serve very well, and compare favourably with those of most books of the kind. Those who have used the ponderous predecessor, in which nearly the whole range of botany is taught in one volume, will realise the convenience of dividing it into two parts; and it is to be hoped that the second part, dealing with the classification and the physiology of plants, will speedily follow. Preferably we would have divided the matter differently, associating morphology and classification in one volume, and anatomy and physiology in the other; and we offer the author this suggestion for adoption in future editions.

If there is one thing we would find fault with, it is the retention of a large number of practically obsolete designations of different modifications of the fruit or seed vessel and of other organs. These names or terms are rarely, if ever, used in descriptive works, or heard outside the class room. The great objection to most of them is that they are only of very limited application, and that to apply such a system of nomenclature consistently would involve the invention of scores of other equally uncalled-for terms. On this point we do not agree with Professor Green in classifying the raspberry and blackberry with the "spurious fruits," because the fleshy edible part is absolutely the substance enclosing the seeds, or the true pericarp. We note, too, that the septum of the cruciferous fruit is confused with the replum. In the description of the roots of epiphytes (p. 23) there is a distinct contradiction, the erroneous part being that "they must draw their food entirely from the air in which they are developed." But errors of this sort are almost inevitable, and we point them out to give more strength to our recommendation of the book.

THE TREATMENT AND EDUCATION OF MENTALLY FEEBLE CHILDREN. By FLETCHER BEACH, M.B., F.R.C.P. London: J. and A. Churchill. 1895. (Demy 8vo, pp. 32. 1s. 6d.)

THE author gives a summary of an extended experience in the treatment and training of children more or less imbecile, as well as of those with lesser degrees of defect, now termed "children mentally feeble." In his description of their physical condition the author dwells upon the imperfect impressions received by the brain through the senses, and points out that music is always pleasing to these children. Therapeutic means and methods of training in movements and co-ordinated action are explained in very practical form with description of useful details. Conditions of body and brain, which in the aggregate render the child imbecile, are often met with singly in dull or backward children, and the hints given will be found of use in such cases. Children feeble in brain power have usually but feeble power of resisting disease, and should be carefully protected against the dangers of phthisis and inflammatory affections; the teeth, throat, eyes often require attention. Hygiene, diet, and special exercises to cause co-ordinated movements, improve gait, speech, and impart good social habits, need intelligent and persistent care; by such means the child may be educated up to occupy a position more self-helpful, and less dependent and degraded than when left untreated and untrained.

We heartily agree with Dr. BEACH that it is nothing but a popular fallacy to suppose that such children will improve of themselves as they reach the age of fuller development. Amelioration can only be afforded by early, patient, and prolonged training adapted to the special needs of the individual child. We recommend the perusal of this practical work to all who are concerned with the care and training of children of deficient mental power.

THE USE OF SHORTHAND BY THE STUDENT: WITH EXAMPLES. Issued by the Society of Medical Phonographers. London: Sir I. Pitman and Sons. 1895. (Fcap. 8vo, pp. 32. 8d., by post 8½d.)

THIS publication deals with the whole subject of note-taking by the student. In the lecture room verbatim notes are not recommended, but the student is advised to take a full summary, using only the right-hand pages of his notebook. The left-hand pages are to be left blank for the record of supplementary facts which he may observe in his daily work or meet with in his reading. In this manner the student compiles a miniature treatise of his own. The ease with which this may be done by the help of shorthand, the mental training it affords, and the incentive to original work it supplies are pointed out, whilst the contention that shorthand thus used prepares a man to excel in the examination room and the sphere of his life's work is self-evident. The writer shows how the student may most profitably use shorthand at the bedside, in the laboratory, in the wards with the physician or surgeon, in the out-patient room, and in his reading. Examples of actual notes are given, and the best form of notebook as well as the most useful pens are mentioned. Every student, and all whose duty it is to observe facts or make notes of what they read, see, and hear, should read this practical little work.

HYGIENE AND PUBLIC HEALTH. By LOUIS C. PARKES, M.D., D.P.H. London: H. K. Lewis, 1895. (Crown 8vo, pp. 550, 80 illustrations. 10s. 6d.)

DR. LOUIS PARKES' handbook has deservedly reached a fourth edition, which fully maintains the standard of excellence to which its popularity is due. It is clear and practical throughout, leaving nothing obscure, and evading no difficulties. In matters still *sub judice* Dr. Parkes gives his readers the benefit of the divergent views of different authorities. The work has been carefully brought up to date, and unless we are mistaken the additions include more than one new illustration. Sanitary law is not touched upon, and there is much to be said in favour of the omission. It would be difficult even for Dr. Parkes to make a legal chapter interesting, and it is questionable whether the study of the original Acts is not more profitable than that of any summary of them. As in former editions, the type is good and clear, and there is a sufficient index.

MEDICAL PARTNERSHIPS, TRANSFERS, AND ASSISTANTSHIPS. By W. BARNARD, M.A., LL.B., and G. B. STOCKER. London: Stevens and Sons. 1895. (Demy 8vo, pp. 260. 10s. 6d.)

THE publication of this volume will have rendered a most valuable service to medical men if it should teach them the necessity for obtaining competent advice before entering into partnerships. No merchant or manufacturer thinks of taking such a step without submitting the conditions of his partnership agreement to his legal adviser. The medical man, with far less knowledge of the world than the merchant or manufacturer, too frequently risks his future on a sheet of notepaper drawn up by himself or his intending partner.

The inquiries of correspondents published in our columns testify to the troubles and losses which are the natural consequence of such rashness. The general law of partnerships—one of the most difficult branches of the law—necessarily governs medical partnership, and a considerable portion,

therefore, of this volume deals with what is common to all partnerships.

The matters of special interest to the medical man are to be found in the chapters relating to Restrictive Covenants, Introduction to Patients, and Assistants, and in the general advice, founded on long experience of the subject, given by Mr. Stocker in Part I. Forms of deeds and agreements are, like printed forms of wills, edged tools to play with, and the use of them without legal advice will probably illustrate the old adage that "the man who is his own lawyer has a fool for his client." At the same time they serve the purpose of guiding the medical man in ascertaining what are reasonable and proper provisions to be introduced into a partnership agreement.

The chapters on Restrictive Covenants, Introductions to Patients, and Assistants, should be read carefully. They have all been subjects of frequent litigation arising from the ignorance of medical men as to the law which regulates them. For instance, we have known practitioners of some standing surprised to learn that the general hiring of an assistant is in law presumed to be for a whole year, and who have suffered for their ignorance. Or, again, we have listened to a costly lawsuit between two men as to the effect of a restrictive covenant against practising within a given radius, which a properly drawn clause in the partnership deed would have entirely obviated.

The general practitioner finds it difficult, often in fact impossible, to start alone. A partnership is, therefore, a necessity to him, and he forms it when comparatively young and inexperienced. Too often may he be said to do it in haste and repent it at leisure. If he will read Messrs. Barnard and Stocker's volume he may avoid some of the pitfalls into which he will otherwise tumble; but he will, in our opinion, read it with still greater profit to himself if he is thereby induced to get the best possible advice before he commits himself to any partnership.

Surgery, its Theory and Practice. By William Johnson Walsham, F.R.C.S., M.B., C.M., Senior Assistant Surgeon, Lecturer on Anatomy, and Surgeon in Charge of the Orthopædic Department, St. Bartholomew's Hospital, etc. Fifth Edition. London: J. and A. Churchill. 1895. (Cr. 8vo, pp. 796, 380 illustrations. 12s. 6d.)

Both teachers and students will welcome this very useful manual of surgery in a new and improved form. The value and popularity of Mr. Walsham's book are well attested by the facts that this is the fifth edition, and that 20,000 copies have been printed in less than eight years. This, though a much improved edition, has not been materially enlarged. Many subjects have been compressed, and many diseases and operations not previously mentioned are now described, but at the same time useless and obsolete matter has been expunged. Attention has been paid to the subject of bacteriology, the pathological sections have been carefully revised, and the chapters on surgical treatment, as those on injuries of the head and abdomen for instance, brought into full accord with modern teaching and practice.

Practical Sanitation. By George Reid, M.D., D.P.H., medical officer to the Staffordshire County Council. Third Edition. London: Charles Griffin and Co. 1895. (Crown 8vo, pp. 330, 100 illustrations. Price 6s. 0d.)

The third edition of Dr. Reid's very useful little manual differs from its predecessors chiefly in being brought up to the present date. It abounds in practical detail, much of it of a kind not to be found in textbooks, written more especially for professional readers, and may safely be recommended to medical officers of health who desire to be kept posted in the latest improvements in sanitary appliances. Dr. Manley's Appendix, dealing with Sanitary Law, is also brought abreast of the times. The whole work bears traces of careful revision, and the only oversights which we have succeeded in discovering are of a purely trivial character.

NOTES ON BOOKS.

Edinburgh Hospital Reports. Edited by G. A. Gibson, M.D., D.Sc.; C. W. Cathcart, M.A., M.B.; John Thomson, M.D.; and D. Berry Hart, M.D. Volume III. (Edinburgh and London: Young J. Pentland. 1895. 8vo, pp. 762.)—The third volume of these *Reports*, which are published under the supervision of the Editorial Committee of the Royal Infirmary, the Royal Hospital for Sick Children, and the Royal Maternity and Simpson Memorial Hospital, contains a very long list of papers by members of the medical and surgical staffs of these hospitals as well as by others. We cannot pretend to do more here than notice the appearance of the volume, but we hope to publish abstracts of some of the papers, which appear to have the greatest clinical value, in the Epitome. The editors are to be congratulated on the way their task has been fulfilled. Appended to the volume, but with a separate pagination, are the annual statistical tables of the Royal Infirmary and the Hospital for Sick Children.

The Conditions of Radical Cure in Cancer, and other Reprinted Papers. By Herbert Snow, M.D.Lond., etc., Surgeon to the Cancer Hospital, London. (London: J. and A. Churchill. 1895. Cr. 8vo, pp. 63. 2s. 6d.)—This collection of reprinted papers deals with certain points of interest relating to the treatment and pathology of malignant disease. In the first and second of these reprints the author discusses questions of treatment, setting forth in the former the principles by which the operating surgeon should be guided in combating the different forms of cancer, and in the second pointing out morbid conditions indicative rather of expectant than of active surgical treatment. The third paper directs attention to the principles involved in the view that there is no absolute line of demarcation between malignant and non-malignant growths. The fourth and last paper is a pithy review of the author's conclusions with regard to the most recent investigations on the pathology of cancer. These papers are suggestive, and though not free here and there from disputable assertions, prove that the author has taken full advantage of the abundant clinical material at his disposal and studied very carefully the latest views relating both to the nature and treatment of cancer.

Alcoholic Drinks. By Dr. Lisboa Pinto. (Colombo: *Times of Ceylon* Office. 1895. Small 8vo, pp. 65.)—This clearly printed and well arranged pamphlet is in the form of a catechism, the information being presented in the answer to each separate question. The subject matter is Alcoholic Drinks; with Notes on the Medical, Social, Political, and Religious Aspects of the Liquor Question. With the medical part alone we have to do, and we can commend the lucid exposition of the leading physiological and pathological relations of alcohol as eminently calculated to popularise knowledge which would be of inestimable value to all persons who have at heart the promotion of sobriety. This useful and interesting little volume by a Ceylon member of the British Medical Association is only the latest of a long series of instructive publications on a subject of deep interest by members of the profession, in the truest interests of individual and public health.

Presentation.—The Mayor of Norwich, Sir Peter Eade, was presented on September 25th with his portrait, painted by Mr. Forbes, R.A., in recognition of services rendered by him in connection with the organisation of the Norwich Castle Museum. The presentation was made by Lord Walsingham on behalf of the subscribers. The Norwich Town Council also presented the honorary freedom of the City to Sir Peter Eade.

Medical Men and Politics in Portugal.—The *Official Journal* of Portugal recently published a scheme of reform of the law relating to political elections. The number of deputies is fixed at 120. The number of public officials with seats in the legislative chamber must not exceed 40 at any given time. In the same way the number of barristers and doctors who can sit is limited to 20 representatives of each profession.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

POCKET COCAINE SPRAY.

Messrs. Burroughs, Wellcome, and Co. have submitted to us a pocket cocaine spray, which has been designed and introduced with a view to obviate the toxic effects so frequently produced by the indiscriminate use of cocaine solutions. With larger instruments holding a considerable quantity of the solution, sufficient for many doses, it is difficult to prevent excessive use of it. By means of this little spray the patient is enabled to control the quantity with the greatest possible nicety, since he cannot exceed the dose ordered by the physician, the solution being prepared from the "tabloids," one or more as the case may be. It not only secures accuracy of dosage, but it enables the patient to carry on the treatment systematically and regularly, as the spray itself can easily be carried in the waistcoat pocket. The value of cocaine in the earlier stages of hay fever, coryza, and inflamed and congested conditions of the nasal mucous surfaces generally, is generally recognised.

MALT PREPARATIONS.

Samples of various malt preparations have been submitted to us for examination by the Trommer Extract of Malt Company, Fremont, U.S.A. The extract of malt is claimed to be a non-fermentible diastasic nutrient, and to be much more desirable in prescriptions than a syrup or elixir. That the use of malt extract as an aid to digestion has not attained the result desired may no doubt in many cases be ascribed to the inferior diastasic power of the extract employed, as many samples of malt extract are to be met with that are very poor in this respect. Analysis of a sample of Trommer's malt extract shows it to be a preparation of good quality, having diastasic power equal to the conversion of its own weight of starch in thirty minutes. It is of pale amber colour and good consistency. The extract of malt and cod-liver oil is as palatable as can be expected of such a preparation, containing about 40 per cent. of cod-liver oil. It is not an emulsion or so-called solution, as the oil globules are readily discernible under the microscope.

In another preparation malt extract has been utilised as a means of masking the bitterness of cascara sagrada; it contains in 4 fluid drachms the active properties of 15 grains of cascara. The London agents of these preparations are Messrs. F. Newbery and Sons, King Edward Street, E.C.

A NEW MOTOR FOR SEWING MACHINES.

The British hygienic motor is a new arrangement for driving sewing machines, which has been devised by Mr. N. A. Ambertin and is sold by the British Hygienic Motor Company, Limited (129, Tottenham Court Road). It is designed to lighten the labour required and to avoid the peculiar movement involved by the use of the ordinary treadle—a movement which has often been objected to as being injurious to women when continued for any length of time.

The arrangement is exceedingly simple. Instead of the motion being derived from a rocking bar lying under the treadles it springs from a similar rocking bar lying close under the table, set in action by a sort of pendulum, which descends from it and terminates in a stirrup or foot-piece on which the foot rests. The worker's knee, when in proper position, lies under the rocking bar, and the leg is parallel to the pendulum. No downward pressure is applied; the mere swinging of the leg to and fro produces an oscillation of the rocking bar which, by a simple crank and connecting rod arrangement, is converted into circular motion and made to actuate the machine. A point of some importance is that, by means of a spring, the pendulum which carries the foot-piece is always brought to rest in such a position as to be clear of the "dead point" on the crank.

In estimating how far the new action is likely to be an advantage to the worker, one must consider the two main claims which are made in its favour, namely, the saving of labour, and the hygienic advantages arising from its use. The fact that the machine will only stand at rest at every fourth stitch is a matter for the practical machinist, not for us. At first sight it might appear improbable that a mere variation of the mode of application of the force would make any material difference in the amount of force required; but a careful consideration of the muscular actions involved shows that besides the alternate contractions of the flexors and extensors of the ankle, by which alone the ordinary treadle is operated, the muscles of the thigh are also put in action so as to keep the foot applied to the treadle, and that this latter muscular activity is waste force so far as the movement of the machine is concerned, while with the new movement the flexors and extensors of the thigh alone are brought into action, and whatever energy they develop is expended entirely on the machine. We are, therefore, of opinion that there is a distinct saving of muscular effort in using the new movement.

Whether, however, the effort is judiciously distributed is another matter. With the old treadle both legs are used, while with the new arrangement only one is used at a time, and practically it seems likely that the right leg alone will be employed in driving the machine. This is certainly a drawback. Anything like unsymmetrical development of muscles is a thing one would avoid if possible, especially where, as in this case, the muscles called into action are comparatively few.

On the other hand, there are undoubtedly certain hygienic advantages in this new invention. In the use of the ordinary treadle there is always a certain amount of alternate flexion and extension of the thighs upon the trunk, a movement to which many evil consequences have, rightly or wrongly, been attributed: and although when the feet are properly placed this movement is reduced to a minimum, the constraint of maintaining them in this position is considerable, and there is very little doubt that in practice the ordinary treadle does often produce this movement to a considerable extent. In the new arrangement also it is possible to produce the same effect, but it is by no means necessary to do so, and when the knee is in the proper position it is certain that there is practically no movement of the thigh upon the trunk. In our opinion an even greater advantage of the new machine is that in its use the thighs are kept apart, and that considerable variation is possible in the position of the body. We consider, then, that the hygienic motor offers the advantage of lessened expenditure of effort, and a relief from some of the hygienic evils of the old treadle system, and that although the strain is all thrown upon a small number of muscles, these are among the strongest muscles of the body. The drawback seems to be the predominating activity of the one limb.

AUSTRALIAN WINE.

Ophir Wine is an Australian wine produced from grapes grown in the Mount Ophir district, Victoria, which is in proximity to the site chosen by the Victorian Government for their experimental vineyard, and is said to be admirably suitable for wine growing. The soil there is highly ferruginous, and is said to produce grapes which yield a fruity wine containing iron. This Ophir wine is claimed to be ferruginous and to be prepared from pure grape juice and of natural strength. Analysis of a sample submitted to us shows it to be wine of a burgundy character, having a specific gravity of 992.4, and containing 14.75 per cent. alcohol by volume, 2.59 per cent. extractives, 0.58 per cent. acidity taken as tartaric acid, and 0.3 per cent. ash. The ash contains an appreciable amount of iron oxide, and thus substantiates the claim as to the ferruginous character of the wine. It seems to be a good sound wine. It can be obtained from Messrs. P. B. Burgoyne and Co., 6, Dowgate Hill, E.C.

CHLORIDE OF AMMONIUM PIPE INHALERS.

Dr. J. Stenson Hooker (Hastings) writes: Seeing a mention of a chloride of ammonium pipe inhaler in the Journal of September 14th, I think it only fair to myself to state that Messrs. Burroughs, Wellcome, and Co. made such an instrument according to my design three or four years ago. My pipe inhaler, however, was of porcelain, but contained the two bowls and the sponge inside the cylinder just as described in the supposed new one.

NEW FEEDING BOTTLE.

Messrs. Allen and Hanburys have submitted to us their new patent feeding bottles, which they claim to be an important improvement on the old-fashioned tube feeders, and free from the drawbacks of the ordinary boat-shaped bottle. The chief points are: (1) The ease with which the bottle can be cleansed, as shown in the appended illustration; (2) the

infant, in taking food, does not suck in air at the same time, thus removing one cause of wind, colic, and other infantile troubles. This is effected by means of a valve made of india-rubber, which is inserted like a cork and permits the air to go in, but does not allow the milk to exude in the least. It is graduated, so as to facilitate the mixing of milk or other food with any proportion of diluent required.

Further important advantages which this feeder has over others are the absence of the tube, in which milk often turned sour, leading to stomach disturbance; and the fact that the teat, which is of ample proportions at the base, can be readily cleansed both inside and out.

A POCKET INSTRUMENT CASE.

Mr. Henry Greenway (Plymouth) writes: In the British Medical Journal of September 14th, p. [illegible], is figured and described as a recently an instrument case made by Messrs. S. Mar[illegible], and Thompson, for Dr. S. H. Appleford. The same firm made for me, under my instructions, a similar pocket case about twenty years since, I think, for carrying in the breast pocket of a coat, so that it would bend to the curve of the body when the coat was buttoned. The case, also, had a ribbon and loop in the centre of its upper edge, whereby it could be hung, when in use, to a button of the coat. I also had a removable enamelled leather cover for the case, to prevent perspiration or other moisture affecting the instruments. Some years afterwards another maker brought out a somewhat similar case, and I drew his attention, through the medium of the British Medical Journal, to my prior design.

THE GRACE TESTIMONIAL.

In addition to the amounts already acknowledged on behalf of this fund, we have received the following sums:

	shillings.			shillings.
Dr. E. Mansel Sympson (Lincoln)	1	Dr. Cocking	...	1
Dr. Pearse (Diss)	2½	Dr. Hall... ...	...	1
Fleet-Surgeon R. D. White (Gosport)	2	Dr. Addison ...	...	1
Per Mr. E. Cecil Montgomery, Charing Cross Hospital:		H. Clapham ...	...	1
E. C. Montgomery ...	1	E. Dodds ...	...	1
A. B. Partridge	1	W. H. Lee ...	...	1
Wm. McCall	1	W. Jepson ...	...	1
W. Johnston	1	H. A. Mason ...	...	1
S. E. Lowry	1	T. Priestley ...	...	1
H. S. Oliver	1	A. W. [illegible] ...	...	1
J. G. Owen	1	L. V. Hill ...	...	1
R. C. Robertson	1	Mr. Harvey ...	...	1
A. C.	1	W. Alcock ...	...	1
A. C. Dennaquet	1	C. R. Dearden ...	...	1
H. R. Harry	1	Mr. A. Young ...	...	1
T. Lawood	1	T. A. B. Harris ...	...	1
A. Bradford	1	[illegible] ...	...	1
F. Clarke	1	R. Lyde	...	1
J. K. Newton	1	W. Broadbent ...	...	1
Per Clarence R. Dearden, Student's Club, Sheffield School of Medicine:		E. [illegible] ...	...	1
Dr. Martin	2	H. Bentin ...	...	1
		J. H. Harrison ...	...	1
		Dr. [illegible] ...	...	1
		Mr. Dawes ...	...	1
		W. Broadbent ...	...	1

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

II.—NORTH DUBLIN UNION.

The union for the northern half of the city lies close to the Grangegorman Asylum, and near—rather too near—to the terminus of the Midland Great Western Railway. The workhouse is not so favourably situated as the sister union of the south, being in a more crowded part of the city: it is also smaller in area, though not so crowded. The nucleus of the building is the "Bedford Asylum," another of the Foundling Houses, to which has been added from time to time the various blocks that compose the North Dublin Union. This Board has adopted the wise plan of removing its children to schools in the country. We were sorry not to have had an opportunity of seeing them, as we understood that they are very satisfactory. The ground plan of the union is a double square, placed back to back; the connecting portion is the Bedford Asylum, the top floor of which is used as the Protestant Hospital, the lower floors being the female infirm wards. We had the advantage of the guidance of the master and matron, and we received every courtesy at their hands.

The Sick,

as is usual in the Irish workhouses, are classified according to creed, the hospitals being duplicated and quite distinct. The Roman Catholics are nursed in two blocks, the male portion in a block near the gate, and the female in the buildings that form part of the square near the Protestant Hospital. The opposite side of the square is occupied in part by the male infirm. In both the male and female blocks for the Catholics the arrangement is the same; the staircase in the middle, the wards going off on each side for three storeys. The wards are oblong, having matting or linoleum down the middle; they contain about 36 beds each, tables and benches for those who are up as there are no dayrooms. The windows, which are small and in heavy frames, face each other; the walls are brick surface painted, the upper walls having pitched roofs. The general appearance of the wards was good, clean, and neat, but they were too crowded, and in winter we were informed that more beds would have to be put in. Each bed had a locker table on which was kept the separate towel, and a bag with brush and comb was hanging at the foot of each bed. The fireplaces are the wide open grates, wasting more heat than they give, and in some of the wards they had been smoking. We noticed some Tobin ventilators, many of which more often served as a shelf. It is evident that the greater part of the ventilation is by means of the windows, the upper part of the frame falling inwards on a toothed bar. There are separate wards for children in both hospitals. The bedding is hair or fibre, on an iron bedstead, with palliasse, with straw ticks for certain cases. The patients are classed as medical, surgical, and phthisical, and included all kinds of disease as in a general hospital.

The Protestant Hospital

for 194 patients is on the top floor of the old building; the male and female patients are on the one floor, also the children. The classification is the same as in the other hospital. The wards, 5 in all, hold, in the largest ward, 28 beds, and, in the smallest, 23 beds. The quarters of the head nurse are in the middle, and the whole is self contained. The wards are in style similar to those in the other blocks, but here also we noticed the difference in the work as done by the trained nurses and the nuns. These wards were not so crowded as those in the other blocks, but they were filled to their capacity.

The Nursing

in the Roman Catholic Hospital is in the hands of the Sisters of S. Vincent de Paul, and we were pleased to notice that it

bore trace of being done in a business like way. It is evident that these nuns, from the variety of the works that they undertake, are well fitted for work in the workhouses, and if to this they would add hospital training as a qualification of the order, they would be invaluable for the work. They are assisted by a large number of inmates, as there are not nearly sufficient nuns for the wards. As far as we could see each sister had charge of a floor, or about 70 patients, and in the male block there were a large number of able-bodied men at work. One was dressing a case of extensive strumous ulceration of the neck, and another was in attendance on a patient recently admitted with delirium tremens. Everywhere we saw them acting as nurses. In the female block very many of the wardswomen are of indifferent character. During the night one trained nurse or a sister is up in each ward with pauper assistance. A trained head nurse is in charge of the Protestant Hospital, and she has 3 nurses working under her for 194 beds. Here also we found the pauper helps, 2 men and 2 women. There is a trained nurse for the night, with a male and female pauper to assist. The sick department is superintended by a resident medical officer, with two visiting doctors from the outside, who are salaried officers. Most of the cases for operation are sent to the general hospital, the surgeon in charge of these cases being of opinion that they stand a better chance of recovery under the more favourable circumstances in which they find themselves.

The Maternity Department

consists of two wards, holding together 20 beds. There is no separate labour bed or ward, and the second ward is used for the waiting pregnant women. It has no separate offices. The women are attended to by a midwife. The nursery for sick children under the nuns is one ward, with a corridor as a playroom. There were no cribs, but only the small bedstead that looked unsuitable for the little things. The playroom was a bright, cheerful room, low chairs and tables, and some toys for the convalescents.

The Lunatics

are not at all well located in this union. The men are crowded into a small, dark, low-pitched dormitory, off which is a small dayroom, and their yard is an oblong concreted enclosure, with very high walls, in which are a few benches. In this we saw the men lounging about, with no occupation to relieve the tedium of their existence. The ward is furnished with "harrow" or box beds and the straw tick; a few benches were round the large old fireplace. Some of the men were here, and others in the equally dreary day room.

The females were lodged in equally unsuitable quarters. The greater part were in the yard at the time of our visit, and we were horrified to see amongst them a coffin lying on the ground, where it had been placed until the mortuary was unlocked; worse still, a low opening in the wall protected with wire netting permitted these unhappy creatures to see into the mortuary at all times. The yard was crowded with all kinds of idiots, some of whom were jabbering round the coffin. There is a paid officer for the male lunatics and another for the females; but these officers must be heavily handicapped by the miserable surroundings in any efforts they make for the good of their charges, who appeared to us to be in quarters better fitted for animals than for human beings.

The Male Infirm Wards

were another weak part of the establishment. We entered a dark low dormitory where we found 35 men congregated in a ward that would be full with 25 men in it. The windows are small and set high in the wall; the "harrow" beds and straw ticks give no idea of comfort; no armchairs or resting seats, benches forming a square round one of the old grates; the walls with rough surface, coloured, and the rafters unceiled, completed a picture of neglect that was not creditable to the authorities. As a set-off against this dreariness, we found that the Master had turned a waste piece of ground into a nice garden for these old men; trees, shrubs, flowers, grass, and comfortable benches made a pleasant spot for them in the fine weather, and furnished some interest for them in the cultivation of their garden. There being no dayroom for the infirm men, this formed a good outlet, but what must be their condition when winter keeps them indoors? Their attendant is a wardsman taken from the inmates, and they are locked up at night, depending on each other for such assistance as they may need.

The Female Infirm Wards

were not so crowded or so dreary. As before said, they are in the two lower floors of the middle block, there is more light, better-sized wards and more cleanliness; but these old women have no officer appointed to attend them, and they are under the charge of an inmate. Considering how nearly some of those we saw are to the stage of helpless infirmity, they can hardly be satisfactorily cared for by inmates, and certainly there is need of more supervision. Another part of the enclosure has been turned into a garden for the old women, where they can sit on comfortable benches and enjoy the sunshine and air. There is no dayroom for these wards.

The Sanitary Appliances

are placed indoors in the hospitals; they are placed either at the ends of the wards or in an annexe built out at the middle of the side wall of the ward. These consist of a watercloset flushed, a slop sink, and a bath with hot and cold supply. We observed that the closet pans were not properly cleansed, in some instances they were quite foul, and the baths were often the receptacle of various odds and ends, as though not in frequent use. In all the places that we saw off the wards there was no intercepting lobby; the convenience was too close to be sanitary, and one, at the end of a ward, appeared to be taken off the ward. The Roman Catholic hospitals have modern kitchens attached to them, where the whole of the food is cooked under the direction of the nuns. The Protestant hospital is served from the main kitchen. The main laundry is much too small for the work that it has to do. We were surprised to see that the Board had not yet adopted the many labour-saving appliances which help the work now that the able-bodied are so scarce in all the unions.

Recommendations.

We would most earnestly draw the attention of the Board to the question of nursing. We were struck by the large number of men employed among the sick—men who appeared to be capable of earning an independent living; how far is this system of pauper nursing responsible for keeping them in the house? We are most anxious to see these large city unions turned into training schools for workhouse nurses, but before this can be done the pauper nursing must be abolished. It demoralises the nurses and is responsible for the lower standard of nursing that is accepted in the workhouse hospitals. We would gladly see more nurses engaged and the places of the paupers taken by probationers, whose cost would certainly not exceed that of the paupers, and who would work more economically and efficiently. Another thing necessary is that all the hospitals should be worked by trained nurses in a business-like way like any other hospital. If these excellent nuns, who are doing such good work in the North Dublin Union, would obtain the necessary knowledge of sick nursing through some of the recognised schools, the value of their work would be enormously increased. It is too much the fashion to think that these hapless poor do not require skilled nursing, but their ailments are the same, whether in the hospital or the workhouse.

The condition of the aged and infirm cannot be regarded as satisfactory, either structurally or from the point of view of attendance. We would suggest that paid officers be appointed with quarters adjacent to the infirm ward. For the wards themselves, on the male side they should be condemned, and the inmates removed to more commodious and healthy surroundings. The same remark applies to the lunatics; we feel certain that more could be done in alleviation of their lot, with better quarters, opportunity of occupation or amusement, suited to their powers, and a means of outdoor exercise in more airy and cheerful grounds. The domestic offices might be improved by the introduction of more modern and suitable appliances, especially in the laundry, and we also suggest the erection of a small kitchen for the Protestant Hospital. The sanitary appliances of the maternity block should be taken into consideration, also those for the infirm and lunatic wards, for which department proper baths and

other conveniences are required. If the Board could only see its way to removing the sick to more commodious and healthy quarters, there would then be ample space for the better housing of the infirm and the lunatics.

MEDICAL MISSIONS.

During the meeting of the London Missionary Society's Centenary an afternoon was devoted to consideration of Medical Missions, of which it appears the Society has many.

Dr. S. H. Habershon, who presided, declared that it was peculiarly fitting that an afternoon should be devoted to the subject, for some of the earliest pioneers in medical missions were members of the London Society. In 1807 Dr. Morrison virtually commenced such work in China, and they welcomed Dr. Lockhart's presence among them then, who was now the oldest living medical missionary. Dr. Habershon went on to describe what doctors themselves were doing at home to help some of their fellows who had gone out, and described some assistance rendered by St. Bartholomew's Hospital Mission. Medical missions, he contended, had often opened the hard and prejudiced heart to the teaching of the missionaries. This was a point frequently insisted upon during the afternoon.

The first paper by Dr. J. C. Thomson, M.A., of Hong Kong, gave a comprehensive view, with some details and statistics of the medical mission work now being done by the Society, not only in China, but in other parts of its spheres of labour. There were, he said, four chief forms of medical mission work—medical, evangelistic itineration, dispensing practice, hospital treatment, including the care of lepers in asylums, and the training of native workers. The most important and permanent results were obtained among in-patients in the hospital wards, while they were able to greatly relieve the condition of the lepers in the asylums. In India the Society had four great centres: one, at Neyoor, had 15 dispensaries in the neighbourhood. Out-patients, it appears, are treated in many thousands; but one centre was still without a hospital through lack of funds. China was probably the most important sphere for medical missions, for there was an absolute lack of any other provision for the rational treatment of physical ailments, and such treatment afforded a ready access to the hearts and homes of the people. The Society had two well-equipped hospitals at Hong Kong, also medical missions at Amoy, Shanghai, Nauhow, Wuchang, Kian Kian, Pekin, and other places. Medical mission work was also carried on in Madagascar, Central Africa, and the South Seas. In conclusion, Dr. Thomson urged they should aim at an elementary medical education for every missionary occupying an isolated position, especially in the southern missions; a medical mission should also be regarded as an integral part of the equipment of every station unless local reasons rendered it unnecessary.

Dr. Fells, of Neyoor, Travancore, argued that the place given to medical work in the mission scheme by Christ was of the utmost prominence. But for years a medical missionary was a rare curiosity; and though the number had been increased of late, they were still a small band compared with those engaged in other branches of the mission scheme. He created some amusement by quoting the case of a high caste apothecary who was accustomed to make the necessary inquiries of his low caste patients and to examine their tongues still standing some yards distant. Dr. Fells also argued that medical mission work could not be called expensive, for in 1894 the South Travancore Medical Mission treated 42,320 patients at an average cost of 2¼d. per head, including salaries of native agents and medicines, etc.

Other speakers included Dr. Davies, of Samoa, who had been simply an "ordained missionary" until he became convinced of the great need for the medical work; he had known a Samoan walk 80 miles on a rough road for medicine for a sick man, and he believed medical missions gave a most practical exposition of Christianity.

Dr. Lockhart, who had first gone out to China in 1838, and received a most cordial welcome, gave his testimony strongly in favour of the work; and Miss Benham, from Amoy, declared that the sphere for medical women in China was unlimited; moreover, she would have every woman who went out have a little medical knowledge.

Mr. W. H. Campbell, from South India, expressed a similar opinion, enlarging it to include men also. He would have some medical training given to every missionary, especially if he or she was to occupy an isolated position. Referring to the need of a hospital at the centre, where his brother (Dr. T. V. Campbell) had been stationed four years without one, Mr. Campbell said that the natives themselves were beginning to subscribe towards it, and with some private gifts from English friends they had half the money in hand. They intended to begin to build in the hope and trust that the balance would be subscribed.

MEDICO-LEGAL CONGRESS IN NEW YORK.

On September 4th and two following days a Medico-Legal Congress was held in New York under the auspices of the Medico-Legal Society, and Mr. Clark Bell was selected to preside over it.

The President having delivered his inaugural address, the following papers were read: By Dr. L. Forbes Winslow on the Progress of Lunacy, by Mr. Albert Bach on the Necessity of Amendment of the Law of New York appertaining to Commitments of the Insane, and by the President on the Mechanical Restraint of the Insane.

The following are the titles of some of the papers read on the subsequent days, namely: On Legal Responsibility in Inebriety, by Dr. Crothers; What Shall We Do with the Alcoholic Inebriate apparently Insane? by Dr. Norman Kerr; Suicide considered as a Mental Epidemic, by Dr. L. Forbes Winslow; Suicide Legislation and the Insanity Plea, by Gustave Boehm, a somewhat extraordinary production advocating the right of a man to commit suicide if he chooses to do so, and in the discussion which followed some of the speakers eclipsed this by advocating the right of medical men to end the agony of a patient who could not possibly recover; these views, we may add, were expressed by the legal, not medical, members of the Congress. Professor Sudduth read a paper on Hypnotism and Crime; and Professor Doremus read papers on Milk Adulteration and on two cases of Chronic Antimonial Poisoning.

At the close of the meeting the following resolutions were unanimously adopted:

That in the opinion of this Medico-legal Congress not only should the subject of medical jurisprudence be recognised in the various institutions of learning, but in the medical and law schools of this country: that such schools should include such a course in the curriculum of studies, and that examination on this subject be made necessary for graduation in either medicine or law. And

That it is the duty, and would add to the interest and benefit, of the legal and medical professions, if every national and State medical society, and every national and State Bar association in the United States and British Provinces should appoint a standing committee upon medical jurisprudence.

Inspection of Retreats for Inebriates.—In the fifteenth report of the Inspector of Retreats under the Inebriates' Acts, nine institutions are reported on for 1894. The Homes referred to are situated in Chiswick, Fallowfield, Folkestone, Kingswood Park, Rickmansworth, Westgate-on-Sea, Aylesbury, Twickenham, and two at Walsall. There was licensed accommodation for 152 patients: 70 female, 82 male. During the year 133 were admitted and 127 discharged, 92 remaining in residence at the end of the year. Only one death had occurred, at Chiswick. The Inspector, Dr. Hoffman, strongly insists on the necessity for power to make the admissions compulsory as well as voluntary.

German Medical Officers and the Iron Cross.—Of the medical officers of the German army who have received the distinction of the Iron Cross in the war of 1870 there are 943 now surviving. Of these 742 belong to Prussia, 29 to Bavaria, 44 to Saxony, 11 to Wurtemberg, 36 to Baden, 16 to Hesse, 9 to Mecklenburg-Schwerin, 1 to Mecklenburg-Strelitz, 3 to Oldenburg, 7 to Saxe-Weimar, 2 to Saxe-Meiningen, 1 to Saxe-Altenburg, 3 to Saxe-Coburg Gotha, 4 to Brunswick, 1 to Anhalt, 1 to Schwarzburg Rudolstadt, 1 to Schwarzburg-Sondershausen, 2 to Waldeck, 1 to Both Reuss, 4 to Bremen, 3 to Hamburg, 21 to Alsace Lorraine. Professor von Bardeleben, who recently died, had the Iron Cross of the First Class.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, [illegible] births and [illegible] deaths were registered during the week ending Saturday, September 28th. The annual rate of mortality in these towns, which had been 19.3 and 19.8 per 1,000 in the two preceding weeks, further rose to 21.0 last week. The rates in the several towns ranged from [illegible] in Huddersfield, 15.0 in Croydon, and 16.1 in Leicester and in Portsmouth to 29.7 in Bolton, 29.9 in Manchester, and 30.5 in Gateshead. In the thirty-two provincial towns the mean death rate was [illegible] per 1,000, and exceeded by [illegible] the rate recorded in London, which was [illegible] per 1,000. The zymotic death rate in the thirty-three towns averaged [illegible] per 1,000; in London the death rate was [illegible] per 1,000, while it averaged 5.6 in the thirty-two provincial towns, and was highest in Bolton, Blackburn, Sunderland, and Gateshead. Measles caused a death rate of 3.7 in Blackburn; scarlet fever of 1.6 in Huddersfield; whooping-cough of 1.4 in Bradford and 2.2 in Bolton; "fever" of 1.3 in Bolton and 4.5 in Sunderland; and diarrhœa of 6.3 in Burnley, 7.0 in Bolton, 7.5 in Hull, and 7.8 in Blackburn. The 61 deaths from diphtheria in the thirty-three towns included [illegible] in London, 8 in West Ham, and 3 in Birmingham. Two fatal cases of small-pox were registered in London, but not one in any of the thirty-two provincial towns. There were 231 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, September 28th, against [illegible], [illegible], and 271 at the end of the three preceding weeks; 31 new cases were admitted during the week, against [illegible], [illegible], and [illegible] in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had increased from [illegible] to 2,739 at the end of the five preceding weeks, had further risen to 2,867 on Saturday last, September 28th; [illegible] new cases were admitted during the week, against 336, 365, and 341 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, September 28th, [illegible] births and [illegible] deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 16.9 and 19.5 per 1,000 in the two preceding weeks, declined again to 17.5 last week, and was 3.5 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.2 in Aberdeen to 20.5 in Dundee. The zymotic death rate in these towns averaged 2.7 per 1,000, the highest rates being recorded in Dundee and Greenock. The 260 deaths registered in Glasgow included 19 from diarrhœa, 4 from "fever," 3 from measles, and 3 from scarlet fever. Three fatal cases of diphtheria were recorded in Edinburgh.

PROSECUTIONS UNDER THE VACCINATION ACT.

THE Thanet Board of Guardians recently addressed a communication to the Local Government Board with respect to the refusal of the Margate Borough Bench to convict in certain second vaccination prosecutions, pointing out that two authorities upon whom the duty of enforcing the law were thus brought into conflict, and asking for advice as to further proceedings. The President of the Local Government Board, in reply, forwarded to the guardians a long letter, stating that, independently of any proceedings that might be taken against a person in default under Section 29 of the Vaccination Act, 1867, the vaccination officer should be authorised to take proceedings against such person at least once, also under Section 31 of that Act. Until this had been done and a conviction obtained, the Local Government Board considered that the guardians had not done their duty. At the same time it was pointed out that where a magistrate's order had been obtained and summary proceedings taken under Section 31 of the Vaccination Act, 1867, no further proceedings should be taken by the vaccination officer without express instructions from the guardians. The idea of this was that the guardians should carefully consider with regard to each individual case the effect which a continuance of proceedings was likely to have. It was undeniable that a repetition of legal proceedings had, in numerous cases, resulted in the vaccination of the child, and it was, therefore, important that parents should be well assured that proceedings would not be lightly discontinued.

Mr. Chaplin's letter concluded: Where repeated prosecutions have failed in their object it becomes necessary to carefully consider the question whether the continuance of a fruitless contest with the parents may not have a tendency to produce mischievous results by exciting sympathy with the persons prosecuted, and thus creating a more extended opposition to the law. The Board entertain no doubt that in all cases of the kind in question the guardians, having before them the preceding observations, will not fail to exercise the discretionary powers confided to them in the manner best calculated to give effect to the policy of the law.

VACCINATION AND SMALL-POX IN IRELAND.

THE *Freeman's Journal*, speaking of the epidemic of small-pox in Ireland last year and of the report of the Coombe Hospital, says: One other lesson the experiences in connection with the Coombe Hospital convey. There cannot be the slightest doubt that they prove the value and necessity of vaccination and revaccination. One fact will almost suffice. When small-pox broke out all the nurses and attendants were revaccinated except two. Both these caught the disease, but all the other officials and servants of the hospital escaped. And as regards the patients, the mortality among the vaccinated was only one-fourth that among the unvaccinated. In view of the danger that still threatens the [illegible] would do well to adopt this means of self-defence. Those who neglected the warnings last year should be wise in time before the winter comes.

COUNTY COUNCIL ASYLUMS.

ONE moral is, says the *Daily Chronicle*, very clearly pointed out by the recent death of an asylum attendant at the hands of a lunatic, and that is that our asylums, even our well managed county council asylums, are sadly understaffed. Long hours, broken rest, and depressing surroundings, are conditions which must lead to slackness, roughness, failure to classify and watch patients; in other words, to emphasise the curative side of asylum work. Over-long hours, meagre pay, inferior food, this is the burden of several letters we have received in connection with the tragedy at Cane Hill. Under such circumstances the discriminating and hospital care which modern sentiment demands for the mentally afflicted, and which the Council, to its credit, has constantly endeavoured to enlarge, will be sought in vain, or will produce far too scanty results.

NEW PROPOSALS FOR STORAGE CISTERNS.

A CORRESPONDENT writes: Before the Local Government Board inquiry into the water service of the East London Waterworks Company terminates there will be submitted to the inspectors some far-reaching proposals for providing house storage accommodation, with the object of ensuring a permanent domestic water supply. The suggestions have emanated from Dr. R. M. Talbot, medical officer of health for the parish of Bow, which is within the jurisdiction of the Poplar District Board of Works. By the direction of that authority, Dr. Talbot submitted at its meeting on Tuesday a special report in which are detailed the uses, advantages, and merits of the new cistern, for the invention of which he is entirely responsible. It is pointed out that the so called constant service is a misleading term, especially after the experience of the last few months, during which there has not been any pretence to give a constant service, and on occasions this inconstant constant service has failed altogether. Many natural causes render a constant service of water uncertain, and the community are in an insecure position, as at any time the supply may become intermittent. As a modern sanitarian, Dr. Talbot naturally abhors the old system of cisterns, and he remarks: "It is to be distinctly understood that where a real and not false constant supply is given, cisterns are of course quite unnecessary; but seeing that in the very nature of things even a municipality could not guarantee such a real constant service, the problem arises as to how a permanent supply can be secured." This consideration, coupled with the local troubles, suggests that it is not only advisable but a necessity to provide every house which is on the constant water system with a suitable storage cistern, which will give a permanent service as distinguished from a constant service. The absence of storage accommodation in the small houses of which the Bow district is comprised, with the present insecurity of supply, may at any time be productive of slight or aggravated evils. A permanent supply under his proposals is different to a constant supply, actually as well as nominally, although the merits of a real constant supply are embodied in the permanent supply, while the dangers and drawbacks of the former are removed by the latter. If this can be satisfactorily established, then the proposals of Dr. Talbot are likely to be revolutionary. This new cistern, it is important to note, is intended to be used in connection with a constant service, and is a simple and sanitary arrangement whereby in the event of the supply becoming intermittent there will be a reserve store of water, whilst at the same time, by reason of peculiar construction, this storage house reservoir is self-cleansing and water-sealed. It is made of earthenware or other suitable material, and is of an ovoid or acorn shape, the draw-off tap being fixed at the lowest point. The water is supplied by means of a ball tap, with overflow pipe, in accordance with the 13th regulation of the Board of Trade made under the Metropolitan Water Act of 1871. This cistern can be placed in the most convenient position of the house, rendering it easy of access for inspection and attention. It is provided with a removal lid with a double lip which embraces the top edge of the cistern, the inner part being immersed in water, forming a water seal and preventing atmospheric or gaseous contamination. The interior of the reservoir—which is to be of small capacity, though the size does not interfere with the mechanical operation consequent upon water being drawn from it—is highly glazed, and, shaped as it is, suspended matter cannot be precipitated upon the sides, but must go to the outlet pipe. In a sense it is an enlargement of the service pipe, but constructed on scientific principles, which will doubtless cause it to be regarded in a different light to the cisterns of ancient type. The draw-off pipe which gives the direct service in the ordinary way can be retained, but there would not be objection to this pipe being unprovided and the whole of the water made to pass through the cistern. As a medical officer of health, Dr. Talbot says that he would have no hesitation in certifying under the Public Health Act that any house possessing this cistern as the sole medium of its water supply is a house "having a proper and sufficient supply of water." Dr. Parkes, in his *Manual of Practical Hygiene* (pp. 12-14), says he prefers the constant system for poor houses, as it leaves no loophole for inattention in the cleansing of cisterns, "only it requires that the constant system should really fulfil the conditions laid down for it, namely, that it should deliver sufficient water and at all times, and not merely delude us with the phrase." Of the two systems, Dr. Parkes thinks that either would answer if perfectly carried out, and Dr. Talbot has taken advantage of this authority to emphasise in his report the advantages connected with his invention.

In concluding, Dr. Talbot says: "There is very naturally and very properly a prejudice in the minds of sanitarians against cisterns, but that the suggestions I have made for the establishment of a cistern of this character are to be regarded in the light of a retrograde policy is a contention with which I cannot concur. It has been demonstrated by recent events that at present there is an absolute necessity for storage accommodation. Not only so, but the great point with regard to the inevitable uncertainty under the best conditions and under the best administration, no matter what they may be of a so-called constant service also impels the conclusion that storage accommodation of some kind must be provided if these evils, which have so loudly called public attention to the question, are to be removed beyond recurrence."

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 5TH, 1895.

THE INTRODUCTORY ADDRESSES AT THE MEDICAL SCHOOLS.

The First of October is the New Year's Day of our medical schools; and to all students, and especially to the first year's men, we wish a Happy New Year. In the introductory addresses that we publish to-day the same wish is expressed or implied. In every medical school in the kingdom the First of October is the Students' Day, and the place is full of hope for them. Even the most thoughtless of them knows that now he takes his life in his own hands, to make or waste it; and many of them come to their introductory address with hearts wholly set on work now, and success and honour hereafter.

This excellent disposition of his hearers is itself a snare in the way of him who is addressing them. They seem not to be in need of good advice; they are willing to work, and the order and details of their duties are already arranged for them. Therefore he who addresses them, knowing that he need not warn them to-day against evil ways, and knowing also that they are ready to give their whole attention to him, tends rather to speak on some theme of general interest than to give a grave moral discourse. At Leeds, for example, Dr. Leech, in an address full of learning, traced the history of medicine, far past Hippocrates, back to a thousand years before the time when Israel went out of Egypt; and he proved, as against Mr. Herbert Spencer, that our art arose not from magic and primitive priestcraft, but from honest observation of the properties of common herbs and foods. At Birmingham Dr. Percy Frankland told the whole story of Pasteur's marvellous work, and told it excellently. At the Westminster Hospital Dr. Monckton Copeman took for his subject the discovery of the thyroid extract and of the preventive serums, and the hope that in time small-pox may be brought under this treatment.

These three addresses are typical of the modern introductory address; it differs from the old-fashioned discourse in that the lecturer is unwilling to be a preacher, and be prodigal of good advice to those who do not seem to need it. These addresses are admirable in form and method, and they come with the highest authority from men who have for years worked at the subject of which they spoke. Yet it must be confessed that their themes are somewhat cold and remote; the moralities of the old introductory address are neglected; there is not enough of welcome or of advice to the students. The opening paper at the first meeting of the Guy's Hospital Physical Society was certainly neither cold nor remote; but Mr. De'Ath, though he spoke of many things, yet spoke in praise of nothing save for a word here and there.

Many will be disposed to agree with Mr. George Pollock that there can be, perhaps, no better subject for a hospital address than the history of the hospital itself and of the great men who have worked for it. It is the place itself, with all its memories, that we love in our student days and after we have left it, and no student ought to be ignorant of the history of his hospital. The best welcome that can be given to the new student is given by him who makes him feel at home in the place.

To the older men, the remarks on idiosyncrasy, which came at the end of Mr. Pollock's address, may have seemed the most excellent part of it; but to the first year's men the story of their hospital, and of the men who made its name, must have appealed to good purpose, being itself at once a welcome and an encouragement.

But, if the lecturer has no special theme on which to speak with high authority, and if the school where he teaches is too young to have a history or a great name, there yet remains the good old fashion of the moral discourse. And it is worthy of note that of all the addresses that we publish, the only one of this form, and that a very good one, was given by Dr. Charlotte Ellaby at the London School of Medicine for Women.

Here, then, we have three kinds of introductory address. There is the modern or specialist address, setting forth the subject which by years of work the lecturer has made his own; admirable in its learning, accuracy, and fulness, but not making any direct appeal to the new student. There is the address of welcome to a great hospital, rich with the names of illustrious men. And there is the address of exhortation, which has neither the scientific interest of the modern address, nor the historical interest of Mr. Pollock's address, but it appeals directly to the spirit of those who hear it, and is liberal of those counsels of perfection that are now somewhat out of fashion.

A combination of the three forms would, perhaps, give an excellent result. In the first place every student ought to know the history of his hospital, and to be ashamed if he is wholly ignorant of it. The address, therefore, must begin with the story of the hospital's origin, its increase, and its present strength, and the names of its most illustrious men must be duly honoured. Next, that the history of our art may not be altogether ignored, Hippocrates, and he alone, must be named; he stands isolated, like Greek art: the Egyptians, Romans, and Arabians are worse than useless in an introductory address; but Hippocrates stands for all of them, and the lecturer would do well to recite the oath of Hippocrates: "With purity and with holiness I will pass my life and practise my art. . . . . Whatever in my work I see or hear that ought not to be told, I will keep it secret." Then, taking a hint from the modern form of address, he might trace the history of some one discovery in medicine or in surgery, preferring some discovery not so profound as to discourage his hearers. Let him follow the way in which Mr. Godlee, some years ago, at University College, told how Ambroise Paré found out the ligature; let him set the students hoping and resolving that they too will one day make their own discoveries.

From this point the lecturer might pass by an easy transition into the third method of address, and give a good exhortation in the old-fashioned style. The plunge into hospital life is sometimes followed by a good deal of shock. When the student leaves the dissecting rooms and the laboratories, and first sees the multitudes of out-patients, casualties, and in-patients, and finds that most of the maladies of the poor are due either to the venereal diseases, or to drink, or to starvation, or to the sweating system—and he is powerless to prescribe chastity, temperance, food, and rest—then with some men the colour goes out of the world, and faith, hope, and charity all go to the wall together; or charity alone may abide, and even she will be sadly changed. The sudden sight of the bad side of things, in all their naked ugliness, is sometimes followed by this sort of shock, and for this the student must be prepared.

And for his peroration the lecturer might speak of the weal and woe of practice, the power we have for good, the certainty of a good choice; and here he can hardly fail to say the right thing. Only let him not fail to say that the great advantage of our art is neither in science, nor in money, nor in social position, but in the daily interest of isolated opportunities of doing good, and in the certainty that we have chosen a calling that can give a man peace at the last.

Finally, the admirable addresses given by Mr. Hutchinson at Liverpool, and by Dr. Mickle at the Middlesex Hospital, show that our ideal lecturer must add a warning as to the need of thorough thoughtful observation, and of such observation as shall fit the student for examination. His work may be spoiled by bookish theories and foolish generalisations, and the cure for these is observation, or by a sort of vague excited interest in strange cases, wonderful operations, and curiosities of pathology, and the cure for this is examinations.

Thus we have put together, by a process of selection, the materials for yet one more introductory address; but he who would pick and choose among the thoughts of others ought himself to possess something of their spirit, if he wishes to speak with authority as they did, or to succeed as they have succeeded.

THE RETIREMENT OF PROFESSORS.

The report of the Committee appointed by the Treasury to consider whether there should be a term of service for professors serving under the Crown, and if so at what age, has just been published. We have taken a little time to study the decisions of the Committee, as the proposals are of no little importance, both in themselves and in the precedent they may set in the case of teachers who are not at present touched by the recommendations. The report is signed by Lord Playfair, Lord Welby, and Sir M. White Ridley. These names in themselves leave something to be desired, inasmuch as the Committee consists too strongly of public men whose minds are naturally set in the direction of practical life; and the Commissioners do, as a matter of fact, lay much stress upon the failure of teaching vigour and enthusiasm which comes about, in most men at any rate, in the later years of life. Lord Playfair is no doubt well known as a man of science, but of late years he is still better known as a statesman. Nevertheless, we are bound to admit that the report shows no forgetfulness of the truth that teaching, in any direct way, may be only a part (and sometimes, indeed, the less important part) of the usefulness of a professor.

In the old universities we often see men actually elected to professorships at ages little short of that suggested in the report for retirement, and such appointments have shed lustre upon the universities in many instances. We are prepared to admit, however, that such advantages, found in exceptional cases, may be dearly bought by the survival in office of other men whose usefulness is a matter of tradition. These important considerations certainly have not escaped the attention of the Commissioners, and perhaps due weight is given to them. Moreover, the deference expressed to the opinions of Professor Rücker, which evidence is quoted in the report, is some guarantee that research and academic wisdom are taken into count as well as the mere teaching, which, as the Commissioners themselves point out, may be pushed forward by professors extraordinary and active demonstrators.

The Committee recommend that the age of 65 be regarded as a proper one for the retirement of professors, with a provision for continuance till the age of 70 in any special instance. One reason given for this decision seems to us a weak one; namely, that young graduates are said not to return to their universities in view of preferment there; and that they may be expected to do so if there be a definite expectation of vacancies.

Now, we suspect that there is a better reason than this, namely, the small salaries usually devoted to these chairs. Such salaries may attract men who find at middle age that a life of quiet research and pursuit of wisdom is more to their taste than to fight in the world. Men at that age find themselves in a position to judge whether they can afford, and are likely to find their happiness in such a life; one which is, in a great measure, its own reward. Under the age of 40 a man is not often ready to give up the dreams of worldly success, nor does he know what family burdens he may have to carry, or the private means he may be able to bring to supplement his salary.

There are few professorships in Great Britain upon which married men with families can, if they would, depend as a sole means of subsistence. We think that, if there be a fault in the report, it is that this pecuniary aspect of the matter is not considered.

Will able men give themselves to an academic career on salaries out of which little or no saving can be made on the certainty of being removed from their position on a pension too small to keep them in something like the social position to which they have been accustomed? The subject of retiring pensions may be dealt with elsewhere, but it does not appear in the report.

OFFICIAL INQUIRIES AND DANGEROUS TRADES.

In addition to what has already been accomplished by Departmental Committees, the Home Secretary has appointed another Special Committee to inquire into the effects of certain dangerous trades upon the health of the workpeople. As to the necessity for such there can be no doubt. To factory owners it may appear as if Parliament was interfering too much with the methods of production and restraining individual freedom, and that excessive legislation

was becoming prejudicial to commerce. There are limits on both sides. It is the duty of a Government, however, to see that in those operations which make for wealth the health of those employed is not imperilled. There are many men and women in this country whose health is so deteriorated that their life's race is practically over at the age of 40, and who, had they been sufficiently protected, might still be wage-earners instead of being a burden to their friends or to the Union. Great Britain has been the pioneer in movements which concern the health of the public, and although much still remains to be accomplished, the sanitary condition of our industries compares most favourably with that of other nations. With the view of supplying carefully sifted and scientific information, the Home Secretary has appointed a Special Committee, composed of Mr. H. J. Tennant, M.P., Captain Smith, Miss Abraham, and Professor T. Oliver of Newcastle to deal with a number of trades that have been scheduled as dangerous. All the members of the Committee have had special training for the work, having gained experience whilst previously serving on other inquiries under Mr. Asquith's directions.

The investigation about to be undertaken is practically a continuation of that in which the ex-Home Secretary not only took such an active interest, but with which his name will be for long identified. Sir Matthew White Ridley as his successor is equally strong in his conviction as to the necessity for such investigations, a circumstance which at once removes them from the sphere of party politics and gives them a truly national character.

The presence of a lady on the Committee is a novel feature. When Mr. Asquith, as Secretary of State, recommended the appointment of female factory inspectors, there were many dissentient opinions throughout the country as to the advisability of such a procedure, not less on economic than on social grounds. Lapse of time has allayed suspicions, and the high character of the work which Miss Abraham and her sister colleagues have accomplished has created a feeling of confidence in them as inspectors, and a belief that many of the minor defects of factory legislation and personal details attendant upon the ordinary routine of industrial life which told specially upon women, and which were overlooked or unrecognised, have by their influence been diminished or removed.

To this special inquiry, therefore, Miss Abraham brings considerable experience gained whilst investigating the effects of the various textile industries upon the health of women. One of the most valuable investigations which this Committee could undertake, and for which it is particularly qualified, would be a consideration of the effects of certain dangerous trades upon pregnant women and upon infant mortality. The baneful influences, for example, of phosphorus are known so far as they affect the bones of the jaw, but there has been in this country no such inquiry as that carried out by Magitot in France to illustrate the frequency of abortion in pregnant women engaged in the manufacture of matches and other industrial pursuits.

Departmental inquiries of such a nature as that of which we speak are not meant to revolutionise trade, but rather that our industries may be conducted on lines which safeguard the health of the workers. Men not less than women and children require protection.

The supersession of hand labour wherever possible by machinery and the many changes which are creeping over the social life of to-day are seriously altering not only our methods of production, but throwing into the industrial arena a larger number of young people than hitherto. It is one of the complaints of trade union benefit societies that there is a gradually increasing number of the older workmen who are unable to find employment. The race is to the young and vigorous. Competition, both physical and mental, presses keener and keener; and whilst the tendency is for the number of the older hands to be diminished, there is, as Miss Collet has shown in her recent Report on the Employment of Women and Children presented to the Board of Trade, a distinct increase in the number of young people employed under the age of 15. Miss Collet's statistics do not support the current opinion that women's employment is extending, and that women are displacing men, but they demonstrate a decided increase in the number of women and girls employed under 25 years of age. Leaving aside the fact of the concurrent increase in the number of males employed between 15 and 25, the increased number of girls employed under 15 years of age calls for one remark. It is as the period of puberty is approaching that girls are sent to trades, where, either as the result of long hours, standing on their feet all day, and, it may be, breathing a vitiated atmosphere, the menstrual function becomes deranged, and the foundation of anæmia laid. It is gratifying to find from Miss Collet's report that the number of married women employed in this country is diminishing—a circumstance which points to increased material prosperity on the part of the men in the rank of life to which they belong. So far as we have been able to ascertain, it is not, however, to the disabilities created in one sex alone by dangerous industries that this inquiry will be directed. The health of men, not less than that of women and children, will be the object of investigation, and from the constitution of the Committee we may rely upon this being done in a thorough and efficient manner.

The Harveian Oration before the Royal College of Physicians will be delivered by Dr. W. S. Church on Friday, October 18th, at 4 P.M.

The Abernethian Society of St. Bartholomew's Hospital will open its 101st session on Thursday, October 10th, when Dr. Church will deliver the introductory address at 8 P.M. in the anatomical theatre, and the subject will be the Rise of Physiology in England and its Effect on the Practice of Medicine.

On the evening of October 2nd, the annual smoking concert was given at the Hospital for Consumption, Brompton, by the medical staff, and was largely attended by gentlemen who have at various times held resident appointments in the hospital. The occasion was not less pleasant than similar gatherings in former years.

The Lettsomian Lectures before the Medical Society of London will be delivered on February 13th and 17th, and March 2nd, 1896, by Mr. Watson Cheyne, F.R.S., who has chosen for his subject the Objects and Limits of Operations for Cancer. The annual oration will be delivered on May 18th by Dr. W. H. Allchin. The first general meeting of the Society will be held on October 14th, when the President, Sir J. Crichton Browne, will deliver an address.

DEATH FROM ANTHRAX.

Mr. Arthur Langham held an inquest recently on the body of a patient who had died in Guy's Hospital from anthrax. Dr. Carpmael, the House-Surgeon, said that a *post-mortem* examination revealed the presence of anthrax bacilli all over the body, and that the case had been very severe. It was stated that the deceased, about ten days previously, had received and weighed a large cargo of skins from Russia.

THE SOCIETY OF MEDICAL PHONOGRAPHERS.

The interesting address by Dr. W. R. Gowers, delivered at the annual meeting of the Society of Medical Phonographers, which we publish in another column, will serve to draw wide attention to the advantages which medical practitioners and clinical students may derive from the use of shorthand. The Society was only started in December last, but already numbers 178 members, and there is much other evidence of an increasing interest in the application of shorthand to medical work. The Society does much to help its members to become good phonographers by the publication of elementary handbooks and of a periodical printed in shorthand. Further information will be supplied on application to the Honorary Secretary, Dr. Neil, Warneford Asylum, Oxford.

POISONOUS EFFECTS OF BORAX.

The extensive use of compounds containing borax, which under various names are sold for preserving foods, lends a special interest to some observations of Dr. Ch. Féré of Paris, who has used borax in the treatment of intractable cases of epilepsy, and with success in certain cases. It is true that for this purpose it was necessary to give large doses for long periods, but in the course of the trial he met with a considerable number of persons who were peculiarly susceptible to borax. In them, loss of appetite was succeeded by burning pain in the pit of the stomach, dryness of the mouth, and eventually by nausea and vomiting. Borax produces also a remarkable dryness of the skin, which is found to favour, if not to cause, various skin diseases, especially eczema. The hair also becomes dry and may fall out, causing complete baldness. The most dangerous result of the use of borax, however, is its power of producing kidney disease, or of converting a slight disorder of the kidneys into a fatal malady.

PATIENTS WANTED FOR A CONVALESCENT HOME.

Usually the demand made is for funds to support beds, but in the case of the recently founded Yarrow Home for Convalescent Children at Broadstairs the demand is for suitable candidates. No subscriptions are asked for or will be accepted, as the home is fully endowed by its founder, Mr. Yarrow. This home for fifty boys and fifty girls has been founded and fully provided for by private means. It is not intended for the children of the very poor, for whom provision is already fairly made by means of existing charitable agencies, but it is for the reception of children whose parents are in reduced circumstances, and are not in a position to supply to their convalescent children, entirely at their own cost, the advantage of a temporary residence at the seaside. As examples of the class from which it is intended the children shall be derived may be mentioned the minister of limited means, the widow who has seen better days, the unsuccessful professional man, the struggling artist, the clerk with a small income, the skilled foreman, all of whom are under the obligation of maintaining a respectable appearance on very restricted means. Boys between the ages of 4 and 14 years, and girls between 4 and 16 years are admitted, irrespective of nationality or creed, provided their home training has been such as to make them fit companions for other respectable and well-mannered children. No child will be admitted who has lately been the subject of scarlet fever, or ringworm, or any other infectious or contagious disease; or who comes from a house in which there is, or has recently been, a case of infectious disease, or who still requires active medical or surgical treatment. The home will be open throughout the year, and resident certificated nurses will form part of the staff. The parents will be required to pay 5*s.* a week towards the maintenance of the child, in addition to its railway expenses. The fare, by special arrangement with the London, Chatham, and Dover Railway Company, is 1*s.* 9*d.* each way between London and Broadstairs. The City office (where all applications must be sent) is 73*a*, Queen Victoria Street, E.C.

HEROISM OF SPANISH MEDICAL OFFICERS.

The medical officers of the Spanish army in Cuba have given some fine examples of heroism. At the action at Caeso, a Spanish column only 300 strong was attacked by a much superior force, and had to retire. So severely were they pressed that the wounded would have fallen into the enemy's hands, had not Dr. Urbano Orad, with 40 men, valiantly defended them under a heavy fire. He succeeded in getting them away, but was so wounded that he has since died. Before his death the cross of San Fernando was conferred on him, and this distinction, we are pleased to observe, carries with it a pension for his widow. Another medical officer, Dr. Marcial Capdevila, of the 1st battalion of the Regiment of Isabel la Catolica, displayed the greatest valour in the battle of Paralejo, attending to the wounded under a heavy fire, and working so successfully, that of 89 wounded men brought in at 11 o'clock at night, all had been attended to by 3 in the morning, and although many were severely injured, only two died. Nor are these by any means isolated instances of devotion, as one of the leading political papers in Spain, *El Imparcial*, says there has hardly been an action of any importance in the war in which medical officers have not distinguished themselves by their heroic conduct in the field. They have been equally intrepid in facing the dangers of infectious disease, notably yellow fever, to which several of them have succumbed. All the lay papers speak in the highest terms of the conduct of the medical officers, and great dissatisfaction is expressed by our Spanish contemporaries that the Cross of San Hermenegildo, the highest military distinction in Spain, is by official pedantry denied to medical officers as being "non-combatants."

THE FRENCH EXPEDITION AND THE MADAGASCAR JIGGER.

In addition to grave forms of malaria and dysentery, the French invaders of Madagascar have to contend with many minor causes of sickness; not the least important of these is that pest of African travel—the jigger. We are informed that hundreds of the soldiers are daily invalided by this insect. Probably this is an exaggeration; but there is little doubt that indirectly the jigger will disable, and even kill, more men, and prove a more serious foe to the invader than their Malagasy opponents. The jigger—pulex penetrans, a small species of flea—is a present from America to Africa. Indigenous to the former continent, it was unknown in Africa prior to 1872 or 1873, when it was introduced on the West Coast. Gradually hopping its way, or carried in the feet of natives, it has spread over almost the entire continent. Not very long ago it had just reached Zanzibar, and now, it would appear, it has crossed the Mozambique Channel to Madagascar. The jigger is found principally in jungle grounds, preferring a dry, dusty soil, and being particularly fond of the ash and rubbish heaps about native huts. Here it waits its opportunity to prey (flea fashion) on man or beast. When the female is impregnated she seeks to bury herself under the skin, particularly of the toes and feet, the terminal segments of her abdomen plugging the hole by which she entered. Once buried in the skin her abdomen enlarges, attaining relatively enormous dimensions, from the development of the

ova, which now rapidly proceeds. If the insect is not carefully removed at an early stage by a small surgical operation, at the execution of which natives are from long practice particularly deft, the superjacent skin inflames and ulcerates, and so allows the intruder to drop out. When she has fallen on the ground the abdomen of the flea ruptures, and her eggs escape. In eight days' time the larvæ are hatched out, and by-and-by result, after a series of metamorphoses, in a new generation of fleas. Besides the jigger it would seem that the French soldier has to contend with yet another skin pest in the shape of a hook-shaped seed belonging to a peculiar species of grass. This seed is said to work its way into the skin and give rise to a great amount of irritation and inflammation. By the pain and irritation they cause, the jigger and this grass seed are sufficiently unpleasant; but in themselves they are not directly dangerous. Some of the newspapers report that the jigger gets into the blood. This of course is absurd. The danger lies in the breach of surface and the scratching induced; for by this breach of surface a ready channel is provided for the entrance of the virus of that most painful and dangerous form of gangrene—tropical sloughing phagedena. Travellers in the tropics are only too familiar with this terrible disease. It is one of the worst afflictions the caravan, the workers in jungle lands, and the campaigner in the tropics have to contend with. It is particularly virulent in camps of overworked, underfed, malarial, scorbutic, and anæmic soldiers and coolies, in whom any breach of surface is liable to become affected with this rapidly-spreading form of ulceration. A sanguineous bleb or ash-coloured slough appears at the seat of inoculation, and in a very few days vast, sloughing, stinking sores, many inches in diameter, are formed; toes and feet are often lost, and death even may result from septicæmia. When the sores at last heal, after many months of suffering, great deformity may result from loss of tissue. This very serious disease is supposed by some to be the same as the hospital gangrene, at one time so familiar in the hospitals of Europe; this is by no means established. Various micro-organisms have been incriminated, but as yet our knowledge of the bacteriology of the disease is very indefinite and incomplete.

SPECIAL HOSPITALS AND THE FIFTH YEAR.

We are glad to learn that some of the special hospitals are altering their arrangements in order to meet the needs of the fifth year's curriculum. At the Brompton Hospital the facilities for the study of diseases of the chest are to be extended by the formation of two new appointments. Clinical clerks are to be allotted to each in-patient physician, and clinical assistants to the out-patient department. In addition, all students who enter (at a small fee) for the practice of the hospital will be enabled to make use of the large amount of material (whether clinical, pathological, or bacteriological) that such a hospital affords. A course of lectures is to be given each session on the principal diseases of the thoracic organs, open to the students of the hospital and to all medical practitioners on presentation of their cards. The opening lecture of the session will be delivered by Dr. Douglas Powell on Wednesday, October 9th, at 4 P.M., on Angina Pectoris. Full information can be obtained from the Secretary of the hospital, or from the dean of the schools at any of the metropolitan hospitals.

A SUGGESTION FOR THE MEDICAL SOCIETIES.

A Correspondent writes: May I draw attention to a difficulty which stands in the way of the clinical investigation of some of the rarer forms of disease? We are told, and I believe it is the fact, that at the present time no organisation exists by which anyone engaged in any inquiry regarding any special malady can find out where among the large number of hospitals, infirmaries, and other institutions which exist in London other cases of the same nature or of allied character exist. People taking up the study of any of the larger groups or divisions into which diseases are commonly classified do not feel the difficulty, but when it is a matter of rare diseases or curious pathological conditions an investigator, however carefully he may describe the few instances that come before him, finds it next to impossible to discover others of similar nature with which to compare them. Yet amid the vast invalid population of London it ought to be possible to match almost any case, however strange. There is no doubt that members of the several medical societies, when they know a fellow member is interested in any subject, are willing enough to tell him of illustrative cases, but only those who are well known are able to get this assistance, and the suggestion is made that this sort of co-operation might be organised on a more methodical basis. At first sight it might appear that by the use of the correspondence columns of the British Medical Journal the difficulty might be met, but I question whether its circulation is not too wide to make its columns quite appropriate for this purpose. Any public announcement that a particular case could be seen in a ward in a particular institution might lead to embarrassment, and would be very likely to be resented both by the authorities of the hospital and by the patient himself. This, however, would not apply to the institution of inquiry lists at such a centre of medical work as the rooms of the Royal Medical and Chirurgical Society. Most men who are attached to hospitals in London are connected with one or other of the societies which meet there; and it would be a practical and useful step if arrangements could be made by which investigators working at any special cases might be informed where similar or analogous ones might be met with.

THE SICK POOR IN IRISH WORKHOUSES: THE NORTH DUBLIN UNION.

The North Dublin Union Workhouse, like the sister union of the south of the city, suggests the desirability of subdivision. If the sick department were, as in London and the larger English provincial cities, entirely separated from the administration of the workhouse proper, and worked on the lines of a general hospital, not the sick alone but also the infirm and the idiots would benefit by the change, as the latter might then succeed to the present sick wards. The actual condition of the two last-named classes is most unsatisfactory. The lot of the aged and of the chronic invalids is unspeakably dreary, and the picture given of the lunatic department recalls the accounts of our asylums before the appointment of the Lunacy Commissioners. Short of such drastic measures as new quarters and complete reorganisation, however, much might be done by increasing the staff and by abolishing the pauper nursing. We hope that the detailed criticisms of our Commissioner may induce the Dublin ratepayers to look into the condition of the unfortunate paupers for whom they are ultimately responsible. A more humane and more enlightened administration of the Poor Law would react for good on the whole community, and it is a reform which will be carried out as soon as public opinion is roused to demand it.

THE JENNER RELICS AND THE JENNER CENTENARY.

The near approach of the date (May 14th, 1896) when a century will have elapsed since Jenner's famous and decisive experiment in vaccination was performed has, as already stated, led the National Health Society of Russia to organise an exhibition, to be held in St. Petersburg, of objects which relate to the great discovery and its author. Prizes of considerable value are offered for the best works on the subject of vaccination, and the opportunity is being taken to collect and publish materials for histories of its practice in Russia and Western Europe. Jenner's works are to be translated into and published in

Russian; also his biography accompanied with a portrait: and a commemorative meeting will be held on the day of the centenary. The competitions mentioned will be closed on March 2nd (14th), 1896. In Bristol a subscription has been opened to purchase the famous collection of Jenner relics formed by Mr. Mockler, of Wotton-under-Edge, shown by him in the Bristol exhibition of 1893, and again in London last year, so as to secure its retention in the museum there or some other public institution. It would seem that this most valuable collection of diplomas, documents, manuscripts, printed works, portraits, and objects personal to the illustrious man was offered to the Council of the Royal College of Surgeons and to that of the Royal College of Physicians, but declined for want of accommodation. It should not be left to the citizens and members of the profession in Gloucestershire to be the sole contributors to what should be a national object. It would be a national disgrace were the collection to be allowed to be dispersed or removed to a foreign country.

MEDICAL ETIQUETTE AND THE PUBLIC.

The *Echo* recently published a reckless paragraph on the death of Mrs. Fletcher at Holloway, containing statements which we are able to say, on the best authority, are wholly unfounded. It was not a matter of medical etiquette that Dr. Whitehead was obliged to ask Dr. Wight's leave to take sole charge of the patient, for Dr. Wight and Dr. Whitehead were already both of them attending her; it was simply a matter of straightforward dealing. In two hours' time after Mrs. Fletcher had been delivered Dr. Whitehead took sole charge of her; he sent at once for Dr. Griffith, and everything was done that could possibly be done to save her life. It is not true that medical etiquette had anything to do with the fatal issue of the case. It is not true that the motto of our profession is to consider our fees before our patients. Nor is it true that a patient is not at liberty to dismiss his medical attendant whenever he likes. And as regards medical etiquette one thing is certain, that if the profession were not bound by its rules the public would suffer past all bearing. Every profession must have its own rules of honour, and without these rules there would be constant fighting, dishonesty, and quackery among us. But as regards the case to which the *Echo* made reference, the plain truth is that medical etiquette did not interfere with the treatment of the case, and had absolutely nothing to do with the issue of it.

LONDON POST-GRADUATE COURSE.

The winter term will commence on Monday next, and the instruction will be carried on at the Hospital for Sick Children (Great Ormond Street), at the National Hospital for the Paralysed and Epileptic (Queen Square), at the Royal London Ophthalmic Hospital (Moorfields), at Bethlem Royal Hospital for Lunatics, at the London Throat Hospital, at the Bacteriological Laboratory, King's College, and at the Central London Sick Asylum. The work is thoroughly practical and suited to the needs of the practitioner. The "diary" is so arranged that all the lectures can be attended with ease, and time left for a large amount of hospital practice. One or more courses can be taken at the option of the members, or all the lectures for one or more weeks can be entered for. Opportunity for doing such an amount of work as each can arrange for is thus facilitated. A prospectus can be had from Dr. Fletcher Little, Secretary, 32, Harley Street, W.

DAIRY FARMERS AS SCAVENGERS.

Dr. John Brown, the health officer of Bacup, draws attention in his report for 1894 to a very important matter connected with the administration of the Public Health Acts alike in Bacup and in many other Lancashire sanitary districts. The occurrence of cases of typhoid fever in the spring of last year led to inquiry as to causation, and in the end the outbreak was traced to the agency of milk. The farmer of the dairy farm whence the implicated milk was distributed was a scavenger of night soil, and had in the course of his business as such to remove the excreta both of infectious and non-infectious cases, and had, as a matter of fact, been known to remove the excreta of a typhoid patient not very long prior to the outbreak in question. The danger to the public health of such procedure can well be imagined, and, indeed, it needs but little stretch of imagination to picture a farmer proceeding from a round of scavenging to the process of milking his cattle, and in this way communicating to his milk produce the specific infective property which will enable the milk to spread disease and probably death among his customers. The dual position of dairy farmer and scavenger should not be allowed for one moment. It is not alone by means of the personal contact with the procedures of milking by the farmer or his staff of scavengers that danger is to be apprehended; there is the further danger of the actual material from deposited night soil in the vicinity of the farm premises gaining access to the milk cans or the milk itself in storehouses, and so on. However the matter be looked at it appears a dangerous combination of offices, and we trust that wherever it exists steps will speedily be adopted to dissociate the incongruous callings.

WATERBORNE CHOLERA.

Colonel H. Wylie, British Resident in Nepaul, in regard to the prevention of cholera, states in the *Times* his experience of one large eastern city, Khatmandu. Cholera, he says, was a perfect plague in this city until 1891, when His Excellency Maharajah Sir Bir Shumsher Jung, the Prime Minister of Nepaul, introduced, at a cost of over six lakhs of rupees, a plentiful supply of pure water, brought in pipes from mountains six miles distant and distributed by means of standards and taps. Since then cholera has been absolutely non-existent in the city of Khatmandu, although it has broken out virulently in other parts of the Nepaul Valley, including a very severe epidemic in the town of Patan, which is only two miles distant from here. He adds that the sanitation of Khatmandu leaves everything to be desired, and that this grievance has been one of many years' standing.

DEFECTS OF IRISH WORKHOUSES.

A report on the condition of Irish workhouse infirmaries was read before a meeting of the Council of the Irish Medical Association on August 29th, 1895, by Dr. Moorhead, Honorary Secretary of the Workhouse Medical Officers' Association. It contains a digest of the various reports furnished by the medical officers of forty-five unions to their respective boards, and of the action or non-action taken by these bodies in consequence thereof, as reported in the local newspapers. These reports, it may be remembered, were furnished by the medical officers in response to an instruction issued by the Local Government Board to the Boards of Guardians charging them to inform themselves of the state of their infirmaries. Dr. Moorhead has tabulated the replies, and in a condensed form lays before the Council the results arrived at. By far the largest number of infirmaries, namely, twenty-nine, are classed as "those in which proper sanitary appliances, efficient nursing, and suitable furniture are absent." On looking through the material on which this classification is based, we are astonished to see the very low standard that is thought sufficient in these infirmaries, and we note, with regret, the attitude of antagonism between the doctor who is doing his utmost to improve the condition of the patients committed to his care and the authority who is responsible for the efficiency of the workhouse. Dr. Moorhead, however, introduces a sympathetic sentence into his report which those who are working at this reform should lay to heart: "Even when willing to set their houses in order, many of them do not know how to set about it, and in this I think they are entitled to our consideration and

forbearance; for having no knowledge of sanitary science or modern hospital requirements, they are called upon to effect large changes, and have no one in authority to show them how to go about it or direct them what to do."

IRISH WORKHOUSE HOSPITALS.

The Local Government Board in Ireland has taken up the question of hospital improvement with some vigour. It has already dissolved an obstinate Board of Guardians, and it is unlikely that the process will need to be repeated elsewhere. At Longford the other day the Board addressed the guardians on the subject of reforms. They required the appointment of three under nurses, the improvement of sanitary arrangements, and a supply of new iron bedsteads with wire wove mattresses for the infirmary. The guardians resolved that the doctor should employ a second fever nurse when required, and that one assistant nurse should be employed at £5 per annum! A few beds were ordered, but before that was done the inspector, Major Fair, had been called a liar by various members of the Board. The Local Government Board will have public support in any effort to deal with persons of this type. The effort at "improvement" is too ridiculous.

ENTERIC FEVER IN INDIA.

The *Broad Arrow* says: "Enteric fever is causing havoc among our young offices at Bangalore. The recent death of Second Lieutenant MacTier, of the Dorsetshire Regiment, at the Station Hospital, where he was under treatment, brings the mortality up to three from this disease, while five deaths in all have occurred among the subalterns of the garrison. All officers who have been quartered at Bangalore are well aware that the drinking water for the cantonment is derived from a tank supplied by an open channel which passes through a native bazaar, kept clean by sweepers. Forming part of the wall of the supply channel is the main sewer from the same area. The sewer is so ingeniously arranged that when overcharged with storm water relief is obtained by discharge into the water-supply channel, and thus into the tank. These facts were laid before the Indian Medical Congress by the Sanitary Commissioner, Madras, in an instructive address on Sanitation in India." As before noticed in a letter from a correspondent, the policy of the tea kettle is here carried out, and the epidemic of typhoid stopped for a time. None the less is it necessary that means should be taken for the uniform purification of the water supply. It will be satisfactory to learn that either perfectly pure sources have been found, or that Pasteur filters have been brought systematically into use.

LUNATICS AT LARGE.

The recent murderous assaults made by several lunatics at large, and ending in the loss of several lives and the severe injury of several other persons, has led to some discussion as to the provisions of the present Lunacy Act, and particularly of its provisions which lead to the discharge of patients who are not properly recovered. These provisions, which render it very difficult for an asylum medical officer to retain certain cases which, when discharged, are very apt to relapse and become dangerous, are certainly very much open to question. Like other provisions, these were inserted as a consequence of the agitation about alleged unnecessary or improper detention in asylums and interference with the liberty of the subject. And there must be one or other of two things—either power to detain persons who, although better than they were, are liable at any time to become more disturbed mentally and to commit some act of frightful violence, or else for the public to submit to be compelled to deal as best it may with such acts of violence when they occur. This latter, however, is rather hard on the unoffending members of the general public who happen to become the objects of the outbreak of murderous violence when it occurs, and for no fault of their own. The public cannot have its cake and eat it too. Some share in the matter is due to the competition to discharge a bigger percentage of so-called "cures" than other institutions secure. The discharge of some lunatics, and their return to their homes to beget a generation largely consisting of weak-minded or insane or criminal persons is in every way most pernicious and disastrous.

LONG HOURS AND MENTAL STRAIN.

Long hours of continuous, or nearly continuous, work place a severe strain upon the constitution quite apart from the actual amount of physical labour involved. On several occasions there has been good reason to suppose that accidents on railways have been more or less directly due to the physical and mental strain produced by exceptionally long hours of duty. This danger will, it may be hoped, be strongly impressed on the managers of railway companies by Major Marindin's report to the Board of Trade as to the collision which occurred last month on the Dublin Wicklow and Wexford Railway. The line was single, and the accident appears to have been due to the driver of a train starting without the staff. The Inspector, however, calls special attention to the fact that this man had been at work for too many hours during the day. He had commenced duty at 8 A.M., and though he was off duty from noon till 4 P.M., and from 4.45 P.M. to 6.55 P.M., his fatal mistake was made when he had been seventeen hours on duty with these intervals of rest. Major Marindin attributes the accident partly to his being tired out, and points out that the cases of the two guards were worse, for one had been at work for nineteen hours, and the other for twenty minutes longer. "The running of trains," he concludes, "with men worn out by long hours, is a distinct danger to the public, as well as an injustice to the men, and should under no circumstances be countenanced." The human brain is a wonderful instrument, but like all living structures it cannot be depended upon to discharge its functions with precision unless at regular intervals reasonable intervals of repose are allowed for recuperation. From this point of view the reasonable amount of work to be expected from a man in good health cannot be gauged by the week. The apportionment of sleep and work must be governed by the day. It is a matter far more of mental than of bodily fatigue. It is hardly a paradox to say that the better the man the greater the liability to temporary brain failure. The deeper his sense of responsibility, the higher his feeling of duty, the more quickly must exhaustion ensue. In railway work we have that combination of hard work and anxiety which most quickly produces fatigue.

"WHITE SLAVES" IN HOSPITALS.

The *Daily News* has opened its columns to a correspondence on the conditions under which nurses are supposed to work in our general hospitals. As is usual when professional subjects are handled in a non-professional journal a great deal of irrelevant matter has been dragged into the argument, and generalised statements have taken the place of facts; as we have read the letters, in some of which some astounding charges have been made against the hospital authorities under cover of an anonymous signature, we felt that the cause would have gained if the name of the writer and of the hospital had been given, otherwise these letters are valueless as evidence. Much stress has been laid upon the long hours of work for the nurses, both in the leaders and in the letters; but these we take it are masculine criticisms by those who understand hours of work to mean the same as those continuous hours exacted of a clerk or a mason; a nurse when on duty is in a position analogous to a soldier in the guard-room—she is to be at her post ready if wanted, but at leisure it may be for half or less of these hours. We feel that in the matter of food, recreation, and sleep there is room for improvement, because the average official is too apt to allow these import-

ant questions to drift into routine, and does not give that individual attention to the domestic side of hospital life on which the well-being of the staff turns. Then there is a tendency to encourage young and immature women to enter on this life, which is one that can only be borne by the healthy and well-seasoned; is not the rage for the young nurse on the private staff to a certain extent answerable for the physical failures in the hospital course of training? These grumbles evidence something wrong somewhere, and it is the business of the officials and the authorities to look into the matter, and remove every justifiable ground of complaint among the probationers.

THE PATHOLOGICAL SOCIETY OF LONDON.

THE first meeting of this Society will be held on October 15th, but the President, Mr. Henry T. Butlin, has decided to postpone his presidential address until next year, when the Society will celebrate its fiftieth anniversary.

DEATH OF SIR THOMAS LONGMORE, C.B.

IT is with extreme regret we announce the sudden death of Surgeon-General Sir Thomas Longmore, C.B., Honorary Physician to the Queen, and for long Professor of Military Surgery in the Army Medical School, Netley. Sir Thomas Longmore was staying at Swanage, and appeared to be in his usual health when he saw his son off by train in the early morning, and within two hours he was dead. Of Sir Thomas Longmore's long, honourable, and useful career we hope to give an adequate account in an early issue.

SURGICAL MECHANICS.

A NOVEL experiment is about to be made in connection with the Institute of Dental Technology. A course of manual training for surgeons will be commenced on October 15th and will be continued each Tuesday and Thursday evening until December 19th. The course is intended to afford an opportunity for practical work at the bench, vice, lathe, and forge, and in the artistic reproduction of cases. The workshops of the Institute at 4, Langham Chambers, W., are fully equipped, and the services of a skilled staff of instructors will be utilised according to individual requirements. A detailed syllabus has been issued and can be obtained from the Principal, Dr. George Cunningham, L.D.S.Eng., or from Mr. H. P. Deane, F.R.C.S., Assistant-Surgeon to the London Hospital. This first course is of a tentative character, and those engaged in the teaching of surgery are specially invited to attend with a view to ascertain whether such a course would be likely to benefit senior students and qualified practitioners. The hours named are from 8 to 10 P.M., but if those who attend the class are likely to find the hours from 5 to 7 P.M. more convenient this change will be made.

THE CORRECTION OF THE "MEDICAL REGISTER."

WE desire to call general attention to the notice, in our advertisement columns, issued by the General Medical Council. It is a reminder that every registered practitioner should be careful to send to the Branch Registrar by whom he was originally registered immediate notice of any change in his address, in order that such change may be duly inserted in the *Medical Register*, and also to answer at once any letter of inquiry that may have been sent to him in regard thereto. Failing attention to this, a practitioner is liable to have his name erased from the *Medical Register*. Any practitioner on whom this misfortune has already fallen owing to an earlier oversight should make immediate application for restoration to the Branch Registrar by whom he was originally registered. Appended to this notice is a further statement containing the resolutions of the General Medical Council and its Executive Committee in regard to covering unqualified persons and the employment of unqualified assistants. With regard to the first point, it is held that a registered practitioner covers an unregistered person when he does, or assists in doing, or is party to, any act which enables such unqualified person to practise as if he were duly qualified. As to the employment of unqualified assistants, a registered medical practitioner renders himself liable to the censure of the General Medical Council if he employ an unqualified assistant on his behalf, or for his benefit, either in complete substitution for his own services, or under circumstances in which due personal supervision and control are not, or cannot be, exercised by the registered practitioner himself. On many occasions the Council has taken action in accordance with these resolutions, and it is obviously the duty of every qualified practitioner, in the interests of the profession to which he belongs not less than his own, to act up to their spirit.

THE MORAL OF JANE CAKEBREAD'S STORY.

WE have on various occasions referred to the distressing case of Jane Cakebread, who, now considerably over 60 years of age, is no sooner out of prison than she yields to her diseased impulse to intoxication, to be brought again before a police court. We commented on a well-meant attempt to detain her for a year (a ridiculously short term for such a confirmed case) in a home for inebriates; but the unhappy victim of a persistent disease would have none of it, and on her 288th conviction has been sentenced to hard labour for a month. The obvious moral of this police-court repeater's career is the necessity of compulsory detention. She is but a type of hundreds of other male and female inebriates, some offenders more unknown to the courts, who can be treated only by involuntary therapeutic seclusion. The late Government saw this, and we have great hope that the present Cabinet will adopt a continuous policy on this matter. This distressful offender against the law has brought a scandal on our legal procedure. Penal measures have failed, why not give compulsory remedial treatment a chance? We earnestly urge all our readers to point the moral of Jane Cakebread's 288 convictions in personal or written appeals to their members of Parliament, and to every member of the Ministry.

CHOLERA AS A TEST OF SANITATION.

DR. THORNE THORNE, in his last report to the Local Government Board, says: "In my report on cholera in England during 1893 I pointed out that of the 61 localities in which cholera appeared in this country the disease was limited in 42, or nearly 60 per cent. of the whole, to one single attack; and this was the case although as regards the majority of the attacks the disease must be looked upon as having been true cholera of the Asiatic type, whether it be judged by its clinical symptoms, by the outcome of bacteriological research, or by the heavy rate of mortality which it occasioned. Such a result, altogether unique in the history of cholera, was, I believe, largely due to the improved sanitary circumstances of England. But it is certain that if, in the cases of public water service I have been considering, the specific material which found access to the waters had been that of cholera instead of enteric fever, our cholera history for 1893 would have been the record of even greater disaster brought about in most of the cases by deliberate neglect. Even as the matter stands such instances of neglect remain a matter of reproach to our local sanitary administration."

REMINISCENCES OF PROFESSOR HUXLEY.

IN the *North American Review* for September Sir William Flower gives some interesting personal reminiscences of Professor Huxley, gathered, as he tells us, during a friendship of nearly forty years. He became acquainted with Huxley through George Busk, whose name, it may be mentioned, is consistently misprinted Bark throughout—a testimony to the duration of scientific fame which may be commended to the notice of ambitious youth. The whole article, however

is a curious specimen of careless proof-reading. The story of Huxley's marriage, as told by Sir William Flower, supplies an element of romance which one hardly looks for in the life of a scientific man. When the *Rattlesnake* was in Sydney Harbour the officers were invited to a ball, and among those who went was young Huxley. There he met his matrimonial fate in the form of a young lady whose parents resided at Sydney. A few days afterwards they became engaged, and within a fortnight of the young people's first meeting the *Rattlesnake* sailed for the Torres Straits to complete the survey of the North Coast of Australia, all communication between them being cut off for months at a time. It was seven years before the lovers saw each other again, and at the end of that time the constancy of the scientific Jacob was rewarded by an appointment to the School of Mines, which enabled him to marry. The union was a very happy one, and although they had at first many household troubles and cares to contend with, a large family of young children, much ill health, and not very abundant means, through it all Huxley's patience and sweetness were admirable. "The fierce and redoubtable antagonist in the battle-field of scientific or theological controversy was all love and gentleness at home." Huxley's early tastes were, as he himself has told us, not for natural history but for engineering. From an early age he also took an interest in literature, the strength of which may be estimated from the fact that while at sea he taught himself Italian with the object of being able to read Dante in the original. Unlike other zoologists, Huxley was never a collector; he only cared for a specimen according to the facilities it afforded for investigation. Sir William Flower believes he never made a preparation of any kind, and he cared little for dissections sealed down in bottles. "In dissecting, as in everything else, he was a very rapid worker, going straight to the point he wished to ascertain with a firm and steady hand, never diverted into side issues, nor wasting any time in unnecessary polishing up for the sake of appearances—the very opposite, in fact, to what is commonly known as 'finikin.'" Sir William Flower thinks Huxley might have been a great artist, but he never found time to cultivate his faculties in that direction. He was, we are told, "free from a quality which paralyses the effective action of many men of great mental capacity—the faculty of seeing something at least of both sides of a case at the same time." He was also a man with "some strong prejudices against doctrines, against institutions, and against individuals." This gave his teaching and his writing the quality of "cocksureness," which was an offence to many, but which was effective in controversy where he fought dogmatism with its own weapons. Huxley, though much of his intellectual life was devoted to fighting theology, was a more truly religious man than many theologians, and Sir William Flower bears witness that no one could be intimate with him without feeling that he possessed a deep reverence for "whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report," and hatred of whatever is the reverse of this, and that "although he found difficulty in expressing it in definite words, he had a pervading sense of adoration of the infinite, very much akin to the highest religion."

PASTEUR AND HAFFKINE.

As impressive and instructive tribute to the memory of Pasteur at the moment that the tomb is closing over him may be found in the results, of which we last week gave a full report, of the admirable work of Dr. Haffkine in India. Not only was Haffkine a pupil and assistant of Pasteur's at the Pasteur Institute, where he was trained in bacteriology and where he carried out all his researches on the prevention of cholera; but the cost of his disinterested journey to India was in the first instance largely subsidised by M. Pasteur from his private resources. When M. Pasteur and Dr. Haffkine first communicated with the Editor of this Journal on the subject of his researches, of which we gave at the time a full account, Mr. Ernest Hart invited Dr. Haffkine to come first to London before starting to India and to give public demonstrations of his method and of the means of preparing his preventive vaccine. Dr. Haffkine accepted the invitation, and it will be remembered that we arranged with Dr. Sims Woodhead (the superintendent of the laboratory of the Royal College of Surgeons on the Embankment) for a public lecture and demonstration to which the leading physicians of London were invited, and which attracted much attention here. Subsequently an appeal was made to the Secretary of State for India, who did not, however, feel justified in any way supplementing the private expenditure of M. Pasteur and of Dr. Haffkine in this great work undertaken for the benefit especially of our great Indian Empire. It is at the moment of Pasteur's death, and after a course of labour of the most unremitting and devoted character, which has seriously injured his health, that this devoted disciple of Pasteur is returning to Europe after having expended three years of labour and a very large sum from his own private purse in carrying out inoculations on a vast scale, of which it is officially announced that the statistical results in Calcutta alone have shown that inoculated persons are twenty times safer than uninoculated. "The results may be briefly stated as follows. Amongst persons "protected by the first inoculation only 2·2 per cent. were attacked and died; among those who had undergone complete second inoculation, there were no cases and no deaths." This latest posthumous result of the beneficent labours of Pasteur is still in a tentative state, but already the results are sufficiently proved as vastly wide applications of the Pasteur principle and methods, and the unflinching advice and munificence with which the labours of the great master are continued by his able and self-sacrificing pupils.

QUARANTINE AT GIBRALTAR.

After all that England has done for the abolition of quarantine it is interesting and by no means reassuring to hear of the imposition of quarantine at Gibraltar on all persons arriving from Morocco ports since the reported outbreak of cholera at Tangier. It is stated that on receipt of a telegram from Tangier officially declaring Asiatic cholera to be present among the native population, the Gibraltar Health Board immediately ordered a seven days' quarantine on arrivals from Ceuta and other Morocco ports, while the Deputy Governor, Sir Frederic Carrington, has prohibited the entry into Gibraltar of any person who has within 21 days been at Tangier. Thus easily do we drift back into the dark ages, and lay ourselves open to the reproach of insincerity. The quarantine has caused no small inconvenience to the many English from the Rock who have been spending their holiday in Morocco, for nearly all the steamers connecting with Europe have ceased to run, and thus many people have been "blocked" at the other side, and have been entirely unable to extricate themselves from the midst of the epidemic. A party of English, including Colonel Markwick and his family, are stated to have been forced to charter a steamer to convey them across to Gibraltar, where they now lie in the bay in quarantine for three weeks. Surely it is derogatory to England's position in sanitary matters that such proceedings should receive official sanction.

Presentation.—Dr. F. B. Garland has been presented with a handsome clock by the inhabitants of Oetham as a parting recognition of his services during the last three years. Mrs. Garland was also presented with a silver tea service.

The Virginia Medical Society has admitted its first lady member in the person of Dr. Catherine C. Runyon. The North Carolina Medical Society has one female member, Dr. Annie L. Alexander, who was admitted as long ago as 1886.

BOMBAY MUSSULMANS AND THE PILGRIM SHIPS BILL.

It is with a sense of some considerable disappointment that we have read the memorial adopted at a meeting of Mohammedans in Bombay and addressed to the Viceroy of India on the subject of the Pilgrim Ships Bill which is now under the consideration of the Government of India. It is not because we have any particular views as regards the Bill as a whole that we regret the attitude adopted, but because we had hoped that where definite sanitary gain was in question the Mohammedans would have been as anxious to promote such gain at the Indian end of the journey as they evidently were to secure it at the Red Sea end when they gave their support to Mr. Ernest Hart during his last visit to India. It was then practically decided that the Mohammedans themselves were to exercise pressure on the Sultan, as head of their religion, to secure sanitary measures and to prevent needless death in connection with Kamaran, Jeddah, and the Holy Places. But we fear any such representations will lose their principal force if the views embodied in the memorial in question come to be adopted.

In the first place the Mohammedans of Bombay object to the provision, under the Bill, of 16 square feet per pilgrim between decks, instead of 9 square feet as at present; and they contend that this provision, which is based on a promise made by the British and Indian delegates at the Paris Conference, is unnecessary, because 6 square feet are allowed on the upper deck as well. This view has been adopted by many, and it has been further asserted that if the 9 square feet serve for troops they are sufficient for pilgrims. But there is no parallel between the journeys of well-organised and properly-disciplined healthy men, under the immediate supervision of skilled medical officers, and the horde of semi-destitute pilgrims who are often found on pilgrim ships. Then, again, it is well known that at certain seasons the upper deck space is not available for sleeping, being either saturated by heavy rains or washed with waves. And yet, in the face of these considerations, the meeting in question preferred an allowance of 9 square feet to 16 per pilgrim, and this even where the larger space was to be allowed, under the Convention, to serve for the deposit of personal luggage or such things as come under the term "petits baggages." Let us consider what 9 square feet per pilgrim means when the monsoon is blowing. It means that at a time when all must lie between decks, the space for each individual is less than 5 feet long by 2 feet broad; and that many of the individuals in question are aged, ailing, and sea sick. Anything more utterly opposed to a condition of healthiness it is all but impossible to conceive; and if the Bombay Mohammedans definitely take up the line that 9 square feet suffice as a proper sanitary standard, then they had better base their arguments and appeals on behalf of better sanitation in Arabia and the Red Sea on some other ground than that of health. The experience of single pilgrimages is of little value in judging of the space needed, for much depends on the season and the weather during which the voyage in connection with the movable feast in question takes place.

Then, again, the meeting objected to the payment of the sanitary taxes at the outset of the journey, and their being handed over to the Turkish authorities by the captain of the vessel. This clause was inserted in order to meet the complaint that so large a number of the pilgrims are in a destitute condition, and that this very destitution constitutes one of the principal dangers of the pilgrimage. This condition of pauperism is practically admitted by the Bombay meeting, the members of which ask that, whatever is done in this respect, exemption should be claimed at the rate of at least 40 per cent., because the Turkish authorities have never "been able to collect the sanitary taxes from more than half the people," and this by reason of the poverty of the pilgrims. We have no wish to secure for the extortionate Turkish authorities a single rupee in excess of that which they have got heretofore; but if health considerations are to influence the arrangements of this pilgrimage, then we cannot but feel convinced that something in the direction indicated ought to be done to prevent so large a following of destitute people becoming a danger to others, and a prey to death along the pilgrim route. The question could be solved in just the same way as that of the pilgrims' fare by steamer is solved. Whether destitute or not the pilgrim pays this in advance, by the aid of others.

As regards these and many other points, the memorialists plead with the Indian Government that they should have regard to the religious susceptibilities of their Mohammedan population, and that they should not take steps which will interfere with religious usages and practices, or with religious freedom. We have the fullest sympathy with the maintenance of the widest freedom in connection with the performance of religious rites, including the Mecca pilgrimage; but when we remember how utterly this principle is disregarded by the Turkish authorities we are almost astonished to find such language addressed to the Viceroy of a Monarch who stands first in the world as the upholder of religious freedom. A requirement as to 16 square feet, which will perhaps just allow an adult pilgrim to lie down, is no greater violation of religious freedom than is the one as to 9 feet now insisted on, nor is the collection of so much of the sanitary tax as must be paid a greater violation of the right to perform a religious duty than are other restrictions which cost money and which must be settled by the pilgrim before he starts. The Netherlands Government demand far more than this without being accused of religious oppression and without their Government being told that they must "bear the odium" of those requirements which they insist on for the benefit of their Mohammedan population generally.

If such words had been addressed to the Mohammedan officials who insist on payments at a rate which the memorialists hold to be extortionate and who block the way to Mecca at every portal by means of a money tax then we could have understood the accusation as to interference with religious freedom. It is well known that the sanitary taxes enforced in the Red Sea and Arabia are used for a very different purpose than that of the welfare of the pilgrims, and yet the Sultan's officials are not accused of preventing poor people from reaching that which they fully "believe.....to be the surest way to salvation." The action taken by the British Government has in this matter always been aimed to secure benefit for the health and lives of our Mohammedan fellow subjects; and we cannot but think that some outside influence, such as a commercial one, in connection with pilgrim shippers has unknowingly been utilised to raise objection on the part of the Bombay meeting to the principle of measures such as those to which we have adverted. According to the united voice of the Governments assembled at Paris, our Government is doing a wrong to the pilgrimage by the laxity of regulations such as are deemed necessary in the interests of those who desire to visit Mecca; and it is difficult to avoid the conclusion that some modifications in the direction of modern public health requirements are really needed.

We have dealt with this subject at some length, because we cannot but feel that if the attitude of our Bombay fellow-subjects is maintained, they will come to regret having taken it up. They plead for improvements at Kamaran, and for the abolition of quarantine restrictions which produce infinitely more cholera than they have ever stopped. We are heartily with them. We look upon Kamaran and other like depots as primarily serving to secure a money-tax, and as often ending in a blood-tax too. Many have left their dead bodies at Kamaran who would have returned to their Indian homes with the proud distinction of Hajis if that mischievous quarantine station had never existed. But, if it is ever to be abolished, and if Jeddah and other places where the pilgrims must land or stay are ever to be so dealt with as to have some approach to sanitary decency, those ends will not be attained by declamations as to interference with religious liberty because a Bill is brought in to provide that when at sea, and especially in bad weather, each pilgrim shall have between decks the very small allowance of a space covering a few inches over 5 feet long by 3 feet wide for himself and his personal encumbrances. We fear this aspect of the question is not being sufficiently taken into account by those of our Mohammedan fellow-subjects who are earnestly desirous of saving some at least of that utter waste of health and life which now accompanies the pilgrimage to Mecca, and much of which

is certainly preventable by the adoption of reasonable sanitary measures.

THE CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The annual calendar has just been published by the Council of the College. From it we ascertain the following facts, namely,—There are 1,160 Fellows on the roll of the College (against 1,144 last year), of whom 947 obtained the Fellowship by examination, 16 were elected as Members of twenty years' standing under section 5 of Chapter 15 Victoria, and 2 are *ad eundem* Fellows. There are 16,816 Members and 645 Licentiates in midwifery. The Licentiates in dental surgery are stated to number 1,007. Holders of the diploma of public health (granted by the Royal Colleges of Physicians of London and of Surgeons of England) number 215.

During the past collegiate year 577 candidates presented themselves for examination in Elementary Anatomy, of whom 473 passed and 104 were referred; 82 candidates presented themselves in Elementary Physiology, 55 of whom passed and 27 were referred; 488 candidates presented themselves in Elementary Biology, of whom 327 passed and 161 were referred. The examiners are appointed in conjunction with the Royal College of Physicians of London, under the scheme for an Examining Board for England. The fees paid by candidates for this examination amounted to £2,991 3s. 9d., the examiners receiving in fees £431 5s. Of 609 candidates who presented themselves in Chemistry 355 passed and 254 were referred; in Materia Medica, of 258 candidates 178 passed and 80 were referred; in Practical Pharmacy, of 226 candidates 181 passed and 45 were referred. The Examiners in Chemistry, Materia Medica, and Practical Pharmacy are elected by the Royal College of Physicians of London.

The Examiners in Anatomy and Physiology for Second Examination are appointed in conjunction with the Royal College of Physicians; they have conducted the Primary Examination under the old regulations as well as the Second Examination by the Examining Board in England; 811 candidates presented themselves for examination in Anatomy, of whom 433 passed and 378 were referred; 803 candidates presented themselves in Physiology, 454 of whom passed and 349 were referred. The fees paid by candidates for these examinations amounted to £3,726 9s., the examiners receiving £1 3.9 2s.

The Board of Examiners in Anatomy and Physiology for the Diploma of Fellow, elected annually by the Council, held two meetings for the examination of 171 candidates, of whom only 63 passed while 108 were referred. The fees received amounted to £1,050, of which the Board received £[illegible]4.

The Court of Examiners, ten in number, are elected by the Council from the Fellows of the Council only for a period of five years. They conduct the Third or Final Examination in Surgery of the Examining Board in England, as well as the Second or Final Examination for the diploma of Fellow. During the past collegiate year the Court has held two examinations for the Fellowship and four for the Membership; at the former there were 79 candidates, 45 of whom passed, 4 were referred for one year, and 30 for six months. For the Membership, 937 candidates presented themselves in Surgery, of whom 579 passed and 378 were referred. The fees paid by candidates for these examinations amounted to £10,142 3s., and the fees paid to the Court of Examiners and the Examiners in Midwifery amounted to £5,697 13s. The Examiners in Medicine under the Scheme are elected by the Royal College of Physicians of London. Of 905 candidates examined, 521 passed and 384 were referred. The Examiners in Midwifery are appointed in conjunction with the Royal College of Physicians of London, and have examined 824 candidates, of whom 558 passed and 266 were referred.

The Board of Examiners in Dental Surgery have held two meetings for the examination of 121 candidates, 84 of whom received the diploma and 37 were referred. The fees paid by candidates amounted to £882, the Board receiving £[illegible]12 8s.

The Examiners in Public Health, appointed in conjunction with the Royal College of Physicians of London, have examined 53 candidates in Part I, 35 of whom passed and 18 were referred. In Part II 46 candidates presented themselves; 26 received the diploma and 20 were referred. The fees received for both Parts amounted to £234 12s. 6d., the examiners receiving £186.

With regard to the finances of the College, it appears that the income from all sources amounted to £28,490 8s., the largest receipt being derived from the fees paid by candidates for the diplomas of the College, namely, £18,791 15s. 9d., the next largest item being from dividends on the Erasmus Wilson bequest, £4,813 16s. 1d.; rents from chambers adjoining the College produced £750; investments, £750 2s. 8d.; hire of rooms, sale of questions, at Examination Hall, £680 17s. 3d.; fees retained for referred candidates, £334; from trust funds, £275 9s. 2d.; incidental receipts, sale of calendars, etc., £14 1s.; from sinking fund, £2 5s. 11d.; Goldsmiths' Company Research Grant, £500; balance at bankers 1894, £1,578 2s.

The expenses for the year amount to £27,760 11s. 3d. (leaving a balance at bankers of £729 16s. 9d.), the largest item being for fees to examiners, £8,840 8s.; expenses of examinations (Fellowship and Dental only), £342 7s. 1d.; half expenses Examination Hall, £4 519 9s. 5d.; half expenses research laboratories, £825 18s. 11d.; rates, taxes, and insurance, £1,540 12s. 10d.; extraordinary expenses, £298 1s. 10d.; alterations and repairs, £669 5s. 8d.; fees to Council, £240 9s.; salaries, wages, and pensions in the three departments (Museum, Library, and College), £4,693 6s. 2d.; lectures, catalogues, specimens, etc., for Museum, £673 11s. 9d.; purchase of books, etc., for Library, £653 9s. 4d.; trust funds, £302 3s. 10d; fees returned to candidates, £556 10s.; purchase of stock, £2,150 15s. 7d.; expenses Metropolitan Asylums Board (repayable), £186 5s. 9d.; miscellaneous items, that is, fuel, light, printing, stationery, etc., £1,267 17s. 11d.

From the librarian's report it appears that the supply of new books has been well kept up during the past year. The donations include the manuscript material for a Greek medical lexicon prepared by the late Dr. Greenhill, presented by Miss Greenhill; a collection of pamphlets from Sir Henry Acland; several old books from Mr. Alfred Kisch; and a manuscript report of John Hunter's lectures from Mr. C. Leeson Prince. The copper and steel plates used for printing Mr. Joseph Swan's book on the nervous system have been presented by Mrs. J. V. Machin, of Gateford Hill, Worksop. Exchanges have been made with the British Medical Association and the Medical Society of Victoria. Amongst the old books purchased may be mentioned a copy of the rare (1672) *Treatise of Wounds*, by Richard Wiseman. The collection of portraits has received a valuable addition from Mr. Jabez Hogg in the shape of a series of daguerreotypes of eminent physicians and surgeons taken by him nearly fifty years ago. Mr. Hogg has also presented a portrait in oil of a surgeon (name unknown), dated 1677, and several volumes of interesting pamphlets. Including journals and transactions, the total number of volumes in the library is about 48,000.

Amongst the additions to the Museum may be mentioned a sarcoma of the patella; a roll of hair weighing 5 lbs. successfully removed by operation from the stomach; an enlarged spleen in a child which weighed one-sixth of the whole body weight. Mr. Willoughby presented a humerus taken from an Egyptian skeleton dated about 4000 B.C., and, in addition to its antiquity, is of interest as showing an old injury to the head of the bone, which must have produced considerable deformity of the limb. An important addition to the Museum is that of 205 skulls and crania with 40 models purchased from the Anthropological Society.

The Secretary's report contains an abstract of the work done by the Council and Committee; the Committee of Management of the two Royal Colleges; the research laboratories on Victoria Embankment; reports of meetings of Fellows and Members; results of elections, etc.

The Cholera.—According to the returns issued on the present state of cholera in Russia, there occurred during the last fortnight of September in the province of Podolia 51 cases and 19 deaths from the disease, and in the province of Volhynia 7,827 cases and 3,085 deaths.

THE PRISONS COMMITTEE.

NOTES ON THE EVIDENCE AND REPORT.

Administration.

Nothing comes out more clearly in the recently-issued Blue Book of evidence taken by the Departmental Committee on Prisons than the failure of certain noisy and neurotic critics to prove their charges of maladministration against the prison authorities. With everything in their favour in the way of a sympathetic tribunal, whose members were practically ignorant of prison management, they have nevertheless signally failed to establish this part of their case. Whatever the defects of our "Prison System" may be, it has been abundantly shown that this system rests entirely on Acts of Parliament which have been passed for the guidance of prison authorities, and the evidence from beginning to end proves that the Commissioners of Prisons have administered these Acts with loyalty and fidelity, and that the transfer of the prisons to Government has been to the public advantage in the way of economy, uniformity of discipline, and improved sanitation, while it has distinctly tended at the same time to the advantage of prisoners themselves.

All this is somewhat grudgingly admitted by the Committee, but it is not easy to see from the evidence how any different conclusions could be arrived at. The direct gains to the community in economy and improved sanitation, as reflected in the reduced death rate, would of themselves have sufficiently justified the changes made in 1877. On this subject the testimony of Sir Godfrey Lushington, after his long experience at the Home Office as Under-Secretary of State, is very valuable. Question 11,350. "I consider the transfer has been eminently beneficial, and not merely as a cause of the better administration of the law, but as much more humane towards prisoners. The immediate purposes of the transfer, which were economy and uniformity, have been entirely fulfilled, and I believe individual abuses are now reduced to a minimum, and all the provisions of the Act are most carefully carried out."

Almost all the other witnesses who were examined, as well as the Committee themselves, agree in this opinion.

Insanity in Prisons.

Some very disquieting statements had appeared in the public press on this subject. It had been openly alleged that prison treatment was producing insanity, and the Committee had before them some figures to prove that this was the case, and further that a higher ratio of insanity prevails in prisons at present than in former days when prisons were under local control. A cursory examination of these statistics, however, showed them to be so unreliable as to carry with them their own refutation. It was seen at once, by the very explicit tables of insanity furnished by the medical officers of the local prisons in the reports of the Prison Commissioners, that the statistics put forward included not only prisoners who were specially remanded for the purpose of ascertaining their mental state, but also many others who were undoubtedly insane on reception. These formed by far the largest proportion of the whole number. Thus for the year ending March 31st, 1894, the total number of insanity cases in the prisons of England and Wales was 344. Of these 342 were either insane on admission or within a month, while 42 only became insane a month, or more than a month, afterwards.

The residue left, after weeding out these people who drifted into prison because they were insane, still appears somewhat large for a prison population of 14,000 when compared with the general population; but all the expert evidence given by Drs. Gover, Shaw, Nicolson, and Lewis went to show that prisoners are (as Sir E. Du Cane put it) "mentally, morally, and physically below the average of the general population," and therefore likely to yield a higher ratio of insanity. It would be absurd to expect that criminals, who are taken from the most drunken and dissolute class of the lowest ranks of society, should evince an average degree of mental stability. Alcoholism is a large factor in the production of insanity as well as of crime, and every prison surgeon knows that the mental injuries of various kinds which abound amongst prisoners are a fruitful source of weakness, and of much of that mental instability which characterises the violent criminal class.

For these and other reasons the insanity cases which arise in prisons must of necessity exceed those in the general population of corresponding ages. In a special memorandum on this subject appended to the report of the Committee, Dr. Bridges, one of the members, estimates the proportion as 3 to 1. Whether or not this result be correct, it is clear that his calculation does not rest on a sound statistical basis, for he compares the daily average population of the local prisons —which is roughly 14 000—with the general population. As, however, the total number of prisoners received in the year under review amounts to 184,000, it is obvious that the prison population changed thirteen times in the course of the year, and no such change as this can be said to take place in the general population.

That imprisonment *per se* should be productive of insanity in any but exceptional cases is totally opposed to the experience of prison medical officers. All the prison officials who were examined on the question were in full agreement about it. The theory undoubtedly has a certain amount of *a priori* plausibility, but it fails to take account of the *personnel* and mental peculiarities of the criminal class, as well as of their surroundings. The lunacy experts, Dr. Shaw of Banstead and Dr. Lewis of Wakefield, whose experience has brought them in contact mainly with prisoners who have been certified insane, gave it as their opinion that prison life tended to develop, though it might not actually give rise to, insanity. It seems just as likely that the present humane system of imprisonment, with its regularity of living and enforced abstinence from drink, preserves rather than impairs the faculties of such an intemperate and mentally unstable class as criminals are admitted to be.

Weak-Minded Prisoners.

This class constitutes from 2 to 3 per cent. of the prison population. It embraces all shapes of mental deficiency, congenital and acquired. Epilepsy, sunstroke, cranial injuries, and alcoholism, appear to be the commonest causes of the acquired variety. They are a most difficult class to deal with in prison, as they are not amenable to ordinary discipline, and exhibit varying degrees of irresponsibility. They are for the most part habitual offenders with short sentences, and, as they are constantly returning, prison is the nearest approach to a fixed address they can be said to possess. Further, they are found to some extent in all prisons, but more especially in the populous centres, so that there are considerable difficulties in dealing with them, as the Committee suggest, by concentration. An attempt was made in this direction a few years ago by the Prison Commissioners, who selected certain district prisons to which such cases could be transferred, but owing to the shortness of sentences and other causes it was found to be impracticable. The care and management of these prisoners, however, have not escaped the attention of the Commissioners (which, by the way, the report of the Committee would seem to imply) for on page 579 of the book of evidence there is given the standing order No. 134, dated February, 1885, directing that such cases should be associated in rooms under the personal supervision of special officers, and under medical care.

Judging by the questions put by Mr. De Rutzen, the police magistrate, to various witnesses as to how weak minded offenders should be dealt with, it would appear that this class is quite as great a source of embarrassment to magistrates as it is to prison managers. A place of detention, at least for the long-sentence portion of them, intermediate between a prison and an asylum, and in which perhaps inebriates might be treated also, is suggested as the best device for dealing with these mental incurables.

Recidivism.

In view of the finding of the Committee that there is "a real and substantial decrease of crime," undue importance seems to have been given to the increased numbers of repeated convictions. The evidences of Sir E. Du Cane and of Mr. Troup show this increase to be partly due to an improved system of identification; but a still more general cause would appear to be the short-sentence system at present in fashion. Habitual criminals, who now receive sentences

of one year instead of five or seven as formerly, are much oftener at large, and have many more opportunities, so to speak, of getting convicted.

The growth of recidivism, therefore, is in this way quite consistent with a decrease of criminals and crime. The Committee say "the head springs of recidivism are to be found in the social conditions of the general population," and base this theory on an anecdote told to them by Mr. Davitt (*Report*, p. 11), but it seems improbable that a general cause of this kind should produce so comparatively few results, for habitual offenders are but a small class in proportion to the general population.

A very hopeless view of their reformation was taken by almost every official who was examined, and who had had experience in dealing with them. Many of them exhibit mental defects which make it difficult for medical officers to gauge their responsibility for prison offences, and their fitness or otherwise for punishment. The community, however, has a right to be protected from them, and long periods of detention, such as the Committee recommend, are the only means at all likely either to reclaim these offenders, or to give adequate protection to the public.

Classification.

The Committee lay great stress on a better system of classification. That which they recommend, however, is so complicated that it is likely to prove unworkable in practice. At present each prison is in itself a microcosm, in which the separate cell system enables the governor to classify all his prisoners as he likes and keep them apart. If, however, distinct prisons, or parts of prisons, are to be reserved specially in future for each class, such as juveniles, first offenders, young prisoners, habitual criminals, inebriates, etc., many of whom have but short sentences to undergo, it is obvious that several prisoners will be kept travelling up and down the country, at an enormous cost to the public, denuding prisons of officers required for escort duty, and with no corresponding advantages to themselves or to society. The sole object of this classification is the reformation of the criminal; but imprisonment has other aims in view. A law breaker, under existing Acts of Parliament, is supposed, in the first place, to be punished for his offence. In undergoing this punishment he is placed under very favourable conditions for reforming his vicious courses, and by means of the mark system and enforced industry he helps to work out his own reformation. The Committee propose to change all this, and subordinate the penal to the reformatory part of prison treatment. We have before us, in the New York Elmira, an object-lesson in an institution conducted on these lines, which, to say the least, is not encouraging; it is said to be "the laughing-stock of Europe."

Whether we should follow this American experiment and convert our prisons into reformatories seems to most people very doubtful policy. Statistics which were laid before this Committee bearing on the deterrent effect of our present prison system showed that "of every 100 who go to prison a first time 70 do not return again." We know then that not only is crime steadily decreasing, but that our prison treatment is exercising a powerful deterrent effect at all events on first offenders, and probably on great numbers of potential criminals besides, who keep clear of the clutches of the law, while it fails to reclaim habitual offenders. If, however, everything in prison treatment is to be sacrificed to the one object of reformation, we must run a serious risk of impairing the deterrent features of the system for the very doubtful chances of reforming habitual criminals, a class who are least susceptible to moral influences, and who are at the same time those who will gain most in prison comfort from the relaxation of penal discipline. Such privileges as "talking," "gymnastic exercises," and "technical instruction," as recommended, seem out of place in a penal establishment. By all means abolish unproductive labour, which was almost unanimously condemned by witnesses as useless and demoralising, give prisoners more exercise to maintain their health, and cultivate as far as possible the *mens sana in corpore sano*, but to return to the principle of association after the experiences of the past is a retrograde proceeding fraught with the special evils which John Howard spent his life in trying to reform.

OPENING OF THE WINTER SESSION IN THE MEDICAL SCHOOLS.

London Hospital.

Presentation of Testimonial to Dr. Hughlings Jackson, F.R.S., by Sir James Paget.

The Library of the Medical College of the London Hospital was on October 1st the scene of an interesting ceremony, the occasion being the presentation to Dr. Hughlings Jackson of his portrait in oils, painted by Mr. Lance Calkin, and a piece of silver plate in the form of an antique silver ewer, subscribed for by his colleagues on the staff and other friends, and bearing the inscription that it was presented "in recognition of their esteem and admiration of his great services to the London Hospital and Medical College, his distinguished position in the profession, and of the advances he has effected in medical science by his laborious investigations and profound insight into diseases of the nervous system." Sir James Paget, F.R.S., D.C.L., occupied the chair, and was supported by Sir William Broadbent, Sir Spencer Wells, Professor Burdon Saunderson, Dr. Buzzard, Dr. Savage, and many members of the medical and surgical staff of the hospital.

Mr. Hale (Chairman of the House Committee) opened the proceedings, and requested Sir James Paget to present the portrait and plate, alluding in his speech to Dr. Hughlings Jackson's long connection with the hospital, and his high position in the profession.

Sir James Paget, in presenting Dr. Hughlings Jackson with his portrait and a silver ewer, said: The only possible ground upon which I can accept the honour offered to me in presenting this testimonial to you is that once you were a pupil of mine, attended my lectures, and helped me in my practice. As far as I know, I am the only one now surviving who can claim that honour. That honour I do claim, and it is some consolation to claim it when one has passed the power of active work in the sciences of our profession, and can therefore only look back to the happiness of seeing the work of those whom one in some degree, however small, promoted in their work by one's teaching. I remember you well more than thirty years ago. You sat regularly at my lectures; you were one of those attentive and watchful students who make lecturers careful, and compel them as far as possible to keep their work up to a level which shall be better than that of their pupils and yet intelligible to them. I well remember you to have been a constant help and guide and promoter of one's own best work. It may seem rather strange to claim an honour from one's pupils in the honour which they receive; but it is a consolation to think that to-day when as one grows old one finds one's pupils going so much beyond one's own knowledge than ever one's own knowledge was beyond theirs; and that is remarkably the case when I compare what I could now tell with what Dr. Hughlings Jackson has told you. I wish I could express half the good feelings that have been said or written by those who have contributed to this testimonial. Let me only assure you that the words that are inscribed upon it do tell us as nearly as possible that to which all have consented; they seem to rival one another in their expressions of esteem and gratitude for the work you have done. Among them are the leading men of science and of sciences, some of them beyond the ordinary range of medicine. There are the pupils, old pupils, colleagues all the leading men who have done best work in medicine and surgery, and all have concurred in this. Let me beg you to receive these testimonials, and believe that with them there comes an expression of our heartiest wish that you may yet live long in health and happiness, and especially may enjoy that supreme happiness of doing good in the promotion of the length of the life of men and in your capacity for work. This you have done all your life long thus far; may you be able to do it yet for many years to come; and when you reach the time that I have reached, and find that you can no longer go on with such active work, then may you have the happiness, as you surely will, of remembering the good that you have done in the more indirect manner, by the pupils you have had who are still doing good work, and following your good example. In presenting this portrait to you allow me to say that I believe

others will look upon it with more pleasure than you will yourself, for it tells you that you have the appearance of a remarkably distinguished man.

Dr. Hughlings Jackson, in replying, said that words were unable to express how deeply he felt the kindness shown to him, and the honour was very much enhanced by the fact that the presentation had been made by Sir James Paget. He rejoiced to have the opportunity of declaring how much he had been indebted to Sir James, not only for scientific aid, but also by a bright example of uprightness of conduct. He (Dr. Jackson) had been connected with the London Hospital for more than thirty years, and a great part of those researches of his of which good-natured people spoke so kindly were begun in the out-patients' room. He advised both his colleagues and the students to cultivate that department of the hospital. During his connection with the hospital he had made many friends, and it was not possible, he thought, for any man to have had pleasanter colleagues than he had had. He thanked Mr. Calkin for the great patience and skill with which he had painted the portraits, and he also felt highly gratified in seeing around him so many eminent members of the medical profession; but he could not, however long he spoke, say how much he felt the kindness shown to him by all. He could only say that he thanked them most heartily.

Sir James Paget, in presenting the other portrait of Dr. Hughlings Jackson to Mr. J. H. Buxton, Treasurer of the London Hospital, who received it on behalf of the College, said: Ladies and gentlemen, I have now the happiness of presenting another portrait of Dr. Hughlings Jackson, which is to appear constantly in the College in the sight of all the students and those who visit the school. This will be, I believe, of real value to both school and hospital. There is nothing of the kind that can be better than the seeing from time to time, or even daily, a portrait of those in whose places one stands, or whom one can boast of as having been directly or indirectly one's teacher. At St. Bartholomew's Hospital I know I can never look at the group as they stand of Percival Pott, Abernethy, and Lawrence, without thinking of the good example they may set me; without feeling what a discredit it would be to throw dishonour on the institutions of which those men were such bright ornaments, and the shame it would be if one did not study their works, and try, if not to attain their eminence, to at least follow their example as far one's own power would admit. As it is there, so it will be here with Dr. Hughlings Jackson's portrait in the school. Those who look at it will ask, if they do not already know, What work did he do? How did he gain that distinction? How does his influence come to bear upon me? And they will learn it. Let me take this opportunity of pointing out what, I think, will be its chief lesson. So far as I can judge from the works of Dr. Hughlings Jackson—I never have been able to follow him in all the minuteness and completeness of his work in neurology and diseases of the nervous system—I can see this, which I would hold to be a great lesson for all students of medicine for all time to come, that he has never failed to make science and practice work together. He has always regarded the clinical room, or as he told us even the out-patients' room, to be a place for scientific study as surely as the laboratory, and that the facts to be gained in one may be quite equal with the facts obtained in the other. That is the rule which all students, nay, I will go further and say that is the rule which all practitioners of medicine should carry through life. Whatever they see, whatever they are within reach of, may be a subject of scientific study and bring forth fruit of the greatest value. This is very well known to all those who have studied Dr. Hughlings Jackson's works; but it has struck me as having been a part of that which has determined his career all through his life, that he has constantly believed and sought to find that in every casual fact, as it might seem to others in medical practice, must be tried to be incorporated in the general body of science. I have always recollected an expression made to me by the late Sir Richard Owen—that all the best essays on the great principles of science were written in monographs, the works of men who seem to give themselves to one study exclusively. I have looked at many works in that view, and it is quite true that the best scientific works are in monographs; but then the authors of those monographs were all men who studied science in its widest range within their minds. They did apply their studies especially to one principal subject, but their power of interpretation was due to their having studied science everywhere within their reach. Sir Richard Owen himself was often an example of this, and many others also could be quoted. Dr. Hughlings Jackson, it may be said, has studied only diseases of the nervous system. He has been a writer of monographs. He has been, some would say with a sneer, a specialist. Well, he has studied one range of subjects especially, but in all of it he has had in view that this is but one small element in the whole body of knowledge. I was struck with this when I looked at one of his earliest works which was printed for private use—I do not know whether it was ever published—in which he had in mind that the pathology of the nervous system might be brought into order by adopting the plan of what he called "Owen's vertebrate theory." Whether it was so or not, I will not venture to say, but as I have read that pamphlet I have seen the resolution all through: "I am observing this and that every day of my life; my object will be to bring this and that into concord with other branches of science, and into order, as evidences of one large, general rule." If I might refer to one work by which his name is best known, I would quote it as an example—Hughlings Jackson's *Epilepsy*. It has for years remained, and for years to come it will remain, a distinctive feature. But its full value is shown in that resolution that nothing should pass him unobserved or unthought of. The principal phenomenon of Hughlings Jackson's *Epilepsy* is one that many men saw before him, and perhaps thought of it; but the greater part of them, and those of his own time too, looked upon it, and were satisfied with those comfortable words: "it is a very curious thing." So they would tell of it day after day, month after month; they would tell of it that it was a very curious thing; and after that they were satisfied. But Dr. Hughlings Jackson worked it out, and found it again and again in all its various forms, and out of that he helped to establish one of the greatest rules of modern cerebral pathology. Out of that, as a beginning, working with general rules, he helped more than any man I can name to determine cerebral localisation; he has helped to bring in the whole mass of cerebral surgery, to say nothing of the help he has given on the medical side. I will repeat again that this is what all students in all times may keep in mind. If they are to make medicine advance they must not do it by studying one narrow piece of work unless they have studied it with the broadest knowledge of science previously attained. This then I trust will be the good of the portrait which is to be presented to the medical school and College. It will be seen by all, and all the good that Dr. Hughlings Jackson has already done will be maintained, possibly even multiplied, by the good example which they will see in the portrait.

Mr. J. H. Buxton and Dr. Stephen Mackenzie acknowledged the gift.

The students' prizes and certificates were then presented by Sir James Paget; and Mrs. Hale distributed the prizes and certificates to the probationers.

Sir James Paget again addressed the meeting. He said: I have yet a few words which I am expected to add. My first duty is to congratulate those to whom certificates and prizes have been given. For the students of the hospital I may say that I hope this will be to many of them as much the beginning of a prosperous career as I can boast it was of my own, for I well remember as a student the great advantage I gained by being assured that up to the time of receiving my prizes I had done my work carefully and thoroughly as far as I then could. Whatever may be the respective merits of those who have and who have not received prizes now, I can for certain say that those who have received them may be marked as men who have done their best; and in doing their best they have shown themselves fitted for the future part of their life; they have shown that they have that property upon which success depends more than anything else I can name, the property of loving to work. When I look back on all I have known in the profession I should say that the one element of success before all—I mean for real, substantial, and praiseworthy success—has been the power of work.

I will give just one piece of advice, and that is that no student, whether he has been thus far successful or not, should be anxious to put a willing measure to the quantity and kind of work that he can do. There is a common expression used by students, and even by grown up and old men, "I will if I can." I have often said that it would be better to reverse the expression and say "I can if I will." If a man will go on in life saying "I will do this, I will do that," he may not achieve the whole of his intention but he will achieve a great deal. The students who have been successful thus far by continuing that plan will add to the renown of this great hospital a renown as high as can be said for any hospital in the world. Then also let me congratulate those who have received as probationers their prizes and certificates. It is an entirely new thing for me to have to address nurses on an occasion such as this, but it is a very happy one, for I know nothing of which I can speak in the history of hospitals as having become more prosperous or gained greater advance than in the cultivation of the true art, and skill, and science of nursing—the true science of nursing we shall very soon have to call it. As I look back upon the nursing of old times—well, the nurses were all women, and, therefore, they were more gentle, and more considerate, and more sympathising than men would have been. Many of them were remarkably good, and even skilful, nurses. Many of them were old women—I do not remember that there were any "new women" among them. Even now the work that they do is rising every year in importance and in utility. I chance to know very well, at least by report, the good work that is done thus in teaching in the London Hospital. I have the privilege of knowing Miss Paget, who has worked here for many years, and who, I am sorry to say, is no relation of mine. I have heard from her account that the teaching of the London Hospital is as thorough and complete as it can well at present be made. So that I may well congratulate all those upon having done their best in the very good work whether as students or as nurses. And here I may venture to say that I may speak of that as an advantage, not only to themselves and our profession, but to the hospitals. To-day is what we might call New Year's Day, for all hospitals and medical schools have now begun again the work of the new year. We are all collected together, and now we enter upon another year of active competition in which all the staff of every hospital is expected and bound to do its very best. It is out of this competition amongst skilled and honest persons that the greatest good can come. I venture to say that there is nothing more complete for what a hospital should be and do than is thus established in our English hospitals, where we have schools connected with the hospital, dependent upon its reputation, and ready to judge all that they see going on. Every member of the medical staff in the London Hospital carries on his whole career under a very strict discipline of examination by those around him. There is complete publicity in the work of a great hospital, students are ready not only to see but to judge. I venture to say that no Government superintendence of whatever kind, no superintendence of a hospital carried out in any part abroad can match the value of the oversight of students well educated and well trained to observe. So that I would not even speak of the promotion of the advantage of a school as if it were concerned with the school alone, and the hospital had nothing to do with it; I would rather say that the governors of the hospital cannot do better than spend money—as far as they may have it—on the promotion of the school, as well as the more direct purpose of the hospital. Every improvement of the school is at once an improvement of the work done in the hospital; every promotion, therefore, of medical learning is a promotion of charity. The working of the two things together—science and charity—have had their very best result, the best result that can be obtained in this kingdom. This is what is continually going on in all our London hospitals. It is not as if they were to study more science, and carry out their knowledge somewhere else; they study it, and at the same time they make themselves more fit for the study of medicine. The hospital, therefore, becomes not merely a centre for good work, but a centre from which springs true work and true charity done in all parts of the kingdom—nay, wherever in the world members of the profession may be. Never let it be thought or repeated that the benefit of the hospital is solely in direct charity to the patients; the benefit is by offering the best possible opportunity for the study of medicine, the promotion of it, and the carrying it to distant parts. This, I know, is accomplished in the London Hospital; this is accomplished, indeed, I believe, in nearly all the hospitals which now begin their work. So that, as I have called this a new year, I do not think I can better end this meeting, which has been to me a source of greatest pleasure and happiness, than by wishing all present, especially this school and this hospital, a very happy and prosperous new year.

On the motion of Dr. Samuel Fenwick, seconded by Mr. Frederick Treves, a hearty vote of thanks was accorded to Sir James Paget; and a vote of thanks was also passed to Mrs. Hale.

St. Bartholomew's Hospital.

A most successful evening was spent on October 1st at St. Bartholomew's Hospital, where the Old Students' Dinner was held in the Great Hall of the hospital. About 130 were present, including Mr. Howard Marsh, Lecturer on Surgery and Surgeon to the Hospital, who occupied the chair; Sir James Paget, Sir Trevor Lawrence, Sir George Humphry, Professor Clifford Allbutt, Professor Burdon Sanderson, Dr. Hill, Master of Downing College, Cambridge; the Dean of Christ Church, Oxford; Sir Horace Walpole, Mr. Hanbury, Mr. Trimmer, Mr. Hallett, Captain Percivall, Dr. Rutherford, of the Westminster School; Mr. Thomas Smith, Senior Surgeon; Dr. Church, Senior Physician; and most of the staff of the hospital and school. After an excellent dinner, the chairman proposed the loyal toasts of "The Queen" and "The Prince of Wales, Princess of Wales, and Royal Family." These having been duly honoured, he next proposed the toast of the evening, "Prosperity to St. Bartholomew's Hospital and School." In the course of his remarks Mr. Marsh referred to the great antiquity of the hospital and its foundation, and to the historical and other associations of Smithfield, and the Priory and Hospital of St. Bartholomew. He spoke in well-chosen words of the unity of the hospital and school, which he said was largely due to the influence of the present treasurer, Sir Trevor Lawrence. In regard to the medical school, he spoke of its continued success. The number of teachers is continually increasing; now there are over 60 teachers. The Jacksonian Prize, which has so many times been won by St. Bartholomew's men, was this year awarded to the Senior Demonstrator of Anatomy, Mr. Waring. He spoke of the social organisation in connection with the medical school, and the good feeling existing between staff and students. During the past year the Rahere Lodge of Freemasons has been initiated in connection with the hospital and the Students' Club Ground with its handsome pavilion, opened. The toast was enthusiastically received. Sir James Paget then proposed "The Visitors," and his son, the Dean of Christ Church, responded. Sir George Humphry proposed "The Chairman," and Mr. Marsh replied. Mr. Marsh then proposed the health of Dr. Hensley, secretary for the October dinner. He responded and referred to the recent appointment of Dr. Brunton as physician, and Dr. Herringham and Dr. Tooth as assistant physicians, and concluded by proposing the health of Captain Hinde, who replied.

No important additions have been made to the school buildings during the past year, but minor improvements have been added to the dissecting room and pathological and physiological departments. In the hospital the surgical equipments have been improved by the opening of the new operating theatre, fitted with all the most modern appliances. The number of available beds has been increased, and their distribution rearranged in connection with the appointment of Dr. Lauder Brunton as the fifth physician. For the use of patients four elegant and picturesque shelters have been erected in the hospital quadrangle. From the students' point of view, the most important addition during the past year has been the opening of the new recreation ground at Winchmore Hill, with the handsome pavilion at a cost of several thousand pounds. This ground gives accommodation for the football, cricket, and tennis clubs, and the pavilion consists of a large common room, with three dress-

ing rooms, besides locker room and offices for supply of refreshments.

Charing Cross Hospital.

At Charing Cross Hospital the session was commenced without any inaugural lecture or ceremonial function of any sort. The annual dinner of past and present students will take place at the Holborn Restaurant on October 23rd, when Mr. C. J. Woollett, F.R.C.S., will be in the chair.

St. George's Hospital.

The introductory address was delivered at 4 o'clock by Mr. George D. Pollock (Consulting Surgeon to the Hospital) in the large theatre, which was decorated with palms and ferns for the occasion. In the evening the annual dinner was held in the Whitehall Rooms of the Hôtel Métropole, under Dr. Blandford's presidency. Upwards of 130 guests sat down, including the Treasurer of the hospital (Mr. T. Holmes), Admiral Sir Houston Stewart, Dr. Dickinson, Mr. Pollock, Dr. Duke, Dr. Patrick Manson, the members of the hospital and school staffs, and other distinguished past students. The toast of "The Governors of the Hospital," proposed by Dr. Dickinson, was acknowledged by Mr. Holmes. In replying to the toast of "The St. George's School," proposed by the Chairman, the Dean (Dr. Isambard Owen) alluded particularly to the progressive increase in the number of its students and to the establishment in the school, for the first time in London of a Lectureship in Tropical Medicine—a step taken in pursuance of representations made in these columns. The "Orator of the Day" was proposed by Mr. Whipham and responded to by Mr. Pollock. Dr. Collins, of New Zealand, now on a visit to England, replied to the toast of "The Past Students," proposed by Mr. Pick, the "Present Students" being represented by the Senior House-Physician (Dr. Wilson), lately a Radcliffe travelling Fellow of the University of Oxford. A musical sketch by Mr. Mercer Adam concluded the proceedings, which were marked throughout by much enthusiasm.

The whole of the interior of the hospital has been repainted and decorated, and an extensive reconstruction of the central block, not visible from the exterior, has been undertaken and carried nearly to completion. The reconstruction will provide an ample nurses' dining room, an enlargement of the Boardroom and chapel, and two entire new operating theatres. The theatres and their accompanying lavatories and anæsthetising rooms will be of the most modern construction, the floors and benches being executed in white marble *terrazzo*, the walls impermeable, and the internal fittings entirely of metal and glass. The chapel, which originally formed part of Wilkins's design, is being rebuilt in Middle-Gothic style. In the schools, in addition to painters' work, the corridors have been lighted with electricity; the arc light has been laid on to the theatres for lantern demonstrations; the anatomical collection has been extended, and a separate collection of surgical instruments supplied for inspection by students.

Guy's Hospital.

The inaugural proceedings of the new session were left, as is the custom, in the hands of the Physical Society. Dinner, at which a large company of the staff and past and present students were present, was served in the College Hall at 6 P.M. Dr. Pye-Smith, as President of the Students' Club, occupied the chair, and was supported by the Treasurer of the hospital (Mr. E. H. Lushington), Drs. Samuel Wilks, Frederick Taylor, Goodhart, Savage, Perry Newton Pitt Campbell, Starling, Stevens, Messrs. Davies-Colley, Brailey, Symonds, Dunn, Groves, Targett, Hopkins, and Bellingham Smith. After dinner the company adjourned to the Anatomical Theatre, where a packed audience was assembled. The chair was taken by Dr. Samuel Wilks, F.R.S., and, before commencing the ordinary business of the meeting, an interesting ceremony was gone through—the presentation to Mr. H. C. Regnart, a student, of a Royal Humane Society certificate for saving five lives off Aldeburgh. In making the presentation, Dr. Pye-Smith said he had been entrusted with the great honour of presenting to one of their number the certificate awarded by the Royal Humane Society for courage and self-sacrifice in saving or endeavouring to save life. On this occasion the endeavour was successful. It was but seldom that such an opportunity could fall to anyone, but all might pray that, should it happen, they might discharge their duty as well as Mr. Regnart did. This was not quite an occasion without precedent, for in the year when he (Dr. Pye Smith) entered as a first year's man, one of his fellow students, a Mr. Phillips, gained a similar award. It was in the hospital chapel that a great divine, the late Frederick Denison Maurice, once the Chaplain of Guy's, preached a sermon which he did not hear. The fault was one of chronology. He was then at a preparatory school. It was told him by Sir William Gull that Maurice then said: "There are two ways to greatness—sympathy and courage." In their profession they had need of both. Might they all have that sympathy which was necessary in dealing with their suffering fellow creatures, and might they all, if occasion should arise, have the courage to follow Mr. Regnart's example. The certificate having been presented amid a demonstration of approval, Dr. Samuel Wilks, as President of the Physical Society, proceeded to offer a few words of welcome to the new comers. He congratulated them on their choice of a profession which, above all others, could be followed in its various branches with the most intense interest during the whole of their lives. He might instance his colleague, Dr. Pavy, whom they found still devoting himself to study, and at the end of a long career finding material to add to the knowledge of his subject. They would be taught much during their hospital course, but one thing they would not learn—namely, that there were diseases having particular names and particular remedies for them. That was not science, but quackery, and he warned them against the quackery and chicanery which existed on so great a scale. Scientific truth none could withstand, so that it was a sure sign of the worthlessness of a system if it existed for a hundred years without being absorbed into the body of general knowledge. When he entered the profession he felt pessimistic at the evils which abounded, but now at the end of his career he could sincerely tell them to be hopeful. Let them pursue a straightforward path, and they might depend upon coming out right in the end. But let them remember that having entered the portals of the profession they were no longer free men; they had a duty to the profession, and what was true of the profession was true also of the particular school at which they had entered. They were Guy's men, members of an institution with a glorious past. He and the men of his generation were going off the scene; they had to leave the place in the hands of those to whom he spoke, and to them they looked to keep up the old and great traditions of Guy's Hospital. He called upon Mr. George De'Ath (Buckingham) to read his paper, which is published at page 830, Mr. De'Ath receiving an enthusiastic vote of thanks for his paper. The Treasurer of the hospital, in acknowledging a similar compliment, spoke of the death of Mr. Arthur Durham. He rejoiced that Guy's men had so liberally responded to the proposal that two beds should be endowed in the memory of their old friend. The cost of the two beds would be £2,000, and he was able to announce that the whole of the money had been found. Mr. Lockhart Stephens, in proposing a vote of thanks to Dr. Wilks, said that in view of the present state of the hospital finances he felt that old Guy's men should not lose that opportunity of doing what they could for the hospital. They had approached Dr. Wilks, and he would take the chairmanship of a committee which had been formed among old students that evening, and as the result of their efforts they hoped to offer a very substantial tribute to the finances of the hospital. Mr. Every-Clayton followed on similar lines on behalf of present students, and a warm vote of thanks having been passed to Dr. Wilks, the meeting was brought to a conclusion.

King's College Hospital.

The opening of the winter session was marked at King's College Hospital by the annual dinner of old students, held at Limmer's Hotel on October 1st; Dr. R. Shingleton Smith, of Bristol, occupied the chair. The popularity of these annual dinners was shown by the large number who attended, and by the great distances travelled by many medical men in order to be present; some had come from Yorkshire, from Exeter, Bristol, Birmingham, and Tredegar. In proposing success to King's College Hospital and its Medical School,

the Chairman referred to the recent honours conferred upon formerstudents, mentioning, amongst others, Mr. Christopher Heath, who has been elected President of the Royal College of Surgeons; Dr. Brodie, lately elected Lecturer on Physiology at St. Thomas's; and Sir Joseph Lister, who has been nominated President of the British Association for the ensuing year. In lighter vein he spoke of the general recognition of King's as the "home of medicine," since at the annual meeting the British Medical Association had insisted on all visitors to town being received there first. After reminiscences of his student days, Dr. Shingleton Smith spoke of the success attending the new venture, the hospital reports, which already included subscribers from India, China, Australia, and Hawaii. Deputy-Surgeon-General Jessop responded to the toast of "The Army, Navy, and Reserved Forces"; and other speakers were the Rev. Dr. Wace, Chairman of the Hospital Committee; Dr. Lionel Beale; Dr. Allfrey, of St. Leonard's; Mr. Richardson Cross, of Bristol; Dr. Playfair, and Dr. Curnow. Mr. Percy L. Webster and Mr. A. Schartau kindly sang numerous songs during the evening, which were much appreciated.

St. Mary's Hospital Medical School.

The annual dinner of the past and present students took place at the King's Hall, Holborn Restaurant, on October 1st, Mr. Malcolm Morris in the chair. About 170 sat down. The Chairman, in proposing the toast of the evening, said that a medical school was composed of four elements: the hospital, the school, the staff, and the students, and he gave an amusing sketch of an interview between an old student of thirty years ago and a student of the present day, showing the vast change in the class of men now entering the profession. He said the prosperity of St. Mary's was due in great measure to the energy of the Dean, Mr. Field. The toast was responded to by the Dean. "The Past Students," by Dr. Wills: "The Present," by Mr. A. Thorne; and "The Staff," by Sir William Broadbent, who proposed "The Chairman." Staff-Surgeon T. J. Preston, R.N., replied for "The Navy," Brigade-Surgeon-Lieutenant-Colonel Myers for "The Army," and Surgeon Lieutenant-Colonel A. T. Norton for "The Reserve Forces." The speeches were followed by a concert, and a most successful dinner was brought to a conclusion. Among those present were Colonel Stanley Bird, the Chairman of the Board; Colonel Blair, R.E.; Mr. Page, Dr. Lees, Dr. Franklin Parsons, Dr. Danford Thomas, Dr. Symes Thompson, Dr. Handfield-Jones, Major White, R.E.; Surgeon-General Jeffcoat, Dr. Waller, F.R.S.; Mr. Critchett, Dr. McCall Anderson, Dr. Sidney Phillips, Dr. Hyslop, Mr. Juler, Dr. Cundell, J.P., Dr. Luff, Mr. John Moore, Dr. Felce, Mr. Lane, etc.

Middlesex Hospital.

At the close of the introductory lecture by Dr. Julius Mickle (an abstract of which is published in another column), the scholarships and prizes awarded during the preceding sessions were distributed by Sir Ralph Thompson, K.C.B., Chairman of the Weekly Board of Governors. The Dean (Dr. Coupland) in his report alluded to the losses sustained by the hospital and school in the past year in the deaths of Sir John Tomes, who was House-Surgeon in 1839-40, and who was the first to hold the office of surgeon dentist to the hospital, Dr. Goodfellow, the Senior Consulting Physician, who retired from the acting staff in 1872 after twenty-two years' service, and Mr. John Whitaker Hulke, the Senior Surgeon, whose connection with the institution was briefly sketched. Allusion was also made to the death of Mr. Bell Sedgwick, for many years Vice-Chairman, and of the appointment to the Governorship of Bombay of Lord Sandhurst, the Chairman of the Weekly Board. The changes in the staff were next mentioned, and in speaking of the examinations passed by the students the Dean expressed the hope that the University of London question would be speedily settled. The prizes were then distributed, and a cordial vote of thanks passed to the Chairman on the motion of Dr. Cayley, seconded by Dr. Douglas Powell. The numerous company of visitors were then entertained at tea in the Residential College. In the evening there was a large gathering of past and present students and their friends at the annual dinner, which took place at the Café Royal, Dr. C. Y. Bass presiding. Amongst those present were Sir R. Thompson, Mr. Kegan Paul, Mr. Jarrett, Mr. Horton, Mr. Castance, Mr. Nunn, and most of the members of the hospital staff. The toast of "The Services," which was given by Mr. Smith Turner, was responded to by Mr. Lane and Surgeon-Captain G. Cree; that of "The Middlesex Hospital and Medical School," proposed in admirable terms by the Chairman, and most enthusiastically received, was replied to by Sir R. Thompson and Mr. Pearce Gould. "The Past and Present Students" was proposed by Mr. Lane, and acknowledged by Dr. Newman (Windermere) and Mr. Braine Hartnell, the holder of the first Brodrip Scholarship. Then followed the toast of "The Visitors," proposed by Dr. Duncan, and replied to by Mr. Ganz; "The Health of the Chairman" being toasted with *éclat* on the proposal of Dr. Douglas Powell. The success of the gathering was much enhanced by the musical treat afforded, under the guidance of Mr. Wilhelm Ganz, who presided at the pianoforte, by the splendid vocal performances of Signor Giuseppe Maggi, Mr. Bernard Lane, Mr. J. W. Myles, and Mr. W. Irving, the two last named being members of the Musical Society of the hospital.

Owens College, Manchester.

The medical classes of the medical department of Owens College were opened on Tuesday last. The total number of medical students attending the College during the last year was 383. The magnificent new laboratories for physiology and pathology are now completely equipped, and afford every facility both from the point of view of the student and for purposes of research. At the opening of the session, Professor Hickson gave an address on "The Teaching of Zoology." After paying a well-merited eulogy to the influence of Huxley and of Milnes Marshall on the teaching of biology in this country, Professor Hickson pleaded for a more effective recognition of the claims of field zoology. The so-called "types"—perhaps falsely so-called "types"—which the student is called upon to study has its advantages, but it has also its disadvantages. The student requires a broader view. This can only be acquired by a wider acquaintance with systematic zoology, and by practical work in the field. Professor Hickson urged that biology should be taught to boys and girls at school, and that during school time they ought to have opportunity for observation of plants and animals in the open field.

Sheffield School of Medicine.

The sixty-eighth session of this school was inaugurated by an address from Professor Victor Horsley, F.R.S. After assuring the students that, provided they had good health and industrious interest in their work, and a liberal proportion of physical exercise and enjoyment, they need have no fear of accomplishing a pass examination, he referred to the large percentage of rejections which actually took place. This he attributed in the main to the fact that the entrance examination was of far too low a standard, especially in the subjects of chemistry and physics. He then passed on to later experiences, and advised every newly-qualified man to act as assistant to a good general practitioner for six months, and hold a hospital appointment. He urged that the British Medical Association and one of the medical defence societies should be joined immediately after qualifying. He then went on to discuss the ethical relations of the profession, and expressed the hope that the energy and activity now being displayed by the British Medical Association would culminate in the passing of a Medical Acts Amendment Bill.

St. Thomas's Hospital.

The prizes for the past year were distributed by Sir Edwin Arnold, K.C.I.E., C.S.I., in the Governors' Hall. The chair was taken by Mr. J. G. Wainwright, treasurer of the hospital. In opening the proceedings he made the announcement that as the result of the recent appeal to the public 60 additional beds would be immediately available for the reception of the sick poor, bringing the number of beds in actual use up to 470. Sir Edwin Arnold gave an eloquent and stirring address, imbued with the true spirit of poetry. He impressed on the students the nobleness of the profession they had chosen, and drew a lofty ideal for them to follow. A vote of thanks to Sir Edwin for his address was proposed by the Dean of the School, and seconded by Sir Henry Doulton. In the evening there was a large gathering of old students

at the annual dinner in the Whitehall Rooms, about 140 being present. Dr. Payne presided. Dr. T. B. Crosby proposed the prosperity of the hospital and medical school, and in doing so feelingly referred to the loss they had all so recently sustained in the death of Dr. Bristowe. The Treasurer responded for the Hospital, the Dean for the Medical School, and Mr. Rice Ord for the Old Students. Dr. William Ord, in a genial speech, proposed the health of the Chairman, Dr. Payne, a toast which was received with great enthusiasm. Mr. Staveley proposed the health of the Honorary Secretaries, Dr. Toller and Mr. Abbott, who may well be congratulated on the complete success of the dinner.

University College, London.

The introductory address was delivered by Dr. J. Rose Bradford, F.R.S., who discussed the position which the preliminary sciences—biology, anatomy, and physiology—occupied in the medical curriculum. While a scientific training was essential to the future practitioner, it was necessary, he said, that the science selected should be one in which the student was able to see for himself practically the data on which deductions were founded. Owing to the long time required to study it properly biology was unsuitable, and the present three months' course was useless as a training. For this purpose human anatomy was to be preferred, since it gave greater facilities for the student to become a careful observer. The value of physiological knowledge to the practitioner was not so great since so much current physiological teaching ignored human physiology in its relation to medicine. The future medical practitioner should receive a more or less specialised course of physiology, differing in certain respects from that suitable to the pure physiologist. No scientific training, however extensive and elaborate, could supplant clinical knowledge and study. Clinical observation could be as sound and scientific a branch of knowledge as any science; it depended upon the capacity of the observer and not on the nature of the subject observed. The annual dinner of the old and present students was held at the Hôtel Métropole on Tuesday, October 1st, under the presidency of Sir Richard Quain. Covers were laid for 120. Among those present were the President of the College of Physicians, the President of the College of Surgeons, Dr. Hare, Dr. George Harley, F.R.S., Dr. Lawford (Leighton Buzzard), Dr. C. Marriott (Reading), and all the present members of the hospital staff. Sir Richard Quain, in proposing the toast of the evening, referred to the opposition which University College had met with in its early days. Those days had passed, and it was gratifying to find that no fewer than thirty-six men who had been educated at University College held important positions in nine of the other medical schools of London, and that University College men were to be found in leading positions in the medical schools of Cambridge, Edinburgh, and Durham. No stronger evidence than this of the continuing success of University College could be desired. The toast was responded to by the Dean of the Medical Faculty, Mr. A. E. Barker. The healths of the Presidents of the College of Physicians and the College of Surgeons, both of them University College men, were proposed by Dr. Poore and Mr. Godlee; and the toasts were welcomed with such applause that Sir John Russell Reynolds remarked in his reply that he had been painfully struck by it—in the drum of his ear. "The Health of the Chairman" was proposed by Dr. H. Charlton Bastian, F.R.S., and suitably acknowledged. During the course of the evening the company were delighted by the excellent singing of Dr. Frederick Roberts, Mr. Sydney Belfrage, and Dr. Walter W. H. Tate.

University of Durham College of Medicine.

The opening ceremony and distribution of prizes took place in the great hall of the College of Medicine, Newcastle-on-Tyne, on October 1st, at 2 P.M., preceded by a reception of visitors and luncheon. The chair was taken by the President (Professor Philipson), who, in the course of his introductory remarks, mentioned that the April convocation of the University of Durham for the conferring of degrees will be held in the College of Medicine, Newcastle, instead of at Durham as heretofore; that the degrees of the University and the classes in the College of Medicine will in future be open to women equally with men; that a Chair of Psychology had been created during the past year, and Dr. McDowall, of the Northumberland and County Asylum, appointed the Lecturer; that Professor Howden had been appointed Secretary to the College; and finally that a bequest of £200 had been granted to the College by the trustees of the late Professor Johnston, for the purchase of instruments for the physiological laboratories. The prizes and scholarships were then distributed by the Dean of Durham, who was present at the College for the first time and was heartily welcomed. On account of his recent illness the Dean did not give any address. Votes of thanks to the Dean of Durham (Warden of the University), the Mayor and Corporation, and to the President were then proposed and carried. In the evening a most successful dinner of the Durham medical graduates was held, about eighty were present; Dr. Arnison, the senior graduate, occupied the chair.

Westminster Hospital.

The introductory lecture was given at 4 P.M. by Dr. Monckton Copeman, which was followed by a report from the Dean (Mr. Spencer). Owing to the enforced absence of Viscount Peel the prizes were distributed by Dr. Potter, who concluded with a few happy remarks to the students. The annual dinner of the Westminster Hospital Medical School took place at the Café Monico, on Tuesday, October 1st. The chair was taken by Dr. de Havilland Hall, Physician to the hospital. There were present a number of former students including Surgeon Hugh Macnamara, R.N., and Surgeon-Major Walsh, I.M.S. Most of the members of the staff were, as usual, present, and the House Committee were represented by Mr. G. G. Tremlett, who, with Mr. Spencer, the Dean of the medical school, responded to the toast of "The Medical School and Hospital," which was proposed by the Chairman. The other toasts were "The Queen," "The Old Students," and "The Chairman." The proceedings were enlivened by the strains of a string band, and the result was a most successful evening's entertainment.

LITERARY NOTES.

Messrs. Sampson Low, Marston, and Co. will be the British publishers of the *Twentieth Century Practice of Medicine*, which is now in course of preparation under the general editorship Dr. Thomas L. Stedman, of New York. As we have already stated, Dr. Stedman has succeeded in securing the co-operation of representative men in the United States, the United Kingdom, and the Continent of Europe, so that this "International Cyclopædia of Modern Medical Science" can hardly fail to attain a place of great authority, while the fact that it will consist of twenty volumes, each containing 780 pages, will ensure that the subjects will be treated with completeness. The encyclopædia will be issued to subscribers only at the price of one guinea the volume, bound in cloth (in half morocco, £1 10s.). The first three volumes have already appeared. Vol. I is concerned with Diseases of the Uropoietic System, which are treated by Dr. Francis Delafield, of New York; Mr. Harry Fenwick and Mr. Reginald Harrison, of London; Dr. Howard A. Kelly, of Baltimore; and Dr. G. Frank Lydston, of Chicago. Vol. II contains essays on Nutritive Disorders, by M. Dujardin-Beaumetz, of Paris; Sir Dyce Duckworth and Dr. Archibald E. Garrod and Dr. T. J. Maclagan, of London; Dr. H. J. Lyman, of Chicago; and Dr. C. H. v. Noorden, of Frankfort-on-Main. Vol. III is devoted to Occupation Diseases, Drug Habits, and Poisons. The contributors are Dr. W. T. Councilman, of Boston; Dr. A. L. Gihon, of Washington; Dr. Norman Kerr, of London; Dr. G. F. v. Liebig, of Munich; Dr. J. H. Lloyd, of Philadelphia; Dr. George F. Shrady, of New York; Dr. Beaumont Small, of Ottawa; and Dr. J. Stewart, of Montreal.

In *Le Centenaire de l'Ecole Normale 1795-1895*, a work recently issued, M. Duclaux describes the primitive laboratories in which Pasteur made the greater part of his researches on silkworm disease and on the micro-organisms of beer and wine. The investigations on wine were for the most part carried out at Arbois in a laboratory improvised in a café. The sign indicating the purpose to which the premises had previously been devoted had been left in position, and the workers were not infrequently interrupted in their scientific labour by persons seeking for refreshment. Generally, however, the thirsty wayfarer got no further than the doorway, a glance at the appearance of the interior sufficing to show him that he

must seek what he wanted elsewhere. There was no gas, the heating being done entirely by charcoal quickened into flame when needed with bellows. There was no water, which had to be got from a public fountain in the neighbourhood, and apparatus had to be washed in the river. The apparatus was of the roughest possible kind, and for the making of it M. Pasteur and his associates had to depend entirely on the local mechanical talent. The strangeness of the apparatus and the mysterious nature of the work led to a good deal of "chaff" on the part of the natives of the little town where the work was being carried out.

We have received several inquiries as to the authorship of the beautiful lines inscribed on Huxley's gravestone which we quoted some weeks ago, and we are glad therefore to be in a position to state that they appeared originally in a poem written by Mrs. Huxley and that they were used as the dead naturalist's epitaph at his own request. The lines as they appeared in the Journal were somewhat disfigured by a misprint, and they are so beautiful in themselves and so appropriate that we make no apology for quoting them again:

And if there be no meeting past the grave,
If all is darkness, silence, yet 'tis rest.
Be not afraid, ye waiting hearts that weep,
For God still "giveth His beloved sleep,"
And if an endless sleep He wills—so best.

Mrs. Huxley's literary powers are well known among her friends. Testimony to her poetic gift in particular was borne by her distinguished husband in the address on "Universities: Actual and Ideal," which he delivered as Lord Rector of the University of Aberdeen on February 27th, 1874, and which is republished in *Science and Culture*, London, 1881. The peroration of this discourse ends with the translation of a passage from Goethe's *Xenien*, which runs as follows:

Would'st shape a noble life? Then cast
No backward glances towards the past;
And though somewhat be lost and gone,
Yet do thou act as one newborn.
What each day needs, that shalt thou ask;
Each day will set its proper task.
Give other's work just share of praise;
Not of thine own the merits raise.
Beware no fellow man thou hate:
And so in God's hands leave thy fate.

Huxley says in a footnote to the passage: "I should be glad to take credit for the close and vigorous English version, but it is my wife's and not mine."

MEDICAL SICKNESS ANNUITY AND LIFE ASSURANCE SOCIETY.

The usual monthly meeting of the Executive Committee of this Society was held at 429, Strand, London, W.C., on Sept. 27th. There were present the Chairman, Dr. de Havilland Hall, Mr. H. H. Clutton, Dr. F. J. Allan, Dr. Walter Smith, Dr. Major Greenwood and Dr. W. Knowsley Sibley. The accounts presented show the business to be steadily growing in financial strength and an unusually large number of referred cases occupied the attention of the Committee. These cases are for the most part proposals for membership received from medical men whose family history or record of past illness makes it doubtful whether they can be treated as first class lives. The sickness experience of the Society has so far been very satisfactory, and this is clearly the result of the great care that has always been exercised by the Committee in examining into the history of all candidates for admission. The list of sickness claims is usually less in summer than in winter, but the exceptionally hot weather has left its mark on the claim list of the last few weeks. Only one case of heat stroke has so far occurred among the members, but an appreciable amount of extra sickness pay has been expended on cases of diarrhoea, intestinal catarrh, and similar ailments. Several cases of influenza have also been reported and there seems some fear that it will be troublesome during the coming winter and spring. A considerable number of accidents have also compelled members to avail themselves of the benefits of the Society, and these accident claims may be expected to increase in numbers as the days get shorter. An interesting statement showing the particulars of the largest sickness claims paid by the Society has been published this year, and this with prospectuses and other information may be obtained on application to Mr. F. Addiscott, secretary, Medical Assurance Society, 33, Chancery Lane, W.C.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 23rd day of October next, at 2 o'clock in the afternoon.

Francis Fowke, *General Secretary.*

September, 1895.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

South-Eastern Branch: West Kent District.—A meeting of the District will be held at St. Bartholomew's Hospital, Rochester, on Friday, October 18th, at 4 P.M., Mr. J. Holroyde in the chair. The dinner will take place at the Bull Hotel, at 6.30 P.M. Charge 6s. 6d., exclusive of wine. To facilitate the arrangements, gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, Mr. J. Holroyde, Camden House, Chatham, not later than Tuesday, October 16th. All members of the South-Eastern Branch are entitled to attend this meeting, and to introduce professional friends. Communications: Mr. J. H. Openshaw: Symptoms, Pathology, and Treatment of Congenital Dislocation of the Hip-joint. Mr. T. F. Hugh Smith: A case of Graves's Disease and Myxœdema, after Treatment with Thyroid Gland. Dr. Ground: On the Position of the Government with regard to Proprietary Remedies.—E. Ground, M.D., Honorary Secretary, 1, Ashford Road, Maidstone.

South-Eastern Branch: West Sussex District.—The next meeting will be held at the Infirmary, Chichester, on Wednesday, October 16th, 1895. Dr. Paxton will preside. Agenda: To fix the place of the next meeting, and to nominate a member to preside at it. Discussion on the Registration of Midwives, to be opened by Mr. G. B. Collett. Paper by Mr. Bilton Pollard on Empyema. Notes on a case of Ichthyosis by Dr. Paxton. Meeting at 3.15 P.M. Dinner at 5.15 P.M. at the Dolphin Hotel; charge 6s., exclusive of wine.—Frank Hinds, Honorary Secretary, 14, The Steyne, Worthing.

South-Eastern Branch: East Sussex District.—Amended notice of meeting. The next meeting will be held at the Crown Hotel, East Grinstead, at 4.15 P.M., on October 8th, Mr. P. E. Wallis, in the chair. Dinner at 6.15. Charge 6s., exclusive of wine. Notice of communications, etc., should be sent to the District Secretary, J. W. Battersham, M.B., Bank House, Grand Parade, St. Leonards.

South Eastern Branch: East Surrey District.—The next meeting will be held at the White Hart Hotel, Reigate, on Thursday, October 10th, at 3.45 P.M., Mr. F. B. Hallowes, of Redhill, in the chair. Dinner at 6 P.M.; charge, 7s., exclusive of wine. Agenda: Minutes of Croydon meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Discussion on Diphtheria.—Introduced by Dr. Sidney Martin. Speaker: Mr. H. G. Plimmer, who will show some cultures and slides. Medical: Dr. Washbourn. Speakers: Dr. [illegible], Dr. [illegible], Dr. [illegible], Dr. J. G. Ogle. Surgical: Mr. C. J. Symonds. Speakers: Dr. Walters, Dr. Hodges, of the South Eastern Fever Hospital. In its relation to Public Health: by Dr. [illegible], Local Government Board. Speakers: Dr. [illegible], M.O.H. Croydon; Dr. [illegible], M.O.H. Reigate. All members of the South Eastern Branch are entitled to attend and to introduce professional friends.—[illegible], Honorary Secretary, [illegible] Road, S.E.

South Western Branch.—A very kind invitation has been received from the President and members of the [illegible] Branch to the South Western Branch to the next meeting, which will be held at [illegible], on Wednesday, October [illegible], when Dr. [illegible] Crocker, Physician to the Skin Department, University College Hospital, will give an address on The Treatment of [illegible] of the Skin. Those members who propose attending are requested to send their names before [illegible] to the Honorary Secretary, [illegible], M.D., [illegible] Place, [illegible], who will kindly [illegible] the [illegible] and other [illegible].—[illegible], Honorary Secretary, [illegible] Lodge, Exeter.

Oxford and District Branch.—The next meeting will be held at the Radcliffe Infirmary, Oxford, at 4.45 P.M. on Friday, October 25th. Members desirous of reading papers or showing cases, etc., are requested to give notice to the Honorary Secretary, Mr. W. Lewis Morgan, 37, Broad Street, Oxford, on or before October 8th.

Southern Branch: South-East Hants District.—The next half-yearly meeting will be held on Friday, November 1st, at 4 P.M., at the Medical Library, 5 Pembroke Road, Portsmouth. Gentlemen desirous of reading papers or of exhibiting cases or specimens are requested to communicate with C. C. Clarendon, Honorary Secretary, 3, Elm Grove, Southsea.

North of Ireland Branch.—The autumn meeting of this Branch will be held in the Royal Hospital, Belfast, on Thursday, October 31st, 1895, at 12 noon. Gentlemen who wish to read papers, show patients, or bring any other business before the meeting, will kindly communicate, as early as convenient, with John Campbell, M.D., F.R.C.S., Honorary Secretary, 21, Great Victoria Street, Belfast.

Shropshire and Mid Wales Branch.—The annual general meeting will be held at the Salop Infirmary on Tuesday, October 15th, at 3 o'clock. Members who wish to bring forward any business, to read papers, to show cases or specimens, or to propose any new members, are requested to communicate with the Honorary Secretary not later than Saturday, October 5th.—H. Willoughby Gardner, Honorary Secretary, Swan Hill, Shrewsbury.

North of England Branch.—The autumnal meeting will be held at the Hydropathic Establishment, Hexham, on Tuesday, October 8th, at 4 P.M. The Honorary Secretary will be glad to receive notice of communications. The dinner after the meeting will be at the same place, at 6 for 6.30, 5s. 6d. each, wine extra.—T. E. Williamson, F.R.C.S., 8, Eldon Square, Newcastle-on-Tyne, Honorary Secretary.

West Somerset Branch.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Friday, October 25th, at 5 P.M. Dinner at 6.30. The subject as settled by the Council for discussion after dinner will be Club Practice, and the discussion will be opened by Mr. Abbott. Short papers or cases may be taken before dinner, and others afterwards. The Honorary Secretary will be glad to receive notice of any case or paper to be communicated to the meeting in the course of the next three or four weeks.—W. M. Kelly, M.D., Honorary Secretary, Taunton.

Border Counties Branch.—A meeting of this Branch will be held at Kendal on Friday, October 25th. Members desirous of reading papers, etc., please communicate with R. Dundas Helm, Honorary Secretary, Carlisle.

SPECIAL CORRESPONDENCE.

PARIS.

The Lourdes Miracles.—The War Health Service.—General News.

Dr. Boissarie, at a students' Catholic club, showed the patients cured at Lourdes: a blind man who now sees very well; a female patient, an incurable left to die, now in robust health; two sisters with infantile paralysis now walk as easily as others. As each "miracle" appeared the members of the club loudly applauded. M. Peri Morosini, Secretary of the Nunciature, was present. Dr. Boissarie terminated his lecture by saying: "Lourdes is not a scientific question; miracles are everywhere. It is an awakening of the whole Catholic party."

The War Minister has decided that the special manœuvres of the health service shall take place on October 7th and 11th. On October 7th the lectures will be given concerning the technical material, victualling, and the working of the sanitary arrangements. The following day a lecture will be given concerning marches and the regulation of the health service during the successive phases of war. In the afternoon the staff of the sanitary divisions will be assembled at the docks of the health service and the material be shown to them. At 3 o'clock the division will leave for Montrouge. The third day of the exercises will be devoted to the working of the help and ambulance stations. A mock battle will take place. The sanitary divisions will follow the phases of the battle and the march. On October 10th the hospital organised at Bourg la Reené at the railway station will receive the wounded and remove them to Montrouge. The next morning the removal of the ambulance, and the manœuvres criticised by the technical director.

M. Aulagner has bequeathed £8,000 to the town of Asnières in order to build a hospital.

The congress on cheap dwellings will be held at Bordeaux on October 20th, 21st, and 22nd. M. Georges Picot, Member of the Institute, will preside.

The inhabitants of the Montmartre neighbourhood have held a meeting to discuss the measures to be taken to remedy the Paris meat famine resulting from the Custom taxes and the sanitary regulations enforced to assure the sale of healthy meat only.

BERLIN.

The late Professor von Bardeleben—"Wild Policlinics."

It is not too much to say that the news of Professor von Bardeleben's death was felt as a stunning blow at the Charité—the hospital which for 27 years had been the scene of his labours, and where all his colleagues were attached to him by feelings of the warmest admiration. Though long past the age when he might have retired with all honour (he was 76 years old), it had never occurred to him to give up even a part of his arduous work. Up to the summer vacation last August he was at his post early and late, and no one who saw him then, looking—with his upright carriage, bright, alert eyes, and long white beard—the very picture of hale old age, could have imagined the end so near. Bardeleben was born in Frankfort on the Oder in 1819, and, after studies in Germany and France, obtained the post of assistant at the Anatomical Institute of Giessen in 1843. In 1849 he was elected to the professorship of surgery in the Greifswald University. Here he laid the foundations of his subsequent fame as an operator, his surgical clinic became a model institute, and he wrote his great work, *Lehrbüch der Chirurgie und Operationslehre* In 1868 Bardeleben was called to Berlin University as Professor of Surgery and director of the surgical clinic of the Charité. During the wars of 1866 and 1870 Bardeleben, who was created "General-arzt," acted as consulting surgeon in the field hospitals. He was one of the greatest authorities of his time on all subjects connected with military surgery, and was active in helping to forward sanitary measures for the army. In recognition of his military services he was raised to the nobility. But the greatest service he rendered his profession was his adoption of Lister's treatment. He was one of the first in Germany to recognise the immense importance of Lister's discovery, and to learn afresh and to change his teaching by its light. His death was caused by kidney disease of long standing, which took an unexpected turn for the worse.

The Berlin medical societies have taken up the question of the so-called "wild policlinics" institutes under the direction of private physicians that are cropping up all over the city, and where patients rich and poor can have medical attendance for nothing. It has been calculated that about 300,000 cases a year are treated gratuitously, and it is alleged that a large percentage of these are well-to-do people, fully able to pay. Of course this represents a tremendous loss to the Berlin doctors, and it is no wonder that the medical bodies are beginning to agitate for legislation on the subject.

CORRESPONDENCE.

THE EDUCATION OF THE STUDENT IN PRACTICAL MIDWIFERY.

Sir,—Dr. Rentoul, it seems, is going to send out in future from the various universities a thoroughly efficient body of obstetricians who have actually "personally attended" thirty cases.

How many normal cases is a student sure to see in thirty cases? Or out of thirty normal cases how many are likely to go wrong? There can be no certainty in the matter. Six out of thirty would be a very large number of abnormal cases, and yet quite inadequate to render a student efficient in all the possibilities of abnormal labour.

If by seeing thirty cases of labour a student could see for himself anything approaching half the possible accidents and dangers of childbirth and of the puerperal state, marriage would be most undesirable from a female point of view, and very rightly so. Happily for the female sex neither thirty nor

sixty cases of labour will wholly educate a student. The basis of midwifery is a proper understanding of a normal labour both in theory and practice.

Such I understand is the aim of the Scottish Universities, and in consequence six personally conducted cases are all that is exacted of the student. Theoretical and clinical work must account for the rest. Most certainly thirty cases will not. It would be absurd to burden the already overworked student with thirty cases, unless it could be shown that a very considerable number of these would be sure in most cases to present different features, and that very widely, from the prescribed six.

I have not yet forgotten that during my three months of clinical work at the Edinburgh maternity I was thirteen times out of bed, twice up all night, and once all day as well, to get these six cases. It looks as if Dr. Rentoul wished to kill off some of the rising medical generation, by adding fourfold to this sort of treadmill.

As perfection or even fair proficiency is unattainable by even thirty or sixty cases, the next best thing is to aim at what perfection is possible. That is exactly what is being done in the Scottish schools. Sound practical as well as theoretical instruction in normal labour, and thorough theoretical and clinical instruction for the rest.

The wisdom of the Scottish vote in the Council is obvious and requires no urging to vote differently, or excusing.

Dr. Rentoul, however, requires excusing in presuming to accuse thirty gentlemen of such eminence as the Medical Council of sending out a "death-dealing recommendation." Dr. Leishman never spoke a truer word when he said, "I could communicate more sound instruction in practical details at the bedside in one case of labour than the student would pick up haphazard in the course of a casual attendance on twenty."—I am, etc.,

Edinburgh, Sept. 30th. A. T. SIMPSON, M.B., C.M.

SIR,—I am not in the habit of reading the lengthy effusions of Dr. R. R. Rentoul which appear in the BRITISH MEDICAL JOURNAL from time to time on the above and somewhat cognate subjects. However, whilst scanning your issue of September 28th, my attention was arrested by a table which appears in one of Dr. Rentoul's letters. From this table it would appear that students of the University of Dublin are not required to attend clinical instruction in midwifery nor to see any cases of labour before presenting themselves for their degree examinations.

This statement is most misleading and quite contrary to the actual facts of the case. Had Dr. Rentoul taken the trouble to consult the Dublin University calendar, he would have seen that a student requires "a certificate of attendance on a five months' course of practical midwifery with clinical lectures, including not less than thirty cases." And again: "The candidate must lodge with the Registrar of the School of Physic his certificate of attendance on Practical Midwifery." The candidate is further required to pass an examination in practical midwifery, gynæcology, and obstetrical anatomy.

The above quotations will show that Dr. Rentoul's figures as regards Dublin University are misleading.—I am, etc.,

ROBT. S. ARCHER, M.D. Univ. Dublin.

Liverpool, Sept. 30th.

MEDICAL EDUCATION OF WOMEN.

SIR,—It happens that—by an unfortunate accident—I have only just seen Dr. Garrett Anderson's excellent article on the medical education of women in the BRITISH MEDICAL JOURNAL of September 7th or I should have asked you at once to allow me to correct an error that it contains respecting education in Edinburgh. She wrote under the impression that all the medical classes for women in Edinburgh were confined to women only, but I think it should be clearly known that this is the case only as regards this School in Surgeon Square. The majority of the classes to which women are admitted outside of our School are mixed classes for men and women, and it is desirable that parents should clearly understand this when sending their daughters to Edinburgh. If they prefer mixed classes they can have them, but if they desire that their daughters should be educated in a separate school of their own, this can only be obtained by sending them to the Edinburgh School of Medicine for Women.

With regard to health, I heartily agree with Mrs. Anderson that no one who is in any sense an invalid should study medicine, and also that a student must give her whole time to her work. At the same time I do not think that more than average good health is required in anyone who will eschew all other duties, and who will so limit her hours of study as to take plenty of outdoor exercise, and allow herself long nights of quiet sleep. Girls as well as boys often break down quite unnecessarily, not because their health is defective, but because they study in a foolish and headstrong way, ignoring the ordinary laws of hygiene, and destroying their own future by attempting the impossible in the present. Kindly counsel on such points ought always to be available for women students, and those most ready to take it will be least likely to suffer from anything like a breakdown. Indeed I know several young women whose health has much improved during their period of study.—I am, etc.,

SOPHIA JEX-BLAKE, M.D.,
Dean of the Edinburgh School of Medicine for Women.

Edinburgh, Sept. 28th.

THE UNIVERSITY GRIEVANCE IN LONDON.

SIR,—In the letter of "Medical Officer of Health" on the above subject there is one sentence which in fairness to my University, viz., that of Edinburgh, I feel it is my duty not only to enter against it the strongest protest, but to absolutely deny the accuracy of the statement. As I have the honour of being an M.R.C.S.Eng., L.R.C.P.Lond. and L.S.A.Lond., as well as a graduate of the University of Edinburgh, I think I am in a position to judge of the merits of those examinations, and I have no hesitation in saying that it requires harder work and greater knowledge to obtain the Edinburgh degrees than is requisite for the M.R.C.S. Eng. and L.R.C.P.Lond. diplomas. Had your correspondent foreseen the value of a degree he would doubtless have taken one instead of, or in addition to, the two London qualifications, but because he had not that foresight is no reason for his decrying University degrees.—I am, etc.,

Wimpole Street, Oct. 1st. GEO. STEELE PERKINS.

MEDICAL DEFENCE UNION.

SIR,—The advantages gained by members of the profession who join the Medical Defence Union had never been so clearly demonstrated than they were in a letter to the *Times* dated September 21st, written by a person against whom we had to enter an action for libel on behalf of a member. In this letter he writes: "In this action the medical officer was only a nominal plaintiff. He had joined a medical trade union, and it was this trade union that pursued the action. *Had it been the individual only I had to meet no apology would have been signed by me, but the fighting of an irresponsible corporate body was a totally different matter, and entailed possible consequences it was most desirable to avoid.*" (The italics are mine). I may state that in this action all the costs and a penalty were paid by the defendant, and an ample and satisfactory apology published by him. The words above are the best testimonial to the value of the union ever yet received.—I am, etc.,

A. G. BATEMAN, General Secretary.

King William Street, Strand, Sept. 30th.

PROFESSIONAL ADVERTISING.

SIR,—In the outcry against medical advertising there seems to be a tendency to include under this heading any attempt to make one's professional status known. Although I am altogether against professional touting and consider it disgraceful, yet, on the other hand, when advertising one's books or lecturing is condemned, I think the critic "doth protest too much."

Let us turn to the other professions. The lawyers, by their calling, are self-advertising. In every newspaper we see their names appearing and their speeches reported. They write their "reminiscences" and biographies and advertise their books largely in the public press. Having so many other opportunities for becoming known to the public, might not these autobiographies, etc., be included under professional advertising?

In the Church it is well known that several eminent preachers relate in their sermons their personal experiences and efforts. One especially is noted for his word-painting of scenery and places he has visited. This, surely, is something very much akin to what in the medical profession would be termed advertising.

In the army combatant officers write essays to the periodicals, address public meetings, and give their views and experiences. These in no small measure make "gallant colonels" popular and mark them for future distinctions.

On the contrary, any medical man bringing himself before the public as a good "doctor" is considered a tout. "Medicine," so-called, is no more a sacred and confidential profession than the Church or the Bar. *Mirabile dictu*, we condemn ourselves as touts for popular favour, and the complacent public considers that we must work in the dark, be content with "small thanks" and smaller fees, and "do the good Samaritan" at little profit and great self-denial.—I am, etc.,

September 29th. DA ET ACCIPE.

SIR,—It seems to me that the rights and wrongs of "professional advertising," when referring to popular scientific books and lectures, are not so much in the thing done but the way in which it is done, or, in other words, it is a question of taste in the doing of it.

I quite agree with "Heretic" that the public ask for and require elementary scientific education (for example, lectures and books), for with every additional step of civilisation comes a slight but proportional increase of personal risk in the use of it, which has to be combated by some elementary scientific educational means as those mentioned above. And who could teach about our profession better than the members of it themselves?

As I have grumbled over a grievance I ought to suggest a remedy. Either let the instruction be given by medical men in the pay of some body corporate (for example, British Medical Council or Government), whose duties will be entirely taken up in this public work. So any advertising concerning their work cannot possibly aid the lecturer, etc., to an increase of income; and jealousy or medical ethics is set at rest. Or raise the standard of the educational examination considerably above its present state. This will act by increasing the expense of the embryo student's school education, which will entail his being taught by better masters and at better schools. This will mean a greater rubbing against great minds and great thoughts, which will give the boy greater powers of judgment, one of which is the power of good taste. Then medical ethics will be a much less harassed subject than now.—I am, etc.,

September 28th. ONE WHO DOES NOT RIDE A HOBBY.

THE MORTALITY FROM INFLUENZA.

SIR,—In a paper on Professional Advertising, which appears in the BRITISH MEDICAL JOURNAL for September 14th, Dr. Potter remarks on the impropriety of giving testimonials to the vendors of patient medicines and foods, and implies that a certain doctor who, in giving such a testimonial, stated that he had attended over 700 cases of influenza without losing a single case, has wilfully told the thing that is not. Dr. Potter continues: "I should doubt if there be one medical man in the whole profession who has attended 700 influenza cases without losing one."

Without entering into the question of giving such testimonials, in which everyone will agree with Dr. Potter, I would remark that I have repeatedly seen similar statements on the mortality from influenza in papers by medical practitioners published in the JOURNAL and elsewhere, in which a special line of treatment of that disease was recommended as a particularly successful one, and where this favourable opinion was based on the circumstance that in 600, 700, or 800 cases not a single death had taken place where that treatment had been followed.

I think it therefore desirable to draw attention to the fact, which does not appear to be at all generally known, that the average mortality from influenza, under any line of treatment, is only 1 per 1,000.[1] That disease is dangerous to life chiefly in habitual drunkards, of whom after all there is not a very great number, while children, who usually constitute the large majority of cases under care, generally recover in spite of the most terrible complications which may have been present, and after coma and other ominous symptoms have set in.

The doctor who gave the testimonial in the instance referred to by Dr. Potter may therefore have told the truth all the same in spite of his indiscretion; but it is far more important to know that the absence of a fatal case in 700, 800, or 900 cases of influenza proves absolutely nothing for the efficacy of any particular mode of treatment which may have been adopted.—I am, etc.,

Harley Street, Sept. 27th. JULIUS ALTHAUS, M.D.

[1] Vide my *Treatise on Influenza*, second edition, p. 322.

A QUESTION OF CONSCIENCE.

SIR,—Our first and plain duty is to preserve life, and any coquetting with such cases of conscience as Miss Keneely describes, however interesting they may be as abstract speculations, is liable to land the unfortunate practitioner in the dock for manslaughter, committed with the best possible intentions. Yet the publication of such distressing cases is of great value, as the more widely they are known the more surely we shall receive the support of all good men and women in our efforts to induce Parliament to sanction preventitive regulation, similar to those which, wisely introduced and unwisely repealed, brought, during this too brief period of existence, the priceless blessing of health, not only to men and women, but also to the little children. I write of what I know, having seen the results of both systems, and can recall many cases where I have felt, as Miss Keneely must have felt, that for the child it would be better to die than to live, and best not to be born at all.—I am, etc.,

September 18th. SURGEON-MAJOR.

SIR,—Many difficult questions in ethnology might be solved if it could be proved that disease will bring about a permanent change of type. That syphilis will convert a Caucasian child into a Mongoloid, however, is a statement ethnologists will hardly accept without further proof. The comparison, indeed, is entirely superficial and misleading. The Mongolian, it is true, has a wider skull, but this is not due, like that of the syphilitic child, to hydrocephalus. The same may be said of the diminished brain. The Mongolian has smaller teeth, but they are not syphilitic. The Mongolian has no hair on his face, but on the head he grows it in thick profusion, which is precisely what the syphilitic does not. The pigmented skin, the flattened nose, and the occasionally contracted eyelids complete the picture. Meanwhile the solid osseous characteristics of the Mongolian, the small nasal index, the large orbital index, the virtual non-existence of the supraorbital ridges, and the extreme prominence and large size of the malar bones, we look for in vain in the victim of hereditary syphilis.—I am, etc.,

Chelsea, Sept. 26th. J. FOSTER PALMER.

*** We have received so many letters on this subject, containing, often, repetitions of arguments already used by other correspondents, that we find it impossible to publish all. We print below abstracts of some of the communications received:—

The Author of *Mona Maclean* thinks that not many practitioners of her sex will agree with Miss Keneely's views. Her contention would appear to be that in any given case the individual doctor is to be the judge whether the individual life is worth preserving or not. The statement of such a principle is its refutation, for the wisest of physicians have had to admit errors in prognosis. Though drugs may not cure, they may enable the patient to round the corner and avail himself of fresh air and sunlight and food and sleep, which are Nature's cures.

Surgeon-Captain O'Callaghan, A.M.S., congratulates Miss Keneely on her courage in formulating in written words one of the many questions of conscience that have perplexed many minds. He thinks that the time may come when the law would hold a man equally guilty in thus defeating nature by attempting to preserve the life of an individual who may taint the stream of life in future generations as a

man who should let loose a criminal to prey on society. Those who shudder at Miss Kenealy's suggestion may be induced to turn their attention to the only other alternative in the instance quoted—"a strong C. D. Act."

Mr. Lauson Tait (Birmingham), while thinking Miss Kenealy quite wrong in her line of action, finds "T. C. A.'s" letter inconclusive and not philosophic. The real reason against Miss Kenealy's course is that, had she given the mother a thorough mercurial course sufficient to save the abortion, both patients might and probably would have been cured.

E. E. W., writing as a woman, dependent on the honest and straightforward dealing of medical men, asks whether, in the case instanced by Miss Kenealy, it was not wrong to withhold treatment from the mother. The individual sufferer relies on her doctor to endeavour to relieve suffering whatever its cause and to minister to the individual without regard to his theories as to what may be best for the race. The individual at any rate should be given a choice.

Mr. A. G. S. Mahomed (Swansea) considers that in the case instanced by her, Miss Kenealy failed in her duty, since, though she thought miscarriage would improve the mother's condition, she failed to prescribe them. Further, the child, by a judicious application of the same treatment, might have been fairly healthy except for some slight blemishes of personal appearance and some more important limits of utterance. It might have been a useful member of society. Further, if the mother's health improves the child may yet be born alive, but may be more weakly than it would have been had appropriate treatment been used.

Mr. T. F. Constant (Scarborough), writing as one who is not a medical practitioner, is stirred by a perusal of Miss Kenealy's letter to inquire whether ladies are fit for a profession so severely practical as that of medicine. The inner working of her consciousness as disclosed in her letter shows, he thinks, that "it is a conception eminently feminine." She has, he adds, described in vivid language the "glaring misconception of her duty as a medical practitioner to which a lady doctor may be led by her natural impulses."

"A SAFE CHLOROFORM."

SIR,—The cause of death during chloroform inhalation is generally stated to be due to paralysis of the respiratory and cardiac mechanism. The question naturally arises: Can we obviate this dangerous tendency of an otherwise beneficent drug? If we could succeed in combining a compatible, volatile, chemical agent with chloroform which would stimulate the vital centres, and at the same time not materially interfere with the anæsthetic, we might reasonably hope to lessen the present mortality from chloroform anæsthesia. The two best drugs available for combination appear to be: (1) ammonia gas, (2) nitrite of amyl. I have found by experiment that chloroform is not decomposed by liquor ammoniæ portion *Brit. Pharmacopœia*, in the cold, and I am informed by a well-known chemist that the anæsthetic absorbs 2·6 per cent. of ammonia gas. The same authority has suggested nitrite of amyl, which can also be combined with chloroform.

In my opinion this new form of the drug might be found useful in cases of sudden emergency and for operations on debilitated patients, and those with weak cardiac action; in field hospitals, and on board Her Majesty's ships of war.

The following method of inhalation might be adopted: Given a safe mixture, ordinary chloroform anæsthesia might be induced, and at the critical stage, when the vital centres are liable to failure, the stimulating anæsthetic might be substituted.

I propose to reserve the powerful 2 per cent. mixture for serious cases, and employ a weaker strength (1 per cent.) for inhalation by Lister's method.

It is possible that the ammoniated drug might be found to lessen the after-sickness and other unpleasant symptoms.

Surely this matter is worth further investigation. It would be instructive to anæsthetise certain animals with a like combination, and to watch and compare the effects on the pulse and respiration. Messrs. Duncan, Flockhart, and Co., of Edinburgh, have prepared for me samples of pure chloroform, containing 2 per cent. by volume of ammonia gas, and some other specimens containing ½j amyl nitrite in each fluid drachm.[1] This combination is said to produce "no failure of respiration on heart, and no failure of blood pressure."

Wachsmuth's.—"One-fifth part of oil of turpentine is added to the chloroform." This mixture is stated to prevent cardiac paralysis.—I am, etc.,

J. DUNCAN MENZIES, M.B. Edin.,
H.M.S. Halcyon, Sept. 9th. Surgeon, R.N.

YAWS AND COKO.

SIR,—In the BRITISH MEDICAL JOURNAL of September 28th you review Dr. Nicholls's *Report on Yaws*, and state that in it he expresses doubts as to the identity of the Fijian coko with yaws.

During three years in which I was in the Fijian Medical Service I saw hundreds of cases of coko, and made myself familiar with its aspects both in the natives and East Indians. During the last two years in the British Guiana Medical Service I have seen several cases which were identical in appearance and course with coko, but these in each case were diagnosed by practitioners of local, West Indian, or West African experience as undoubted cases of yaws.

The descriptions of yaws both by Dr. Nicholls and others would serve equally well for coko, and so would the illustrations given in the report. Those illustrations which I considered most typical of coko were those selected subsequently by others as the best of yaws. Coko is not by any means confined to Fiji, but is common throughout Polynesia and Melanesia.—I am, etc.,

C. W. DANIELS, M.B.Cantab.,
British Guiana Medical Service (late Fiji Medical Service).
Cressington, near Liverpool, Sept. 28th.

VACCINATION BEFORE JENNER.

SIR,—During my rambles in Herefordshire a few weeks ago I noticed an inscription on a tombstone in the little village churchyard of Worth Matravers as follows: "Sacred to the memory of Benj. Jesty Downestay, who departed this life April 16th, 1816. Born at Yetminster in this county. A honest and upright man. He was the first person (known) that introduced cowpox with inoculation, who from great strength of mind made experiment from the cow on his wife and two sons in the year 1774."

I have since ascertained that there is no doubt as to the correctness of this statement, and the above was a farmer in that neighbourhood, and there remains no doubt that he performed vaccination, at least on his own family, several years before Jenner made the discovery.—I am, etc.,

Bristol, Sept. 28th. G. C. PAULI, M.R.C.S.

*** There is no reason to doubt the correctness of the statement made upon the tombstone. It was long a matter of traditional belief amongst the dairy farmers in England and in Holstein that cow-pox was protective against small-pox. The deliberate introduction of cow-pox may therefore well have been adopted by several independent minds. All great discoveries have been anticipated in a similar manner, but it detracts nothing from the greatness of him who first systematises or renders them available for the purposes of every day life.

[1] The Glasgow Committee of the British Medical Association, 1879; Hyderabad Commission, 1890; Von Mering's mixture. Chloroform, 1 vol., dimethylacetal, 2 vols.

We regret to learn that Mr. Trimmer, the Secretary of the Royal College of Surgeons, was on Wednesday evening the victim of the robbery with violence which is so common in the neighbourhood of Clare Market. Mr. Trimmer left the College just before 6, and at the corner of Portugal Street met a man who snatched his chain and seals and made off with them. He attempted to give chase, but was at once knocked down by a confederate of the thief, and, besides the shock, sustained a severe cut on the face. Mr. Trimmer returned to the College, and was at once taken by Mr. Cowell to King's College Hospital, where his injuries were attended to. On inquiry just as we go to press we are pleased to find that Mr. Trimmer is going on as satisfactorily as could be expected.

OBITUARY.

LOUIS PASTEUR,

Member of the Institute of France.

M. PASTEUR died on September 28th, at 5 P.M., at Garches, the portion of the domain of Villeneuve l'Etang, in the city of Paris, placed at his disposal for studying rabies.

Our Paris correspondent writes: The dwelling-house is of the simplest. M. Pasteur's health was excellent until the end of the year 1886, when began the violent attacks on him concerning his rabies researches. The grief these attacks inflicted on him resulted in insomnia, palpitations, and symptoms of asystolia, which obliged him to seek health in the South of France. In 1889 he wintered at Bordighera in the villa M. Bischoffsheim placed at his disposal. The earthquake of that year obliged him to quit the South. He returned to Paris slightly improved in health, but, nevertheless, very ailing. At frequent intervals heart trouble intervened, and albuminuria declared itself. In 1892 slight attacks of uræmia occurred, though the unremitting care and devotion of his family and pupils enabled him to gain a semblance of health. On November 1st, 1894, he had a fresh attack, and was obliged to lay up for some months. He again apparently recovered, and went to Garches, where he appeared to be much better. Later on the excessive heat fatigued him greatly, the heart became weaker, and uræmia again set in. The pupils of the Pasteur Institute took it by turns to watch at his bedside. On Thursday, September 26th, the approach of death was evident. M. Pasteur's intimate friends and absent pupils received telegrams, while MM. Chantemesse and Metchnikoff were in constant attendance at his bedside. When Dr. Roux arrived Pasteur was all but unconscious and a prey to violent uræmic dyspnœa. On Saturday, September 28th, Pasteur quietly passed away from the scene of his labours, his rewards, and his trials. At 4 P.M. he breathed his last surrounded by his family and his pupils. Dr. Metchnikoff and Dr. Chantemesse prepared the body for the grave; his arms were crossed on the breast, and a crucifix placed in the hands. On Saturday the Curé of Garches and M. Boulangin, a Dominican priest, visited M. Pasteur. The body was conveyed to the Pasteur Institute on September 30th, embalmed, and placed in state in the library of the Pasteur Institute awaiting a public burial decreed by the State. The President of the Republic, ministers, students, corporations, and a crowd of sympathisers and notabilities have addressed telegrams of condolence to Mme. Pasteur and her family. M. Maurice Lemoir, M. Pasteur's nephew, has been authorised to take a portrait of the illustrious *savant* on his deathbed.

Louis Pasteur was born at Dole, Jura, on December 27th, 1822, where his father, an old soldier of the First Empire, carried on the business of a tanner. The father was a man of some intelligence, and made strenuous efforts to give his son the best education in his power, in order that he might become a master at Arbois College. The son commenced his classical studies at that College, and subsequently studied at Besançon, where he obtained his degree of Bachelier-ès-Lettres, and became a supernumerary master of studies. In 1842 he entered as a candidate for the Ecole Normale of Paris, but, passing only fourteenth in this list, young Louis Pasteur devoted another year to study, entering in 1843 as fourth amongst the aspirants. Already he had begun to devote himself to chemistry, and now, under Dumas at the Sorbonne, and Balard at the Ecole, this study absorbed a large portion of his time. Under Delafosse he became a proficient in molecular physics also, and, while listening to this lecturer, struck upon the ideas regarding dissymmetry which at a later period of his life he developed at great length. In 1847 he took the degree of Doctor, and in the following year was appointed Assistant Professor of Physics at the Faculty of Sciences at Strassburg. At the end of 1854 he was entrusted, as Dean, with the organisation of the newly-created Faculty of Sciences at Lille. Three years later Pasteur returned to Paris, and was appointed Director of Scientific Studies of the Ecole Normale Supérieure, which post he held from 1857 to 1867. In 1856 the Royal Society of London awarded

Pasteur the Rumford Medal for his researches relating to the polarisation of light. He was decorated with the Legion of Honour on August 12th, 1853, was promoted to be an officer of that Order in 1863, and a Commander in 1868. In December, 1863, he was appointed Professor of Geology, Physics, and Chemistry at the Ecole des Beaux-Arts, and in 1867 Professor of Chemistry at the Sorbonne, which latter chair he occupied until 1875. In 1862 he was elected a member of the Académie des Sciences (mineralogical section). Honoured in 1868 by the Medical Faculty of the University of Bonn with the degree of doctor, he returned the diploma after the Franco-German war. In 1869 he was elected one of the fifty foreign members of the Royal Society of London. He became an Associate of the Académie de Médecine in 1873, was elected member of the Académie Française in 1881, in succession to M. Littré, and was received on April 27th, 1882. The following year Oxford University conferred upon him the honorary degree of Doctor of Science. In 1887 he was unanimously elected Perpetual Secretary of the Académie des Sciences, replacing M. Vulpian, but, owing to his health and the pressure of scientific labours, he resigned the post two years later, and was made an honorary Perpetual Secretary.

M. Pasteur wrote numerous work relating to chemistry which were favourably received, and for which, in 1861, he obtained the Jecker prize. When, in 1854, he removed to Lille, although still an enthusiast in molecular physics, he regarded it as politic, considering that the staple history of the town was distilling, to devote some of his lectures at the Lille Faculty of Sciences to the subject of fermentation.

It was in a little room on the first storey of a building connected with the old Château de Villeneuve l'Etang that the eminent *savant* died. The chateau was burnt down about twelve years ago, and the outbuildings had been placed at Pasteur's disposal by the Government for his experiments. Nothing could be more simple than the furniture of this chamber, comprising as it does the bed on which his remains were laid as if still in sleep, a few chairs, a table, and a little drugget; while in a cupboard is a small collection of the books which he most loved to read. His mode of life, indeed, has always been very simple—that of the ardent student; and the language which he uttered during his last visit to his native town of Dôle, in a street of which—the Rue des Tanneurs—is a little house where a marble slab commemorates his birth within its walls on December 27th, 1822, was extremely touching. He spoke of his departed father and mother in the most dutiful and affectionate terms, and ere he left he possessed himself of the old signboard which had embellished the paternal tannery, and placed it in his bedroom at the Institute which bears his name. Nothing, too, could be more characteristic of the man than his reply when a Russian doctor who had studied under him announced to the Academy of Science that he had succeeded in curing at Odessa 1,200 persons affected or threatened with rabies. A colleague exclaimed, "This is a fresh triumph for you." "No," he answered, "this is not a triumph for me, but for my method. In such questions the man disappears, the scientific result remains."

Louis Pasteur had been in the enjoyment of fairly good health until some years ago, when certain experiments led him to spend long hours in a very overheated atmosphere. He fell ill, and his medical adviser told him that if he continued that sort of life he would probably shorten his days, and would at any rate be afflicted with paralysis. His reply was that he could not abandon his studies. He felt that he was approaching a discovery, and, happen what might, he must do his duty. Some time afterwards the desired goal was attained, but at the cost of partial paralysis. The use of an arm was lost. Pasteur grew nervous, was liable to tears when demonstrations were made in his honour, and a few months ago he was unable to attend a crowning *fête* in which the Municipal Council of Paris took a leading part, Dr. Roux being obliged to receive and to acknowledge the compliments for both.

Though Pasteur has disappeared, the Pasteur Institute will have lost nothing of its strength. His work will be carried on by a band of self-sacrificing hard-working scientists who grouped themselves round the great man. Of Pasteur's disciples Dr. Maurice de Fleury writes in the *Figaro*: "First and foremost is M. Duclaux, the actual sub-director of the Institute, who will certainly be called to the direction of the establishment. M. Roux will no doubt succeed him, for though he is likely to modestly refuse, he will be forced to give way. With an incomparable technician like Roux, a searcher of genius like Metchnikoff, accomplished bacteriologists like Chantemesse, Nocard, Charrin, and so many others; with Yersin, with Dr. Albert Calmette, who is seeking the vaccine of the venom of serpents; with Nicolle, who is directing at Constantinople the laboratory which is destined to bar the road westward to the cholera, the Pasteur Institute is in no danger of perishing."

In recognition of his services, and as a reward chiefly for his investigations on fermentation, the National Assembly voted to M. Pasteur a life annuity of 12,000 francs. He was raised to the rank of Grand Officer of the Legion of Honour on October 24th, 1878. In 1882 the Society of Arts awarded the Albert Medal of the Society to M. Pasteur for his researches in connection with fermentation, the preservation of wines, and the propagation of zymotic diseases in silkworms and domestic animals. As might be expected, M. Pasteur's theories found stout opponents, both in his own and foreign countries, especially that for killing the rabbits in Australia by chicken cholera germs; but the honours conferred upon him by almost general consent go to prove that his work was greatly valued, while the orders, doctorates, and honorary diplomas showed the high estimation in which he was held by almost every civilised country. It may be of interest to mention that a decree, dated July 27th, 1870, was signed by Napoleon III and M. Ollivier, raising him to the dignity of Senator, but the decree was never promulgated.

M. Pasteur's contributions to science have appeared in the *Recueil des Savants Etrangers*, the *Annales de Chimie et de Physique*, and the *Comptes Rendus*. He published, in a separate form, *Nouvel Exemple de Fermentation déterminée par des animalcules infusoires pouvant vivre sans oxygène libre* (1863); *Etudes sur le Vin ses maladies, les Causes qui les provoquent, etc.* (two editions, 1866 and 1872); *Etudes sur le Vinaigre, ses maladies, moyens de les prévenir, etc.* (1868); *Etudes sur la Maladie des Vers à Soie* (1870); *Etudes sur la Bière, ses maladies, causes qui les provoquent* (1876); *Les Microbes* (1878), (with Professor Tyndall); *Examen Critique d'un Ecrit Posthume de Claude Bernard sur la Fermentation* (1879). Several memoirs have been published on Pasteur and his work; we may mention one, written by M. Vallery-Radot, under the title *M. Pasteur, Histoire d'un Savant, par Un Ignorant* (1883), which was translated into English by Mrs. Tyndall, and published with a preface by Professor Tyndall in 1884.

Sir Joseph Lister has favoured us with the following brief observations on M. Pasteur's career: It would be impossible in the short time at my disposal to refer even cursorily to the brilliant and far-reaching discoveries of Pasteur which have so widely extended the province of biology and have revolutionised medicine and surgery. I must content myself with a few words regarding his personal characteristics. His acuteness as an investigator in seizing upon essential points and his wonderful lucidity of judgment were only equalled by the patience with which he pursued what he termed *la méthode expérimentale*; and his enthusiasm was tempered by dispassionate caution. In doing battle with the fallacious doctrine of spontaneous generation, he was a keen controversialist; but his utterances were invariably characterised by transparent truthfulness and perfect fairness towards his opponents. His rare modesty and entire freedom from affectation made intercourse with him easy and delightful. Anyone who reads the account he gave in the *Comptes Rendus* of the case of the little boy on whom he first ventured to employ antirabic injections in the human subject will see clear indication of another feature of his character, loving tenderness of heart. His splendid early work in chemistry and physics proved indeed how dearly he loved pure science for its own sake: yet it was undoubtedly the great joy of his later researches that they directly promoted the good of mankind. In Pasteur the world has lost a personality as beautiful as it was great.

Dr. G. Sims Woodhead sends the following estimate of Pasteur's scientific work: When in 1856 the Royal Society awarded the Romford medal to Louis Pasteur for his researches on the

polarising effects of tartaric and paratartaric acid few people outside the Royal Society were aware of the singular ability that marked the researches as a result of which such interesting conclusions had been arrived at. The subject was not sufficiently popular to attract general attention, but after a time, as the subject was developed along somewhat different lines, a bloodless battle was waged which shook the scientific world to its very foundations. The same series of experiments which were instituted to show how certain fungi could break up the tartarates into those which polarised light to the right and those which rotated it to the left were utilised to show that no living organisms, however low in the scale, could be developed from any kind of albuminoid material, whilst on the other hand a single organism placed in a nutrient material which contained not a trace of organic matter, but merely ammonia and crystalline salts, could grow and multiply almost indefinitely so long as any food material remained and so long as the products of these organisms did not accumulate in too large quantities. So long as dust and living organic particles were kept out of the richest organic or albuminoid fluid such fluid remained absolutely unaltered as regards the production of living protoplasm. This was the starting point from which all Pasteur's more recent work went out. Without having a sterile soil to begin with it would have been impossible to isolate and study individual organisms as he was afterwards able to do, and without such study the germ theory of fermentation, putrefaction, and disease could never have been demonstrated and applied.

The part that Pasteur played in overthrowing the remnants of the theory of abiogenesis brought his name prominently forward before all educated men. He was no longer the *savant* of the *savants*, he jumped at one bound into a very high place in the popular estimation. This estimation was confirmed when his investigations on unsound wine and its causes, on the silkworm disease, on fermentation, and on vaccination in turn occupied his attention. The wine industry, which had been flagging under the burden of certain wine diseases, the result of intercurrent fermentations, became indebted to him for a method by which such fermentations could be prevented, his process of Pasteurisation stopping all changes after the wine had been bottled. He was also able to improve the method of manufacturing vinegar, whilst his researches on the silkworm disease were not only of great scientific interest, but were of immense practical importance to the silk industry. In all of these his qualities of patience, industry, and technical skill, guided by that touch of inspiration in which consists the difference between the patient observer and the true genius enabled him to arrive at very definite conclusions both as to the cause of the evil and the method to be adopted in dealing with it. His observations on putrefaction and the organisms by which it was set up, and his experiments on the fermentation of beer and the different kinds of yeasts could be used to obtain the best results, completed this part of his work, which really constituted the foundation of all that he has since done. The mycoderma aceti, the "corpuscle" of pebrine or silkworm disease, and the yeast cell became types of which the bacillus of anthrax and the organism causally associated with other disease processes were the antitypes. If it were true that yeast cells or the pebrine "corpuscles" could under certain conditions multiply, always producing the same forms and products, beer in the one case and silkworm disease in the other, was it not probable that the contagium of specific infective diseases was of a similar character? There was evidence of the presence of a living poison or of a living organism that had the power of producing a poison; there was evidence, too, of the multiplication of this living organism, as only could the disease run such a definite course, gradually increasing in intensity, on some such supposition. He had observed that during fermentation there was a similar process of multiplication of yeast cells and a formation of considerable quantities of the product of the special form of cell when acting on media of certain kinds, the products altering with the nutrient medium. After a time the growth became interfered with by the accumulation of the products of fermentation, especially as the nutrient materials were used up, until at length the yeast cells, in place of developing young cells, died off, and the process ceased. This corresponded so accurately with the rise and fall of the specific symptoms of infective diseases, that to a man of Pasteur's keenness of intuitive perception the analogy was complete enough to suggest the line of research which has borne such abundant fruit. It is the keenness of perception and this power of applying all knowledge that raised Pasteur to the position that he occupied in the scientific world. Other men might supply facts, Pasteur used them. To him a fact was merely a stepping stone to further knowledge, or a brick in the great edifice of Nature. As Pasteur built up his work, that which he was leaving below him always served first as an outlook tower, and secondly as a foundation on which a greater superstructure might be reared. He applied the touchstone of experiment to the nebulous theories and half-proved facts of his predecessors, separated that which was lasting and sound from that which was false and specious, whose gaps were to be filled in he toiled until they were made good, and then fitted his own theories into the scheme on which he was engaged, with the result that no department of research on which he engaged did he fail to illumine, whilst many questions that he worked at were completely revolutionised by his touch.

It has been said that the time was ripe for the advent of the man, and that Pasteur was peculiarly fortunate in his selection of subjects at which to work. He, however, like his great colleague Lister, was the man for the time for where others had worked and passed on these men thought and worked and achieved. Pasteur never evolved his theories from his inner consciousness: he built them up, but when the lighthouse was completed he did not stop until the lantern was lighted.

The great work of Pasteur's life from the point of view of the surgeon and the physician was his gradual development and proof of the germ theory of disease. It is easy to say that it followed naturally on his investigations on fermentation, but then only a Pasteur could have proved either of them. Much collateral work was done, and Koch in Germany worked out much that concurred with and some things that anticipated Pasteur's discoveries, but to Pasteur must be given the honour of proving that specific infectious diseases were due to the action of specific infective organisms. Even the mode of infection was indicated, and the possibility of multiplication of disease organisms, both outside and within the human and animal body. He studied their conditions of growth and the effects of one attack of a specific disease upon subsequent attacks. He noted that these pathogenic organisms could be modified by heat and by the action of various chemical reagents, and he finally sought to modify the attack of a disease by infecting with a modified organism such a modified attack acting as a protection against the more severe forms of the same disease set up by more active organisms. Whatever may be Pasteur's claim to honour, it undoubtedly rests upon the work he has done in connection with the study of the etiology and prophylaxis of specific infective disease. One idea is the root from which his work branches in all directions. Throughout he followed one line of thought and reasoning but he never took a step forward until he was perfectly certain of the solidity of the ground on which he already rested. No labour was grudged, no time or energy spared in the filling up of the gaps of the work of each stage as he advanced. This it is that makes his work so reliable, and assures to it a permanence than can be hoped for the work of but few.

Many are willing to acknowledge the great and outstanding merit of Pasteur's earlier work who cannot be brought to appreciate the value of his later investigations. The two, however, cannot be separated; the one follows the other as naturally as daybreak follows the dawn. The investigations on immunity constitute the greatest advance on the study and treatment of disease that has been made during the present century, and the prospect of further advances on the same lines cannot yet be limited. Those who know Pasteur's work recognise the benefits conferred by his investigations, whilst even those who scoff at his experiments on the production of vaccines and the vaccination method of the treatment of such diseases as anthrax and hydrophobia are fated sooner or later to receive benefits directly or indirectly from the hands of the man whom they have reviled without either stint or reason, but whom France and the whole scientific

world were delighted to honour, and whom now they mourn most deeply.

We regret to have to record the death of Mr. Charles Palmer Phillips, the Senior Commissioner in Lunacy, on September [illegible]. Mr. Phillips, who was born in 1822, was educated at Eton and Oxford, and was called to the Bar in 1846. He was appointed Secretary to the Commissioners in Lunacy in [illegible] and became a Commissioner in 1872. During the thirty years for which he was connected with the Commission he took the deepest interest in its work, and devoted himself heart and soul to the duties which he had undertaken. He had a strong sense of their responsible nature, and brought to them not only wide knowledge and an absolute uprightness, but also a kindliness of disposition which shone through every act of his official as of his private life. Mr. Phillips died literally in harness, for it was on his return from holding an official inquiry which had caused him much anxiety that he was seized with a fatal attack of cardiac syncope.

MEDICO-LEGAL AND MEDICO-ETHICAL.

W.J.R. will do wisely not to accept the patient's statement of the case but to communicate direct with the medical man.

PROFESSIONAL SECRECY IN THE UNITED STATES.

The Legislature of Pennsylvania has passed a law which was signed by the Governor on June 11th providing protection for medical men called as witnesses against questions which would injure the good name of their patients. The law is entitled: "An Act to prevent physicians and surgeons from testifying in civil cases to communications made to them by their patients. It runs as follows: 'Section I. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in general assembly met, and it is hereby enacted by the authority of the same that no persons authorised to practise physics (*sic*) or surgery shall be allowed in any civil case to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity, which shall tend to blacken the character of the patient, without his consent.'"

ADVERTISING HANDBILL.

A correspondent sends us a handbill, of which the following is a copy. He states that it is widely distributed in the neighbourhood by three men. Our correspondent considers that such a handbill should be condemned. To this opinion we apprehend there will be no dissentient among our readers. The offence of professional advertising is aggravated in the present instance by the way in which an honourable office is paraded:

LAMBETH WALK SURGERY,
104, Lambeth Walk, S.E.,
Resident Physician, Dr. E. J. Smith (late House-Surgeon to Charing Cross Hospital).
Dr. E. J. Smith (late House-Surgeon to Charing Cross Hospital) resides on the premises and personally attends to all cases.
Table of Fees:
Advice and Medicine ... ... 6d.
Midwifery. Vaccination.
Patients attended in their own homes.
Hours of Consultation
Mornings ... ... 9 till 12 | Sundays { Mornings ... 11 till 12
Evenings ... ... 6 till 10 | Sundays { Evenings ... 7 till 9

CHANGE OF ADDRESS.

A Member.—When impracticable to notify personally the change of residence, the most unexceptionable mode is to transmit an autograph note or a well-executed *facsimile* thereof on notepaper, to the bulk of the patients of the newly located practitioner; or to enclose an ordinary address card, with "Change of Address" inserted at the top, the old address in the lower right corner being defaced by a black line, and the new one engraved in the left-hand corner, or *vice versa*.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A Surgeon-Major serving in Bengal wishes for an exchange which would give him about three years at home. Address, stating terms, to S. L. H., care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

The following appointments have been made at the Admiralty: John Grant, Surgeon, to the *Cambridge*, September 26th; Richard L. Price, Surgeon, to the [illegible], additional, September [illegible].

THE ARMY MEDICAL STAFF.

Surgeon-General Hamford Hugh Massey, M.D., C.B., died at Bournemouth on September 27th, aged 75 years. He entered the service as Assistant-Surgeon, November [illegible]; became Surgeon, March 2nd, [illegible]; Surgeon-Major, November [illegible]; Deputy Surgeon-General, March [illegible]; and Surgeon-General, April [illegible]. He was granted retired pay, April [illegible]. We learn from *Hart's Army List* that he served as Assistant Surgeon of the 31st Regiment towards the close of the Sutlej campaign in 1846; in the Eastern campaign of 1854-56 as Surgeon of the 17th Lancers, including the affairs of Bulganak and M'Kenzie's Farm, battles of Alma, Balaclava, Inkermann, and Tchernaya, and siege and fall of Sebastopol (medal with four clasps, 5th class of the Medjidie, and Turkish medal), being recommended for promotion to the rank of Deputy Inspector-General of Hospitals for service in the field by General Sir William Codrington; as Surgeon of the 2nd Dragoon Guards in the Indian campaign of 1858-59, including the siege and capture of Lucknow, action of Koorsee, and Trans-Gogra affairs at Bungaon (medal with clasp); and acted as Principal Medical Officer with Brigadier Barker's Column in the campaign of Oude during a portion of 1858-59. He was nominated a Companion of the Bath in 1869, and was granted a reward for distinguished service in 1889.

INDIAN MEDICAL SERVICE.

Brigade-Surgeon-Lieutenant-Colonel F. A. Smyth, Bengal Establishment, has retired from the service from October 30th. He was appointed Assistant Surgeon October 1st, 1869, and served with the Burmese expedition in 1886-87, receiving the Frontier medal with two clasps.

Brigade-Surgeon-Lieutenant-Colonel H. B. Purves, Bengal Establishment, has also retired from December 4th next. His first appointment dates from October 2nd, [illegible].

The retirement from the service is also announced of Surgeon-Lieutenant-Colonel E. B. Ruttledge, Bengal Establishment, from October 1st. His commission as Assistant Surgeon dates from October 1st, [illegible].

ARMY MEDICAL RESERVE.

Surgeon-Captain R. C. M. Pooley, having resigned his volunteer appointment, ceases to be an officer of the Army Medical Reserve, October 2nd.

Surgeon-Lieutenant Henry D. Brook is promoted to be Surgeon-Captain, October 2nd.

Surgeon-Lieutenant Hamilton Chambers Reid, M.B., Glasgow Companies Volunteer Medical Staff Corps, is appointed Surgeon-Lieutenant, October 2nd.

THE VOLUNTEERS.

The services of Surgeon-Lieutenant C. Malcolm, 2nd West Riding of Yorkshire (Leeds) Engineers, Fortress and Railway Forces, Royal Engineers, are dispensed with, October 2nd.

Surgeon-Lieutenant J. W. Talent, M.B., 3rd Volunteer Battalion the Manchester Regiment, has resigned his commission, October 2nd.

THE SURREY VOLUNTEER BRIGADE.

We are glad to be able to state that in the list of brigades without bearer companies furnished by a correspondent, Surrey was wrongly included; it has had a brigade bearer company for nearly a year.

MAJOR-GENERAL LORD METHUEN ON BEARER COMPANY RESERVISTS.

Lord Methuen's report on the first mobilisation of a portion of the 1st Army Corps contains the following on bearer company reservists: "As to these the general physique is reported to be not equal to the men's work on service; they behaved well, but their knowledge of first dressing and first aid, and of carriage of wounded, was very poor, the men apparently having forgotten their earlier instruction." Are these then the men on whom the Medical Department will have in part to rely for attending to the well being of the sick and wounded? Lord Methuen's report will surely tend to some action on the part of the War Office.

INDIAN RELIEFS, ARMY MEDICAL STAFF.

Some 44 officers of executive rank return to England this trooping season, and will have to be relieved by officers now serving at home. Of the four Army Corps the Punjab Command sends home 12 officers, Bengal 11, Madras 13, and Bombay 8.

HEALTH OF THE CHITRAL FORCE.

The health of the Chitral Field Force on August 20th was nominally 13.13 per cent., but two regiments (the Bedfordshire and East Lancashire) were then *en route* to India. The total number on the sick list at that date was [illegible], of whom [illegible] were British.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The winter work of the school commenced on Monday, September [illegible], at the headquarters of the [illegible], when two large companies paraded for instruction under Surgeon-Major H. F. Stokes, Senior Medical Officer, Instructor. The present classes will conclude with the official inspection on December 9th. It is notified for general information that no more men can be taken in either class after October [illegible]. Among the officers who have recently joined for a course of instruction are Surgeon-Major T. F. Fleetwood, F.R.C.S., Victorian Military Forces, [illegible], Australia, and Surgeon-Captain J. H. Cox, Cape Town Volunteer Medical Staff Corps.

INDIA AND THE COLONIES.

INDIA.

The Indian Medical Service.—The *East Coast News* (Madras Presidency), commenting on Mr. Ernest Hart's address in the Public Medicine section of the recent meeting of the British Medical Association, deals clearly and efficiently with the subject of reconstruction. The article proceeds to describe the present arrangements as a state of affairs that "would not be endured in England," and emphasises the point for which Mr. Hart contends—namely, that "The Civil Medical Department must be separated *in toto* from the Military if any lasting benefit is to be derived." It also urges "the separation of the medical from the sanitary work." The article sums up its views by the following striking language: "All these matters put together show that there is something wrong in the present system of medical aid in India; and we must emphatically endorse the opinion of Mr. Ernest Hart that the whole system of the Indian Medical Service must be remodelled. The wonder is that the system has continued so long."

Punjab Lunatic Asylums.—There are two asylums in the province of the Punjab, one at Lahore, containing [illegible] inmates, and one at Delhi, containing 105. The number of lunatics under confinement bears a very small proportion to the population of the province, which is about 21,000,000. Nor does there seem to be any tendency to increase. Female lunatics constitute less than one-fourth of the inmates. The report for the year 1894, by Surgeon-Colonel D. O'C. Raye, M.D., indicates that about 40 per cent. of the admissions were discharged cured, and that the death-rates of the two asylums were 9·16 and 17·12 per cent. of average strength respectively. Pneumonia, tubercle, and dysentery were the chief causes of death. Figures purporting to show the causes of lunacy indicate that charas, ganja, and bhang (Indian hemp) are credited with about one half of cases in which a cause is assigned, but the sources of information are very doubtful and the value of all such statements in India very questionable. Industrial occupations are the chief instrument of treatment, 183, or more than half of the inmates being employed. The work done materially reduces the cost of maintenance, which amounts to about 85 rupees per head per annum, or, at the present rate of exchange, less than £8 sterling.

Vaccination in Assam is not in a satisfactory plight. The successful operations of 1894-95, as reported by Surgeon-Colonel A. Stephen, M.B., bore a rate of 28 per 1,000 of population, which is much below the birth-rate. The ratio of successful results was only 87 per cent. in primary vaccination and 61 in revaccination. Each vaccinator performed only [illegible] operations, the lymph supplied by the animal lymph depot was unsatisfactory. Small-pox continues rife in the province and no impression appears to have been as yet made on its prevalence by vaccination. Inoculation is still practised in some places and the results of the year under report compare unfavourably all round with those of recently preceding years. It is well to realise these shortcomings, and it is to be hoped that the administration and the Sanitary Commissioner having done well now set vigorously to work in the direction of more numerous and effective operations.

Dispensaries in the Hyderabad Assigned Districts.—Surgeon-Lieutenant-Colonel C. C. Little's report for the year 1894 indicates that 8 hospitals and 38 dispensaries were in operation during the year, in which were treated 4,754 indoor and 344,778 outdoor patients. The diseases treated were mostly malarial fevers, digestive disorders, eye and skin diseases, worms, chest complaints, and ulcers. The attendance is increasing, and the number of surgical operations is also growing larger. Some of the hospital assistants in charge of dispensaries are commended for diligence and skill in this direction. A trial is being made in these provinces of a system of levying small fees for advice and medicine from persons who are able to pay for treatment. The plan is said to promise well. Rs 1,767 were received during the year on this account. The financial condition of these institutions is satisfactory, and it is evident that they are doing good work. A hospital for women and children, under a lady doctor, was opened in connection with the Lady Dufferin Fund in January, 1895.

WESTERN AUSTRALIA.

[By an accidental error in our issue of September 21st a paragraph giving the result of the inquiry recently made into the affairs of the Christchurch Hospital, New Zealand was placed under the heading of the Cue Hospital, Western Australia.]

The Cue Hospital.—Judging from the reports of public meetings and from letters which have been forwarded to us there is considerable excitement at Cue about the dismissal of Dr. Monteith, the late resident medical officer, and the appointment of Dr. Ramsay in his stead. The information at our disposal, however, is too indefinite to enable us to speak decidedly on the subject. Not only are personal matters involved, but also questions as to the jurisdiction of the resident magistrate, the relation of the medical officer to the central Government, the terms of his appointment, and the scope of the Hospital Act, 1894. On these matters our information is too incomplete for us to form a judgment, although *prima facie* Dr. Monteith appears to have good cause for complaint.

NEW SOUTH WALES.

The Lepers at Little Bay.—On December 31st, 1894, there were 40 lepers in the lazaret at Little Bay, near Sydney, including 5 new patients admitted during the year; two of these were Australians, one a German, another an Indian, and the last a native of New Caledonia; 1 of the white lepers died during the year. The total number of patients admitted since 1882 is 85, 6 of whom were females and natives of New South Wales. Their nationality was as follows: Natives of New South Wales, 15, of whom 4 have died; Queensland, 1; China, 29, of whom 10 died; India, 2; West Indies, 1, who was discharged in 1885; Java, 1; England, 1; Fiji, 1; Solomon Islands, 1; New Zealand, 1; New Caledonia, 1; and Germany, 1.

MEDICAL NEWS.

Dr. Jamieson of Brodick has been appointed Sheriff Substitute of Banffshire.

Mr. Wyndham Randall, Public Vaccinator of the Central District of Bridgend and Cowbridge Union, has been awarded the grant for successful vaccination for the fourth time in succession.

The winter session of Toynbee Hall opened on Saturday, September 28th, with the usual *conversazione*. During the course of this session, Mr. Tait, Assoc.R.C.S., F.C.S., and Mr. Chalmers Mitchell, M.A., F.Z.Sc., will give lectures on chemistry and biology respectively; and popular lectures in science will be given by Professor Michael Foster, Professor Horsley, Mr. Ernest Hart, Professor Gotch, the Master of Downing College, Mr. Preece, Professor Armstrong, and Professor Silvanus Thompson.

A Quarantine Brutality.—Under this title the *Medical Record* of New York tells an almost incredible story of the fate of an unhappy sufferer from small-pox. He was expelled from Arkansas and refused admittance into Mississipi. "As he could not well remain in or on the Mississipi River until the disease ran its couse, he attempted to evade the quarantine and land on the river bank in the latter State, but was shot and killed by one of the quarantine officers." Even a British antivaccinator might prefer compulsory vaccination to the alternative of death by drowning or shooting.

Sir Henry Roscoe, in addressing the students at the presentation of the prizes at the Morley Memorial College, Waterloo Road, on October 1st, referred to the death of M. Pasteur, and said all the world of science mourned the loss of that great man. Pasteur was a great man because he did great things, because he lived for others, because he spent his time in seeking to improve the condition of mankind. All scientific men and all who were interested in the progress of humanity grieved at his loss.

The Artificial Larynx at the Antipodes.—A case is reported from Melbourne in which an artificial larynx, devised by Professor Anderson Stuart, of the University of Sydney, has been applied successfully. In 1874 Professor Billroth applied an instrument invented by Dr. Gussenbauer to a patient whose larynx had been extirpated with considerable success, and since then various modifications have been repeatedly made use of. Of these Treves (*Operative Surgery*) mentions Irvine's modification of Gussenbauer's instrument as being most generally satisfactory, but doubtless adaptation to the individual case will usually be necessary; and we congratulate Professor Stuart on his success.

Entrance Scholarships.—At University College, London, the Medical Entrance Exhibitions have been awarded as follows: To Mr. Thomas C. Savage an exhibition of 131 guineas, to Mr. H. W. Reynolds and to Mr. William Reith Scroggie an exhibition to each of 55 guineas.—At Guy's Hospital the Entrance Scholarship in Arts, of the value of £100, was awarded to Mr. G. Lewin, and the second Scholarship, of the value of £50, to Mr. C. G. Gibson. Honorary certificates were awarded to Mr. M. Feldman, Mr. F. S. S. George, Mr. H. F. Hatfield, and Mr. H. D. Kempthorne. The Entrance Scholarship in Science, of the value of £150, was gained by Mr. P. W. L. Camps, and the second, of the value of £60, by Mr. S. Hodgson. Certificates were awarded to Mr. C. A. Miller and Mr. D. Forsyth. The Entrance Scholarship in Arts for dental students, of the value of £30, was awarded to Mr. H. A. G. Butler.

MEDICAL VACANCIES.

The following vacancies are announced:

BUCKLOW DISTRICT COUNCIL.—Medical Officer of Health. Salary, £130 per annum, inclusive of travelling expenses and postages. Applications, with three recent testimonials, endorsed "Medical Officer of Health," to George Leigh, Clerk to the Rural District Council, Council Office, Sexton Road, Knutsford, by October 9th.

CARNARVON JOINT SANITARY DISTRICT.—Medical Officer of Health, must be between 25 and 40 years of age, doubly qualified. Must

devote his whole time to the duties, and have a knowledge of the Welsh language. Appointment for five years. Salary, £294 per annum, inclusive of all expenses, except those incurred for such books, stationery, and apparatus required in the performance of the duties. Applications, endorsed "Application for Office of M O Health," to J. H. Thomas, Clerk, to the Joint Committee, 14, Market Street, Carnarvon, by October 16th.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House-Surgeon and Dispenser. Salary, £50 per annum, with board, apartments, and laundress. Applications to the Secretary by October 17th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—Assistant Physician to see out-patients. Must be Fellow or Member of the Royal College of Physicians of London. Applications to Thomas Hayes, Secretary, by October 28th.

EAST SUSSEX COUNTY COUNCIL.—Consulting Medical Officer. Appointment for one year. Honorarium, 100 guineas and travelling expenses. Applications to F. Ferrifield, Clerk to the County Council, County Hall, Lewes, by October 14th.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon, doubly qualified. Salary, £80 per annum, with board and lodging in the hospital. Applications to the Committee by October 18th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 146, Buchanan Street, Glasgow, by November 8th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications and testimonials to W. Theobald, Secretary, by October 10th.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician, must be qualified and registered under the Medical Act. Applications to G. Q. Roberts, House-Governor, by October 19th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Medical Officer for the Institution at Bowdon, Cheshire. Salary, £80 per annum, with board, apartments, and washing. Applications to C. W. Hunt, Secretary, by October 14th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—Assistant Surgeon. Must be Fellow of the Royal College of Surgeons of England. Applications and testimonials to Charles H. Byers, Secretary, by October 7th.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Salary, £30 per annum, with board, attendance, and washing. Post tenable for six months, with prospect of re-election as Senior. Salary, £40 per annum. Applications to the Honorary Secretary or Secretary by October 11th.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary, £150 per annum, with practice, free house, and garden. Applications to Robert Sutherland, Inspector of Poor, Durness, by October 19th.

PARISH OF ST. LEONARD SHOREDITCH.—Male Second Assistant Medical Officer for the Infirmary, Hoxton Street, N.—Salary, £60 per annum, with rations, furnished apartments, and washing in the infirmary. Must devote his whole time to the duties of the office. Applications to the Medical Officer, 204, Hoxton Street, London, N.

PARISH OF ST. MARY, Islington.—Resident Assistant Medical Officer for the Workhouse and Infirmary. Salary, £80 per annum, with rations, apartments, and washing, or an allowance in lieu of same. Applications to Edwin Davey, Clerk, by October 8th.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke Road, Brighton.—House Surgeon; doubly qualified. Salary, £80 per annum, with board, lodging, and washing; no stimulants. Applications to the Chairman of the Medical Committee by October 5th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Resident Medical Officer (House-Physician); doubly qualified. Appointment for six months but eligible for re-election. Board, residence, and washing provided. No salary. Applications to the Secretary by October 19th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Appointment for six months, when re-election is required. Salary at the rate of £50 per annum, with furnished apartments and board. Applications to the Secretary by October 12th.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary, 60 guineas per annum, with board (exclusive of wine and beer) and lodging. House-Physician, unmarried. Appointment for one year. Board (exclusive of wine and beer), lodging, and an honorarium of 25 guineas. Applications to Dr. Sinclair White, Secretary to the Honorary Medical Staff, by October 16th.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House-Surgeon. Salary, £—, with board and residence. Applications and testimonials to J. Walter Wilson, Honorary Secretary, by October 12th.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House-Surgeon. Appointment for six months, but renewable for a further period of six months. Board and residence and an honorarium of £30. Applications to J. Walter Wilson, Honorary Secretary, by October 12th.

SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer, doubly qualified, unmarried, and under 30 years of age. Salary not exceeding £50 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by October 22nd.

SWANSEA HOSPITAL.—House-Physician. Salary, £60 per annum, with board, lodging, and laundress. Appointment for one year. Applications to Jno. W. Morris, Secretary, 9, Castle Street, Swansea, by October 9th.

WIRRAL CHILDREN'S HOSPITAL, Woodchurch Road, Birkenhead.—Resident House Surgeon (lady or gentleman). Salary, £50 per annum, with board, lodging on the premises, and washing. Applications to P. W. Atkin, Honorary Secretary, 25, Lord Street, Liverpool, by October 12th.

MEDICAL APPOINTMENTS.

AITKEN, Chas. Crawford, M.B., C.M Edin., appointed Junior House-Surgeon, Cumberland Infirmary, Carlisle.

BARR, John, M.B., C.M Glasg., reappointed Medical Officer of Health to the Rishton Town Council.

BEALE, P. T. B., F.R.C.S.Eng., appointed Demonstrator of Histology and reappointed Lecturer on Elementary Biology in King's College, London.

BIERNACKI, John, M.B., C.M.Glasg., L.R.C.P.Ed., appointed Medical Superintendent of the West Ham Fever Hospital.

BOULTON, A. E., M.R.C.S Eng., L.S.A., appointed Medical Officer of Health to the Horncastle Rural District Council.

COLBY, J. G. E., M.A Oxon, M.B., B.Ch., appointed Medical Officer of Health for the Malton Rural Sanitary District and for the Morton Rural Sanitary District.

COLLINS, A. B., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Yapton District of the Westhampnett Union.

COOK, Mr., appointed Assistant Medical Officer to the Poorhouse of the Greenock Parish Council.

FYFFE, W. Kington, M.B., M.R.C.P., appointed Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park.

GIDLEY, G. G., L.R.C.P.Lond., M.R.C.S., appointed District Medical Officer to the Tiverton Union.

GORDON-SMITH, J., L.R.C.P. and L.R.C.S.Edin., appointed Assistant Colonial Surgeon, Gold Coast.

HOLTON, F. W. P., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Tenth District of the West Ham Union.

INNES, John C., L.R.C.S.Edin., reappointed Medical Officer for the Matlock Bath and Cromford Districts of the Bakewell Union.

JOHNSTON, Mr. J. W., appointed Medical Officer for the Workhouse and First District of the Fordingbridge Union, *vice* G. E. R. Paine, M.R.C.S.Eng., resigned.

KENDALL, Bernard C., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Wendron District of the Helston Union, *vice* C. F. Seville, M.B Lond., resigned.

LAIRD, Dr. F., appointed Medical Officer for the Raventhorpe District of the Dewsbury Union.

LAWSON, T. C., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Stogursey District of the Williton Union.

LEIGH, D. Albert, appointed Medical Officer for the Malpas District of the Whitchurch Union, Salop.

MACDONALD, James, M.A Edin., M.B., appointed Medical Officer of Health to the Carlisle Rural District Council.

MCNAUGHT, James, M.D., appointed Medical Officer of Health to the Kawtenstall Town Council.

MONK, H. G. H., M.R.C.S., D.P.H.Eng., appointed Medical Officer of Health and Public Analyst to the Leicester Town Council, *vice* J. Priestley, B.A.Lond., M.D.Edin., resigned.

RICHARDS, Mr. W. H., appointed District Medical Officer to the Cardiff Union, *vice* Mr. J. Llewellyn, resigned.

ROBERTSON, J. A., M.D.Glasg., appointed Medical Officer of Health for Peterborough, *vice* W. E. Paley, M.B.Durh., F.R.C.S.Eng., deceased.

ROMER, Mr. Frank, appointed Medical Officer for the No. 3 District of the Malmesbury Union, *vice* A. E. Clarke, L.R.C.P.I., M.R.C.S.Eng., resigned.

THOMAS, Dr. J. T., appointed Medical Officer of Health and Port Medical Officer at Lowestoft.

TYLECOTE, T. H. L., appointed House-Surgeon to the Lancaster Infirmary.

WALKER, Dr. A., appointed Medical Officer of Health to the Westslade Urban District Council.

WESTON, Dr. G. H., appointed Medical Officer for the No. 3 District of the South Stoneham Union.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: Clinical Examination of the Eye. London Throat Hospital, Great Portland street, 5 P.M. Mr. W. R. H. Stewart: Examination of the Ear.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: Acute Mania.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Quarry Silcock: Choroidal Affections, with Illustrative Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Beevor.

HUNTERIAN SOCIETY, 8.30 P.M.—Address by the President, Mr. Charters J. Symonds. Mr. F. Rowland Humphreys: The Infectious Nature of Rheumatism.

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 5 P.M.—Cases will be shown Dr. Leonard Roper and Mr. Charters Symonds. Pathological specimens by Dr. Felix Semon and Dr Scanes Spicer.

WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Mr. S. Paget: Surgical cases (Post-Graduate Course).

SOUTH-WEST LONDON MEDICAL SOCIETY, Workhouse Infirmary, St. John's Hill, New Wandsworth, 8 P.M. Dr. J. B Neal will show several cases of interest from the infirmary.

THURSDAY.

LONDON POST-GRADUATE COURSE, Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Gowers: Clinical Lecture. Hospital for Sick Children, Great Ormond Street, 3 P.M. The Medical Registrar: Pathological Demonstration. Central London Sick Asylum, Cleveland Street, 5.30 P.M. Mr. John Hopkins: Cases in the Wards.

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Specimens by Dr. Collins, of Cardiff. Dr R. H. Hodgson: A Multilocular Ovarian Tumour undergoing Fatty Degeneration. Mr. Bowreman Jessett: A New Method of performing Abdominal Hysterectomy with five successful cases.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 3 to 5 P.M.—Professor Crookshank: Lecture: the Microscope and Methods of Cultivation. Practical Work; Examination of Cultivations.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Introductory address by the President. Papers.—Mr. Arbuthnot Lane: Three cases of Luxation of the Temporo-Maxillary Articulation in Children. Sir Dyce Duckworth: A case of Sudden Death due to Cardiac Syphiloma. Mr Barker. Traumatic Derangement of the Knee-Joint due apparently to Fracture of the Spine of the Tibia; Exploratory Arthrotomy. Dr. Radcliffe Crocker: Impetigo Contagiosa Gyrata.

SATURDAY.

LONDON POST-GRADUATE COURSE Bethlem Royal Hospital, 11 A.M.—Dr. Hyslop: Hysterical and Delirious Mania.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

MICHAEL.—On October 1st, at 18, Harold Terrace, Dover, the wife of Surgeon-Major H. J. Michael, A.M.S., of a daughter.

SMELT.—September 29th, at 371, Holloway Road, N., the wife of C. A. Casterton Smelt, M.B., C.M., of a son.

WHITAKER.—September 28th, at Cove House, Sandycove, co. Dublin, the wife of J. Minchin Whitaker, L.R.C.S.&P.Ed., of a son.

MARRIAGES

BALLANCE—MAUNSELL.—On September 26th, at All Saints Church, Raheny, co. Dublin, by the Rev. Alexander Thomas, M.A., Rector of Nenagh, brother-in-law of the bride, assisted by the Rev. F. Carlisle Hayes, M.A., Rector of Raheny, and the Rev. W. Smale, M.A., Vicar of St. Philip's, Kensington, Herbert Stanley Ballance, M.D., B.S.Lond., of Weston-super-Mare, third son of the late Charles Ballance, of Clapton, Middlesex, and of Mrs. Ballance, of 58, Fellows Road, London, N.W., to Kathleen Isabella, daughter of John Maunsell, Esq., J.P., of Raheny, co. Dublin.

FIELD—HOWARD.—On September 28th, at St. John's the Divine, Kennington Park, by the Rev. S. R. Lavies, Frederick Arthur Field, M.R.C.S., L.R.C.P.Lond., of Friern Lodge, Lordship Lane, S.E., to Emma, daughter of the late Edward Howard, of York, and granddaughter of the late Captain Clark, of Whitby.

FINDLAY—PALSER.—At Bombay, on September 20th, Harry Findlay, M.B., etc., Rangoon, to Mary Lilla, daughter of the late J. B. Palser, Fort Edward, U.S.A.

GIBSON—LUPTON.—On September 26th, at Gosforth Parish Church, by the Rev. W. Maddison, M.A., Charles Gibson, M.D., Harrogate, to Ann Frances, younger daughter of Banister Lupton, of Beecheroft, Gosforth, Northumberland.

WEBB—CLARE.—On September 25th, at the Parish Church, Cheadle, Cheshire, by the Rev. F. A. Macdona, M.A., Rector, assisted by the Rev. S. Gaudan, of Coal Island, co. Tyrone, Frank Webb, L.R.C.P., M.R.C.S., Newcastle, Staffordshire, son of James Webb, Brooklands, Cheadle, to Annie Louisa, second daughter of the late Lodlie Clark and Mrs. Clark, Park House, Cheadle, Cheshire.

WILKS—KITTO.—On October 3rd, at St. George's, Bloomsbury, by the Rev. J. W. Goodall, M.A., Vicar of Tickhill, Rotherham, brother-in-law of the bridegroom, assisted by the Rev. F. R. Bevan, M.A., Curate of the Parish, Joseph Henry Wilks, M.A., M.B., B.C., eldest son of Edward John Wilks, of Rutland Park, Sheffield, to Amy Kate Margaret, second daughter of the late Richard Luke Middleton Kitto, of Preston Lodge, Prestonpans, and formerly of Fryerstown, Victoria, Australia.

WORLEY—LEAF.—On October 2nd, at St. Thomas's Church, Pendleton, by the Rev. Canon Nunn, M.A. uncle of the bride), assisted by the Vicar, the Rev. J. E. Gull, M.A., and the Rev. G. Wharehouse, B.A., Philip Worley, M.R.C.S., L.R.C.P., of Thornhill, Pendleton, son of Philip Worley, Her Majesty's Inspector of Schools, to Violet Elise, second daughter of the late Alfred Leaf, Esq., Solicitor, Leaf Square, Pendleton.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

PATERFAMILIAS asks for information as to the climate of Tunbridge or Tunbridge Wells, with special reference to its suitability in the case of a boy with bronchitic troubles, tendency to take cold, etc.

H. H. wishes to know whether patients unable to pay, or only able to pay a very little, are taken in at the Holloway Sanatorium, what are the cheapest terms there, and whether there is a similar institution where non-paying mental cases are taken in.

**** Dr. S. R. Philipps, of the Holloway Sanatorium, informs us that the committee do, under exceptional circumstances, take in patients gratuitously, there being at present sixteen such on the books. The ordinary rate is 29s. per week, which is reduced in deserving cases to 21s. per week. Bethlem Hospital receives a large number of free cases. It is endowed, whereas the Holloway Sanatorium is without endowment, and has to be self-supporting.

SURGEON-MAJOR writes: I should be glad if any of your readers can suggest an apparatus for keeping in position the partially dislocated metacarpal bone of the thumb on the trapezium. The bone slips backwards and forwards in the trapezium with the most annoying freedom, being reduced and displaced again to the extent of about ¼ inch. Various kinds of splints, pads, strapping, and plaster-of-paris have been tried without success. Curiously enough this is the second case I have had of the sort lately. In each the original displacement was very slight, produced by no very great force, easily reduced but difficult to retain in position.

"GOLF ELBOW."

ENQUIRER would be glad to know what is meant by "golf elbow," and what is the treatment most approved of?

WARTS ON THE HEAD.

G. M. writes: Are warty growths on the head common? I have a case where a crop appeared in a few days. They are of all sizes. What is the treatment other than glacial acetic acid as a local application and sulphate of magnesia internally?

SHIP'S SURGEON.

C. M. B. asks where he can get complete and reliable information of the duties and emoluments of a ship surgeon, and how to set about obtaining such a post. Some well-known agents informed him that if he would give his services as surgeon to a vessel for the outgoing journey to Australia, and also pay (not be paid) £40, they would provide him with a first-class saloon passage. The duration of the appointment, the vessel, and the company, etc., are immaterial, but a certain amount of salary, however small, is essential.

MECHANICAL ROAD CARRIAGES.

S. E. desires to obtain information as to mechanical road carriages such as were tried recently between Bordeaux and Paris.

**** We believe that such carriages cannot, practically, be used in this country until the law has been amended. It is hoped that the Government will pass an amending Bill next session.

MANUAL OR ORAL INSTRUCTION FOR THE DEAF AND DUMB.

SURDUS asks: What is the consensus of professional opinion on the question of the superiority of the "manual" method over the "oral," or vice versâ, in the instruction of deaf and dumb children? Is either system better than the other, or would it be best (for a school board, for instance) to adopt a system which shall be a combination of the two?

Purchase of Share in Practice.

CLAREMONT asks whether the purchase of a share in a practice is usually based on gross receipts or on net profits? Is it also usual to purchase a further share (that is, to a moiety) on a basis of gross receipts or net profits, or is this arranged by mentioning a lump sum in the deed of partnership on payment of which the junior partner is admitted to a moiety?

⁂ The sale and purchase of practice is always based upon gross receipts. The succession to a further share should be secured, and as the point requires a careful adjustment, the best course would be to consult an expert.

A Professional Government.

X. writes: "P. M. O." addressing you in the BRITISH MEDICAL JOURNAL of March 9th, 1895, p. 571, asks for a requotation from the Act of Parliament empowering medical officers and barristers in Indian Government Service to take fees. Here are the passages from the Act with introductory and explanatory remarks. The celebrated Regulation Act of 1773, 13 Geo. III, c. 63, after forbidding the acceptance by any civil or military officer of "any present, gift, donation, gratuity, or reward, pecuniary or otherwise," from any of the Indian princes or any other natives of Asia, enacted as a proviso s. 25: "Provided always and be it further enacted by the authority aforesaid that nothing herein contained shall extend or be construed to extend to prohibit or prevent any person or persons who shall carry on or exercise the profession of a counsellor, a physician, or a surgeon, or being a chaplain from accepting, taking, or receiving any fees, gratuities, or rewards in the way of their profession."

About 20 years after, another Act was passed to continue the Government of India by the East India Company, namely 33 Geo. III, c. 52. After very stringent provisions against the acceptance of gratuities, which is made a misdemeanour and after causing the gift to be forfeited to the Crown unless returned to the giver. The above proviso is repeated with slight alteration to make the meaning clearer. S. 64 declares: "Provided always and be it enacted that nothing herein contained shall extend *or be construed to* extend to prohibit or prevent any person exercising the profession of counsellor-at-law, physician or surgeon, or any chaplain from accepting, taking, or receiving fees, gratuities or rewards (*bonâ fide*) in the way of his profession only." This is still the law in India. The italics are mine.

ANSWERS.

HALIFAX.—We see no objection to the extracts forwarded.

F. S. S. L.—The suggestion is absurd, and it is idle to discuss the supposed reasons for a non-existent phenomenon.

GAMMA might consult the information as to clinical hospitals given in the Educational Number of the BRITISH MEDICAL JOURNAL (September 7th, pp. 601-607).

West African Medical Service.

I. P. M. will obtain every information regarding the Army Medical Service on the West African coast by applying to the Director-General, Army Medical Department, 18, Victoria Street, Westminster, S.W.

Flea Bites.

D. writes to recommend "Clinic" to prescribe for his patient the ordinary soap liniment of the *British Pharmacopœia*. This soap liniment, applied here and there to the surface of the skin, acts both as a preventive and a destroyer of fleas. The odour of the liniment is only perceptible to bystanders for a few minutes only after the application, so that the patient is not obnoxious to his friends. On the other hand, the good effect, as regards the fleas, lasts for six or eight hours. The liniment requires to be simply smeared on the skin; it is not necessary that it should be rubbed in.

Agricultural Labourers' Clubs.

ALPHA.—If the Society in question is desirous of changing its medical officer, and with that object gives notice of a fresh election, our correspondent would be quite justified, especially under the circumstances he describes, in becoming a candidate for the appointment, but it would be decidedly unethical on his part personally to agitate for any change or to encourage any section of the Society to do so on his behalf, because his residence happens to be more conveniently situated to meet the wants of a certain number of the members. We are disposed to think that agricultural labourers could at least pay twopence a week a member, but are aware that as a matter of fact they pay less than this in most parts of the country.

NOTES, LETTERS, Etc.

Vaccination and Whooping-Cough.

MR. THOMAS KIRWAN, Public Vaccinator, (No. 1 South City District, Dublin), writes: In the EPITOME of the BRITISH MEDICAL JOURNAL of September 28th, par. 258, I see a note by G. Cavillieri (*Gazz. d. Osped.*, June 1st), stating that he had tried the effect of vaccination in cases of pertussis, and found that it cut short the disease in from three to three and a-half weeks. Some time ago, within the last five years, I think—I cannot be certain as I have not the JOURNAL to refer to—I wrote stating that some years previously I had seen in some American medical paper an account of the beneficial effects of vaccination in cutting short the course of whooping-cough in children suffering from that disease who were unvaccinated, and that I had tried it and found that such was the fact, and that my practice was to vaccinate all such children coming under my observation, with the result that I found the disease was cut short, and that the whooping-cough was cured in a very short time, and without any ill-effect on the child.

In the next issue of the JOURNAL, or very shortly afterwards, I was considerably taken to task by a contributor to your paper, who held me up to ridicule. I have nevertheless continued to vaccinate in all cases of whooping-cough where the subject was unvaccinated with the happiest results; in no case that I can call to mind has the whooping-cough not been cured in three weeks after vaccination. Vaccination does not appear to have any effect on the disease if the patient has already been vaccinated before the whooping-cough appeared, but otherwise I am satisfied that it is of decided use in cutting short the disease.

The Contagion of Scarlet Fever.

MR. W. KENNEDY (Waterford) writes: In a letter dated September 2nd Dr. E. S. Gilbert stated that "for the last twenty years he has acted on the conviction that in a desquamating skin after scarlet fever there is no danger to others," but that "during the isolation period (one month) he has the skin smeared daily with carbolic oil," and finally washed with "three good scrubbings of hot soap and water." Now if he acted consistently he would discard these precautions as waste of energy, but his twenty years' conviction would shortly after receive a shock from which it would never recover, and he would realise that there is a vast difference between those desquamations which have, and those which have not, been systematically disinfected before their separation from the body of the patient.

Nervous Pyrexia in a Child.

MR. FRANCIS W. BAILEY, M.R.C.S.Eng., L.R.C.P.Lond. (Liverpool), writes: In the spring of this year I was summoned to see a girl, aged 11, who hitherto had enjoyed good health; she had had scarlet fever and measles some years previously. On the afternoon of the day before I was called in the child had been vomiting greenish matter, and was unable to take her food. The mother put the patient to bed and kept her quiet. During the night the child was very feverish and delirious. The mother mentioned that the previous afternoon the child had come running into the house crying that one of the neighbours was threatening her with a knife. In her delirium she was calling out that a woman was running after her with a knife, and that blood was streaming down her back.

On first seeing the child I suspected one of the specific fevers, but found no evidence in favour of this supposition. The lungs and heart were normal, and the only evidences of any disease I could find were a temperature of 103°, some very slight congestion of the tonsils, and precordial pain, but no lesion to account for it. I prescribed salines, diaphoretics, a dose of castor oil, and light diet.

On the following day (Friday) the patient was in much the same condition; I therefore gave 5 grains of quinine, but it had no appreciable effect, for the following day the temperature was still above normal, though it had fallen to 101.2°. On this day (Saturday), as the child was getting very low and rapidly losing strength, I ordered brandy. The next day (Sunday) the condition had slightly improved, and the temperature was 100°. On the Monday I found the patient had evidently taken a change for the better; the temperature was 99.8°, and the condition was more favourable.

About a week after the child first commenced to be ill I paid a visit to my patient, and found her up and going about in the usual way. I saw the child several times after this, but she was apparently restored to perfect health.

In this case I think the pyrexia was undoubtedly due to nervous origin, through the fright the child had had. Of course there must be some reserve in putting this cause down for pyrexia in children, for in them we are always confronted with some diagnostic difficulty when we find in their cases high temperatures, for very slight organic troubles such as errors in diet may tend to pyrexia in children, whereas in adults, we should find very little disturbance. But as I inquired into every possible cause for the febrile condition, and made repeated careful examinations of the case from all points, I feel in my own mind that this was a case of nervous pyrexia.

Rapid Diagnosis.

To diagnose patients at the rate of two and a-half a minute seems, says the *Westminster Gazette*, pretty quick work. According to a German contemporary, this is about the average performance of Pastor Kneipp, of cold water fame, at Woerrishofen. When receiving patients on a busy day the pastor sits at a long table in a large, plainly furnished room, smoking a huge cigar. He dictates his "prescriptions" to an assistant in a solemn tone, as if he were presiding at a religious ceremonial. Men, women, and children of every station in life file past him. In an hour and a-quarter he gets through 180 without difficulty. There is no examination and few questions are asked—indeed, there is little necessity, for cold water baths and bandages and walks on wet grass with bare feet exhaust the worthy pastor's pharmacopœia. There is one exception: an ointment composed of honey and medicinal herbs for those who suffer from diseases of the eye. But then the ointment is a sovereign one for everything, and so Pastor Kneipp manages to break the record as an oculist as well.

The Question of Fees.

M.B., M.R.C.S.ENG. writes: With regard to the questions of fees now so much discussed may I quote two passages from Bransby Cooper's *Life of Sir Astley Cooper?* Vol. I, p. 272: "Soon after I got into my new residence," Sir Astley relates, "a patient gave me half a guinea, saying 'I gave Mr. Cline a guinea, but as you were his apprentice I suppose half a guinea will do for you.' Mr. Cline made it a rule to take whatever was offered him, so I did not refuse the proffered fee." Vol. II, pp. [illegible]9: "He (Sir Astley) never spoke of a fee in his life; when he received none he made it a rule to regard the case as one of charity, and was glad to perform an office of charity. 'If we receive more than we expect,' he has often said, 'we return nothing; why, then, should we complain on receiving sometimes less than we deserve.' Even at the period of his life when his days were unceasingly occupied by the demands of his public and private practice he would spend the greatest part of his nights in dissection, and it was then well known that he was ready at any hour to obey a summons from any quarter to attend a post-mortem."

Is there any need for the members of that great College which owned Sir Astley Cooper, Sir Richard Owen, and Mr. Huxley to desire any

further title than that prefixed to the name of John Hunter. Plain "Mr." John Hunter's fame will never die. Perhaps the public would think more of us if we did not assume titles to which we have no title but our own assurance. Probably they would pay us better also.

May I quote another passage? In vol. i, p. [illegible], there is an extract from Sir Astley Cooper's judgment of himself: "His diagnosis was most remarkable. He obtained that decision from having made it a practice when young to see all the poor who would come to him, and thus he saw such a variety of disease as to make him as familiar with it as a parent with his child. His principle in practice was never to suffer anyone who consulted him to quit him without giving them satisfaction on the nature and proper treatment of their case." Free attendance on the poor was not "unprofessional conduct" then. Perhaps it was this straightforward honesty of the old surgeons that raised them so high in the opinions of their contemporaries that when a quack set up in the borough and took the name of "Dr. Ashley Cooper" the surgeon did not think it worth his while to notice so palpable a fraud.

Buried Alive.

X. Y. Z. writes: In view of the sensational letters on this subject in the daily papers it is well to be sure of our ground. The whole question resolves itself into this: "How far can catalepsy simulate death?" I have always looked upon loss of tension in the eyeball from relaxation of the elastic tissue of the cornea as an absolute test of death. May I ask if any of your readers who are acquainted with catalepsy have ever seen or heard of a case of catalepsy in which this condition has been simulated?

A Centenarian.

F.R.C.P. writes: As you refer to Mrs. Neve in your article on centenarians in the British Medical Journal of September 21st it may interest your readers to know that, whilst in Guernsey a fortnight ago, I had the pleasure of an interview with this truly wonderful old lady, who received me most kindly. She walks easily without the assistance of anyone, and with her glasses could comfortably read her prayer book, which was printed in nonpareil type. Her conversational powers are remarkably good, and though slightly deaf at times she has no occasion for the aid of an ear trumpet or the like. She talks and acts more like a woman of 83 than one who was 103 in May last, and her appearance would give a stranger no idea of her advanced age. Though, in different parts of the world, I have been fortunate in meeting very aged people of both sexes (one old man in Quebec that I spoke to had attained his [illegible] year), yet no one has hitherto impressed me so much as did Mrs. Neve, whom I am sure all your readers will join me in hoping that she may yet enjoy (if in her present sound health) many years of life in the beautiful island in which she has so many years resided.

Enteric Fever at Poona.

The death of Captain Upperton, A.D.C. to General Blundell, from this disease quite recently, draws attention to the report that at a Cantonment meeting Brigade-Surgeon-Lieutenant-Colonel MacRury made a strong representation as to the insanitary state of the Poona cantonments, and pointed out the probable sources of prevailing sickness. Several young soldiers have died during the past few weeks of enteric fever.

Yet Another Inebriety Cure.

An amusing account of the examination of a number of reputed drunkards who claimed to have had the drink crave destroyed by a secret "vegetable cure," has been given by a provincial daily journal. A goodly proportion of the persons experimented upon reported that they had kept from liquor and had no desire for it. How long can drunkenness survive if the hundreds of "cures" which have been certified by abstaining and non-abstaining philanthropists to have been equally successful are to be augmented by another new "cure" almost weekly? It is surprising that the much more numerous temporary—in some instances permanent—conversions to abstinence which have repeatedly characterised epidemic waves of temperance in America and Britain have been passed by without notice, and yet that a similar alleged result is certified and applauded when stated to have been attained by the hourly swallowing for three weeks of a proprietary "cure."

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Dr. J. Althaus, London; A. E. T.; Mr. Clarence E. Ady, London; A. M.; A.; Mr. R. S. Archers, Liverpool. (B) Mr. T. W. Bailey, Liverpool; Messrs. Baillière, Tindall, and Cox, London; Dr. J. Barr, Liverpool; Dr. A. G. Bateman, London; Dr. H. D. Bishop, Dartford; Mr. J. K. K. Benjamin, Shrewsbury; J. T. W. Baird, M.B., Congleton; J. Biernacki, M.B., Bootle; Dr. P. Boulton, London; Mr. R. H. Breare, London; Mr. J. J. Bell, Cornholme; Mr. H. A. Ballance, Weston-super-Mare; B.; T. J. Burton, M.B., Helensburgh; Dr. D. C. Black, Glasgow; Mr. D. Butler, Bristol. (C) Mr. W. N. Clemmey, Bootle; Dr. S. M. Copeman, London; Dr. G. N. Caley, York; C. R. S. L.; Mr. E. Connor, London; Mr. T. L. Craister, Cala, Cape Colony; Mr. C. A. Coventon, St. Leonard's-on-Sea; Mr. F. W. Count, East Dereham; Mr. T. E. Constant, Scarborough; Mr. R. Coates, Newport; Mr. R. Clifford, Bath; Dr. C. C. Claremont, Southsea. (D) Mr. W. Duncan, Jersey; Da et Accipe; Delendus est Pulex; C. W. Daniels, M.B., Liverpool; D. C.; Mr. E. B. Denton, London. (E) Enquirer; Dr. S. Elliott, Wick; Dr. Charlotte Ellaby, London; E. R. S. L.; Mr. T. S. Ellis, Gloucester; E. H. L. (F) Mr. E. Frimpton, London; Mr. N. R. Finsen, Copenhagen; Mr. J. Fryer, Dewsbury. (G) G. M.; Mr. Golding-Bird, London; Mr. J. Garland, Bristol; Dr. E. Ground, Maidstone. (H) Mr. R. H. Hemsted, Whitchurch; J. D. Hollick, M.B., Knowle; T. H. Haydon, M.B., Marlborough; Mr. F. Hall, London; Mr. A. A. Hayes, Mount Ayliff; Dr. S. H. Habershon, London; Dr. T. Heryng, Warsaw; Mr. P. Houghton, Lichfield; Dr. F. Hinds, Worthing; Mr. C. W. Hunt, Manchester; Mr. F. Heatherley, Birkenhead; House-Surgeon. (J) Mr. R. Jaques, Oldham; Dr. J. Jamieson, Brodick; Messrs. James, Smith, and Co., London; Dr. S. Jex-Blake, Edinburgh. (K) Mr. P. Q. Karkeek, Torquay; Dr. A. Kenealy, London. (L) Dr. D. J. Leech, Manchester; Mr. H. K. Lewis, London; Rev. F. Lawrence, Westow, York; Lex; Mr. T. Laffan, Cashel; Mr. E. Llewellyn, Ramsey. (M) C. E. Maguire, M.B., Aberdeen; Mr. F. Malcolm, Hull; Mr. J. W. Morris, Swansea; Mediterranean; Dr. J. McKie, Newton Stewart; M.D.; C. R. Marshall, M.B., Cambridge; M.B., M.R.C.S.Eng.; H. C. Mactier, M.B., Wolverhampton; Mr. W. L. Morgan, Oxford; J. Monteith, M.B., London; Member; Medicus; Mr. T. A. Marsden, Wigan; M.D., B.S.Lond.; M.R.C.P.Lond.; Mr. W. McLeish, London; Mr. F. N. Menzies, Carnarvon. (N) Numas de Cognay; A. E. Nowell, M.B., Greenock; Nemo. (O) One Who does not Ride a Hobby; Messrs. Oppenheimer, Son, and Co., London; Observer; Omega; Dr. J. G. Ogle, Reigate. (P) Mr. G. C. Pauli, Bristol; Mr. G. Pollock, London; Mr. E. F. Parry, London; Petens; Mr. H. C. Pattin, Norwich; Mr. S. H. Perry, Spalding; Dr. Petch, York; G. S. Perkins, M.B., London; Paterfamilias. (R) Dr. L. Roberts, Manchester; Dr. J. Ramsay, York; Mr. W. Randall, Bridgend; W. Russell, M.B., Liverpool; Dr. G. Robertson, London; Mr. W. A. C. Roe, Lahore; Dr. J. M. Robertson, Glasgow. (S) Surgeon-Major; Surdus; Dr. G. A. Simmons, London; Messrs. Stevens and Sons, London; Dr. J. Smyth, Madras; Dr. W. J. Simpson, Calcutta; Dr. G. E. Shuttleworth, Richmond Hill; Mr. J. J. Smith, London; Mr. W. S. Sheppard, London; Subscriber; A. T. Simpson, M.B., Edinburgh; Mr. A. C. Shaw-Mackenzie, London; Dr. J. Shaw, London; J. C. Syson, M.B., Glasgow; Dr. J. A. Shaw-Mackenzie, London; Mr. W. B. Saunders, Philadelphia; Dr. E. Snape, London. (T) Dr. J. H. Tylecote, Stone; E. Trevithick, M.B., Cheltenham; A. H. Tubby, M.B., London; Mr. A. Taylor, Newbury. (U) Union Medical Officer. (V) Mr. T. Vincent, Dublin. (W) Dr. J. W. Washbourn, London; Dr. H. Webster Jones, London; Mr. T. C. Wigg, Southend-on-Sea; Mr. W. F. West, Dublin; Mr. S. W. Walker, Belfast; Mr. J. West, London; Mr. H. Wigham, Dublin; W. Y. M.; J. W. Wilson, M.B., Plymouth; J. H. Wilks, Sheffield. (X) X. Y. Z.; X., etc.

BOOKS, Etc., RECEIVED.

Twentieth Century Practice; an International Encyclopædia of Modern Medical Science by Leading Authorities of Europe and America. Edited by T. L. Stedman, M.D. In twenty volumes. Vols. 1, 2, and 3. London: Sampson Low, Marston, and Co. 1895.

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The National Leprosy Fund: Prize Essays on Subjects connected with Leprosy. No. 1: On the History of the Decline and Final Extinction of Leprosy as an Endemic Disease in the British Islands. By George Newman, M.D. London: Adlard and Son. 1895.

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The Elephants, etc. (a Zoological Mnemonic). By R. J. Anderson, M.A., M.D. Belfast: W. E. Mayne. 1895. 1s.

⁂ In forwarding books the publishers are requested to state the selling prices.

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SIXTY-THIRD ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in LONDON July 30th, 31st, and August 1st, 2nd, 1895.

PROCEEDINGS OF SECTIONS.

SECTION OF SURGERY.

Sir W. Mac Cormac, F.R.C.S., President.

The Presidential Address, delivered by Sir W. Mac Cormac, will be found on page 278.

DISCUSSION ON THE DIAGNOSIS AND TREATMENT OF FRACTURES OF THE UPPER THIRD OF THE FEMUR, INCLUDING THE NECK.

I.—Sir William Stokes, Ch.M.Univ.Dubl., F.R.C.S.I.,

Surgeon in Ordinary to Her Majesty the Queen in Ireland; Professor of Surgery, Royal College of Surgeons, Ireland, etc.

The first subject which has been selected for discussion by the Council of the Surgical Section on the present occasion may not possibly have the same attractions as one more closely identified with recent surgical development, as, for example, the surgery of the brain, the thorax, or the renal organs. It is desirable, however, in the interests and advancement of our art, that the surgical student, as well as the student of sculpture or painting, should at times look back, contemplate, and study the work of his predecessors, observing how much has stood the test of time and experience; and in some instances noting perhaps how rash it is to generalise from insufficient data, while observing that what remains permanently accepted is the result of no mere chance discovery, but of long, careful, and accurate observation. Some time ago the opinion was expressed to me by a surgical friend of ability that the amount of brain power that has been expended in attempting to form an accurate estimate of the diagnostic signs and symptoms attending certain bone lesions, notably fractures and contusions of the lower end of the radius, of the fibula, and of the upper third of the femur, by what he considered to be an unnecessarily close investigation of minute pathological variations, is quite in excess of the importance of the subject, considered either in a practical or scientific point of view. In this opinion I could not concur, holding that so long as the dense mists which still unhappily obscure many of these injuries, especially those of the cervix femoris, rendering it often difficult, in truth well nigh impossible, to estimate and differentiate with exactitude the protean forms of injury that are met with there, so long will it be necessary to continue the system of accurate investigation and close analysis, of which such signal examples have been given us by the splendid work in this direction of Sir Astley Cooper, A. Colles, Dupuytren, Malgaigne, R. W. Smith, Adams, Humphry, Bryant, Gordon, and others.

It should ever be borne in mind by those disposed to make little of such investigations that, if a subject is worth working out at all, too minute a consideration cannot possibly be given to it; and this would especially apply to the practical aspect of the topic to be discussed to-day, as there are few injuries, or groups of injuries, in which accuracy of diagnosis is more important or more imperatively called for. I am not vain enough to hope that any remarks I may make to-day will materially advance our knowledge or much increase our powers of differentiating the characteristic signs and symptoms of these injuries, and it seems to me my function on the present occasion should be mainly to point out the limits that have been reached, and some of the principal landmarks that have been given for our guidance, trusting that those who follow me may erect others, by which we may hope to advance further.

From the preceding remarks it may, perhaps, be thought that as regards difficulties of diagnosis I have given too gloomy a picture of the situation; that I regard it somewhat in the light of an impenetrable jungle in which reliable landmarks are still wanting. When we remember, however, that in these injuries at times many of the signs and symptoms of fracture may be present without the occurrence of any such lesion, and that, on the other hand, fractures may exist without many of these signs and symptoms, it should hardly, I think, be considered that I have expressed myself in any exaggerated manner. There is, in truth, no group of fractures in the vicinity of a joint in which there is greater variation in the signs. In the majority of cases there is more or less shortening of the limb, in others it is scarcely perceptible, and in one form it has been said that even slight lengthening may occur. In most cases there is eversion and abduction of the limb, but in others there is neither one nor the other, and in a third group there is inversion and adduction. In some there is pain, and in others a comparative freedom from it. Immediate shortening of the limb occurs as a rule in fractures of the cervical base, but it frequently happens in fractures of the cervix that it is a subsequent secondary development. In fractures of the base impaction occurs in some cases and is absent in others, whereas in the cervix proper we have, as I think, not impaction but penetration. In some instances the fracture is the result of a fall, and in others the fall is the result of the fracture. In one group exuberant new bone growths are the rule, whereas in the other absorption of bone is usually observed. Death from

Fig. 1.—Fracture with exuberant bone growth.

hæmorrhage in fractures of the base has been noted by Cruveilhier, R. W. Smith, Vidal, and others, but I am not aware that it has been observed in connection with fractures of the cervix. Comminution is a frequent complication in one group, but is rarely if ever observed in the other. Fractures of the cervix are met with as a rule in the more advanced periods of life, although rare cases, such as that shown in Fig. 3, p. 882 for which I am indebted to Mr. Bland Sutton, and which is taken from a specimen in the museum of the Middlesex Hospital, prove that they may be met with even before the junction of the epiphyses. Somewhat similar cases have been observed by Morgagni, Stanley,

and Hamilton. Lastly, the more serious of these injuries, both as regards immediate and remote consequences, is often the result of trivial force indirectly applied—a greater force as a rule producing the less serious fracture.

Fig. 2.—[illegible]

All these circumstances tend to prove the truth of R. W. Smith's dictum, that "each particular symptom of fracture of the neck of femur separately considered must be looked upon as equivocal; the union of all can alone lead to the formation of a correct opinion as to the nature and seat of the injury."

Fig. 3.—Fracture of cervix before union of epiphyses.

Before discussing any of the points connected with the classification or differential diagnosis of fractures of either the cervix or its base, I should like to say a few words in reference to some anatomical details which are called for, having regard to the fact that one structure in the joint, and that in my opinion the most important in a surgical point of view, is in many, indeed most, of the modern surgical textbooks practically and strangely ignored. I allude to the fibro-synovial envelope of the cervix, to which attention was, I believe, primarily given by the late Mr. Stanley, and my former master, Professor R. W. Smith, the so-called cervical ligament, with which I think their names might properly be associated. In a case of fracture of the cervix, it is not too much to say that on the integrity or otherwise of this ligament the outcome of the case mainly depends.

Being an important medium, through which nutrition is supplied to the bone, in most instances already modified by senile changes, if not in its form, in its structure, any injury, such as severe contusion, laceration, or tearing, is certain to be followed by serious consequences, such as inflammation, effusion into the joint, displacement, shortening, non-union, and ultimate atrophy. Its osteogenetic properties appear to exist in a very limited degree, and it is covered or lined by what appears to be an exceptionally sensitive synovial membrane. In its fibrous structure there is no uniformity as regards thickness and strength, for in some situations, especially in front, the strong bands can be observed, the "retinacula" of Weitbrecht, thus resembling the capsular ligament of the joint, which is so strengthened on its anterior surface by Bigelow's Y-shaped ligament.

The consideration of these facts is a matter not merely of theoretic, but of practical interest, for it is by observing what occurs when the integrity of this ligament is maintained that we are furnished with an index as to the line of treatment we should adopt in cases where it is not so preserved. Upon the latter circumstances depends largely the remarkable variation in the physical characters of fractures of the cervix, as much as the sequelæ of such injuries. Among these, one of the most remarkable is the rapidity and completeness in the interstitial absorption of the cervix, which takes place not alone in cases of fracture, but also in cases where there is no evidence of such having taken place, but only of contusions such as are familiar to everyone who has even made a superficial study of these injuries.

This rapid absorption may be due primarily to senile alteration in the bone tissue, and secondarily to activity of absorption due possibly to traumatic disturbance. It seems to illustrate the fact that in morphological changes the osseous system is one of the most plastic. As an example of this I would point to the readiness with which bones are absorbed owing to the pressure of aneurysms and other tumours, showing that a system which at first sight would seem so much more capable of resistance than other structures, is as a rule, the first to break down.

Of this condition of absorption many signally beautiful examples are now before us. Mr. Curling[1] has discussed this point exhaustively. He has pointed out that in the majority of fractures within the capsule, "the periosteum being torn, the circulation is diminished to a greater extent than in other descriptions of fracture, where one division of the bone is deprived of its nourishment from the medullary arteries. The loss, moreover, is not limited to its central structure, but the whole of the detached bone sometimes suffers, and the atrophy, instead of being merely eccentric, occurs throughout its texture—not only the cancelli enlarging, but the size of the head becoming insufficient to fill the acetabulum."

A similar process may, I think, result from impaired nutrition, consequent on synovio-periosteal inflammation without fracture. Certain it is, I think, that many cases have been noted in which atrophy of the cervix occurred without fracture, and was not only a source of error in diagnosis, but also the cause of blame being unjustly attached to the surgeon for not recognising the occurrence of a supposed fracture, the disappearance or diminution of the neck producing many of the apparent signs of fracture.

[1] *Med.-Chir. Trans.*, vol. xx, p. 336.

The process of atrophy and absorption which goes on in these cases is similar, as Curling pointed out, to the thyroid atrophy which takes place following the ligation of one or more of the thyroid arteries or division of the isthmus. The atrophy is essentially eccentric, the cancelli and medullary cavity enlarge first, and this is followed by a thinning of the outer shell. In some instances the earthy parts are first removed, and the head of the femur sinks down upon its shaft, but "more commonly the texture remaining is brittle, and the bone gives way on receipt of even a trivial force."

This process of rapid absorption is, in the case of fracture, probably due, in the first place, to senile osteoporosis; and

Fig. 4.—Senile osteoporosis.

in the second place to the twofold action of the absorbents on the one hand, and friction of the broken fragments on the other; and in the case of contusion, to impaired nutrition, consequent on a low form of synovio-periosteal inflammation.

Until recently the generally received opinion, and one accentuated by R. W. Smith, was that an alteration in the angle between the axis of the cervix and the shaft was a frequently observed senile change, this being held to be one of the determining causes of fractures of the cervix in advanced periods of life. The researches, however, of Sir George Humphry, and also of Dr. Charpy, of Lyons, have definitely disposed of this view. According to the latter, the angle between the axis of the cervix and the shaft is in the infant greater than in that of the adult; but once adult life is reached, no further change in the angle is observable. There can be no doubt that an alteration in the angle has been observed in old femora, and a signal example of this is to be found illustrated in Professor Gross's work on surgery; but this is, I believe, due, not to any normal senile change, but to a partial absorption of the cervix, probably from contusion, which has ultimately the effect of approximating the head to the shaft of the bone. It has been held by those maintaining the theory of senile alteration in the angle that there is an analogy between this and what, as everyone knows, takes place in the lower jaw. There is, however, nothing of the kind. In the case of the lower jaw, as Sir George Humphry has pointed out, the angle between the ramus and the body of the bone is rendered more obtuse by the effect of muscular action, drawing the angle forwards and upwards, there being no opposition to this force, in consequence of the loss of the teeth and the absorption of the alveolus. The result is an obliteration of the acuteness of the angle. No analogous process, of course, occurs at the junction of the cervix and the shaft of the femur.

It may therefore, I think, be held as tolerably certain that we cannot connect, as so many have done, the frequent occurrence of fractures of the cervix in aged persons with any normal senile alteration in the angle between the axis of the cervix and the shaft.

Fig. 5.—Fracture of cervix with penetration of cervix into head.

As regards the many forms of fracture of the cervix femoris that we have to deal with, the varying position and limit of the capsule posteriorly, together with the fact that a large proportion of these fractures are, so to say, mixed—that

Fig. 6.—Fracture of cervix with reciprocal penetration.

is, partly within and partly without the capsule—sufficiently justify, I think, an abandonment of the classification adopted by Sir A. Cooper, R. W. Smith, Adams, and others, into intra- and extracapsular fractures. But although this classification may be anatomically or pathologically incorrect —"unscientific," as Mr. Bryant terms it—in a clinical point of view it is convenient, and, as far as this aspect is concerned, might be retained. In the accompanying scheme I

Fig. 7.—Fracture of cervix at junction with head.

have indicated in a tabular form what I think should be the accepted classification, adopting many of the subdivisions of intra- and extracapsular fractures suggested by the late Professor Gordon, of Belfast. In considering the subject of

Fig. 8.—Fracture at centre of cervix.

classification, I think it is desirable that a distinction should be made between fractures with and without penetration, and fractures with and without impaction. A similar distinction has been made by Professor Chiene in connection with fractures of the lower end of the radius, and I think it can with equal propriety be made in connection with fractures of the femoral neck or its base. Those within the capsule afford examples of the first group, those external to it the second. In

Fig. 9.—Fractures of cervix with laceration of cervical ligaments and absorption of cervix.

reference to this classification I may mention that the majority of illustrations I desire now to submit to your consideration are from specimens belonging to the Museum of the Queen's College, Belfast, and I am indebted to the kindness of the distinguished Professor of Surgery there, Dr. Sinclair, for enabling me to exhibit them.

Fracture of Cervix Femoris (Intracapsular).

I. Fracture with penetration of cervix into head	With penetration.
II. Fracture with reciprocal penetration	
III. Intraperiosteal fracture of cervix at junction with head (transverse)	Without penetration.
IV. Intraperiosteal fracture at centre of cervix (transverse)	
V. Extraperiosteal fracture with laceration of cervical ligaments	

Fracture of Base of Cervix Femoris (Extracapsular).

I. Fracture of base of cervix with partial impaction (posteriorly)	With impaction
II. Fracture of base with complete impaction	
III. Fracture of base with partial impaction above (angle obtuse)	
IV. Fracture of base with partial impaction below (shaft split)	
V. Longitudinal splitting of cervix	Without impaction.
VI. Comminuted fracture without impaction	

Among the fractures of the cervix there can be no doubt that the fifth variety is the one that is most frequently met with, and the one in which osseous union, owing to deficient nutrition, non-apposition of the fragments, synovitis, effusion of blood, and rapid interstitial absorption, never takes place. The frequent occurrence of this result it doubtless was, that caused Sir A. Cooper, Cruveilhier, and others to fall into the error of maintaining that osseous union never takes place in intracapsular fractures. Now we know that in a considerable

proportion of these cases osseous union does take place, and before us we have many beautiful examples of this taken from the Museums of the College of Surgeons here and in Dublin, the Museum of the Royal University of Ireland, and that of the Queen's College, Belfast, and I here tender my

Fig. 10.—Fracture of base of cervix, partial impaction posteriorly.

grateful thanks to the authorities of these institutions for enabling me to submit, for the inspection of the members of the Association, the superb collection of specimens of these injuries which is now before them. There are two conditions

Fig. 11.—Fracture of base of cervix with complete impaction.

which appear to be essential to the occurrence of osseous union—one, the integrity of the cervical ligament; and the other, the existence of one of the two forms of penetration, either (*a*) of the cervix into the head, or (*b*) reciprocal penetration. It would appear, therefore, that there are four different forms of fracture of the cervix in which osseous union may take place, provided the routine expectant treatment be abandoned.

Fig. 12.—Fracture of base of cervix, partial impaction below (shaft split).

It may, I think, also be held that the further from the base of the cervix the lesion is, the less is the chance of

Fig. 13.—Fracture of base of cervix, longitudinal splitting of cervix.

osseous union. The nutrition of the bone at the base is not so profoundly affected as in situations nearer the head, since

in the latter it is derived chiefly through the medium of the cervical ligament, which is, as a rule, more or less torn or

Fig. 14.—Comminuted fracture of base of cervix without impaction.

contused. The osteogenetic properties, too, of the fibrous envelope of the cervix appear to be almost nil, and absorption of the bone, the nutrition of which is so much impaired, appears to be carried on with exceptional activity, not merely in cases of fracture, but also in those of contusion; and the difficulties of maintaining fixation and rest are more prominent owing, among other things, to the rarity of penetration which is observed the nearer the lesion is to the head.

In the second group, namely, the fractures of the cervical base, impaction in some form or other is the rule, and the amount of eversion which is present in almost all cases depends on the particular form of impaction that has occurred. The most usual is of the posterior cervical wall into the cancellous structure underneath the posterior intertrochanteric ridge, and the probable reasons why the posterior wall is so much more frequently impacted than the anterior are anatomical and mechanical. Among the former may be mentioned the capsular ligament being strengthened anteriorly by the powerful Y-shaped ligament, also by the retinacula of Weitbrecht being broader and stronger in front than behind, and the compact tissue of the cervix being thicker anteriorly than posteriorly. Again, when a person falls on the trochanter the point of impact lies, as a rule, behind the axis of the neck, and this would obviously predispose to posterior penetration.

In the second form the direction of the force is either in a line with or in front of the cervical axis; and in the third form Gordon held that by the accidental downward inclination of the ground on which the patient falls the greatest amount of shock is communicated to the upper part of the neck, resulting in impaction of the neck above and increase of the obtuseness of the angle, and in the fourth form, owing to the lower part of the base receiving the greatest amount of shock, and the base being particularly dense at this part, the shaft is split.

There is little difficulty in understanding the characteristic eversion that is observed in the vast majority of cases of fracture, either of the cervix or its base, due, as Bigelow held, to a rotation of the fractured bone on a hinge formed in the anterior cervical wall. The theory of eversion being due to rotation of the shaft upon the base of the neck is, according to some, untenable, who hold that it is due to a rotation of the base of the neck upon the shaft, but few, I should think, would be disposed to accept this view.

Fig. 15.—Rare form of fracture of the femur.

The occasional occurrence of inversion in both groups of fractures of the cervix and its base is more difficult of explanation, and is a sign which in no small degree adds to the difficulties of differential diagnosis. Guthrie held that this unusual condition was confined to the extracapsular forms

Fig. 16.—Rare form of fracture of the femur.

of fracture, the one, namely, through the great trochanter, a portion of it being continuous with the shaft of the bone: but this has been shown to be erroneous, as the condition has been observed in the fractures of the cervix within the

capsular ligament. The late Professor Pirrie published a very remarkable case of extreme adduction, flexion, and inversion of the limb in a case of fracture of the cervix close to the head, at right angles to the axis of the neck. The patient died six weeks afterwards. The capsular and ilio-femoral ligaments were found unruptured, and to the integrity and tension of these ligaments Professor Pirrie attributed the adduction, flexion, and inversion of the limb. It is hard to understand, on anatomical grounds, how the inversion could be explained satisfactorily in this way.

Fig. 17.—Intra-capsular form of fracture of the femur.

R. W. Smith held the view that the inversion was due to the altered action of the adductors, which became rotators inwards, owing to the lower fragment being displaced in front of the upper, so that the insertion of these muscles was in a plane anterior to their origin. If muscular action was the cause, however, the inversion would continue constant; but such is not the case. I can call to mind a case in which inversion was well marked, and a day or two afterwards I found that the usual eversion had supervened. I think, therefore, the inversion is most probably due to the limb having been adducted and inverted at the time of the accident, and that afterwards the limb remained in the position it was at the time injury was sustained.

No part of this subject is of greater importance than the differential diagnosis, as the patient's future and the surgeon's reputation depend on a correct estimate of this being formed. The conditions with which fracture of the cervix or its base may be mistaken are luxation on the dorsum ilii, fracture of the brim of the acetabulum, fracture of its fundus, and contusion. The differentiation may as a rule be correctly made by bearing in mind that, whereas in fracture we have usually a history of a direct fall on the trochanter, followed by eversion, shortening, and backward direction of the outer surface of the trochanter, occurring in advanced life, and with marked pain along the line of fracture, diminished tension of extensor muscles, occasional inversion, and that not well marked; in luxation, on the other hand, we have a history of forced rotation inwards, rarity of occurrence in advanced life, usual inversion, great shortening, approximation of trochanter to anterior superior spine, head of bone on dorsum ilii, movements difficult and restrained, absence of pain on trochanter, increased tension of extensor muscles, and constant, well-marked inversion. In fractures of the brim of the acetabulum we have the head drawn upwards and backwards, with detached fragment of brim, shortening, inversion, crepitus, adduction, recurrence of shortening after extension is removed, and power of eversion and abduction of the limb. In fractures of the fundus we have usually comminution, head passing into the pelvis, shortening, liability to abscess formations, and generally a fatal result. In contusion we have a preservation of the normal relations between the anterior superior spine and trochanter preserved at first, but often ultimately lost, and the knowledge that pre-existing chronic rheumatism may in these cases accentuate the difficulty of differentiation in no small degree.

I have here tabulated these points of difference, and a reference to the leading signs and symptoms of them, grouped side by side, may facilitate our forming a correct diagnosis.

Differential Diagnosis.

Fracture of base of Cervix (Extra-capsular.)	Dislocation on Dorsum Ilii.	Fracture of the Brim of Acetabulum.	Fracture of Fundus of Acetabulum.	Contusion.
Common in advanced life.	Rare in advanced life.	—	—	Relation between anterior superior spine and trochanter on both sides the same at first.
History of direct fall on trochanter.	History of forced rotation inwards of femur.	—	—	
Shortening.	Shortening greater.	Shortening. Shortening recurring after extension is removed.	Shortening.	Pre-existing chronic rheumatism, a cause of great difficulty in forming a right estimate of the case. Note the previous history, and observe that the powerless state induced by the injury has passed off.
Eversion rare.		Inversion.		
Inversion rare.	Inversion constant.			
Inversion slight (sometimes).	Inversion well marked.	Power of eversion. Adduction.		
Movements comparatively easy.	Movements difficult and restrained.	Power of abducting limb. Flexion of knee.		
Head in acetabulum.	Head on dorsum ilii.	Head drawn upwards and backwards with detached fragment of brim.	Head passes into pelvis.	
Outer surface of trochanter looking backwards.	Approximation of trochanter to anterior sub-spine.	Crepitus.	Fracture comminuted, star-shaped.	
Pain along line of fracture in front, above, and behind.	No pain on pressure over trochanter.		Liability to formation of abscesses in iliac fossa.	
Diminished tension of extensor muscles (Lagorio.)	Increased tension.		Accident generally fatal.	

As regards the treatment of these injuries there is still much diversity of opinion. The employment of fixation and extension has been by many condemned as a useless and irrational practice on the grounds that as the trochanteric fragment is approximated and more or less fixed to the acetabulum by the obturators, gluteus minimus, and pyriformis, so by rotating the limb inwards and extending, the base of the neck is, as Professor Gordon held, separated from the trochanter, posteriorly at all events, and the shaft from the head and neck. The fragments, in fact, are drawn asunder, thus diminishing the chances of osseous union. In addition to these alleged disadvantages there are those which undoubtedly attend keeping the patient, especially if advanced in years, for a considerable time in the recumbent position.

For these reasons the routine treatment formerly was a very simple one, consisting practically in doing nothing at all, the rule adopted being to let them (the patients) select their own position and support the limb in any way they pleased.

This simple but, as a rule, ineffective method of treatment is no longer, I think, generally accepted. Professor Senn instituted in 1883 a series of interesting experiments on cats and dogs, with the object of determining what will best promote the chances of osseous union in fractures of the cervix femoris. In a large proportion of cases, when the required conditions were obtained by drilling and subsequent fracture of the cervix, and when, in the after-treatment, nothing was done except to keep the limb in a gypsum bandage, there was no attempt even at the formation of bony union. In a second series of cases the treatment of a more thorough immobilisation was adopted by fixing, namely, the fragments with ivory, bone, or metallic nails. In ten of such experiments bony union was obtained in most of them. The ivory and bone nails were usually found absorbed, the metallic ones encysted. The importance of these experiments consists in demonstrating that the more perfect the fixation and immobilisation are, the greater is the chance of bony union, and the conclusion is irresistible that the surgeon should be cautious not to break down or disturb any penetration or impaction that may be present. Consequently, with the view of securing permanency of the impaction, Professor Senn has introduced the principle of making lateral pressure in the direction of the axis of the cervix by a pad which rests on the external surface of the great trochanter, and the necessary pressure made by a screw action, which can be regulated from day to day. In non-impacted fractures the fractured surfaces should be brought into perfect mutual apposition, and in this position the affected limb, pelvis, and thigh on the opposite side should be encased in a plaster-of-paris dressing, all of the bony prominences being well protected by salicylic wool. In this dressing Professor Senn combines the application of his splint, in which provision is made for the lateral pressure.

Some surgical authorities, Sir John Erichsen among the number, consider that in an extracapsular impacted fracture a limb cannot be restored by traction to its normal length, and that nothing can be done to diminish the deformity, the patient remaining throughout life more or less crippled. Recently there seems to be evidence of a tendency for the pendulum of surgical opinion to swing to the opposite side, for with the view of preventing or diminishing the permanently crippled condition that Sir J. Erichsen speaks of, Mr. Southam, of Manchester, has practised and advocated a deliberate breaking down of impaction, instead of leaving it intact as surgeons hitherto have aimed at doing. The patient whose case Mr. Southam has published,[1] was aged 27 years, and all the usual signs and symptoms of extracapsular fracture of the neck of the femur were present. The patient was anæsthetised, the impaction broken down, and the excision and shortening being overcome, the fracture was then treated by extension. "The fracture readily united with the limb in the corrected position, no deformity ensuing."

It is possible that in the treatment of this case Mr. Southam may be the pioneer, so to speak, of a revolution in the routine practice adopted in such instances. As far as one can judge from a single example I should say that the treatment could only be applicable in a very limited number of cases, namely, those rare ones that occur at a period of life long antecedent to that of any senile anatomical change, and when the physical reparative powers are in full activity. In no other case, I should imagine, having regard to the senile changes in the bones to which I have alluded, could the practice be adopted with any reasonable hope of success. I have pointed out that in four different varieties of fractures of the cervix (intracapsular) osseous union, and that with little or no deformity, can take place.

This satisfactory result is the result of one or other of two conditions being present, namely, penetration or the preservation of the integrity of the Stanley-Smith cervical ligament. When either or both of these conditions are present as well as the absence of any marked senile structural change osseous union may take place in consequence of the proper and permanent apposition of the broken ends of the bone. Our object, therefore, should be to bring about this condition as far as is practicable by artificial means, and this can best be done by rest, fixation of the limb, and as much extension as will aid in promoting these two latter essential conditions. I have not as yet tested Professor Senn's method of lateral pressure, but in my experience the necessary conditions can best be fulfilled either by Mr. Bryant's double splint, or, I hope I may say without vanity, by the screw extension combination splint which I have devised and employed, not merely in the treatment of various fractures of the lower extremity, including those of the cervix femoris and its base, but also in certain forms of chronic articular disease. Whatever apparatus is employed, it should be remembered that two things are essential, especially in dealing with very aged persons: First, to have provision for enabling the patient to sit up occasionally, not allowing him to remain long in the recumbent position; and secondly, that the extension be not greater than will promote immobility; in other words, care should be taken not to have any violent and useless contest set up between muscular and mechanical forces, a condition necessarily antagonistic to, if not incompatible with, that rest, fixation, and freedom from pain which are so essential to the satisfactory union of all wounds, whether of bones or soft structures.

From the preceding considerations we are, I think, justified in forming the following conclusions:

1. The alleged senile alteration in the angle between the axis of the cervix and the shaft of the femur does not occur, and cannot therefore be regarded, as it has hitherto been, as a predisposing cause of fracture of the cervix femoris.

2. That the process of absorption in the case of fracture is probably due primarily to senile osteoporosis, and secondarily to the twofold action of the absorbents on the one hand and friction of the broken fragments on the other, and, in the case of contusion, of impaired nutrition consequent on a low form of synovio-periosteal inflammation.

3. That in classifying fractures of the cervix or its base a distinction should be made between those with and without penetration, and those with and without impaction.

4. That osseous union may take place in four out of the five different forms of fracture of the cervix femoris.

5. That the further the fracture is from the base of the neck, the less is the probability of osseous union.

6. That fracture of the cervix may occur previously to epiphysial junction.

7. That the differentiation of these injuries lies between fracture of the cervix or its base, luxation, fracture of acetabular brim, of acetabular fundus, and contusion.

8. That the principles of treatment should be fixation, rest, and moderate extension.

[1] *Lancet*, November 17th, 1894.

II.—Sir George Murray Humphry, M.D., F.R.S.,

Professor of Surgery, University of Cambridge.

Sir George Humphry considered the conclusions arrived at by Sir William Stokes to be most important. He then proceeded to lay down as an axiom that a fracture in any part of the skeleton at any time of life will unite if the parts can be kept in contact. The senile change in the neck of the femur is not alteration of its angle but thinning of its walls, which cannot resist the devouring action of the cells of the vascular areolar tissue surrounding cancellous bones. The femur is in its upper part much dependent upon its cancellous portion, and, as the senile change occurs first in cancellous bone, there is a great difference between the effects of an unfavourably-applied force in fracturing this region at different times of life. The weakness of the bone structure does not, however, entail any loss of the osteophytic qualities of the cells thrown out from a fracture: hence union of fractures at the base of the neck of the femur is common, non-union being rather the exception. There is usually a large amount of new bone formed near the fracture, so that there is often a superabundance of new bone in fractures of the base in old people. Very often, indeed, the strength of the bony union is proportional to the amount of damage done. Fractures within the joint are most common where the bone is narrowest, that is, close to the head. Here union is liable to fail, though not from either want of bone-forming power in the patient or deficiency of blood supply, which is ample or repair in any part of the skeleton. The real causes of

non-union are two: (1) The fixation of the head in the acetabulum prevents the two fragments from overlapping, the amount of the bony surfaces which are approximated being diminished; (2) the new bone-forming cells are not retained in the neighbourhood of the fracture but escape into the joint. When the fragments are retained in apposition union is as sure as in other parts of the skeleton. Sir George Humphry illustrated this by exhibiting a drawing from a specimen taken from a patient whose age when the fracture occurred was 80, and who survived the injury a year. The fragments had perfectly united in front, there was no deficiency in the amount of bony material thrown out, and the patient was able to lift his leg from the bed in six weeks from the accident. The speaker did not think that the retinaculum of the neck had much to do with union. He pointed out that it is thicker and more closely adherent in front than elsewhere, and hence is more commonly torn through here than behind, where, though thinner, it is more loosely connected. He believed that the rapid absorption of bone noted by Sir William Stokes took place exclusively between the fracture and the trochanters, there being none between the fracture and the head. This was illustrated by a specimen which he showed. It was due to the rubbing of the trochanteric fragment against the structures of the inner side owing to movement and also to rapid absorption of the cancellous tissue from senile weakness and from the number of phagocytes in that tissue. He considered that the keynote of union was contact: if there was contact union resulted, with no contact no union. This led him to endorse Sir William Stokes's views as to the necessity of keeping the fragments in apposition and at rest.

III.—Thomas Bryant, F.R.C.S.,
Consulting Surgeon to Guy's Hospital.

Mr. Bryant assented fully to the opener's conclusions, but thought that the eleven varieties into which he classified the fractures were more valuable from a pathological than from a clinical aspect. There is not such a marked distinction as has been alleged between intra- and extracapsular fractures. It is clinically better to regard them from the point of view of impaction or non-impaction. All fractures anywhere are capable of repair, and of those under consideration there are only a few near the head in which good union is not obtained. R. W. Smith taught that all fractures of the neck were originally impacted, and only became unimpacted by a second force or by bad treatment. This dictum is often true, and the surgeon should have impaction in his mental eye as a guide to treatment. Mr. Bryant agreed that inversion depends upon an accident of position, and that impactions are all due to purely mechanical forces. In treatment he found that if the rules laid down by the opener were adhered to, union usually took place, so that by keeping the limb quiet with no friction, repair might be looked for. Of 42 consecutive cases, of which the average age was 70, all went out with good and useful limbs, and bed sores were unknown. How many of these cases were intra-, and how many extracapsular, he had no idea; the union depended essentially on whether there was impaction or not. His treatment resembled that of the two preceding speakers, and he always abstained from turning the patient about too much, and from prolonged attempts to obtain crepitus. In special cases he acted in the same manner as Mr. Southam. Thus, in a lady of 80, who had an impacted fracture, with adduction and an everted foot as the result of a hansom cab accident, he loosened the impaction by rotating the condyle of the femur, and put on a double splint. In three weeks patient had recovered, the two limbs were of the same length, and an enormous quantity of callus had been thrown out. Impaction should never be loosened in an old subject, and the two opposite evils to avoid in any case were (1) simply leaving alone, and (2) reckless treatment.

IV.—E. H. Bennett, M.D., M.Ch., F.R.C.S.I.,
Professor of Surgery, Trinity College, Dublin; Surgeon to Sir Patrick Dun's Hospital, Dublin.

The first essential for the study of this, as of any group of fractures, is to classify them in some systematic manner. I arrange them in two divisions according as they are the product of force applied directly or indirectly to the bone. I think that this arrangement is necessary in order that error may be avoided which is current with regard to the mechanism of some of the most common injuries, notably the extracapsular fractures of the neck of the thighbone.

Analysis based on 136 specimens. I record the number of specimens of each group under each head. I fear that some will object to the number of groups which I have made in each division, but I hold that the more complete we render our classification the more useful it will be found in practice.

Fractures of the Upper Third of the Thighbone caused by Direct Injury.

Division A.

1. Fractures of the trochanter major only		
(a) Occurring in the adult bone...	2	specimens
(b) While the trochanter is an epiphysis	0	,,
2. Fracture through the trochanter	6	,,
3. Gunshot fractures involving the hip joint	2	,,
4. Transverse fractures of the shaft immediately beneath the trochanter	2	,,
	10	,,

Fractures caused by Indirect Injury.

Division B.

1. Fractures of the head	0	specimens
2. Separation of the superior epiphysis	0	,,
3. Ordinary intracapsular fracture	46	,,
4. Impacted intracapsular fracture	6	,,
5. Partial fracture of the neck	0	,,
6. Mixed intra- and extracapsular fractures of the neck (type intra)	1	,,
7. Extracapsular impacted fracture with fracture of one or both trochanters	66	,,
8. Extracapsular impacted fracture, type exceptional ...	3	,,
9. Non-impacted fracture of the neck secondary to comminuted fracture of the upper third of the shaft of the bone	5	72 ,,
10. Fracture of the lesser trochanter only	1	,,
11. Fracture of the neck of the thighbone in ankylosis of the hip joint	1	,,
12. Oblique fracture beneath the trochanters	0	,,
	125	
Division A ...	10	
	136	

This surely is a long category, but as each and every lesion contained in it has been proved to exist by the pathological test, and where the known numbers are enough to establish it, each group has its distinct type.

I base my analysis on the collection of fractures of the upper third of the femur contained in the museum of Trinity College, Dublin.

I may be asked why in this classification I adopt groups of which the museum contains no specimens. I simply admit the defects of the museum, but I cannot adopt a classification which would omit groups the type of which have been fully established, and all of which I have myself seen except two. But these two—separation of the superior epiphysis and the partial fracture of the neck—are attested by absolute pathological proof.

The great size and importance of the Division B makes it desirable to briefly examine its details before noting those of Division A. The first group—fracture of the head of the femur—consists in the tearing off of the piece of bone which gives attachment to the ligamentum teres during dislocation of the hip joint.[1]

Group 2 has been proved by *post mortem* examination to be a possible injury, so that systematic writers can no longer doubt its existence.[2]

Group 3. Ordinary intracapsular fracture of the neck of the thighbone. The number of these in the collection is 46, which may well be considered in reference to the number of those that might be named the ordinary extracapsular fractures, 66. These relative numbers differ remarkably from those obtained by Malgaigne, which are 61 intracapsular and 42 extracapsular, and, if we take the total of all the groups included under the terms intra- and extracapsular, our numbers are 53 intra- against 71 extracapsular. I regret that of these 53 intracapsular fractures clinical details are noted in but very few cases, and in no case is the cause of the accident sufficiently clearly stated to help us to an exact determination of its mechanism. I would like to note, however, that it has happened to me twice to break

[1] Barnett, *Med.-Chir. Trans.*, vol. iii.
[2] *Bulletin de la Société Anatomique*, 1867, p. 283.

the neck of the thighbone within the capsule in the attempt to produce the dorsal dislocation of hip by forced adduction of the thigh. I mention this fact, as I find that the most elaborate writer on injuries of the femur (Hennequin) stated that up to his date, 1877, he knew of no one who had been able to produce an intracapsular fracture of the neck of the

Fig. 1, Division B, Group 3.—Ordinary intracapsular fracture of the neck of the thighbone

femur experimentally, while the extracapsular has been so produced by many. The subjects on which I produced these experimental fractures, quite unintentionally, were both old, probably between 60 and 70 years, so that the condition of atrophy of the bones which predisposes to the fracture in the

Fig. 2. Division B, Group 3.—Absorption of the neck in old intracapsular fractures.

living was present in these bodies. Many of our specimens are fractures in which the death of the patient occurred very shortly after the receipt of the injury, the fractured surfaces being sharp and unaffected by absorption. In all those in which the individuals lived long after the injury both the fragments exhibit absorption, so that the necks of the bones have almost clean gone; and this is true whether the union of the fragments is close and intimate or whether fibrous cords of considerable length connect them or they are quite disconnected; in some the fibrous union was so close and intimate that protracted boring alone established the fact that osseous union was absent. Many show polished surfaces, worn by the friction of the osseous fragments on each other, facts which go to prove that many individuals who suffer this injury preserve some amount of use of the limb, especially those who are provided with close fibrous union.—facts which should lead us, if possible, to keep the fragments at rest in the earlier days and weeks of treatment rather than abandon them to the earliest possible passive movement.

Group 4 consists of 6 specimens which are all fractures strictly within the capsule, all impacted; in all the impac-

Fig. 3, Division B, Group 4.—Impacted intracapsular fracture.

Fig. 4. Division B, Group 4.—Impacted intracapsular fractures; left-hand figure also fracture of lesser trochanter, Group 10.

tion is the same, the lower fragment driven into the upper; in all bony union has occurred. Where a doubt might be

raised as to the nature of the union it has been tested by long boiling in water, a process which leaves the specimens rough and porous and friable. In one of these specimens the fracture is placed so close to the head of the bone that the margin of the head, as it were, overhangs the line of fracture. This form has been specially described as subperiosteal or greenstick fracture, but in its union no bone was deposited in the periosteum nor on the surface of the fragments, only the junction of the impacted osseous tissue holds the fragments together. It is clear that in these specimens we must attribute the union to the occurrence of impaction of the fragments after the occurrence of the fracture, in each the lower fragment has been rotated outwards as it was driven into the upper. The contest about the possibility of such union as these present, and the denials of the existence of such specimens as these may well end now, but every year we hear it renewed afresh in one form or another, even though as long ago as 1834 Sir Astley Cooper published his recantation of his old and loved doctrine. It is the maintenance of rest and apposition of fragments by the impaction that insures osseous union.

Group 5. I have placed this group in a prominent place merely to admit that a single genuine partial fracture of neck of the thighbone exists, the case recorded by Jackson in 1856 at the Boston Society of Medical Improvement, and preserved in the Warren Museum at Harvard. The references so often made to the early publications of Colles, of Adams, and even R. W. Smith on partial fracture of the neck of the thighbone, have been put aside by the later writings of the last two authors as being examples of intracapsular impacted fractures united by bone.

Group 6. Of this our series presents a single specimen in which the fracture is of the type of the intracapsular in its mode of impaction and osseous union, but a fragment was detached which pierced the capsule anteriorly.

Group 7. This group, the largest of all numerically, attests the constancy of the fact so much dwelt on by Professor Smith, but which so many writers question, "The extracapsular fracture is accompanied by fracture with displacement of one or both trochanters." Among these 63 specimens there is no exception to this rule, and I think we may accept the doctrine that all these fractures are primarily impacted, and that the injuries in which the secondary fractures are separated and the head and neck are set free are the results of the extreme force of the impaction. I place these injuries among those resulting from indirect force, first because they are so in reality, the trochanteric region being broken by the intrusion of the neck into its tissue, not by its contact with the ground. The most common kind of accident that produces them is no doubt a fall on the great trochanter, but there is ample evidence that they may be caused by falls on the feet and on the knees, and by muscular action without any fall.

Fig. 5. Division B. Group 7.—Extracapsular impacted fracture with fracture of one or both trochanters.

Group 8. Before discussing the most important questions relating to fractures of the neck of the thighbone, their diagnosis and prognosis, I put forward this group of injuries, three in number; a few other examples have been published.

Fig. 6. Division B. Group 8.—Extracapsular fracture; type exceptional; great trochanter unbroken.

Fig. 7. Division B. Group 8.—Extracapsular fracture; type exceptional; great trochanter unbroken.

I place them in a separate group chiefly to demonstrate their insignificance in numbers as compared with those of the last group. They are extracapsular fractures in which the great trochanter has not been broken; the mode of impaction in these is the reverse of the ordinary, the lower fragment penetrating the upper. The lesser trochanter is broken, and the base of the neck projects in front so as to cause a great increase in the bulk of the trochanteric region which in the united fracture is increased by the mass of callus deposited for the union of the fracture. In these fractures the injury closely resembles the ordinary fracture, but as the trochanter major escapes fracture we lose the evidence which this fracture offers in establishing the existence of fracture of the neck outside the capsule. I know of no other conditions in which the great trochanter escapes fracture but those presented by this group. I may now look to the bearing of the facts I have noted on the diagnosis of the extracapsular fractures. To the labours of Professor R. W. Smith and Malgaigne we owe the knowledge on which the diagnosis between intra- and extracapsular in their various forms rests; and, although it may not always be easy to establish it in the case of the recent fractures, still I hold that it can be made, and in our own interest as well as those of our patients it must be made. In the majority of intracapsular fractures osseous union will not occur, in the

extracapsular fractures it will, and at the end of a few weeks the most inexpert surgeon can readily distinguish the injuries. To many writers we owe the weak and damaging theory that the diagnosis while the fractures are recent cannot be made. To M. Gosselin, whose reputation as a great surgeon and teacher all will admit, we are most indebted for this mischievous doctrine. He says: "This rigorous diagnosis between the extracapsular fracture and an intracapsular is useless for both prognosis and treatment, consequently it is useless from any practical point of view." "For on these points no author up to this day (1873) has pretended to establish a rigorous diagnosis." And yet we see in Ireland and Paris this diagnosis established in 1847. But this teaching is rendered more pernicious by the statement made to support it from the view of treatment. "The fracture of the neck of the femur being, as you know, a malady of the aged, arthritis will develop in consequence of it, an incurable dry arthritis (that is chronic rheumatic arthritis), or if it does not pass into the condition of dry arthritis, it will leave during some months a painful stiffness of the joint." How many of our united extracapsular fractures are there which show these changes and how many do not? Five do, 23 are absolutely free from chronic rheumatic arthritis. The experience of every surgeon who has had to deal with these injuries is that he has seen a fair share of patients who have had extracapsular fractures walking freely and firmly, it may be with a halt, but without crutch or stick long after the injury. Surely it is well that the surgeon should be able to forecast this good result or on the other hand in dealing with intracapsular fractures save his own reputation by a clearly stated prognosis.

Group 9. This group of fractures of the neck of the thighbone differs from the preceding in the mechanism of the fracture of the neck, and in its cause. In this form there is no impaction of neck into the trochanteric region of the bone. I have already published the details of these fractures in a communication made to this Association at its meeting at Cork in 1880, showing that in certain spiral fractures of the upper third of the thighbone this segment of the bone is comminuted, and where the injury is complete the head and neck are set free. In the incomplete fracture of which I present three remarkable specimens, a fissure runs up and around the limits of the base of the neck, but the neck is not set free. These incomplete fractures of the neck enable one to read correctly the mechanism of the complete fracture: the wedge action of the lower fragment in these cases was sufficient to crack the tissue of the upper; had the force been continued in its action the neck would have been completely detached. All these specimens and all that I know of, present the same striking feature, a long spike of bone extending down the greater part of the whole of the upper third of the shaft of the bone. In his paper on extracapsular fractures of the neck of the thighbone Professor Gordon describes this fracture as the fourth variety of impacted extracapsular fracture and recognises the fact that the fracture of the shaft attracting attention by the very definite character I have mentioned may cause the fracture of the neck to be overlooked. I have

Fig. 9, Division B, Group 9.—Non-impacted fracture of the neck of the thighbone secondary to fracture (comminuted) of the upper third of the shaft.

Fig. 8, Division B, Group 9.—Non-impacted fracture of the neck of the thighbone secondary to fracture (comminuted) of the upper third of the shaft.

Fig. 10, Division B, Group 11.—Right hand figure, fracture of the neck of the thighbone in ankylosis of hip. Left hand figure, Division A, Group 3, gunshot fracture of the neck of the thighbone.

already in the paper referred to shown that this injury is produced by muscular action, not by falls on the hip.

Group 10. Fracture of the lesser trochanter (see Fig. 4); I know of no other specimen of this fracture. It is here associated with intracapsular fracture which is united by bone and we may reasonably conclude that the injuries, though independent of each other, were caused at the same time by forced abduction of the limb. I have seen this injury in the living, but I was not able to follow the case.

Group 11. I produce this specimen because of its rarity; that it was caused by injury done to a joint ankylosed by morbus coxæ is proven by the fact that a piece of the cotyloid border broken off is included in the lower fragment. The kind of force is seen in the united fracture of the innominate which was associated with it.

Group 12. Our collection does not contain this injury, but the famous specimen represented in Sir Astley Cooper's book and the numerous specimens of the Royal College of Surgeons in Dublin attest its existence and importance. On this subject the writing of the late Mr. Butcher correcting the views of Sir Astley Cooper are well known.

FRACTURES OF DIVISION A. THE RESULT OF DIRECT INJURY.

Group 1. Fractures of the trochanter major only. The fractures of this process occurring in the adult are attested here by three specimens, and with one we have, as in a previous specimen, the history written on the innominate bone by a fracture of the same character. These specimens are sufficient to set aside the doubt expressed by a somewhat recent writer who uses the words "Fracture of the great trochanter without any fracture of the neck or shaft of the bone has been said to occur."[3]

Fig. 11. Division A, Group 1.—Fracture of the trochanter major

In the museum of Dr. Steevens's Hospital there was placed an example of the epiphysiary separation by the late Dr. Warren, of Dublin.[4]

Group 2. Fracture through the trochanter. "Since the publication of Sir Astley Cooper's work on *Fractures* it has become the custom to describe this variety of fracture separately and a certain degree of vagueness or indefiniteness in the first description has been preserved in most of the subsequent ones."[5] This doubt appears to exist because of the want of recorded specimens of the injury.

In this state of things I need not make apology for presenting three very perfect specimens, two of them united fractures, one of recent injury which was produced in a man who was struck down and killed by a railway truck in the making of one of our earliest railways. The statement made that in this injury "there is shortening, sometimes very considerable, great eversion of the limb,"[6] is in no way supported by these specimens; and in the living in whom I have been able to recognise the injury the diagnosis was arrived at rather by way of exclusion than by the existence of such marked signs as I have quoted. It was only after a long interval that the diagnosis was made in Sir Astley Cooper's case; the accident occurred on July 20th, and on August 14th the diagnosis was first made by the discovery of crepitus and the prolonged inability to use the limb without any of the signs of the other forms of fracture which occur in this region. If we want to avoid the unpleasant question put by the patient to Sir Astley Cooper on that day, "Why, you do not mean to find a fracture now?" we must have a clearer idea of the injury than is conveyed in the sentences I have quoted.

Fig. 12, Division A, Group 2.—Fracture through the trochanter major.

Group 3. This group it is obvious must be maintained (see Fig. 10). Our collection contains but two such injuries; in one a bullet is lodged in the neck of the bone, and the patient died under the expectant mode of treatment.

Of the second specimen I have already published the details with photographs. I place it here merely because of its rarity, for that the expectant treatment was successful there is in this case no doubt. The bone presents united

Fig. 13, Division A, Group 4.—Transverse fracture of the shaft of the femur immediately beneath the trochanter.

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[3] [illegible]. T. P. Pick, 1885.

[4] *Trans. of Pathological Society of Dublin*, vol. vii, [illegible]

[5] *Treatise on [illegible]*. L. A. [illegible]

[6] T. P. Pick, loc. cit.

fractures of the upper end, which radiate from a tunnel in the neck reaching downwards as far as the lower third of the bone; ankylosis of the hip followed the lesion, and the condition of the bone, the atrophy of the cancelli of the head where they ceased to transmit pressure, and their hypertrophy under active use, all prove that the patient recovered from his wound and walked on the limb. All doubt of the diagnosis of the lesion in this graveyard specimen is removed by the finding in the tunnel ample traces of carbonate of lead.

Group 4. Transverse fractures, fractures of the shaft immediately beneath the trochanter. I submit two most perfect specimens, one united with the barest sign of angular deformity outwards. In the second, the deformity is at a maximum, while the lower fragment is so remarkably inverted that previous to the dissection of the limb the features of dorsal dislocation were simulated.

V.—J. GREIG SMITH, M.B., C.M., F.R.C.S.E.,

Surgeon to the Bristol Royal Infirmary; Professor of Surgery at University College, Bristol.

AFTER referring to the large knowledge and wealth of illustration of this subject exhibited by the Dublin School, Mr. Greig Smith proceeded to supplement certain points on which previous speakers had touched less fully. He first appealed for a simpler classification, since the pathological one ran the risk of elevating a rare variety into a separate species. A causal classification gives (1) indirect violence applied directly vertically, and resulting in fracture of the neck near the head; and (2) direct violence applied transversely to the great trochanter, which produces fracture near the base. In the first case there is never any injury to the joint unless the patient falls directly on it. The obliquity of the fracture in the neck is of the greatest importance as regards both union and deformity. We walk normally on the posterior half of the femoral neck only, and hence, in falling, chip off more of this part than of the anterior, the line of the fracture running from before, back, and out. From this obliquity eversion can be deduced by a simple resolution of forces. Inversion is a mere accident of position. Non-union of fractures high up in the neck is due to the causes stated by Sir George Humphry, and also to the fact that no nidus for the development of new bone is present in this region. At this spot there is no cellular tissue to undergo the primary calcifying cellulitis, but only blood clot, and perhaps bits of ligaments; whereas at the base cellular tissue abounds. In treatment, Mr. Bryant's rules as to the importance of the question of impaction, and the non-importance of other variations should be adhered to. In young patients impaction should be reduced, in old not.

VI.—A. W. MAYO ROBSON, F.R.C.S.

Senior Surgeon, Leeds General Infirmary; Professor of Surgery, Yorkshire College, Leeds.

SIR WILLIAM STOKES's classification is based only on the *post-mortem* room, and has but little real clinical interest. These fractures should be classified into impacted and unimpacted, and in old people it is not even necessary to take much trouble to ascertain the fact of impaction. In treatment the main object is apposition; the parts should be disturbed and manipulated as little as possible, and constitutional disturbance looked out for. The treatment of young and old patients is essentially different. The latter are put to bed, and then, if nothing untoward happens, treated as in early life with a long splint and a weight to keep it steady. If recumbency is badly borne, a Thomas's hip-splint is applied, securely fixed with starch or plaster, and the patient allowed to get about. Mr. Southam's case belongs to a different class, and his treatment had, in Mr. Robson's experience, often been adopted before. It is not right to allow a young patient to go about for the rest of his life lame, and with an inverted and shortened limb when this can be relieved surgically. Here the treatment is to relieve the impaction and secure a good position.

VII.—THOMAS SINCLAIR, M.D., F.R.C.S.,

Assistant-Surgeon, Belfast Royal Hospital; Professor of Surgery, Queen's College, Belfast.

DR. SINCLAIR drew attention to the frequency of osseous union in intracapsular fracture of the femoral neck, which is greater than commonly supposed. It was therefore desirable to strive to secure osseous union, which occurred in fractures close to the articular head, as illustrated by three specimens, as well as in those fractures nearer the middle of the neck, as illustrated by nine specimens from the collection of the late Professor Gordon, of Belfast. But, having regard to the physical and mental deterioration caused in aged persons by long recumbency, it was well to distinguish those cases of intracapsular fracture that were likely to unite by bone, namely, those produced by force acting from before backwards, including extreme external rotation, in which the periosteum was little injured, from those due to a force acting from above downwards, as when the weight of the body bore upon the neck during abduction in the production of the common form of intracapsular fracture. In the latter case the body, after breaking the neck, being still in projectile force, followed on by the influence of gravity to lacerate the periosteum. As this laceration, by permitting free movements and displacement at the seat of fracture, was the chief cause of non-union, it would be wiser not to risk too much in the way of long recumbency in an attempt to secure osseous union. Under these circumstances, after a couple of weeks, the attempt might be abandoned, or better, a mode of fixation adopted from the outset which did not involve recumbency. The cause of disappearance of the neck was mainly mutual attrition between the fragments, and in those instances in which absorption followed simple contusion of the hip the opinion was expressed that these were probably intracapsular fractures with so little displacement that the ordinary signs of fracture were not demonstrable. With regard to extracapsular fractures, the advantage of an elaborate classification, like that suggested by Sir Wm. Stokes, lay in that we were able to understand how each one of the classical signs of this accident might vary to its opposite—shortening to lengthening, eversion to inversion, and so on—and thus learn that no single sign could be depended upon as pathognomonic. In the treatment of extracapsular fractures there could be no difference of opinion that in non-impacted forms splints, with or without extension, were demanded; but in the impacted cases in old people, in whom it would not be wise to disturb deliberately the impaction as it might in young subjects, the view was expressed that there was still room for difference of opinion as to the necessity of apparatus of any kind, seeing that if the surgeon took care not to disturb the impaction in making his diagnosis, the patient could be trusted not to do so by his or her bodily movements during the treatment, except perhaps in those few cases in which traumatic delirium or other complication arose.

VIII.—Sir WILLIAM HINGSTON, M.D.,

Surgeon to the Hôtel-Dieu, Montreal.

SIR WILLIAM HINGSTON had come to the meeting not to impart information, but to carry back crumbs of knowledge to Canada. He was pleased and somewhat surprised to find the opinion here that union in these fractures was the rule and shortening the exception, results which were certainly not in accordance with experience on the other side of the Atlantic, as exemplified in the *pronunciamento* of the Chicago Conference twelve years ago. In Canada the results were so bad and actions-at-law so frequent, that it was sometimes difficult to get a doctor to attend a case of fracture of the neck of the femur.

IX.—F. J. GANT, F.R.C.S.,

Consulting Surgeon, Royal Free Hospital.

MR. GANT had never seen a case of fracture of the cervical neck which did not result in shortening. The diagnosis of these cases did not appear to be understood except by surgical specialists, and cases of fracture were often treated as rheumatism.

X.—S. H. WEEKS, M.D.,

Portland, Maine, U.S.A.

THE diagnosis in the United States was based on the following points: The age and history, the position and helplessness of the limb, and especially the pain, which was increased on the slightest movement. Mr. Bryant's line was

also found a most satisfactory aid. Intracapsular fractures arose in aged subjects from slight violence, while the word "extracapsular" was a misnomer, fractures through the base being both within and without the joint. The treatment was to correct eversion by Bryant's splint, or better still by light extension with Liston's long splint and a footpiece or sand bag.

XI.—C. B. Keetley, F.R.C.S.,

Senior Surgeon, West London Hospital.

The following case illustrates the treatment of fractures of the upper part of the neck: A girl, aged 18, one year after fracture of the neck was still crippled and unable to stand, and there was a mass of bone below the anterior inferior iliac spine. Most of the head was out of the acetabulum, and had ankylosed with the ilium, and the stump of the neck had become mushroom-like. Mr. Keetley removed both, and the patient was practically cured and able to return to her laundry work. With regard to Sir William Hingston's pleasant sarcasm, Mr. Keetley had found that shortening was very rare in London, as, except in fracture of the actual neck, he had only been able to collect two or three cases in the last two years. He stated by the use of two L-shaped steel pins introduced into the fragments some little way from the fracture, and fastened outside the skin by wire, shortening was entirely obviated. The splint treatment had, however, also to be adopted at the same time.

XII.—F. A. Southam, M.B., F.R.C.S.,

Surgeon, Manchester Royal Infirmary.

Mr. Southam wished to direct attention to the unsatisfactory result which followed the method of treatment usually adopted in impacted extracapsular fracture of the neck of the femur. This consisted in simply keeping the limb at rest, without making any attempt to correct the characteristic deformity, the shortening and eversion of the leg, always present in a greater or less degree. It consequently remained permanently deformed, and the patient was therefore seriously crippled for the rest of life. With the view of preventing this result in a case of this injury which was under his care in the Manchester Royal Infirmary last year, the impaction was at once broken down under anæsthesia, the eversion was overcome, and the limb was restored by traction to its normal length. The fracture was then treated in the ordinary way, extension being kept up by means of a weight, and a Lister's splint being applied to the outside of the limb. At the end of a month the limb was put up in a plaster-of-paris bandage, and when this was removed, in the course of about six weeks, it was found that perfect union had taken place with the limb in the corrected position, without any shortening or eversion, the movements of the joint being quite free. Two similar cases had recently been treated in the same way with equally successful results. He was aware that this method of treatment, which he wished to recommend, was somewhat unorthodox, and quite at variance with the usual teaching of surgeons, there being a traditional dread of union not taking place if the fragments were separated by breaking down the impaction. Inasmuch as this fracture was frequently met with in middle-aged persons in whom the neck of the bone had not become the seat of the atrophic changes occurring at a later period of life, there was little fear of this result, and he therefore advocated reduction of the deformity by breaking down the impaction in all cases when the patient was of a good constitution and not advanced in years.

Sir William Stokes's Reply.

He was pleased at the importance and interest of the discussion elicited by his paper. He agreed with Sir George Humphry as to the blood supply as long as the cervical ligament was uninjured, but considered injury to the latter the main cause of non-union in these fractures. He was sorry that some of the speakers had objected to his classification as being founded on the museum or the *post-mortem* room, but he wished to point out that most classifications which were of use in clinical surgery were based on *post-mortem* investigations, and that his own formed an efficient guide to prognosis. He was not aware, from any published writings, that the Leeds school had anticipated Mr. Southam in laying down the principle of disimpaction. He disagreed with Professor Sinclair's view that the presence of osseous union in some cases obviated the necessity for mechanical interference. He reminded Sir William Hingston that in the practice of one American surgeon at least—Professor Senn, of Chicago—good union with a minimum degree of shortening was the rule. He considered that Mr. Keetley's clamp—which resembled an apparatus designed by the late Professor Wood, of New York, for use after resection of the knee—was much too flexible for use in fractures of the cervix femoris.

ON MOVABLE KIDNEY.

By Kendal Franks, M.D., F.R.C.S.I.,

Senior Surgeon to the Adelaide Hospital, Dublin; Surgeon in Ordinary to his Excellency the Lord Lieutenant.

Some years ago there were many medical men who did not believe in the existence of a mobile kidney. This was partly due to the fact that abdominal operations were rare, and therefore the diagnosis of a movable kidney had little chance of being verified; hence the unbelievers in this condition, in the presence of a mobile tumour within the abdomen, were prepared for any diagnosis except that of a kidney which had been dislocated. This want of belief was also partly due to the infrequency with which this condition is found in the dissecting or *post-mortem* room. This infrequency is the result, I believe, to two causes. Mobility of the kidney is rarely looked for, and with a subject lying in the dorsal position the kidney naturally sinks back into its normal place, and may thus easily escape detection. Moreover, as pointed out by Newman, the fatty envelope becomes solidified after death, and would tend to fix a kidney which during life had been freely movable.

There are few to-day who will venture to deny that a kidney may be mobile. The present tendency of the medical mind is to assert that it is not a condition of frequent occurrence, that it is not of serious import, that for the most part it is an invention of the surgeon, more given to enterprise than to exactness of diagnosis.

With these views I cannot agree. Mobility of the kidney is of far more frequent occurrence than is generally admitted. Any man who will take the trouble to look out for these cases will be surprised to find how very frequently he will meet with them. There is of course every degree of mobility of the kidney to be found, but all are not pathological. When I speak now of a movable kidney, I draw a distinct line between the varieties or degrees. Suppose we get a patient lying in the dorsal position. Standing on the right side I pass the four fingers of my left hand underneath the hollow of the loin below the twelfth rib. The thumb in front encircles the abdomen just below the costal arch, but without exercising any pressure. I then direct the patient to draw a full breath. Immediately before expiration begins I press with my thumb upwards beneath the costal arch, and let it sink in as deeply as possible, following the liver as it recedes during expiration whilst the fingers behind press the loin forwards. If now with my right hand I can feel the kidney lying entirely below the grasp of my left hand, I call that a right kidney pathologically movable. If the right hand presses on the tumour so felt, whilst the left hand relaxes its grasp gradually, the tumour can be felt to slip between the fingers of the left hand and to disappear from our ken—upwards into the position normally occupied by the kidney. This sensation is, I believe, pathognomonic of a movable kidney. A kidney which can be felt to descend so that its lower half may be felt, but which moves back on expiration, is a kidney physiologically movable.

Considerable diversity of opinion exists as to the cause or causes of movable kidney. The theoretical nature of these opinions emphasises the difficulties which surround the question. Thus Cruveilhier attributes renal mobility to the pressure exerted upon the liver by stays; Lauvergeon to the physiological and pathological relation between the kidneys and the generative organs; Guttmann to the congestion of the kidneys which occurs during menstruation. These organs then tumefy, become heavier and have a tendency to leave their normal position and to descend little by little into the abdomen. Newman considers that the kidney is

originally forced out of its place by the force of the anterior and posterior abdominal muscles during a strain, such as during delivery, or in lifting heavy weights. "The resultant of these forces will act in a manner similar to what takes place when one presses a bean between the finger and thumb —that is to say, the kidney will be pressed downwards."

Now before we can adequately discuss this vexed question, we should consider the means which Nature has provided for keeping these organs in their normal position. We find the kidney surrounded on all sides by a fatty capsule and by connective tissue. I do not think we ought to lay too much stress upon the fatty capsule, for though after death we may find this pretty firm and affording apparently some considerable amount of support to the kidney, during life it is in a very different condition. The fat then partakes more of a fluid than of a solid character and would unquestionably allow of a certain amount of motion. Yet that it does exert some influence is shown, I think, by the greater frequency of movable kidney amongst the lean and emaciated than among the well nourished. Still I have met with freely movable kidneys among women who were anything but insufficiently supplied with adipose tissue, and I believe that too much importance has been attached to the absence of fat as a cause determining mobility.

Of more importance, however, is the connective tissue which binds the kidney to the loin behind and to the various abdominal viscera above, below, and in front. In the latter position it is assisted to no inconsiderable degree by the peritoneum reflected over its anterior surface. In probably a majority of cases these connective tissue adhesions and the disposition of the peritoneum are sufficient to maintain for a time the kidney in its place, even where causes operate which would dislocate an organ with less firm connections. These connections are not in themselves sufficient to withstand alone the weight of the kidney, but they are important to bear in mind from another point of view, for, as I hope presently to show, though they may not keep a kidney in its place when once it has become dislocated they are mainly responsible for the symptoms which accompany a movable kidney and which may make life unendurable.

I now come to what I believe is the great factor for maintaining the kidney in its proper position, and I am very much indebted in regard to this matter to the researches of my friend Professor Cunningham and to his kindness in placing his material at my disposal.

The researches of Professor His and of Professor Cunningham have clearly shown that the form of the kidney itself and the influences exerted upon it during life, or rather in the unopened body, vary very materially from what is usually observed in the dissecting room or on the *post-mortem* table. The method employed lately by Professor Cunningham with the view of obtaining an accurate knowledge of the true form of the solid viscera of the abdomen, is shortly this: Having selected two well-formed subjects, he proceeded to harden them by the injection method. He employed Müller's fluid, followed by graduated spirit injections. In the case of one of the subjects, the injections were repeated almost daily for a period of two weeks, whilst in the other the hardening process was continued for fully six weeks. By this method all the internal organs were hardened *in situ*, before any disturbing influence had been introduced by opening the abdomen.

As regards the kidney, and with the kidney we are now alone concerned, the results have been most remarkable. The kidneys present many slight changes in form, according to the amount and the kind of pressure which is exerted upon them by contiguous viscera; and these changes undoubtedly are continually taking place in the same individual. We need not interest ourselves at present over these slight variations, but we should fix our attention on the more constant conditions of forms which the illustrations clearly show.

Professor Cunningham thus describes them:[2] "In every case and on both sides there is on the anterior surface a point of maximum convexity, a place where the kidney substance is raised in the form of a marked prominence or bulging, which may slowly rise from all sides to a blunt summit, as is usually the case in the left kidney, or which may extend across the anterior surface in the form of a rounded ridge, as happens more commonly in the case of the right kidney. Above and below this eminence the anterior surface falls away towards each extremity in the form of an inclined or sloping plane of greater or less obliquity. (See Fig. 1.) These impressed districts indicate

Fig. 1.—Outer convex borders of the right and left kidneys, showing the wedge-shaped outline of the kidneys when viewed from this aspect; also the central prominence and the two inclined surfaces on the anterior aspect of each. L. A. Lig. arcuatum externum groove on the right kidney. (From a photograph by Professor Cunningham.)

pressure exercised on the anterior surface of the kidney in two directions, and the intervening eminence is the result of this counter-pressure. Upon the upper inclined plane of the anterior surface of the left kidney are placed the suprarenal capsule, the stomach, and the spleen. These exercise a downward and a backward pressure.....Upon the inferior inclined surface of the left kidney the counter-pressure is produced by the intestinal canal, which presses as a rule upwards and backwards (see Figs. 2 and 4).....On the right side the upper

Fig. 2.—Anterior surface of the left kidney. s. s. Impression for suprarenal capsule. s. c. Area in direct contact with stomach. s. l. Impression for the spleen. s. p. Impression for the pancreas. s. i. Inferior inclined surface, in contact with intestine. (From a photograph by Professor Cunningham of subject B.)

inclined surface is occupied by the liver, whilst in contact with the lower inclined area is the colon. In many cases the

[2] *Journ. of Anat. and Physiol.*, July, 1885.

Fig. 3.—Anterior surface of the right kidney. s. s. Impression for suprarenal capsule. s. h. Hepatic impression. s. c. Colic impression. (From a photograph by Professor Cunningham.)

Fig. 4.—Anterior surface of left kidney. Lettering same as in Fig. 2. (From a photograph by Professor Cunningham of subject A.)

colic or inferior sloping surface presents a high degree of obliquity." (See Fig. 3.)

We see, then, that on the right side we have two forces acting on the kidney: one, acting from above, presses the kidney downwards and backwards; the other, acting from below, presses the organ upwards and backwards. The resultant of these forces will be a force acting almost directly backwards, wedging, as it were, the kidney into the position it usually occupies. Now, the pressure from above is practically constant. It varies somewhat with the position of the body, and also during respiration. But these variations do not really affect the question, for the liver, kidney, and colon move together under the circumstances, and the relative position of the forces is practically unaffected.

The pressure from below varies to a much greater degree with the varying conditions of the intestine itself. It diminishes where the bowels are empty; it increases with the least distention. Still the general direction of the pressure, upwards and backwards, on the inferior inclined plane of the kidney is maintained. The effect of these normal variations of the two forces is shown in the illustrations. In one kidney we find the transverse ridge on the anterior surface is near the middle of the organ, in another we find the ridge is below the junction of the middle and lower third. Slight alterations in shape appear to be the main results of these frequent variations between the upper and lower compressing forces.

Now if the balance between these forces be lost, so that their resultant acts in a more or less downward direction, it is easy to conceive how the kidney itself, aided by this downward force and by its own weight, would gradually sink, making a way for itself behind the peritoneum which lines the loin below it.

There are several ways in which this balance of pressure may be destroyed. An obvious example is after parturition. We know that normally the pressure within the abdomen is positive, but immediately, and for some days at any rate, after parturition, the pressure becomes negative. If during this period the patient assume the erect posture, the pressure from above acts downwards and backwards unopposed, and unless the cellular connections round the kidney are sufficiently and unusually firm, the kidney must gradually yield to the combined forces, and slip from its place. Each act of parturition, with shortened respites in bed, will increase this tendency, and it is difficult to understand how the kidney, having once slipped from the control of the colon, could ever again regain accurately its relative position, so as to be wedged between it and the liver, as we have seen it normally is. Probably a movable kidney, when it slips into place in the recumbent position, lies behind the colon and below the liver, its anterior surface being flattened, so that the wedging forces can no longer act. Another method by which the balance of power may be destroyed is by traumatism. If by means of a violent shock, such as a fall from a height on to the feet, or by means of extreme pressure, as the passage of a cart wheel across the body, the kidney be forced downwards out of its bed, the equilibrium of forces is disturbed, not to be again restored. I have elsewhere recorded several instances of such traumatically dislocated kidneys.

Besides the ridge and planes on the anterior surface there are other markings on the kidney which may be shortly alluded to. The duodenum almost invariably rests upon the anterior surface of the kidney, and it gives rise to a very evident duodenal impression. The outer convex border of the kidney of both sides presents a marked thickening opposite the eminence on the anterior surface. In the neighbourhood of this thickening a faint groove passing upwards indicates the place where the border of the kidney is "clasped" by the last rib. (See Fig. 1.) This is worthy of notice, as it supports those who advocate fixing a movable kidney to the last rib. The posterior surface of the kidney exhibits three well-marked areas, which correspond respectively to the psoas internally, to the quadratus lumborum externally, and to the diaphragm above. Between the areas marked by the psoas and the quadratus lumborum muscles dimples corresponding to the transverse processes of the lumbar vertebræ may sometimes be observed in spare subjects. (See Fig. 5.)

Fig. 5.—Posterior surface of the left kidney. (Note the vertical ridge which separates the surface of the kidney into an internal and an external division.) p. Surface in contact with the diaphragm. p. Impression for the psoas. c. Impression for the crus of the diaphragm. q. Impression for the quadratus lumborum. T^1, T^2, T^3. Dimples corresponding to the tips of the transverse processes of the first, second, and third lumbar vertebræ.

I have hitherto taken the right kidney for my text because dislocation and mobility are much more frequent on the right than on the left side. The proportion is about 11 to 1, and it is not uncommonly bilateral. It will be understood that the arguments which have been adduced regarding the right kidney apply to the left also, taking into consideration the altered relations on the left side.

The symptoms produced by a movable kidney are many and varied. They may practically be nil, and some accident alone reveals the presence of a movable tumour within the abdomen. Or, on the other hand, to quote the words of Keen, "the discomforts are very great, and the pain may be so excessively severe and prolonged as to interfere with all

occupation, and practically to make life almost unendurable. .....The disorder may pass beyond the realm of bearable evils into serious and actual danger to life itself." Between these extremes we find every variety of discomfort and every degree of pain.

In attempting to explain the connection between these symptoms and the mobility of the renal organs again we find that the imagination has been fertile in the production of theories. The nervous system, of course, is largely called upon, and the well known gastric crises, in which severe abdominal pain and distension of the stomach are not infrequently followed by vomiting, are attributed to the reflex disturbance caused by dragging upon the renal vessels and nerves. The causation of these gastric crises was discussed at some length at the Société Médicale des Hôpitaux in Paris in 1892, and the explanation then supported was that offered by Bartels in 1884—namely, that when the right kidney was displaced and came in contact with the second portion of the duodenum, the compression might be sufficiently strong to cause dilatation of the stomach.

Now, I think an examination of the kidney relations will show that such a compression of the duodenum is impossible unless we were to suppose that the kidney could leave its bed in the forward direction, and could fall over across the duodenum towards the other side of the body.

The symptoms of movable kidney are, I believe, to be explained in a much more simple way. For convenience they may be divided into three groups:

1. Those symptoms which are common to both right and left movable kidney.

2. Those symptoms which belong exclusively to mobility of the right kidney.

3. Those symptoms which may be found when the left kidney is mobile.

In the first group I include a dragging pain in the abdomen, and a sense of weight in one or the other side, neuralgic pains in the loin or shooting down the thigh, fatigue on slight exertion, and general debility, which makes any effort a weariness to the flesh. Many of these symptoms may, with some justice perhaps be attributed to the "dragging upon the renal vessels and nerves."

The second group comprises those symptoms which we recognise in their severer form under the term "the gastric crises." In the milder form the chief complaint is indigestion, flatulence and sometimes vomiting. The following points can generally be elicited. The indigestion does not depend on the kind of food taken. One patient told me she had made the round of all sorts of food, and that nothing made any difference. Pain generally comes on about one or two hours after food, and large quantities of gas are frequently belched up. The usual remedies for indigestion and flatulence are of little if any use. I have frequently been told that the only relief to be obtained was by lying down, and one lady informed me that she always found ease by kneading her right side. Such a train of symptoms should always make us suspect a movable kidney on the right side. Now these symptoms can be explained on purely mechanical grounds. In October, 1892, I opened the abdomen of a woman who had what was diagnosed to be a most abnormally movable kidney. The opening was made in the right linea semilunaris, and the kidney was found lying in the right iliac fossa. The cause of all the symptoms was at once obvious. The kidney was attached by strong bands to the descending portion of the duodenum, and when the kidney fell towards the iliac fossa, it so dragged upon the duodenum as to kink it, and it was obvious that in that state nothing could pass out of the stomach. The stomach was in a state of dilatation. The symptoms from which she suffered and which she herself described as agonising disappeared when the kidney was fixed into its proper position.

Now, if we examine the normal relation of the descending portion of the duodenum to the kidney, we find that it generally lies on the inner portion of the anterior surface; sometimes, as in the engraving (see Fig. 6) it covers more than half the surface of the kidney, but this is an unusual amount. Occasionally though very rarely, it does not touch the kidney at all, but lies on the renal vessels and the commencement of the ureter. The kidney and the vertical portion of the duodenum are bound together by connective tissue, which may sometimes be extremely lax and weak, sometimes may have an appreciable degree of strength. Both organs are retroperitoneal. Now what I believe occurs is this.

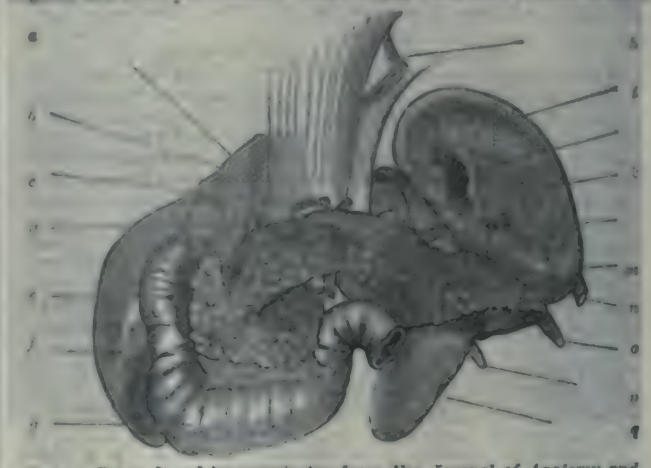

Fig. 6.—Reproduced by permission from the *Journal of Anatomy and Physiology*, July, 1895. *a*, right suprarenal capsule; *b*, hepatic artery; *c*, portal vein; *d*, bile duct; *e*, superior mesenteric vessel; *f*, right kidney; *g*, duodenum; *h*, œsophagus; *i*, spleen; *j*, left suprarenal capsule; *k*, left kidney; *l*, splenic artery; *m*, pancreas; *n*, tenth rib; *o*, eleventh rib; *p*, twelfth rib; *q*, left kidney.

In many cases when the kidney slips, its attachment to the duodenum may be so slight and lax, or the surface in contact with the duodenum may be so small, that the kidney disengages itself from the duodenum, and may become freely movable in the abdomen, without in any way interfering with the gut. Under such circumstances we have, what is a not uncommon experience, a freely movable kidney presenting no symptoms—a condition very difficult to explain on the usual theories laid down.

If, on the contrary, the surface of contact between the kidney and duodenum be extensive, when the kidney loses its usual support, and begins to descend behind the peritoneum, it gradually drags the duodenum with it, and as in the instance in which I had the good fortune to observe what occurred, the duodenum kinks, and a temporary condition is induced very similar in its symptoms to what we find in stricture of the pyloric end of the stomach. This view is further strengthened by the fact that marked dilatation of the stomach is found in some of these cases.

These gastric symptoms, I believe, are not found when the left kidney is alone at fault. Dislocation of the kidney is very much more uncommon on the left than on the right side. It is difficult, therefore, to speak of the symptoms produced by a mobile kidney on the left side with as much confidence as we can of the symptoms produced on the right side; but this I can affirm: I have never seen the gastric crises, nor anything like them in any case of left movable kidney that has come under my notice. Such cases have generally been quite symptomless, with the exception, of course, of the symptoms in Group 1, which, however, may be so slight as not to call for treatment.

If we examine the relations on the left side, at first sight there does not appear to be any reason why the left kidney, slipping out of its place, should interfere with any organ in its neighbourhood. But I have had reason to change my view regarding this, owing to a circumstance which has still further convinced me that the causation of the symptoms produced by right movable kidney is as I have stated above. In March, 1894, I saw a lady in consultation who suffered from extreme debility, inability to walk, caused by a feeling of weight in the abdomen, complete exhaustion after any attempt at exertion, distension of the abdomen and aggravated constipation. She had been ailing since the beginning of 1892. Castor oil and turpentine enemata gave her no relief, and large doses of cascara, or of castor oil very frequently were unavailing. On examination I found she had both right and left kidney movable, the left most marked. An abdominal belt and massage improved her considerably, especially as regards the constipation; but as

her progress was not altogether satisfactory, I performed nephrorrhaphy on the left side on April 10th last. At the operation I found a very interesting state of affairs. The kidney was firmly fixed to the splenic flexure of the colon and as it fell downwards it carried the colon with it, so that it became kinked forming a V bend. That this was the cause of the intractable constipation was proved by the sequel. The wound in the loin healed without suppuration, but I kept the patient lying in bed for six weeks in order to allow the adhesion the kidney had contracted to the loin to become firm. When she began to go about she rapidly regained strength, and when I last saw her towards the end of June the constipation had entirely disappeared, and for three weeks she had taken no aperient of any sort. She was able to go about as much as she wished. This case, if unusual, is most instructive, for it indicates that if symptoms other than those comprised in Group 1 arise, the symptoms will be due to traction on neighbouring organs, and the one most likely to suffer is the colon, so that constipation may be included in Group 3. Further experience must show what other symptoms may be added hereafter.

In thus grouping the symptoms, and bearing in mind their significance when taken together, I think that cases of movable kidney ought to be diagnosed with greater facility and accuracy than is done at the present day. Such symptoms tell a tale which a very rapid manipulation of the abdomen will generally verify, though sometimes it may refute it.

I do not propose on the present occasion to enter at any length on the question of treatment; surgeons are to a great extent agreed as to the cases which require palliative and those which require radical treatment. Nephrorrhaphy is, comparatively speaking, a safe operation. Our object in resorting to it is not merely to suture the kidney into the loin, but to the best of our ability to keep it there. A great deal has been written and said on the method of suture, and the best materials to employ. Many advise that the kidney should be fixed to the edges of the wound, some that it should be fastened to the last rib. I think it matters little which method we adopt. As a matter of fact I have for a long time been in the habit of suturing it to the twelfth rib. When we see in the kidneys hardened *in situ*, that the upper margin is marked by a groove where the kidney is clasped by the twelfth rib, this gives us a clear indication as to the proper position the sutured kidney should occupy. The material employed for suture is also a matter of no moment. I always use catgut now because it becomes absorbed. There are two considerations of the first importance: the first is to have plenty of material thrown out to glue the kidney into its place, and, secondly to allow no strain upon this material until it has had time to become organised and sufficiently strong to withstand any reasonable strain put upon it. The best way of ensuring the first of these desiderata is to employ the method, first suggested, I believe, by Mr. Jordan Lloyd, namely, to divide the capsule of the kidney at the place where it is proposed to pass the sutures, to partially strip it off, and to suture the capsule and the renal parenchyma to the wound, or to the last rib, if preferred.

To secure the second object we should keep the patient lying in bed for at least six weeks, no matter whether the wound has healed by first intention or not. A patient who will submit to an operation in order to be relieved from the inconveniences or perhaps agonies of a movable kidney, will generally consent willingly to a little extra confinement in order to insure that the operation shall not have been in vain.

Mr. Bland Sutton expressed his great interest in the demonstration, particularly in the question of the normal retention of the kidney in its place. He had seen jaundice simply from dragging down of the viscera by a movable right kidney. He considered that a mobile kidney, sliding up and down in a groove behind the peritoneum was quite common, especially on the right side, and formed a real source of suffering, though often diagnosed by physicians as hysteria. Dr. Franks had conclusively shown that mobile kidneys are a source of real and serious trouble.

ON RHINOPLASTY IN INDIA.

By Brigade-Surgeon-Lieutenant-Colonel D. F. Keegan, M.D., F.R.C.S.

Brigade-Surgeon Lieutenant Colonel D. F. Keegan gave a lantern demonstration on rhinoplasty in India, notes of which are as follows:

In Europe, in the great majority of cases, rhinoplasty is performed in order to repair the ravages and disfigurement caused by lupus or tertiary syphilis, and it is but seldom that plastic surgery is called upon to make good the damage done to a nose by accident or mutilation. In Eastern countries and more especially in India, rhinoplasty is usually performed to repair the ghastly disfigurement caused by mutilation, and our patients are, as a rule, young, healthy, and robust. All those who have had much experience of rhinoplasty are, I think, agreed that the principal difficulties in obtaining good results centre in the formation of the columna and in obviating the continued tendency to contraction in the nostrils of the newly formed nose—a tendency which continues for several months after operation. The details of the operation, which I have devised as the result of many years' experience of rhinoplasty, are fully described in Mr. Treves's very comprehensive treatise of surgical operations; and therefore, on the present occasion when time presses, I shall merely state that the special feature of the operation consists in utilising the skin and tissues covering the nasal bones with the view of preventing the contraction in the nostrils of the newly formed nose. The skin and tissues clothing the nasal bones are dissected from off their bed, and the dissection is made from above downwards. The skin and tissues thus raised from their bed are reflected downwards, and therefore the skin of this nasal flap looks backwards and its raw surface forwards. A flap is now raised from the forehead, and is brought down and placed on the nasal bones and on the raw surface of the flap taken from off the nasal bones. It therefore follows that the inside of the newly formed nose is lined with skin, and this lining prevents any subsequent contraction.

The exact size and shape of the flap taken from the forehead is shown on the back of each photograph which I have the honour of submitting for inspection, and it will be seen that the shape and size vary in each case, although it will be remarked that all the forehead flaps present more or less a family likeness. The shape or outline of this forehead flap differs considerably from what one generally sees depicted in most English surgical textbooks. The sides or lateral margins of the forehead flap are most accurately attached by means of fine horsehair sutures to the bed prepared for them. The flap raised from the forehead includes all the structures down to the pericranium, but does not include the latter. I usually allow a fortnight to elapse before dividing the root or pedicle of the new nose, and in doing so I cut a wedge-shaped slice out of the root, so that the new nose may not be parrot-shaped.

A HITHERTO UNDESCRIBED LOCALITY IN THE MALE URINARY BLADDER WHERE A STONE MAY ELUDE CONTACT WITH ANY URETHRAL INSTRUMENT.

By G. Buckston Browne, M.R.C.S.

In most cases of vesical suffering the presence or absence of a stone is a question of great importance. The history of surgery is full of cases of mistake in the diagnosis of vesical calculi. A stone is found which has been searched for by others and not found; a bladder has been opened and a stone found which had never been felt when searched for by instruments introduced through the urethra, whilst, on the other hand, a stone found by an ordinary sounding has not been detected when the bladder has been opened by perineal incision, and a bladder has been believed to have been cleared of stone by perineal incision when in reality a second stone existed which has subsequently required removal. These surgical catastrophes have been explained by the existence of three varieties of vesical pouch, the ordinary sacculus, the post-trigonal pouch, and the post-prostatic

pouch, to which I drew special attention in my paper read before the Medical Society of London in 1891. Since then, however, further experience has convinced me that there is yet another place in the male bladder, in certain forms of prostatic enlargement, where a calculus may lie out of reach of urethral instruments altogether, or to such an extent as to make it impossible to seize the stone by a lithotrite introduced through the urethra.

In a certain number of cases of prostatic enlargement the prostate forms are intravesical projection. This intravesical outgrowth may be egg-like, with the urethral orifice at the apex of the egg, while in other cases this ovoid projection may be deficient anteriorly, or anteriorly and laterally, or anteriorly and on one side only. It is never wanting posteriorly, and when deficient anteriorly and laterally we have the well known so called middle lobe enlargement. In fine, when we have anything more than middle lobe enlargement, we have lateral enlargement on one side or the other or on both, and it is between this lateral enlargement and the wall of the bladder that a pouch is formed in which I have found that a fair sized stone may lie and escape contact with a sound introduced urethrally, or if detected by the sound, prove unseizable by a lithotrite.

A The right lateral intravesical growth. B. Posterior or middle-lobe enlargement. C. Left lateral intravesical growth. D. The calculus. E. The sound.

The figure is taken from the first of the two cases I am about briefly to relate. The bladder has been cut away, leaving the interior of the vesical neck exposed to view. The intravesical prostatic growth is shown. In this case it is wanting anteriorly, and it is represented by the two lateral projections A and C, and the posterior or middle lobe enlargement B. Between the right lateral enlargement and the wall of the bladder lay the stone D, and it will be seen how difficult it is for the sound E, lying in the prostatic urethra, to be made to touch the calculus. In cases of intravesical prostatic growth, where the ovoid mass is complete all round the urethra, it is easily conceivable that a stone may lie anteriorly between the growth and the bladder wall. I have not as yet, however, met with stone in such a position. In both my cases the stones lay laterally, and caused the greatest difficulty and anxiety, until fully demonstrated by suprapubic incision. Suprapubic cystotomy has indeed let light into many of the dark places of the bladder.

Case I.—H., aged 69. All urine had been passed by catheter for four years. Had had renal attacks and passed calculi. There was great distress. Catheter was required every hour. Much vesical spasm. Urine contained blood and mucus. On August 13th, 1892, he was anæsthetised. Now and then the sound could be made to touch a calculus lying apparently on the neck of the bladder and on the right side. Patient and careful attempts to seize the stones with the lithotrite were unsuccessful. The patient continued to suffer severely, and on August 19th I opened the bladder suprapubically. My left forefinger readily defined a large intravesical prostatic mass, under which, in the post-prostatic pouch, no calculus could be felt, but as the finger passed round a stone was found wedged in between the right side of the intravesical prostate and the bladder wall. The calculus was easily removed with a scoop. The patient lived three weeks and lay relieved of pain, but gradually sank, apparently from an absence of any desire to live.

Case II.—C., aged 64. This gentleman had suffered much for ten years. He had passed numbers of small calculi. The prostate was very large, the whole urethra measuring 11 inches. The most careful catheterism was followed by blood. He could not bear to have the bladder washed out. On July 3rd, 1892, the patient was anæsthetised, and with great difficulty I satisfied myself that there was a stone in the bladder, lying on the right side and close to the neck of the bladder. Sometimes the sound could touch the stone, sometimes not, and it could not be seized by the lithotrite. The stone appeared large, and in a sac or pouch. Happily I thought of putting an elastic ligature round the penis, and filled the bladder with water; the stone was then seized and crushed and entirely removed, the work being done throughout in a distended bladder. Towards the end of the year discomfort was again complained of, and in March, 1893, I examined under the influence of ether, in every way possible, with sounds, tubes, and endoscope, but could detect nothing. Feeling convinced that there must be a calculus present, I opened the bladder above the pubes in April 13th. The intravesical prostate was very large, and laterally between it and the bladder wall lay three calculi. The post-prostatic pouch contained no stone. The patient lived two years afterwards, and did not die from any vesical trouble. I believe that the first stone which I crushed lay in this lateral prostatic pouch, and that it was large enough for me to seize when the bladder was distended with water; and that the second stone, which I had to remove by lithotomy, was small enough to be completely hidden in the pouch, and to elude all instruments introduced through the urethra.

With reference to the special treatment of what I would call *lateral prostatic calculus*, as distinguished from post-prostatic calculus, a suprapubic incision satisfactorily settles all difficulties, whether the stone is only suspected, or when it can be felt but not seized by the lithotrite; but naturally there are cases where a less severe treatment is desirable, and I am convinced that the manœuvre which I practised in my second case may occasionally be satisfactorily accomplished. The patient being anæsthetised an elastic ligature is placed round the penis, a catheter is introduced, and the bladder filled with a warm antiseptic solution. The catheter is removed and a lithotrite introduced. The elastic penile ligature effectually retains the fluid, but readily allows of the passage of the lithotrite. The wall of the bladder in this way is removed from close contact with the stone and if the pelvis of the patient is well raised, the stone may fall into a position where it can be seized by the lithotrite, or the calculus may be scooped out of its bed by a rotatory movement of the lithotrite, with its blades closed, upon its long axis. Should this fail an evacuating lithotrity tube may be introduced, an aspirator attached, and an attempt made to dislodge the stone by the suction of the aspirator through the tube, the eye of which has been brought as near the stone as possible.

Since this paper was written Mr. Cadge, of Norwich, who is not surpassed by any surgeon in this or any other country as an authority on stone in the bladder, has sent me his lectures delivered in the Royal College of Surgeons in 1886. In

discussing the difficulties of lithotrity in the aged, he points out that the enlarged prostate generally projects into the bladder, and leads to the formation of deep hollows or pouches on each side of or behind and beneath the prostate in which broken fragments of stone will hide, where it is most difficult to follow them, and from which it is sometimes impossible to dislodge them by any means or by any instrument. My observations will therefore perhaps be accepted as an enlargement of these remarks, and as adding emphasis to them.

Mr. Mayo Robson said that cases in which vesical calculi are inaccessible by the sound occur to every surgeon. He quoted three from his own practice. In the first there were symptoms of stone, but none could be touched by the sound; after the patient had been allowed to walk about for a few days a stone was just reached. Suprapubic cystotomy was performed, and the calculus found impacted in a sacculus in front of an enlarged prostate. The second case was one in which, during the operation of suprapubic prostatectomy, three undiagnosed calculi were found in a pouch behind the hypertrophied gland. In the third case the calculus could not be touched by the sound, but could be felt by the finger in the rectum; it lay in a post-prostatic pouch with a narrow neck, which had to be slit up before extraction by the suprapubic method was possible.

Mr. Browne, in reply, described Mr. Robson's first case as unique.

SYMMETRICAL NECROSIS OF EACH FEMUR; UNDER NOTICE TWENTY-THREE YEARS; REPEATED REMOVALS OF DEAD BONE; ULTIMATE AMPUTATION OF LEFT THIGH; RECOVERY.

By William Newman, M.D.Lond., F.R.C.S.Eng.,
Senior Surgeon, Stamford and Rutland Infirmary.

The following are the notes of this case:

E. M., male, 21, was first seen in 1872. He had been ill five years. There was dead bone in the lower and posterior third of each femur. Large plates of dead bone were removed.

In 1874 he was well save for a small amount of discharge, and was continuously at work.

In 1886, the patient being then 35 years of age, there was evidence of pent-up matter, specially in the back of the lower third of the left thigh. Free incisions gave exit to much pus but no loose bone was found. A large irregular excavated surface was felt on the posterior aspect of the femur. He was under care for two months, and much improved.

In 1891, being now 43 years of age, and having been at work as a gardener until three weeks before, he was found to be suffering from a renewal of acute mischief, specially in the left thigh, with very serious constitutional disturbance and implication of the left knee-joint. He was admitted into the infirmary on October 2nd, and amputation through the middle third of the left thigh was performed on October 24th. Repair was tedious but satisfactory. The specimen is now in the museum of the Royal College of Surgeons.

A DISCUSSION ON THE SURGICAL TREATMENT OF CYSTS, ADENOMATA, AND CARCINOMA OF THE THYROID GLAND AND ACCESSORY THYROIDS.

I.—Henry T. Butlin, F.R.C.S.,
Surgeon to St. Bartholomew's Hospital.

Mr. President and Gentlemen,—Probably I betray no secret when I tell that it was not originally intended that I should open this debate. I was indeed invited to take part in it, and was pleased at the invitation. Towards the end of March I received a letter from the officers of the Section to ask me to take the place of Professor Annandale, upon whom they had relied to introduce the subject of the surgical treatment of cysts, adenomata, and carcinoma of the thyroid gland and accessory thyroids, and who had, after long negotiations, reluctantly felt obliged to decline, as it was uncertain whether he would be able to attend our meeting. I cannot say I willingly accepted the task, for I was fairly frightened by the list of those who were to take part in the discussion, most, if not all, of whom know far more of the subject than I do; but time was growing short, it was necessary that someone should undertake to open the debate, and I agreed to do so, because it was represented to me that if I had no claim to be the wisest, at least I must admit to be one of the oldest of those set down to speak.

I mean to adhere as closely as possible to the text which our officers have decided on; but I would ask to be allowed to begin at the end of it, and to say at once that of *tumours of accessory thyroids* I know absolutely nothing. To my knowledge I have never seen a tumour of an accessory thyroid. I have certainly seen thyroid tumours lying at some distance from the thyroid gland which might have been supposed to have been developed in an accessory thyroid gland, but, when they were treated, they were found to be connected with the thyroid gland itself. I cannot but believe the frequency and importance of such tumours have been exaggerated. I do not know whether it was intended in this part of the subject to include the consideration of tumours with thyroid structure occurring in such situations as the base of the tongue. If that be so, I have, I suppose, seen more than my share; but my experience is contained in the *Transactions of the Clinical Society* (vol. xxiii, 1890, p. 118), and I have little to add to it.

Secondly, but still working backwards, I must confess to great ignorance of the surgical treatment of *carcinoma* of the thyroid gland. Probably it was intended to include sarcoma, and the word carcinoma may be taken to include both forms of malignant disease. Not only have I never removed a malignant tumour of the thyroid gland, but I have never seen one removed. And more, although I have seen a good many cases of malignant disease of the thyroid gland, I have never yet seen one in which there appeared the smallest likelihood of a successful radical operation. An examination of these and other museum specimens will show why this is so. Rapid infiltration, not only of the gland itself, but of the great vessels, nerves, and tubes in the vicinity of the gland, is a characteristic feature of carcinoma of the thyroid. And what is true of carcinoma is almost equally true of sarcoma, as these specimens will witness. I saw, in consultation, the patient from whom this mass was taken after death, and within three weeks of its first appearance, at least of his discovery of it, which was quite accidental. There was not, even at that early period, any chance of removing it. When he died a few weeks later (within ten weeks of the first noting of the tumour) it was, as you see it now, an immense mass, adherent to everything in the neighbourhood of the thyroid gland, and extensively ulcerated.

Last January I saw in consultation a boy, 15 years of age, whose thyroid had only been noticed to be large for about three weeks. There was general enlargement of the gland, but particularly an extremely hard and prominent mass on the right side, by which the trachea was thrust over to the left. The right side of the larynx was paralysed, the right pulse much smaller than the left. Sudden attacks of dyspnœa had several times occurred, and the tumour appeared to increase in size each day. I believed the disease to be malignant, but the rapidity of its progress and the age of the patient led me to recommend that it should be examined under an anæsthetic, in the possible chance that it might prove to be inflammatory. I cut freely into it, and found malignant disease, in which not only the thyroid was involved, but which had already extended beyond the limits of the gland and infiltrated the surrounding structures. If an operation had been performed on the very day the enlargement was first observed, there could have been no hope of a successful removal of the disease.

Although my own experience has been so unfortunate, I cannot doubt that there are occasional rare instances of malignant disease which are amenable to operation. I have read the accounts of a few such cases, chiefly in foreign literature, and I hope to hear some of our Continental *confrères*, whose experience in diseases of the thyroid gland is much larger than our own, speak on this important part of the subject.

Last, Sir, I come to the diseases which are set down first in your official subject for discussion, *cysts and adenomata*, of whose surgical treatment I speak with pleasure, as I have had some experience of it. The surgery of these tumours has improved very rapidly during the last ten years, and I believe the improvement is due to the more accurate knowledge which we have of them. Indeed, I would point to this as another and excellent example of the good influence of the study of pathology on the progress of surgery. Until within the last few years separate cysts and solid tumours of the thyroid gland were looked upon as rarities, and the enlargements caused by them were generally regarded as due to an enlargement of the gland itself. Now we know that almost all, if not all, partial enlargements of the thyroid gland are produced by separate and separable tumours. And we can go further than this, and say that, in the very large majority of instances, the tumour which produces the enlargement is either a cyst or an adenoma or a combination of cyst and adenoma. Here, for example, is a simple cyst in which only fluid was found. Here is a solid tumour which is formed of tissue resembling the structure of the thyroid gland. Here is a cyst in which an adenoma has grown, and here is an adenoma which contains a cyst. And here is another in which the cyst again contains a solid glandular growth. And here are larger complex tumours, in which the changes and relations of cysts and adenomata are rung in and out until the pathologist becomes confused in his attempt to assign the proper value to their component parts. But to the surgeon they all present some common features: they are innocent tumours, separate and generally easily separable, enclosed in distinct capsules, and for the most part growing in the midst of sufficiently healthy thyroid glands—glands which are certainly no more diseased than the mammary glands in which we find corresponding tumours.

It is difficult to understand why we have been so slow to become acquainted with these facts. Our ignorance of them is reflected in our nomenclature. We still speak of a cyst, simple or proliferous, of the thyroid gland as a "cystic goitre," which may be translated into "cystic enlargement of the thyroid gland;" and, of mixed solid and cystic tumours as "cystic adenomatous goitres," terms which seem to imply that there is some general affection of the thyroid gland, instead of a tumour in the substance of the thyroid gland. Who of us would speak of a fibro-adenoma of the mammary gland as an "adenomatous enlargement of the mammary gland," or of a simple or proliferous cyst of the breast as a "cystic enlargement of the mammary gland?" And who of us would think of treating a cyst of the breast by opening it and fastening its margins to the opening in the skin? Yet such terms and such treatment are regarded as suitable to cysts of the thyroid gland. For the term "goitre" suggests an enlargement of the thyroid gland, a disease of the gland, which would require the removal of a part of the gland, and surgeons have been disinclined to undertake their removal, scarcely knowing where the operation would lead; and feeling that they were only removing a part of a general disease, which might not improbably spread after the operation to the parts of the gland which were yet apparently sound.

With a better knowledge of the conditions to be dealt with a more reasonable and appropriate surgery has grown up. Cysts and adenomata are removed precisely by the same method as is employed for their removal from many other parts of the body; indeed, much more easily than from some parts of the body, on account of the readiness with which they can be separated from the tissues of the thyroid gland. I need not describe the operation further than to say that the tumour is exposed by a free incision; that the structures over it, including a layer of the thyroid gland itself, are divided until the capsule of the tumour is apparent. The capsule can almost always be readily distinguished by its bluish tint, compared with the redder colour of the thyroid gland, with which it may be confounded. From this point the knife is used as little as possible; the tumour is separated, generally quite easily, from the surrounding tissues with the finger, aided by an occasional touch with the knife or scissors to some firm band which will not yield. The hæmorrhage is temporarily arrested with clamp forceps, and, after the removal of the tumour, the vessels are tied with catgut. The wound is treated precisely in the same manner as any other wound of the neck or body. And it usually heals within five days or a week, with the exception of a tiny sinus at the lowest part, which is left by the introduction of a strip of gutta percha tissue. It is expedient to use some drainage during the first few days, in order to drain off fluids which are liable to ooze into a cavity over which it is impossible to maintain sufficient pressure.

If the operation is thus performed, I know no special difficulties connected with it; there is no reason to take special precautions against hæmorrhage; no reason to treat the wound differently from any other wound; no fear of damage of any important structure.

I first took out a separate tumour of the thyroid gland (it was a fibroma) in the year 1884; and, since then, have performed the operation many times. Mr. Charters Symonds has written[1] in favour of it; but I believe that Professor Socin must be regarded as the real author, although he has not himself described it in print; for I think this is the operation which goes by the name of Socin's operation of enucleation.[2]

Of the dangers of enucleation, perhaps the fairest estimate may be formed by comparing it with operations for the removal of enlarged lymphatic glands of the neck.

The operation of enucleation is, so far as I have seen, applicable to all innocent tumours of the thyroid gland, whether solid or cystic. I believe I may go so far as to say that it is applicable to all partial enlargements of the thyroid glands which are due to non-malignant causes; for I am disposed to accept Mr. Berry's suggestion that almost all partial enlargements are due to the presence of cysts and cystic tumours,[3] with perhaps one exception—enormously capacious and deep cysts which pass far down behind the sternum. My colleague, Mr. Bowlby, described one of them at a meeting of the Clinical Society last April. It presented as an ordinary cyst well above the sternum, and he proceeded to remove it. But soon finding that it passed behind the sternum, he opened it, and, looking into its interior, could see that it was several inches deep, and that its base rested on the aorta and great vessels of the arch, which could be plainly seen pulsating through its thin wall. The enucleation was not further proceeded with; the cyst was drained, and the patient made a good recovery. Many years ago, in the out patient department, I met with a somewhat similar but even more terrible case. A woman, aged about 40, came to St. Bartholomew's Hospital with a prominent swelling of the left lobe of the thyroid gland, which I diagnosed as a cyst, and I then did, what I should not now do, tapped it with a trocar and cannula, partly to confirm the diagnosis and partly with the hope, which I should not now have, of curing it. The fluid which issued from it was deeply blood-stained. I caught it in one of the old pewter bowls which have been in use in St. Bartholomew's Hospital for centuries and which are marked inside with circular lines to show the number of ounces contained at different levels. In the course of a few minutes several ounces had escaped through the cannula, but while the tumour became no smaller the fluid became more bloody and the flow was as steady and forcible as at the first. I was surprised and wondered what to do. Having had no previous experience of a hæmorrhagic cyst of the thyroid gland I withdrew the cannula and covered the opening with a dressing, which was firmly fixed with broad strips of strapping. The hæmorrhage ceased and the patient went home.

But two or three days later she came back to the hospital, saying that whenever the dressing had been disturbed blood had escaped. She was admitted. The neck was prepared for operation: chloroform was administered. I exposed and

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[1] *Clin. Trans.*, 1890, xxii-51.

[2] It is difficult to be sure to whom the credit of suggesting the enucleation of cysts of the thyroid gland is due. In 1883 Juillard recommended this method of dealing with cysts (*Revue de Chirurgie*, 1883, p. 585). In the same year, and in the following year (1884), the *Centralblatt f. Chirurgie* contains the same suggestion by Kottmann. And again, in 1884, the same journal contains a fuller account of the method by Burckhardt. But the application of it to mixed cystic and solid tumours, and to completely solid tumours, appears to be due to Socin. The *Correspondenzblatt f. Schw. Aerzte*, vol. xvi., p. 592 (1886), contains a paper by C. Garré, Socin's private assistant, in which the advantages of the method of enucleation, as practised by Socin, both for solid and cystic tumours, are fully set forth.

[3] *Path. Trans.*, xli, 262, 1890.

opened the cyst. Blood escaped freely. I enlarged the opening, hoping to discover a bleeding vessel; but, while no distinct bleeding point could be discerned, I found that the cyst passed deep down into the chest, and blood seemed to pour from every part of it, and in such abundance that I thought the poor creature must have died upon the table. I saw that no time was to be lost, and as rapidly as I could plugged the cavity with long strips of lint. Its capacity may be judged by the fact that it took nine strips, each of which was about 1 inch in width and about 12 inches in length. To my great relief the patient made a good recovery.

The so-called "hæmorrhagic cysts," when they are so situated in the gland that they can be readily reached, may be removed like cysts in which no bleeding has taken place. Here are specimens of several of them. One is an old specimen from the Museum of the Royal College of Surgeons.[4] The cyst was punctured and continued to bleed until the patient died. It serves to illustrate the need of removal, or at least of efficient plugging of such cysts. But it does not tell—what, indeed, no one has yet satisfactorily explained—why some thyroid cysts bleed so readily, and why the bleeding is continuous. The readiness with which they bleed may perhaps be explained by the frequency with which they contain soft and very vascular intracystic growths, but not the dangerous continuance of the bleeding.

To my mind, there is one great objection to the treatment of cysts and adenomata of the thyroid gland by excision or enucleation—the scar. And in the cases of young subjects I can never reconcile myself to it. At the present time we are so enamoured of our art and so pleased with our achievements in surgery that without hesitation we cut wounds which leave long scars in the neck, white and fine and perfect as scars, but cruel disfigurements in the eyes of the patients and their friends.

To avoid such scars I have, in a certain number of cases, employed Morell Mackenzie's method of treating cysts by injection. This method, which I believe to be excellent in suitable cases, has fallen much into disuse, partly because of its uncertainty, partly because it is not free from danger, and is sometimes very long-lasting and tedious; and partly because the method of treatment by enucleation is at present in vogue, for we have our fashions in surgery as in our dress and manners.

To save time, I would refer those who are not familiar with the details of Mackenzie's method to the original paper,[4] and would urge that the instructions which the paper gives should be closely followed. The object of the treatment is to convert the cyst into an abscess, which discharges through a small cannula until it has completely healed from the bottom. If the treatment succeeds—and it is sometimes brilliantly successful—there is really no appreciable scar. It is hardly to be recommended for hospital patients on account of the loss of time incurred, for the suppuration may continue as long as four or even six months. But where time is of little importance, and the avoidance of a scar is of primary importance, I do not hesitate to practise it.

And in order to do so with the best prospect of success and with the least danger, I have again quite recently studied the accounts of cases to discover, if possible, the conditions which have led to failure, and the causes of danger or of death: for it is said that in some cases repeated injections have failed to cure the disease, and in other cases an injection has been immediately or quickly followed by death, presumably from thrombosis or embolism, or the entrance of air into a vein, or there has been paralysis of a vocal cord and permanent affection of the voice, or diffuse suppuration has occurred in the tissues around the thyroid, and this has sometimes led to death.

I believe that failures and danger are largely to be ascribed to the treatment of improper cases, and the selection of fit cases has been rendered unduly difficult by our confused knowledge of the pathology of tumours and enlargements of the thyroid gland. From what I can learn the treatment by injection has been practised promiscuously in cases of separate cysts and cystic tumours, and in parenchymatous enlargements of the thyroid gland. Even Mr. Berry, in his Jacksonian prize essay,[5] which deserves the highest praise, treats of the injection of cysts and parenchymatous goitres under one heading, and speaks as though it matters not whether an injection be made into a closed cavity or into the substance of the gland. I hold so different an opinion that, while I fearlessly treat simple cysts by injection, I would not on any account deliberately inject into the substance of the thyroid gland.

Mackenzie himself made a great distinction between the cases in which parenchymatous injections were made and those in which a solution of perchloride of iron was injected into a closed cavity. The drawing off of the liquid of the cyst through the cannula ensured the entrance of the injection into the cavity, not into the substance of the gland. Under such circumstances there is no fear of injecting into the interior of a vein, or of wounding the recurrent laryngeal nerve. And, if the cyst is continuously drained through the cannula until it is closed, there is scarcely any danger of a diffuse suppuration of the gland and its surroundings. I would not aver that the treatment of simple cysts by injection is free from danger, but I believe the danger is reduced to a minimum in the case of simple cysts. Suitable for this treatment are cysts of moderate size, cysts which are thin-walled, cysts which are simple, cysts which contain but little blood in young persons who are in good health. Conversely, strumous and delicate patients should not be treated by injection; and very large cysts and old cysts with thick walls, and cysts with calcareous walls, and compound cysts and cystic tumours should be treated by enucleation, for they are not suited to this method.

I have often wondered how far the presence of intracystic growth interferes with the successful treatment by injection. A small quantity of it probably is not an obstacle to success, for the large majority of cysts contain some growth on the inner surface of their wall. And, I suspect, that even a large quantity of soft growth would shrink up and cease to grow under the influence of injection and consequent suppuration. For pathological thyroid gland tissue, whether it produces a general enlargement of the gland, or whether it produces separate tumours, appears strangely sensitive to treatment. Faint-hearted attacks upon it, which would be almost surely resented and followed by more active growth of many tumours, are frequently successful in arresting its growth and inducing it to shrink. Yet, I would not willingly attempt to treat by injection a cyst of the thyroid which was known to contain a large mass of solid growth.

In spite of careful selection of cases for injection, it is probable that some cases will end in failure, for it is not possible invariably to gauge the fitness of the individual case. It may then be necessary to excise the disease. I should have thought that an operation undertaken under such circumstances would prove to be very difficult. I have never myself performed it, but other surgeons have done so, and their reports do not tell of greater difficulties or dangers than are met with in ordinary cases.

Of other methods of treatment of cysts and adenomata of the thyroid gland I have had no experience, nor have I any inclination to adopt them, unless a better account is given of them to-day than I have learned from reading.

It will be seen, Sir, that I have not dealt with parenchymatous enlargements of the thyroid gland, whether simple or containing cysts. To have done so would lead to long and probably discursive discussion. You, Sir, in your good judgment, defined the subject for discussion in such a manner as to exclude all true goitres. And I have thankfully availed myself of your definition, for it saved me from dealing with matters in which perhaps I should have gone beyond my depth.

II.—J. Rutherford Morison, F.R.C.S.,

Assistant Surgeon, Newcastle-on-Tyne Royal Infirmary.

Mr. Morison entered upon the question of exophthalmic

[4] I am indebted to the authorities of this museum and of that of St. Bartholomew's Hospital for permission to exhibit specimens.

[4] *Clinical Society's Transactions*, vol. vii, p. 115 (1874).

[5] "Cystic and parenchymatous goitres are so closely allied to one another in their nature, and also, to a certain extent in the treatment suitable for them, that it has been thought advisable to treat of both under a common heading." (p. 84.) a, Simple tapping; b, tapping and injection; 1, Semon's method; 2, M. Mackenzie's method.

goître, operations on which appeared, according to recent experience, to have been very successful. Four cases, however, which he had recently seen in the practice of four different surgeons, had terminated unfavourably. Upon the question being raised, the President decided that exophthalmic goître did not come within the scope of the discussion.

III.—W. W. KEEN, M.D., LL.D.,

Professor of Surgery, Jefferson Medical College, Philadelphia; Surgeon to Jefferson College Hospital.

PROFESSOR KEEN drew attention to the fact that on the Continent of Europe thyroid operations were done without the use of anæsthetics except in children under 15 and in very nervous patients. He was much struck with the very slight pain of the operation. When no anæsthetic was given there was less hæmorrhage since the respiration was less embarrassed, and the patient did not cough when coming to. Also during the ligation of the inferior thyroid artery the patient was induced to talk in order that it might be seen whether the recurrent laryngeal nerve was included in the ligature. Professor Kocher, whose practice he was describing, made a transverse incision convex downwards so as to get at the thyroid better, and leave a well-concealed scar. Dr. Keen thought the scars in Mr. Butlin's cases very slight. He suggested the use of Halsted's subcuticular suture for the purpose of obviating unsightly scars. This is effected by a moderately stout silver wire carried backwards and forwards across the face of the cavity beneath the skin. The wound is slightly puckered at first, but when the suture is removed, in some cases after as long as three weeks, almost no visible scar is left. There is no invasion of the ligature by the epidermal streptococci. Dr. Keen's own personal trouble in these cases was hæmorrhage. Much attention is paid to this in Switzerland, every bleeding point (artery, vein, or tissue) being seized in pressure forceps and subsequently, if necessary, ligatured. Thus not more than 2 ozs. of blood are lost during the operation. Professor Kocher, after his first incision, cuts right down to the tumour, tying every source of bleeding. He then goes for the tumour, commencing his extirpation at the upper part, which he can often wipe clean from the surrounding tissues. He next ties the superior thyroid artery and vein, and then goes right down to the thyroidea ima. He finally feels for and ligates both inferior thyroid arteries in succession, then removes the tumour. Dr. Keen assented to Mr. Butlin's statement that in diseases of the thyroid the treatment should rest on a pathological basis.

IV.—CHARTERS J. SYMONDS, M.S., F.R.C.S.,

Assistant Surgeon, Guy's Hospital.

MR. SYMONDS had had 44 successful cases of thyroid operations, of which 29 had been on cysts and adenomata. Carcinoma of the gland was inoperable, but where there was compression of the trachea indicating tracheotomy, it was a surprising fact that almost no hæmorrhage attended the incision through the growths. For cysts he employed the median incision, which allows the surgeon to get at any tumour of a lobe. Professor Kocher is troubled by hæmorrhage because he resects the gland before approaching the tumour, which is unnecessary in 99 cases out of 100, whereas dissection of the gland off the cyst is unattended with hæmorrhage. "Hæmorrhagic cysts" are those which have vascular growths from their walls. If the wall of a cyst is white it can be enucleated without hæmorrhage; if purple and vascular, blood rushes out when it is punctured. The hæmorrhage is alarming for a moment, but as the cyst wall is very thin the finger can be inserted and the whole tumour turned out almost instantaneously. The cavity is plugged with a sponge and the bleeding stops at once. With regard to the question of anæsthetics, ether leads to free hæmorrhage, which is not present when chloroform or A.C.E. mixture is used. The wound should be drained for twenty-four hours but no longer. Substernal cysts are very grave but, if thick-walled, may be operated on with confidence. As to injection, pure cysts do well, those with solid growths badly, for where there is a growth the wall is thin, and suppuration is liable to extend through. The great objection to injection is the frequent impossibility of diagnosing between solid and cystic growths. With regard to the scar, Mr. Symonds makes a median one as near to the sternum as possible. He finds that a white-walled tumour can be punctured and removed through a 1½ inch incision without hæmorrhage.

V.—A. W. MAYO ROBSON, F.R.C.S.,

Senior Surgeon, Leeds Royal Infirmary; Professor of Surgery, Yorkshire College, Leeds.

MR. MAYO ROBSON, on the whole, supported Mr. Butlin. He had changed his views since reading Mr. Symonds's paper on the subject. He had no experience of accessory thyroid tumours. In regard to malignant disease he considered it but rarely amenable to operation. The dyspnœa was very hard to relieve, but intubation had been very successful in one case in which tracheotomy was impossible. He had sometimes had difficulty in enucleation, and had even had to remove a whole lobe. He had tried subcutaneous suture and found that it minimised the scar, whence Mr. Butlin's objection to incision was not very important. Ether as the anæsthetic produced great venous congestion with increased hæmorrhage and dyspnœa, but chloroform and A.C.E. mixture were not open to this objection. A very good method was to anæsthetise the patient during the skin incision, and then to allow him to come to. He had twice done tracheotomy for dyspnœa during an operation on the thyroid, and had made a point of suturing the trachea immediately after the operation, avoiding the difficulty which Professor Kocher finds in this procedure.

VI.—JAMES BERRY, B.S., F.R.C.S.,

Surgeon, Royal Free Hospital.

MR. BERRY said: I think it ought to be clearly borne in mind that the great majority of cases of goître that we meet with in practice require no surgical treatment. I cannot help thinking that of late years operations for goître have been performed a little too often, sometimes when they were really not necessary. In my own practice I operate only on a small minority of cases that come under my notice. There should, in my opinion, always be some definite reason for the operation other than the mere presence of a tumour. That reason in most cases is dyspnœa. I find from my notes that my operations for the removal of goître have been 36 in number, and that in 31 of these cases the operation was undertaken on account of dyspnœa, often dyspnœa of a severe and paroxysmal nature. In one case dysphagia was the cause of operation, in another a septic sinus that had followed injection of a large cystic goître performed a year previously at another hospital; in 3 cases only have I operated merely for deformity; in 2 of these the patients were young ladies exceedingly anxious to be rid of a deformity which prevented them from wearing low dresses.

There are two main classes of operation by which removal may be effected, and these two classes are essentially different. One is extirpation of a part of the gland together with its glandular capsule, an extraglandular operation; the other is enucleation of a localised tumour, whether cyst or adenoma, from within the thyroid gland in which it lies embedded, an intraglandular operation.

I should like here to refer to a remark made by Mr. Symonds, and to express the opinion that these localised tumours, however superficial they may appear to be, really are always covered by a layer of true gland tissue. The latter is often so much thinned and atrophied by pressure that the tumour appears to be uncovered by thyroid tissue; a layer of such tissue nevertheless always exists, and its presence can be and has been repeatedly demonstrated by the microscope. In operating by enucleation it is very important that this layer be penetrated, so that the actual surface of the enucleable tumour be exposed. The shelling out is then effected far more easily and safely.

It is often a difficult matter to decide which of these two operations, extirpation or enucleation, is to be preferred for a given case. Enucleation is to be attempted, I venture to think, in those cases in which there is a single well-defined tumour on one side of the neck only. It is, in the main, correct to say that unilateral goîtres are capable of treatment by enucleation, but we must not forget that there are some

few cases of strictly unilateral goitre in which enucleation is wholly inadmissible and impossible to perform. These are chiefly the cases of large solid fibro-adenomatous tumours involving the whole of one lateral lobe of the gland, and which are met with chiefly in middle-aged women. In one case of this kind I successfully removed by extirpation, not by enucleation, a tumour which weighed 19 ounces. Subsequent examination of the tumour showed that there was no intraglandular capsule, and that consequently enucleation would have been an impossible operation.

Another class of unilateral tumours unsuitable for enucleation comprises those cases in which one lobe of the gland is occupied by a number of cystic or solid tumours, the opposite lobe being healthy or nearly so; such cases are, however, comparatively rare.

The most characteristic feature of a tumour capable of removal by enucleation is, in my opinion, its shape. The more nearly globular the tumour the more likely is it to permit of enucleation. Tumours that preserve exactly the normal pyriform shape of the gland are seldom suitable for enucleation. Smoothness of surface is another point of some importance. Very irregular nodular tumours are seldom suitable for enucleation, since the irregularity generally betokens the presence of multiple cysts or adenomata, and multiple tumours are not as a rule removed with advantage by any intraglandular operation.

The position of the tumour is a point of some importance, since unilateral tumours high up in the gland, although a great deformity, rarely cause serious dyspnœa unless very large indeed. Of unilateral tumours it is those that are situated low down in the neck, and especially in the upper opening of the thorax, that most urgently demand removal. To illustrate this point I have selected a typical case out of several that have come under my notice. A man, aged 53 was admitted into the Royal Free Hospital under the care of my medical colleague Dr. Sainsbury, suffering from extreme paroxysmal dyspnœa, for which at first no cause could be found. I show you a cast of the neck taken before operation, and you will see that there is no visible swelling. On examining the root of the neck a slight swelling could be felt just above the sternal notch, evidently the top of a substernal goitre. The man's condition being desperate, I cut down upon the swelling, and succeeded in pulling up from behind the sternum and removing by enucleation the tumour now shown to you, and which is about as large as an ordinary tennis ball; about two-thirds of it is solid, the remainder cystic. The wound healed throughout by primary union, and the man left the hospital on the seventeenth day completely cured.

A few words in conclusion upon the complications of operations upon goitre. By far the most serious are sepsis and hæmorrhage. Of the former it is not necessary to say much. It is of course all important that the operation should be strictly aseptic, and I have pleasure in stating that I have never lost a patient from suppuration or other septic complication following an operation for goitre. In one case some suppuration was followed by a slight attack of pneumonia, and caused much anxiety for about three weeks, the patient then making an excellent recovery; this was a case of extirpation of a large bilateral parenchymatous goitre. Hæmorrhage, especially venous hæmorrhage, I have found occasionally to be troublesome. This has especially been the case with some enucleations. I consider that hæmorrhage is less serious in cases of extirpation, because every vessel should be seen, and tied or clamped before it is cut. In all my later cases of extirpation, the loss of blood has been quite trivial, and I hardly ever see spurting from any artery except the most minute. With enucleation the case is somewhat different. In the great majority of cases there is very little bleeding, but sometimes, especially in the case of large tumours and tumours in young subjects, the hæmorrhage may be very alarming. It is best dealt with by rapidly completing the enucleation, and then temporarily drawing the bottom of the wound forward with a pair of forceps. Of wound of the recurrent nerve, a grave complication by no means unknown, I have fortunately had no personal experience.

An anonymous donor has presented to the Royal British Nurses' Association the sum of £100.

VII.—C. B. Keetley, F.R.C.S.,

Senior Surgeon, West London Hospital.

Mr. Keetley had twice operated in cases of malignant disease, and three times without an anæsthetic. In one of the latter cases the tumour projected anteriorly in front of the chin, reached downwards to the sternum and outwards to the ear on either side, overlapping both sterno-mastoids by numerous processes. Anæsthesia was only employed during the division of the skin. A flap was turned back, and the tumour occupied 3 hours in removal, during which the patient was under no sort of restraint whatsoever, and did not raise any objection. The only time that any pain was felt was in the process of lifting the tumour up from behind the sternum. Another operation was performed without an anæsthetic owing to the patient taking chloroform very badly. Malignant disease came in another category altogether. Theoretically the growth must at one time be encapsuled, and should therefore be favourable for removal if only diagnosed early enough. The difficulty at present was the early diagnosis of malignancy, but surgeons who operated frequently on the thyroid would no doubt often find cases of early malignancy. The advance in our knowledge of this subject was due to the improvement of clinical pathology. Mr. Keetley considered that there should be no hesitation about lengthening the incision if necessary. Drainage was not required, but the serum might be let out later if necessary by means of a probe. He concluded by expressing his decided objection to any method of treatment which had for its object the setting up of suppuration.

VIII.—A. E. J. Barker, F.R.C.S.,

Surgeon to University College Hospital; Professor of Surgery, University College, London.

Mr. Barker recounted two cases of malignant disease of the thyroid which he had successfully treated by operation. In the first the tumour had been pronounced malignant six years before the operation by the late Mr. Hulke and Sir William Savory. Mr. Barker made an incision 13 in. to 14 in. long, and enucleated the growth together with infected glands behind the clavicle as far as the apex of the pleura. The wound healed by first intention. There was recurrence in a gland two years after the operation. This was removed, and the patient was quite well last Christmas, six years after the original operation. The second case was one in which the right side alone was affected. The right scalenus anticus muscle had to be removed, and the phrenic nerve turned aside. The wound healed by first intention, and there was no recurrence five years later, though the patient suffered from urgent dyspnœic attacks suggesting mediastinal growths.

IX.—Jordan Lloyd, F.R.C.S.,

Surgeon, Queen's Hospital, Birmingham, and Birmingham and Midland Hospital for Children.

Mr. Lloyd had had two cases in which enucleation was very difficult, the cysts being associated with solid tumours. He had formerly disbelieved in the occurrence of severe hæmorrhage in these cases, but had since had two very severe examples. In one case of a woman aged 60, there was great dyspnœa, and the patient's condition was very grave. An ice-bag was applied to the tumour, and the patient propped up in bed. Seven or eight days later Mr. Lloyd excised the tumour with success. He considered that the malignancy of Mr. Barker's cases must have been very different from that usually met with in thyroid tumours, which, as a rule, progressed very rapidly, and attached themselves very firmly to surrounding structures. There might be besides sarcoma and carcinoma a third kind of malignancy peculiar to the thyroid, and Mr. Barker's cases were possibly examples of this. Mr. Lloyd thought Mr. Butlin's objection to enucleation on account of the scar unfounded, and believed injection to be much too dangerous to practise, leading, as it sometimes did, to fatal results. He had four or five times operated by horizontal incisions low down in the neck, thus obviating the scar.

X.—Thelwall Thomas, F.R.C.S.,

Assistant Surgeon, Royal Infirmary, Liverpool.

Mr. Thomas described two cases of accessory thyroid tumours.

The first was in a woman aged 25, who had lumps behind the sterno-mastoid near the ear, and one under the angle of the jaw. These were quite unconnected with the thyroid, but on removal were found to be composed of normal thyroid tissue, one containing a small cyst. The second was in a woman aged 29, who had had a little lump in the posterior triangle above the clavicle ever since she was quite a little girl. It consisted of thyroid tissue with cysts. The thyroid itself was normal. Mr. Thomas agreed with the difficulty of diagnosing cysts from solid tumours in the neck, but had a great objection to running needles into them. He called attention to the lines of cleavage in the skin, one of which ran right across the middle line of the neck. If incisions were made parallel to the lower jaw the skin would not stretch subsequently.

XI.—R. C. Chickens, F.R.C.S.,

Surgeon, General Hospital, Nottingham.

Mr. Chickens had first operated on the thyroid in 1885, when the current of opinion was contrary to surgical interference. He treats all tumours by enucleation, and believes that the difficulties in this are usually caused by the previous application of strong medicaments to the skin. He has only met with one case of hæmorrhage; in this he could not enucleate the tumour, but had to tie its pedicle. In some large unilateral growths he removes the isthmus of the thyroid, after which they atrophy. The largest cyst he had met with he tapped and drained with perfect success.

XII.—C. W. Cathcart, M.B., C.M., F.R.C.S.,

Assistant Surgeon, Royal Infirmary, Edinburgh.

Mr. Cathcart simply desired to draw attention to the gradation in malignancy between different thyroid tumours, there being an intermediate stage between the malignant and the non-malignant.

Mr. Butlin's Reply.

Mr. Butlin thought that the account given of Professor Kocher's procedure showed that we are much ahead of Continental operators in thyroid surgery. He had never had to ligature the inferior thyroid artery, and was not accustomed to more than 2 drachms of hæmorrhage. He thought that the scar of the transverse incision rather recalled a cut throat, and considered it a misfortune when he punctured a cyst during its removal. He had only met with one adherent thyroid tumour, and in that case there was curiously little bleeding, the vessels having been destroyed by the adhesions.

ABSTRACT OF NOTES UPON A SERIES OF SEVENTY OPERATIONS FOR THE REMOVAL OF TUMOURS FROM THE URINARY BLADDER.

By E. Hurry Fenwick, F.R.C.S.,

Surgeon to the London Hospital.

The value of an intelligent and skilful electric cystoscopy in determining the presence and the character of vesical tumours and in indicating the propriety of removing them is amply borne out by the results obtained in this series. The following points are submitted for discussion:

Benign Tumours.

Although benign papillomata of the urinary bladder are characterised by the symptomless appearance of blood, causelessly and intermittently, in normal urine, yet there are some papillomata which evoke symptoms which markedly resemble stone in the urinary bladder. This deviation from the classical is due to the length of the pedicle or stalk, which favours the free excursion of the tumour and allows it to get swept into the orifice of the bladder, and to act as a partial or as a complete plug. Benign papillomata therefore readily fall into two divisions, the non-obstructive and the obstructive. Of these the former are by far the more common. I hold very strongly that the calculus sound should not be employed in either class. In the non-obstructive group the symptoms are so definite and so dissimilar to stone that its employment in males under 50 years of age is not only useless but detrimental. After 50 years of age, cases are encountered in which small, smooth uric acid stones, lodging behind an upraised prostate, produce symptoms similar to those of benign growth, and the sound permissible. In the obstructive group of papillomata a cross-examination of the onset symptoms will permit of a diagnosis of pedicled tumour being made rather than that of stone, and a distinct danger is avoided if the patient's bladder is not interfered with. In the obstructive group backward renal pressure has already been exerted by the plugging; there is always more or less residual urine, and the sound or the catheter is extremely prone to induce cysto pyelitis.

In all cases in which a vesical growth is suspected it is much wiser to cystoscope in a period of calm between the attacks of hæmaturia, and to arrange that the bladder be full of urine at the time. In all cases of growth, if the bladder has not been meddled with, the urine in these intervals will be seen to be quite clear, and the growths are exhibited to their best advantage. Failing a cystoscopy, a fingertip sized opening suprapubically is the best method of examination.

Operation.

The best results have been obtained in cases which have not been sounded or catheterised. I am sure that the true surgery of the disease is to make the operation coincident with the examination. All those cases in which the operation has been performed immediately after the cystoscopy have done well. These remarks apply equally well to operations for the removal of stone from the bladder.

Routes.

Women seem more prone to produce pedicled papillomata than men. Many of these growths can be cleanly removed through the dilated urethra, either with forceps or through cannulæ, but the surgeon should always obtain permission to operate through the vaginal septum or suprapubically in case he should find that the base is extensive or the pedicle very thick.

In men, the only certain and surgical route is the suprapubic.

It is advisable in every case of subacssile or pedicled growth to remove the base cleanly either by cutting or by crushing and cutting. The curette is only indicated in large sessile patches or secondary minute patches. The bleeding from the base of the ablated tumour should be arrested before the patient leaves the table. The best means to effect this is probably a silk ligature left hanging out of the bladder or the application of iron through a Keith tube. I have reason to believe that the munching or squeezing of the healthy mucous membrane in the neighbourhood of the growth fosters the appearance subsequently of growth in the traumatised areas. It is questionable whether the removal of a small sessile patch is advisable in the male before 32 years, as the rate of increase of sessile patches is often very slow. To determine this question, the cystoscope is of the utmost value. The longer the history of a non-obstructive tumour the denser will its structure be found to be.

Malignant Growths.

The opinion I expressed in 1893 regarding operative interference of malignant growth has not been modified by wider experience. The hard slow-growing single button of carcinoma can be removed with a fair prospect of successful delay of the course of the disease, provided that the base and submucous tissues beneath the tumour be removed with the knife. Munching the surface of a carcinoma and leaving the base is tantamount to an increase in the rapidity of its growth. Malignant growths situated on or near the trigone do not repay removal, and always resent interference. If they obstruct, they had better be treated by suprapubic drainage. All infiltrating growths as detected by rectal, or by bimanual examination under ether, all multiple or "contact" growths as discovered by the cystoscope are inoperative. Small, single, indolent malignant growths may be removed even when they have so far advanced as to become glued to the muscle coat, provided that the entire thickness of the subjacent bladder wall be resected with them. This

is, of course, only feasible in the anterior, lateral, or posterior wall of the middle and upper zones. When the peritoneum is included in the ablation, free drainage of the bladder must be maintained in order to afford the bladder wound time to heal. As an example of the value of resection, I may mention that I ablated a large piece of the left lateral wall of the bladder for epithelioma two years ago.[1] The patient is still at work and in good health.

RESULTS.

These 70 ablations include recurrences. I have had 5 deaths, 2 as the direct result of the operation.[2] The remaining 3 deaths occurred in carcinomatous cases at or about the third week after the operation, the patients dying of renal complications.

A NOTE ON THE EMPLOYMENT OF DIPHTHERIA ANTITOXIN AS A CULTURE MEDIUM FOR THE DIPHTHERIA BACILLUS:

AND ON SOME PRACTICAL POINTS IN CONNECTION WITH THE PREPARATION OF DIPHTHERIA ANTITOXIN.

BY

A. E. WRIGHT, M.D., Professor of Pathology, Army Medical School, Netley.

and

SURGEON-MAJOR D. SEMPLE, M.D., Assistant Professor of Pathology, Army Medical School, Netley.

THE bacteriological diagnosis of diphtheria is at present almost exclusively in the hands of bacteriological specialists. The practitioner takes a portion of the diphtheritic membrane, or a swab which has been in contact with the diphtheritic throat, and sends it in for diagnosis to a central laboratory. Cultures are there made from the diphtheritic material upon tubes of blood serum; these cultures are kept at blood heat for twenty-four hours; the bacteria which have grown are then examined microscopically, and the result is reported to the practitioner. This deputing of the task of making the bacteriological diagnosis has been found to work well in practice. But there are numerous occasions when, either owing to distance from a laboratory or other causes, this course cannot be adopted. In such cases the practitioner must himself undertake the bacteriological diagnosis. He has hitherto been deterred from doing so by the fact that blood serum, which constitutes by far the best culture medium for the diphtheria bacillus, is not easily obtained.

We propose to show that this difficulty can be easily overcome. The practitioner who is dealing with diphtheria will, we may take it, generally have beside him a supply of antitoxic[1] serum or plasma. Now, in this antitoxic serum or plasma the practitioner has at his disposal as good a culture medium for diphtheria as the serum which is derived from a non-immunised animal.

The method by which the culture medium can be prepared is as follows. A small quantity of the antitoxin (half a teaspoonful will amply suffice) is to be poured into any clean—but not necessarily sterile—small wide-mouthed bottle. The bottle is to be brought into the horizontal position, and the albuminous substances of the serum are to be coagulated in this position so as to adhere to the side of the bottle. This may be conveniently done by laying the bottle sideways over the mouth of a steaming kettle. The bottle is to be removed as soon as the serum is firmly coagulated. Any water of condensation that may have accumulated is to be poured off, and the culture medium is to be allowed to cool down. It is then to be inoculated by passing a stout wire or glass rod which has been brought in contact with the diphtheritic throat lightly over its surface. The stopper is then to be replaced, and the bottle is to be kept as nearly as possible at a blood temperature. If a higher temperature cannot be obtained, the temperature of an inside pocket will generally suffice. The microscopical examination may be undertaken after 24 hours have elapsed. The material for examination may be obtained by lightly scraping the surface of the culture medium with a platinum needle.

This method of preparing a culture medium from antitoxic serum or plasma may also be employed in the laboratory. There will probably, in every laboratory in which antitoxin is prepared, be enough leavings of antitoxic serum or plasma to make it unnecessary to employ serum derived from other sources. About 1 to 2 c.cm. of the antitoxin suffice for each examination, and the serum may conveniently be coagulated in a Petri's dish held over a beaker of boiling water.

In this connection it may not be out of place to advert to the following practical points in connection with the preparation of diphtheria antitoxin:

1. There are certain advantages of convenience in employing the plasma instead of the serum of immunised animals as an injection material. (*a*) A larger yield, often over 65 per cent. of the blood volume, of an equally effective antitoxic fluid is obtained and this amount is not dependent upon the degree to which the clot contracts. (*b*) Antitoxic plasma can always be obtained perfectly free from red blood corpuscles. The blood corpuscles of horses' blood sediment very readily, and there is no need to disturb them when the antitoxic fluid is siphoned off.

There are no disadvantages to be balanced against these advantages. Experience has shown that no danger whatever is to be apprehended from the injection of plasma. Urticaria is an exceedingly rare sequela. The antitoxic plasma is readily prepared by leading off the blood from the horse's vein into a little citrate of soda dissolved in normal salt solution. An addition of 5 grammes of citrate of soda for every 1,000 c.cm. of blood is all that is required, provided that the tube through which the blood is led into the receiving vessel reaches quite down to the bottom of that vessel, so as to ensure complete mixture.

2. The easiest method of siphoning off the antitoxic plasma from the layer of red blood corpuscles appears to be the following.

A glass tube is to be bent into the shape of a U in such a manner as to leave one limb considerably longer than the other. Near the extremity of the longer limb another glass tube is to be fused on at an acute angle. To this side tube a piece of india-rubber tubing is to be attached. The other end of this india-rubber tube is fitted with a mouthpiece plugged with cotton wool. A siphon will thus have been formed which can be started by exhausting the air in the side tube. A tap or a piece of india-rubber tube fitted with a pinchcock is fixed at the end of the long limb of the siphon. This completes the arrangement.

[1] *Clinical Journal*, 1894.

[2] *British Medical Journal*, June 1, 1895.

[1] Where antitoxin cannot be obtained, hard boiled white of egg which was proposed as a culture medium by Takaraki will be found a very fair substitute. The culture medium may be prepared from the raw white of egg by the same method as that here recommended for the preparation of the nutrient medium from the antitoxic fluid.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A CASE OF BREECH-PIN OF GUN IN ORBIT: REMOVAL: RECOVERY.

TANG SHAN, Chinese farmer, 31 years of age, was injured in the face by the bursting of a shot gun. After having for upwards of two months under the treatment of native practitioners, he came to me on December 4th, 1894.

I observed a cicatrix on the right side of his nose, and above this a sinus still unhealed, the orifice of which involved the inner canthus of the right eye, and extended downwards and inwards for about a centimetre. The sight of the right eye was entirely lost, and the anterior surface of the globe was so uniformly red that the cornea could hardly be distinguished from the surrounding conjunctiva. There was no perceptible enlargement or protrusion of the eyeball, and it did not appear to have sustained any mechanical injury or loss of tissue. The ophthalmia and keratitis were possibly caused by the irritating substances applied by the Chinese doctors to the wound.

The sinus on the side of the nose gave exit to a continuous

discharge of slightly putrid pus, and the patient complained of continuous headache and occasional dizziness, which interfered with his work. The pain was referred to the right frontal and temporal regions, and the skin on this part of the head had a slight blush, but there was no superficial tenderness.

The patient had been told by his native doctors, and he believed it himself, that there was no foreign body in the wound; but on probing it I easily recognised the lower edge of a hard metallic substance at a depth of about 1 inch posteriorly from the orifice of sinus.

Being unable to obtain any reliable information as to the probable size or shape of the object, I cautiously made several attempts to remove it through a slightly enlarged opening, but without success. I therefore continued the incision along the side of the nose to the nostril, thus laying open the right nasal cavity; then, seizing the foreign body with a pair of strong forceps, I with difficulty removed the complete breech-pin of a Chinese gun. Its size and shape are accurately represented by the accompanying drawing.

The breech-pin measures a little over 3 inches in length, and weighs 2⅝ ounces, or 75.6 grammes. It had evidently lain at the back of the orbit, inclined upwards and slightly backwards from its point of entrance, at an angle of about 45 degrees. On its removal the headache was at once relieved and did not return. In ten days the wound was perfectly healed and the patient went back to his work.

A somewhat similar case, but which terminated fatally, is recorded in the *American Journal of Medical Science* of July, 1882.

Fatshan, South China. CHARLES WENYON, M.D., M.Ch.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

F. H. CHAMPNEYS, M.A., M.D., President, in the Chair.

Wednesday, October 2nd, 1895.

SPECIMENS.

DR. WILLIAM DUNCAN: (1) Ruptured Tubal Gestation; (2) Double Pyosalpinx Complicating Pregnancy.

THE VARIATION IN HEIGHT OF THE FUNDUS UTERI ABOVE THE SYMPHYSIS DURING THE PUERPERIUM.

Drs. T. G. STEVENS and W. S. A. GRIFFITH read this paper, which was intended to demonstrate the importance of recording by measurement "charts of involution" during the puerperium. It had been for the most part drawn up by Dr. Stevens, and was the result of observations by Dr. Griffith and Dr. Stevens at Queen Charlotte's Lying-in Hospital. The method of measurement was first described, with the precautions necessary to avoid errors, and the method of recording the measurements on the ordinary temperature charts. The measurement was the height of the middle of the fundus above the symphysis. The sources of error were: (1) Distension of the bladder; (2) distension of the rectum; (3) distension of the small intestines; (4) prolapse of the uterus; (5) abnormally high uterus; (6) unusual bulk of uterine muscle; (7) retroversion of the uterus; (8) excessive lateral obliquity of the uterus. The pathological conditions which interfered with the involution of the uterus, and therefore with the descent of the fundus, were: (1) Retention of portions of placenta and membranes, and of blood clots and lochia; (2) putrid decomposition within the uterus. (There had been no septic cases to study.) Charts illustrating normal involution and its variations, and pathological conditions were given, and their value in indicating, even before any rise of temperature, putrid decomposition, was demonstrated. Reference was made to the work of Serdukoff,[1] and the valuable work of Barbour[2] had not been overlooked.

Dr. MCCANN wished to mention as a source of error in such measurements marked anteversion of the uterus. With regard to the influence of suckling, he had found that in women who had no milk involution was rapid, while in those who had milk and nursed their children involution was rapid for the first few days, the rapidity diminishing later, probably owing to the stimulus from the breasts decreasing. The effect of prematurity of labour as a cause of delayed involution was noted, and prolonged labour delayed involution for the first days. It was important to determine on what day the uterus became a pelvic organ, for on this rested to a large extent our opinion as to when a puerperal woman should assume the erect posture. Textbooks stated that at the tenth day a patient ought to leave her bed. Dr. McCann thought that a more scientific method was to investigate the position of the uterus before giving an opinion. He gave some statistics showing the dates on which the uterus became pelvic in I-pare and multipare respectively.

Dr. STEVENS said in reply that with regard to Dr. McCann's query as to extreme anteversion being a source of error in measuring the uterus, the dorsal position assumed for measuring purposes would tend to correct that displacement unless the anteversion were so extreme as to make the fundus lie entirely behind the symphysis pubis.

Remarks were made by Drs. GRIGG and GRIFFITH.

CERTAIN MICRO ORGANISMS OF OBSTETRICAL AND GYNÆCOLOGICAL INTEREST.

Dr. G. D. ROBINSON read a paper on this subject, in which he pointed out the fact that in fatal cases of puerperal sepsis the streptococcus pyogenes was constantly found in the blood and tissues. He mentioned some of the circumstances which caused increase or diminution of virulence in this organism. Normally after labour the uterine cavity was known to contain no microbe; but in cases of puerperal sepsis many micro-organisms of different sorts were found both in the uterine cavity and in the substance of the decidua. Of these the streptococcus pyogenes appeared alone to be able to pass through the uterine walls along the veins and lymphatics, and so to cause a general infection. This microbe might in these cases cause death without producing any obvious lesion, and 3 cases were cited. Much more frequently the streptococcus set up suppuration in various tissues. Sometimes this microbe produced false membranes on the peritoneum or genital tract, with or without suppuration. Two cases were cited. Lately in some cases of phlegmasia dolens the streptococcus pyogenes had been found in the clots plugging the veins of the uterine walls and broad ligaments (more rarely in the clots in the iliac veins), and even infiltrating the vein wall itself. Dr. Robinson next pointed out the supposed connection of the bacillus coli communis with various inflammations (usually suppurative) of the human body. He quoted a case in which a woman four months' pregnant had intestinal obstruction from retroversion of a gravid uterus. Abortion occurred four days after reposition, and was followed in a few hours by fever and diarrhœa, which continued until the death of the patient five days later. During life pure cultures of the bacillus coli communis were obtained from the uterine discharge, and after death these were obtained from the uterine cavity, peritoneum, and heart's blood also. Attention was next drawn to the gonococcus, its appearance as seen in gonorrhœal pus or in pus cultures, and its relation to gonorrhœal discharges, and the situations in which it had been found.

The PRESIDENT said that the paper was valuable as a summary of the present state of knowledge of a subject which most had to take second-hand. One fact with regard to the comparative impermeability of the decidua to micro-organisms struck him as being important practically. It might not always be safe to curette the uterus when its contents were septic. In one such case within his own knowledge infection seemed to follow curetting, and a fatal result followed.

[1] *Edin. Med. Journ.*, May, 1875, p. 985.
[2] *The Anatomy of Labour*, 1889.

Dr. Roberts asked the author if he knew the exact clinical appearances in the cases of white leg referred to in the paper, for the term "white leg" was made to include many forms. Dr. Roberts believed that the definite white brawny legs were generally septic with a very early onset of symptoms, and often with distinctive pelvic signs (parametritis, etc.), while the commoner thrombotic leg came on generally later—namely, about the tenth to the twelfth day. He believed that high temperature did not necessarily mean sepsis. He also asked the author if anything was known of cultivations of the micro-organisms found in the brawny legs, and whether the S. pyogenes was invariably found. He suggested that the bacillus coli communis was the cause of some cases of suppuration in ovarian tumours and extrauterine sacs, which on account of some reason for lowered vitality became permeable to these organisms. If the S. pyogenes were the only organism which had the power of penetrating the deeper layers of the uterus and the lymphatics, he thought that the removal of the superficial layer by curetting should be attempted, combined with antiseptic treatment of the uterine cavity.

After some remarks by Dr. Griggs and Dr. McCann,

Dr. Robinson, in reply, said he was unable to give any information as to the colour of the skin in the fatal cases of phlegmasia dolens, as this point had not been noted in the report. He thought that culture experiments on living patients suffering from phlegmasia dolens would be of no value, since it had been demonstrated that the secondary clots in the affected limbs rarely contained streptococci, even in those fatal cases of the disease in which numerous organisms were found in the primary clots and walls of the vessels. He had experienced the usual difficulty in separating the gonococcus from other microbes. According to his experience the best method of doing this was by making plate cultures with a mixture of blood serum (human, ox, or horse), and agar-agar in the manner recommended by Wertheim and others.

Special Meeting.

The President announced that the next meeting of the Society would be made special for the purpose of considering some recommendations of the Council regarding the Society's laws.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

A. Symons Eccles, M.B., President, in the Chair.

Friday, October 4th, 1895.

The Death of M. Pasteur.

Mr. Keetley moved a vote of condolence with Mme. Pasteur.

President's Address.

The President delivered an address on the Advantages of Oxidation. He remarked that a large portion of the oxidation processes occurred in the muscular system, and mentioned the series of changes taking place in an active muscle, the sense of weariness being attributed to the accumulation of incompletely oxidised products. The grave consequences of partial arrest of oxidation processes were alluded to, and stress laid on the presence in the system of leucomaines as a result leading in some cases to a morbid condition, which might best be termed "leucomainæmia." Reference was made to the work of Bouchard and others, and it was pointed out that in chlorosis, gout, etc., there was evidence of insufficient oxidation, with excess in the urine of leucomaines and other products of incomplete oxidation. The train of symptoms generalised under the term "neurasthenia" were attributed to suboxidation. The method of von Poehl for the detection of leucomaines in the urine was described. It was shown that in melancholia, etc., the symptoms varied *pari passu* with the amount of precipitate by von Poehl's process. The parallelism between the prodromata of acute fever and some of the symptoms of functional neuroses was attributed to like causes being in operation, though not of common origin. Comparison was drawn between symptoms of cinchonism and those of coprostasis, the poisons in both interfering with the oxidation process. It was suggested that much of the value of animal extracts might be assigned to their potency as oxidising agents. The value of exercise and other therapeutic means for promoting oxidation was detailed and illustrated by the narration of cases.

Dr. Lauder Brunton laid stress on the value of apparently theoretical observations, and pointed out that many of Pasteur's most practical results arose therefrom.

Dr. Campbell Pope made some remarks, and the President briefly replied.

Kidderminster Medical Society.—At a meeting of this Society on September 17th, Mr. D. Corbet in the chair, Mr. J. L. Stretton read notes of a case of so-called Hermaphroditism. M. F., aged 67, was born in a small village, and pronounced a female. The condition of the genitals was one of hypospadias, the under part of the urethra being absent from the orifice to the junction of the penis and scrotum, where the outlet was now situated. There had never been any sexual appetite. The person was at present an inmate of one of the female wards of the Kidderminster Workhouse by direction of the guardians and the local inspector, who still maintain that he is a woman, and the Local Government Board see no reason to interfere.—Mr. P. E. Davies showed the Kidneys from a case of purpura (a boy aged 5), which exhibited numerous hæmorrhages.—Mr. J. L. Stretton related a case in which he had performed Laparotomy for Intestinal Obstruction. The patient died of collapse. On *post-mortem* examination it was found that the root of the constricting band (which had been divided) was about the diameter of the little finger; it had extended from midway above the transverse colon (attached to its mesentery), across it, binding it down, and was attached to the mesentery of the ileum near the cæcum. There were several recent adhesions between the colon and the abdominal wall. The obstruction had been relieved by the operation. Treves spoke of the condition as a pathological curiosity.—Dr. Evans showed a girl, aged 14, from whose right leg the whole of the diaphysis of the tibia had spontaneously exfoliated; it was only held in its place by a small band of granulation tissue, and was easily removed. She had made an excellent recovery and had a useful limb, new bone being formed.—Mr. J. L. Stretton read a paper on Osteotomy, with notes of 108 operations.

Newport Medical Society.—The annual meeting of this Society was held at the Newport Infirmary on October 2nd; A. Garrod Thomas, M.D., in the chair. The report for the last year showed that there had been a good average attendance of members, and that useful work had been done. Reference was made to the loss the Society had suffered by the death of its late President, Dr. B. Davies; and also of one of its members, Dr. A. W. Loveridge. The report and statement of accounts were adopted. Dr. A. G. Thomas was unanimously elected President for the ensuing session, and Mr. G. A. Davies, President-elect. Messrs. Marsh, R. E. W. Brewer, Grath, and Paton were elected members of Committee; and Mr. W. Bassett re-elected Honorary Secretary. A vote of condolence with the relatives of the late Dr. B. Davies was unanimously passed.—The President (Dr. A. Garrod Thomas) delivered an interesting address on Some Lessons Learnt by Mistake.—A vote of thanks to the President concluded the business.

REVIEWS.

The Diseases and Deformities of the Fœtus: an Attempt towards a System of Antenatal Pathology. By J. W. Ballantyne, M.D., etc., Lecturer on Midwifery and Gynæcology, and of Diseases of Infancy and Childhood, School of Medicine, Edinburgh. Vol. II. Congenital Diseases of the Subcutaneous Tissue and Skin. Edinburgh: Oliver and Boyd. London: Simpkin, Marshall and Co., Limited. 1895. (Royal 8vo, pp. 264. 10s. 6d.)

We cannot but admire the scientific zeal which has moved Dr. Ballantyne to prepare a second volume of his work. The domain of teratology has the reputation of being far from an El Dorado, nevertheless a really scientific treatise

on monsters would be profitable, since its author must gain the reputation of having written a great work. Dr. Ballantyne is acquiring that reputation. We do not wish to disparage the labours of Förster, Ahlfeld and Hurst and Piersoll, but we mean that the time has come when something more than an atlas is demanded by the student of teratology. The above-named writers have provided the necessary material, which must now be utilised. An atlas of monsters vying with each other in hideousness is certainly a satire on the uses to which art may be turned. With equal certainty it may be said that such an atlas has ceased to be of the highest scientific value.

Dr. Ballantyne expounds the relations between disease and malformation, which he rightly terms antenatal pathology. The present volume is essentially pathological. The author's subject must include three conditions: first come pure monstrosities, where the pathological element remains unknown; may be it lies in some disease of germinal layers or other primitive structures difficult to detect. Then come the mixed cases, such as acardiacs, which are truly monsters in their extraordinary deficiencies, and truly pathological through the presence of general œdema and other changes due to a diverted course of the circulation. The third class includes many cases which are hardly monsters. All show marked disease.

The disorders of which the author writes are sclerema neonatorum, fœtal ichthyosis, dermatitis exfoliativa, and other rare but important pathological conditions, which are often congenital, and therefore of antenatal origin. All the author's subjects are discussed at length, and with great deliberation. As might be expected, the pathogenesis of these fœtal skin diseases is very obscure. It would seem easy to attribute congenital atrophy of the subcutaneous tissue, where specific disease or malformation interfering with nutrition is absent, to wasting disease or natural leanness in the mother: but this affection does not necessarily imply that the mother is lean, and Dr. Ballantyne notes that it is a matter of frequent occurrence that a patient in the last stages of pulmonary phthisis, or *in extremis* from the incoercible vomiting of pregnancy, may yet give birth to a plump well-nourished infant. The work is full of copious references.

Textbook of Forensic Medicine and Toxicology. By Arthur P. Luff, M.D. In two volumes. London: Longmans, Green, and Co. 1895. (Demy 8vo, pp. 776. 24s.)

After an introductory chapter on the duties of the medical man in regard to giving evidence, Dr. Luff devotes the first six chapters of the first volume to questions connected with the dead body, for example, the signs of death, the period at which death has taken place, the modes of death, and the mode of conducting a *post-mortem* examination for medico-legal purposes. We note that the distinction between bruises and *post-mortem* stains has been put in tabular form, which should be useful to students.

In speaking of the causes of sudden death, Dr. Luff discusses the commonest causes of sudden death in children; but, seeing the excessive rarity of any kind of sudden death in children, we think the paragraph might well be omitted in future.

The remainder of the first volume is given up to the subject of poisons. The recognised divisions and classification of the poisons are in the main followed, and, as might be expected from his official position, Dr. Luff gives with especial care and detail the chemical analysis necessary for the detection of the different poisons, and illustrations are given of the leaves and seeds of all the more important vegetable poisons. That this section of the work is well brought up to date is evident from the fact that cocaine, sulphonal, exalgine, antifebrin, and antipyrin all come in for consideration, but curiously enough there is no mention of the use of permanganate of potash as an antidote in cases of morphine poisoning, the only omission of any importance which we have found throughout the work.

In the second volume, blood and other stains are first passed in review, and Dr. Luff then passes on to speak of wounds and mechanical injuries; and, in dealing with fire-arms, he points out that in wounds made with the new magazine rifle, the aperture of entrance is much cleaner than in that produced with rifles of an older pattern, and that the aperture of exit with the modern weapon much more resembles the aperture of entrance with the old weapon; there is much less tearing of the tissues by the modern bullet and so there is much less sloughing. The introduction of the smokeless powder, too, does away with the blackening of the wound and its edges in the case of a weapon discharged close to the body.

Deaths from asphyxia are next considered, and here we note that in the table of the appearances in the bodies of the drowned, he omits to say whether the averages given are for winter or summer. The account of pregnancy, delivery, and abortion is good and concise, and, under the heading of infanticide, special directions are given for making a *post-mortem* examination in a suspected case. Altogether we have no doubt that the work will meet with the approval of medical students, to whom it is mainly addressed. The arrangement is good and the descriptions are clear, and though there are many excellent works already in the field on the subject, we have no doubt it will take a very high place.

Les Sanatoria: Traitement et Prophylaxie de la Phthisie Pulmonaire (Sanatoria: The Treatment and Prevention of Pulmonary Phthisis). Par le Dr. S. A. Knopf. Paris: George Carré. 1895. (Large 8vo, pp. 206. Fr. 6.)

This volume, a thesis presented for the degree of M.D. to the Paris Faculty by an American physician, is possessed of rather more general interest than usually belongs to such academic exercises. It is written in a tone of conventional deference which contrasts in a rather amusing way with the independent views and settled opinions which the author obviously entertains.

After a brief historical sketch and some observations on the pathological and clinical evidences of the curability of tuberculous disease of lungs, Dr. Knopf describes a number of sanatoria which he has visited, and gives a list of others in Europe and America. The descriptions are in some instances illustrated by photographs, and form a most interesting part of the essay, though as a rule too brief. The author would have added much to the practical value of his book not only by entering into greater detail in his account of the plan and management of the institutions themselves, but also by appending notes as to travelling and as to the cost of living. The majority of the institutions described are in German-speaking countries—Falkenstein, the three institutions at Goerbersdorf, Hohenhonnef, Reiboldsgrün, St. Blasien in the Black Forest, and Davos. Brief descriptions are also given of the sanatoria at Canigon (Pyrenees), Leysin (Switzerland), the Ventnor Hospital, Craigleith, and the Adirondack Cottage Sanitarium, New York. We do not notice any mention of Bournemouth.

Almost the only point which the sanatoria for phthisis have in common is that all are built in pure air, and that the patients spend a great deal of time in the open air, and that they are required to submit absolutely to the benign autocracy by which each is governed. One of the aphorisms inscribed on the walls of Brehmer's sanatorium at Goerbersdorf might be the motto of all these institutions: "The best occupation for a sick person is to labour to become well," and it is therefore not surprising to read that Dr. Knopf, during his visit to Leysin, was "very disagreeably surprised to see that a kursaal (café casino) was in course of construction not far from the sanatorium." Dr. Knopf next describes, with plans drawn by Mr. Van Pelt, architect, an "ideal sanatorium," though we are left in doubt as to whether the ideal is ever to become the actual. Dr. Knopf insists with justice on the essential importance of the strict medical supervision exercised in the best sanatoria. The number of hours to be spent in the open air, the quantity and quality of the food, the amount and character of the exercise to be taken are all determined by the medical officers, who apply general principles after a careful study of the individual cases. Pure air, and such a sheltered sunny situation that the patients may be in the open air either on foot in the woods and grounds, or resting in reclining chairs in shady verandahs for many hours a day, are the two main points to be sought in choosing a site.

Dr. Knopf urges the erection of such sanatoria for patients of the poorer classes, who are able to pay little or nothing towards their maintenance; and he enters into an elaborate calculation to prove that for the city of Paris this system would be little more costly, if at all, than the present want of system by which phthisical patients are again and again treated for short periods in the general hospitals. He assumes, it is to be feared correctly, that all of these patients succumb after a few months or years of incapacity; he asserts that the statistics of German sanatoria prove that of early cases 14 per cent. recover completely, 14 per cent. are "relatively" cured, and 42 per cent. are improved.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CONDENSED SWISS MILK AND CONDENSED UNSWEETENED NORWEGIAN MILK.

In view of the recent inquiry instituted by the BRITISH MEDICAL JOURNAL with respect to milk and condensed milk, we have been requested by Mr. H. Nestlé, of Vevey, Switzerland, to analyse a sample of "Nestlé's Condensed Swiss Milk," and by Messrs. Anderson and Coltman, of 5, Philpot Lane, E.C., to analyse the "Viking Condensed Unsweetened Milk," prepared by the Norwegian Milk Condensing Company, of Christiania, Norway.

The results of our analysis of Nestlé's Swiss milk show that it has the composition of a genuine sweetened condensed milk of very good quality. The sample examined by us contained 10.23 per cent. by weight of milk fat and the other constituents were present in proper proportion to the fat.

Our analysis of the condensed unsweetened Norwegian milk shows that it has the composition of an unsweetened condensed milk of very good quality, obtained by condensing genuine cow's milk. The sample examined by us contained 34.5 per cent. of total solid matters. The percentage of milk fat was 10.27. When mixed with about 2½ parts of water a liquid closely resembling ordinary genuine fresh milk of good quality is obtained, and it is to be noted that a condensed milk of this kind differs from the ordinary types of condensed milk in that it contains no added sugars. The preservation of the milk in the tins has been effected without the addition of objectionable chemicals.

Having regard to the revelations we have made as to the characters of so many of the preparations which are bought by the public as condensed milk, it is satisfactory to be able to call attention to high class products such as these here referred to.

PARAFFIN SAFETY LAMPS.

Messrs. KERSON AND CO. (25, Fore Street Avenue, E.C.) have submitted to us a safety lamp for use with paraffin oil, which contains a novel feature in the formation of the wick tube. This, which descends nearly to the bottom of the oil vessel, although not so nearly as we think it is well that it should do, is bent into an S-shaped curve in such a way as to form a "trap" which will become filled with oil in whichever direction the lamp may happen to fall, the intention being to prevent all possibility of access of the flame to the gases in the partially empty oil vessel. The intention is good, and it is probable that the arrangement might lessen the risk of explosion when the oil in the reservoir is so low that the lower end of the wick tube is uncovered when the lamp is overturned. Whenever there is sufficient oil to cover the bottom of the tube, as in the diagram accompanying the specimen forwarded to us, there seems to be no special advantage in the S-shaped curve. It is curious that an inventor who so far recognises the principles of construction as to make his lamp of metal, and to carry his wick in a metal tube to the bottom of the oil chamber, all for the sake of preventing his lamp from exploding if it should chance to be upset, should at the same time construct his lamp with so narrow a base as to make it almost certain that it will be overturned. But it is still more curious that, after taking all the trouble not only to put in a wick tube, but to make it of a special shape for trapping off the gases in the oil chamber, he should make two little holes at the very top of the wick tube through which any down-flashing flame would obtain direct access to the vapour from which the tube is intended to cut it off. This is, indeed, swallowing a camel while straining at a gnat. The existence of these holes would appear to neutralise the benefit derived from the arrangement of the wick tube, and thus the chief advantage of the lamp would seem to lie in its being made of metal.

THE FIFTH INTERNATIONAL CONGRESS OF OTOLOGY.

[FROM OUR SPECIAL CORRESPONDENT.]

SINCE the first of these gatherings was held in America, in 1876, successive meetings have taken place in Milan, Basle, and Brussels. The fifth was held last week in Florence, and proved in every way to be a most decided success, under the presidency of Professor Vittorio Grazzi. The choice of an Italian city for the second time within the relatively short space of twenty years shows the general sympathy for the country, and the affection with which Italy is regarded was shown at the Congress by the applause which greeted Dr. St. Clair Thomson when he spoke of the feeling of fraternity and of freedom in meeting on the common soil of the mother of nations.

The autumn crop of congresses has been particularly abundant in Italy this year, including those of Geology, History, Accountants, Garibaldian Veterans, Co-operations of Manufacture and Labour, Internal Medicine, and of Barbers! The latter have shown their solidarity by deciding to close on holidays, to keep the First of May as a labour *fête* day, and to appoint as their organ *La Voce del Parrucchiere*.

This profusion of congresses and the time of the year may account for the absence of any high dignitaries of State or City at the opening ceremony on September 23rd. They all, however, were most courteous in the messages sent, while they showed their practical hospitality by throwing open without fee, not only the art treasures of the Tuscan capital, but also the gardens and private apartments of the royal palaces and villas. The hospitalities of the municipality were most highly appreciated.

An afternoon reception was given at the Palazzo Vecchio, when visitors were received in the wing called after Leo X. by Councillor Picchi (representing the Prefect), Alderman Chevalier Artimini (representing the Syndic), General Driquet, Chevalier Hermite, and others, representing the army, the law, etc. In addition to more substantial delights, flowers were liberally presented to the ladies of the party, and the *congressisti*, after visiting the historic hall of the Cinque Cento and the apartments of Eleonora of Toledo, ascended the tower to see the prison of Savonarola and enjoy the magnificent view over the City of Flowers and the valley of the Arno. Another civic hospitality was an excursion to the old Etruscan city of Fiesole. Private bodies were well represented by the charming concert given in the Palazzo Pucci by the Artists' Club. Here visitors had an opportunity of seeing some modern Italian pictures, and of enjoying some most delightful amateur music. Finally, the colleagues of the speciality throughout Italy united with the profession and the citizens of Florence in giving a banquet, which was most completely successful. As for the President, Dr. Grazzi, and his charming wife, their hospitality was simply unending throughout the week. Not only did they initiate it with a ball, and continue with a succession of luncheons and dinners, but the size of their magnificent apartment allowed them to give a dinner to over eighty of the foreign visitors. Nor must we neglect the share taken by the Anglo-American doctors resident in Florence for the entertainment of their compatriots. The Florence Club was, through their intervention, thrown open to visitors, and proved to be a welcome gathering point; while Drs. Coldstream and Baldwin offered both hospitality and help, which was greatly appreciated by visitors from Great Britain and the States.

Taken as a whole, the scientific work of the Congress showed the general and steady progress of otology; there was nothing particularly striking in the way of originality; several papers were of great pathological and clinical interest, and in certain points there appeared the commencement of a wise conservative reaction from some recent operative proceedings.

Four general subjects were discussed. General Treatment in Diseases of the Ear was sketched by Dr. Gellé (Paris), and General Treatment in Diseases of the Internal Ear, by Professor Gradenigo (Turin). The question of the Treatment of Intracranial Abscesses consequent on Purulent Disease of the Ear lost some of its interest through the unavoidable absence through illness, of its introducer, Dr. Thomas Barr (Glasgow); his article was read by Dr. Urban Pritchard, who elucidated it by his own valuable experience, and his conclusions were placed under the headings of questions which were submitted to the Congress: (1) Should these cases be in the hands of the aurist or the general surgeon? (2) Should the cranium be opened in cases of meningitis without definite indications of localised abscess? (3) How should the sinuses be treated? (4) What is the best method of opening the skull? Needless to say that in such a Congress the opinion was unanimous in favour of such cases being in the hands of aurists. Our Present Knowledge of the Pathological Anatomy of the Labyrinth called forth a scholarly and scientific paper from Professor Politzer, which was illustrated by a beautiful collection of specimens.

The fourth subject, the Physiology of the Middle Ear, was introduced by Dr. Carlo Secchi, of Milan.

A large number of communications were read and discussed. We have only space to refer to those of representatives of the United Kingdom. Dr. Macnaughton Jones read a paper on the Relation of Turbinal Hypertrophy to Deafness, with special reference to the operation of turbinotomy. With regard to the association af this affection and deafness or tinnitus, he quoted Loewenberg, Solis Cohen, Hartmann, St. John Roosa, Spalding, Swanzy, Wolf, Berthold, and Guye, all of whom gave a more or less negative reply in some cases modified in consequence of the coincidence of naso-pharyngeal catarrh. An equally positive reply was given by Turnbull, Barnett, Bosworth, and Lefferts. The author's own conclusions were: 1. That turbinal hypertrophy should be regarded as a serious complication of deafness and allied aural troubles; when it precedes the aural symptoms it can with justice be regarded as the principal cause. 2. When detected it should be treated by active therapeutic measures, of which the principal is the galvano-cautery. 3. Deviation and spurs of the septum are rarely, perhaps never, the cause of deafness and only become so in those cases which are complicated with turbinal hypertrophy. 4. If in any case it is found that the occlusion of one nostril is partly due to a septal deviation or spur this should be corrected. 5. Turbinotomy should be reserved for those cases where it is useless to hope for an amelioration from any other treatment; this occurs in a relatively small number of aural cases.

Dr. A. Bronner (Bradford) read a practical paper on Local Massage in the Treatment of Chronic Eczema of the External Meatus. Dr. St. Clair Thomson discussed the question of Antiseptics in Nasal Surgery and of Intranasal Medication. Mr. Cresswell Baber demonstrated his models and dummy for examining the nose, and Dr. Macnaughton Jones showed several instruments. Dr. Urban Pritchard and Dr. Dundas Grant took part in several of the debates.

It was unanimously agreed to hold the sixth congress in London in 1899, and a British Committee was appointed to carry out all the business and local arrangements.

DEATHS UNDER ANÆSTHETICS.

Chloroform.

Mr. Richard Coates, House-Surgeon at the Newport Infirmary, has favoured us with the following account of death under chloroform, which occurred recently at that infirmary:

The patient, a man 47 years of age, had been under treatment in the casualty department of the Newport Infirmary for six weeks, suffering from a man-bite of the index finger of the right hand. The wound had been neglected, and when the patient came to the out-patient department an operation was performed under chloroform, and the first, second, and third phalanges of the index finger were removed, the patient taking the chloroform very well. The wound suppurated, and numerous incisions had to be made into the palm of the hand to let out the pus, which collected in large quantities despite the insertion of drainage tubes. The inflammation at last settled down, and on probing a sinus dead bone was discovered in the base of the second metacarpal bone. As the man was not well enough to have the operation performed while still an out-patient, he was advised to become an in-patient, and was admitted on September 21st, six weeks after the primary operation. He remained inside until September 24th, and during that time his general health improved. A routine examination of the patient was made. The cardiac dulness was normal; the heart's action was regular but feeble, there was no evidence of valvular disease or degeneration, no albumen in the urine, and the lungs were normal. He was considered a fit case for anæsthesia, and was prepared in the usual way for the operation. On the morning of the operation he was extremely nervous, and dreaded the anæsthetic very much, but was anxious to get the operation over. Chloroform was administered from a graduated drop bottle, and was given in drops poured continuously on one layer of a smooth towel folded in the shape of a cone. The patient took the chloroform well, but when nearly under he struggled a little, ten minutes after the commencement, and had a tonic spasm which took the form of opisthotonos; the spasm lasted half a minute, during which time no air entered the chest. The patient was restrained only so much as to prevent him from falling from the table. He became relaxed, and the chloroform was cautiously continued. He breathed quietly for a minute, the corneal reflex was gone, and the patient looked well in every way. The surgeon commenced to unfasten the bandage, when the patient suddenly became pale and then livid. A gag was immediately placed in the mouth, the tongue drawn forward, the head depressed, artificial respiration commenced, and a capsule of nitrite of amyl broken over the mouth and nose. Air entered the lungs freely, but the heart had stopped; the pupils were neither contracted nor dilated. Twenty minims of ether were injected subcutaneously over the præcordium, the electric battery was applied, an enema of brandy given, the skin stimulated by scrubbing, and the chest flicked with a towel wrung out in cold water. Artificial respiration was kept up for three-quarters of an hour, and air entered the chest freely the whole time, but the heart never beat after the first stoppage. A *post-mortem* examination was made on a coroner's order, forty-eight hours after death. The heart weighed 13½ ounces, and was slightly enlarged; the pericardium had an excess of fat on it; the organ was empty and flabby; the walls of the ventricles were thinner than normal, especially the right, in which there was a small coagulum; the valves were healthy, the arteries normal, the lungs were slightly emphysematous, and all the other organs were healthy. Death was undoubtedly due to primary heart failure. About ℥ij of chloroform (Duncan and Flockhart's) were used.

SCIENTIFIC TEACHING AS TO ALCOHOL.

At the National Temperance Congress held at Chester, Dr. W. Carter (Liverpool) discussed the Practical Benefits of Abstinence from a Physician's Point of View. Three broad principal facts, he said, had been firmly established: (1) Those people who entirely abstained from alcohol lived longer than those who used it even moderately; (2) the abstainer worked harder and longer than the moderate drinker; and (3) intellectual energy could be well sustained, and was as great without as with alcohol. In a paper on Alcohol as a Narcotic, Dr. McDowell Cosgrave, Professor of Biology at the Royal College of Surgeons in Ireland, stated that during the past few years a number of observers had tested the effect of small doses of alcohol upon the special senses, and had all come to the conclusion that from the very first alcohol acted upon the body as a narcotic and not as a stimulant. The same thing had been found true of the action of alcohol upon the mind. It caused mental processes to be slower but gave

the idea that they were really faster. This explained how it was that people often continued to use alcohol when those around them saw that it was doing them harm. A paper, entitled Alcohol, the Antagonist of Hygiene, was read by Dr. Vacher, Medical Officer of Health for Cheshire, who said that the effect of alcohol on the living growing body, as had been shown experimentally, was to make growth less perfect and the system less able to resist the forces that made for decay. He then passed on to consider the question whether alcoholic liquors and the facility given for obtaining them co-operated with the sanitary authority or thwarted its best efforts; and it was shown that alcohol was the opponent of hygiene. Dr. F. H. Walmsley, Medical Superintendent of the Metropolitan District Idiot Asylum, stated that pauper lunatics in London were increasing at the rate of 500 a-year. It was now universally admitted that alcohol was directly or indirectly responsible for more mental and physical incapacity and suffering than any other single known cause of disease. Out of 11 cases of those who became insane, 9 ultimately died insane, and of the remaining 2 but 1 entirely recovered. The lunacy laws filled a big octavo volume, yet one clause forbidding the marriage of those in whom the taint existed, and another to prevent people driving themselves mad with drink would be worth the whole volume. Dr. Annie McCall, Director of the Clapham Maternity Hospital, suggested that all police should be total abstainers. Dr. Crespi, of Wimbourne, complained of the amount of ignorance which still prevailed amongst medical men on the temperance question; and Mr. W. S. Caine said that one of the great difficulties was the indiscriminate and ignorant manner in which large sections of the medical profession prescribed alcohol. Mrs. H. Kingsley complained of the way in which country doctors ordered alcohol; and Mr. Garrard, of Hackney, of the way in which Band of Hope members had broken their pledges owing to medical advice and sickness. Dr. William Flint said that the difficulty of country practitioners was that patients were eager to take stimulants, and that if one doctor would not prescribe them they would call in another who would.

THE DOCTRINE OF THE TEA-KETTLE AND THE PASTEUR FILTER IN INDIA.

Since Mr. Ernest Hart's visit to India and the crusade of the policy of the tea-kettle immediately upon the occurrence of any outbreak of typhoid, cholera, dysentery, or malaria, notices such as the following are, we are glad to see, constantly appearing in the Indian papers:

> The epidemic of dysentery which has recently proved so fatal in the Sussex Regiment, stationed at Dum-Dum, has now almost entirely disappeared. It is significant to notice the fact that its disappearance has been synchronous with the abolition of the filters previously in use by the men, and the introduction instead of a system of boiling the whole of their drinking water.—*Indian Daily News.*

A well-informed correspondent at headquarters in India, who forwards this to us writes: "The subject of the best methods of combating typhoid, cholera, dysentery, and malaria are engaging more actively than ever the attention of the medical authorities in charge of the military stations and of the Government generally. The proofs which have now been adduced of the absolute inefficiency and even increase of danger arising from the use of the Macnamara filters—which Mr. Hart denounced in his address at the Calcutta Congress as the worst in the world—have slowly but surely wrought upon the convictions of our sanitary and civil authorities here, and I believe also of the military authorities both of the Indian army and the British forces. In the gaols, too, the matter is being seriously considered. Numerous circulars have been issued in Bengal, I hear, to the gaol authorities, calling their attention to the subject of the Pasteur filters, which have proved themselves the only thoroughly efficient means of filtration for the purpose of excluding infectious germs, which are coming more and more into favour, and will no doubt in time be officially introduced into all public establishments. The policy of the tea-kettle also, which Mr. Hart so picturesquely illustrated, is being put to an official but rather daring test by Sir Anthony MacDonnell, who was at the time of Mr. Hart's visit here the active and accomplished Secretary of the Home Department, and who received a deputation, of which he was spokesman, from the Congress, urging its adoption of increasing methods and facilities for bacteriological research and the adoption of an active policy for purifying the water supply of the gaols, prisons, hospitals, and other establishments, and in the villages of the native population. Sir Anthony MacDonnell, who is now Lieutenant-Governor of the North-West Provinces, has issued an order directing that half of the inmates of the gaols of that province should be supplied with boiled water, and the other half receive still the existing water supply. In England such an order might be resented by public opinion of a sentimental kind, as being in the nature of an experiment on human lives, for if it be true, as Mr. Hart declared, that the supply of either efficiently boiled or perfectly filtered water would annihilate epidemics of typhoid and cholera, and would largely diminish dysentery and malaria within the gaols, there seems no reason why the order in question should not apply to the whole of the inmates. The results, though less scientifically rigid from the scientific experimental point of view, might be not less satisfactorily worked out by comparing the mortality from these diseases subsequent to the issue of the order to that of the years preceding it, other conditions being the same. However that may be, it might be well if the Governor of the Punjab should order that one half of the prisoners should be supplied with efficiently boiled water, and the other half with water passed through the germ-proof filters of Pasteur. This would have the effect of trying two measures of protection of health and life, both of them possibly thoroughly efficient. There is no doubt that boiled water will prove to be a most efficient protection against many enteric diseases and malarial poisons, but it is, unless subsequent oxygenation is resorted to, a very tasteless fluid, and one to which many object, while the same objection does not apply to water efficiently filtered by germ-proof filters, which, as a permanent measure, is of course more economical and in many ways likely to prove more acceptable. The outbreak of enteric fever at Poonah and the very large number of deaths from typhoid and enteric fever in the Chitral expedition, where the soldiers drank water which was neither boiled nor filtered, are attracting much public attention, and no doubt medical officers and regimental officers in command will in future be much more alive to the necessity of meeting public opinion by taking the measures which Mr. Hart so urgently recommended than they have been hitherto. The recent experience at Bangalore and at Dum-Dum yet have, as they probably will be, to be properly emphasised by medical opinion, and may by the aid of the press here prove both instructive and life-saving. It is useless and unnecessary to inflict blame in these cases for the preventable loss of valuable lives which have occurred, for they are only examples of what is still going on all over India, and until public opinion was thoroughly aroused by Mr. Hart's address at Calcutta comparatively little attention was given to the subject, although what he had to say in the matter was of course not either absolutely new or altogether unheeded. The doctrine of the tea-kettle and the germ-proof filter has now, thanks to his picturesque and energetic advocacy, definitely made its appearance on the stage of Indian sanitation; and it has come there to stop. Although I am one of those who must take my share of blame for not having as earnestly preached and acted on the truth of the doctrine which was in me, I am nevertheless one of the first to recognise the vast importance of the universal application of this knowledge; and I think we may be all well content, putting aside all questions of blame in the past, to press forward the universal application in the present and in the future of what is now evident is likely to become a new and life-saving matter of doctrinal practice in this vast Empire."

In New York recently several milk sellers, convicted at the instance of the health authorities of adulteration, have not only been fined but imprisoned. It is stated that as a result the sale of adulterated milk has almost ceased.

The *Zeitschrift für Physiologische Chemie*, founded by the late Professor Hoppe-Seyler, and edited by him for many years, will in future be edited by Professors Baumann, of Freiburg, and Kossel, of Marburg, who have been for some time associated with him in the task of editing.

LITERARY NOTES.

Messrs. Bailliere Tindall, and Cox announce the publication of an unusual number of new works and new editions during the coming season. On October 1st they issued an original work on *Physiology* by Professor Stewart, of the Cambridge University Museum, lately Examiner in Physiology at Aberdeen University, now Professor of Physiology in the Western University, Cleveland. They will also publish a translation of Professor Kaposi's classical *Diseases of the Skin*, and a translation by Dr. Ernest Clarke of Professor Haab's *Atlas of Ophthalmoscopy*, with 64 coloured plates; new works by Dr. Sachs on *The Nervous Diseases of Children*, by Professor Max Knies on *The Relations of the Eye to Diseases of the Body*, by Dr. John Broadbent on *Adherent Pericardium*, and a new edition of Peddie's *Physics*.

In a recent number of the *Century* Dr. Max Nordau, in replying to his critics, gives some interesting information about himself. Since the publication of his work *Degeneration* he has so frequently been said to be himself a degenerate and a lunatic, and to be descended from insane ancestors, that he thinks it worth while to state that the only evidence of an abnormal mental condition which has ever been observed in the members of his family is a strange indifference to money. He adds:

> For several generations both my paternal and my maternal ancestors have accordingly been poor. They did not understand how to make money. They did not concern themselves about it. They preferred to occupy themselves with abstruse scholarship. They were rabbis or officials of Jewish congregations. As their heir I have had frequent occasion to reproach them with their lack of worldly sense, but as an alienist I should hesitate, on account of this defect, to charge them with insanity.

To the objection that in dealing with such a subject as degeneration he had violated the precept *ne sutor crepidam*, he answers that although he is neither an expert in psychiatry nor the director of a lunatic asylum, he for eight years attended the clinical lectures of the late Professor Ball, and accompanied him on his visits to the St. Anne Asylum, Paris; he therefore resents the imputation that he is a mere dilettante in the matter of mental pathology. He denies that his teaching implies that all genius is a form of degeneration. It is by no means a rare thing, he says, for men of true genius to suffer from mental disease. But that is far from proving that true genius is in its essence degenerate. It is as absurd to say that all genius is a form of degeneration as it would be to maintain that, because many athletes suffer from hypertrophy and fatty degeneration of the cardiac heart, athleticism is a form of heart disease. Genius is incidental to evolution; degeneration, on the other hand, is retrogressive—a form of atavism which, if it were to become general, would cause the species to revert to stages of development long since past. As there has been a good deal of uncertainty about the distinguished author's patronymic, the following extract from a letter written by him to the *Jewish Chronicle* may be of interest:

> You go on saying "Max Nordau's real name is Simon Südfeld." This is a falsehood which you might have avoided with the slightest measure of care. My petty names (or ought I to say my "Christian names"?) are Max Simon. After having assumed, at my father's behest, for reasons that have no interest for strangers, and at the age of 15, the name of Nordau, I had this name officially and legally conferred upon me by decree of Karl von Zeyk, then Royal Hungarian Minister of the Interior, under number 13,138, and the date of April 11th, 1873. Since then, Nordau is my "real" name, and I have no legal right to bear and use another.

Messrs. MacLehose and Sons will publish a new edition of Dr. Barr's *Manual of Diseases of the Ear; Deaf-Mutism*, a treatise on diseases of the ear, as shown in deaf-mutes, with chapters on the education and training of deaf-mutes, by James Kerr Love, M.D., and W. H. Addison; and *An Account of the Institution and Progress of the Faculty of Physicians and Surgeons of Glasgow*, by Alexander Duncan, Secretary and Librarian to the Faculty.

The *Library* complains that in some libraries the current numbers of medical journals are placed in the reading room, thus bringing them within the easy reach of the youth of both sexes. We quite agree with our contemporary that if such journals are taken at all, they should be kept under the strict care of the librarian or some responsible officer, and given out only to adults.

Messrs. Longmans and Co. have just published Dr. Elizabeth Blackwell's *Pioneer Work in Opening the Medical Profession to Women*; it consists of autobiographical sketches. The same firm will also publish *A Book for Every Woman: Being Suggestions as to the Management of Health from Childhood to Old Age*, by Jane H. Walker, out-patient physician to the New Hospital for Women.

Dr. Bayard Holmes, of Chicago, has taken up the question of the "Medical Library of the Medical School of the Small Community." He holds that changes are necessary in the teaching of medicine corresponding to that which has come about in histology. Lectures alone, he thinks, are no longer adequate; there should be the same possibility of studying the literature of a medical case as there is now of studying in the laboratory the development of the eye. Hence the necessity for a well-arranged working library in each medical school. The objects to be aimed at in the formation of a medical college library are, according to Dr. Bayard Holmes, the following: 1. To furnish the means of training students in medical bibliography and bibliographical research. 2. To furnish, through its medical literature, material for the study of each and every medical science which now forms a part of the medical curriculum. 3. To furnish material for the study of the sciences collateral to medicine. 4. To make possible the proper pedagogic methods in medical schools. Incidentally some interesting information is given as to public libraries in America. In 1891 there were 3,873 public libraries in the United States, containing 26,826,000 bound volumes and 4,340,000 pamphlets, or 31,167,000 books in all, making an average of 8,194 volumes in each library, or about 50 books to each 100 of the population. At the same time there were 59 public medical libraries in the States, only 6 of which contained more than 10,000 volumes. These were the library of the Surgeon-General's office in Washington, with 104,000 volumes; that of the College of Physicians in Philadelphia, with 41,000 volumes; that of the Pennsylvania Hospital, with 14,000 volumes; that of the New York Academy of Medicine, with 30,000 volumes; that of the New York Hospital, with 20,000 volumes; and the Boston Medical Library Association, with 21,565 volumes. Mention is not made in this report of the Newberry Library, in Chicago, which has about 25,000 volumes in its medical department. On comparing the department libraries of the various universities having medical departments and departments of law and theology with each other, it is found that Harvard Medical School, with 339 students, has only 1,500 volumes in its library, while the general university library has 292,000 volumes; the law department, with 366 students, has 28,157 volumes, and the theological school, with 86 students, has 23,360 volumes. The same inequality exists at Yale College, with its 1,755 students, where there are 185,000 volumes in the library. The medical school, with 72 medical students, has 3,000 volumes in its library. Again, there are many cities with 20,000 or more inhabitants, with flourishing medical societies, but no library worthy of mention. A number of medical societies, especially in the eastern States, report as high as 6,000 or 8,000 volumes in their libraries, but these libraries are in no sense working libraries, being old libraries and without adequate catalogues.

The *Parish Register of Skipton-in-Craven*, vol. 2, 1680-1771, edited by the Rector of Burnsall, contains some notice of small-pox epidemics in 1716 and subsequent years, besides many entries relating to families connected with the neighbourhood. Application for the volume should be made to the Rev. W. J. Stavert, Rector of Burnsall.

The following are among the scientific announcements of the Cambridge University Press for the autumn: *Textbook of Physical Anthropology*, by Professor Macalister; and a second edition of *Practical Physiology of Plants*, by F. Darwin and E. H. Acton.

The first volume of the *Transactions* of the Eighth International Congress of Hygiene and Demography, held at Buda-Pesth in 1894, is ready for delivery to members of the Congress. Members who have changed their place of residence or who omitted to give their address to the Secretary at the time of the Congress should communicate with Dr. Sigismund von Gerloczy, Rochusspital, Buda-Pesth. Persons not members can obtain the volume on application to the Director of the Rochusspital with enclosure of 12 florins (Austrian), being 10 for the book and 2 for postage.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st: and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 12TH, 1895.

A LAY SERMON.

Sir Edwin Arnold is not the first poet who has seen the poetical side of hospital life. There is that strange and beautiful scene in *Love's Labour Lost*, where Rosaline sends her idle lover to test his wits for a year in a hospital, and see how small he will feel in the presence of the life within its walls. And there are Henley's wonderful lyrical poems *In a Hospital*, his own experience in Edinburgh Infirmary, with such an account of his taking chloroform as few poets could have written. And there is the account of the little hospital in *The Ring and the Book*, where Pompilia found rest at last. The poets have always known how to value our work, from Homer, who said that a physician was worth many other men, down to Robert Louis Stevenson. "The physician," says Stevenson, "is the flower of our civilisation. Generosity he has, such as is possible to those who practise an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Heraclean cheerfulness and courage."

Sir Edwin Arnold could thus join the company of the doctors without leaving that of the poets. His praise of our calling is admirable, and it is not all praise that is worth hearing or having—the after-dinner compliments, when somebody proposes "The Staff," and the excessive gratitude of patients who dare not be ill or do not care to be well, and the glowing descriptions in novels of heroic doctors who cure and marry the heroines—none of these praises are of much value: but in this wise and eloquent address to the students at St. Thomas's Hospital, Sir Edwin Arnold paid the tribute to our work that we deserve and desire to receive: and he has given pleasure not only to those who heard him, but to all who now read what he said.

Three lines of thought converge in his address toward his estimate of our profession: and they are just those that we should expect in the one Englishman who is at once a poet and an exponent of the faith of the East. First, in the advance of our art, what most appeals to him is the discovery of anæsthetics. Next, among the methods by which that advance has been made, that alone concerns him which involves experiment on animals. Last, among the influences of hospital life on hospital students, he is most concerned with the growth or loss of the student's faith. Following Sir Edwin Arnold along these lines of thought, let us see how far we in our profession agree with what he, as a layman, has said so well.

As regards the discovery of anæsthetics, the story was told some years ago by Sir James Paget in the *Nineteenth Century*, and by Sir Russell Reynolds at a University College Hospital dinner in 1886. It is strange that of the three men who made the discovery in America not one attained success in later life; indeed, one became bankrupt, and one died by his own hand. It is strange, too, that in our own country the use of chloroform to relieve the pains of labour was met at first by a storm of opposition from all sorts and conditions of men, including many of our own profession. The attitude of one surgeon toward the great discovery is best told in Sir Russell Reynolds's own words: "The first operation in this country performed under an anæsthetic was witnessed in University College Hospital. Liston had consented to try the anæsthetic. I can see him now as he said to the students, 'Gentlemen, we are going to try a Yankee dodge for making men insensible.'.....At length Peter Squire said, 'He is quite ready now, sir.' Liston's knife flashed in the air; I took out my watch to count the time, and the leg was on the floor in six-and-twenty seconds. Liston turned to the students and said, 'This Yankee dodge, gentlemen, beats mesmerism hollow.'" That was all the welcome given to the first use of anæsthetics in England. There was no public rejoicing, no Thanksgiving Day, no Te Deum in the churches, no commemoration of the discoverers; the great discovery had to make its way against obstinate prejudice and folly in high places, even in some of our profession: and Liston's somewhat grudging utterance should serve as a warning to those of us who make light of new methods only because they are new. We are glad that Sir Edwin Arnold saw only the discovery itself, and not the way in which it was received.

Next, as regards experiments on animals, we agree with him that these should be as few as possible; that every possible precaution should be taken to avoid the inflicting of pain; and that the use of such experiments should be allowed to those alone who are thoroughly qualified to make them. The Act of Parliament which enforces all these limitations, and others in addition to these, should be carefully studied by every person who wishes to know the truth as to experiments on animals in this country. And with the Act he should also study the inspector's annual reports, and observe that a very large proportion of these experiments are simple inoculations, and that in every experiment, where the initial operation is of such a nature as to cause pain, this must be done under an anæsthetic.

Anyone who will read these reports will see that the sum of pain is indeed small when it is compared with such discoveries as the localisation of the centres of the cortex, the treatment of myxœdema with thyroid extract, or the preparation of the antitoxins. We agree also with Sir Edwin Arnold that any experiment on animals should be made with a grave sense of responsibility, and, as it were, under compulsion; we believe that in England this is the spirit in which they are made. Students, of course, do not make them. We are glad that Sir Edwin has spoken on this subject with better judgment than the two great poets of our age, Tennyson and Browning.

Finally, as regards his belief that the experiences of a hospital life are such as to strengthen the faith of its

students, he must remember that when a student begins his work his mind is either set one way or the other, or is still halting between two opinions. He whose mind is already fixed, either *pro* or *con.*, will probably during his student days still go whither the earlier influences of home, school, or university have led him. He who has "not made up his mind" will probably, as a student, turn toward negation: but in after years he will see many things that are now hid from him. At any rate, the old aggressive sort of young iconoclast is passing away; the joke of not finding the soul while dissecting the brain is happily played out; the student sets himself to his work, and keeps his thoughts on these things to himself, till time shall set them in their proper order and significance.

FACTORY SURGEONS AND THEIR FUNCTIONS.

A NEW departure was taken by Dr. A. P. Laurie in the introductory address at St. Mary's Hospital, published in the BRITISH MEDICAL JOURNAL of October 5th. His main point was to demonstrate the need for a closer connection between medicine and the administration of the factory laws. This want has long been clear to every reflecting and observant mind. As long since asserted by Lord Cross when he occupied the post of Home Secretary, factory laws are sanitary measures designed to secure the health and welfare of factory operatives. This fact has not sufficiently arrested the attention of the profession in the numerous discussions and propositions that have taken place in regard to sanitary science. Moreover, as Dr. Laurie states, the medical men engaged in the service of the factory office have, as a rule, not availed themselves of their position and opportunities to study and bring to notice the relations subsisting between health and employment, or to investigate diseases incident to occupation, and he points out various unsolved problems the solution of which calls for the direct aid of medical experts.

In the midst of the inactivity and indifference deplored, it is highly pleasing to welcome Dr. Laurie as a recruit to the small band of those who desire to give a due place to medical knowledge and experience in industrial hygiene, and who claim for the profession its rightful position in questions concerning the sanitary aspects of occupation and the means requisite to secure to the working classes those plans most conducive to their health.

Excepting those who have specially examined the matter, none can realise how much suffering and death are bound up with manufacturing operations, nor to how great extent those evils are remediable.

Dr. Laurie adverted to the special investigations promoted by the late Home Secretary, Mr. Asquith, which have cleared up many points connected with the effects of employment on health and life—sufficient surely to arouse public attention, though insufficient to suggest remedies for the evils revealed. They need to be considerably supplemented by additional inquiries, whilst the results of remedial measures hitherto attempted call for examination and report, so that the direction in which new attempts shall be made may be rendered obvious.

In fact, finality in this matter of investigation is remote, if indeed, ever attainable. New manufactures are ever opening up, and in old-established ones novel processes are perpetually introduced. The consequence is that new industrial evils constantly arise, and the preventive means calculated on as sufficient in past times are thrust aside as useless, or no longer efficient.

These considerations indicate the necessity of some standing authority competent to advise what alterations of special provisions need be enforced by legislation. In what direction, Dr. Laurie inquires, are we to look for a basis on which such an authority may be founded? This he finds in a reorganisation of the staff of certifying surgeons appointed by the Chief Inspector of Factories, with the sanction of the Home Secretary. In this body he recognises the first factors in any scheme for the constitution of a consultative committee to determine what special provisions and rules are to be enforced for depriving manufacturing processes of their terrors to health, to limb, and to life.

All this implies activity on the part of certifying surgeons in observing and recording the effects on health of all occupations under their notice, and also the results of all expedients devised to counteract hurtful consequences.

The necessity of revising and extending the functions of certifying surgeons has long been advocated in this JOURNAL on grounds similar to those advanced by Dr. Laurie, but the manner in which this extension can be made has not yet been fully enough discussed to elaborate a scheme for effecting the purpose. Unfortunately there exist many dual authorities in sanitary work, whereby duties overlap, and one set of officers and of administrative authorities comes into collision, and sometimes antagonism, with another. For instance, sanitation is in the hands of the Home Office, of the Local Government Board, and of their subordinate departments. Even in certain sanitary matters the War and Foreign Offices claim a directing voice. So, likewise, when we descend from central offices to local governing bodies, we encounter councils of many sorts contending for power in sanitary affairs, in appointing officers of health and regulating their action, and especially in paying them. Among such miscellaneous bodies, of whom no special qualification can be predicated, what uniform opinions or practice can be expected?

It is with regard to these various and often discordant authorities that difficulties may be discerned in defining the limits of action of certifying surgeons, and in leaving them the independence they require for the execution of their duties on the extended plan desired.

There is one thing plain, that local control is inexpedient and mischievous when success demands uniformity and continuity of administration. This is sufficiently illustrated by the shifting of the executive for enforcing the Bakehouse Acts from factory inspectors to local authorities, and *vice versâ*. And, alas! a new factor in factory legislation seems threatening in the shape of police supervision after the Continental fashion.

Dr. Laurie's address opens out many collateral questions which deserve consideration and discussion which cannot on the present occasion be entered upon. The Factory Act of the current year was hurried through Parliament—each political party being desirous to figure as the friend of the operative classes—without adequate discussion; and is on all hands recognised as an incomplete measure, that leaves to a future session the task of passing a consolidating and amending Act to remove anomalies and omissions patent in

the several Acts which have emerged into light as a result of increasing experience in the working of factory legislation.

A BRAVE DOCTOR.

The gallant conduct of Dr. Charles Toller, of Ilfracombe, on October 2nd, appears to us deserving of conspicuous recognition by the public and by the profession to which he belongs. During the great gale of that day a gatherer of seaweed heard the cries of a man who, supported by a lifebelt, had managed to struggle on to the rocks at Hall's Bush in Lee Bay, a part of the coast which is well known to be extremely dangerous. The man was the sole survivor of the crew of a small schooner which had foundered in the early morning off Bull Point. The seaweed gatherer managed to remove the man from immediate danger and carried the news to Ilfracombe.

Dr. Toller, accompanied by police and coastguard officers, immediately determined to go to his assistance; but, finding it impossible at that time to pass along the lower level, they were obliged to proceed to the cliffs above the spot where the sailor had been seen. It was impossible for a boat at that time to approach the rocks, and the cliffs —at this point 150 feet high and nearly perpendicular— offered no path.

In this emergency Dr. Toller had himself lowered over the cliffs by life lines to the spot at which the sailor, who had now become unconscious, lay. He administered restoratives, and remained with him altogether for some three hours. In this perilous task he was assisted by the coastguard and policemen. Efforts were made to haul the sailor up the cliff; but this, with the appliances at hand, was found to be impossible. An attempt to reach the spot in an open boat also failed; but finally, in a different state of the tide, the Ilfracombe lifeboat succeeded in reaching the spot and rescuing the sailor, who was taken back to Ilfracombe. Unfortunately he died of exhaustion shortly after he was taken ashore.

It needs a good nerve, a sure eye, and a steady hand to endure without flinching to be lowered over a perpendicular cliff, 150 feet high, on a calm day, but in a gale of wind, when death seems to offer an alternative of being dashed to pieces on the cliffs or drowned in the surges, the act becomes one of real heroism. Our columns were filled last week with much sound advice to medical students commencing their studies. Dr. Toller's act is also a lesson teaching by that most effectual of all means, a splendid example teaching the lesson that a member of the medical profession must be ready for any emergency which may arise in the course of his calling, and that, putting aside ideas of self, he must allow no obstacle to interpose between him and his great duty of ministering to suffering. Dr. Toller, who received his medical education at St. Bartholomew's Hospital, was at one time house-surgeon to that hospital. His act has again reflected a peculiar credit upon that great institution, and not less upon the whole profession to which he belongs. That profession delights to honour those of its members who give to the world conspicuous instances of that virtue of self-devotion of which we have had in recent times not a few striking examples among our military and civilian brethren. We believe that it will be the general wish of the profession that it should have the opportunity on this occasion of marking in some public manner its admiration of Dr. Toller's courage and endurance.

In honour of M. Pasteur the Paris Municipal Council have decided to give his name to the Boulevard de Vaugirard, which adjoins the Pasteur Institute.

The committee of the Pasteur Institute is not likely to meet before the end of the month to appoint a successor to the lamented founder. It is thought that Dr. Duclaux will be appointed director and Dr. Roux sub-director.

The Bradshaw Lecture, on Some New Vaso-dilators, will be delivered before the Royal College of Physicians of London, by Dr. J. B. Bradbury, Downing Professor of Medicine in the University of Cambridge, on Tuesday, November 12th, at 5 P.M., and not on November 7th, as originally announced.

The term of office of Dr. Argyll Robertson, the Senior Surgeon Oculist to the Edinburgh Royal Infirmary, has been extended for two years; Dr. George Mackay, the Senior Assistant, has now been promoted to the full status of Surgeon Oculist with a certain number of beds under his care; while Ernest E. Maddox, M.D., F.R.C.S.Edin., has been appointed Assistant Ophthalmic Surgeon.

The sixty-fifth session of the Harveian Society of London will commence on Thursday, October 17th at 8.30, at the Stafford Rooms, Tichborne Street, Edgware Road, when Dr. Symes Thompson will read a paper on The Climate of Egypt. All members of the profession are cordially invited to attend. The Harveian lectures for 1895 will be delivered by Dr. M. Handfield Jones in December.

Surgeon Hinde has been appointed the Principal Medical Officer of the Machakos, or central, province of British East Africa. Mr. Hinde, up to the date of his appointment, was in the service of the Congo Free State, and he will be remembered as having taken part in all the fighting against the Arabs on the Upper Congo, when, notwithstanding his status as medical officer, he was given command as a combatant, and eventually reached the rank of captain, and acted as Baron Dhanis's second in command.

THE SICK POOR IN IRISH WORKHOUSES: COOTEHILL.

We have often in our comments on our Commissioner's reports urged the desirability of better classification as a remedy for many of the evils which prevail in workhouses. But where is the advantage of a rigid separation of paupers into classes without its logical consequence—the treating each class according to its special needs? In the account of Cootehill Workhouse, the one bright spot in an inconceivably dreary picture is the remark that the nurse, in spite of squalid surroundings and the lack of nursing appliances, is able to make the condition of the sick one of comparative cleanliness and comfort, at least in the daytime. But the aged and infirm are far removed from the sphere of her influence, so is the nursery, so also are the feeble-minded. We do not mean to suggest that all these departments should be under the charge of one unhappy nurse, who is probably already overworked, but rather that when the day comes when the administration of our workhouses is admitted even by the Local Government Board to stand in need of reform, all those who by reason of sickness, of extreme youth, or of the helplessness of age require constant atten-

tion should be placed under the charge of trained attendants. The only reason for regretting the present tendency in England to separate the sick department from the rest of the workhouse is that the change occasionally leaves the aged and infirm entirely without trained assistance.

THE GENERAL MEDICAL COUNCIL.

The next session of the General Medical Council will commence on Tuesday, November 26th, and the meeting of the Executive Committee will be held on the preceding day. The alterations at the Council's house in Oxford Street, which has now become its freehold property, are making satisfactory progress. The improvements include the erection of what is practically a new Council Chamber, an apartment 30 feet square and 14 feet high. Special attention is being given to the ventilation of the chamber, and it is expected that the work of the Council will be expedited and much facilitated by the improved condition under which it will in future meet for the transaction of business. The sanitary arrangements, also, have been overhauled, and as it was found that the drainage was not in good condition, a new drain has been constructed leading into the deep sewer in Oxford Street. As this has involved excavating to the depth of some 40 feet, it has delayed somewhat the completion of the work, but it is anticipated that all will be in readiness for the meeting of the Council next month.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The first meeting of the Royal Medical and Chirurgical Society will be held on Tuesday, October 22nd, at 8.30 P.M., when a paper on Posture in its Relation to Surgical Operations under Anæsthetics, by Dr. Frederic Hewitt, Anæsthetist to the London Hospital, and Mr. Marmaduke Sheild, Assistant-Surgeon to St. George's Hospital, will be read. The subject is one which must interest all branches of the profession; and as it is, we are informed, very thoroughly and carefully considered by the authors, it is anticipated that an important discussion will take place. The paper will be illustrated by a large number of diagrams and drawings.

KHAMA AT THE LONDON HOSPITAL.

Khama, King of Mashonaland, is showing a lively interest in English civilised life, and on Monday last, October 7th, paid a long visit to the London Hospital. The King was accompanied by three other chiefs and Mr. Willoughby, his interpreter, through whom he made numerous inquiries during his inspection of the wards, examining the beds and spring mattresses, ice safe, surgical appliances, etc., remarking frequently on the prevailing cleanliness. Khama is a tall, well-built man, with a quick and courteous manner. He asked many intelligent questions as to the management of the institution, and whether the patients paid; also as to the position of sisters and nurses. In speaking his face presents a pleasing and intelligent expression. In the children's wards he made many friends among the little patients, with whom he shook hands, to their great delight; and he remarked of the nurse that the children "loved their new mother."

TYPICAL HABITUAL DRUNKARDS.

Our statement last week that the London police court inebriate "repeater" Jane Cakebread was but a type of many similar cases has met with speedy proof. The Swansea journals have since recorded the 279th conviction of Ellen Sweeney at Swansea, in spite of local efforts to reclaim her. Had she received the same lighter sentences as Cakebread has experienced in London Sweeney would have attained to over a 300th conviction. But the Swansea magistrates, after having found prison and workhouse fail, hit upon a new course this year. After one release in a drunken bout she fell foul of her sister, and had to find a surety that she would keep the peace and be of good behaviour for six months. She of course was unable to keep from drink, so that the Bench were empowered to imprison her for the six months. On her release she offended again, and on a magisterial alternative of being bound over or going to the workhouse she chose the latter, where she has been for several months.

IRISH WORKHOUSE REFORM.

The Local Government Board inspectors are taking up a position of much-needed and useful activity. We read of them appearing first on one Board and then on another. Major Fair is, we are glad to note, making war against the "harrow" beds; Dr. Browne, the medical inspector, is investigating a case of alleged neglect in the nursing of a pauper; the guardians of Granard Union are told that their hospital "is the worst in the country." All this is evidence that the conscience of the country is awaking to the general neglect of the lives and well-being of the unhappy inmates of the workhouses. At present the discussions are too much distinguished by a desire to shift the blame on to someone else. In our opinion it would be much wiser for everyone concerned to frankly admit that at least some share of the blame rests on themselves, and, as a sign of contrition and amendment, to work earnestly and honestly at the inevitable task of correcting the maladministration of the past. What is wanted at this juncture is first of all a clear idea of the line that reform should take, and then a united effort on the part of all members of the community to make such a reform possible.

THE IMMACULATES.

We are really sorry that the Guardians of the South Dublin Union appear to be hurt at the report of our Commissioner. Our desire has been to help to bring about badly-needed improvements, and we have suggested what these should be. The Visiting Committee handed in the following report at the last meeting:

> The attention of the Visiting Committee having been called to some paragraphs on the condition of the South Dublin Union Workhouse, published in the British Medical Journal and other newspapers, they beg to report, with reference thereto, that as the statements are evidently made with a predisposition to find fault, and are not supported by the actual state of the workhouse, the Committee consider they are not deserving of any attention of the guardians.

Mr. Lenehan was bold enough to say that he thought the report a fair one, but his opinion was of no avail at a meeting where all the other guardians appeared to think that everything went very well. As a matter of fact this feeling does not find much support outside the Board. We should like to have a specific denial of our specific statements. They were plain enough. Does the Visiting Committee say that they are untrue? Perhaps it is natural that a committee whose efficiency is questioned by the nature of our report should tell the guardians that our statements are not deserving of attention. We are pretty sure that an independent committee would not concur in that judgment.

MEDICAL MISSIONS.

In the report of this Society for the year 1894-95, which has just been published, it it stated that the cause of medical missions has been heartily supported by the Society since 1885. The ways in which the Society helps are by the training of students, the building and furnishing of hospitals, and the maintenance of medical missions. The Society voted during the past year £1,000 for the training of female students, and £1,000 for the training of men, but the maintenance of medical missions is the most expensive part of the work. The Society is at present assisting medical missions at Freetown, Sierra Leone; at Mahonoro, in Madagascar; at St. Barnabas Mission, Pondoland West; at Dur-

ban, in Natal; at Dummaguden, Chaibasa, Nazareth, Haifa, at Pekin and in Corea; and at Metlakatla, in British Columbia. During the year the Society has added to this already extensive list.

TWO IN A BED.

It was reported at a meeting of the Edinburgh Town Council on October 8th that there were at the present time 359 patients in the City Hospital for infectious disease, the largest number that ever had been in the hospital at any one time, even including the period of the small-pox epidemic. There were, it appeared, an unusual number (22) of cases of typhoid fever for this season of the year. There were 279 cases of scarlet fever. It appears that in some cases two patients have to be put in one bed, so great is the pressure, or so deficient is the accommodation. A subcommittee of the Town Council has been visiting the proposed site of the new fever hospital, and determining where the new hospital shall be built, and where the temporary wooden erection now in the Queen's Park shall be placed when it is removed. The unfortunate thing is that Edinburgh is now face to face with the grave possibility of epidemic disease with absolutely inadequate hospital accommodation, although for some years the Public Health Committee of the Town Council have been looking at and reporting on sites almost *ad nauseam;* not only so, but the rate-payers are to be made to feel the matter more substantially than in the way of mere talk, since it has been resolved to add one penny to the rates on each pound of rental, in consequence, it is stated, of the excessive expenditure in connection with the small-pox epidemic. Altogether, one cannot say that Edinburgh public-health affairs are at a high-water mark just now. Indeed, there are not wanting those who urge that they are being considerably bungled.

A SCHOOL FOR CHILDREN SUFFERING FROM RINGWORM.

Ringworm, though pathologically insignificant, is a nuisance, and sometimes a calamity, to schoolmasters, and often a serious hindrance to the education of children. At the International Congress of Hygiene held in London in 1891 Mr. Malcolm Morris suggested that special schools for children suffering from ringworm should be established, in which systematic treatment could be carried out while the child's education was continued. As far as we are aware, no step has been taken to carry this suggestion into effect in this country, although the disease is particularly rife in our large cities, and is believed by some to be increasing in prevalence. In Paris, where ringworm is comparatively rare, attacking on an average only from 500 to 600 children a year, a school for children suffering from the disease was founded in connection with the Saint Louis Hospital in 1882. This school is now being enlarged, and when the work is completed—in about two years according to the estimate—it will comprise two divisions, sufficient for the reception of all the children afflicted with ringworm and other contagious affections of the scalp in the French capital. The school is to bear the name of the late Professor Lailler, the distinguished specialist, who gave a large part of his life to the care of sufferers from ringworm. One division is reserved for children with ringworm; the other is intended for cases of favus and alopecia areata. The dormitories are to contain 400 beds, but the school will accommodate 500 pupils, as it is found that a certain number of mothers decline to be separated from their children for the six or seven months usually required for treatment. These day pupils will remain at the hospital school all day, being taken home under proper supervision at night. The cost of the buildings now in course of erection for the purpose indicated is estimated at £60,000, of which sum £44,000 will be furnished from the proceeds of the *Pari Mutuel*, and £16,000 will be granted by the Municipal Council. A school on the same lines, though not on so large a scale, is in existence in Rome. The experience of the out-patient rooms of our hospitals shows that ringworm is far more prevalent in London than in Paris or any other Continental city, but in this pharisaical country the betting ring is not made to pay tribute to public charity, while the keepers of the public purse might with advantage take a lesson from the "unpractical" and "sentimental" foreigner. We commend the example of the Paris Municipal Council to the attention of the London School Board.

THE INDIAN MEDICAL SERVICE.

The *Pioneer Mail* of September 4th, in an article on "Lessons of the Chitral Campaign," alluding to the medical arrangements, comments as follows: "Again, strict regulations are required regarding the entraining of field hospitals. As matters now stand doolies are sent by one train and bearers by another. The doolies too are carelessly mixed up with other goods, and thus delayed for days or even weeks *en route* to the railway base. These may seem small matters, but they all need attention. Looking further afield we see that the Indian Medical Service as now constituted could not possibly meet the requirements of an Indian army corps engaged in conflict with a powerful enemy." In the face of this, how are we to explain the official optimism of the Secretary of State for India, who, not very long before Parliament was prorogued, in reply to a question in the House of Commons stated that his military advisers had informed him that the Medical Staff "was considered sufficient for all requirements"?

THE ANDREW CLARK MEMORIAL FUND.

The failure of the Andrew Clark Memorial Fund has now been admitted by those responsible for the form which the proposed memorial took. The sum received in subscriptions since the great meeting addressed by Mr. Gladstone some eighteen months ago is altogether paltry, and the total amount falls very far short of that which it was hoped might have been obtained, and which was absolutely necessary for the new wing of the London Hospital which it was designed to erect. This failure is on many accounts a matter for great regret. Sir Andrew Clark was a man who deserved well of his profession and of his generation. This failure of an attempt to link his memory with an important extension of the hospital which he served so long and so well will appear to cast an unmerited slur on his memory—a memory which is cherished by the medical profession as that of one who was a loyal champion of its best interests and its highest aspirations for the public weal. Mr. Gladstone, in a communication addressed to a weekly contemporary, writes: "Were I called upon to advise about it, I should be tempted to recommend that an application for a small subscription be made to every medical man in Great Britain. I know not whether it is now too late, but I think the main interest in the design is that of the great profession with which Sir Andrew Clark was identified in feeling and in history." The truth of the last sentence will be admitted. In fact, the response which Mr. Ernest Hart received to a circular issued from this office in December, 1893, made it sufficiently evident that the profession desired that Sir Andrew Clark's memory should be perpetuated by some worthy memorial. Within a few days a long list containing the names of some of the most representative men of the profession in all departments of practice was received. But it was found that the authorities of the London Hospital already had their scheme in hand, and so far advanced that plans were drawn. Thus, the form of the memorial had been settled without consultation with the profession which, as Mr. Gladstone says, was mainly interested, and, rather than risk compromising the success of the movement, it was thought best by Mr. Hart to ask those who had already expressed their approval of the proposal to create a memorial to act

on the committee then in process of organisation by the authorities of the London Hospital. The movement has ended in fiasco, and Mr. Gladstone in the letter quoted above appears to attribute some blame for lukewarmness to the medical profession. The profession, however, had not the opportunity of expressing its wishes on the form which the memorial should take. There are, no doubt, two opinions in the profession as to the degree in which hospitals are abused, but it will be admitted that there is a very widespread feeling that what we want is not an addition to the number of hospital beds, or to the number of patients treated gratuitously in hospitals, but a better distribution of the eleemosynary aid now given (of which the medical profession contributes the most important part), so that it may now reach only those for whose benefit it is designed. We make bold to assert that the general opinion of the medical profession is that the public advantage would have been better served by a scheme which would have contributed to the advancement of clinical medicine—to the extension of our knowledge of the manifestations of disease, greater accuracy in diagnosis, and increased precision in the use of remedies. It is to be feared that the opportunity has now passed, but there can be no doubt that Sir Andrew Clark would himself have been overjoyed to think that his name should be associated with an institute in London for the advancement of clinical medicine, of which he was throughout his life so ardent a student. In late years, when the demands of an enormous practice made the most serious calls on his time and energies, it was his custom to retain the services of a highly-skilled assistant, whose sole duty was to aid him in the study and investigation of the private cases which came under his care. Several of these gentlemen are now occupying posts of distinction. They were not in any sense secretaries, for Clark wrote all his own letters with his own hand; nor did they assist him in his practice in the ordinary sense of that phrase. Their part was entirely behind the scenes, so far as Sir Andrew Clark's patients were concerned. It was in the study and investigation of clinical problems which came before him that their services were required. Would it not have been wiser to have taken counsel from Andrew Clark's own opinions as evidenced by his practice, and to have founded in his memory an institute which would have given to other and less prosperous practitioners the facilities and skilled assistance which he provided for himself in the clinical study of disease?

THE IRISH PRISONS BOARD ON INEBRIATE PRISONERS.

In the seventeenth report of the General Prisons Board, Ireland, issued on October 4th, reference is made to the inutility of imposing short sentences on inebriates and other old offenders. This, it is stated, is especially noticeable in the case of drunkards, who comprise 50 per cent. of the convicted prisoners in Ireland. From a curative point of view this system, the report adds, has admittedly proved a failure, while from a disciplinary point of view grave objection must be taken to sending habitual drunkards to prison, where, owing to their condition of health, they have in most cases to be treated as patients rather than as prisoners. The Board think it ought to be a question for consideration whether the law on this subject should not be amended, so that such inebriates, instead of being committed to prison for short terms, should be detained and treated in special institutions.

THE EXPERT INSPECTOR.

Carrying matters to what appear their logical conclusions is not always a safe proceeding, and some writers in the general press seem to have been led into error by the apparent simplicity of the deductions which can be drawn from the remarks made by Dr. Laurie in his introductory lecture at St. Mary's Hospital. He pointed out the daily growing necessity for the employment of experts in the inspection of the various trade processes which are now placed under the rule and governance of the Home Office, and showed that it was out of the question to look for the special knowledge required among ordinary inspectors who had been engaged in work of a different character. From this the not unnatural deduction has been arrived at that, even in the medical profession, specialism must begin at the beginning, and that a man intended for the sanitary service must devote himself from his youth up to that particular department of knowledge. "Why," we are asked, "should not the Government catch them when young?" and we are told that "there is an urgent need for systematic and continuous observation and recommendations such as can only be given by a medical expert put to the work when fresh from the hospitals and relieved from the necessity of obtaining a livelihood by private practice." In all this there is much truth; at the same time there is also underlying it a fallacy. The great value of a medical officer of health lies in the fact that he is a specialised medical man. It is far better to recruit the sanitary service from the mass of the profession, so long as the individuals chosen are qualified for their posts, than to organise the service in such a way as to exclude medical practitioners from obtaining access to it. A great deal of the success of the sanitary administration of this country is due to the fact that its members have so far been truly medical men. The tendency for men to go in for the sanitary service from the beginning, and to devote no more attention to purely medical work than is necessary to enable them to gain access to the *Register*, will turn out some very smart officials, who will apply their cut and dried knowledge with a precision and exactitude which will be pleasing to all town clerks; but they will not be as well fitted as truly medical officers would be to cope with the ever-varying phases of disease.

TYPHOID FEVER IN EAST LONDON.

During the past few weeks there has been a considerable increase in the number of cases of enteric fever notified in certain parts of the East of London. All over the metropolis there has been a somewhat increased prevalence of the disease, but in Poplar and the adjoining district of Bromley the number of cases during the four weeks ending September 21st was more than twice as great as in the corresponding period of last year. During the four weeks mentioned 28 cases were reported, the next week there were 4, the next 8, and this week up to the time of our report 5, making altogether 45 cases in a little less than seven weeks. The origin of the outbreak is not very apparent. There certainly had been a considerable increase in the number of cases of diarrhœa during the hot weather, but that had subsided almost coincidently with the heavy rains by which the sewers had been flushed, and some time before the rise in the prevalence of enteric fever. There seems at present no reason to connect this outbreak with the milk supply, the cases being distributed fairly impartially over the district, and not being associated with the walk of any particular milkman. The cause of this local epidemic is being carefully inquired into by Dr. Alexander, the energetic medical officer of the districts, and by the sanitary officials of the County Council.

NUNS AS NURSES IN IRELAND.

We have already referred briefly to this matter in the Journal of September 28th, but the question is of such importance and the crisis in Ireland is so grave that we recur to the subject. It is most unfortunate that the question of creed has arisen to complicate the situation; we are quite sure that the Local Government Board has acted in the best interests of the poor inmates of the workhouses, but it is hard to induce our friends over the water to look at the action of the department with our eyes. The matter at issue lies in a nutshell: Are the sick in the workhouses to be

nursed by trained or untrained nurses? The addition of the word "trained" is not of the small importance that some of the critics in the local press would lead their readers to imagine; a trained nurse is a woman who has been taught her business in a school authorised to teach, and by a body qualified to teach. Now we do not meet with either of these qualifications in a workhouse infirmary; the experience there gained is undoubtedly most useful, but forasmuch as it is acquired without the benefit of being directed by those who are qualified to teach, it can only rank as amateur work; this experience also is limited to the style of work in that particular infirmary, and so has no received standard of efficiency. In the Mater Misericordiæ, Vincent's, and Jervis Street general hospitals in Dublin, which are under the direction of nuns, and where nuns have for years nursed, it has, we understand, been found advisable to change the system. Lay nurses are now trained there, and the nursing is done by the lay nurses, the nuns working in the domestic departments of those institutions. Thus in these hospitals under Roman Catholic management, there has been a voluntary admission that the old system was capable of improvement. A medical officer who has his infirmary worked by untrained nurses is crippled in the application of his skill to the treatment of his patient; he can go so far but no further. Now we contend that if it is essential to the proper equipment of a workhouse infirmary to retain the services of a doctor for the treatment of the inmates; the medical man should have his department properly provided with nurses, as well as drugs and instruments. We earnestly hope that wiser counsels will prevail, and that the services of the nuns, who, because they are a disciplined body of workers are most valuable, will not be lost to the paupers, because the sisters are not allowed to qualify themselves in the wards of a hospital. Workhouse reform is in the air, the times move on and the guardians must move with them, or they will find themselves superseded by those who are in sympathy with the age.

SUPERVISION OF TUBERCULOSIS AND DIPHTHERIA.

We have received from the Health Department, City of New York, a complete set of the various documents, letters, and forms, together with a culture outfit, employed by them in the supervision of all cases of diphtheria and tuberculosis. The methods employed are most thorough in nature. As they affect diphtheria, they have already been noticed in our columns, but the regulations affecting tuberculosis are of such importance that a brief description of the methods employed must prove acceptable to all. The attention of the Board was first directed to this subject in 1889, at the instance of Dr. J. D. Bryant, but it was not until Dr. H. M. Biggs, at the latter end of 1893, again called attention to the importance of the subject that any decided steps were taken. The results of these gentlemen's efforts are now embodied in a very complete system of supervision and prophylaxis, of which the main features are somewhat as follows: On the death or removal of a consumptive patient from premises which have been occupied by him, the medical sanitary inspector is required to visit such premises, and enforce the disinfection by the department of all infected articles; at the same time an order is issued by the Board enforcing, on the recommendation of the medical officer, the renovation or disinfection of the premises themselves. For the prevention and treatment of pulmonary tuberculosis the Board recognises the importance of early diagnosis, and are prepared to make bacteriological examinations of sputa at the request of physicians attending all cases not being treated in hospitals. In the case of patients being treated at public institutions, the Board compels the authorities to furnish a full report of each case, but in the case of private patients it contents itself by earnestly requesting the co-operation of the attendant practitioner. In addition there has been printed a very excellent circular (in English, German, Hebrew, and Italian) setting forth clearly the infectious nature of the disease, and giving simple directions for diminishing the risk to such persons as have to live with consumptive patients. The obvious results of the work done thus far lie in the evident effects on the education of the people as to the infectious nature of tuberculosis and the means to be taken for its prevention; and in the destruction of sources of infection by the renovation of infected apartments. Although the report, which appeared in the *American Journal of the Medical Sciences* in January of last year, claims that for the current year there had been a much greater diminution in the death-rate than for any previous year, we suspect the real cause to lie, not in the method adopted of compulsory disinfection and renovation, but in the good effects which invariably follow any increase in general knowledge relating to the *modus operandi* of health matters. And we suggest that even if the stringent measures adopted and successfully carried out by the New York Medical Board cannot be put into operation in our own country, still almost as much could be done by the dissemination, among the people at large, of at least an elementary knowledge of the etiology of tuberculosis. Such a course would involve increased work on the part of the medical officers of health were no special arrangements made for its accomplishment. Undoubtedly such arrangements should be made, but a consideration as to their exact nature is beyond the scope of this note.

THE DIAGNOSIS OF BOVINE TUBERCULOSIS.

After an extended trial of tuberculin as an aid to the diagnosis of tuberculosis in cattle Dr. Leonard Pearson, of the Pennsylvania State College, reports that it is a very reliable agent for determining the presence of tuberculosis in cattle, that when properly prepared and judiciously handled it does not produce disease, and that it is the only known means by which a positive diagnosis can be made in the early stages. According to the *Medical News*, from which we quote, Dr. Pearson, so far from accepting the view that it will produce the disease in susceptible animals, believes that in some cases it has exercised a curative influence. The tuberculin used was obtained in some instances from Professor Koch's laboratory, in others from the Bureau of Animal Industry at Washington, and in others again from the Agricultural Experiment Station, Delaware. The tuberculin manufactured at these three centres gave like results. For injection tuberculin is diluted with a 1 per cent. solution of carbolic acid in freshly boiled water to a strength of 10 per cent. The amount used varied with the condition of the animal, a larger dose being given to an emaciated animal, a probable victim of tuberculosis. Dr. Pearson points out that care should be taken to ascertain that any sample of tuberculin used for diagnostic purposes is really active, and he utters a warning against the attempt to obtain very large quantities of milk from individual cows. The strain thus put on the constitution renders the cows more susceptible to contract tuberculosis; "the aim should not be to discover how much it is possible for a cow to produce, but to discover how much she can produce with a reasonable amount of exertion and without detriment to her constitution."

EPIDEMIC TYPHOID AT SUNDERLAND.

The epidemic of enteric fever through which the borough of Sunderland is at this present time passing is one which is attracting a considerable amount of interest, and not unnaturally, looking to the nature of the prevailing disease from the standpoint of its swift onset from comparative quiescence to that of epidemicity. In successive weeks from August 10th we are told that the cases newly arising in the borough have been respectively 14, 10, 13, and then a jump to 57, with a further stride to 104 and 105, and thereafter a decline to 88 and further to some 60 cases, the figures pointing, to our mind, to some new cause set agoing sud-

denly in some way. Indeed, the facts are not inconsistent with a milkspread epidemic, and again they would be met by water as a causative agent. To neither of these, however, does Dr. Harris, the late health officer of Sunderland, ascribe the present prevalence, but to the midden system in vogue in the town, concerning which he inveighed so strongly and persistently when in the borough. How far this may be so in the present circumstances we cannot pretend to estimate, but all questions will doubtless soon be answered now that, as we are informed, the Local Government Board have sent down a medical inspector to investigate the matter. Apart, however, altogether from the epidemic, the advice of Dr. Harris in his letter to the *Sunderland Herald* as to the need for the abolition of the midden system and the substitution therefor of a water carriage system of excrement is sound on all accounts, and deserves the serious attention of the Health and Building Committees to the important considerations which are involved. To learn of new houses being allowed to perpetuate the foul attachments of midden privies is to hear of retrogression in health principles, and for the sake of the town we trust this will at once cease, and the larger matter at the same time receive unhesitating support from the Town Council.

HOSPITAL ABUSE AT BRIGHTON.

DR. FRANCIS WARING calls our attention to the gross abuses which exist in the administration of the medical charities in Brighton. It is impossible to have any doubt as to the existence of abuse when we hear that, notwithstanding the fact that Brighton is one of the richest communities in the kingdom, 38,113 patients were last year admitted to the various hospitals and dispensaries of that town, although the whole population, including that of the sister town of Hove, amounts only to 130,000. The most startling facts, however, have relation to the lying-in charities for it appears that out of 3,704 births in Brighton and Hove during the year 1894, no fewer than 1,240 were attended by one charity alone, in addition to which some were attended in the Union, and others by a society for helping young women. It is impossible to believe for a moment that over one third of all the mothers in that district are fit objects of charity, yet the only alternative to that belief is that the charities of Brighton are badly managed, laxly administered, and, as a consequence, are grossly abused.

ALCOHOL IN IRISH WORKHOUSES.

IT is satisfactory, from a compilation of various statistics from Government returns issued by the Irish Association for the Prevention of Intemperance, to find that there was a slight decrease in the cost of alcoholic intoxicants since 1891. The reduction is small, practically a diminution of 3d. per head. There are some curious features in the figures. As in previous returns the cost per inmate in the North Dublin Union is very different from that in the South Dublin Union, being 3s. 10½d. in the former and only 1s. in the latter in 1893. Strange to say, the average expenditure in Belfast is the same as in North Dublin. It is evident that stimulants are given on no common principle. In the following unions no alcohol was administered in 1893; in Clones, with 76 inmates on a daily average; in Manorcamilton, with 127; in Newry, with 213; in Scariff, with 106; and Stromarlar, with 66. Westport and Newcastle follow with an average cost per head of 1d., Lurgan of 3½. Then the averages rise gradually up to the highest of 10s. 7d. The rate of reduction or of increase has also shown some apparent eccentricities. In short, the amounts consumed and the rates of cost per inmate present a maze of confusion and contradiction which could hardly be surpassed in its chaotic bewilderment if the responsible officers had drawn for the liquor orders in a hat filled with the paupers' names. We are not informed how much of the intoxicants has gone to officers' rations, how much to healthy paupers as an illegal reward for work, or how much has been prescribed for the sick. In the United Kingdom there has been a general decrease of some 60 per cent. during the past quarter of a century. The medical officers would be well advised if they made a special study of alcoholic liquors as dietetic and therapeutic articles, that they may order these dangerous remedies on some general, accurate, and sound scientific basis. Unless they set to this urgent work in earnest the existing chaos of alcoholic prescriptions will remain a reproach to an intelligent, valuable, and hardworked public service. The sooner an associated and resolute inquiry of this kind is set on foot the better for the interests of the poor, the better for the administration of the Poor Law, the better for the character and usefulness of the medical staff.

THE PILGRIMAGE QUESTION IN INDIA.

WE are glad to see that when the revised Pilgrim Ships Bill, which has formed the subject of much controversy, came before the Viceregal Council of Simla on October 3rd, Prince Jehan Kader stated that the Mohammedans would hail the Bill as a great blessing. They in no way regarded it as a serious interference with religious freedom, and he hoped that the Secretary of State for India would sanction the measure. The Viceroy welcomed the attitude of moderation and good sense adopted by the Mohammedans, and said that the present Bill strengthened the case against unreasonable restrictions, and facilitated an early amendment of the existing conditions of pilgrimage. The Government of India did not consider all the restrictions of the Paris Convention necessary, but admitted that evils existed. They had no wish to place any obstacles or restrictions in the way of pilgrims, but only desired to render their religious duty more convenient and more consistent with safety and ordinary decency.

MEDICAL FEES FOR CERTIFYING CASES OF PAUPER LUNACY.

AT a recent meeting of the Yeovil Board of Guardians a motion was made expressing disapproval by the Board of the increase of the payment of medical officers for certifying cases of pauper lunacy from half a guinea to one guinea. After some discussion the motion was carried by twenty-three votes to eighteen. The mover of the resolution believed in work being done at the least possible price, and that it was the duty of the Board to see that such was the case, and stated that his object was not to sweat the doctors, but to prevent the Board from sweating the ratepayers, and consequently that he brought forward the motion in the public interest, and thus supported a just and righteous economy. The Rev. Mr. Hardin, the Rev. Mr. Armstrong, and Dr. Colmer, on the other hand, maintained that the work of certifying pauper lunatics was onerous and responsible, and should be properly remunerated; and one member of the Board mentioned that the ordinary fee for passing a horse by a veterinary surgeon was one guinea, and, very rightly, he could not see why it should be less for certifying a pauper lunatic. We have no desire to claim that the fee of medical men should be over large, but, considering the important and often difficult nature of the work of examining and certifying, or deciding not to certify an alleged lunatic as being such, the time that must be taken not only in examination but in preparing documents and copies of them, the risks of prosecution which are run by every medical man who does sign any such certificate, and the importance of having a skilled opinion on behalf of the interests of the alleged lunatic himself or herself, we think no medical practitioner should be asked to undertake the work for less than one guinea, and that the fee should be the same whether, on examination, the medical practitioner decides that the case is or is not a fit one for certification.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

III.—COOTEHILL UNION, CO. CAVAN.

We received a cordial welcome from Dr. Moorhead, the medical officer of the workhouse, who very kindly took us round, giving us every help in his power. The house, a grey stone building, stands close to the railway station, but about a mile from the town, on rising ground, facing south and north. It is what is styled a "second class house," a term describing its capacity (about 300 inmates), but not referring to its efficiency. Passing through the lodge and the body of the house we came to the

Infirmary.

As we looked at the exterior we were struck by the small slit apertures in the wall which serve as windows; they are a relic of the time when the therapeutic value of light and air was not understood. On the ground floor is the surgery, a small room full of drugs, and intended for the use of the medical officer; to the back is a disused ward holding 8 beds, now used for operations, or for the isolation of any case; opposite is a stone paved room intended for a men's day-room when the infirmary is full; the corresponding room on the female side is used as the infirmary kitchen; its equipment is a wide open grate, over which was suspended a large cauldron, containing water, we believe, a large iron boiler containing the only water at hand for use, a dresser, some tin plates, mugs, a saucepan, and a frying pan. There is a close range in the nurse's kitchen upstairs.

The Wards.

It is almost impossible to convey to the reader the picture of squalor and wretchedness that greeted our eyes as we mounted the stairs to the first floor where the sick are; long narrow rooms, beds on each side, 6 on a side in the first ward, and about 4 on a side in the continuation ward; the beds close together, on one side (the north) square windows in heavy iron frames, and opposite to them the slit-like apertures already commented on, rough colour-washed walls, roof open to the slates, an old-fashioned grate at one end, more chimney than fire, a bench and a few wooden armchairs; a bucket, chair, and a small table at one end completed the furniture. The bedsteads, close together, were many of them of the hospital pattern, but we saw the "harrow" bed in use besides. On the spring beds Dr. Moorhead uses a pad of old blanketing, this being, in his opinion, more sanitary than the hair mattress, as it can be washed, but on the "harrow" beds there was a tick filled with straw, and all the pillows are of straw. On the old bedsteads the tick and pillow are placed against the wall, which is sometimes damp. As the square windows are neither weather-tight nor air-proof, the lower section has been boarded up, as some of the beds are across them; the whole of the ventilation is by means of the windows, the upper section swings on a pivot regulated by a toothed bar, but the frames are so heavy that it is a trial of strength to open them; such other openings as were in the roof or cornice were evidently out of gear. There are four

Fig. 1.—An infirmary ward, Cootehill Workhouse.

such wards, two on each side, and it must be observed that those at each end are over the lunatics' quarters.

The Patients

presented all the variety of ailment that is found in a general hospital, though the larger number are chronic cases; the wards were comparatively empty, as it was the summer; there were 22 patients in the wards, and 35 in all on the medical relief book. Several of these were in bed; a man with rheumatic arthritis, a severe case of pneumonia, a case of intestinal obstruction, ulceration of the leg, senile debility, and some good cases of recovery from operation; all surgical cases are dealt with here, as it is practically the hospital for the district. There is no lying-in ward, the women being confined in the general wards.

The Nurse,

a trained midwife, has acquired her general training under the medical officer; her wards were clean and showed that much can be done for the sick by a zealous nurse, even under such unpromising circumstances. She has the assistance of an inmate in each ward, and on the male side there is a paid wardsman, who works under the nurse, and "who has been of much service in inducing habits of order and cleanliness" (Dr. Moorhead's report). There is no night nurse. Dr. Moorhead selects the wardswomen from the older women, rejecting, if possible, those who are in the house with infants, the latter being likely to neglect the patients for the sake of their child. The nurse is responsible to the medical officer for the infirmary, and she also is held responsible for the custody of the lunatics. There are bells from the wards to the nurse's room.

The Fever Hospital,

a two-storeyed building, stands at right angles to the main building. It was built later than the infirmary, and exhibits many improvements in its structure and arrangement; the walls have a smooth surface; the wards are larger and more lofty; the windows are of fair size and face each other; the ceilings are plastered; but the fireplaces are of bad construction, and there are no internal sanitary appliances. A nurse—untrained, but experienced—is in charge, with proper help. At the time of our visit there were two patients, both convalescent, under her care; considering the decline of fever all over the country, the number of patients is never likely to be large, except in the event of an epidemic. Still, as the nurse has entire charge of the laundry and kitchen in the hospital her hands must be more than full when her patients are in the acute stage.

The Lunatics

were almost a sadder sight than the sick in the wards; they are in the two ends of the infirmary on the ground floor. Their quarters consist of the old cells disused by the medical officer, but not removed by the guardians, and the corridor and dayroom attached. In the corridor were 3 beds head to foot against the wall, and the other beds were in the dayroom, no furniture but a bench and a table, rough whitewashed walls, a small window, and an old grate protected by bars. The recreation ground, as shown in our illustration, a stone-walled grass-grown yard, having a deal board as a seat; the woman standing up, herself feeble-minded, is the caretaker, the previous one having been discharged by the doctor for beating the poor creatures. These unhappy wretches are confined to this section, where neither treatment nor alleviation is possible. On the male side the section is the same, but many of the men were employed about the place.

Fig. 2.—Lunatics in the airing court, Cootehill Workhouse.

The Airing Courts

attached to the infirmary are small grass-grown courts at the back of the building. In this house Dr. Moorhead has endeavoured to redeem the waste of desolation by laying them out somewhat like a garden, and placing a few seats for the old people, an act of kindness that has been much appreciated, the old people finding some relief to the monotony of their existence by the cultivation of the garden. The law of classification is so rigid that these poor people are practically imprisoned in the part of the house to which they are assigned. The rank grass that we saw in the lunatics' yard is anything but wholesome for the inmates.

We now turned our steps to the body of the house, where are the quarters for the

Aged Men and Women.

These consist of long wards, low-pitched and unceiled, rough, whitewashed walls, windows at either end, and three at the side, a stove, harrow beds down each side, a few benches without backs, and a table at one end. The rooms were dirty, the patients were unkempt and unwashed, and as the only materials that we saw for the toilet were a tin basin and a dirty round towel this was not to be wondered at. This ward is approached through a concrete floored apartment called the dayroom, equally dirty and uninviting; most of the men were here, seated on a cross-bench in front of the comfortless grate; a long deal table, almost as black as the floor, was the only other furniture. On the female side most of the women were in the dormitory, many of them at needlework; their appearance was not quite so bad as that of the men, though the conditions in which they lived were the same. Both the men and women are in charge of an inmate, these caretakers themselves being old and infirm. In fine weather this class can sit under the sheds in the yard, but in the winter they are confined to their quarters. Before passing to the nursery we will describe the

Sanitary Arrangements

in these and the sick wards. It must be understood that there are no indoor conveniences, and that the privies marked P in the sketch plan[1] are at some distance from the wards, and therefore unavailable in bad weather or at night; to meet this difficulty the old people are provided with open pails or buckets; in the sick wards these buckets are enclosed in a wooden chair. It must also be observed that the infirm wards are locked on the outside from 7 P.M. until 6 30 A.M. The greater part of that time the ward is in darkness, and the only assistance available is such as the inmates can render to each other. The pails remain unemptied until the morning in both the sick and the infirm wards. We pictured to ourselves these wards locked up, the windows closed to husband the feeble warmth of the stove; the inmates on their narrow beds, from which they may slip to the floor in their weakness and there remain until the morning; the filthy-smelling buckets, some doubtless upset in the dark; no water to be had, no help available except in case of dire need; we turned away sick at heart that such things should be. In the sick wards the nurse is at hand, but there is no night nurse, and the excreta of the sick poison the air in those crowded wards. In the lunatic wards the same unsavoury method prevails, and the well-known dirty habits of the feeble-minded add to the foulness of the surroundings. The privies in this house are on the waggon system; a movable trough receives the soil, and when full is drawn out of a door at the back and wheeled on to the land. We noticed that the trough was neither cleansed or purified before being returned to the privy.

The Nursery

is close to the women's dayroom. It is a small room, having one window, rough walls, raftered ceiling, and an old grate set in the angle of the wall. We saw three infants in this nursery; one asleep in a wooden chair by the fire, its vomited food on its clothing and on the floor; another in a wooden cradle asleep; and the third sitting up, and roaring lustily for the attendant, who was not in the nursery. These infants were not clean or sweet; we were informed that their mothers were supposed to take care of them. We saw nothing suggestive of a nursery—no toys, amusements, or pictures. The room opens on to a yard.

[1] British Medical Journal, September 28th.

Domestic and Other Appliances.

There are no baths either in the infirmary, the fever hospital, or the infirm wards, nor is any water laid on to these departments, except to the laundry. The water for the infirmary is obtained from a tank in the body of the house, and that for the body of the house from a large well, from which it is pumped up by the inmates into the tank. The movable bath, having to be filled and emptied by hand, is now practically disused from lack of labour. The kitchen and the laundry remain as they were constructed when the house was built; in the former, three large boilers each, with its separate fire—one for the stirabout, one for potatoes, and one for holding cold water; in the laundry two old wash-tubs, a copper, and a box filled with stones on rollers serves as a mangle. Both these offices were very dirty—a dirty pauper was head cook, and two women were splashing dirty clothes about in dirty water in the laundry. The sole cooking utensils that we saw were two saucepans and a frying pan. It is no wonder that Dr. Moorhead pathetically remarks in his report that it is no use his ordering meat, for he has no one to cook it. Under these circumstances we were not surprised to find that the dietary was as elementary as the appliances, consisting principally of porridge, milk and bread for the able-bodied and old people, and for the sick such food as could be cooked in the small ill-found kitchen in the infirmary.

Recommendations.

It has been our custom in concluding these reports to focus the results of the inspection; thus, we hope, giving some aid to the guardians in the work of reform; but in this case we find ourselves confronted with a building in all ways unsuitable for the work required of it, and, when the question of adaptation is considered, the cost of fitting it for the use of a modern hospital will be so large and the result so unsatisfactory that we hesitate to suggest it. As we considered the circumstances of the district and the proximity of workhouses quite in excess of the population, we saw a prospect of amalgamation leading to better classification and the more efficient treatment of the sick and infirm. The alternative is a new infirmary, which would be cheaper in the end than the attempt to patch and adapt an unadaptable building.

NENAGH WORKHOUSE INFIRMARY.

The inquiry into the alleged scandal in this house has ended most unsatisfactorily. It is evident that the medical officer, Dr. Meredith, feeling dissatisfied with the arrangements made for the nursing of the wards during the night, made efforts to awaken the guardians to their responsibility. Of the wisdom of the action taken we may have our doubts; but we are thoroughly in sympathy with the effort made to secure the appointment of a trained nurse for the night, and we regret to read that the Board is content to go on as they have been doing. As long as the system of locking up helpless people during the night with no more responsible attendant than an inmate is persisted in, there will always be a possibility of old people dying whose lives might have been prolonged if skilled nursing had been at hand.

IRISH WORKHOUSE REFORM.

We note with pleasure that the Irish press is turning its attention to this question; the *Northern Whig* and the *Irish News*, besides giving full reports of the proceedings of the Boards of Guardians, have recently editorial comments on the matter, and from the *Irish News* we gather that the Government intend to appoint a Royal Commission to enquire into the working of the Poor Laws. This sounds like a move. For a most direct and very general interest for the great body of the people, and will, we trust, receive early and careful consideration from the Government. Few questions call so loudly for an exhaustive examination.

BIRKENHEAD WORKHOUSE.

The medical officer at Birkenhead is endeavouring to move the Board to revise the system of nursing in the workhouse infirmary. As we gather from the report of the proceedings of the Board, Dr. Stansfield has been drawing attention to the unreliable manner in which the orders are interpreted by the nurses, and in so doing he wished to explain the uselessness of the system that appoints an insufficient staff improperly supervised to undertake the nursing of the sick. We are glad to see that a committee is appointed to investigate both the charges brought by Dr. Stansfield against the individual nurses, and to inquire into the working of the system.

THE HOUSING AND NURSING OF THE SICK POOR.

Everyone must feel wearied of the perpetual chronicle of the policy of obstruction on the part of responsible authorities to the necessary reforms in the housing and nursing of the sick pauper; these reforms are bound to come, and the guardians will be choosing the wiser part if

they go with the stream instead of contesting each step. The Poplar Board of Guardians are at cross purposes with the managers of the sick asylum; the workhouse is overrun with sick for whom there is neither the accommodation or the nursing staff, and their desire to transfer them to the asylum is met by serious delays on the part of the managers, leading to mutual recriminations, and it is hard to place the blame; but of this we are sure, that if the business of a company or of a private venture were transacted in the manner in which the affairs under the Local Government Board are managed the directors would soon be sent about their business.

BASINGSTOKE UNION INFIRMARY.

THE Board of Guardians of this Union had two propositions to consider at its last meeting, by which the admitted congestion in the infirmary might be relieved. One was to build a new infirmary; the other was to twist and turn the existing buildings, adapting here and altering there, so that the increased and increasing number of patients might be accommodated. At present the position of affairs is that at a meeting of the Board held on April 5th of this year a resolution to build a new infirmary to accommodate 40 patients, with proper administrative adjuncts, was carried. This resolution was the result of a discussion on the report of the Inspector Mr. Baldwyn Fleming, who condemned the present infirmary as inadequate and insanitary. At a subsequent meeting of the Board when other members were present, the whole question was reopened, and certain then present succeeded in carrying an adverse resolution and referring the matter back to a Committee with an alternative scheme to adapt the chapel and other parts of the building to meet the demand for more space. We sent our Commissioner to inspect the workhouse and report on the arrangements as at present made for the infirmary purposes, with the result that the report as published in the BRITISH MEDICAL JOURNAL of September 21st shows that the scheme of patching as advocated by a section of the Board will only result in disappointment and in the expenditure of the sum necessary for a new infirmary at no very recent date. At the last meeting of the Board, held September 20th, we note with much regret that the policy of the party in favour of patching has carried the day, and further we read that the argument that seemed to turn the scale was that so dear to the obstructive guardian, namely, that there may be a prospect, whether in the near or distant future is not stated, of some revolution in the condition of and provision for the aged and infirm; therefore let us do as little as we can. For this reason Basingstoke is going to patch and make the rent worse.

OPENING OF THE MEDICAL SCHOOLS:

INTRODUCTORY ADDRESSES.

ST. THOMAS'S HOSPITAL.

MEDICINE: ITS PAST AND FUTURE.

By Sir EDWIN ARNOLD, M.A., K.C.I.E., C.S.I., etc.

IN the course of the address (to which we referred briefly last week) delivered on the occasion of the distribution of prizes to the students of the Medical School, Sir Edwin Arnold said:

INTRODUCTION.

The first impulse of a very busy man when he has been asked to deliver an address is undoubtedly to excuse himself as politely as he can. That impulse may be described as automatic and instinctive. But when the honour fell unexpectedly upon me of being invited to distribute prizes here to-day to the students of the medical school of St. Thomas's Hospital, I could not consider the occasion ordinary. The profound respect which I feel for your noble profession; my true delight in its progress and advancing achievements; the firm hope I entertain of greater medical and surgical developments to come, which will by and by render human life more pleasant and more prolonged; my many friendships among the leading physicians and surgeons of the day; my own private gratitude to the skill and goodness of some among them; and my personal interest in your great and useful foundation of St. Thomas's—these, with other considerations, suppressed in me that "reflex" and automatic "No" which fatigue and the dread of apparent presumption must otherwise have enjoined.

You, gentlemen, begin by self devotion and fearless defiance of risks which others dread and shun. Your original choice is brave, your early ambition honest, your first steps hard and dogged by the spectre of examination; your daily work, even if ever so little elevated by enthusiasm and faith, is work that brings help and hope to your fellows, and constitutes you the common friends of all.

TRUE VICTORS.

Moreover, you are advancing like true victors in a march of constantly augmenting conquests over that strange fascinating waste of twilight and wondering exploration which is called "science." There have been times when it was not particularly honourable to be a doctor. The specimens of medical and surgical practitioners whom we find held up to ridicule in the pages of Molière or in the pictures of Hogarth, deserved, as far as can be judged, the pillory of immortal scorn in which their ignorance and pretentiousness have been placed by the genius of satire. Yet there were not wanting, even in times of Thomas Diafoirus, serious and modest searchers after the secrets of healing, men imbued with the dignity and solemnity of their calling; and, indeed, I think we could fill up every single age from Galen and Avicenna to Ambroise Paré and John Hunter with the names of truly great doctors. But your lot is cast in an epoch of such acceleration of knowledge, such expansion of methods and resources, such ever-increasing power of doing solid good to your kind, that the old satires have all died away. The new age frankly honours and values your vocation, in discharging which you yourselves move forward by rules more and more exact and less empirical.

Living men of 60 years or so belong entirely to the present benignant reign—and within that reign we can recognise, though lacking your closer observation, what prodigious progress has been accomplished by medicine and surgery, and, I may add, in the science of sanitation. It was one of the surgeons of St. Thomas's Hospital—the illustrious John Simon, F.R.S.—who may be said, in conjunction with Mr. Edwin Chadwick, to have actually invented public hygiene. These great benefactors, and their able assistants, had none of the knowledge which you all, in greater or in less degree, now possess about bacilli and bacteria; but by improved drainage, purer water supply, good paving and scavenging, removal of refuse, and prevention of overcrowding they succeeded in establishing such a difference between clean and unclean places that the way was paved for the fruitful discoveries which followed.

Now you have at over-extending command the vast new region of bacteriology, wherein sunshine and daylight, and the wonderful natural forces of life, and those that are friendly amongst the microbes fight on the side of your enlarging science, and, on our behalf against the "pestilence that slayeth in secret." A great authority has declared that "a day will come when—in London, in Berlin, in Paris man will not die of diphtheria, of typhoid, of scarlet fever of cholera, or of tuberculosis any more than he dies in these cities to-day of the venom of snakes or of the tooth of wolves."

SNAKE POISON.

In connection, moreover with that promising subject of the antitoxins such as those for diphtheria and tetanus, there is some promise, be it observed, of injections which will neutralise snake poison. Professors Calmette in France, and Fraser of Edinburgh, after patient experiment with snake venom have apparently succeeded in rendering rabbits, and eventually horses, proof against doses of this 350 times stronger than an ordinarily lethal quantity.

TSETSE FLY.

Has anybody given thought in the same connection to what might be done to rescue the draught cattle and horses of South Africa from the tsetse fly? Whole belts of our growing empire there are cut off from trade by the poison of this tiny plague, which kills all horses, oxen, and donkeys that it stings, yet has no power whatever upon the zebras, buffaloes, and wild beasts of the veldt. If the blood serum of these naturally acclimatised and adapted creatures of the same genera, properly applied, could give immunity to South African caravans, millions of money might be saved to the colony.

ANÆSTHETICS.

Let me take permission to tell you that what fills my own heart most with thankfulness, and causes me chiefly to congratulate you on these new days of therapeutic science, is the benign, the blessed discovery, and the now almost universal employment of anæsthetics. If you look into the history of that happy revolution, you will be warned against depreciating fresh ideas by noticing how sadly slow men are to take the hints which Nature gives to them of her very

choicest treasures of resource. Why did not anyone act upon what Sir Humphrey Davy had so long before learned and imparted about the properties of nitrous oxide? The key was already there, but not until many years afterwards did an almost casual hand (that of an American dentist) fit it into the golden door behind which sat waiting an angel of pity, kinder and more powerful than any Arabian fairy suddenly revealed in her divine beauty and bountifulness to any prince or magician of the *Thousand and One Nights*. Is there anything in human history which more sternly teaches that men must win every boon of Nature by his own ceaseless striving than that this simple chemical and physiological secret of chloroform should have lurked so sadly long in its easy formula, undeciphered, through all those waiting generations when pain was an omnipresent tyrant, whom science could not control, and the operating room a torture chamber, dreaded almost as much by the surgeon as by the sufferer? Think of those gallant sailors of Nelson at Trafalgar, whose bleeding stumps, in the gloom of the orlop deck, were plunged into hot pitch to stay the hæmorrhage! One would almost expect that, for pity of such brave men, and for the sake of the countless tender women and children who age after age, so hopelessly endured, Telesphorus, the God of Healing or Nature herself, would have burst the iron law of her impassive silence, and as Helen did in the Odyssey for the sorely-tried Greeks, have poured this nepenthe into the bitter cup of mortal life. I can remember the poetess, Eliza Cook, whom as a boy I knew, when chloroform was still unknown, writing how

> I've seen that blench not in the reeling strife
> Turn silent and white from the surgeon's knife.

Not until 1847 although Humphrey Davy had been so near the revelation, did the anæsthetic age commence, giving to your Art a sure control of anguish; to its boldest practice confidence, quiet, and leisure; and to those who have to lie under that knife a sweet and complete oblivion. I have myself known what it is to pass, fearless of the kind steel, into that world of black velvet tranquillity, of which your magic drugs now keep the gate; and to awake as good as healed, grateful beyond words for the soft spell of enchanted peace, and the sure and faithful skill.

Nurses.

I have met in this great Palace of Pain gentle and graceful presences which lead me to allude to one more great and happy change among many that has come upon your profession; I mean the education and employment of professional female nurses. A great physician once said in my hearing that the three most sovereign medicines he knew were hot water, fresh air, and good nursing. In your fathers' day, gentlemen, we had no good nursing; we had Mrs. Gamp and Mrs. Betsey Prig, or else heavy-handed and heavy-footed male attendants, very different in mind and manner and influence from the lightly-moving and softly-speaking woman, whose carefulness—intelligent, pitiful, but tranquil, trained, and governed—now smooths every sick pillow, and carries out faithfully and fearlessly the ordinances of the doctor. I do not know whether you, the surgeons and physicians, or we, your patients in *posse* or *esse*, are most to be felicitated upon this admirable revolution in the hospital ward and the sick room. There is no doubt that it was primarily due to the example of that most compassionate and noble-hearted woman, Florence Nightingale, who went at the head of a band of nurses, many of good birth, to the Crimean war, and by demonstrating there and afterwards the immense advantages of skilled and high-class nursing, gave to her age the blessing of this modern system and to her sex a new, a suitable, and a most honourable vocation. You have greeted the name of Miss Nightingale with instant and hearty applause. That generous tribute to her—who in her old age and retirement is even now the centre of so much silent national affection—encourages me to remember that I am, after all, poet by nature and lecturer only by accident, and that in those dark hours of the Crimean war I wrote certain verses, which are perhaps brief enough to be on this occasion acceptable. If I am so bold as to revive them from their unprinted oblivion, it is because what they express of admiration and gratitude is applicable in a great degree to every good and dutiful nurse, here and elsewhere, who loyally discharges this new and most womanly function.

The lecturer then recited the subjoined lines:

> If on this verse of mine
> Those eyes would ever shine
> Whereto sore-wounded men have looked for life,
> Think not that, for a rhyme,
> Nor yet to suit the time,
> I name thy name, best Victress in the strife,
> But let it serve to say
> That when men kneel to pray
> Prayers rise for thee thine ear can never know,
> And that thy gentle deed
> For Heaven and for our need
> Is in all hearts as deep as Love can go:
>
> 'Tis good that thy name springs
> From two of Earth's fair things,
> A stately city, and a sweet-voiced Bird;
> 'Tis well that, in all homes
> Where thy kind story comes,
> And brave eyes fill, that pleasant sounds be heard,
> Oh voice! in night of fear
> Like Night's birds—sweet to hear
> Oh Strong Heart! set like city on a hill,
> Ah! Watcher! worn and pale
> Dear Florence Nightingale!
> We give thee thanks for thy good work and will:
> England is glad of thee,
> Christ, for thy Charity
> Take thee to joy when heart and hand are still.

Indian Doctors.

This topic tempts me to glance at another closely connected with it, which has always had my earnest interest and support—I mean the movement so excellently instituted and so successfully carried out by my most noble friend the Marchioness of Dufferin and Ava for the supply of English female doctors to India. In that country, by reason of its peculiar institutions, we are secure from any controversial questions as to the fitness of women for your profession. The customs of the *purdah* absolutely forbid the high-caste Indian ladies to avail themselves of male European skill. I was dining once in Jeypore at the table of Surgeon-Major Hendley, the able and trusted friend of the Maharajah, when a message came that the chief Queen had been taken ill and begged the advice of the British Hakeem. He went, and on returning told us that, although for seventeen years a familiar visitor of the palace, and the private adviser in many matters of the Rajpoot Prince, he had been obliged to suffer his head to be enveloped in a silken bag, and so equipped had been led into the Zenana, where he had felt the pulse of Her Highness, and had examined her with the stethoscope without seeing an atom more of his patient than a glimpse of one jewelled slipper through the strings of the bag. Here is a medical and surgical field, therefore, wide and unfilled, which might absorb any amount of feminine ability and devotion, if only proper public support be given; and I ardently entreat your countenance and assistance for it in the course of that professional influence to which I well know many among you are destined to rise.

Vivisection.

I shall take courage, since your kind attentiveness proves you convinced of the sincerity of my interest in your profession, to touch upon yet another topic, bristling, I know, with dangers from outside observers. I have read, in one of the able disquisitions already quoted, a paragraph dwelling upon Harvey's grand discovery of the circulation of the blood, where, after mentioning that that splendid revelation was the result of experiments performed upon living animals, the talented writer—a great living practitioner—goes on to say: "The whole fabric of modern medicine, the whole difference between the prospects of a sick man to-day, and his prospects two hundred years ago, rests absolutely upon vivisection."

I do not venture, in presence of knowledge and experience so much vaster and riper than mine can be upon such a matter to dispute or qualify that assertion, nor shall I as an individual take on myself to deny to conscientious science, as many persons deny whose motives and arguments I most deeply respect, the right claimed to pursue essential experiments at the cost of the pain and death of innocent creatures. If to give my own life under torture would certainly lead to the saving of very many other lives, I should hate and scorn myself if I had not the will so to die; and as between men and beasts I suppose it is true that we are "more than many sparrows." But my private feeling, founded upon an ever-growing sympathy

for the lower animals, an ever-increasing wonder at their gifts and capacities, and an ever-deepening sense of our human responsibility to them, was expressed in a phrase, which I confess was extravagant, used by me to a famous contemporary surgeon, who said: "What, Sir Edwin! May I not vivisect a cat to save the life of a bishop?" and I replied: "Yes, Sir Henry, on condition that you afterwards give the cat a public funeral in Westminster Abbey as a benefactor to the Church and to humanity." Of course that was paradox, but I am persuaded that all of you will understand me, and many will agree with me when I declare that this solemn right to succour pain by inflicting pain has its best foundation upon an immense reluctance to adopt such a necessity, an anxious economy of anguish in the act; in fine, a feeling not of the heedless experimentalist, but of the priest sacrificing victims for propitiation. I say again that I disclaim any pretension to teach mercy to you whose vocation has mercy for its watchword. I will not share with my age the fruit of patient physiological researches, and then hastily reproach those who have laboriously acquired them for the general good. But as regards my own sentiments, that which chiefly led me to write *The Light of Asia* was the boundless and beautiful tenderness of the Buddhist religion towards the lower animals, whose lives are so mysteriously related to our own, whose lot is so largely at our disposal, and who are to us much as we human beings are to that invisible almighty Power at the feet of which we have sometimes too little cause to wonder if we ask in vain for pity and clemency. Therefore I will be bold enough to-day to put in this humble plea for the dumb martyrs of vivisection, that they may be as few as possible, as mercifully dealt with as possible, and that it be held by the inner *religio medici* which every true doctor cannot but possess and profess, that the meanest living thing thus sentenced to suffer and to perish for mankind derives from its very doom a certain enhanced regard and a special consideration to which the conscience and him who is a gentleman as well as a doctor will never be insensible.

But Mercy Natural.

I am not here however, as I before remarked, to inculcate reverence for all forms of existence, and tenderness towards all suffering, upon those whose glorious vocation it is to be merciful, sympathetic, and conscientious. Very quickly must the chivalrous aspect of a good doctor's life lay hold of him, as is sufficiently shown by a memorial which I have observed in your chapel. A tablet there records how your fellow student in this medical school gave up his young life in the passionate desire to save that of some obscure and humble patient. To my thinking no ancient cathedral, no chapel of St. George at Windsor, or of Henry VII at Westminster, no shrine or temple, or sanctuary anywhere, can contain an epitaph more touching to peruse, more nobly commemorative of the dead, more splendidly honourable to the institution which trained him, and to-day trains, I doubt not, many like him. We have all of us lately read, too, of the heroism displayed by Surgeon-Captain Whitchurch in the fighting at Chitral on the Indian frontier—heroism graciously rewarded by Her Majesty, and such as casts a lustre upon the whole profession.

OWENS COLLEGE, MANCHESTER.

THE TEACHING OF PATHOLOGY.

By Sheridan Delépine, M.B., C.M.,
Proctor Professor of Pathology in the Victoria University.

In the course of an introductory lecture delivered on the occasion of the opening of the new Pathological Department at the Owens College, on October 2nd, Professor Delépine said: We meet to-day under circumstances which are of considerable interest and importance. For the first time the new extensive lecture and work rooms which have been provided with wise munificence by the Council of the Owens College for the study of forensic medicine, physiology, and pathology are opened to students and other medical workers. It is not my place to tell you how, through the addition of these new buildings to the medical school, all the departments, besides those I just mentioned, have benefited. It is enough to say that this College offers you now, in all branches of medicine, facilities for study second to none in the empire.

I will only refer to pathology, and I may say at once that it is perhaps in this department that the improvements to which I have just alluded will be most felt. In the old buildings the space at our disposal was very inadequate; now, on the contrary, each branch of pathology is provided with laboratories well adapted to the special studies which have to be conducted in them. I will perhaps help you to realise the importance of these advantages by giving you a general idea of the subject which we have to study together.

Pathology is nothing else than the "natural history of diseased organisms," and as such is a branch of pure biological science, and is based on the same methods of observation and research as other biological sciences. The word pathology means "the science of disease." A definition of disease is not easy to give, but I may perhaps say that it is "a reaction of a living organism to agents incompatible with the normal performance of function." The reaction consists in (*a*) alterations in the functions, (*b*) alterations in the chemical composition, (*c*) alterations in the structure of the tissues or organs of the animal affected. The study of these alterations forms the object of three practical branches of pathology—morbid physiology, very often spoken of as experimental pathology, though experiments are not confined to this branch only; morbid or pathological chemistry; morbid or pathological anatomy, including histology. This subdivision corresponds also to methods of investigation which are quite distinct, though all tending to the same end.

The morbific agents, or causes of disease, form the object of another branch of pathology—etiology. This part of the science has most important practical bearings. Every advance in our knowledge of causes makes prevention and cure more possible. Among the causes of disease which are now known, none are more important than those parasites to which the name of bacteria has been given; to these I should, however, add a certain number of protozoa. Our knowledge of the relations of these micro-organisms or microbes to various fermentations and diseases may be said to be of quite recent growth. Thirty years ago bacteriology did not exist. It is to the remarkable discoveries of the illustrious man whose death science is mourning to-day that we owe the first clear and complete conception of the nature of contagious diseases. The influence of Pasteur's work in medicine is difficult to overrate, for we can hardly in the present day conceive how any true and complete idea of some of the most common diseases could be obtained without any reference to their microbic origin.

As a striking instance I need only allude to what occurred between the years 1850 and 1863 in connection with anthrax or splenic fever, otherwise known as malignant pustule or woolsorters' disease, etc. In 1850 Davaine and Rayer had noticed that in the blood of animals dead of anthrax there were rod-shaped bacteria. They evidently did not in the least realise the importance of this discovery. But after Pasteur had communicated to the scientific world the results of his splendid researches on lactic acid, butyric, ammoniacal, and other fermentations, and had shown the far-reaching meaning of his discoveries, Davaine reconsidered his old observation. In 1863 and 1864, in important communications on "Le Sang de Rate," he came to the conclusion that the bacterium which he had seen thirteen years previously, and which we now know under the name of bacillus anthracis, was the cause of the disease.

In the same way, under the influence of Pasteur and Davaine's work, Villemin, who had proved by a number of careful experiments the contagious nature of tuberculosis, was led to infer the probable existence of a microbe as a cause of that disease. This suggestion was proved some seventeen years later to have been correct by Koch's brilliant discovery of the tubercle bacillus.

Charles Richet has so keen a sense of the influence which Pasteur has had on the development of modern pathology that he feels inclined to divide the history of medicine into two great eras—namely, that of medicine before Pasteur, and that of medicine after Pasteur.[1] This subdivision, I need not

[1] *Travaux du Laboratoire*, 1892, vol. ii, p. 18.

say, is not likely to find general acceptance, and may possibly by many be considered a piece of Gallic exaggeration. We are perhaps too much under the influence of bacteriological doctrines to foresee how far they will retain the primary importance which even the most careful scientists attach to them at present.

It is, however, impossible to doubt the well-proved connection there is between the presence of certain microbes and the production of corresponding morbid states; many methods now used for the prevention of disease, based on the connections just mentioned, have yielded such confirmatory and practical results that bacteriology is becoming daily a more important science in connection with the department of public health.

The practical teaching of pathology has necessarily many aspects. In our new department special laboratories have been provided for the study of morbid anatomy and histology, pathological chemistry, experimental pathology, and bacteriology. These laboratories have been designed so as to make them suitable not only for teaching, but also for research.

It might be imagined from what I have said so far that a complete course of pathological lectures should cover the greater part of medicine and surgery, with the exception of what relates to treatment; but it has been generally accepted that, for convenience sake and in the interest of the student, a course of pathology should deal specially with (1) morbid anatomy and histology; (2) the physiological processes involved in the production of lesions; (3) the nature of the causes of disease.

Billroth has justly said that "an enlightened and refined empiricism is still at the basis of most methods of treating disease;" and, such being the case, you might wonder why so much time should be devoted to the purely scientific side of medicine. A little thought will show that the duty of a medical man does not consist simply in the blind application of rules transmitted to him by tradition. If such were the case we would be still groping in utter darkness.

One of the constant objects of the physician or surgeon is to improve his art. This can be done in part at the bedside by careful observation and comparison of results, but the ideas suggested by these observations can only be tested by anatomical observations and experiments, and it would be hardly fair to use the patients themselves for experimental purposes, however probable the chances of success might be. It is not less important to keep in mind that hypothetical conceptions which are so useful in scientific research are bad—I should even say dangerous—guides in practice until they have thoroughly been tested by careful observations and experiments. From this it is evident that although pathological theories have an important place in the development of medicine, these theories should hardly be the main object of any useful course of medicine considered as an art. We have had many sad instances in the past of the dangers of theoretical conceptions, and of their blind application in practice, by very great men; and we are not exempt from the same fault at the present day.

But putting aside the philosophical side of the question, I will say that pathology has a most important place in the education of a medical man. Only by a study of this branch may the student hope to realise the field which opens before him in the short time that he can devote to his medical studies.

It is only by having placed before him a systematic and comparatively short exposition of the various processes, whether rare or common, that may be observed in the diseased body (so far as we know them at present) that he may hope to obtain an idea of the probable relations of one form of disease to another. It is only in this way that he can hope to learn rapidly the probable connection between cause and effect. Such a knowledge must be useful to him in presence of rare cases, or of more ordinary cases with some unusual features. Then, although I have said that it is not wise to depart in practice from the empirical methods established by experience, it is equally evident that a man in possession of a greater number of facts may arrive at more sound conclusions than observers who had fewer facts to compare together.

This course will be divided into three important parts:—

1. General pathology, or more correctly general morbid anatomy and physiology, which deals with the alterations produced by disease in the structure, composition, and functions of the tissues. It is necessary to consider in connection with this part disorders of circulation, and to a certain extent of innervation, in so far as they influence the productions of cellular lesions.

2. Special pathology, which is chiefly concerned with the changes produced in each organ by the morbid processes studied more generally in the previous section.

3. Etiology, which treats of the various causes of disease and of the way they affect the living body.

It has been of late the fashion, in some quarters, to speak with a certain amount of contempt of morbid anatomy. I should, however, advise you to pay special attention to this branch of pathology. Anatomical changes in a great many instances have been the means of attracting the attention of observers to disorders of functions and to causes of disease which would otherwise have escaped their notice. No pathologist would at the present day think, as some of the older medical men did, that anatomical lesions were actually diseases, yet in many instances the nomenclature used at the bedside is still based on that old notion, so that you will constantly hear of patients suffering from cirrhosis of the liver, nephritis, softening of the brain, and unfortunately in many cases the diagnosis cannot go further.

It is only in anatomical lesions that we can at the present day find a solid basis for a classification of the phenomena of disease that will not lead to constant confusion through overlapping of the sections. Whilst during life the existence of a large number of diseases is known by a certain association of symptoms, after death the same diseases may be indicated even more clearly by a certain association of anatomical lesions.

Through morbid anatomy the identification of certain diseases has been made possible long before the actual cause was known. I need only mention tuberculosis as an instance of this. Thoughtful physicians and surgeons have always taken a keen interest in morbid anatomy. The reasons for this are simple:

(1) The symptoms observed during life are often evanescent, and very often not evident at the time when a patient is under observation. (2) Many of the physical signs require considerable technical skill and experience to be recognised and properly interpreted. One observer is not always certain that he hears or feels exactly what another observer has found or felt. (3) Secondary phenomena often obscure the primary lesions. (4) Patients for some reason or other have often a desire to mislead their medical attendant by fanciful stories.

On the other hand, in the *post-mortem* room (1) one has mostly to deal with material or organic traces of disease, which are not liable to become obliterated except under special and definite conditions. (2) The structural changes produced by disease are few in number, and the complete effects resulting from their various combinations can be analysed with a considerable amount of accuracy. (3) The lesions themselves are objects capable of being accurately described and compared one with the other. They can be depicted and even preserved in our museums in such a way that it becomes possible for a man to compare his own observations with those of numerous other previous or contemporary observers.

By tracing carefully the connections between symptoms observed during life and lesions observed after death, the clinical observations of one observer can be compared with those of another in such a way as to leave little room for the disturbing influence of the personal equation. Anatomical lesions give us therefore the best means to compare and check our own observations and those of others; and though pathological anatomy gives but a very limited knowledge of disease, it provides the only firm basis on which to arrange the facts connected with disease.

King's College, London.

The physiological laboratory has been enlarged by the addition of two extra rooms. One of these has been fitted with

motor, shafting, and the necessary apparatus for conducting an advanced course of experimental physiology; the other is a dark room for photographic purposes. The lecture room has been also improved by fitting it with dark blinds for lantern demonstrations.

MASON COLLEGE, BIRMINGHAM.

The session at Mason College was opened with a public meeting in the large Lecture Theatre. The President of the College, Mr. Oliver Pemberton, F.R.C.S., occupied the chair, and was supported by the trustees of the College, the professors, and lecturers. There was a very large attendance. The President, in his opening speech, called attention to the fact that it was the sixteenth anniversary of the founding of the College by Sir Josiah Mason and the fourth anniversary of the transference of the Queen's Faculty of Medicine. By this event, the Birmingham School of Medicine, founded seventy years ago by William Sands Cox, had gained new life and strength, and stood at that moment on a level with the best known and most distinguished of its provincial brethren. The Principal, Dr. Heath, introduced the prize winners in the Faculties of Arts and Sciences, and Professor Windle (Dean of the Medical Faculty) introduced those of the medical school. After the distribution of prizes had taken place, Professor Percy Frankland delivered the inaugural address on Pasteur and his Work: the Debt of Medicine to Chemistry. The address has been reported in last week's issue. At its close Dr. Frankland received an enthusiastic vote of thanks from the meeting, and the proceedings terminated.

THE SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY.

ADDRESS BY DR. FREDERICK ROBERTS.

At the opening of the fifty-fourth session of the School of Pharmacy last week, the President presented to a representative of the Austro-Hungarian Embassy the Hanbury Medal, which had been awarded to Professor Vogl of Vienna. In making the presentation Mr. Cartwright said that Professor Vogl was the father of pharmacognosy. It was reported that eighty-three students had attended the school during the fifty-third session. The prizes were then presented to the successful students. Dr. Frederick T. Roberts, Professor of Medicine in University College, then delivered the Inaugural Sessional Address. After some introductory remarks and a brief reference to the history of the Society, he spoke to the students of the responsibilities of pharmacy, and impressed upon them the need for taking the utmost advantage of the excellent means of instruction and training, both scientific and practical, which the school afforded. Turning, then, to more general topics, he said that there should be nothing approaching want of harmony between the medical profession and pharmacists. They ought to work together for the common good. In a state of perfect social order the one would really be the complement of the other. The medical profession claimed from the pharmacists protection against certain dangers and evils. In the first place it looked to them to guarantee that drugs supplied to patients were efficient, active, pure, and unadulterated. Deliberate substitution of drugs or systematic adulteration was an iniquitous variety of fraud which ought to be punished by something more than a fine. Dr. Roberts then touched upon the number and variety of preparations and compounds now so extensively advertised, and, while acknowledging that a debt of gratitude was owing to many pharmaceutical and manufacturing chemists of honourable type, he thought it decidedly wrong that so many drugs, some of them very powerful and even dangerous, should be supplied to the public in various portable forms, to be used to any extent at their own discretion. He deprecated also the extreme haste with which new drugs and special preparations were advertised before they had been fairly studied or tested. With regard to the long-established custom of medical men dispensing and sending out their own medicines, he said that he did not see how the system could be changed on a general or even on a large scale for many a day to come, especially in the smaller towns and country districts. For the prescribing chemist there was, Dr. Roberts declared emphatically, no excuse whatever. He had not been educated or trained for such a duty, and to treat patients merely on their own statement as to what was the matter with them was wrong in principle and disastrous in consequences. He acknowledged with pain that there were practices prevalent among a certain class of medical men not one whit better than those of the prescribing chemist. He said that the running of "cheap dispensaries," where "advice and medicines" were supplied to all comers without the slightest pretension to "clinical investigation" and, as a rule, at a figure that he felt sure would make them blush if he mentioned it, and the extensive employment by medical men of "unqualified assistants," who were absolutely ignorant and incapable, and not a few of whom were but the wreck of immoral and degraded lives, were standing blots upon our profession, and it was a scandal that it was possible for such practices to continue. At the conclusion of the address a cordial vote of thanks was moved by the President, seconded by the Vice-President (Mr. Harrison), and carried by acclamation.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 23rd day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

September, 1895.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

DORSET AND WEST HANTS BRANCH.—The next meeting will be held at Bournemouth on Wednesday, October 16th. The business meeting will be held at the Hotel Burlington at 3.15 P.M. Agenda:—Election of officers for 1895, namely, President, Vice-Presidents, Honorary Treasurers and Secretaries. Place of the May meeting. Dr. Lush to move: "That a donation of 5 guineas be granted to the British Medical Benevolent Fund." Address by Dr. Radcliffe Crocker: The Treatment of Inflammations of the Skin. Communications:—Dr. Ramsay: (1) The Pathology and Treatment of Appendicitis, with short notes on nine cases of Removal of the Appendix Cæci; (2) Uterus Removed by Rapid Hysterectomy; (3) Specimen showing New Method of Wiring the Patella. Mr. Vernon: A Case of Fractured Olecranon treated by Suture. Dr. Lawrie: (1) A Case of Oophorectomy for Relief of Reflex Symptoms; (2) Removal of a Large Ovarian Tumour. Mr. Charlton and Dr. Evans: A Case of Castration for Prostatic Disease. Dr. Ransome, F.R.S.: The Act of Coughing. Dinner at the hotel at 6 P.M., charge 6s. each, without wine. It is suggested that members having under their care interesting cases of skin diseases should bring them to the meeting. The nearest stations to Bournemouth are Pokesdown and Bournemouth East.—WILLIAM VAWDREY LOCK, M.D., Weymouth, C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

SOUTH-WESTERN BRANCH.—A very kind invitation has been received from the President and members of the Dorset and West Hants Branch to the South Western Branch to the next meeting, which will be held at Bournemouth, on Wednesday, October 16th, when Dr. Radcliffe Crocker, Physician to the Skin Department, University College Hospital, will give an address on The Treatment of Inflammations of the

Skin. Those members who purpose attending are requested to send their names before October 8th to the Honorary Secretary, W. V. Lush, M.D., 11, Frederick Place, Weymouth, who has kindly promised to forward the agenda and other particulars.—W. GORDON, Honorary Secretary, Barnfield Lodge, Exeter.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn meeting of this Branch will be held in the Station Hotel, Stirling, on Tuesday, October 22nd, at 3 P.M. The election of office-bearers for the year will take place and other business postponed at summer meeting will be transacted. The President (Dr. J. C. McVail) will deliver his Presidential address, entitled Gleanings from Practice. Further particulars by circular to members.—C. J. LEWIS, Honorary Secretary, Stirling.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The first meeting of the session will be held—by kind invitation of Dr. Adams—at Brooke House, Upper Clapton, on Thursday, October 17th, at 8.30 P.M. The chair will be taken by Dr. Daly, Vice-President of the District. Sir William Priestley, M.D., President of the Branch, will read a paper on Some Recent Observations on Infant Feeding. Visitors will be cordially welcomed.—HERBERT E. POWELL, Honorary Secretary, Glenarm House, Upper Clapton.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the District will be held at St. Bartholomew's Hospital, Rochester, on Friday, October 18th, at 4 P.M., Mr. J. Holroyde in the chair. The dinner will take place at the Bull Hotel, at 6.30 P.M. Charge 6s. 6d., exclusive of wine. To facilitate the arrangements, gentlemen who intend to dine are particularly requested to signify their intention to the Chairman, Mr. J. Holroyde, Camden House, Chatham, not later than Tuesday, October 15th. All members of the South Eastern Branch are entitled to attend this meeting and to introduce professional friends. Communications: Mr. J. H. Openshaw: Symptoms, Pathology, and Treatment of Congenital Dislocation of the Hip-joint. Mr. T. F. Hugh Smith: A case of Graves's Disease and Myxœdema, after Treatment with Thyroid Gland. Dr. Ground: On the Position of the Government with regard to Proprietary Remedies.—E. GROUND, M.D., Honorary Secretary, 1, Ashford Road, Maidstone.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.—The next meeting will be held at the Infirmary, Chichester, on Wednesday, October 16th, at 3 P.M. Dr. Paxton will preside. Agenda: To fix the place of the next meeting, and to nominate a member to preside at it. Discussion on the Registration of Midwives, to be opened by Mr. G. R. Collett. Paper by Mr. Bilton Pollard on Empyema. Notes on a case of Ichthyosis by Dr. Paxton. Meeting at 5.15 P.M. Dinner at 5.15 P.M. at the Dolphin Hotel; charge 6s., exclusive of wine.—FRANK HINDS, Honorary Secretary, 14, The Steyne, Worthing.

OXFORD AND DISTRICT BRANCH.—The next meeting will be held at the Radcliffe Infirmary, Oxford, at 3.15 P.M. on Friday, October 25th. Gentlemen intending to read papers or show cases, etc., are requested to give notice to the Honorary Secretary, Mr. W. LEWIS MORGAN, 37, Broad Street, Oxford, on or before October 8th.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The next half-yearly meeting will be held on Friday, November 1st, at 4 P.M., at the Medical Library, 5 Pembroke Road, Portsmouth. Gentlemen desirous of reading papers or of exhibiting cases or specimens are requested to communicate with C. C. CLARENDON, Honorary Secretary, 57, Elm Grove, Southsea.

NORTH OF IRELAND BRANCH.—The autumn meeting of this Branch will be held in the Royal Hospital, Belfast, on Thursday October 31st, 1895, at 12 noon. Gentlemen who wish to read papers, show patients, or bring any other business before the meeting, will kindly communicate, as early as convenient, with JOHN CAMPBELL, M.D., F.R.C.S., Honorary Secretary, 21, Great Victoria Street, Belfast.

SHROPSHIRE AND MID WALES BRANCH.—The annual general meeting will be held at the Salop Infirmary on Tuesday, October 15th, at 3 o'clock. Papers:—The President: On the Need for Further Legislation for Imbeciles. Dr. W. H. Thursfield: On the Exit Gates of Infection in Scarlet Fever and Typhoid. Dr. Alfred Eddowes: On the Pathology and Treatment of Acne and Eczema. Dr. Fred. Edge: On Vaginal Cœliotomy. Mr. T. Law Webb will demonstrate an improved method for obtaining particles of mucous membrane for diagnostic purposes. Cases will be shown by Mr. J. Macartney, Dr. Chernley, and Mr. Cæsar. The annual dinner will be held at the Music Hall at 6 P.M. Dinner ticket (exclusive of wine) 5s. each. Morning dress. Members have the privilege of introducing friends to the dinner.—H. WILLOUGHBY GARDNER, Honorary Secretary, Swan Hill, Shrewsbury.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Friday, October 25th, at 5 P.M. Dinner at 5.30. The subject as settled by the Council for discussion after dinner will be Club Practice, and the discussion will be opened by Mr. Abbott. Short papers or cases may be taken before dinner, and others afterwards. The Honorary Secretary will be glad to receive notice of any case or paper to be communicated to the meeting.—W. M. KELLY, M.D., Honorary Secretary, Taunton.

BORDER COUNTIES BRANCH.—A meeting of this Branch will be held at Keswick on Friday, October 25th. Members desirous of reading papers, etc., please communicate with R. DUNDAS HELM, Honorary Secretary, Carlisle.

SOUTH MIDLAND BRANCH.

THE autumnal meeting of this Branch was held at the Bull Hotel, Olney, on October 3rd, fourteen members and one visitor being present; Dr. A. H. JONES, President of the Branch, in the chair.

Minutes.—The minutes of the last (annual) meeting were read, and a report was presented from the Committee of Management, both being confirmed.

Papers and Cases.—Mr. R. A. MILLIGAN read Two Cases of Intestinal Obstruction successfully treated by Abdominal Section.—Mr. GEO. A. PERCIVAL read Some Cases of Ovariotomy, entering into a great many interesting details.—Both the papers led to good and prolonged discussions, in which most of the members present took part.—A proposal on a medico-ethical question, set down in the name of Mr. W. H. Bull, was, in consequence of his absence, deferred to a future meeting.

Votes of thanks were passed to the Chairman and to the readers of papers, and the meeting terminated.

EAST ANGLIAN BRANCH.

A MEETING of this Branch was held at Thetford on September 26th, Mr. G. E. JEAFFRESON, President, in the chair.

New Members.—The following gentleman was elected a member of the Association and Branch: Percy Graham Gilmour, M.R.C.S., L.R.C.P., Gorleston, Yarmouth. The following members of the Association were elected members of the East Anglian Branch: Elizabeth Garrett Anderson, M.D., Aldeburgh, Suffolk, and 4, Upper Berkeley Street, London; William Edward Baylie, M.R.C.S., L.S.A., Yaxeford, Suffolk; Francis Augustus Brooks, M.D., Felixstowe, Suffolk; Benjamin S. Brown, L.R.C.P., L.R.C.S.Edin., Saxlingham, Norfolk; Eleanor I. Dodson, M.D., Norwich; William Glosg Gallafly, M.B., Northwold, Norfolk.

Papers.—Dr. PEMBROKE MINAS read Antiquarian Notes on Thetford, and Dr. EVERLEY showed books, mainly historical, relating to Thetford and its Chalybeate Spa.

The Registration of Midwives.—The Committee appointed at the Framlingham meeting to consider the registration of midwives presented the following report:

a. It is evident that in the present state of public opinion some improvement in the attendance on the very poor by the very poor during midwifery is imperative.

b. It is also evident that, although at the present moment in abeyance, legislation to that end is imminent.

c. Therefore your Committee, consisting of E. G. Barnes, M.D., A. C. Mayo, M.R.C.S., and A. R. Manby, M.D., in accordance with the directions received by them at the annual meeting of the East Anglian Branch at Framlingham, present the following report as the result of their consideration of the matter at issue.

d. No legislation can be permitted which aims exclusively at (or in the least degree tends towards) the licensing of a lower grade of practitioners. Because by so doing (1) the interests of the profession will be weakened; (2) the confidence of the public in the perfection of medical education will be lessened; and (3), according to the opinion of eminent lawyers, the foundations of all existing Bills for the education and licensing of medical practitioners will be sapped.

e. Midwives to act alone, even in the simplest cases, with safety, must be as perfectly educated in anatomy, physiology, and the collateral sciences of medicine and surgery as an ordinary general practitioner, because it is impossible to predict that any given case may not become a seriously complicated one, nor is it possible without such knowledge to realise the distinction between a case of difficulty and a natural labour sufficiently early to guard against danger to the mother or child, or both.

f. Such education cannot be obtained in the short space of time (three months) spoken of in the Midwives Registration Bill of 1895 and hitherto allowed as sufficient for the training of a midwife.

g. Therefore the safety of the public would be in jeopardy, and the poor who cannot afford to employ more skilled attendants would suffer at their most dangerous times, a condition of things absolutely incongruous in a paternal country where unqualified attendance on paupers is, although permissible to the rich, illegal for the treatment of the simplest disorders, for example, constipation, etc.

A. And, moreover, nothing is suggested that could prevent the admittance of male as well as female practitioners, so that under the protection of a midwifery diploma, chemists, quacks, and unqualified assistants could be actually admitted to the *Register* and licensed to practise obstetrics, pædiatrics, etc., with impunity.

i. A state of things which would be eagerly seized by a large mass of unscrupulous persons—and even in its least objectionable form would once again encourage the employment, by medical men, of unqualified assistants at branch establishments (which is rightly held to constitute covering)—and would enable the ratepayers, Boards of Guardians, etc., for the sake of saving their funds, to entirely refuse the extra fees now allowed for parochial midwifery, and to station in each village a licensed midwife under control of the district council, who would not be able to claim skilled assistance, and who, therefore, would increase the bill of mortality.

j. None of these objections would apply to nurses trained after the manner of the best medical and surgical nurses, who would be licensed and registered to work under the direction of any properly qualified medical man wanting them, and who would be liable to be removed from the *Register* and debarred from practice if they wilfully attended alone to any obstetric case, however simple or natural.

k. Your Committee therefore recommend the Bill of the Parliamentary Bills Committee of the British Medical Association, and cordially endorse the vote passed at the late Exeter Hall meeting in support of Mr. Lawson Tait's amendment:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act 1886 as now existing.

l. Your Committee are further of opinion that a Midwives diploma, issued by the Obstetrical Society, or by similar bodies, is misleading to the public and injurious to the honour and interests of the profession.

A. C. MAYO.
E. G. BARNES.
A. R. MANBY.

After discussion, it was unanimously resolved, on the proposition of Dr. WILLIAM CROWFOOT, seconded by Dr. BARTON, "that the report be received and adopted."

Communications.—Dr. W. S. A. GRIFFITH (London) read a paper on the Early Diagnosis of Cancer of the Uterus, and the Cases Suitable for Operative Treatment.—Dr. MARY SCHARLIEB (London) read a paper on Our Duty towards Women who Suffer from Abnormal Discharges or Pains, especially about the time of the Menopause. In the discussion which followed, the following members took part: Dr. GARRETT ANDERSON, Dr. W. M. CROWFOOT, Mr. MORSE, Mr. BURTON, Dr. BEVERLEY, Dr. DOUTY, Dr. BLAKE, and the PRESIDENT.

Cases.—The following were shown:—Mr. MORSE: Specimen of Cancer of the Cervix Uteri removed fifteen months since and now recurrent. Specimen of Cancer of the Cervix with pregnancy at the sixth month, the fœtus removed by abdominal section and the uterus by vaginal hysterectomy.—Mr. HARPER: Case of Multiple Sarcoma.—Dr. BARTON: (1) Case of General Paralysis of the Insane; (2) Case of Transverse Myelitis (lumbar origin); (3) Case of Double Hemiplegia.—Dr. BURTON FANNING: (1) Case of Exophthalmic Goitre in a man recovering under treatment with Thymus Gland: (2) Case of Lead Poisoning.—Mr. D. DAY: (1) Specimen of Intestine successfully removed by Enterectomy with Murphy's Button; (2) Bones from Knee-Joints affected with Rheumatoid Arthritis.

Hospitality of Local Practitioners.—Fifty-three members and visitors were present at the meeting. They were hospitably entertained by the medical men of Thetford after the meeting.

AT a recent meeting of the trustees of Jefferson Medical College, Philadelphia, the honorary degree of LL.D. was conferred on Dr. John Collins Warren, Professor of Surgery in Harvard University.

SPECIAL CORRESPONDENCE.

PARIS.

Funeral of M. Pasteur.—M. Pasteur's Will.—Hospital Districts. General News.

THE funeral of M. Pasteur took place on October 5th with much pomp and circumstance. The Government, the army, the university, public bodies, learned societies, and the general public were present to show their reverence for the illustrious dead and their appreciation of his work. The quiet Rue Dutot, in which the Pasteur Institute is situated, was the scene of much bustle whilst the remains were lying in state in that temple of science raised by his own efforts. At 8 o'clock on Saturday, October 5th, a detachment of police took possession of the street with strict orders not to let anyone but those invited to the ceremony to enter the Pasteur Institute. The outer oaken coffin had been replaced by one in ebony, enclosing a leaden one and a pine coffin. The members of the Pasteur family were assembled round the catafalque. Those persons invited to the ceremony moved in procession round the bier, bowing respectfully to the afflicted family. At 9 o'clock the military detachments arrived. They were composed of two divisions of infantry, two regiments of artillery, and a cavalry brigade commanded by General Saussier, Governor of Paris. At 10 o'clock the bier was placed on the funeral car, surmounted by the hat, the coat, and the sword worn by the deceased Academician. The car, which was richly decorated, was drawn by six horses. The command to present arms was given, the Garde Républicaine played Chopin's funeral march, and the entire procession slowly moved towards Nôtre Dame, which it reached at a quarter to twelve. The President of the Republic, who arrived at the Cathedral at twelve o'clock, was conducted to his seat by the Archiprêtre of Nôtre Dame; he was followed by the Grand Duke Constantine, Prince Nicholas of Greece, the French Cabinet Ministers, and the delegates of the Academy, diplomatic bodies, generals and their staffs. After the mass M. Poincaré, Minister of Public Instruction, took his place in a tribune arranged in front of the catafalque and pronounced a funeral oration, in which he sketched Pasteur's labours and their benefit to humanity. He laid great stress on the modesty and moral worth of this earnest and ardent worker. The body of Pasteur reposes in one of the side chapels of Nôtre Dame. It is stated that its abiding resting place is to be the spot in the courtyard of the Pasteur Institute where now stands the statue of Jupille, the shepherd, Pasteur's first patient, and a statue of Pasteur will replace that of Jupille. Perhaps the most touching and impressive incident in the funeral ceremony was the lowering of the national flag when the procession passed round the catafalque, before the body was removed from it. The President of the Republic stood bareheaded, and the foreign princes gave a military salute.

Pasteur's will is very simple, it runs as follows:

"This is my testament. I leave to my wife all that the law allows me. May my children never forsake the path of duty, and always cherish for their mother the tenderness she so richly merits.—L. PASTEUR. Paris, le 29 Mars, 1877. Arbois, le 25 Août, 1880."

After October 14th gratuitous patients can only be treated in their district hospital. The system of hospital circumscription will be in force. In the case of homeless persons who have found shelter in night asylums, a paper signed by the director of the night asylum must be produced. Children are admitted only into the two children's hospitals—Enfants Malades and Trousseau; the children's surgical wards of the Tenon Hospital, and the orthopædic service of the asylum of the Enfants Assistés. Patients with specific and special diseases are treated in special hospitals, whatever may be their district—Saint Louis, Broca, Ricord Hospitals for cutaneous and syphilitic diseases; Salpêtrière for nervous diseases. Lariboisière and Hôtel Dieu, besides being district hospitals, are also special hospitals for diseases of the eye; likewise Necker for urinary diseases, and Cochin for surgical gynæcology. Patients with contagious affections are sent to Aubervilliers Hospital; cases of accident are to be conveyed to the nearest hospital independently of the district

in which the injured person dwells. Gratuitous advice is given every day in the out-patient department of all the important hospitals, excepting Sundays and holidays, in the morning; those which were given at the Bureau Central at the Hôtel Dieu are now suppressed.

The Association of the Gironde Medical Men gives the following advice. It is etiquette when a medical man sends a patient to a mineral water station, or to any establishment for treatment, that he should give to the said patient a letter addressed to his *confrère* who undertakes the treatment, but he should not under any circumstances give his patient directions or prescriptions for his guidance while there.

The Paris Medical Academy has named a commission, consisting of Dr. Laveran, Dr. Vallin, Dr. Lagneau, Dr. Léon Collin, Professor Proust, and Le Roy de Méricourt to investigate the means of combating malaria.

M. Ribot, Minister of the Interior, has visited the Pantin (Aubervilliers) lucifer-match manufactory. It is stated that the ministerial visit has produced an excellent impression on the workpeople. All of them declared themselves satisfied with the reforms effected. In the evening the Federal Council met. A report of the interview with the Minister was drawn up, and the delegates took their leave expressing their gratitude towards M. Ribot.

ST. PETERSBURG.

The Cholera Epidemics in Volhynia and in Siberia.—The Death of Pasteur and the Profession in Russia.—A Medical Conference on Syphilis and its Control.—The New Medical Institute for Women.—Scientific Institutions in Siberia.—The New Pirogof Museum.

In the last letter the cholera returns from Volhynia were brought down to August 5th (17th).[1] Since that date the epidemic has reached a maximum and begun to decline, as the following figures show:

From Aug.	6th[2]	to Aug.	12th	there were	2,497	cases and	944	deaths
"	"	13th	"	19th	"	"	3,352	"	"	1,190	"
"	"	20th	"	26th	"	"	4,264	"	"	1,666	"
"	"	27th	to Sept.	2nd	"	"	3,554	"	"	1,417	"

The occurrence of considerably over 13,000 cases and 4,000 deaths in only four weeks marks the epidemic in Volhynia as the most severe outbreak of cholera in Europe during the present year. The outbreak is not confined to Volhynia. During the same four weeks there have occurred in Podolia respectively 34, 67, 35, and 16 cases, with 20, 25, 11, and 8 deaths. The contrast between the two sets of figures from two adjoining provinces is striking, but it will not be forgotten how intensely Podolia suffered during the past two years from cholera. Districts, like individuals, appear to gain a relative immunity for a time after a severe outbreak of cholera. In the last published cholera bulletin the name of the Maritime (Primorskaia) Province appears. This province borders the Pacific Ocean, and there seems little doubt that the infection was imported from China. Cases occurred in Vladivostok in the middle of July, and before the 25th of that month there were 9 cases of cholera with 7 deaths. It is now announced that from the beginning of the epidemic there to August 29th there occurred in the province 74 cases with 51 deaths, and between August 30th and September 5th, 8 cases with 4 deaths.

The loss to medical science in the death of Pasteur is as deeply felt in Russia as it will be in all other parts of the civilised world. A deputation representing the profession in St. Petersburg has already started for Paris in order to lay a wreath on the great scientist's grave, and a similar deputation has started or is about to start from Moscow with the same object.

The thirteenth conference of Zemskié Vratchi—that is, of medical officers to the zemstvos or local government corporations of the Government of Moscow—met in Moscow last week under the presidency of Professor Erisman. A more important conference, to be held in St. Petersburg in November, 1896, is one which has been summoned by the Government to consider the question of syphilis and its spread in Russia. The ravages of syphilis in this country can scarcely be exaggerated, and it is to be hoped that the conference will do something towards diminishing the evil. The discussions at the conference will be under the following heads: (1) Syphilis in villages; (2) syphilis in towns; (3) in the army and navy; (4) the medical staff required to combat the disease; (5) the control of prostitutes.

The new Women's Medical Institute in St. Petersburg is meeting with some difficulty in obtaining a site suitable for the necessary buildings. A division of the Obukhovski Hospital (one of the largest hospitals in the city) which had been set aside for the institute is now found to be unsatisfactory. The building committee have asked the hospital authorities to grant them a vacant space in their grounds for a new building, but the only available vacant space is required by the hospital for its own purposes. A plot of ground not far from the hospital is for sale, but the price asked —150,000 roubles—exceeds the funds at the disposal of the committee.

The opening of the Trans-Siberian Railway may be expected to prove of enormous benefit to the provinces through which it will pass—not only by the development of their material resources, but also by the introduction of the arts and sciences which invariably follow the opening up of lines of communication. In this respect Siberia is at present a long way behind, although the seeds of improvement have already been sown. For instance, Tomsk has possessed a university since 1889. In order, however, to obtain professors, the salaries offered have had to be much larger than those in any other Russian university; and, in order to attract students, the regulations of the University Code of 1884 had to be considerably relaxed. During its first year of existence the number of students in Tomsk University was 70. The medical faculty is the only one in full working order. Quite recently news came that in Blagovéshchinsk, on the Amur river, a bacteriological institute had been opened. At present it is mainly employed in inoculating horses against anthrax, or, as it is called in Russia, Siberian plague (*Sibirskaia yazva*).

The new Pirogof Museum of Anatomy and Surgery was recently inaugurated by the laying of an inscribed stone in the Government building which is to be reconstructed for the purposes of the museum. The museum will be arranged on the lines of those of Hunter in London and of Dupuytren in Paris. So far as normal anatomy is concerned, the new collection will have a powerful rival in the fine anatomical museum in the adjoining Army Medical Academy, which was largely collected and arranged by Pirogof himself. Pirogof was for many years professor of anatomy in the Academy. A history of the chair of anatomy and of the Museum has just been published by Professor Tarenetzki, the present professor of anatomy, in connection with the approaching centenary of the Academy.

[1] British Medical Journal, p. 672.

[2] All the dates mentioned are according to the old style.

CORRESPONDENCE.

RARE CASES AND THE MEDICAL SOCIETIES.

SIR,—I have just seen the excellent suggestion made in the British Medical Journal of October 5th, p. 853, and hasten to say that if my Council approves (which I feel sure it will) I shall be delighted to offer facilities for the exchange of information about important and rare cases. I should be glad to receive suggestions, but at first sight it seems to me that the most feasible plan would be to invite practitioners to send me particulars of the kind of cases they wish to study, and I would post up a daily list, with an invitation to those who know of likely cases to send a postcard giving the required information to inquirers.

A more perfect plan would depend for its success on the co-operation of the metropolitan staffs. Uniform cards could be prepared and a supply kept at each hospital; on these brief particulars of interesting cases should be written, and the cards immediately forwarded to me, and I would undertake to keep these filed in alphabetical order of disease names in such a manner that any inquirer would be able instantly to discover whether such diseases as he might wish to study could be found in London. We should, in fact, establish a kind of hospital "clearing house" of cases. If the

hospitals will promise to co-operate I will gladly do my part.—I am, etc.,

J. Y. W. MACALISTER,
Resident Librarian, Royal Medical Chirurgical Society.
Hanover Square, Oct. 9th.

A QUESTION OF CONSCIENCE.

SIR,—On reading the letters your correspondents have been good enough to write in reply to my "question of conscience" I find myself charged with a number of theories which I most assuredly have not advanced. I have not advocated euthanasia. I do not underestimate the sacredness of human life nor the position of trust held by the physician. I would not withhold from any sick fellow creature, however worthless, one thought or consideration which might free it of pain, nor would it have occurred to me to urge the artificial abortion of an embryo though its parents were obviously syphilitic.

Only this much have I suggested, that in view of that which is plainly a higher mandate; in view of the multiple miseries of the syphilitic infant and child, and its degenerate maturity; in view more especially of the fact that not upon us, but upon these miserable little creatures from whom we avert the mercy of abortion, the consequences of our interference fall, we should in all cases in which Nature is trying to cast off a syphilitic fœtus thankfully allow her to do so.

I do not consider that any onus rests upon the doctor in this matter, nor that the situation bears any relation whatsoever to a "kill or cure" adjudication. An agency more competent than he decrees that this particular embryo is unfit for survival, and enjoins its expulsion at a period when it is as yet incapable of suffering. Tolerant, with an amazing patience of other physical shortcomings, Nature's action in syphilis is the more noteworthy. She will have none of it. Embryo after embryo—if we allow her—she will abort. And if by our interference or from some other accident the fœtus come to term, she curses its birth with sudden old age, shrivelling, withering, and atrophying it out of existence. Her relentlessness against it should convince us that in syphilis as in nothing else there exists a poison most inimical to human health. She makes it repellent to every sense, with its ulcerous mouth, its mutilated nose, its distorted bones, its malodour—the trail of its serpentine eruptions. She makes it raucous of voice and defective of articulation, sloughing its palate and searing its tongue. She sets contamination on the lips, whereby the infant may infect the nurse who gives him suck and the mother who kisses him.

The evils which originated it go on resulting in human pain and devolution until their forces are exhausted. Were not the path of health thus indicated by disease, to what extent should we not by now have deviated from the normal?

The fact that some victims of inherited syphilis attain a maturity which admits of their being "useful citizens" I cannot regard as subversive of my position. So long as these unfortunates are childless, the standard of human health is only temporarily lowered, but in the event of offspring the syphilised cells in the systems of these latter will assuredly make devastating war with the cells transmitted to them by the healthy parent. Evolution must be accomplished by the garnering of vital forces, and their spontaneous generation on to ever higher planes; but if we debase these vital powers, adulterating them ever with noxious elements, what then? I have under my care a family of syphilitics who have reached maturity. The mother is robust, the father is apparently healthy; the eldest daughter is afflicted with severe congenital heart disease; the second is a neurotic without uterus or ovaries; the third is mentally deficient; the life of the fourth is embittered by the deformity of her limbs, a horrible ozæna, and an unnatural uncouthness; the fifth is fairly healthy; the sixth is a melancholy youth with an enlarged liver and spleen and a distressing asthma; the youngest is a great-headed, knock-kneed boy of weak intellect and vicious moral tendency.

All these unfortunates underwent mercurial treatment in their childhood, and their threatened abortion was prevented by the mercurial treatment of their mother. To me, as to them, their existence appears nothing less than a lamentable fact.

One of your correspondents says "progress consists in a steady defiance of Nature." Could we indeed so much as heal a pin-scratch on a baby's arm were Nature not to set in motion one of her eternal laws? And if we are not to defy Nature, there is nothing left us but to co-operate with her. Shall we then, against her unmistakable decree, continue by our interference to perpetuate pain and degeneration when she would mercifully absolve the victim and the race from the further penalties of a trespass against her laws?—I am, etc.,

Watford, Oct. 9th. ARABELLA KENEALY.

*** This correspondence must now cease.

LONGMORE'S *GUNSHOT INJURIES*.

SIR,—In the notice of the second edition of Sir Thomas Longmore's work on *Gunshot Injuries*, which appears in the BRITISH MEDICAL JOURNAL of October 5th, your reviewer speaks in terms of commendation of almost everything contained in the book, but refers to the omission of statistics of later date than those of the Franco-Prussian War of 1870-71 as constituting its great defect. He states that the statistics of the campaigns "in Egypt, Burmah, Chin Lushai, Hazara, and Waziristan, in which weapons of greater range and velocity were employed, would have been of incalculable value." If, as your readers might naturally suppose, your reviewer by this statement means to point out that these returns would have been of value because rifles of small calibre were used on these occasions, he is in error except in the case of Waziristan. In the Waziristan expedition the Lee-Metford rifle was used for the first time; but there are even now no statistics available for this campaign, and Sir Thomas Longmore's work was in the hands of the printers before it was finished. In the other campaigns mentioned the Martini-Henry rifle was employed, and we are already supplied with ample statistics as to the effects of the use of small arms of this kind.

Sir Thomas Longmore could, no doubt, have given the percentages of killed and wounded to strength in the campaigns of Egypt, Burmah, Lushai, and Hazara; but of what value this information could have been to anyone, especially when we remember the class of enemy opposed to the English forces, or how its omission from the work under review can be said to be a defect it is not easy to comprehend.—I am, etc.,

W. F. STEVENSON,
Oct. 6th. Professor of Military Surgery, Army Medical School, Netley.

*** It is satisfactory to know, on the authority of Professor Stevenson, that statistics as to gunshot injuries received in the Waziristan expedition are, even now, not available, and that their omission from the book referred to in his letter was due to no fault of its author. But surely Professor Stevenson, as a practical teacher, cannot seriously maintain that a standard work upon a subject of world-wide interest is either complete or up to date which, in an important chapter on statistics, can only give figures referring to wars which occurred from twenty-five to thirty-five years ago. The experiences of the Balmaceda rebellion in Chili, in which rifles of small calibre were freely used, and also those of our own recent wars, even though the weapon used was only the Martini-Henry, are likely to be of more practical value to the student of the present day than references to the American war of the Rebellion, the Prusso-Danish war of 1864, and even of the great war of 1870. Professor Stevenson says, "we are already supplied with ample statistics as to the effects of the use of small arms." Precisely so; it was the omission of these up-to-date statistics from the book under review that suggested the criticism to which Professor Stevenson takes exception.

"THEY KNOW NOT THE MANNER OF THE GOD OF THE LAND."

SIR,—As Surgeon-Lieutenant-Colonel Chester credits me with "attributing typhoid fever to defective personal hygiene," I beg for a small space to deny the impeachment. I was not dealing with the cause—"a specific morbid poison," according to Aitken—but merely indicating one direction in which a solution of the question of susceptibility might be sought. As I said, Sir A. Home, regarding the disease as one rather of palaces than of hovels, thought it a

direction not worth following, possibly for the same reason as that named by Dr. Chester, whose argument is that because a comparatively small number of cleanly persons get typhoid fever uncleanliness cannot have anything to do with producing susceptibility in the uncleanly, irrespective of dose. This kind of reasoning ignores the condition of health at the time of exposure as influencing the question of effectual or ineffectual phagocytosis; for we may safely assume that the many get the germs of disease into them, while only the few develop the disease. The statement that typhoid fever was "practically unknown" twenty or thirty years ago only means that less attention was paid to it, unless, indeed, it be the one new thing under the sun. If Dr. Chester will specify the "factors" in the case, which, he says, were non-existent twenty or thirty years ago, he will be doing a public service.—I am, etc.,

Sheffield, Sept. 30th. F. A. Davy, M.D.,
Surgeon-Lieutenant-Colonel, A.M.S., Retired Pay.

Sir,—In reply to the letter of Surgeon-Lieutenant-Colonel Chester in the British Medical Journal, September 28th, allow me to say that although it may be a fact that the term enteric fever was practically unknown two or three decades ago, yet it is impossible to admit that the disease, at present so called, did not then prevail among British soldiers and sailors in hot climates.

In Europe, typhoid fever was unheard of until the time of Louis, but all the evidence is against the supposition that the disease arose for the first time at the beginning of this century. Similarly, although enteric fever first appeared in the statistical returns for India in 1861, I have never heard it suggested before that the disease did not previously exist in that country. As a matter of fact, there is evidence that a fever with enteric symptoms has been a fatal disease in fleets and armies from remote times.

With regard to the increased prevalence of enteric fever in India, which has been recorded since 1870, I accept the explanation of Professor Notter,[1] that it is owing to a difference in nomenclature and to the greater number of young and recently-arrived soldiers serving in the country—and of these young and recently-arrived soldiers it may with pre eminent fitness be said: "They know not the manner of the God of the land."—I am, etc.,

Aberdeen, Oct. 1st. Gilbert Kirkpatrick, M.D.,
Staff Surgeon, R.N.

THE TITLE OF PHYSICIAN.

Sir,—If a man who holds a license to practise from a College of Physicians is not a physician, what is he? It is difficult to see on what grounds he can call himself a surgeon or an apothecary, titles which would appear to be properly reserved for those who have satisfied the examining board of a College of Surgeons or a Society of Apothecaries. And if the title of Physician is the special property of those who have passed the higher examination of the College of Physicians, surely those who have passed the higher examination of the College of Surgeons, the Fellowship, have an equally good claim to monopolise the title of Surgeon. Under these circumstances, as it has already been held by the High Court that the prefix of "Dr." is legally the prerogative of those who hold a degree in medicine, it would be a great kindness if somebody would invent a designation at once clear and inoffensive, which might be used without fear of pains and penalties by the unfortunate possessors of the M.R.C.S. and L.R.C.P., to inform the public that they are still members of the medical profession.—I am, etc.,

October 1st. M.D., B.S.Lond.

Sir,—It seems to me that one thing at any rate still "accentuates the distinction" between the pure physician and the general practitioner, and that is the restrictions which the rules of most hospitals still impose on the professional liberty of their physicians. It appears still to be laid down in the majority of cases that the physicians are not to practise surgery, pharmacy, or midwifery in private. The surgeons, on the contrary, are allowed in their private practice an absolutely free hand in which to hold as large a bundle of surgical and medical specialities as they can clutch. For the general practitioner of the present day, at any rate in provincial towns, appears to not infrequently endeavour to pose rather as the universal specialist, who is, moreover, prepared to perform general surgical operations, or to give opinions in consultation on medical cases as opportunity offers. He is, in addition, in some cases not by any means behindhand in emphasising the hospital rule in question when it happens to suit his purpose.

If, as you suggest, the distinction between the pure physician and the general practitioner "should no longer be accentuated as heretofore," is it unreasonable to suppose that it should follow that the old-fashioned restriction concerning the professional conduct of provincial hospital physicians should be withdrawn?

The present state of things seems to be unfair, and it is difficult to see why, at the present time, one-half of a hospital staff should be restricted and the other half left free in the performance of their private practice. I have ventured to raise this point because it seems to me to be really a practical one. As to who may "call himself a physician," or as to who is entitled to the "title of Dr.," it seems unprofitable to consider in the face of unchecked French liberty, and the occasional hardness of the present day professional conscience.—I am, etc.,

October 2nd. Anon.

SEWER VENTILATION.

Sir,—I should like to make one or two observations in reply to the letter of Dr. Sidney Davies in your issue of September 14th. I quoted Mr. Baldwin Latham's dictum with approval, but not exactly in the sense implied by Dr. Davies in his letter.

If a sewer be not ventilated with due regard to the conditions existing within the same, then the vent or ventilation of many sewers would increase, instead of diminish the nuisance arising therefrom at certain points. Large volumes of air pass through certain sewers, and this occurs principally through those in which there is a rapid stream of sewage because the force (that is, the flow of sewage) which moves the air is continuous, and also pretty constant in its operation. In order to illustrate my points, take the following example of a supposed sewer 1,000 yards in length, and, say, 2 feet in diameter. Suppose this sewer for the first 800 yards has a great fall, and for the remaining 200 yards the gradient is much less. At the change of gradient is a manhole A, and the stream of sewage is 6 inches deep. Under such conditions sewer air will flow towards A much more quickly than it will move beyond that point, hence more sewer air will be brought to A than will be carried further down the sewer, and the excess in the amount brought down will flow out of that manhole and those immediately above it. Now suppose the manhole covers were closed, and bent pipes connected with the sewer, a similar thing will happen. The pipes in the neighbourhood of A will convey air out of the sewer, while those higer up will not act, or if they do they will probably serve as inlets of fresh air. Sectional ventilation, as suggested in my paper, in arresting the flow of sewer air will diminish the amount of fresh air gaining access to the sewer. Fresh air, in passing through a short section of sewer only, cannot, I think, be so offensive as when it flows in contact with sewage for 600 yards or 800 yards or more.

I do not assume that ventilation will render sewer air innocuous, for that possibly can only be done by burning it, but I think diluting it with air as suggested above will render it somewhat less harmless, and discharging it high up in the air will further dilute and diminish the nuisance arising therefrom. With regard to the idea of vent *versus* ventilation, I incline to the opinion that under some conditions the former might be the more useful, while under others the latter would be better suited to the purpose. Every sewer should be dealt with upon its merits, and that method applied which is best calculated to effect the purpose in view.—I am, etc.,

Tyldesley, Sept. 21st. Jas. T. Nixon.

Dr. Percy Sharpe, Public Vaccinator, Brant Broughton District of the Newark Union, has been awarded the grant for efficient vaccination.

[1] *Transactions of the International Congress of Hygiene and Demography.*

OBITUARY.

Surgeon-General Sir THOMAS LONGMORE, C.B.,

Honorary Physician to the Queen.

We have been favoured with the following from Surgeon-General W. C. Maclean, C.B.

Long before this record of the life and work of the above-named distinguished military surgeon is in the hand of your readers, the fact that his life and work are ended will be widely known at home and abroad. For many years past his life was in constant peril from cardiac failure. As time went on the attacks became more frequent and alarming, and the suffering always attending them more intense. It was a marvel to himself, his family, and professional friends, that the end, so often expected, was deferred so long.

On Sunday, September 29th, he was in the full enjoyment of the fine air of Swanage, the place above all others most congenial to him. He attended church at evening service with his wife, and slept that night with more than usual restfulness until 6.40 A.M. on the 30th, when he awoke and complained of his usual "breast pang." His brother-in-law, Colonel Moorsom, hastened to call in medical aid. A few minutes before his doctor, armed with nitrite of amyl, arrived he expressed himself a little "easier." Suddenly, before there was time to use that remedy, he became cyanotic, and expired. All was over a few minutes after 7 A.M.

Thomas Longmore was born in London on October 10th, 1816. His father was a surgeon in the Royal Navy. He was educated at Merchant Taylors School. In due course became a student at Guy's Hospital. He was dresser to Mr. Bransby Cooper, assisted that surgeon in his private practice and in writing the life of Sir Astley Cooper. He arranged and catalogued the museum of that great surgeon, afterwards purchased by the Royal College of Surgeons of England. He became M.R.C.S.Eng. 1841, and F.R.C.S. 1856 and Fellow of the Royal Medical and Chirurgical Society. He was gazetted Assistant Surgeon 19th Regiment February 3rd, 1843; served with that regiment in the Ionian Islands, the West Indies and Canada, returning to England in 1851. He was gazetted Surgeon of his regiment in March, 1854, and served as Surgeon of the 19th Regiment in the Light Division of the Eastern Army from its first taking the field throughout the campaign of 1854-55, until the termination of the siege of Sebastopol; he was not absent from duty one day during the campaign. He was present at the affair of Bulganac, battles of Alma and Inkerman, capture of Balaclava, assaults on the Redan June 18th and September 8th; and received the medal and three clasps, and the Turkish medal, and was named a Knight of the Legion of Honour. He served with the 19th Regiment in the Sepoy Mutiny war until promoted Deputy Inspector-General of Hospitals in 1858. On his return to England he was appointed P.M.O. at Colchester. In 1860 he was appointed by Lord Herbert, then War Minister, Professor of Military Surgery at the new Army Medical School, and delivered the opening address in the presence of that Minister, the General Commanding the District, and other officers of distinction.

In 1864 he represented the British Government at the International Congress at Geneva. At this Congress the International Treaty, since known as the Convention of Geneva of August 22nd, 1864, was formally adopted, and he was a member of the Committee that settled the terms of the Convention. In 1867 he took part, by order of the Secretary for War, in the international conferences of the societies for aid to wounded soldiers in time of war. In 1867 he was nominated a Companion of the Military Division of the Most Honourable Order of the Bath, and in the following year he was gazetted Honorary Surgeon to Her Majesty the Queen. In 1868 the Société Impériale de Chirurgie de Paris elected him Correspondant Etranger. In 1869 he again represented his Government at a Conference in Berlin on Aid to Sick and Wounded in War. In 1872, and again in 1873 and 1876, Surgeon-General Longmore represented the British Government at Vienna and Brussels for the settlement of international agreements relating to sick and wounded in war, and took, in a mixed committee of military and medical officers, an active part in establishing the bearer companies, and most of the existing field hospital arrangements of the British Army. On five other occasions he represented his Government at foreign congresses, and was elected an Associé Etranger of the French Academy of Medicine and other scientific societies. In 1879 he was promoted by decree of the President of the French Republic to the rank of Officier in the Legion of Honour, the insignia of which, by Royal licence, he was permitted to wear. In 1886 he was knighted by the Queen at Osborne, and in the following year the Military Medical Services presented the fine portrait of Surgeon-General Longmore to the Army Medical Department, by George Reid, R.S.A., of Edinburgh, which adorns the anteroom of the mess-room at Netley.

I may not ask for space to give an exhaustive catalogue of his printed professional works and papers. Their mere titles take up four closely printed pages of letterpress. It must suffice to mention his *Synopsis of Cases of Heat Apoplexy*; his essay on Gunshot Wounds in Holmes's *System of Surgery*—this essay was reprinted in the United States, and formed the textbook of the surgeons of both armies in the American civil war; *Report on the Whitworth Projectiles in War*; *The Medical Officer's Ophthalmic Manual*; *Treatise on the Transport of Sick and Wounded in War*. His observations on the preliminary care necessary for accidental injuries, read at the annual assembly of St. John of Jerusalem, 1874, was the starting point of the St. John ambulance classes throughout the kingdom. He was also the author of *Antiseptic Surgery on Battle Fields*; *Life of Wiseman*, and an immense number of lectures, reports, and papers on every subject relating to military surgery.

The above will convey to the service and profession he adorned a perhaps not inadequate conception of his public life and work. Of Longmore in private life, his loyalty as a colleague, his unselfish and generous appreciation of the work of others, the noble simplicity of his character, without egotism or finesse, the warmth of his friendship, the tenderness of his heart, his sympathy with those in trouble, sorrow, need, sickness, or any other adversity, I dare not speak. While I, the last of his first colleagues in the school in which we both served, pen this poor tribute to his memory, his brother officers are committing to the narrow house all that is mortal of my late friend and colleague. I can only, from the room to which I am this day restricted, with a sad heart say, *Vale!*

A second edition of his most important work on *Gunshot Injuries* was reviewed in the British Medical Journal of October 5th. It was entirely rewritten, and, as was pointed out by the reviewer, was practically a new book.

Mr. Ernest Hart writes: I cannot omit to add my personal and official testimony to the high character, unusual ability and great services which Sir Thomas Longmore through a long and useful life rendered to his country and his department. It is unnecessary for me to speak of his high intelligence and painstaking capacity in the fulfilment of his important functions in the field, the camp, and in the lecture-room at Netley. As a teacher Longmore possessed qualities of an unusual kind; he separated clearly the essential from the accessory facts of his department of surgery, and he spared no pains to analyse all the evidence for or against the conclusions at which he arrived, and the doctrine which he taught. To the last he remained thoroughly in touch with the whole progress of military surgery, and numerous experts from foreign armies who have spoken to me of his attainments and teaching both prior to their visits to Netley and on their return, never failed to do justice to his unusual ability and great usefulness as a teacher and trainer of men. I wish in this brief note especially to emphasise one side of his work which is but little known. For the last twenty-five years Longmore has been the trusted, energetic, and public-spirited friend not only of all Netley men, but of the whole of his department. I should have felt myself much weakened and frequently perplexed in the long battle which I have waged during the whole of that time for the improved organisation and the enlarged privileges of the Army Medical Department without his constant advice, large experience, and sound judgment in the solution of all the difficulties encountered as they arose, and in the fair discussion and thorough investigation of all the grounds of opposition to the numerous reforms which we have been enabled to aid or to carry through in spite of steady official opposition. For Longmore was essentially a moderate and a fair-minded man, cognisant of all that was in the official mind and well acquainted with office difficulties and with the reluctance of military as well as high medical authorities to enter upon changes such as those which we have succeeded in bringing about, but of which some have still yet to be made.

Longmore was from first to last always young in spirit, progressive in thought, and sympathetic with reformers. A very large proportion of the articles, memoranda, and notes which appeared in the British Medical Journal, and much of the substance of the reports which I have submitted to the Parliamentary Bills Committee on army medical matters, were either due to his pen or underwent revision at his hands. In the conduct of the military department of this Journal and in all that related to the questions of military surgery and administration, the sound judgment and unbiassed criticism and fearless independence of Sir Thomas Longmore have been of constant advantage, and it would not be right that his name should pass into oblivion, or that the grave should close over him without this tribute to the helpful kindness, the unvarying sympathy, and the great ability with which he has for many years assisted in the fight for those changes in the administration of the Army Medical Department which have led, and will yet lead, to its constantly increasing efficiency and its public utility.

The profession and the public owe to Sir Thomas Longmore far more than they are ever likely to realise. Of course during his official career he was precluded by official rule from formally signing any of his contributions to our pages, but he was a man who had the courage of his opinions, and the services which he rendered to us were well known throughout the department, although not perhaps always viewed with favour by his immediate official chiefs.

Surgeon General HAMPDEN HUGH MASSY, C.B.

We regret to have to announce the death of Surgeon-General Hampden Hugh Massy, C.B., who died at Northwood Lodge, Bournemouth, on September 27th, at the age of 75. Surgeon-General Massy entered the service in November, 1844, and took part as assistant-surgeon with the 31st Regiment in the Sutlej campaign. He was promoted surgeon and posted to the 17th Lancers, with which regiment he served in the Crimean War, taking part in the battles of Alma, Balaclava, Inkerman and Tchernaya, the affairs of Bulganak and M'Kenzie's Farm, and the siege of Sebastopol. He received the Crimean medal with four clasps, the Turkish medal, and the Medjidie (fifth class), and was recommended for promotion by Sir William Codrington and for the Legion of Honour by Lord Cardigan. He then served with the 2nd Dragoon Guards during the Indian Mutiny, was present at the siege and capture of Lucknow, the actions of Koorsie-Transgegra and Burgaon, and also acted as principal medical officer to Brigadier-General Barker's column in the Oudh campaign. He received the Indian medal with clasp, was made a Companion of the Bath on June 2nd, 1869, and retired as Surgeon-General on April 1st, 1880, with the grant of the good-service pension for meritorious service.

JOHN CHARLES LANGMORE, M.B.Lond., F.R.C.S.Eng.

The death of Dr. Langmore has removed from the ranks one of the patriarchs of the profession. He was the second son of William Langmore, M.D., who formerly practised in Finsbury Square, London, and he was born in February, 1814. After his general education at St. Paul's School, he commenced his medical education at the London Hospital, and became L.S.A. in 1834 and M.S.A. in 1836. He travelled abroad, chiefly in Italy, for months as medical attendant to a young man, and subsequently studied for a time at the Paris medical schools, but was recalled by his father to take a general practice in Upper George Street, Portman Square, in 1838. He graduated as M.B.Lond. in 1842, and became F.R.C.S.Eng. in 1853. He had in the previous year (1852) removed to Oxford Terrace, Hyde Park, where he remained (with the exception of seven years, during which he resided at Sussex Gardens, Hyde Park) until 1889, when his son, John Wreford Langmore, M.D. Lond., who had joined him in partnership, died. He then retired to Shepherd's Bush Green, where he died, September 29th, 1895. He had practically retired a couple of years previously, on account of ill health. He suffered in 1889 most seriously from embolism, but afterwards recovered to some extent. Of late years he had had repeated attacks of influenza; the last, which began on September 11th, eventually proved fatal, notwithstanding the careful attention of Dr. Campbell Pope and Mr. Swinford Edwards. Dr. Langmore was President of the Harveian Society of London in 1885; and when the Paddington Medical Book Society was founded in 1838, he was elected the first Honorary Secretary, and continued to hold the post until 1889, a period of fifty-one years.

He was even then the sole survivor of the twelve original members. He was endowed both by nature and education for success in practice; he was a gentleman of refined and cultured tastes; and he earned the respect and affection of a wide circle of patients and friends. Although many of these predeceased him, others remain to whom his death has caused deep and sincere sorrow.

W. H. BELLOT, F.R.C.S., M.D.

W. H. Bellot died at Leamington on September 24th, aged 84. He was born at Manchester in 1811, and educated at the Grammar School. Afterwards he was apprenticed to and became the pupil of his uncle, Dr. Joseph Bellot of Stockport. He attended the Manchester Infirmary, and then went to London and Paris to pursue his studies. On returning to this country he became a partner with his uncle, whom he ultimately succeeded at Stockport. In 1852 he was elected an honorary Fellow of the Royal College of Surgeons of England, and in 1860 took the degree of M.D. at Erlangen. He published an essay on Nélaton's lecture on Mr. Joseph Jordan's autoplastic treatment of ununited fracture. He retired from practice in 1884, and since then has resided at Leamington.

His elder brother, Mr. Thomas Bellot, F.R.C.S., translated a part of Galen, and also wrote a treatise on the *Sanskrit Derivation of English Words*, and he was one of the earlier workers in the domain of scientific philology. Whilst in the East he made a valuable collection of Chinese books and ancient bronzes. These he directed should become the property of the Manchester Free Library at the death of his brother, but many of the books were transferred at once, and now constitute the "Bellot Collection."

FRANK H. HODGES, M.R.C.S.Eng., F.R.C.S.Edin.

The late Mr. Frank Hodges, of Leicester, was a student first at the London Hospital, and subsequently at Edinburgh, where he was appointed eventually Resident Physician at the Royal Infirmary. He afterwards held the office of Resident Surgeon to the Birmingham and Midland Eye Hospital, and early determined to devote himself to ophthalmic practice. Before settling down to this speciality he wisely sought to obtain a wider experience in general surgery, and held in succession the offices of House-Surgeon to the York County Hospital and to the Leicester Infirmary. He was finally elected Ophthalmic Surgeon to the infirmary, and obtained a reputation in that department, which was well earned by the ardour and diligence which he brought to its study. He was an excellent operator, and was untiring in his devotion not only to private practice, but also to his hospital duties.

An intimate friend writes of him: "His character was truly noble and unselfish. He had a stern up-hill fight, and was beset by many private troubles; but he was uniformly sincere to his high professional ideal, and all who knew him are familiar with his quiet courage in facing difficulties, and with his entire devotion to the conscientious discharge of all his duties. Among his many excellent characteristics was a manly love of cricket, in which he used to excel; but a noteworthy trait in his character was his passion—an hereditary one—for music of a high class. His moral and intellectual nature was in harmony with these tastes."

It is sad to record that a career of so much promise should have been terminated in so sad a manner. He broke down under the strain of overwork, and his condition became critical last June. An attack of the nature of sun apoplexy was followed by great prostration, for which he sought repose first at Filey and afterwards in Lincolnshire. He returned to work, but was seized with a return of symptoms which indicated cerebral disorder, and he ended his life by his own act on September 7th.

The esteem in which he was held by his professional brethren was shown by the large attendance at his funeral.

We regret to announce the death of Dr. Edward Thomas Tylecote, which occurred on September 16th, at Great Haywood, after a trying illness. Dr. Tylecote was born at Great Haywood, graduated at Aberdeen in 1860, and then returned to Great Haywood where he succeeded to his father's practice and passed the whole of his life. Dr. Tylecote took an active interest in all local matters of the district. For many years he acted as people's warden of the parish church of Great Haywood and took a special interest in the management of the schools, and he was elected a member of the first parish council for his parish. Dr. Tylecote leaves a widow and one daughter.

The sudden death is reported of Dr. R. B. Morley, of Chapel-Allerton, near Leeds, on October 3rd. He had gone on a bicycle to visit a patient, and whilst in the act of examining fell back and expired in a few moments. The patient died the next day, her death, it is believed, having been accelerated by the shock. Dr. Morley, who was 43 years of age, was educated at the Yorkshire College, Leeds; he was a member of the British Medical Association and of the Yorkshire Branch.

The death is announced of Dr. Larrey, member of the Institute and of the Academy of Medicine, Paris. Born in Paris in 1808, Baron Felix Hippolyte Larrey was the son of the famous surgeon of Napoleon I. He first entered the sanitary service of the army. He obtained the doctor's degree in Paris in 1832, after which he entered the Northern Division of the army, and was present as a high official in the Ambulance Corps at the siege of Antwerp, and then was appointed Chevalier of the Order of Leopold. In 1841 he became Professor of Pathological Surgery at the Val-de-Grâce Hospital. He was appointed in 1858 Inspector of the Army Sanitary Service, and received the title of Chirurgien Ordinaire du Chef de l'Etat. As Surgeon in Chief in the army of Italy in 1859, he distinguished himself in that campaign by his devotion and courage. At Solferino his horse was killed under him. Dr. Larrey became Chevalier of the Legion of Honour in 1843, Officier in 1851, Commander in 1859, and, upon his retirement in 1871, Grand Officier. In 1876 he tried for a seat at the Chamber but he was not successful, although in the following year he was elected at Bagnères by 12,000 votes. He did not again offer himself, however, in 1881. Baron Larrey published a great number of works on military surgery.

By the death of Dr. Francesco Vallardi, of Milan, Italy has lost its principal medical publisher. He was himself a member of the medical profession, having taken his degree in 1833. He was the son of a publisher, and was born at Milan in 1809, and after a short experience of medical practice he determined to go into the publishing business. To his liberality and enterprise are largely due the development of rational medicine and the diffusion of the scientific spirit in Italy during the last thirty years. He gave his countrymen the best work of other countries in the form of translations of the writings of Niemeyer, Erichsen, Holmes, Leissl, Hebra, and others; and he encouraged and helped Italian investigators to give their work to the world. In a recent number of the *Gazetta degli Ospedali*, Professor Bizzozzero of Turin bears eloquent witness to the enlightened spirit in which Vallardi conducted his business and to the integrity and elevation of his character.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are: Dr. Slawczynski, a well-known practitioner of Berlin, aged 74; Dr. Valentini, a distinguished medical officer of the German army, and since 1834 President of the Italian Society of Berlin, aged 88; Dr. Gustav Amburger of St. Petersburg, author of numerous contributions to medical literature, aged 55; Dr. Marcus Hohlbeck, Chief Physician of the Michael Hospital at Tulia, aged 57; Dr. A. Tebaldi, Chief of the Psychiatric Clinic of the University of Padua; Dr. J. F. de Macedo Pinto, Emeritus Professor in the Medical Faculty of the University of Coimbra, aged 80; Dr. A. de Carvalho, Professor of Anatomy in the Medical Faculty of Bahia; Dr. Jambon, Chief Surgeon to the Hospital of Mâcon; Dr. W. Bode, to whom the development of Nauheim as a health resort was largely due; Dr. Hertwig, who took a leading part in organising the municipal abattoir of Berlin; and Dr. F. Berghammer, Surgeon Dentist to the King of Bavaria, formerly a medical officer in the Bavarian army. He had seen much service in the field during the American civil war and in the campaign of 1866.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A Medical Officer of field rank, under orders for India—the trooping season—leaving probably in January, wishes to exchange with an officer having about two years longer to remain at home. Reply to "Spes," care of Messrs. Holt and Co., 17, Whitehall Place, London.

A Surgeon-Major serving in Bengal wishes for an exchange which would give him about three years at home. Address, stating terms, to S. L. H., care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

Staff-Surgeon J. A. M'Adam has been promoted to be Fleet-Surgeon, September 19th. He was appointed Surgeon March 31st, 1875, and Staff-Surgeon twelve years later. He was surgeon of the *Superb* at the bombardment of Alexandria in July, 1882, and during the Egyptian war in that year, receiving the medal with clasp and the Khedive's bronze star.

The following appointments have been made at the Admiralty: John Hunter, Staff-Surgeon, to the *Niger*, October 2nd; Arthur W. May, Staff-Surgeon, to the *Benbow*, October 2nd; Sidney H. Youel, Surgeon, to the *Champion*, October 10th.

ARMY MEDICAL RESERVE.

Surgeon Lieutenant-Colonels A. E. Mackenzie, M.D., T. F. Greenwood, and H. F. Holland, M.D., having exceeded the limit of age required, cease to be officers of Army Medical Reserve, October 9th.

Surgeon-Lieutenants John H. H. Martin, M.D., F.R.C.S.Eng., and David Todd are promoted to be Surgeon-Captains, October 9th.

INDIAN MEDICAL SERVICE.

Brigade-Surgeon Lieutenant-Colonel Andrew Barry, M.D., Bombay Establishment, has retired from the service, which he entered as Assistant-Surgeon, March 31st, [illegible]. He was in the Abyssinian war in 1867-8 (medal) and in the Afghan war in [illegible], when he took part in the march to Candahar with the force under Major-General Phayre (medal). He retires with the ordinary pension of £[illegible] per annum, payable in England.

The extra pension of £[illegible] allotted to the Madras Establishment for the year [illegible] has been conferred by the Government of India upon Dr. [illegible] Lane Hackett, who retired from May 4th last, the pension takes effect from that date.

THE VOLUNTEERS.

Surgeon Lieutenant-Colonel [illegible] Smith, 1st Gloucestershire Engineers, Fortress and Railway Forces Royal Engineers, has resigned his commission, with permission to retain his rank and uniform, October 9th.

Surgeon-Captain C. Richardson, 2nd West Riding of Yorkshire (Leeds) Engineers, Fortress and Railway Forces Royal Engineers, is promoted to be Surgeon-Major, October 9th.

Surgeon-Lieutenant W. L. Edwards, the Severn Division Submarine Miners, Royal Engineers, is promoted to be Surgeon-Captain, October 9th.

Surgeon-Lieutenant W. G. Marshall, M.B., 4th Volunteer Battalion the Cameronians (Scottish Rifles), has resigned his commission, October 9th.

Surgeon-Lieutenant W. de Watteville, M.B., 1st (Inverness Highland) Volunteer Battalion the Queen's Own Cameron Highlanders, is promoted to be Surgeon-Captain, October 9th.

Acting Surgeon H. W. Crosse, M.B., 1st Cadet Battalion the Norfolk Regiment, has resigned his commission, October 9th.

MILITIA MEDICAL STAFF.

Surgeon Lieutenant-Colonel T. F. Greenwood, 4th Battalion the Sherwood Foresters (Derbyshire Regiment), has retired, retaining his rank and uniform, October 5th.

Two distinguished service rewards for medical officers have become vacant by the death of Surgeon-General Sir Thomas Longmore, C.B., and Surgeon Major-General H. H. [illegible], C.B. Sir Thomas Longmore's death also creates a vacancy among the Honorary Surgeons to the Queen.

THE JAPANESE ARMY MEDICAL SERVICE.

The Japanese army is accompanied by [illegible] medical attendants, of whom [illegible] are surgeons. The largest of the military hospitals is at Hiroshima. The staff consists of 56 surgeons and [illegible] nurses, as well as [illegible] surgeons and nurses from the Red Cross Society, in which many of the Japanese nobility serve. The Society has [illegible] practitioners and [illegible] nurses in the field. Dr. Kitasato, who received his medical education in Germany, deserves much of the credit for the advanced condition of surgery, medicine, and sanitary science in Japan.

MILITARY TEMPERANCE IN INDIA.

The remarkable influence of the Army Temperance Society in India in improving the physical and moral health of the soldiers is brought out very forcibly in the statistics for [illegible], collected by the secretary from Adjutants-General and officers commanding corps in India.

Trials by Court-Martial.—Convictions of abstainers, 84; of non-abstainers [illegible]. The number of abstainers having been 20,075, and of non-abstainers [illegible], the convictions were therefore per 1,000 among the abstainers, [illegible], among non-abstainers [illegible], or nearly ten times as many convictions per 1,000 of the drinkers as of the non-drinkers.

[illegible] —Among abstainers, [illegible], or [illegible] per 1,000, as against [illegible], or [illegible] of non-abstainers.

Convictions for Minor Offences.—In the three months ending March 31st, 1895, the entries in twenty-six corps among abstainers were [illegible] per 1,000; among non-abstainers, [illegible] per 1,000. General [illegible], in recommending separate temperance canteen tents on the line of march, stated that one regiment he inspected in 1885 at Umballa had [illegible] courts-martial, with £500 fines for drunkenness, in one year; next year 37, with a proportionate decrease in the fines. This good effect, added the General, was the result of upwards of 400 of the men having joined the temperance societies.

Health.—In these twenty-six corps during the six months ending March 31st, 1895, the admissions into hospital per cent. were: of abstainers, 6.6; of non-abstainers, 12. We need hardly point to the obvious moral of the great finance and efficiency values of temperate soldiers.

MARCHING POWERS OF BRITISH SOLDIERS.

On Patrol writes: The deficient marching powers of the British soldier are still before the public in the newspapers and exciting a variety of opinion on a question of evidently increasing interest. Having served in the army as a medical officer and seen the soldier in peace and in war, in camp and in barracks, I believe the present inefficiency to be mainly due to the recruits being obtained from cities instead of from the country as in former times. The town recruit has already wasted his strength in dissipation of all sorts, whereas the country lad has kept his less impaired from the absence of temptation. It will take some years of training and feeding before the former gets his heart fixed again and made fit for work and up to the standard of the other physically. In this interval it would be advisable that he should be debarred from the use of spirits, tobacco, and venery, so as to reconstitute his frame and circulation on a more healthy basis. Badly fitting boots of the ammunition type are a fertile source of lameness on the line of march, and unsuitable and cumbersome dress is equally the [illegible] cause of collapse in the ranks on the road. These defects should admit of an easy remedy, as there are master tailors and master shoemakers in every regiment, and these should accompany their men on their outings in the manœuvres to see after and rectify mistakes and wear. A racial defect in the English soldier, however, is not so easy to remedy, and that is the comparative shortness of his legs, as exemplified in the sketches of John Bull in *Punch*, whereby he is obliged to make, say, four strides to three of other races. Both the Irishman and the Highlander have longer legs comparatively, and can travel further by their three strides than the Englishman can by his three, though not stronger in bodily power.

THE ARMY AND MILITARY FILTERS.

Referring to the water supply of Curragh Camp, a military correspondent, writing to the *Irish Independent*, says: "Now, here are the actual facts, and I challenge the military authorities on the Curragh to refute my statements. Immediately after the appearance of the typhoid, two Winchester quarts of water from the same source as that which was used at the mess were sent to Dublin to be analysed by a well-known scientist. The bottles were labelled respectively 'filtered' and 'unfiltered.' The analyst tested both, but finding that the filtered water was impure while the unfiltered water was fairly pure, he sent a letter to the Curragh, suggesting that the quarts had been wrongly labelled. Two more Winchesters were sent to Dublin with the same result. Then the colonel of the regiment sent one of the large filters to be tested by the analyst. It was a large oblong box, with a bed of charcoal in the bottom through which the water was supposed to filter. Above this charcoal bed was a tank. When the perforated portion between the tank and the bed was removed, the analyst discovered that the charcoal was choked with pollution that contained millions of microbes of disease. The 'filter' was, I believe, constructed by the Royal Engineers, and had not been cleaned for nearly ten years. As a matter of fact, there was no means of cleaning it, for the perforated partition was kept solidly in its place with cement." This recalls in some degree the recent disasters at Cawnpore and Lucknow, where the defective character of the filters in use were found on investigation to be the means of extending and propagating outbreaks of cholera and typhoid.

THE ARMY MEDICAL SERVICE.

Scotia writes: While wandering about in Scotland I have just come across your valuable Journal of September 21st in the hotel where I am staying, and notice with surprise the letter in it from "A. M. S.," on which you so judiciously commented in the same issue. If the medical services, British and Indian alike, were boycotted by the medical schools, as they richly deserve, the status of medical officers would have to be better recognised in the army, and nothing short of army rank pure and simple will do much in this direction. But in every country and in every calling [illegible] there will always be disloyal members like "A. M. S.," who, as long as they are fairly comfortable themselves, disregard the welfare of their brother officers and the service to which they belong.

LEAVE FOR ARMY MEDICAL OFFICERS.

A Correspondent informs us that in the district at home where he is serving the principal medical officer has informed applicants for leave that he cannot recommend it because he has only enough medical officers to carry on duty without any margin whatever. Such a state of things is well known in the schools, and yet people wonder why young medical men will not enter the army.

SCARCITY OF CANDIDATES.

M.D. writes: The War Office probably do not mind the scarcity of candidates for the medical service and will do nothing to increase them while they can hoodwink the public with a bogus "Army Medical Reserve." But meanwhile sick and wounded soldiers, who claim decent medical attendance, are ignored. How long is this to continue?

MEDICO-LEGAL AND MEDICO-ETHICAL.

PROFESSIONAL ADVERTISING.

Under this title we published in the British Medical Journal of September 21st, page 736, a letter from a correspondent, who called attention to an announcement in the *Daily Telegraph* of the return of a certain physician to his London residence. He pointed out that, according to a standing statement in that paper that "all society and fashionable paragraphs ..... will be charged at a minimum rate of 1 guinea for two lines, each succeeding line 10s. 6d. additional." Other correspondents now send us the following announcement, cut from the *Daily Telegraph* of October 1st, 1895. He states that similar announcements have appeared in former years; if so the practice is one which ought to be discontinued:

"Dr. and Mrs. Hugh Fenton have returned to 27, George Street, Hanover Square, from Lochmaddy, N.B."

Other correspondents send us a cutting from the *Daily Telegraph*, making a similar announcement with regard to Dr. Robson Roose:

"Dr. Robson Roose has returned to Hill Street after a visit to South Africa."

A MEDICAL LIBEL ACTION.

At the Victoria Courts, Birmingham, on September 14th, Mr. Blenkinsop, acting as Under sheriff for the county of Stafford, sat with a jury to assess damages in an action for libel, which the defendant had allowed to go by default at the assizes.

The case for the plaintiff, Dr. H. Shore, of Walsall, was that in a letter which was written by the defendant to a local newspaper he had been libelled. The letter was written in reference to an inquest which had been held on the body of Caroline Johnson, aged 76, the mother of the defendant, owing to Dr. Shore's refusal to grant a certificate. After hearing the evidence the coroner's jury had returned a verdict of "Death from natural causes." Mr. D. S. Johnson, in his letter, complained that "he thought it a cruel injustice to have an inquest forced upon him when such a thing was, in his opinion, entirely unnecessary." He further made the following statement, that "at the inquest Dr. Shore was asked by the coroner what the deceased was supposed to be suffering from when he was called in, to which the doctor made the startling reply, 'Fracture of the hip and other injuries.'

"Now this is a most wilful untruth, as neither my sister or I ever expected such a thing. The coroner then asked him what was his opinion as to the cause of death, when he replied, 'The mental changes consequent upon old age accelerated by erysipelas.....' Now this I find to be absurd. He further remarked that she might possibly have lived another fortnight if erysipelas had not set in, but not longer. Then I ask why I should be put to the outrageous ceremony of an inquest with its attendant and false reports in the evening papers?"

There was a further passage in the letter which the editor struck out, imputing that "the inquest fee of £1 1s. proved too great a temptation for him" (Dr. Shore). It was contended that the defendant by his letter imputed to the plaintiff that he had committed wilful and corrupt perjury at the inquest, and that he was ignorant and unfit to perform the duties of a medical practitioner; also that he refused to give a certificate of death in order that he might obtain the inquest fee. Damages to the extent of £100 were claimed. Judgment went by default, and the case was remitted to the sheriff for the purpose of assessing the damages. At this court the defendant attempted to reopen the case, but was promptly checked by the learned judge, who refused to allow him to speak on other than the question of damages. It was held that the plaintiff need not prove any specific damage, but that any aspersion of the kind indicated upon a professional man was a subject for damages.

The defendant spoke on his own behalf in mitigation of damages, and stated that he would have settled the matter out of court, but that the prosecution insisted upon a publication of the apology, and this he would not consent to allow.

The Under Sheriff summed up to the effect that a libel of this nature upon a medical man might be the subject of heavy damages, but that it would not do for the jury to estimate these damages at a larger amount than the defendant could pay. He pointed out that the defendant, by persisting in his assertion that the libel was true after he had allowed judgment to go against him by default, had made the matter more serious, and the jury might, if they thought fit, take this into account.

The jury returned the damage at £10.

The remark of the Under Sheriff upon hearing this verdict that the defendant was a "very lucky man" will be echoed by all the members of the profession. It is difficult enough for medical men to defend their professional honour against the attacks of unprincipled persons, as to do this entails expenditure of time as well as money, but it will be doubly difficult when a jury estimates the damage, admittedly sustained (the defendant in this case having attempted no defence) at such a low figure. Dr. Shore is to be congratulated by all of us on his pluck in bringing this case forward, but we must also sympathise with him on the verdict. We notice that apparently Dr. Shore was not a member of any defence union.

MEDICAL ETHICS.

A. writes: A. goes away for a holiday leaving a *locum tenens*. A club patient, four miles off, sends at 7 P.M. asking doctor to go. Patient has been under treatment some time. A.'s *locum tenens* cannot go, then gives messenger medicine, and tells him to send or come in the morning if the patient is not better. The messenger conveys a garbled message, tells friends that if they do not send doctor will come. No message being sent in the morning, A.'s *locum tenens* does not go. At night B. is called in without further communicating with A.'s *locum tenens*. B. takes charge of case without communicating with A.'s *locum tenens*, who receives a letter from patient's friends dispensing with his services. A. returns, proposes to resume charge of case. The patient and friends are quite satisfied that he should. He writes to B. thanking him for his taking charge of the case. B. replies to the effect that he has asked the patient and friends, and as they are anxious that he should attend he considers he is entitled to do so. Ought B. not to have communicated with A.'s *locum tenens*, and then, on finding that his failure to attend was due to a misunderstanding, ought he not to have left the case to A.'s *locum tenens*? Ought B. not in common fairness to have resigned the case to A. on his return?

*** The above incident affords another instance of the imprudence of entrusting a more or less important message verbally to an unlettered messenger. Assuming, however, that the statement is a fair version of the facts, there can be no doubt that, medico-ethically, it devolved upon B. to communicate with A.'s *locum tenens* in relation to his (B.'s) attendance on the patient in question. Moreover, on receiving A.'s explanatory note he (B.) should have at once have retired from the case, and his omission to do so constitutes, in our opinion, a grave neglect of ethical duty, and of the moral precept to do unto others as he himself would wish to be done by.

CONSULTANTS AND THE WIVES OF MEDICAL MEN.

A Member.—We would refer our correspondent to the explicit replies published in the British Medical Journal, p. 736 and p. 967, under the respective headings of "Professional Services to Doctors and Wives," and "Consultant and the Wives of Medical Men," and if he fails to comprehend their true import, containing as they do a specific answer to the question twice submitted, we reluctantly shrink from making a third attempt to convey in another form of words our simple and intelligible reply.

With reference to our correspondent's further question relative to the title of physician and "Dr.," the subject has been so fully discussed, month after month, in our columns, that we are constrained to refer him to the registrar of his college for a definite exposition on the special point in dispute.

A COMPLICATED CASE.

B. writes: B., a general practitioner, consulted by S., agrees to meet in consultation G., who formerly attended S. G. is a consulting surgeon. G. writes to B., making an appointment, saying under no circumstances will he see the patient except with B., as he considers S. B.'s patient. A line of treatment is agreed upon and is carried out for eighteen months by B. During this time B. had occasion to remonstrate with G. for seeing the patient, prescribing, and not acquainting B. Patient S. becomes tired of the restraint carried out by B. and objects to see him; then G., without any communication with B., supersedes him by another medical man, although S. has merely done what was agreed on. Patient's husband acknowledges B.'s services, and says G. has acted thus so that B. may not be insulted by the patient, namely, a mental case. B. remonstrates with G., but can get no satisfactory explanation. How can a consulting surgeon to a special hospital explain his action in a purely medical case?

*** That S. had an unquestionable right to decline the continued attendance of B. there can be no doubt: but even if sanctioned by the husband it would not justify the alleged course of action adopted by the consultant, whose procedure in the case would appear to have been more or less irregular and unethical. Need we remind B. that the fact of G. being a surgeon-consultant to a special hospital would not, however otherwise uncommendable, preclude him, if legally qualified, from attending a medical case?

ADVERTISEMENTS BY DENTISTS.

Observer.—The advertisement of Mr. O'Duffy in the lay press, to which our attention has been called, is certainly in bad taste, and contrary to the unwritten etiquette of the medical profession. The Royal College of Surgeons in Ireland, who require their dental licentiates to sign an obligation not to advertise, would no doubt communicate their views to the perpetrator of this advertisement, if the Secretary were officially informed of the infringement of their laws.

THE TITLE OF DENTIST.

E. W. W.—The 3rd Clause in the Dentists Act is as follows: "A person shall not be entitled to take or use the name or title of 'dentist' (either alone or in combination with any other word or words), or of 'dental practitioner,' or any name, title, addition, or description implying that he is registered under this Act, or that he is a person specially qualified to practise dentistry, unless he is registered under this Act. Any person who, not being registered under this Act, takes or uses any such name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding twenty pounds." The dental qualifications are granted after examination by the Royal Colleges of Surgeons and not by schools; the latter are for educational purposes only.

TOUTING SOCIETIES AND PERSONAL ADVERTISEMENT.

Dr. Arthur C. Shaw-Mackenzie (Fulham) writes: My attention has been drawn to the remarks in the British Medical Journal, Sept. 28th, on "Touting Societies and Personal Advertisement." I desire to say that several weeks ago before your notice appeared, the undesirability of such a label had been pointed out to me, and I determined to withdraw all such as I could and to issue no more. As regards the clubs themselves, I can hardly think you realise the impossibility of a young man competing in a district like this without one. I have been in Walham Green eight years, and it is only in the last few months, when I found my patients leaving me to join other men's clubs that I felt compelled to join in self-protection. No fewer than 140 medical men belong to this club in West London, and 13 or 14 belong to another big club supported by the clergy of this district, and there are numerous others. In

issuing the labels to the society, which were on the lines of similar labels and rules to members of other clubs, there was, I considered, no particular harm or injury to neighbouring medical men. When parochial societies or sick clubs encourage a family to join for 3d. a week, which includes husband and wife, and all the children under 14 years, and payments of midwifery are encouraged by 2s. 6d. monthly payments in advance, and no restraints put on touting, it is extremely difficult for an individual medical man to hold his own fairly against his competition.

I venture to hope your readers will think that I have been the victim of circumstances rather than have wilfully transgressed professional regularity.

*** We are pleased to learn that our correspondent has withdrawn the objectionable labels, and trust his example will be followed by other practitioners whose labels have likewise been forwarded to us, and are every whit as bad. Debasing as it is from a professional point of view to have anything to do with "touting" societies, it is still more disgraceful for a practitioner to endeavour to advertise himself broadcast by means of labels printed under the cover of their names. Our correspondent complains bitterly of the competition young practitioners have to contend against, and of the laxity in professional ethics displayed by many of his professional neighbours. But two wrongs do not make a right, and it is precisely this ethical laxity that renders the struggle for professional existence so keen, and in many cases so undignified and unworthy of an honourable profession.

THE POLICE AND CASES OF ATTEMPTED SUICIDE.

THE house surgeon of a provincial infirmary writes that he had, a few days ago, a case of attempted suicide—cut throat—brought in from a neighbouring district; that he informed the county police, and requested them to make the customary provision for watching the case, but that they replied that they had not arrested the woman, and till they did so they were not responsible, and consequently they refused to watch her.

*** We have referred the matter to Mr. Nelson Hardy, who replies as follows: They were quite right, and no legal dictum is required to show that until a person is formally charged with an offence the police have no power to control his or her movements. We do not suppose our correspondent is desirous of becoming the accuser of his patient, nor do we think it desirable that he should do so; and if her relatives take no step in the matter, it is not the duty of the hospital authorities to act. If the borough police act differently—as our correspondent informs us they do—they act *ultra vires*.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

EXAMINATION IN SANITARY SCIENCE.—The following candidates have satisfied the examiners in both parts of the Examination:

R. F. Carse, C. Childs, T. Dunlop, J. Gallelly, J. J. Gorham, C. R. M. Green, P. G. Grimth, C. W. Hayward, E. Hill, Kate Marion Hunter, A. Jervis, D. C. Muir, G. Newman, W. J. Potts, J. T. Pragnell, M. A. Mc[illegible]

BOTANICAL DEPARTMENT.—The late Professor C. C. Babington has bequeathed his valuable collection of plants and his botanical library to the University.

UNIVERSITY OF DURHAM.

AT a Convocation held at Durham on September 28th, the following degrees in Medicine were conferred by the Warden, Dean Kitchen:

M.D. (*ad eundem*).—W. Ewart, Caius College, Cambridge.

M.B. (Examinees.)—B. Duke, E. Duke, R. Hartley, G. H. Hetherington, J. E. Richards, H. A. Smith, W. Sykes, W. F. Thomas, W. P. Turner, J. F. Woods.

M.D.—J. H. Baker, J. Braithwaite, T. Beattie, W. A. Dow, J. W. H. Eyre, W. E. Harker, R. L. Meade-King, G. Metcalfe, F. B. Rutter, F. Syrett, I. C. Thorne Thorne.

M.B.—C. Beven, W. Turnbull, N. C. Gwynn, J. J. Grace, L. G. Fraser, H. L. Hatch, J. R. Adamson, A. Baker, S. Barker, W. S. Carpenter, H. Crichton, R. C. de Lacey, W. G. Fell, L. Fothergill, H. H. Gourley, G. W. Harbottle, A. H. Hobbs, J. S. Manford, C. M. O'Brien, W. H. Rowell, W. J. Rowland, F. R. Sutton, C. Stewart, F. S. Walker.

B.S.—J. R. Adamson, A. Baker, S. Barker, C. Beven, H. Crichton, R. C. de Lacey, L. G. Fraser, W. G. Fell, N. C. Gwynn, G. W. Harbottle, H. L. Hatch, A. H. Hobbs, E. B. Kendall, J. S. Manford, C. Meaden, W. H. Rowell, F. R. Sutton, C. Stewart, W. Turnbull, F. S. Walker, J. G. Grace.

B.Hy.—R. Green.

Among a number taking Mus. Bac. was Miss M. U. Arkwright, of Newbury, who is the first lady to take a degree in music at Durham.

ROYAL UNIVERSITY OF IRELAND.

FIRST EXAMINATION IN MEDICINE, AUTUMN, 1895.—The Examiners have recommended that the following candidates be adjudged to have passed the above-mentioned examination:

J. W. Bannister, Queen's College, Cork; W. Barkley, Queen's College, Belfast; P. J. Carroll, Queen's College, Cork; Emily M. Crooks, Queen's College, Belfast; D. J. Farnan, University College, Dublin; A. J. Frost, University College, Dublin; C. E. Geraghty, University College, Dublin; G. Graham, Queen's College, Galway; R. J. Hackett, University College, Dublin; T. Hunter, Queen's College, Belfast; R. Kennedy, University College, Dublin; Kathleen F. Lynn, Royal College of Science, Dublin; R. McCarrison, Queen's College, Belfast; T. J. B. McDonagh, University College, Dublin; P. G. Moran, University College, Dublin; M. J. Rahilly, University College, Dublin; J. J. Robb, Queen's College, Belfast; M. L. Rowan, B.A., Queen's College, Belfast; F. Ryan, University College, Dublin; H. F. Shepherd, Queen's College, Cork; J. E. Simpson, Queen's College, Belfast; P. Stack, Queen's College, Cork; W. Starkey, University College, Dublin; J. J. Walsh, University College, Dublin; W. Watson, Queen's College, Belfast.

The following candidates may present themselves for the Further Examination for Honours in the subjects set opposite their names. Where more than one subject is mentioned the candidate will be allowed to present himself in all:

W. J. Bannister, Experimental Physics; P. J. Carroll, Zoology and Experimental Physics; D. J. Farnan, Botany, Zoology, Chemistry, Experimental Physics; A. J. Frost, Experimental Physics; C. E. Geraghty, Chemistry; R. J. Hackett, Experimental Physics; R. McCarrison, Experimental Physics; T. J. McDonagh, B.A., Zoology, Chemistry, and Experimental Physics; M. J. Rahilly, Zoology; M. L. Rowan, B.A., Botany, Zoology, Experimental Physics; F. Ryan, Chemistry and Experimental Physics; H. F. Shepherd, Botany and Zoology; J. E. Simpson, Zoology and Experimental Physics; W. Starkey, Botany, Zoology, Chemistry, Experimental Physics; J. J. Walsh, Zoology, Chemistry.

SECOND EXAMINATION IN MEDICINE, AUTUMN, 1895.—The Examiners have recommended that the following candidates be adjudged to have passed the abovementioned Examination:

Upper Pass.—*D. Brown, Queen's College, Belfast; *R. A. L. Graham, Queen's College, Belfast; B. Hanlon, Queen's College, Cork; *G. Jefferson, Queen's College, Belfast; *G. M. Keating, Catholic University School of Medicine; *D. McCay, Queen's College, Cork; A. B. McMaster, Queen's College, Belfast.

Pass.—W. R. Beatty, Queen's College, Belfast; J. Brangan, Queen's College, Belfast, and Catholic University School of Medicine; F. J. Burke, Catholic University School of Medicine; A. W. Crawford, Queen's College, Belfast; J. M. Dunne, Catholic University School of Medicine; T. P. Flynn, Queen's College, Cork; W. Hartnett, Queen's College, Cork; G. H. Henry, B.A., Queen's College, Belfast; E. Heskin, Queen's College, Cork; T. Kennedy, Queen's College, Belfast; R. Kerr, Queen's College, Belfast; T. Magner, Queen's College, Cork; J. Martin, Queen's College, Belfast; L. T. Moore, Queen's College, Cork, and Catholic University School of Medicine; P. J. Moran, Queen's College, Belfast; J. Murray, Catholic University School of Medicine; W. Nicholson, Queen's College, Galway; W. Paisley, Queen's College, Galway; F. S. Scott, Queen's College, Galway.

THIRD EXAMINATION IN MEDICINE, AUTUMN, 1895.—The Examiners have recommended that the following candidates be adjudged to have passed the above-mentioned examination:

Upper Pass.—*J. G. Corry, Queen's College, Galway; *G. A. Hicks, Queen's College, Belfast; W. G. Jordan, Catholic University School of Medicine and Queen's College, Belfast; *O. E. McCutcheon, B.A., Queen's College, Belfast; C. E. McDade, B.A., Queen's College, Belfast; W. H. W. Mewburter, Queen's College, Belfast; H. J. Monypeny, Queen's College, Belfast; R. Moore, M.A., B.E., University College, London; *L. Robinson, Catholic University School of Medicine; J. H. Stewart, Queen's College, Belfast.

Candidates marked (*) may present themselves for the Further Examination for Honours.

Pass.—A. Birmingham, Catholic University School of Medicine; J. M. Davis, Queen's College, Belfast; J. Harvey, Queen's College, Belfast; B. P. Healy, B.A., Catholic University School of Medicine; J. Johnston, Queen's College, Belfast; J. F. Kiernan, B.A., Queen's College, Galway; T. A. Kelleher, Queen's College, Cork; J. J. Kinsella, Catholic University School of Medicine; J. McCarthy, Queen's College Cork; J. H. McComb, Queen's College Belfast; L. McDonald, Catholic University School of Medicine; F. C. McKee, Queen's College, Belfast; R. R. McLean, Queen's College, Belfast; J. J. A. G. McMurtry, Queen's College, Belfast; G. J. Maguire, Queen's College, Belfast; C. J. Moore, Catholic University School of Medicine; J. P. J. Murphy, Queen's College, Cork; R. J. Murray, Catholic University School of Medicine; D. S. Robinson, Queen's College, Belfast; W. S. Shaw, Queen's College, Cork; J. Steinkwin, Queen's College, Cork; R. W. G. Stewart, Queen's College, Belfast; W. J. Wilson, Queen's College, Belfast.

THE UNIVERSITY COLLEGE OF SOUTH WALES.

AT the half-yearly meeting of the Court of Governors of the University College of South Wales and Monmouthshire, on October 8th, it was announced that the Treasury were prepared to insert in next year's estimates a grant of £[illegible] to the Welsh University provided that a similar amount were collected locally within a given period of years. The Drapers' Company, which has already endowed the University College of South Wales with a professorship of engineering and with several scholarships has now offered it £10,000 if £[illegible] can be subscribed locally within twelve months. The Governors resolved unanimously that an appeal to the public for [illegible] should be organised and local committees appointed to further this object. It was reported that the number of students attending the College in 1894-95 had been 365, of which number 305 were from South Wales and Monmouthshire. It is evident, therefore, that the College is meeting a real local demand and it cannot be doubted that the endowment fund now asked for will be raised without delay. The financial position of the College is already fairly good though the deficit this year was £600. A sum of £[illegible] is to be received shortly from the Cardiff Corporation, and when this has been paid over the financial position of the College will be far more satisfactory.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the Second Examination of the Board in the subjects mentioned.

Monday, October 7th.

Anatomy and Physiology.—A. Heirsyd, student of Yorkshire College, Leeds; G. H. Irvine, F. A. Coates, E. [illegible], and J. W. Wallace, of University College, Bristol; S. Bentley, of Firth College, Sheffield; A. M. Dodd and A. Johnson, of University College, Liverpool; F. E. Wayte and W. T. Jackson, of Owens College, Manchester; J. H. Mort, of Cambridge University and Owens College, Manchester; G. C. F. [illegible], of Cancer Medical College, Bombay; E. H. Musgrove, of University College of South Wales, Cardiff; J. I. Baykin, of Queen's College, Cork; and W. A. [illegible], of University College, London.

Anatomy only.—W. [illegible], of Firth College, Sheffield; E. Ashby, of [illegible]'s Hospital; and G. Isley, of St. Thomas's Hospital.

Physiology only.—A. S. Underhill, of Owens College, Manchester; G. L. Wright, of University College, Bristol; C. E. [illegible], of St. Thomas's Hospital; A. B. Passmore, of Guy's Hospital and Durham University; E. T. McDonnell, of Queen's College, Belfast, and Mr. Cooke's School of Anatomy and Physiology; and M. Clover, of University College, London.

Seventeen gentlemen were referred in both subjects, 4 in Anatomy only, and 1 in Physiology only.

Tuesday, October 8th.

Anatomy and Physiology.—C. F. Watson, H. S. Turner, R. J. Pritchard, and E. C. Davies, of Guy's Hospital; F. L. Rae, of Cambridge University and Guy's Hospital; H. H. Elworthy, C. S. Cato, of Westminster Hospital; J. M. Edwards, of Charing Cross Hospital and Mr. Cooke's School of Anatomy and Physiology; H. S. Roch, of King's College, London; C. E. Evans, of University College, London; S. Hey, of Cambridge University and St. Bartholomew's Hospital; W. I. Bradley, of McGill College, Montreal, Canada; G. Young, of London Hospital and Trinity College, Dublin; A. R. Kay, J. L. Morris, and F. G. [illegible], of St. Bartholomew's Hospital.

Anatomy only.—J. E. Francis and J. W. Cheese, of University College, London.

Physiology only.—G. B. Nicholson, of Cambridge University and St. Bartholomew's Hospital, and E. Fryer, of Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Sixteen gentlemen were referred in both subjects, 2 in Anatomy, and 2 in Physiology only.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

RESULTS OF EXAMINATIONS.—The following analyses of the results of the examinations held by the Royal College of Surgeons during the past two years contains some interesting facts. The enormous proportion of failures in Chemistry at the Conjoint Board's First Examination is particularly worthy of note, and appears to indicate some very serious defect in the present method of educating students in this subject. The root of the mischief lies probably in the neglect of this subject at the general run of boys' schools, where the teaching in science is often most perfunctory. It cannot be said either that the result of the Second Examination under the five years' regulations is very satisfactory. Failures amounting to 45 per cent. must be due to defective teaching or imperfect examinations.

First Conjoint (Five Years' Regulations).

—	Number of Candidates.	Referred.	Percentage of Passes.
1893-4.			
Chemistry	497	210	57 per cent.
Pharmacy	197	58	70 ,, ,,
Botany	448	149	67 ,, ,,
Osteology	497	91	80 ,, ,,
1894-5.			
Chemistry	510	210	59 ,, ,,
Pharmacy	228	45	80 ,, ,,
Botany	488	161	67 ,, ,,
Osteology	497	84	83 ,, ,,

Second Conjoint (Five Years' Regulations).

—	Number of Candidates.	Referred.	Percentage of Passes.
1893-4	89	30	66 per cent.
1894-5	338	191	55 ,, ,,

Third Conjoint (Four Years' Regulations).

—	Number of Candidates.	Referred.	Percentage of Passes.
1893-4.			
Medicine	889	378	56 per cent.
Surgery	841	358	57 ,, ,,
Midwifery	849	281	67 ,, ,,
1894-95.			
Medicine	905	384	57 ,, ,,
Surgery	880	364	61 ,, ,,
Midwifery	824	276	67 ,, ,,

First Fellowship.

—	Number of Candidates.	Referred.	Percentage of Passes.
1893-4	160	98	39 per cent.
1894-5	171	108	37 ,, ,,

Final Fellowship.

—	Number of Candidates.	Referred.	Percentage of Passes.
1893-4	99	48	51 per cent.
1894-5	70	34	51 ,, ,,

Dental Surgery.

—	Number of Candidates.	Referred.	Percentage of Passes.
1893-4	139	61	56 per cent.
1894-5	131	37	72 ,, ,,

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST.—The following candidates passed in:

Surgery.—F. Butcher, Royal Free Hospital; A. E. [illegible], McGill University; R. Jones, St. Mary's Hospital; C. F. Preston, Manchester; C. A. K. Renshaw, Cambridge and Manchester.

Midwifery, Forensic Medicine, and Medicine.—L. M. Broton, St. Thomas's Hospital; F. Butcher, Royal Free Hospital; J. Cryer, Manchester; A. E. Garrow, McGill University; J. [illegible], London Hospital; E. T. V. von Hempe, Royal Free Hospital.

Medicine and Forensic Medicine.—T. E. [illegible], Leeds; [illegible], Dublin.

Medicine.—E. R. Sims, Leeds and Glasgow.

Forensic Medicine.—A. H. Grace, Bristol; [illegible], Manchester; M. K. S. Holst, Royal Free Hospital; T. W. [illegible], Toronto.

Midwifery.—R. Goulden, Manchester; P. E. [illegible], University College.

To Messrs. Abbott, Breton, Butcher, [illegible], Garrow, Gill and [illegible] was granted the diploma of the Society.

PRIMARY EXAMINATION, PART I.—The following candidates passed in:

Chemistry.—R. Brookes, Westminster; C. H. [illegible], London Hospital; A. H. Wilson, Birmingham.

Materia Medica and Pharmacy.—F. E. T. [illegible], Royal Free Hospital; E. C. Scarlett, Royal Free Hospital.

Materia Medica.—H. Greenwood, London Hospital.

PRIMARY EXAMINATION, Part II.—The following candidates passed in:

Anatomy and Physiology.—J. W. Cheese, University College; L. D. B. Cogan, Guy's Hospital; G. S. Foulds, Manchester and Edinburgh; E. Fryer, Guy's Hospital; G. E. Hogan, St. Bartholomew's Hospital; D. V. Lowndes, London Hospital; R. S. O. Mamwell, St. Bartholomew's Hospital; H. R. Miller, Guy's Hospital; C. R. White, Edinburgh.

Anatomy.—S. R. Bhagtani, King's College; H. Charles, Middlesex Hospital; J. C. S. Dunn, St. Bartholomew's Hospital; G. W. Dutton, Middlesex Hospital; J. Ellul, Edinburgh; S. Hogan, London Hospital; A. R. Hoare, St. Thomas's Hospital; F. O. [illegible], Guy's Hospital; E. F. Lamport, Royal Free Hospital; H. W. B. Walling, Guy's Hospital.

Physiology.—F. G. Aldrich, Charing Cross Hospital; H. J. de Saram, Middlesex Hospital; A. H. Fitzpatrick, St. Bartholomew's Hospital; W. M. Hocken, Liverpool and Edinburgh; H. G. Lower, Edinburgh; E. P. Marett, St. Thomas's Hospital; W. P. R. Nesta, St. Thomas's Hospital; J. Scarr, Manchester.

Biology.—E. Yoxall, Birmingham.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

NOTIFICATION BY HOUSEHOLDERS.

A STRIKING instance of culpable negligence and its consequences was brought before the Borough Bench by the Wigan Corporation lately. A child was seized with small-pox, and died after several days' illness. No medical man seems to have been called in, and the case was concealed until death took place. The father took the infection, and ten or eleven other attacks were traced to the same source. The mother was summoned for failure to notify, and the only defence offered was that she was unwilling to have the child removed to hospital. A penalty of 40s. and costs was inflicted. In this matter the Corporation were well advised in taking proceedings. Where there is no medical attendant, and no possibility therefore of medical certification, notification by the householder should be strictly enforced.

WHAT IS AN "INHABITED HOUSE?"

AT Bradford, on September 30th, the Pudsey Urban District Council obtained closing orders, under the Housing of the

Working Classes Act, with regard to a number of dwellings unfit for habitation. One of these had been empty for upwards of two years, but it was stated in evidence that the owner had some intention of repairing it for occupation. Another group of houses, however, which had been unoccupied for eighteen years were held to be exempt from the operation of the Act. The Bench expressed the opinion that where there was long disuse and no prospect of future occupation the premises were not to be regarded as inhabited houses within the meaning of the Act. It was thought that the section which empowers the court to issue a closing order, even if the house be unoccupied, bore reference merely to a temporary cessation of tenancy. It does not appear that any notice of appeal was given, but the decision is one which, if generally accepted, must hamper the action of public authorities in dealing with insanitary portions of their districts. The "closing order" is a necessary preliminary to the "demolition order," according to the Act, and the Bradford ruling would leave the worst houses standing, while affording facilities for the removal of the less bad.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,930 births and 3,949 deaths were registered during the week ending Saturday, October 5th. The annual rate of mortality in these towns, which had risen from 19.3 to 21.0 per 1,000 in the three preceding weeks, declined to 19.4 last week. The rates in the several towns ranged from 13.2 in Croydon, 14.2 in Huddersfield, and 14.4 in Brighton to 30.5 in Salford, 32.3 in Bolton, and 37.2 in Blackburn. In the thirty-two provincial towns the mean death-rate was 21.9 per 1,000, and exceeded by as much as 6.0 the rate recorded in London, which was only 15.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 4.2 per 1,000; in London the death-rate was 2.6 per 1,000, while it averaged 5.5 in the thirty-two provincial towns, and was highest in Oldham, Salford, Bolton, and Blackburn. Measles caused a death-rate of [illegible] in Salford and 4.9 in Blackburn; scarlet fever of 1.1 in Gateshead and 1.2 in Wolverhampton; whooping-cough of 1.7 in Bolton and 3.6 in Wolverhampton; "fever" of 3.4 in Sunderland; and diarrhœa of 6.3 in Salford, Oldham, and Burnley, 9.2 in Bolton, and 10.2 in Blackburn. The 71 deaths from diphtheria in the thirty-three towns included 44 in London, 4 in West Ham, and 4 in Salford. One fatal case of small-pox was registered in London and 1 in Oldham, but not one in any other of the thirty-three towns. There were 198 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, October 5th, against 307, 271, and 234 at the end of the three preceding weeks; 17 new cases were admitted during the week, against 42, 23, and 21 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had increased from 2,367 to 2,807 at the end of the six preceding weeks, was [illegible] on Saturday last, October 5th; 259 new cases were admitted during the week, against 365, 344, and 339 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, October 5th, 894 births and 527 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.5 and 17.5 per 1,000 in the two preceding weeks, rose again to 18.3 last week, but was 1.1 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.5 in Edinburgh to 21.1 in Paisley. The zymotic death-rate in these towns averaged [illegible] per 1,000, the highest rates being recorded in Aberdeen, Leith, and Paisley. The 246 deaths registered in Glasgow included 27 from diarrhœa, 10 from whooping-cough, and 3 from scarlet fever.

EAST END WATER SUPPLY.

The report of the managers of the Poplar and Stepney Sick Asylum gives many details regarding the working of the institution, but the matter of greatest interest at the present moment is the account given of the difficulties entailed upon the management in consequence of the imperfections and irregularities of the water supply. From a letter written to the secretary of the East London Water Company last January it appears that great inconvenience had been felt in consequence of the failure to get sufficient water to warm the buildings. The managers had at a very large expense fitted up a hot water service, and at the very moment when it was most required the service was frequently of little or no avail, because of the lack of water. This trouble also was no exceptional affair, but usually arose as soon as the least frost made its appearance, so soon as the time arrived when the apparatus was required to perform the work for which it was intended, it became almost inoperative on account of the lowness of the pressure. Nor was the trouble confined to winter only, for in summer also it was found that the pressure was often insufficient, so that the lavatories and waterclosets became very offensive through want of water to flush them. In addition to paying upwards of £45 per annum specially for the high water service, the managers had caused a pump to be attached to the engine for the purpose of aiding the pressure from the company's mains, but even this was of little or no avail for want of water to pump up. The result of this may be imagined when it is considered that the institution contains between 700 and 800 inmates.

LEICESTER AND HER MEDICAL OFFICERS OF HEALTH.

Dr. Joseph Priestley has commenced his duties as medical officer of health for Lambeth, and the Town Council of Leicester at their last meeting elected as his successor Mr. H. E. H. Monk, M.R.C.S., L.S.A., D.P.H., M.O.H. Scarborough. The Town Council have presented Dr. Priestley with a testimonial, in which they specially compliment him on the way he stamped out the small-pox epidemic, while at their last meeting they also resolved to apply for a loan from the Local Government Board for the conversion of the remaining pails and privies into waterclosets at an estimated cost of [illegible]. Dr. Priestley advised this change in his last annual report, and brought the matter well home by means of some carefully worked-out statistics, by which he showed the Council the greater incidence of typhoid fever on pail over water-closet houses. The Town Council have also decided to appoint a female sanitary inspector on the suggestion of their late medical officer of health, Dr. Priestley.

FEE FOR ASSISTANCE GIVEN TO WORKHOUSE MEDICAL OFFICER.

X. writes as follows: At the request of the workhouse medical officer I administered an anæsthetic and assisted at an urgent case requiring an operation. Am I entitled to a fee from the guardians and should I send in a claim to them? I should think one guinea would be reasonable.

*** We question whether our correspondent has any legal claim on the guardians as he appears to have given his services at the request of the workhouse medical officer, but if he puts in a claim for the fee of one guinea the guardians doubtless have the power to pay it if they decide on doing so, and this will of course depend on the votes given for or against the resolution, if it should be proposed and seconded.

THE PROTECTIVE VALUE OF VACCINATION.

The following letter appeared recently in the *Star* and [illegible]:

THE VACCINATION FAD.

Sir,—"F. H.'s" is a very useful letter. It should be noted that the Local Government Board issue instructions under authority of an Order in Council which public vaccinators do not carry out. Light should be let in upon the practice of vaccination on every side. I have had within the last day or two a significant instance of the protective value of vaccination. Mr. L——, of Greenwich, and his wife were well vaccinated in infancy, as "small-pox was about." The husband yielded to persuasion and was revaccinated this year. In July last both he and his wife contracted small-pox, and were taken to the Long Reach Small-pox Hospital. *Verbum sapientibus sat.*—Yours, etc.,

H. A. SCHULTESS YOUNG.

16, Queen Anne's Gardens, Bedford Park, W.

We have made inquiries at the Metropolitan Asylums Board's hospital ships at Long Reach, and we are informed that the patients to whom Mr. Young refers were, it is believed, admitted to the ships at the end of May and beginning of June and not in July, as he says. The woman, aged 25, was admitted on May 25th, the fourth day of her rash. She had been vaccinated in infancy and had three small non-foveated scars; she had never been revaccinated. Her husband, aged [illegible], was admitted on June 6th, his rash having appeared on the fourteenth day after that of his wife. He had been vaccinated in infancy and had four non-foveated scars. He was revaccinated on May 28th, that is on the seventh day after the appearance of his wife's rash and on the eighth day before the appearance of his own rash. One would not expect that vaccination performed so late in the incubation period would have the effect of entirely preventing an attack of small-pox. Both these patients had very mild attacks of the disease.

The following facts may be interesting as affording some evidence of "the protective value of vaccination": The infant son of the above parents, aged [illegible] months, was allowed to come to the ships with his mother, although he was not suffering from small-pox. He had been vaccinated when younger and was not revaccinated after admission. Although he lived for more than three weeks in a small-pox ward he did not contract the disease.

INDIA AND THE COLONIES.

The Calcutta Medical College.—It is the practice in this institution to hold in each class at the close of each session a "test and honour" examination, which has been hitherto compulsory for lady and military students, and optional for the rest. The option has been exercised by the majority of students to evade it. It has now been resolved to make this examination a real test of progress for all students, and to dismiss those who do not obtain a moderate percentage of marks. The rule, which has obtained the sanction of the Director of Public Instruction, has raised quite an agitation among the students and their friends and in the native press. The circumstances of medical study in India are quite peculiar. A large proportion of students who enter on the course of study relinquish it on account of want of means, want of capacity, diligence, and application, and from other causes. Many of those who persevere do not succeed in obtaining a qualification, and set up in practice, regular or irregular, without one. Many of those who obtain a qualification do so by a painful process of repeated efforts and passing by instalments spread over six, seven, eight, or nine years. The new rule is intended to filter out incompetents during the early stages of the curriculum and demonstrate to them practically that they have mistaken their calling and had better turn their attention to some other mode of obtaining a livelihood. It is also calculated to stimulate the capable but indolent to greater diligence and closer application. A rule of this kind obtains in some Scottish universities and English public schools. It is not enforced in medical colleges and schools in this country because it is not needed. But, looking to the conditions of medical study in India which we have mentioned, the practice seems likely to be a salutary one, provided that it is carried out with discretion and kindness. The so-called test examinations in Indian medical colleges have hitherto been to a large extent a sham. The object is to make them real and helpful to students by showing them whether they understand and accomplish their work.

MEDICAL NEWS.

A PORTRAIT of the late Mr. Ernest Turner, F.R.I.B.A., Chairman of the Council of the Sanitary Institute, has been presented to the Institute by his widow, and has been placed in the library.

AN American paper states that a female medical practitioner has been elected City Physician and Coroner of Pender, Nebraska, after she had been but six months practising in the town.

WE stated last week that Dr. J. W. Jamieson had been appointed Sheriff Substitute of Banffshire. This is incorrect. The position to which Dr. Jamieson has been appointed is that of Honorary Sheriff Substitute to the Arran Division of Buteshire.

A FEMALE DENTIST IN BOSNIA.—The Government of Bosnia has granted permission to Frau Emilie Edel to practise dentistry in any part of that country except in Sarajevo, the capital, which is already, it is officially declared, "sufficiently supplied with dentists." Frau Edel, who received her professional education in the Dental Institute of the Vienna University, proposes, it is stated, to settle in a town where the Mohammedan element predominates in the population.

THE MANUFACTURE OF ANTITOXINS IN NEW YORK.—The New York Pasteur Institute has purchased thirty-five acres of land near Tuxedo Park, on which an experiment station is to be established. It will be stocked with cows, horses, sheep, and goats, which will be used for the production of diphtheria and cancer antitoxins. The situation is healthy, and in the grounds there will be a house in which some of the patients of the Institute will be treated. A new station, to be known as the Pasteur Station, will be established on the Erie Railroad close at hand.

ENDOWMENT OF HOSPITAL BEDS.—Mrs. Saxton, of The Elms, Shrewsbury, has made a benefaction from the Gwyn Trust Fund to the Salop Infirmary, the interest of which is to be devoted to the maintenance in perpetuity of two beds in the children's ward. Over each bed a brass plate will be fixed, with the following inscription: "This bed was endowed by Caroline Saxton, widow of the Rev. Charles Waring Saxton, D.D., in memory of her parents, for the special use of children—1895."

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the South-Western Division of the Medico-Psychological Association will be held at Wonford House, Exeter, on Tuesday, October 15th. Dr. Deas will open a discussion on the Uses and Limitation of Mechanical Restraint as a Means of Treatment. Dr. Macdonald will read a paper on the Nursing Staff: Thoughts and Reflections, with Remarks on a New Departure; and Dr. Morton one entitled, Notes on Three Cases of Spontaneous Gangrene.

THE President of the Society for the Study of Inebriety, Dr. Norman Kerr, in opening a discussion on the proposed probationary curative detention of inebriates and others deemed to be insane, at the last meeting of the Society, said that at present many inebriates and other persons were certified as lunatics and sent to asylums for the insane, who might have been cured under a better legislative state of things. He ventured to predict that in twenty years or so more there would be: (1) Probationary curative mental hospitals; (2) Asylums not in one block, but in a number of smaller buildings as in some American asylums; (3) Mental convalescent homes, where the discharged from the asylum could be received for a few weeks, to render the re-entrance of the convalescent into the world less trying, a work to some extent attempted at present by the excellent After-Care Association. Drs. Longhurst, Parker Young, Smith, and Weber approved of the proposal.

THE third annual meeting of the Society of Anæsthetists will be held at Limmer's Hotel, Conduit Street, W., on Thursday, October 17th, 1895, at 7 P.M., to receive the reports of the Council and Treasurer, and to elect the officers and Council for the ensuing year. The following list will be submitted to the meeting, namely:—*President:* Mr. G. Hewlett Bailey. *Treasurer:* Dr. Dudley W. Buxton. *Elected Members of Council:* Dr. J. Frederick W. Silk, Dr. A. E. Bridger, Mr. E. A. Starling (Tunbridge Wells). *Secretaries:* Mr. Walter Tyrrell, Mr. C. C. Braine, F.R.C.S. *Auditors:* Mr. Richard W. Lloyd, Dr. T. Sydney Short (Birmingham).

WEST KENT MEDICAL CHIRURGICAL SOCIETY.—The annual general meeting of the Society was held on Friday, October 4th, at Greenwich, when the following officers were appointed for the ensuing year:—*President:* Ernest Clarke, M.D., B.S.Lond., F.R.C.S. *Vice-Presidents:* Peter Cooper, M.R.C.S., L.R.C.P.; Frank Tayler, B.A., M.B.Lond. *Council:* A. Stewart Brown, F.R.C.S.Edin.; Morgan Dockrell, M.A., B.Ch., M.D.Dub.; George Herschell, M.D.Lond.; Arbuthnot Lane, M.S.Lond, F.R.C.S.; Clarke Morris, M.R.C.S.; C. J. Parke, M.R.C.S.; Septimus Sunderland, M.D.Brux. *Treasurer:* Prior Purvis, M.D.Lond. *Secretary:* E. H. Ezard, M.D., C.M., D.Sc.Edin. *Librarian:* J. P. Henry, B.A., M.D., B.Ch.Dub. The Purvis Oration was delivered by Professor Curnow, who chose for his subject "Medical Examination and Education."

ENTRANCE SCHOLARSHIPS.—At St. Thomas's Hospital Medical School the first entrance scholarship in Natural Science, of the value of £150, has been awarded to Mr. Frank B. Skerrett; the second, of the value of £60, being divided between Messrs. Walter B. Fry, George W. Hare, and Alfred B. Lindsey, bracketed equal. The entrance scholarship, value £50, for students from the universities, has been awarded to Mr. Percy W. G. Sargent, B.A., of St. John's College, Cambridge.—At St. Mary's Hospital Medical School the two university scholarships, of the value of £52 10s. each, have been awarded to Mr. R. Wade, B.A., of Exeter College, Oxford, and Mr. G. S. Keeling, B.A., of Caius College, Cambridge. The first Natural Science scholarship, value £105, has been awarded to Mr. W. H. Willcox, and the three value £52 10s. each to Messrs. H. Lovell-Keays, E. W. Holyoak, and A. F. Hayden.—St. Bartholomew's Hospital is specially rich in endowed scholarships, and five of these are awarded to students just entering upon their medical studies. The competition which was held on September 25th and following days has resulted in the following awards:—(1) Scholarship of £75 in biology and physiology for students under 25 years of age to Mr. C. S. Myers, B.A., Caius College, Cambridge; (2) the scholarship of £75 in chemistry and physics for students under 25 years of age to Mr. J. S. Williamson, Preliminary Scientific University of London; (3) the scholarship of £150 in biology, chemistry, and physics for students under 20 years of age to Messrs. R. C. Bowden and R. H. Paramore: (4) the preliminary scientific exhibition of £50 in biology, chemistry, and physics for students under 20 years of age to Mr. J. C. M. Bailey, Preliminary Scientific University of London; (5) the Jeaffreson exhibition of £30 in classics and mathematics to Mr. H. A. Kellond-Knight, Matriculation University of London.—The entrance scholarships at the London Hospital Medical School have been awarded as follows: Price Scholarship in Science, £120, Mr. H. Balean; Science Scholarships, £60 and £35, Mr. O. Eichholz and Mr. A. B. Soltau; Price Scholarship in Anatomy and Physiology for University Students, £60, Mr. R. C. Wall and Mr. J. H. Evans.

MEDICAL VACANCIES.

The following vacancies are announced:

ARMAGH UNION.—Medical Officer for the Richhill Dispensary District. Salary, £120 per annum as Medical Officer and £25 per annum as Sanitary Officer, together with vaccination and registration fees. Applications to F. J. Best, Honorary Secretary, Richhill, before October 14th.

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street, S.W.—Surgeon to Out-patients; must be F.R.C.S.Eng. Applications to the Honorary Secretary by November 2nd.

BOROUGH OF SCARBOROUGH.—Medical Officer of Health. Salary for the first year, £325, for the second, £350, and for the third and following year, £375. Will be required to act as Public Analyst at a further salary of £25 per annum. Not less than 25 or more than 40 years of age. Applications to John T. Graham, Town Clerk, Town Hall, Scarborough, by October 21st.

CARNARVON JOINT SANITARY DISTRICT.—Medical Officer of Health, must be between 25 and 40 years of age, doubly qualified. Must devote his whole time to the duties, and have a knowledge of the Welsh language. Appointment for five years. Salary, £300 per annum, inclusive of all expenses, except those incurred for such books, stationery, and apparatus required in the performance of the duties. Applications, endorsed "Application for Office of M. O.

Health," to J. H. Thomas, Clerk, to the Joint Committee, 14, Market Street, Carnarvon, by October 16th.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House-Surgeon and Dispenser. Salary, £50 per annum, with board, apartments, and laundress. Applications to the Secretary by October 17th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Grange Road, Shadwell, E.—Assistant Physician to see out-patients. Must be Fellow or Member of the Royal College of Physicians of London. Applications to Thomas Hayes, Secretary, by October 26th.

EAST SUSSEX COUNTY COUNCIL.—Consulting Medical Officer. Appointment for one year. Honorarium, 100 guineas and travelling expenses. Applications to F. Ferrifield, Clerk to the County Council, County Hall, Lewes, by October 14th.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon, doubly qualified. Salary, £80 per annum, with board and lodging in the hospital. Applications to the Committee by October 18th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House-Governor, by October 26th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 146, Buchanan Street, Glasgow, by November 8th.

GUEST HOSPITAL, Dudley.—Resident House Surgeon. Appointment for six months. Board, lodging, and washing in hospital. No salary. Applications to the Secretary.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician, must be qualified and registered under the Medical Act. Applications to G. Q. Roberts, House-Governor, by October 19th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Resident Medical Officer for the Institution at Bowdon, Cheshire. Salary, £80 per annum, with board, apartments, and washing. Applications to C. W. Hunt, Secretary, by October 14th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Western Hospital for Fever Patients, Seagrove Road, Fulham, S.W. Doubly qualified, unmarried, and not more than 35 years of age. Applications, on forms to be obtained at the offices of the Board, Norfolk House, Norfolk street, Strand, to be sent in by October 17th.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer. Salary, £110 per annum, with £10 annual increase to £130, with board (no liquors), lodging, and washing. Unmarried, and not more 30 years of age. Applications to Dr. Thomson, Medical Superintendent.

NOTTINGHAM GENERAL DISPENSARY.—Junior Assistant Resident Surgeon. Appointment for six months. Salary at the rate of £120 per annum, with rooms, fire, and attendance. Applications to the Resident Surgeon, Broad Street, Nottingham, by October 22nd.

OLDHAM INFIRMARY.—Junior House-Surgeon; doubly qualified. Salary £80 per annum, with board and residence. Applications to E. L. Bake, Secretary, by October 22nd.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary, £100 per annum, with practice, free house, and garden. Applications to Robert Sutherland, Inspector of Poor, Durness, by October 15th.

ROYAL BERKSHIRE HOSPITAL.—Consulting Dentist; must be registered Licentiate in Dental Surgery. Applications to the Secretary ten days before the election on November 9th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Resident Medical Officer (House-Physician); doubly qualified. Appointment for six months but eligible for re-election. Board, residence, and washing provided. No salary. Applications to the Secretary by October 19th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Appointment for six months, when re-election is required. Salary at the rate of £100 per annum, with furnished apartments and board. Applications to the Secretary by October 18th.

RURAL DISTRICTS OF BUNTINGFORD, HADHAM, HERTFORD, STANSTED, AND WARE, AND THE URBAN DISTRICTS OF BISHOP'S STORTFORD, HERTFORD, HODDESDON, AND WARE.—Medical Officer of Health; must devote his whole time to the office. Salary, £600 per annum, including travelling and other expenses. Applications to George H. Gosby, Clerk to the Joint Committee, Council Office, Baldock Street, Ware, Herts, by October 21st.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. Salary at the rate of £50 per annum, with furnished apartments, attendance, coal, and light. Applications to the Directors by October 21st.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House-surgeon. Appointment for six months, but renewable for a further period of six months. Board and residence and an honorarium of £25. Applications to J. Walter Wilson, Honorary Secretary, by October 14th.

STOURBRIDGE DISPENSARY.—House-Surgeon and Secretary. Salary, £120 per annum, increasing £5 a year to £150, with furnished rooms, coal, gas, and extra allowance of £25 for travelling expenses. Applications to the Honorary Secretary, T. F. Bland, The Firs, Norton, Stourbridge by October 24th.

SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer, doubly qualified, unmarried, and under 30 years of age. Salary not exceeding £50 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by October 23rd.

MEDICAL APPOINTMENTS.

ASPINALL, J., M.R.C.S.Eng. L.S.A., appointed Medical Officer of Health for the Saint Charles Urban Sanitary District, vice J. S. Walker, M.D.St.And., M.R.C.S.Eng.

ATKINSON, C.S.A., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Fourth District of the East Ashford Union.

BEAUMONT, Albert Wm., B.A.Camb., L.R.C.S.Edin., reappointed Medical Officer of Health to the East Ham District Council.

BOULTON, Mr. Arthur, appointed Medical Officer of Health to the Horncastle Rural District Council.

BOWES, Dr., appointed Medical Officer for the Sixth District of the East Ashford Union.

DON, Alex., M.B., C.M.Aberd., appointed Assistant Surgeon, Dundee Royal Infirmary.

ELLIS, W. C., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Tollerton District of the Easingwold Union.

GARLAND, E. C., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer of Health for the Borough of Yeovil.

GREIG, David M., M.B., C.M.Edin., F.R.C.S.Edin., appointed Surgeon to the Dundee Royal Infirmary, vice C. Templeman, M.D., D.Sc.Edin., resigned.

GRIFFITHS, J. H. R., M.B., C.M.Edin., appointed House-Surgeon to the Carmarthenshire Infirmary, vice J. J. Evans, M.B., C.M.Edin., resigned.

GROOM, H., B.A.Camb., M.D., M.R.C.S.Eng., reappointed Medical Officer of Health to the Walsoken Urban District Council.

HALLEY, George, M.B., C.M.Edin., appointed Assistant Surgeon to the Dundee Royal Infirmary.

HOWARD JONES, J., D.Sc.Pub.Health, M.B., C.M.Edin., appointed Medical Officer of Health, Medical Officer to the Port Sanitary Authority, etc., of the Newport (Mon.) Town Council.

KNIGHT, Henry, M.R.C.S., L.R.C.P., appointed House-Surgeon at the West London Hospital, Hammersmith, W.

MCCORMACK, Charles Vincent, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Superintendent of the Corporation Hospital, Bootle, Lancashire.

MERSON, Adam G., L.R.C.P., L.R.C.S.Edin., appointed Parochial Medical Officer for Aberdour and District.

MILNER, Cyril W., M.R.C.S., L.R.C.P., appointed Assistant Resident Medical Officer to the Nottingham General Dispensary.

MORGAN, H. de R., M.A.Oxon, L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for the Cockington Urban District Council.

MOXON, Wm., L.R.C.P.Edin., M.R.C.S., reappointed Medical Officer for the Matlock District of the Bakewell Union.

SANDFORD, H. V., L.R.C.P.Lond., L.F.P.S.Glasg., reappointed Medical Officer of Health to the Bromyard District Council.

STANLEY, Dr., appointed Medical Officer for the Fifth District of the East Ashford Union.

STANLEY, Mr. H., appointed Medical Officer for the Sellindge District of the Elham Union, vice L. M. Snow, L.R.C.P.Lond., M.R.C.S., resigned.

STEPHENS, William J., M.R.C.S., L.R.C.P., appointed Senior Resident Medical Officer to the Nottingham General Dispensary, vice H. Belcher, resigned.

STYRS, John F. J., M.D., D.Sc., L.R.C.P., M.R.C.S., Medical Officer of Health for St. Pancras, appointed Lecturer on Public Health at Guy's Hospital Medical School.

TEMPLEMAN, Charles, M.D., D.Sc.Edin., appointed Medical Officer of Health for Dundee, vice Dr. Anderson, resigned.

TEW, J. Scott, M.D., D.P.H., appointed Medical Officer of Health for the West Kent Combined Sanitary District, vice H. Butterfield, M.R.C.S., deceased.

THOMAS, P. M., M.D.Cleveland, L.S.A., appointed Medical Officer for the Conwil District of the Carmarthen Union, vice J. E. Edwards, M.R.C.S., Eng., L.S.A., resigned.

VINCENT, Henry Bird, M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the East Dereham Union District.

WILKIN, R. H., M.R.C.S., L.R.C.P., appointed Medical Officer for the Fifth District of the Risbridge Union, vice R. W. Bateman, M.R.C.S., L.S.A., resigned.

WILLIAMSON, George A., M.A., M.B., C.M.Aberd., appointed District Medical Officer in the Island of Cyprus.

WILSON, J. H., M.B., C.M.Edin., appointed Medical Officer of Health for the Standish with Langtree Urban Sanitary District and Medical Officer for the Standish District of the Wigan Union, vice J. A. Marsden, M.R.C.S., L.S.A.

WORSLEY, H., M.B., C.M.Edin., appointed Medical Officer of Health for the Church Urban Sanitary District, vice W. Loynd.

ERRATUM.—In the notice of the appointment of Dr. Robertson last week it should have been "appointed Medical Officer for the Oundle Rural District of the Peterborough Union," instead of "Medical Officer of Health for Peterborough." Dr. William Jolly holds the appointment of Medical Officer of Health for Peterborough.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 1 P.M.—Mr. W. Lang: Lachrymal Affections. London Throat Hospital, Great Portland Street, 8 P.M. Mr. Edward Law: Examination of the Throat and Nose.

MEDICAL SOCIETY OF LONDON, 8 P.M.—General meeting 8.30 P.M.—Ordinary meeting. Opening Address by the President (Sir J. Crichton Browne, F.R.S.) on the Generalisation of Specialism. Mr. C. B. Lockwood: The Operation for the Radical Cure of Hydrocele by Excision of the Sac. Illustrated with a series of cases.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Craig: Melancholia.

MEDICO-PSYCHOLOGICAL ASSOCIATION: SOUTH-WESTERN DIVISION, Wonford House, Exeter, 2.30 P.M.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

PATHOLOGICAL SOCIETY OF LONDON, 8.30 P.M.—Drs. Ord and Plowright: Spontaneous Disruption of Calculi. Mr. D'Arcy Power: Primary Sarcoma of Vagina of Child. Dr. Wm. Collier: Multiple Polypi of Stomach and Intestines. Mr. Jackson Clarke: Tertiary Syphilitic Lesions in Lymphatic Glands. Dr. Herbert Snow: The Non-existence of Round-celled Sarcoma as a Distinct Class of New Growth. Card Specimens by Dr. Kanthack and Mr. Targett.

WEDNESDAY.

LONDON POST-GRADUATE COURSE, Royal London Ophthalmic Hospital, Moorfields, 8 P.M.—Mr. A. Stanford Morton: Retinal Affections.

WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Dr. Abraham: Dermatological Cases (Post-graduate course).

NORTH-WEST LONDON CLINICAL SOCIETY, North-West London Hospital, Kentish Town Road, 8.30 P.M.—Clinical Meeting.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, W., 8 P.M.

THURSDAY.

LONDON POST-GRADUATE COURSE, Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Ormerod: Ataxia. Hospital for Sick Children, Great Ormond Street, 3.30 P.M. Mr. C. A. Ballance: Selected Surgical Cases. Central London Sick Asylum, Cleveland Street, 5.30 P.M. Dr. Patrick Manson: Sprue.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—Card Specimens at 8 P.M. by Mr. Ernest Clarke, Dr. Mott, Mr. Treacher Collins, and Mr. Lawford. 8.30 P.M.—Introductory Address by the President. Papers.—Mr. Treacher Collins: Four Cases of Bilateral Glioma of the Retina, cured by Enucleation of Both Eyes. Mr. Kenneth Scott: Keratitis occurring in Leprosy. Mr. Devereux Marshall: Detachment of the Choroid.

HARVEIAN SOCIETY, 8.30 P.M.—Dr. E. Symes Thompson: On the Climate of Egypt.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 3 to 5 P.M.—Professor Crookshank: Lecture: the Examination of Air, Soil, and Water. Practical Work; Plate Cultivations.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 4 P.M.—The Harveian Oration by Dr. W. S. Church.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, 8 P.M.—Cases will be shown by Dr. Edward Law, Dr. Geo. Stoker, Dr. Wm. Hill, Dr. Dundas Grant, and Mr. Bark. Paper by Mr. R. Lake on Keratosis Obturans. Discussion on the Treatment of Ménière's Complex of Symptoms. Inaugural Address by the President.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Hypochondriasis.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

DOUGLAS.—On September 26th, at Sanchez, Santo Domingo, the wife of Robert Douglas, M.B., C.M., of a son.

GREENLEES.—On September 12th, at the Residency, Grahamstown, South Africa, the wife of Dr. T. Duncan Greenlees, of a daughter.

ROBSON.—On October 6th, at Castle House, Banbury, the wife of Frederick Robson, M.B., B.S., of a daughter.

MARRIAGE.

ATLEE—STUART.—On October 9th, at St. Saviour's, Clapham, by the Rev. H. Hughes, assisted by the Rev. D. H. Davys, John Atlee, M.D.Cantab. of 58, Brook Street, W., son of John Atlee, of Rose Hill, Dorking, to Edith Mary, elder daughter of John Stuart, of "The Hollies," Clapham Common, and of Stonehurst, Ardingly, Sussex.

DEATH.

THOMSON.—At Johannesburg, South Africa, William Sinclair Thomson, M.D., formerly of Falcon Court, London, aged 50. (By cablegram.)

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

ED. H. asks whether there is any place near Westminster where a patient could have certain exercises for a stiff hip.

HIGH PEAK asks what is the best prescription for the administration of mercury by inunction, (1) having in view its easy absorption, and (2) the disadvantages of the colour of the unguentum hydrargyri *B.P.*

PREVENTION OF MIGRAINE.

SUBSCRIBER writes: A lady, aged 30, has suffered for ten years from frequent attacks of migraine; the longest remission she has had has been fourteen days before and after an attack. On an average she has one a week. She has been under my care for three months, during which time she has been strictly dieted, taking only one meat meal a day, with plenty of bread-and-butter, eggs, milk, puddings, fruit, etc.; no stimulants.

LIGHT-COLOURED FÆCES.

ENQUIRENS writes: A patient of mine has for some months noticed, and occasionally shown me, that his daily fæcal excretion is in colour light as a canary's plumage, although his health is good, and he in no way appears to suffer from bile suppression. His diet is an egg, about six ounces of meat or fish, a quart (or slightly more) of milk, much green vegetables, fruit, weak tea and coffee, all sorts of puddings and bread stuffs. The mass is rather dry, and non adherent, and in no way "putty" like, as in the case sometimes of infants. I should like to know if it be of any importance as my patient supposes. Blue pill and mist. sennæ co. cause no change.

BOOKS AND DIAGRAMS FOR LECTURES ON HYGIENE.

X. asks the following question: I have been asked by the County Council to give popular lectures on hygiene; can you recommend a suitable book, and where could I get any diagrams?

*** The necessary diagrams could doubtless be obtained of Baillière, Tindall, and Cox, 20 and 21, King William Street, Strand. Useful books would be the *Manual for the Medical Staff Corps*, published by Harrison, St. Martin's Lane; and Martin's *Ambulance Lectures*, published by Messrs. Churchill.

ANSWERS.

M.D.—The matter is not one in which we feel concerned.

A. V. L.—The proportion of ammonia in the prescription mentioned would not injure any ordinary scalp, and whether an acid stimulant would do better would depend on the case. The dyeing of hair is the work of a hairdresser.

DR. CARRY COOMBS (Castle Cary) writes in reply to "Horseflesh" that he will find Courtenay's *Veterinary Medicine*, published by Baillière, Tindall, and Cox (10s. 6d.), an excellent work, and that Messrs. Routledge publish a shilling book which will give the main points for a buyer.

MEDICUS.—The report of the Committee appointed to Investigate the Nature of the Phenomena of Hypnotism was published in the BRITISH MEDICAL JOURNAL of July 29th, 1893. It was presented at the annual general meeting at Newcastle on August 1st. The report was then received, and the Committee thanked for their services.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

J. M. writes: If M.B., B.A., who wrote in the BRITISH MEDICAL JOURNAL of September 14th will write to Mr. J. B. Blackett, Secretary of the above Society, 11, Chandos Street, W., he will get all the information he requires.

LANTANA.

Messrs. Thomas Christy and Co. (London) write with reference to the note on lantana, published in the Epitome of October 5th, that they have for some years kept a stock of this herb, and are ready to supply samples.

DIPLOMA IN STATE MEDICINE.

M.D.—We have every reason to believe that the M.D. in State Medicine of the University of London is in all respects such a degree as will satisfy the requirements of the Local Government Act of 1888. We doubt if a higher degree in public health work can be obtained.

MECHANICAL ROAD CARRIAGES.

Dr. Walter Lattey (Southam) writes in reply to "S. E.": A short time since, I obtained an illustrated catalogue (6d.) from the Daimler Petrol-motor Syndicate, of 95, Billiter Buildings, E.C., and find that the prices range from £190 for a two-seated carriage to £262 for a goods van. In these light petroleum oil is used, but some English firms manufacture motors for heavy oil, and claim advantages for the same.

"PREMIER MEDICAL AID SOCIETY."

J. G. O.—From the statement forwarded by our correspondent, it would seem that this Society is very different from all the medical aid societies with which we are acquainted. If these facts be verified he must take his own course. We cannot take the responsibility of advising him, seeing how often in such societies the facts of working do not accord with the promises made.

THE METRIC SYSTEM AND THE "BRITISH PHARMACOPŒIA."

Dr. F. J. Joynes (Dursley).—As was stated in the British Medical Journal of August 17th, Dr. Donald MacAlister announced at the annual meeting of the British Medical Association, that the metric system would be introduced into the revised edition of the *British Pharmacopœia*. To facilitate transition, the official proportions in the *Pharmacopœia* articles will be given in the old as well as in the metric system, but in all gravimetric and analytical operations, the metric system alone will be made authoritative.

WATER FILTERS.

M.D.—The statement marked by "M.D." we should judge to be correct. The report in question was only intended to separate those filters which were grossly useless or dangerous from those which were not. The results of Dr. Johnston were summarised in the British Medical Journal of December 29th, 1894, p. 1495; and the much longer experience of the Prussian War Office Laboratory recently published shows that the Berkefeld filter was not more permanently reliable than the other imitations of Pasteur's apparatus and cannot safely be used except subject to daily bacteriological control.

CURE BY DISEASE.

Puzzled writes, in answer to Dr. Campbell's second query in the British Medical Journal of September 28th: A patient who had suffered from chronic gonorrhœa or gleet for about four years contracted syphilis. He had discontinued all treatment for his "gleet" for months. About ten days after the appearance of the hard chancre the discharge entirely disappeared, and did not recur. The man was being treated for his syphilis by mercury and iron internally and black wash locally. Was the "cure" of the gleet due (1) to the presence of the chancre (it was on the frænum), counter-irritation, or (2) to the mercurial treatment, or (3) to the mental effect, the presence of a graver disease distracting his attention from the less. This last seems far-fetched.

PAY AND PENSION IN THE MEDICAL SERVICES.

[illegible]—A Surgeon-Lieutenant Army Medical Staff is never "appointed" to a regiment in India. There is no such regimental system in the A.M.S. The Surgeon-Lieutenant's pay A.M.S. in India is Rs. 317 a month, consolidated up to five years, when he gets a slight increase of Rs. [illegible] per mensem, and a substantial increase after six years' service. An Indian Medical Service officer is not eligible for regimental duty till he has acquired a knowledge of the native language. Special regulations are in force as to the pay and retired pay of Indian Medical Service officers, and these are obtainable by application at the India Office in person or by letter. (*b*) The retiring pensions are totally different in the Army Medical Staff and Indian Medical Service. The latter service is better off, for an officer of twenty-five years' service gets £500 a year retirement, while an Army Medical Staff officer can only obtain this sum if selected for promotion to Brigade-Surgeon's rank. If a Surgeon-Lieutenant-Colonel A.M.S. is not selected for promotion, he cannot get a higher pension than £1 [illegible] a day, and that only after thirty years' service; after twenty-five years' service he can obtain £1 2s. 6d. a day. (*c*) Generally speaking, the Indian Medical Service as to pay and retirement has the advantage unquestionably. The rates of pay and retirement A.M.S. are laid down in the Royal Warrant, Pay and Promotion, etc., [illegible], which only costs 1s.

MANUAL OF AURAL INSTRUCTION FOR THE DEAF AND DUMB.

Mr. John Barker (Brondesbury, N.W.) writes: In reply to "Surdus" I would say that a very strong argument in favour of the superiority of the "oral" method over the manual in the instruction of deaf children is its almost universal adoption within the last twenty years. If we look on the Continent we find France and Italy entirely converted to the oral method. Germany tolerates no other. In England all the private schools are oral, which may also be said of the greater number of the public institutions. In the United States of America, too, where so much is spent by the Government in the education of the deaf, oral instruction is very greatly on the increase. I believe too the oral method has been adopted by most of the school boards in England and Scotland which have established classes for their deaf children, if not by all of them. After nearly forty years' experience as a teacher of the deaf, during which I have taught on both systems, I find I can give as good a general education by the oral as by the manual method, with the great additional advantage to the pupil of being able to speak and understand to a great extent the speech of others.

NOTES, LETTERS, Etc.

"GUINEA GORGES."

Mr. J. Lawrence-Hamilton, M.R.C.S. (Brighton) writes to protest against what he calls the "guinea gorges" held in connection with many medical schools at the beginning of a session. He things the charge too high and the fare unnecessarily luxurious. The charge for a meal without wine, sufficient for the occasion, ought not, in his opinion, to exceed 3s.

THE AIRD JOLLY FUND.

Mr. Garry Simpson, Treasurer (East Acton, London, W.) begs to acknowledge the following additional subscriptions:

	£	s.	d.
Thomas Barlow, M.D., London	1	1	0
Sir Hugh Beevor, Bart., M.D., London	1	1	0
Dr. G. Vere Benson, M.A.Camb., Deputy Coroner, Middlesex	0	10	6
F. Woodhouse Braine, F.R.C.S., London	1	1	0
Dr. F. C. Dodsworth, Gunnersbury	1	1	0
William Dyson, M.D., Sheffield	1	1	0

THE PROVISION FOR INFECTIOUS DISEASES IN THE METROPOLIS.

Mr. Clark Wakefield, F.R.C.S.Edin. (Notting Hill) writes confirming from his own experience the remarks which we recently made regarding the insufficiency of the accommodation now existing for the reception of cases of infectious disease in London. He states that a child was brought to him on a Monday evening, suffering from diphtheria; that the Asylums Board authorities are requested to remove it at once; that the next day the parents, hourly expecting the ambulance, did not send for him till evening, when they had given up all hope of the patient being removed; that on arrival he found the child apparently moribund from laryngeal obstruction; that he immediately performed tracheotomy; and that the child was not removed to hospital till the Wednesday. He justly adds that the delay in treatment might have proved a serious matter.

THE TREATMENT OF CARBOLIC ACID POISONING.

Dr. S. Herbert Perry (Spalding) writes: Dr. A. W. Sheperd considers the use of oil in cases of poisoning by carbolic acid objectionable because carbolic acid is very soluble in oil. He does not seem to distinguish sufficiently between the caustic and toxic actions of carbolic. In a case of poisoning by liquefied carbolic acid the most urgent indication is to prevent the caustic action from doing more damage than it has already done. Now, there are two ways of doing this: one by removing the poison; another by neutralising it.

Oil acts completely as an antidote to the caustic action of carbolic acid, and is far more readily miscible with the liquefied form than is water or any saline solution. Rapidity of action is, of course, absolutely essential; and therefore it is better to use oil at first, in spite of its not destroying the physiological action of the acid.

To my mind the oil should be given before a stomach tube is used; because of the high specific gravity of the liquefied carbolic acid, which would naturally cause delay in its removal by water, because of the slowness with which it is dissolved in water or saline solutions, and because of its great solubility in oil. If sufficient oil were at hand it would be preferable to wash the stomach out completely with oil. It would, of course, be absolutely unjustifiable to give oil and leave the poison in the stomach (a possibility which Dr. Sheperd seems to suggest).

One objection that I have heard raised to the use of oil is that it would simply lie on the wet surface of the stomach and, not coming in contact with it, would have no demulcent action. If, however, a little oil be poured on the surface of an aqueous solution of carbolic acid it will very soon remove the greater part of the carbolic from the water, and this it will do with great rapidity if they be well agitated, as would occur in the stomach.

One dangerous treatment is recommended in some books, and that is the immediate administration of emetics, which simply repeats the cauterisation of the œsophagus, etc., by the ascent of the carbolic, which has already taken place once too often in its descent. After the carbolic acid has been dissolved by the oil and removed by the tube "for the treatment of the general symptoms following carbolic acid poisoning, and to aid the elimination in the urine, the administration of sulphates, for example, sodium sulphate in [illegible]-grain doses, is advisable" (*Vide* Dr. Lauder Brunton's magnificent work on *Pharmacology, Therapeutics, and Materia Medica*, third edition, p. 513.)

A NEW LEPER COLONY.

Consul-General Michell, of St. Petersburg, in his latest report to the Foreign Office, abstracted in the [illegible], states that the number of lepers in the province of St. Petersburg has for some time past been found to be on the increase, while no means of [illegible] existed for their treatment and isolation. This lamentable state of things has at last been remedied by the establishment of a leper colony near Yamburg, a district town of the province of St. Petersburg. Accommodation is there provided for 25 lepers of both sexes, and a surgeon and sister of mercy are on the staff of attendants of the institution, which was endowed with [illegible] acres of land by the late Emperor, His Majesty also contributing £[illegible] towards defraying the cost of establishing the colony. A further sum of £[illegible] was obtained from private charity. The lepers not in an advanced stage of the disease will be employed in cultivating the land allotted to them, so that the institution will to a certain extent be self-supporting. The Committee of Management appeal to the public for donations in order to place the asylum on a secure foundation. Its Lady President is the Countess [illegible], wife of the Provincial Governor, and it is owing to her philanthropic efforts, in which she was aided zealously by Dr. [illegible], that the foundation of this much-needed asylum is due. The opinion prevails that leprosy has spread to the province of St. Petersburg from neighbouring Esthonia, where the disease has long existed and where two special leper hospitals exist for its treatment.

LEGISLATION FOR INEBRIATES IN AUSTRIA.

THE Austrian Government has prepared a Bill for legislative procedure with habitual drunkards, which embodies the principal suggestions of the Association Inebriates Legislation Committee and the Society for the Study of Inebriety. The authorities of the State, the provinces, the districts, and the communes are to be empowered to establish and maintain retreats. Voluntary and involuntary patients are to be provided for; the former, except as to admission into a retreat, are to be treated in the same way as patients who may be compulsorily sent in, the maximum period of detention being two years, as recommended by the recent English Departmental Committee. Involuntary patients may be consigned to the district retreat, either by a magistrate's order, or on the petition of the parents or children, or of the husband or wife or trustee, or of the head of a lunatic asylum of which the drunkard may be an inmate, by the action of the public prosecutor, or by the mayor or burgomaster of the town or village where the inebriate resides. Compulsory consignment must be ordered only after an ordinary judicial action before a Court of First Instance, where the evidence is to be taken, inter alia, of that of the alleged drunkard and of medical witnesses, especially experts. Among the circumstances proposed to constitute an habitual drunkard and involving curative sequestration by judicial process is a record of three convictions within twelve months. If discharged on leave before the expiry of the two years, if the inebriate relapse he may be secluded for the remainder of the term; if he relapse he may have, if necessary, successive terms of two years' detention. As there is a growing demand for this legislation in Austria, it is expected that the Government measure will be passed into law.

BURIED ALIVE.

WE have received a letter from Mr. Herbert McD. Phillpotts, of Ealing, complaining of the observation in our leader on "The Signs of Death," published on September 28th, that in his published letter to the *Daily Chronicle* he made inadequate acknowledgement of the copious extract therein from Dr. Gowers's article on trances in *Quain's Dictionary*, which he wishes us to reproduce. On reading again his letter we retain the same opinion: at the same time we disclaim any intention to accuse Mr. Phillpotts of any unworthy motive. We must again observe that although Mr. Phillpotts states in his letter to the *Daily Chronicle* that "we have many instances supported in so thorough and unbiassed a manner" of the burial of living persons, yet he does not mention a single instance.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE TITLE OF "DR."

M.R.C.P.LOND. writes: Will you kindly allow me to sympathise with "Chagrin," who has written a letter to the BRITISH MEDICAL JOURNAL under the above heading. "Chagrin," however, must have the consolation of knowing that he has done the right and proper thing in discarding the title "Dr." which his late not very conscientious principal had invested him with. "Chagrin" is also to be commended in obeying the mandate of his College, the Royal College of Physicians of London, which expects all its members to be truthful and honourable. As "Chagrin" now stands he is in unison with the vast majority of the London licentiates, for I do not know a single member of the College of Physicians who has assumed the title of "Dr." excepting those who have in addition a university degree. This is not the case, however, with the licentiates of the Irish and the Edinburgh colleges, who are by no means straitlaced about taking the title "Dr." and M.D., to which they have just as much right as the man in the moon.

LEPROSY IN THE UNITED STATES.

THE New York Correspondent of the *Daily Chronicle* states that the discovery of frequent cases of leprosy in various places in that country has determined a Catholic sisterhood to build a leper hospital at New Orleans. Catherine Carr, of Evansville, Indiana, has bravely offered to act as head nurse, and the Catholic papers are appealing for more volunteers.

AD PASTOREM MEDICUM.

THE following verses appeared in a recent number of the *Westminster Gazette*:

Vulneratus qui rabido canini
Dentis incisu gelidos fontes
Spernis invisos sitiens, cibumque
Respuis ore,

Quære Pastorem, pecus atque mirum
Quod colit doctus, genitum ex bacillo;
Cujus injectum rabiem levabit
Mite venenum.

LETTERS, COMMUNICATIONS, ETC., have been received from:
(A) Mr. T. A. Alexander, Watton, Norfolk; Mr. J. Allen, Norwich; J. A. Adams, M.B., Glasgow; Dr. B. Anningson, Cambridge; Mr. C. E. Ady, London; Dr. J. Althaus, London; Anglo-Celt. (B) Mr. P. T. B. Beale, London; Mr. W. Blyth, London; H. Barnett, M.B., Church Stretton; Dr. T. Barr, Glasgow; Dr. E. H. Bennett, Dublin; Dr. E. G. Barnes, Eye; Mr. J. S. Battams, London; Messrs. W. Blizzard and Co., Birmingham; Dr. J. M. Barnett, Belfast; Dr. M. Baines, London; Dr. Braidwood, Amersham; J. S. Bolton, M.B., Oldham; Mr. J. Barber, London; Mr. W. Bassett, Newport. (C) Dr. S. Coupland, London; Mr. W. Cripps, Dulwich; Mr. A. Craske, London; Mr. W. H. Cooke, London; Messrs. Crossley, Moir, and Co., London; Mr. J. Couldrey, Scunthorpe; Messrs. Thos. Christy and Co., London. (D) D. R. B.; Dr. H. G. Dyer, Ringwood; Dr. T. M. Dolan, Halifax; District Medical Officer; Mr. J. Donald, Kingston-on-Thames; C. E. Douglas, M.B., Cupar Fife. (E) Enquirens; Mr. A. Ehrmann, Southampton. (F) Mr. G. P. Field, London; G. W. Farley, M.B., Bangor; Mr. E. W. Forster, Darlington; Dr. Flower, Warminster; Mr. E. R. Fothergill, Tynemouth. (H) Mr. N. Hardy, London; Mr. E. Hawke, Shortlands; Dr. J. M. Hobson, London; J. M. Hughes, M.B., Ruthin; High Peak. (I) Dr. C. R. Illingworth, Ventnor; Indicus. (J) Mr. H. Jepson, Durham; Sir George Johnson, London; Mr. W. Jolly, Peterborough; Dr. J. A. Jamieson, Brodick; Justitia; Mr. F. W. Jordan, Stockport; Mr. J. Jenks, Shrewsbury. (K) Dr. G. Kirker, Aberdeen; Mr. H. Knight, London; Dr. Kenman, Birmingham; Dr. E. Knight, Rotherham. (L) Dr. A. E. Lloyd, Rhyl; Dr. J. Lawrence-Hamilton, Brighton; Dr. C. J. Lewis, Stirling; Mr. E. Llewellyn, Ramsey, Hunts; Dr. W. Lafley, Southam. (M) C. R. Marshall, M.B., Cambridge; Mr. T. T. Marks, Llandudno; Mr. C. V. McCormac, Bootle; M.B., M.R.C.S.; M.D.; Member; Mr. R. Martin, Gilford, co. Down; Mr. H. de R. Morgan, Torquay; A Member of the B.M.A.; Mr. J. Miller, London; Dr. P. W. MacDonald, Dorchester; Messrs. Mayer and Meltzer, London; Medical Student; Dr. J. W. Moore, Dublin. (N) Dr. F. Neal, British Guiana; Dr. W. J. Naismith, Ayr; Mr. E. Nolid, Eccles; Nemo; N. M. (O) An Officer of the I.M.S.; J. S. Owens, M.B., Gorey; An Old Member. (P) G. S. Perkins, M.B., London; E. Phillips, M.B., Coventry; Puzzled; Mr. H. D. Philpotts, London; Dr. J. E. Platt, Manchester; Post Graduate; Mr. H. E. Powell, London; Public Health; Perplexed. (R) Mr. H. W. Roberts, Pendleton; Mr. J. Ritchie, London; Miss A. Ravenhill, London; Mr. H. J. Robson, Leeds. (S) Dr. H. Snow, London; Mr. A. W. Sheperd, Cowbridge; Mr. W. D. Stevenson, Netley; Sero sed Serio; Dr. J. F. W. Silk, London; Mr. J. C. Smyth, Glastonbury; Dr. J. F. J. Sykes, London; T. W. Shore, M.B., London; Dr. H. R. Spencer, London; Mr. P. Sharp, Newark-on-Trent; S. P. W.; Seaside Practitioner; Sydney and New South Wales Branch of the B.M.A., The Secretary of the, Sydney. (T) Dr. N. Tirard, London; Tyro. (U) Dr. A. R. Urquhart, Perth. (W) Mr. C. Wakefield, London; Dr. F. J. A. Waring, Brighton; W. F. F.; Dr. F. R. Walters, London; W. A.; Dr. A. Wheeler, Darlington; Dr. A. E. Wright, Netley; W. J. Watson, M.B., Wellingborough; Mr. N. Wood; London; G. A. Williamson, M.B., Inverness; Dr. F. Warner, London, etc.

BOOKS, ETC., RECEIVED.

The Structure of Man. By Dr. R. Wiedersheim. Translated by H. and M. Bernard. The translation edited and annotated by G. B. Howes, F.L.S. London: Macmillan and Co. 1895. 8s.

The Methodical Examination of the Eye. By William Lang, F.R.C.S. London: Longmans, Green, and Co. 1895. 3s. 6d.

A Manual of Pathology. By Joseph Coats, M.D. Third edition. London: Longmans, Green, and Co. 1895. 31s. 6d.

Moral Pathology. By A. E. Giles, M.D., B.Sc. London: Swan Sonnenschein and Co. 1895.

Weather and Disease: A Curve History of their Variations in Recent years. By Alex. B. MacDowall, M.A. London: The Graphotone Co. 1895. 2s 6d.

Atlas of Diseases of the Skin. By Dr. H. Radcliffe Crocker. Fasciculus XII. London: Young J. Pentland. 21s.

Sewerage and Sewage Disposal of a Small Town. By E. B. Savage, A.M.Inst.C.E. London: Biggs and Co. 5s.

The Urine in Health and in Disease, together with its Chemical Examination. By H. Aubrey Husband, M.B., C.M., F.R.C.S.Edin., M.R.C.S. Edinburgh: E. and S. Livingstone. 1895. 1s.

Rural Water Supply. A Practical Handbook on the Supply of Water and Construction of Waterworks for Small Country Districts. By A. Greenwall, A.M.I.C.E., and W. T. Curry, A.M.I.C.E., F.G.S. London: Crosby, Lockwood, and Son. 1895.

Atlas der pathologischen Histologie des Nervensystems. Redigirt von Professor V. Babes und P. Blocq. Lief 1 und 2. Berlin: August Hirschwald. 1894.

*** In forwarding books the publishers are requested to state the selling prices.

SIXTY-THIRD ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in LONDON July 30th, 31st, and August 1st, 2nd, 1895.

PROCEEDINGS OF SECTIONS.

SECTION OF OPHTHALMOLOGY.

INTRODUCTORY REMARKS

By HENRY POWER, M.B., F.R.C.S.,
President of the Section.

After the warm expressions of welcome that have been addressed to the members of the congress generally by the President little remains for me to add except that the ophthalmologists of London in a more special manner greet with a friendly grasp of the hand all those who are practising this important department of medicine in other cities and towns of Great Britain or who have come to visit us from other countries. I am sure I am expressing the sentiments of the metropolitan members of this congress when I say that we feel ourselves highly honoured by their presence on this occasion, and that we trust they will not only derive profit from the numerous papers on interesting subjects that have been promised to us, but that they will receive some pleasure from the various objects of interest to be found in this great city and its vicinity. Half a century ago no such friendly salutation could have been offered, because ophthalmology, though full of vitality, had not yet reached the stage of separate existence, but was still merged in general surgery, few or none practising it with exclusiveness.

Within that period, however, great changes have occurred. Affections formerly lightly passed over or altogether disregarded have been found to require for their elucidation prolonged and careful inquiry, and new means and methods of research have been added to our previous stock. The ophthalmoscope invented by Helmholtz, the distinguished physicist and physiologist, whose loss we have had so recently to deplore, opened up a vast field of study, and the revelations obtained by its employment of the changes in the intra-ocular structures is by no means exhausted. The investigation of errors of refraction and their correction in the path pursued by Donders and his school and still further developed by Landolt and others; the study of muscular anomalies and defects, so energetically worked at by our American coadjutors; the recognition of the immense practical importance of good colour vision in all forms of land and sea conveyance where the traffic is regulated by coloured signals; the labours of a host of clinical observers both at home and abroad in devising and perfecting methods of treatment both operative and medicinal; the gradual recognition of the fact that many constitutional diseases, as albuminuria, diabetes, leukæmia, and febrile affections generally powerfully influence vision, are all circumstances that have contributed to enlarge the horizon and to develop the resources of the ophthalmologist to an extraordinary degree. This again has led to the establishment of several special hospitals devoted entirely to the treatment of diseases of the eye, and also to the founding of departments with the same object in view in connection with each and all of our general hospitals. To discharge the duties connected with these institutions professors have been appointed, who have required the services of assistants and house-surgeons, and these in turn have been able to instruct a large number of intelligent and diligent students, and thus a sound knowledge of the nature and treatment of eye diseases has been diffused throughout the kingdom, so that whereas only a decade or two ago the unfortunate victim of iritis or of keratitis, of squint, cataract, or glaucoma was either compelled to come to one of the great centres of population, at the present time there are few towns even of very moderate size that do not possess either an ophthalmic surgeon or a practitioner capable of diagnosing and treating any of the ordinary forms of ophthalmic disease.

The foundation of the Ophthalmological Society of Great Britain has proved of the greatest service by enabling remarkable cases to be seen by all who are interested in the subject; by supplying a field where papers can be read in which new views can be advocated, or old ones subjected to wholesome criticism, and in which an *esprit de corps* can be be fostered, and a fellow feeling established amongst men who have no petty jealousies, and who seek success only by honourable rivalry.

Our branch of work is by common consent the most fortunate of all in the opportunity it affords of applying methods founded on pure science to the diagnosis and treatment of disease; and so long as our ranks are recruited by those who have gone through the ordinary curriculum of medicine and surgery now required by the examining bodies, and so long as it is recognised by the profession generally that an accurate knowledge of ophthalmology will often supply the key to many constitutional affections, we need have no fear that it will separate itself from the main trunk, or become a barren branch. But this does not the less relieve us from the necessity of constantly keeping in view the scientific side of its study, and I am strongly of opinion that all those who enter the ophthalmic department to pursue it as a special study should have gone through a sound mathematical training. At the present moment this is certainly not a *sine qua non* for a candidate applying for any post at an ophthalmic hospital; but I am sure that if it were made so, it would prove of great advantage to the rising generation of ophthalmologists; that the practical work of correcting errors of refraction would be better done, and that under any circumstances it would be an efficient means of mental training.

Though the organ with which we are engaged is but small, it is yet a theatre large enough to permit many pathological processes to be followed out, which, owing to the diversity of tissues present, are more various, and can be defined with greater precision than elsewhere; and where different modes of treatment can be strictly compared and their relative value estimated. Our diagnosis of disease is daily becoming more precise, as is shown by the circumstance that in 1862 Dr. Hockin, tabulating the statistics of six eye infirmaries, found that out of 30,971 cases of ophthalmic disease, 16,383—or more than half—were cases of conjunctivitis, a large proportion of which would now be distributed under very different heads. No doubt much remains to be done; there are many gaps and imperfections in our knowledge. Let us hope that some of these may be filled up and removed in the labours to which we will now address ourselves.

CASE OF ACROMEGALY WITH OCULAR COMPLICATIONS.

By A. H. BENSON, F.R.C.S.I.,
Ophthalmic and Aural Surgeon City of Dublin Hospital.

The patient was a man, aged 38, who after an injury to his leg nine years before, began to grow lazy, sleepy, and big; the sight had been affected for two or three years. There was no diathesis, either hereditary or acquired. He was a heavy smoker, had a central scotoma for colours, and a bitemporal colour defect. His vision was $\frac{6}{9}$ in each eye. After giving up smoking and taking iodide of potassium, vision was again $\frac{6}{6}$, and remained good for two years. He then took to smoking again, and in two months vision was reduced to $\frac{6}{24}$; at this time he presented the characteristic appearance of acromegaly, and there was irregular bitemporal hemianopsia. Thyroid extract tabloids were ordered, but the next day vision was reduced to perception of light; fresh thyroid extract was given, and within seven weeks the vision was again $\frac{6}{9}$. He diminished in weight, and the field of vision had improved.

Dr. MEYER (Paris) mentioned three cases of acromegaly that had come under his observation. One was without ocular symptoms; the other two had diminution of central vision to $\frac{1}{3}$ and $\frac{1}{5}$. Complete temporal hemianopsia, with slight decoloration of the optic discs. In one of the cases the characteristic signs of acromegaly were accompanied by

pronounced tabetic symptoms; in the other the general health, with the exception of the acromegaly, was perfect. His patients were still living, but the results of the necropsies that had been made gave very different results; in some the pituitary body was altered, in others not. The most remarkable feature of Mr. Benson's case was the restoration of vision after its nearly absolute abolition.

Dr. Swanzy (Dublin) pointed out that the disease, although only recently described, was not a modern one, inasmuch as marked signs of it were present in the skeleton of the Irish giant Cornelius Magrath, preserved in the museum of Trinity College, Dublin. He lived in the early part of the last century, and it was only about two years ago that a careful examination of the skeleton proved that the giant had been the subject of acromegaly; the sella turcica was so dilated that a small walnut could be placed in it; the groove for the chiasma had disappeared, as also the posterior clinoid processes.

Dr. Little (Manchester) had seen only one case of acromegaly associated with eye symptoms. A gentleman, aged about 30, consulted him about eighteen months ago with failing sight of the left eye of three or four weeks' duration. The vision was equal to $\frac{6}{9}$, refraction normal; optic nerve pale as compared with the other, but that was doubtful. Other eye normal. A month afterwards there was distinct atrophic change in the optic nerve; no neuritis; field contracted upwards and outwards. Two months later there was marked atrophy and vision = Jaeger 20; the right eye was still normal.

Professor Panas (Paris) said that the case observed by him regarded a woman aged 35, affected with typical acromegaly, preceded by epileptic attacks. The disease was accompanied with hypertrophy of the thyroid gland. The urine contained a large quantity of sugar and albumen. The ocular troubles consisted in bitemporal hemianopsia, the separation line being placed precisely in the middle of the visual field; proof that compression due to the enlargement of the hypophysis, weighed on the posterior angle of the chiasma. He considered that the acromegaly was due in that case to an alteration of the central nervous system, which produced the enlargement of the thyroid gland, and hypophysis, diabetes with albuminuria, and the epileptic attacks at the first stage of the disease.

Professor Fuchs (Vienna) said the central scotoma in Mr. Benson's case might be due not to tobacco amblyopia, but to a connection with the hemiopia. He had seen a case, which was supposed to be a tumour of the intracranial part of one optic nerve, spreading over to the other half of the chiasma. There was complete blindness in one eye, and temporal hemiopia in the other; this hemiopia was preceded by a cerebral scotoma, which disappeared later on, and normal vision was restored. He thought that the scotoma was due to the inflammatory œdema which is so often found in the neighbourhood of the tumour. This œdema might have caused a transient functional trouble in the papillo-macular bundle, which is especially liable to be implicated in pathological conditions of the various kinds.

Dr. Hill Griffith (Manchester) had had for some years a well-marked case, which had recently died under the care of a medical friend, and showed a large sarcomatous tumour of the pituitary body. There was nothing especially of interest in the form of the field defect; like pressure on the chiasma in other conditions, there might be blindness of the eye with temporal hemianopsia for form or only for colour, and so forth. He had also seen one other case under the care of a colleague, and one or two others had been shown him by medical friends.

Mr. Snell (Sheffield) had seen one case of well-marked acromegaly in a man. There was at that time an absence of eye symptoms; the field of vision for white and colours was normal, and vision was not impaired. The patient had not been examined for twelve or more months, but he was still living. Mr. Benson's case taught the lesson of repeatedly, in such a case, taking the field.

On Injecting Chlorine Water into the Vitreous.

Mr. G. A. Berry (Ophthalmic Surgeon to the Edinburgh Royal Infirmary) gave the results of his further experiments on the injection of chlorine water into the vitreous. His method of operating was to make an incision through the conjunctiva at the equator between the inferior and external recti tendons; a Graefe's knife was then plunged through the denuded sclera. The nozzle of a hypodermic syringe was next introduced into the middle of the vitreous, and 4 minims of freshly-prepared chlorine water slowly injected. The wound was cleaned with chlorine water, and the conjunctiva drawn together by sutures. Moderate chemosis followed the operation, but no other harmful effect. Where purulent infiltration of the vitreous had already set in, the process was aggravated by the injection. He hoped that more experience would prove that these injections of chlorine water would prevent the beginnings of septic inflammations in the eye, especially after the removal of pieces of metal from the eye.

Dr. Argyll Robertson had seen most of Mr. Berry's cases, and could corroborate the beneficial effects spoken of; he had employed it in one case in which the result was not satisfactory, owing to the already advanced state of suppuration present.

Optometry by the Subjective Method.

Dr. G. J. Bull (Paris) believed that the only satisfactory way of testing vision by the subjective method was first to find out the astigmia before correcting the spherical error. He advocated the method of making the meridian of last refraction emmetropic; any astigmia then present resolved itself into simple myopic astigmia.

Essential Shrinking of the Conjunctiva.

Mr. C. G. Lee (Honorary Surgeon to the Liverpool Eye and Ear Infirmary) narrated a case in which the vision in both eyes was reduced to a perception of light; the disease in the first eye being complicated with a cyst of the upper lid leading down to bare bone at the margin of the orbit.

Choroidal Sarcoma in Infancy.

Mr. John Griffith (Pathologist and Curator Royal Westminster Ophthalmic Hospital) narrated two cases which he considered to be undoubted instances of choroidal sarcoma—one in a child aged $2\frac{1}{2}$ years, in which a section of the eyeball revealed a non-pigmented growth springing from the choroid; in the other, a child aged 4 years, a non-pigmented sarcoma completely filled the eye, and had penetrated through the ciliary region. Mr. Griffith believed sarcoma of the choroid to be more common at this period than was usually admitted; he upheld the view that glioma of the retina was a sarcoma, and objected to the term glioma of the retina.

Hereditary Congenital Nystagmus Associated with Head Movements.

Mr. Angus MacGillivray (Ophthalmic Surgeon Dundee Royal Infirmary) narrated two series of cases, in one of which the nystagmus could be traced through four generations; the nystagmus was of the horizontal kind, and the head movements persisted throughout life. The affection seemed to be transmitted through females to male children. The movements in these cases seemed to form a connecting link between the infantile cases of head nodding and the tremors found in the aged.

Mr. Snell (Sheffield) said he did not know that miners' nystagmus could be regarded as hereditary, but he had often found it present in a father and his sons who were also miners. It probably only showed in these cases a tendency to the development of muscular disabilities.

Mr. Geo. Walker (Liverpool) had found considerable ametropia in several cases of nystagmus in which the movements had been much reduced on correcting the error of refraction. He suggested that the heredity of the nystagmus might depend on the presence of the ametropia.

Mr. Lloyd Owen (Birmingham) referred to two cases of family nystagmus recorded by him some years ago, in which the nystagmus descended to male children through the females; the only condition common to all members of the family was hypermetropia.

Exhibits.

Dr. Koster (Utrecht) described and demonstrated the use of his new Tonometer for measuring the tension of the eye.

Professor Gayet (Lyons) showed a series of Photographs illustrating the use of photography in recording the conditions of the eyes before, during, and after treatment.

A New Theory of Erythropsia.

Professor Fuchs (Vienna), as the result of his excursions into the snow-covered mountains near Vienna, came to the conclusion that erythropsia is a common occurrence in healthy eyes; he could produce it at will in patients who had had their lenses removed by sending them to walk in the snow. From the result of his experiments he had come to the conclusion that the erythropsia was produced by the visual purple becoming visible during its formation after exhaustion of it in the retina by long exposure to dazzling light.

The Tests for Colour Blindness.

Dr. Edridge-Green, after giving a summary of the known facts of colour blindness, went on to say that coloured objects of different materials should be used as classification tests, and also coloured lights, modified if necessary by neutral glasses, which altered the colour of the light to the colour blind but not to the normal sighted.

The Influence of the Cerebrum and Cerebellum on Eye Movements.

Dr. Risien Russell, after describing his former work on this subject, went on to say that it was possible to demonstrate even in the dog and cat the existence of distinct foci in the cerebral cortex related to each simple movement of the eyes. With all the external ocular muscles intact the invariable result of excitation of the frontal eye area was the movement of both eyes to the opposite side; when this movement was excluded by dividing the external rectus of the opposite eye and the internal rectus of the eye on the side of the hemisphere stimulated, it became possible to demonstrate the existence of a focus, stimulation of which resulted in simple upward movement of the eyes. Further, after division of the muscles that raised the eye, a focus could be demonstrated, stimulation of which resulted in simple downward movement. Evidence was adduced to show that the true action of these centres in the cortex must be to initiate movement by their action on lower centres. The author went on to describe the effect on movements of the eyes of removing the lateral and middle lobes of the cerebellum.

Errors of Refraction in Neurasthenic Women.

Dr. H. Macnaughton Jones read a paper on The Importance of Correcting Errors of Refraction in Neurasthenic Women, in which he stated that of 270 women who had consulted him for affections of their pelvic organs 58 complained of head symptoms. A large proportion of these suffered from varying degrees of hyperopic astigmatism; 27 were completely cured or greatly relieved of their head symptoms by correction of their refractive error.

On the Question of Latent Hypermetropia in the Visual Examination of Candidates for the Public Services.

Mr. W. M. Beaumont (Bath) in this paper pleaded for more definite regulations with regard to the question of latent hypermetropia in the examination of candidates for the public services.

The Surgical Treatment of Dislocation of the Lens into the Anterior Chamber.

Dr. George Mackay (Edinburgh) asked for the experience of his colleagues upon the question of what proportion of cases received permanent benefit from reduction of the dislocation. His own experience was in favour of the employment of a needle to fix and remove the lens from the path of the knife while making the corneal section, and to prevent its falling back into the vitreous whilst the vectis is being passed behind it.

Messrs. Priestley Smith, Drake-Brockman, Emrys Jones, and Geo. Walker narrated their experience.

A New Operation for Trichiasis.

Mr. Kenneth Scott (Cairo) described the operation which he had performed in its perfect form on 374 cases with invariable success, except in 9 cases where the eyelids had been deformed by previous operation.

EPISCLERITIS PERIODICA FUGAX.

By Professor Dr. Ernst Fuchs,
University of Vienna.

I mean by the name "episcleritis periodica fugax" a special form of frequently recurring inflammation of the eye, which attacks pre-eminently the conjunctiva and the episcleral tissue, runs its course without extensive exudation, and is of a very transitory nature. The symptoms of the disease are in many cases so characteristic that we can from the history alone, with great probability, diagnose the same. I think it best to relate some of the special characteristics of the 23 cases which I collected.

I will begin with one of the simplest cases. A man, 34 years of age, had fourteen years ago for the first time an inflammation of the right eye, which lasted eight days. After eight days' interval the left eye became inflamed, likewise for eight days. Up to three years ago the inflammations repeated themselves, always in such a manner that, after intervals of two or three months, sometimes the right eye, sometimes the left, began to be inflamed, and that after a short intermission the other eye followed. Only twice were both eyes affected at the same time. In the last three years the disease has so far become milder that now only one eye becomes inflamed, and after an interval of two or three months the other. The cause of the relapses is unknown to the patient. During the inflammation the pain is insignificant (mostly on moving the eye), but severe photophobia is present, so that the patient during this time is unable to work. The man otherwise is in good health. As I once had the opportunity of observing the inflammation, I found it to consist of a coarse injection of the conjunctiva bulbi, and a particularly severe injection of the episcleral vessels. A sclerotic node was not present.

The following case shows us a patient with gouty predisposition, in whom the travelling of the inflammation was distinctly to be seen, also the partaking of the ciliary body in the hyperæmia. The patient is a man aged 50, wealthy and living well, whose urine on cooling deposits a sediment, which consists of uric acid and oxalate of lime. The amount of uric acid is, in comparison, slightly increased, yet the patient has otherwise no gouty appearance or symptoms. The attacks of inflammation of the eyes have existed for five months; they last usually eight days, and travel from one eye to the other. When I saw the patient the inflammation began in the left eye on the outer side of the cornea, jumped from there to the inner side of the same eye, and then over to the right eye, where it first attacked the outer side of the eyeball. In the meantime the left eye had again assumed its normal pale appearance. The inflammation consists in a coarse net-like injection of the conjunctiva and a very intense injection of the underlying ciliary and episcleral vessels. The non-inflamed parts of the eyeball were perfectly pale, especially the conjunctiva of the fornix and of the lids. Pain was present with movement of the eye, and on accommodating. It was probably as the result of these pains that I found during the attack that the near point was removed about 40 centimetres away, while during the intervals of freedom from an attack it was 25 centimetres. The refraction and acuteness of vision remained unchanged.

It more frequently happens, however, that the hyperæmia of the ciliary body leads to a spasm of accommodation, and therefore to an apparent myopia. This will be illustrated in the following case, which is, moreover, interesting on this account, that there comes here into play not the uratic diathesis, but intermittent fever as the cause of the disease. The patient is 31 years of age, and a labourer. He declares that in other respects he is perfectly healthy, and knows nothing of having passed through a fever. The internal examination showed, however, a rather significant enlargement of the spleen. The patient has suffered since the year 1885 from inflammations, which alternately attack both eyes. The attacks occur every two or three weeks, and lasted in the

beginning only one to two days, later four to five, or even eight, days; and while at first the eye during the attack was only reddened and not painful, there were present later severe pains, which radiated to the forehead, nose, and ear. The inflamed eye is also extremely sensitive to the touch. During the attack the patient sees as through a mist; he has also fever and great thirst. The patient showed himself for two years from time to time in the clinic, and was observed during several attacks. The inflamed eye showed conjunctival and ciliary injection, but was otherwise of normal appearance. Only the vision was diminished, and myopia was present. This varied according to the severity of the attack, amounting during the inflammation to 3 dioptries; the vision was thereby reduced to $\frac{1}{20}$. During the time of freedom from inflammation there was present emmetropia and vision $\frac{1}{1}$. The treatment consisted in quinine, which did not abort the attack, but when the patient had taken quinine for a long time the attacks did not occur, so that there were intervals of two to three months. But as the patient always ceased to take the quinine on account of the expense, the attack soon returned.

The involvement of the deeper parts in the inflammation expressed itself also in the fact that the pains often become especially prominent with movement of the eye. Many patients can predict the onset of the attack in that by fixation of the finger held before the eye they experience pain in consequence of the accommodation and convergence. The inflammatory œdema can extend so far posteriorly that even exophthalmos arises.

It is quite frequent for the inflammation to be associated with a similar affection of the mucous membrane of the nose, and the inflammation of the eye frequently begins with a severe nasal catarrh; the predisposing cause of these attacks seems to be a cold.

The following case is a fair example of this kind; it also goes to show that the presence of a uratic diathesis need not necessarily be the cause of the inflammation of the eye. A man, 46 years of age, the owner of a large estate, has been since the year 1887 exceedingly sensitive to change of temperature. As soon as he exposes himself to such he acquires a severe acute nasal catarrh and inflammation of the eye.

In the first years he was so sensitive, that the mere taking hold of the cold doorknob, or the resting of his elbow on a marble plate was sufficient to make him sneeze thirty times in succession, and an acute nasal catarrh and inflammation of the eye soon followed. Also later, when the sensitiveness had diminished, it was sufficient to go out of a warm room into a cold one for these symptoms to appear. The patient is bald-headed, and a mere draught on his bald head is especially apt to produce the disease. Otherwise he can in all weathers, summer and winter, remain outdoors on his estate, become heated or drenched, without catching cold. The examination of the nose showed a considerable thickening of the nasal mucous membrane, especially the lower turbinates. These were repeatedly cauterised with the galvano-cautery, after which an improvement followed, which, however, was of short duration. The inflammation of the eye consisted in a severe reddening of the whole conjunctiva, especially the conjunctiva bulbi, which as a rule disappeared after twenty-four hours. The patient lives well, is well nourished, and has some increase of uric and oxalic acid in his urine; otherwise no gouty symptoms are present. All attempts at a cure proved unsuccessful, until he had, in the summer, 1894, the left upper canine tooth extracted. This tooth, the patient asserted, only appeared when he was 30 years old, and had come out of the line posteriorly to the normal row of teeth; it had an unusually long root, but was otherwise healthy. Since the extraction of this tooth all these symptoms, even the sensitiveness to change of temperature, have disappeared completely.

I will not, gentlemen, take up your time any longer with histories of other cases, of which I could mention a considerable number. Those related by me are the most frequent types of the affection. The disease in question consists in a severe inflammation of the conjunctiva bulbi, but especially of the underlying episcleral tissue. From acute conjunctival catarrh it differentiates itself by the absence of secretion and by limiting itself on the conjunctiva bulbi, of which at times only one quadrant is affected. From the usual episcleritis it is distinguished by the absence of any nodes and its very rapid disappearance, after which no traces of the disease are to be found. It consists chiefly in a severe inflammatory œdema of the episcleral tissue; the deeper structures often take part in the hyperæmia, as is shown sometimes by the presence of pains on accommodation, or movements of the eyeball, or spasm of the sphincter of the pupil which causes miosis, or a spasm of the ciliary muscle which produces transient myopia. The inflammation is frequently accompanied by severe photophobia, lachrymation, and pains; the latter often make their appearance before the inflammation, and denote its coming.

The duration of the inflammation is as a rule only a few days. The inflammations reappear at regular intervals, which last from several weeks to a few months. In the same case the disease may vary in its course, so that the attacks become more frequent and severe or, on the contrary, less frequent and milder. The duration of the disease is as a rule some years. After inquiry I find that only 7 of my 23 patients are now entirely cured; in one of these cases, however, the disease had lasted twenty years. The treatment in most cases of episcleritis fugax is powerless, as the long duration of the disease shows. With a diet suited for the uratic diathesis or with hydrotherapy one can at times produce an improvement, so far that the disease returns less often and gets milder. But more effective are quinine and salicylate of soda, each of these remedies having produced a complete and lasting cure in its case.

Episcleritis fugax is a rare disease; still I am sure that most of you have observed such cases. In fact the first two accurate descriptions which I find in the literature are given by English authors—namely, by Mr. Hutchinson and Mr. Nettleship. Mr. Hutchinson described this disease in his Bowman Lecture (1884) as a "hot eye." Mr. Nettleship also reported such cases before the Ophthalmological Society in 1888. Both gentlemen believe that the disease is similar to recurrent iritis, and eventually may pass into it, which, I must confess, I have never observed, even in the longest duration of the disease. I find that another case of this affection has been reported by Mr. Swan Burnett in 1892, who considers it as a vasomotor disturbance.

I have observed the disease most frequently in men of middle age, less often in women. Mr. Hutchinson and Mr. Nettleship claim gout to be the cause of the same. It is true that some of my patients are living in the best of circumstances, and that they excrete probably more uric acid than normal; however, they exhibited no pronounced gouty symptoms, and besides I must mention that typical gout is extremely rare in Austria. There were decided signs of rheumatism present only in one patient, who has had two attacks of acute rheumatism of the joints previous to his eye disease; instead there were indications of malaria in several cases. Although the patients had had no typical attacks of intermittent fever, still there was enlargement of the spleen present in a few cases, and in these as well as others quinine produced good effect. This drug was able to shorten an attack, or, when taken for a long time, prolong the intervals of freedom. In one case there was an immediate and entirely curative effect produced by the quinine. One must, however, not confuse the episcleritis fugax with a certain conjunctivitis, which was observed in cases of intermittent fever, with each attack or in place of the fever.

I must confess that for the large number of my cases no etiology could be found. I believe that the predisposition to this disease is caused by an abnormality of nutrition, such as gouty diathesis, malaria, and so forth. In consequence of the general disturbance, an accumulation of noxious substances takes place, which, when a sufficient amount is collected, would produce an attack of inflammation. The last provocation to such an attack is often produced by some external cause such as change of temperature.

I thought I would first consider the disease as a vasomotor disturbance or of an angioneurotic nature, somewhat like urticaria, because one of my last cases was accompanied with urticaria. By the collection and investigation of the histories of my patients I assured myself, however, that the episcleritis differentiates itself from the angioneurotic affections; that the symptoms far exceed the simple non-inflammatory œdema; and that the attacks are of longer duration than is known of the vasomotor neurosis. As a vasomotor affection,

I would like to consider transitory œdema of the lids which I have observed myself in several cases, and of which a large number of cases have been reported by others, also by English authors, as Mr. Ormerod, Mr. Jamieson, Mr. Doyne, Mr. Gunn, Mr. Collins, and others.

Mr. Bruce (Edinburgh) believed that this disease was known to all ophthalmologists, though probably under different names. It was probably the same disease as that described by v. Graefe, under the the term "subconjunctivitis." It was not a conjunctivitis, as the secretion was not increased. It was possibly in some cases the prodroma of something more severe—iridocyclitis or scleritis.

Dr. Harry Jones (Manchester) had had three cases of this disease, which agreed entirely with Professor Fuchs's account of it. One of them was very obstinate, and resisted all kinds of treatment, both local and general, for more than a year; he at last performed peritomy with great and lasting benefit. He had since done peritomy in the other two cases, with marked benefit.

Mr. Priestley Smith (Birmingham) thought the affection a difficult one to define. It was probably allied with episcleritis, with urticaria, with hay fever and herpes. In addition to the local cause there was often a systemic cause present as well—gout, rheumatism, or faulty elimination of some kind. He advocated systematic drinking of hot water in the morning and at night, as useful in eliminating waste products and removing the tendency to congestive states.

Mr. Cutcheett thought these cases were probably of rheumatic origin. He found great benefit resulted from salicin and quinine, hot water internally and lamp baths.

A DISCUSSION ON THE DIAGNOSIS OF ORBITAL TUMOURS.

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In the diagnosis of an orbital tumour there are three questions which present themselves—first, the main question, Is a tumour of the orbit present?; secondly, Is the new growth confined to the orbit, or does it extend to neighbouring cavities? and, thirdly, Of what kind is the new growth? The diagnosis as regards any of these points does not often occasion much difficulty in advanced stages of the disease, especially where the growth occupies the anterior part of the orbit or protrudes from it. It is rather in the early and middle stages that difficulties in diagnosis are apt to present themselves, and in this paper attention will be mainly directed to those stages. It is not intended to indicate within the scope of this paper the diagnosis of some extremely rare tumours of the orbit, such as cysticercus, plexiform neuroma, and so on.

Of the signs by which the presence of a tumour is diagnosed in its early stages by far the most important, because the most constant, is exophthalmos. In the earliest stages of a growth which commences in the deepest part of the orbit, there may be, it is true, no exophthalmos, while other symptoms—defects of sight, pain, loss of motion—may already be present, but when the growth attains to certain dimensions, or if, in the anterior part of the orbit, there be even a small tumour, the eyeball must be pushed out of its place.

It is not necessary that I should enumerate all the other causes of exophthalmos, but assuming that they have as far as possible been excluded, exorbitism at once renders the presence of an orbital tumour almost a certainty. An important diagnostic point in connection with the exophthalmos caused by a tumour is that its direction is almost always oblique and not straight forwards, for orbital tumours commonly tend to develop more along some one wall of the orbit than along the others, and hence the eyeball becomes pushed towards the opposite side as well as forward. In cellulitis, œdema of the orbital tissues, Graves's disease, and paralytic proptosis the exophthalmos has a direction straight forwards. Tumours growing from the apex of the orbit may in their early stages cause no obliquity of direction in the displacement of the globe, and some tumours do not do so even in an advanced stage of their growth, but these cases are exceptional. Tumours too, situated altogether within the muscular cone, of which the most common are tumours of the optic nerve, need not cause any lateral displacement of the globe. Again, the exophthalmos caused by an orbital tumour usually increases in degree slowly and gradually, differing in this respect from exophthalmos due to most of the other causes, in which either a sudden or a rapid development of the exorbitism is the rule. While tumours are sometimes present in both orbits, especially lymphoma or lympho-sarcoma, yet it is infinitely more common for one orbit alone to be diseased, and hence monolateral exophthalmos is suggestive of orbital tumour.

Although exorbitism is almost an essential, and other causes being excluded, so conclusive a sign, yet we naturally seek for additional aids in a diagnosis of such grave import. Of these the most valuable is often obtained by palpation of the orbit, provided that the new growth has come within reach in the anterior part of the cavity. In many cases, indeed, there is no difficulty whatever in recognising the presence of an orbital tumour by this means, the sensation obtainable by the tip of the finger pressed into the orbit being very definite, but in other cases the evidence is not so clear, and the surgeon may have a reasonable doubt as to whether there is any abnormal resistance met with by the tip of his finger. By palpation, too, we may gain some knowledge of the position, extent, shape, and consistence of the tumour, and whether it be adherent either to the walls of the orbit or to the eyeball. It is important, when practicable, to compare the result of examination of the diseased orbit with the condition of the sound orbit, and this can be done to greater advantage if palpation of the orbits be performed simultaneously with a finger of each hand.

Derangements of vision are often, but by no means always, present in the early and middle stages of the growth of an orbital tumour. Their occurrence depends frequently on the rapidity of the growth of the tumour rather than upon its size. In an early stage of a rapidly increasing tumour the sudden stretching of and pressure on the optic nerve may produce absolute blindness, while in another case, with an equal degree of exorbitism, but which has been brought on by a slowly growing tumour, vision may be unaffected by reason of the optic nerve becoming gradually accustomed to the change. Yet slowly growing tumours, which spring from the optic nerve or its neighbourhood, or from the deepest part of the orbit, are competent, by direct pressure on, or by implication of the optic nerve, to cause serious loss of sight, even in an early stage, and with but little exophthalmos. Optic neuritis, and, later on, atrophy, are occasionally discovered with the ophthalmoscope. Diplopia is often present when the globe is at first displaced, but disappears when the exophthalmos becomes extreme or the vision defective.

Pain is a symptom sometimes, but by no means always, present in cases of orbital tumours. It is especially liable to be complained of when the growth is increasing rapidly in size, even though it may not have attained to great dimensions. The pain is then often of a neuralgic kind, and very severe, from the unaccustomed pressure on branches of the fifth nerve in the orbit. Certain sorts of tumour are more liable to be attended by pain than others, and the nature of the pain, too, is to some extent characteristic of the sort of new growth. To this I shall have to refer later on.

Loss of power of motion of the eyeball is a very common symptom in cases of orbital tumours. It is caused in some cases by the mechanical obstruction offered by the tumour, as a result of which motion of the eyeball towards the side of the orbit on which the new growth is situated becomes defective. In other cases the loss of motion is caused by stretching of the muscles from the exophthalmos, or by implication of them in the new growth, or by atrophy of their tissue, or by paralysis of the orbital nerves from pressure. When there is little or no loss of motion, while the exophthalmos is marked, the conclusion may be drawn that the tumour lies within the muscular cone.

As regards the question whether the tumour is confined to the orbit, or involves one or more of the neighbouring cavities, it may be assumed that it is confined to the orbit, unless there are symptoms or signs which point in the opposite direction, and in each case these symptoms and signs ought to be looked for. Tumours may either originate in one of

these spaces and grow into the orbit, which is the more common event; or, originating in the orbit, they may at a later stage spread to a neighbouring space; and it is often the history or progress of the case alone that can inform us which of these events has taken place.

Tumours which originate in the frontal sinus are usually either mucocele or exostosis. Mucocele of the frontal sinus frequently extends to the ethmoidal sinus and thence first encroaches on the orbit, pushing the eyeball downwards and outwards. Sometimes there is supraorbital pain, and sometimes, when the nasal meatus has become involved, there is discharge from the nostril. The diagnosis in these cases is often obscure. Osteoma of the frontal sinus shows itself as a slowly-growing and densely-hard tumour almost free from pain, situated along the superior margin of the orbit, extending into the latter and pushing the eyeball downwards and forwards. It may subsequently extend to the orbital plate of the ethmoid. An error in diagnosis is, I think, liable to be made, sometimes when a tumour of the frontal sinus drives the outer table downwards and forwards, and when the latter gives to the touch the sensation of a bony growth. If the tumour also involves the ethmoid cells, the lachrymal bone is apt to be driven forwards, and the liability to the error I have mentioned is further increased. This was well exemplified in a case recently under the care of my friend Mr. Kendal Franks, where a sarcoma originating in the ethmoid cells had invaded the frontal sinus and the orbit, causing marked exophthalmos, yet no soft tumour could be felt in the orbit owing to the displacement forwards of the lachrymal bone, and downwards and forwards of the roof of the orbit, a condition which at first sight suggested the presence of an osteoma of the orbit. Bony growths originating in the orbit may invade the frontal sinus, and, whether originating there or in the sinus, are liable to produce absorption of the tables of the skull without any cerebral symptoms to indicate the occurrence.

Tumours of the ethmoid cells which encroach upon the orbit are likewise most commonly either mucocele or osteoma. Mucocele of the ethmoid cells presents itself in the orbit as a tumour gradually increasing in size on the inner wall of the orbit, and pushing the eyeball outwards and forwards. When it has grown sufficiently large, palpation of it will discover fluctuation. The source of error just now referred to, when the lachrymal bone is pushed in front of a slowly-growing tumour of the ethmoid cells, must be borne in mind. The sharp posterior edge of the lachrymal bone is easily felt for and found, and will direct the diagnosis into the right channel. Mucocele of the ethmoid cells encroaching on the orbit must also be distinguished from a dermoid cyst, but to this I shall return later on. Osteoma of the ethmoid appears in the orbit as a hard round swelling at the inner canthus followed by a swelling of the cheek and displacement of the eye outwards and forwards. It is apt also to extend into the nasal meatus, driving the septum out of place, and to push the hard palate downwards, so that examinations of the nose and of the mouth should be made in aid of the diagnosis. Enchondromata and fibromata also sometimes spring from the ethmoid and extend into the orbit, and malignant growths may be met with here.

Tumours that spring from the body of the sphenoid bone, or from the antrum of the sphenoid, and encroach upon the orbit are rare, and the diagnosis of their origin in an early stage is practically impossible. Here, again, the examination of the naso-pharynx is important. It is stated (Stedman Bull) that an orbital tumour—which soon causes blindness, commencing in the temporal side of the field, and leaving the fixation point unaffected to the last, while at the same time a growth appears in naso-pharynx—is likely to be one having its origin in the sphenoid antrum. Bony tumours—osteoma, hyperostosis, and exostosis—polypi, and sarcomata are the growths most frequently found to originate in the sphenoid antrum.

Tumours of the maxillary antrum sometimes erode the floor of the orbit and grow into that cavity, driving the eyeball upwards and inwards, or upwards and outwards. The breadth of the cheek is increased, the nose becomes pushed towards the opposite side, and the roof of the mouth is pushed downwards. Tumours of the antrum of Highmore sometimes cause pain in the teeth or in the region of the distribution of the infraorbital nerve, and there may be a dull pain in the region of the antrum. In some cases there is a discharge of pus or of blood from the nostril.

Tumours of the brain do not often invade the orbit, and then it is tumours of the middle fossa which gain access through the sphenoid fissure and optic foramen. The diagnosis of the origin of the disease can only be made if cerebral symptoms have existed prior to any sign of a new growth in the orbit. Tumours of the pituitary body may encroach upon the orbit by way of the sphenoid fissure and are apt to be associated with polyuria and bitemporal hemianopsia, which serve to aid the diagnosis. A more common event, although not in an early stage of the growth, is the extension of a primary orbital tumour to the brain, either along the optic nerve, through the sphenoid fissure, or through the roof of the orbit by erosion of the bone. This occurrence is usually evidenced by the presence of cerebral symptoms, but cases have been met with where no such symptoms existed, although the orbital growth had encroached upon the anterior or middle fossæ of the skull.

As regards the nature of the growth which may be present, it must be admitted that, in many instances, in the early stages of a deeply seated tumour we have to rest content with an indefinite or provisional diagnosis, unless an exploratory operation, with puncture or harpooning of the mass, is practicable, and such a procedure is often called for, in order to decide not only the nature of the tumour, but also its extent and origin. Yet there are symptoms which with caution may be utilised in this branch of the diagnosis, namely, pain, marked loss of motion, pulsation, consistency, and congenital origin.

Although pain is frequently present along with orbital growths of every sort, freedom from pain of a very severe kind is much more common with benign than with malignant tumours, in which latter it is often complained of even from an early stage.

Loss of motion of the eyeball of some degree will be found with nearly every orbital tumour, especially towards the side of the tumour, but marked loss of motion in every direction, or in nearly every direction, while the tumour may not as yet have attained a large size, is a sign very suggestive of a malignant tumour. In a case which was quite recently under my care there was complete loss of power of the third and sixth pairs, the exorbitism was directly forwards and of moderate degree, and a soft new growth could be indistinctly felt with the finger on the floor of the orbit. After removal the great mass of the tumour was shown to be fat and dense connective tissue, but towards the centre of this mass was situated a small pigmental round-celled sarcoma. There was no pain in this case, and in that particular it proved to be an exception to the general rule in malignant tumours.

Pulsation of the growth, or of the eyeball which is pushed out of place by it, points to its being one or other of certain vascular tumours in the orbit, or, which is more common, in the middle fossa of the skull. In addition to this, in these cases we expect to find characteristic *bruits*, which are perceptible both subjectively to the patient and objectively to the surgeon on auscultation of the orbit and skull, and there may also be a fremitus observable on placing the hand over the eyeball. But it must be borne in mind that pulsation may sometimes be found with malignant tumours which are rich in vessels, and with non-vascular tumours situated deeply in the orbit.

If a tumour be congenital, this as a rule points to its being either an encephalocele or a dermoid cyst. Dermoid cysts, although always congenital, do not often grow to any size until the age of puberty or later, and may then for the first time give rise to troublesome symptoms. An encephalocele is situated most commonly in the inner angle of the orbit, and is a striking object from the moment of birth. It is a fluctuating, semi-transparent, pulsating tumour, which disappears on pressure while cerebral symptoms are simultaneously produced. Occasionally an encephalocele is cut off from the cranial cavity so as to form a true cyst. Pressure on it does not then cause any cerebral disturbance, and the diagnosis may be less certain.

The consistence of a tumour is a valuable guide to its nature. All the bony tumours present, of course, the sensation of dense hardness to the touch, but there are some

malignant growths of such hardness that it may not be easy to tell them from the osteomata by palpation, and an exploratory puncture becomes necessary in order to decide the point. The growth of an orbital osteoma is excessively slow, and pain is rare. In addition to the dense hardness of these tumours, their usually globular and somewhat nodulated surface, their immobility and their direct connection with the walls of the orbit ascertainable by touch, are the deciding points in the diagnosis. Certain malignant growths are so soft that false fluctuation may be obtained from them, and the erroneous diagnosis of a cyst or abscess be made, and here too an exploratory operation is in its place. True fluctation suggests the presence of a cyst, usually a dermoid cyst, a meningocele, a mucocele proceeding from the ethmoid sinus, an abscess, or very rarely an echinococcus cyst or a cysticercus. The echinococcus cysts are usually associated with severe ciliary neuralgia. To obtain fluctuation, the best method is, with the tips of all the fingers of one hand placed on the protruded eyeball, to push it suddenly backwards towards its normal position, while at the same time with the tip of the first or first and second finger of the other hand on the tumour the impact of the displaced fluid contents of the tumour is observed. It is as a rule less satisfactory to endeavour with one or two fingers of each hand placed on the tumour to obtain fluctuation, for the surface which can be reached is usually small, and, moreover, the force of the pressure made on it is transferred largely to the eyeball and other movable contents of the orbit, and, consequently, the strength of the impact on the finger of the other hand is reduced. Cysts, it should be remembered, are sometimes associated with both bony and malignant tumours, and may mask the main disease, which is not discovered until operative means are being used for removal of the cyst. Some dermoid cysts, the cholesteatomata, do not afford any fluctuation.

In respect of the diagnosis of sarcoma of the orbit in its many varieties, it has been stated by a distinguished writer (Berzin) on this subject, that "When we meet with a solid tumour with nodulated surface, which does not fluctuate, does not pulsate, is not compressible nor densely hard, does not seem to be in connection with the brain, and does not proceed from the eyelids, eyeball, lachrymal gland, optic nerve, or neighbouring cavities, we may conclude that we have to do with a sarcoma of the orbit." Yet here we are liable to errors, for many very vascular sarcomata are compressible and may exhibit pulsation, while myxosarcomata and cystosarcomata sometimes fluctuate.

Nævus of the orbit is almost always associated with nævus of the eyelids. It is soft and somewhat compressible. The tumour swells and the exorbitism increases, if the head be held forward, or if congestion of the vessels of the head be produced in any other manner. The motions of the eyeball are much impeded, and pain is rarely complained of. These tumours are congenital.

Tumours of the optic nerve, as von Graefe pointed out, are diagnosed by the protrusion of the globe being pretty much in the direction of the visual axis, with retention of the mobility of the eyeball, and of the normal centre of motion. The consistence of the tumour is soft, there is absence of pain, and in an early stage loss of sight. The increase in size of the tumour is usually slow. Palpation under chloroform may discover a tumour which is in connection with the eyeball behind, and which extends back towards the optic foramen. The diagnosis of tumours of the lachrymal gland is mainly made from the position of the growth, and the direction of the dislocation of the globe produced by it.

In conclusion, it must be admitted that the diagnosis of orbital tumours, especially in respect of their nature and extent, and as to whether neighbouring cavities are involved, must in many instances remain uncertain, until in the course of the operative measures undertaken for their removal the true state of things has been exposed.

II.—Professor PANAS, M.D.,

Paris.

PSEUDO-MALIGNANT TUMOURS OF THE ORBIT.

WHEN we look into the annals of science we are struck by finding a number of observations of exorbitism with tumour supposed to be malignant, in which the appearance of an intercurrent erysipelas or a medical treatment employed intentionally, or by chance, has had the effect of causing the disappearance of the tumour. We nearly always infer, and often wrongly, that the case was one of orbital syphiloma. Inasmuch as syphilis stands at the head of infectious diseases, it is certainly very often the cause, but as mercury and iodide of potassium have a marked action on other things besides syphiloma, we are not justified in inferring the existence of syphilis, by reason of the happy effect of treatment, unless there be other specific manifestations. Such unjustifiable inferences are still constantly repeated, as we may see by looking over the works that have appeared recently, among others those of Maracek,[1] Campana,[2] Galezowski[3], Haltenhoff,[4] W. H. Hennebert and Coppez.[5]

In this last work the opinion as to the syphilitic nature is based upon the cure by the mixed treatment, and upon the existence of pharyngo-nasal cicatrices only, as are observed in cases of old ozænas outside of all syphilitic contamination.

The recent communication of Esmarch in the German Society of Surgery, 1895, does not appear to be exempt from valid objections. The author enumerates cases of sarcomas and lymphadenomas of syphilitic origin having yielded to the specific treatment. He cites no fewer than forty cases—quite a great number. He thinks that the diathesis can be acquired or inherited. The cranium is the seat of predilection, and there is rapid recurrence of the tumour after extirpation. The tumours in question give way on the contrary to the treatment by iodide of potassium, to the action of toxins, and upon the appearance of an intercurrent erysipelas. The histological examination of the neoplasm, showing the presence of granular tissue with patches of fatty degeneration and proliferation of the vascular walls, would have, according to him, a great diagnostic value.

This manner of interpreting the clinical facts, which is also the one admitted by Krause,[6] of Altona, with regard to analogous tumours—among others one of the nasal fossa cured by iodide of potassium, of some value a few years ago—does not hold good, since we are beginning to recognise that a whole category of tumours reputed malignant are distinctly independent of syphilis. We think that a number of neoplasms thought to be lymphomas, sarcomas, or syphilomas ought to be attributed to the dyscrasia produced by some toxins.

The infectious principles, microbes or toxins, act by means of the venous anastomoses and by the lymphatics, or after their penetration into the entire organism. According to this there would be quite a class of infectious tumours, the syphilitic being an example, but not the only one. From considerations of this order we were led to look upon the neoplasms of the orbit, especially the symmetrical ones, in a new light, and that by clinical observation. The starting point was that of a patient whose history was related in one of my clinical lectures at the Hôtel Dieu.[7] He presented a double exophthalmia, simulating in all respects sarcoma, which was completely cured by the arsenical treatment in solution in the form of arseniate of soda. Iodide of potassium, on the other hand, administered by a colleague, had for effect to exaggerate the volume of the tumour, as also the exorbitism. The patient, a vigorous man of 35 years, was absolutely exempt from all syphilitic taint, but had been suffering for some years from a certain degree of ozena accompanied by epistaxis. To explain the double exophthalmia with fixity of the eyeball, papillary stasis, and waxy chemotic ectropion of the lids we admitted a microbic infection of the cellular tissue of the orbit caused by the microbes of ozena from the nasal fossa.

We asked ourselves whether cases of this order were not more frequent than is generally thought. An interesting fact to note was that the two tumours of firm consistence, had for principal seat the inner or nasal wall of the two orbits, causing bilateral divergent squint. Since that time we have been able to observe a young woman, not syphilitic,

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[1] [illegible]

[2] [illegible]

[3] [illegible]

[4] [illegible]

[5] Ann. de [illegible]

[6] [illegible]

[7] [illegible] January [illegible]

but affected with sarcomatous polypi of the left nasal fossa. These polypi having been several times removed, an exophthalmia manifested itself in the left eye with marked external strabismus, and the operation demonstrated that there was no sarcoma of the orbit, but that the cellular tissue was indurated, with destruction of the corresponding lateral masses of the ethmoid. On the other hand, histological examination of a fragment of the nasal polypi showed that these were composed of pure adenoid tissue in no way sarcomatous.

To explain what had occurred in the orbit we admitted that at a given time the repeated removal of the nasal polypi must have been accompanied by an infectious process which propagated itself towards the cavity of the orbit. Upon this supposition the patient was put upon an arsenical treatment, which ameliorated her condition and has preserved up to the present time the vision of the exorbitic eye.

Apropos of such interesting facts, we had the good fortune to confer with Professor Duplay and our colleague in surgery, Schwartz, and both related to us what follows: In the presence of a neoplasm of the two superior maxillary bones, occurring in a boy aged 15, well constituted and exempt from syphilis, either acquired or inherited, Dr. Schwartz, in consideration of the bilaterality of what he thought to be a sarcoma and the young age of the patient, tried, before proceeding to the operation, the internal treatment with Fowler's solution. At the end of some weeks, the tumours were completely resorbed, proving that they were not of a malignant nature.

The case of Professor Duplay concerns an adult Brazilian with a voluminous tumour of the iliac fossa presenting all the characters of pelvi-abdominal sarcoma adherent to the bone. Judging the case to be an incurable one, he prescribed the tincture of conium as a "moral medication," and to appease the pain. What was his astonishment to learn three or four months later from the patient's physician that under the influence of the conium, an old remedy reputed narcotic and praised by Trousseau, the tumour had entirely disappeared.

Quite recently we were called in consultation with Professor Grancher by Dr. Kalt, to see a girl aged 10, well constituted and absolutely exempt from all syphilitic antecedents, either personal or hereditary. There had been noticed in April, 1895, a soft tumour the size of a small nut, at the superior and internal angle of the right orbit behind the lachrymal sac. This tumour, preceded by pain in the frontal region, was adherent to the bone by a large base, and also to the internal rectus muscle, and offered the reactionary signs of an abscess. Dr. Kalt made an incision into it on the fourth day, which proved to him that the mass had the constitution of a neoplasm. Upon the examination of a small fragment which he had removed, he found it under the microscope to be composed of round cells recalling those of sarcoma. In spite of this constitution, and apart from all syphilitic manifestations, mercurial ointment and the internal treatment by the iodide of potassium were prescribed by common accord. Six weeks later the so-called sarcoma had been nearly completely absorbed. A peculiarity to note was that at the outset of the evolution of the tumour there had been for one day a flow of pus from the corresponding nostril. As the frontal sinus is hardly formed at the age of the patient (10 years), we wondered whether the case was not one of a point of ethmoidal labyrinthitis having caused the engorgement by infection of the adjoining portion of the periosteum and of the cellular tissue of the orbit which had been infiltrated with migratory cells. It is not astonishing then that the resorption was caused by the influence of iodide of potassium combined with mercury, and we need not attribute the affection on that account to a specific cause of which no trace could be found.

In the presence of cases of that order we recalled to memory those published by others under different titles with reference to the orbit. Who does not know of the celebrated case of General Radetzky, related in the treatise of Mackenzie, where a chronic indurated abscess of the orbit was taken by the ophthalmological celebrities of that time for a malignant tumour, and which ended in a spontaneous cure? We ourselves have observed a case of the same order in the service of Velpeau, who had been mistaken in his diagnosis up to the time when the patient, a youth aged 14, was cured after evacuation of the pus. A deep exploratory puncture with the bistoury having proved negative had confirmed Velpeau in his error, which lasted more than three months. Professor Gayet[7] observed the case of a man aged 70 affected with a double exophthalmia without any known cause. He thought that the symmetrical tumour of the two orbits should be considered one of lymphadenitis. Having made bibliographical researches, he thought to class his case with those published by Arnold, O. Becker, Leber, Reymond of Turin, and Ostwald. Delens also published in the *Archives d'Ophtalmologie*, 1886, a double orbital lymphadenoma which disappeared during an attack of cholera.

The question whether lymphadenoma could be regarded as of infectious origin appeared to us the more certain, for the reason that we had under our care a young patient affected with lymphosarcoma of the pharynx, occurring after an attempt by a colleague to remove adenoid vegetations from the nasopharynx. That presumption became a certitude since P. Delbet made his communication on the experimental inoculability of lymphadenoma.[8] On account of the importance of that work we beg permission to give a summary of it.

The proof of the infectious nature of lymphadenoma is based on the reproduction of the affection from man to the dog by inoculation of pure cultures of a particular bacillus. It was a question of a woman with generalised lymphadenoma of the specially splenic form.

Having made cultures with the blood taken from the spleen with a Pravaz syringe, the experimenter inoculated dogs with massive doses of the pure colonies at varying intervals. The only dog that he sacrificed had been inoculated on May 16th, then on the 18th, and so on until June 15th when he was killed; half the injection had been made in the peritoneum, half in the cellular tissue. The animal having lost 9 kilos. began to diminish in weight at the rate of 2 kilos. in a fortnight. At the necropsy the glands of the mesentery, of the mesocolon, the thoracic and the prevertebral glands, those of the right groin and of the axillary spaces were considerably hypertrophied. To be free from the objection that the polyadenitis might not be in any way specific, he made cultures with the glands of the dog, and he was able to ascertain the presence of the inoculated bacillus in a pure state, while it was not to be found in the blood of the animal. Delbet promises to publish a paper later on the complete biological study of the bacillus causing lymphadenomas.

Besides the tumours of the orbit, sometimes unilateral, at other times bilateral, those having the lachrymal glands for their primitive seat must be noted. There are several varieties caused by general infectious conditions, such as gonorrhœa, the eruptive fevers, influenza, mumps, and perhaps also syphilis. Their peculiarity is that they are bilateral, and are accompanied with engorgement of the parotid and salivary glands. In a certain number of cases, as in that of one of our patients, the starting point had been some uterine trouble at the menopause, complicated with hæmorrhages from a fibromyoma of the uterus. We think that we have to do here with an infectious state of the organism, as after the engorgement of the lachrymal glands our patient presented a double plastic choroiditis. We have published quite an interesting case in the *Semaine Médicale*, June 23rd, 1895. The case was one of acute dacryoadenitis in an adult. In looking for a possible infection we were led to discover that there existed a tonsillitis; one of the tonsils yet swollen and secreting furnished a pus full of streptococci.

We all remember the interesting case cited by Eales and Jonathan Hutchinson,[9] in which the cure was obtained by iodide of potassium. The patient of the last-named author was an inhabitant of Calcutta who had come to London with his eyes exorbitic due to the swelling of the lachrymal glands. The parotid and cervical glands were also swollen.

From the facts and reflections contained in this paper let me be permitted to draw a certain number of deductions. If they are not as yet very conclusive, they will have the advantage at least of fixing the attention of clinicians and will be, I hope, profitable to patients.

1. In the presence of a tumour of the orbit reputed sarcoma-

[7] *Revue d'Ophtalmologie*, 1886 and 1887.
[8] Académie des Sciences, June 17th, 1895.
[9] *Ophth. Soc., U. K.*, iv., p. 36, 1884.

tons, even should we be enlightened by the histological examination, we must think of the infectious origin and not have recourse to any operation until previous treatment has proved negative.

2. Among the means of treatment we possess, we must include mercury, iodine, arsenic, and toxitherapy as it has been attempted with erysipelas or the pure cultures of streptococci by Fehleisen,[11] Holst,[12], and Ealey.[13] Lassar,[14] Spränk,[15] W. B. Johnson,[16] Coley,[17] and Repin[18] have used by preference the streptococcic serum, which is less dangerous, and whose toxicity can be increased by the addition in the cultures of the micrococcus prodigiosus. The injections are made into the tumour, at a remote point under the skin, or into the veins.

3. The research of the point of origin of the infection (nose, sinuses, pharynx) and the bacteriological determination of the toxins which are the cause, contribute to confirm the diagnosis and to lay down the basis for a rational medical treatment. It is only after this that we can have recourse to surgical interference, which is often powerless in the so-called sarcomas and lymphadenomas of the orbit.

The discussion was continued by

Dr. Hime Griffith (Manchester), who referred to a case of orbital sarcoma, accompanied by an unusual amount of inflammatory action, in which the growth closely enveloped the whole eyeball. He asked if anyone had thought it advisable in cases of exophthalmos, without other symptoms, to divide one or other rectus tendon, and explore the deeper parts of the orbit.

Professor Fuchs (Vienna) had observed a case of rhinoscleroma of both orbits, which had extended from the nasal cavity through the apex of the orbits. The most striking feature of the case was the early onset of immobility of the eyes.

Dr. Argyll Robertson wished to support the view expressed by Professor Panas, that cases which presented every symptom of organic tumour of the orbit could still be cured by medical treatment.

Mr. Nettleship mentioned a case of single proptosis, with hypertrophy or semisolid œdema of the tissues in the corresponding temporal fossa, which had been perfectly stationary for the last five years.

Mr. Spencer Watson narrated a case in which double proptosis was cured after the removal of both inferior turbinal bones with other nasal growths.

Mr. Adams Frost spoke of a case of a patient who presented symmetrical tumours in both lachrymal glands, one of which was excised and found to be small round-celled sarcoma, the other recovered under iodide of potassium.

Case of Acute Orbital Calculus Following a Dental Abscess.

Mr. H. E. Juler and Mr. Morton Smale read notes of the case of a boy, aged 15, who was admitted to the hospital, having fallen from a van a few days before. He presented all the signs of acute orbital cellulitis. The eye was lost. The eyeball was excised, and free incisions made into the parts around, and much foetid pus escaped. The boy had complained of pain in the upper molar teeth; this was accordingly removed. An abscess at its root communicated with the antrum, and by an opening through the roof of the antrum into the orbit. After free drainage the boy recovered perfectly.

Carcinoma of the Body of the Sphenoid: Complete Blindness of both Eyes.

Mr. H. E. Juler and Mr. W. J. Harris read notes of a case of this description. The patient was operated on for cancer of the breast, which had been removed two years before. The first sign of the orbital affection was sudden blindness of one eye, without intraocular change; then followed proptosis, and impairment of [illegible] on to total ophthalmoplegia. The left eye followed the same course. The seat of origin of the growth found at the necropsy proved to be the body of the sphenoid.

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[11] [illegible]

[12] [illegible]

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[14] [illegible]

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[16] [illegible]

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[18] [illegible]

A DISCUSSION ON THE QUESTION OF OPERATING IN CHRONIC GLAUCOMA.

Introduced by E. Nettleship, F.R.C.S.,

Ophthalmic Surgeon St. Thomas's Hospital.

I think that it may be interesting both to ophthalmic surgeons and to those in other branches of practice to hear what practice the members of this Section follow in the treatment of chronic glaucoma; to hear whether experience is now more favourable to operation than it has been; whether there is an increasing tendency to leave cases of chronic glaucoma alone or to advise operative interference early.

In introducing the subject I have nothing new to propound; I desire simply to put before you for discussion a few of the many questions with which this difficult subject is beset.

There are many things about chronic glaucoma upon which we need spend no time to-day; we know that, speaking comprehensively, operations for chronic glaucoma are often negative in result and occasionally harmful; and we know that, even if nothing be done, the course of the disease is now and then so extremely slow (I mean ten years and upwards), that had an operation been performed early in the case, the operation could not have been credited with any share in the result. But such extremely slow cases are rare; and as chronic glaucoma when untreated commonly runs much the same course in both eyes of the same person, the effect of operation on one eye can often be gauged by the course the malady has already taken in the other.

1. I would ask first whether anything is gained by trying to distinguish between cases of chronic glaucoma in which the diagnosis admits of no doubt, and others, where, owing chiefly to the absence of decidedly increased tension, the diagnosis of a peculiar form of atrophy of the optic nerve with cupping of the disc is sometimes made? An optic atrophy, be it observed, occurring in the glaucoma period of life, unaccompanied by true colour blindness, unaccompanied from beginning to end by the smallest indications of disease of the central nervous system, and lastly, linked by imperceptible gradations with typical chronic glaucoma. I myself believe that cases in which the disc shows well-marked glaucomatous cupping should almost without exception be looked upon and dealt with as glaucoma, whether demonstrable increase of tension and other common signs of glaucoma be present or not. I anticipate that in these, the simplest cases of "simple" glaucoma, the truly glaucomatous nature of the disease will sooner or later be established anatomically. Probably in these cases, the lamina cribrosa being very weak, yields to an increase of tension too slight to be detected by the finger. I am far from saying that the result of operating on such very quiet cases is as good as we could wish; but I venture to think that the habit of regarding them as something different from true glaucoma is undesirable, and may tend to induce in the surgeon an unduly hesitating attitude on the treatment of chronic glaucoma as a whole.

2. Another question: Is it true that iridectomy performed when the visual field is already lost nearly up to the centre is often followed quickly by a further loss of field which engulfs the centre and thus seriously damages visual acuity? And, if such rapid loss of field occurs after operation, is it more to be expected when the previous contraction was of the concentric type than when it took chiefly the form of a sector? My own experience on this point is favourable. I have had very few cases of quiet glaucoma in which the field became worse as an apparent result of the operation, whilst there is quite a number in which the field has remained the same after as before. The risk of such further rapid loss of field as a consequence of iridectomy is probably greater *ceteris paribus* when the tension is much increased.

3. If we operate in chronic glaucoma, should the operation be done early, or, influenced by the fear of doing harm to a good eye, should we wait till the disease has made considerable progress, and there is but little to lose?

I am on the side of operating early and of operating first on the better eye if both are affected. Not only do we thus save more, but, and chiefly, the risk of displacement of the lens and internal hæmorrhage is certainly less in the early period, before marked atrophy of ciliary processes and iris has set in, and of course the hope of re-establishing the angle is better.

I cannot help thinking that the fear, to a large extent unfounded, of operating early, and the negative and sometimes harmful results of operating late are responsible for not a little of the general disbelief, or weak belief, in the benefit to be expected from operating for chronic glaucoma.

4. Another point: If we operate as early as possible in chronic glaucoma, we must, in practice, sometimes operate on cases in the prodromal stage before permanent loss of field and before much permanent change at the disc; cases, in short, some of which would, if left alone, become acute, others more or less quiet and chronic. There can hardly be a doubt that if iridectomy were commonly performed in the prodromal stage the number of persons who become blind of glaucoma would be considerably lessened. The risk of operation carefully done is very small; the prospects of immunity conferred by it very great.

The rule of operating in the prodromal stage must, of course, be applied with care; exceptions may be proper when a myotic is found to be efficient and the patient can be trusted to use it properly, and to report himself regularly. But I have a dread of letting such patients drift, as they are apt to do, into an acute outbreak or into permanent chronic glaucoma.

The rule for operating early in established simple glaucoma must also, of course, be relaxed at times, especially for the very old, and those who on other grounds are bad subjects. On the other hand, early operation is, I think, strongly called for in glaucoma occurring in young subjects, because, size of cornea and lens apart, juvenile glaucoma probably often indicates an early tendency to weakness of the suspensory ligament and of the blood vessels. For the same reason I am inclined to keep the incision further forward in young patients, especially when the anterior chamber is of full depth, than in older persons.

Some parts of the iris in cases of glaucoma are often atrophic, and the practice now, I believe, usually followed of selecting for removal the most healthy looking piece, will no doubt commend itself to all.

I have throughout spoken of "operation;" personally I almost invariably employ iridectomy as the first operation, reserving sclerotomy as a second operation in occasional cases, and making it then opposite to the iridectomy. I performed primary sclerotomy, by Wecker's method, many times some years ago, and gave it up. It will be instructive to hear other experiences of sclerotomy, whether performed by the subconjunctival method with a narrow knife, leaving a conjunctival and scleral bridge (de Wecker), or with a lance knife (Snellen and others).

I have as yet tried Priestley Smith's scleral puncture as a preliminary to iridectomy only twice, both times in acute glaucoma with very shallow chamber. I have nothing to say against the proceeding, and it certainly made the iridectomy easier.

Professor FUCHS (Vienna) had given up operation in cases of chronic glaucoma where there was no increase of tension. He always did iridectomy except when a fresh increase of tension came on after iridectomy when he did a sclerotomy.

Dr. MEYER (Paris) agreed with Mr. Nettleship's propositions generally with the exception of the first one. He had watched such cases for many years, and had seen the cupping of the disc becoming deeper and deeper without sufficient alteration of central or peripheral vision, and he did not regard them as cases of glaucoma. He always advised operation, whatever might be the diminution of vision or the state of the visual fields. He always performed iridectomy, having found after serious trial that all that sclerotomy does iridectomy does more surely.

Professor GAYET (Lyons) considered sclerotomy as an operation done rather for the satisfaction of the surgeon than in the interest of the patient. He performed iridectomy from choice, but where this was dangerous he preferred equatorial puncture of the eye.

Mr. CRITCHETT felt that they ought to be very grateful to Mr. Nettleship for having brought this question forward at a time when they had the advantage of the presence of so many of their eminent foreign colleagues. In this disease it was essential to remember the well-known text, "That thou doest, do quickly;" and he was in favour of early operation. He laid great stress on the advantages of a cystoid cicatrix, and said that any ophthalmologist who could invent a certain method of securing this condition would deserve well of his country.

Mr. PRIESTLEY SMITH, referring to the question of diagnosis, said that a better agreement as to the sense in which the name "glaucoma" should be used was much wanted. To him, glaucoma meant a morbid process depending essentially on excess of pressure, while cases in which changes simulating those found in glaucoma arose from other causes than pressure, for example, physiological cupping supplemented by atrophy of the nerve, were not glaucoma at all. He thought, however, that a more general use of the tonometer would render those exceptional cases rarer than they are now supposed to be. The tonometer had rendered him good service for many years. He hoped that the new instrument shown by Dr. Koster would prove an advance on his own: its principle was certainly good, but he was not quite sure of its practical applicability at present.

His own experience in the operative treatment of chronic glaucoma appeared to him to justify the following conclusions:

1. It is right to operate at any stage of the disease so long as there is any sight worth saving, provided that the patient's general condition does not forbid an operation; and that he or his friends have been given clearly to understand that the operation is the only means, but not a certain means, of avoiding blindness.

2. The immediate safety of the eye as regards the operation depends chiefly on the avoidance of injury or displacement of the lens, and deep-seated hæmorrhage. The making of a scleral puncture so as to slacken the eye immediately before the iridectomy is a valuable safeguard against injury of the lens during operation and displacement of it afterwards.[1] Scrupulous attention to the condition of the patient as regards sleep, bodily tranquillity, and the action of bowels and kidneys are the chief safeguards against deep-seated hæmorrhage, but in certain cases this complication is inevitable.

3. The ultimate success of the operation depends largely on the formation of a permanent subconjunctival fistula which keeps the eye slack. The presence of such a fistula is shown by a bleb-like elevation of the conjunctiva over some part of the cicatrix. Iridectomy for glaucoma will be a more perfect operation than it is at present when we have learned how to establish such a filtration scar in every case.

4. Permanent retention of vision is not always secured, however, even by an operation which fulfils the requirements already mentioned. The optic nerve, like other nerves, when once it has been reduced to a condition of partial atrophy, as in advanced glaucoma, is especially liable to undergo further atrophy when the nutrition of the nervous system in general fails. Anxiety, overwork, loss of appetite, and loss of sleep are potent causes of such failure. The treatment of glaucoma must therefore include, in addition to an efficient operation, careful and persistent attention to the health and habits of the patient.

Dr. LITTLE (Manchester) believed that iridectomy arrested the progress of chronic glaucoma in a considerable number of cases. He thought that a cystoid cicatrix was rather a desirable thing to have after operation. After a fair trial he had given up sclerotomy as a primary operation, but he thought sclerotomy should be done where iridectomy had failed; and he preferred to do it in the coloboma. He did not think that operation was the cause of further contraction of the fields. He thought iridectomy should be done in the very early stage of glaucoma, in fact, during the premonitory stage, as he was quite certain that in spite of myotics these cases did develop sooner or later into glaucoma.

The PRESIDENT (Mr. Henry Power) said the principle which had guided him had been whether the case was progressive

[1] See paper read at the Edinburgh Congress.

or not. Many cases depending on mental worry were purely temporary, and could be cured by general treatment with eserine. In regard to scleral puncture, he could say with some certainty that it was useless in chronic glaucoma.

Professor PANAS said that the treatment of chronic glaucoma by myotics ranked foremost; no fewer than four applications should be made daily, experiments having shown that the action of myotics does not last more than five hours. He preferred an ointment of vaseline, sulphate of eserine, and hydrochlorate of pilocarpin. The irritation of the conjunctiva by eserine was thus avoided, and the application could be continued many months. Where myotics were insufficient he performed sclerotomy, and where this failed iridectomy.

Mr. SWANZY was in favour of early operation in chronic glaucoma; a certain amount of loss of sight was in many cases to be reckoned with, and for this reason he declined to operate in cases where the field was so contracted as to approach fixation point.

Mr. ADAMS FROST, until recently, operated as routine practice in chronic glaucoma, but he had done so less often lately, owing to a suspicion that it did not arrest the disease. He had found preliminary scleral puncture useful in preventing failure of vision as a result of operation.

Mr. J. G. MACKINLAY said that it was not advisable to wait too long before operating in chronic glaucoma; it was necessary to make the incision very far back.

Mr. TREACHER COLLINS had examined many sections of eyes with cystoid cicatrices, and had found that they were formed by a prolapse of a fold of iris into the sclero-corneal wound. This prevented the sclero-corneal tissue from reuniting, and when the conjunctiva healed on the surface a weak spot was left in the fibrous tissue of the globe, which yielded to the pressure of fluid within.

Mr. R. WILLIAMS (Liverpool) thought that sclerotomy was to be preferred to iridectomy, on account of its greater simplicity.

Mr. G. WALKER (Liverpool) expressed his belief that it was essential in the treatment of glaucoma to correct errors of refraction, especially hypermetropia. He had abandoned iridectomy for glaucoma more than twenty years ago. In order to form a cystoid cicatrix he dissected up a flap of conjunctiva, and tucked it into the wound of the incision into the anterior chamber; he had found this efficacious.

ON THE LATER NEGLECT OF THE EYESIGHT QUESTION IN BOARD OF TRADE INQUIRIES INTO SHIPPING DISASTERS.

By T. H. BICKERTON, M.R.C.S.,
Ophthalmic Surgeon Liverpool Royal Infirmary.

ALTHOUGH the public memory is notoriously short, it will hardly be forgotten that on February 1st last a deputation from the British Medical Association and the Ophthalmological Society waited upon Mr. Bryce, who then occupied the position of President of the Board of Trade, to urge the adoption of more precise tests for eyesight in the examination of the mercantile marine and railway employees.

It is no compliment to the gentlemen who formed that deputation, or to the carefully prepared case which they laid before the Board of Trade, that the visual test question is precisely in the same position as it was then. Possibly the President of that overburdened department of Government—the Board of Trade—thought that he was doing well by the deputation when he gave it courteous hearing, and that nothing further would result from his neglect to take action upon this important matter. In fact Mr. Bryce, in his reply to the unanswerable arguments brought to his notice, seemed to resent the mere suggestion that the Board of Trade had not pursued the most enlightened policy possible in dealing with the question of sailors' eyesight.

It may, perhaps, seem a little ungracious to criticise that reply at the present juncture; earlier action, however, on our part would have constituted a breach of the unwritten law of etiquette in such matters. It was promised us that the subject should receive careful consideration, and as the wheels of officialdom run proverbially slowly, a policy of passive waiting in the hope that the result of this promised "consideration" would ultimately be vouchsafed was practically the only line of action open to us. Mr. Bryce, too, it should be remembered, merely voiced the opinion of the permanent officials of the Board of Trade, and it is against their policy of inertia that my criticisms are directed, rather than at the statesman who was then their head and mouthpiece.

Mr. Bryce asserted that his "department had shown due diligence in dealing with the matter." At this stage of the colour vision and eyesight question it is perhaps unnecessary to expose the baselessness of such a claim. It is well known that the "diligence" of the department to which is entrusted the safeguarding of the travelling community by land or sea has manifested itself, first in refusing to admit the danger of the colour-blind factor, and subsequently, when compelled by facts to abandon this untenable position, in stubbornly resisting any effort which sought to eliminate visually afflicted persons from serving on our railways or in our mercantile marine.

The action of the medical profession in persistently pointing out the dangers arising from visual defect and suggesting the adoption of remedial measures has been, until quite recent times regarded in the light of mere fanatism, and so long as discussions and recommendations were confined to the medical press the subject was a closed book to the public, and the Board of Trade treated the views of those competent to give an opinion with undisguised contempt. That the rights of the case were unknown to the public may be gathered from the fact that, though the dangers of employing colour-blind men as sailors were first pointed out in 1876, a leading daily paper stated in 1888 that "too much fuss is made about the supposed deficiency." For such a statement the public press may rightly plead ignorance, but no such plea can be put forward by the Board of Trade. They were well aware of the researches of Dr. Wilson (Edinburgh), whose work on *Colour Blindness*, published in 1855, will ever be a living monument to his labours; and they knew well of the efforts of Mr. Jabez Hogg, to whose admirable exertions, I believe, we owe the first Parliamentary return on Colour Vision; of Mr. Brudenell Carter, of Cantor Lecture fame; of Dr. Bailey (London); and last, but not least, of Dr. Joy Jeffries, of Boston, U.S.A., whose work on *Colour Blindness* has done more than any other to point out to the English-speaking people the dangers and the means of detection of that condition. But to all advice the Board of Trade turned a deaf ear, and I believe it was not until I enlisted Dr. Farquharson's assistance to direct Parliamentary attention to the question that the public began to be awakened to a due sense of the needless peril to which our seamen were subjected from visually-afflicted sailors; and the Board of Trade to see that they had the public and not the medical profession only to deal with. For when once the vital importance of the matter was pointed out to the general and shipping press their voice has not ceased to make itself heard in the cause, and it has done incalculable good towards educating the nation to understand aright the risk which must ever accrue to lives and shipping property from colour-blind and defective-sighted officers and look-outs.

As far back as December, 1877, Dr. Caldwell, surgeon on board the historic Cunarder *Russia*, wrote to the *Nautical Magazine* as follows:

"1. I hold that the quality of eyesight that was good enough to steer clear of the old sailing packet is by no means adequate to recognise surely and promptly the lights of the modern steamer, where the time for reflection is often limited to seconds.

"2. That more collisions occur through mistaking coloured sidelights than almost all other causes combined."

The truth of the first statement, Dr. Caldwell goes on to remark, is almost self-evident, and will be conceded when one considers the increasing rate of speed as compared with the more leisurely progress of the days when steam was unknown. The history of accidents from collision, and the conflicting evidence with reference to the bearings of coloured lights, as exemplified in our law courts, will, I think, sustain the latter statement.

So wrote Dr. Caldwell close upon twenty years ago, and it speaks volumes for the "diligence" which the Board of Trade

has exercised over this subject that we, in the present year of grace, should still be urging the adoption of remedial measures to safeguard the public from dangers which were so pertinently indicated so far back as 1876.

Apparently the Board of Trade take credit to themselves concerning the Royal Society inquiry into the colour vision question. It is well known, however, that it was only after steady pressure, long continued, that such a step was practically forced upon the Board of Trade. The inquiry was a costly one, and its findings were quite in accord with the latest scientific teachings. But the Board of Trade, if we except their adoption of the Holmgren wool test, have done but little towards adopting the Royal Society's recommendations. Their action in thus seeking advice, and then failing to act upon it, is clearly evidential that the inquiry was wrung from them with the greatest reluctance. They were practically compelled by the influence of public opinion to order it, and their subsequent neglect of its suggestions lays the Board of Trade open to the very serious charge of regarding the Commission in the nature of a sop which the united forces of the medical profession and the press compelled them to throw to the Cerberus of public opinion.

The official position on the subject of colour blindness and its risks is the illogical one which assumes the absence of risk, because among the direct causes of collision, definite cases of the disaster being due to colour blindness or to defective eyesight do not largely figure.

"It was certainly very remarkable," said Mr. Bryce, "that an exceedingly small number of accidents, he might almost say few or no accidents, at sea or on land had been so far traceable to this cause. He had for some months past carefully perused the reports of the courts of inquiry, and he had made most careful inquiries of the heads of the railway and marine departments, and had been assured that in scarcely any case had it been suggested, or so far as they knew could it be suggested, that defects of vision had been the cause of accidents."

This is the buttress behind which officialdom shelters itself. The Board of Trade requires that death and disaster shall first take place before they will take the necessary steps to eliminate colour-blind and defective far-sighted subjects from occupying responsible positions on the decks and bridges of our merchant vessels. Mr. Bryce, instead of perusing the reports he alludes to for months might do so for years—for a lifetime in fact—and not find a single case in which the court finds that a vessel has been lost through the defective vision of some member of its or another vessel's crew. But, if Mr. Bryce will deign to peruse the reports in question with an impartial mind, first dismissing the official view that the risk from colour blindness and defective sight is a mere bogey, raised by the medical profession and believed in by the press, he will have but little difficulty in learning that many collisions occurring at sea by night are of an altogether unaccountable character. The atmosphere may be clear, the respective look-outs alert, so that the approaching vessels are duly signalled and reported before the danger point is reached. In spite of this, collision occurs. Through what cause? The Board of Trade maintain the cause may be anything save and except colour blindness or defective sight. The preconceived official view on that visual defect quite precludes any suspicion that the disaster was due to such a factor. Common sense would say, why in such cases is not the eyesight of the survivors of such a catastrophe tested? Why too in cases where there is a glaring contradiction on matters of fact respecting the position of converging vessels as manifested by their sidelights does not the court insist upon the eyesight of the witnesses being tested? If such steps were taken I venture to assert that many an inexplicable disaster would be solved and many an apparent case of wilful perjury would be explained.

I challenge Mr. Bryce and the Board of Trade to point to one single case out of the many thousands that have occurred where, after collision, the Board have ordered an examination of the eyesight of the surviving officers and look-outs, and I submit that Mr. Bryce's misleading—not to use a stronger adjective—reply was not of the kind to be expected from the responsible Minister of a great public department. Rightly or wrongly, I felt at the time that his reply was an invasion of the positive evidence laid before him, and was directed towards screening the permanent officials from the charge of apathy and negligence. Unquestionably it deceived, with a few notable exceptions, the public press, and not for the first time was the public gulled into a false feeling of security. Little did I think such a striking proof of their negligence and incapacity would so soon be forthcoming.

It might have been thought that the somewhat inexplicable cause of the *Elbe* and *Crathie* disaster would have suggested to the Board of Trade officials the advisability of testing the eyesight and colour sense of the *Crathie's* look-out men. Apart, however, from the utter improbability of themselves deeming it advisable to sift this phase of the question, they even refused to do so when asked.

Thinking that in such a lamentable catastrophe as this no stone should be left unturned in the endeavour to trace to its true source the cause of the disaster, I wrote to the Board of Trade while their inquiry was pending, suggesting the desirability of examining the eyesight and colour sense of such of the *Crathie's* crew as were on deck at the time of the casuality.

In response to my letter I received from the Board of Trade an autograph communication, of which the following is a copy:

Board of Trade, Whitehall Gardens, S.W.
May 20th, 1895.

Dear Sir,—I am directed by Mr. Bryce to acknowlege receipt of your letter of yesterday's date, and to state in reply that the question of the powers of vision will be carefully borne in mind in the Board of Trade inquiry into the cause of the collision between the *Elbe* and the *Crathie*.—Yours faithfully,

(Signed) Garsham Rofer.

A perusal of the above letter clearly conveys the impression that the Board of Trade intended—or, rather, stated their intention—to examine the eyesight of the *Crathie's* look-outs. The inquiry, however, was duly held as announced, but the question of defective sight not being mentioned in the full reports appearing in the *Times*, I wrote again to the Board of Trade, asking for a definite statement of fact as to whether these look-outs had actually been examined or no. In reply I was honoured with the following letter:

Board of Trade Marine Department, 7, Whitehall Gardens.
June 20th, 1895.

Sir,—With reference to your letter of the 19th inst., asking whether the look-outs of the *Crathie* were examined as to their eyesight, and where you can obtain a copy of the evidence taken, I am directed by the Board of Trade to state that the witnesses were not examined as to their eyesight, and that the evidence of both sides showed that colour blindness had nothing to do with the cause of the collision.—I am, Sir, your obedient servant,

(Signed) Ingram B. Walker.

Colour blindness or defective vision may or may not have had something to do with the disaster; but I maintain most emphatically that, considering the awful nature of the catastrophe and the unsatisfactory nature of the evidence forthcoming, the Board of Trade should have tested the eyesight of the *Crathie's* look-outs, and that in the face of these letters their failure to do so constitutes a most serious dereliction of duty, and one which imperatively calls for Parliamentary action.

So much for Board of Trade persistency in escaping by any and every loophole from admitting that defective sight or colour vision *may* be productive of maritime disaster.

A few words now on the subject of the Board of Trade's present regulations as to the proper time when the tests for colour blindness or defective sight should be applied. Instead of being enforced before the articles of indentures are signed—and this is the proper moment—the tests only become compulsory on a candidate applying for a certificate of mate. They are thus only applied after a tedious apprenticeship has been completed, and when the candidate has, by following the sea, unfitted himself for success in other walks of life. What are the rejected ones to do? Stay on shore and starve, or go to sea? The public have an idea that the Board of Trade tests eliminate the visually imperfect from our mercantile marine. But is that so? The following letter shows that the only course open to the rejected is to go to sea, colour blindness or defective sight notwithstanding.

It is the letter of a hardworking sailor, and industrious young fellow, a lifelong total abstainer, one who would under kinder circumstances have become an ornament to his profession. Failing after being rejected for colour blindness to

get a berth on shore, even at the paltry pittance of £1 per week, he was literally compelled to go to sea as an A.B. at a wage of £3 10s. per month. But let him state his own case:

"I signed my indentures on December 28th, 1887, to Mr. S. J., Liverpool, for four years. I joined my ship at Cardiff, January 1st, 1888, and finished my term of apprenticeship. I was also nine months over my time in the same vessel as A.B. On arriving home I went to school to coach for second mate. I put in my papers October 14th, 1892 (Friday), and was told I was colour blind. At the advice of my late captain I took a short trip up the Mediterranean in a steamer belonging to Messrs. L. (the voyage occupying a month). Again my sight was tested and was failed in the 'greens,' but was told my sight in other colours was perfect. There was no hope for me to pass my exam., but at the same time there was nothing to prevent me going before the mast. I went away then in one of the Pacific Steam Navigation Company's Royal Mail Steamers, in which I have been seven voyages. During these voyages I have never had any complaints as to my ability to keep a proper look-out. This I did in a fast steamer for over two years. In conclusion, I may state that my only prospect now is to continue as A.B. for the rest of my days. (Signed) E.B.W."

For many years past we have told the Board of Trade that their adoption of imperfect tests and regulations has, by permitting the entry of colour-blind subjects into the service, constituted a serious double offence. By such laxity, not only have incompetent men been foisted upon the public as competent ones, but the inhuman procedure has been followed of granting certificates of competency which, on the introduction of reliable tests, would be rendered valueless to the possessor, and would consequently entail loss of occupation, or, in other words, ruin.

This constitutes a serious blot on the fair fame of our Government. The colour-blind officer has neither riches, influence, nor even a Parliamentary vote at his command; no redress is open to him: his only course is to quietly submit, without even an opportunity of protest, and he is consequently plunged into the depths of despair.

The present Government has a clean page before it. Humanity demands, and a sense of right dictates, that these poor men be not cast adrift. Their names and addresses are known to the Board of Trade. Let Government see that at the earliest opportunity shore berths in Government offices be offered to them, and thus, in some measure, they may be compensated for that loss of position and means of livelihood which, through no fault of their own, has unfortunately fallen to their lot.

If I am thought to be exaggerating the distress entailed, the recital of the following cases will carry conviction, where perhaps my mere statements would fail.

By the courtesy of Mr. J. Clark Hall, Registrar-General of Shipping and Seamen, I hold in my hands the returns of those men, failing to comply with the colour and eyesight tests, from September 1st, 1891, when the new tests came into force, to July 25th, 1895. The numbers are truly appalling. No fewer than 76 failed on account of colour blindness, and 80 for defective sight. Think for a few moments of what this means. Who can form the faintest conception of the depth of blank despair into which these poor fellows are plunged in an instant, victims of the crass ignorance, pride, and hardness of heart of gentlemen who, whatever they may be in private life, exhibit in their public capacity a callousness which cannot be surpassed, if paralleled, throughout the length and breadth of the land. I have seen men, strong in the pride of manhood, men who would face any danger, and who are a credit to any nation, utterly broken down on hearing that their position and livelihood—secure at one moment—are, through no fault of their own, swept away at the next.

I have already recorded the case of Captain Smith, who, after being at sea for twenty years, and in the possession of a Board of Trade's master's certificate, was accidentally found to be colour-blind, and was dismissed his ship. The ruin of his hopes and home—he was married and had three children—so preyed upon his mind that, though up to that [illegible] his health gradually gave way, and his death occurred in a little over twelve months after his dismissal.

A still more distressing illustration is to be found in the case of Captain F., who, in April, 1895, was discovered, also accidentally, to be colour-blind. A quotation from a letter received from the house-surgeon of the institution in which he was an inmate, in consequence of attempted suicide, will best describe his condition: "Early in this year the patient's certificate was endorsed 'colour blind,' in consequence of which he has been thrown out of employment. This has preyed upon his mind. He became sleepless and unsettled, and eventually tried to do away with himself by leaping into one of the docks. During his stay in hospital he was observed to be very melancholic, apparently taking no interest in his surroundings, and quite hopeless as to his future."

The bitter pathos of despair embodied in the above illustrations would be hard to parallel. Humanity and justice alike ask why the Board of Trade do not institute their tests so as to preclude a colour-blind or weak-sighted lad from embarking upon a sailor's life. The medical profession has long asked this question, the shipping and general press have long urged it; and, what is even more reflecting upon the criminal ineptitude of the Board of Trade, the Committee appointed by the Royal Society and paid out of the public funds for the express purpose of considering this very subject, made it one of their most important recommendations, if not the most important of all. Why should the Board of Trade seek costly advice and then not act upon it? How long will the British nation tamely submit to such a manifestation of wilful perversity? Their examiners can produce many such harrowing cases of a life of promise blasted as the above; still the evil is unremedied, although the means is so easily available.

There is, too, another aspect of the question. The sight examiners have to test candidates' knowledge of seamanship and navigation as well, and the new visual tests appropriate a great deal of time and entail much clerical work. The duties of the examiners are thus vastly increased. The work must be got through, however, and it is open to question if some section or other of the examination scheme does not suffer in consequence. On this ground alone, if on no other, a strong case is made out for expert examination. It is not the first time by a long way that the Board of Trade has been similarly indicted upon this same question. The matter is one of national importance, rather than one which calls for the intervention of the medical profession alone. What is to be done to bring the Board of Trade to its senses? It is of little use interviewing the President of the Board of Trade, if like Mr. Bryce he is content to allow the officials of his department to continue the time-honoured but criminal policy of refusing amendment. By such methods we may even do harm, for the press and the public are bound to pay more heed to his reply than to the statement of our case. What then, is to be done to make the British nation insist that the Board of Trade shall adopt a humane, an enlightened, and a less criminally stupid policy on this important question?

Mr. Bickerton's paper was discussed by Dr. Caldwell, Dr. Farquharson, M.P., Dr. Eginton-Green, and the President (Mr. Henry Power). On the President's suggestion the following resolution was proposed by Dr. Farquharson, and carried unanimously:

That the following points should be brought before the attention of Parliament:

1. Adequate tests should be compulsorily applied before a lad is apprenticed to the sea life.
2. The Royal Society's recommendations should be applied in their entirety.
3. That officers already holding certificates, and now, by the institution of adequate tests, found colour blind, should have shore berths given them in Government offices.

Everyone who has visited the French capital knows how recklessly the Paris Jehu drives, but most people will probably be startled by a calculation made by the *Progrès Medical*, according to which the number of persons killed or injured by omnibuses and other vehicles in a single year exceeds the number of victims of railway accidents in France in ten years.

SECTION OF SURGERY.

Sir W. MAC CORMAC, F.R.C.S., President.

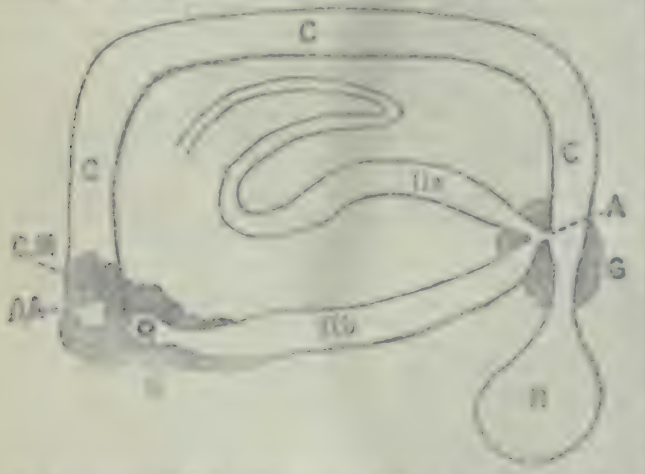
SEQUEL TO THE CASE OF LATERAL ANASTOMOSIS BY MEANS OF MURPHY'S BUTTON.

PUBLISHED IN THE "BRITISH MEDICAL JOURNAL" OF APRIL 20TH, 1895.

By CHARLES A. MORTON, F.R.C.S.,

Surgeon to the Bristol General Hospital; Demonstrator of Anatomy, University College, Bristol.

BEFORE describing the junction made by the button and the condition of the disused portions of bowel, I will very briefly give an abstract of the case as reported in the BRITISH MEDICAL JOURNAL. The patient was aged 27, and suffered from intestinal obstruction due to a malignant stricture at the junction of the cæcum and ascending colon, for which the cæcum was opened with complete relief. Three months later obstruction again set in—presumably from blockage by growth further back—and I then made a lateral anastomosis between the distended small intestine and the sigmoid flexure by means of Murphy's button, with complete relief



CM, Cæcum almost filled up by new growth, which also surrounds the ileum at its junction with the cæcum; AA, the old artificial anus; A, the anastomosis; ILG, the ileum coming from the stomach to the anastomosis; ILD, the ileum going from the anastomosis to the cæcum; C, colon; G, the new growth around the anastomosis; R, the greatly-dilated rectum; B, the button.

from the symptoms, but the abdominal distension did not wholly subside as it did after the colotomy, and occasionally a visible coil could be seen contracting, followed by a loud gurgle in the region of the anastomosis. Towards the end of April he had become very emaciated and feeble, and was attacked with troublesome diarrhœa. The growth in the cæcum invaded the abdominal wall around the colotomy opening, and the inguinal glands became affected, and the growth could be felt under the scar of the incision for the anastomosis. He died on April 24th, three months after the anastomosis operation.

Post-mortem Examination.—All the intestines in the lower half of the abdomen were infiltrated on their peritoneal aspect with new growth and were matted together and adherent to the abdominal wall. This was the condition at the anastomosis. The button used to join the intestine has a diameter of 1 inch, and the opening, three months after operation, had a diameter of ⅝ of an inch, showing only ⅛ of an inch contraction, even where surrounded by new growth, which was constricting the bowel. A fine dark ring in the mucous membrane marked the junction of that structure. The new growth around the anastomosis was in the outer wall of the bowel, and only one minute nodule had invaded the interior. I found the junction had been made 4 feet above the ileo-cæcal valve.

Of the two portions of ileum which opened into the sigmoid flexure at the anastomosis, the one which was the continuation of the bowel from the stomach had an opening ⅝ inch in diameter, the one which was continued on to the cæcum of only ½ inch. The former was considerably dilated and thickened for some feet above the anastomosis; the latter was even more so, but the last foot before joining the cæcum was much narrowed by a surrounding mass of growth, continuous with that which occupied the position of the cæcum. The cavity of the cæcum was filled up by growth with the exception of a sloughing excavation in its interior. The button lay in another cavity in this mass of malignant growth, just at the junction of ileum and cæcum, but all trace of the original opening of the ileum into the cæcum was lost in the mass of growth. The track which led to the button from the anastomosis had become narrowed by surrounding growth, so that it could not return into the ileum, and between it and the old colotomy opening was a mass of new growth which was sloughing, so that a communication had been established between the cavity where the button lay and the colotomy opening; and had the destruction of the new growth here advanced further the button would have appeared at the old artificial anus. The button had slipped back into the disused portion of ileum, and been carried by peristalsis—or antiperistalsis, as Senn calls it—as far as it could go, that is, to the point where the ileo cæcal valve was obliterated by new growth. It was this blockage which no doubt caused the second attack of obstruction. The growth originally situated at the junction of the cæcum and ascending colon, spread backwards and invaded the ileo-cæcal junction, and then the whole cæcum. In the sigmoid flexure immediately below the anastomosis the gut was constricted to a diameter of ⅜ inch from new growth in its outer wall. The colon above this as far back as the obstructing growth in the cæcum and its junction with the ascending colon was much dilated and thickened, and for some inches above the anastomosis was honeycombed by ulceration. There was only a little liquid fæcal matter in this portion of the bowel. The portion of the sigmoid flexure below the anastomosis opening and the upper part of the rectum were not dilated much (they were bound down by growth), but the lower end of the rectum was enormously dilated. The button was in perfect working order. The sloughs were still present, clinging to the silk threads, in the groove of the instrument.

The contraction then of the opening made by the button was only ¼ inch in three months, with constricting new growth around it. One cannot help regretting very much the presence of this growth, as it makes it impossible to say with absolute certainty whether the ¼ inch contraction was cicatricial or due to the growth, but it seems to me that one would have expected as much or more contraction from the presence of the growth *per se*. The possibility of contraction of the orifice taking place after junction by means of Murphy's button was one of the objections raised to its use when it was first introduced. In Keen's case,[1] one in which the cut end of the ileum was joined to the side of the sigmoid flexure, and the junction was examined forty-seven days later, the button measured 1 inch in diameter and the opening ½ inch, showing contraction to half of the original diameter. The entire colon at the point where the anastomosis was made was narrowed to 1 inch in diameter, the diameter of the colon towards the splenic flexure being 1½ inch, and at the rectal end 2½ inches. After reading the report of the case, I cannot accept Murphy's explanation of this—that the contraction of the opening was due to the contraction of the previously distended bowel—as there is no evidence of previous distension. The anastomosis was made not for obstruction, but for the cure of artificial anus. It seems to me that the contraction both of the orifice and the lumen of the bowel at the seat of anastomosis must have been due to cicatricial contraction, but why such an amount of contraction should have taken place in this case in six weeks and only ¼ inch in my case in three months, I am at a loss to understand. Certainly there was a difference in the mode of junction. Keen's case was an end-to-side junction,

[1] *Annals of Surgery*, vol. xvii, p. 668, 1893.

whereas mine was a side-to-side, but one would, I think, expect decidedly more contraction in the latter.

But I should not like Dr. Murphy to think that by referring to Dr Keen's case I am trying to raise an objection to the use of the button on the ground that it causes stenosis; and had Dr. Murphy not been present I had intended quoting from his published writings[2] to show that judging by the clinical evidence stenosis after junction has been formed by the button, is exceedingly rare.

Why did the button pass into the disused portion of intestine in my case instead of passing *per anum*? It has gone the wrong way in a few other cases. Mr. Mayo Robson records[3] a case in which the same junction which I effected was made—that is, a lateral one between the ileum and sigmoid flexure—and in his case also the button passed backwards into the cæcum. Abbe mentioned at the New York Surgical Society[4] that in one case of union of intestine with the button it was found six weeks later to have fallen back into the loop of bowel on the proximal side of the union; and at the same meeting of the Society three cases were reported of gastro enterostomy in which the button fell back into the stomach. It has been suggested that this difficulty may be got rid of by always placing the heaviest half of the button in the portion of bowel along which it is desired it may pass. This would no doubt answer if the patient always remained in such a position after the operation that the button lay evenly balanced as in scales, but this can only happen by the merest chance. Whether the button pass the right way or the wrong in cases of lateral approximation (and the difficulty does not occur in simple end-to-end junction of intestine) will depend on how the patient lies after the operation, having regard to the position of the coils when the abdomen is closed after the anastomosis. When one coil is fixed, as in the case of the sigmoid, this would not materially alter with peristalsis. But we cannot keep the patient lying for weeks in one position, and if it is not constant the button may just happen to become detached when the right position is not assumed. In gastro-enterostomy the button has been known to go the wrong way even when the small intestine was attached to the posterior wall of the stomach, but this must have been from the patient turning on the side. If the bowel were attached to the posterior part and the heaviest half placed in the bowel this ought then only to occur if the patient turned over on to the abdomen.

The condition of the disused portions of intestine in my case is of much interest. One would certainly expect them to become contracted and atrophic as they did in Senn's experiments,[5] but the disused portion of the colon, from the anastomosis back to the cæcum, was much dilated and thickened, with ulceration of the mucous membrane. Certainly the sigmoid below was contracted by new growth, but not to less than three-quarters of an inch in diameter, which would not cause obstruction to the passage of the liquid fæces discharged through it from the anastomosis opening. The equal dilatation and thickening of the portion of disused intestine extending from the anastomosis back to the cæcum might have developed before the anastomosis from the existence of the obstructing mass of growth in the cæcum. There is no doubt that much of the persistent abdominal distension was due to gas in the disused portion. The enormous dilatation of the rectum to replace the colon is interesting.

A SERIES OF CASES OF COLECTOMY.

By Mayo Robson, F.R.C.S.,

Senior Surgeon to the General Infirmary at Leeds; and Professor of Surgery in the Yorkshire College of the Victoria University.

In no branch of surgery has more progress been made recently than in operative interference with the intestinal canal, this being markedly shown in the operation of enterectomy.

There are practically two classes of operations performed for excision of portions of the intestines, one without any special apparatus, as in Maunsell's invagination method or in the end-to-end suture; and the other by means of some special contrivance, such as Senn's plates, Murphy's buttons, Paul's tubes, or by the decalcified bone bobbin.

After using or seeing used all the above contrivances, I have returned in enterectomy to the use of the bobbin, which I infinitely prefer, not only on account of its simplicity and safety, but because it can be employed quickly, secures an immediately patent channel, leaves no foreign body permanently in the passage, avoids stricture by securing continuity of mucous surface, and can be adapted to any of the operations on the intestinal canal. My remarks are limited, according to the title of my paper, to colectomy, though my experience in cases of excision of parts of the small intestine, would lead me to use the same arguments, and to come to the same conclusions.

Of the five cases of colectomy I am about to relate, in four the bobbin was used and in one the button.

Case 1. *Carcinoma of Descending Colon with Intussusception: Reduction of Intussusception and Removal of Tumour by Colectomy.*—Mrs. B., aged 27, was sent to me by Dr. Ryan, of Sheffield, and admitted to the Leeds Infirmary, March 6th, 1894. The following history was sent with the patient: Married eighteen months; one child born August last, died five weeks after birth from tabes mesenterica.

Family History: Comes of a highly neurotic family; mother died, aged 51, from cancer of uterus.

Present Illness: June, 1893, had an attack of colic with diarrhœa, which passed off in a few days after appropriate treatment. In August, 1893, fourteen days after confinement, a similar attack recurred, and since that time the attacks have been recurring with intermission of a day or two. Some five weeks ago, on palpation of the abdomen after a seizure, a hard round mass, about the size of a small hen's egg, and situated a little above the left iliac fossa, was discovered, to remove which, thinking it might be a scybalous mass, 5-grain doses of calomel were given from time to time followed by Hunyadi water, and to relieve the intense attacks of colic, copious enemas of hot soap and water and turpentine were given. On giving the enema a difficulty was experienced in introducing beyond a pint; the patient then complained of intense pain at the seat of the obstruction, but with force the enema seemed to pass beyond it, the patient at the time exclaiming: "There, it is past now," after which quite a quart could be got in without inconvenience. It was further ascertained on admission that slime had been passed occasionally but no blood, and that constipation had prevailed for over a year; that after the first attack there had been no diarrhœa, and that the passage of flatus usually gave relief for a time. The patient was very thin, having lost a stone and a-half in weight during the six months before admission. The abdominal walls were thin and flaccid, and in the left inguinal region a hard swelling the size of a fist could be easily felt and could be moved in every direction, upwards under the ribs, down into the pelvis, and from one side of the abdomen to the other; it was not tender, and gave no pain on manipulation. During an attack the lump was forced into the pelvis, and a hard, sausage-like lump could be felt in the course of the transverse and descending colon. Rectal and vaginal examination negative.

March 15th, 1894. The skin of the abdomen having been aspeticised and the patient anæsthetised by means of the C. and E. mixture, the abdomen was opened by a 3-inch incision in the left linea semilunaris, when it was found that the descending colon was intussuscepted into the sigmoid flexure, a tumour of the intestine forming the apex of the intussusception. By pressure from below reduction was easily effected as there were no adhesions. The tumour was brought to the surface, and the base of the loop of intestine containing it was encircled with an elastic tourniquet, after which the segment of colon, about 5 inches, containing the tumour was excised. The divided vessels in the cut mesocolon were ligatured, and the cut ends of the colon were united by means of a large decalcified bone bobbin. After the tourniquet had been removed, the parts which had been exposed were sponged over with a moist sponge dipped in carbolic lotion, and the abdomen was closed. The whole operation occupied thirty-five minutes. No shock followed; the bowels were moved by enema at the end of the week, and

[2] *Med. Record*, June, 1894, p. 669.
[3] *Lancet*, June 16th, 1894, p. 1514.
[4] *Annals of Surgery*, 1896, vol. xxi, p. 74.
[5] *Trans. International Medical Congress*, 1887, vol. i, p. 451.

the sutures were removed on the eighth day, when the wound was found healed, this being the only dressing required.

She was allowed to be up on April 6th, and returned home, looking and expressing herself well, on the 10th.

As is usual when the bobbin is employed, no trace of it was found in the motions. When going home she said she had not been so well for months. Some months afterwards she reported herself as quite well. The growth was a hard nodular mass, nearly completely encircling the bowel; its surface within the gut was ulcerated and greyish black in colour, and the summit was larger than the base. A finger could be passed through the lumen of the bowel at the site of the tumour. Under the microscope the growth was found to be columnar epithelioma.

Case II. *Carcinoma of Ascending Colon at Age of 14: Excision of Cæcum and Ascending Colon.*—E. R., aged 14, residing at Bishopthorpe, was sent to me on September 18th, 1894, suffering from intestinal obstruction, with the history that for six months she had been losing flesh and strength, and that during this time she had suffered from constipation, with abdominal pain and occasional attacks of vomiting. Two months before admission an intensification of the symptoms had occurred, with fæcal vomiting lasting three days.

On admission she was very weak, and emaciated to an extreme degree; the abdomen was greatly distended, the distension being especially marked on the right side, where a hard tumour could be felt in the course of the ascending colon. Between the time of admission and the time of operation she vomited fæcal matter on two occasions.

On September 22nd, 1894, typhlotomy was performed, as the patient was too ill to bear any more serious operation, but before the distended cæcum was fixed to the surface a finger was passed into the peritoneal cavity, when it was found that the lump previously felt was a growth in the ascending colon. Intestinal drainage was effected through an india-rubber tube, giving the patient very marked relief. Her general condition improved so materially that in three weeks she was thought to be well enough to bear a radical operation.

On October 10th an incision of 4 inches was made, the typhlotomy opening being in the line of incision at its lower part. The bowel was rapidly detached from the parietes, when an elastic ligature was placed on the ileum and on the hepatic flexure of the colon, and as the tumour involved 3 to 4 inches of the colon, enterectomy was performed by dividing the ileum near its entrance to the colon and the ascending colon just below the hepatic flexure, the intermediate part, including the cæcum and ascending colon being removed.

The blood vessels in the mesocolon having been ligatured, the two ends of the bowel were united by means of a decalcified bone bobbin. The wound healed in a satisfactory manner, and the patient was discharged well on November 10th, having gained considerably in weight. The bowels were moved naturally on the fourth day after operation.

The patient was seen six months afterwards, and expressed herself as being in perfect health. A recent report of her states that she is keeping well. The tumour proved to be a columnar epithelioma, which had almost completely obliterated the lumen of the colon.

Case III. *Carcinoma of Cæcum: Colectomy.*—J. S. H., aged 40, was admitted to the infirmary under the care of Dr. Barrs on March 27th, suffering from loss of flesh and strength, with profound anæmia. He pointed out a swelling in the right iliac region which he said he had noticed for twelve months. He had suffered from constipation, but there had been no complete obstruction. He was transferred to the surgical wards, and operation was performed on May 2nd. On opening the abdomen by an incision in the course of the right linea semilunaris widespread adhesions were found, and the omentum had to be ligatured in several places before it could be detached from the cæcum. The operation was performed exactly as in the last case, except that a Murphy's button was used instead of a bone bobbin. On the following day the patient rose from his bed during the temporary absence of the nurse, and walked across the ward to get himself some ice. This disturbed his dressings, and probably led to the suppuration which supervened. On the seventh day after the operation there was a little fæcal discharge from the wound, which lasted nearly a week. Although the wound healed by granulation, and the continuity of the intestine was manifestly established, the patient suffered from several attacks of abdominal pain and vomiting, which prevented his discharge from the hospital. These attacks were apparently dependent on the button, and it was not until the forty-fourth day that he parted with it. He was kept under observation for ten days longer, during which time he had no recurrence of the pain or sickness, and then went home on June 26th. The pathologist reported that the portion of bowel removed measured 6 inches, and that the tumour was a columnar-celled epithelioma involving the cæcum and ascending colon.

Case IV. *Fæcal Fistula and Ulceration with Stricture of Ascending Colon Treated by Excision of Cæcum and Ascending Colon.*—L. S., aged 12, was sent to me by Dr. Sykes, of Cleckheaton, on account of a fæcal fistula in the right iliac region. The boy was extremely emaciated, and had his right thigh fixed in a fully-flexed position quite on the abdomen. There was a six months' history of purulent and three months of fæcal discharge. On November 22nd, the sinus was dilated, and found to communicate with a large abscess cavity, but no distinct opening into the bowel could be felt; it was therefore purified as far as possible and packed, in the hope of securing healing by granulation. At the same time, extension of the leg by weight and pulleys was made in order to overcome the contraction of the psoas muscle. On January 24th, 1895, as the fæcal discharge showed no signs of diminishing, it was decided to open out the cavity from the front, in order to try to close the communication between the intestine and the abscess cavity. This, however, it was found impracticable to effect by any simple method, and it was decided to ask the friends to grant permission for a more radical operation, which, however, was not performed until July. In the meantime, numerous plum stones and cherry stones were discharged through the fistula. On July 4th, the friends recognising that life under the conditions in which he then existed would be extremely undesirable, consented to whatever might be necessary in order to try to effect a cure, knowing that such an operation must be very hazardous. On opening the abdomen, the intestinal adhesions seemed almost insuperable, though after a time the cæcum and ascending colon were isolated from the adherent omentum and small gut. It was then found that the fistula was in the back of the ascending colon, which was strictured and ulcerated from the cæcum to the hepatic flexure. Enterectomy was performed, the open end of the ileum being fixed to the cut end of the colon by means of a bone bobbin. Unfortunately, on account of the large abscess cavity and suppurating tracks, strict asepsis was impracticable, though the parts were made as pure as possible, and free drainage of the abscess cavity through the fistula was adopted. The patient suffered severely from shock, but rallied somewhat on the second day. Although there was no distension and no increase of temperature, the pulse remained quick, and he died on July 7th, three days after operation. It was found that 7 inches of bowel had been removed, including the cæcum and ascending colon. The vermiform appendix was apparently free from disease, but the rest of the bowel was ulcerated and much thickened, and the lumen was so contracted at certain parts that it would not allow the passage of the little finger.

Case V. *Fæcal Fistula Depending on Stricture of Ascending Colon Treated by Partial Colectomy and Enteroplasty.*—This case has been fully reported in the *Lancet*, and need not be given in detail. The patient was a girl of 16, who had been ill for eighteen months with ulceration of the bowel, ending in abscess and fæcal fistula, the latter being kept open by a stricture of the gut below the fistula. Partial enterectomy followed by enteroplasty resulted in complete recovery and perfect restoration to health.

For the notes from which the cases have been abstracted, I have to thank Dr. Oldfield and Mr. A. S. Robinson, my late and present house-surgeons. It will be noticed that out of my five cases, the histories of which are given in detail, four recovered, yielding a mortality of 20 per cent. The fourth case was of so unfavourable a character, it being next to impossible to secure asepticity, that the result was almost anticipated.

As our experience of these operations increases, and the

technique is improved on, we may reasonably hope to maintain or possibly to improve on this rate, though in so serious an operation as colectomy we cannot, I fear, hope to rival the statistics of some other abdominal operations, such as ovariotomy and cholecystotomy, the mortality of which should not exceed about 5 per cent.

The cases I have related in detail, besides their general surgical interest, present individual points worthy of remark.

In the first is the interesting fact of intussusception of the large bowel caused by the growth, relieved over and over again by injection, and finally by operation.

In the second is the fact of a malignant intestinal tumour occurring at the early age of 14.

In the third may be noted the extent of the growth with infiltration of omentum, yet compatible with a primarily successful operation.

The fourth case exemplifies the difficulty of performing successfully an extensive plastic operation in the peritoneal cavity, at the same time that a large septic abscess is associated with the part to be operated on; it also shows what extensive damage may result to the intestine by the lodgment of foreign bodies in the cæcum and ascending colon.

In the fifth case we have an instance of a simple stricture of the intestine following on ulceration, completely relieved by partial colectomy and enteroplasty.

Although there may be a saving of 3 or 4 minutes in some cases by the use of Murphy's button, the contrast in the after-progress when it is employed and when the bone bobbin is used, is well exemplified by the uninterrupted recoveries in Cases I, II, and V and the retarded and anxious convalescence in Case III, where the button took 44 days to pass, and caused partial obstruction on several occasions.

Although I have usually employed two sutures—a mucous and a serous—in using the bobbin, I have not hesitated to employ only one continuous stitch to unite the whole thickness of the gut where time was an object in the case. When one stitch only is employed, the bobbin operation can be done more quickly than the button method, and at the same time I think it will give greater security against leakage, and a much firmer bond of union.

The bobbins which I first employed had the rims at the ends too prominent, and although they answered their purpose very well, the modification in shape shown in the appended diagram (1) will be found easier of application. A

Fig. 1.—Modified decalcified bone bobbin.

thin coating of shellac, if desired, around the central portion, ensures greater persistence and delayed dissolution, and with or without this modification a single continuous suture may be safely employed. This may either pass through the whole of the coats as shown in diagram (2) or may take up the

Fig. 2.

serous, muscular, and submucous coats, missing the mucous membrane, which, however, will be brought into contact with the opposite mucous coat when the buried stitch is tightened as shown in diagram (3).

Fig. 3.

Thanks to the courtesy of my colleagues, I am able to refer to all the cases, 13 in number, operated on in the Leeds Infirmary during the past two years. The record shows a mortality of 23 per cent., and as the cases are varied and the number is, for the nature of the subject, considerable, and as, moreover, the operations have been performed by five different surgeons, I think we may fairly substitute the mortality of colectomy on this basis, and not on the higher rate given in textbooks as 80 per cent.

Mr. Greig Smith (Bristol) criticised Mr. Robson's operation of typhlotomy for acute intestinal obstruction of duodenal origin. The correct procedure would have been to have brought the tumour outside the abdomen at the first operation, and not to have waited till the second. In acute cases Mr. Greig Smith brought the tumour outside, and kept it so by skewering the mesentery. He then drained the bowel till the abdomen was flat, and finally closed the artificial anus extraperitoneally. He objected to primary enterectomy in obstruction, mainly on account of the condition of the patient; his treatment was primary typhlotomy, the bowel being brought outside the abdomen, and subsequently resected calmly and deliberately without the use of an anæsthetic. Finally, a third operation might, if necessary, be performed later on for the closure of an artificial anus.

Professor Kelly (Philadelphia) related two fatal cases in which Murphy's button had been used. The first was one of gastro-enterostomy, in which the button was blocked by a plumstone which he had not succeeded in washing out of the stomach. In the second the button could not be completely closed, the two halves remaining about one-eighth of an inch apart. The patient died of perforative peritonitis, the upper end of the bowel having sloughed. It was found post-mortem that the ends of the circular suture had been left too long, and that one had caught in between the two halves of the button.

Mr. George Hamilton (Liverpool) had performed three colectomies for carcinomatous stricture, the ages of two of the patients being 27 and 35 respectively. The first case, in which he used a bone tube, was unsuccessful. In the second he used the large—an inch and a-half—Murphy's button, this being the first time it had been employed in England. The third case was one of subacute intestinal obstruction in a woman of 70. He found a growth the size of a fist in the splenic flexure, and resected it, using the one and a quarter inch button. The operation lasted twenty-five minutes, and the patient had perfectly recovered in three and a-half weeks. Mr. Hamilton had hence great faith in the button.

Mr. H. W. Allingham had performed eight resections, of which the four done for obstruction died. He thus recommended that the operation should be done as Mr. Greig Smith had suggested. Mr. Allingham preferred decalcified bone plates to the use of the button.

Mr. Harrison Cripps wished most emphatically to endorse Mr. Greig Smith's views as to the advantage of a temporary opening, as he held that a patient could but rarely stand the operation of resection when obstruction was present. Mr. Cripps considered Murphy's button the worst possible method of treating intestinal obstruction. He had recently seen four fatal cases of its use by an eminent St. Bartholomew's surgeon. Two were moribund at the operations, but the others were directly killed by the button. In one case the junction effected was perfect, but the patient died on the eighth day from perforative peritonitis caused by the button having become impacted 6 inches lower down the bowel, and having ulcerated through. The other patient died in two or three days from acute septic peritonitis due to sloughing of the intestine over the upper half of the button. Mr. Cripps held that careful and accurate suturing was better than the use of any apparatus, and that two or three minutes more or less at the operation made no difference to the patient's chance of recovery.

Professor Macewen (Glasgow) stated that though usually regarded as a radical in surgery, he was in this particular conservative. Although he had always buttons ready for use, he had never yet seen a case in which there was any reason to prefer them to stitches. He was in the habit of adopting the operation in two stages for acute intestinal obstruc-

tion, but found that it was not always applicable in acute obstruction. He had treated the cancer with the Lane intestinal tube in three of which four were still living, twelve, eight years, and the others after two years and one year respectively.

Mr. Mayo Robson, in his reply, agreed with the operation in two stages for acute cases, but held that it was not always possible to pull out the whole intestine with the growth at the first operation. He held that a large Murphy's button was not as good in enterectomy, as it sometimes caused the colon in its passage down. He preferred to use sutures in pyloroplasty and enterectomy, but not in colectomy, where he thought the bone bobbin better, as allowing the surgeon to use a continuous stitch, and protecting the line of sutures for several days.

COMPLICATIONS ARISING IN INGUINAL COLOTOMY.

By HARRISON CRIPPS, F.R.C.S.,
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My experience of colotomy for malignant disease of the rectum extends to 170 cases. In far the larger number of these the operation was performed as a palliative treatment in rectal cancer, in which more or less stricture was present, though the obstruction was not complete. In the minority of cases it was performed as a means of saving life after obstruction had become absolute.

The death-rate in the two series differs widely. In the cases where the obstruction was not yet complete, the mortality was slightly less than 4 per cent. In those where the obstruction was complete it rose to nearly 30 per cent. The deduction from this comparative death-rate is that the high mortality following after colotomy for complete obstruction is not due to the operation itself, but to the condition into which the patient has drifted through relief being too long delayed. Nevertheless apart from the condition of the patient, there can be no doubt that the risk of septic peritonitis is increased when colotomy is performed on a completely blocked and distended intestine. In these circumstances the finding of the colon may be a matter of some difficulty. The small intestines, greatly distended, endeavour to crowd out of the wound and obscure the position of the sigmoid flexure, which may only be found after a good deal of manipulation. It is a very different matter handling intestine when distended than when it is flaccid and empty. The tightly stretched peritoneal investment of an inflated intestine will split and crack with a very little handling. It is like india-rubber in this respect, which will split with ease when tightly stretched, but will stand a considerable amount of manipulation when relaxed. I regard these tears in the peritoneal coat of the bowel as often the starting point of fatal peritonitis. Then again the actual stitching of the distended bowel to the parietal peritoneum and skin is very difficult to accomplish without risk of the needle perforating beyond the muscular coat, and thus getting the wound contaminated before the peritoneal cavity is completely closed.

The object of this communication is not, however, to argue the advantages of an early over a late colotomy, but rather to consider what are the dangers arising when an inguinal colotomy is undertaken in good time on an undistended bowel. The complications which render the operation dangerous may be either met with at the time of operating, or may occur subsequently. I do not propose to enumerate all possible difficulties, but merely to mention those which I have actually met with in my own cases.

DIFFICULTY IN FINDING THE BOWEL.

The more experience the operator has the less likely is he to meet with trouble in this respect. If the bowel does not immediately present itself, it is best found by passing the forefinger deeply into the abdomen, and feeling for the brim of the pelvis, and by sweeping the finger along the brim the upper part of the rectum can be felt passing over it, and by keeping the finger in contact with this it will guide the operator to the sigmoid flexure. In these cases the flexure is almost invariably nearer the middle line of the abdomen than when the operation has been performed. In one case, notwithstanding a long search with the finger, I was unable to find the bowel. In this difficult, where the bowel was in the abdomen in the neighbourhood of the iliac fossa, I ordered the nurse to give an injection of water by the rectum with a Higginson's syringe. After two or three squirts of the ball I could distinctly feel a piece of intestine, which had before been overlooked, becoming distended, and was thus enabled to find the sigmoid, which was lying almost over in the right iliac region. Although I have occasionally had great difficulty in finding the bowel, I have always eventually succeeded in doing so.

ABSENCE OF MESENTERY.

This is, perhaps, the most unfortunate and dangerous complication that can be met with, and to this cause, with one exception, I owe all my fatal cases. In the great majority of cases the mesentery of the sigmoid flexure is amply sufficient to allow of the bowel being well drawn up in the wound, and safely fixed without tension; but in 3 or 4 per cent this is not so, for there is absolutely no mesentery, the bowel being bound back firmly against the posterior parietes. This is either due to the congenital deficiency, or to malignant disease behind the colon, fixing it firmly. The question to be considered is as to what should be done after the operator has opened the abdomen and met with one of these cases. I am confident from my unfortunate experience that any endeavour to invert the skin and forcibly drag it down to the bowel by the sutures is a fatal mistake. The sutures will certainly cut through, leaving an open peritoneal cavity. The surgeon has three choices: he may either abandon the operation altogether, he may close the abdominal wound on the left side and perform a colotomy on the right side, or he may endeavour by some modification of the usual operation to fix the bowel without dangerous tension. If he abandons the operation altogether I do not consider he is to be blamed, but rather than do this most surgeons would prefer to close the wound and open the cæcum or ascending colon on the right side. Although the subsequent inconvenience of a right colotomy is far greater than the left, on account of the less solid nature of the fæces in that direction, nevertheless it fulfils the chief purpose for which colotomy was undertaken, namely, the establishment of a permanent safety valve against death from obstruction. If the colon is absolutely fixed and lying at some depth from the parietal peritoneum, this is the course I would advocate. On the other hand, if the bowel is not absolutely fixed it may be possible by means of a Hagedorn's needle to suture the parietal peritoneum to the sides of the bowel, leaving sufficient space between the two layers for the opening. No attempt whatever must be made to draw the parietal peritoneum and the skin together, the skin, and all the structures above the peritoneum being excluded from the sutures. By merely attaching the peritoneum in this way the tension on the sutures is materially diminished. By opening the bowel opposite the mesenteric attachment, and then fixing the cut edges to the parietal peritoneum, tension on the stitches will be further diminished. The objection, however, to this is that the wound becomes at once soiled, and the chance of primary union between the bowel and parietal peritoneum diminished. In one instance I adopted the following plan so as to avoid this. Instead of making the linear incision completely through into the bowel it was made very carefully through the peritoneal and muscular layers only. These two layers were readily separated, and stripped back a little way from the mucous coat. Two sort of flaps were thus raised, the free edges of which were united to the border of the parietal peritoneum, and were fixed there with comparatively little tension except at the two angles. Two days later, when the opposed surfaces were well glued together with lymph, the opening into the bowel was completed by cutting through the mucous membrane. When this was done three strong silk sutures were passed on either side, going completely through all the coats of the bowel and the whole thickness of the abdominal wall. In any case, if the bowel has been fixed to the parietal peritoneum and skin with the least tension, the patient must be carefully watched from day to day, and on the least sign of the bowel falling back additional silkgut sutures should be at

once passed through the whole thickness of the edges of the bowel and the abdominal walls.

Apart from these instances of short mesentery, I have had but a single case in which the bowel tore away from its attachments, and fell back into the abdominal cavity. I have already published an account of this case, so it will be sufficient here to say that the accident occurred on the seventh day during a violent fit of coughing. The released bowel discharged a considerable motion into the peritoneal cavity. Fortunately I saw the case about an hour after the accident. The fæcal matter was thoroughly washed out from the abdomen, and the detached bowel restitched to the wound. The patient recovered.

I have met with no instance of small intestine forcing itself out at the side of the attached bowel.

Complications occurring subsequent to the Operation.

Prolapse, which was such a troublesome complication in the earlier cases, is now comparatively rare, due in great measure to the fact that most surgeons at the time of operating draw out and remove the superfluous bowel, and in addition to this I find, by making the opening in the abdominal wall somewhat higher than in my earlier cases, there is much less tendency to protrusion. Indeed, I make my incision now nearly as high as the level of the umbilicus, so that the wall of the lower half of the abdomen, where the pressure is greatest, is left intact.

Undue Contraction of the Opening.

This is not an uncommon sequence, and if allowed will destroy the whole advantage of the operation. Too small an opening means a constant dribbling of fæcal matter, the motions never getting freely and completely away. These contractions do not occur where the original opening has been made of proper size, and where all the wound has healed by first intention, but occur where the angles of the wound have failed primarily to unite, and where the granulations gradually become converted into firm contractile tissue. If the angles have not united properly the contraction will begin about the third week, and if at this time a little spring dilator be introduced and worn for a few hours daily for a month, the tendency to undue contraction will be obviated. If this precaution has been neglected, or be impracticable, the opening can readily be made the right size by passing the finger into the bowel, and then completely cutting through all the contractile tissue up to each angle, the depth of the cut exposing the outer wall of the bowel. The bowel is now freed a little on either side of the incision, and a curved needle and silk thread is passed through its edge, and through the tissues and skin at the apex of the reopened wound. The suture is tied, bringing the gut well up to the angle. A couple of additional sutures may be necessary at the sides. This little operation is practically painless, does not require an anæsthetic, and is generally most efficient.

Lastly, I come to a complication occurring after colotomy which I think must be rare, since I have had but a single instance. The case I will briefly narrate, for it teaches an important lesson, and had I known that such an occurrence could take place the patient's life might easily have been saved. The symptoms were so suggestive that they cannot well be misinterpreted in a future case.

I performed colotomy at St. Bartholomew's on a middle-aged man. All went well at the operation, and the artificial anus had united firmly, was of the right size, and worked well. The patient was on the eve of leaving the hospital when he was suddenly seized with sharp griping pains referred to the region of the colotomy opening. An hour or two later he commenced to vomit. The vomiting continued for three or four hours. At this time the patient said that he felt something slip in his inside, the vomiting ceased, and the pain suddenly left him. The following day the patient felt quite well beyond a little general abdominal tenderness. A few days after he was discharged from the hospital. Ten days later he was readmitted in a dying condition. He had been vomiting for two days, and was in a state of complete collapse. He stated that thirty-six hours previously he had been seized with a similar pain to that which he had experienced prior to leaving the hospital, and had been vomiting continuously ever since. The patient died a few hours after readmission. At the *post-mortem* examination the colotomy wound was found to have united firmly, and there was not the slightest sign of peritoneal inflammation. A loop of small intestine over a foot in length was found to have slipped down between the attached portion of the gut and the reflection of the parietal peritoneum in the neighbourhood of the anterior superior spine. The canal thus formed was nearly an inch in length, and was bounded on the inner side by the bowel forming the colotomy opening, and in front and behind by the parietal peritoneum, and on the outer side by the reflection of the parietal peritoneum. This canal would about admit one finger through it, and was the seat of the strangulation. At the *post-mortem* examination the bowel could be easily withdrawn through the canal. There can be no doubt that the first attack was due to the slipping of gut through this channel from which it spontaneously released itself. Prompt abdominal section would have saved this patient.

I have merely related, Mr. President, the few complications I have myself met with in colotomy. Doubtless there are other surgeons present who could inform us of complications not mentioned in this paper. The mortality from inguinal colotomy is very small, and I trust may be yet further reduced by considering the nature of the complications which form the chief cause of death. The operation in properly selected cases is of great value, and at present is the only known means of prolonging life and relieving suffering in cases of cancerous stricture of the rectum for which excision is impossible.

THREE CASES OF SACLESS HERNIA OF THE SIGMOID FLEXURE THROUGH THE LEFT INGUINAL CANAL.

By William Anderson, F.R.C.S.,
Surgeon to St. Thomas's Hospital.

Sacless hernia of the sigmoid flexure through the left inguinal canal has not hitherto been recorded, so far as I am able to trace, although both vesical and cæcal hernia have been seen in the same situation. I propose to read a summary of the main features of three examples.

The cases all came under notice in the wards of St. Thomas's Hospital between the months of May and November (inclusive) of last year. The patients were strong, healthy, working men, one aged 41, the other two 44; and the duration of the hernial protrusion before coming under surgical treatment had been a few months only in two instances and twelve years in the third. In two cases the hernia was oblique, and entered the scrotum; in the other—a bubonocele—it appeared to be direct, and was associated with an undilated processus vaginalis in the course of the canal. In two cases an inguinal hernia on the right side was also present. In one case the left hernia was incarcerated at the time of admission; in the others it was readily reducible, but it was observed that it returned into the abdomen without the sudden slip commonly noticed in replacing an ordinary enterocele.

On cutting down upon the tumour it was found in each instance that the dissection exposed the muscular wall on the convex side of a short coil of bowel, while on the concave side the tube was covered for about half its circumference by peritoneum, which extended upwards into the abdomen. On opening the peritoneal infundibulum distinct plicæ adiposæ were seen on the serous segment of the gut in two of the cases; in the other (the first of the series) these were not visible, probably because the bowel was not drawn down sufficiently into the wound. In all, however, the intestine was traced upwards by the finger into the iliac fossa towards the hinder part of the iliac crest, and was bound down to the fascia iliaca by a layer of peritoneum which ran over the front of the gut without forming a mesentery.

The treatment adopted was to sew up the exploratory opening in the peritoneum, to reduce the gut, and finally, in the second and third cases, to close the inguinal canal with sutures, with a view to retain the intestine in the iliac fossa as long as possible, in the hope that the tendency to descend might be lessened. The result has so far been fairly good. In the second case the cure has held good during a period of

nine months with the aid of a truss: in the other two the protrusion recurred soon after work was resumed, but in a less troublesome form than before.

The anatomical conditions essential to the occurrence of this form of hernia have, I think, never been described in our textbooks although they were alluded to as a possibility by Joseph Maclise in his *Atlas of Surgical Anatomy*. By a curious coincidence, not only did three examples of the pathological result of the variation present themselves in the hospital practice of one surgeon, but two instances of the variation itself appeared in the dissecting room of the same hospital within the same year. One of these is now brought forward. The sigmoid or ilio-pelvic coil, which includes the so-called "first portion of the rectum," is usually fixed to the posterior pelvic wall by a well-marked mesentery. This peritoneal duplication, as our experience in the operation of inguinal colotomy shows, is of a very variable length, sometimes sufficient to allow an embarrassing degree of extrusion of the gut through the parietal wound, at others scarcely permitting it to reach the incision at all; occasionally, as we now see, it is absent altogether, the intestine running along the iliac fossa, as the descending colon runs down the loin, behind the peritoneum, and invested by it only over half or two-thirds of its circumference. In such a condition, if the subperitoneal tissue which unites the gut to the iliac fossa be lax, the intestine may wander, and may find its way through the inguinal canal into the groin or scrotum; and it is possible that in the female subject it would in like manner enter the crural canal, in either case drawing after it a pouch of peritoneum adherent to the concave side of the coil.

In the radical cure of the ordinary form of inguinal hernia the most essential point is the obliteration of the sac; but in cases like those now described there is no sac to close, and no treatment of the inguinal canal can offer more than a moderate probability of a permanent cure. It is desirable, however, to make the attempt.

Mr. BIDWELL described a similar case, which had, however, become strangulated, and which, after operation, broke down, leaving a faecal fistula.

A SIMPLE FORM OF EXHAUSTION PUMP FOR USE AFTER SUPRAPUBIC CYSTOTOMY.

By CHARLES W. CATHCART, F.R.C.S.,
Assistant Surgeon, Royal Infirmary, Edinburgh.

THE following apparatus will be found to be of service in withdrawing the urine after suprapubic cystotomy by way of the wound (or by the urethra if desired), as soon as it reaches the bladder, with considerable advantage to the patient and nursing staff. Besides a douche can, some indiarubber tubings, and a pail, we require a screw clamp, a small glass Y or T tube, a second piece of glass tubing bent like a capital letter S, and a third piece bent at a right angle to go into the bladder. These are joined together as illustrated in the diagram and the apparatus works as follows:

The douche can filled with water is fixed above the head of the patient's bed, the Y tube is fastened with a large safety pin to the edge of the mattress opposite the patient's pelvis or loins, and the part below the Y is made to hang over a pail on the floor. The screw clamp which controls the rubber tubing between the douche and one arm of the Y tube is then relaxed, so as to allow the water to flow very slowly, in fact only by drops. It accumulates in the S tube, and as it tends to run out produces a negative pressure in the other arm of the Y tube, that is, the one which is connected with the tube in the bladder. It thus withdraws urine from the bladder, and this in turn as it runs down the S tube into the pail increases the negative pressure in the bladder arm of the Y, and so on.

The amount of negative pressure obtainable depends on the distance between the branching point of the Y tube and end of the india-rubber tube above the pail; about a foot will generally be found sufficient. A very small outlet at the clamp is all that is required, and at the fastest the flow into the clamp arm of the Y must be less than the possible outflow through the stem below, otherwise there could be no negative pressure in the bladder arm of the Y tube. This will be better understood by considering what would happen if the conditions were reversed. If we were to diminish the outlet below the Y tube and increase the inlet on the douche arm, the water would flow up the bladder arm of the Y into

the bladder. Thus nothing is gained by increasing the rapidity of the flow beyond a steady dropping from the clamp. The accumulation in the S tube will transform this into a rapidly intermitting flow with which the urine from the bladder is mingled.

The apparatus has worked very satisfactorily after operations for extroversion of the bladder, as well as after suprapubic cystotomy, and may, I hope, be found useful after other operations on the genito-urinary tract, and possibly as a means of draining the pelvis in septic conditions.

A SUCCESSFUL CASE OF LAPAROTOMY FOR INTUSSUSCEPTION IN AN INFANT, WITH REMARKS ON TWO OTHER CASES SIMILARLY TREATED.

By FREDERIC EVE, F.R.C.S.,
Surgeon to the London Hospital and to the Evelina Hospital for Sick Children.

CASE I.—A female child, aged 11 months, was admitted to the London Hospital on May 29th, 1895, at 4 P.M. The mother stated that the child was well until one hour before, when she was sick, and blood came from the back passage. She was at once taken to the theatre, placed under chloroform, and an injection of warm water, 1½ to 2 pints, was given with a siphon and funnel. The pressure used was very considerable, the funnel being raised above the couch at least 12 inches; and the injection was continued for a considerable time, about 20 minutes to half an hour. It was combined with manipulation of the abdomen, the intussusception being grasped in the hand and squeezed, so that pressure was exercised downwards towards the right iliac fossa.

Under this treatment the intussusception gradually disappeared, and from occupying the epigastric region the swelling gradually passed down to the right iliac region. But notwithstanding the exercise of very considerable force with the fingers, grasping the bowel above the swelling, a small ill-defined lump still remained which could not be reduced. The abdomen was therefore opened in the middle line, and it was found that a slight protrusion of the ileo-cæcal orifice, to

the extent of about ⅜ to ½ inch, into the cæcum persisted. This was readily drawn out and the abdomen closed, the operation only lasting a few minutes. Immediately after the operation the temperature was 96.5°; it rose steadily, reaching 104° on the evening of the next day. From that time it declined, gradually reaching the normal on the evening of the second day, and did not again ascend. Convalescence was uninterrupted, and she left the hospital on June 16th.

Case II.—A male, aged 2 years, was admitted to the London Hospital, February 25th, 1893, with symptoms of intussusception, which had existed six days. A cylindrical tumour occupied the right hypochondrium. A copious rectal injection of warm water was given under chloroform in the inverted position. During the injection the tumour gradually disappeared, and finally only a slight indistinct fulness in the cæcal region could be made out. This it was thought might be due to swelling of the intestine which had been invaginated. Subsequently two motions containing fæcal matter were passed. Next day the symptoms with the tumour returned; the abdomen was opened in the middle line, and the intussusception readily reduced. The child continued well until the second day when the temperature rose, and he was found to be suffering from broncho-pneumonia. Death took place on the third day with a temperature of 104.8°. At the *post-mortem* examination there was no evidence of peritonitis, but the lower lobes of both lungs were deeply congested and consolidated; to this the fatal result was probably due.

Case III.—A female child, aged 11 months, was admitted to the Evelina Hospital on July 31st, 1893. The symptoms, which were acute, had existed for twenty-four hours. A sausage-shaped tumour passed upwards from the pelvis and the left iliac region, and extended in a curved manner across the abdomen below the umbilicus. The apex of the intussusception could just be felt in the rectum. The child was somewhat cold. Influenced by the disappointing result of rectal injection in the case above related (Case II), I at once proceeded to perform laparotomy. Some little difficulty was experienced in exposing the intussusception, as the cæcum had become twisted over on itself, and occupied the left side of the abdomen. Moderate traction upon the entering intestine had no effect, but reduction was readily effected by grasping the upper part of the rectum where the intussusception terminated, and gradually kneading it upwards by pressure. The invagination took place at the ileo-cæcal valve. The child was placed on a hot water bed during the operation. She bore it well, and continued in fair condition until 11.45 P.M., when a large quantity of blood was passed *per rectum*, and she become collapsed. Soon after vomiting of blood commenced, and continued incessantly until death took place at 12.45 midnight, the temperature having in the meantime risen to 104.2.

Remarks.—Cases I and II bring out prominently the fact—which is still further emphasised on referring to the histories of previously recorded cases—that recurrence is extremely liable to take place after apparent reduction of an intussusception by injection of water or of air. This recurrence is evidently due, in the large class of ileo-cæcal intussusceptions, to the ileo-cæcal orifice still remaining slightly invaginated into the cæcum. In Case I this could be felt as a distinct nodule, and its presence determined me to operate at once, fortified by my experience in Case II, in which the swelling was vague and indistinct, and could only be felt occasionally by palpation. Yet in both these cases I am of opinion that the injection served a useful purpose by reducing the bulk of the intussusception, for in both instances the operation lasted only a few minutes, and therefore involved very little disturbance of the intestine. Consequently there was slight shock, and replacement could be effected through a small wound; whereas in Case III, where no injection was used, the operation was somewhat prolonged, and reduction only effected after considerable manipulation of the intestine and through a larger wound. I would therefore insist that where an intussusception has apparently been reduced by injection the greatest pains should be taken to ascertain that the reduction has been complete, and that if any uncertainty exists on this point the abdomen should be opened at once. Another point to which I wish to draw attention in reference to these cases is the mode of death in those which terminate fatally after laparotomy. In Case III it will be observed that the temperature on the evening of the day of the operation rose to 104°. In another case under the care of one of my colleagues the temperature on the evening of the operation rose to 105°, and the child died.

In a successful case recorded by Mr. Barker[1] in a child aged 4 years, the temperature also on the evening of the day of operation rose to 104.4°, while in another fatal case in a child aged 5 it reached 107.8°. In my own successful case (I) the temperature gradually rose, reaching 104° on the evening of the day after the operation. I might also quote other cases in which the same fact was observed. It may be inferred that the pyrexia in some instances is largely concerned in bringing about the fatal result. A rise of temperature after laparotomy should therefore be anticipated, and directions given to reduce it by cold sponging and the application of ice to the head. Its cause appears uncertain. Sepsis may be excluded since the pyrexia usually occurs within a few hours of the operation, and when recovery takes place, rapidly subsides. Further, in fatal cases, no evidence of peritonitis may be found. It may probably be referred partly to reaction from shock, and partly to absorption of blood and serum poured out into the coats of the congested and swollen intestine involved in the intussusception; or, again, in some cases of longer duration to enteritis. A third cause of death to be guarded against is broncho-pneumonia. This was the cause of death in Case II, also in a case published by Mr. Barker,[2] which otherwise would have recovered.

A SUCCESSFUL CASE OF REMOVAL OF THE ENTIRE UPPER EXTREMITY FOR INJURY BY BERGER'S METHOD.

By Thomas F. Chavasse, F.R.C.S.,
Senior Surgeon to the Birmingham General Hospital.

The patient was a man, aged 32, whose left forearm was completely severed immediately below the elbow-joint, the skin and soft parts of the arm being also injured as high as the shoulder-joint, the result of entanglement in machinery. The limb, together with two-thirds of the clavicle and the scapula were removed within an hour of the accident. The patient made a rapid recovery. Attention was directed to the advantages of Berger's method of amputation in such instances, and the statistics of previously reported traumatic cases, in which the entire upper limb had been surgically removed were commented upon.

ON THE TREATMENT OF RESISTANT TALIPES EQUINUS IN ADULTS AND ADOLESCENTS.

By E. Muirhead Little, F.R.C.S.Eng.,
Surgeon to the National Orthopædic Hospital, London.

There are certain cases of talipes in adults or adolescents usually congenital in origin, in which, as the result of treatment, varus is not a strongly marked characteristic, but in which equinus persists. In such the adduction and outward rotation of the fore part of the foot may generally be overcome by subcutaneous operation combined with forcible stretching with the wrench and gradual correction by means of Scarpa's shoe, or other appliances.

Some progress may also be made towards flexion of the foot upon the leg, but after a time it will become obvious that the resistance encountered is due to the shape of the bones entering into the ankle-joint, and that all that can be done by dividing and stretching the soft parts fails to bring the sole of the foot up to a right angle with the leg. Some operation on the bones then becomes necessary if the patient is to be enabled to walk with comfort and without pain.

Excision of the astragalus appears to be the operation most in favour with surgeons, if we may judge from the statistics of 435 operations on the bones in club-foot, collected by Dr. Augustus Wilson, of Philadelphia.[3] I would venture to suggest,

[1] British Medical Journal, vol. ii, 1894.
[2] *Op. cit.*
[3] *Trans. American Orthopædic Association*, vol. vi, Philadelphia, 1894.

however, that this is a rough-and-ready procedure, the effects of which cannot be accurately foretold, that it shortens the limb, and needlessly mutilates the foot, and that its results are often unsatisfactory, so much so that further operations often have to be undertaken.

Even in the worst of these cases the bony "block" is not encountered until flexion reaches within about 15 degrees of the right angle. If the range of movement already existing can be preserved, but 90 degrees be substituted for 105 degrees as the flexion limit, the result must, I think, be considered satisfactory. This end can, I submit, be attained by removing a wedge from the neck of the astragalus and anterior portion of the os calcis, leaving the body of the astragalus *in statu quo* between the malleoli. If the base of this wedge be directed outwards as well as upwards, any varus tendency can be corrected at the same time as the equinus.

The annexed sketch of the skeleton of a normal foot shows the wedge to be removed:

Fig. 1.—Diagram of skeleton of left foot seen from outer side.

In any average-sized adult foot, such as that of the patient whose case is described, the removal of a wedge having a base half an inch thick means the gain of 8 or 9 degrees of flexion. A wedge of this size is easily removed without going beyond the neck of the astragalus; by including the head also in the wedge, the gain may be nearly doubled, but this can seldom be necessary.

The following case illustrates the method:

J. T., aged 19 years, is the eighth of ten children, of whom five are the subjects of congenital talipes equino-varus. He has been treated in various ways since birth, and now presents the following condition:

Fig. 2.

Both feet are considerably adducted and rotated outwards. The soles can only be placed on the ground by rotating the limbs inwards. There are bad corns on the outer edges of the feet on which he habitually walks. The head of the astragalus is prominent, and easily to be felt beneath the skin on the outer side of the dorsum of the foot. Movement at the ankle-joint is limited, and the feet cannot be brought to nearly a right angle with the leg, a firm unyielding resistance seeming to oppose further flexion. The legs are thin, all the muscles being very poorly developed owing to want of use. The two sides are almost alike, except that perhaps the right foot is the more deformed. Fig. 2 shows ink prints of the feet before and after operation.

It was determined to give a thorough trial to subcutaneous section and stretching, but without much hope of overcoming the resistance to flexion. The plantar fasciæ were therefore divided together with some of the subjacent muscles, and the feet were, with the aid of the wrench and Scarpa's shoes, abducted and put into fair position; but as despite section of the tendines Achillis, flexion beyond about 100° was impossible, the following operation was undertaken on the left foot. An incision was made from above downwards over the neck of the astragalus, and exposing the ankle-joint. An examination of this joint showed that the front part of the trochlea of the astragalus locked firmly against the tibia on flexion, and that only a very wholesale removal of bone in this situation would be of any use. The neck of the astragalus was then removed with the chisel, and the incision through the skin having been prolonged from its lower end downwards and backwards on the outer surface of the foot, the calcaneum was also divided, the portion removed from the two bones occupying a wedge with its base directed upwards and outwards. A carpenter's chisel was used. The bones were soft and fatty, and easily cut, and bled very little. Hæmorrhage was slight. The skin wound was closed by suture, and a drainage tube passed through a puncture in the sole. Cyanide gauze and wool dressings were applied, and the foot and leg secured in the best position attainable on a wooden back splint. There was a good deal of oozing of blood during the first few days, controlled by pressure. The temperature never rose above 100° F., but healing went on very slowly, and was not complete till three months had elapsed, when a small remaining sinus finally closed.

Fig. 3.

This delay was attributed to the condition of nutrition of the bones, no doubt largely due to want of use and the pressure of the straps of the apparatus worn. The patient was

therefore sent away into the country, and directed to wear no apparatus on the right foot, and to use it as much as possible. A boot with a single steel support to the calf was fitted on the left foot.

Six months after the last operation on the left foot the patient returned to London, when the right foot presented the appearances shown in Figs. 3 and 4.

Fig. 4.

The same operation was then performed on the left foot as on the right, except that the ankle joint was not exposed and examined. The bones were more vascular and less fatty than in the right foot. No drain was used. The dressings had to be changed twice in the first fortnight, owing to serous oozing, but the wound was quite healed on the forty-fourth day. The temperature remained normal throughout. At the present time (July 3rd, 1895), fifteen months after the first, and nine after the second operation the feet are in good position. There is no tendency to varus, and they can both be flexed to a right angle. The patient is wearing ordinary boots, and says that he can walk four or five miles.

Figs. 5 and 6 show the present condition.

Fig. 5.

Fig. 6.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CHLORIDE OF AMMONIUM VAPOUR IN MIDDLE EAR DISEASE.

Whoever attaches a Richardson's—continuous—spray apparatus by the proximal end of the elastic ball compressed by the hand, to the distributing tube of a Vereker's chloride of ammonium inhaler, and lastly a Eustachian catheter to the distributing end of the spray apparatus, will have a most efficient means of applying this gas to the middle ear. A few squeezes must first be given to the ball so as to fill the apparatus with gas before introducing the catheter. Again, if such a catheter or even a glass tube drawn to a point be affixed to a Higginson's syringe, the best and handiest means of syringing the ear that I know of will be afforded. The small and practically continuous jet applied with any force desirable almost immediately tunnels a hole in the hardest cerumen, and quickly allows of that reflex current necessary for its removal, doing away with the need for clumsy ear syringes. These means I have used for years. I have also conceived the idea of applying chloride of ammonium or carbonic acid gas to the bladder in certain catarrhal states by a modification of the first idea, and through a double channel catheter, but I cannot yet speak of the utility of this.

Finsbury Pavement, E.C. JAMES MACMUNN.

CÆCAL ABSCESS FOLLOWED BY PORTAL PYÆMIA AND SECONDARY ABSCESSES OF THE LIVER.

G. C., aged 26, complained of illness on June 28th, 1895, and was seen by me on July 2nd. He then complained of nausea and dull aching pains about the umbilicus, and of feeling "shivery" at times. Two days later he became jaundiced, the urine contained a large quantity of bile, and the stools were grey: the pulse was 100, and the temperature 101° F. On July 5th he complained of pain in the right shoulder, great thirst, and flatulence. The liver dulness was not increased, but there was marked tenderness over the whole organ. During the previous night he had had several severe rigors, which recurred at intervals throughout the day. On July 6th, 7th, 8th, and 9th his pulse and mid-day temper-

ture varied a little, but the rigors continued at intervals of six or seven hours with increasing severity, and lasted as long as half an hour. The sweating after them was most profuse.

On July 10th there was no amelioration in his symptoms, and, after a consultation with Mr. R. C. Lyle, it was decided to explore the liver by means of the aspirating needle, as the symptoms pointed to hepatic abscess, though we were without guidance as to its situation. I introduced the needle in five places over the right lobe with negative results, except that from one of the punctures I drew off ℥ij of blood. This seemed to give slight but only temporary relief, and his condition daily became worse. The rigors continued, the abdomen became tympanitic, and the fauces and inside of mouth were covered with aphthous patches. The mid-day temperature was usually about 102° F. The liver dulness in the mammillary line increased to 5½ inches. On July 16th bile reappeared in the motions, but this was followed by no improvement in his general condition. On July 19th his pulse was 120 and temperature 103° F. On July 20th he became collapsed. He revived somewhat later in the day, but died the next day.

Post-mortem Examination.—The lungs were healthy and crepitant throughout. The pericardium contained ℥v or ℥vj of bile-stained serum, and the left ventricle a large *ante-mortem* clot. The liver weighed 5 lbs. 6 ozs., was soft, dark in colour, and mottled with purplish patches. The right lobe was adherent to the diaphragm. On cutting sections, throughout the whole liver numerous small abscesses were seen and one larger one near the fissure. The hepatic veins were completely filled with pus. The spleen weighed 1 lb. 6 ozs., and was dark and pulpy. The kidneys were both congested. When the vena porta was cut through pus welled out in large quantity. The intestines were much congested, and the peritoneum showed signs of general inflammation. The cæcum was intensely red and adherent. On examining it more closely a small abscess cavity was found upon its outer and posterior part. It had been cut through in taking out the cæcum, and would probably have held a small hazel nut. The coats of the gut were much thickened and covered with lymph. The branches of the portal vein proceeding from this region all contained pus. The appendix vermiformis was healthy.

Remarks.—It is somewhat curious that the patient should not have complained at an earlier date than he did, for it is quite evident, from the short space of time which elapsed between his first complaints and the appearance of jaundice, that he must have passed through the earlier stages of his illness before he desisted from his work. It is also curious that the usual signs of typhlitis, such as pain, tenderness, dulness, etc., were entirely absent when his abdomen was first examined.

Great Bardfield. RICHARD RICHMOND, M.D. Edin.

HEREDITY OF APPENDICITIS.

THE question of heredity as a cause of appendicitis, raised by Dr. Armstrong Atkinson, receives further illustration from the following cases which came under my notice many years ago:

Out of a family of four sons and one daughter, the second son died of acute general peritonitis, which was shown by examination after death to have resulted from a perforating ulcer of the vermiform appendage. He had had several previous attacks of what I supposed was typhlitis due to his chewing wheat in the exercise of his calling as a miller. The youngest son, also a miller, had a severe attack of appendicitis, followed by iliac abscess, which relieved itself by bursting into the rectum. The daughter, a single woman, has had two well-marked attacks of either typhlitis or appendicitis, from which she made good recoveries. Lastly, an elderly woman, a cousin of the above, died of acute peritonitis originating in inflammation and probable perforation of the appendix.

Although I have met with many cases of appendicitis, both with and without perforation, the cases now related are the only instances I have known of the disease affecting more than one member of a family.

Guildford. HENRY TAYLOR.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

HENRY TRENTHAM BUTLIN, F.R.C.S., D.C.L., President, in the Chair.

Tuesday, October 15th, 1895.

THE SPONTANEOUS FRACTURE OF URIC ACID CALCULI.

DR. PLOWRIGHT read a communication on this subject. The patient was a man aged 72, from whose bladder were removed 236 fragments and 6 entire calculi in the process of spontaneous fracture. The base of the bladder was occupied by several sacculi or pockets about half an inch across, which contained the calculi, the fragments, and pus laden urine. The sacculi were formed by hernia-like protusions of the mucous membrane between the reticulating muscular fibres of the bladder, and were so placed as never to be emptied during life. The entire calculi were mapped out into segments by elevated ridges, and upon section each segment was seen to be lifted up, being separated from the nucleus below, and from the other segments by cracks or fissures sufficiently wide to admit the point of a penknife. They were held together only by the ridges on the exterior of the calculus. These ridges consist of uric acid with a trace of ammonia, as pointed out to the author by Dr. Ord. The same substance in the form of a greyish white deposit covers not only the exterior of all the calculi and fragments, but extends into the interior of the fissures, covering their sides with a granular or nodular layer. (Fig. 1.)

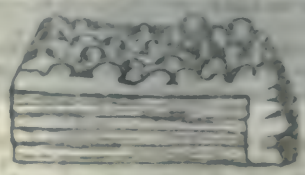

Fig. 1.

Towards the outer extremities of the fissures, opposite the one or two outer concentric laminæ of the calculus, it is deposited much more abundantly, so as to constitute an obtuse wedge when seen in section (Fig. 2), by the increase of which

Fig. 2.

the fissure is opened. The fragments are, as a rule, more or less wedge-shaped, but convex externally where they correspond to the exterior of the calculus, and concave internally when they have been lifted away from the nucleus. In some cases only one or two segments have been lifted out from a calculus (Fig. 3). On the surface of the calculi the deposit often forms blister-like elevations, which may be perforated in the centre, and resemble volcanic craters. On section the upper wall of these blisters is seen to consist not only of the whitish-grey deposit, but fragments of the outer concentric lamina of the calculus have been upheaved by and remain embedded in it

(Fig. 2), and are easily recognisable by their yellow colour and striation. When pressure is applied to a calculus with sufficient

Fig. 3.

force to crush it, fracture takes place not only by a separation between the concentric laminæ, but also at right angles to them along what may be called the planes of radial cleavage. The tendency to radial fracture can often be observed in the sections of calculi in museums; but it is best shown in the structure of artificial calculi as pointed out by Rainey in his book on *Molecular Coalescence*. We may, therefore, regard a calculus as an assemblage of pyramids arranged with their bases externally. In the case under consideration the new deposit of uric acid on the exterior has taken place in such a manner as sometimes to lift up the outer laminæ, sometimes to open the interpyramidal sutures. When once an opening has been made between two pyramids, the fissure spreads inwards, the deposit acting as a wedge, so that the calculus becomes split in exactly the same way as a log of wood may be. The transverse section of an exogenous trunk presents many similarities to the section of a calculus. The pith answers to the nucleus the annular rings to the concentric laminæ and the medullary rays to planes of radial cleavage. If a wedge be driven a short distance into such a log of wood parallel to its length and pressed forcibly sideways, it would lift a segment out of the trunk. The fissure between the wood fibres passes first inwards towards the pith, but when the wedge is pressed sideways the fissure turns off at right angles, taking the direction of the annular rings for a certain distance, but if the sideway pressure of the wedge be continued the fissure will turn upwards in the direction of the medullary rays, and a piece of wood will be prised out. The process is identical with these calculi, the lateral pressure being caused by the wedge-like deposit shown at Fig. 2. Rainey showed in the work above mentioned that when the artificial calculi formed by the action of potassium carbonate or solutions of gum arabic were placed in denser solutions of the colloid than that in which they were originally formed they tended to disintegrate. This is just what has happened in the present case. The lower parts of the calculi were continually immersed in the pus-laden urine of the pocket, while their upper portions were bathed in comparatively pure urine.

Dr. W. M. Ord had exhibited specimens of spontaneous fracture at different times, though they did not all agree with that shown by Dr. Plowright. That the fractures were spontaneous or had occurred during life was evident in the presence of unconformable additions to the older strata of the fragments. Usually the disrupting force arose from within, and was due to expansion of the deeper parts or nucleus of the calculus. There was a more subtle disintegration which proceeded from without inwards, and arose from changes in the circumambient colloid; but he did not follow the author in thinking that the deposition of urate of ammonium was the cause in the present instance.

Mr. Reginald Harrison observed that Bigelow used to believe that the contraction of the bladder was the cause of the spontaneous fracture; this could not apply in the present instance, as the calculi lay in relatively capacious sacculi, as in test tubes exposed to experiment. He imagined that at some future period the facts of spontaneous fracture might serve as a basis for a scientific method of treatment.

Mr. W. G. Spencer could not understand where the disuniting force came from on the author's supposition: for the fissures must have been present before the urate, otherwise the latter could not have penetrated the substance of the calculus. He thought, as Dr. Ord had stated, that the disrupting force arose from within. The "blistering" of the calculi possibly resulted from the evolution of carbonic acid from decomposition occurring in the uric acid or urea.

Mr. Buckston Browne had described two or three cases of this kind of fracture occurring in cases of sacculation or of post-prostatic pouch. In the latter condition there was not infrequently met with a semilunar form of calculus, which he attributed to the spontaneous fracture of calculi in such a pouch having been followed by their reunion from fresh deposit; the final concretion in this manner came to be moulded to the space in which it was found. He adopted the author's view that in cases of spontaneous fracture lithotomy was to be thought of as against lithotrity.

Dr. Plowright, in reply, admitted the difficulty offered by his explanation, but he thought there was evidence to show that the process of crystallisation might exercise a disruptive force, and that the crystallisation of the intruding urate would occasion fracture of the calculi.

Primary Sarcoma of Vagina in a Child.

Mr. D'Arcy Power exhibited the pelvic organs of a child 2 years and 4 months old, who died with symptoms of uræmia, there being acute retention of urine. The illness dated about 14 months back, and was shown in purulent discharge from the vagina, and the protrusion of polypi, many of which were scraped away by the general practitioner. After death no growths were discovered elsewhere. The vagina was much dilated, and from its right wall there projected a mass of new growth which partially subdivided the canal. The whole of the vaginal mucosa was beset with polypi, some of which were pedunculated and myxomatous, others of the round-celled sarcomatous structure like the main growth.

The President had recorded a somewhat similar case, in which the tumour, however, involved the bladder and urethra as well as the vagina.

Multiple Polypi of Stomach and Intestine.

Mr. William Collier recounted the case of a man, aged 21, who a year before admission began to suffer from abdominal pain and intermittent sickness, with constipation. When admitted no diagnosis was at first possible, but with exacerbation of pain and sickness a tumour was felt about the pyloric region and thence extending downwards. Intussusception was now diagnosed, and after laparotomy this was reduced. Death, nevertheless, took place with little change in the symptoms. After death polypi were found projecting from the stomach and large intestine, but in greatest numbers into the upper part of the small. They were innocent in nature, and many were furnished with long pedicles.

Tertiary Syphilitic Lesions of Lymphatic Glands.

Mr. Jackson Clarke thought that tertiary syphilitic lesions were somewhat more common than was generally believed. He had recently observed an instance in an out-patient at the North-West London Hospital. A woman, aged 42, who came for treatment from time to time for tertiary lesions of the skin, nasal fossæ, etc., reappeared after an unauthorised interval of non-attendance in a condition of marked anæmia and complaining of lumps on the left side of the neck. These proved to be the deep cervical and axillary glands, which were as large as filberts and hard. At the time there were no active lesions elsewhere. The swellings rapidly subsided under iodide of potassium. He had only once observed gummata in lymphatic glands in the course of about 1,000 necropsies. This was in the case of a man, aged 25, who was admitted into St. Mary's Hospital under Sir William Broadbent complaining of pain in the right side of the chest and in the right lumbar region. There was hæmaturia and slight fever. He had several attacks of pain (accompanied by dyspnœa and collapse) in the right side of the chest. He died in one of these attacks some days after admission. After death the

right renal vein was found to be occluded by clot, the right kidney was slightly enlarged, pale, and fibrosed, and there was a circumscribed ulcer in the pelvis of the kidney. The right lung contained several recent infarcts. In the liver were numerous gummata. The cervical glands, which had been noticed to be enlarged during life, were found to contain gummata. In some cases there was a difficulty of distinguishing between syphilitic and tuberculous glands. As an instance Mr. Clarke mentioned the case of a child, aged 2 years. When the patient first came under notice there was around the base of the glans penis a raised indurated sore. The history was that the child had been circumcised. All went well for four weeks, when the sore began to form. The lesion had been present for three weeks when the child was brought to hospital, at which time there were, besides the sore, marked swelling of the inguinal glands, and a general eruption of macules, papules, pustules, and some tense bullæ. There was also a slight snuffling. The child was treated with mercury for three weeks, and the rash disappeared, but the inguinal glands continued to enlarge and began to soften. The glands were removed, and sections showed typical tuberculosis with characteristic bacilli. In this case there might have been a mixed infection, but no exposure to syphilis could be traced.

The President observed that tertiary disease of the lymphatic glands was not sufficiently recognised: he had seen cases himself which were rapidly benefited by iodide of potassium. As a rule such glands were more indolent than those infected with tubercle, and were more angular in figure. Such tertiary lesions did not follow tertiary lesions of parts in anatomical relationship.

Card Specimens.

Dr. A. A. Kanthack: (1) Dissecting Aneurysm; (2) Cylindroma of Large Intestine; (3) Diffuse Primary Sarcoma of the Liver.—Mr. Targett: Old Injury of the Humerus from an Egyptian Mummy.

CLINICAL SOCIETY OF LONDON.

Richman J. Godlee, M.S., F.R.C.S., Vice-President, in the Chair.

Friday, October 11th, 1895.

Postponement of President's Address.

In the unavoidable absence of the President (Dr. Buzzard), the delivery of his introductory address was postponed.

Bony Ankylosis of the Temporo-Maxillary Articulation.

Mr. Arbuthnot Lane read notes of four cases treated by excision. The first was a boy, aged 9, the duration of the ankylosis being less than three years; the second, a girl, aged 12, and the duration less than two years and a-half; the third, a boy, aged 4, and the duration less than three years; the fourth, a girl, aged 10, and the duration less than three years. All these were cases of complete bony ankylosis, and the results obtained were most satisfactory, the wounds healing immediately, and a perfectly new joint developing very rapidly. Mr. Lane considered that the occasional failure of this operation resulted from an insufficiently free removal of bone.

Mr. Howard Marsh thought the interest of the paper would be much enhanced if the cases could be seen. The operation was a rare one; he had never had occasion to perform it. He asked if there was resultant deformity; or if the jaw was rotated to either side?

Mr. Wallis had found the recorded results of such cases very unsatisfactory. He had seen a case of double ankylosis in a woman, aged 30, treated by his colleague, Mr. Bloxam, who, after experiencing difficulty in finding the articulations, removed both heads of the lower jaw. After the operation the lower teeth were removed, and replaced by others; and six months ago, when last seen, she had very good movement of the jaw.

Mr. Targett had also found difficulty in arriving at the articulation in the case of a boy, aged 7, who had suffered from scarlet fever. The lower jaw was completely fixed, but being behind the upper the boy could take liquids. As section of the neck of the bone scarcely effected any improvement, he chiselled away the ankylosed head of the jaw. The patient had since regained every form of movement, and could just put the lower jaw in front of the upper.

Mr. A. E. Barker had operated upon two cases. One was that of a young lady, aged 15, with ankylosis after injury produced ten years before by a fall. She could only with effort separate the lower about an eighth of an inch from the upper incisors. There was difficulty in removing the head of the bone in consequence of the large growth of new bone around it. She could now open the jaw an inch and a-quarter. Before operation the affected side was much atrophied, and the front of the jaw was rotated to that side. This condition was not benefited by the operation. In his second case the trouble had probably started in inflammation in the ear. The child was 8 years old, the lower jaw was atrophied, and the chin shifted to the diseased side. Since the operation two years ago the improvement was great, and she could separate the incisor teeth for an inch or more, whilst the joint was quite mobile. There was still deformity, however, as before the operation. In former days, before asepsis was attained, renewed ankylosis almost always followed the inflammation that ensued after the operation. No inflammation resulted nowadays, and the chance of subsequent movement was thereby greatly increased.

Mr. Godlee inquired how much of the bone Mr. Lane took away.

Mr. Lane, in reply, said that two of the cases had been shown twice to the Society; one was still attending Great Ormond Street Hospital; the fourth was in Wales, and of that case he had a recent photograph. He had had a fifth case in which he had previously excised an elbow and a knee-joint.

Sudden Death due to Cardiac Syphiloma.

Sir Dyce Duckworth related particulars of this case. T. W., aged 35, a strongly-built man, was walking in the street, carrying his little boy, on October 7th, 1894, when he suddenly fell down and expired. The body was carried to St. Bartholomew's Hospital, and was examined on October 9th. A very meagre antecedent history was obtained, which threw no light on the nature of the case. There was evidence of old syphilitic disease on the tongue and on the glans penis. A small gumma was found in the left lung. The heart weighed 22 ounces, and had firm adhesions to the pericardium, both at the apex and at the base. The right ventricle was hypertrophied and dilated; the valves were natural. The left ventricle was hypertrophied and dilated. There was a round depression in its wall above the apex, the diameter of a shilling, covered by long adhesions. This was due to a thinning of the wall, with much endocardial thickening. A large aneurysmal pouch was found behind the posterior cusp of the mitral valve. This appeared from without as a tumour growing from the base of the heart, completely covering the left auricle. Its walls were half an inch thick, and the pericardium was closely adherent over it. On section, the muscle was found to be replaced by tough fibrous tissue, with foci of gelatinous matter. The endocardium was greatly thickened and fibrous. Microscopic examination proved it to be gummatous in nature, with patches of caseation. The smaller arteries showed signs of endarteritis. These appearances indicated plainly a recently gummatous growth at the base of the left ventricle, and a similar but older one near the apex of that cavity. The fact of sudden death as a frequent occurrence in cases of this nature was alluded to. The author had collected particulars of 14 similar cases. Death occurred almost if not quite suddenly in 8 of these cases. The disease was rare in women, only 1 of the 14 having occurred in that sex. The mean age of all the patients was 32. Many of the cases appeared to have been previously devoid of urgent symptoms. In some there had been pericardial pain. Graver symptoms were to be expected when fibrotic changes followed on the evolution of the gummatous growths, and when they led to aneurysms of the ventricular walls. The valves were usually not involved, and hence murmurs were not to be met with as in the case of rheumatic endocarditis. The ventricles and their septum were the common sites of these growths. Tendency to fatal and sudden syncope was probably explicable by the fact that endarteritis affected the coronary arteries in part, and possibly by the occurrence of embolisms from

the softening contents of aneurysms into coronary arterial branches, the ventricular walls degenerating in consequence and becoming gradually intolerant of strain. The great object was to make an early diagnosis when possible, and to seek for syphilitic concomitants in cases where there were obvious cardiac symptoms and no signs of involvement of the valves. The treatment was to employ iodide of potassium in full doses.

Dr. Sidney Phillips had collected the records of many of these cases. In one case, that of a gentleman, aged 55, who had had syphilis two years, death was quite sudden, the only premonitory symptom having been occasional pain at the chest, which was thought to be gastric and trivial. He returned to work against the advice of his doctor, sat down in his chair, and died suddenly. Other cases had been recorded at the Pathological Society. When there was opportunity of examining for previous symptoms they were usually found, although they might not be properly interpreted. The gummata were usually found near the apex of the left ventricle in the cases of sudden death. They often gave rise to aneurysm; in fact, except from injury, aneurysm of the heart was almost always due to syphiloma. A young soldier who had had syphilis for four years, died suddenly of cardiac aneurysm, the result of gumma of the heart. Syphilis might cause extreme dilatation and false hypertrophy of the heart.

Dr. Hale White said that at Guy's a genuine gumma of the heart was rarely seen. Syphilitic fibroma, which might have been gummatous, was oftener found. Its usual situation was over the left ventricle and the septum. He doubted if one could differentiate between gumma and fibroma in any case until after treatment, when if very little improvement resulted one would class the case as a fibroma. Of 9 cases he had known, 6 died suddenly. Several had previous symptoms. Thus, 2 were out-patients—4 died suddenly in the street, and the other 3 were hospital in-patients. Consequently, if a syphilitic subject had cardiac symptoms not ascribable to any ordinary lesion it might be inferred that there was gumma or fibroma. About twenty years ago Dr. Fagge collected a series of such cases, and his results were practically the same.

Sir Dyce Duckworth, in reply, mentioned a case in which with hypertrophy of the left ventricle there was inordinate cardiac action. The patients had usually had active syphilis within the last two years before death or recognition and treatment of the lesion. In a case he had recently attended, after three months' treatment with iodide of potassium the patient had lost many of the first symptoms.

Traumatic Derangement of the Knee-Joint due apparently to Fracture of the Spine of the Tibia.

Mr. A. E. Barker read notes of a case for which an exploratory arthrotomy was done. The patient received the injury while in a mine in South Africa, and came home quite disabled. In walking, the knee was very insecure and inclined to give way inwards, which movement was accompanied by a sharp audible snap. The head of the tibia could be slipped backwards on the femur either by active or passive movement, but could only be replaced by hard pressing forwards. The nature of the injury seemed to be obscure, but it appeared possible that the spine of the tibia was broken off, or the posterior crucial ligament torn through. The patient being anxious for an exploratory operation and relief, which was only considered possible, Mr. Barker laid open the knee-joint by sawing across the patella, and found the crucial ligaments apparently intact. The spine of the tibia was found, however, to be marked at its base by a deep groove into which the handle of a scalpel could be laid, and having the appearance as if it had resulted from imperfect union of a fracture of the process. Nothing further was done. The wound healed perfectly *per primam*, and the limb was kept immobile for some months. When last seen, more than a year after operation, the patient had a useful limb, with none of the former abnormal movements. He was advised to be cautious in using it however.

Mr. Edgar Willett inquired what proof there was that such tough, unyielding structures as the crucial ligaments contracted after opening of the joint and the irritation which thereupon ensued.

Mr. Godlee considered the case very uncommon. He had presented a similar case to the Pathological Society from a boy whose leg had been amputated after a crush. Then it was found that the spine of the tibia had been torn off, a lesion not before suspected. He had seen a somewhat similar case lately. A little woman fell upon getting off an omnibus, and hurt the knee-joint. The symptoms were much like those in Mr. Barker's case, except that there was no exaggeration of the power of rotation of the tibia. As Mr. Barker had not found much improvement from his operation, he (the speaker) devised an apparatus for this patient with which she could walk fairly well.

Mr. Barker had seen this patient, but did not consider her to be as much disabled as was his own patient. He considered that if the synovial membrane covering the crucial ligaments were irritated, as by the opening of the joint, it became hyperæmic, and that the ligaments, not being kept upon the stretch, accommodated themselves to the new surroundings, and afterwards when put upon the stretch might be found to have contracted to the position of non-strain. Whatever the exact result of the operation on the structures of the joint, the man was greatly benefited as to his walking powers.

MEDICAL SOCIETY OF LONDON.

Monday, October 14th, 1895.

Sir J. Crichton Browne, F.R.S., President, in the Chair.

President's Address.

After the business of the general meeting had been disposed of, the President elect, Sir J. Crichton Browne, F.R.S., was installed in the Presidential chair, and delivered his inaugural address, choosing for his subject, "The Generalisation of Specialism." He alluded to the fact that the Medical Society had during the last few years included among its presidents representatives of several of the great specialities into which the profession, in its ever-growing heterogeneity, tended to divide. He thought the liberal spirit which characterised the policy of this most conservative of medical societies was one of its most admirable features, for it prevented that insulation of the specialists, which was a danger both ethically and scientifically, and the impoverishment of professional thought, which the withdrawal from its consideration of novel and minute observations must entail. Specialism at the present time was inevitable, for no one could train his senses or muscles to consummate expertness in the use of all the now multitudinous instruments of research and treatment. The great thing was to keep the special departments in touch with the main body of the profession, to see that they were conducted on rational lines, and that the departments of practice detached by specialism did not become refuges for empirics or imperfectly equipped practitioners. He pleaded with specialists of all types and varieties to avail themselves of the advantages which the Society offered. While himself proud of being a specialist, he was prouder still of belonging to a great and magnanimous profession, and, in respect of his speciality, he urged that it was hardly a speciality at all, or only in a very restricted sense. It was, indeed, almost coextensive with medical practice as a whole. He regretted that those who devoted themselves to medical psychology were often compelled to spread themselves far beyond medical practice, and to merge their professional capacity in non-scientific and comparatively menial avocations. He admitted, however, that the attempt to separate completely administration from treatment was not likely to prove successful on a large scale. He looked forward to the organisation of hospitals for the treatment of mental disease on the lines submitted to the London County Council by Mr. Bruhnell Carter, where psychology could be studied and systematic investigation, teaching, and demonstration carried on. He insisted on the necessity for a just conception of the relation of body and mind, and he alluded *en passant* to the materialistic constructions placed on this relationship, convictions based on sensory stimulation being accorded more weight than was accorded to other classes of belief. He protested against the view that mind was to be regarded as simply a result of cerebral activity or chemical transforma-

tions in the nerve centres. The series of phenomena separating mind from matter stood apart, a neural process and a mental process having nothing in common, and the facts of consciousness were not explained by the facts of brain function—in fact, psychology was not merely a branch of mechanics, consequently mind could have no causal dependence on matter.

THE RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC.

Mr. C. B. LOCKWOOD showed a number of patients on whom he had successfully performed the operation of excision of the sac for the cure of hydrocele. He showed that the operation for cure by injection was followed by a very large percentage of failures, in addition to other objections to this operation, which he mentioned. He referred to the alternatives, and described the operation of complete aseptic excision of the parietal layer of the tunica vaginalis. He had done twenty-five of these operations, one being for hæmatocele. They were accompanied with hardly any pain and but slight inconvenience. One patient had subacute suppuration, due to the frequent escape of urine into his dressings. The subsequent history of sixteen of these patients had been obtained. All were cured of their hydroceles. Another patient operated upon in the same way was also cured. Two cases illustrating the modification required in congenital hydrocele and in chronic hydrocele associated with hernia were described. He concluded by advocating the more frequent excision of encysted hydroceles of the cord.

Mr. SWINFORD EDWARDS resorted to excision of the sac only in cases in which injection had failed to cure. He had been struck years ago by the large proportion of failures after injection at St. Bartholomew's, and he attributed this fact to the use of the ordinary tincture of iodine instead of the Edinburgh solution, which was twice as strong. He had on one occasion used a 1 grain to the ounce solution of perchloride of mercury on the person, and at the request of the patient, himself a medical man. The "result" had proved very satisfactory, the patient not having laid up for a single day, and the cure being permanent.

Mr. BRYANT asked what was the average duration of the treatment by operation. He admitted that the treatment was of value, but personally he had recourse to it only after injection had failed. He himself used a mixture of the liquor and the ordinary tincture of iodine. He had injected simple hot water in four cases, with the result of effecting an immediate cure in two cases: in the two others suppuration followed, but these also after free incision resulted in cure. His own plan was to cut away a portion of the sac wall, swabbing the membrane with a solution of chloride of zinc (20 or 30 grains to the ounce), and packing the cavity with iodoform gauze. He thought this was a simpler plan than that advocated by the author.

Mr. WALLIS had operated on the author's lines seven times during the last three years. After his first case, which recurred, he had adopted the practice of scraping the hypertrophied visceral layer, and the results had been uniformly successful. He had never used a drain.

Mr. BIDWELL pointed out that some patients objected to any operation which necessitated the administration of an anæsthetic, and for this reason he had injected in several cases. In two of them, however, he had been obliged to excise the sac subsequently. He had drained in his first case, but as orchitis followed he had not since made use of a drainage tube. He denied that the treatment by operation was more severe than that by injection; the latter always obliging the patient to "lay up" for a period of more than ten days. He asked whether the author had been able to ascertain the condition of the parts after recovery in any of his patients.

Mr. LOCKWOOD, in reply, insisted on the fact that the injection of iodine was a very painful proceeding, besides involving the risk of saddling the patient with an orchitis, etc. Moreover, the result was very uncertain. All the patients with one exception were well in ten days, and left the hospital in a fortnight. He thought the use of a drainage tube was a wise precaution to avoid the formation of hæmatoma, etc. He had not as yet been able to ascertain the condition of the parts after operation.

HUNTERIAN SOCIETY.

CHARTERS J. SYMONDS, M.S., F.R.C.S., President, in the Chair.

Wednesday, October 9th, 1895.

PRESIDENT'S ADDRESS.

THE PRESIDENT delivered a short address on the advisability or justifiability of explorative abdominal operations. His first postulate was that if we could feel sure that no serious additional risk was run by the patient through the operation, then it was not only advisable but practically imperative; this class of cases he illustrated by several examples of insuperable (by other means) obstruction. He next spoke of the possibility of serious risk brought on by operation, and this group he illustrated by a case of urgent symptoms induced by gut adherent to the abdominal parietes, in which rupture of the intestine during separation was unavoidable. A third group of abdominal operations he spoke of, namely, exploration with excision of a kidney, and he laid down the inflexible rule that no nephrectomy should be done unless the other kidney had been definitely examined and found healthy. Lastly, he urged the great responsibility physicians now accepted if they waited till the bacillus coli communis had gained a firm footing in the tissues of the patient outside the lumen of the gut.

THE INFECTIOUSNESS OF RHEUMATISM.

Mr. HUMPHREYS read a paper on this subject, in which he referred to the recent lectures by Dr. Newsholme on the subject, and to other writings. He then proceeded to give several illustrative cases in which skin affections, follicular tonsillitis of a somewhat special type, and acute rheumatism had seemed to him definitely to follow one another as if by infection, either in the same patient or in different members of the same household. He had taken careful notes of many such cases, and to him they seemed to point very strongly though, he admitted, by no means conclusively, to the specific bacillary nature of true rheumatism.

Dr. SHADWELL gave illustrative cases in which he traced rheumatism to drain poisoning, and to the unwashed blankets in which a case of rheumatic fever had lain. He felt prepared to accept the infectious nature of the malady.

Mr. STEVENS hoped to see the specific bacillus found by scientific workers.

Dr. HINGSTON FOX thought it difficult to accept the bacillary theory, but drew attention to the relation or likeness of the tissues affected by rheumatism. His mind leaned more towards a nervous origin for the disease; he quoted the historical case of the man who was cured of acute rheumatism by the shock of a railway accident.

Dr. LYON thought there was danger in accepting the bacillary view, in that it might lead men's minds too far from clinical causes, namely, lowering of vital activity of the body with exposure; that, in fact, it might draw all attention to the seed leaving the soil in a state of neglect.

Mr. J. T. FOX compared the possible bacillus to the malarial organism, and stated that though malaria, as a rule, rendered the patient liable to future attacks, there was at least one variety that rendered the patient (he himself having experienced it) immune against future malarial paroxysms.

Mr. HUMPHREYS, in reply, mentioned a case in which, from similar exposure to drain air, the husband caught typhoid fever and the wife acute rheumatism.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Thursday, October 10th, 1895.

ANNUAL GENERAL MEETING.—INSTALLATION OF PRESIDENT.

DR. JAMES DRUMMOND, of South Shields, the newly-elected President, was introduced.

CASES.

Dr. WARDLE showed a patient on whom he had successfully operated for Diffuse Suppurative Peritonitis, due to disease of the appendix. The abdomen was drained of 2 quarts of pus and the appendix though seen was not removed on account of the condition of the patient. The drainage tube

was taken away at the end of 48 hours, and except for some faecal discharge through the tube opening on the sixth day healing was uninterrupted. Dr. Wardle thought that in such cases the tube might be removed earlier than had been taught.—Mr. Rutherford Morison showed some cases of Syphilis, and Mr. Page a case in which Epithelioma of the Penis and Inguinal Glands had been mistaken for a syphilitic lesion.—Dr. D. Drummond showed a bricklayer, aged 48, who had been troubled with a cough for two years. The case was at first regarded as one of Phthisis Pulmonalis. During the last two months severe pain in the back, chest, and right arm had been the most prominent symptom, and still more recently an enlarged gland was discovered under the left jaw. The gland was now very hard and fixed, and this, together with the severe pain and other signs of a growth in the anterior mediastinum, made the diagnosis of malignant disease of the lung easy, though the long history and the physical signs at first proved misleading. Dr. Drummond also showed a neurotic man, aged 25, who had been lying in bed for five years and was reduced to a weight of 5 stone—a very good example of the condition known as Anorexia Nervosa. The patient, after a month of treatment, had gained a stone in weight and was walking about. For the first fortnight of his stay in hospital, however, he did no good, and not until the nurse was forcibly impressed with the need for getting him well did any improvement result. The case illustrated two things: (1) that a certain amount of compulsion must be used in such cases, and (2) that isolation was not essential.—Dr. Hume showed a boy of 14, along with a Tumour in the upper jaw which he had excised. Four years before the patient got a blow on his left cheek, which swelled immediately. The swelling soon became painless, but slowly increased, and was removed on September 2nd. Microscopically the tumour was a myeloid sarcoma. Dr. Hume also showed a man on whom he had successfully performed Nephrectomy for what he regarded as a rare condition. The man was a sea-going engineer, aged 25. Five years ago he had his leg amputated for an accident, and retention of urine, which followed, necessitated the use of a catheter. The catheter caused cystitis, and from this time he had urinary distress. Pain in the right kidney with pus in the urine suggested calculus, and the kidney was examined by drawing it out on the loin through the ordinary lumbar incision and palpating it; but it was neither incised nor punctured. Dr. Hume thought the danger of wound infection from puncturing even a healthy kidney was to be remembered. No calculus was discovered, and the kidney was returned. For some months the patient was no better and no worse. Then the pain became more severe, and at last a swelling was discovered in the loin, evidently an enlarged kidney. Nephrectomy was performed on July 15th, 1895, after which for a time the urine cleared of pus, and then there was some return. The patient's general condition was much improved. On section, the kidney was enlarged and studded with abscesses, and looked as if it might be tuberculous. The microscopist reported, however, that it was an example of ascending septic nephritis.

Specimens.

The following specimens were exhibited:—Dr. Wardle: A very large Gall Stone removed by cholecystotomy from a lady aged over 70. There was a history of frequent "spasms," but except for the absence of jaundice all the evidence was in favour of gall stones. After an attack threatening life cholecystotomy was performed. The gall bladder walls were very thin and firmly adherent to the stone, which had to be dissected out. Death followed from senile heart.—Dr. Hume: (1) A Myoma from the anterior vaginal wall of a middle-aged unmarried lady. Hæmorrhage was severe, and frequent attacks of retention of urine called for the use of the catheter. The urethra was so elongated and tortuous that considerable difficulty was experienced with the catheter, and on one occasion the bladder had to be aspirated. The growth projected from the vulva, protruded the urinary meatus, and filled the whole vagina. It was enucleated after division of the vaginal wall, and the bleeding, which was severe, was arrested by tampon. Dr. Hume could find no such growth described as a fibro-myoma of the vaginal wall. (2) An Inverted Uterus removed by Vaginal Hysterectomy. The inversion followed confinement four years before. Packing with iodoform gauze and a trial of different forms of elastic pressure were ineffectually tried before hysterectomy was performed. The patient made a good recovery.—Dr. Murphy: (1) A Tongue excised for Epithelioma from a woman. The sex of the patient was of interest. (2) A Pessary of India-rubber, filthy and corrugated, which had lain for years in the vagina of a patient supposed to be suffering from cancer. (3) An Enlarged and Cystic Ovary and a Normal Ovary and Tube which he had taken from a patient without a vagina, and with a nodule only to represent the uterus, who had suffered severely from abdominal pains.—Dr. D. Drummond: (1) Congenital Cystic Kidneys taken from an adult. The case was correctly interpreted during life from the presence of anæmia and of symmetrical swellings of long duration in the renal region. The specimens were beautiful examples of the condition. (2) An Aneurysm of the Aorta which had pressed upon and obstructed the right bronchus. He had shown the patient at a previous meeting, and now exhibited the specimen obtained *post mortem*, for in connection with it he had described what he ventured to call a new physical sign. The respiration was stertorous, and all over both lungs rhonchi were to be heard. Over the right lung inspiration was loud and accompanied by rhonchi as over the left, but in the right lung expiratory sounds were absent. That this was due to pressure on the right bronchus the specimen exhibited made certain.

British Orthopædic Society.—At the last meeting of this Society Mr. Noble Smith showed a case of complete recovery from Compression Paraplegia in which laminectomy had been performed. He also showed specimens, amongst them a portion of the Vertebral Column of an infant who had suffered from spinal caries and general tuberculosis.—Mr. Robert Jones brought forward specimens showing chronic Hypertrophy of the Fingers in a child aged 18 months. From microscopic specimens the overgrowth seemed to be fatty, and not lymphatic in nature. He also exhibited three photographs of cases of Fracture of the Great Trochanter, in which the ultimate results had been very good.—Mr. Newbolt showed photographs of a case of Genu Recurvatum in a child. By forcible traction and flexion at intervals, combined with an anterior angular splint, the limb was brought into the improved position illustrated.—Mr. Luke Fildes brought forward a patient, aged 7, on whom he had operated for most pronounced Congenital Talipes Equino-Varus. The deformity was completely rectified by appropriate tenotomies, massage, and manipulations.—Mr. J. Jackson Clarke demonstrated specimens of Spina Bifida Occulta, Double Congenital Dislocation of the Hip, Congenital Talipes Equino-Varus, and Atlo-Axoid Disease.—Dr. N. Grattan exhibited his improved Osteoclast, and stated that he had done about 220 cases with it, and never lost one.—Mr. A. H. Tubby communicated a paper on Original Observations on the Union of Tendon, with their Practical Bearings. Messrs. Jackson Clarke and Muirhead Little followed with remarks.—A discussion on the Treatment of Abscess in Pott's Disease was initiated by a paper read by Mr. Tubby, and Messrs. Robert Jones, E. Muirhead Little, J. Jackson Clarke, and Luke Fildes took part in it.

South-West London Medical Society.—A clinical meeting of this Society was held at the Wandsworth and Clapham Union Infirmary on October 9th; Dr. Gilbert Richardson (President) in the chair.—Dr. Bernard Neal, the Medical Superintent of the infirmary, showed the following cases: (1) Sarcoma of Axilla in a man, aged 44, following the removal of a warty growth from the wrist a year ago. (2) Progressive Muscular Atrophy in a man aged 31. (3) A case of old-standing Inguinal Hernia in a man aged 61, in which symptoms of strangulation came on within half an hour after the prolapse of the hernia. Failing reduction, and owing to the man's condition becoming rapidly more urgent, operation was performed in two hours with a successful result. (4) Chronic Rheumatoid Arthritis in a woman aged 28, accompanied by vaginal discharge of doubtful character. (5) A case of Foul Ulcer dependent upon diseased metatarsal bone, which was successfully excised, leaving only a small sinus. (6) Two cases of Senile Scirrhus of Breast.—A hearty vote of

thanks was passed to Dr. Neal for his courtesy and hospitality.

READING PATHOLOGICAL SOCIETY.—The fifty-fourth annual meeting of this Society was held on October 9th, in the Library of the Royal Berks Hospital, Mr. OLIVER C. MAURICE, the President, being in the chair, and about forty members attending.—Dr. STEPHEN MACKENZIE delivered the inaugural address on The Advantage to be Derived from the Study of Dermatology. He said the study of diseases of the skin afforded one of the best fields for educating the observant faculties and training the mind to discern the phenomena of disease and for watching the effects of remedies. Nowhere else, with the exception of the visible mucous membranes, could they observe the whole pathological processes so well. He described the skin physiologically, and the influences affecting it, and then dealt with the many diseases to which the epidermis was liable, and their treatment. Among his conclusions were that many skin diseases generally believed to be constitutional were traceable to bacteria, and that very few skin diseases were directly traceable to dietetic causes, though improper diet might largely aggravate existing eruptions, so that the avoidance of alcohol, the regulation of the bowels, and the cure of anæmia were of infinitely more importance in treatment than diet, and at the same time the disease must be cured by external means. The golden rule to preserve a healthy skin, as to avoid other ills, was to observe regularity, moderation and temperance in matters of eating and drinking, especially as regarded alcohol.—The annual dinner was held at the Queen's Hotel, under the presidency of Mr. MAURICE.

WIGAN MEDICAL SOCIETY.—A meeting of this Society was held on October 3rd, when a good number of members and several visitors from Preston and St. Helens were present, Mr. WM. M. ROOCROFT (President) occupied the chair.—Dr. T. HARRIS, Physician to the Royal Infirmary, Manchester, read a paper on the Clinical Value of Inoculative Experiments in Guinea-pigs in the Diagnosis of Tuberculous Phthisis. He referred to the difficulty which existed in diagnosing between some cases of simple chronic pneumonia of a non-tuberculous nature, and chronic tuberculous fibroid phthisis. He brought forward a series of cases which he had met with during the past two years, in which the sputum had been repeatedly examined by himself and others for tubercle bacilli with negative results, and the sputum from these cases he had inoculated into guinea-pigs without producing tuberculosis. He also referred to some cases in which the expectoration was fœtid, and was due to bronchiectasis, and in which tubercle bacilli were absent from the sputum. The sputum from these cases, which had also been inoculated into the guinea-pigs, gave negative results. A third series consisted of cases of repeated examinations of the sputum from cases which had failed for a long time to show tubercle bacilli, but where after a number of examinations had been made a few of the organisms were discovered. In all these latter cases the guinea-pigs which were inoculated with expectoration became tuberculous. The experiments were considered of value as check experiments where repeated examinations of sputum from doubtful cases of pulmonary disease failed to show the presence of tubercle bacilli, and they also confirmed the view that chronic fibroid disease of the lung usually left by an acute pneumonia does exist, and that such cases are of non-tuberculous nature.

BRADFORD MEDICO CHIRURGICAL SOCIETY.—At a meeting on October 8th, Dr. S. JOHNSTON, the retiring President, introduced Dr. ADOLPH BRONNER as the President for the coming year. The new President delivered an address on Otorrhœa, its Complications and their Treatment. Otorrhœa was the result of an inflammation of the mucous membrane of the middle ear, caused by micro-organisms passing up the Eustachian tube from the pharynx. Hence the importance of examining the throat in these cases. In children otorrhœa was very common, 85 per cent. being the result of one investigation. The principal complications of otorrhœa were: (1) Granulations; (2) Polypi; (3) Caries of the Ossicles; (4) Disease of the Attic of the Mastoid Antrum and of the Mastoid Cells. Specimens were shown illustrating the treatment of these complications, and the different operations for mastoid diseases associated with the names of Schwartze, Macewen, Köster, Bergmann, and Stacke were described. (5) Brain Abscess, either Cerebral or Cerebellar. The symptoms were discussed, and Dr. Bronner detailed a case on which he had recently operated successfully. (6) Thrombosis of Lateral Sinus. (7) Meningitis. Many cases of local meningitis had been successfully treated by trephining and drainage. Cases were cited illustrating the different complications of middle ear disease, and the principal instruments used in the operations arising therefrom were exhibited. The conclusions the President directed attention to were: (1) The frequency of these diseases in infancy; (2) the necessity for operation; (3) the mastoid process should be carefully examined, and even if there were no external signs of disease, the operation should be done if symptoms were present; (4) the mastoid antrum should be opened before trephining.—Mr. MERCER read a paper on Venesection in a Case of Puerperal Eclampsia. On May 28th, 1895, he was called to see a lady in the eighth month of pregnancy. She was in convulsions, comatose, and dropsical. One-third of a grain of pilocarpin was given hypodermically; chloral and bromide by the rectum, and a tent introduced into the os uteri. Chloroform was administered later on, and delivery was accomplished by the aid of forceps; after delivery the fits returned, and were not controlled by treatment. The urine became solid on boiling. Venesection from the arm to 30 ounces was performed. The patient became conscious, had no more fits, and made an uninterrupted recovery. The PRESIDENT, Dr. GOYDER, Dr. BELL, and Dr. GRAY made remarks, and Mr. MERCER replied.—Mr. WILMOT showed a man suffering from Lymphadenoma affecting the axillary, cervical, and inguinal glands.—Microscopical specimens were exhibited by Drs. MAJOR and CHAPMAN.

GLASGOW EASTERN MEDICAL SOCIETY.—This Society held its opening meeting on October 9th, when the following were appointed office-bearers for the ensuing year: *President:* Wm. Patrick, M.D. *Vice-President:* Alex. Patterson, M.D., F.F.P.S.G. *Treasurer:* Thos. McMurray, M.B. *Secretary:* Jas. Craig, L.R.C.P.E. *Editorial Secretary:* D. Couper, M.D. *Extra Councillors:* Geo. Mather, M.D., F.F.P.S.G.; Wm. Findlay, M.D.; Wm. Carr, M.B.; Robt. M'C. Service, M.B.; Alexander Munro, M.B.; Jas. Dunlop, M.B.; John Wilson, M.B.

REVIEWS.

INDURATIVE MEDIASTINO-PERICARDITIS. By THOMAS HARRIS, M.D.Lond., F.R.C.P. London: Smith, Elder and Co. 1895. (Demy 8vo, pp. 67; 1 plate; 11 figures in text. 5s.)

DR. T. HARRIS has done well to publish in a compact form the articles on "Indurative Mediastino-Pericarditis," which originally appeared in the *Medical Chronicle*.

The work may be divided into two parts. In the first three cases are recorded in such a way as clearly to bring out the clinical features and the pathology of the disease. The second part is devoted to a critical digest of our knowledge on indurative mediastino-pericarditis, and contains a table of twenty-five cases of the disease collected from various sources, with a useful bibliography.

The term "indurative mediastino-pericarditis," introduced by Kussmaul, is applied to two conditions, clinically indistinguishable, which differ in the extent and degree, but not in the kind of the anatomical lesions found. These are: (1) Adherent pericardium associated with the presence of much cicatricial inflammatory tissue in the mediastinum—indurative mediastino-pericarditis proper; and (2) adherent pericardium with some adhesions to the sternum, ribs, and lungs, but without any fibrosis of the mediastinum; this condition is pericarditis interna et externa.

Allied to these lesions, though of rare occurrence, is inflammatory thickening in the mediastinum, without any adhesions inside the pericardiac sac—chronic mediastinitis. These three conditions are illustrated by the author's cases. His statistics show that, contrary to the general impression, these lesions are rather commoner in adults than

in children, and that men are more often attacked than women.

The work is so full of thoughtful criticism and is so well planned, that it is to be regretted that it does not include the whole subject of adherent pericardium, on which a monograph is much wanted.

In conclusion, we confidently recommend this clear and graphic account of a somewhat obscure disease to all interested in the subject.

A Pharmacopœia, including the Outlines of Materia Medica and Therapeutics, for the Use of Practitioners and Students of Veterinary Medicine. By the late Richard V. Tuson. Fifth Edition, edited by James Bayne, F.C.S. London: J. and A. Churchill. 1895. (Cr. 8vo, pp. 380. 7s. 6d.)

For a quarter of a century the late Professor R. V. Tuson's work has been the only *Pharmacopœia*, properly so-called, available for the veterinary student and practitioner. An effort has been made, with considerable success, to render the book more conformable with modern veterinary practice by the introduction of some of the newer drugs. The original arrangement with all its clearness is adhered to, and the statements are made with commendable brevity.

The work is not, however, free from defects. Formulæ for several tinctures in common use are not given, although alluded to under the drug heading; enemas are formulated without indicating for which animals they are intended to be used; gentian is described as being used occasionally as a mild excitant and antiseptic externally; and the external application of decoctum tabaci is entirely ignored. It may be pointed out that an ounce twice daily of massa digitalis composita for chronic cough in the horse is very likely to lead to complications unless fuller information be afforded under the respective heads of "Use" and "Dose." No word of warning is given to the unsuspecting individual who may be preparing "tow thoroughly saturated with a mixture of four parts of tar and one part of nitric acid" for a foot dressing. This mixture, if not prepared in the open air, is likely to asphyxiate the operator with its orange-brown fumes, and create considerable mess by its fierce boiling over.

Under the head of "Actions and Uses" occur many statements which require most rigorous revision; they are based upon pathological knowledge and expression of twenty-five years ago, and are totally unsuited to the present day.

It is a pity that the present edition has been brought out without the collaboration throughout of some experienced veterinary therapeutist. The chemical and botanical sides of the work are handled in that thorough and correct manner which are indicative of Professor Bayne's great knowledge of these special parts of the subject.

The Value of Electrical Treatment. By Dr. Julius Althaus. London: Longmans and Co. 1895. (Demy 8vo, pp. 100. Four illustrations. 2s.)

This little book may be taken as a summary of Dr. Althaus's views on medical electricity, a subject in which he has had an extended experience. The plan of the book consists mainly of brief accounts of representative cases under the headings of the different diseases for which electrical treatment has been found useful by the author. These are for the most part nervous disorders, but a few pages are devoted to other complaints. Electrolysis is also touched upon, in connection with its uses for the removal of nævi, superfluous hairs, etc. A very interesting case of exophthalmic goitre is related, in which electrolytic destruction of part of the enlarged thyroid gland was followed by disappearance of the tumour and relief of the symptoms. This method of treating Graves's disease is likely to yield better results than can be expected from simple electrical treatment applied percutaneously. Although not supplying all the requirements of a beginner in medical electricity, Dr. Althaus's book will be read with pleasure and interest by those who have experience in the subject.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

COMPRESSED TABLETS.

We have received a number of specimens of compressed drugs sent by Messrs. Parke, Davis, and Co., manufacturing chemists, 451, Oxford Street, and 21, North Audley Street, W. These tablets are well made, and the excellence of the sugar-coated cascara sagrada and pepsin aseptic tablets is specially worthy of note; their solubility or disintegration in water also is perfectly satisfactory. Messrs. Parke, Davis, and Co. have anticipated the wants of medical practice by preparing compressed tablets of various formulæ containing grandiflora, tincture of digitalis, and chlorate of caffeine, and citrate of caffeine as a heart tonic, and viburnum (black haw) with other drugs as a uterine tonic. Tablets of the four chlorides from the University Hospital *Pharmacopœia*, and the hypophosphites of quinine, iron, manganese, etc., with beechwood creasote. Sodium salicylate, extract. colchicum, and tinct. digitalis, and hydrastine hydrochlorate with lead acetate, zinc sulphate, and morphine acetate. Antiseptic solutions can be readily made from the tablets containing mercuric iodide or mercury chloride combined with chloride of ammonium or citric acid. Cascara sagrada extract can be given in a sugar-coated tablet or in the ordinary compressed form combined with aloin and podophyllin.

For preparing peptonised milk, etc., compressed tablets of pancreatin with sodium bicarbonate are convenient. An alkaline antiseptic nasal application can be made from the nasal tablets containing sodium bicarbonate, borate, chloride, benzoate, and salicylate with menthol, oil of eucalyptus, etc. Lactophenin, a new antipyretic, which is said to possess advantages over antipyrin and phenacetin, and ferratin, a new easily-absorbed iron preparation, are also made in a compressed form.

PEPTONE OF BEEF.

From a consideration of the results of analysis we are of opinion that the sample of the Liebig Company's Peptone of Beef submitted to us consisted of a true "peptone" of meat, and that it was well made and of very good quality. We find rather less total moisture than the amount put forward on the papers sent with the sample, the result being 22.1 per cent. against 30 per cent. stated. This is a point in favour of the manufacturers. The mineral constituents amounted to 8.23 per cent., and the organic extractive matters of meat, including peptones and soluble albumin bodies (albumoses) to 69.6 per cent. The total amount of these is stated by the makers to be from 57 to 67 per cent. The sample was free from objectionable chemical preservatives, and the peptone reactions are strongly given. We can, therefore, recommend Liebig Extract of Meat Company's Peptone of Beef as a very satisfactory preparation. It is very pleasant to the taste, and is of very good quality, containing 77.9 per cent. of total solid matters, 8.2 per cent. being mineral constituents, the solid matters, apart from the mineral matters, consisting of albumoses, peptones, and extractives.

The Canadian Medical Association will hold its annual meeting for 1896 in Montreal. The President will be Dr. James Thorburn, and the General Secretary, Dr. F. N. G. Starr, both of Toronto. The Treasurer is Dr. H. B. Small, of Ottawa. The other officers are as follows, the first named being in each case a Vice-President and the second the Local Secretary:—For Prince Edward Island: Dr. James Warburton; Dr. H. D. Johnson. For Nova Scotia: Dr. William Tobin; Dr. G. O. Jones. For New Brunswick: Dr. W. W. White; Dr. Wm. Christie. For Quebec: The Hon. D. Marcil; Dr. J. G. McCarthy. For Ontario: Dr. Fife Fowler; Dr. J. H. Mathieson. For Manitoba: Dr. H. H. Crown; Dr. W. J. Neilson. For North-West Territory: Dr. G. Brett; Dr. G. Macdonald. For British Columbia: Dr. R. E. McKechnie; Dr. W. A. Richardson.

LITERARY NOTES.

The new periodical to be called *Pedriatics*, devoted to diseases of children, to which we have previously made reference, will make its first appearance on January 1st, 1896. It will be owned by Dr. Dillon Brown, of New York, and edited by Dr. George A. Carpenter, of London, and will appear twice a month. The first number is promised for January 1st next. It will be published in London by Messrs. John Bale and Son, and in New York by the Van Publishing Company. The annual subscription will be 8s.

The Queen, as Empress of India, has accepted the dedication of the Indian translation of Mr. S. Osborn's book *First Aid to the Injured*. The little work has also been translated into French, German, Italian, and Japanese.

Messrs. Swan Sonnenschein will shortly publish a work by Mrs. Mary Ann Scharlieb, M.D., entitled *A Woman's Words to Women*.

Mr. W. Heinemann announces the publication of a translation of Dr. William Hirsch's *Genius and Degeneration*, by Mr. J. R. McIlraith; and one of Dr. Oscar Hertwig's *Biological Problem of To-day*, by Mr. Chalmers Mitchell.

Among their forthcoming books, Messrs. R. Bentley and Son announce *My Residence at the Court of the Amir*, by John Alfred Gray, M.B., late surgeon to His Highness the Amir of Afghanistan.

Of new magazines, it may truly be said "the cry is still they come." The most recent arrival is *The Country House*. The first number, which is now before us, contains an interesting and varied assortment of papers, among which we may particularly mention "From Berkshire to Balmoral in my Caravan," by the indefatigable Dr. Gordon Stables, who, like Tennyson's brook, goes on for ever. A paper on "Making a Pasture," by the veteran Sir J. B. Lawes, will interest the agriculturist; and there are stories by the Rev. S. Baring Gould and John Strange Winter, with chatty articles on various subjects for the general reader. The illustrations are plentiful, without undue encroachment on reading matter.

The October number of *Scribner's Magazine* contains an article on Huxley by Mr. George W. Smalley, who, however, has little original to say about the great apostle of science except that he gave dinners to which Mr. Smalley, with other distinguished men, was occasionally invited, and that he was fond of oats, a taste which, as one gathers, is shared by Mr. Smalley. We learn incidentally that Huxley "liked to think of himself as the heir of all the ages," and that he also "liked his pipe, and would never admit that tobacco in moderation could hurt anybody;" that he would "dine on a little soup and a bit of fish;" that he "used the chest notes" in lecturing, and that once he confided to Mr. Smalley that if he were not a man he should like to be a tug. Mr. Smalley seems to think some kind of apology is expected of him for the fact that Huxley allowed himself to be made a Privy Councillor. "It need not" (he kindly explains), "be thought that Mr. Huxley derogated in accepting it, whatever incongruity there might seem to be between his proud plebeianship and the title of Right Honourable by which henceforth he was to be called." This from a writer in a country where it seems to be the aim of every citizen to disguise his "proud plebeianship" under a military or official title of some kind is amusing. Mr. Smalley approves of Huxley's style, but he somewhat disables his own judgment in the matter by pronouncing that Darwin, the most lucid and one of the most graceful of scientific writers, "had a very bad style," and that Tyndall, who from a purely literary point of view was nothing but sounding brass or a tinkling cymbal, "wrote admirably." Altogether Mr. Smalley's article, though readable enough, is a chronicle of very small beer.

In a work entitled *Los Indios, su Historia y Civilazion*, by Don Antonio Batres Jáuregui, a well-known writer on Guatemala, some interesting information is given as to the medicine of the natives of America at the time of its discovery by Columbus. They were acquainted with the therapeutic properties of balsam of Peru, jalap, rhubarb, sarsaparilla, and coca. The aborigines used pills made of the living flesh of the lizard called by them "*cuetz palin*" (Lacerta terrestris), which they looked upon as a specific for cancer, leprosy, and syphilis. From maize they made various preparations which are still largely used in Guatemala and elsewhere as beverages, and mixed with sarsaparilla, guaiacum, etc., as remedies for venereal and other diseases. According to Señor Batres Jáuregui, the aborigines of Guatemala had some knowledge of elementary surgery, and could reduce dislocations, set broken bones, extirpate tumours, and treat wounds with medicinal lotions and herbs. They could also embalm dead bodies. They made great use of baths—cold, luke-warm, and hot—in various diseased conditions. The *temaxcal*, a primitive kind of Turkish bath, was employed by them from the earliest period.

ENTRIES OF THE MEDICAL SCHOOLS AND COLLEGES.

We are indebted to the Deans, Wardens, or other officers of the medical schools and colleges in England for returns of the number of new students who have commenced the study of medicine, or have entered for special courses in the several institutions. From these returns the following table has been compiled. The returns may probably call for some amendment subsequently, but they may be taken to show with approximate accuracy the numbers of new students at the schools and colleges from which they have been received.

	A.	B.	C.	D.	E.
St. Bartholomew's Hospital ...	105	42	0	20	167
Charing Cross Hospital	17	36	28	—	81
St. George's Hospital	50	3	1	1	54
Guy's Hospital	80	32	35	37	147
King's College	31	71*	—	11	102
London Hospital	76	63	—	13	139
St. Mary's Hospital	71	23	1	11	145
Middlesex Hospital	20	27	9	2	56
St. Thomas's Hospital	73	15	—	2	89
University College	45	76	—	52	121
Westminster Hospital	14	4	0	4	22
London School of Medicine for Women	24	2	—	—	26
Cambridge University§	—	—	—	—	—
Oxford University§	—	—	—	—	—
University of Durham College of Medicine*	—	—	—	—	—
Bristol University College	18	1	1	19	19
Owens College, Manchester* ...	—	—	—	—	—
University College, Liverpool* ...	—	—	—	—	—
Yorkshire College, Leeds ...	37	4	—	17	41
Mason College, Birmingham ...	34	35	4	8	73
Firth College, Sheffield	13	—	—	3	13
University College of South Wales, Cardiff	18	30	—	10	48
London School of Dental Surgery	—	—	40	—	40

* No return received. ‡ Including Bacteriology. § Figures not yet available.

A. Number of students who have joined for the full curriculum.
B. Number of students who have joined for special courses.
C. Number of dental students.
D. Number of students who have joined classes for preliminary instruction.
E. Total, excluding students who have joined classes for preliminary scientific instruction.

The returns given above from the metropolitan medical schools indicate a slight improvement upon the low number of last year. The total number of new students entered for the full curriculum (excluding the London School of Medicine for Women) is 581, as compared with 552 in 1894.

Looking back to similar tables published in previous years, we find that the average number of new students entering the metropolitan medical schools yearly for the five years 1881-85 was 635, for the five years 1886-90 was 646, and for the last quinquenniad (1891-95) 598. The average entry during the last five years is thus seen to be below the average of the two previous quinquenniads, and the actual entry this year below the average for the quinquenniad.

The returns from the provincial medical schools and colleges are as yet too incomplete to warrant any deductions.

We have received a bound copy of the *Practitioner*, January to June, 1895, forming a handsome and handy volume with a very full index. We congratulate the new editor, Mr. Malcolm Morris, on the success of his efforts, which have made the *Practitioner* one of the most useful and certainly the most readable medical "monthly" now in existence.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 19TH, 1895.

THE PARLIAMENTARY COMMITTEE ON ADULTERATION.[1]

II.

Among the suggestions made to the "Food Products Adulteration" Committee of the House of Commons for the amendment of the law relating to adulteration, one of the more important and valuable was the proposed establishment of a Board of Reference or Council of Control, whose duty it should be to lay down definite and clear rules for the guidance of public authorities and their officers in the administration of the Adulteration Acts; to fix and vary standards of purity and strength, to lay down definitions as to the composition and characters which different foods and drugs should possess, to decide upon what constitutes adulteration, to give a final decision in matters of dispute, and to discharge such other functions of a similar kind which might be considered necessary to secure the uniform and equitable application of the law throughout the country. Although differing in minor particulars, this suggestion—originally made in the draft Bill prepared by the Council of the Society of Public Analysts—was put forward, in effect, by four representative witnesses whose general acquaintance with the subject, and whose responsible positions, should lend considerable weight to their statements before the Committee. We refer to Mr. Charles Umney, representing the general body of wholesale druggists, and the Chemical and Drug Section of the London Chamber of Commerce; to Mr. John Rogers, another representative of the Chamber, as well as of one of the most important wholesale trading houses in London; and to Mr. R. A. Robinson and the Hon. A. de Tatton Egerton, M.P., respectively chairmen of the Adulteration Acts Committees of the London municipalities of Kensington and St. George Hanover Square, where, for several years, the existing Acts have been administered with vigour and success.

Of the principle of establishing a Central Board of Control we heartily approve, so long as it is carried out upon broad lines, which will prevent the vesting of the ultimate control in the hands of a single Government department: or, what is still worse, in the hands of a single Government official, bound down by red tape, and in all probability out of touch with the daily progress of analytical science and with the general body of public analysts. A centralisation of this description would be unquestionably an unmixed evil; but the institution of some system whereby the law will be administered in a uniform and equitable manner is obviously an urgent necessity, and it is no less necessary that by some such system the heavy and unjust responsibility of settling what is, and what is not, to constitute adulteration and fraudulent dealing in reference to a great variety of commodities, should be removed from the shoulders of individual scientific officers, scattered all over the country, and compelled to act upon their own initiative. The present system—if the term can be used—is exceedingly unsatisfactory, and it is astonishing that with such cumbrous machinery so much real good has been done. Leaving other matters for the moment, the present system of reference, whereby a portion of a sample alleged to be adulterated can be sent to the Somerset House Laboratory for examination, results in producing a ludicrously unsatisfactory state of things, and in reducing the administration of the Acts in many cases to a farce. With respect to milk, for instance, it has been proved to demonstration that a purchaser of ordinary milk is entitled to get not less than 3.5 per cent. of fat in it, and if any further proof were required, it is afforded by the fact that the better class members of the milk trade, and the representatives of large dairy companies, before the Parliamentary Committee and elsewhere, have advocated the fixing of a higher standard of quality in regard to fat than 3 per cent. Even such a body as the Metropolitan Dairymen's Society, whose conclusions must be considerably influenced by the feelings of the smaller dealers, have recently advocated a standard of at least 3 per cent., and have done so in a way that amounts to an admission that the standard should really be fixed at a higher percentage. In the columns of the BRITISH MEDICAL JOURNAL we have recently shown how the adoption of an exceedingly low standard such as 3 per cent. leads to widespread fraud. Thousands of analyses have been published showing the limits between which the composition of really genuine milk varies, and yet the Somerset House analyst, as it appears from published legal cases and from the evidence given before the Committee, adopts the universal limit of 2.75 per cent., a limit which can only be founded upon the analyses of the miserable products yielded by improperly fed, improperly kept, badly managed, or very abnormal single animals, which products cannot be called "milk." Even this limit, it would seem, is not adhered to, since in a recent case, Mr. Bannister of Somerset House, declined to support a certificate of the Middlesex County Analyst alleging fat abstraction, because he found some 2.6 per cent. of fat. These circumstances, in connection with a food product so universally important as milk, will serve to show the necessity for establishing such a Board as that which has been suggested, apart from any other considerations. The injury that is done by such a state of things is incalculable.

Inasmuch as the Council of the Society of Public Analysts has itself suggested the appointment of a Board of Control, it cannot be supposed that to do so would be to cast a slur upon these officials. Indeed the more responsible witnesses who appeared before the Committee paid a tribute to the general excellence of the work done

[1] The first article was published in the BRITISH MEDICAL JOURNAL of September 28th.

by the public analysts. "With very imperfect means," observed Mr. Rogers, "they have done wonders," while Mr. Umney and others expressed in decided terms a general approval of their scientific and official work, and of the fairness with which their duties had, in the main, been discharged. The establishment of a Board of General Control would not mean the abrogation of the individuality of the public analyst, nor the reduction of his work to mere mechanical routine. In the draft Bill previously alluded to it is suggested that the proposed Board should consist of the chief chemical officer of the Inland Revenue Department, of three public analysts nominated by the Local Government Board, and of two additional members nominated by the General Medical Council and the Board of Agriculture respectively. Mr. Umney very reasonably suggested nominees of the Institute of Chemistry, of the Pharmaceutical Society, and of the London Chamber of Commerce; while another witness considered that an elected advisory council of traders would be able to render most valuable assistance to the Board of Reference or Control when established—a proposition which is no doubt worthy of careful consideration; but the acceptance of the main principle, apart from details, is the point of importance at present.

The report recommends that the Food Products Adulteration Committee should be reappointed in the forthcoming session. It is earnestly to be hoped that this will be done, as a great variety of important matters have still to be dealt with and much valuable evidence remains to be given. The extent to which the Acts should be applied, the most effective steps to be taken to ensure the adequate carrying out of the law in districts where the authorities neglect their duties, the question of minimum penalties, and especially the best way of dealing with the wholesale producer and vendor of adulterated goods and of protecting the innocent retailer—in regard to which we think the most effectual course would be to make the wholesale dealer a co-defendant in every case—are all matters which have engaged the attention of the Committee but which have yet to be considered far more fully and carefully. It is probable that most of the members of the Committee had but an imperfect conception of the magnitude of the work upon which they were called upon to enter, but in view of what has already been published the new Committee will necessarily appreciate the matter more clearly. It is to be hoped that, considering its gravity and urgency, the members who may be appointed will not shrink from the task, and that we may look for amending legislation of a comprehensive, just, and effective character.

CONCERNING ALCOHOL.

THE National Temperance Congress, a body which would be more properly called the Congress of Total Abstainers, held its meeting recently at Chester, as was briefly recorded in the BRITISH MEDICAL JOURNAL of October 12th. The papers consisted of the old arguments and appeals to which we are so well accustomed, and it is difficult to find any new matter in the reports of them.

We are far from wishing to imply that the absence of novelty is any reason against the holding of the Congress, or of the reading of these papers; on the contrary, the very persistence of the repetition of the old arguments may, by its continual dropping, have more influence upon the dull public than more fluctuating if more adventurous doctrines. It is difficult to estimate our debt to these ardent enthusiasts who, by persistently hammering in their main doctrine, do no doubt produce an impression upon the masses. This achievement—one in which the more cautious and more sceptical methods of the man of science would assuredly fail, or which, at any rate, he would attain very slowly—is a service for which we cannot be too grateful.

Perhaps no man has deserved better of his country than the President (Sir B. W. Richardson), who adds to his somewhat rigid enthusiasm scientific attainments which command the respect of his opponents, if he has any, and a vein of common sense and knowledge of human nature which are very useful in the chair which he now occupies.

To ordinary readers the utterances, even of the more scientific of the speakers suffer from the "cocksureness" which arouses a continual mistrust, and leads us to suspect that, as science, their assertions are not worth all that their authors claim for them. It is of the essence of scientific truth that the searcher after such truth shall approach the study of natural phenomena with a single and unbiassed judgment; whereas it is but too apparent that the total abstinence lecturer is disposed to seize upon such parts of current doctrine as are suitable to his purpose, and has little disposition to weigh those parts which seem against him. As advocates this way of dealing with truth is fair enough; we shall wait to reform our fellow creatures for ever if we wait till scientific men work out a solid and coherent system of doctrine for us. Still, it would be more fitting if the speakers did not claim so loudly a scientific character for matter which is rather of the nature of counsel and exhortation than of scientific discovery or even of teaching.

One paper—that by Dr. McDowell Cosgrave—discussed a subject of some novelty and of no little scientific interest. It dealt with recent observations upon the organs of special sense, which appear to prove that alcohol acts from the first as a narcotic—that there is no previous stage of stimulation. This is in accordance with the general impressions of many persons accustomed to observe with care, who have been led to suspect that the so-called exhilarating effects of alcohol are apparent only, and may be explained by the suppression of the upper planes of the nervous structures with a consequent letting go of those below them. If this be so the exhilaration is not direct but indirect, and due to the sudden reduction from the careful thoughtfulness of the man to the careless buoyancy of the youth. This is not of course any final argument against the use of the drug. On the contrary, it might be alleged that the relief given by throwing the higher parts of the nervous system out of gear and leaning for a time upon the more automatic structures has a restorative value. It is evident, however, that any relief of this sort may be very dearly bought; and in any case should be confined within the narrowest limits.

Herein lies a problem which the more thoughtful among the abstainers will do well to work out. What the abominable "moderate man" alleges is not that he works better when he takes alcohol during his work—this delusion has been well insisted upon in the Congress—but that after work a small dose of alcohol with the last meal conduces to a cheerfulness and to a forgetfulness of the little worries of

the day, which promote digestion, brighten social life, and lead to a pleasant repose.

A weary man who returns home from a hard day, with his head full of the cares of the day, brooding over this man's rudeness and that man's folly, and then, by whatever mechanism, chases away these thoughts, comes into amity with all men, and expands in the bosom of his family instead of wearily sulking, may live more happily and sleep better for his glass of wine.

It is this relief which the ordinary man is unwilling to give up so long as he has full control over his appetites, and is not sure that he is doing any harm by this apparently useful custom; such points seem to us to demand a little more care and investigation. On the other hand, to threaten us with the penalties for "breaking the laws of Nature"—as if the "laws" of Nature could be broken, or were rules imposed by some authority from without—and again to clamour for civil laws to prevent marriages between persons in whom any taint of insanity may be found, and so forth, is time less well spent because the limitations of practical politics are thus ignored.

METROPOLITAN WATER SUPPLY.

The recent "inquiry directed by the Local Government Board into the cause of the failure of the East London water supply in the summer of 1895" seems to have re-opened the subject of the adequacy "in quantity and quality for the water supply of the metropolis," which was inquired into by the Royal Commission presided over by Lord Balfour of Burleigh in 1892, which reported on September 8th, 1893. During the course of the inquiry, the purity of the water derived from the Lee has been impugned on the ground that the recommendations of the Royal Commission had been disregarded. Reference was made also to the well-known evidence quoted in paragraph 175 of this report; and although the East London Water Company did not put any witness into the box in respect of purity (and probably wisely, too), still we are face to face with the fact that "the state of matters" which, to quote the report, "ought to be remedied without delay," still remains unremedied, and are the same this day as those present on the day when the late Mr. Justice Watkin Williams pronounced what we, with all respect, venture to call his ill-advised judgment in 1884 *re* Hertford. It is a curious fact, however, and to this the Royal Commissioners bear testimony, that "the water as supplied to the consumer in London is of a very high standard of excellence and of purity" (para. 178). They refer to the prejudice against the use of river water, but state that no danger exists "provided that there is adequate storage, and that the water is efficiently filtered before delivery to the consumers."

It is precisely this "adequate storage" which the East London Company are now endeavouring to obtain, perhaps a first instalment towards carrying out the recommendations of the Commissioners.

The East London Company is entitled to draw—and to quote from the evidence of the Company's engineer does draw—10,000,000 gallons daily from the Thames; this, naturally enough, gives that company interest in the quality of Thames water, and we should like to know something more than we do at the moment as to the course taken by the Thames Conservators towards preserving the purity of that river. Looking to the evidence of the officials of the Conservancy before Lord Balfour's Commission we find, as it seems to us, that a mere modicum of time is given to protecting the water from pollution, and that the inspectors have "river work proper" to attend to which absorbs much of the time which might be spent in detecting or remedying pollution.

We are, however, writing from the evidence given, and know that this practice existed when the area under charge of the Conservators was only a belt of country ten miles wide on each side of the main river. Perhaps, since the whole watershed is now in charge of the Conservators by the Thames Conservancy Act, 1894, 57 and 58 Vict., these mixed duties may be abolished; but there does not appear to be any provision in the Act for separating such duties, nor for a special fund for prevention of pollution. For this last purpose surely was the area extended, and the large extra contributions of the water companies permitted.

There does not appear to be a special officer detailed to the charge of this special duty with a proper and sufficient staff as we hoped to have seen. Last year advertisements appeared for certain inspectors who were to be paid the magnificent sum of £120 a year each. There were to be seven of them, and seven sub-inspectors at £80 a year each, to work under a committee. Whether such inspectors were appointed or not does not appear, nor has there been any public statement as to the success of the proposed committee.

It seems to be the fashion of the period to govern by committees, or Boards. The army itself is to be so "worked," we hear, at no very remote date; and we have some recollection of the saying of a distinguished legislator that if the Children of Israel had in their passage through the wilderness been under the command of a committee instead of a leader they would probably be wandering about the desert at the present day.

To carry out the requirements of an Act of Parliament in respect of abatement of pollutions needs individual action and diplomacy not usually found in those whose duty it is merely to find out an error and report it. To let such report be followed out by cumbrous machinery of notices and correspondence, the natural consequences of such procedure, makes the offender resentful and he, or the local authority, fights the matter to the bitter end, with, it may be, as in the case of Hertford and the East London water, a result that a pollution is legalised by a judgment of the High Court giving a peg on which to hang a complaint, as in the inquiry into the failure of the East London water supply.

THE WAR OFFICE AND "PRIVILEGED" COMMUNICATIONS.

In a recent review of the late Sir Thomas Longmore's work on *Gunshot Injuries*, which appeared in these columns (page 840), occurs the following sentence: "For a standard work of this kind it is regrettable that the author had not been able to gain access to reliable statistical facts, if such are available, regarding our more recent expeditions, such as those in Egypt, Burmah, Chin Lushai, Hazara, and Waziristan, in which weapons of greater range and velocity were employed.

These would have been of incalculable value, but possibly our War Office has been unable to furnish them."

The reasonableness of that criticism has been verified by the fact which has since come to our knowledge, that a medical officer has been reprimanded for publishing, without permission, in our columns some observations on the character of the wounds inflicted by small-bore weapons in the Chitral campaign.

That contribution was not only valuable, but most opportune towards the solution of a problem at present exercising military surgeons both at home and abroad; nevertheless, it has brought the writer into trouble, because it is officially declared that the subject is "privileged." We may be sorry, but cannot complain, if he unwittingly infringed a perhaps wholesome regulation, and thereby incurred censure; but we do complain of the somewhat dog-in-the-manger policy of both the home and Indian military authorities in such matters: they neither publish such "privileged" matter themselves, nor allow others to do so; or, if they do publish, it is generally long after the event, when interest has waned or the observations have even become obsolete. They manage these things better in the navy, of which the surgeons habitually forward papers for publication in our columns through their Director-General. We should like to see the same system adopted in the army, whereby such interesting observations as that to which we refer could be published to the profession at once through the medium of a medical journal. If there are objections to this course, let them be publicly stated, and then we may find arguments to meet them.

Another instance has recently come under our notice in which a medical officer has been requested to withdraw a paper dealing with an important point in connection with the new rifles and the wounds they produce. The matter is one of public as well as of scientific interest. As we have already pointed out in these columns, there is grave reason to doubt whether the new rifle is a suitable weapon to place in the hands of an expeditionary force against savage tribes. The question is, Will it stop a rush? The mere fact that the answer is in doubt ought, the plain man would be disposed to think, be in itself sufficient to cause the military authorities to be anxious to encourage the early publication of trustworthy information gathered by medical officers during recent wars. The disposition to repress scientific enthusiasm displayed by some military authorities is utterly contrary to the best traditions of the medical profession, and contrary also, as seems obvious in this case at least, to public policy.

Dr. Duclaux has been appointed Director of the Pasteur Institute, and Dr. Roux Sub-Director.

We are glad to see that the reports on the Irish workhouses which we are publishing are being reproduced in most of the Irish journals.

The Lord Chancellor has appointed Mr. George Harold Urmson, Secretary to the Commissioners in Lunacy, to be a Commissioner in Lunacy in the place of Mr. Charles Palmer Phillips, deceased.

The introductory address by the new President of the Clinical Society, Dr. Buzzard, postponed owing to his unavoidable absence from the meeting on October 11th, will be delivered at the meeting on Friday, October 25th.

The first Hunterian Society's lecture for the present session will be given on Wednesday, October 23rd, at 8.30 P.M., by Dr. Sims Woodhead. The subject of the lecture will be The Probable Limitations of Serumtherapy. Any member of the medical profession will be welcomed.

The Institute of France will celebrate its centenary on October 23rd, 24th, 25th, and 26th, with receptions, banquets, etc., ending off with a visit to Chantilly, where the members will be received by the Duc d'Aumale. The centenary will be made the occasion for the last obsequies to the most distinguished member of the French Institute, who has recently passed away. The remains of M. Pasteur, which have been temporarily placed in a vault in Notre Dame, will be finally interred on October 23rd. Sir Joseph Lister and other distinguished representatives of English medicine and science are expected to be present.

The staff of the Ophthalmological Department of the Edinburgh Royal Infirmary is now constituted as follows:—Dr. Argyll Robertson, whose term of office as Senior Surgeon-Oculist expired on September 1st, has been appointed Extra-Surgeon Oculist for one year; Dr. George A. Berry, who has held the office of Junior Surgeon-Oculist, has been promoted Senior Surgeon-Oculist, retaining half the beds in the department; Dr. George Mackay, the Senior Assistant, has been promoted to be Surgeon-Oculist with a certain number of beds; Dr. William G. Sym has become Senior Assistant, while Dr. Ernest E. Maddox has been appointed Junior Assistant Ophthalmic Surgeon.

THE "INDEX MEDICUS."

Dr. Billings announces that up to September 24th he had received the names of 105 subscribers to the *Index Medicus*. The Medical Department of the United States Army subscribes 250 dollars (£50), the Library of the Surgeon-General's Office, Washington, 50 dollars (£10), and the British Medical Association has promised a similar amount. The subscriptions already promised amount to over £400.

THE NEW COMMANDER-IN-CHIEF AND THE ARMY MEDICAL DEPARTMENT.

Our contemporary, the *Pall Mall Gazette*, in its "Service Notes" refers to rumours, "as might have been expected," of impending "root and branch organisation of the Army Medical Service at the hands of the new Commander-in-Chief." Why "as might have been expected?" Had Lord Wolseley's intentions been long ago expressed before he anticipated reaching the position he is now to occupy? All we can say to the drastic changes spoken of is, that unless they meet with the concurrence of the department itself and the medical schools they are doomed to failure. There is no medical conscription to fall back upon, and if distasteful changes are arbitrarily forced on, the already ebbing flow of candidates will altogether cease, and the last state of the department be worse than the first.

THE HOUSEMAID AND THE DUSTPAN.

To those who know the true inwardness of things the sight of a housemaid brushing a dusty carpet is suggestive of many evils. The death of Pasteur has reminded the world of what is constantly present in the thoughts of medical men—namely, that while micro-organisms are the great producers of disease, dust is the great carrier of micro-organisms. Now that we know these things, it is distressing to find how little our knowledge is put to practical use, and to see old customs still unchanged, old habits which we know to be destructive carried on, and to find the housemaid on her knees, with her brush and dustpan, stirring up dust to the detriment of everyone, and breathing germ-laden particles to her own destruction. It needs but a small amount of

common sense to see that if carpets must continue, a thing greatly to be deprecated, they should be rubbed with a damp cloth rather than brushed, and that if, in deference to prejudice, they must be brushed, this should be done by a covered American sweeper with plenty of damp tea leaves. Of all ways of removing dirt from a carpet the worst is by the use of the ordinary short brush, which involves the housemaid kneeling down in the midst of the dust which she so needlessly creates, and drawing it into her lungs with every breath. For ordinary household use something like linoleum, something which can be washed with a wet cloth every morning, would seem to be the best covering for floors; but if carpets must be, and if it is impossible to teach the present generation the evils of seeking present comfort at the expense of future risks, at least let us remember that carpets may be washed even where they lie; that, till the day of washing comes, a closed sweeper is far better than a brush, and that the worst form of brush is one with a short handle.

CISTERNS AND THE CONSTANT SERVICE.

The difficulty of adapting hygienic ideals to the hard conditions and pressing necessities of actual life was strikingly illustrated in the futile conclusion arrived at by the metropolitan medical officers of health recently met to discuss the question of the retention of cisterns under the constant service, and the restrictions to be placed on the use of such stored water. The fact is that we have to reconcile, or to effect a compromise, between a number of mutually incompatible propositions: for example, the contamination of water from public works takes place in a large proportion of instances in the domestic cistern, and the chief advantage of the constant service is that it furnishes a fresh and pure water at all times. But since no human ingenuity can absolutely provide against accidental interruptions of the supply, it is necessary for health and safety that some reserve be stored for feeding the small cisterns attached to water closets and kitchen boilers. Again, while no harm can result from the use of stored water for house cleaning, laundry work, and even personal ablution, the practice of receiving the company's water into, and drawing it from, a cistern exposed to any risk of contamination completely neutralises the advantages of the constant service (save for extinguishing fires), and that worst of all would be the use for dietetic purposes, albeit the more urgent, of water that had been long stored without renewal in a cistern reserved for emergencies only, as was proposed by Dr. Talbot, who has provisionally patented one, to be made of glazed stoneware, in the form of an inverted bee-hive with a draw-off tap at the apex, which he would have fixed independently of the usual connections with the rising main proper to the constant service. But we cannot see why it should not be like cisterns under the older system, so placed that the whole of the domestic supply should pass through it, since its form would preclude the accumulation of deposits.

ARE COLLIERS EXEMPT FROM CANCER?

Mr. T. Law Webb, of Ironbridge, whose labours to elucidate the cause of cancer are well known, in an interesting paper on this subject,[1] states that he has practised for twenty-five years in a district overlying the Shropshire coalfield, and during that time he has been surgeon to two collieries, yet he has never seen a single case of cancerous disease in a collier who was working in the pits. "Moreover," he says, "an examination of the books of the district registrar shows that of all persons whose deaths are registered as due to malignant disease during the past thirty years, only two are described as 'coal miners.' Of these one I know positively had long retired from the arduous occupation of coal-getting, and had for many years followed the more gentlemanly occupation of rat-catching. The other died in the workhouse, and had not worked in the pit for some time. It should be borne in mind that in this same locality cancer is very common, and is often seen amongst the furnacemen, moulders, ironworkers, and general labourers." Another practitioner living in the same district is also unable to recall the case of any collier suffering from cancer. The immunity, however, does not extend to sarcoma. The explanation lies partly: Mr. Webb thinks, in the habitual cleanliness of the collier who "tubs" daily as soon as he comes home from the pits, partly in the fact that his habits rarely lead him to drink water from casual sources. He goes to work early, and habitually in his working hours carries with him a quart can containing cold tea or coffee without milk. He always returns home to dinner, at which he usually drinks tea, or, if he can get it, small beer, whilst his supper consists of bread and cheese, with sometimes an onion and a pint of beer. The colliers in Shropshire are a temperate, peaceable, law-abiding class not given to excesses of any kind. Though they are often seriously injured in their dangerous occupation, they survive the most extensive wounds and fractures, and although they look pale and anæmic they are in reality a healthy set of men. It would be extremely interesting if the surgeons who practise in the great coalfields of the North and in the South Wales colliery district would give their experience upon this point of the alleged unequal distribution of cancer mortality in the population of coal-mining districts. If it is a fact that men working underground and not drinking much water are more exempt from cancer than those in a similar state of life working above ground and drinking from casual water supplies, we shall have a more tangible reason for suspecting cancer to be a waterborne disease than is afforded by any of the present theories or statistics.

[1] *Birmingham Medical Review*, October, 1895.

WITNESSES AND COURTS OF LAW.

At an inquest recently held at St. Clement's Vestry Hall before Mr. Troutbeck, on a man who fell off his cab and shortly afterwards expired, it appeared that a person who witnessed the occurrence declined to give his name and address, or to attend the inquest, on the ground that he did not want to lose his time. The coroner rightly enough urged that it was a citizen's duty to attend, for, as he said, it might be a serious case, involving the liberty of someone else. Undoubtedly, the difficulty of obtaining reliable evidence as to anything which takes place in the streets is a matter of growing importance, but the cause of it is not altogether the fear of loss of time. It is the treatment to which witnesses are so often subjected by coroners and police magistrates which makes respectable men hold aloof. Some police courts are notorious for the manner in which both witness and counsel are treated. In the very issue of the *Daily Telegraph* in which Mr. Troutbeck's homily on the duties of citizens is reported, there is a report also of a case at the Marlborough Street Police Court, from which we extract the following passage of arms: "Mr. Humphreys (the solicitor) was about to put Holloway in the box, but Mr. Newton (the magistrate) said: Before you put him in the box I tell you I shall not believe a word he swears. Mr. Humphreys: I tender him as a witness. I take it that you have made up your mind not to believe him. Mr. Newton: I think that an impertinent observation. Please sit down. Mr. Humphreys further pointed out that owing to the action of the magistrate his witnesses were at a great disadvantage as compared with the police." It will be remembered that it was at the same court and before the same magistrate that only last week Sir George Lewis felt called upon to retire from his case because of the way in which he was treated when appearing for Professor Lankester, who had been charged by the police. It must be obvious to everyone what an enormous responsibility is thrown upon the police by the absence of respectable confirmatory evidence, and how easy it might be for an innocent man to be convicted. It is to be feared that there is among

respectable folk a growing dislike to giving evidence and exposing themselves to all that may befall them in the witness box. In cases of accident or sudden illness in the street not only good citizenship but humanity demands that all should help. The knowing Londoner, however, has learnt the lessons of experience as taught in the morning papers, and he takes good care not to risk the witness box; and so, by the unwisdom of magistrates and coroners, it has come to pass that in the affairs of the streets only official evidence is available. This may turn out to be the germ of many evils.

THE ANIMAL OF CULTURE.

Professor Albert, of the Vienna University, has recently published a pamphlet on the subject of the admission of women to the medical profession. He considers that the "zoon politicon," the methodical being, the animal of culture, is exclusively the male, and that it would be waste of time for women to attempt to fit themselves for medical practice. He thinks, however, that they might be trained into useful assistants by spending "two terms in the theoretical and practical study of surgery, gynæcology, and midwifery." Any such proposal, however, would be likely to be criticised as severely in Austria as it would be in England. To create a class of very inadequately trained practitioners who could not be easily distinguished by the lay public from those who have been properly trained would be a *volteface* of the most undesirable kind. Professor Albert's theoretical views of what women cannot do are not confirmed by the study of what they are doing at this moment in Great Britain and in many parts of the world. Whether they have any claim to be considered "methodical beings or animals of culture" may be open to discussion, but that they can organise a hospital and carry on surgical work on a large scale and with excellent results has been proved by experience. Professor Albert's scheme would exclude women from all professional dignity and from any but the most meagre remuneration. The women and the public of Austria are not likely to give it serious consideration. The indications in Professor Albert's paper of his superb masculine self-approval seem in this country to be somewhat out of date.

THE BLACKFRIARS SALVATION ARMY SHELTER.

The hearing of the application made by the vestry of St. George the Martyr, Southwark, for an order prohibiting overcrowding at the above-named shelter was resumed before Mr. Slade at the Southwark Police Court on October 10th. Professor Wanklyn was called for the defence, and he stated that he had examined samples of air taken at this shelter. The results of his analysis were 8.6 parts of carbonic acid in 10,000 parts in one instance and 10.9 parts of carbonic acid in 10,000 parts in another instance. Dr. Severn, who was called for the prosecution, had found 75 parts of carbonic acid in 10,000 parts. This looks like a mistake; the highest proportion of carbonic acid hitherto found in the air of a public building being 40 parts in 10,000. Professor Wanklyn expressed his willingness to have a fresh analysis made by himself, Dr. Severn, and a third person. The case was again adjourned.

THE SICK POOR IN IRISH WORKHOUSES: MEDIÆVAL CASTLEBLAYNEY.

Our Special Commissioner's account of Castleblayney Workhouse reveals a state of things almost mediæval in the indifference to all that we have learnt to consider sanitary and becoming. There are no indoor closets, no water is laid on, the roller towel is used by all the patients in common, the female lunatics have no paid attendant, what wonder that they showed evidence of neglect in dirt and unkempt hair and slovenly attire. The wards are insufficiently lighted and ventilated, and, as is always the case, the aged and infirm have no attention at all at night after they are locked in. This being the invariable custom the guardians are content to accept it, but will they try to realise what it means? Old people are wakeful, and the weary vigil of age and helplessness is aggravated by the oppression of foul air and the impossibility of obtaining any help if such were needed. We note that the medical officer has prevailed on the Board to do something towards bringing the sanitation of the house up to modern standards of healthfulness and decency. Much more will remain to be done before it can become a model institution, but we may congratulate the medical officer on this important advance. The union doctor is often the only voice crying in the wilderness of ignorance and prejudice. The lot of the neglected pauper may soon be alleviated by a general awakening of the public conscience; but when that day comes let all honour be given to those who were first in the field, who, unsupported by public opinion, unaided by praise, have so long championed an unpopular cause—the cause of the helpless poor—against the ignorance and prejudice of the average guardian and the hidebound officialism of an obsolete system.

THE "CHURCH ANTIVIVISECTION LEAGUE" AT NORWICH.

A branch meeting of this Society was held last week at Norwich, and four addresses were given in the usual style by three clergymen and a lady. Dr. Beverley and Dr. Burton-Fanning then addressed the meeting and explained the real facts. A vote of thanks was given to them, and a good account of their addresses was published in the *Eastern Daily Press*. It is difficult and thankless work for any member of our profession to speak at such a meeting, and expose himself to be talked about for a week after it. But, as a rule, if he has carefully selected and arranged his arguments beforehand, he obtains a good hearing, and may even carry an amendment to the effect that, under the restrictions of the Act, experiments on animals ought to be allowed. The proofs which Dr. Beverley and Dr. Burton-Fanning selected were taken from abdominal surgery, cerebral localisation, and the antitoxin treatment of diphtheria. These examples, and the use of thyroid extract in myxœdema, are exactly suited for meetings of this kind; and it is worse than useless to speak on these occasions unless one is well provided with the right sort of facts, arranged ready for use. The Secretary of the Association for the Advancement of Medicine by Research (57, Wimpole Street, W.) is always glad to send literature regarding experiments on animals to anybody who wishes either to speak at a meeting or to study the subject for himself.

ANNUAL MEETING OF THE ROYAL COLLEGE OF SURGEONS.

The annual meeting of Fellows and Members of the Royal College of Surgeons of England will be held on Thursday, November 7th, at 3 P.M. The report to be then presented sets out in full the new by-laws (Sections IV, XVI, and XXV) which have been approved by the Home Secretary, and signed by him, by the Lord Chancellor, and by the Lord Chief Justice. The last election of members of Council was held under the revised by-law dealing with this matter. The most important new by-law is that determining the powers of the Council in dealing with cases of misconduct of Fellows or Members. The Council will in future be able to deal with many cases of misconduct of which under the more limited scope of the old by-law they were unable to take cognisance, and the disability under which the Council formerly not infrequently laboured of being unable to take action against Members of the College whose names had been removed from the *Medical Register*. The question of the admission of women to the examinations for the diploma of Member will come up for consideration, but before any final decision is taken it will probably be found advisable

to await an opportunity for consultation with the Royal College of Physicians, since at the present time the diploma of Member is practically only granted in conjunction with the licence of the College of Physicians. The tone of the report in the paragraphs dealing with finance is somewhat desponding and puzzled. The receipts are less and the expenditure greater. The decrease is due in part to a falling off in fees for the Fellowship Examinations, in part to other causes, but in the main to a decrease in the payments received from candidates at the First and Second Examinations for the Membership. The decrease on the Second Examination was anticipated, since there had been a decrease on the First Examination in the previous year; but the Finance Committee express the opinion that "the continued falling off in the receipts on the First Examination calls for the most serious consideration." No explanation is suggested, but it may be assumed that its causes are similar in nature to those which have in recent years caused an appreciable decline in the number of new students entering at the medical schools. Among these are to be numbered the greater activity of the northern schools of medicine, many of whose students seek degrees from the Victoria and the Durham Universities, and the growth of the Cambridge School, in short the growing disposition to seek elsewhere than in London a degree in medicine, the value of which is becoming more and more appreciated by medical students and their parents and guardians.

HOSPITAL ACCOMMODATION IN LONDON.

At a meeting of the Marylebone vestry held on October 10th, Mr. E. White, J.P., presiding, Mr. A. Wynter Blyth, medical officer of health of the parish, reported that six cases of scarlet fever in the parish were notified to him that morning, and an urgent case of diphtheria, for which there was no available accommodation in the hospitals of the Metropolitan Asylums Board. He had succeeded in getting the urgent case of diphtheria admitted into the Middlesex Hospital, but the cases of scarlet fever remained unisolated in private houses, mostly in one- or two-roomed tenements. In the course of a heated discussion, Sir Edwin Galsworthy, chairman of the Asylums Board, said the Marylebone vestry was not relieved of its responsibility because it was the especial duty of the Asylums Board to take infectious cases. The Board had been, and now was, doing its level best to meet all emergencies, and to keep pace with the demands made upon its accommodation. It was decided to convene a conference of delegates of London local authorities to "consider the position of the Metropolitan Asylums Board as the body which provides for the care of infectious diseases in the metropolis."

THE BALY MEDAL.

After the delivery of the Harveian Oration before the Royal College of Physicians, by Dr. Church, this day (Friday), the Baly Medal will be presented to Dr. W. H. Gaskell, F.R.S., of Cambridge. The Baly Medal was founded in 1866 by Dr. F. D. Dyster "in memoriam Gulielmi Baly, M.D.," and is awarded every alternate year to some person who has distinguished himself in the science of physiology, especially during the two years immediately preceding. Dr. William Baly, whose memory is thus commemorated, was at the time of his death, in 1861, by a rather singular accident on the South-Western Railway, Assistant Physician to St. Bartholomew's Hospital, and was joint Lecturer on Medicine with Dr. (afterwards Sir George) Burrows. He was also Physician to Millbank Prison, and in his Goulstonian Lectures on Dysentery had described the second epidemic of that disease (1846-7) in that prison. He was Physician to the Queen, and in large practice at the time of his death, at the age of 47, but his earlier years were devoted to the study of physiology. He was the translator into English of Müller's *Physiology*, and it was for this reason that when his friend Dr. Dyster, of Tenby, desired to perpetuate Dr. Baly's memory by a medal, he associated it with physiology. The first award was made in 1869, and the recipient was Richard Owen; among the names of those who have since received it are those of Claude Bernard, Carl Ludwig, Charles Darwin, and Brown-Séquard, to mention only those who are no longer with us.

DISCOMFORTS OF RAILWAY TRAVELLING.

A time is within the memory of many of us still living, when we were grateful if we arrived at the end of a railway journey without having received bodily injury, and when a diet of station sandwiches (celebrated by Dickens in *Mugby Junction*) was considered sufficient for our bodily wants upon a journey. At the present time much has been done to ameliorate the condition of the railway traveller, but there is one important reform which requires to be completed on all trains before it becomes of any use to the public. We refer to the provision of lavatory accommodation for all classes. By the present arrangement the traveller may get a lavatory carriage of any class, but until he starts on his journey he seldom knows whether he will do so or not. For first-class fare we pay about 3d. a mile, or double the fare generally paid in North America, where lavatory accommodation is universal. As a preliminary step to getting this supplied to all classes, the public should insist on having it provided on all first-class carriages, and decline to use them at all until such accommodation is provided. The public would be more satisfied to find comfort in this particular in their journeys than even the saving of a few minutes of time on the journey to Scotland—a matter of very little importance to most of us.

FEES TO MEDICAL WITNESSES.

A correspondent, signing himself "H. E. C. C.," sends a graphic account of his experience as a witness before magistrates. He is acting as assistant medical officer of an asylum in the Midlands, at which an attendant recently attempted to commit suicide. The case had, of course, to be investigated in Court, and the medical superintendent requested "H. E. C. C.' to attend, "in case his evidence should be wanted." He attended accordingly, without any summons (mistake number one). On being called into the witness-box he asked for his fee, and was promptly rebuked by the presiding magistrate—a Major, pompous, overbearing, and apparently ignorant of law, who bullied his brother magistrates and everyone else present in the Court. The Major threatened to commit the young medico for contempt of court, and here "H. E. C. C." gave in, and gave evidence without any fee (mistake number two). The Major and his brother magistrates happened to be members of the asylum's committee, and "H. E. C. C." has since been informed by one of the others, that evidence such as his is never rewarded with a fee in the courts of the magistrates in that county. The statement of their practice is probably accurate, but the practice is palpably wrong. A medical witness is entitled to his fee as a professional man, whether his evidence is technical or scientific, or not; and he renders himself liable to no penalty if he refuses to give evidence till his fee is paid. The safer course is to keep out of court altogether until a summons with the proper fee has been served. A witness who attends voluntarily, as "H. E. C. C." did, puts himself at the mercy of the Court; and if he should be rudely treated by an overbearing chairman, must take the consequences of his own indiscretion in so attending. Possibly "H. E. C. C.," if he had persisted in his refusal to give evidence without his fee, might have been wrongfully committed for contempt of court, and so become a martyr. He might even have brought an action for damages against the Major, and obtained a substantial solatium for his wounded feelings. But these possibilities cannot now be realised. "H. E. C. C." has merely been added to the number of his professional brethren who have been refused their proper remuneration. The Major and his brother

magistrates will continue to decide cases regardless of law or justice until someone who is bold enough to insist on his rights comes before them. The right to some remuneration is clear; but rights are useless if not enforced. An opportunity of demonstrating that they exist has been missed.

FARNBOROUGH DRAINAGE.

An announcement of considerable interest with regard to this pressing matter was made at the meeting of the parish council last week. Mr. Radnor, the expert called in, looking at the question quite impartially, sees that the evils of the present system will never be completely remedied, though possibly they might be patched up. He therefore advises the council to face the position boldly, to abandon the present farms, and to secure a site for drainage at Cove. It remains now for the council to act on this sound advice. This new departure may be costly, but it must be remembered that any attempt to put in order the existing farms would also involve considerable present expenditure, whilst in a few years time it might have to be repeated. Moreover, there is a distinct advantage about the new scheme which could never quite be gained by any work of improvement at the old farms—namely, it will carry the drainage a considerable distance from the residential part of Farnborough, and it will certainly give to the town greater security than exists at present against disease. A decision is urgently needed.

A PRECOCIOUS CRIMINAL.

An inquest was held last week on the body of a male infant four months old, who had been brought in dead into Charing Cross Hospital, its death being due to suffocation caused by pieces of coarse blue paper, such as sugar is wrapped in, pushed down its throat; these were at once removed, and every effort made to restore the infant, but without avail. The mother testified that she had gone out for a few minutes, leaving in the room with the baby an older child of three years, who had often betrayed jealousy of the infant. On her return she found the infant choking, and at once brought it to the hospital. Subsequently the child accompanied her parents to the mortuary, and on seeing the body of the infant, pointed to it, and said, "I done it," and there can hardly be a doubt that this spontaneous confession of hers conveyed the truth. The jury wisely returned an open verdict; the only alternative, indeed, would have been for them to have found the mother guilty of causing the death by neglect. We are reminded of a similar instance where a three-year-old girl, jealous of the twins who recently arrived, took the opportunity, when the nurse was out of the way, to pull them both from their cradle, and proceeded to drag them downstairs, holding them by their long clothes, so that their heads were almost reduced to a pulp by the time she got to the foot of the stairs. It is needless to add that the infants did not long survive the ill-usage. Children of this age are apt to be very jealous of those who have come in to share with them the affection of their parents, and are wont to be excessively cruel sometimes, and of course until they are old enough there is no prevention possible except by watchfulness on the part of mother or nurse.

DENGUE FEVER AT HONG KONG.

Our Special Correspondent writes: An epidemic of dengue fever is prevalent in Hong Kong. It is characterised by its infective character, by a suddenly developed high temperature (105° or even 106.5° F. after a few hours' seizure), pain in the limbs, vomiting, coated tongue, and frequently mental aberration or excitement. In many districts it is impossible to get servants at any price. The period of incubation is under twenty-four hours. A coolie engaged as a chair carrier, after sleeping one night where the disease is raging, invariably develops the fever. Dengue being perhaps the most readily infectious disease known, it can be understood how few Chinese escape, when it is remembered how they herd together. Eight coolies employed as chair carriers in a European house will sleep in a room 10 feet by 10 feet by 10 feet. A few deaths have occurred amongst Chinese. Europeans have as yet escaped fairly well, although many cases have occurred amongst children. With children a rash occasionally occurs, sometimes there is coryza, at times catarrh of the throat and trachea. Diarrhœa, orchitis, and boils are common sequelæ during convalescence. As regards treatment, quinine is well nigh useless. The effects of antipyrin or phenacetin are slight and transient. The real treatment is change of house and locality. In twenty-four hours, sometimes immediately, the temperature will drop to normal and a long way below (96.4°), after a change from the infected locality, especially to a higher level. Salicylate of soda is the most useful drug during the attack, and strychnine the best during convalescence. The plasmodium malariæ is not present even in cases assuming a pseudo-intermittent type.

CAMARAN: A DEPOT FOR CHOLERA.

It may seem late to refer to matters which took place so far back as in March, but as we have now been enabled to obtain from official sources the exact facts and dates regarding the asserted importation of cholera into the Hedjaz by pilgrims from Bombay, we think it well to place them on record. Cholera is said to have first declared itself at Camaran amongst the pilgrims of the steamship *Mahamoodie* in lazaretto there. Now the *Mahamoodie* left Bombay on March 6th with a clean bill of health and certificate showing no deaths from cholera during the week previous to her departure. She arrived at Camaran on March 16th. During the voyage to Camaran, 3 deaths occurred amongst the pilgrims, the causes being respectively senile debility, pneumonia, and phthisis pulmonalis. On March 23rd, or seven days after their arrival, 2 of her passengers died of diarrhœa, and on March 24th cholera was declared by the quarantine officers to have broken out, that is, seventeen days after leaving Bombay, which was then free from cholera, and seven days after arriving at Camaran. The pilgrims were quarantined at Camaran for thirty-nine days, and during that time 54 of them died—28 from cholera and 26 from ordinary diseases. The surviving pilgrims, re-embarking on April 24th, reached Jeddah three days after cholera is said to have appeared in Mecca itself, namely, April 24th or 25th. The next vessel from Bombay left that port on March 16th, with no cholera deaths on its bill of health, carrying 1,021 pilgrims. She arrived at Camaran on March 24th, and four days after disembarking its passengers cholera declared itself among them. The vessel was quarantined for forty-five days before the pilgrims were allowed to re-embark for Jeddah. The agents state that there were absolutely no suspicious deaths on board ship on the voyage from Bombay to Camaran. After the departure of the above-mentioned vessels others set out from Bombay on March 17th and 27th, and on April 10th, 16th, 20th, etc. Of these the first three are alone of any interest, because they alone could have arrived in time to introduce cholera into the Hedjaz by the time it was known to be present there. Neither the *Naseri*, leaving Bombay on March 17th, nor the *Mobile*, starting on March 27th, suffered from cholera at Camaran, and they were allowed to proceed after the usual ten days' detention always in force. The *Naseri* on the voyage to Camaran had 4 deaths—2 from old age and debility, 1 from convulsions, and 1 from central hæmorrhage—while the *Mobile* had 2 deaths—1 from tuberculous meningitis, the other from pneumonia. The pilgrims on the *Husinee*, which started on April 10th, did, however, suffer from cholera at Camaran. It is clearly evident that none of these vessels carried cholera from Bombay, but that in each case in which cholera took place the infection was incurred at Camaran—a place which, as our correspondent asserts, has been cholera tainted for the last fifteen years.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

IV.—CASTLEBLAYNEY UNION, CO. MONAGHAN.

This is a large house, built originally for 1,000 inmates, though with the new regulations as to cubic space we doubt if more than half that number could be accommodated. In the infirmary the space per bed is already too small. The house is on the immediate outskirts of the town on a hill overlooking the railway. At the time of our visit the number in the house was 150, of whom 22 were in the wards and 30 altogether on the relief book. Dr. Wilson, the medical officer, kindly met us and went round the house with us. The structure plan is the same as that in the other country unions.

The Infirmary

was divided among the sick, the idiots, and the maternity department. On the ground floor we went into a ward of eight beds for females, most of them being occupied; a paved passage led down the middle, but the floor under the beds was boarded. The beds were of modern pattern, elsewhere the "harrow" bed is in use. The more serious cases appeared to be in this ward. Across the passage is a stone-paved room called a day room; upstairs is a larger ward having nine beds in it. Opening out of this is a ward for children, and beyond the lying-in ward, with a staircase from it leading down to the female lunatics' quarters. On the male side the disposition is the same, except that the children's ward is appropriated to the male idiots. The nurse's rooms are in the middle block. The walls are rough surface whitewashed, the uneven surface showing plenty of dust. On the ground floor the rafters are unceiled; in the floor above the roof is pitched and plastered. There was nothing to redeem the dreary aspect of the wards, the beds were crowded, only a narrow space forming a passage in the middle, and between the beds was space for a chair, but such articles of furniture are more conspicuous by their absence; a wooden bench being the most frequent seat provided for these sick folk. Straw ticks and straw pillows were on the "harrow" beds; on the iron wire wove beds we found a mattress. It is painful to see these short, narrow beds in use for the sick; the comfort of the straw tick depends on the nature of the straw and the manner in which the tick is filled, and no care can prevent the vermin which they harbour. Between the beds is a double shelf bracket, used by the patients for their mug or personal possessions. The ventilation is by the windows; those on one side are of respectable dimensions, but opposite are small slit openings near the ceiling, useless either for light or air, so that the wards are not well lighted. The fireplaces, one in each ward, have wide open chimneys, with a few bars; these must consume much fuel and give but little heat in return, and only add to the uninviting aspect of the wards.

The Sanitary Appliances

for the sick consisted of a bucket-chair in each ward, and a basin on a bracket with roller-towel suspended above, changed, as the nurse informed us, when necessary, but evidently used by the patients in common. There are no indoor conveniences, nor is there a supply of water; the hot water is heated in the kettles; there are no fixed baths, but movable baths are used in the infirmary and body of the house. All vessels used during the night remain unemptied until the morning.

There is One Trained Nurse

and a paid assistant, untrained; the rest of the nurses are inmates with illegitimate children on the female side, and for the males inmates of more or less age and infirmity. There is no nurse for the night, and the sick are dependent on the attention of these mothers with their infants or the more capable among the men. We saw several acute cases among the patients, and besides the usual bed-ridden cases, though the wards were comparatively empty, the time being midsummer.

The Fever Hospital

was a pleasant contrast to the infirmary; the wards are larger and more lofty, the walls have a smooth whitewashed surface, there is cross-ventilation, the windows giving a good supply of light and air. The wards are on two floors, the lower ones being a little smaller; in all the wards the fireplaces are of old construction; narrow beds and straw ticks are used in this department, and if the frames were wider we should not quarrel with these for infectious work. There is a laundry and kitchen, but we were surprised to see how little attempt is made to keep the apparatus in serviceable repair; the kitchen grate was out of order, and we saw the nurse heating water for her patients on this range, of which the front bars were falling out and the bottom bars deficient; in the laundry also most of the service pipes were split. The nurse in this block has had six months' training at the Fever Hospital, Cork Street, Dublin; she had two patients suffering from diphtheria in the wards, both convalescent.

The Lunatics

are placed at the ends of the infirmary building. This class comprises the insane, imbeciles, and epileptics. The cells have been removed, and the lunatics are in dormitories, but their surroundings were unspeakably dreary. The wards are dark and ill-ventilated, those on the female side crowded with women in all stages of helplessness; the men are better off, as some of them are employed about the grounds. There is no paid attendant for the females; an idiot master is on the male side. There are no baths or other conveniences for washing, so that we were not surprised to see that their persons and clothing looked dirty, their hair unkempt, and no evidence of care in their appointments. What can be expected when this irresponsible class is practically left to see after themselves? The males, as before mentioned, are placed in the upstairs ward near the sick; the medical officer, doubtless confronted by a choice of evils, has probably made the best selection; but we feel that these noisy inmates are not desirable neighbours for the sick. The whole matter of the care of the workhouse lunatics in Ireland calls loudly for attention, so it is useless to attempt to alter these minor details. These patients are locked up at night, and are provided with pails and buckets for sanitary purposes. The airing-courts are small stone-walled yards. Nowhere in this department could we see anything which suggested employment or alleviation. In this direction, however, there is a move on, as a new building is in process of erection to accommodate the male lunatics, and is being fitted with all modern appliances; this building Dr. Wilson said was to be ready for occupation this year.

The Aged and Infirm

are as usual in the wings of the body of the house on the ground floor. The dormitories, dark, uninviting, and cheerless, are, with the exception of the yards, the only places where these old people can spend their days; rows of harrow beds on each side, one open grate surrounded by benches. There are a few armchairs in each ward, rough walls of doubtful colour, unceiled rafters, four windows in a long ward, one at either end, and two in the middle of the length; no appearance of occupation or amusement; the old men in listless groups round the windows; the females, a few at needlework, but many too old or feeble to employ themselves; a basin and a very dirty roller towel. This was summer; when we picture the long winter's evening and the feeble light, a dreary evening brought to an end by the turn of the key on the outside; the open pails with their contents fouling the air, already fœtid with the use of the room by day, we think that the hopeless captivity of these inoffensive paupers shows an apathy on the part of the authorities that would be criminal but that, unhappily, it wears the sanction of custom. There are no indoor conveniences attached to this department, and the outside privies are at the far end of the yards.

The Nursery

is divided into two sections—that for the orphans, and that

for the infants with their mothers; the former is in the small room adjacent to the females' ward, and the latter is the able-bodied women's dayroom. The first class appeared to be much better cared for. The woman in charge, herself an inmate, was doing her work well, and as she was free from the interference of ignorant mothers, the poor little things had a chance. They were clean and cheerful in appearance, and looked on good terms with their nurse. In the other nursery there were about five infants; here, on the contrary, were dirt, squalor, untidiness, and fretfulness. The infants lie on straw ticks in wooden cradles; some were being nursed and others are bottle fed, of course, the tube bottle being in favour. We were informed that a movable bath is used in this department.

RECOMMENDATIONS.

We see from a newspaper report that since our visit the Committee appointed to confer with Dr. Wilson recommends "that register grates be placed in each ward, and that every ward in the house be fitted with Turner's ventilators; that the pail and privy system be done away with, and water-closets erected all over the house." This is indeed a step in the right direction, and we congratulate the guardians on this action. We take the liberty of supplementing this recommendation by asking that the quarters occupied by the old people be improved by giving them more comforts, better beds, armchairs, more light, and more appliances for keeping themselves clean; in the hospital that a night nurse be appointed, and a paid attendant for the female lunatics. We fear to add baths and lavatories to our list, but cherish the hope that these counsels of perfection may one day win their way with the guardians.

THE SELF-SATISFACTION OF TRURO.

This workhouse has received a visit from the Commissioners in Lunacy, who inspected the condition of two men and eight women, and reported "the accommodation to be fair; rooms, beds, etc., clean; and that the patients appeared to be well cared for." The Board is delighted, and contrasts this report with that given in the BRITISH MEDICAL JOURNAL of September 19th, 1894, which they are pleased to describe as "rather sensational." In turning to that report, we note that it does not deal with the condition of the lunatics, except so far as they would come under the class of patients; but if any of our readers refer to the report in question they will see that it deals with hard facts of insufficient nursing, especially at night, and antiquated wards and appliances for the treatment of the patients, a manner of dealing with the sick pauper which ought not to be a matter of congratulation on the part of the body responsible for such a state of things. Considering how much the attention of the public has been directed to this house, first during the inquiry into the conduct of the master, and then through the controversy respecting the appointment of an untrained nurse as assistant, it seems to us that the most businesslike course would be to make an earnest effort to set the house in order, and wait for congratulations when solid progress could be reported.

NURSING IN WORKHOUSE INFIRMARIES.

As a corollary to the movement which has been so effectively developed by the BRITISH MEDICAL JOURNAL in its reports on provincial workhouse infirmaries on behalf of better nursing arrangements existing in these public institutions we are glad to see that an association has been formed entitled the Workhouse Attendants Association. Among the officers are: *Patron:* Her Royal Highness Princess Christian. *President:* The Countess of Meath. *Vice-Presidents:* Adelaide Duchess of Bedford, the Duchess of Rutland, Constance Marchioness of Lothian, the Lady Bloomfield, the Lady Knightley, Mrs. Hugh Rathbone, Miss Home-Cochrane, Sir William H. Broadbent, Bart., M.D., and Rev. J. W. Horsley, M.A. *General Committee:* Mrs. Edwin Booth, Miss Bramston, Poor Law Guardian, St. George's, Hanover Square; Mrs. Charles, Poor Law Guardian, Paddington; Miss Clifford, Poor Law Guardian, Bristol; Miss Eyre, Miss Glossop, Mrs. Angus Hall, Mrs. Healey, Poor Law Guardian, Liverpool; Mrs. Henniker, Poor Law Guardian, Fulham; Mrs. Burdon-Sanderson, Oxford; Mrs. Shaen, and Mrs. Arnold Toynbee, Poor Law Guardian, Oxford. *Honorary Secretaries:* Miss Lee, 20, Bryanston Street, Portman Square, and Miss Mary E. Johnson, 5, Upper Park Place, Richmond, Surrey.

A further executive Committee has been appointed including Miss Louisa Twining, Poor Law Guardian, Tunbridge.

This Association is formed for the purpose of introducing trained attendants into the wards for the aged and infirm, epileptics, imbeciles, and infants in workhouses. At the present time the charge of many of these wards devolves upon wardsmen and wardswomen chosen from among the inmates. Now that public attention is especially directed to the condition of paupers it is generally acknowledged that some change in this arrangement is desirable. In England the workhouse is the only national refuge for the old and infirm poor. In France and Germany they are received in *hospices* and tended by "the Little Sisters of the Poor" and by deaconesses. This Association trains in well-managed institutions women to take charge of these wards, who will, while adding considerably to the bodily comfort of the inmates, raise their moral and religious tone. The Countess of Meath has paid for the training expenses of the first six suitable probationers, and it is earnestly hoped that the public will generously come forward to assist in the extension of this scheme.

WATERBORNE DIARRHŒA AND DYSENTERY.

AN outbreak of diarrhœa and dysentery in the city of Melbourne, ascribed to the agency of drinking water, and located within a circumscribed area and brief space of time in 1892, is of such importance as to demand that it be permanently placed on record in our English Indian journals. The report, which is elaborate and valuable, is by Dr. D. Astley Gresswell, the health adviser to the colony of Victoria. The circumstances briefly summarised were as follows:—

In the last ten days of November, 1892, there occurred in a well-defined and limited section of the city (hereafter termed the "block," seeing that it comprised only a block of streets) an outbreak of diarrhœal disease in circumstances which seemed to point to some factor common to the whole block, and common only to that block, since the attack occurred with great simultaneity, and all within the epidemic area thus sharply defined. Inquiry of a special and close character showed that 185 separate premises were involved in the block, and from the 144 occupied tenements information was forthcoming of a sort to help the inquiry. It was found that 140 of these took the tap water common to the city generally, and that of 53 of these habitually taking the water in a boiled state only 1 (1.8 per cent.) was invaded; that in 14 the water was generally boiled, 3 (14 per cent.) being invaded; and that of 68 in which the water was as a rule taken unboiled and unfiltered, 34 (50 per cent.) were invaded. There were indeed other 8 houses invaded, but Dr. Gresswell does not insist on these, since they may not have had relation to the particular outbreak, owing to dates of occurrence and the like; but even apart from these there was much to condemn the water as the causative agent, and accordingly further inquiry was made to determine the point outside the special area, that is, immediately outside it, and the facts elicited showed that in 98 out of 105 houses giving information outside the block in which the same tap water was taken, there had been in the epidemic period cases as follows:—At 15 houses taking boiled water, and at 7 using filtered water, no illness; at 21 generally boiling the water, 1 case; and only 1 again at 55 houses using the water in a raw state. Here, then, was an enormous difference of attack incidence on houses inside and outside the block, and, as regards the former, on those boiling and those not boiling their drinking water.

Now the disease in question was of a diarrhœal nature, as already stated, and was accompanied by severe abdominal pains, by vomiting, and by passage of blood *per rectum*. What were the circumstances whereby the water, if, indeed, water were the cause, could have acquired its property for harm in such a small section of its reticulation? The reason was not far to seek. On November 23rd the pipes of the block thus invaded had been cleared of all water for the purpose of doing some repairs to the service mains of certain premises in the block. In order to complete the repairs the water was turned off from the mains running round the streets of the block and the fire plugs in the streets were, some of them, "staked" with the view of more quickly emptying the mains. The fire plug in use was similar to what is known in this country as the ball hydrant, an arrangement which permits of the ingress of all sorts of surface impurities at certain states of pressure in the mains. It was immedi-

ately after this emptying of the mains in the block that the epidemic outburst occurred; and elaborate experiments were made in January with the pipes treated in precisely the same manner in which they were treated on November 23rd, with a view of ascertaining if possible how the disaster might have been brought about. The single exception was that after emptying, the mains were flushed out copiously, and the first water issuing from a particular hydrant collected and analysed. The water issuing in the first half minute consisted of foul liquid mud, seven to twelve buckets full, an analysis of a sample showed it to be in the main composed of foul matters, derived in chief part from an adjacent sewer, or rather open gutter, only 5 feet away and at a higher level.

It was thus seen that on November 23rd, when no flushing took place, similar filth to that issuing on the day of experiment from the hydrant must have found its way into the systems of consumers of the water in the block and to a slight extent also to consumers outside the block, though in a much more dilute form, the ramifications of the water service permitting only little of the water in the block mains to find its way outside the epidemic section. Now we learn that the fire plug openings are fixed, and that service pipes are also fixed in Melbourne (without intermediate service box) near to, below, and actually into urinals, drains, etc., and that leaking mains are permitted to lie just beneath street gutterings and immediately alongside the foulest of open pervious drains in soil thoroughly saturated with putrid filth. Thus either by way of open fire plugs or by way of leaking drains and leaking water mains—which are apparently numerous—the water of Melbourne at this time could have become fouled. These mains are open to access of human urine, animal excrement, sweepings, and all sorts of street and household filth. It was no doubt accidental that particularly foul filth was present in juxtaposition to the emptied mains in this block, but the same thing might have been happening on a smaller scale all over the city. The water at the time of the epidemic was noticed to be milky, foamy, fermented, and discoloured. And as lending additional colour to the condemnation of water as the *vera causa* of the dysenteric diarrhœa, the experiments carried out on the block mains in January, after the manner of November 23rd, and notwithstanding the subsequent flushing, were followed by diarrhœal illness of a like kind in the inmates of some of the houses in this block.

WELL-VACCINATED LOCALITIES.

Mr. Alexander Wheeler (Darlington) writes to us: Will it ever be possible for your pen to do us justice? The British Medical Journal of September 19th says: "The towns which have suffered most from small-pox epidemics are those in what are known as the woollen districts—Bradford, Keighley, Dewsbury, Leicester, etc., where vaccination has been most neglected."

Take Bradford. It is not there that vaccination has been most neglected. A glance at the vaccination Local Government Board returns would have prevented your committing yourselves to so serious an error. Vaccination is patronised and enforced in Bradford; but take Keighley, not only is there little vaccination there, but there is little small-pox since vaccination fell out of use; and by what perversion of fact you could say it was a place that "suffered most" from small pox epidemics I cannot understand. It is not true. Nor is it true of the other two. Leicester has not suffered anything like as much as Birmingham or Sheffield, where vaccination is run as the salvation of man. You must surely be both bigoted and sore to use such words.

Now take this town, it has let vaccinations run down, in obedience to a strong popular desire, but the small-pox is simply absent, from the wise action of the authorities in pulling down the old small-pox habitat and treating all new dwellings as places where sanitation must be followed.

It is no use trying to blink the issue of the war; the fact is out, and is well known, that there is not the least need to be in fear of small-pox if there is the proper care to keep out of the abode and lieu the results and effluvia of decaying organic matter.

*** The following tabulation of the facts of the epidemics referred to will offer sufficient answer to Mr. Wheeler:—

	Ten Years.									
	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891
Bradford, Yorks:										
Percentage of default under Vaccination Acts	5.1	4.9	6.1	7.1	8.9	15.1	21.9	20.6	24.2	21.9
Deaths from small pox	2	—	—	2	—	—	2	1	—	—
Rate per 1,000 population	0.00	0.00	0.00	0.01	—	—	0.01	0.00	—	—
Sheffield:										
Percentage of default under Vaccination Acts ...	5.1	5.8	4.6	4.3	3.4	3.8	5.3	5.1	5.4	6.9
Deaths from small pox	4	2	24	8	—	275	4.39	—	—	—
Rate per 1,000 population	0.01	0.01	0.11	0.03	—	0.99	1.57	—	—	—
Birmingham:										
Percentage of default under Vaccination Acts ...	1.3	3.5	2.4	4.2	4.6	5.5	4.9	5.4	5.8	4.3
Deaths from small-pox...	17	110	63	12	—	2	—	—	—	7
Rate per 1,000 population	0.4	0.27	0.15	0.03	—	0.00	—	—	—	0.02
Leicester* (all deaths from small-pox to 1891 registered in Blaby district):										
Percentage of default under Vaccination Acts ...	39.2	43.6	47.9	52.1	60.1	72.3	77.0	79.6	78.7	76.9
Deaths from small-pox...	—	—	—	—	—	—	—	—	—	—
Rate per 1,000 population	0.00	0.00	0.00	0.00	—	—	—	—	—	—

* Leicester vaccinates and revaccinates all exposed to infection whenever a small-pox case arises.

All the facts for the other towns named cannot be given. It must be held in mind that the vaccination returns issued by the Local Government Board convey no true idea of the state of vaccination of the whole population, as, for instance, we know of Leicester that two years back the medical officer of health estimated 98 per cent. to be vaccinated. It is unvaccinated and badly vaccinated sections of communities (rather than whole populations, which are variously circumstanced as to vaccination) that suffer most from small-pox.

THE EVOLUTION—PAST AND PROSPECTIVE—OF MEDICAL AND SANITARY WORK IN INDIA.

By Brigade-Surgeon-Lieutenant-Colonel KENNETH MACLEOD, M.D., LL.D.

Questions of medical reorganisation and sanitary development in India are at the present time undergoing keen discussion. There seems to be a general consent that some change is necessary and impending; but the grounds on which that change is needful and the manner in which reform is to be accomplished do not appear to be always clearly realised. Service considerations loom too large in the argument, and it is not sufficiently held in view that medical and sanitary administration must constitute a part of general administration; and that questions of reorganisation must turn upon the condition and requirements of the country, and not upon the history or qualities or rights of present establishments, or the claims and qualifications of those who clamour to replace them. A review of the evolution of general and medical administration in the past is necessary in order to understand clearly the faults of the present and needs of the future in respect of medical and sanitary work.

For this purpose I have drawn up a table in which the more prominent features of the history and administration of India, since the granting of a charter to the East India Company in the year 1600 up to the present time, are stated on one side, and the consequent changes which have taken place in the strength and constitution of the medical services are shown on the other.

Scheme of Administrative and Medical Evolution in India.

Historical.	Medical.
Seventeenth Century. Factories; writers, native agents and subordinates; ships; a few soldiers.	
Eighteenth Century. Acquisition of territory by cession at conquest, war; armies, white and black; navy. Civil administration, by presidencies and districts, of acquired country; collectorates, courts of justice, gaols. Police established, and subordinate revenue, judicial and clerical services organised.	Surgeons to attend officials; hospitals for soldiers and subordinates; compounders and dressers to assist. Increased medical establishment for attendance on civilians and troops and service in navy. Superintending surgeons and Medical Boards appointed. Company's medical officers posted to districts for attendance on officials and charge of Government gaols, hospitals, etc. Apothecaries and native doctors trained in hospitals.
First Half of Nineteenth Century. Extension of territory; increase of army and navy; annexation of new provinces; centres of civil government multiplied; provincial administration created; considerable attention paid to education and medical relief; peace, protection, and commerce extending.	Medical staff enlarged; all medical supervision conducted by Company's officers; civil charges multiplied; hospitals and dispensaries established for medical relief of general population; vaccination started; medical schools founded; subordinates trained in these employed in subordinate posts; some attention paid to sanitation of military cantonments and civil stations.
1857. The Indian Mutiny. Extensive disorganisation of military establishment and civil government. Suppression of mutiny; augmentation of European army; resumption of civil administration.	Medical officers largely utilised on service; serious check to medical and sanitary progress. Gradual return to the *status quo ante*.
1858. Honourable East India Company abolished, and government of India assumed by the Queen. Some administrative confusion in consequence of transfer of Government from the Company to the Queen.	Great jealousy and friction between British and Indian medical services.
Reorganisation, military and civil. Rapid progress in peaceful government, and great increase of schools and hospitals; local self-help encouraged in these. Some measure of self-government established in presidency towns.	1859-65. Indian Medical Service closed; civil medical duties largely entrusted to trained Indians and "casuals." Increase of uncovenanted and subordinate medical services.
	1864. Indian Medical Service reopened. Officers restricted to charge of native army and civil employment.
	1866. Administration of British Army hospitals and medical staff assigned to British Medical Department.
Realisation of great sickness and mortality among soldiers, prisoners, and population; deplorable sanitary condition of country becomes evident.	1867. Civil Medical Department organised. Provincial governments appoint their own medical inspectors.
	1868. Sanitary Commissioner with the Government of India appointed.
	1868. Provincial Sanitary Commissioners created. Considerable friction between medical and sanitary departments and between imperial and provincial medical inspectors.
1872. Lord Mayo's policy of decentralisation gives increased responsibility and power to local governments. Considerable increase of activity in medical and sanitary matters follows.	Provincial governments take medical and sanitary matters more into their own hands, and recent interposition of military medical department.
Expediency of separating military and civil medical administration fully realised. Progress in public medical relief, medical education, sanitation, vaccination, and vital statistics continues.	1880. Military medical administration unified, separated from civil, and placed under one head. Civil medical administration reorganised and placed under control of provincial governments. Licentiates and graduates of Indian medical schools settling in practice in large towns and villages.
1882. Lord Ripon's scheme of local self-government elaborated. Municipalities and local bodies created and entrusted by law with power of collecting and spending money for local purposes—medical relief and sanitation among them.	Local bodies support and found hospitals and dispensaries, and employ medical subordinates for medical and sanitary purposes. Great increase of sanitary work, and closer attention to health matters in general.

From this bird's-eye view of Indian administration, it is evident that our government of the Empire has been pervaded by several well-defined principles, chiefly (1) Military unification; (2) separation of civil from military administration; (3) decentralisation of civil government; and (4) development of local self-government. It is on these lines that progress will proceed in the future, and any change which is considered necessary in the interests of the country ought to take the shape of gradual development rather than abrupt revolution.

The recent creation of four army corps under one chief is another step towards consolidation of the military forces of India. Probably a higher degree of assimilation of the native to the European section of the army will result in the course of time; and the question of amalgamating and unifying the Army Medical Executive, medical administration having already been amalgamated and unified, will eventually arise. Meantime the differences of constitution and location of the two sections of the Army, and the different conditions under which the medical executive of each are engaged, will probably militate against consolidation of the latter.

Military and civil medical administration have been completely separated since the year 1880, and the system then commenced has worked well. No complaint has arisen from the Governments under which they have served of inefficiency or neglect on the part of that section of the Indian Medical Service which is employed under civil administrations. On the contrary, it is allowed that the work has hitherto been done well, and that officers of the Indian Medical Department have rendered splendid services in war and peace—in medical relief, sanitation, vaccination, education, the management of prisons and asylums, and in many other capacities. It is true that they are primarily recruited for military service, are trained in the Army Medical School at Netley, have to serve two years with the colours, and are liable to recall from civil employ in case of military exigency. As a matter of fact, this recall has seldom taken place since the Mutiny, and as a matter of experience these officers are none the worse—rather the better as regards status and discipline—for their military training. It was once the fashion to disparage military medical work. It consists after all in treating the sick and wounded and improving the sanitation of barracks, lines, cantonments, and camps. In India it is frequently combined with civil work. The work is by no means paltry nor the men incompetent, and the reduction of the death-rate of the European army from 69 to 12 per 1,000 is no mean achievement.

Equally anachronistic is the phrase "fossil seniors." Administrative officers in these days are the survival of the fittest, and are carefully selected both at home and abroad. That the liability to recall to military duty has not damaged the work of civil surgeons in India is quite certain. Whether the policy of maintaining in this manner a reserve of medical officers for military contingencies is expedient and sound or otherwise must depend on administrative considerations; especially on the question, how far the contingency of military exigency on a large scale can be banished from Indian thought. The recent cry for a purely civil service has arisen from an interested class which hopes to profit by the change, and not from those who rule the country and administer its military and civil affairs.

Even if it were decided to be advisable, on administrative grounds, to entertain a purely civil medical service, it would be necessary to obtain the same class of men as at present and in a similar way. The primary duty of civil medical officers is to attend on Government officials and their families, and take charge of Government institutions. Europeans, or Europeanised persons, are obviously best fitted for these purposes, and the universal rule in India that all official departments must, for efficiency and progress, be officered in chief by Europeans cannot with impunity be set aside in the case of the medical and sanitary services. Plenty of employment has arisen, and more will arise, as the country develops, for Indians educated in India without destroying arrangements which have hitherto worked so well.

The real cause of dissatisfaction with medical and sanitary services in India as now constituted is that disease and death are yearly ravaging the country; that sanitation is in a very backward state, and that these services are feeble in the face of conditions making for deterioration of health and destruction of life throughout a vast area covered by an immense population. What are a few hundred doctors and a few score sanitarians to the 280 millions of India? All this is quite true; but does the remedy lie in multiplying and debasing the medical and sanitary executive, and is it the duty of Government to carry medical relief to every door and compass the cleansing of every home?

The remedy consists rather in following out the lines of policy — decentralisation, and self-government — already initiated, and developing the spirit and practice of self-help and self-support among the people. This has been already

done largely as regards medical relief, but it is even more necessary in matters of sanitation. Medical relief requires a skilled agency, but the work of cleansing, which ought to commence with the home, can and must be wrought by the people themselves.

It is absurd to contemplate an army of sanitarians and scavengers sweeping the Indian Empire. The head of the house must be held responsible for the cleanliness of the homestead, the urban authority of the town and the district and provincial authorities for the execution of important works necessary for the health of the community at large. The duty of Government consists in showing why and how sanitary measures are to be undertaken. By means of advisers and inspectors the sanitary needs of the country and community are ascertained, and this done, the ruling power ought to insist on the proper steps being taken by the local authority to secure cleanliness and prevent practices dangerous to health. The present advising and inspecting agency requires strengthening and organising, and arrangements have to be made for the scientific study of disease causes.

But sanitary progress must depend on sanitation becoming part and parcel of the rule of the country and life of the people as in England. As development proceeds in this direction there will be abundance of employment for Indian medical men.

I have in these remarks designedly limited myself to principles, and avoided comment on particular proposals and plans of medical reorganisation.

The points which I have endeavoured to establish may be summarised in these three propositions:

1. The sanitary defects and defaults of India do not result from any ignorance or incapacity on the part of the Indian Medical Service, but depend upon the circumstances and habits of a teeming and ignorant population spread over a vast extent of unhealthy country.

2. The arrangements for medical aid to Government servants and medical charge of Government institutions and for medical administration are satisfactory; but the arrangements for supplying the sanitary requirements of India are rudimentary and ineffective.

3. Sanitary reform and progress can be accomplished only by educating, persuading, and empowering the people to adopt measures conducive to health as a detail of domestic and communal life. To that end the State requires an organised establishment, acting under the orders of imperial, provincial, and district authorities to investigate, report, and advise.

ROYAL COLLEGE OF SURGEONS.

A QUARTERLY council was held at the College on October 10th; Mr. CHRISTOPHER HEATH occupied the chair. The minutes of the last meeting were read and confirmed. On the recommendation of the Museum Committee, it was resolved that the series of drawings of malignant and other tumours collected by the late Mr. J. W. Hulke be accepted, and that the best thanks of the Council be given to Mrs. Hulke for the presentation of the same to the College.

It was announced that Mr. Tweedy had presented to the Library a MS. by Archile de Verona entitled, "De Dolore Junctuarum," and the thanks of the Council were accorded to him for his donation.

The draft report, prepared by the subcommittee, to be presented to the Fellows and Members at the meeting on November 7th next was approved and adopted.

Messrs. Heath and Howse were re-elected members of the Committee of Management and of the Laboratories Committee respectively.

The report of the Laboratories Committee gives the following interesting particulars: As regards the examination of suspected diphtheritic material for the Metropolitan Asylums Board, no fewer than 4,651 specimens have been examined and reported upon during the four months June to October. The average number of specimens examined per diem has been 45. Since September 1st the Director has supplied about 750 doses of antitoxic serum for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, and he hopes to be able to meet the demands of the hospitals, which are, however, somewhat greater than was anticipated. The Laboratories Committee, on the recommendation of the Director, have given £100 from the grant made by the Goldsmiths' Company for researches on the antitoxin treatment of diphtheria, to Dr. Cartwright Wood, who is carrying on investigations as to improved means of treating the horses with a view to obtaining the serum in a shorter time than is possible by the methods hitherto in use.

It was resolved that the following institutions be added to the list of recognised places of instruction in chemistry, physics, and biology—The University College of North Wales, Bangor; Wyggeston School, Leicester; Victoria Institute, Worcester (without biology)—and that the National Hospital, Queen Square, W.C., be recognised as a place of study during the fifth year of the curriculum.

The College of Physicians have decided to appoint six delegates to confer with a like number from this College upon the question of the examination for the fifth year.

DEATHS UNDER ANÆSTHETICS.

CHLOROFORM.

MR. E. C. CRIPPS, M.R.C.S.Eng., L.R.C.P.Lond. (Cirencester) writes: The reports of deaths under chloroform which appear in almost every number of the BRITISH MEDICAL JOURNAL form very melancholy reading. In the case reported by Mr. Coates on October 12th, it would be interesting to know why chloroform was administered in preference to ether. The heart's action was ascertained to be feeble before the operation, and there seems to have been nothing to contraindicate ether, so that the case was essentially one in which ether and not chloroform should have been used, and in all probability if it had been the patient would have been alive now. Ether may be contraindicated in a very few instances, but in the large majority of cases it is the best and safest anæsthetic, and it seems almost criminal to use in preference to it chloroform, which is five times more dangerous.

Dr. E. W. Dickson has favoured us with the following notes of a case of death under chloroform which occurred at the Coombe Lying-in Hospital, Dublin, on September 23rd: The patient, A. S., aged 38, was prepared for chloroform on September 23rd, in order to have the uterus curetted for an incomplete abortion. There was no evidence of cardiac disease. The heart was examined by Dr. F. W. Kidd, Master of the hospital, who also took charge of the pulse. Chloroform (Duncan and Flockhart's) was administered drop by drop on the ordinary face mask covered with lint. At first the patient took it quietly, and breathed well. In a few minutes she had a sort of clonic spasm of the arms and legs, then conjugate deviation of the eyes occurred upwards and to the left, and the pulse stopped. The administration of the anæsthetic was suspended when the spasm did not pass off, and artificial respiration was at once commenced. This was continued for over forty minutes, and a few respiratory efforts were made by the patient in the early part of the time, but they gradually ceased. The heart never recommenced beating. Inhalation of nitrite of amyl, hypodermic injection of ether, stretching the sphincter ani, inversion and hot stupes over the heart, were all tried, but without avail. At the necropsy the heart was found free from valvular lesion, but in a condition of fatty degeneration. About ℥j of chloroform had been given, and the patient had not been fully anæsthetised. The corneal reflex was present just before the fatal issue.

SCHOOL PRECAUTIONS.

THE New York Board of Health has approved of certain recommendations which Dr. Biggs, the bacteriologist to the Board, has suggested that it should make to the Board of Education. Among these are the following:

1. The use of slates, slate pencils, and sponges shall be discontinued in all the public schools. 2. According to requirement pupils shall be supplied with pencils and penholders, each pupil to retain these received in a box provided for the purpose, such box to be marked with the pupil's name. Pencils and penholders shall not be transferred from one pupil to another without suitable disinfection. 3. All school property left in the school building by a child sick with any contagious disease, and all such property found in

an apartment occupied by a family in which a case of small-pox, typhus fever, diphtheria, scarlet fever, or measles has occurred, shall be taken by the health department for disinfection or destruction. 4. Books which are taken home by pupils shall be covered regularly once each month with brown manilla paper. 5. Places for drinking water on the ground floors of the school buildings shall be discontinued, and a covered pitcher provided for each class room, in which fresh water shall be placed before every session. A numbered cup, to be kept in the class room, shall be issued to each pupil. No interchange of cups shall be allowed.

OPENING OF THE MEDICAL SCHOOLS:

University of Edinburgh.

The various classes in the University of Edinburgh and Extra Academical Schools were opened on October 15th.

In opening the class of the Practice of Physic, Professor Sir Thomas Grainger Stewart, after indicating the plan of the course to be pursued, went on to discuss some of the more important recent advances in medicine. Referring to serum therapeutics and immunity, two diseases had been specially studied along these lines, namely tetanus and diphtheria. The former disease was so grave, that so far as could be ascertained the mortality from it had generally been about 75 per cent.; under the new treatment, however, the most marvellous results were attained in chronic cases, and even in acute cases, when the dose of the poison was not excessive, and when the cases were seen early enough, the results were most encouraging. Passing to the subject of diphtheria, he exhibited a series of tables of cases under the care of the Metropolitan Asylums Board, von Ranke (Munich), Baginsky (Berlin), Roux, cases in the Hospital Trousseau, from Richet, Hermann Briggs, and Funck (Brussels), to show the mortality under the old treatment as contrasted with the new; and urged that these tables abundantly proved that there was ground for great expectations from the latter. After speaking on the good effects of the remedy, he said the treatment had certain disadvantages, such as rashes, abscesses, joint inflammation. Some said that albuminuria and nephritis occurred in certain cases, but of this he was doubtful. Some maintained that paralysis was more frequent, but, if so, this was probably explained by the fact that a much larger number of severe cases recovered. The large bulk of the remedy to be injected was a disadvantage, but he believed that this would soon be surmounted. Then there was the extraordinary difficulty of the production of the antitoxin in quantity sufficient to meet the demand for it. When we were able to get more and better antitoxin he believed that better and more uniform results would be got. Finally, how were we to measure the dose to be exhibited in any given case? We required more light and more precision on this point. By and by we should hope to get remedies for the whole series of microbe diseases along these lines, and thus widen the range of our possibilities in treating such diseases. Already in this University Professor T. R. Fraser had done excellent work with regard to snake poison. In conclusion he referred to the epoch-making work of Pasteur in this relation.

Professor A. R. Simpson sketched the history of the chair of midwifery in Edinburgh University from its creation in 1726. The Edinburgh chair was, he said, the oldest professorship in this subject in any university. He gave brief notes concerning the various occupants of the chair. The latter part of the lecture was given to a eulogy of Dr. Thomas Keith, whose pioneer work led to the ultimate and amazing triumphs in the department of ovariotomy.

Professor Chiene (surgery) took as his subject the careers of Pasteur and Dr. Thomas Keith, and urged that the lives of these two eminent men were incentives to work and duty. He referred to Professor Fraser's work on snake poison, and expressed the hope that a chair of bacteriology would soon be established in the University of Edinburgh.

Professor Rutherford, in opening the class of physiology, discussed the conditions that tend to the attainment of the physiological ideal.

Sir Thomas Grainger Stewart, in opening the class of clinical medicine, took as his subject the Schott methods of the treatment of chronic diseases of the heart. He described a recent visit to Nauheim and some cases he had seen there, the mode of treatment, and the effects of that treatment as observed by himself, and he exhibited various illustrative charts and diagrams, and explained how he purposed to carry out special inquiry in regard to the value of this treatment during the present winter session.

Edinburgh School of Medicine.

Emeritus Professor Struthers gave the opening address at the Edinburgh School of Medicine in Surgeons' Hall, his subject being medical education. He maintained that the medical schools, much as they had advanced, had not done so as fast as they might have done. More practical teaching and more inquiry ought to be encouraged, and there should be less lecturing in these days of good textbooks. What lecturing there was should rather be in the way of comment on practical work. His remarks were not aimed at the Edinburgh schools in particular, because he believed that, taken as a whole, no schools of medicine in the United Kingdom could be compared with those of Edinburgh.

University College of South Wales and Monmouth (Medical Faculty).

The College opened on October 9th with an introductory lecture by Professor Galloway, which was delivered in the lecture theatre of the chemical department. The lecturer was supported by the principal and staff, and several members of the Council and of the University Court.

The attendance of students overtaxed the capacity of the lecture room, and the number of entries for the entrance scholarships has been greater than in any other previous year. The medical classes commenced on the following day, and the number attending the lectures showed a steady increase. Several ladies have availed themselves of the courses of medical study open to them at Cardiff, and the admirable Woman's Hall of Residence.

The efforts made to prepare students for the higher examinations in medicine have already been appreciated by them, and in the classes of anatomy and physiology there are fourteen students preparing for the London Intermediate M.B., three for their Primary Fellowship, as well as three who are preparing for the M.B. of the University of Edinburgh. The rest of the students are preparing for the London Conjoint Board.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 23rd day of October next, at 2 o'clock in the afternoon.

The following Committees will also meet:

Tuesday, October 22nd, 1895.—3.0 p.m. Premises and Library Committee.—4.0 p.m. General Practitioners Committee.

Wednesday, October 23rd, 1895.—11.0 a.m. Journal and Finance Committee.—4.30 p.m. Parliamentary Bills Committee.

Francis Fowke, *General Secretary.*

October, 1895.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

[illegible] BRANCH: NORTH LONDON DISTRICT.—The next meeting of the District will be held at the London Temperance Hospital, Hampstead Road, N.W., on Thursday, October 31st, at 4 P.M. [illegible] will preside. Dr. W. [illegible] will read a paper [illegible]. The District Council will meet at [illegible].—[illegible], Honorary Secretary.

SOUTH EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting will be held at the County Hospital, Guildford, on Thursday, October 31st, at 4 P.M.; Dr. J. P. A. [illegible], in the chair. Dinner at the White Lion Hotel at 6 P.M.; charge [illegible], exclusive of wine. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends. Agenda: Arrangements for next meeting. Papers: Dr. Stanley Boyd (London): Some Surgical Cases of General Interest. Dr. Montague Murray (London): Hydrochloric Acid in the Diagnosis and Treatment of Chronic Gastric Disorders. Members desirous of exhibiting or reading notes of cases are invited to communicate at once with the Honorary Secretary, ALEX. HOPE WALKER, The Common, Cranleigh.

BORDER COUNTIES BRANCH.—The autumn meeting will be held at the Grosvenor Hotel, Strammongate, Kendal, on Friday, October 25th. A meeting of the Council will be held at 2 P.M. The general meeting will be held at 2.30 P.M., when the President, Dr. Smith, Dumfries, will take the chair. Dr. A. J. McCallum (Kendal): (1) A Boy with Enormous Spleen recovering under Splenic Extract; (2) A Boy cured of Unusually Severe Epilepsy by Enormous Doses of Bromide. Dr. W. R. Parker (Kendal): A Cretin recovering under Thyroid Extract; and Photographs and Illustrations of numerous Cretins before and after treatment. Dr. W. B. Cockill (Kendal): A case of Albuminuria with Atrophy of Optic Nerve closely simulating Cerebral Tumour. Dr. B. Walker (Kirkby Stephen) and Dr A. J. McCallum: Sections of Mammary Tumours under half-a-dozen microscopes. Dr. P. F. Sturridge (Kendal): Notes on the Eyesight of 300 School Children. Dr. A. J. Newman (Bowness): Obstetric Statistics—a digest of [illegible] consecutive cases. Dr. G. H. Seagrave (Milnthorpe): The Hypodermic Use of Cocaine in Neuralgias. Dr R. A. Taylor (Kendal): Bonesetters' Malpractice. Dinner will be served at 4.30 P.M., when visitors will be the guests of the Kendal practitioners in conjunction with Dr Newman, of Bowness. Visitors who have not already done so will kindly communicate their intention of being present to Dr. Parker, Kendal, not later than the morning of the 25th, so that adequate arrangements may be made.—R. D. HELM, Honorary Secretary, Carlisle.

PERTHSHIRE BRANCH.—The winter meeting of the Branch will be held in Perth on Friday, November 1st, 1895.—A. R. URQUHART, Honorary Secretary.

SOUTH OF IRELAND BRANCH.—The annual general meeting of this Branch will be held on Saturday, October 26th, in the School of Art, Nelson Place, Cork, at 5 P.M. Agenda: Council's Report. Election of Officers. The following matters will be discussed: 1. The Abuses of Clubs in Cork; 2. Hospital Abuse; 3. Midwives Registration Bill; and any other matters which members may wish to bring forward. Medical Society's dinner at Imperial Hotel, Cork. Members who have not previously sent in their subscriptions will please do so to Dr. PHILIP G. LEE, Patrick's Hill, Cork.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The autumn meeting of this Branch will be held in the Station Hotel, Stirling, on Tuesday, October 22nd, at 3 P.M. The election of office-bearers for the year will take place and other business postponed at summer meeting will be transacted. The President (Dr. J. C. McVail) will deliver his Presidential address, entitled Gleanings from Practice. Further particulars by circular to members.—C. J. LEWIS, Honorary Secretary, Stirling.

OXFORD AND DISTRICT BRANCH.—The next meeting will be held at the Radcliffe Infirmary, Oxford, at 3.15 P.M. on Friday, October 25th.—W. LEWIS MORGAN, Honorary Secretary, 37, Broad Street, Oxford.

STAFFORDSHIRE BRANCH.—The twenty-second annual general meeting will be held at the North Western Hotel, Stafford, on Thursday, October 31st, at [illegible] P.M., when an address will be delivered by the President-elect, Dr. G. Reid. Members and friends will dine together at [illegible] P.M.—G. REID, General Secretary, Stafford.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The next half-yearly meeting will be held on Friday, November 1st, at 4 P.M., at the Medical Library, 4 Pembroke Road, Portsmouth. Gentlemen desirous of reading papers or of exhibiting cases or specimens are requested to communicate with C. C. CLAREMONT, Honorary Secretary, 57, Elm Grove, Southsea.

WEST SOMERSET BRANCH.—The autumnal meeting of this Branch will be held at the Railway Hotel, Taunton, on Friday, October [illegible], at 5 P.M. Dinner at 5.30. The subject as settled by the Council for discussion after dinner will be Club Practice, and the discussion will be opened by Mr. [illegible]. Short papers or cases may be taken before dinner, and discussed afterwards. The Honorary Secretary will be glad to receive notice of any cases or papers to be communicated to the meeting.—W. M. KELLY, M.D., Honorary Secretary, Taunton.

NORTH OF IRELAND BRANCH.—The autumn meeting of this Branch will be held in the Royal Hospital, Belfast, on Thursday, October 31st, 1895, at 12 noon. Gentlemen who wish to read papers, show patients, or bring any other business before the meeting, will kindly communicate, as early as convenient, with JOHN CAMPBELL, M.D., F.R.C.S., Honorary Secretary, 26, Great Victoria Street, Belfast.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE thirteenth annual meeting of this Branch was held at Sydney on March 29th; Dr. W. H. CRAGO (President) in the chair. Ninety-four members and three visitors were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Death of Sir Robert Duff.—The PRESIDENT stated that since the last meeting of the Branch the death of his Excellency Sir Robert Duff had occurred.—Dr. SYDNEY JONES proposed, and Dr. QUAIFE seconded, that a letter of condolence be forwarded to Lady Duff.

New Members.—The PRESIDENT announced the election of the following members: Dr. G. L. Murray, Sydney; J. Flynn, Sydney; F. W. [illegible], Redfern; E. A. Binney, Sydney; T. P. Anderson, Kiama; T. [illegible], Hillston; J. Kerr, Wollongong; D. Luker, [illegible]; Hugh Kirkland, Bathurst; A. Pentland, West Maitland; R. W. Crooke, Young; T. J. Henry, Warialda; C. E. Corlette, Sydney; Max Sully, Riverstone; S. Fielder, Gosford; L. J. Lamrock, Waverley; E. O. Newland, Coonamble; A. G. Cribb, Newcastle; J. R. Malloy, Annandale; G. Watt, Hay; T. Lane, Inverell; J. [illegible], Eylstone; A. Carvosso, Broken Hill; T. Heald, [illegible]; H. Walter, Pymble; W. D. Power, West Maitland; A. O. Cooley, North Sydney; G. B. Sweet, Napier, N.Z.; F. H. Hughes, Chatswood; L. Hickey, Nyngan; E. G. [illegible], Burwood; T. E. O. Henry, Sydney; J. C. Cox, Sydney.

President's Address.—The President (Dr. W. H. CRAGO) read his address.—Dr. FIASCHI proposed and Dr. KNAGGS seconded a vote of thanks to Dr. Crago for his address. Carried.

Officers and Council.—The PRESIDENT announced that the following had been elected office bearers and Councillors for the ensuing year:—*President:* Dr. E. J. Jenkins. *Vice-President:* Dr. Sydney Jones. *Councillors:* Drs. Fiaschi, Huxtable, Clubbe, W. Chisholm, Knaggs, Crago, Worrall, Scot Skirving, Thring, Faithful, Coutie, Quaife.—Dr. CRAGO then vacated the chair, and Dr. E. J. JENKINS thanked the members for having elected him President.

A GENERAL meeting of this Branch was held on April 26th, at the Royal Society's Room, Sydney, Dr. JENKINS (President) in the chair. Fifty-four members were present.

Correspondence.—Letters were read from Mrs. White, of Singleton, acknowledging letter of sympathy; and from Lady Duff, acknowledging letter of condolence.

New Members.—The following were admitted members: Dr. Mead, Quirindi; Dr. Cunningham, Cobar; Dr. G. H. Phillips, Parramatta; Dr. L. G. Davidson, Balmain; Dr. McCredie, Glebe Point; Dr. Hollis, M.P., Goulburn.

Notice of Motion.—Dr. ANGEL MONEY gave notice of the following resolution:

That no member of Council hold office for more than three years.

Election of Auditors.—The PRESIDENT having explained that the election of auditors had been overlooked, moved:

That Drs. A. Jarvie Hood and G. L. Mullins, who had been duly proposed and seconded, be elected auditors for the ensuing year.

Carried *nem. con.*

Communications.—Dr. KENDALL exhibited a patient who had been relieved of long-standing sciatica by gymnastics.—Dr. CLUBBE exhibited a female child aged 3 years, suffering from a primary sore on the buttock, and well-marked rash over trunk. Drs. ANGEL MONEY, MORGAN, MARTIN, and [illegible] made remarks upon the case.—Dr. POCKLEY read notes on the Prescribing and Wearing of Spectacles, and gave a demonstration of modern ophthalmic optical instruments and appliances. Dr. GORDON MCLEOD discussed the paper.—Dr. HINDER read a paper on a first series of Fifty Cases of Abdominal Section. Drs. THRING and WORRALL discussed the paper, and Dr. HINDER replied.

THE general meeting of the Branch was held at the Royal Society's room, Sydney, on Friday, May 31st, 1895. Dr. JEN-

KINS (President) occupied the chair, and there were fifty-two members present. Drs. Lillie (formerly of Moree), Macdonald (Queensland), Haynes (West Australia) were present as visitors.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Communications.—Dr. GORDON MACLEOD exhibited a patient suffering from Congenital Malformation of the Iris, with a Polycoria in the Right Eye, and explained the case.—Dr. W. C. MACDONALD read a paper on some Experience of North Queensland Snakes.—The PRESIDENT, Drs. SCHRODER, CHARLES MARTIN, MCKAY, COLPE discussed the paper; and Dr. MACDONALD replied.

THE general meeting of the Branch was held at the Royal Society's Room on June 26th, Dr. JENKINS (President) in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The election of the following new members was announced:—Dr. Carruthers (Balmain), Dr. Bloch (Albury), Dr. Flashman (Parramatta), Dr. Macdonald (Queensland), Dr. McBurney (Queensland).

Communications.—Dr. POCKLEY exhibited a patient suffering from Cholesterine Crystals on the posterior surface of the Lens of the Eye, with Hæmorrhage into the vitreous of the other Eye.—Dr. FIASCHI exhibited a patient suffering from Sycosis. Dr. CRAGO and Dr. ANGEL MONEY made a few remarks on Dr. Fiaschi's exhibit.—Dr. MULLINS read a paper on the Duties and Responsibilities of Medical Practitioners in New South Wales. The PRESIDENT, Dr. FIASCHI, Dr. NEWMARCH, Dr. LENNHOFF, Dr. MEGGINSON, Dr. MORGAN MARTIN, Dr. SYDNEY JONES, Dr. WORRALL, Dr. POCKLEY discussed the paper; Dr. MULLINS replied.—Dr. MCKAY read a paper on the Progress of Gynæcology.

THE usual monthly meeting of this Branch was held in Sydney, on Friday evening, July 26th, 1895, Dr. E. J. JENKINS (President) in the chair. There were thirty-seven members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The PRESIDENT stated that the following gentlemen had been elected members of the Branch:—Dr. L. J. Haynes (Perth), Dr. G. L. Lawson (Goulburn), Dr. C. O. Birch (Liverpool), Dr. G. Gillon (Darlinghurst), Dr. H. Lilie (Sydney), Dr. W. Shortt (Corowa), Dr. P. J. Kelly (Balmain).

Communications.—Dr. J. MARSHALL exhibited a case of Sporadic Cretinism. Drs. RENNIE, GILL, SCOT SKIRVING, ANGEL MONEY discussed the exhibit.—Dr. COLPE described a new Hæmostyptic, *penghwar-djambi*. Drs. FIASCHI and DIXON discussed the subject.—Dr. FIASCHI read some notes on Santini's Hydatid, resounding or booming as a diagnostic sign of multiple hydatid cysts.—Dr. VAN SOMEREN read a paper on Typhoid Fever, some points in management and etiology. Drs. CHENHALL, QUAIFE, SCHRADER discussed the paper.

Hospital for Consumption.—Dr. SYDNEY JONES moved the following resolution:

> That, in the opinion of this Branch, the establishment of a hospital for the cure of consumption in this colony is urgently required.

The resolution was discussed by Drs. RENNIE, VAN SOMEREN, SCOT SKIRVING, MEGGINSON, and JENKINS. The resolution was carried unanimously.

MALAYA BRANCH.

AN ordinary monthly meeting of this Branch was held in the Raffles Museum on June 1st; the VICE-PRESIDENT (Dr. Simon) in the chair.

Cases.—Dr. HIGHET showed a case of Peripheral Neuritis following upon an attack of influenza. When he examined the patient two days after the onset of the symptoms of paresis, and ten days after seeing him for the first time suffering from influenza, he found paresis to a marked extent affecting the extensors of the feet, legs, and thighs. The patient also complained of numbness of the extremities, a feeling of pins and needles and lightning pains. The deep reflexes were absent. A week later, after large doses of strychnine and treatment by massage freely applied, the paresis was almost gone, and the reflexes had returned although still weak. Reference was made to a similar case, in which the fingers and the heart were affected as well as the lower extremities. Dr. Highet also brought forward a Eurasian, aged 40 years, who presented a well-marked deep Retinal Hæmorrhage in the Right Eye, and a large Separation of the Retina on the Left. The retinal hæmorrhage was of only a few weeks' duration, and was apparently a complication of an attack of malarial fever. The separation of the retina was of old date, due, it seems, to an attack of plastic cystitis when a child. A history of injury is uncertain.

Confirmation of Minutes.—The minutes of the previous meeting were then read and passed.

The Diagnosis of Malarial Fevers.—Surgeon-Captain GARIC, A.M.S., read for Surgeon-Captain F. SMITH, A.M.S., of Penang, a paper on the diagnosis of malarial fevers, with some account of the malarial parasite in Malaya. The paper was illustrated by diagrams showing the various forms of parasite described by Surgeon-Captain Smith.—In the discussion which followed Dr. LEASH said that he placed less reliance upon the height of the patient's temperature than upon the condition of the pulse and respirations.—Dr. HIGHET spoke of the rarity of true types of malaria in Singapore.—Surgeon-Captain GARIC agreed with Dr. Highet with regard to the absence of typical malaria in Singapore. He only found classical malaria in men who had come from India. He had lately two deaths in the regiment from acute remittent fever, verified in each case by *post-mortem* examination. In both cases cerebral symptoms were very marked.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of this district was held at East Grinstead on October 8th. Mr. P. E. WALLIS of East Grinstead presided.

Communications.—The PRESIDENT showed a boy, aged 10, who on June 24th, 1895, had both Tendines Achillis divided by a field mower. On the left side some inches of the tendon were torn away, some bone removed by the lower end of the tibia, and the ankle joint opened. The patient had recovered with perfect use of the ankle.—Dr. A. J. RICHARDSON showed photographs of a girl, aged 10, with a Congenital Hypertrophy of the Feet, to which the term Sciopody had been applied. She was in other respects well-formed and healthy. Dr. Richardson read a paper on Serumtherapy, giving a historical sketch of the treatment, and discussing the methods of immunisation and the action of antitoxins.—Mr. FOOTNER read notes of a case of Division of the Median Nerve at the Wrist-joint, in which nerve suture was practised on the fourth day after the injury. Sensation had in large measure returned a month after operation. Motor power was becoming re-established at the eighth week. After two years the hand was "as strong as ever it was," but some numbness of the index finger still remained.—Mr. A. H. DODD read notes of a case of Pulmonary Embolus occurring six weeks after delivery in an albuminuric patient recovering from phlegmasia dolens. The patient was suddenly seized with acute pain in the mid-sternal region passing through to the spine, and "felt as if bound inside with a tight cord." She presented a pale, drawn, anxious expression, dyspnœa (without cyanosis), and feeble pulse of about 120 per minute. The symptoms gradually diminished in intensity, till some five hours later the pain suddenly returned, this time in the right clavicular region, and the patient was again *in extremis*. Twelve hours later she had quite recovered.

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch was held at the Hydropathic Establishment, Hexham, on October 8th.

Communications.—Dr. HUME read a paper on Appendicitis, in which he emphasised the necessity of early diagnosis and of early operation, of which he gave illustrative cases.—Dr. DRUMMOND showed examples of Diffuse Congenital Cystic Disease of the Kidneys. The patient was a woman, aged 47, the mother of sixteen children. Her health through life was feeble, but she had no illnesses of note until the last year, when recurring attacks of diarrhœa compelled her to seek the aid of her medical attendant, Dr. Johnstone Weir. The

diarrhœa persisted more or less up to the end, and she gradually lost strength and flesh. The final attack began ten days before her death, and consisted of most obstinate diarrhœa and rapid loss of strength. Forty-eight hours before death uræmic convulsions set in, with deepening coma. The diagnosis of cystic disease of the kidneys was made on recognising the uræmic condition and the presence of double kidney tumour. Dr. Drummond advanced the opinion that the disease was of the nature of adenoma, and compared the renal tumour with the common type of an ovarian cystic disease. The kidneys weighed about 2 lbs. each.—Mr. Rutherford Morison described a new operation for the cure of Vesico-vaginal Fistula. The principle on which this operation was based was a free exposure of the opening in the bladder by reflection of the vaginal wall for some distance round it and closure of the vesical opening by a continuous Lembert's suture. In the case related a horse-shoe shaped flap of the anterior vaginal wall was separated from the bladder, the opening in which was exposed and made watertight by a continuous silk Lembert suture, the ends of which were cut short. This was followed by suturing over it the vaginal flap with catgut. The operation was performed with a scalpel and ordinary needle and needle holder and occupied less than half an hour. Healing occurred by first intention.—Dr. Macalister discussed the Pathology of Exophthalmic Goitre. He urged that the fact that the administration of thyroid gland in Graves's disease restored health to the patient, and its discontinuance was followed by a return of the symptoms, proved that Graves's disease was due to the cessation of the secretion and decay of a persistent thymus gland. The thymus secretion had a depressing effect on the heart, circulation, and medulla, and its cessation in adults was followed by excitability of the medulla, producing the symptoms of Graves's disease.—Dr. Allison (Newcastle-on-Tyne) read a paper giving details of a well-marked case of Osteomalacia, and exhibited photographs showing the great improvement which had taken place under a treatment which he believed to be original, namely, by bone-marrow extract.

Dinner.—The usual dinner was held after the meeting.

NORTH WALES BRANCH.

The annual meeting of this Branch was held at Criccieth on July 11th in the absence of Dr. Eyton Lloyd, the President, Dr. Lloyd Roberts was voted to the chair.

New Members.—Messrs. Wm. Cecil Fenwick, M.R.C.S., Llangollen; Richard Griffith, M.R.C.S., Aberdaron; Llewellyn Roberts, M.D., Llandudno; and Evan Williams, M.R.C.S., Bala were admitted members of the Association and Branch; and Messrs. F. H. Barendt, F.R.C.S., Liverpool, and Herbert W. S. Williams, M.R.C.S., Holywell, of the Branch.

Installation of New President.—The Chairman, in felicitous terms, vacated the chair in favour of Mr. T. Hughes Hughes, M.R.C.S. Eng., President-elect, Carnarvon for South Carnarvon.

Proposed Intermediate Meeting.—Dr. Lloyd Edwards, J.P., Denbigh, proposed, and Mr. H. Jones Roberts, Penygroes, seconded:

That an additional intermediate meeting in the autumn of each year be held.

On being put to the meeting, it was unanimously passed.

Election of Officers.—The following were elected office-bearers for the ensuing year: *President-elect:* Mr. Richard Williams. *Honorary Secretary:* Mr. W. Jones Morris. *Honorary Treasurer:* Dr. Samuel Griffith, J.P. *District Council:* Messrs. R. Arthur Prichard, T. L. K. Davies, Llandudno; Hugh Jones, Dolgelly; H. P. Rowlands, Towyn; J. R. Jenkins, Ruthin; and J. Lloyd Roberts, Denbigh. *Representative on the Council of the Association and Parliamentary Bills Committee:* The Honorary Secretary was unanimously re-elected.

Places of Meeting.—It was resolved:

That the autumnal intermediate meeting in 1896 be held at Ruthin; the spring intermediate meeting in 1897 at Dolgelly; and the annual meeting in 1897 at Conway.

Report of District Council.—This report stated that the increase in numbers of the Branch was the highest in its history. Reference was also made to its flourishing financial position; to the grievous loss it had sustained in the death of Dr. A. E. Turnour, of Denbigh, the last of its original members, his many virtues, good qualities, and intense devotion to the Branch, which had been very appropriately borne witness to in his obituary in the British Medical Journal; to the useful and practical papers and discussions on professional subjects brought forward at the meetings of the year; to the expression of opinion on the part of the Branch on many questions of professional polity, and the resolutions passed thereon; to the interest taken in its affairs by the members.—On the motion of Mr. Lloyd Williams, seconded by Dr. Robert Jones, the report was unanimously adopted.

Midwives Registration Bill.—A general discussion, in which many members took part, on this question was concluded by the unanimous adoption of the following resolution, proposed by Mr. Lawson Tait, seconded by Dr. Lloyd Roberts (Denbigh):

That the action of the Parliamentary Bills Committee in postponing the discussion of the Bill till the Branches have had time to consider it be approved of.

Medical Defence.—The following resolution was unanimously carried:

That this matter be referred to a future meeting of the Branch, as it requires most careful consideration.

President's Address.—The President briefly referred to the Sanitary Conditions of South Carnarvonshire, touching upon the growing popularity of its health resorts, Criccieth and Tallybell, their undoubted salubrity, and the duty of the medical practitioners of the district to keep a vigilant eye on the proceedings of the public authorities, and concluded with some excellent practical suggestions on the ethical relations of medical men.—On the motion of Mr. Arthur Prichard, seconded by Dr. E. J. Lloyd, a hearty vote of thanks was accorded the President for his address.

Communications.—Dr. Richard Jones, D.P.H.Cantab., Consulting Medical Officer of Health to the County Council of Merioneth, read a paper entitled Death and Disease among Quarrymen: a Statistical Inquiry. A hearty vote of thanks was passed to Dr. Richard Jones for his valuable paper, and a hope was expressed that it might be circulated among those concerned in this important trade.—Mr. R. H. Mills Roberts, F.R.C.S.Edin., read notes of a case of Obturator Dislocation of the Femur, giving its history, treatment, literature, and opinions as to its causation and reduction. He was warmly thanked for his remarks.

Cases.—Mr. Henry Evans exhibited patients suffering from (1) Progressive Muscular Atrophy; (2) Progressive Muscular Atrophy with Epithelioma; (3) Myxœdema. Each of the cases gave rise to a discussion, in which many members joined, and Mr. Evans was thanked for bringing the cases forward.

Dinner.—In the evening the members sat down with the Rector and Chairman of Local Board of Criccieth as guests to a well-served and enjoyable dinner.

RUTHIN.

The autumnal intermediate meeting was held at Ruthin on September 18th. There were twenty-six members present. In the absence of the President (Mr. Hunter Hughes), Dr. J. R. Jenkins was voted to the chair.

New Members.—Messrs. R. T. Davies, L.R.C.P.Edin. (Prestatyn) and Evan Ll. Williams, M.D. (Amlwch), were elected members of the Association and Branch; and Messrs. W. H. Griffith, L.R.C.P. (Prestatyn), C. J. MacAlister, M.D., M.R.C.P. (Liverpool), and Robert Owen, L.R.C.P. (Penygroes), of the Branch.

Communications.—Dr. H. Drinkwater (Wrexham) read notes of a case of Jacksonian Epilepsy, in which he had trephined with marked success. He detailed the steps of the operations, his reasons for the site, and the successive stages of this recovery. The paper gave rise to an interesting discussion, in which the members generally took part; and Dr. Drinkwater was thanked and congratulated.—Dr. Judson S. Bury (Physician, Manchester Royal Infirmary) gave a practical address on Some Points in the Investigation of Nervous Diseases.—Dr. J. Lloyd Roberts read notes of recent cases of Hernia at the Denbigh Infirmary, which was a practical summary of a series of cases differing in many particulars. In the subsequent discussion Mr. Lawson Tait said that he had for some time had under consideration the advisability of a median intraperitoneal operation rather than

the canal operation in cases of hernia—to pull the bowel from inside rather than push from the outside. Unfortunately his experience of hernia was not as great as for other abdominal operations, but he should wish, if the opportunity presented itself, to give his plan a trial.—Mr. W. Thelwall Thomas, F.R.C.S., read notes of some recent cases of Bone Operative Surgery.—Mr. Hugh E. Jones, F.R.C.S., read notes and exhibited a specimen of extensive Mastoid Disease, involving a large portion of the petrous portion, in which operative treatment was refused.—*Dr.* F. H. Barendt read a paper on Eczema Squamosum.

Resolutions at Annual Meeting.—Mr. Lawson Tait deferred action with regard to his motion regarding the resolutions at the annual meeting so that his propositions may be circulated to the members.

Luncheon.—The members lunched together prior to the meeting, and a most enjoyable meeting in one of the loveliest spots in Wales was spent.

SPECIAL CORRESPONDENCE.

PARIS.

The Medical Department in the Autumn Manœuvres.—Insanity among Silk Spinners.—Suppression of an Epidemic of Anthrax.—Aluminium Cooking Utensils for the Army.—General News.

The hospital of evacuation organised at Bourg-la-Reine was in working order on October 10th, under the supervision of General Berruyer, director. A considerable number of medical men and members of administrative staffs went to Bourg-la-Reine. At 9 A.M. the wounded sent on from Champigny arrived; they were immediately removed from the carriages, placed on *brancards*, and carried to the wards set apart for their form of illness. On the 11th the manœuvres of the Army Sanitary Service were terminated by a lecture from the director of the manœuvres and the dismemberment of the sanitary train. This train was organised at 1 A.M. In the waggons were arranged the apparatus for suspending different kinds of *brancards*, with the necessary material for tending the wounded. At 1.30 the hospital was evacuated, and the wounded carried on *brancards* were placed in waggons. Those not seriously wounded were placed in the second class carriages, the first class carriages being reserved for the use of General Berruyer, the health service officers, the medical and civil officers. At 2 o'clock the train started for the Paris Montrouge Station, where a divisional ambulance service was in working order. The Sanitary Service manœuvres have not brought to light any novelties. The war material of the preceding years, slightly improved, again does service. As to the manœuvres for receiving the wounded, they are always equally unlike the reality and contrary to the war directions, which do not allow any of the ambulance staff to go beyond the reserves of the battalion, otherwise the bearers would be exposed to the enemy's fire. These imperfections are inevitable during the annual manœuvres, owing to want of space. It is impossible that manœuvres of this kind can give a true idea of the necessities and emergencies of actual war. The sanitary service manœuvres should be attached to the annual autumn manœuvres. One or two divisions could be set aside to simulate the wounded. The medical officers of the reserve corps could be called out, and would learn more in four days than in eight of ordinary service. It is stated that five times as many more would be working and learning for the same expense as now. After noting the above shortcomings, it is only fair to admit that the organisation of the ambulance was perfect. The help stations were quickly established and worked admirably.

M. Spratling has recently published notes of 57 cases of insanity occurring in six years among silk spinners. All the cases occurred in the same town, which has a population of less than 100,000 inhabitants. This large proportion of insane in a calling followed by comparatively few persons is a fact worthy of note. Moreover, there appears to be a connection between the position daily assumed by the workers, and their excessive mental tension, and the development of insanity. Half of the insane were predisposed by hereditary influence. Alcoholism was a factor in [illegible] All the 57 cases studied by M. Spratling at the [illegible] Asylum were very serious; 14 were cured, 5 were [illegible] improved, 6 remained stationary, 6 died, 26 are still in the asylum, and are considered incurable. All forms of insanity are more severe among silk spinners than among other patients. M. Spratling also observed that insanity among silk spinners becomes more and more frequent; this he considers to the machinery, which becomes more and more complex, necessitating constant and unremitting attention in those who have to work it. Mental overstrain from this cause and positions causing severe bodily fatigue are believed by M. Spratling to be the source of insanity among the silk spinners.

At a recent meeting of the Academy of Sciences M. Forbelot announced that the letters of condolence addressed to the Academy on the occasion of Pasteur's death are so numerous that a list of them will be printed at the expense of that scientific body. It is stated that Professor Duclaux will succeed Pasteur at the Pasteur Institute. As subdirector he frequently replaced his illustrious chief. A letter from New Jersey, received by a prominent American resident established in Paris, states that anthrax appeared among the cattle of that locality some months ago; the disease was so widespread and terrible that the inspectors were at a loss how to combat it. A petition on the subject was addressed to the Minister of Agriculture by M. Powell, President of the Sanitary Committee of Bridgeton. An order was immediately sent to veterinary surgeons to vaccinate 2,000 cattle with Pasteur's lymph. This was done, and the disease was stamped out at a cost of 2,000 francs.

When the Madagascar expedition was decided on, the French Minister of War decreed that aluminium cooking and other utensils should be supplied to the regiments ordered to Madagascar. M. Balland, Principal Army Pharmacist, has presented a report to the Academy of Sciences on the advantages of these utensils. Hitherto the dearness of aluminium and its frequent deterioration have prevented it from being used for cooking utensils. In fluid kept in aluminium utensils a cloudy deposit formed, which gave them an unwholesome appearance. M. Balland in 1892 made experiments which demonstrated that aluminium in contact with vinegar in four months loses 0.349 gramme per square decimetre, and 0.045 gramme with a salt solution of 5 per cent. The Madagascar expedition has proved that aluminium utensils can be used without any injurious effects. They are durable, neither the action of fire nor that of fluids or solid food stuffs having any influence on them. The surface becomes blurred, but the weight after ten months' use is not perceptibly diminished. Food does not remain long enough in the canteens to take up any considerable quantity of the metal; moreover, the compounds thus formed would be harmless.

Mdlle. Julie Goldber has bequeathed the whole of her fortune to be divided between three night asylums.

M. Lapparent and M. Bertrand are mentioned as successors to the late Professor Pasteur in the Mineralogy Section of the French Institut.

ROME.

Antituberculous Serum.—Congress of the Medical Society.—News.

Three phthisical patients are being at the present time treated in the Santo Spirito Hospital with Professor Maragliano's serum, but the investigation is not yet sufficiently advanced to permit the issue of a report on the results obtained. It is doubtful now whether any report will be issued, as the Minister of the Interior has just published a decree that for the present the antituberculous serum prepared by Professor E. Maragliano cannot be freely sold and used for treatment until the Superior Council of Health has approved of it. He deems it advisable, however, to permit the experimental treatment under the direct responsibility of the preparer, so that he may be able to test its therapeutic value. Professor Maragliano intends giving a full description of his method of preparing and using the serum at the meeting of the Italian Congress of Internal Medicine. This statement is looked forward to with much interest by the profession in Italy, as the professor has not yet published full particulars of his method.

The sixth Congress of the Italian Medical Society will be held in Rome, under the presidency of Professor Bruccelli, from October 22nd to 25th. For the past two years the annual meetings have been suspended in consequence of the International Medical Congress. The King will honour the Congress with his presence. The two chief subjects for discussion are: Sero-therapeutics, introduced by Professors Foà of Turin, and Maragliano of Genoa; and the Slackening of Nutrition, introduced by Professors de Renzi and Reale. This year there will be for the first time a clinical conference on practical subjects. It will be held at the Santo Spirito Hospital, and Professors Cardarelli, De Giovanni, Giocco, and Riva will take part in it.

The Italian Hydrological Congress was opened at Venice on October 10th, and was largely attended, especially by those members living in Venice. The Congress was opened by Dr. Vinai, the President of the Hydrological Association.

The Minister of the Interior has issued a decree prohibiting the introduction of rotten or damaged maize into the kingdom for any purpose whatsoever. It appears that large quantities of unwholesome maize have been imported from foreign countries into Italy for apparently industrial purposes and as food for animals only. The Minister states this was simply a pretext to permit its free introduction, as it was afterwards consumed as food by the poorest classes, with grave injury to their health. He also states that unwholesome maize, even if adopted for the preparation of alcohol, does not cease to be injurious to those who may drink it, and that it may also be injurious as a food for animals.

The death is announced of Dr. A. Tebaldi, Professor of Psychiatry in the University of Padua.

LIVERPOOL.

Liverpool Medical Institution.—Opening of the Session.—President's Address.

THE inaugural meeting of the session of the Liverpool Medical Institution took place on October 10th, when the usual introductory address was delivered by the President, Mr. Chauncy Puzey, his subject being the earlier history of the antiseptic movement, which, he said, might be described as terminating with the decline and fall of the carbolic spray. At first sight, he remarked, it might appear that a great part of Lister's work had been proved to be erroneous, but he believed the whole course of his work was useful and of steady progress, its successes being the abolition of pyæmia and septic infection, and the union of wounds by first intention. The results of his practice in this respect might be estimated from statistics published by Professor Simpson in his essay on "Hospitalism" in 1869, when Lister was working out his earlier methods. These statistics showed, as the results of some thousands of amputations, that the ratio of deaths to recoveries was, in Parisian hospitals, 1 to 1½, in London hospitals 1 to 2½, and in provincial hospitals from 1 in 3½ to 1 in 7, the mortality increasing with the number of beds in the hospital. In private country practice it was 1 in 9·2. In 1874 Erichsen stated that pyæmia proved fatal in 33 per cent. of primary amputations, in 44½ per cent. of secondary, and in 34½ per cent. of amputations for disease.

When he (the President) first came to the old Liverpool Royal Infirmary he was struck with the freshness of the wards and the smaller mortality after major operations as compared with his experience at Guy's, but the mortality, especially from pyæmia, was such as would be now considered terrible. Lister's contribution to the happier condition of things which now exists began in 1867, when, at the annual meeting of the British Medical Association, he delivered an address on the antiseptic principle in the practice of surgery, his plan being based on the results of Pasteur's researches. He based his practice on the principle of destroying the minute organisms suspended in the air, compound fractures being the first class of cases to which he applied it. The acid in its full strength, melted by heat, was introduced into all accessible recesses of the wound by means of a piece of rag held in dressing forceps, a piece of lint dipped in the strong acid was laid over the wound, and was covered with a piece of block tin or sheet lead. In Lister's hands this treatment was very successful, but in other hands fatal poisoning from carbolic acid occasionally took place, and before long surgeons were content with carbolic lotion and oil. In 1871 Lister, in his address on surgery at the meeting of the Association at Plymouth, recommended the 1 in 40 solution, and for the first time fully described the well-known Listerian dressings, and he also advocated the use of the spray, employing Dr. B. W. Richardson's small hand spray producers. About this time the method was fully adopted in the Liverpool Royal Infirmary with the best results, the improvement being effected under the management of the late Dr. William Cleaver, who had been Lister's house-surgeon, and who succeeded the President at the infirmary as resident medical officer.

Whatever might now be thought of the spray, he (the President) had no doubt that for many years it was a most valuable agent under the sanitary and other conditions then existing. However, from the first it met with great disapprobation, and as early as 1879 it began to be pointed out that it was not an essential part of the method, while in 1882 Lister himself began to show signs of doubt as to its necessity in the face of improved antiseptic arrangements and sanitary surroundings, and in the year 1887 he finally gave it up. There were two addresses which stood out prominently—that of the late Sir W. Savory at the annual meeting at Cork in 1879, and that by Sir W. Stokes at Worcester in 1882. Since the writing of this paper was commenced, the names of two great workers whose names gave rise to it had come very prominently before the public. Lister had been elected President of the British Association, Pasteur had been called away from the scenes of his useful work, and the whole civilised world had heard of his departure with respectful regret. Mr. Puzey concluded his remarks in the following words:

"Let us hope that Lister may be long spared to us; but, when the time arrives for his departure, I think that no better inscription could be engraved on his tomb than these eloquent words of Sir James Paget: 'More than any other he did good, both by his own work and by leading others to do their best in their own way.' For the present we can look forward with pleasurable anticipation to the time next year when we shall have him in this city as the President of the British Association. Then, I am certain, from no section of our citizens will he receive a more hearty welcome than from the members of the Liverpool Medical Institution."

A cordial vote of thanks to the President for his address was proposed by Mr. Rushton Parker, and seconded by Dr. Alexander, and carried by acclamation.

The members of the institution were subsequently entertained at a supper and smoking concert by the President, an excellent programme being rendered by some of the guests.

The biennial dinner of the Liverpool Medical Institution took place recently at the Adelphi Hotel, the President, Mr. Chauncy Puzey, being in the chair. About one hundred members and several guests were present. Among other toasts, that of "The Clergy and the Medical Charities" was proposed by the President, who coupled the toast with the names of the Rev. J. Bell Cox, his old schoolfellow, and the Rev. John Watson, perhaps more widely known as "Ian Maclaren." The Rev. J. Bell Cox, in replying, suggested that as in many of the higher grade schools, including that in which he was interested, there was a cookery class, such classes as well as other schools of cookery might be made useful in providing dinners for convalescent patients just discharged from hospitals, some arrangement being made between the hospital staffs and the school managers by which the dinners should be classified and food provided suitable to the various cases. The Rev. John Watson, in the course of his speech, took occasion to state that there were many doctors, both in Scotland and in the South, as forgetful and as utterly Christian as "William MacLure." It had been one man's good fortune to know four country doctors, each one of whom might have sat for his hero. He desired to thank his readers, and chiefly the medical profession, for the reception given to the doctor of Drumtochty. From all parts of the English-speaking world letters had come to him in commendation of "Weelum" from doctors who had received new courage from the book.

The next Congress of French Scientific societies will hold its opening meeting in the Sorbonne, Paris, on April 7th, 1896.

MANCHESTER.

Entries.—Annual Dinner.—Extension of Royal Infirmary.

The entry of new students at the Owens College Medical School is distinctly above that of last year, and there is a decided increase of candidates for the University degrees, so that it would seem that the influence of Victoria University is making itself distinctly felt in the surrounding districts. The magnificent new laboratories of the physiological, pathological, and other departments are proving a great boon, as throughout they are equipped with all modern arrangements, so that the students have ample space for carrying on their work. It is thus possible, with the greatly increased accommodation, to allow the students to do many things for themselves which are not possible in small laboratories.

The annual dinner of the Owens College and Royal Infirmary took place last week under the genial presidentship of Mr. Mold, the popular lecturer on mental diseases.

The "infirmary question" is on again. That an increase of beds is required has long been conceded, but the question is: Are the additional beds to be added to the present site, or what is to be done? A subcommittee appointed some time ago to report on this question have now sent in two reports, one on the part of the majority and the other by a minority. The following is the gist of the report. The majority stated:

That only by rebuilding would it be possible adequately to provide, in a fit and proper way, the requirements of an infirmary brought up to date scientifically, with every latest improvement, and otherwise worthy of the city of Manchester. As to the plan upon which such a building should be constructed, they were unanimous that the pavilion principle was by far the most suitable, and on consulting a competent authority they found that there would be no difficulty in constructing a pavilion hospital containing the accommodation that in their opinion is absolutely indispensable, and that could be looked on as satisfactory with due regard to architectural, sanitary, and all other considerations, on the present site without covering to any important extent the land now vacant within the area of the infirmary boundaries.

While the minority:

Do not see the necessity of building an entirely new hospital, as they believe that all the necessary additions and alterations required can be provided by a modification of the existing building. The cost of a new building cannot, in the opinion of the minority, be less than, and will probably exceed, £200,000.

The following resolutions were ultimately adopted:

That the signatories to the majority report be requested to obtain full plans and elevations on which they propose the hospital shall be rebuilt on the present site, and also to obtain evidence from experts in hospital buildings and others as to the practicability and efficiency of such plans, and an approximate estimate of costs.

That a further subcommittee be appointed to obtain the opinion of experts and others as to the building of a new supplementary hospital elsewhere to provide for the additional accommodation required, to obtain plans and an approximate estimate of the cost of such hospital, and also to report as to what alterations in the present building would be necessary to bring it up to date, and to make it as efficient as possible according to modern ideas (without providing additional accommodation for patients now), with the probable cost of such alterations.

That the signatories to the minority report be asked to give full details of this scheme, and be given equal powers as to the preparation of plans and the calling in of experts as have been given to the members who signed the majority report.

CORRESPONDENCE.

LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS AND THE TITLE OF "PHYSICIAN."

Sir,—In reference to a recent article in the British Medical Journal, in which the claim of the Licentiates of the Royal College of Physicians of London to the title of "Physician" is discussed, I desire to remove all misapprehension on the subject by stating that when the class of Licentiates was established on its present basis, the College consulted the standing Counsel to the College—Sir Richard Webster, the present Attorney-General—on this very point. He gave it as his opinion that those on whom the College conferred its licence were thereby legally constituted physicians. The incident is well within my recollection, and I have no doubt at all about the matter.—I am, etc.,

October 10th. F.R.C.P.

A BRAVE DOCTOR.

Sir,—Allow me to thank you for the very laudatory remarks in the British Medical Journal of October 12th. I cannot, however, let the occasion pass without placing before my medical friends a few material details.

I was unable to descend in the ordinary way to the beach owing to the tide having cut off the path. The coastguard officer then selected a shelving portion of the cliff, and by means of a life line fastened under his arms scrambled down, I following in the same manner, and arriving safely with a few scratches and bruises. I was at no time during the descent suspended in mid-air, as depicted in certain illustrated papers; but there is no doubt of the risky nature of the undertaking owing to the strong gale blowing and the slippery nature of the shale. Others followed in the same way; and, after all, I feel that I did no more than any man would do under such urgent circumstances. I greatly regret that we had not sufficient assistance to save the unfortunate man.

I take this opportunity of thanking the many members of my profession who have so kindly written to me on the subject.—I am, etc,

Ilfracombe, Oct. 14th. Chas. W. E. Toller.

CHITRAL RELIEF FORCE.

[Forwarded by the Director-General of the Medical Department of the Navy.]

Sir,—In an editorial paragraph in the British Medical Journal of September 14th in connection with the sickness from which the Chitral Relief Force appears to be suffering it is stated that "the use of Pasteur filters and the boiling of the drinking water were alike neglected, and hence the troops were severely damaged and the efficiency of the enterprise compromised." Now one would very much like to know whether this positive explanation of the sickness is founded merely on theory or on actual observation at the spot. In a letter which appeared in the Journal on August 10th Surgeon-Major Battersby, who is with this force, said that he thought the waterborne theory would scarcely account for the prevalence of enteric fever, as the water supply in many instances had been above suspicion, being procured from springs coming directly from the mountain side. He also mentioned that European troops alone were attacked, and now we hear that among these the Bedfordshire Regiment has suffered disproportionately. By the information published one is unable to see how the neglect of using Pasteur filters and boiling the drinking water would account for the selective incidence of the sickness in general or of the enteric fever in particular, and it appears to me that this is the first fact which a theory of causation should account for.

Reports in the daily press state that there is a great amount of sickness—doubtless much of it enteric fever—among the French troops in Madagascar; yet it is reasonable to conclude that, as Pasteur filters have done so much for the army at home, they have been liberally supplied to the expeditionary force.

It would be a good thing were it possible to preserve the health of men in hot climates by Pasteur's filter or Mr. Hart's tea-kettle, but it is unfortunately the fact that ill-health and disease—in both hot and cold climates—arise from many causes. The procuring of the best drinking water possible should never be omitted, but assiduous attention to many other hygienic matters is also necessary. According to my experience, the fevers which attack Europeans in hot climates are seldom due entirely to drinking water, and frequently have little or no connection with it.—I am, etc.,

Gilbert Kirker, M.D.,
Aberdeen, Sept. 17th. Staff-Surgeon, R.N.

. The statement in question was from a well-informed military source. Dr. Battersby's observations are, of course, theoretical, and based on the hypothesis of *omne ignotum*. It would always in such cases be advisable to remove known sources before speculating as to unknown. It is the opposite

process which has been the cause of so much sanitary disaster. The Madagascar troops were, according to our information from Paris, equally neglected in sanitary respects, and the importance of attending to the water supply either largely overlooked or greatly neglected for the troops on march. It is unfortunate that experience gained in times of peace does not seem to be always applied to expeditions of war; in the latter case there are always much greater difficulties than in the former.

CERTIFICATED MIDWIVES AND BOARDS OF GUARDIANS.

SIR,—Your readers who are interested in the midwives question will be pleased to hear of the action of the Local Government Board towards Boards of Guardians who propose to employ certificated midwives. The following is from the *Leicester Daily Post* of October 9th:

The Clerk read a letter from the Local Government Board respecting the appointment of Nurse Masters as a midwife at a fee of 5s. a case, in which it was said: "The Board direct me to state that in every case in which an order is given by the relieving officer for the attendance of Miss Masters, with a view to her acting as midwifery nurse, they consider that an order should at the same time be given by the relieving officer for the attendance of the district medical officer, and that he should attend in accordance with the regulations under which he holds office and receive remuneration for the case. The Board request that the guardians may be issued to the officers concerned accordingly."

Whatever may be thought of the necessity or otherwise of midwives in private practice, surely all doctors must agree that official bodies like Boards of Guardians should not employ unqualified medical practitioners.—I am, etc.,

Leicester, Oct. 10th. REGINALD PRATT.

THE DISCUSSION ON FRACTURES OF THE NECK OF THE FEMUR AT THE LONDON MEETING.

SIR,—In the discussion on the above subject, at which I was unable to be present, Mr. Mayo Robson is reported to have said that the treatment which I advocated in a paper recently published, and to which Sir William Stokes and Mr. Bryant had referred, namely, breaking down the impaction under anæsthesia, "had, in Mr. Robson's experience, often been adopted before." I shall be much interested if Mr. Robson will refer me to published reports or give details of any cases which have previously been intentionally treated in this manner, for I was under the same impression as Sir William Stokes, who in his reply at the close of the debate remarked that "he was not aware, from any published writings, that the Leeds school had anticipated Mr. Southam in laying down the principle of disimpaction."—I am, etc.,

Manchester, Oct. 12th. F. A. SOUTHAM.

THE MALARIAL PARASITE.

SIR,—The BRITISH MEDICAL JOURNAL of August 24th, which arrived by the mail of last week, contains a leading article devoted to a condemnation of an address which I delivered before the Calcutta Medical Society in February last.[1] The following seems to be the chief grounds of your complaint.

You appear to disapprove, in the first place, of "warlike official titles" being affixed to the names of members of the Indian Medical Service who like myself have spent nearly the whole of their time in civil employment. You do not seem to have grasped the facts that the Indian Medical Service is essentially a civil one, that the prizes in the civil department form the chief inducement to enter the service, and that we had no choice or voice in the selection of the titles under which we serve. They came to us as a sort of reversion from the sister service, and it seems somewhat inconsistent in the Editor of the BRITISH MEDICAL JOURNAL to decide the titles which he is believed to have been largely instrumental in obtaining for that service. Neither is there anything very extraordinary in medical officers of the Indian army holding permanent appointments in the civil department. Military officers are to be found in all civil departments in India, as in the police, the public works, and even in the Civil Service itself in non-regulation provinces. And it is vain to call out about it, as the formation of a reserve of medical officers in this very way is part of a wise and deterministed policy of the Government of India; and it is not easy to understand how the possession of military titles can affect the efficiency of the officers so employed.

[1] BRITISH MEDICAL JOURNAL, October 12th, p. 994.

You are good enough to allude to me as having been "for many years chiefly, if not wholly, a highly successful medical practitioner." I object to this as being a wholly inadequate and misleading description of even my present position in Calcutta, which comprises the executive and medical superintendence of a large hospital, besides other official duties which I need not detail. It is true that it is one of the Calcutta appointments to which is attached "the privilege of private practice." But you can have read my address with scant attention to have been able to take "the anomalous relationship of army medical rank to much more lucrative and preoccupying civil medical practice," as representative in any way of my past services in Government employment, or of the lot of civil surgeons generally. I detail in my address official duties which occupied me for eight hours out of each day when I was civil surgeon of Dacca, and the absence of private practice, except in the Presidency towns, is a universal subject of lament throughout India.

You say that the claims I make for scientific research by members of the Indian Services show that I could not have read Mr. Ernest Hart's address, in which the work of the men I mention is acknowledged. I confess that this is true. I was not even aware that it had been printed; and it certainly does not appear in the *Transactions* of the Indian Medical Congress. I, however, heard his address delivered, and I apologise if I am mistaken in my belief that the address as delivered did not contain any of the qualifying expressions which you now quote. My recollection is that he stated without qualification that "India had contributed nothing but confusion to the advance of scientific medicine;" and I must ask to be excused if I persist in saying that Mr. Hart not once, but repeatedly, told us that the only way of diagnosing malarial fever was by the microscope, and that it should be done in every case. I find that my recollection is confirmed by that of my friends, and the impracticability of the information was at the time on every tongue, and evidenced Mr. Hart's inability to gauge the proportions of the problem with which we have to deal in India.

You question the correctness of the advice I gave as to the best time in the fever cycle for the examination of the blood with a view to finding the malarial parasite, and you quote Mannaberg against me. Allow me, on the other hand, to quote from Marchiafava and Bignami. I regret that I am obliged to do so in the original. At page 10 they say: "Alcune ore dopo l'accesso febbrile si vedono nei globuli rossi i plasmodi," etc.; and at page 53: "Se si esamina il sangue nell' acme dell' accesso, si trova il reperto costituito di piccole amebe senza pigmento, etc.....nel periodo di preparazione del nuovo accesso ha luogo, d'ordinario, una notevole diminuzione della quantità dei parassiti, nel sangue preso dal dito," etc., which is entirely in accord with my advice to beginners to examine the blood of the finger at the end of the hot stage, during the sweating stage, and in the early part of the apyrexial period; and I should venture to think, though I apologise, of course, for the temerity of the suggestion, that clinical experience in India might be a safer guide to the beginner in India than even such authorities as Mannaberg and Marchiafava, especially where they disagree with one another.

You accuse me not only of "many errors of fact," but of "conveying an exaggerated idea of the difficulties of finding the malarial parasite, an idea calculated to deter the medical worker from attempting it." I specially guarded myself against this inference, and warned him "If he wishes not to be discouraged beyond all hope not to begin his investigations in January, February, or March, when a large proportion of our fevers appear to be of non-malarial character, and when the proportion of cases in which the organisms are invisible in blood taken from the finger is very large. Let him wait until September, and he will then begin the study at a time when the organisms are numerous, and frequently to be found."

"During this period let him examine as many specimens as possible, so as to familiarise himself with their various appearances, so that he may not miss seeing them when they are there."

I still regard this as most excellent advice, and I am glad to be able to agree with you that the parasite requires to be looked for in the right way, and if the right way is employed,

and the parasite is there, a child (nay, even a member of the Indian Medical Service) might see it.—I am, etc.,

A. CROMBIE, M.D.,
Surgeon-Lieutenant-Colonel; Surgeon Superintendent of the European General Hospital, Calcutta.

Calcutta, Sept. 18th.

*** The address in question was published by Messrs. Thacker and Co. in Calcutta immediately after delivery, and Dr. Crombie confirms our impression that he had not read it. In reference to the paragraph on malaria in Dr. Crombie's letter we would remind him that both he and we were discussing the best time in the fever cycle for a beginner in malaria blood examination to select for finding the parasite; and we quoted Mannaberg, who, along with Laveran and many others, distinctly recommends the end of apyrexia and the commencement of pyrexia for this purpose. Dr. Crombie notes Marchiafava and Bignami (pp. 9 and 56, *Sydenham Society's Translation*) to show that the parasites are most numerous during pyrexia and fewest during apyrexia; and he would have us think that Mannaberg and these authors are in disagreement. But if he would study Mannaberg he would find that this authority and all other good observers concur on this particular point. This, however, is not the question at issue. What is wanted is the best time for the beginner to look for the parasites, not the time when they are most numerous. These are two very different things. It is quite true that many more parasites can generally be seen by the expert during fever than during late apyrexia; but it is equally true that during fever the vast majority of the parasites—the new generation in fact—are then so minute—little more than specks in the corpuscles—that they are hard for one unaccustomed to the work to recognise, so that at this stage the beginner, and even the expert, has often to fall back on pigmented leucocytes, or, according to the type of the fever, on any crescents or flagella-forming spheres that may chance to be present for a diagnosis. But about the end of apyrexia and the beginning of the fever paroxysm the parasites, though fewer in number, are pigmented and have grown so large that a "child might see" them, and hence this is the most suitable time for the beginner to endeavour to find the malaria parasite. A full-grown hen is a much more conspicuous object than a newly hatched chicken—a self-evident proposition as applicable to the malaria parasite as to the barn-door fowl.

If Dr. Crombie had quoted the passages from Marchiafava and Bignami *in extenso*, and had translated them, his readers would have had no difficulty in reconciling what he would erroneously have them believe is a discrepancy between these authorities, Mannaberg, and ourselves. A mutilated quotation gives an incorrect impression. In other respects this letter does not correctly represent the effect of our leader, with which it may be compared.

LONGMORE'S *GUNSHOT INJURIES*.

SIR,—In the last paragraph of the note you appended to my letter which appeared in the BRITISH MEDICAL JOURNAL of October 12th, you quote me as having said that "we are already supplied with ample statistics as to the effects of the use of small arms." What I did say was that we had full statistics as to the effects of small arms of the Martini-Henry patterns. As regards the wounds rifles produce, these weapons may be divided into two classes: one comprising the modern rifles of small calibre, and the other all the older rifles firing the elongated cylindro-conoidal bullet—the Martini-Henry, Snider, Gras, Chassepôt, needle gun, Minié, etc. The point I wished to make in my remarks on Sir Thomas Longmore's second edition was that it contained the ample statistics which are available as to the use of rifles of the second category, but that the omission of statistics of the effect of the use of modern rifles was not a defect, or that it was unavoidable, for the reason that none existed. As regards the Balmaceda rebellion in Chili, we have no information as to the effect of the small bores used there, except some general statements which are now known to be, in great part, inaccurate. I certainly would not "seriously maintain that the work was complete" if it omitted important statistics which were available, but I do not consider that it does so.—I am, etc.,

W. F. STEVENSON,
Professor of Military Surgery, Army Medical School, Netley.

October 14th.

THE ANDREW CLARK MEMORIAL FUND.

SIR,—In the BRITISH MEDICAL JOURNAL of October 12th you have rightly stated the cause of the failure of this fund—that the profession had not an opportunity of expressing its wishes on the form which the memorial should take.

Clinical medicine was a strong point with Sir Andrew; any scheme which would have contributed to the advancement of its study would have been dear to his heart: therefore may we not hope at the eleventh hour that a meeting of medical men will be called in order that Sir Andrew Clark's memory may be perpetuated by some worthy memorial?—I am, etc.,

Warwick Square, S.W., Oct. 14th. THOS. LANGSTON.

INADEQUATE SALARIES OF PUBLIC HEALTH APPOINTMENTS.

SIR,—I should very much like to enlist your help in trying to induce those of the profession who have taken up public health work to make a stand once for all against such sweating as appears to be contemplated by the East Sussex County Council, judging from their advertisement in the BRITISH MEDICAL JOURNAL of October 5th. The JOURNAL has of late said much to encourage the medical men of Cork and elsewhere in their resistance to the grinding terms which the clubs and medical aid societies have sought to impose. Is this bargain proposed by the East Sussex County Council not quite as stringent?

This proposed appointment in East Sussex is unfortunately not the first of its kind. There are others, of which the remuneration is on much the same scale, which have been sought after and accepted even by men of some standing in the profession, and the need is therefore the greater that some expression should be given to the opinion held by, I trust, the vast majority of the profession, that all those who apply for such posts show an utter want of respect for themselves and their profession.

The appointment of a county medical officer of health on such terms must mean one of two things as regards the County Council: either that they are quite ignorant of the work to be done by a county medical officer of health, which is the more charitable supposition, or that they do not wish their officer to be too active in the discharge of his duties; but as regards the medical officer of health appointed the former excuse can scarcely be applicable, and he must be undertaking the office well knowing that the salary is totally inadequate to the work which ought to be done.

I have laid stress upon the injury to the profession which such an appointment will give rise to, but it is evident that the injury to the public will be no less. The useful work now being done by the medical officer of health in a few of the more advanced counties where they are properly remunerated can evidently not be looked for under such an arrangement as that proposed by the East Sussex County Council.

It may be that this advertisement is merely a matter of form, and that it is the intention of the County Council to combine the post of county medical officer of health with some of those for local sanitary districts, but if so it would have been only fair to make the facts known, and even so the above remarks apply to other similar posts in other counties.

It is, Sir, I hope you will agree with me, high time that the profession should make some protest against such treatment.—I am, etc.,

October 9th. PUBLIC HEALTH.

*** The duties of the appointment appear to be those ordinarily assigned to the medical officer to a county council, and the "honorarium" offered is one hundred guineas a year and travelling expenses.

The proprietors of the *Provincial Medical Journal* have decided to discontinue its publication after the December number. Dr. T. M. Dolan, the editor of the moribund periodical, proposes to provide a substitute in the form of a monthly journal of medicine and surgery, to be entitled *The Scalpel*.

A MONUMENT to Duchenne, of Boulogne, will shortly be erected in the Salpêtrière. It is the work of M. Desvergnes, the sculptor, and M. Debrie, an architect. It is also proposed to erect a memorial to Duchenne in his native city of Boulogne.

OBITUARY.

THOMAS KEITH, M.D., LL.D.EDIN., F.R.C.S.EDIN.

THE death of Dr. Thomas Keith, which occurred on October 9th, though a source of deep regret to his professional friends and an irreparable loss to the profession generally, was by no means unexpected. For a considerable time past Dr. Keith had practically retired from active professional life owing to the advances of an old-standing disease.

Thomas Keith was born on May 27th, 1827, in his father's house at St. Cyrus (or Ecclescraig) in Kincardineshire, within six miles of Montrose, in Forfar, from which it is separated by the estuary of the North Esk. Dr. Keith's grandfather, the Rev. Dr. Skene Keith, made himself celebrated by an important work, *The Agriculture of Aberdeenshire*. His brother was the Rev. Dr. Keith, of St. Cyrus, who wrote several theological works and pamphlets still well known in Scotland; he died, aged 89, sixty years after his book on *Prophecy* appeared. His mother was sister to Sir Thomas Blaikie.

Dr. Keith received his early education at Aberdeen Grammar School and Marischal College. Dr. George Keith, his brother, informs us that "in Aberdeen, while still a boy, he began to be troubled with passing small calculi from the bladder, which later were found to consist of pure cystic oxide. One of them stuck in the urethra, and had to be removed by operation. To try to cure the ailment he got large quantities of carbonate of soda, and this he blamed for first upsetting his stomach and for much of his subsequent miseries." In 1843 Mr. Syme unsuccessfully performed lithotomy. In 1844 he opened the bladder but found the stone in the urethra. In 1849 a large abscess formed behind the kidney, Mr. Skene Keith opened it and the sinus never closed. In 1851 a small sharp stone lodged about the neck of the bladder and caused bleeding. The bladder filled with clot; the stone was ultimately passed. Thus Dr. Keith passed a life of feeble health varied only by attacks of acute agony; yet his courage never failed him and he worked and attained fame in spite of intractable infirmity.

His medical education was entirely conducted at Edinburgh, where he was apprenticed to Professor (afterwards Sir) James Simpson, for whom he did much work. He was, his brother informs us the last medical apprentice in Edinburgh. Dr. Keith acted as Resident Surgeon to Mr. Syme in the Edinburgh Royal Infirmary. He was much attached to Mr. Syme, and declared to the last that he was indebted to that great surgeon for sound principles in the treatment of surgical cases, especially simplicity, painstaking, and absolute cleanliness. The attachment was mutual, and continued till Mr. Syme's death. Dr. Keith had previously attended the second Mrs. Syme during a long illness.

After qualification, Dr. Keith accepted the appointment of Surgeon to the Hon. Wm. Abercromby, British Ambassador at the Court of the King of Sardinia, at Turin where he remained two years. During his stay in the Italian city he published a paper in one of the local journals on the evils of the then prevailing system of copious blood-letting. His action, which posterity can more than justify, caused him great trouble, and all the profession in Turin, except one of the principal surgeons, treated him with marked discourtesy. Afterwards he became a partner in the practice of his brother, Dr. George Skene Keith, and remained for twenty years in partnership, the surgical work in the practice being placed almost entirely in his hands.

Although in his first years he practised obstetrics with success, yet from an early period he devoted himself to general surgery, in which he had a large practice. Ultimately, however, he confined himself to gynæcological surgery. It was in 1862 that Keith performed his first ovariotomy, having seen how successful Sir Spencer Wells had been in his series of operations commenced four years previously.

Dr. Keith removed for the first time a cystic ovary, and followed up his first ovariotomy by a long and successful series of abdominal sections. He strongly believed in well-trained assistants. Dr. James Sibley, and afterwards Mr. Skene Keith, were on that account selected for co-operation. Believing that general hospitals were not, when he began his labours, sufficiently aseptic, Dr. Keith, at a personal cost of over £3,000, converted into a hospital a house in Great Stuart Street, Edinburgh, and there many of his earlier operations were undertaken.

It is needless to speak of the success which attended his work as an ovariotomist. Though the only successful performer of this operation in the city at that time, he extended the benefits of his little hospital to both rich and poor alike. In 1870 his merits as an operator had become so well recognised that the managers of the Infirmary acknowledged his position by appointing him extra-surgeon for ovarian disease, and he filled this post for eighteen years, resigning it only on his removal to London. In this capacity he did much to increase the fame of the Edinburgh Hospital and School. He was in the habit of allowing a select number of students to see his operations, and these opportunities were most eagerly sought after, and highly prized by students and practitioners alike.

During these years of active work in Edinburgh, Keith not only perfected the operation of ovariotomy, but applied himself to reducing the mortality of hysterectomy, and his modifications were so eminently successful that before leaving the Edinburgh Infirmary he had made the operation comparatively safe. In 1888, out of 33 cases recorded there were only 3 deaths.

Dr. Keith was for some years Extra-examiner in Surgery in the University. In 1888 he resolved to go to London, and the managers of the infirmary recognised the importance of his services by acknowledging in a very appreciative minute their sense of the greatness of their loss.

While in Edinburgh he built up for himself a world-wide reputation, and his professional journeys were not confined to Great Britain, but included various parts of Europe and America. His departure from Edinburgh was deplored not only by the entire profession, but by a large circle of friends and patients. Of a very retiring disposition, and disliking all fuss and ostentation, Dr. Keith did not take a very active part in Edinburgh society. He belonged to all the scientific societies in the city, though he did not take a prominent part in any of them. All his magnificent work was done in a quiet unassuming manner.

After Dr. Keith and his son, Mr. Skene Keith, came up to London, they continued to practise abdominal sections with great success. The electrical treatment was extensively tried in cases of fibroma, and Dr. Keith found after long experience that though electricity cannot "disperse" a fibroid, it places a patient who has a fibroid that causes pain or trouble in the position of a patient who has a fibroid that is in no sense a source of danger or suffering.

For the last three years Dr. Keith's infirmities prevented him from doing any active work. In the course of the summer he visited his home near Montrose, and returned to London feeling much better; but the heat seems to have been the direct cause of a debility which increased till it proved fatal early on the morning of Wednesday, October 9th. Dr. Keith dying without any suffering at his residence in Charles Street, Berkeley Square. He was buried last Friday in Kensal Green Cemetery.

Dr. Keith married Miss Johnston, first cousin to the wife of Sir James Simpson. Mrs. Keith and their six children all survive him. Three out of Dr. Thomas Keith's six brothers entered the medical profession like himself. One survives, Dr. George Skene Keith, his former partner, who qualified over seven years before his now deceased brother, and who, in his 78th year, lives in retirement at Currie, near Edinburgh; another brother died, aged 70, in Algiers. The other brothers who became medical men both died young.

Dr. Keith was well known as a writer. His early successes in ovariotomy were published in the *Edinburgh Medical Journal* between 1857 and 1874. His *Contributions to the Surgical Treatment of Abdominal Tumours* relate to that still unsettled question, the treatment of uterine fibroids. The first part (published in 1885) treated of hysterectomy; the second appeared a few years later, and related to electricity as a therapeutic agent in fibroid disease. A large number of papers on these two subjects are to be found in past numbers of the BRITISH MEDICAL JOURNAL, especially in 1887 and 1889.

Dr. Keith certainly showed no approval of the principles

and practice of certain Continental authorities who advocate very early vaginal hysterectomy for fibroid, on the score that the tumour may grow bigger and give trouble or even cause danger. "To the woman with a fibroid uterus, who has passed the best of her years in weariness and pain, middle age brings relief, and old age may be spent in peace," writes Dr. Keith. "Hence the difficulty in knowing how far we are justified in advising interference for a disease that troubles for a time, though it rarely kills." He knew as all the profession should know, that many fibroids fail even to trouble for a time.

In 1894 much of Dr. Keith's latest experience was embodied by his sons in their work, *A Textbook of Abdominal Surgery*. The authors admit that electricity is in no sense a panacea, and deprecate over-zeal in any kind of operative work.

The fame of Dr. Keith brought him many honorary distinctions, hardly necessary to recapitulate in the case of a man whose name was so well known. He was made an LL.D. of the University of Edinburgh on the occasion of its tercentenary, and received the same honorary degree from Aberdeen. He was an Honorary Fellow of a large number of British and foreign societies. In the United States, in particular, he was deeply respected, as reference to the American medical papers will amply prove, for his professional merits, his courtesy, and his impartial judgment of foreign authorities on his speciality.

Dr. Keith took a lively interest in many social questions, though the feeble health which hindered him throughout his career quite precluded him from appearing as a publicist. Early in 1881 an attempt was made to gain him over to the antivivisection cause. An enthusiast called upon Dr. Keith, who expressed an opinion that a certain series of experiments on animals were of questionable value. After the manner of such persons, the interviewer misrepresented Dr. Keith's statement at a public meeting. Dr. Keith replied in a very strongly worded paragraph to be found in the JOURNAL, vol. i, 1881, p. 133. He expressed his indignation that a gentleman had been hissed at the meeting in question for honestly declaring that many sham humanitarians thought as much of their overfed, wheezing, pampered cats and dogs as of human life. He concluded by deprecating the degradation of science involved in a Parliamentary licence.

Sir Spencer Wells writes: I willingly comply with the Editor's request that I should write something as to my appreciation of the work of my old friend Thomas Keith. Latterly, although he has been practising in London, I have not seen so much of him as I did many years ago in the early days of ovariotomy. We then saw a good deal of each other. He was in Edinburgh while I was in London, but he often came up and I occasionally visited him in Edinburgh. We were then, and have been since, on the most friendly terms. We compared notes together, and gave each other what help we could. I had done eight cases of ovariotomy when Keith began, and he soon afterwards sent me a lady from the West of Scotland, whom he subsequently told me was the first case for which he received the usual fee. She wished me to go to Scotland and operate, but I advised her to leave herself in Keith's hands. The operation proved quite successful, and I believe she is still alive. This case increased our intimacy, which then went on without interruption as long as he was at work.

When Duncan and Lister came to London, Keith felt lonely in Edinburgh, and soon followed them; but his health failed, and although he was enthusiastic in his treatment of uterine tumours by electricity, I doubt whether his hopes and expectations were fully realised. Between two and three years ago he became ill, and went to his native place in Scotland, of which he was very fond, and where his health improved, and only returned to London two or three weeks before his death. It is nearly three years since he did his last ovariotomy, and after that time we very seldom met.

He operated between 500 and 600 times, and his success was very great. He was one of the earliest, and has been one of the most successful operators. He was thoroughly honest, and was to be believed in every word that he said or published. He was most cautious in giving an opinion, and equally so in acting upon it. I was much amused some thirty years ago when I asked him to see a lady in London, of whose case I was doubtful. I said, "Shall I operate or not?" He replied, "She is a nice-like woman." I said, "Yes, very; but shall I operate?" He said, "She is a very nice-like woman;" and that was all he would say. But she got well, and is still alive. I have often laughed with him since over his cautious judgment of the case.

He thought I was not sufficiently favourable to Apostoli's views; but I saw [illegible] several patients soon after his arrival in London. Some of the cases are quoted in his book. The results were encouraging, but not so favourable as I had hoped. During his illness his son continued the treatment, but I think with more confidence in surgical than electrical methods. Another son, now in London, is devoting himself to obstetric practice.

I have been trying in vain to put into words my appreciation of Keith as a friend and as a professional brother, and I am driven to quote a few sentences which I once addressed to medical students from Dr. James Jackson's *Letters to a Young Physician*. Writing of Dr. Holyoke, the first President of the Massachusetts Medical Society, he said: "It was on account of his professional merit that he was thus honoured, but all the more that his whole character was most worthy of respect. He had the delicacy of taste, as shown in his manners and general bearing, which grows out of a fine organisation and of a cultivated mind.....His conceptions were clear and his memory strong, though, like other old men, he lamented its decay in the latter part of his life. He had not lost it, however, as was shown on the day which completed his 100 years, and when he began a new century.....His reputation was unspotted. I never heard anyone hint at even any moral error in his life." I might truly say of Keith all that Jackson wrote about Holyoke. I should like to quote more from Jackson's letters, but I know how fully your space is occupied, and must be content to refer your readers to his book published at Boston in 1855, entitled *Letters to a Young Physician just Entering on Practice*, and with a few words from the prefatory dedication to Dr. Warren, with which I may fittingly conclude this tribute to the memory of a very dear old friend. Jackson writes:

"You and I began our active lives in this city nearly at the same time. It was when Boston had about one sixth of its present population, and I suppose much less than a sixth of its present wealth. We were so circumstanced as to be peculiarly rivals. Our business led us across each other's paths every day for a long series of years. What one gained the other seemed to lose. It would have been very easy for us to have got up a pretty quarrel at any moment; and, having once begun, we might each have got partisans, and all the usual entanglements to such cases appertaining might have followed. Happily we pursued a different course. We met together with the feelings we had as fellow-students. We took much delight in consultation and discussion on professional subjects, and were ever ready to help each other. We have, indeed, maintained a strong personal interest in each other's welfare and promoted each other's happiness. We do not resemble each other in temperament and cannot see all things alike. From this cause and not always looking at objects from the same point of view we often differed in opinion. But we have always agreed to differ. We have not often disputed and never have quarrelled on account of this difference of opinion nor on any other account. In our intercourse with the sick each has given the other credit for what was good in him instead of studying and publishing the other's faults. In every work for the promotion of medical science or for elevating the profession we have co-operated heartily, neither of us trying to push the other aside. And thus it is that being now as regards age in the front rank of our profession we have continued to this day on terms of intimacy and friendship. This is something to rejoice in, and something for which we may properly thank God, and I know you will join me in giving thanks reverently.

"As we are nearing the end of our journey I hope I may be excused for stating this experiment and its results. I would show to young men how grateful those results are. I can say to them that our interests have been promoted by our friendly treatment of each other; that each of us has gained by it much more than either of us could have done by the sharpest quarrels. If they believe me, any two of them

placed side by side as we were may be induced to try the plan of a peaceful competition."

We are indebted to Dr. Granville Bantock for the following brief estimate of Dr. Keith's characteristics: Twenty years ago Dr. Keith stood out prominent as an ovariotomist; for while his few contemporaries were striving to reduce a mortality of something between 20 and 30 per cent., his success had already attained a figure that would by some be considered satisfactory at the present day. But it was not only in the operation of ovariotomy that he obtained brilliant results. In the much more difficult one of "hysterectomy" for fibroid tumours he attained an enviable success. He was a fairly rapid operator, without any appearance of hurry; he went straight at his work without a sign of hesitation, and paid great attention to details. He used to say that the nail brush was an important factor in his results. Under a reserved manner, which caused him to shun popularity, he possessed a large and warm heart, and he was seen at his best in a quiet chat at the fireside, when the store of his knowledge and experience was at the service of his visitor.

SIR THOMAS CRAWFORD, K.C.B., M.D., LL.D.,

Ex-Director-General of the Army Medical Department.

THE announcement of the death of this distinguished officer will be received with surprise and very great regret by a large circle of friends in both the Army and civil life. It seems but a few days since he was to be seen in London in his usual hearty health; yet he was really confined to bed for four weeks before his death, suffering from acute cystitis with kidney affection.

Sir Thomas was an Ulster man, born in 1824, and educated at the University of Edinburgh, where he graduated in 1845. From it he received the degree of LL.D. at the tercentenary in 1887. He entered the Army Medical Service as assistant surgeon in 1848, and, for his services in the Crimean war and Indian Mutiny, as well as at headquarters, his promotion was unusually rapid. He became Surgeon in 1855, Surgeon-Major in 1868, Deputy Inspector of Hospitals in 1870, Deputy-Surgeon-General in 1873, Surgeon-General in 1876, and was Director-General from 1882 to 1889. He served in the Burmese and Pegu war of 1852-3, including the bombardment of Rangoon and capture of Bassein, for which he received the medal and clasp. He served with the 18th Royal Irish in the Crimea in 1855, for which he obtained the medal and clasp and Turkish medal; also in India during the Mutiny, in the Madras Presidency.

He successively filled the highest posts in the Department, such as Surgeon-General in Ireland and India. He was an Honorary Fellow of both the Colleges of Physicians and Surgeons in Ireland, and was created a military K.C.B. in 1885, and also an Honorary Surgeon to the Queen.

From his public career few officers were more widely known, and none more generally respected in the service. The position of Director-General of the Army Medical Department is not a bed of roses, and could not be filled even by an angel without giving offence to someone; yet Sir Thomas Crawford passed through it with a very minimum of personal friction. He had a clear head, and enormous capacity for work; and there never was a Director-General more master of detail. He was a man of even and judicial temper; and those who had the pleasure of serving with him in his highest office will remember how seldom he was ruffled, even when worried beyond the endurance of most men. The Egyptian expedition of 1882 caused a severe strain on the Director-General and his office; but his steady hand, and the able men he had around him, brought the Department triumphantly through most unfair criticism, and even a semi-hostile Commission.

He was a man of fine presence, [illegible] disposition, excellent address and fluent speech; few could fill the chair at a public meeting or dinner with greater acceptance than he. Death has lately been sadly busy in the retired ranks of the department; during the past few weeks we have had to chronicle the deaths of Surgeons-General Irvine, Massy, Sir Thomas Longmore, and now of Sir Thomas Crawford.

Sir Thomas was twice married, first to Clara Frances, daughter of Mr. Richard [illegible], of Dublin, who died in [illegible]; and, secondly, in [illegible], to Mary Jane, daughter of General Clement A. Edwards, C.B. Lady Crawford died only a few months ago, and the deepest sympathy will be felt for the very large family, mostly of young boys, who have thus lost both their parents within the year.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, [illegible] births and [illegible] deaths were registered during the week ending Saturday, October 12th. The annual rate of mortality in these towns, which had been 21.0 and 19.4 per 1,000 in the two preceding weeks, rose again to 21.0 last week. The rates in the several towns ranged from 8.6 in Croydon, 13.4 in West Ham, and 15.8 in Plymouth to 33.6 in Salford, 34.0 in Burnley, and 42.5 in Blackburn. In the thirty-two provincial towns the mean death-rate was 23.9 per 1,000, and exceeded by as much as 6.9 the rate recorded in London, which was only 17.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 4.4 per 1,000; in London the death-rate was 2.8 per 1,000, while it averaged 5.6 in the thirty-two provincial towns, and was highest in Wolverhampton, Burnley, Salford, and Blackburn. Measles caused a death-rate of 1.5 in Oldham, 2.6 in Wolverhampton, and 7.4 in Blackburn; scarlet fever of 1.0 in Liverpool and in Salford; whooping-cough of 1.2 in Bolton; "fever" of 1.5 in Birkenhead and in Sunderland; and diarrhœa of 8.5 in [illegible], [illegible] in Salford, 8.9 in Burnley, and 11.6 in Blackburn. The [illegible] deaths from diphtheria in the thirty-three towns included 56 in London, [illegible] in West Ham, 6 in Birmingham, and 4 in Liverpool. Two fatal cases of small-pox were registered in London, but not one in any other of the thirty-two large provincial towns. There were 155 cases of small-pox under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday, October 12th, against 271, 234, and 196 at the end of the three preceding weeks; 9 new cases were admitted during the week, against 23, 21, and 17 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital, which had been [illegible], 2,607, and 2,602 at the end of the three preceding weeks, had [illegible] on Saturday last, October 12th; [illegible] new cases were admitted during the week, against [illegible], [illegible], and [illegible] in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, October 12th, 834 births and 536 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.5 and 18.3 per 1,000 in the two preceding weeks, further rose to 19.3 last week, but was 1.7 per 1,000 below the mean rate during the same period in the large English towns. Among these Scotch towns the death-rates ranged from 14.4 in Aberdeen to 27.9 in Dundee. The zymotic death-rate in these towns averaged 3.3 per 1,000, the highest rates being recorded in [illegible] and Greenock. The 462 deaths registered in Glasgow included [illegible] from diarrhœa, 6 from whooping-cough, and 3 from scarlet fever.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE THIRD QUARTER OF 1895.

IN the accompanying table will be found summarised the vital and mortal statistics of the forty-three sanitary areas of the metropolis, based upon the Registrar-General's returns for the third or summer quarter of the current year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary areas in which the patients had previously resided.

The [illegible] births registered in London during the three months ending September last were equal to an annual rate of [illegible] per 1,000 of the population, estimated at [illegible] persons in the middle of this year; this rate corresponded with the mean rate in the [illegible] quarters of the two preceding years [illegible]. The birth-rates during the period under notice in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the population. In Kensington, St. George Hanover Square, St. [illegible] Westminster, Hampstead, St. Martin-in-the-Fields, London City, and [illegible] the birth-rates were considerably below the average, while they showed a marked excess in St. Luke, Shoreditch, Whitechapel, St. George-in-the-East, Mile End Old Town, Newington, and [illegible].

The [illegible] deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of [illegible] per 1,000; although this rate considerably exceeded that recorded in the corresponding quarter of last year, it was [illegible] below the mean rate in the third quarter of the ten preceding years, which was [illegible] per 1,000. The lowest death-rates last quarter in the various sanitary areas were [illegible] in Hampstead, [illegible] in Stoke Newington, [illegible] in St. George Hanover Square and in [illegible], [illegible]; the highest rates were [illegible] in Mile End Old Town, [illegible] in Whitechapel, [illegible], and [illegible] in St. Luke. During the quarter under notice [illegible] deaths were referred to the principal zymotic diseases in London; of these [illegible] resulted from diarrhœa, [illegible] from measles, [illegible] from diphtheria, [illegible] from whooping-cough, [illegible] from scarlet fever, [illegible] from different forms of "fever" (including [illegible] from typhus, [illegible] from enteric fever, and [illegible] from ill-defined forms of continued fever), and [illegible] from small-pox. These [illegible] deaths were equal to an annual rate of [illegible] per 1,000, [illegible]; the zymotic death-rate last quarter exceeded that recorded in the corresponding quarter of any year since [illegible]. During the September quarters of the ten preceding years the

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions, during the Third Quarter of 1895.

SANITARY AREAS	Estimated Population middle of 1895.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhoea.	Phthisis.	Deaths of Children under 1 year of age to 1,000 births.
				Births.	Deaths.	Principal Zymotic Diseases.												
LONDON	[illegible]	33,240	19,932	[illegible]	18.2	4.3	4,668	31	[illegible]	[illegible]	[illegible]	261	1	[illegible]	1	[illegible]	1,631	220
West Districts.																		
Paddington	132,766	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	5	5	17	11	—	3	—	[illegible]	[illegible]	[illegible]
Kensington	167,671	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	4	[illegible]	[illegible]	—	4	1	[illegible]	[illegible]	[illegible]
Hammersmith	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	4	[illegible]	12	[illegible]	—	[illegible]	—	[illegible]	[illegible]	215
Fulham	117,745	[illegible]	[illegible]	[illegible]	[illegible]	5.3	[illegible]	—	[illegible]	4	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Chelsea	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.1	[illegible]	—	3	[illegible]	[illegible]	4	—	[illegible]	—	[illegible]	[illegible]	172
St. George Hanover Sq.	74,097	[illegible]	[illegible]	[illegible]	[illegible]	1.9	25	1	—	4	4	[illegible]	—	[illegible]	1	[illegible]	[illegible]	128
Westminster	[illegible]	312	[illegible]	[illegible]	[illegible]	[illegible]	40	—	7	1	1	1	—	1	—	[illegible]	[illegible]	[illegible]
St. James Westminster	[illegible]	132	[illegible]	[illegible]	[illegible]	1.9	11	—	1	1	1	—	—	[illegible]	—	[illegible]	[illegible]	[illegible]
North Districts.																		
Marylebone	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.7	91	—	[illegible]	1	9	7	—	[illegible]	—	[illegible]	[illegible]	176
Hampstead	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3	[illegible]	—	—	1	2	[illegible]	—	[illegible]	—	[illegible]	[illegible]	178
St. Pancras	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.5	[illegible]	1	31	11	32	11	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Islington...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.3	[illegible]	1	52	19	34	[illegible]	—	[illegible]	1	[illegible]	[illegible]	172
Stoke Newington ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.3	[illegible]	—	3	—	3	1	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Hackney	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.3	[illegible]	1	37	12	13	[illegible]	1	[illegible]	—	[illegible]	[illegible]	[illegible]
Central Districts.																		
St. Giles	[illegible]	[illegible]	160	29.4	17.0	[illegible]	[illegible]	1	2	1	3	—	—	1	—	[illegible]	[illegible]	207
St. Martin-in-the-Fields	13,586	48	50	14.2	14.8	1.8	6	1	—	1	—	—	—	1	—	[illegible]	[illegible]	[illegible]
Strand	[illegible]	[illegible]	103	[illegible]	[illegible]	[illegible]	19	2	—	6	2	—	—	1	—	[illegible]	[illegible]	248
Holborn	[illegible]	[illegible]	214	25.4	[illegible]	[illegible]	[illegible]	—	13	—	1	1	—	—	—	[illegible]	[illegible]	[illegible]
Clerkenwell	[illegible]	[illegible]	261	32.1	[illegible]	5.1	[illegible]	—	[illegible]	5	7	[illegible]	—	1	—	[illegible]	[illegible]	[illegible]
St. Luke	[illegible]	[illegible]	[illegible]	[illegible]	25.1	13.4	[illegible]	—	71	2	[illegible]	[illegible]	—	2	—	[illegible]	[illegible]	[illegible]
London City	[illegible]	[illegible]	[illegible]	[illegible]	10.2	1.7	14	—	3	1	1	—	—	1	—	[illegible]	[illegible]	174
East Districts.																		
Shoreditch	[illegible]	1,128	[illegible]	[illegible]	22.4	6.3	[illegible]	2	[illegible]	14	17	12	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Bethnal Green	130,061	[illegible]	[illegible]	35.7	21.4	6.2	[illegible]	2	[illegible]	11	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Whitechapel	[illegible]	[illegible]	[illegible]	[illegible]	25.6	6.0	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
St. George-in-the-East	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.8	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Limehouse	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.8	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Mile End Old Town ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.7	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Poplar	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.1	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
South Districts.																		
St. Saviour Southwark	26,570	206	[illegible]	[illegible]	[illegible]	5.1	[illegible]	—	6	4	[illegible]	1	—	—	—	[illegible]	[illegible]	[illegible]
St. George Southwark	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.1	[illegible]	—	13	5	7	[illegible]	—	6	—	[illegible]	[illegible]	[illegible]
Newington	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.1	123	1	[illegible]	6	12	14	—	2	—	[illegible]	[illegible]	232
St. Olave Southwark	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.0	13	—	2	—	1	1	—	—	—	[illegible]	[illegible]	[illegible]
Bermondsey	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5.2	[illegible]	—	[illegible]	6	7	[illegible]	—	[illegible]	—	[illegible]	[illegible]	177
Rotherhithe	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.9	40	—	[illegible]	—	[illegible]	1	—	4	—	[illegible]	[illegible]	[illegible]
Lambeth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.7	[illegible]	2	40	14	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Battersea	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.3	175	—	[illegible]	13	16	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Wandsworth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.4	110	1	6	5	[illegible]	4	—	[illegible]	[illegible]	[illegible]	41	[illegible]
Camberwell	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.0	[illegible]	6	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	—	[illegible]	[illegible]	[illegible]
Greenwich	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.1	[illegible]	1	2	14	47	14	—	2	—	[illegible]	[illegible]	[illegible]
Lee...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.2	[illegible]	—	2	—	1	—	—	—	—	[illegible]	[illegible]	146
Lewisham	82,410	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	3	1	3	—	[illegible]	—	[illegible]	[illegible]	183
Woolwich	42,768	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37	—	2	3	6	1	—	5	—	[illegible]	21	180
Plumstead	61,494	[illegible]	[illegible]	[illegible]	14.1	[illegible]	15	2	1	1	4	4	—	7	—	[illegible]	[illegible]	172

zymotic death-rate averaged 3.7 per 1,000. The lowest zymotic rates during last quarter in the various sanitary areas were 1.2 in Lee, 1.3 in Hampstead, 1.7 in London City, 1.8 in St. Martin-in-the-Fields, and 1.9 in St. George Hanover Square and in St. James Westminster; while the rates ranged upwards to 6.1 in Poplar and in St. George Southwark, 6.2 in Bethnal Green, 6.3 in Shoreditch, 7.7 in Mile End Old Town, 7.8 in Limehouse, 9.8 in St. George-in-the-East, and 13.4 in St. Luke.

Thirty-one deaths from small-pox of persons belonging to London were registered during the three months ending September last, of which 6 belonged to Camberwell, 4 to Whitechapel, and 2 each to Strand, Shoreditch, Bethnal Green, Lambeth, and Plumstead sanitary areas. Measles showed the highest proportional fatality in Holborn, St. Luke, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Bermondsey, and Camberwell; scarlet fever in Strand, Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, and Poplar; diphtheria in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Camberwell, and Greenwich; whooping-cough in Fulham, Clerkenwell, St. Saviour Southwark, Newington, and Lambeth; enteric fever in Hackney, Shoreditch, and St. George Southwark; and diarrhoea in Fulham, St. Luke, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, St. Saviour Southwark, and St. George Southwark.

During the quarter ending September last 1,631 deaths from phthisis were registered in London, equal to an annual rate of 1.5 per 1,000. Among the various sanitary areas the lowest phthisis death-rates were recorded in Fulham, Hampstead, Stoke Newington, Wandsworth, and Lewisham; the highest rates in Westminster, Strand, Holborn, Clerkenwell, St. Luke, Whitechapel, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, and St. Olave Southwark.

Infant mortality in London last quarter, measured by the proportion of deaths under one year of age to registered births, was equal to 220 per 1,000; this rate exceeded that recorded in the corresponding period of any year since 1887, and was 29 per 1,000 above the mean rate in the third quarters of the ten preceding years. Among the various sanitary areas the rates of infant mortality were lowest in St. George Hanover Square, St. James Westminster, Islington, Stoke Newington, Rotherhithe, Lee, and Plumstead; while they showed the largest excess in Holborn, Clerkenwell, St. Luke, St. George-in-the-East, Limehouse, St. Saviour Southwark, and St. George Southwark.

THE MANAGEMENT OF PAUPER LUNATICS.

LEX writes: 1. A man is sent to the workhouse, of which I am medical officer, and placed in the asylum before my arrival without any detention order. He has previously been in more than one asylum, and has lately been drinking and is somewhat excited. There is not sufficiently apparent proof of insanity to warrant my certifying him at once, but I think it desirable to keep him under observation for a week or two. Can I (under Section 21 of the Lunacy Acts Amendment Act, Subsection 2) give a detention order for fourteen days without a magistrate's or other medical man's order? 2. A certified lunatic in the workhouse asylum is becoming more and more restless and troublesome; he is suffering from chronic mania, and, though not dangerous to himself or others, ought to be removed to an asylum where he can receive more systematic treatment. A magistrate refuses to sign the order, on the ground that the patient "has no delusions."

*** 1. No. 2. "Lex" can do no more than make a full representation of the facts to the justice—that is, having once freed himself from responsibility by doing his part under Sections 14 and 16 of the Lunacy Act, 1890.

DUTIES OF A DISTRICT MEDICAL OFFICER.

H. T. asks the following four questions: 1. When a medical order has been granted does it continue in force for the current illness only or should it be renewed after any specified time? 2. Is it necessary to

visit a patient the same day an order is received, such order not being marked "urgent." 3. In the case of an alleged lunatic not under proper care and control, is it necessary or customary after visiting and and certifying to attend before a magistrate to give evidence on oath in reference to the case? 4. Is a medical man, having received a magistrate's order to visit an alleged pauper lunatic, at liberty to decline doing so owing to the inadequacy of the fee or for other reasons?

*** 1. The practice on this point varies much in different unions. In some the order is in force only for the illness for which it was granted, in others it lasts by special direction of the Board for a fixed time, in others again till the end of the current year. Greater uniformity on this point is much needed. 2. It hardly appears necessary to visit all cases the same day an order is granted, especially when this is not marked "urgent" and the case is known not to be an urgent one, but if the visit is deferred this is at the risk of the medical officer. 3. This is certainly not customary and we cannot consider such a course necessary in any ordinary case. 4. We consider that any medical practitioner is at liberty to decline to visit a pauper lunatic on a magistrate's order if he thinks fit to do so.

MEDICAL ORDER GRANTED ON IRREGULAR APPLICATION.

UNION MEDICAL OFFICER writes a very long letter asking whether he is obliged to act on a medical order to attend upon a widow with three children which has been granted by the relieving officer on the application of a charitable lady, and this without the knowledge or wish of the patient herself?

*** We consider that as the order in question has been granted by the proper official our correspondent cannot decline to attend the case as a pauper patient, unless the order is cancelled by the Board of Guardians.

FEE FOR ASSISTANCE GIVEN TO WORKHOUSE MEDICAL OFFICER.

DR. E. JONES (Leigh, Lancs.) writes: In reply to "X," in the BRITISH MEDICAL JOURNAL of October 12th, who asks what is the proper way to get paid a fee for assistance given to the workhouse medical officer, may I point out that the medical officer should himself apply to the Board to allow him the fee for assistance given him by "X"? If he does so and tells them why he called him in they will probably make no difficulty in the matter if there has has been a proper reason for so doing. In a case lately I applied for fees for two men I asked to help me in an outdoor case as well as one for myself, as the operation was a difficult one, the guardians unanimously allowed us each a fee. The thing to do is to give a proper and satisfactory reason for one's action. I should be glad to know the result.

CONSTRUCTION OF WORKHOUSE INFIRMARIES.

[illegible].—[illegible] *Guide* to the arrangement and construction of workhouse buildings may be consulted with advantage. The plans attached to the Memorandum of the Local Government Board on the provision of isolation hospital accommodation will equally meet the case of Poor-law infirmary buildings.

PAYMENTS UNDER THE NOTIFICATION ACT.

W. F. F.—It appears perfectly sufficient, in rendering an account to the sanitary authority for notifications sent in, to state the number of notifications between the dates specified, and any but an exceptionally crotchety county court judge would hold it so. It is most usual, indeed, for sanitary authorities themselves, from their Register of Notifications, to make up the accounts of medical men half-yearly, and forward cheques for the amount.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A SURGEON-MAJOR in Bombay Presidency wishes to exchange with one at home.—Apply, No. 1,349, The Manager, BRITISH MEDICAL JOURNAL, Strand, London.

THE NAVY.

SURGEONS ERNEST D. MINTER, JOHN D. HUGHES, THOMAS AUSTIN, and ALFRED H. L. COX are to be lent for study at metropolitan hospitals, from October 15th.

Deputy-Inspector-General JOHN COCKBURN [illegible], M.D., died at Edinburgh on October 9th. He was appointed Surgeon, August [illegible], [illegible]; Staff-Surgeon, August [illegible], [illegible]; Fleet-Surgeon, January 27th, [illegible], and Deputy-Inspector-General on retirement, June [illegible], [illegible]. He was Assistant-Surgeon of the *Duke of Wellington* in 1854, and of the *Centaur* in 1855 in the Baltic expeditions of those years, and had received the Baltic medal.

Surgeon GEORGE T. COLLINGWOOD has been appointed to the *Pembroke*, October [illegible].

ARMY MEDICAL STAFF.

SURGEON-MAJOR GENERAL ROBERT LEWER is placed on retired pay, October 3rd. Appointed Assistant-Surgeon, August 1st, 1867, he became Surgeon, September 9th, 1871; Surgeon-Major, March 1st, 1873; Brigade Surgeon, April 1st, [illegible]; Surgeon-Colonel, October [illegible], [illegible]; and Surgeon-Major-General, August [illegible], [illegible]. He served in the Royal Navy during the operations in the Baltic, and was present at the bombardment of Sweaborg (medal). He was also in the Afghan war of 1878-80 in medical charge of the 9th Lancers, and as sanitary officer to the Cabul Field Force, and was present in the operations around Cabul in December, 1879, including the investment of Sherpore; he accompanied Sir Frederick Roberts in the march to Candahar, and was present at the battle of Candahar (mentioned in despatches, medal with two clasps, and bronze decoration).

Surgeon-Major WILLIAM M. JAMES is promoted to be Surgeon-Lieutenant-Colonel September 28th. He dates as Surgeon from September 30th, [illegible], and as Surgeon-Major, September [illegible], [illegible].

Surgeon-Major ERNEST H. FENN, C.I.E., is also promoted to be Surgeon-Lieutenant-Colonel, September 28th. His commission as Surgeon bears date September [illegible], [illegible], and as Surgeon-Major, May [illegible], [illegible]. He was engaged in the Afghan war of 1878-80 in medical charge of a battery of Royal Artillery, and was present at the affair at Saidabad; accompanied Sir Frederick Roberts in the march to Candahar, and was present at the battle of Candahar (mentioned in despatches, medal with clasp, and bronze decoration); he was also in the Soudan campaign in 1885 with the 3rd Battalion of the Grenadier Guards, and was present in the engagement at Hasheen and at the destruction of Tamai (medal with clasp and Khedive's star).

Surgeon-Captain P. B. SKERRETT, who entered the service August 1st, 1886, now retires with a gratuity, October 16th.

Surgeon-Colonel H. S. MUIR has been appointed an Administrative Medical Officer in the Madras Command.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

BOTANY.—The election to the Professorship of Botany, vacated by the death of Professor Babington, will take place on Saturday, November 2nd, at 2.30 P.M.

PHYSICS.—Mr. C. T. R. Wilson, of Sydney, has been appointed Assistant Demonstrator at the Cavendish Laboratory. A Clerk Maxwell Studentship in Physics, vacant by the resignation of Mr. Whetham, will be filled up this term. The studentship is worth £150 a year for three years.

PHARMACOLOGY AND THERAPEUTICS.—Professor Bradbury announces a class in these subjects this term, at the Downing Laboratory and Museum, for students preparing for the Third M.B.Camb., and the Intermediate M.B.Lond.

DEGREE.—At the Congregation, on October 10th, George Pinder, of Queens' College, was admitted to the degree of M.D.

FELLOWSHIP.—Mr. Ivor Lloyd Tuckett, B.A., First Class in Human Anatomy and Physiology in the Natural Sciences Tripos of 1894, has been elected to a Fellowship at Trinity College.

UNIVERSITY OF EDINBURGH.

THE following candidates have passed the First Professional Examination for the degrees of M.B. and Ch.B. in the subjects prefixed to their names:

Chemistry.—R. E. Clark, W. Hutcheson, W. J. M. McFarlan, A. E. McLeod, C. F. T. Scott, J. Thornhill, D. B. B. Hughes.

Physics.—J. H. C. Orr, J. B. Thorburn.

The following have passed the Medical Preliminary Examination:

C. H. Allen, W. L. L. Alston, J. H. Bell, [illegible], J. H. R. Bowman, J. C. Boyd, G. F. Buist, J. P. Campbell, L. Campbell, K. A. Carrie, G. S. Carey, D. G. Carmichael, C. W. A. Carroll, A. W. S. Christie, W. P. Cormack, P. D. Cremona, T. A. Davies, C. Douglas, W. Eadie, V. M. Ferguson, A. Fleming, Catherine Fraser, J. S. Geikie, R. M. Glanville, J. M. Glasse, T. Gowans, L. S. Sandeman, W. S. Scott, E. T. Selkirk, J. Shields, J. J. Sinclair, B. O. Spence, C. C. Southon, H. M. Speirs, A. Trotter, J. H. Upham, A. S. Watson, A. G. Watson, W. Watson, G. D. Willis, F. M. Wigg, G. Wright, J. H. Wrightson, A. M. Ward, A. L. Gurney, H. W. Gush, G. W. Guthrie, N. E. Harding, L. S. Hill, Eleanor J. Hodson, L. C. Hunter, J. P. P. Inglis, J. G. S. Jamieson, E. A. Klein, A. C. Lennie, G. H. Lewis, W. E. Macfarlane, N. F. M'Hardy, D. M'Kinnon, D. S. Macknight, R. M. Matheson, F. C. C. Maunsell, R. C. Monnington, A. L. Nevill, J. C. Peebles, H. G. Pearl, W. G. Porter, L. T. Price, J. B. Primmer, L. C. Rattray, J. S. E. Robertson, A. L. Roxburgh.

UNIVERSITY OF GLASGOW.

THE following have passed the First Professional Examination (New Regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated after their respective names (B., Botany; Z., Zoology; P., Physics; C., Chemistry):

G. Alexander (B., C.), A. A. Barclay (B., Z.), J. F. Bennett (B., P.), A. Brownlie (B., Z., C.), G. F. Buchan (P.), J. Carruthers, M.A. (B.), G. M. Crawford (Z.), C. P. G. [illegible] (B., Z.), C. Cumming (B., C.), W. Dick (B., P.), J. A. Dickie (B., C.), F. L. Dickson (B., P.), D. C. Douglas (B., Z.), J. P. Duncan (B., C.), M. C. Ferguson (C.), C. Mackie Findlay (B.), J. A. Garden (B., C.), G. Gardner (B., P., C.), J. Gardner (B., P.), G. Garry (B., C.), W. Gibson (B., C.), H. Goodman, M.A. (B., Z., C.), C. A. Gourlay (Z.), N. Jamieson (Z., P.), A. Kerr (C.), J. F. Lawrie (B.), N. M. Love (B., P.), A. Love (Z., C.), R. Millar (B., C.), H. Miller (B.), N. M'L. Miller (B., C.), R. Mitchell, M.A. (Z., C.), D. Morrison (B., C.), P. [illegible] M'Fadyen (B., C.), J. [illegible] (B., C.), P. [illegible] (B., [illegible]), T. [illegible], M.A. (B., Z.), N. F. [illegible] (B.), W. J. [illegible] (C.), J. [illegible] (B., C.), W. [illegible], M.A. (B., Z., C.), J. [illegible] (C.), T. S. [illegible] (B.), J. Reid (P., C.), D. J. Smith (B., C.), J. S. [illegible] (Z., P.), W. S. [illegible] (B., [illegible]), P. A. Stevens (B., P.), A. [illegible] Stewart (B., P.), T. Y. [illegible] (P., C.), R. Taylor (B., [illegible]), C. P. Thompson (B., P.), W. B. Thomson (B., C.), J. S. Thomson (P., C.), J. Turnbull (B., Z.), A. Vost (B., Z., P.), A. L. Watson, M.A. (B., C.), J. White (B., C.), M. W. Williams (B., C.),

A. Wilson (B., C.), W. Wright (B., C.), J. D. Young (B., P.). Women candidates: M. K. H. Fleming (B., P.), M. M. Gordon (B., Z.), M. Hardie (B., Z.), C. S. Howden (B., Z.), J. F. B. Hunter (B., [illegible]), F. M'Neill (B., Z.), M. A. Richards (B., Z.), E. H. Smith (B., [illegible]), E. M. [illegible] (P., C.).

The following have passed the First Professional Examination (Old Regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):

S. Dunbar, C. M. MacLeod. Women candidate: M. J. G. Carr.

The following have passed the Second Professional Examination (New Regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated after their respective names (A., Anatomy; P., Physiology; M.M. and T., Materia Medica and Therapeutics):

A. S. Cross (M.M. and T.), J. Alston (A., P., M.M. and T.), G. MacL. Allan (M.M. and T.), J. G. W. Boleyn (A., P.), W. C. Burns (A., P.), A. L. Cairns (M.M. and T.), F. J. Charteris (M.M. and T.), C. Clark (A., P., M.M. and T.), J. A. Clark (M.M. and T.), G. Coats (A., P., M.M. and T.), G. W. Coats (M.M. and T.), J. D. Cochran (M.M. and T.), J. M. Corbett (A., P., M.M. and T.), R. Crawford (A., P.), J. Crow (A., P.), W. S. Findlay, M.A. (M.M. and T.); J. F. Fleming (M.M. and T.), A. A. Forrester (M.M. and T.), T. B. Garvie (A., P., M.M. and T.), T. Hunter, M.A. (A., P.); A. Lawrie (P., M.M. and T.), A. M. Lindsay (A., P.), J. W. Lindsay (A., P., M.M. and T.), J. MacDonald (M.M. and T.), M. MacDonald (A., P.), J. M. Maffie (M.M. and T.), D. M'Kail (M.M. and T.), A. MacKenzie (A., P., M.M., and T.), J. M'Queen, M.A. (M.M. and T.), J. S. Ormond (A., P., M.M. and T.), J. Reid (A., P., M.M. and T.), N. E. H. Scott (M.M. and T.), R. Scott (A., P.), J. L. Simpson (A., P.), A. B. Sloan (M.M. and T.), S. M. Sloan (M.M. and T.), D. S. Smith (M.M. and T.), J. M'C. Stewart (A., P., M.M. and T.), D. S. Sutherland (A., P., M.M. and T.), J. D. C. Swan (A., P.), M. L. Taylor (M.M. and T.), D. R. Thomas (A., M.M. and T.), W. L. Thomson (M.M. and T.), W. J. A. Walker (A., P.), W. Watson (M.M. and T.), J. Wotherspoon (A., P.), W. Wyper (M.M. and T.), D. J. Young (M.M. and T.). Women candidates: D. A. Bennett (A.), M. Gardiner (A., P.), J. Lorimer (A., P.), M. A. Macfarlane (A., P.), A. R. Robson (A., P.), C. L. Smith (A., P.), J. H. Smith (M.M. and T.).

The following have passed the Second Professional Examination (Old Regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):

A. P. Aitken, W. Colquhoun, M.A.; W. Duncan, C. E. Fleming, J. Millar, J. Rankin, B.Sc.; A. P. Robertson, D. W. Smith, A. J. T. Swann. Women candidate: M. M. Pearson.

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):

(A) Including Pathology.—W. Allen, J. M. Bonar, H. Borland, W. Brown, J. Butler, H. Calderwood, B.Sc.; J. L. Carstairs, M.A.; T. Cochrane, P. L. L. Craig, M.A.; J. Gardner, W. Hanson, J. H. Lyell, A. Mason, A. B. Murray, N. Macnair, B.Sc.; R. Nelson, W. S. Paterson, D. L. Stevenson, M.A.; R. H. Thomson, A. C. Wilson, B.Sc. Women candidates: A. J. Anderson, M. P. Graham, M. Ransome.

(B) Not including Pathology: D. M'G. Campbell, J. A. C. Doonan, J. S. Douglas, C. Lowson, W. Martin, M.A.; J. I. MacMillan, M.A.; W. M'M. Pearson, J. H. Rankin, J. R. Ratcliffe, A. Robertson, J. Taylor.

ROYAL UNIVERSITY OF IRELAND.

THE Examiners have recommended that the following candidates be adjudged to have passed the undermentioned examinations:

M.B., B.Ch., B.A.O. Degree Examination.—Upper Pass: S. W. Carroll, Queen's College, Cork and Galway; *J. P. Prenglay, Catholic University School of Medicine; D. W. Howett, University of Edinburgh and Queen's College, Galway; A. A. F. McArdle, B.A., Queen's College, Cork; J. C. Nixon, B.A., Queen's College, Galway; E. J. O'Farrell, Catholic University School of Medicine; W. A. Osborne, Queen's College, Belfast. Pass: C. Blue, Queen's College, Belfast; J. A. Clarke, Queen's College, Cork; R. W. Clements, B.A., University of Edinburgh and Queen's College, Galway; J. Crean, Catholic University School of Medicine; S. F. Floyd, Queen's College, Belfast; Amelia G. Grogan, B.A., Royal College of Surgeons, Ireland; M. Hynes, Queen's College, Galway; G. M. Irvine, B.A., Queen's College, Belfast; J. McArdle, Catholic University School of Medicine; D. McCarthy, Queen's College, Cork; W. A. McWilliams, Queen's College, Belfast; J. P. Maguire, Queen's Colleges, Galway and Cork; A. E. Moore, Queen's College, Cork; Lilian A. Powell, Queen's College, Belfast, and Royal College of Surgeons, Ireland; J. A. Roughan, B.A., Catholic University School of Medicine; R. Watson, Queen's College, Belfast.

Candidates marked thus (*) may present themselves for the further Examination in Honours.

B.Ch. Degree Examination.—J. Browne, M.D., Queen's College, Belfast.

M.Ch. Degree Examination.—A. G. Greenway, M.D., Queen's College, Galway; J. Magrath, M.D., Queen's College, Belfast, and University College, London.

M.A.O. Degree Examination.—R. H. Creighton, B.A., M.B.

M.D. Degree Examination.—J. Colville, B.A., M.B., Queen's College, Belfast; Katharine M. N. Maguire, B.A., M.B.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

THE following gentlemen passed the Second Examination of the Board in the subjects indicated.

Wednesday, October 9th.

Anatomy and Physiology.—L. O. Fuller, E. A. Bullmore, W. S. Sheldon, and A. E. Francis, students of University College, London; N. J. Roche and V. S. Partridge, of Charing Cross Hospital; C. L. Francis, E. G. Bailey, E. N. Berryman, A. H. Brewer, and J. K. S. Flemming, of St. Bartholomew's Hospital; W. R. Cazenove, H. P. W. Barlow, J. Howells, and N. Williams, of Guy's Hospital; F. Bawtree, of St. Thomas's Hospital; W. Meade, of St. George's Hospital; H. Hipwell, of Middlesex Hospital; K. de R. Bell and [illegible] Bateson, of King's College, London.

Anatomy only.—H. P. Shanks, of University College, London; and E. C. Plummer, of King's College, London.

Sixteen gentlemen were referred in both subjects, and 1 in Anatomy only.

Thursday, October 10th.

Anatomy and Physiology.—G. G. Campbell, E. P. Court, W. H. Carzaly, J. Dalebrook, and N. H. Joy, of St. Bartholomew's Hospital; P. R. Tarbet and D. L. K. Pritchard, of University College, London; A. D. Lewis, H. W. Fox, and W. W. Harrison, of Guy's Hospital; H. C. Adams, of Middlesex Hospital; J. C. S. Coles, of St. Thomas's Hospital; J. L. W. Morris and J. Lindsay, of St. Mary's Hospital; H. B. Ainsworth and F. B. Thompson, of St. George's Hospital; F. J. A. Beringer, of London Hospital.

Anatomy only.—A. W. Penrose, of Guy's Hospital; A. C. Bird, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; W. Amsden, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; F. H. Lawson and E. S. Shove, of Middlesex Hospital; E. J. Distin and J. J. C. Hamilton, of King's College, London.

Physiology only.—G. H. Dominy, of St. Thomas's Hospital; and C. S. Agnew, of Charing Cross Hospital.

Twelve gentlemen were referred in both subjects, 1 in Anatomy only, and 1 in Physiology only.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PROSECUTION UNDER THE LUNACY ACT.

THE recent conviction at the Birmingham Quarter Sessions of a medical man for receiving into his house a lunatic without compliance with the provisions of the Lunacy Acts will strengthen the hands of the authorities in dealing with such infractions of the law, which, there is every reason to believe, are far too frequent, and efforts to punish which have signally failed in some cases. In the present case it was even alleged that mechanical means of restraint were used, and no record of it kept—a double illegality, if so. A fine of £50 was imposed, and it was only the Recorder's belief in the good intentions of the defendant that saved the latter from prison. It was not alleged to be a case of a person not insane being unjustly deprived of personal liberty on the ground of insanity, but it was alleged to be, and proved to be, an instance of an insane person being received into a medical man's private house without the proper legal proceedings being taken beforehand, and therefore was an example of a person properly detainable as insane being so detained, but in an illegal manner by an infraction of the law's provisions. Strange to say, the case has been made the occasion for a diatribe against private asylums; and discussed as if it exemplified improper reception and detention of a person in a private asylum. Whereas, in reality, the patient was a fit and proper person to have been received into a private asylum, into which she would, assuredly, not have been received without the proper legal antecedent proceedings and authority to receive, in the form of a reception order under the hand of a "judicial authority." Had she been insane there would have been "no case." But, in certain quarters, whatever particular act is, or is supposed to be, improper in the case or treatment of lunatics, or done with regard to alleged lunatics—whether it concerns the proceedings of a private individual not connected with any institution for the insane, or whether it concerns those of a public institution for the insane—is coolly and irrelevantly laid at the door of private asylums, and with a bold effrontery which savours far more of impudence than of ignorance.

UNPUNCTUAL PAYMENT OF SALARY.

D.R.B.—We do not think the fact that our correspondent's salary has been irregularly paid effects an alteration in the terms of the agreement relating to his employment. If the agreement provided for the determination of the employment on one month's notice such notice would be quite sufficient.

UNREGISTERED QUALIFIED PRACTITIONER.

AJAX inquires whether a gentleman who took the diplomas of M.R.C.S. and L.S.A. forty years ago but has never been registered is entitled to practise and charge for his services?

*** We know of nothing to prevent the gentleman in question practising medicine and surgery. He could not recover his fees in a court of law if his non-registration were properly raised by way of defence in such action, but we would not advise our correspondent to suggest that such a course should be taken.

SUBSTITUTE OR SUPPLANTER?

M.D. writes: A. and B. are partners. A. takes a holiday, and in his absence a patient calls to see him, and is sent on to B. (who is new to the place). On the way to B. the patient changes her mind, and calls in to see C., who takes on the case forthwith without any intimation to B. I may add that A. has frequently helped C. (a young man), and seen his patients during his absence, but on no occasion has he behaved unfairly to him. Ought C. to have handed the case over to B.?

*** Personally annoying as would be the patient's course of action to B. as a newcomer, it was a natural incident, more or less common to all practitioners. At the same time, and especially under the circumstances referred to, it would have been only courteous on the part of C. to have urged the patient to consult B. as the partner of A., failing to effect which, then C. should have acted as the latter's substitute, and on his return home have at once resigned the case to him.

MEDICAL NEWS.

The ninth French Congress of Surgery will be held in Paris from October 21st to 26th under the presidency of Professor Bouckel.

We are pleased to announce that Mr. Trimmer has sufficiently recovered from the injuries inflicted on him by the miscreants who robbed him in Lincoln's Inn Fields, to be able to resume his duties at the Royal College of Surgeons.

The late Mr. Charles Cardale Babington, Professor of Botany in the University of Cambridge, has bequeathed the whole of his valuable collection of plants to the University. This is in addition to his botanical library, which was presented to the University by the late professor in June, 1888, and is now in the University Museum.

The first meeting of the Matrons Council for the winter session will be held at the rooms of the Medical Society, Chandos Street, Cavendish Square, on Thursday, October 24th, at 5.30 P.M., when Miss Isla Stewart, Matron of St. Bartholomew's Hospital, will open a discussion on a Uniform Curriculum of Education for Nurses.

The winter course of Lectures and Demonstrations given by the staff of the Hospital for Consumption and Diseases of the Chest commenced on Wednesday, October 9th, when Dr. Douglas Powell gave a lecture on Angina Pectoris. Other lectures are given on succeeding Wednesdays until December 18th.

Edinburgh Royal Infirmary.—The following appointments have been made by the managers:—*House-Physicians:* Drs. Joseph E. Bowes, Frank W. B. Fitchett, John Forbes, William J. Garbutt, David M. Hutton, Ernest M. Skœtz, and Frederick Skey Stanwell. *House-Surgeons:* Drs. Charles J. Hill Aitken, H. P. Barlow, W. H. Bryce, Henry F. J. Simson, and David Waterston.

At the Quarterly Court of the Directors of the Society for Relief of Widows and Orphans of Medical Men held on October 9th, the President, Sir James Paget in the chair, two new members were elected. There were no fresh applications for grants; applications for continued assistance were read from 51 widows, 8 orphans, and 4 orphans on the Copeland Fund, and it was determined that a sum of £1,182 10s. should be distributed at the next Court, subject to the report of the visitors. A sum of £452 was voted to be given at Christmas, namely, £8 each to the 51 widows, £3 each to the 8 orphans, and £5 each to the 4 orphans on the Copeland Fund. A grant of £20 towards the self-maintenance of an orphan was made, and a special grant of ten guineas was given to a widow. The expenses of the quarter amounted to £55 9s.

The Fifeshire Medical Association.—At the last meeting of this Association, held at Kirkcaldy, the President (Dr. J. Sutherland Mackay) delivered an address upon Historical Pathology, with special reference to the "Black Death" and the Cholera Epidemic in Spain of 1885, the latter being described from personal experience. Reference was then made to the high mortality from preventable diseases in Great Britain, and an appeal made to assist in diminishing this waste of life. The President then moved a resolution to the effect that the holder of a "Medical Aid" Society's appointment should be ineligible for membership. After some informal discussion, entirely in favour of the proposition, it was determined to make some further inquiries as to the attitude of the General Medical Council in respect to such appointments. The following officers were elected for the ensuing year:—*President:* Dr. William Stark, Falkland. *Vice-President:* Dr. John Aitken, Buckhaven. *Honorary Treasurer:* Dr. A. G. Macdonald, Cupar. *Honorary Secretary:* Dr. Dewar, Cupar. *Councillors:* Drs. D. Hamilton, Kyle, and Huntington, St. Andrews, and Dr. Hamilton, Guardbridge.

Entrance Scholarships.—At St. George's Hospital an entrance scholarship in Arts of the value of £145 has been awarded to Mr. Thomas Crisp Ensor, and scholarships in Arts of the value of £50 to Mr. Henry Ayrton Chaplin, Mr. Hitchcock Frank Case, and Mr. Lawrence Jones. Entrance scholarships in Science of the value of £85 were awarded to Mr. Herbert Stringfellow Pendlebury, B.A., of Pembroke College, Cambridge; to Mr. Henry Goodridge Deller, B.A., of Trinity College, Cambridge; and to Mr. John Howell Evans, B.A., Oxford. The two last-named were bracketed equal, but owing to the excellence of their papers a full scholarship was awarded to each.—At King's College, London, the Warneford Scholarship of £25 for three years has been awarded to Mr. R. N. Batterbury, and scholarships of similar amount for two years to Mr. J. G. Pritchard and Mr. H. G. Wright. The Clothworkers Company's exhibitions have been awarded to Mr. C. F. Mott (£30 for two years) and Mr. R. H. C. Gompertz and Mr. C. L. Cartwright (£20 for two years). The Sambrooke Exhibitions have been gained by Mr. N. L. Stuart (£60) and Mr. A. C. Williams (£40).—From a revised list issued by St. Mary's Hospital Medical School it appears that an exhibition of £25 5s. has been awarded to Mr. A. Ferguson MacCallan, B.A., Christ's College, Cambridge, and that the three Natural Science Scholarships of 50 guineas each were awarded to Mr. E. W. Holyoak, Mr. A. F. Hayden, and Mr. J. Tattersall.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street, S.W.—Surgeon to Out-patients; must be F.R.C.S. Eng. Applications to the Honorary Secretary by November 2nd.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salaries, £70 and £60 respectively, with board, washing, and attendance at the institution. Applications to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham, by November 5th.

BOROUGH OF SCARBOROUGH.—Medical Officer of Health. Salary for the first year, £325, for the second, £350, and for the third and following year, £375. Will be required to act as Public Analyst at a further salary of £25 per annum. Not less than 35 or more than 45 years of age. Applications to John T. Graham, Town Clerk, Town Hall, Scarborough, by October 21st.

BRISTOL EYE HOSPITAL, Lower Maudlin Street.—Third Honorary Assistant Surgeon. Applications to T. Hampton, Secretary, before October 26th.

CARLISLE INFIRMARY, Carlisle.—House Surgeon. Salary £60 per annum, with apartments, not board. Applications to W. S. A. Lightfoot, Honorary Secretary, 14, Bank Street, Carlisle, by October 26th.

CATERHAM ASYLUM.—Second Assistant Medical Officer under Metropolitan Asylums Board. Must not exceed 30 years of age, and duly registered and qualified to practise both medicine and surgery in England. Will be subject to annual election after the completion of his third year of office. Salary, £100 per annum, rising by annual increments to £150. Forms of application may be obtained at the Offices of the Board, Norfolk House, Norfolk Street, Strand, W.C., and applications and testimonials to T. Duncombe Evans, Clerk to the Board, before October 30th.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-surgeon. Must be legally qualified to practise both medicine and surgery. Salary, commencing £80 per annum, with board and lodging. Applications and testimonials to Rev. Thomas Lund, Honorary Secretary, before October 24th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—Assistant Physician to the out-patients. Must be Fellow or Member of the Royal College of Physicians of London. Applications to Thomas Hayes, Secretary, by October 24th.

EAST RIDING LUNATIC ASYLUM, Beverley.—Assistant Medical Officer unmarried; age between 25 and 30 years; salary £100 per annum, with board, lodging, and washing. Applications to C. W. Hodgson, Clerk to Visiting Committee, by October 31st.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Appointment for six months. No salary, but commons, board, and washing provided. Applications to Samuel J. Gamble, House-Governor, by October 24th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 146, Buchanan Street, Glasgow, by November 9th.

GUEST HOSPITAL, Dudley.—Assistant Resident House Surgeon. Appointment for six months. Board, lodging and washing in hospital. No salary. Applications to the Secretary.

HORNCASTLE URBAN DISTRICT COUNCIL.—Medical Officer of Health. Appointment for one year. Salary, £80 per annum. Applications to John Pearson, J.P., Chairman of the Council, by October 24th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—House-Physician and also House-Surgeon, unmarried. Appointment for six months, beginning Jan. 1st, with board and residence in the Hospital. Applications and testimonials to the Secretary before October 26th.

HULL BOROUGH ASYLUM.—Assistant Medical Officer. Must be registered, unmarried, and not more than 30 years of age. Salary, £100 per annum, with board (exclusive), lodging, and washing. Applications and testimonials endorsed "Assistant Medical Officer," to the Town Clerk, Town Hall, Hull, by October 24th.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—Non-Resident Assistant Medical Officer. Salary, £50 per annum.

Applications to R. Stonex, Secretary, 39, St. Mary's Gate, Manchester, before October 28th.

NORTH WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer and Assistant Resident Medical Officer. Appointments for six months. Salary at the rate of £60 per annum attached to the senior post. Applications to Alfred Craske, Secretary, by October 26th.

NOTTINGHAM GENERAL DISPENSARY.—Junior Assistant Resident Surgeon. Appointment for six months. Salary at the rate of £130 per annum, with rooms, fire, and attendance. Applications to the Resident Surgeon, Broad Street, Nottingham, by October 22nd.

OLDHAM INFIRMARY.—Junior House-Surgeon; doubly qualified. Salary, £60 per annum, with board and residence. Applications to E. L. Blake, Secretary, by October 22nd.

PARISH OF DURNESS, Sutherlandshire.—Medical Officer. Guaranteed salary, £150 per annum, with practice, free house, and garden. Applications to Robert Sutherland, Inspector of Poor, Durness, by October 18th.

ROYAL BERKS HOSPITAL.—Consulting Dentist: must be registered Licentiate in Dental Surgery. Applications to the Secretary ten days before the election on November 8th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Assistant Surgeon. Applications to the Secretary by October 29th.

RURAL DISTRICTS OF BUNTINGFORD, HADHAM, HERTFORD, STANSTED, AND WARE, AND THE URBAN DISTRICTS OF BISHOP'S STORTFORD, HERTFORD, HODDESDON, AND WARE.—Medical Officer of Health, must devote his whole time to the office. Salary, £[illegible] per annum, including travelling and other expenses. Applications to George H. Gisby, Clerk to the Joint Committee, Council Office, Baldock Street, Ware, Herts, by October 21st.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. Salary at the rate of £50 per annum, with furnished apartments, attendance, coal, and light. Applications to the Directors by October 31st.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House-Surgeon (non-resident); doubly qualified. Must reside near the hospital, and devote the whole of his time to the institution. Salary, £200 per annum. Applications and testimonials to H. G. Sanderson, Secretary, by November 8th.

STOURBRIDGE DISPENSARY.—House-Surgeon and Secretary. Salary, £120 per annum, increasing £5 a year to £130, with furnished rooms, coal, gas, and extra allowance of £25 for travelling expenses. Applications to the Honorary Secretary, T. F. Bland, The Firs, Norton, Stourbridge by October 24th.

SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer, doubly qualified, unmarried, and under 30 years of age. Salary not exceeding £80 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by October 23rd.

MEDICAL APPOINTMENTS.

BEVAN, Richard, L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer for the No. 1 District of the Romney Marsh Rural District.

CANE, Leonard, M.D.Lond., B.S., appointed Physician to Peterborough Infirmary, *vice* Dr. W. E. Paley, deceased.

CHRISTIE, J. MacNaughtan, M.B., C.M.Glasg., L.M.(Rot. Hosp. Dubl.), appointed an Honorary Surgeon to the New Plymouth Hospital, New Zealand.

COTTON, Charles, F.R.C.P.Edin., appointed Physician to the Seamans' Infirmary and General Hospital, Ramsgate.

DAGLISH, Richard R., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Brooklane District and the Workhouse of the Romney Marsh Rural District.

DEACON, J. G., M.D., M.Ch., D.P.H., L.A.H., appointed Medical Officer for the No. 4 District of the Croydon Union, *vice* Dr. Perkins-Case, deceased.

FLETCHER, James L., M.B., C.M.Edin., appointed Medical Officer of Health to the South Darley Urban District, *vice* M. H. F. Cantrell, L.R.C.P.Edin., M.R.C.S., resigned.

GARROD, Thomas A., M.D.Edin., appointed Physician to the Newport and County Infirmary, *vice* Ben. Davies, M.D., deceased.

GILBERT, John, L.R.C.S.I., L.M., L.A.H.Dubl., appointed Medical Officer for the Cruskeen Dispensary District.

HICK, Henry, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer for the New Romney District of the Romney Marsh Rural District.

HILL, Charles Alex., M.B., B.C., B.A.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed Obstetric Assistant to St. George's Hospital.

JONES, J. Howard, appointed Medical Officer of Health to the Newport County Council.

PARHAM, W. M., M.D.Edin., M.B., C.M., appointed Medical Officer for the Workhouse of the Brecknock Union, *vice* J. Williams, resigned.

PERN, Dr. Edgar C., appointed Medical Officer of Health to the Droxford Rural District Council, *vice* B. N. Earle, M.D.Camb., D.P.H.

PHILLIPS, J. N., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Cannock Urban District Council, *vice* J. C. Blackford, resigned.

RENTON, W., L.R.C.P.Edin., L.R.C.S.Edin., L.M., L.S.A.Lond., appointed Clinical Assistant to the South London Royal Ophthalmic Hospital.

RIGG, S. E., M.R.C.S., L.R.C.P., appointed House-Surgeon to the Royal United Hospital, Bath, *vice* W. A. Sharpin.

RUTHERFORD, W. A., M.B., C.M.Edin., late House-Surgeon to the Morpeth Dispensary, appointed House-Surgeon to the County Hospital, Durham.

TAYLOR, H. S., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Clayton Hospital, Wakefield.

THOMSON, St. Clair, M.D., F.R.C.S., appointed Assistant Surgeon to the Royal Ear Hospital, Frith Street, Soho Square.

TIFFETT, Sydney, M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Westminster Hospital.

WALKER, W. W., B.A., M.B., B.C.Cantab., appointed Assistant Physician to the Peterborough Dispensary and Infirmary.

WANN, A. L., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Clayton Hospital, Wakefield.

WILSON, J. H., M.D., B.S.Durh., appointed Medical Officer of Health for the Standish-with-Langtree Urban Sanitary District, and Medical Officer for the Standish District of the Wigan Union, *vice* J. A. Marsden, M.R.C.S., L.S.A.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, London Throat Hospital, Great Portland Street, 8 P.M. Mr. George Stoker: Chronic Glandular Disease of the Naso-pharynx.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Craig: Delusional Insanity.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Dr. Frederic Hewitt and Mr. A. M. Sheild: On Posture in its Relation to Surgical Operations under Anæsthetics.

WEDNESDAY.

WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Mr. Keetley: Surgical Cases (Post-graduate course).

HOSPITAL FOR CONSUMPTION, Brompton, 4 P.M.—Dr. T. H. Green: On Pleural Effusion.

HUNTERIAN SOCIETY, 8.30 P.M.—First Hunterian Society's Lecture. Dr. G. Sims Woodhead: On the Probable Limitations of Serumtherapy.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Beevor.

THURSDAY.

LONDON POST-GRADUATE COURSE, Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Buzzard: Cases in the Hospital. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Mr. C. A. Ballance: Selected Surgical Cases. Central London Sick Asylum, Cleveland Street, 5.30 P.M. Mr. Pearce Gould: Cases in the Wards.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 3 to 5 P.M.—Professor Crookshank: Lecture; Anthrax and Malignant Œdema. Practical Work; Staining Sections.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Introductory Address by the President. Papers:—Dr. Radcliffe Crocker: Impetigo Contagiosa Gyrata. Mr. E. W. Parker: Sequel to a case of Removal of the Right Patella; recurrence after six years in the iliac glands; death. Dr. A. Wilson: The Treatment of Acute Pleural Effusion by Incision. Mr. C. Mansell Moullin: Suprapubic Cystotomy and Prostatectomy in Cases of Multiple Growth.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Craig: Stupor, Catalepsy, Katatonia, Dementia.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

FITCH.—On the 4th inst., at Churchgate House, Chadderley Corbett, Kidderminster, the wife of Dennis Fitch, M.R.C.S., of a daughter.

HUDSON.—On Friday, the 11th inst., at 16, Harley Street, Cavendish Square, W., the wife of C. E. Leopold B. Hudson, F.R.C.S., of a son.

LANGFORD-JONES.—On the 6th inst., at Tan-y-Graig, Bangor, the wife of Alderman R. Langford-Jones, M.R.C.S.Eng., Mayor of Bangor, of a daughter.

MARRIAGE.

SLATER—GILL.—On October 14th, at Linkinhorne Parish Church, Cornwall, by the Rev. Norman Leslie Rockwell, M.A., Howard Slater, M.R.C.S., L.R.C.P.Lond., second son of Daniel Slater, M.A., of Chevening Hall, Plymouth, to Susanna Josephine (Phœnie), younger daughter of the late Joseph Gill, of Bath. No cards.

DEATH.

THOMPSON.—On September 26th, at Clyde House Cradley, of Bright's disease, Wesley Hayes Thompson, M.D.Durham, L.R.C.P., L.R.C.S.Edin., aged 45 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

SUFFOLK asks what St. Polten's lotion for eczema is composed of.

M O H asks what are the best books to get for giving the nursing lectures for women under St. John Ambulance.

SURGEON asks for advice as to the drugs, clothing, etc., to take to South Africa. Any other information will be appreciated.

M D. asks how hot salt water baths may best be obtained in London for a patient; and, if these cannot be obtained, how best to substitute them at home.

MEMBER will be much obliged for information regarding the use of electricity in stimulating the growth of hair, in premature baldness for example, a cheap but effective battery; kind and strength of current to be used, and method of application of the poles.

NAILBITING.

MEMBER OF B.M. ASSOC. asks for advice in preventing a girl, aged 10 years, from biting her nails. The child herself is very anxious to stop this evil habit.

PETROLEUM LOCOMOTIVES.

J. O. asks whether the petroleum motor has as yet been applied to tricycles in this country, either instead of or in aid of pedalling. It would be a great boon to many country practitioners in going distant rounds to have an auxiliary power to turn on when the rider is tired, and it probably would not be very prominently in contravention of the Act.

RECOVERY OF SMALL DEBTS.

G. F asks for experience as to the best method of dealing with small bad debts among the working class. Sums from 2s. 6d. to £1 are often run up, and I find are very difficult to collect. This is especially the case with the smaller sums, where people have one or two visits only.

AMBULANCE LECTURES.

J. C. F writes: I have been asked to give some ambulance lectures in connection with the Technical Education Committee, about twelve in the course, what is the best book to recommend my class to read? I have *St. John's First Aid*, but I judge that hardly sufficient for my purpose. Also, where could I hire a manakin to illustrate anatomical lectures, and approximate cost?

*** A *Manual of Ambulance*, by J. Scott Riddell, published by Griffin, Exeter Street, is a very good one, but there are many others. We are not aware that any suitable manakins are to be had. Our correspondent is advised to purchase a skeleton, which can be got at Kimpton's, Wardour Street, or many other medical booksellers or instrument makers, at a cost from £3 10s. to £5 5s. or more. The diagrams published by the Science and Art Department for their lectures, three in number (the Muscles, the Vessels, and the Viscera), will be found useful, cost about £1 each.

COLLEGE HERALDRY.

J. P. D asks where he can find a correct heraldic description of the arms or crests of the various medical corporations, such as the Colleges of Surgeons and Physicians, the Faculty of Physicians and Surgeons, Glasgow, etc., or where paintings of their crests could be obtained.

*** There is no book with which we are acquainted containing a correct heraldic description of the arms and crests of the various medical corporations. The arms of the Barbers and Surgeons will be found in Mr. Sidney Young's *Annals*. There is a description of those of the Royal College of Physicians in Munk's *Roll*, vol. iii, p. 318, and a woodcut of these on the title-page of the *List of Fellows*. The armorial bearings of the Royal College of Surgeons of England are described and figured in the *College Calendar* as a note to section 1 of the Bye-laws. Sir Charles Cameron gives an account of the arms of the Royal College of Surgeons in Ireland in his *History of the College*, p. 65. For an accurate description and for paintings of these coats of arms, our correspondent will probably find it necessary to apply to the secretaries of the various corporations.

TEXTBOOKS OF PHYSIOLOGY.

T. F. writes: I am anxious to re read the subject of physiology. Would you mention the best book for the purpose—one including the latest discoveries?

*** We would recommend our correspondent to read the last edition of any of the standard works on physiology, namely, *A Textbook of Physiology*, by M. Foster, M.A., M.D., London: Macmillan and Co.; *A Textbook of Human Physiology*, by Dr. L. Landois and W. Stirling, M.D., 2 vols. London: C. Griffin and Co. (42s.); *An Introduction to Human Physiology*, by A. D. Waller, M.D. London: Longmans, Green, and Co. (18s.); *Manual of Physiology*, by G. F. Yeo. London: J. and A. Churchill. (14s.); *Elements of Human Physiology*, by E. H. Starling. London: J. and A. Churchill. (7s. 6d.) The three last named are works in one volume, and so one of these would probably suit our correspondent's purpose best.

ANSWERS.

H. A. C. should communicate with the authorities of the St. John Ambulance Association, St. John's Gate, Clerkenwell.

CANDIDATES AND FALSE TEETH.

MEDICUS.—False teeth have not hitherto been held a disqualification in candidates for the Indian Medical Service, provided, of course, that a sufficient number of sound natural teeth remain.

THE INUNCTION OF MERCURY.

C. M. J., in reply to "High Peak," recommends the white precipitate ointment of the *London Pharmacopœia* spread on linen 4 by 3 inches applied to the soles of the feet every morning. This gives no indication of treatment, and is preferable to blue ointment. "C. M. J." adds that he has used it for years.

HOSPITAL APPOINTMENTS.

E. H. C., J. S. B., D. S.—There is very little doubt that if any appointment were made contrary to rules duly passed, in accordance with the deed by which the hospital is incorporated, such appointment would be voidable; but it is probably very rarely the case that rules regarding the appointment of house-surgeons are of such a fundamental nature, or that they are so strictly worded as to make it possible to prove that such an abuse as is described by our correspondent is, in fact, contrary to the deed. Unless the matter were taken up by an influential governor, we doubt whether good would result by any attempt to bring the matter to the test of law.

INDECENT LITERATURE AND THE POLICE.

A CORRESPONDENT has sent us a number of advertisements cut from a local provincial paper, and also a circular from a publisher containing notices of books which he considers, and probably quite correctly, to be of an improper nature. The suppression of the circulation of such literature is a matter of police administration, and, if the police do not see their way to interfere, we apprehend that it is not within our power to take any useful action. Our correspondent sends us also a volume, apparently a reprint of a work issued many years ago, containing a great deal of matter which might pander to the prurient mind. However objectionable it may be that such works should be placed in the hands of the general public, we fear that no remedy is to be found except through the action of the police.

SHIPS' SURGEONS.

SURGEON R.M.S.P.Co. writes: In reply to "C.M.B.," who inquires about the duties, etc., of a ship's surgeon, I would recommend him to apply personally with copies of his testimonials at the offices of the different shipping companies; an introduction to one of the directors or managers is of great advantage, in fact almost indispensable. Pay averages £5 to £10 a month in the better class companies, some of the smaller ones not giving any salary, but allowing the surgeon to charge passengers for attendance. In most he must supply a complete outfit of uniform, etc., and in some he has also to supply instruments. The duties are to attend gratuitously all passengers and members of the crew who may require his services, and generally to supervise the sanitary condition of the ship. He is subordinate only to the captain. He must not expect a berth without waiting some months.

NOTES, LETTERS, Etc.

TREASURE TROVE.

THE custom of placing paper money between the leaves of a book for safety, particularly in books which are not likely to attract much attention, and forgetting all about it, was exemplified not long ago when a Turkish physician came upon a treasure of silver ore. The physician had to refer to a book upon simples which was in a bookcase in a library belonging to the family of Dr. Cleveland, who had been dead some two years. This wonderful book contained some Italian routes and a receipt for a deposit at the Banca d'Italia, altogether of the value of the above-named sum. The papers were of course handed over to the family of the late doctor.

Medical Registration.

M.D. writes: Your notice under this heading is a timely one, and may save much annoyance. Several years ago I moved into another street a few hundred yards distant from my former residence, and not being aware of the remarkable habit of the General Medical Council, had not intimated my change of residence. I have reason to believe that all my letters were forwarded, but I never received a line from the Council, and was therefore much surprised to find that my name did not appear in the *Register*. To me this was of no moment, but to many it might have been of serious importance. Is it not strange, Sir, that the communication, if sent—which in my own case I do not believe it was—should not have been registered?

Waterborne Cholera.

Brigade-Surgeon E. D. Tomlinson, M.D. (retired pay), writes: In a paper in the October number of the *English Illustrated Magazine*, there is an account of an "interviewing" of Mr. Carl Hagenbeck, who, it appears, was the exhibitor of the East African show at the Crystal Palace, and he is also the proprietor of the zoological gardens at Hamburg, and from the account of the interview I take the following extract: "But perhaps the most interesting of Mr. Hagenbeck's many interesting observations on the health of his animals was made apropos of the cholera epidemic at Hamburg. Before the cholera reached the human inhabitants, the inmates of his gardens were attacked by it. They had violent cramps and other choleraic symptoms, and in a short time sixty animals died. He stopped the epidemic, which was clearly cholera, by boiling all the water given them to drink, a precaution which, if observed by the crowded population near the Hamburg docks, might have prevented the epidemic which attacked them a month later." This statement is interesting as supporting Mr. Ernest Hart's opinion.

Military Sanitation in India

A Correspondent of the *United Service Gazette*, signing himself "Panjabi," writes: "I was in Rawal Pindi (Punjab) three or four years ago when General Luck commanded the division for six months. He and Brigade-Surgeon Churchill were most energetic in pushing the pure water supply on; indeed, I believe we were saved that year from an awful epidemic of cholera in the cantonment through their zeal. I do not know how the general squared it with the authorities at Simla, but he was fearless and plucky in everything he undertook. I often heard army doctors say how they liked serving under him." More generals like him would put a very different face on things as they now exist, for it is the want of support by generals that makes the task of the army medical officer in sanitary work so difficult and disheartening.

A Canine Collector for Hospital Funds.

From 1880 to 1895 the treasury of the Bristol Royal Infirmary has benefited to the extent of some £33 in all by the sagacious collections of "Punch," a wire-haired brindled Irish terrier. In the course of six years his average annual takings may be reckoned at £5 10s.; the last, that of 1895, consisted of 2,000 coins of all sorts. At the inn called the Plume of Feathers, in Bristol, there is a large tin case on a table in the bar, which is his savings box, and in this he carefully deposits whatever coin may be given him. Above this hangs his portrait. His antics and gambols are amusing enough. He will sit about a spittoon or a heavy chair in the bar and parlour, and make the one or the other gyrate until the clatter attracts attention. Then he looks up, and touches the visitor's pocket with his paw. When given a copper he will jump upon the table, where is placed his savings box, and wait until a bit of biscuit or a cake is brought to him. This he places on his nose, puts the coin in the slit, tosses the cake into his mouth, wags his tail, descends, and proceeds upon a fresh quest. "Punch" is the proud possessor of two silver medals, bestowed upon him by the infirmary, and a handsome inscribed silver collar.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Mr. F. W. Alexander, London; An Associate of Fifty Years; Mr. L. Archer, London; Mr. C. E. Addison, Colchester; Mr. M. Andrews, London; A. J. B.; J. Adams, M.B., Hamilton; C. F. M. Althorp, M.B., Bradford. (B) Mr. W. Bentley, Lancaster; Mr D. M. Barry, Grampound; Mr. H. Bowes, Manchester; Mr. H. Bowden, Salford; Mr. W. Berry, Wigan; Mr. M. R. J. Behrendt, Burringham; G. Berry, M.B., Edinburgh; J. W. Batterham, M.B., St. Leonards-on-Sea; Mr. A. Bird, London; Dr. J. B. Bridgley, Manchester; Mr. M. L. Barry, London; H. A. Beaver, M.B., Bristol. (C) J. M. Christie, M.B., New Plymouth, N.Z.; A Candidate; Mr. E. C. Cripps, Cirencester; Callant; H. A. Collinson, M.B., Chester-le-Street; Dr. W. Campbell, Liverpool; C. M. J.; W. S. Church, M.B., London; Cityowyn; Mr. H. Coates, Salisbury. (D) Dr. Bernard Dyer, London; Mr. W. G. Dickinson, London; E. W. Dickson, M.B., Dublin; Dr. J. G. Duncan, London. (E) Enquirens; Mrs. E. Evans, Basingstoke. (F) Fair Play; F.; Mr. A. J. F. Fullarton, Glasgow. (G) Dr. G. Gledhill, Manchester; G. P. (H) J. Howard-Jones, M.B., London; C. A. Hill, M.B., London; Dr. Hudson, St. Boswells; Dr. R. D. Helm, Carlisle; Dr. S. H. Habershon, London; G. H. Hogg, M.B., Cooma, N.S.W.; Dr. W. R. Huggard, Davos Platz. (I) Dr. C. R. Illingworth, Ventnor; Independence; An Indignant Surgeon. (J) Dr. B. Jones, Leigh; J. O. (K) Dr. G. S. Keith, Edinburgh; Kudos. (L) E. Liveing, M.B., London; Mr. W. M. Leish, London; Mr. T. H. Lovegrove, London; Mr. C. S. Loch, London; L.R.C.P.; Mr. G. A. Lightfoot, Carlisle; Dr. J. L. Livingston, Winchester. (M) Mr. J. Y. M. MacAlister, London; W. Mitchell, M.B., Bradford; M.D.; Member; Dr. B. R. Martin, London; Member of the B. M. A.; M.R.C.S., L.S.A.; Mr. E. D. McNicoll, Southport; Medical Etiquette; M.B.; Mr. R. Morison, Newcastle-on-Tyne; M.B., B.A.; M. O. H. (N) Dr. E. F. Neve, Kashmir. (O) Mr. G. W. Ord, Mildenhall; One Not Requiring a Perambulator when Taken Out for a Walk; Mr. S. Osborn, London. (P) Mr. T. F. Pearse, Southsea; Perplexed; Dr. R. Pratt, Leicester; Post Graduate. (Q) Querist. (R) Dr. D. L. Roberts, London; Dr. J. Ramage, London; W. A. Rutherford, M.B., Durham; Mr. H. E. Rawlings, Reynoldston; Dr. R. R. Rentoul, Liverpool; Mr. D. J. Richardson, Brighton; Mr. T. P. Roberts, Harrogate. (S) Mr. R. B. Sellers, Rochdale; Surgeon R. M. S. P. Co.; Dr. R. Saundby, Birmingham; Mr. E. Shirtliff, Malvern; Dr. C. Schilling, Munich; Dr. C. E. Soulby, Great Grimsby; J. A. Shaw-Mackenzie, M.B., London; Dr. D. Stewart, Nottingham; Mr. W. H. Savory, Cleethorpe; A Sufferer; Dr. P. B. Smith, Aberdeen; F. A. Southam, M.B., Manchester; Dr. W. Smyth, Madras. (T) R. Thorburn, M.B., Sedbergh; Dr. E. D. Tomlinson, Folkestone; Mr. H. Taylor, Guildford; Mr. J. B. Thomson, York; Dr. A. G. Thomas, Newport; Mr. S. G. Tippett, London; Dr. C. W. E. Toller, Ilfracombe; Mr. A. Todd, Monkstown. (V) Vacca. (W) Dr. F. J. Waldo, London; Mr. H. Wilson, Weybridge; Mr. J. H. Wilson, Wigan; Mr. A. H. Walker, Cranleigh; Mr. S. W. Wilson, Newcastle-on-Tyne; W. W. Walker, M.B., Peterborough. (Z) Messrs. A. and M. Zimmerman, London; etc.

BOOKS, Etc., RECEIVED.

Vorlesungen ueber allgemeine Embryologie. Von Dr. R. S. Berg. Wiesbaden: C. W. Kreidel. 1895. M. 7.

Cutaneous Medicine. By Dr. L. A. Duhring. Part I. London and Philadelphia: J. B. Lippincott Co. 1895.

The Methods of Microscopical Research. By A. C. Cole, F.R.M.S. Second Edition. London: Baillière, Tindall, and Cox. 1895.

The Tallerman (Sheffield) Patent Localised Hot-Air Bath. London: Baillière, Tindall, and Cox. 1895.

Aids to the Analysis of Food and Drugs. By T. H. Pearmain and C. G. Moor, M.A., F.C.S. London: Baillière, Tindall, and Cox. 1895.

The Art of Horse-Shoeing. By W. Hunting, F.R.C.V.S. London: H. and W. Brown. 1895. 3s. 6d.

An Atlas of Ophthalmoscopy. By Dr. O. Haab. Translated and edited by Ernest Clarke, M.D. London: Baillière, Tindall, and Cox. 1895.

"Hallowe'en" Ahoy! or Lost on the Crozet Islands. By Hugh St. Leger. London: Blackie and Son. 1895. 4s.

At War with Pontiac, or the Totem of the Bear. By Kirk Munroe. London: Blackie and Son. 1895. 6s.

For Life and Liberty. By Gordon Stables, M.D., R.N. London: Blackie and Son. 1895. 5s.

Through Russian Snows: A Story of Napoleon's Retreat from Moscow. By G. A. Henty. London: Blackie and Son. 1895. 5s.

A Knight of the White Cross: A Tale of the Siege of Rhodes. By G. A. Henty. London: Blackie and Son. 1895. 6s.

The Tiger of Mysore: A Story of the War with Tippoo Saib. London: Blackie and Son. 1895. 6s.

Elementary Physiology. By J. R. Ainsworth Davis, B.A. London: Blackie and Son. 1895. 2s.

Observations on Congenital Dislocation of the Hip. By Bernard E. Brodhurst, F.R.C.S. London: J. and A. Churchill. 1895. 1s.

A Manual of Physiology. By G. N. Stewart, M.A., D.Sc., M.D. London: Baillière, Tindall, and Cox. 1895. 15s.

Verhandlungen des Congresses für innere Medicin. Herausgegeben von Dr. E. Leyden und Dr. E. Pfeiffer. Wiesbaden: J. F. Bergmann. 1895. M. 12.

Uber Hemeralopie speziell akute idiopathische Hemeralopie. Von Dr. H. Krienes. Wiesbaden: J. F. Bergmann. 1895. M. 7.

*** In forwarding books the publishers are requested to state the selling prices.

THE HARVEIAN ORATION
ON
HARVEY AND THE RISE OF PHYSIOLOGY IN ENGLAND.

Delivered before the Royal College of Physicians of London on October 18th

By W. S. CHURCH, M.D., F.R.C.P.,
Senior Physician to St. Bartholomew's Hospital.

Mr. President.—In obeying your request that I should undertake the delivery of the Harveian Oration, I am painfully sensible of the gravity of the task you have imposed on me. For 239 years, with but few intermissions, the College has, in obedience to Harvey's own wishes, assembled to commemorate its benefactors, and if we can no longer precisely follow Harvey's directions, and "commemorate all the benefactors of the said College by name, and what in particular they have done for the benefit of the College," the remainder of his words are still applicable, for part of the Harveian Orator's duty is "to exhort others to imitate those benefactors, and to contribute their endeavours for the advancement of the Society according to the example of those benefactors." This annual office has been filled during the years that have elapsed since Harvey's institution of it by some of the most illustrious Fellows on our roll—by Garth (1697), Arbuthnot (1727), and Akenside (1759); by Mead (1723), Heberden (1750), and Warren (1768), not to mention others of more recent date, men whose names will ever remain fresh in the history of the literature and medicine of our country. I have no claim to be associated with these great names, nor with the many learned and eloquent men who have addressed you in recent years, and I should have shrunk from attempting the task your favour has imposed on me had I not felt that in asking me to undertake it you were mindful of the position which it is my lot to hold in connection with the great hospital to which the immortal Harvey was thirty-four years physician, in which he exercised an influence over its governing body that remains to this day, and where his memory is yet held in reverential remembrance.

I wish it were possible for me to bring forward from the records of St. Bartholomew's Hospital any new facts illustrating either Harvey's life or works; but many years ago Sir James Paget, in his *Records of Harvey*, exhausted all that is known of him from the journals of our hospital. In the fragmentary notices of him which we there meet with he is seen as the trusted adviser to the governing body, and as the maintainer of the dignity of his order rather than as the physician. In his *Prælectiones Anatomicæ Universalis* we obtain glimpses of his work in the wards of the hospital, and had his *Medical Observations* come down to us there can be little doubt that in them much would have been found which emanated from the wards of the hospital and the dissections of patients who died whilst under treatment there.

Foremost among the benefactors to our College present to the mind of Harvey when he established this annual Oration must have been Dr. Richard Caldwell and Lord Lumley, who together founded and endowed in 1581 the Surgery Lecture, which, under the name of the Lumleian Lecture, Harvey held from 1615 until 1656, and in the course of which he demonstrated to the College his immortal discovery.

I have failed to find out the nature of the connection, if any, between Caldwell and Lord Lumley. The latter succeeded his father, Lord Arundel, as High Steward of the University of Oxford in the year 1558, the year before Caldwell appears to have completely severed his connection with the university. Of Lord Lumley Camden says "that he was a person of entire virtue, integrity, and innocence, and in his old age a complete pattern of true nobility."

By the kindness of our Registrar, my attention has been drawn to the very interesting notice of Caldwell in Hollinshed's *Chronicles*, where an account is given of the first lecture delivered under the terms of this bequest by Dr. Richard Forster, "which was celebrated by a goodlie assemblie of Doctors, Collegiate and Licentiate, as also some Masters of Surgerie, with other students, some whereof had been Academicall. Dr. Caldwell, his white head adding double reverence to his person, notwithstanding his age and impotencie, made an Oration in Latin to the auditorie, the same by occasion of his manifest debilities unfinished at the direction specialie of the President; who after a few words shortlie and sweetlie utered, gave occasion and opportunity to Dr. Forster, then and yet the appointed Lecturer, to deliver his matter."

It is impossible for me to mention the long list of those who, by their munificence or by the honour which their lives and labours have bestowed on the College, have to be commemorated as benefactors since the days of Harvey.

Within the present year we have had a notable example, not only of the generosity, but, what is still more to be desired, of the brotherly feeling which Harvey desired should exist among us. No one among our Fellows has, during the last fifty years, been a brighter ornament to this College or a greater benefactor to his country or the world at large than Edmund Alexander Parkes. It must be a source of gratification to us all that Dr. Hermann Weber, when generously endowing the College with the magnificent sum of £3,000 for the furtherance of original research on the "Prevention and Cure of Tuberculosis" should have associated Dr. Parkes's honoured name with his own. The triennial prize, which the College has decided to found with this bequest, will tend, let us hope, not only to keep fresh in the memories of many generations of Fellows the genial and liberal donor and his valued friend, but may accomplish the object of the giver and lead to future discoveries by which the ravages of tuberculous disease may be controlled and abated, if not altogether prevented.

It may interest the College to know that the subject selected for the first competition is "The Means, Prophylactic or Curative, deemed by the Author to have Value in the Control of Tuberculosis, especial regard being had to their Application to Human Tuberculosis."

I should like to pause here to set before you at somewhat greater length the useful, pure, and unselfish life of Dr. Parkes and to recall to your memory the excellence of his scientific work in connection with the ingestion and elimination of nitrogen in the system, as well as to draw your attention to the benefits which our naval and military services and the general public have received from his labours in the field of hygiene; but I must pass on now and content myself with thus briefly alluding to the munificent gift of Dr. Hermann Weber and the memory of Edmund Alexander Parkes.[1]

Harvey's fame is immortal, and he is to be placed in the same category with Hippocrates, Aristotle, Archimedes, and Newton, who by their genius may be looked upon as not so much the exponents as the founders of their respective branches of knowledge. Aristotle was the first, and in a sense the greatest, of biologists. Harvey was the founder of physiology. Harvey himself was an Aristotelian, educated in all the learning of the schoolmen; and in attempting to estimate his genius and originality it is almost impossible for us in these days of independent thought to realise the crushing influence which authority then exercised on the minds of men; in the words of Dryden, they—

> betrayed
> Their freeborn reason to the stagyrite
> And made his torch their universal light.[2]

As in medicine, although there must have been practitioners before the days of Hippocrates, he is to be taken as the starting point, so in biology, notwithstanding the labours of Parmenides, Empedocles, and others of still earlier date whose writings are known to us but by fragments, Aristotle stands alone as the originator of biological science. He, together with his immediate successors, took, as has been observed by Professor Huxley,[3] "the broadest view of the subject, and man assumed his place as neither more nor less scientifically interesting than his fellows."

Harvey's admiration of Aristotle is profound; he calls him the supreme dictator in philosophy, and in the introduction to the *De Generatione Animalium* says: "Foremost among the ancients I follow Aristotle, he is my leader." Dr. W. Ogle,

[1] Dr. Parkes died of [illegible] March 29th, 1876.
[2] [illegible]
[3] Appendix to Richard Owen's Life.

in the preface to his excellent translation of Aristotle's work *On the Parts of Animals* says most justly: "The biological treatises of Aristotle are more often quoted than read; and it may be added much more often misquoted than correctly quoted." The prominent feature of Aristotle's biological writings, as indeed of his philosophy generally, is classification, in which respect his writings contrast strongly with the poetical and imaginative treatises of his forerunner Plato.

From the time of Aristotle to that of Harvey no advance was made in physiological knowledge; in truth it had receded, overwhelmed by the glosses and erroneous interpretations so often put on Aristotle's writings.

In attempting to estimate Harvey's merits as a discoverer it is necessary for us as far as possible to realise the state of knowledge at the commencement of the seventeenth century, and the nature of his surroundings. Subsequently to the time of Aristotle, who was very imperfectly acquainted, as he himself admits, with human anatomy, the Alexandrian school, where the two rivals, Erasistratus and Hierophilus, practised human dissection, and had considerably advanced human anatomy; their observations and discoveries were made use of by Galen, who added to anatomical knowledge by his accurate dissections of the lower animals, including apes. The anatomical facts thus observed were of comparatively little use through their being treated as disjointed observations; thus there can be no doubt that Erasistratus observed the lacteals in the mesentery of sucking kids hundreds of years before Aselli rediscovered them in dogs; and Aselli's observations would have proved as barren as Erasistratus's had Pecquet not traced the lacteals to the receptaculum chyli and thoracic duct, which vessel had many years before been noticed by Eustachius in the thorax of the horse, and described by him as the vena alba thoracis.

With the revival of learning human anatomy began to be studied on account of its obvious bearing on medicine and surgery, and by Harvey's time, owing to the labours of Mundinus, Sylvius, Eustachius, Vesalius, Fallopius, and others, the details of the bodily structure of man observable by the unassisted eye were for the most part discovered.

In physiology, on the other hand, there had been no advance whatever, unless the very imperfect knowledge of the lesser circulation be considered as having a claim to be so regarded. It in no way detracts from Harvey's merit or originality that Servetus, Columbus, and Cesalpinus all had an idea of the lesser circulation, without however comprehending it or seeing to what it led, nor that Fabricius had demonstrated beyond doubt the existence of the valves in the veins. Dugald Stewart has remarked, "in the sciences, the observations and conjectures of obscure individuals on the subjects which are level to their capacities, and which fall under their own immediate notice accumulate for a course of years, till at last some philosopher arises who combines these scattered materials, and exhibits in his system not merely the force of a single man, but the intellectual power of the age in which he lives."[4]

Regard must also be paid to the spirit of the times, and the remarkable uprising of independent thought and inquiry which characterises the century immediately preceding Harvey's birth.

Bacon is frequently spoken of as the founder of inductive philosophy and the destroyer of the syllogistic reasoning which had been all powerful before his day. This may be true when applied to moral philosophy, but is certainly not so when we consider physical or natural philosophy. In his biological writings Aristotle makes constant use of the inductive process, and he points out that it is absurd to suppose that syllogistic reasoning could lead to the discovery of any new principles;[5] and again he says still more definitely "that reasoning is naturally prior and more known that proceeds by syllogism, yet is that more perspicuous to us which is based on induction."[6]

Aristotle's inveterate custom of specifying a final cause for every structure and organ which he came across in the animal body not only led him into many absurdly erroneous conclusions, but joined with the oft-quoted maxim of Bacon, "Causarum finalium inquisitio sterilis est et tanquam virgo Deo consecrata nihil parit," has led to the wonderful work he did in biology being less thoroughly appreciated by us than it deserves. Bacon's objection to the consideration of final causes in physics was owing to his belief that it "banished the study of physical causes; the fancy amusing itself with illusory explanations derived from the former." That Bacon was wrong in this view is proved by Harvey himself, for we have it in his own words, as reported by Boyle,[7] that it was from studying the valves of the veins, and believing "that so provident a cause as Nature had not placed so many valves without design," that he was first induced to think of a circulation of the blood.

Equally false is the belief very generally held that Bacon was the first to revolt from the tyranny of the Aristotelian school. The alliance which had taken place between the Papal Church and the Aristotelians caused those who at the Reformation refused to recognise the infallibility of the Church of Rome also to throw off their allegiance to the tenets of the schools. Luther and Calvin, not to mention lesser men, declared that no man could be an Aristotelian and a Christian; and St. Paul's warning, "Beware lest any man spoil you through philosophy and vain deceit after the tradition of men,"[8] was a favourite text for the ministers of the Reformation to expound.

The same spirit of inquiry which broke down the tyranny of the Church also freed men's minds from the trammels of the dogmas of the current philosophy. The physicists, by questioning the accepted doctrines of the nature of the universe, were the first to commence this healthy movement, and the widespread popularity of Ramus's teaching very greatly expedited the change which occurred. Ramus, from the commencement of his career, disputed the authority of Aristotle, and may be said to have spent his whole life in opposing the orthodox philosophy of the times, and perished a martyr to his opinions and the rancour of his opponents in the massacre of St. Bartholomew's Day (1572).

Harvey, when at Padua, must have been in the midst of the conflicting theories and bitter controversies of the Aristotelians and their opponents. His even and well-balanced mind prevented his joining either party. Throughout all his writings he pays the greatest respect to Aristotle, and takes him as his main guide in his work *De Generatione Animalium*. He makes also constant references to him in his *Prælectiones Anat. Univ.*; and when Aubrey asked him what he should read, bid him go to the fountain head and read Aristotle, Cicero, and Avicenna. The same authority tells us that Harvey, whilst esteeming Bacon much for his wit and style, was not enamoured of his philosophy. It would be interesting to know how intimate Harvey was with the Lord Chancellor, and whether their communications merely partook of the character of physician and patient, or whether Harvey discussed philosophical questions with the older man.

My predecessors in this office have so fully vindicated Harvey's claim to the discovery of the circulation against the attempts which have been made within recent years to deprive our countrymen of this honour that I will pass on, merely thanking Sir Edward Sieveking and Sir George Johnson for the able and triumphant manner in which they have refuted the statements put forward in favour of Cesalpinus as the true discoverer of the circulation of the blood.

Neither Servetus, Columbus nor Cesalpinus in any way anticipated Harvey, who not only discovered the greater circulation, but demonstrated it and explained the true motion of the heart. He, and he alone, recognised the muscularity of the heart's wall and perceived and demonstrated that it was the contractile power of the heart which was the primary cause of the pulse and of the circulation of the blood through both systemic and pulmonary vessels. Harvey by a chain of close and acute reasoning, drawn from direct experiments, and from observations on the pulsation in aneurysms and in vessels distal to aneurysmal dilatations and to portions of rigid and calcified arteries, demonstrated once for all that the motion and contraction of the heart was the main, though not the only, cause of the pulse.

Leaving then the *Exercitatio Anatomica de Motu Cordis et*

[4] *Elements of the Phil. of the Human Mind*, vol. i, p. 217, sixth edition.
[5] Last chap. Analytics.
[6] Anal. Post. Lib. i, c. 2, p. 2.
[7] Boyle's Works, folio edition, vol. iv, p. 529.
[8] Colossians, ii, v. 8.

Sanguinis, I wish to consider that which Harvey's discovery rendered possible, the rise of physiology, more especially in England, and the part which Harvey himself took in founding it.

It must be always borne in mind that but a portion of Harvey's work has come down to us. We gather from his extant writings that he had collected materials for, if not composed and completed, the following treatises: *Observationes de Usu Lienis*; *Observationes de Motu Locali*; *Tractatus Physiologicus de Amore Libidine et Coitu Animalium*. We do not know how far advanced his *Medical Observations*, to which he makes frequent references; his disquisitions on the *Cause, Uses, and Organs of Respiration*; his *Medical Anatomy, or Anatomy in its Application to Medicine* may have been. Harvey announces, in his first disquisition to Riolanus, his "intention of putting to press this last work," and it must be regarded as an irreparable loss that the world should have been deprived of the material he had collected, for one cannot doubt that his *Medical Anatomy* would have displayed the same master mind as is shown in his other works, and that morbid anatomy would have been advanced to the position it was placed in a hundred years later by Morgagni. As it is we have to collect Harvey's general views of physiology from scattered passages in his works.

Next to his *Exercitatio Anatomica de Motu Cordis et Sanguinis*, his most important treatise is *De Generatione Animalium*. This is an unfinished work. Harvey had probably intended to publish a larger and more complete work, but had failed to satisfy himself on the subject of generation, and what he was persuaded by Sir G. Ent to entrust to him for publication were but the exercises from which Harvey had intended to compile his treatise. Possibly the loss of his *Observations on the Generation of Insects* prevented his undertaking the larger work; for no one who reads the treatise will come to the opinion that Harvey was prepared to publish it in the shape in which we now have it. In the exercises we find much repetition both of words and ideas, much speculative matter on which he expresses no opinion. Not having satisfied himself as to the facts of generation, he allows himself to be under the influence of the

> Master Sage of those who know,
> (Dante's *Inferno*, Cant. iv, l. 131.)

and wanders off from observed facts into the shadowy but enticing realms of fancy and metaphysics.

It is no detraction from Harvey's merit that he failed in understanding the nature of generation. The necessary means were not in existence; the simple magnifying glasses he used for the inspection of the *punctum saliens* were unable to show him his error in supposing that the male element did not enter the uterus—a conclusion he came to after repeated inspections. Writing of the uterus of the doe after copulation, he says: "I began to doubt, to ask myself whether the semen of the male could by any possibility make its way by attraction or injection to the seat of conception; and repeated examination led me to the conclusion that none of the semen reached this seat." (Exercise lxvii); and in another place (Exercise i) he asks "whether the conception of the uterus be of the same nature or not with the conceptions of the brain, and fecundity be acquired in the same way as knowledge—a conclusion in favour of which there is no lack of argument;" and in his essay on Conception he gives us what I imagine was his final conclusion: "The woman, after contact with the spermatic fluid *in coitu*, seems to receive an influence and become fecundated without the co-operation of any sensible corporeal agent, in the same way as iron touched by the magnet is endowed with its powers."

The aphorism *Omne vivum ex ovo* is ascribed to Harvey, and often quoted as if he made use of the expression. It is true that at the end of his consideration of the development of the egg he concludes by quoting Aristotle with approval: "All living creatures, whether they swim, walk, or fly, and whether they come into the world in the form of an animal or of an egg, are engendered in the same manner." But it is quite evident from many passages in his treatise that Harvey did not unconditionally reject the doctrine of spontaneous generation. In Exercise lxiii, after stating "now we at the very outset of our observations asserted that all animals were in some sort produced from eggs," he goes on to explain his meaning more fully: "an egg is a conception exposed beyond the body of the parent whence the embryo is produced. Let us therefore say that that which is called *primordium* among things arising spontaneously, and seed among plants, is an egg among oviparous animals; the prime conception in viviparous animals is of the same precise nature;" and earlier in Exercise xlv, when discussing the difference between epigenesis and metamorphosis, he says: "Some animals are born of their own accord, concocted out of matter spontaneously." Harvey showed that the mode of development and growth was the same in the embryos of viviparous and oviparous animals, and maintained that in creatures said to arise spontaneously or to take their origin from putrefaction, filth, etc., the same developmental changes occurred, but nowhere expresses an opinion as to the origin of the ova themselves, although it is probable that he inclined to the belief that they were "propagated from elements and seeds so small as to be inconspicuous (like atoms flying in the air) scattered or dispersed here and there by the winds" (Exercise xliii). In the same way he expresses no opinion as to the origin of the animalcules generated in our bodies, and of the worms produced from plants and their fruit or from gall nuts, the dog rose and various other galls, contenting himself with remarking that the living principle of the animals thus arising cannot have existed in the plants on whose juices they live (Exercise xxvii).

Though misled from the want of proper means for observation in the fundamental facts of generation, there is much touching general physiology scattered through the treatise, which is extremely interesting. Harvey remarks that he was the first to note that the bronchia or ends of the trachea in birds open into air-sacs in the abdominal cavity (Exercise iii), an observation which, so far as I know, attracted no attention, and did not receive confirmation until John Hunter demonstrated these air-sacs afresh, and showed that the bronchia in birds were continuous also with the hollow spaces in their bones. In Exercise lvi he has anticipated Darwin in explanation of sexual adornments, remarking, "Ornaments of all kinds, such as tufts, crests, combs, wattles, brilliant plumage and the like, of which some vain creatures seem not a little proud, are most conspicuous in the male at that epoch when the females come into season, and whilst in the young they are still absent in the aged they also fail as being no longer wanted." Hereditary likeness did not escape him, nor that form which is spoken of as atavism, for he asks, "Why the offspring should at one time bear a stronger resemblance to the father at another to the mother and at a third to progenitors, both maternal and paternal, further removed." (Exercise lxii.)

After the circulation of the blood and the mysteries of generation, the subject which appears to have had most attraction for Harvey was that of "innate heat"—*calidum innatum*—the θέρμη ἔμφυτος of Aretæus, a term by which more was meant than the temperature, although that was the sensible evidence of it. Harvey distinguished the *anima*—soul or vital principle—from the innate heat; to the consideration of the latter he devotes Exercise lxxi, and treats at length of the former in Exercises xxvi and xxvii. It would take me too long to attempt to give a sketch of his views of the *anima*; it is clear that he himself was dissatisfied with his own conception of the vital principle or *anima*, for he says in Exercise xxviii, speaking of the way in which the egg is produced, "leaving points which are doubtful and disquisitions bearing upon the general question (that is, on the *anima*), we now approach more definite and obvious matters."

Animal heat before the knowledge of the production of heat by chemical union was an inscrutable mystery which not even the genius of Harvey could penetrate. The maintenance of animal heat was supposed to be the gift of the heart to the blood. The belief that the heart was the source of heat was universally held by the ancients, Aristotle saying "that its wall is thick that it may serve to protect the source of heat."

This Aristotelian doctrine Harvey discerned from and destroyed by reasoning little less cogent than that by which he demonstrated the circulation, although he was unable to account for the presence of animal heat and imagined that

it was inherent in the nature of blood, and of divine origin. His words are so grand and poetic that I may be permitted to quote them at length:

"I say that innate heat and the blood are not fire, neither do they derive their origin from fire. They rather share the nature of some other, and that a more divine body and substance. They act by no faculty or property of the elements; but as there is something inherent in the semen which makes it prolific, and as in producing an animal it surpasses the powers of the elements—as it is a spirit, namely, and the inherent nature of that spirit corresponds to the essence of the stars—so there is a spirit of certain force inherent in the blood acting superiorly to the powers of the elements, very conspicuously displayed in the nutrition and preservation of the several parts of the animal body; and the nature, yea, the soul in the spirit and blood, is identical with the essence of the stars" (Exercise lxxi). This outburst of Harvey's is most striking, so unlike his usual manner, and one cannot but be astonished at his inconsistency, for it occurs in the same exercise as the following shrewd and calm remark: "We are too much in the habit, neglecting things, of worshipping names. The word blood signifying a substance which we have before our eyes and can touch, has nothing of grandiloquence about it, but before such titles as spirit and *calidum innatum*, or innate heat, we stand agape," for assuredly the substitution of the phrase that the nature inherent in the blood was responsive to the essence of the stars is not less calculated to set us wondering than is the term "*calidum innatum*." Harvey nevertheless disproved for once and all the doctrine that the heart was the source of heat; he showed how animal heat was dependent on the due circulation of the blood and that the belief that the function of the lungs was to cool the heated blood was absurd. He says: "The blood, instead of receiving, rather gives heat to the heart, as it does to all parts of the body; and it is on this account that the heart is furnished with coronary arteries and veins; it is for the same reason that other parts have vessels, namely, to secure the access of warmth for their due conservation and stimulation, so that the warmer any part is the greater its supply of blood, or otherwise, where the blood is in the largest quantity there also is the heat the highest."

The *Prælectiones* are but notes to assist Harvey whilst lecturing, and it is therefore impossible to know what interpretation to place on them, but I think it highly probable that in the course of years Harvey, as his physiological knowledge increased, modified his views of the connection between animal heat and the heart, for in the *Prælectiones* he speaks of the heart as the *fons totius caloris*, and calls it *arx et domicilium caloris*, from which it appears that in 1616 he still held the Aristotelian opinion of the heart being the source of heat.

No portion of the *Prælectiones* show more strikingly the closeness of Harvey's observation, the amount of his knowledge, and the acumen of his reasoning than that relating to the exposition of the anatomy and the functions of the lungs. In his description of them and the pleuræ he makes constant references to their morbid anatomy and their embryonic condition. He is evidently in doubt whether the lungs expand and contract from their own movements or merely follow the movements of the thorax—a question which was afterwards fully investigated and explained by Mayow.

The immediate followers of Harvey naturally turned their attention to the subjects on which he had thrown so much light—the circulation and respiration. Most notable among them were two distinguished Cornishmen, Richard Lower and John Mayow. The former is the best known from his experiments on the transfusion of blood, which attracted the attention of the general public, but those experiments, though the best known, are by no means the most important of his physiological researches. In addition to demonstrating in many ways that the red colour of arterial blood was due to the action of the air, he calculated also the force of the heart and the quantity of the blood passing through it. He showed also by demonstrations on dogs that œdema of the parts distal to the heart followed ligature of the veins, and produced ascites by tying the vena cava in the thorax. Lower also was the first to show the dependence of the heart's action on nervous influence and to demonstrate the moderating effect of the pneumogastric nerve on the heart.

Mayow, though recognising that there was an interchange between the blood and air in the lungs, still thought that the source of vital heat was in the heart, "not that it contained a biolynchium (that is, a vital torch) flaring within it, but that from its perpetual motion for carrying on the circulation, the nitro-aërial and sulphureous particles in it must be in a state of perpetual effervescence and that necessarily remarkable heat must be excited."[10] Mayow thought that air was impregnated with a certain universal salt, which was of the nature of nitre, and with vital spirit, and with fire; notwithstanding this erroneous view of the nature of air, it is remarkable how closely his explanation of the action of this imaginary salt on the blood agrees with the actual action of oxygen, and he sums up his conclusions as to the uses of respiration as follows: "Life consists in the distribution of animal spirits which must be supplied for the pulsation of the heart. In very truth it is highly probable that the aërial salt is necessary for any muscular movement, so that without it no pulsation of the heart is possible."[11] In his essay *De Respiratione Fœtus in Utero et Ovo* he correctly infers that the blood of the fœtus obtained through the umbilical arteries not only nourishment but also aërial salts which obviated the necessity of functional activity in the lungs during intrauterine life, and states definitely that the placenta should not be regarded as an amplified liver, but as a uterine lung. It is not for his chemico-vital theories alone that Mayow deserves to be remembered; he first accurately described the action of the intercostal muscles and diaphragm, and showed that inflation of the lungs depended on atmospheric pressure.

It was not until upwards of a hundred years later, when Black had shown the presence of carbonic acid in expired air, and investigated the phenomena of latent and sensible heat, when Priestley had isolated oxygen, and Cavendish and Lavoisier had completed the analysis of atmospheric air, that any real progress could be made in the study of respiration and animal or vital heat. Even now we are by no means fully acquainted with this most complex and difficult subject. Your Croonian Lecturer pointed out a few months ago some of the many difficulties which still have to be surmounted before we can arrive at an adequate knowledge of how and where the interchange between the oxygen of the air and the tissues takes place, and how our systems accommodate themselves to the changes of pressure and temperature in the air, so as to maintain the animal heat at a uniform level.

I have endeavoured, very imperfectly I fear, to set before you the rise of physiology in England. Before the discovery of the circulation of the blood, a right understanding of the means by which life is carried on was impossible, and Harvey's discovery should rank on the same level as Newton's discovery of gravitation. In both cases others had to a certain extent prepared the way, and may have had glimpses of the truth, but to them the truth was revealed, and they might say with Tennyson's Holy Sage—

> Idle gleams to thee are light to me,

and the light which their genius led them to perceive enabled their successors to reveal what we now know of the mysteries of animate and inanimate Nature.

We know very little of Harvey's practice as a physician; what little we can gather from his writings show him to have been fertile in resource and skilful in the management of gynæcological cases. We cannot doubt that one who showed such acumen in deciphering the problems of life, and who speaks so wisely of the necessity for the study of morbid anatomy, must have been far ahead of the rest of his contemporaries in the application of his knowledge to clinical work; and the disparaging gossip of Aubrey merely reflects the opinions of those too ignorant and too bigoted to appreciate him.

I have already spoken of the overpowering authority of Aristotle over the minds of the students of Nature, but the completeness of his dominion was not to be compared to the overwhelming influence of Galen in the medical world during the sixteenth and early part of the seventeenth centuries, and it needed yet another than Harvey to enable men to throw off the benumbing mantle of Galen. Our College annals

[10] *De Spiritibus Animalibus*, chap. iv, p. 31.
[11] *De Respiratione*.

recount, as pointed out by our learned Librarian in his Roll of the College, that in the year 1559 Dr. Geynes was refused the Fellowship because he had ventured to doubt the infallibility of Galen; and in our annals it is stated that Dr. Hook was not granted admittance to the examination for the licence because he had the honesty to say that he had not read Galen. The revival of anatomy had by Harvey's time somewhat undermined the authority of Galen, which was still further impaired by Harvey's own discoveries. Nine years after Harvey's death appeared Sydenham's *Methodus Curandi Febres Propriis Observationibus Superstructa, etc.*, and the world became aware that one had arisen who brought independent thought, unbiassed by the traditions and views of the various schools of medicine, to bear on the study of disease.

Our ignorance of the details of Sydenham's life renders it difficult to express an opinion as to the position he occupied in society or among his professional brethren in the year 1666, when the *Methodus* first appeared. He had then been settled in Westminster for ten years, and his intimacy during his Oxford life with Locke, and Boyle (to whom he dedicates the work) makes it probable that from his first arrival in town he must have mixed with those bright and inquiring minds who instituted the Royal Society. Be that as it may, his treatise at once attracted their attention, and in the same year in which it was published we find it reviewed in the *Philosophical Transactions of the Royal Society*, then in the second year of its existence.

I will not stay to consider how great or how small were Sydenham's literary acquirements, or whether he wrote his works in Latin, or whether they were translated from the vernacular by Dr. Mapletoft and Mr. Havers; the subject is fully treated of by Dr. Latham in his *Life of Sydenham*, and I know of no fresh evidence that has been obtained. Whatever may have been the amount of Sydenham's scholarship, no one who reads his works can fail to see from his frequent allusions to Horace, Lucretius, Seneca, etc., that he was intimately acquainted with the Latin classics, and, like Dr. Latham, I should be sorry to consider that his admiration for Hippocrates—the divine old man—was taken at second-hand. As to the other disputed point, whether Sydenham served as an officer in the Parliamentary army, the question has been set at rest by the discovery in the Record Office of a petition to the Lord Protector signed by Thomas Sydenham and endorsed Captain Sydenham's Petition.[13]

Nurtured during the civil war, the rough and turbulent early life of Sydenham left perhaps its stamp upon his character—a thoroughly upright, honest, God-fearing man, but somewhat intolerant of opposition, and of singular independence of mind. He had not the sweet nature of Harvey, which appears to have enabled that gifted man to have lived in peace with all men; but we must, I think, receive with caution the few contemporary anecdotes which have come down to us concerning him. It is pretty certain that Sydenham thought Sir R. Blackmore a pedant and prig—an opinion shared by many, for, besides Dryden's well-known castigation of Sir Richard Blackmore, we have the following description of him by a contemporary:

> By Nature formed, by want a pedant made,
> Sir Blackmore at first set up the wrapping trade;
> Next quack commenced, when fierce with pride he swore
> That toothache, gout, and corns should be no more.
> In vain his drugs, as well as words he puffed,
> His boys grew bald-heads and his patients died.
>
> Col. Coddrington.

The oft-quoted story of the advice Sydenham gave him to read *Don Quixote* was probably only passing on that which Locke had given Sydenham, for the former says: "Of all the books of fiction, I know none that equals Cervantes's *History of Don Quixote* in usefulness, pleasantness, and constant decorum."[14] And it may also have contained a covert allusion to the fictitious character of most medical writings.

Sydenham's independence of mind is the key to his position in medicine. The opening paragraph in the preface to the first edition of the *Methodus Medendi* exhibits to us the serious and lofty view that Sydenham took of the physician's duty, whilst in the greatly-expanded preface to the third edition he instructs us as to the means by which the science of medicine was to be advanced. It was his determination to study diseases as they presented themselves to him, keeping the peculiar and constant phenomena apart from the accidental and adventitious, and laying aside all hypotheses as to their nature, which enabled Sydenham to draw up those pictures of gout, dropsy, and fever which will remain classical for all time and justly entitle him to be called the modern Hippocrates. From Harvey's physiological teaching, and from clinical observations carried on in the spirit of Sydenham, our present knowledge of disease became possible. Harvey's work and writings had no direct influence on Sydenham; the latter makes no reference anywhere to Harvey, nor does he seem, in his treatise on *Dropsy*, written in 1683, to have seen the bearing which Lower's experiments, made fourteen years previously, of ligature of the veins, had on dropsy. Sydenham considered "weakness of the blood" to be the sole cause of dropsy, and throughout his writings he nowhere alludes to the physiology of the tissues. He quotes Hippocrates with approval, as blaming those who in their exceeding curiosity and officiousness busied themselves in speculations on the human frame, and whilst admitting that more than one valuable medicine had been obtained from the chemists, blames those who thought that medicine could be promoted by the new chemical inventions of his day;[15] and he further on says "the whole philosophy of medicine consists in working out the histories of diseases and applying the remedies which may dispel them; and experience is the sole guide."[16] Yet Sydenham himself had his theories, and, viewed by the light of our present knowledge, very incorrect ones, for without theory, or, in other words, general principles, experience is a blind and useless guide. Rational theories of disease and its treatment can only be founded on physiological knowledge, and until, comparatively speaking, a very few years ago the knowledge of physiology and medicine were inseparably connected, for, with very few exceptions, the former was cultivated by medical practitioners alone, and may, without disrespect, be said to have been parasitic on medicine.

This is no longer the case, for using the term in its widest sense, as embracing the study of life, whether under normal or abnormal conditions, it has become the largest division of the natural sciences, throwing out like a gigantic tree huge branches from its main trunk, which depend more or less for support on chemistry and physics, and embracing within its ample boughs a vast series of subjects with whose rapid growth it is beyond the powers of any man to keep abreast. What is to be the future relation of it to medicine, or rather, I should say, of medicine to physiology? The old position is reversed, and medicine—that is, the study of the manifestations of disease, its origin, course, and the means of alleviating its effects or preventing its occurrence—may be regarded as a branch of physiology, and one not less scientific than the observation of physiological phenomena in the laboratory. The practitioner of medicine turns to the physiologist, the bacteriologist, the chemist, and the physicist for aid in unravelling and explaining the symptoms he observes and has to deal with, and so long as they work together in the spirit which influenced Harvey and Sydenham—the pursuit of truth—the world must be the gainer.

The very brilliancy of recent discoveries and the vast increase in our knowledge may for a time react prejudicially on the art of medicine. Are we not in danger of being carried away by our enthusiasm? And may we not fall into the predicament described many years ago by Buckle, of our facts outrunning our knowledge and encumbering our march? More especially does this difficulty arise in the training of our students. So vast is the range of subjects bearing on medicine, and so important does each appear to those best acquainted with them, that there seems to me danger lest, in endeavouring to secure an acquaintance with them all, we may forget that the future life of the majority of those entering our profession is to be spent in ministering to the victims of accident or disease, and that for the due recognition and treatment of sickness and injury, experience and trained clinical observation is absolutely necessary. No amount of laboratory training will enable a man to recognise the nature and proper mode of

[13] A copy of the petition, together with other remarks, was published by Dr. Gee in *St. Bartholomew's Hospital Reports*, vol. xix, p. 1.
[14] *Some Thoughts concerning Reading and Study*
[15] On *Dropsy*, par. 33, *Syden. Soc. Trans.*
[16] *Op. cit.*, par. 48.

reduction of a dislocation, or know scabies when he sees it, and the words of Sydenham to his dear friend Dr. Mapletoft, "The art of medicine can be properly learned only from experience and exercise," will always hold good.

There is no need to urge on the Fellows of the College another of Harvey's directions to the Orator of the day "to search out the secrets of Nature by way of experiment," for at no period during the existence of our College have they manifested greater activity than at the present.

The great scientist who has recently passed away in the fulness of years and fame opened to us new and most fascinating fields for future research, pregnant, I believe, with an abundant harvest, of which he himself was permitted to see the first fruits. Working out with scientific patience and accuracy the clue afforded by Jenner's discovery of the efficacy of vaccination in small-pox, Pasteur not only threw light on the darkness which surrounded the communicability of specific diseases, but placed in our hands a means to fight them. Pasteur has gone to his rest surrounded with all the honours a grateful nation could pay to his memory, and I know not that I can pay a greater tribute to his genius than by saying that he will worthily be placed in the Temple of Fame by the side of our Harvey, both men honoured alike for the blameless character of their lives and the brilliancy of their discoveries. If we, as a nation, have not been able, through the action of our Legislature, to bear our full share in the furtherance of Pasteur's discoveries, we have at least the satisfaction that Lister was the first to recognise their bearing on morbific processes, and to introduce new principles into surgery, which have added a hundredfold to its powers. The later developments of Pasteur's discoveries in the hands of Koch, Behring, Roux, Klein, and a host of equally earnest inquirers have had in medicine a correspondingly important and beneficial effect on our conceptions of disease and its treatment.

Remarkable as has been the nineteenth century in the development of science and its application to the needs of mankind, in no direction has it been more remarkable than in the progress of medicine. The introduction of anæsthetics marks the middle of the century, and its close will in the future be ever memorable as the era in which we commenced to have a truer and fuller insight into the causation and nature of disease than the world has yet seen. Let us all, then, strive to work after the examples of Sydenham and Harvey in the confident hope that as our knowledge advances we shall obtain greater powers of control over disease in all its forms, and that pain and suffering may be yet further mitigated.

Midwives in Belgium.—The Belgian Gynæcological and Obstetrical Society has recently passed resolutions to the effect that midwives should be placed under the active supervision of a competent authority. It recommends that they should be taught to employ certain specified methods of disinfection and asepsis; to use the thermometer regularly, and summon the doctor when the temperature of the patient remains above 101° F. for more than twenty-four hours; to call in the doctor also as soon as any signs of purulent ophthalmia are noticed in the infant. The strictest precautions are enjoined after attendance on cases of puerperal septicæmia, and it is recommended that any neglect in this respect should be made punishable by law. Any case of puerperal fever must be notified to the proper authority within twenty four hours.

Printing and Mortality.—The Labour Department of the Board of Trade has just completed an inquiry into the relative mortality of a number of group occupations. Their inquiry covers (1) printing and bookbinding, (2) shipbuilding, (3) metal, (4) building, and (5) miscellaneous trades. They find that the following are the rates of mortality per mille of the members of the respective unions in these occupations: Printing, 12·27; metal, 11.87; miscellaneous, 10.15; shipbuilding, 9·37; and building, 7.93. Taking the average age at death, printing again occupies the unenviable position of being worst. These are the actual figures: Printing, 44·5; shipbuilding, 46·6; building, 47.5; miscellaneous, 50; and metal, 50·5.

Dr. A. L. F. Robertson-Fullarton has been appointed Deputy Lieutenant of the county of Bute.

SIXTY-THIRD ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in LONDON July 30th, 31st, and August 1st, 2nd, 1895.

PROCEEDINGS OF SECTIONS.

THE SECTION OF LARYNGOLOGY.

Felix Semon, M.D., President.

THE INFECTIOUS NATURE OF LACUNAR TONSILLITIS.

I.—Professor Dr. B. Fraenkel,
University of Berlin.

Under the title of tonsillitis, or angina lacunaris, or as it was formerly called follicularis, we understand an inflammatory affection of the tonsil which is distinguished by its phenomena and course as a disease *sui generis*. It begins in the majority of cases with a rigor and rapid rise of temperature. Simultaneously or after a short delay the patient experiences a sense of uneasiness in the throat. Swallowing, and particularly swallowing saliva, causes him some pain, though this is usually insignificant, and even when he is not swallowing he feels that the throat is not normal, or rather that some slightly painful change has occurred in it. In some cases these subjective phenomena precede the rigor by a few hours. If the throat is examined at the beginning of the illness the palatine tonsils are seen to be red and swollen. A few hours later whitish elevated spots make their appearance, and these prove on closer inspection to be drops of secretion issuing from the orifices of the lacunæ. These may be seized and pulled away, and if this is done they usually become drawn out into threads, which retain an attachment to what is left behind in the lacunæ. Fresh secretion is formed and expels what is already present, and in this manner drops of secretion reform at the lacunar orifices. They finally gravitate downwards, and may coalesce with similar drops from neighbouring lacunæ. In this way a larger or smaller extent of the surface of the tonsil may be covered with the whitish secretion. The latter is of a dense fluid consistency, and adheres fairly firmly to the underlying parts. It is, however, not a pseudo-membrane, for it may be removed without any injury to the surface on which it lies, and proves on microscopic examination to contain no fibrin. It consists in the main of large numbers of cells (chiefly leucocytes, together with epithelial cells), which exhibit granulation and the other usual indications of impaired nutrition. Besides the cells, micro-organisms (chiefly cocci) are present in crowds; but, as I said before, there is no fibrin.

With the further progress of the disease the redness and swelling of the tonsils increase, but these phenomena as well as the pain in the throat usually keep within moderate bounds; while, on the other hand, the fever advances with rapidity, a temperature of 40° C. and more being reached as early as the first evening of illness. Next morning the fever remits, but again rises in the evening, until during the night of crisis the temperature sinks to normal, with the occurrence of perspiration and urinary sediment. In some cases the fever ceases even within twenty-four hours of onset, in others it lasts three or four days. In all cases, however, it gives us, by the suddenness of its onset and by its termination in crisis, the impression of an infective fever, an impression which is strengthened by the disproportion which exists between the local phenomena and the height of the fever, while it is further supported by the fact that in a fraction of all cases a swelling of the spleen is to be detected.

Owing to the favourable course which the disease usually takes one seldom has an opportunity of meeting with it in the cadaver. The pathological anatomy can nevertheless be studied without difficulty. When the affection occurs in individuals who suffer from hyperplasia of the tonsils—and

they frequently are attacked by it—the performance of the necessary tonsillotomy during the acute stage of the disease is sometimes indicated on mere external grounds. Experience of such cases proves that tonsillotomies performed during angina lacunaris do not differ in their course from the usual operation. Since observing this repeatedly, I have during the last few years removed without delay more frequently than formerly hyperplastic tonsils affected with angina lacunaris, and even those in which there was a merely acute and considerable swelling. In this way I have obtained a sufficiency of material for the study of the pathological anatomy of lacunar tonsillitis.

Microscopic examination of sections of tonsils of this kind shows that the most obvious change present is an increase in the transudation of leucocytes from the follicles. This is in parts so considerable that the swarms of emigrating leucocytes so obscure in places the contour of the follicles, as well as of the epithelium, that in various spots (where one can conclude with certainty, on account of the character of the surroundings, that a follicle border or an epithelial fringe must be present) nothing is to be seen of these structures, but only a broad dense current of leucocytes is observed. Moreover, in the neighbourhood of the follicles transudation of leucocytes takes place from the fringe of adenoid tissue underlying the epithelium. The stream of leucocytes is poured into the lacunæ, which becomes completely filled thereby, and finally flows out on to the surface through their orifices.

I do not hesitate to say that I consider that the anatomical changes of lacunar tonsillitis consist essentially in an enormously increased transudation of leucocytes. This cannot be due to the transudation being facilitated. Nothing is to be seen, so far as the epithelium and the follicles are concerned, to justify such a conclusion. We must rather suppose that the influx of leucocytes to the follicles and adenoid tissue of the tonsils is increased, and therefore that angina lacunaris is a genuine inflammation of the parenchyma of the tonsils—a tonsillitis in the true meaning of the term.

The same phenomena occur in the other tonsils of the pharyngeal ring of lymphatics as in the palatine tonsils, though less often. Of these, the pharyngeal tonsil is relatively the most frequently affected, but I have seen angina lacunaris occur in the lingual tonsil. With regard to complications, we must mention that it is not uncommon for the neighbouring lymphatic glands to become acutely swollen secondarily, and these may be tender on pressure. The swelling of these glands sometimes lasts considerably longer than the affection.

Under the heading of sequelæ, peritonsillar abscess deserves to take a prominent place. Its onset, which is indicated by severe and more localised pain in the throat, generally occurs during the early days of convalescence. It is also worthy of notice that many patients appear to be more pulled down and weaker after their recovery than the slight character of the local affection and the short duration of the fever would lead one in the abstract to expect.

When we now proceed after this short consideration of the pathology and clinical phenomena of the affection with which we are dealing to investigate its etiology, it becomes necessary for us to limit ourselves to such cases only about which there can be no question that they are really cases of genuine lacunar tonsillitis. We must, therefore, exclude from our etiological investigation all those cases in which pseudo-membrane occurs, or in which the Loeffler bacillus is found. I do not in the least mean to deny that even in simple lacunar tonsillitis the inflammation may become so intense that fibrin is secreted and false membrane formed. But if we desire to make a clear distinction between lacunar tonsillitis and diphtheria, we shall do well in our etiological investigation to leave these forms out of consideration, and confine ourselves to typical and perfectly pure cases. For the same reason we must exclude all cases in the secretion of which the Loeffler bacillus occurs.

Dr. Macintyre and I have divided our task so that the bacteriology should be dealt with by the former. I need not, therefore, enter upon this point.

In elucidating the etiology within these limitations, I think it best to start from certain observations which we have the opportunity of making more frequently than we like. I refer to the occurrence of lacunar tonsillitis after intranasal operations. Lacunar tonsillitis so frequently follows operative interference in the nasal cavities—especially when the galvano-cautery is used, but also when cutting instruments, or even caustic applications, are employed—that we cannot but suppose that a causal connection exists between the intranasal interference and the tonsillitis; for the latter occurs in individuals who have never suffered from it previously, and who had kept their rooms since the operation. I have often seen it occur in one and the same person on each occasion that the cautery has been used in the nose. It comes on, as a rule, during the first days after the intranasal interference, and affects either the palatine or pharyngeal tonsils, or both of them at once. I have never been able to detect any difference between the course of the traumatic and the spontaneous varieties of the disease. I have found the same micro-oganisms in both, and have observed peritonsillar abscess as a sequela of either.

Granted that we are correct in our observation that a true lacunar tonsillitis may be occasioned by intranasal operative interference, there is, to my mind, no other explanation of the matter than the hypothesis that something is carried by the lymph or blood circulation from the nose to the tonsils, which sets up inflammation in the latter. We must suppose that the injury which damages the protective epithelial lining of the nasal cavities throws open the doors to the exciters of inflammation, and that through this door they obtain access to the tonsils from within by way of the lymphatic vessels.

I think that such an explanation of the tonsillitis is much more probable than the hypothesis that the exciters of inflammation make their way into the tonsil by the same route by which the leucocytes make their way out. In some quarters the emigration of leucocytes is interpreted as identical with that from an open wound, but even if that were correct, the micro-organisms would have to enter against the stream of leucocytes. If one studies the emigration of the leucocytes through the epithelium, with particular attention to that point, one sees that the idea is probable, that an immigration takes place with relative difficulty on the same road as an emigration, but at least with as much difficulty as in all other mucous membranes with intact epithelium; for on the road of emigration the advancing micro-organisms are met by the living leucocytes and the stream of serous fluid directed towards the surface, circumstances which in both cases are, we take it, unfavourable to micro-organisms. That these micro-organisms, and particularly cocci, are to be found within tonsils affected with lacunar inflammation is proved by the microscopic examination of sections stained by Gram's method, in which one can make out in some places single cocci, in others masses of them, even within the follicles.

I have commenced our etiological consideration with traumatic lacunar tonsillitis because, relatively speaking, it presents the most easily intelligible conditions. In accordance with our method of arriving at conclusions *a posteriori*, we must proceed from better known facts, such as these, and draw wider inferences from them, in order to throw light upon points of greater obscurity. For some years I have advocated the idea that lacunar tonsillitis was an infectious disease. I have arrived at this conclusion because the clinical phenomena correspond in every respect with those of an infectious disease, and because I have observed instances of undoubted transmission. I trust I may suppose that my earlier work on this subject is known and that therefore I may omit to adduce further proofs of these facts, especially as in the meantime similar observations have in very many quarters been recorded in literature.

If, during the discussion, any doubt is thrown upon the capability of lacunar tonsillitis being transmitted from man to man, I will adduce proofs in full in my concluding remarks. I take it, however, that no voice will be raised against the transmissibility of lacunar angina.

It might appear that traumatic angina supplied evidence directly counter to the infectious nature of angina lacunaris. If lacunar tonsillitis can occur as a consequence of an intranasal operation, why need we assume an infection at all, in order to explain its origin? This objection, however, only holds on superficial consideration. For we must assume that

an infectious substance exists in traumatic angina also, which travels from the nose to the tonsils, and there sets up inflammation. Also traumatic angina runs the same course as an infectious disease. The injury we must suppose merely serves to open to the inducers of infection a door which was previously closed. Only a minority of the pathogenic micro-organisms known to us are capable of attacking a perfectly normal body or a perfectly normal mucous membrane. In the case of the overwhelming majority of them, an accessory factor must be present to damage and weaken the organism before they can affect it pathogenically. This factor is, in the case of traumatic angina, the intranasal operation. The question here arises as to whether the micro-organisms which cause lacunar tonsillitis must necessarily be introduced into our bodies from without, or whether they are already present in them, but must await an injury to the mucous membrane in order to become pathogenic. Our bacteriological knowledge does not at present enable us to answer the question. Dr. Macintyre will, I suppose, go further into it.

A similar *rôle* to that taken by intranasal operation in the causation of lacunar tonsillitis is, I think, played by chill. This cause of illness is generally accepted; the frequency, however, of its supposed causal influence stands in inverse ratio to our actual experience of the matter. But I will not deny that sudden cooling of our heated skin, or of portions of it, is capable under some circumstances of causing lacunar tonsillitis, for the simple reason that I have frequently experienced it in my own person. I take it that the chill acts causally merely by opening the door to infective agents. Since the time that I studied traumatic angina, I have seen cases in which the tonsillitis was preceded by a slight rhinitis. Possibly here the chill produced catarrh primarily, while the tonsillitis was caused secondarily from the nose through the lymphatic vessels. I mention this as a possibility without wishing to exclude other ways by which the tonsillitis may be occasioned. The circumstance that an individual who has suffered from lacunar tonsillitis once sometimes acquires a predisposition for further attacks of angina can no longer be used as an argument against the view that the tonsillitis is an infectious disease, for we now know that the same thing occurs in the case of several diseases of this character, for instance, in acute articular rheumatism and pneumonia. Lacunar tonsillitis, then, I regard as an infectious disease; for the infection to become active an injury to the organism must be added. The infective agents may reach the parenchyma of the tonsils by way of the lymph stream. I believe that on this hypothesis the clinical and pathological phenomena of the disease under discussion are brought into harmony. It is true that many points still demand further investigation, which will be the more readily accepted the more we learn to think etiologically, or what in these days is the same thing, bacteriologically.

II.—John Macintyre, M.B., C.M.Glasg.,
Surgeon for Diseases of Throat and Nose, Royal Infirmary, Glasgow; Lecturer on Diseases of Throat and Nose, Anderson's College, Glasgow, etc.

My first duty is to thank the Council of this Section for having conferred upon me the honour of opening a discussion upon the infectious nature of lacunar tonsillitis in association with our distinguished colleague Professor Fraenkel.

For some time past this subject has been receiving a great deal of attention, particularly the study of its etiology, and catarrh in the upper respiratory tract generally, but although considerable progress has been made, much yet remains to be done. In a paper read in the Section of Laryngology at the Nottingham meeting of the British Medical Association in 1892 I pointed out the difficulties which arose on account of the different views in the literature and practice; while bacteriology has done much since then, in this as in many other branches of science, the question deserves further attention. That such terms as "angina," "catarrh," "follicular," "croupous," and other forms of tonsillitis have not been found satisfactory is proved by the many attempts now being made to supply a classification based upon recent scientific investigation. I trust I may not be considered hypercritical if I say that even the name "lacunar" tonsillitis is not unlikely to disappear with increase of knowledge; and, while admitting its usefulness from certain standpoints, in the present state of our knowledge the same remark, with all due respect, may be made of Sokolowski's classification of tonsillitis lacunaris chronica desquamativa, tonsillitis lacunaris chronica desquamativa exacerbata, and tonsillitis lacunaris pseudo-membranacea. In the paper above referred to it was pointed out that such terms as catarrh, inflammation—in fact distinctions based upon clinical evidences—must in all probability ultimately disappear, and the same remark holds good when we appeal to anatomical distinctions. Consequently, although we have changed the word from "follicular" to "lacunar" tonsillitis we have only succeeded in overcoming to a certain extent the difficulties which arise when different affections attack different anatomical structures or tissues whose names give rise to confusion. A specific example, such as diphtheria, will render my meaning clearer to you, because the recent advances in bacteriological science have made it evident that this affection is due to the presence of a specific micro-organism, and so when the etiology of catarrh, lacunar tonsillitis, or other inflammation in this region is better understood we shall in all probability have no difficulty whatever in supplanting all such classifications. I am aware that this has already been attempted, and that we hear of staphylococcal, streptococcal, and pneumococcal sore throat, but to this question I shall return further on.

The question which I wish particularly to place before you is, How far are we entitled to consider the comparatively well-defined group of signs and symptoms usually associated with the name of lacunar tonsillitis as a specific affection? I think at the outset it may be said that the answer to this question, viewed from the standpoint of modern research, points in the direction of a specific and definite cause or causes being at work in its production; that while many inflammations may be found in the same region, simple, traumatic, or due to constitutional affections, that not one, but perhaps different micro-organisms, may be in causal association with it, we may look forward, and possibly in the near future, to classifying the majority of acute inflammations of the tonsils in definite order, just as we have been able to attribute the true diphtheritic exudations to the presence of Klebs-Loeffler bacillus. In other words, that just as we have found it convenient to group and compare constitutional fevers such as typhoid and typhus, so we hope some day to be able to split up the great group of inflammations in the tonsillar region into its component parts, and assign to each a different place under a generic heading or term. In pursuance, therefore, of a study of the nature of infectious lacunar tonsillitis, it may not be out of place to attempt to make a comparison between it and other acute inflammations of the tonsils, of whose microbic origin no reasonable doubt can now be entertained.

Take the case of diphtheria. Here we believe in an organic cause at the seat of infection producing definite local lesions followed by secondary pathogenic phenomena in distant organs of the body; in fact, a disease which in its main features suggests in every way a constitutional fever whose virulence is due to the toxic effects produced by the definite parasitic micro-organism capable of producing the latter. While it has been arranged most courteously by Professor Fraenkel that he should deal more particularly with this part of the subject, I may be pardoned for here pointing out (1) that in lacunar tonsillitis we have as a rule a well-defined group of signs and symptoms occurring in distinct anatomical structures, and ushered in by a series of phenomena in every way suggestive of an invasion evidently following a period of incubation, the result of a definite and specific cause. A consideration of the local phenomena leaves little doubt that the best explanation of their presence is that of some specific organic source or cause. As we watch the course in the tonsils, we have distinct evidence of local irritation. At first it may be focussed at a part, but as it proceeds its course is such as to suggest organic invasion from point to point; it may be central and pass to the periphery, or it may be spread from one side of the fauces to the other, and all these changes are accompanied with an evidence of irritation, in fact, a casting out of what is evidently deleterious material. Moreover, setting aside the diversity of opinions for a

moment, I am inclined to cast in my lot with those who hold both clinically and from bacteriological observation that we are dealing with an affection which is not only auto-infectious, but capable of transmission from one subject to another. (2) That the clinical evidences are not confined to the local symptoms and signs at the seat of infection. I have been able in many instances, both in hospital and private practice, to confirm the clinical observations made by many others, that we sometimes have evidence of secondary infection of the respiratory and gastro-intestinal tract, that secondary mischief may be detected in the glands of the neck and mediastinum, of the presence of albuminuria, alteration in the normal cardiac sounds, enlargement of spleen, skin eruptions, pleurisy, pneumonia, and irritation of such distant organs as the testes and ovaries, all accompanied by distinct alterations in temperature, prostration, and general manifestation of the presence of a severe constitutional fever. I may be here allowed to say that on the question of paralysis as a sequela I have no definite opinion at present to offer. Clearly the simplest assumption is again that of an infectious disease with constitutional toxic effects.

[Dr. Macintyre here described a number of cases in which from clinical, bacteriological, and *post-mortem* evidences septic infection was traced from the tonsils to other and distant organs of the body. Photographs of cases where even Peyer's patches were involved were shown.]

Continuing he said: Further the local conditions are frequently not obliterated after an attack of the disease, and recurrent attacks may produce accumulative effects in the region of the crypts. Reasoning thus the natural suggestion is that careful search should be made for any pathogenic organisms to be found before, during, and subsequent to the attack. No sooner have we engaged in this particular series of investigations than we are beset with many difficulties, because the buccal cavity has been proved by the researches of many, particularly by those of Miller, to be one of the richest seats for investigation of the non pathogenic and pathogenic organisms found in healthy or diseased subjects. In a series of papers which I read at the British Laryngological Association some years ago I dwelt more particularly upon this branch of the subject, and I think the general opinion of bacteriological and clinical observers who have engaged in this study is that no form of pathogenic micro-organisms is to be detected during the acute affection of the tonsils which may not be present in the normal buccal cavity. This, of course, proves nothing by way of etiology, because the same remark applies to many other specific pathogenic organic causes, but it is a fact not to be forgotten. Sallard, if I remember rightly, places it as high as 5 per cent. in healthy subjects, but this is not quite my own experience. During the process of the disease it is easy to satisfy oneself that various forms of cocci, streptococci, most particularly staphylococci and more rarely diplococci, are found in great abundance. In the papers above referred to I gave results, and anyone can satisfy himself of the presence of these organisms in the crypts or discharges in a sufficient number of cases of affected individuals to suggest a causal association. Fraenkel, Kopioc, Gabbio, Roux, Sedzink, and many others, are agreed upon the presence of organisms corresponding to the structures which we have just indicated. We are indebted to Professor Fraenkel, amongst others, for the demonstration of the presence of the pneumococcens in a certain number of these cases. Without going into a discussion of the similarity in the structure of these and other organisms found in such conditions as erysipelas, not only is the presence of these organisms now regarded as proved both in the discharges and in the tissues themselves, but carefully conducted cultures show microscopic evidence that we are dealing with the organisms such as streptococci, staphylococcus pyogenes albus and aureus. Moreover, by careful cultivations in suitable media we get macroscopic and microscopic appearances which are quite identical with similar organisms found in other parts of the body, and frequently associated with septic infection. But further, we are indebted to our distinguished colleague, Professor Fraenkel, for he has shown by experiments that those organisms found in the tonsils have pathogenic properties. The presence of definite micro-organisms, even pathogenic, although suggestive of a causal origin if found during the course of the disease, is not enough, and in a critical survey of the position we are entitled to demand the complete carrying out of Koch's postulates before accepting the theory as proved. It is in this direction, therefore, that much work has yet to be done.

Lastly, Sokolowski and others have shown that in the contents of the lacunæ of ordinary enlarged tonsils staphylococci, streptococci, and diplococci, with a variety of forms of organisms usually included under the heading of leptothrix, can be demonstrated. Admitting for a moment that the causal association between such pathogenic micro-organisms and the ordinary form of acute tonsillitis has not been proved, even the most sceptical must admit that the statements above made are at least strongly suggestive that such a theory will be one day substantiated.

There are yet many difficulties to explain away, and Miller has shown that some forms of mischief in the teeth are dependent upon organisms which do not associate themselves usually with the formation of pus; further, what are known as non-pathogenic may under certain conditions be pathogenic. Our difficulties in the study of etiology do not end here, however. Granting the bacterial origin of disease, we must never forget that the causation of all affections is, as a rule, complex. Colds, damp, surface chills, and certain diatheses have at least a predisposing effect; and even families often exhibit similar tendencies. We know that certain individuals are more frequently attacked than others, and the same individual will often show different degrees of resistance at different periods of his life quite apart from variations in the standard of normal health. We know that in the very young and in the very old acute inflammatory affections of the tonsils have not the same hold. Again, climate seasons, situation—for we find epidemics recorded—must be taken into consideration. In considering, therefore, the nature of lacunar tonsillitis whatever be our views upon the active cause of the affection, no study of etiology is complete without a consideration of these and many such predisposing conditions; for it must be granted that whether the affection comes by the air, food, or direct contagion, the same individual at different periods of his life, or groups of individuals more or less predisposed to the affection, are subject to similar conditions with totally different results.

In submitting this paper for discussion, let me say that whether we consider it from the standpoint of comparison with other acute inflammations in the same region proved beyond doubt to be the result of specific infection, clinically or pathologically or bacteriologically investigated, we have reasonable grounds for assuming that the time is not far distant when we shall prove beyond doubt that lacunar tonsillitis is an acute infectious disorder of the tonsils belonging to the group of specific affections, which was the thesis I had the honour of submitting to you at the beginning of this paper.

The PRESIDENT drew attention to the ever growing importance of the tonsils as the prominent portal of entrance for the most various pathogenic micro-organisms and explained this as being due to the physiological gaps of the covering epithelium, which are large enough to give easy passage to emigrating leucocytes and to immigrating microbes.

Dr. A. HODGKINSON (Manchester) said that whilst numberless cases of lacunar tonsillitis occur which present no indications of infectious characteristics, yet we have abundant evidence of the existence of an infectious form. There are also numerous cases in which the origin can be found in an intranasal operation, probably by lymphatic absorption. With the object of testing the transmissibility, the speaker admitted a number of cases into the hospital under Dr. Edwards for observation, and not one single instance of direct transmission was noted. What is known as a lacunar tonsillitis may include several forms of disease; that the rheumatic diathesis is very inclined to predispose to tonsillitis is undoubted, in which cases chill and fatigue are common causes.

Dr. WM. HILL considered rheumatic lacunar tonsillitis as one of the most interesting varieties of the matter being discussed. When seeking some years ago for the microbic origin of acute rheumatism, one naturally turned to the cases where tonsillitis preceded rheumatic fever, but it was a remarkable fact that no cases of infection by "osculation" or aërial infection could be found. Whilst most cases of acute lacunar

tonsillitis were contagious, he thought that the rheumatic variety was an undoubted exception; this did not necessarily militate against the probability that microbic life processes in the mouth might by autoinfection or by the dissemination of consequent chemical irritants and toxins in the system bring about in one case lesions in the synovial and serous membranes, in others lymphatic gland involvement, of which phlegmon of the throat is an extreme instance, in others intestinal irritation with enlargement of Peyer's patches and nephritis; such cases reminded one of the parallel instance of diphtheria, where a secondary systemic involvement follows a primary tonsillar lesion. Admitting that various buccal cocci are under some conditions benign and at others pathogenic, he thought that the explanation would eventually have to be sought in the study of various chemical products produced in the mouth as the result of microbic life processes.

Mr. Lennox Browne agreed with the statement of Professor Fraenkel that lacunar tonsillitis sometimes followed intranasal operations, and drew attention to the fact that it occurred more frequently when the galvano-cautery was used than when the operation was a cutting or sawing one for the removal of a spur, the explanation probably being that for a certain time the filtering functions of the nose were abrogated, and that some at least of the innumerable organisms of an innocent character which are found in the nasal passages were stimulated into virulence. The accident was a comparatively rare one, and was as liable to produce acute medium otitis as an acute lacunar tonsillitis. In the latter case the stage of abscess was rarely reached, probably because it was attacked immediately on its occurrence. In regard to the relation between rheumatism and tonsillitis to which the speaker had revived attention some twenty years ago, it was a doubt in his mind whether both were not examples of autoinfection, the tonsillitis sometimes preceding the rheumatism, at others the rheumatism preceding the tonsillitis. No specific organism had been discovered, for in some cases not only diplococci, both free and encapsuled, but streptococci of the short and rigid—that is, of the least virulent—form, staphylococci, and fungi were indifferently found. The speaker did not believe that there was a high degree of infectiousness in these cases from one person to another, and his experience confirmed the observations of Dr. Hodgkinson. When several cases occurred in a district or in the same family, faults in sanitation or similarity in constitution were probably accountable for the attacks.

Dr. Sokolowski (Warsaw) said the microscopic examination of several pharyngeal tonsils affected with so-called angina follicularis gave the following results. Weigert's method of staining was used. The lacunæ were distended and completely filled with a network of fibrin, in which large numbers of lymphoid cells and micro-organisms were found. In nearly all cases were found many small cocci with numerous diplococci, streptococci, and a few bacilli. A few of these were also found in the epithelial cells. In the upper lacunæ a very large number of cocci was found, and in the lower ones the number was much smaller. In all cases fibrilles were found, but the connection of these with the tissue was slightly different to that found in malignant or diphtheritic cases. In these cases the fibrin was found in the tissue, and the tissue itself was partly necrotic. In the cases he referred to he only found very few necrotic patches, and these were only in the superficial layers of the tissue. The epithelial cells of the lacunæ can be implicated to such an extent that in some parts they were hardly visible. In some cases not only part but the whole of the epithelial layer of the lacunæ was so much infiltrated that it was often difficult to tell where the contents of the lacunæ and where the tissue began, except where the fibrin network and the micro-organisms were clearly visible. The adenoid tissue itself was normal, with the exception of an increased infiltration; also the follicles. Several kinds of lymphoid cells were also found. The microscopic appearances seemed to prove that the anatomical changes which were met with in angina follicularis were a diphtheritic process, but of a less severe kind than that met with in genuine diphtheria. We did not, however, yet seem to be in the possession of facts which could satisfactorily explain the etiology of this process. A more detailed description was published in *Deut. Arch. für klin. Medicin*, 1892.

Professor Moritz Schmidt (Frankfort-on-Maine) wished to know how often his colleagues present had met with lacunar tonsillitis after intranasal operations. For his part he did not consider it was 1 per cent. He could not attribute this to his antiseptic precautions, for he did not rely very greatly on them in the nose. Perhaps it was due to the bactericidal properties of the nasal mucus.

Dr. Gleitsmann (New York) merely wished to say he was quite in accord with Professor Fraenkel regarding the infective nature of the disease in question. But he desired to touch on some points of practical interest. The first was relative to tonsillotomy in lacunar tonsillitis as mentioned by Professor Fraenkel. Until now he was afraid to excise acutely inflamed tonsils, and he was glad to hear that the operation had been done with impunity in such cases. He had seen quite a number of cases in which, after excision of simple hypertrophied tonsils, pseudo-membranes had formed, although the instruments were aseptic, and he had used a solution of hydrate of chloral in glycerine as a paint after this operation, with good results. As to the occurrence of tonsillitis after intranasal operations, especially after application of the galvano-cautery, there was still some doubt in his mind as to their origin. It was not due to septic instruments or cautery points, nor to the subsequent swelling and obstruction after intranasal cautery, for it had occurred with perfectly patent nostrils; the effects of the cautery he had restrained by the application of trichloracetic acid.

Dr. St. Clair Thomson thought the subject under discussion was the infectious nature of tonsillitis, and not its septic origin, for the latter was not nowadays doubted by any; nor did it deal with the infective nature, for the cases quoted by Dr. Macintyre of pleurisy, nephritis, etc., subsequent to lacunar tonsillitis illustrated this. The proof of infection in the ordinary way from one person to another had not been advanced. He presumed what Dr. William Hill referred to when speaking of the breath was microbic infection by dust from expectoration, etc., for the researches of Strauss, Grancher, and others showed that expired air never contained any germs, even in cases of tuberculosis. With reference to the question of rheumatic infection from the tonsils, the views of Hill had been fully investigated by Buss. Passing on to the question of intranasal operations being a source of infection, he wished to know if the instruments were quite sterile, for the galvano-cautery might be sterile at its point, but most septic at the barrel. He also suggested that the nose becoming blocked the tonsils became infected owing to their exposure to infection, and the mouth was not used to being open. He had seen recurrent attacks of lacunar tonsillitis arrested by removal of nasal obstruction. With regard to the organisms, it had been pointed out at the Royal Medical and Chirurgical Society in a paper by Dr. Semon that they might have pathological identity with bacteriological diversity, so that we must not expect the discovery of a specific organism.

Mr. L. Lawrence gave the history of a family of nine, six of whom had lacunar tonsillitis. The family history was a rheumatic one, but the only members who had had acute rheumatism had not had tonsillitis, and one child had chorea. Adenoids were present in at least one member of the family.

Dr. Fraenkel replied briefly that in his cases of tonsillitis, secondary to nasal operations, there was no suspicion of sepsis.

Dr. Macintyre in reply, thanked the members of the Section for the manner in which they had received his paper. He would only say with regard to the remarks of Dr. St. Clair Thomson that he (Dr. Macintyre) thought he made his views sufficiently plain in his paper. He had nowhere made the statement that he expected a specific bacillus for every known affection. What he did maintain, however, was that while we had strong grounds for believing that lacunar tonsillitis and many such acute affections of the throat were due to microbic causes, the requirements of Koch, before accepting anything as definitely proved, had not been demonstrated in any series of experiments of which he (the speaker) knew. Until these were forthcoming he preferred to say that, viewed clinically, pathologically, or from bacteriological investigations, there were strong presumptions that we were dealing with pathogenic organisms in this affection. With

regard to the remarks of Dr. Hill and others about the rheumatic diathesis, he would only say that the presence of such did not exclude the possibility of septic infection. On the contrary, we knew in such conditions, say, as influenza, the liability to tuberculous infection subsequently, and therefore while any known diathesis might exist in the patient, it by no means excluded the possibility of septic infection.

THE FUNCTION OF THE LARYNGEAL VENTRICLES AND VENTRICULAR BANDS.

By Alex. Hodgkinson, M.B., B.Sc.,

Lecturer on Laryngology at Owens College; Senior Physician, Hospital for Consumption and Diseases of the Throat, Manchester.

Whatever interferes with the free vibration of the vocal cords during phonation tends to impair the voice, whether used in singing or speaking. By far the commonest agent producing such interference with the free vibration of the normal vocal cords is dust, which in the form of fine physical particles is diffused everywhere to a greater or less extent through the air we breathe. Some of such particles may directly settle on the vocal cords, either naturally during inspiration or may be artificially applied for purposes of observation or treatment. By far the larger portion, however, is drawn into the windpipe and larger bronchi, and, taken up by leucocytes, either passes into the bronchial lymphatics or is carried along by the ciliated cells of the respiratory mucous membrane towards the larynx. In the larynx the current of mucus is distinct along its posterior wall, so as to pass between the cords posteriorly, over the interarytenoid fold, into the gullet, and out of the system by way of the alimentary canal. In this way actual contact with the vocal cords is avoided. Such is the normal course taken by dust laden mucus when the inhaled dust is not in extraordinary quantities, and the mucous membrane is in a healthy condition. Under such circumstances the process of excretion is a gradual one and excites no sensation. If, however, the mucous membrane of the air passages is in an inflamed condition, the above normal process is materially modified. Dust gains access as usual to the air passages, but its mode of exit is altered. Owing to the inflamed condition of the mucous membrane, the action of the ciliated epithelial cells is more or less interfered with, the consequence being that, though the dust particles are taken up by the mucous corpuscles as usual, the latter are no longer carried along separately and in a continuous stream, but collect together in larger or smaller groups. When these collections of mucus are sufficiently large to produce irritation, they are expelled by coughing or clearing of the throat. It is thus evident why, of two individuals breathing the same dust-laden atmosphere, one suffering from even slight chronic catarrh and the other free from any affection, the former is constantly expectorating larger or smaller collections of dark mucus, whilst the latter is free from perceptible irritation.

Occupying an intermediate position to the normal isolated dust laden mucous corpuscles which in health are continuously passing through the larynx without exciting our consciousness, and the larger collections of mucus which excite cough, is a third form of excretion, a form to which I more especially desire to direct attention not only because it is immediately connected with the subject of the present communication, but also on account of its great prevalence amongst residents in our large air-polluted manufacturing towns. This intermediate form of excretion consists of collections of mucus into masses, such masses, however, being too small to excite cough or voluntary clearing. The cause, as in the previous case, is usually a catarrhal condition of the air passages, but that less marked but extremely prevalent condition which is scarcely perceptible excepting during an exacerbation. These small pellets of mucus, varying in size from a millet seed to a size imperceptible to unaided vision, are borne along by the sluggish ciliated epithelial cells towards the larynx. Here their course, though chiefly confined to the posterior wall, is not always so limited. Frequently during phonation minute pellets of mucus are carried to the inner surfaces of the vocal cords and upwards through the glottis. Such pellets of mucus, containing carbonaceous and other particles, may commonly be seen passing between the vibrating edges of the cords during phonation whilst the larynx is under examination. Such passage may, if the little masses of mucus are of sufficient size, cause a momentary interference with the sound of the voice, but, if small, they pass over the edge to the upper surface of the cord without producing any perceptible alteration. If finely divided indigo is blown into the larynx and the glottis examined with a magnifying laryngoscope, extremely minute particles may be seen passing from the edges of the cords, and producing little or no change in the tone of the voice.

If now a fine particle of dust or small pellet of mucus on the vibrating vocal cord be kept under observation, its immediate destination is seen to be dependent on the normal or abnormal condition of the cords. If the cords are normal the particle is seen to rapidly move from the free edge of the cord over its upper surface to pass at a diminished rate below the margin of the ventricular band into the laryngeal ventricle. The rapidity with which the particles move from the edge of the cord depends on the amplitude of the vibration of the cord, and therefore diminishes gradually from its centre towards the extremities. For the same reason that the rate of movement of the particle diminishes as it passes from the free edge towards the attracting border of the cord the amplitude diminishes as this point is approached.

If, however, the cords are not in a normal condition, but inflamed and sticky, the particle behaves at first as in the case of the normal cord, and moves rapidly away from its free edge, but its onward motion is arrested before it arrives at the ventricle, and it therefore remains stranded on the surface of the cord. It is now disposed of in one of two ways. Either it is expelled from the larynx by coughing, or it is cleared off the surface of the vocal cord by the ordinary act of swallowing, in the following manner.

During the act of deglutition, the upper aperture of the larynx is tightly closed by the combined sphincter-like action of its surrounding intrinsic muscles. By their action, and more especially that of the upper fibres of the thyro-arytenoid muscles bounding the laryngeal ventricles externally, the ventricular bands are forced together, and their lower borders brought intimately into contact with the upper surfaces of the vocal cords, and at the same time the contents of the ventricles and secretion from the laryngeal pouches is prised out of these cavities over the surfaces of the vocal cords. By the combined action, therefore, of the ventricular bands and the fluid from the laryngeal pouches, the removal of matter adherent to the vocal cords is facilitated. In some instances in which dust blown into the cords has been purposely allowed to remain for some little time without swallowing, several acts of swallowing have been required to remove it, even when the cords have obviously been moistened with fluid from the ventricles. This is evidently due to the fact that in such cases the cords are dry and sticky, since it is only noticed when the cords have been catarrhal. If a powder, such as indigo, be blown on the surface of the normal cords, it seems somewhat more irritating than when enclosed in mucous capsules, since if the cords continue to vibrate until it approaches the entrance of the membrane, a free flow of clear fluid may be seen issuing from the orifice, which carries towards the glottis the particles of indigo which, if phonation is continued, are vibrated back again and again by the action of the cord. If now phonation ceases the cord is abducted, the powder and ventricular fluid may be seen to flow over the edge of the cord into the larynx below. In health, therefore, where powder has been directly applied to the cords, no act of deglutition seems necessary to clear them, the fluid simply exuding from the mouth of the ventricle without apparent muscular action. If, however, as invariably happens, the powder has passed through the glottis and appears on the normal cords in small pellets of coloured mucus, it passes into the ventricles during phonation, without exciting any apparent flow of ventricular fluid, and the same occurs when the cords, though slightly catarrhal, are not dry or sticky. When the cords are red and swollen, both powder blown on to them and mucus passing over their edges from below the glottis, though moving to a little distance from the free edges during phonation, adhere to the surfaces of the cords with great tenacity.

In both these instances—that is, when the matter has passed into the ventricles and when it is adherent to the cords—its further disposal is brought about by the act of swallowing, as previously described. Having now traced the progress of the inhaled particles from their entry to the windpipe and larger bronchi, partly to the alimentary canal and partly to the surface of the cords, and partly to the interior of the ventricles, and since their location in the alimentary canal, so far as the present article is concerned, may be regarded as their ultimate destination, it remains only to briefly describe the disposal of the mucus and dust after removal from the cords and ventricles by the act of deglutition. By this act, the fluid forced from the laryngeal pouches in its onward passage through the ventricle washes out the contents of the latter cavity over the surface of the cords, carrying with it any adherent mucus, and is forced out of the larynx between the posterior ends of the ventricular bands over the interarytenoid fold into the alimentary canal. And since matter vibrated from the vocal cords into the ventricles accumulates at their anterior extremities, and since the fluid from the laryngeal pouches is poured into the ventricles at their anterior ends, its passage over the whole length of the cords is ensured by its exit posteriorly. Blackish-grey pellets of mucus from the ventricles may commonly be seen adhering loosely to the edge and posterior surface of the interarytenoid fold if the larynx of an individual in whom dusty mucus has previously been seen on the cords is examined immediately after swallowing.

In the preceding remarks I have attempted to show: (1) That in a normal condition of the air passages inhaled particles of dust, etc., are excreted in the interior of mucous corpuscles or leucocytes, and not floating free in the intercellular fluid. (2) That in health such dust-laden cells do not collect together in masses to be excreted at intervals, but remain separate, passing through the larynx in a continuous stream along its posterior wall between the arytenoid bodies over the interarytenoid fold into the alimentary canal. By this course interference with the vocal cords is avoided. (3) That in a catarrhal condition of the air passages the dust-laden mucous corpuscles collect together in larger or smaller masses owing to the impaired function of the ciliated epithelial cells of the mucous membrane. And for the same reason small pellets of mucus stray from the normal track and during phonation may often be seen passing between the edges of the cords to their upper surface; and if the cord is normal or only slightly catarrhal, moving over the surface of the vibrating cord to pass into the laryngeal ventricles. But if the cord also is in a marked catarrhal condition, the particles become stranded on its surface. (4) That inert coloured powder blown on to the normal cords passes during phonation to the base of the cords, and may never enter the ventricle, but directly phonation ceases and the cord is abducted, may be washed over the edge of the cord into the larynx below by a free discharge of fluid from the ventricle. (5) That the movement of particles from the edge of the cord to near the entrance of the ventricles is due to the vibration of the cord, their further movement into and within the ventricle being due to ciliary action. (6) That dust or mucus adhering to the cords or in the laryngeal ventricles is discharged into the alimentary canal during the act of ordinary deglutition as follows: The glottis is tightly closed and the upper portion of the larynx tightly compressed as previously described. By this compression the ventricular bands rub adherent matter from the cords, fluid is forced from the laryngeal pouches through the ventricles, over the cords, and through the upper aperture of the larynx between the arytenoid bodies into the alimentary canal.

From the above facts it is seen that in man, whilst the laryngeal pouches supply their special secretion, the laryngeal ventricles themselves act as receptacles for dust and mucus cleared off the cords by their vibration, which by its accumulation would otherwise interfere with phonation; and that the ventricular bands have a threefold function: they act as the inner boundaries of the laryngeal ventricles; they assist in closing all excepting the posterior extremity of the upper aperture of the larynx during deglutition; and, lastly, they aid in the removal of matter adhering to the vocal cords, both by friction and by their special arrangement, whereby the fluid from the laryngeal pouches is compelled to pass over the whole length of the cords from front to back in its passage from the larynx to the gullet.

Practical Deductions from the Foregoing.

It appears to me (*a*) that the mucous corpuscles or leucocytes exercise a protective function on the organisation by their property of enveloping particles of dust and germs, and so facilitating their removal from the body.

(*b*) That the passage of mucus from the air passages along the posterior wall of the larynx, in its passage outwards suggests a probable explanation of secondary infection of this part in pulmonary tuberculosis.

(*c*) The passage of mucus, etc., from the ventricles through the glottis into the air passages proves that blood, pus, etc. coughed up from these passages may be other than of pulmonary origin.

(*d*) The clearing of the cords and ventricles by the ordinary acts of deglutition helps to explain the clearing of the voice by eating, drinking, or sucking lozenges, etc.

The President wished to know whether the reflex cough immediately caused by insufflation of powders into the larynx did not materially interfere with the purity of his experiments.

Dr. Cathcart said Dr. Hodgkinson maintained that the ventricular bands were not necessary for controlling the exit of air, as they were too feeble to resist the strain. Cass and Lauder Brunton had proved that those animals who require their thorax filled with air, as a point of resistance for the muscles which move the forearm in the act of striking, have false cords, and agreed with Wyllie that the air is kept in the thorax entirely by closure of the ventricular bands.

Dr. Claremont would like to ask Dr. Hodgkinson if he considered the backward flow of the mucus as a normal or catarrhal process? In his observations on deglutition did he ever actually observe the surface of the ventricular bands during that act? Did he consider that the ventricular bands ever came into contact with the cords during vocalisation?

Professor Moritz Schmidt (Frankfort) also believed the principal function of the laryngeal ventricle was to prevent air escape: the folds were first distended, then pressed together; the greater the pressure of air, the firmer the glottic closure. The muscular fibres in the ventricular bands are unable to withstand a pressure of more than 80 mm. of mercury. Also during the act of swallowing the larynx is closed similarly, the expiration which follows being a sign of intratracheal pressure.

Dr. Illingworth referred to the theories he had advanced on the previous day in this relation. He considered phagocytosis a mischievous doctrine.

Dr. Hodgkinson, in reply, said that he had been surprised at the tolerance shown by the larynx to powders. They are borne well if not unduly large; if they are not, however, a little cocaine removes the difficulty. With reference to Dr. Wyllie's theory, observation had convinced him that the ventricular bands do not and cannot completely close the upper apertures of the larynx enclosed between the arytenoid bodies. Observations led him to believe that closure of the glottis during straining efforts was done by the cords. The reason, he concluded, was that the cords and ventricles were cleared by deglutition efforts, because after this act the cords and bands, previously dust-laden, were free from it, and the powder was seen on the edge and posterior surface of the interarytenoid fold, these parts being previously clear.

SOME CASES OF DISEASE OF THE LARYNX AND BRONCHI TREATED BY INTRA-LARYNGEAL INJECTIONS.

By Adolph Bronner, M.D.,

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In treating diseases of the larynx and bronchi we try, roughly speaking, to do two things: first, to cure the diseased mucous membrane; and, secondly, to relieve the irritation and cough. This can most readily be achieved by the application of local remedies. Of these we have any number, the efficiency of which has been tried on the mucous mem-

brane of other parts of the body. We know that large quantities of nearly any non-irritating and aseptic fluid can be safely injected into the bronchi, and that they are readily absorbed there (Botey, Schmalz, and others). A menthol solution not only relieves the cough, but has also strong deodorising and antiseptic properties. I generally use a 5 to 20 per cent. solution in paroleine. If about 20 per cent. of water or rectified spirits are added, and the injection well shaken before use, it mixes up much more readily with the secretion in the bronchi. When the expectoration is very offensive and copious, I add 10 to 50 per cent. terebene, or 2 per cent. oleum pimentæ (largely used by dentists), or 3 per cent. europhen. This is one of the few powerful antiseptics which is soluble in oil. I have tried a solution of salol, which, however, sometimes causes nausea and irritation.

In cases where there is not much secretion I add 2 or 3 per cent. of bicarbonate of soda or boric acid, or 3 to 15 per cent. of tincture of iodine. I have had no experience in the injection of terebene in cases of hæmoptysis, as recommended by Campbell. A glass and metal syringe (made by Down) is used which can be thoroughly sterilised, and which is so cheap that a separate syringe can be kept for each patient; it contains about 1 drachm. If necessary, three or five injections can be made at one sitting, for instance, in cases of purulent bronchitis or bronchiectasis. Before injecting I apply a few drops of a 5 per cent. cocaine solution for the first time or two, till the patient has got used to the operation. In some cases (bronchitic asthma) menthol causes great irritation. It is of great importance that the first few injections should cause as little inconvenience as possible, or else the patient will not call again. The patient is told to take a few deep inspirations and then to say "ah." The syringe is then put in position, and as soon as the cords open the end is introduced and the fluid injected. By pointing the end to one side we can to a certain extent inject the fluid into the right or the left bronchus. The various solutions should be kept in thin glass bottles, a separate one for each patient, and thoroughly sterilised. Pasteur's flask, or an ordinary small thin glass bottle, can be used. The majority of cases which I have treated by injections are naturally of laryngeal disease, chiefly tuberculous or atrophic laryngitis. I will record a few typical cases as briefly as possible.

I.—Cases of Laryngo-tracheitis.

Case I.—Mr. B. saw me in June, 1894. For some years in spring and autumn he has been troubled with a tickling in throat, which generally comes on about midnight, and prevents him from sleeping for some hours. He has tried innumerable remedies, of which only morphine seemed to do any good. There was slight redness and thickening of the vocal cords. I injected at first a 5 to 15 per cent. menthol solution in paroleine, and after eighteen injections added 3 per cent. europhen. He called daily for fourteen days, and then twice a week for three weeks. Last autumn he had no attacks, and this year only a few, which ceased after six injections.

Case II.—Mr. S., aged 40, has for years been troubled off and on with tickling in the throat and coughing as soon as he gets into bed. The attacks lasted from ten minutes up to one hour. Twenty injections in June and July, 1893, cured the affection. He very rarely has any attacks now, and they only last a few minutes. He calls off and on to have an injection. I used 10 to 20 per cent. solution of menthol in paroleine, and for the last few times added 2 per cent. bicarbonate of soda.

II.—Atrophic Laryngitis.

Case III.—S. L., aged 25, a mill girl, has for the last ten or twelve years been troubled with violent attacks of coughing several times a day, worse at about 5 A.M.; the cough did not cease until a black crust had been expectorated. I saw her first in January 1893. The ordinary remedies, including iodide of potassium, were tried. In March I commenced injection of menthol solution. In April I added 3 to 10 per cent. tincture of iodine. In June the attacks of coughing had greatly diminished in frequency and violence, and only small pieces of tough mucus were coughed up. Since October, 1893, there have been very few attacks. I injected about fifty times. She comes to the infirmary about once a month for an injection.

Case IV.—Mrs. P., aged 50, has for the last twenty or thirty years been troubled every winter with attacks of coughing and black, more or less sticky, and offensive expectoration, sometimes very profuse. This was a case of bronchitis and laryngitis sicca. In December, 1893, I injected menthol (10 to 20 p.) and terebene (30 per cent.) in paroleine. In January the expectoration was much less profuse and less offensive. In February menthol, tinctura iodi. (5 per cent.) was used. During the whole of winter (1894) there has been very little expectoration.

III.—Chronic Bronchitis with Asthma.

Case V.—Mrs. L., aged 50, has had bronchitis for years, more in the spring and autumn. During the last few years she has had frequent attacks of asthma. I saw her in February, 1894. There was most profuse and offensive expectoration. I injected at first menthol. This, however, caused great irritation, and had to be discontinued. I then used europhen (3 per cent.), terebene (30 per cent.), and paroleine. In a few weeks there was great improvement. As the expectoration was still offensive I added 2 per cent. oleum pimentæ. During last winter the bronchitis has been much better, and the asthma very slight.

IV.—Tuberculous Laryngitis.

In these cases of course local (lactic acid, scraping, etc.) and constitutional treatment must not be neglected.

Case VI.—J. S., aged 45, has had disease of the lungs for some years. For the last six months he has been hoarse, and had difficulty and pain in swallowing. There was extensive tuberculous disease of lungs and of larynx. For the last few months he has also been troubled with a painful cough, which was worse at night. After a few injections (10 to 20 per cent. menthol) he coughed much less, and was able to sleep at night. For some hours after the injection he was able to swallow without much pain. During the six months he was under treatment (September, 1894, to February, 1895) he gained in strength and weight, and the larynx was much less inflamed. This was of course partly due to the fact that he could take more nourishment and sleep better. Lactic acid was applied to the larynx. The patient has been lost sight of.

These few cases (it is needless to record any more) prove that intralaryngeal injections are most beneficial in some diseases of the larynx and bronchi, and that this method of treatment, although not new, deserves to be more widely known and adopted than is at present the case.

THE OPERATION OF THYROTOMY,

WITH A SHORT ACCOUNT OF THE CASES IN WHICH IT HAS BEEN PERFORMED AT ST. BARTHOLOMEW'S HOSPITAL DURING THE LAST FIFTEEN YEARS.

By F. de Santi, F.R.C.S.,

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Having for some long while past taken a deep interest in the operative surgery of the larynx, I have in connection therewith had occasion to carefully consider the value of the operation of thyrotomy, especially with regard to its efficacy in the treatment of malignant disease. Up till quite recently I had looked upon the operation as one that should be rarely performed, and it was not until I learnt from Mr. Butlin what excellent results he had obtained with it that I began to change my opinion as to its value.

Thanks to the kindness of my old teacher and friend Mr. Butlin, I have been able to have access at my Alma Mater, St. Bartholomew's Hospital, to the notes of all the cases of thyrotomy that have been performed there up to the present time. Moreover, Mr. Butlin has very kindly allowed me to have notes of all the private cases in which he has performed thyrotomy, so that I am able to put before this meeting a very complete series of cases.

In the *Lancet* of December, 1894, there is a most interesting paper by the distinguished President of this Section, Dr. Felix Semon, on the Results of Radical Operation for Malignant Disease of the Larynx from the Experience of Private Practice. Dr. Semon's results have been most encouraging, and his opinion with regard to the value of thyrotomy with

TABLE OF ALL MR. BUTLIN'S CASES OF THYROTOMY, ILLUSTRATING MR. DE SANTI'S PAPER.

TABLE A.—THYROTOMIES PERFORMED FOR INNOCENT DISEASE.

Case.	Occupation of Patient.	Sex.	Age.	Hospital or Private.	Part of Larynx Affected and Laryngoscopic Appearances.	Symptoms.	Nature of Growth.	Date of Operation.	Method of Operation.	Parts Removed.	Result of Operation.	Last Seen or Heard of.
1	Labourer	M.	32	H.	Size of a hazel nut left side below vocal cord, pedunculated	2 years increasing aphonia; slight dyspnœa	? Fibrous (no microscopic examination)	June 10, 1886	Tracheotomy; thyroid divided and growth removed with scissors	Growth was very firm at its attachment. (Endolaryngeal forceps had been tried before but unsuccessfully)	Uninterrupted recovery; voice returning	Seen 2 or 3 years later. No recurrence. Voice good.
2	Nil	.	5	H.	Mucous membrane thickened and inflamed	Croupy cough and dyspnœa for 6 months. Tracheotomy on admission	No growth; chronic laryngitis and dyspnœa	March 7, 1889	Thyrotomy; nothing removed	Patient could not dispense with tube	Exploratory	—
3	Same Patient	—	—	—	—	Wearing rubber tube; paroxysmal dyspnœa	—	Sept. 18, 1889	Wound in larynx enlarged; interior of larynx examined and found lined by granulations. Probe passed from tracheotomy wound through glottis and through mouth; this was followed by copious gush of blood-stained pus. An O'Dwyer's tube was inserted	With intubation tube in could breathe well through mouth. Sept. 22.—Tracheotomy wound healed. Intubation tube removed; urgent dyspnœa followed and tracheotomy was re-performed. The child wore a tube till Jan., 1891. The tube was then shortened and in Feb., 1891, left off altogether	—	Condition in 1891.—Voice much improved. Upper opening through trachea quite patent. April, 1891.—Tracheal fistula; patient breathes *per vias naturales*.
4	Restaurateur	F.	25	H.	Small pedunculated growth growing from under right true vocal cord	Hoarseness and aphonia 18 months; dyspnœa about 6 weeks	Papilloma (microscope)	Aug. 1890	Tracheotomy; Hahn's tube; division of thyroid; growth removed with scissors, and base scraped and touched with cautery	Portions of the growth had been removed frequently with endolaryngeal forceps	Excellent recovery. Discharged Aug. 28, 1890	Quite well and with excellent voice 2 or 3 years later.
5	Clergyman	M.	37	P.	Middle edge of left cord	Loss of voice	Probably leucœma of the cord	Jan. 22, 1891	Thyrotomy	Only the white patch on the cord	Rapid recovery; singing and speaking voice as good as ever	July, 1891.
6	—	M.	24	H.	Vocal cords	Loss of voice for 2 months; dyspnœa on exertion. Tracheotomy had to be performed at once	Papilloma (microscope)	Aug. 27, 1891	Under chloroform on Aug. 6; two pieces of growth were removed as big as a pea with endolaryngeal forceps. Tube out Aug. 10. Aug. 19, dyspnœa at night. Aug. 26, intubated. Aug. 27, thyrotomy	Growths removed chiefly from right vocal cord; left vocal cord was covered with sessile warts which were scraped with Volkmann's spoon	Recovery; wound healed on fourth day	Readmitted Sept. 28, 1892, with a recurrence
7	Same patient	M.	24	H.	Vocal cords covered with papillomata	Four months after thyrotomy dyspnœa, and tracheotomy had to be performed	,,	Oct. 1, 1892	Thyrotomy; tube left in	Growths removed with curette and scissors	Recovery. Patient could not do without his tracheotomy tube	Recurrence almost certain
8	—	F.	7	H.	Rima glottidis blocked by a pink warty mass	Dyspnœa; 3½ years ago laryngotomy; never able to dispense with tube since	,,	Sept 3, 1891	Thyroid split, thyroid sutured tube taken out, and only old laryngotomy wound left open	Papillomata removed from right and left vocal cords with scissors and sharp spoon	Uninterrupted recovery	Quite well and with perfect voice many months later
9	Clergyman	M.	50	P.	At and below edge of left cord	Dyspnœa; loss of voice	Papilloma	Sept. 19, 1894	Thyrotomy	Only the growth; cautery applied to place	Rapid recovery, but voice remains hoarse from lax condition of right cord	July, 1895
10	Nil	F.	30	H.	Ant. half of right vocal cord and ant. three-fourths of left covered with a growth some of which was removed with endolaryngeal forceps and microscoped	Loss of voice for 14 months	Papilloma (microscope)	May 14, 1895	Thyrotomy; Hahn's tube; dissection of growths off the cord; cauterisation of bases	Endolaryngeal operations by Mr Butlin and two other laryngeal surgeons were followed by extremely rapid and dangerous recurrence	June 29, 1895.—Web at anterior commissure	No recurrence, Sept., 1895.

TABLE B.—THYROTOMIES PERFORMED FOR MALIGNANT DISEASE.

11	Cabinet maker	M.	61	H.	Tumour, size of a walnut, concealing the left vocal cord (intrinsic)	Soreness of throat; aphonia and increasing dyspnœa	Malignant (no microscopic examination)	Aug 28, 1886	Hahn's tube	Tumour too extensive for removal	Died without wearing a rubber tube and relieved	Disease still progressing.

I. *Exploratory.*

12	Labourer	M.	55	H.	Nothing definite could be made out with laryngoscope; thyroid large and symmetrically enlarged and hard	Hoarseness for 12 months; for 4 months attacks of dyspnœa; tracheotomy before admission	Epithelioma (microscope)	Dec 9, 1892	Hahn's cannula; thyroid divided and interior scraped; tracheotomy tube reinserted	Thyroid cartilage and surrounding tissues were destroyed with the growth	Discharged Jan. 10, 1893, wearing a Hahn's tube	Disease still progressing
13	Cabman	M.	62	P.	Large swelling in interior of larynx; enlarged gland	Loss of voice, severe dyspnœa	Spheroidal-celled carcinoma H. T. B.	Sept. 5, 1894	Exploratory thyrotomy	Removal of portion of growth for examination	Relief	Died a few months later.

II. *For Removal of Disease suspected to be Malignant.*

14	Boot finisher	M.	40	H.	Severe, some loss of substance at the posterior part, the anterior part is thickened and surface eroded; the loss of substance is new since a month ago, there was then thickening and erosion of the posterior half of right vocal cord (in brine)	Hoarseness during winter for 9 years, aphonia 4 months, dyspnœa 3 weeks	? Malignant, no microscopic examination	Aug 12, 1895	Hahn's tube; thyroid split and tumour removed with scissors and the thyroid scraped	A warty growth, chiefly on under surface of right vocal cord, and as big as two peas; the growth had spread forwards in the cord and involved the anterior third of left vocal cord. Both cords were removed	Excellent recovery	—
15	Merchant, retired	M.	70	P.	Ulcerated warty red growth at commissure, and below left cord; thickening at base	Hoarseness	Papillary, apparently just changing into epithelioma H. T. B.	June 10, 1896	Thyrotomy	Anterior commissure and large part of left cord; cartilage bare	Rapid recovery; hoarse voice	Well now, July, 1896

III. *For Removal of Intrinsic Malignant Disease.*

16*	Banker	M.	61	P.	Fore part of left vocal cord	Hoarseness	Epithelioma H. T. B.	June 24, 1880	Thyrotomy	Left half of larynx and whole of right cord, the under aspect of which was diseased	Good recovery; good but hoarse voice	Recurrence; tracheotomy June 28, 1887; died Aug. 28, 1888
17†	Labourer	M.	60	H.	Growth partly covered with pus, on left true vocal cord; left vocal cord fixed and immobile	History of dyspnœa for apparently only 3 days; tracheotomy performed at once	Epithelioma H. T. B.	July 19 1888	Thyrotomy; Hahn's tube; parts removed with scissors and Volkmann's spoon	Growth involved true and false vocal cords on left side; removal of parts on left side; thyroid scraped	Went on uninterruptedly well, and left the hospital Aug. 16, 1888, with a fairly strong and clear voice	Well more than 3 years later.
18‡	Navvy	M.	47	H.	A warty growth, about the size of a pea, in the angle of the cords below the epiglottis	Aphonia for 14 months; increasing dyspnœa for 7 months	Epithelioma H. T. B.	Nov. 17, 1888	Hahn's tube; thyrotomy; growth cut away with scissors and a sharp spoon	Growth chiefly left side of larynx below the cords	Discharged Feb. 11, 1889	Well more than 3 years later.
19§	Machine-superintendent of cement	M.	50	P.	Commissure and anterior part of cords	Aphonia	Epithelioma H. T. B.	May 16, 1889	Thyrotomy	Anterior part of both cords and portion of angle of thyroid cartilage	Recovery	Well for 5 years. Lately dead of internal disease of uncertain nature.
20	Cook	M.	60	H.	Carcinomatous mass in larynx, began on left vocal cord	Two years difficulty in speaking; 3 months aphonia; bad attack of dyspnœa before admission	Epithelioma (microscope)	June 5, 1889	Hahn's tube; division of thyroid and cricoid; disease removed with scissors and sharp spoon	Both sides of the larynx occupied by a fungating mass	Death; patient died on June 14 of pyæmia	*Post mortem.*—Deep suppuration in the muscles of the neck & abscesses in the lungs; no secondary visceral growths.
21	Cab-driver	M.	46	H.	A small growth on and (?) ulceration of the left vocal cord, which is quite fixed	Hoarseness for 6 months; of late bad dyspnœa	Epithelioma (microscope)	June 13, 1889	Thyroid and cricoid split; growth removed with scissors and Volkmann's spoon, and parts touched with thermo-cautery	Left vocal cord, arytenoid, and arytenoepiglottidean fold, also part of right vocal cord	Recovered. Weeks later, owing to dyspnœa, the tracheotomy wound had to be reopened	By July 25 the growth had extended through the tracheotomy wound, and patient died Sept. 15, 1889. Recurrence.
22	Navvy	M.	40	P.	Rounded tumour in situation of right ventricular band	Hoarseness; attacks of dyspnœa	Spheroidal-celled carcinoma H. T. B.	Sept. 12, 1891	Thyrotomy	Tumour, large and rounded, shelled out, cartilage laid bare	Rapid recovery	Recurrence.
23	Same patient	—	—	—	Recurrence at anterior commissure and glands of neck enlarged	—	—	June 12, 1892	"	Tumour removed freely	"	Died some months later.
24	Merchant	M.	56	P.	Ulcerated warty growth of middle of right vocal cord	Hoarseness	Epithelioma H. T. B.	May 24, 1894	"	Complete removal of cord down to cartilage; cartilage scraped bare	Rapid recovery, hoarse voice	Well a year later, July, 1895.

* Clin. Trans., xx, 58, 1887. † Clin. Trans., xxii, 93, 1889. ‡ Clin. Trans., xxii, 93, 1889. § Dr. Semon, Lancet, Dec., 1894.

TABLE OF MR. BUTLIN'S CASES OF THYROTOMY—*continued.*

TABLE E.—THYROTOMIES PERFORMED FOR MALIGNANT DISEASE—*continued.*

Case.	Occupation of Patient.	Sex.	Age.	Hospital or Private	Part of Larynx Affected and Laryngoscopic Appearances.	Symptoms.	Nature of Growth.	Date of Operation.	Method of Operation.	Parts Removed.	Result of Operation.	Last Seen or Heard of.
					III. *For Removal of Intrinsic Malignant Disease—continued.*							
25	Engineer	M.	40	P.	Ulcerated warty growth of left cord and surrounding parts, reaching back to arytenoid	Hoarseness	Epithelioma H. T. B.	July 2, 1894	Thyrotomy.	Removal of soft parts of left half of larynx and of arytenoid	Recovery	Rapid recurrence; tracheotomy Sept. 4, 1894.
					IV. *For Removal of Extrinsic Malignant Disease.*							
26	Light-erman	M.	39	H.	A tumour extending into the larynx from the right ary-epiglottidean fold	Hoarseness for 2 months; haemorrhage; dyspnœa; tracheotomy at Gloucester Infirmary	Columnar-celled epithelioma (Mr. Bowlby)	Aug. 8, 1887	Thyrotomy; incision to base of hyoid bone, and laterally along upper border of thyroid on right side	Tumour, which was of the size of a small Tangerine orange, was gouged out with the finger	Went out wearing a rubber tube; voice improved	Recurrence; see next case.
27	Same patient	—	—	H.	Readmitted 2 years later with a recurrence, a large tumour being seen attached to right aryteno-epiglottidean fold	Difficulty in swallowing	"	July 27, 1889	The same as previously	Soft parts on inner side of right half of thyroid and right ary-epiglottidean fold	Uninterrupted recovery; went back to work Aug. 21, wearing an india-rubber tube	About 1891 came to the Gloucester Infirmary with "recurrence in the glands of the neck. An effort was made to remove them, which failed, and he died shortly after."
28	Merchant	M.	62	P.	Tumour, ulcerated, of right ary-epiglottidean fold	Aphonia	Epithelioma H. T. B.	June 9, 1890	Thyrotomy	Soft parts at back and right side of larynx removed	Death, June 11, from septic pneumonia	—
					TABLE C.—INFRA-HYOID LARYNGOTOMY FOR EXTRINSIC MALIGNANT DISEASE.							
29	General	M.	59	P.	Small warty growth of left ary-epiglottidean fold	Pain, chiefly in swallowing	Probably epithelioma	June 28, 1893	Infra-hyoid Laryngotomy	Disease removed with galvano-cautery loop	Died in 9 days from acute mania	—

† Dr. Semon, *Lancet*, December, 1894.

subsequent removal of the diseased area as a curative operation in malignant disease of the larynx has undergone a great change, he being now as greatly in favour of its performance in suitable cases as before he was against it.

I am decidedly of opinion that the much better results that have been obtained of late years are due to some most important innovations both in the performance of the actual operation and the after-treatment. For these improvements we are indebted to Mr. Butlin. It was, therefore, with considerable interest that I investigated the cases in which thyrotomy had been performed at St. Bartholomew's Hospital, though my investigations were not limited to its application to malignant disease only.

Following the general lines of Dr. Semon's able paper I have tabulated all the cases that have been done by Mr. Butlin both in his hospital and private practice.

At St. Bartholomew's Hospital thyrotomy was first performed by Mr. Butlin in 1886, and since then he has performed the operation 17 times.
Of these hospital cases 7 were performed for intrinsic malignant disease; 2 were performed for extrinsic malignant disease, one of the latter being a secondary thyrotomy for a recurrence.
Total therefore for malignant disease, 9 thyrotomies on 8 patients.
For innocent tumours 6 thyrotomies on 5 patients.
For other causes (exploratory, etc.), 2 thyrotomies on 1 patient.
In private practice Mr. Butlin has performed the operation 11 times.
Of these 7 were for intrinsic malignant disease, 1 being exploratory and 1 a second thyrotomy for recurrence, therefore 7 thyrotomies on 6 patients, 2 for extrinsic malignant disease and disease of uncertain nature, 2 for innocent tumours.

Total of all the cases in which Mr. Butlin has operated:

For intrinsic malignant disease,	14	thyrotomies on	12	patients.
For extrinsic " "	4	" "	3	"
For innocent tumours,	8	" "	7	"
For other causes,	3	" "	1	"
Altogether, therefore,	28	" "	24	"

The time at my disposal does not permit me to describe these cases individually, and therefore I have had them all printed in a tabular form for distribution among the members attending this Section. The tables give in each individual case the occupation, sex, and age of the patient, whether hospital or private case, part of the larynx affected, symptoms, nature of growth, date of operation, operator, method of operation, parts removed, result of operation, and condition when last seen or heard of.

The malignant tumours are divided into those of intrinsic origin—that is, vocal cords, ventricles of Morgagni, ventricular bands, and the subglottic cavity within the borders of the larynx proper—and those of extrinsic origin, growing from the epiglottis, posterior surface of the cricoid, aryteno-epiglottidean folds, and intra-arytenoid fold.

I now pass to a brief description of the various steps in the performance of the operation, and the after-treatment. Finally I shall briefly summarise the results obtained.

The Operation of Thyrotomy.—The patient having been placed in a good light, chloroform is administered—ether, if possible, should be avoided, as it excites the secretion of much mucus and saliva, which obscure the parts to

be removed—and an incision is made from the upper border of the thyroid cartilage, accurately in the middle line, down to about 1½ to 2 inches below the cricoid cartilage. The trachea is then exposed and opened and a Hahn's compressed sponge cannula inserted. Great care, as Dr. Semon has pointed out, must be taken to render the sponge thoroughly aseptic before it is used.

An interval of ten to eleven minutes must now be allowed to permit of the expansion of the compressed sponge, the object of which is to occlude the lower air passages and prevent the entry of any blood therein when the larynx is opened. The parts over the thyroid cartilage are then carefully cut through, keeping well to the middle line until the cartilage is properly exposed; all bleeding having been controlled, the thyroid cartilage is divided mesially with bone forceps or a small saw, and the two alæ are firmly held aside with suitable retractors. Should there be an excess of mucus and saliva obscuring the parts in the interior of the larynx, an aseptic sponge with a silk ligature attached to it may be inserted through the wound into the lower part of the pharynx.

The interior of the larynx must now be painted with a 5 per cent. solution of cocaine, the effect of which is to cause contraction of the small vessels and lessening of any hæmorrhage, and also a diminution of the sensibility of the parts—a very important point if the patient is not deeply under the influence of the anæsthetic used.

Two elliptical incisions carried down to the perichondrium and surrounding the diseased tissues are now made, care being taken to go as wide of the disease as possible.

The growth, if not too friable, is now seized with a pair of fine-toothed forceps, and removed with curved sharp-pointed scissors, the mucous membrane lining the inside of the thyroid and included in the incisions being removed as well. The base is then thoroughly scraped with a Volkmann's spoon, and, all hæmorrhage being arrested, the interior of the wound is dusted with iodoform, and the Hahn's cannula removed at once.

Up to 1890 it was Mr. Butlin's practice to leave the sponge cannula in for the first twenty-four or forty-eight hours in case any secondary hæmorrhage occurred, and the interior of the larynx was packed with strips of iodoform gauze; after the Hahn's tube was removed an ordinary T tube was inserted.

There is no doubt that the compressed sponge surrounding Hahn's tube has in some of the cases of thyrotomy where it has been retained from twenty-four to forty-eight hours acted as a source of septic infection, and, as in the practice of both Mr. Butlin and Dr. Semon, it has been removed as soon as the operation has been completed, and with the best of results, so probably a source of infection can in the future be absolutely done away with by following out their plan. Again, the strips of iodoform gauze packed into the larynx in the earlier operations acted as irritants to that organ, becoming soaked in mucus and saliva, and in some cases getting displaced, hanging down in the trachea and acting as foreign bodies.

The Hahn's cannula should, therefore, be removed at once, the interior of the larynx be well dusted with iodoform, and the whole external wound be left open and covered with a piece of iodoform gauze, changed as often as necessary.

In cases of simple tumours such as papillomata, the *technique* differs somewhat. When the interior of the larynx is exposed, the neoplasms are carefully removed with scissors, and their bases touched with the galvano-cautery. Great care should be taken to avoid damaging the healthy parts, and scraping should be avoided. The thyroid cartilage is brought together, the greatest pains being taken to secure accurate adaptation of the alæ, which are fixed with silk or silver sutures. The upper part of the wound is sutured and the lower part left open for drainage.

After-treatment.—The greatest importance attaches to this; to the improvements introduced by Mr. Butlin it is hoped that some of the better results may be attributed. The patient must be kept on his side, that side being lowermost which corresponds to the half of the larynx operated on. The head must be low, one pillow only being allowed. This position diminishes the chances of discharges passing down into the bronchi.

Mr. Butlin feeds his patients for the first day or two principally on nutrient enemata. On the day after the operation an attempt may be made to give fluids by the mouth; water is tried first, the patient being made to sit up and lean well forward; if the water gets into the larynx, it at once runs out through the wound; but should it be successfully swallowed, beef-tea, milk, etc., is given. Feeding by nasal or œsophageal tubes is thus avoided.

The wound must be carefully dusted with iodoform daily, and Mr. Butlin has pointed out that during the act of swallowing, the two lips of the wound into the larynx separate sufficiently to permit of the introduction of the nozzle of an insufflator between them. As a rule, there is but little constitutional disturbance, and the wound rapidly heals by granulation.

In conclusion, gentlemen, I think all that is necessary is to give a brief summary of the actual results obtained by the operation. Of the thyrotomies performed for intrinsic malignant disease, amounting to 14 on 13 patients, there was only 1 death from the operation itself. In 3 cases the disease was too extensive for removal; in 5 cases the disease recurred, 1 patient dying three months and 2 two years after the operation. The fourth case is still under observation. One of these patients was subjected to a second operation, which was again followed by recurrence. In 2 cases the patients were quite well more than three years afterwards. In 1 case there was no recurrence whatever, the patient dying more than five years afterwards of internal disease of uncertain origin. In 1 case the patient was quite well a year afterwards (May, 1895). One operation was performed for disease supposed to be malignant; this was in 1893; the patient is quite well at present.

Of the thyrotomies performed for extrinsic malignant disease, amounting to 3 on 2 patients, 1 died as the result of the operation. In the other case recurrence took place, and a second thyrotomy was performed two years subsequent to the first operation. Within a period of another two years a recurrence took place in the glands of the neck, and death followed an attempt to remove the glands.

The thyrotomies performed for innocent tumours—exploratory purposes, that is—give a uniformly good result, there being not a single death, and the operation having completely cured 6 patients out of 8. Of these latter 2, 1 was a papilloma that most probably recurred, the other a case still under observation, where a small papillomatous nodule still remains. In 1 case the voice remains permanently impaired.

A DISCUSSION ON THE INDICATIONS FOR EARLY RADICAL TREATMENT OF MALIGNANT DISEASE OF THE LARYNX.

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When your distinguished countryman Watson first startled the scientific world by successfully removing a larynx, he, as a pioneer, lacked the aid which to-day should be afforded to us by the records of the work accomplished since his time. Unfortunately these records are far from representing the actual number of cases operated upon, and in many instances are too fragmentary and imperfect to be of any real value.

With the accumulation of satisfactory material now at our disposal, however, the time has fairly arrived in which we should learn, if possible, what good has been accomplished, on the one hand, by the radical removal of malignant disease of the larynx; and, on the other, under what conditions and by what means the best results have been attained. That laryngectomy is a resource of unquestionable prospective value has been abundantly suggested by its latest published records, in spite of the evil name which it at one time acquired, and which until very lately it has held.

In dealing with the question under discussion, I have approached them absolutely unbiassed by any theory, and with no other motive than an earnest desire to arrive at the truth both by emphasising the successes thus far gained and by clearly indicating the errors and the deficiencies which must be removed before the matter can be reduced to a

reliable scientific basis. That need of better information exists is unfortunately true, partly on account of the fact that but comparatively few cases have come under the personal observation of any one observer, and partly because some of the unsolved problems to be met are among the most elusive of scientific mysteries.

Reviewing the history of the subject, we are at once confronted with the fact that any operation for the relief of malignant growth of the larynx, to promise the best results, must be performed at the earliest possible period in the history of the disease, and in a patient in whom the conditions favourable to operation are to a reasonable degree present. In view of this it follows that accurate appreciation of the reasons for or against operation in a given case is an all-important factor in its wise and successful management.

Briefly stated, the indications for the early extirpation of laryngeal cancer will depend upon the prompt recognition of danger; the nature, position, and progress of the neoplasm; the personal characteristics of the patient: the special fitness of the surgeon and of his surroundings for the work, and the impossibility of relief by less heroic means.

Undoubtedly one of the most important considerations in connection with a malignant growth will be its histological character. Thus sarcoma shows less tendency to recurrence than does epithelioma, while the possible success to be attained from the employment of serumtherapy in its treatment may some day remove it from the sphere of surgery altogether. Adenoma, although possessed of well-known liability to epitheliomatous degeneration, gives much better results from early operation than does carcinoma. Of the various forms of epithelioma, that which originates as a well-localised, slow growing, papillomatous-like tumour may be extirpated more thoroughly and with less damage to the parts than the variety characterized by diffuse infiltration. Several of the most successful laryngectomies on record have been done in cases either of doubtful diagnosis or of distinctly not carcinomatous character.

The location of the growth is another element likely to affect the prognosis. It is held by many surgeons that in cases where the disease is extralaryngeal, or where there is glandular involvement, operation is rarely admissible. Occurring within the larynx, its restriction to one side of the organ, to the superficial structures or to a comparatively limited area, must, of course, increase the possibilities of successful operation. Involvement of the œsophagus is one of the most unfavourable complications, on account of the difficulties in the way of recovery and the necessity for permanent artificial feeding.

Again, the activity of growth shown by the neoplasm may afford a slight degree of suggestive evidence as to its future progress, and, although far from being infallible, may foreshadow to some extent the probabilities of tardy or rapid recurrence.

Having arrived, in the study of the nature and situation of a given growth, at conclusions favourable to its radical extirpation, the next question to be settled will be the personal characteristics of the patient himself. Account must be taken of his age, vitality, and general physical condition; of his temperament, his intelligence, and finally of his station and surroundings in life.

Age, absolute or relative, will shorten the natural expectation of life, and thus detract from the value of even a successful operation. It is less desirable to inflict such an ordeal as laryngectomy upon one whose days are already numbered than upon one to whom a fortunate operation may bring years of usefulness.

Again, upon the assured vitality of the patient will depend not only his immediate recovery, but the success with which he will ultimately rise above the physical depression incident to such a severe surgical measure. It would be instructive to know in how many of the cases which have died without recurrence within a few years after laryngectomy the fatal issue has been largely due to the general effect upon the system of the operation.

Perfection of the physical condition in general and of certain organs in particular will add greatly to the prospect of success. Thus, on the contrary, certain impaired conditions of the heart or lungs will increase the liability to pneumonia, and almost necessarily fatal complications; bronchial irritation of any kind, accompanied by cough and expectoration, will seriously affect the patient's comfort, and dangerously interfere with the successful progress of the cervical wound; gastric disturbance must also be taken into account, as will readily be believed by anyone who has seen the effect upon a recently operated case of a single attack of emesis, or of continued indigestion.

There are at least four cases on record in which the subject of a so-called successful laryngectomy has committed suicide; nor can we wonder that the ordeal of the operation and of the period of convalescence, the physical deformity incident to it, the impairment of the power of speech, the social ostracism of the higher order of man, and the physical incapacity of the lower, should call for rare equanimity and almost superhuman moral courage on the part of the one obliged to face such a situation. The temperament of the patient therefore may easily become the determining factor in the success or failure of the result, while upon this, and upon his surroundings, and the intellectual ability to adapt himself in the most satisfactory manner to the latter, will depend the toleration with which he will meet his life. Both the instinct and training of the surgeon lead him to heroic efforts in the preservation of life. It is a grave question, however, and one not to be lightly dismissed, whether some lives, as influenced by the results of laryngectomy, have been worth the living after all. Already several patients have taken the matter into their own hands, and have decided in the negative.

Very few men in public life could have shown the fortitude of that celebrated patient of our chairman, whose history subsequent to operation is such a brilliant tribute to the wisdom of the operator and to the moral courage of the man himself. Hickey, on the other hand, a triumph in every way of surgical ingenuity and success, is a helpless inmate of the almshouse. Unquestionably, laryngectomy should not be performed without a full understanding on the part of the patient of the nature of the operation and of its results.

The indications for the early radical treatment of malignant disease of the larynx, as far as the growth is concerned, are therefore:

1. A growth of undoubted malignancy.
2. Located within the larynx.
3. Favourably situated for complete removal with the minimum of injury to the surrounding parts, and
4. With the best outlook as to the possibility of non-recurrence.

Concerning the patient the indications are:

1. That he should not be too old.
2. That he should be possessed of good vitality.
3. That he should suffer from no physical defect likely to complicate recovery or seriously annoy him afterwards.
4. That he be of a cheerful, courageous temperament.
5. That his intelligence be fair and his surroundings such as to make it possible for him to exist with moderate comfort after operation.

That these specifications should seem exacting is not denied. They are not unreasonable, however, as proved by the general experience of the past.

Undoubtedly, if radical operation is justifiable in these cases, the sooner the growth is removed the better. This being the fact, the early recognition and diagnosis of it is of paramount importance. Indeed, it is the veritable key to the whole situation. Just here, however, we are confronted with a difficulty in many cases hitherto insurmountable. Either the disease has been unrecognised by the general practitioner until the favourable time for operation has passed, or else the difficulties in the way of early diagnosis have been so great that not even the skilled specialist has been able to solve them.

Sarcoma, and even adenoma, may sometimes be diagnosed with comparatively little trouble. The difficulties in the way of the early recognition of epithelioma, however, have formed the basis of historic controversies and of an extensive literature. Summarised, the early diagnostic signs which possess the slightest value are few in number, and often both unreliable in character, and extremely hard of detection. Thus the neoplasm may appear in one of no fewer than three different forms:

1. The distinctly localised and somewhat superficial papillomatous-like excrescence.
2. The deep fairly localised neoplasm with irregular or nodular surface.
3. The variety beginning indefinitely, and extending for some time in the form of a general diffuse infiltration.

In the papillomatous form the growth manifests itself somewhat superficially, and its characteristically tumour-like appearance makes it at once an object conspicuously striking to the eye. But even with this apparently helpful feature, how often has early diagnosis been impossible. Between it and ordinary papilloma in many cases the eye cannot decide. The statement that the appearances at the base of the growth will show marked peculiarities in the experience of the writer has often been disproved. True, the tendency to advance from before backwards in the direction of the larger muscular masses, the occurrence of muscular infiltration, with more or less fixation of the affected side, the presence of lancinating pain, all these may be strongly suggestive to the practised observer of malignant disease. But these signs, unfortunately, have to do with the extension of the disease, not with the localised wart which has been early discovered, and the true nature of which it is of such vital importance to determine. With deepest respect for the microscopist and his work, how often has that trusted resource not only failed to demonstrate the true condition, but by its misleading testimony has caused such delay as to have effectually sealed the fatal verdict.

In the other forms of epithelioma in which the focus of disease appears to be more deeply seated than in the above, the impossibility in many cases of removing a specimen for early examination at once renders the microscope of little or no use.

Transillumination, as suggested by Voltolini, has not proved of practical aid.

Again, as has been shown by the speaker, malignant disease may not only simulate other conditions, and in turn be simulated by them, but it may even coexist with them, so that the demonstration of the tubercle bacillus or the presence of typical specific scars may by no means exclude the diagnosis of cancer.

Failure on the part of the general practitioner to realise the existence of a malignant growth in the larynx until long after the favourable period for operation has passed is a matter of common occurrence. Case after case is presented to the specialist in which the destructive progress of the disease has left no hope for the patient beyond the temporary relief of a tracheotomy. While it may be by no means certain that the result of the case would have been materially different had it originally fallen into other hands, yet it is unquestionably true that in cases possibly amenable to the only known method of relief such delay is fatal.

In view of the inability of the expert in this direction, however, the general practitioner must not be exposed to undue censure. The difficulty lies in the fact that the condition is rare and unfamiliar to him, and that he is, therefore, unable either to recognise or to appreciate it. If it be true that the specialist is in need of more reliable diagnostic signs than he now possesses, it is also the case that the practitioner should have a better knowledge of the means for examining the larynx, and of the recognised symptoms of possible danger. Unless he is to that extent qualified, it is surely wrong that he should undertake the slightest responsibility in so serious a matter when, by referring to the nearest dispensary, the patient could have been warned of his danger. In the case of either practitioner or expert, the present state of our knowledge of the diagnosis of cancer of the larynx is such as to make additional light upon the subject imperatively necessary.

Failing in other diagnostic means, the practical resource at present at our disposal is thyrotomy. Where the diagnosis cannot be promptly made by endolaryngeal methods, it is maintained that the best course is an exploratory thyrotomy, immediate examination of the growth with the freezing microtome, and then partial or complete excision, according to the necessities of the case.

The objections to this are the infliction of a somewhat severe measure upon a possibly benign case and the chance that the testimony of the microscope may prove unreliable after all. Fortunately, improved methods have made thyrotomy a much less formidable operation than it was formerly considered. But, even so, its employment should be entrusted to conservative hands, and, above all things, operation upon non-malignant cases avoided. Far better that even this should happen, however, than that the unfortunate error of extirpating a larynx unnecessarily should be repeated. There is no question that in most cases thyrotomy will generally be useful in confirming diagnosis already fairly well established in expert hands. To apply it indiscriminately would be highly objectionable.

Clearly, what is needed is some reliable test by which, in spite of uncertain local appearances and in the presence of general complicating conditions, the true nature or tendency of the growth may be established from the earliest possible period; and the chances for successful treatment thereby proportionately increased. Just what this will be it is impossible to say, but as tuberculin has given us a guide to the diagnosis of tuberculosis, may it not be possible that the future may see the development of some analogous method as applied to the demonstration of malignant disease?

Since prompt diagnosis is a matter of such urgent necessity, and at the same time of such acknowledged difficulty, the importance of securing for the patient the best possible advice cannot be too strongly urged.

To summarise again: Granting that radical operation is justifiable, the earlier it is done the better, and to that end it is all-important that there should be a more widespread diagnostic knowledge of the subject, and that the facilities for early diagnosis should be greatly improved.

Before unreservedly advocating capital operation, it would be well to eliminate the possibility of aid by other means, admitting that in the present popularity of the former resource these methods have been allowed to fall into undeserved neglect. Thus, the treatment by local applications of various non-malignant growths of a more or less vascular nature and of small size has often proved useful. In two cases of extensive papilloma lately seen by the writer, a complete cure was effected by repeated local application to the larynx of a spray of alcohol as suggested by Birkett, of Montreal. The persistent use of astringents will visibly retard the progress of certain neoplasms, while, with others, the application of lactic or chromic acid has resulted in marked benefit. Unfortunately, in a genuine case of epithelioma such results are not obtained. If it should be proved by the study of a larger number of cases, however, that the alcohol treatment is curative in ordinary papilloma and without effect in malignant disease, a diagnostic point of some value would have been established.

Endolaryngeal operation, much as it may have fallen into disrepute through the advocacy of other methods, has at least this to be said in its favour, that the patient's life is neither sacrificed by an unsuccessful operation, nor his future made wretched by the results of a successful one. It may be questioned whether certain forms of growth cannot be more safely treated in this way than any other. As to epithelioma, however, the outlook seems absolutely bad, and while cases have been known in which it has succeeded, the testimony of the last few years is against it.

As to constitutional treatment, there is probably not a case on record where a true laryngeal carcinoma has been cured by medicine.

The question of the value of serumtherapy, however hopeful in the case of sarcoma, for carcinoma has thus far been answered in the negative. If the inoculations were of no greater value, however, than to demonstrate, after the manner of tuberculin, the presence of the specific disease, an important diagnostic point would have been gained.

Whatever may have been the case in the past, in the light of our present knowledge the indications are pretty clearly in favour of the operative treatment of epithelioma of the larynx.

Operation.

Having studied thus far the indications for the early surgical treatment of malignant disease of the larynx, it next becomes necessary to consider the questions connected with the technical part of the subject—namely, the operations for the removal of the disease and the care of the patient during recovery.

As to the operative procedures in general, it may be said that while they are undoubtedly much better than they were fifteen years ago, the most of them are yet by no means as perfect as is desirable. As far as freedom from hæmorrhage and non-interference with respiration during operation are concerned, a high degree of perfection has been reached. Measures for avoiding pneumonia and certain insidious forms of sepsis, especially those affecting the nerve supply of the heart, are still very imperfect and unreliable, and until they are furnished the statistics of operation must continue to be unsatisfactory. Eliminating the above accidents, on the other hand, the operation of laryngectomy would be reduced to what might be called a fair basis of practical usefulness.

In reviewing the literature of laryngectomy several interesting facts present themselves. Apparently it has not always been the best general surgeons who have obtained the most favourable results in this department. On the other hand, some of the most brilliant work on record has been done by men known principally as laryngologists rather than as general operators. Several of these gentlemen, let it be said, have operated in connection with general surgeons of well-known ability. No more favourable combination could possibly be made. Again, many surgeons of high repute as general operators have signally failed. Were the true history of their work to be known, it would often appear that failure has been due to lack of appreciation of the peculiar needs of these cases and of the special skill and knowledge required to manage them. To conduct a laryngectomy as one would manage an amputation is to lose the case. Laryngectomy has sometimes been undertaken by men unskilled in general surgery, without proper aid and in the midst of improper surroundings, with results, of course, of the worst.

Another requisite for the successful management of these cases is an accurate knowledge of the physiology of the throat. This is not only valuable during the time of operation, but absolutely indispensable to the correct understanding of many of the various accidents, direct and reflex, which may occur during early convalescence. To secure the best success, therefore, the operator should first of all be a surgeon thoroughly practised in all that contributes to make a good operator. He should have had special training in the surgery of the neck and in the physiology as well as the anatomy of the laryngeal region. He should be a master of antiseptic methods and of good judgment in the after-care of the case. Finally, he should have at his disposal the resources of a perfectly equipped and thoroughly well managed modern hospital of the best class. As the dangers, not only of operation, but of the first days after operation, are of conceded importance, it is necessary that this part of the case be managed with extreme care. Many a patient has died of preventable accidents whose life would have been spared if he had had the constant care of a highly-skilled watcher. As has been eloquently insisted by Solis Cohen, such a case should never be entrusted to the *interne* nor to the assistant without experience in such matters, but should have within reach an attendant only less competent than the surgeon himself, qualified to appreciate the special necessities of the patient, and to promptly meet any emergency that might arise. Obvious as this suggestion would seem to be, the necessity for dwelling upon it will be apparent when we find in how many cases death has been due to accidents in feeding, to improper care of the wound, etc. It cannot be insisted too urgently that carcinomatous cases requiring laryngectomy are desperate at the best, both as to immediate and as to ultimate results, and that, with our present limited knowledge of the subject, no amount of caution, however great, will avail in preventing a high percentage of failures. With the sources of danger so numerous, so constant, and so subtle, it is impossible that too great vigilance, foresight, or experience be brought to bear against them, or that the urgency of this demand be overstated.

Unfortunately it must be admitted that laryngectomy at present appears to be our only resource, and unsatisfactory as its results may often have been we are obliged, for the want of something better, at least to regard it with respect. It is not only wrong to the patient to diminish by the slightest degree his prospects, but an even greater injustice to the operation itself to so perform it or so to care for the patient afterwards as to throw discredit upon it, thus hindering its progress and depriving other sufferers of its possible benefits. Improved management after operation, as has been said, requires first of all the constant attendance upon the patient of assistants thoroughly qualified by experience, as well as by precept, to skilfully care for the case. It is not by any means enough that the watcher should be ordinarily qualified in the care of severe surgical cases. Nothing short of special fitness in the department of this particular class of cases will yield the best results. Next, it demands that the possibilities of certain accidents be recognised and their causes carefully guarded against. Among these the dangers from the entrance of foreign matters into the air passages, and the mishaps due to carelessness in feeding, are among the most common and dangerous. For the prevention of the latter it would seem that the means at hand, namely, rectal alimentation, the œsophageal tube, and Wolfenden's method, were adequate if properly used. It has undoubtedly been the case that the œsophageal tube, when entrusted to inexperienced hands, has more than once resulted in disaster. This part of the management, as proved by the records of accidents, cannot be too carefully conducted.

Another dangerous and preventable accident is the poisoning of the patient by the antiseptic dressing. Within the personal experience of the writer, this has occurred in no fewer than four cases; while the whole number, recorded and unrecorded, is very considerable, including several which have been attended with a fatal result. As has often been pointed out, the magnitude and the location of the wound render absorption particularly easy. In this class of accidents iodoform has been the principal offender. That it is not the only one is shown, among other examples, by the very interesting case treated by Dr. Roswell Park of New York, who, "remembering the symptoms of iodoform poisoning which had been observed in a former laryngectomy, substituted oxide of zinc gauze instead of iodoform gauze for packing the wound. The patient did well until the second day, when she began to suffer from increasing dyspnœa and cyanosis which, in spite of every effort to relieve it, persistently increased, causing death in a few hours. Necropsy showed that the interior of the small bronchial tubes was coated with mucus whitened with the oxide of zinc, and which had been made so tenacious thereby that death seemed to be due to the impossibility of oxidisation on account of the obstructing film."

Between the ever-present and persistent danger of sepsis, on the one hand, and the accidents alluded to above the necessity for skilled and experienced care is again strongly emphasised. As the prevention of sepsis will always be one of the most serious considerations in these cases, it is highly desirable that some disinfectant be found which shall combine the best antiseptic with the least toxic properties.

The indications for laryngectomy itself, as far as the *technique* of the operation is concerned, must depend more or less upon the possibilities present in each given case. Opinions differ as to whether the better results may be obtained by partial or by complete removal of the larynx, and the results of operation certainly tend to leave the question somewhat in doubt. While it would seem *a priori* that the less removed the better, the fact still remains that in some of the most successful cases on record the entire larynx has been extirpated. The arguments for and against the various forms of operation I shall not attempt to discuss.

Referring to the latest successes in this department, we have, on the one hand, the remarkable results of partial removal obtained by Semon; and, on the other, not to mention the successful work of earlier operators, the cases of complete removal done by Solis Cohen, Schmidt, and Swain. The method pursued in the last-named cases, and illustrated in the patient herewith presented, is certainly one which commends itself highly on account of its several decided advantages over the ordinary plan of operation. These advantages, as explained by Swain, have been well shown in the case before you. Briefly stated, they may be described as follows:

1. The danger to life from inspiration pneumonia is greatly lessened owing to the shutting off of the mouth from the trachea.

2. Swallowing is accomplished with great ease and as freely as usual.

3. In at least three cases thus operated upon the power of phonation has been acquired, with a voice fully as satisfactory as that produced by any artificial appliance, and that without either the inconvenience and discomfort of an artificial larynx, or the danger to the adjacent parts from the irritation of its presence.

4. The comfort of the patient is greatly increased, and the disfigurement of the other operation and of the wearing of the artificial larynx largely done away with. It seems entirely probable that this method will prove to be most satisfactory of any yet proposed, and it is to be hoped that it may be given a sufficient trial to prove whether or not these cases have been but the result of a happy accident rather than the first illustrations of a definite rule.

The case of Hickey suggests what must have been true in other instances in which life has been unusually prolonged, namely, that doubt as to the actual fact that carcinoma has originally existed must always be present where its characteristic appearances have not been clearly proved. Heretofore recurrence has been so certain that, without indisputable proof to the contrary, permanent cure has always excited the suspicion that the case must have been other than one of epithelioma. Indeed, even in the best of hands the tendency to recurrence has seemed an impassable barrier to genuine success, and case after case in which the best possible surgical results have been attained has sooner or late succumbed to it. The question of recurrence is by no means as hopeful as is that of successful *technique*. The latter has evidently accounted for Bull's remarkable series of recoveries. The record of immunity from recurrence given in the lately published statistics of Semon is certainly the most brilliant in the history of this subject, reviving as it does a strong hope for the ultimate success of a class of operations which from past statistics have been in no little danger of falling into disrepute.

Although there may not seem to be many new suggestions in the statements herein made, I have brought them forward for the purpose of placing them prominently before you, and of leading up to the main proposition of the discussion. In making them I have sought to call attention to the importance of bringing to the case the highest diagnostic skill. The necessity in dealing with it for the exercise of peculiar special ability on the one hand, and eminent surgical experience on the other; the urgent importance of surrounding the patient with every possible means of aid, and of eliminating as far as possible every element of danger.

While fully appreciating the good work already done, and recognising the hopeful outlook for the future, I have dwelt with all possible emphasis upon the difficulties, uncertainties, and dangers of the present situation. This I have done for the purpose of insisting upon the urgent gravity of the subject, and of distinctly discouraging the class of effort which has too often been brought to bear upon these cases. Personally I have never performed a laryngectomy, otherwise it would be impossible for me to advance the proposition which I am about to offer. Let me beg you not to misunderstand the spirit in which it is given, and to receive it with the largest possible share of humane impulse and of generous breadth of view.

The situation is one of the most peculiar in the whole realm of our art. We are fairly groping for light upon the subject of one of the darkest and direst of human ills. The matter has reached a point which places it almost beyond the pale of individual ambition, for these patients are usually too poor to appeal to the acquisitive man, and the operation has been so often performed that to lose a patient or two for the sake of having done it has long since ceased to bring anything but discredit. The majority of us can well afford, therefore, to exercise a fair amount of self-denial if by so doing the general good may be promoted. I am strongly of the opinion that for a time both the welfare of patients operated upon as well as the interests of science demand that the indiscriminate performance of capital operations upon the larynx should cease. In most great centres there are individual surgeons or groups of operators who are especially well fitted, both as to personal qualifications and hospital facilities, for the successful performance of this work, as has been proved in many cases by the records which they have already made. Let such men surround themselves with the proper assistants, let them systematise their efforts, and use all diligence in the perfecting of appliances and methods and in the study of the cases under them. Let them keep careful and accurate record of everything pertaining to the history of their work. Then resign to them temporarily the care of as many cases of laryngeal cancer as possible. When a sufficient amount of material should have been collected let them place the latter upon a substantial scientific basis, or as one advance after another had been made let them give to the profession in general the results. Then we would soon learn whether the radical extirpation of laryngeal epithelioma is on the whole unjustifiable, or whether—as we have the best reasons for hoping—it has already proved a substantial success. Already the example has been set in this place. It would be fortunate indeed if it could be followed, and with as gratifying results, in other parts of the world.

In conclusion, to state the matter broadly, the indications for the early operative treatment of malignant disease of the larynx are the prompt recognition of a neoplasm of a type impossible of treatment by other methods. Situated favourably for radical extirpation, in a suitable patient, and operated upon by one absolutely qualified for the successful accomplishment of such work.

II.—Henry T. Butlin, F.R.C.S.,

Surgeon to St. Bartholomew's Hospital.

When I was invited by the officers of our Section to join in introducing this subject, I felt some embarrassment. On the one hand I could not well refuse to do so, not only because I was very sensible of the honour which was conferred on me by the invitation, but also because my name has been associated with the radical treatment of malignant disease of the larynx for some years past. On the other hand, I was sure that everyone likely to be present here would know perfectly my opinion on the matter, and I had nothing new to say. I therefore begged Dr. Delavan to undertake the task of introducing the discussion, and promised to speak on his address. The arrangement has answered better than I could have hoped; for the views which he has put forward are, in some respects, so different from my own, that the discussion bids fair to be both animated and interesting. His synopsis concludes with the proposition that the indications for the early treatment of malignant disease of the larynx are, "the prompt recognition of a malignant neoplasm of a given type, impossible of treatment by other methods, situated favourably for radical extirpation in a suitable patient, and operated upon by one absolutely qualified for the successful accomplishment of such work."

This proposition, and the whole tone of the paper, breathe a caution regarding the radical treatment of malignant disease of the larynx which is wholly opposed to my own views. I should lay down my own proposition in these terms: Every malignant growth of the larynx of intrinsic origin which can be dealt with, should be treated by a radical operation in the absence of a decided indication to the contrary, and the operation should be performed with the least possible delay.

And I would go further than this, and lay down a second proposition to the effect that every tumour of the larynx suspected to be malignant, of intrinsic origin, of limited extent, and apparently within reach of free removal, justifies an exploratory thyrotomy in a suitable patient in the absence of evidence of infiltration of the surrounding structures and of affection of the lymphatic glands.

I shall endeavour to show that these propositions are not extravagant. And, to this end, I must show that cancer of the larynx in properly selected cases can be successfully treated by a radical operation, and that there is no other method but a radical operation which can be confidently relied on to cure the patient. And, in the second place, that exploratory thyrotomy is singularly free from danger, and that thyrotomy, with removal of malignant disease of intrinsic origin, is not more dangerous than the severity of the disease will justify.

By a radical I mean a surgical operation, performed from the outside, and consisting of not less than the opening of the larynx by thyrotomy, and the free removal of the disease,

either with or without the removal of a part or the whole of the framework of the larynx. I have thus defined the term "radical operation," because I imagine that my definition of it is in accordance with the view which our officers had in mind in framing the text for our discussion, and that they did not intend to imply intralaryngeal operations and applications, which are nevertheless quite radical if they succeed in curing the disease.

As Mr. de Santi has read a paper giving the whole of my cases of thyrotomy, I shall only so far deal with them as is necessary to the completeness of this paper. I have performed 10 thyrotomies on 9 patients for the radical treatment of intrinsic carcinoma of the larynx; 1 patient died of the operation; 4 patients suffered from local recurrence of the disease, and one of these was subjected to a second operation, which was again followed by recurrence; 3 patients were alive and well more than three years after the operation, and another patient is well and free from recurrence, but only about thirteen months have elapsed since the disease was removed.

I have twice performed the same radical operation for intrinsic disease suspected to be malignant. Unfortunately, the disease in one patient was thrown away without an examination, and I lost sight of the man after he left the hospital. The other patient is still free from disease at the end of two years. The tumour was red, fleshy and warty, and associated with thickening of the cord. But I was not sure, on microscopical examination, that it was malignant.

Other methods of radically treating carcinoma of the larynx may be dismissed in a few words. Constitutional treatment holds out no hope of cure. Serumtherapy is on its trial, and there is, unfortunately, very little yet to be said in favour of it as a curative agent. Intralaryngeal operations and applications, in spite of the able advocacy of Professor Fraenkel, are only possible in very rare cases. The uncertainty of the result, and the probability that failure to completely remove or destroy the tumour may excite more rapid growth will prevent laryngeal surgeons from employing these methods in any but the most exceptional circumstances. The only treatment which holds out a reasonable prospect of success is to thoroughly expose the tumour and the parts in the midst of which it grows, and to remove it as freely as a malignant growth in any other part of the body should be removed.

Of the dangers of exploratory thyrotomy and of thyrotomy with the removal of intrinsic carcinoma, I can say from my own personal experience that they are singularly light. Although I have not often performed an exploratory thyrotomy without at the same time removing some of the soft parts within the larynx, I have now performed thyrotomy for innocent and malignant disease 28 times on 24 patients. Two of the 24 patients died, both from septic pneumonia, one of them after an operation for the removal of intrinsic carcinoma, the other after a much more severe operation for extrinsic carcinoma.

If the results which have been given are held to justify the propositions which have been laid down it will seem almost childish to press the further proposition that if an operation is to be performed for the discovery or removal of malignant disease of the larynx the sooner it is performed the better the prospect of success. But there is still necessity to urge this point. Even men skilful with the laryngoscope are sometimes disposed to watch suspicious growths too long, forgetting that the disease, without making much progress at its upper margin, may be spreading steadily below where its progress cannot be observed.

It only remains to be considered in what cases an operation is most likely to succeed, and what methods of after-treatment are likely to lead to the most speedy and safe recovery.

On these matters some of us have very clearly made up our minds. We operate in cases of carcinoma of intrinsic origin: that is in which the disease commences on the true cords, the ventricular bands, the ventricle of the larynx, or the parts below the cords, and scarcely ever venture to deal with a carcinoma of extrinsic origin. We select cases in which the disease is of limited extent, appears to be fairly movable, is situated towards or at the anterior part of the larynx, and in which there is no affection of the arytenoid regions or the interarytenoid folds. And we avoid the cases in which the larynx is filled with growth, in which it is widened, and in which there is reason to fear that the disease has perforated the cartilage, and in which the lymphatic glands of the neck are affected.

And, in choosing our patients, we prefer those whose general health is good, and, particularly, those who are not liable to bronchial and pulmonary affections. At the same time, provided the season of the year be propitious, I have operated with success on more than one patient who has suffered severely before the operation from chronic bronchitis.

For several years past the greatest attention has been paid to the early diagnosis of malignant disease in such cases as those which have been indicated, particularly by our distinguished President. Greater attention is paid to slight impairment of mobility of the cords, to swelling beneath the growth, to ulceration of its surface. And the diagnosis is generally confirmed, where it is possible to remove a fragment for examination, by the aid of the microscope. But, Sir, after all we are still in this position, and are likely to remain in it for a good many years to come—that we must admit that there are three classes of cases: the first, in which any one and everyone can make the diagnosis; the second, in which the better-instructed or more experienced make it, and the others do not; and the third class, in which the conditions are so obscure that no one can make the diagnosis unless the larynx is opened, and in some of which it is even then difficult to be sure of the nature of the disease.

It is for the necessity of exploration in these cases that I plead, and I do so in the full belief that operations for the exploration and for the removal of intrinsic carcinoma of the larynx are far less dangerous than they used to be.

I cannot but hope, and I think our President agrees with me, that the better results which have been procured during the last few years are in some measure due to the methods of treatment which I gradually thought out since the meeting of the International Medical Congress at Berlin. I remove Hahn's tube directly the operation is over. No attempt is made to close the wound. No tracheotomy tube is used, and no dressing is inserted into the interior of the larynx. But the surface is dusted with iodoform, and iodoform is frequently applied to the interior of the larynx. The external wound is covered with a piece of iodoform gauze which is changed as often as necessary, even 15 or 20 times a day. Instead of propping the patient up in bed, I take away all the pillows except one, so that the head lies low, and place the patient on his side, so as to diminish the tendency of discharges to pass down the trachea. During the first day or two, the patient is fed with nutrient enemata; but, usually on the day following the operation an attempt is encouraged to take fluids by the mouth. Water is first tried. The patient sits up and leans well forward, or leans over the edge of the bed, so that the fluid which passes into the larynx runs out through the wound immediately. If the water is swallowed without passing in any quantity into the larynx, beef-tea, milk, and soft solids are allowed.

In the last five years during which I have employed these measures, I have not lost a single case of thyrotomy; and, although I always feel that good fortune has something to say to these successful series of cases, I cannot but believe that the present series owes some part of its success to the after-treatment of the patients.

NOTE.—It is of the utmost importance that the iodoform powder should reach the surface of the wound in the interior of the larynx. Watching patients on whom I had operated, I discovered that this may be easily effected. When the patient swallows, the two halves of the thyroid cartilage separate to such an extent that the nozzle of an insufflator can be readily inserted between them, and the powder can be blown directly on to the raw surface.

I have a great opinion of the value of iodoform in the treatment of wounds of the mouth and larynx, but it is not likely to do good unless it reaches the actual surface of the wound and this is difficult to compass when the powder is insufflated through the mouth.

The discussion was continued by

The PRESIDENT (Dr. Semon), who insisted on the necessity of not confounding the expression "radical" operation with that of "laryngectomy." Thyrotomy had, in Mr. Butlin's

and his own hands, proved sufficiently radical in many cases to effect all that was necessary. In 62 per cent. of his cases complete recovery, in many cases with surprisingly good voice, had occurred; some of his patients had been operated on as long as three to four years ago, and in one case only had recurrence taken place. He would not deny at all that in future the indications for radical operation were likely to be drawn much wider than they were at present, and that extrinsic cancer with secondary implication of glands would also be found suitable for radical operation; but he felt that by early diagnosis and early operation a good many of the more severe operations would be entirely avoided. Finally, he expressed himself strongly against making local applications of any kind in cases of suspected laryngeal cancer.

Dr. A. HODGKINSON (Manchester) said: Whatever the ultimate results were, the operation must always be regarded as a serious one. The operation for the removal of the larynx, besides destroying the power of speech, does away with the capacity of fixing the chest walls by closure of the glottis, and so renders difficult the numerous muscular efforts which required a fixed condition of the chest walls for their full effect. Solis Cohen's case of complete removal of the larynx except as a marvellously successful result of the operation, precludes the possibility of the man following his usual employment: this inability may, I think, be largely due to the absence of the power of glottic closure. I think it is most important that patients about to undergo the operation should be made thoroughly aware of the utmost that can be expected from the result of the operation, together with the dangers of delay, even when diagnosis is doubtful.

Dr. R. H. WOODS (Dublin) said he could not agree with the proposition that operation is not admissible in extrinsic laryngeal cancer or where there was glandular enlargement. He pointed out that cancer of the breast was now undertaken most successfully when there was marked glandular affection, and why should not this apply to the larynx also? He then showed a patient the right half of whose larynx he had removed, and who had had separate chains of glands involved, one down the internal jugular and one up to the angle of the jaw (enlarged), and which he also removed. The operation was performed last April 1st, and there was no recurrence. He found the following method useful for removing blood and mucus from the wound. It consisted of a bottle with two tubes passing through the cork; to one an ordinary enema syringe was attached tail on, so that when the syringe was worked the bottle was emptied; to the other a flexible tube with a nozzle was attached. By this means a great deal of time was saved by avoiding sponging. As an antiseptic he was much in favour of tr. benzoin co. He did not approve of using soluble antiseptics, as chloride of zinc, in places where it might be directly washed away.

Dr. J. N. MACKENZIE (Baltimore) said: I have been greatly interested in this discussion. Dr. Delavan has treated the subject with that thoroughness and lucidity of statement which characterise all his literary productions. In this symposium of authority it is refreshing to have the sentiments expressed by Mr. Butlin. I accept his propositions, and go still further. If there be any chance of saving life I believe a preliminary thyrotomy justifiable, even in the presence of external glandular involvement, provided such involvement be not, on its face, too extensive. More than that: if, on thorough exposure of the parts—assuming, of course, that there be no serious contraindication to operation—it be found that the disease can be thoroughly eradicated, even if such eradication should involve more or less deep dissection of the surrounding tissues of the neck it is far better to give the patient that chance of life than to allow him to drift on to certain and horrible death. As Jacobi said of opening the windpipe in diphtheria, if we saw a man hanging by the neck, we would not hesitate to cut the rope because the individual was in the last stages of tuberculosis or cancer. So in the class of case we are considering. We have no right not to give our cases every possible chance, even though the statistics of the past may possibly be against us. We want a new statistic—a statistic based on more accurate co-operative work, upon work done by men like Dr. Delavan and Mr. Butlin, which we can accept at once as *ex cathedrâ*. We, special workers in the field of laryngology, must cast aside our pride, and recognise the fact that, while our achievements in the domain of endolaryngeal surgery may be brilliant, when it becomes a question of extirpation of the larynx, we must seek the aid and counsel of the general surgeon. We must work together the one dependent on the other. In this way we shall rob the operation of extirpation of the larynx of many of its terrors. What is meant by "radical operation?" Radical operation, as I understand it, means practically either partial or complete extirpation of the larynx, with or without removal of extrinsic circumscribed glandular enlargements. The proportion of cases in which the entire growth may be with certainty removed through the natural passages is infinitely small. Only one such instance has come under my observation. A man, aged 41, applied at my clinic at the Johns Hopkins Hospital two years ago for slight difficulty in swallowing. A small senile growth was found on the epiglottis and removed by one of my assistants. An examination made under the microscope by Professor Welch showed it to be a typical epithelioma. Two months later the man returned to the hospital. There was no trace of the original growth, but at the junction of the epiglottis and ary-epiglottic fold was a tumour about the size of a hazel nut, distinctly pedunculated, at times lying in the pyriform sinus, at others occupying the laryngeal vestibule. This was removed by means of the snare, and also found to be an epithelioma. I examined the man a few days before leaving America, and although over two years had elapsed since the performance of the second operation, there were no signs of laryngeal disease. This is the only case of pedunculated carcinoma of the larynx I have met with either in practice or literature. In this man the growths were distinctly circumscribed, within easy reach, and the disease was recognised at an early stage, so that all the conditions favourable to complete removal through the mouth were present. But this combination of circumstances is, unfortunately, not the rule. It is often impossible to limit laryngoscopically the extent of the disease. In the first specimen which I show you, on laryngoscopic examination the disease was apparently distinctly circumscribed to one side of the larynx, and it was only after complete removal of the organ that the discovery was made that the cancer had invaded the opposite side through a sort of cleavage, as it were, of the corresponding ala of the thyroid cartilage. Not only is it often impossible to map out with the laryngoscope the entire area covered by the disease; even after preliminary thyrotomy it is sometimes difficult, if not impossible, to define its exact limits. This was shown in a case of mine operated on by Professor Halstead last May in which the epithelioma was glandular in origin, and had not reached the surfaces over the entire area occupied by the growth. I do not wish for one moment to depreciate the value of the removal of laryngeal cancer by thyrotomy. To do so would be to fly in the face of all experience; but in the presence of the fact that it is sometimes impossible to limit the extent of the disease laryngoscopically, or soon after preliminary division of the thyroid cartilages (and I produce these two larynges in evidence), it often becomes a serious question whether we accomplish all to be desired by any operation short of complete excision of the larynx. Confronted by this uncertainty, the position of the surgeon is a most difficult and responsible one. Operations of this class should only be undertaken by surgeons of universally acknowledged skill and experience, and with a conscientious recognition of the ethical relations of operator and patient. In considering this question, I am profoundly impressed with the solemnity of the issue involved. It is not a theory but a condition that confronts us. Beside the question of saving life all other considerations pale into insignificance. Given a cancer confined to the larynx (even though the entire interior of that organ be involved) in a person in fairly good condition, and offering no absolute contraindication to operation, I would no more hesitate to recommend excision of the larynx than I would under similar circumstances hesitate to recommend excision of the breast. The conditions surrounding the two operations may be dissimilar and the dangers greater in the one than in the other; but to the patient it is the choice between danger and death. It is not so very long ago that excision of the breast was looked upon as a formidable operation, but this idea has

been dispelled by modern surgery, and especially by the brilliant results obtained by Halstead in this special field. If we can, with impunity, remove breasts, pectoral muscle, and axillary contents at one operation, we should certainly not hesitate, in suitable cases, to resort to the less formidable operation of excision of the larynx. In the hands of a skilful surgeon, the latter operation is not the ghastly procedure that we have been taught to regard it in the past, whilst its dangers are largely preventable. At the end of this century—if a century can ever end—we shall see a decided revolution of sentiment in regard to the radical operations on the larynx. I believe that the surgery of the future will reckon its cases not among the hundreds but among the thousands—that with improved *technique*, earlier diagnosis and therefore earlier radical surgical treatment, we shall achieve, in a very large proportion of cases of laryngeal cancer, the highest aim of our calling—the salvation of human life.

Dr. J. W. Bond thought Mr. Butlin's lines of selection of cases for operation most judicious; he himself laid special stress on involvement of the posterior commissure and top of œsophagus. As to gland involvement, if this were slight it was no contraindication of laryngectomy. He found palpation of the brim of the larynx useful in diagnosis. To him the mixed cases were the difficult ones in diagnosis. He had more experience of laryngectomy than thyrotomy, and he thought the operation would survive in suitable cases. The operation, like thyrotomy, is less dangerous if the patient is put with head low, so that blood runs towards the mouth and not into the lungs. He trusted to this more than to Hahn's tube. He had a paint of iodoform in ether, with tinct. benzoin co., which should be applied to the raw wound. As to Solis Cohen's case, he doubted if it would be possible to close the upper wound in many cases, especially if the œsophagus was touched. To him the moral of the discussion seemed to be that any patient over 40, with persistent hoarseness, ought to have the benefit of early skilled examination, and, if need be, prompt treatment; that thyrotomy ought to be done early in suspicious cases, for with laryngoscopy we only see in a glass one end or side of a growth, while in thyrotomy we see the whole surface to face, and can judge what to do.

Dr. Scanes Spicer said, that among the large number of cases of cancer of the larynx he had seen, owing to the late period at which they had come under observation he had only in one case felt justified in advising a radical operation. Even in this case the laryngoscopic appearances as to the extent of the disease were deceptive, for though apparently intrinsic and confined to the left side of the larynx, it was found, after thyrotomy, to have extended through the posterior wall, under an apparently healthy mucous membrane, then down the pharyngo-œsophagus and across the middle line. In this case it was decided to extirpate the the larynx and diseased tissues, but the result proved unfavourable within a week, for septic pneumonia carried off the patient. Was it better to extirpate diseased parts in such cases as this, or to close the wound up and leave the patient with a well-fitting tracheotomy tube?

Dr. Dundas Grant urged the advantages gained by the performance of thyrotomy for exploratory purposes. He thought that the adoption of the sloping position with the head downwards rendered the use of Hahn's cannula unnecessary as exemplified by his own experience. In exploratory thyrotomy it was very necessary to hit off the anterior commissure with precision, and for this purpose he found it advantageous to introduce a curved director through openings above and below the thyroid cartilage, and to cut down upon it as a guide. If the anterior commissure is missed the features of the interior of the larynx are so distorted that an exact inspection of the growth is difficult or impossible. He expressed his indebtedness to the introducers of the debate for their valuable papers.

Mr. L. A. Lawrence suggested that in cases requiring complete removal of the larynx it might be quite as well always to cut off all connection of the respiratory tract from the mouth by stitching the trachea to the wound in the neck; this procedure would obviate all chance of food entering the trachea during the act of deglutition.

Dr. Bryson Delavan, in reply, said: It is certainly a subject for congratulation that this discussion has served to bring out more prominently than has ever been the case before the value of the work being done in London to-day in this department, the full nature and extent of which have not been sufficiently well known. It is likely that any difference of opinion which might exist between us would be more apparent than real, and would be based upon the fact that upon the Continent and in America the standards are set upon the basis of the older methods of operation, and not upon the advanced methods which have been adopted here. It is highly desirable, therefore, that your methods should be made better known, and the reasons for their unprecedented success thoroughly understood. There are two points in Mr. Butlin's argument to which I should especially refer. The first is the statement that every malignant tumour should be operated upon. Now, while I quite agree that this view is correct from the surgical point of view, I think that there are other considerations which should be thought of in connection with all such cases. It is impossible to ignore the personality of the patient, and to operate without any regard to questions other than the actual surgical condition. It is a very different thing to argue these matters in the abstract, and to take them home personally to ourselves. The most radical surgeon will sometimes see ample reason for modifying his views when he has personally considered a given operation with relation to himself. This I have found to be the case with laryngectomy. I would modify Mr. Butlin's statement by saying that every malignant tumour should be operated upon in cases in which operation is indicated, not only from the surgical point of view, but also from the probabilities present that the case may be ultimately a success in the fullest sense of the word. As to Mr. Butlin's second statement that in cases of suspected malignant disease of the larynx, in which the diagnosis cannot be made otherwise, an exploratory thyrotomy should be done, I am in full accord with him in the main, but think that the proposition should not be made without some qualification. It must be remembered that under the observation of an expert diagnostician, and in the hands of a skilful surgeon, this procedure may not only be admissible, but highly desirable. It will not do, however, for the idea to be promulgated, upon such eminent authority, that thyrotomy is to be lightly undertaken under ordinary circumstances and by ordinary operators. To sanction indiscriminate thyrotomy in cases of doubtful diagnosis in intralaryngeal disease would open the way for an amount of abuse the evils of which could hardly be over-estimated; and I must enter a strong plea for conservatism in this matter. It must be remembered that an expert opinion, based upon the widest experience, will often be mistaken by the outside world, and more latitude accepted from it than its originator had the slightest idea of suggesting. It is quite possible that more harm might be done by placing the operation of thyrotomy thus advocated in careless hands than good might be accomplished by its most skilful performance. The statement that because accidents have not occurred from the use of iodoform in a certain series of cases hardly answers the objection to the use of that drug, inasmuch as most serious results have followed its use in a sufficient number of instances to make it worth while for us to consider whether we may not eliminate in some way its dangerous properties, or else resort to other less toxic means. The statement also that cases have recovered who were subject to bronchitis will hardly do away with the reports of death following shortly after operation in patients who had suffered from this and similar complaints; and while the chances of such a patient may not be eliminated by them, it goes without saying that they may prove very annoying complicating factors, and therefore be well worthy of consideration. I am not aware that the upper aperture of the wound in the case of Dr. Cohen's patient simulates in any way the closure of the glottis, as it accompanies intense muscular action. For that reason, among others, probably, the patient has never been able to do any hard labour, or to undergo marked exertion since the operation. If some means could be provided him for supplying this deficiency, it would probably be of great assistance. The question alluded to by Dr. Wood—namely, the advisability of operation in cases where the disease has spread beyond the larynx, and where involvement of the glands is present—is a most important one in connection with

this discussion, although occupying as it does a place outside of the main question before us. While it is undoubtedly true that the best prognosis is likely to be afforded by the early extirpation of intralaryngeal disease, there are at least a number of cases on record in which more extensive operations have resulted for a certain length of time, in immunity from recurrence, and in decided relief to the patient. One of the very objects of my paper has been to stimulate such investigation upon this subject as would enable us to know positively whether these more severe operations were justifiable or not; and while the statistics resulting from them may not be as good as from the other class, it is nevertheless possible that a certain number of lives may be prolonged by them which otherwise would be quickly terminated. In the very nature of things there must always be a certain number of cases in whom disease is not early recognised, and who will therefore be obliged to submit to severe measures if the slightest help is to be afforded them. I am in hearty accord with the statements of Mr. Charters Symonds *apropos* of the matter. I am obliged to take issue with the statements of Dr. Mackenzie with regard to laryngectomy as compared with the excision of the breast. The two things are widely different, and it seems to me are not to be compared, either on anatomical, physiological, or surgical grounds. It was quite right that laryngectomy should have been called unjustifiable five years ago, in view of the published statistics, and, worse still, of the unpublished records, of an operation which had given such eminently bad results. Probably no other operation in surgery was less likely at that time to find general favour, in view of the wretched showing which it had made. In my own practice at that time I invariably explained the matter to my patient or to his friends; laid before him in the best manner that I could the possibilities of success, but explained to him frankly the chances of failure. In a few instances in which the cases were exceptionally promising the patients submitted to operation; with few exceptions they died in about the same limit of time that would have been the case had the disease pursued its natural course unrelieved by anything but tracheotomy. The simplest glance at the statistics showed that the chances on the whole were likely to be better without operation than with it, and no patient could have been criticised for declining to submit. It is a most fortunate thing that the progress which you have recently made should have so radically altered the state of affairs in this particular, and so vastly improved the prognosis. That the operation under any circumstances is easy and simple, as Dr. Mackenzie has suggested, is a proposition which I cannot accept. It may be not difficult to remove a larynx or a part of it; the operation, however, is a very small part of the whole story. I cannot help believing that a larger experience on Dr. Mackenzie's part will convince him of the desirability of a more conservative view. I have always been strongly in favour of the performance of tracheotomy several days prior to opening of the larynx, and believe that many dangers may be prevented by the early introduction of the tracheal tube. Ten days is not too long a time beforehand. I agree most cordially with the opinion of the Chairman, that early operation should be done in all cases where it is possible, in order to avoid the necessity of the more extensive operation which would be required at a later period. As before stated, however, I do not believe that all surgical interference should be avoided in some of the later cases. With regard to local applications in epithelioma of the larynx, I have already stated that they are ineffective, excepting in certain cases in which operation is refused and in which it is desirable to delay the progress of the growth as much as possible. It can never be curative, of course, but it may succeed, as I have known it to, in retarding the progress of the disease. The effect of applications of alcohol upon simple papilloma has been so marked in my experience as to make it well worth while to call your attention to it. It is conceded that at a certain stage of some growths, apparently of a papillomatous nature, it is impossible to say with certainty whether the tumour is a simple one or whether it is malignant. The most innocent looking papilloma may ultimately prove to have been the beginning of grave malignant disease. All apparent papillomas, however, are by no means necessarily malignant. To perform thyrotomy at once upon every papillomatous growth which presented itself would not be advocated by anyone. There are some cases in which a certain amount of delay is absolutely unavoidable, unless we are to rush into the most reckless kind of surgery. I see no reason why in such cases some treatment similar to the alcohol treatment should not be employed, in view of the probability that the case is benign. It would be dangerous advice to say that thyrotomy should be done in every case of apparent papilloma and at the first moment such case presented itself. I cannot speak in too earnest terms of appreciation of the admirable work which you are doing in London. It appears to be far in advance of that done in any other part of the world. I congratulate you upon it, and trust that you may continue with unflagging enthusiasm in its successful pursuit.

(*To be continued.*)

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

JONATHAN HUTCHINSON, F.R.S., President, in the Chair.

Tuesday, October 22nd, 1895.

PRESENTATION OF REPORT OF THE COMMITTEE APPOINTED TO INVESTIGATE THE MEDICAL CLIMATOLOGY AND BALNEOLOGY OF GREAT BRITAIN AND IRELAND.

THE CHAIRMAN, Dr. W. M. Ord, presented the first volume of this report to the Society, and in so doing described the scope of the work that had been done. He paid a high tribute to the indefatigable exertions of the Secretary, Dr. A. E. Garrod, and referred to the careful and valuable work done by the contributors.

Sir E. H. SIEVEKING spoke in high terms of the report that had been laid before them, and expressed a hope that similar committees for the investigation of important medical problems should be instituted from time to time by the Society, and that such work should, if possible, be endowed.

Dr. W. H. DICKINSON thought it would be a gracious act to present to those medical practitioners in the country who had contributed reports to the volume copies of that part of the work. He cordially endorsed Dr. Ord's remarks about the debt the Committee owed to its Secretary, Dr. Garrod.

On the motion of the PRESIDENT, a cordial vote of thanks was passed to the Committee for the report.

POSTURE IN ITS RELATION TO SURGICAL OPERATIONS UNDER ANÆSTHETICS.

Dr. F. HEWITT and Mr. A. M. SHEILD, who read this paper, pointed out that the posture of a patient prior to, during, and after a surgical operation under an anæsthetic was a matter of considerable importance to the surgeon, to the anæsthetist, and in many cases to the patient himself. The subject was discussed under the following headings: 1. The Posture of the Head in its Relation to that of the Trunk. Extension, flexion, and rotation of the head were considered. Stress was laid upon keeping the head, whenever practicable, in the longitudinal axis of the body. The circumstances which favour the entrance of blood into the larynx and trachea were defined. 2. The Influence of the Force of Gravity upon the Circulation and Respiration. The observations of Snow, the Hyderabad Commission, and of Dr. Leonard Hill, were quoted; and the administration of anæsthetics to patients in the sitting and semi-recumbent postures was discussed. 3. The Postures of Surgery individually considered. (*a*) The dorsal, supine, or horizontal posture. The advantages of keeping the head turned to one side; and the disadvantages of allowing a patient to lie face upwards, and with the head slightly extended. (*b*) The dorso-lateral posture. (*c*) The lateral posture. Its advantages in most major operations within or about the mouth and nose. Operations for empyema. (*d*) The latero-prone and prone postures. Necessity for caution when patients of certain types are placed in these positions. (*e*) The semi-recumbent posture. Its disadvantages except in a few special cases. (*f*) The sitting posture. (*g*) Special postures, including the lithotomy, the semi-inverted, Trendelenburg's, and the knee-elbow. 4. The Posture of the Patient after the Operation. Remarks were made concerning the raising of patients for bandaging, etc., the application of

bandages after empyema operations, and the appropriate positions for patients when the circulation is feeble. The authors strongly urged the advantages of at once turning patients upon the side after an operation, provided, of course, that there were no special contra-indications.

The President, in congratulating the authors on their paper, said the subject was one of comparative novelty, and had not been previously so fully treated. The paper was full of careful criticism and valuable practical hints.

Mr. R. Gill congratulated the authors on having chosen a topic of wide interests and bearings, but would have preferred a less vague and generalised manner of treating the subject. He could not agree that position was so important, or that some postures were so dangerous as the authors said. He had given chloroform in almost every imaginable position without any bad results. In illustration he quoted cases where anæsthesia was induced in the lying down position which was then changed for the sitting-up position to allow of laryngoscopic examination. The authors had said that in over-extension of the neck there was danger of blood and vomited matters entering the larynx; he considered the entry of blood very rare, and had never known vomited matters pass into the larynx.

On the motion of Dr. Scanes Spicer, seconded by Dr. A. E. Sansom, the debate was adjourned until the next meeting of the Society.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Edward Nettleship, F.R.C.S., President, in the Chair.

Thursday, October 17th, 1895.

President's Address.

The President began by thanking the members for the honour they had done him in electing him President of the Society. He took this honour, however, as not only, nor even chiefly, for himself. It was his good fortune in the spring of 1880 to be much thrown with several earnest and enthusiastic workers in ophthalmology, whose joint efforts led to the formation of the Society. They were especially indebted to Brailey, Stephen Mackenzie, and the late James Adams for the movement that secured the weighty approval and leadership of Sir William Bowman in launching this almost the first of the special medical societies in this country.[1] If to-day it was his (the speaker's) lot to preside at their meetings, he owed that distinction chiefly to his association with those who created the Society. Coming as he did after a series of Presidents, all older than himself, all vastly his superiors in merit, many of them men whose names had been household words in the profession all over the world, he felt but little confidence that he would be able to discharge fitly the duties of his high office. He begged indulgence for defects of which he was only too well aware—defects brought home as they were with especial force when he remembered the urbanity, dignified address, impartiality, and diligent attention to all the interests of the Society that were so conspicuous in his immediate predecessor. As the Ophthalmological Society was almost the first of the special Societies, so it was still, and must always remain second to none in practical importance and breadth of interest. The Society was a very important educational centre, comprehending in itself the spirit of all that was best in the teaching, research, and practice of the ophthalmic institutions of the country. Every difficult art or craft must be more or less specialised if its achievements were to be as good as possible, for art was long, difficult, and elaborate and ophthalmology offered no exception. The necessity of keeping their knowledge fresh and growing, of holding their minds open and their mental grasp broad and vigorous had to be reconciled with the limitations of personal capacity, endurance, and opportunity. Thus specialist societies and special hospitals, leavened as much as possible by variety of membership, and stimulated by friendly rivalry, were necessary for thoroughness of work. They were not, however, incompatible with breadth of view and simplicity of aim; for the narrowing influence of specialism in daily work has not been increased, but diminished, by meeting often and discussing freely, especially when many of their members were largely engaged in other branches of professional work. What was true of the scientific value of special societies was in the main true also of well-ordered special hospitals. For in the latter practical work and scientific research could often be elaborated to a degree impossible in the corresponding departments of the general hospitals, where the interests of the great medical and surgical divisions must always be supreme. The special departments could not have taken, and could not now maintain, the high standard of their work and teaching, did not facilities exist for associated work and mutual enlightenment at the special hospitals and special societies. Lest the words just used should fail to convey fully what he wished to express as to the respective functions of the departments and the special institutions, he would venture at the risk of being wearisome, to enlarge a little. During the last thirty or forty years the hospitals and medical schools had gradually made provision—often on a very liberal scale—for the separate charge of maladies that, by common consent, required particular or difficult methods of diagnosis and treatment. He wished emphatically to express the warmest appreciation of the very high value of the special departments, and equally to guard himself against overlooking certain dangers to which general hospitals were particularly prone. All now admitted that the special departments were necessary at every hospital with a medical school; that the teaching of the elements of, for example, ophthalmology—to mention only one subject—was essential; that the advantage of constant association in work with his medical and surgical colleagues was invaluable, even indispensable, to the specialist in his own branch; and that his work reacted favourably on that of others. Probably few, if any, doubted that special hospitals also would continue to be necessary, and that they would command respect as long as by advanced teaching, pathological research, and all other suitable methods they strove for the furtherance of knowledge and skill in their own subjects. Neither the departments nor the institutions for special diseases could stand alone without danger of one kind or another. The best way, as it seemed to him, of combining the strong points in each and avoiding the weak places in both, would be found when each officer of a special department should also be attached to a special hospital; and when the staffs of the special hospitals were composed of men who also held office in a special department. The work hitherto done by the Society had, they might justly say, been of considerable importance. Some far-reaching discussions had taken place, and several valuable collective reports had been made; their *Transactions* contained a great store of important records and observations, and many of their illustrations were, he believed, second to none in faithfulness and beauty of execution. Whilst he yielded to none in admiration and respect for the immense value of much of the work that had been and was published abroad, he thought they occasionally allowed their appreciation of foreign research to obscure the merits, either in time or in importance, of work done at home. They could not be too careful to assign the claim of priority, whether in time or in merit, correctly, even when it was due to their own countrymen. The material the Society had to deal with was inexhaustible, and their continued success was assured if they showed that they could adapt themselves to any changes in the character or method of their work that the times might demand. How often in ophthalmic work it was necessary that researches, either clinical or pathological, which seemed final had to be repeated in a different and better way. How true it was that there was almost unbounded room for the re-examination of many everyday practices and beliefs; for the filling up of many gaps in their knowledge; for the observation of the effects of particular remedies separated as far as was proper and possible from complicating circumstances, for the pathological examination of many conditions that they knew hitherto chiefly through the clinical appearances. The President then referred in feeling terms to the loss the Society had suffered since its last meeting in the death of their distinguished member, Dr. John Syer Bristowe, to whose great merit as a physician and fine character as a man he paid an eloquent

[1] The Odontological Society of Great Britain was formed in 1856 and the Obstetrical in 1858. J. B. Bailey, British Medical Journal, 1895, vol. ii, p. 101.

tribute. He next proceeded to speak of certain points in the pathology and surgery of the organs of vision, which he thought might fruitfully be made the subject of fuller investigation by members of the Society.

Four Cases of Bilateral Glioma of the Retina cured by Enucleation of the Two Eyes.

This paper was read by Mr. Treacher Collins. He first referred to the paper in which Mr. Lawford and he had shown that there was no authentic record of a case in which a gliomatous growth had recurred later than three years after enucleation of an eye for that disease. He related histories of the following four cases:—Case I. A boy who had his right eye excised for glioma when 5 months old, and his left eye three years later. Three and a-half years after the removal of his second eye he was alive and well, and there was no sign of any recurrence. Case II. A girl whose left eye was excised for glioma when 5 months old, and right eye nine months later. She was seen to be in perfect health four years and seven months after the removal of the second eye. Case III. A girl whose left eye was excised for glioma when 10 months old, and right eye thirteen months later. Four years after removal of the second eye she was in good health, and there was no sign of any recurrence. Case IV. A boy both of whose eyes were excised for glioma when he was 1 year and 4 months old, the left being a shrunken one. Three years and three months later he was in good health, and had no sign of any recurrence. Seeing that all these four patients were alive and in good health, without any sign of recurrence, after an interval of more than three years from the date of removal of the second eye—that is, after the longest interval at which there is any authentic record of a recurrence having occurred, he thought he might justly claim that they were cured.

Mr. Lang had had three cases, two of which were described by Mr. Collins; in the third case one eye was excised at 15 months of age; the growth was discovered in the second eye nine months later. The parents refused to have the eye excised, but it was excised later on account of pain. There was then a secondary nodule in the neck. The child did not die till 8 years of age.

Mr. Lawford quoted a case in which the first eye was excised at the age of 2 months; two years and a half later the second eye was affected. The parents refused to have the eye removed till three years after, when the nerve was involved.

Mr. Priestley Smith had seen a child in a blind institution who was said to have both eyes removed for cancer in infancy; it was probably glioma.

The President had had another case besides those quoted by Mr. Collins, in which both eyes were excised before 1892, and the boy was still in good health.

Detachment of Choroid.

Mr. C. Devereux Marshall read this paper. Three cases had recently come under his notice. The first case was the eye of a lad aged 20, who suffered from glaucoma. Iridectomy was done, and three days later the eye became very painful, owing to a large hæmorrhage having taken place beneath the choroid. On examining it after removal the choroid and retina were completely detached. The second case was that of a man aged 60, who had suffered from glaucoma. Iridectomy was done, but the eye shrank and was removed. There was an extensive detachment of retina and choroid, the subchoroidal space was filled with new tissue in which cyst-like spaces were developed. Microscopic examination proved it to be the much thickened Lamina suprachoroidea and lamina fusca; the small spaces contained pigment and were probably lymph channels. The third case was that of a man aged 68, who had a cataract extracted; the V. = $\frac{6}{9}$, and J. 1 afterwards but six months later the vision failed. As it was feared that the eye contained a new growth, it was removed. There was almost complete detachment of choroid and retina; the only place where the coats remained attached to the sclerotic were at the places where the vessels and nerves penetrated; thus there were four large balloon-shaped detachments the subchoroidal space containing nothing but serous exudation. The first case is similar to that condition met with after an accident resulting in the loss of a large quantity of vitreous, and it is occasionally seen after cataract extraction, but here the hæmorrhage probably did not come on for three days after the operation, and there was no loss of vitreous. The last case is the most uncommon. The detachment probably came about as the result of (*a*) hyalitis leading to shrinking of the vitreous; (*b*) choroido-retinitis; (*c*) serous exudation poured out between choroid and sclerotic. The diagnosis previous to removal is most difficult. The tension is usually diminished, and this is the most distinctive feature between the simple detachment and that due to a growth.

Mr. Jessop asked if there had been any cases recorded in which there was diminished tension with an intraocular tumour.

The President wished to know if there were on record cases in which a simple detachment of the choroid had been diagnosed during life. He thought it was not very uncommon to get diminished tension in the very earliest stages of intraocular tumour.

Mr Priestley Smith and Mr. Treacher Collins had both looked for cases of intraocular tumour with diminished tension without success.

Card Specimens.

The following were the card specimens: Mr. Ernest Clarke: (1) Rare form of Nystagmus; (2) Orbital Tumour. Dr. Mott and Mr. Treacher Collins: Case of Exophthalmos with Trigeminal Hemianalgesia. Mr. Kenneth Campbell: Case of Anophthalmos. Mr. A. S. Morton: Snellen's operation for Symblepharon. Mr. Higgens: Unusual form of Conjunctivitis. Mr. Lawford: Case of Retinitis Circinata.

LARYNGOLOGICAL SOCIETY OF LONDON.

Felix Semon, M.D., F.R.C.P., President, in the Chair.

Wednesday, October 9th, 1895.

Cases.

Dr. Leonard Roper showed a case of Congenital Syphilis of the Soft Palate, Pharynx, and Larynx in a girl aged 21. Six months ago she lost her voice. Three years ago sores appeared on the upper lip and nose. The ulceration of the face lasted twelve months. Two swellings then appeared on the right arm. The lower end of the radius was now much thickened. The epiglottis and false cords were thickened, and there was some infraglottic swelling. The general opinion of the members appeared to be that this was a case of lupus.—Dr. Furniss Potter showed a man, aged 28, with Tertiary Syphilis. The uvula was almost detached from the soft palate, and was adherent to the left posterior pillar of the fauces. The epiglottis was almost destroyed. The rima glottidis was much narrowed. A polypoid growth was attached to the epiglottic stump. The patient improved greatly under iodide of potassium.—Dr. Soanes Spicer showed a case of Cicatricial Obstruction of the Anterior Nares. Mr. Butlin suggested that a plastic operation should be performed. Dr. Dundas Grant would if this failed try cutting the columna and introducing a silver saddle to raise the tip.—Mr C. Symonds showed two cases of Tuberculous Disease of the Septum. (1) A man, aged 48, who fifteen months ago had a small pimple in the left nostril. Soon after the nose became blocked. The man was invalided out of the army for consumption. No syphilis. Father died of phthisis; mother now ill with the same disease. No definite physical signs. (2) A boy, aged 16, had had his nose blocked on the right side for eight months. No history of accident or phthisis. Lungs healthy. A mass projected from the anterior part of the cartilaginous septum. In the left nostril there was some ulceration of the septum. Mr. C. Symonds also showed a man, aged 50, whose left vocal cord had been removed for cicatricial stenosis. Tracheotomy was performed six years ago. The cords were then red and swollen. Some tags were removed and the tracheal wound closed. Two years after tracheotomy had again to be performed, and later the thyroid was divided. After this there was great stenosis from irregular contraction rendering the tube necessary. In February, 1895, the thyroid was again divided, and the left cord and its muscles removed; and in September the tracheal fistula was closed. The man now breathed well, and his voice was gaining power.—Dr. W. Hill showed a woman with Frontal Sinus Disease. Since showing the case previously he had opened the sinus and dilated the infundi-

bulum, but had found it impossible so far to establish efficient drainage. Dr. TILLEY and Mr. BADER suggested that Grünwald's method should be employed.

SPECIMENS.

The following specimens were shown: Dr. KANTHACK: Carcinoma of the Larynx; Carcinoma of the Pharynx; Diffuse Papillomatous Hyperplasia of Laryngeal Mucous Membrane in a Child; Necrosis and Ulceration of Epiglottis in a Case of Typhoid Fever.—The PRESIDENT: Large Nasal Polypi removed from the Right Tonsil of a Lad, aged 19; Tuberculous Ulceration of the Soft Palate, Uvula, and Right Tonsil and Larynx; Very Large Laryngeal Papilloma; a True Myxoma of the Larynx; Syphilitic Endotracheitis.

LIVERPOOL MEDICAL INSTITUTION.

J. W. WARBURTON, M.D., Vice-President, in the Chair.

Thursday, October 17th, 1895.

CASES.

MR. PAUL described the case of a woman, aged 56, from whom he had removed a very large Villous Papilloma from the Rectum. The symptoms were chiefly bearing-down pain and constant desire to defæcate, with passage of blood and mucus. They had existed for over eight years. The operation was followed by slow but good recovery. The tumour had the typical structure of villous papilloma, and did not infiltrate the submucous tissue. Mr. Paul believed that these growths were more rare than is generally supposed, and that they were not liable to become malignant. Mr. RUSHTON PARKER agreed with Mr. Paul that a purely villous papilloma was not likely to become malignant, and that the villous tumours which became carcinomatous were probably carcinomata from the first, but liable to be mistaken for the innocent form of villous growth.—Mr. THELWALL THOMAS showed a young man of 18, in whom he had diagnosed Hydrocephalus, possibly produced by a cerebellar tumour on the right side. There was a history of increasing headache for eighteen months, extreme ataxia causing falling to the right side, nystagmus, giddiness, double vision; paralysis of right fourth nerve, double optic neuritis, occasional vomiting; head 25 inches in circumference. The right cerebellar fossa was opened, the dura mater bulged and was very tense, and it did not pulsate, and so was incised. The cerebellum still protruded, so the finger was inserted to explore. No tumour was felt, but a membrane across the space under the cerebellum, through which the finger readily passed, liberating a quantity of clear fluid; the medulla and the floor of the fourth ventricle were distinctly felt. The bone was not replaced. The headache disappeared, and he quickly regained all his faculties, and now (six months after the operation) he is apparently quite well. Dr. GLYNN, who had suggested operation to Mr. Thomas, thought at the time that the case was one of cerebellar tumour. It was remarkable that the operation should not only have been followed by temporary relief, but by permanent recovery. It was possible that a posterior meningitis had been followed by adhesions in the membranes in the neighbourhood of the fourth ventricle, and so caused hydrocephalus. Messrs. RUSHTON PARKER, MURRAY, and LARKIN also made remarks on Mr. Thomas's case, the last two speakers suggesting that the case was probably one of cyst of the cerebellum.—Dr. STOPFORD TAYLOR showed a case of Congenital Syphilis in a man aged 24. It appeared that a "sore" came on his upper lip while in the River Plate about four years ago, and this slowly spread, invading both cheeks, producing ectropion of the left eyelid, and causing complete loss of nose. It also affected the left half of the scalp and the alveolar process of the upper jaw. His present condition is best described as syphilitic lupus. Rapid healing took place under the influence of iodide of potassium and mercurial dressings.

EXOPHTHALMIC GOITRE.

Dr. ABRAM read a paper on exophthalmic goitre, with special reference to the thyroid theory of the disease, and the treatment of the affection by operation. A short description of the symptoms was given, followed by a critical examination of the various theories advanced to explain the disease. The thyroid theory was held to be the most satisfactory. Two operations—partial thyroidectomy or ligature of the thyroid arteries—were suggested as fulfilling the conditions necessary for the relief or cure of the disease.

Dr. CARTER believed that violent emotion sometimes caused the disease; he was unable to accept any absolutely inclusive theory, but thought there must be a variety of causes which would probably account for variations in clinical history. He mentioned cases where cure had taken place under medical treatment. On two occasions he had seen marked cases without any detectable enlargement of the thyroid.

Mr. PAUL said he had operated on two cases for Dr. Barron. The first was only moderately severe. Here he divided the thyroid isthmus, and the case was distinctly benefited. The second operation he performed ten days ago. This was a most severe case, and he removed the entire right lobe, which weighed 2½ ounces. The bleeding was less than in the case of large adenomata. The change in the patient was most remarkable; in three days the remaining half of the thyroid was not visible; the temperature and pulse had fallen, and the exophthalmos was receding.

Dr. BRADSHAW had tried the prolonged application of ice-bags to the thyroid, and also counter-irritation with red oxide of mercury ointment, but without benefit.

Mr. G. HAMILTON said that in many cases goitres could not be operated upon owing to the enormous vessels and sinuses present.

Dr. BUCHANAN said that the symptoms resulting from artificial removal of the thyroid, the pathological atrophy in myxœdema, and those produced by excessive administration of thyroid extract, so much resembled the symptoms of exophthalmic goitre, that this much supported the idea that exophthalmic goitre was due to over-activity and excessive secretion of the thyroid gland.

Drs. GLYNN, CATON, LOGAN, DAVIES, GIVEN, and SHERRINGTON also took part in the very interesting discussion on Dr. Abram's paper.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting on October 17th, Mr. VACHER, the President for the coming year, gave an address on the Prevention of Epidemics, which were evidence of the failure of our efforts at important points, as the speedy removal of excreta and refuse, early notification of all cases of infectious diseases, isolation, and disinfection. In most towns in the south water carriage by sewers had superseded all "storage" systems, but in the north the midden was dying hard, yet whether in the old form of "combined midden," or as a smaller private cesspit, or a pail, the retention of excreta amid dwellings was inexcusable. Notification was invaluable in checking the first beginnings of an epidemic, but it must be general, prompt, and rigidly enforced. It was useless when a large proportion of cases were not reported at all, or not until the disease had nearly run its course, yet there were places where medical men sent them in in batches at intervals of two or more weeks, and others where the deaths from puerperal fever, diphtheria, and "membranous croup" outnumbered the cases notified. Dual notification was a dead letter, not one in a thousand being from a householder, and it was, therefore, clear that mild cases without medical attendance escaped. The powers conferred by successive Acts from 1866 to 1893 on local authorities for isolation of infectious diseases had too often been but insufficiently exercised. Arrangements with endowed or other general hospitals were rarely satisfactory, and the inadequate accommodation usually provided had, whenever an epidemic broke out, to be supplemented by tents, huts, and the like, in which ventilation and warming, sanitation and nursing were difficult, while the expense delayed the provision of larger permanent buildings. Hospital districts should not be too small, and there should be one bed at least for every 1,000 of the population, with separate small-pox and observation wards, and accommodation for families during disinfection of their houses. Disinfection, however, as mostly carried out—that was to say, sulphur fumigation of any kind—was a farce; general instructions to the occupier as to stripping and lime washing were of little use, while the furniture, the chief retainer of infection, was ignored. It was not the air that needed disinfection, but walls, carpets, furniture and

bedding. Lime washing, sublimate (1 in 1,000) spray and swabbing of walls and floors, with disinfection by steam, or by boiling water of all fomites, was the only effective means; and since a very efficient steam oven could be put up complete for £75, no authority could excuse its neglect on the score of expense. Baths for disinfecting persons, while their clothes were being steamed, should be provided at the same station.

Bristol Medico-Chirurgical Society.—The annual meeting of this Society was held in University College on October 9th. Mr. A. W. Prichard, President, delivered an Inaugural Address, which dealt chiefly with the surgical aspect of disease and accident as occurring in the boys of Clifton College. He mentioned numerous interesting cases, and insisted that there was a great benefit obtained by the following out of the course of athletics and games as arranged at that great public school.—Mr. Paul Bush (Honorary Secretary) read his annual report, as did also Mr. L. M. Griffiths (Assistant Editor and Honorary Librarian). These reports were adopted.—The following officers were elected: *President-elect:* Dr. Aust-Lawrence. *Honorary Secretary:* Mr. J. Paul Bush. *Committee:* Dr. Michell Clarke, Mr. Deane, Mr. W. H. Harsant, Dr. B. Rogers, Dr. Shaw, Mr. Munro Smith. *Library Committee:* Mr. L. M. Griffiths, Dr. Parker, Dr. J. Swain.

Sheffield Medico-Chirurgical Society.—A meeting of this Society was held on October 10th, Dr. Porter (President) in the chair.—The President delivered an address in which he dealt with many of the ethical questions now agitating the profession. In reference to medical etiquette he said that it was very desirable that certain canons or broad principles should be laid down decisively, and everyone entering the profession should be required to subscribe to them. He then dwelt upon the necessity for a more representative form of government in the profession, on similar lines to the Incorporated Law Society. He also advocated very strongly the adoption of the "one portal" principle, both as regards the entrance examination and the tests of professional fitness. There would then be no necessity for the representation of the universities and licensing bodies, as such, upon the governing body of the profession. They would then simply confer their titles on their own terms upon those who were already qualified medical practitioners. He believed, too, that one uniform standard of examination would tend to exclude some undesirable candidates for admission to the profession. The President next dealt with the question of the abuse of medical charities, advocating a more searching inquiry on the part of the hospital authorities into the circumstances of those who presented themselves as out-patients, and suggesting that in some cases the exaction of a small charge might be advisable, though he was not in favour of admitting cases indiscriminately as paying patients. State support or State aid he was not in favour of, but thought that registration and periodical government inspection of all hospitals, dispensaries, and similar institutions, would have a very salutary effect, especially if this were accompanied by the power to close all such institutions as were considered unnecessary or administered in an improper manner. The State had a duty to perform in preventing institutions which were conducted for personal ends being falsely marked with a title calculated to deceive the public and divert support from more deserving objects. The President concluded with some remarks on the national importance of medical education and the public side of medical work, commenting upon the very inadequate acknowledgment on the part of the public of their indebtedness to the medical profession as a body.

Medical Schools of Philadelphia.—The *Medical News* gives the following statistics as to the several medical schools of Philadelphia. The University of Pennsylvania has 900 students as against 865 in 1894-95; Jefferson Medical College has 720 as against 700, the Medico-Chirurgical College has 330 as against 225; the Hahnemann Medical College has 285 as against 280; the Women's Medical College has 200 as against 175; and the Philadelphia Policlinic 150 as against 150. The total number of students in all the medical schools of Philadelphia this year is, therefore, 2,610 as against 2,345 in the previous session.

REVIEWS.

Essays on Heart and Lung Disease. By Arthur Foxwell, M.A., M.D.Cantab. London: Charles Griffin and Co. 1895. (Demy 8vo, pp. 490. 12s. 6d.)

These admirable essays have for the most part been previously published, but have been collected and carefully edited by the author so as to ensure that they represent his present opinions, and are also consistent with the medical knowledge of to-day.

Unquestionably the best, and in our opinion that which gives the author a right to a niche in the temple of medical science, is the group of papers on the Condition of the Vascular System in Anæmic Debility, wherein he gives an excellent explanation of the production of the heart murmurs met with under these circumstances. It is without doubt the most satisfactory solution of the problem hitherto attempted, and appears to be very likely the true one.

The essay on Catarrhus is an attempt to enter the field of general pathology which will undoubtedly provoke controversy. Catarrhus is regarded by Dr. Foxwell as a specific infective process of wide range and varying intensity, often accountable for the most diverse visceral complications, so that under this heading must be included such diverse diseases as meningitis, pneumonia, pericarditis, peritonitis, nephritis, etc. In other words, cases at present regarded as primary, or, at least, unexplained examples of meningitis, etc., receive, at Dr. Foxwell's hands, the title catarrhal, and are attributed by him to the influence of this common infection. Is not such a conclusion somewhat premature, and should we not in the first place have some better evidence of the specific nature of catarrhus? Is it not probable that many different infective organisms can cause catarrhus, and that we have at present no means of differentiating them or their effects?

These essays will be appreciated by all who care for writings which are eminently thoughtful, yet withal practical in their bearing.

Treatment of Enteric Fever on the Antiseptic Principles. By Surgeon-Lieutenant-Colonel R. H. Quill, A.M.S. Reprinted from the *Indian Medical Gazette*, No. 7, July, 1895.

In this excellent and temperately written pamphlet the author describes the treatment of enteric fever which he has adopted during the past two years. Out of 36 consecutive cases, many of great severity, there were only 2 deaths, 1 from perforation, the other from hyperpyrexia with nervous exhaustion. Gratifying as this result is the number of cases is obviously too small for any final conclusions to be drawn, though sufficient to justify a careful and extended trial of the treatment. Surgeon-Colonel Quill makes milk the staple article of diet, and justly lays stress on the examination of the stools as a guide to the prevention of over-feeding. He adds to each 6 ozs. of milk 2 ozs. of lime water; in addition to this each pint of milk receives an ounce of a mixture containing 10 grains of bicarbonate of soda and 5 grains of common salt dissolved in water. We may here point out that the chemical action of this mixture would be to precipitate chalk from the lime water so that the efficiency of the latter would be seriously impaired. Lime water alone, or barley water with an alkaline mixture, is to be preferred as a diluent for the milk.

The author treats distension or hæmorrhage by an ingeniously-constructed ice-tray suspended like Dr. Fenwick's ice-cradle; he believes in the use of calomel in the early stage of the disease, giving 2 grains every other night for three times if the case is admitted during the first eight or nine days. He considers that its action is antiseptic as well as purgative, and he uses it in ½-grain doses as a remedy for constipation during the course of the disease. The special antiseptic treatment advocated in this paper is the administration every two or three hours of a mixture containing 3 minims of acid. carbol. puriss. (Calvert) with 10 minims of compound tincture of chloroform made up to an ounce with tinct. cardamom. co., syr. hemidesmi and aq. chloroformi and given with an ounce

of iced water. No carboluria resulted from this treatment the chloroform was employed in consequence of Werner's experiments showing its toxic effects on the enteric bacillus. Surgeon-Colonel Quill considers that the antiseptic treatment will reduce the mortality of enteric fever in India from its present figure—20 to 30 per cent.—to 5 to 12 per cent. While admitting the value of the method he adopts we should like to be absolutely certain of the fact that the mixture actually reaches the seat of the disease; it seems quite possible that such easily absorbable substances as carbolic acid and chloroform would pass out from the alimentary tract before reaching the lower portion of the ileum.

This is a point for future investigators to decide, and until it is settled the definitive value of Surgeon-Colonel Quill's interesting communication must remain undecided.

VIVISECTION: CAN IT ADVANCE MANKIND? By C. S. OAKLEY. London: J. Davy and Sons. 1895. (Demy, 8vo, pp. 58. 6d.)

In this essay, advocating the prohibition by law of all experiments on animals, there are several paragraphs that are well worth reading. Mr. OAKLEY has much to say that is of interest regarding the greatness of science, the problems of slavery and of sport, the supreme importance of a high and ever higher standard of morality for the nations, and the far-reaching power of one good life over many; and he has taken a great deal of trouble over his work, so that it is more pleasant reading than the rubbish that is printed in certain newspapers.

But this is all that can be said for it. He has not studied his subject; he has no sense of his own ignorance and no humility. To him experiment on animals means "cutting up animals alive," and there are special young men who "devote themselves to cutting up live dogs leisurely and without wincing." Again, he says, "If it did not hurt them, and hurt them intensely, the demonstration could be of no value." And thus he sinks lower and lower, talking about the "voiceless corridors" and "exquisite secrecy" of the "new holy inquisition." And all this nonsense is written by a man who has not even read the Act, or the inspector's annual reports. There is not one word about inoculations, not one word about preventive medicine; worst of all, there is not one word about anæsthetics. He is careful to say we cannot silence him by saying that these horrors were not done in England; he "is dealing with vivisection internationally." We hope that we have found a very easy way to silence him; we have shown that he has not even attempted to study his subject. Let him study it in all patience, honesty, and humility for six months. At the end of that period let him acknowledge his errors, and commit to the flames the remaining copies of this most unhappy pamphlet.

MENTALLY DEFICIENT CHILDREN. By G. E. SHUTTLEWORTH, B.A., M.D. London: H. K. Lewis. 1895. (Crown 8vo, pp. 140. 4s.)

THE author does not profess in this book to bring forward anything new, but to collect various papers which he has previously published in medical journals and proceedings of societies. A historical retrospect is given of the subject, from which we learn that about fifty years ago attempts were first made to train the mentally deficient child, and that Seguin is to be considered as the pioneer in the work. Some illustrative cases of children of this class are related, and reference is made to the work which Dr. Warner has done in examining 100,000 children belonging to various schools. Very valuable material has been collected, and this, it appears, will soon be available to the profession and the public when the report of the Committee on the Mental and Physical Condition of Children is issued. The establishment of schools for special instruction by the London School Board is alluded to; and it is useful to know that there are now seventeen centres, at which 600 children attend for special instruction and training. Pathology obtains only scanty notice, but the author refers those who are interested in the subject to books in which information respecting it can be obtained. Cases are divided into congenital and non-congenital, and a description is given of the various forms of mental deficiency which are met with in institutions which receive these children for treatment. The etiology of the subject is shortly noticed, but the diagnosis and prognosis are fully considered. The treatment occupies four chapters of the book, and some illustrations are given of the apparatus employed in training the special senses of these cases.

The author is of opinion that more institutions for the education and training of juvenile imbeciles should be erected, and additional industrial homes for feeble-minded young women should be provided. A list of the public and private training institutions, and of School Board classes where special instruction is given, is found at the end of the book.

NOTES ON BOOKS.

The Art of Breathing as applied to Physical Development: with Respiratory Exercises for both Children and Adults. By A. L. HOPER-DIXON, Surgeon-Captain, A.M.S. (London: Gale and Polden. 1875. Fcap. 8vo, pp. 30. 2s. 6d.)—This little book will fulfil a useful purpose if it teaches soldiers, athletes, and others the necessity of a correct manner of breathing; for though the act of breathing is performed automatically, there is no doubt that the exercise of the will can play an important part in correcting the *modus operandi* of the respiratory act should it require correction. Abdominal breathing is very properly regarded as that which gives the best results, and any error of dress which interferes with the movements of the diaphragm should be removed. The exercises with which the pamphlet concludes appear well adapted for the end they have in view.

Official Drill Manual for the Members of the St. John Ambulance Brigade. Compiled by REGINALD SLEMAN, M.A., and W. J. CHURCH BRASIER. (London: St. John Ambulance Association. Demy 32mo, pp. 74; 6 illustrations. 6d.)—This little book is, as stated in the preface, a simple guide for the use of those engaged in teaching the St. John Ambulance Brigade the rudiments of drill and discipline. It is on the lines of the army regulations, and the directions given are clear and concise, and such as can be understood by those not accustomed to military drill, the descriptions being accompanied by explanatory diagrams. In the latter part of the book will be found some very useful information about the various methods of moving the sick and injured, matters which are sometimes lightly regarded, but on the proper performance of which the immediate comfort, and not infrequently the ultimate result to the patient, largely depends.

The Annual Report of the Mansion House Council on the Dwellings of the Poor. (London: Cassell and Company. 1895. Demy 8vo, pp. 88. 1s.)—This report shows how much requires to be done to maintain the effective working of the various laws and regulations which have been made to ensure the sanitary condition of the dwellings of the poorer classes. Notwithstanding the large powers possessed by local authorities, from the very constitution of many of the vestries there is a tendency to allow these powers to remain in abeyance, and it has often been found advantageous for the Council not only to make its own independent inspections, but for it to step in and take the matter of putting the law in force into its own hands. Attention is drawn to the urgent necessity which exists for some uniform standard of sanitation throughout the metropolis, for a study of the cases of insanitation which are brought before the magistrates and of the decisions which have been given upon them, shows how often it happens that what one magistrate upholds another will condemn. An evil of perhaps almost equal importance is the practice, to which attention is drawn, of medical officers of health stepping out of their own districts to give evidence in favour of bad property in other metropolitan areas, such evidence being in direct conflict with that of the district medical officer. This is a question of ethics worthy of careful consideration. The report contains four illustrations representing "cottage homes" in London, which have been projected and are being worked by Miss Octavia Hill and her band of devoted helpers. Such buildings are to be highly commended, and are incomparably superior to the barrack dwellings which are becoming so common.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

HYGIENIC TOWELETTES.

We have received from the Sanitary Wood Wool Company samples of their improved towelettes, for which it is claimed that they are turned out with greater softness and absorbing power than hitherto. These excellent towelettes might well replace the old-fashioned linen diapers, as they can be purchased at 1s. a dozen, which is about the cost of washing the ordinary diaper now used.

TEA, COFFEE, AND COCOA MEASURE.

This invention is made as a small bell-shaped cup, with divisional markings from one to four teaspoonfuls. An article such as this is much needed for the purpose of exactness to prevent these beverages being made too strong, and thus causing them to be injurious to the health and distasteful to the palate, or of being made so weak by insufficient quantity as to be not worth drinking. The measure is a great improvement on the rough and ready way now in vogue of measuring by various size teaspoons. This useful article is to be obtained at the Army and Navy Stores, Victoria Street, Westminster.

REPORT ON THE SANITARY CONDITION OF WINDSOR.

By BAILEY DENTON, M.Inst.C.E.

In accordance with instructions from the Editor of the British Medical Journal, I visited Windsor on October 8th and 9th with a view to report upon its sanitary and general condition.

Before describing in detail things as they are, I desire to state that in the years 1885 and 1886 considerable stir was made in the town with regard to the insanitary condition of its low-lying slums, and that public attention was drawn to the matter in the press. As a result of this publicity a deputation from the Town Council, with the borough member, waited upon Mr. Ritchie, M.P., the then President of the Local Government Board, on September 14th, 1886, and, after complaining of certain statements which had been publicly made concerning the sanitary condition of the Royal Borough, requested him to institute an inquiry on the subject through his inspectors, and promised to abide by their recommendations. As a result, Dr. Hubert Airy and Mr. Arnold Taylor, both of the Local Government Board, went down to Windsor in the October of that year to examine into the whole question, and on January 17th, 1887, issued a report.

This report, after stating that the population of the town—including the garrison of household troops, infantry and cavalry—amounted to about 12,500, acknowledged in most plain language that in the lower districts, where all the poorer dwellings erected in recent years are built, and which are situated on the alluvial plain that stretches at the foot of the western slopes of the Castle, as well as in one quarter of the older portion of the town, periodical floods occurred, with the result not only that great temporary inconvenience was caused, but that a most unwholesome state of things ensued.

The inspectors examined the numerous courts and alleys between the river and the main street, giving as a result their opinion that their condition was "still pitiably bad." The following places came under their immediate notice, and are described in detail in the report: Bier Lane, Garden Court, Collins's Buildings, South Place, Charles Place, Keppel Row, and Keppel Court.

After passing in review these unhealthy and overcrowded districts, they next called attention to the fact that in many instances the house drains throughout the town were ill-laid and unventilated. That the watercloscts were frequently unflushed. That there existed no means of burning the house refuse, and that, as a result, it all had to be carted away to a field about a mile from the centre of the town, where it was used to fill up hollows, and created an offensive smell. That there was no hospital for the isolation of infectious diseases. And, lastly, that the sanitary staff of the borough was insufficient, inasmuch as the borough surveyor not only acted in that capacity, but was inspector of common lodging houses, weights and measures, petroleum, and canal boats.

The inspectors after expressing an opinion that some allowance should be made for the difficulties besetting sanitary authorities in their endeavours to amend the faulty state of things existing in all old towns like Windsor, and which have been inherited from bygone centuries, finally recommended: (1) That the sanitary defects existing in the low-lying slums should be remedied under the powers given to the Borough Council under the Artisans' and Labourers' Dwellings Improvements Acts, 1875-82; (2) that they should appoint a separate inspector of nuisances; (3) that they should provide a hospital for the treatment of infectious diseases; and (4) that they should build a furnace for the destruction of house refuse.

It may be presumed that Mr. Ritchie, on receipt of this report, was not content to leave things as they were, for he instructed the same inspectors to revisit Windsor and again report to him, which they did on November 20th, 1889; and the contents of their second report, which is under date January 23rd, 1890, may be thus fairly summarised.

They found that a few of the most disreputable houses in several of the numerous courts had been pulled down, and that there was generally an increased watercloset accommodation; but that practically the courts and slums were only in a slightly better condition than on their previous inspection, and that certainly the Town Council had taken no notice of their advice that they, as the Urban Sanitary Authority, should make use of their legal rights, and remove most, if not all, of the evils complained of. They observed that a separate nuisance inspector had been appointed, and therefore expressed the hope that there would be improvement with regard to the slums in the immediate future. They, however, again drew the attention of the Local Government Board to the fact that, although nearly three years had elapsed since their first report, there was still no hospital for the isolation of infectious diseases; and that no refuse destructor had been built. In their closing paragraphs they announced that the Mayor had informed them that it was in contemplation to construct a new riverside road and promenade, which would not only greatly beautify the town, but would remove some of the insanitary courts abutting on River Street.

I now come to the condition of the town in October, 1890. It will, I think, be generally conceded that as a Royal Borough, to which in consequence visitors and foreigners constantly flock, the condition of Windsor should be, if anything, better than that of other towns, and certainly that within its limits there should be no evidence of continued and needless neglect.

I propose to treat the various points brought under my notice under the following heads:

There are no public baths and wash-houses. This will hardly be credited when the large number of resident poor is taken into consideration, who must find it most difficult, especially in times of flood and frost, to have recourse to any methods of cleanliness.

No hospital for the isolation of infectious diseases has been built, although the provision of one was strongly recommended in both reports of the Local Government Board in 1887 and 1890.

Slaughterhouses are still in use in the principal thoroughfares of the town, so that sheep and cattle can be seen being led to the slaughter from the very residence of the Sovereign.

No new road and river-side promenade has been made, as foreshadowed by the Mayor in 1890. Why this long needed improvement has not been carried out it is difficult to say, but it is rumoured that some of the Corporation are afraid that a handsome new street, adjacent to the river, would remove the business of the town away from High Street and

Thames Street, where the principal old-established shops are situated.

The condition of the streets is lamentable. The surface of the granite cubes—for example, in Peascod Street—is needlessly uneven and injurious to carriage traffic, whilst all the main thoroughfares are badly kerbed and channelled. The macadamised roads also are equally neglected, and after rain pools of water remain on them for days, thus creating an unnecessarily humid atmosphere. Grass is allowed to grow in several of the roads—for example, round Trinity Church—in a way which I have never seen equalled in any English town of a similar size. The pavements likewise, even round the Castle, are in a disgraceful condition.

Royal Windsor is approached from the river above Windsor Bridge either by River Street or by Goswell Road. The traveller, on landing from his boat at River Street, is immediately confronted on his left by a huge wooden dustbin, full of filth, measuring 6 ft 6 ins. by 3 ft., and on his right by tumbledown houses let in tenements, whilst in front of him is a steep narrow street ending in a slaughter-house, immediately under the Castle walls. Should he elect to reach the town by Goswell Road he will land near about twelve heaps of rubbish and brick dust. Beyond this his route lies along a dirty road, with inferior cottages on the left, until he reaches the Great Western railway viaduct, where, should he desire to pass by a near way to the booking office, he will go through an arch, the roadway under which is covered with manure and rubbish. Arrived at the top of the hill, or, in other words, at the Great Western station, he will stand between two approach (or rather reproach) roads, the condition and width of which would be a disgrace to any important town in the country.

I will now refer to the appearance and condition of the houses.

As to those inhabited by the wealthier class, it is obvious that, as a rule, the outside sanitary arrangements are defective. The soil pipes are mostly ill-ventilated, whilst the rain-water pipes in many instances are leaky; in fact I do not believe that there are many houses in the borough which would successfully stand a modern sanitary test. A general appearance of neglect predominates throughout, and in one road which I could name there are sixteen empty houses within a distance of 800 yards. On inspecting one, which was provided with a large brick dustbin close to the lawn in the back garden, I was told by the caretaker that, though it had been built nineteen years, it had only been inhabited for three; he added that the reason was that the smells of the adjacent open ditch were intolerable in summertime. Why the Town Council have not covered this ditch over he did not know.

As to the condition of the poorer dwellings in the low-lying districts, considering the advance made in sanitary science during the last ten years, they practically remain as they were. Amongst the most noted slums which I inspected were South Place, Collins's Buildings, Haines Court, Love Lane, and Garden Court. In South Place most of the houses contain only two small rooms, with one watercloset situated outside and used jointly by two dwellings. These watercloset are in nearly every instance worn out and in a filthy condition. They are supplied with water (an improvement on 1886) from a waste-preventing cistern above them, which is in every instance unprotected from frost, the consequence being that during the cold weather, when a good flush is essentially necessary, no water can possibly be obtained. There are a few taps off the public water mains in the back yards from which the people can obtain water, except in lengthened frosts, but the public supply is in no case carried into the houses. There is no sink accommodation beyond one or two outside gulleys in the back yard common to the whole court; whilst the inhabitants of the houses on the south side of the court, who have no backyards of their own, are obliged still to cross the road to the yard at the back of the houses on the north side in order to use the waterclosets.

In Collins's Buildings, which are four-roomed houses, let at rentals of 3s. 6d. per week, the flood last November rose to 3 feet above the ground floor level, and as a consequence signs of decay and damp are still everywhere apparent. The watercloset, gulleys, and water supply are practically in the same position and condition as in South Place. The same remarks apply to Haines Court and Garden Court. The worst and filthiest slum of all, however, is Weltington Square, Love Lane, which is surrounded by two- and four-roomed houses, with an unpaved surface in the centre covered with filth, with a few waterclosets and old washhouses on either side falling to pieces. In all the courts are large worn-out dustbins, which are only emptied once a week, and which at times, between the periods of removal, must emit most noxious odours.

Is Windsor worse than other towns? My reply, after a certain amount of experience, is decidedly Yes. What, then, are some of the remedies? If in 1886 the Local Government Board inspectors pointed out that there were in existence Acts of Parliament which would enable the Town Council to do away with the above disgraceful slums, still more so are there now, after the passing of the Housing of the Working Classes Act, 1890, which provides that local authorities may carry out improvement schemes for the rearrangement and reconstruction of the streets and houses within their jurisdiction. There is therefore ample legal machinery at command if only it is set in motion. Each house should be provided with a separate watercloset, and an indoor sink and water tap. The huge and nauseous dustbins should be done away with, and small galvanised iron dustbins substituted, the contents of which should be frequently removed and burnt in a destructor. An isolation hospital and public baths should be immediately built. The slaughterhouses should be removed to less objectionable sites. The sanitation of the houses of the wealthier classes should be more looked after, and all necessary modern requirements where possible insisted on; whilst the roads should be properly paved and channelled; and last, though not least, the approaches from the river should be improved.

It will probably be asked whether the annual death-rate in Windsor is so excessive as to justify this all-round censure. My answer to such a question is that the details of a death-rate are entirely outside my province. There are, however, many things in this life much more to be feared than death, amongst which may be mentioned uncleanliness and degrading vice, and neither of these evils runs much chance of being eradicated at Windsor if things are allowed to remain as they now are in the Royal Borough. No good will be done by blaming officials, so long as they remain servants of the local authority and not of the State, and who therefore frequently are afraid to speak their mind. On the contrary, the remedy rests entirely with the Borough Council, and it is for them to act without delay.

FACTORY AND WORKSHOP INSPECTION.

The report of the Chief Inspector of Factories and Workshops for 1894 reached our hands a few weeks since. It forms a considerable volume of over 500 pages, and contains a mass of facts respecting our great industries and also our smaller ones, and workshops. It tells of perpetual industrial progress, and affords numerous particulars which show the condition of those engaged in them, and makes besides many suggestions for improvements.

The extension of the Factory Acts, and particularly the passing into law of the Workshops Bill, have immensely enlarged the business of the Factory Department of the Home Office. The report before us proves the necessity for, and the wisdom of the extension brought about. In fact, it goes much further than this, for it brings to light the need of still further extension, of the existence of legislative omissions and anomalies to be remedied, the necessity for amendment and revision, and generally of an improved administrative organisation.

The institution of a class of lady inspectors by the former Home Secretary, Mr. Asquith, has proved a success, as indicated by the work done. The ladies exhibit great interest and energy in their duties, not devoid of the ambition to have additional work entrusted to them, and to render their position still more important than it is.

As a matter of courtesy doubtless the chief inspector, acting on the maxim of "ladies first," accords to the reports of the lady inspectors the first place. The call for women inspectors was made in the interests of female workers, who, presumably, were imagined to be reticent in making complaints or in meeting the inquisitiveness of male officers.

Those feminine weaknesses are not, in our experience, very pronounced; and, if they do exist, factory and workshop hands must have them in a higher degree than women of other classes; for we must remember that inspectors have not to pry into the diseases of women or to report upon them; and if such interrogations are to be made it should be the business of some authorised medical men, or, for that much, "medical women," to make them, and to do this would imply a considerable extension of the Factory Act in regard to its purposes.

At the same time it may be admitted that the sudden inroad of one of the ruder sex into a milliner's or a dressmaker's workroom may cause a flutter and disturb the prevailing quiet serenity of the occupants; and that also in those cases where the workshop occupier has cause for hiding some of the "young ladies" from the eye of an inspector, a female officer may more appropriately search the apartments. Moreover, it might possibly be held by some that females will best know the female character and be more capable of bringing to light the subterfuges and evasions which are not confined to male persons and might be unsuspected by them.

Again, if we admit their own estimate of fitness for the employment, lady inspectors are fully qualified to perform its duties in all respects and under all circumstances—difference of sex forming no obstacle. This persuasion on their part shows itself by their readiness to engage in sanitary matters of all sorts, and to investigate the effects on health of industrial processes; indeed, in all such matters, to undertake duties usually assigned to the action and supervision of medical officers of health.

In these pretensions they unfortunately have received encouragement from the chief inspector, who has entrusted to them the duty of noting the ventilation and the warming of places they visit; of inquiring into the effects of the many manufacturing processes on health, including those in which lead is employed; and generally of supervising and reporting upon the due observance of special rules made for the conducting of those trades classed as dangerous to health.

Individuals uninitiated in official notions respecting the fitness of employees for particular duties would probably fancy that all such lines of inquiry appertain rightly to those who have been specially trained to conduct them, and that with respect to some employments males are more eligible than females in the work of inspection—in a word, would conclude that sanitary functions at large should be exercised by sanitary officers. This principle we have always contended for, and consequently treated it as a blemish in the factory laws that sanitary provisions are relegated to non-professional though most worthy gentlemen to carry out.

It is the more anomalous when we look at the laws relating to the general health of the population; these demand special instruction in sanitary science, and evidence furnished by examinations that medical officers of health possess ample knowledge of the whole range of subjects included in the science of sanitation. These qualifications are increasingly called for as the importance of sanitary science becomes better understood; yet when efficient sanitation is required in the health interests of workers in factories and shops any lady or gentleman is officially accounted as qualified for the undertaking. The question of special education and qualification is not raised. To any logical and thinking mind this state of things is inexplicable, and the more so as in the case of manufactories and workshops causes of illness are not limited to those common to all habitations but to a host of pathological conditions attaching to the work carried on and to the materials employed—that is to say, to a far wider set of circumstances affecting health and life. Who can fail to see this grave anomaly in legislation, and the necessity of assimilating the sanitary regulations in the health of towns and in the factory laws.

The reports sent in by both lady inspectors and the old staff to the Home Office concur to show the inadequacy of the administrative machinery in existence to compass the objects of the Factory and Workshops Act; and it is equally clear that the remedy wanted is to increase the medical agency.

But we must not dismiss from view so cavalierly the work reflected by the lady inspectors. It deserves more consideration and appreciation at our hands, for their reports prove that, in the case of workshops especially, they have accomplished much excellent sanitary work. This is true in particular with regard to dressmakers' and milliners' shops, to numerous small tailoring establishments, and to many small handicrafts pursued in dense and poor districts, of which the East End of London supplies the most examples. In many such places the labour of women and girls is most in request, and it is a fair inference that female inspectors may more readily and thoroughly reach such workers than those of the male sex.

Their quick observation and their ready realisation of the wants of their toiling sisters furnish additional arguments for their employment where female labour abounds. And accordingly they have been enabled in their reports to make some useful suggestions and to point out, among other things, the abuse of exceptional permission to work at times beyond the legal period; the evil custom of locking the women in their workrooms, of inflicting illegal fines, and making deductions from wages earned to pay for articles supplied. The suggestion that no young person under the age of 15 shall work overtime is good, and derives sanction from a similar provision in the industrial codes of Germany and Scandinavia. But this suggestion is less drastic than that advocated by some of the male inspectors, who would altogether abolish overtime.

Another subject most urgently insisted on is the necessity of providing a watercloset for each sex where men and women are employed in the same building. That this provision has been so widely neglected, notwithstanding its patent necessity in the interest of cleanliness, decency, and morality, reflects discredit on all who are vested by law with authority to secure its observance.

We observe that one new inquiry has been conducted by Dr. Arlidge since the issue of the preceding general report of the chief inspector—namely, on the effects of naphtha as used in rubber works on the health of the employed. The general conclusion is that though the vapour be objectionable, it causes no actual injury to those who breathe it.

But we hasten to conclude this notice of the official report, though we must not fail to remark that there are several other topics contained in it which well deserve attention, but are little likely to get it, being as good as buried in a Parliamentary Blue Book.

THE RUSSIAN JENNER CELEBRATION.

We have received from our St. Petersburg correspondent the following further particulars[1] relating to the Russian National Health Society:

The Russian National Health Society, which is under the presidency of His Imperial Highness the Grand Duke Paul Alexandrovitch (the youngest brother of the late Emperor) determined last spring to make arrangements for celebrating the centenary of the introduction of vaccination in a becoming manner. The Imperial rescript permitting them to do so was signed on April 27th (old style). The Society then selected May 2nd (14th) 1896 as the day on which the centenary should be observed this being, according to the circular issued by the Society the date on which—in 1796—Jenner made the "first scientific experiment on the subject of vaccination." They further announced that they would celebrate the occasion in the following manner: (1) By offering four prizes for the best literary work upon vaccination; (2) by collecting and publishing (with the co-operation of the Government, the *zemstvos*,[2] municipalities, learned societies, and private individuals) materials for a history of the practice of vaccination in Russia, together with a brief account of the practice in Western Europe; (3) to publish in Russian a translation of Jenner's works, with his portrait, biography, and drawings of small-pox; (4) to hold an exhibition of objects relating to vaccination; (5) to call a special meeting of the Society for the day appointed for the anniversary.

A further public notice was issued, containing the following details as to the prizes offered:—Works sent in for competition may be: I. Such as relate to the general questions of small-pox and vaccination, for instance, (*a*) handbooks of vacci-

[1] British Medical Journal, August 24th, 1895, p. 391.

[2] *Zemstvos*=local governing bodies.

nation; (*b*) historical, medico-geographical, or medico-statistical essays on small pox and vaccination; (*c*) clinical, pathological, bacteriological, chemical, or other investigations; or (*d*) works for the general public on the utility of vaccination. II. Such as relate to the *technique* of vaccination; for instance, (*a*) essays on improved methods of preparing lymph, and particularly on the best modes of preserving and transmitting it; (*b*) proposals for new or improved instruments and other apparatus required in vaccinating human beings and animals; (*c*) suggestions for a model vaccination institute.

The above programme is not intended to limit authors to any one of the headings mentioned; they may combine any of them, and also deal with other aspects of the subject not mentioned above.

Essays for competition may be in the Russian, French, German, or English language; they may be in manuscript or in print, but in the second case they must not have been published before May 2nd (14th), 1894. They must be sent in not later than March 2nd (14th), 1896, addressed to the Council of the Russian National Health Society, 15, Dmitrofski Pereulok, St. Petersburg.

The essays will be judged by a special committee of the Society, and the prize winners announced on the day of the centenary. Essays may be sent in signed by the author's name, or by a *nom de plume*; in the second case the author's real name must be sent in a closed envelope, bearing the *nom de plume* outside.

Four prizes are offered: the first will be the Society's gold medal and 1,000 roubles (about 100 guineas); the second a gold medal; the third a smaller gold medal, and the fourth a silver medal. The names of the prize winners will be published in the papers.

The Society have also invited all institutions, medical men, and private individuals to co operate with it in making the centenary a success; particularly in furnishing it with information, or by lending it objects of interest in connection with the history and practice of vaccination. All such aid will be gratefully acknowledged, and the names of persons who so co-operate with the Society will be published in the centenary report. Information or objects of interest should be sent to the Society, at the above address, if possible not later than December of the present year.

LITERARY NOTES.

Professor Antonio de Gordon y de Acosta has published a work entitled *Medicina Indígena de Cuba*, in which he gives a mass of interesting information as to the medicine of the natives of Cuba at the time of the discovery of America. That they were not entirely destitute of elementary notions of hygiene is shown by the fact that the use of the bath was general and frequent among them, that they abstained from sexual intercourse during menstruation, and that isolation of sufferers from diseases believed to be contagious was enjoined. Their habit of staining their skin with vegetable colouring matters mixed with fatty substances was probably, in part at least, adopted as a protection against the stings of insects. Their food was chiefly vegetable, but they also ate largely of fish: the flesh of wild animals, birds, lizards, larvæ, and ant eggs also entered into their dietary. The dead were disposed of by cremation, by burial, and by mummification. They had some notions as to diseases of the respiratory, digestive, and genito-urinary apparatus, worms, rheumatism, fevers, nervous diseases, and intoxication by the abuse of snuff. They appear to have been very subject to skin diseases, and the descriptions of the Conquistadores, though vague, suggest that neither syphilis nor leprosy was unknown to the aboriginal Cubans. Their materia medica included certain purgative substances; they had a kind of castor oil which was used in cases of colic and dropsy, and also as a preventive of skin diseases and as a cure for deafness; *hoaracan* (guaiacum) was used for the treatment of glands and anæmia: tobacco was applied to wounds and was employed in the treatment of asthma, toothache, and other diseases; sassafras was given in fevers, and pineapple was used as a remedy for stomachache. A large number of plants which still hold a place in scientific therapeutics were also used. The medicine men were priests as well as physicians, and when a chief died his doctors were expected to kill themselves in order to continue their attendance in the other world. Probably there was not a very keen competition for the dignity of court physician among the Cuban faculty in those days.

Surgeon-Major John Smyth, I.M.S., writes from Madras to call attention to "a literary error" in the article on "Diseases of the Gall Bladder" in *Quain's Dictionary of Medicine*, where dropsy of the gall bladder at a certain stage of its existence is called *hydrops cystidis fellæa*. Dr. Smyth says:

> Greek words like *ecens*, which have the genitive *ecet*, when Latinised have the same form both for genitive and nominative. Gray gives the word properly when describing the fossa for the gall bladder—fossa *cystis fellea*.

Doubtless the editors will feel grateful to Dr. Smyth for his concern about their grammatical orthodoxy. When they correct the little slip, however, we venture to suggest that they might with advantage substitute *vesiculæ fellis* for *cystidis fellea*. "Cystis" is, strictly speaking, not Latin at all in the sense of "bladder," and the plea of necessity cannot be urged on its behalf. *Vesicula fellis* is given as the Latin equivalent of gall bladder in the *Nomenclature of Diseases* of the Royal College of Physicians.

In the *China Medical Missionary Journal* for June, Dr. J. Dudgeon gives an interesting account, with illustrations taken from the Chinese *Golden Mirror of Medicine*, of various manual methods for the treatment of fractures, injuries to sinews, dislocations, etc. These are the *moh* or feeling method, the *chieh* or uniting method, the *twan* or supporting method, the *t'i* or elevating method, the *anmoh* or pressing and rubbing method, and the *t'ui-na* or the method of pushing and taking hold of (so as to place the bone in position). These methods may require to be supplemented by apparatus. Ten different methods are described by which the broken may be joined, the slanting made straight, the elevated made even, the depressed raised, the dangerous made benign and peaceful, the severe made light; the administration of medicine and a nourishing diet are enjoined as part of the treatment. As a specimen we may take the method of suspension reinforced by the use of piles of bricks. The patient grasps with both hands a rope slung transversely above his head; three bricks piled one upon another are placed under each foot. This is to cure injury of the thorax, abdomen, axillæ, and ribs, no matter how caused. The chest has become depressed and must be elevated. The patient first takes hold of the ropes, standing on the bricks, with his loins fixed. Then one brick is removed from each side, the patient straightening his body and fixing the thorax. This is to be repeated three times, when the feet will have reached the ground and the air will have circulated and the superfluous air have been dissipated; the depressed will have become elevated, the bent will have become straight. Then the patient must be enveloped in a bamboo screen—which in the illustration looks not unlike a corset but appears to be adaptable to any part—and eight broad bandages must be applied, and "everything is to be made proper and suitable." He then ought to recline on his back, and, when sleeping, ought not to lie either face downwards or on one side, and a pillow ought to be placed under the loins, all movements to the right or left being forbidden.

The first two volumes of the *System of Medicine*, edited by Professor Clifford Allbutt, are now in the press, and Messrs. Macmillan hope to be able to issue them shortly. This first portion of the *System* will consist of Prolegomena: on Inflammation by Professor Adami; on Fever by Professor Burdon Sanderson; on Therapeutics by Professor Leech, Dr. Hermann Weber, Dr. Lewis Jones, and others; on General Pathology by Dr. Mott and Messrs. Shattock and Ballance; and on the Pathology of Infection by Dr. Kanthack. The section dealing with the Infectious Diseases is also in an advanced state.

Messrs. Rivington, Percival, and Co. have in the press, and will issue shortly, a work of a somewhat novel character by Dr. C. J. Cullingworth, of St. Thomas's Hospital, entitled *Clinical Illustrations of the Diseases of the Fallopian Tubes and of Tubal Gestation*. The basis of the work is a series of drawings from specimens removed by operation. Each specimen is accompanied not only by a description, but by a clinical history of the case. The volume will contain fourteen plates illustrating all the commoner and not a few of the less common diseases of the parts.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, OCTOBER 26TH, 1895.

THE HARVEIAN ORATION.

The place of Harveian Orator could not have been more admirably filled than by the Senior Physician of St. Bartholomew's Hospital. The Orator wisely decided not to handle again those passages in the life, work, and records of Harvey which have been exhaustively treated by Sir James Paget and others of his predecessors. After a tribute to the honoured name of Parkes—happily coupled on this occasion with a reference to the generous foundation of his friend still preserved to us, Dr. Hermann Weber—Dr. Church (as will be seen from the text of his oration published in another column) proceeded to an examination of the relative places in science and in philosophy of Aristotle, of Bacon, and of Harvey. His words were not those of current opinion, but of a deeper and more instructed judgment. Thus we are tempted to consider with more than usual care these parts of his oration, and we are stimulated to that more serious discussion and criticism of his statements which, even when we differ from them, will appear, we trust, to testify only to their merits.

Dr. Church is on strong ground when he sets forth Aristotle's prodigious achievements as a biologist. Not only was this extraordinary man the founder of biology—or, as we should prefer to say, of natural history—but he also built largely upon his own foundation; herein he showed himself a far abler master of method than Bacon. Not only in the collection of a vast mass of information—which, as has been well said, testifies as much to the alert intelligence of those of his contemporaries who were able to supply him with such valuable information as to the inexhaustible energy and thirst for knowledge in the master himself—but also in his generalisations from these facts, his labours were relatively greater and more successful than those of any other scientific man of any age. We have only to refer to Aristotle's personal observations on embryology to convince ourselves of his mighty and fertile intellect.

Bacon, on the other—superb in wit and in power of philosophic statement—added little which, apart from the way of putting it, was positively original in itself; and when he came to illustrate his own method, or rather that of Aristotle, in practice he showed himself far the inferior of his great master and of Harvey. This was, no doubt, Harvey's meaning in his well-known epigram that Bacon wrote about Nature like a Lord Chancellor. The author of the *Opus Majus*, indeed, has more claim to our regard as a man of positive scientific intellect than his eminent namesake and successor.

It is habitual with us to regard Bacon as the giant who delivered us from the "dead hand" of the ancients—Plato and Aristotle and Galen—whose works had become a bondage to later generations. But Dr. Church was strictly justified when he spoke of the large debt which Bacon owed to Aristotle. In their monumental edition of Bacon's works Messrs. Ellis and Spedding have proved that, magnificently as Bacon translated his matter, he owed almost the whole of it—save its errors—to his great forerunners. Bacon, indeed, was not only out of the track of those fertile scientific conceptions and observations which arose in his own day; not only was his own method never deliberately applied to the investigation of natural phenomena, but, as Mr. Ellis has shown, he also misconceived the problem to be solved. Mr. Benn has acutely said that there is no such thing as *a priori* speculation; for, apart from observation, the boldest intellect can do no more than rearrange the materials or thoughts of his predecessors. "Still," he adds, "if ever any system was constructed *a priori* the *Instauratio Magna* was."[1] Bacon, no doubt, thought that an instrument might be found for extracting the virtues out of Nature as, after their fashion, the alchemists sought to do. On the other hand, he followed Aristotle in some of his least justifiable distinctions between matter and "form."

Dr. Church pointed out that, although Harvey, when at Padua, must have been in the very midst of the bitter conflicts of the Aristotelians and their opponents; yet that he preserved a mind well balanced amid them all, and in all his writings invariably paid the greatest respect to Aristotle. Again, the Orator well said that Bacon was by no means the first or even the chief deliverer from the pseudo-Aristotelian bondage—a subject which neither he nor we can fully enter upon, though we may suggest that the translation of Aristotle by St. Thomas Aquinas first led to the more rational use of his authority; he reminds us that Aubrey also speaks of Harvey as esteeming Bacon rather for his wit and style than for his philosophy.

On the other hand, in his remarks upon "final causes," the Orator seems to fall into some confusion. In speaking of Aristotle's habit of specifying a final cause for every part of the body as one which led him to error, and gave rise to Bacon's well-known gibe that the study of final causes was as sterile as a virgin consecrated to a god, Dr. Church tells us that herein Bacon was wrong again. He alleges against him the evidence of Harvey himself, who says that his study of the valves of the veins led him towards the discovery of the circulation of the blood, and "that so provident a cause as Nature had not placed so many valves without design." Whether final causes are to be considered at all is a question which must not be discussed here; but we must point out that the detection of adaptations is a widely different thing from the discovery or attribution of final causes, in the proper sense of the term, as ultimate purposes. In Aristotle's mind (as, perhaps, more or less in the minds of all philosophers before evolutionary conceptions had their recent more definite beginnings) an organism, like any other natural aggregate, was supposed, by whatever cause, to have come into being complete, and it was regarded

[1] [illegible] Philosophica, 1858, vol. ii, p. 373.

mainly from a statical point of view; thus the adaptations in such an aggregate may seem to indicate immediate design. But from the moment that an organism is supposed to have been developed gradually by an infinite series of protective adaptations, and to have gained these adaptations by a process of elimination, then, unless some perverse person were to say that the valves of the veins, for instance, were there by accident, we should assume that these related functions and parts merely present the facts of existence from a dynamical point of view; that, in a word, these correlations are but a mode of saying that the animal exists. To admire the ermine as a little beast created for the purposes of the dignity of the law is to regard final causes; but to admire its adaptations, internal and external, in a state of Nature is a biological analysis, and not a study of final causes. To say that our predecessors did not always distinguish the means of becoming from these ultimate uses is true, but the distinction is a real one.

What Aristotle did for biology and the great anatomists of the sixteenth century for their study, Harvey did for physiology. This the Orator aptly illustrated from Harvey's own works. In an admirably constructed address he then went on by an easy transition to the regeneration of clinical medicine by Sydenham, whose immediate debt to Harvey is not easy to discover and was probably indirect.

Finally, in a weighty peroration Dr. Church invited us to consider whether "the very brilliancy of recent discoveries and the vast increase in our knowledge may for a time react injuriously on the art of medicine." This is a very anxious inquiry for those who are driven year by year to add more and more to the course of medical training. May we not be positively encumbered in the application of our science by the overwhelming accumulation of facts?

We take a more hopeful view of the immediate future; the qualities of mind and sense which are cultivated in the laboratory will bear fruit in the field of clinics, as indeed we may see to-day; never was clinical observation more accurate and more fruitful than it now is, in spite of the concurrence of the laboratory. The wider our explanatory formulæ, the more readily will be cultivated in our students that scientific attitude of mind which is a better equipment for the duties of life than a wilderness of facts learned by rote.

WAR OFFICE REORGANISATION AND THE ARMY MEDICAL DEPARTMENT.

All sorts of rumours are already in circulation on possible changes in army medical administration under a reorganised War Office. We may safely believe that nothing whatever is yet authoritatively known of such changes—good, bad, or indifferent. The question has probably not even been approached, much less discussed; but when the attitude of the new Commander-in-Chief to the medical service in days gone by is considered, we cannot wonder that even premature speculation becomes rife as to his possible policy towards it in the near future. It is apparently foreseen that, although Lord Wolseley is to be only one of five in a deliberative Board, yet his high position and remarkable powers of initiative will practically make his opinion paramount in questions of administration. But whether he has a free hand or not, in his new office he will undoubtedly wield far greater power than he has hitherto possessed; although it may be doubtful whether, under the shield of a Board, his direct responsibility will be, as it ought—correspondingly increased.

We have faith that his wide experience and strong common sense will impart circumspection in dealing with every branch of the service, but we may remind him that caution will have to be superlatively necessary in dealing with the medical department. He may, indeed, turn out its regenerator, and thus falsify present doubts and fears; but a single and simple false move might prove disastrous enough. We would suggest that ill-advised changes are best to be obviated by the military authorities frankly taking into their confidence the wisest heads in the department itself, and among the medical profession at large.

We do not yet know how medical matters are to be discussed by the new Boards and Councils; but, in the various accounts of the proposed War Office reorganisation we have seen, it is with surprise and misgiving we observe that the medical service and army sanitation have never been so much as mentioned. It can hardly be that in future such matters are to be held secondary and unimportant in the war councils of the nation; least of all in an Imperial Empire like ours, with soldiers living and fighting under every climate on the globe. The exact position and representation of the medical department in the new War Office Boards is so important that it must be inquired into directly Parliament meets; it is with this view that we call early attention to the question, in order that its true bearings may be ascertained by preliminary discussion.

Lord Wolseley—for we cannot speak of an impersonal Board—now has it in his power to do great good, or to work indefinite harm, to the army medical service; but the times are ticklish, for those who have the best means of judging see clearly that another crisis in its fortunes is steadily if not rapidly approaching. The best evidence of that is its growing unpopularity in the medical schools, through which there is already not only a qualitative but a numerical deficiency of candidates for commissions; in fact, it cannot be denied there are already unfilled vacancies, and the gaps in the ranks a year hence may be very serious. In one sense, therefore, the new Commander-in-Chief and his colleagues have a splendid opportunity of putting the entire army medical service on a fresh and better footing; but, in another, they must recognise that their powers are limited in certain directions; for they must needs consult the views and feelings of the medical officers themselves; otherwise, if the War Office attempt to ride roughshod over the department, they will only scare away candidates and cover themselves with disastrous failure. It will be no use declaring, as has been done before, that every recurring crisis in the department is manufactured from without; that has never been, nor can be, and is not so now; the mischief has always been internal, as it is at the present moment.

It is quite impossible to discuss in a short article all the evils causing the present falling-off of candidates; but they are well known, and seem to be thoroughly appreciated in the schools; we can only mention the more prominent. First, the position of the medical officer to the rest of the army is most unsatisfactory, and to high-spirited, self-respecting men, intolerable. An attempt has been made, by some in high places, to inculcate in the army that, although

the medical officer is in it, he is not of it; an impossible and illogical position, the absurdity of which the humblest private can see through, when he knows that nothing can be done or is done in military duty without the intervention of the doctor. But such teaching has done infinite mischief in fostering class and caste exclusiveness, which comes out in the shameful blackballing of medical officers in certain military clubs, and their being often practically ostracised in garrison life. They therefore claim full equality of status with other officers, without which young medical men will not enter the army.

Then, the conditions of foreign service, especially in India, are exceedingly hard and destructive to health. The Medical Staff, especially the ill-paid juniors, consider themselves both literally and metaphorically "sweated" by the Indian Government; they experience all the disadvantages without enjoying any of the advantages which fall to their brethren of the Indian Medical Service.

Of course there are others, but these two are the chief causes, so far as we can judge, which are bringing the Army Medical Service into disrepute. We shall be curious to see how a reorganised War Office proposes to deal with them.

THE MALARIAL PARASITE.

Dr. Daniels, of British Guiana, whose interesting letter we publish to-day, is another of the rapidly-growing cloud of witnesses testifying to the truth and value of Laveran's discovery. Dr. Daniels is favourably known as a skilled pathologist; he has enjoyed exceptional opportunities for the study of malaria, and of these he has not failed to avail himself, as his contributions to the British Guiana Branch of the British Medical Association, published in the *Medical Annual* issued by that Branch, and elsewhere, amply testify. What he has to say on this and cognate subjects has, therefore, a distinct claim on our attention.

The tendency of his letter, we remark, is rather to depreciate than to uphold the finding or otherwise of the malaria parasite as a reliable and practical test of the presence or absence of malarial infection. It must be conceded at once that cases do occur in which the parasite is not to be found in the peripheral circulation at all times of a malarial fever cycle, and perhaps that in a very few instances it may not be present in the peripheral circulation at any time during the first twenty-four hours or so of a malarial attack; but, on the other hand, the weight of evidence tends to indicate that in all ordinary cases of ague, and of what used to be called malarial remittent, the parasite is to be found always or at some period or other of the fever cycle most readily in intermittents during or just before the rigor stage and during the rise of temperature, and in the case of remittents at the commencement of the exacerbations.

In the vast majority of instances the parasite, or its product (malaria melanin), can be seen in greater or less profusion throughout the fever, and until quinine has been taken, and at any time of the day or night. For the most part, to find the parasite or its product is simply a question of proper preparation, of perseverance, and familiarity with the appearances the animal assumes. As we mentioned some time ago, Thayer and Hewetson state that, "excepting in two or three instances, where the patients entered the hospital during convalescence, the specific organism was found in every case of malarial fever treated in the wards," and the number, 616, was no insignificant one. Other good authorities tell us that sometimes they fail to find the parasite, but they also say that such failure is a rare event and that the longer they work at the subject the fewer their failures become. This was Laveran's experience, and Mannaberg speaks very much to the same effect. So that while admitting with Dr. Daniels that the distribution of the parasite in the circulation is not always and merely a mechanical affair, that the specific organism exhibits a marked predilection for certain organs, and that cases do occur in which it is not found in the peripheral circulation, such cases of complete absence from the general circulation are distinctly rare. Dr. Daniels's comparison with the filaria gives an exaggerated idea of the frequency of this occurrence; rather, we would say, the malaria parasite in finger blood is as valuable and reliable a test of malaria as the tubercle bacillus in the sputum is of phthisis.

It is well known that there are many fevers in warm climates which are not malarial and which do not fall into line with the recognised types. Perhaps many of the British Guiana fevers are of this nature. It would be interesting and useful to have from Dr. Daniels careful clinical records of those cases of fever in which he failed to find the malaria parasite, to see their temperature charts, to have a definite statement of the number and times of blood examinations in each, together with a statement as to the influence quinine had on the symptoms and progress of each case.

The malarial fevers met with in London are generally relapses and are seldom severe; in fact if left alone a large proportion of them recover spontaneously and without the use of quinine. The infection, in the first instance acquired in the tropics and usually attended with fever which was quickly got under by quinine, remains latent for a considerable number of weeks or even months. On the patient entering our cold and stormy climate some exposure or imprudence brings about a relapse. Accordingly we find that these relapses are much more frequently met with here during the winter or during bad weather. In such cases, Dr. Manson informs us, the malaria parasite—no matter the type of the fever, whether mild or more severe—can invariably be detected in the peripheral circulation.

All this shows—what we have so often insisted on—the necessity there is for the practical instruction in this important branch of medicine of medical men intending to practise abroad. Men require to be shown when and how to find the parasite, and they ought to have it demonstrated to them over and over again. If this could be done there would be less scepticism on the subject and a better appreciation of its practical value. Failure to find the plasmodium may depend in the case of the small unpigmented varieties on the minuteness of the object, on imperfect preparation of slides, and on wrong times being selected for examination; but, given properly prepared slides, one used to the work can find the parasite in practically every case of untreated malaria; the larger and pigmented forms are so definite, so clear that, we repeat, "a child could recognise them."

City of Dublin Hospital.—Dr. Henry Fitzgibbon has resigned his position as surgeon to the City of Dublin Hospital. The appointment of his successor will take place on November 5th.

At the annual meeting of the Royal College of Surgeons of Edinburgh on October 16th, Emeritus Professor John Struthers, M.D., LL.D., was elected President for the ensuing year.

A clinical demonstration (drawings and patients) will be given by the Neurological Society of London at Mr. Hutchinson's Museum, 1, Park Crescent, Regent's Park, on Thursday, November 7th, at 8.30 P.M.

It is proposed to entertain Sir Thornley Stoker, President of the Royal College of Surgeons in Ireland at dinner on Saturday, November 2nd, on the occasion of his receiving the honour of knighthood.

Following the example of abstaining medical practitioners in Britain and in America in the British and American Medical Temperance Associations, between twenty and thirty Continental physicians who are abstainers have recently founded a Continental Medical Temperance Association. Alienist physicians occupy a prominent place in this new undertaking, the first president of which is Dr. Smith, of Grossherz, Baden. On the continent of Europe, such a medical society, based on the abstinence of its members, is of considerably greater significance than the similar associations in the United States and England.

Mrs. Gladstone, though much better than she was a few days ago, is still weak. Ever since a severe attack of influenza from which she suffered last year she has been troubled with a sequel of a debilitating nature, and she overtaxed her strength during the summer owing to her devotion to social duty and philanthropic work. Her recent illness was, we understand, due to an aggravation of certain infirmities of age, but from this she has now, we are happy to say, recovered. Although subject now and then to vertiginous attacks, her pulse is good and her general vitality for a woman of her age is wonderful. Her distinguished husband had a slight cold a week ago, but is now, we have the best authority for stating, wonderfully well.

THE ROYAL COLLEGE OF PHYSICIANS.

The delivery of the Harveian Oration at the College on St. Luke's Day, October 18th, was attended by a large number of physicians and guests, among the latter being Sir J. Paget, Sir J. Lister, and the Hon. G. Denman. The chair was occupied by the President, Sir Russell Reynolds. The oration, by Dr. W. S. Church, is published in another column. At the conclusion of the address, the President awarded the Baly Medal to Dr. W. H. Gaskell, F.R.S., of Cambridge, in respect of the great advances in physiology to which his researches have contributed.

MEDICAL PRACTICE IN SOUTH AFRICA.

Some time ago a statement was published in the press to the effect that there was a dearth of medical practitioners in South Africa, and Cape Town, Johannesberg, and Barberton were mentioned as places where this dearth was particularly felt. A correspondent who has practised for more than twenty years at the Cape thinks that this reckless statement, calculated to cause unnecessary anxiety to persons in this country who have friends and relatives in the places mentioned, and calculated also to raise false hopes in the minds of young medical men here, ought to be contradicted. Those who are regular readers of the British Medical Journal will be aware that so far from there being a dearth of medical men—at least in the more important towns—there is something very like a plethora. Thus our correspondent states that in Cape Town and the surrounding district, with about 95,000 inhabitants, there are over fifty medical practitioners; in Johannesberg, with a population of 70,000, there are some 120 medical practitioners. Altogether, in South Africa, there are about 600, and the official *Colonial Medical and Pharmacy Register of the Cape of Good Hope*, a volume published with the sanction of the Cape Government, contains the names of all registered medical practitioners, and information also as to dentists, pharmacists, midwives, and nurses. The notion that a lady, or anybody else at the Cape who wants reliable treatment, must travel to Europe to obtain it is one of those pieces of perverse feminine exaggeration with which we are all familiar, and to which the majority of us pay very little heed.

GOOD SERVICE REWARDS.

The recent sad mortality in the senior retired list of the Army Medical Service leaves vacant the appointment of one honorary physician and two honorary surgeons to the Queen. Likewise three good service pensions are vacant. Such a remarkable occurrence suggests once more the question often asked before: Why should all these honours and rewards go to the highest rank only? Are there none in the lower ranks worthy of such distinction? It is certain that only a mere fraction of those entering the service can ever reach the highest grade, and it may be open to question whether the ablest and most meritorious do. As matters stand, only the highest paid and pensioned officers get the good service pensions, and those who are lucky enough to reach the topmost rung of the ladder the honours. A surgeon-major, even if a very Syme or a Clark, could never wear the honorary sash; and it is equally certain he could never expect an extra sixpence of pension.

ST. WINEFRIDE'S WELL.

Even miraculous cures have their financial side nowadays, and there is a flavour of anachronism in the discussion at a *fin de siècle* district council meeting of the terms upon which St. Winefride's well, at Holywell, is to be let to the priest in charge of the Roman Catholic Mission. It seems that the enormous number of pilgrims attracted by the reputation of the shrine suggested to the district council the mundane consideration of raising the rent some 50 per cent., although it was urged with much show of reason that the town already benefited by the influx of visitors. Upon the question of granting a lease the secular tone became still more pronounced, but the proposition that "if a man improved his business and had his rent raised he should have some security for the future" failed to find adequate support, and it was decided to exact £150 per annum, without lease, in place of the £100 hitherto paid. So at least the *Manchester City News* says.

CANON BARNETT ON A USE OF CONVALESCENT HOSPITALS IN WINTER.

During last winter the workhouses, and in some cases the infirmaries, were crowded beyond what either health or decency permitted, and this is sure to occur again unless some plan can be devised to meet the need of increased accommodation. From the fertile brain of Canon Barnett comes to us a suggestion which seems to be pregnant with possibilities alike for the aged poor, the over-burdened rate-supported establishments, and certain charitable institutions. He suggests that the convalescent hospitals and homes (which, thanks to the philanthropy of the rich, exist in considerable numbers) should be utilised for the housing of some of the aged and respectable poor during the winter, the guardians paying for their support. By this plan hundreds of beds which now remain vacant and useless would be filled, and the old folk would probably enjoy the change to the seaside or into the country, and the pressure for accommodation, which is now as certain to come as November and December, would be relieved. Added to these advantages there would be the indirect gain that the

convalescent hospitals would be enabled to retain their staff throughout the year; one of the difficulties to which all these institutions are subject being the inability to keep their officers and servants during the slack season, and the constant changes of staff make the summer work specially trying. To carry through such a plan it would be imperative that only the respectable and amenable poor should be drafted to the convalescent homes, where to some extent discipline might be relaxed and individual eccentricities studied. This attempt at classification would render easier the task—which must always be a difficult one—of treating the casual poor with the amount of severity which would tend to deter them from too readily seeking the workhouse, combined with the justice which is the dessert of every human being, however erring. From previous experience of the cumbersome machinery by which the Local Government Board maintains control over the Poor-law interests, we are doubtful whether such a plan as is here suggested could be carried out. If not it is but another argument to add to those we have many times adduced for the removal of all Poor-law matters from the immediate and detailed control of the Local Government Board, in order to place them under the care of a central metropolitan committee which would be small enough to be elastic, and large enough to command the respect and attention which the public are no longer able to accord to Boards of Guardians.

PURE BEER.

If adulteration of beer and other alcoholic beverages were practised to anything like the extent that is sometimes stated there would be great need for increased vigilance on the part of the public analyst. It is satisfactory, however, to know that whatever mischief may result from misuse of beer, there is little reason for believing that the presence of abnormal noxious ingredients is often, if at all, responsible for such results. An instructive article on this subject has recently been published in the *Standard*, which should altogether confute the sentimental assumption that beer at the present day is more deleterious than it was in the "good old days of home-brewed malt and hops." All known facts point in the opposite direction. The art of brewing is better understood and better carried out than it used to be, and although the use of sugar as a partial substitute for malt is permitted, the intoxicating effect of beer is just the same, whether the alcohol it contains has been derived entirely by fermentation of sugar produced from the starch of malt or in part from sugar added in the brewing. There is probably no article of consumption that is subject to more frequent systematic analytical examination than beer, but the number of instances in which adulteration is detected is comparatively very small, and then the main feature of the adulteration is dilution with water. In this respect there is indeed a vast improvement upon the practice that was not uncommon some fifty years ago of giving unnatural potency to beer by the use of cocculus indicus, grains of paradise and coriander seeds, etc. The strict supervision of breweries by the Inland Revenue officers is a sufficient protection against such improper practices being carried on there and even in public-houses, the possibility of adulteration is but very limited.

HOSPITAL ACCOMMODATION IN LONDON.

Reference was made recently to the difficulty experienced in Marylebone in connection with the removal to hospital of infectious cases, owing to the large demands which are being now made upon the accommodation of the Metropolitan Asylums Board hospitals. Mr. Wynter Blyth has recommended the adoption of bacteriological examination as a means of limiting the number of cases of sore throat in which removal to hospital is recommended. With the co-operation of medical men in the district, Mr. Blyth proposes, "while the hospitals are so full, to adopt the Bristol system, and get a bacteriological examination of cases returned as diphtheria; the examinations, it will be understood, are not for the purpose of disputing, revising, or correcting a medical man's certificate, but for the purpose of ascertaining whether the case may be treated at home successfully with fair safety, or whether it should go to hospital." If this plan is carried into execution, its practical working will be watched with interest. If the examinations are to cease, however, as soon as the pressure on the hospitals subsides, the trial of the new system will not, it may be anticipated, be a very extended one.

THE SICK POOR IN IRISH WORKHOUSES: BAILIEBOROUGH.

At the Bailieborough Union Infirmary our Commissioner was challenged by a pauper inmate in these terms: "Can you tell me why I am shut up in prison? I have served my Queen and country well, I have my discharge and pension, but my liberty is taken from me as if I were a felon; will you please tell me why it is?" The old soldier's tale was true; he had a few privileges in the way of tea and tobacco from the guardians, who take his pension, but he is never allowed to go from the precincts of the house, and he with the other inmates pass almost the whole of their life, waking and sleeping, in the bare and filthy wards, condemned by the medical officer as "quite unfit for their purpose; no alteration can make them suitable." As our Commissioner says, the infirm patients are worse fed, worse clothed, worse housed than criminals, and, like, criminals, they are deprived of their liberty. Dirt, neglect, pauper nursing, insanitary conditions, these things we have found in many English houses, but the senseless rule of "no leave out" obtains only in the sister island. Bailieborough, except in the possession of a medical officer who has the knowledge and the courage to denounce abuses (notably pauper nurses, who levy blackmail), appears to be without a single redeeming feature. Perhaps the blackest spot in its management is the treatment of the idiots and feeble-minded, who are shut by twos into unwarmed cells, lighted by a narrow slit. They have no employment, no care but that of pauper inmates, no place for exercise but a stone-paved yard; they are far worse off than the pigs on any decent farm. How long shall these things be?

LEPROSY AND ITS ALLEGED CURE.

Within the last few days paragraphs have been appearing in the newspapers under such headings as "The Cure of Leprosy," "The Treatment of Leprosy; Important Discovery," and the like, based upon an "interview" with Dr. Impey, who has recently arrived from the Cape of Good Hope. The public memory is a short one, and no doubt little is now remembered of the great results which were promised from the exploits of certain ladies who were duly "boomed" by sensational pressmen when the subject of leprosy was before the public. Dr. Impey, if he has made any observations of value in connection with the treatment of leprosy, will find no difficulty in making them known to those who have the care of leprous patients, nor in setting them in the usual manner before the medical profession at large. As far as we can gather from the remarks which purport to have been taken down by the reporter, the "important discovery" and "the cure of leprosy" seem to consist in the inoculation of lepers with the virus of erysipelas. This is by no means the first time that a treatment of the kind has been proposed; everybody knows that such an inoculation has been practised with a certain advantage in cases of cancerous disease, and that this is only one of the numerous developments of the new therapeutics which we largely owe to the initiation of Pasteur's work; but it appears not to be so generally known that the inoculation of erysipelas in leprous subjects has been already practised, and some of the results published. Indeed, experiments in the direction of the

sero-therapeutics of leprosy are probably now in progress in many parts of the world, and it is to be hoped that it is the reporter's mistake that makes Dr. Impey pose as the "discoverer" of any such methods for the cure of leprosy. It is, moreover, by no means desirable that theories and observations not yet fully worked out should be published in the general press. The hopes of sufferers may thereby be cruelly raised, and the only result, as we have said, may be the temporary notoriety of the "discoverer."

LUNATICS AT LARGE.

We commented recently upon a series of murderous assaults done by lunatics, most of whom had been discharged from asylums. Several persons lost their lives through these assaults, and several others were very severely and dangerously injured. Much questioning has arisen in consequence concerning the working of those provisions of the Lunacy Act which deal with the subject of the continuation or non-continuation of "reception orders" by medical officers of asylums in the cases of those insane persons who, although better, are still in a condition in which, under slightly disturbing influences, or without any such, they may easily be brought, on relapse, into a state of homicidal or otherwise dangerous insanity. Our remarks in the commentary above cited are accentuated by the report of an occurrence similar to those already referred to. A man who had just been released from a lunatic asylum, whilst walking in Glasgow Green, happened to see a woman lying asleep on the grass, a woman a stranger to him, one who had never done him any harm or given him any provocation. But here was an inviting opportunity for the freed lunatic with homicidal tendencies; the favourable conditions probably suggested the homicidal idea, which, rising promptly into an impulsive force, issued in the impulsive and fatal act; for the lunatic forthwith smashed in the skull of the sleeping woman with a hammer. Perhaps the public will some day become tired of this sort of proceeding, and will insist upon power being given to asylum authorities to detain those who have been lunatic, and although improved, are really lunatic or excessively unstable still, and who, if set free, are sources of danger and perhaps of loss of life to their fellow-subjects.

THE HYPNOTISM OF "TRILBY."

The pivot on which Mr. Du Maurier's extremely able and popular book depends is a hypnotic phenomenon of which the publicity is adversely criticised in many well-informed quarters. Mr. Ernest Hart, however, the author of *Hypnotism, Mesmerism, and the New Witchcraft*, of which no small part is devoted to exposing many of the shams and impostures exhibited and described under that title, is of opinion that while Mr. Du Maurier has with dramatic and artistic instincts somewhat stretched the working probabilities of hypnotic condition beyond the ordinary limits, and has artistically concealed the difficulties and mechanism by which his striking effects are produced, he has, nevertheless, not outstepped the bounds of possibility. Of course, to the uninformed critic and observer the mere fact of the apparent endowment of Trilby under the influence of suggestion with powers and capacities which she does not possess otherwise or at other times than when placed under this influence appears either miraculous or false, or suggestive of some new force, some transference of nerve power or some so-called magnetic influence, to use the ordinary jargon. Those who have followed Charcot, or who agree with Mr. Hart in his analysis of the phenomena known as suggestion or hypnotism, hold that no such agencies exist, and the phenomena such as those which the hypnotic state presents are due to the transformation effected in a perfectly natural and physiological manner in the subject under the influence of external or automental suggestion. It is by no means uncommon—and of this many instances have been widely observed, and are recorded in Mr. Hart's book—to find persons who, under the influence of suggestion, and when in the deep hypnotic state, are capable of fits of strength and of agility, of intense dramatic expression and matchless emotional effects, as may be seen in the photographs which have appeared in our columns when these articles were running through them, or in their collected form in the book itself. Superficially and at first it might appear that some new quality has been added, and some mental endowment as it were freshly injected into the subject; on more careful study, this is found not to be so. The ordinary individual is impeded in such dangerous efforts as leaping on narrow ledges, climbing the walls of a room, or in adopting the rapidly changing and intensely emotional attitudes and expressions by the inhibitory influence of fear or shyness and interfering mental emotion, and of other jarring and inhibitory influences. In the hypnotic state and under the influence of suggestion inhibition ceases, the individual is unconscious of danger, and *pro tanto* insusceptible of fear. The shyness, the awkwardness, the want of muscular exactness and intensity of effort produced by these interfering agencies are removed, and the subject becomes a machine wholly subject to the expressed will from without with which there is nothing to interfere. The elaborate lessons of Svengali in vocalisation and dramatic passion might quite conceivably transform Trilby, who possesses a magnificent vocal organ, into a dramatic singer of the highest order. Under the conditions which Mr. Du Maurier carefully and accurately indicates of perfect hypnotic subjection, of complete abstraction from interfering external or internal influences, Trilby, when she sings, is in a perfect hypnotic sleep; she is unconscious of her audience and unaware of her surroundings. She is, like all thorough hypnotics, reduced to the state of a marvellous machine, capable of receiving the most perfect training and in complete subjection to the will and the suggestion of the operator. The state is one of exaltation of certain muscular and mental functions, due to the removal of all inhibitory influences. It is quite characteristic that while in this condition she performs the marvellous feat ascribed to her in the book but she has no recollection of anything she has done while in this condition. When, however, the presence and the suggestive influence of her teacher are removed she relapses into complete and bewildered incompetency, for no new faculty has been added, no new mental power has been given; the influence is only that of training in the hypnotic state and under the suggestion, and when these motor conditions are removed she is no better, but rather worse, in her last state than in her first. Mr. Du Maurier may be congratulated on having produced for the first time a literary masterpiece in which the conditions of hypnotism are used with the power of genius, and in which their limitations and nature are correctly indicated if not fully analysed or described.

A DANGEROUS VOYAGE.

Something like a panic has, it is said, arisen on the Liverpool Exchange, owing to the death of one well-known merchant and the serious illness of several others. All were members of a party who accepted an invitation of the Manchester Cotton Brokers' Association to travel from Liverpool to Manchester by the Ship Canal on September 21st. During the journey complaints were made as to the foul smell arising from the canal when its waters were stirred up by the steamboat. So distasteful was this to some members of the party that they left the boat at the first stopping place, and returned to Manchester. It is confidently asserted that the illness of several members of the party and the death of one are to be attributed to infection contracted from the waters of the canal during the picnic. This theory appears hardly to have been proved, but it is not disputed that a considerable quantity of sewage finds its way into the canal, so that it is

not impossible, though, so far as we have been able to learn, all the cases of illness have occurred among the Liverpool guests, and none among the Manchester hosts. Whatever the condition of the Ship Canal, it cannot be denied that the Irwell, up which the Liverpool party subsequently travelled in a steam launch, is a pestilential stream and a disgrace to a great and enlightened city such as Manchester.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION OF PORTSMOUTH.

Professional union and medical defence have been largely discussed in the provincial centres of the British Medical Association during the last few months, and the outcome, we hope, will be the development of a higher standard of professional ethics and intercourse. The Council of the Association have given their unanimous support to the united action of the general practitioners in the South of Ireland during the long and hard battle which has been fought there against the unfair action of the local benefit clubs by the admission of well-to-do persons who have no right to their help. We shall be glad to hear that the united and honourable conduct of our brethren in Cork has been crowned with success. In the south of England too another battle of the clubs is now raging, and the contest is between the medical profession of Portsmouth and the local friendly societies. One large and influential club in that neighbourhood has called upon its medical officers to accept the splendid remuneration of 2s. 6d. per annum for day and night attendance on infants from 3 months to 3 years of age, and 2s. per annum for attendance upon the other juveniles from 3 to 15 years of age. It is a matter of congratulation, under these circumstances, that a Portsmouth medical union has been inaugurated, and that its members have unanimously refused these terms and have resolved to accept nothing less than 4s. per annum per member for all ages. We sincerely hope that firm and wise union will prevail in this new centre of medical defence, and that the contest will be carried to a successful termination. The medical men of Portsmouth are to be congratulated on their unanimity, and we trust that no outside doctors will be induced to accept the sweating system which these societies are endeavouring to establish. Our Portsmouth brethren will receive the hearty support of all the members of the British Medical Association, for in this high and honourable action they are fighting a battle not only for themselves but also for the general practitioners of the country.

THE MEDICAL ENTRIES IN THE PROVINCES.

By the courtesy of the officers of the several institutions, we are now enabled to complete the returns of the number of new medical students. The tutors of colleges and other officers of Cambridge University have kindly furnished returns, from which it appears that the entry of medical students there is larger than in any previous year. Up to the time of writing 151 of the 868 freshmen just matriculated have indicated their intention of studying for the degrees of M.B. and B.C. Nearly 200 students are dissecting. At the University of Durham College of Medicine, Newcastle-on-Tyne, 24 new students have entered this session for the full curriculum, and 37 have joined for special classes. At Owens College, Manchester, 66 students have entered for the full curriculum, 60 for special classes, 62 for the preliminary scientific course, and there are 13 dental students. At University College, Liverpool, there are 37 new students entered for the full curriculum, 23 have joined special classes, 28 the classes in preliminary scientific subjects, and there are 11 dental students. At the Oxford University it does not appear to be possible to ascertain how many freshmen intend to study medicine. Excluding Oxford, then, it would appear that 326 new students have begun the study of medicine this session in the provinces as compared with 581 in London. The figures indicate a remarkable growth in the provincial schools, though the large share which Cambridge has in raising the total diminishes to that extent the apparent loss of the London schools. The majority, probably the very large majority, of Cambridge men, after spending three years there, come to London to take the practical clinical classes in medicine, surgery, and midwifery at one or other of the London hospitals. There are many advantages attending this procedure, and it is not likely to become less popular, but it should not be forgotten that Cambridge's gain is not all London's loss. [We are asked to state that the number of students entered for the Preliminary Scientific Course at the Yorkshire College, Leeds, is 19, and not 17 as stated previously.]

INCREASE OF DIPHTHERIA IN LONDON.

During the past few weeks the mortality from diphtheria in London has shown a tendency to increase, and last week it was higher than in any week since the end of 1893. The deaths referred to this disease in the metropolis, which had been 44 and 56 in the two preceding weeks, further rose to 76 during the week ending Saturday last, October 19th. This number is nearly double the average for the corresponding week of the ten preceding years 1885-94. The mortality was practically confined to children, 51 of the 76 deaths recorded last week being of children under 5 years of age, and 24 of young persons aged between 5 and 20 years, nearly all of whom were under 10 years of age. Only one of the 76 deaths was a person aged upwards of 20 years. After distributing the fatal cases that occurred in the Metropolitan Asylums Hospitals and other institutions to the sanitary areas in in which the patients had previously resided, it appears that 6 cases belonged to Kensington, 6 to Camberwell, 5 to Marylebone, 5 to St. Pancras, 5 to Mile End Old Town, 5 to Greenwich, 4 to Fulham, 4 to Shoreditch, and 4 to Battersea sanitary areas. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 667, and 115 new cases were admitted during the week.

AUSTRIAN OLD-AGE HOMES.

The reports of our Special Commissioner have shown, in the most indisputable and striking manner, that the treatment of the sick and aged in our workhouses needs amendment. When we find ourselves nationally at fault, it cannot but be useful and instructive to see what other nations do under the similar circumstances in which we have failed. Miss Edith Sellers's article on "Old-Age Homes in Austria," published in a recent number of the *Nineteenth Century*, should therefore be read with interest at the moment that we find our workhouse system needs in some respects reform. All persons, it seems, who have a right of settlement in Vienna—that is, about 36 per cent. of the inhabitants—may on or after their sixtieth birthday claim either a pension, or admission to an old-age home, always providing they cannot support themselves, and have no relations legally bound to support them. There is room for about 4,600 persons in these institutions, but as the demand for admission is four times greater than the accommodation the Poor-law authorities exercise a discretionary power, and give the preference to persons of good character. The homes are all large, with fine gardens attached: the inmates may retain their special little belongings, and they wear their own clothes. Men and women sleep in separate dormitories, but married couples and members of a family can be together as much as they wish during the day. Each person is given 28 kreutzers (about 5d.) a day for food, and large restaurants are kept by the authorities, at which meals are taken at separate tables, and selected from a varied, but extremely low-priced, menu. Before any of the dishes are served the director of the home and the doctor must certify that their ingredients are excellent, and that they are well cooked. Invalids and the feeble-minded

have rations. Those who are willing and able can earn small wages at carpentering, tailoring, shoemaking, etc. Each room has a *Stubenälter* or *Stubenmutter* whose duty it is to keep the place orderly and to look after the feeble. For this service a payment of 6 kreutzers a day is made. In the rooms set apart for invalids the "house fathers" and "house mothers" are replaced by nurses. Once a month in each house the officials, the clergyman, the doctors, and a representative of the Poor-law Department sit in conference, and the inmates are invited to appear before them and make known their wishes and grievances. The result of thus treating worn-out old working people as human creatures, with the likes and dislikes, the small interests, and the self-respect of ordinary folk is, as Miss Sellers says, that "it would be difficult to find a more contented set of old people." Certain improvements are suggested, such as the separation of the incurably ill from the others in a house of their own; and the dormitories are said to be too large. The cost of these free and happy homes for the aged poor compares favourably with our workhouses. In Vienna the cost per head is about 11d. a day; in London workhouses it reaches an average of 1s 4½d. In England we have tried barracks and the regimental system in treating the young and the old of the pauper class, and they have signally failed. It is time we tried now a more human system, not so destructive of the varying influences and interests of family life.

MEDICAL ADVERTISING.

In another column we print a letter from "Anglo-Celt" in which are expressed some sentiments which no doubt are more or less present to the minds of many struggling practitioners. Why should not the medical man take certain opportunities of advertising his name and calling? The clergy advertise their sermons, lawyers make orations in public, and so on. Let us consider for a moment what it is that a physician would advertise. He would advertise not goods which can be tested by appropriate means; not sermons, in which case the public, which goes to hear, is the best and final judge of that which it needs; nor again speeches which are to be estimated there and then by their success in convincing a judge or bamboozling a jury; but certain personal qualities of learning and character which cannot be estimated at the moment, which indeed at the moment may seem disproportionately simple and unpretending, and in any case are beyond the scope of even intelligent criticism, except in a very general sense. In a race of advertisers, and of advertisers whose wares cannot be directly appraised, it is easy to see who will win, and that this will be the man of the loudest voice and the fewest scruples. Again it is to be remembered that the business of a physician is carried on in secret; in such a calling it is not only necessary to lead the public to trust in our reticence and unselfishness; but, within our own ranks, to make habitual a sense of loyalty and consideration for our professional brethren, under circumstances of great temptation, when a stab in the dark can be given with deadly effect and never found out. These are not virtues which will flourish under that discipline which consists in the gospel of "the devil take the hindmost." At the same time, we think some of our correspondents may regard public lectures and the like by medical men in too censorious a light. Much depends upon the good taste and propriety shown on the particular occasion.

MEDICAL AID FREE! WITH A POUND OF TEA!

In the British Medical Journal of September 14th, p. 673, attention was called to a medical aid scheme carried on by Bryan Brothers, grocers, Dale Street, Liverpool. Customers who took "one-quarter pound of our famous tea every week" were to be provided by the firm with medical attendance free of charge. The customer received a card headed "Bryan Bros. Free Medical Aid Scheme," and containing a "List of Medical Officers for this District." A letter from one of the three medical practitioners whose names were printed on the card was published in the Journal of September 21st, p. 748. This letter stated that our correspondent had realised "the very great mistake" he had made in permitting himself to be associated with such a scheme, and that he had ceased to be in any way connected with it. We have not, however, received any communication from the other two medical men whose names appeared on the card. Are we to assume that they retain their connection with this new development of a pernicious system? To this question the profession is entitled to receive a categorical reply. The names on the card were; "J. B. Forster, Esq., L.R.C.S.I., 27, Brookfield Road North, Liverpool," and "W. M. Prees, Esq., M.R.C.S.Eng., etc., 131, Queen's Road, Liverpool."

THE LATE DR. ROBERT BROWN.

A portrait bust of Dr. Robert Brown, the distinguished botanist, was recently unveiled in his native town, Montrose, Forfarshire. Beneath the bust is a tablet with the following inscription: "Robert Brown, D.C.L. Oxon., LL.D. Edin., F.R.S. Lond., President of the Linnean Society, Member of the Institute of France. Born in this house 21st December, 1773; died in London 10th June, 1858. 'Botanicorum facile princeps.' Alex. von Humboldt." The bust is in bronze, by Mr. D. W. Stevenson, R.S.A., and was unveiled by Miss Paton, Linkshouse, Montrose, a relative of Dr. Brown's. At a reception held by the Provost, magistrates, and town council of Montrose, a large number of distinguished botanists from all parts of the kingdom were present, and among the speakers were Mr. Carruthers, ex-president of the Linnean Society, and formerly Curator of the Botanical Department of the British Museum; Mr. George B. Murray, Curator of the Botanical Department of the British Museum; Professor Balfour, of Edinburgh; Professor Bower, of Glasgow; Professor Traill, of Aberdeen; and Professor Geddes, of Edinburgh.

NURSING IN IRISH WORKHOUSES.

There is a perfect storm of indignation in Ireland over the effort to improve the nursing in the workhouses. The reason is that in a large number of them the nurses are nuns, and that any doubt as to the efficiency of these ladies as nurses is regarded as something of an insult. That was, perhaps, to be expected, and we sympathise with the Local Government Board in the difficulty with which they are confronted. For ourselves, we know that these ladies have done inestimable services in many of the workhouses, and we should be very sorry if their good influence and their devotion to well-doing were lost to the poor inmates. But we must point out that they are not trained in nursing. We observe that ill-informed persons say that some lady has been seven or more years in the workhouse, and she must therefore be a trained nurse. Of course that is absurd. A lady might be fifty years in a hospital and still be an untrained nurse; just as a man may attend lectures and hospitals and be quite ignorant of even elementary facts. There is no training in workhouses, and the sooner that this is recognised the better. The Dublin Roman Catholic hospitals have now lay nurses, and this is a sufficient answer to those who refuse to have any improvement made in the workhouses. If the guardians everywhere, including Dublin, would only look at the whole question of workhouse hospital management with a little calmness, and with less belief in their own perfection, much might be done for the sick pauper. We are sure that this will come. The guardians are rather unaccustomed to intrusion upon their easy-going system, and they resent any disturbance. But they must bow to the force of facts

Successful Vaccination.—Dr. J. Lockhart Livingston, Public Vaccinator of the Hursley Union, near Winchester, has been awarded, for the second time, the Government grant for successful vaccination.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

V.—BAILIEBOROUGH UNION, CO. CAVAN.

This house is situated in a remote country district on the outskirts of a town of the same name. It is a medium-sized house, and was more than half empty when we visited it. Dr. Ryan, the medical officer, to whose house we drove, readily accompanied us to the workhouse, and under his escort we found our way into

The Fever Hospital,

which stands to the left of the body of the house and between it and the infirmary, making with a low building opposite a square enclosure, the body of the house and the infirmary forming the other sides. There is accommodation in this block for twenty-eight patients, but on this day it was empty. The wards are on the first floor, the ground floor being occupied by two large flagged rooms not in use at present, though we thought that one might be advantageously turned into a laundry for this block. The rooms above are two long wards for male and female cases respectively, the nurses' rooms being between, and a slice taken off one ward forms the hospital kitchen. The bed spaces on each side are platforms raised about 6 inches, leaving a sunk path down the middle; this construction represents a period in social history when straw ticks placed on the ground were the beds of the inmates, a custom which still prevails in the dormitories for the able-bodied in the majority of the workhouses. The wards were empty of all furniture but a few wire-woven mattress beds on trial and the barrow bed and ticks. The walls are rough surface whitewashed, and from their appearance we should say that they offered every facility for the lodgment and subsequent dissemination of germs; no care bestowed on their cleansing could ever make them antiseptic; the roof is pitched, the rafters being exposed. The little kitchen looked thoroughly businesslike, having a modern range, one of the best that we have yet seen in our rambles.

There is a permanent nurse in charge of this block, experienced but not trained, and she is assisted by her daughter, also untrained, who at this time was taking holiday duty for the nurse in the infirmary.

The Infirmary,

in style like that of all the other houses, has 32 beds on two floors, 7 beds in each of the two lower wards, and 8 in each ward above, the lying-in ward containing 2. We saw patients in all these wards. The structure is quite unsuited for hospital purposes, the roof bare and open to the slates in the top wards, and the rafters uncelled in the ground floor rooms, the walls rough, having some remains of whitewash on the surface, small ill-fitting windows on one side, and slit openings in the opposite wall, dirty floors, dirty beds crowded together, a few tumble-down chairs, an arm missing from one, a leg unsteady on another, the inevitable backless bench, old rusty grates, mugs of milk standing by the beds, a hunk of dry bread, sometimes on the floor, sometimes in a dirty handkerchief, made a picture of neglect—or shall we say of ignorance?—that was sad to see. The whole conditions are insanitary, the straw ticks and pillows resting against the wall, missing a greasy mark or, as we heard, sometimes collecting lime mould; the continuous rail supporting the bed head enclosing a space between the wall and the uprights, the thorough cleansing of which is a task beyond the intelligence of the average pauper nurse (we saw the cakes of ancient dirt and dust under the beds); the absence of any closets or water supply inside the infirmary, necessitating the use of buckets or pails by day and night, the imperfect ventilation, these conditions fully bear out the statement of the medical officer in his report: "The infirmary is quite unfit for its purpose; no alteration will make it suitable." Ledges, floors, benches, walls, patients, all stood in need of a thorough cleansing. As we only saw the one basin and towel in each ward for the patients, we were not surprised that they looked in want of a good wash. As we entered the male ward

An Old Man,

hearing a strange voice, stood up, and saluting in military fashion said, "Can you tell me why I am shut up in prison? I have served my Queen and country well, I have my discharge and pension, but my liberty is taken from me as though I were a felon. Will you please tell me why it is?" The doctor, in explanation, told us that the man is a pensioner, but being friendless and old he has no other refuge than the house; that he pays his pension to the guardians, and he has a few indulgences—extra tobacco, tea, etc.—but since by the general orders he cannot go beyond the small yard attached to the infirmary, he is, in fact, that which he states himself to be—a prisoner. And this is the condition of all the aged, infirm, and sick, who are forced by stress of circumstances into the workhouse; they are worse fed, clothed, and housed, than criminals. We denounce the whole system as inhuman and barbarous, unworthy of a civilised country, and we will not cease to clamour for justice for the poor voiceless paupers and the old soldier seated on his hard wooden bench grieving over his wrongs.

The other Patients,

many of whom were in bed, included some serious cases—an abdominal tumour, a man suffering from spinal injury, another with bronchitis, a case of hip-joint disease, anæmia, hemiplegia, and various forms of infirmity. There are no day-rooms, and, to quote again from the medical report, "the wards are too small, and the cubic space insufficient, for the number of patients who have to eat, sit, and sleep in the same apartment." The nurse (at this time absent on her holiday) is untrained; her assistants are the pauper inmates, one to each ward, and there is no night nurse. We are glad to read in the report from which we have quoted that the doctor protests against the pauper assistants, "who levy blackmail on the patients." The blackmailing of the helpless by the pauper placed in authority is known to every Poor law official, but as it is one of those abuses of which ignorance is commonly professed, we hail the fearless courage which notes the custom in a report which is published in the general press.

The Lying-in Ward

was occupied by a woman with her sickly child, placed here apart because its fretting disturbed the older patients. We judged from appearances that the case was marasmus; the little thing was much wasted, it was in a wooden cradle filled with straw; mother, infant, ward, all dirty, a mug of milk standing on a bench, and a piece of bread on the floor, were not suggestive of scientific feeding. *Apropos* of milk, we may mention here that it is served out once a day, and stands uncovered in the wards for the use of the sick. The circumstances surrounding this infant were not conducive to recovery. The confinements average ten in the year.

The Epileptics and Idiots

are placed in the cells, which form the blocks at each end of the infirmary. These cells differ in no respect from those used for prisoners, except that they are unlocked during the day; a square flagged cell, whitewashed walls, slit in the wall for air, light and ventilation; a heavy door with pendorous bolt, crib beds filled with straw for the "dirty cases," and barrow beds for the less helpless two patients in each cell, no means of warming these cells in the winter, but the borrowed heat from the fire in the corridor. We asked ourselves whether a trick of time had carried us back to the eighteenth century. The pathetic look of the hapless creatures, as they stared at us out of the cribs haunted us for a long time; the darkness, the confinement, the want of employment, the stone yard for exercise, all seemed cunningly contrived to send them out of their minds. The attendants are pauper inmates, and this department is locked at 7 P.M. Here, again, we found the pails and buckets in the cells; one most offensive case gave quite sufficient proof that this class did not receive skilled nursing. We found

Paupers and their feeding troughs

The Aged and Infirm

in their usual locality in the wings of the body of the house. We hesitate to repeat the same tale of dreary wards, dark and ill-lighted, destitute of comfort, noting the same listless group of aged inmates, the same want of cleanliness or of means for personal washing, lest our readers should think that we are filling up blanks from our imagination; but in this case we must even put in the shadows in darker colours, for it is hard to picture a more comfortless place than these wards for the old people. They are approached through day-rooms having mud floors, a long table at one end and a bench being all the furniture in these rooms. The whole ward was dirty, and smelt so, and the patients showed in their persons negligence and untidiness, but who could blame them when they had one basin and a towel to go round, no bath or lavatory, or decently clean clothing? There are 15 beds in these dormitories.

The only Bath

we saw was one in the male probationary ward; this answers to the tramps' wards in England, but from its appearance and odour we should say that it was put to other purposes to that for which it was intended. In all sanitary apparatus this workhouse is quite behind the times; pails and buckets are used all over the place, and outside there are privies which being at some little distance would not be available for the aged or infirm in bad weather. The privies are in a highly insanitary condition; no water is laid on inside the infirmary or the house. The water supply is taken from the lake; there is also a well in the precincts; the drinking water is drawn from the well. The drainage is into the lake and also into cesspools.

The Nursery

occupies a portion of the low building facing the fever hospital. It is a very dark stone-paved room, lit by small windows; it was more like a shed than a room, having rough stone walls, roof open to the rafters and slates, and a rusty grate. We saw about eight infants with their mothers; there was no evidence of nursing or supervision, and the condition of the infants appeared in no respect better than that of the children in the wayside cabin. To say that they were dirty and neglected is to use a mild term; a few wooden cribs filled with straw, infants in them; slatternly untidy mothers, with babies in their arms; some half-rinsed cloths on a string. At the other end of the room the beds used by the mothers at night. Needless to say, nothing to amuse the children. No bath or sanitary arrangement for this department, so that it is no wonder that neither infants nor nursery looked as though they were washed. We turned into

The Dining Hall.

As the dinners were being served a few old men came in at one door, a few old women and children at another; they stood around the feeding troughs out of which they took the food, presumably porridge. Our illustration shows the feeding troughs, but in this case the inmates were standing to take their meal. No grace was said, no officer appeared to be present; it was like the feeding of animals, and not of human beings. The kitchen at the end of the hall was indescribably filthy; refuse, dirty straw, and cats were in the corners, the table was black with grease and dirt, the few utensils lying about were in the same condition; the walls and pitched roof black with grime and smoke, and the presiding genius of the kitchen, a male pauper, was in harmony with his surround-

ings. The laundry opposite was in the same condition—a broken sloppy floor, tubs of dirty water, a copper of which the brickwork was breaking down, no mangle or wringer; we could hardly believe that it would be possible to do any work in such a place.

RECOMMENDATIONS.

It is difficult to make any suggestion. Our readers will agree with the medical officer that the "infirmary is quite unfit for its purpose;" hence to suggest alterations of structure which will involve expenditure is only recommending a course that would be wasteful of the ratepayers' money. It seems to us that the best plan would be to make use of the fever hospital temporarily as an infirmary, making such improvements in the way of water supply and closets as would make it serviceable, and that a temporary building be erected for the infectious cases. With regard to the management, very much might be done to improve the cleanliness both of structure and inmates by efficient, energetic officers, who should be determined to do their duty in the face of almost superhuman difficulties. It would be possible if a larger staff were employed, both in the infirmary and the body of the house. The lunatics' condition requires the attention of the central authority, but until other and more humane arrangements are made for them there is nothing to prevent the guardians doing away with the cells and appointing paid attendants to take care of them. In the name of humanity we trust that the matter will have their immediate attention.

THE IRISH WORKHOUSE INQUIRY OF THE "BRITISH MEDICAL JOURNAL."

WE are glad to see that the Irish papers continue to draw attention to our reports on the Irish workhouse infirmaries, and the *Irish News* says: "The conductors of the BRITISH MEDICAL JOURNAL are doing real service in the interest of the Irish poor who from want or sickness have to seek the shelter of the workhouse or infirmary. The Journal has gone to the expense of appointing a Special Commission to report on the administration of these institutions in Ireland. The Commission has only been a short time at work, but already it has made known the result of its investigations in several unions. The instalment relating to the Cootehill Workhouse is certainly interesting reading. There is no suggestion that this workhouse is any better or worse than others of its class throughout the country; but the squalor and miserable surroundings of the inmates, both healthy and invalid, as pictured in the report, is, to say the least, no credit to the efficacy or humanity of our present Poor-law system. It has been the custom of the members of the Commission to give the guardians the benefit of the experience acquired in the course of their inspection by way of suggesting improvements, and it is, perhaps, the strongest commentary on the Cootehill Workhouse building that they found it so unsuitable in every way that they hesitated to make any recommendation."

THE COVENTRY BOARD AND THE NIGHT NURSE.

WE imagine that it is not often that a paragraph of the BRITISH MEDICAL JOURNAL finds itself doing duty as a handbill to summon an indignation meeting to protest against the action of a public body; such has been the use made of the note we made on the action of the Coventry Board of Guardians in refusing to appoint a night nurse for the infirmary. We are gratified to know that we have been of considerable use in aiding the people who have championed the cause of the paupers in the workhouse to carry their point. At the last weekly meeting of the Board it was proposed, seconded, and carried that a "certificated night nurse be appointed for the infirmary."

NURSING AT THE BIRKENHEAD WORKHOUSE.

THE Committee selected to inquire into the report made by Dr. Stansfield, the medical officer, respecting the alleged insufficiency and inefficiency of the nursing staff has met and heard both the doctor and the nurses. From the evidence it appeared that there were 241 patients and 5 nurses; under these circumstances we are not surprised to read of any number of irregularities and mistakes on the part of a nursing staff that is set to do such an impossible task as to nurse 48 patients as the share of each nurse. The Committee regret the publicity that Dr. Stansfield has given to these complaints against the nursing staff, and, whilst admitting the truth of his statements in the main, remark that the reforms at which he aimed might have been easily obtained by quieter methods. Our experience is, on the contrary, that it is only by giving continued publicity to the medical officers' reports that the reforms at which they aim are accomplished.

THE DRUG TRADE IN THE UNITED STATES.—According to the *Pharmaceutical Era*, there are 36,362 retail drug stores in the United States, the ratio of population to each being 1,199, taking the figures of the 1890 census as a basis. It is estimated that in all probability there are 50,000 registered pharmacists, assistants, etc., employed in these stores. It is also estimated that there are in the United States over 2,000 establishments, with a capital of more than £20,000,000 engaged in the manufacture of drugs and chemicals.

WATER FILTERS.

WE published on September 21st last an abstract of the tables in the report recently issued by the Prussian Army Medical Department, regarding the trials of water filters which have been conducted for them during the last three or four years. Those relating to the Berkefeld filter, a candle filter made in the Pasteur form, but of infusorial earth, were given in this report in the fullest detail. Briefly summarised, they showed that in a three years' continuous trial 37 specimens of this filter were set to work. As we stated in our abstract, "the output was in almost all cases found not only to be initially very high, but also, with periodical cleaning at short intervals, to remain so for long periods." In regard to their sterilising capacity, it was shown that 6 out of 37 remained unbroken and capable of preventing the passage of microbes at the end of their respective trials, varying from twelve days to three months. Four of the remaining 31 permitted the direct passage of microbes from the outset; 5 did so before the end of their respective trials, varying from five days up to three or four months; 1 passed microbes during its trial within eight to ten hours of sterilisation; 3 did so from the outset within twenty-four hours of sterilisation at some time previous to the termination of the trials, varying from five days to seven or eight months. The author accordingly states that it is necessary for these filters to be sterilised by boiling at least once a day; and he recommends for cases where they may be working during the night as well as the day that they should be sterilised twice every day. The process of sterilising is stated to take from an hour and a-half to two hours, it being risky to put the tube into water which is already boiling, or to use it after sterilisation before it has sufficiently cooled, owing to its liability to develop minute flaws. In regard to the mechanical strength of the filter tubes, 27 out of the 37 were broken during their respective trials, varying from nine days to seven or eight months.

We have received from the Berkefeld Filter Company, Limited, of London, a letter dated October 16th, in which they characterise our summary as inaccurate and injurious to their business interests. The letter does not give a single particular in which it is alleged that the results these tables of trials of the Berkefeld filter in actual use have been incompletely or unfairly stated. On the other hand, it attributes to the author of the report a statement that one of their patterns is "a model filter," when the statement in the original is that the filter in question is, in contradistinction to other types of the Berkefeld filter, "the normal model," and is so described in the subheading of the paragraph. It quotes a statement in the report that the processes of cleaning and sterilising used in the trials tried the filter severely, and that the maker described them as "flaying" the tubes; but it omits the author's statement that these processes were necessary, and that the maker's comment was made in jest. It states that 48 tubes were successfully subjected to "a severe test," but it omits to explain that this test consisted in passing muddy water through them for an unstated time, and finding that after the indefinite number of seconds or minutes occupied in the process the filtrate was sterile—a test which Dr. Sims Woodhead and Dr. Wood have shown to be endurable by filters incapable of preventing even the direct passage of microbes. The Company quote further the opinion of Dr. Flugge that the results of the tables as summarised in our abstract—the fairness and accuracy of which are not disputed—are such as to "justify confidence and speak decidedly in favour of the Berkefeld filter." That is, as Dr. Flugge points out, a matter for the decision of the reader.

We take this occasion to repeat to makers of filters the warning which we have previously expressed that the time during which the sale of inadequate filters or of filters offered under unfounded claims will be permitted is, in our opinion, rapidly drawing to an end. The interest which public health has in the matter is such that materials for purifying water, like those for nourishing and healing the body, must be sold for what they are, or not at all. As we have previously stated, a reasonable time should be allowed for the withdrawal from the market of inadequate filters and unjustified professions on their behalf, and then some effective action will be called for; and we trust that in this interval

the makers of filters will spontaneously render unnecessary the task of further interference. At the present time the demonstrated standard of efficient filtration appears to us to be the Pasteur filter; and it is not the least valuable of the legacies which the great man who has just passed from his work has bequeathed to humanity. There is no reason that it should remain alone in this respect. The condition of other appliances being introduced and accepted as means of combating waterborne disease is that the efficiency which Pasteur has secured be realised.

In connection with the same report, Mr. Gustav Bischof writes to us under date October 18th, respecting the experiments of Dr Plagge in 1885 on Mr. Bischof's spongy iron filter. Dr. Plagge states that these experiments were carried out in the presence of the inventor, and showed the filter to be inefficient. While not asserting that his filter prevented the passage of micro-organisms, Mr. Bischof alleges gross carelessness on Dr. Plagge's part in the conduct of the experiments. Considering the date of this research, and the absence of exact published details, the matter must rest here so far as we are concerned.

Mr. Bischof also takes exception to the report of Dr. Sims Woodhead and Dr. Wood. He considers that it would have been better for these gentlemen to have experimented upon a somewhat larger filter, and he objects to their statement that they found little evidence to justify the statement that spongy iron does not favour the growth of low germs of life in the same way as animal charcoal and porous charcoal blocks do. The first objection can hardly be seriously sustained. In support of the second, Mr. Bischof quotes the experiments of Dr. Percy Frankland in 1886, in which the spongy iron gave a sterile filtrate for twelve days, and after a month's filtration removed 99.8 per cent. of the organisms, whereas animal charcoal after a month's filtration increased the number of organisms more than fourfold. Mr. Bischof omits, however, to state that at the time when the animal charcoal acted in this way the rate of filtration was increased to nearly double that used with the spongy iron; and that while the rate of filtration was only 15 per cent. more than that used with the spongy iron, the animal charcoal was equally found at the end of twelve days to be yielding a sterile filtrate. In any case, however, these experiments have no bearing upon domestic filters, as the materials were in each case passed through a sieve of 1,600 meshes to the square inch, that is, nearly as fine as ordinary Portland cement; and, as Mr. Bischof points out, it has not been found practicable to employ for domestic purposes materials so finely divided. Mr. Bischof also overlooks the fact that Dr. Sims Woodhead and Dr. Wood were not content with observing that the water from the two spongy-iron filters examined gave on the fourth day at least ten times as many germs as were contained in the tap water, but made special determination of the extent, if any, to which the life of a test micro-organism was inhibited by the filter, as suggested by Mr. Bischof. They found that after a suspension of the cholera bacillus had been passed through the filter, sterile water passed through it became polluted with that organism for eight days the limit of the experiments, a circumstance which shows that, so far from preventing the contamination of water, this filter is liable, when once infected, to pollute for a considerable time any pure water which may subsequently be passed through it, thereby, in the words of the report, "enormously increasing the risk of infection when any of the water used happens to have been infected."

DEATHS UNDER ANÆSTHETICS.

Chloroform.

We have received from Mr. J. S. Bolton, Junior House-Surgeon, the following report of a death under chloroform which occurred at the Bolton Infirmary on October 3rd. The death occurred during the operation of excision of the upper jaw by Dr. Robertson. The patient, a woman aged 43, was suffering from advanced cancer of the right maxilla. On careful examination nothing was found to contra-indicate the use of chloroform, which was administered by Dr. S. H. White, *locum tenens* House-Surgeon, at first on lint and then when the conjunctival reflex was lost, by a catheter in the nostril attached to the efferent tube of a Junker's inhaler. At this stage the operation was commenced, but the patient winced, whereupon the catheter was withdrawn and chloroform again applied on lint, when it was noticed that the patient had ceased to breathe. Artificial respiration was at once commenced, and was kept up without avail for forty minutes. Faradisation of the phrenics and hypodermic injections of ether were used as adjuvants. At the *post-mortem* examination the heart was found to be much laden with fat, but the muscle was not involved. The rib cartilages were markedly ossified, which greatly impeded the efforts made for her recovery.

SMALL-POX AND VACCINATION IN MANCHESTER IN 1892-94—XXII.

Dr. Niven, in submitting his first annual report on the health of the city of Manchester, has to record the continuance of the very serious prevalence of small pox, which comprised 1,007 cases in the period 1892-94 the attacks notified in the three years being respectively 118, 607 and 282. The organisation in Manchester is so perfect that almost cent. per cent. of the cases found isolation in hospital, the exact number being 996, leaving only 11 attacks not removed to hospital. The disease was centred more particularly in Central and North Manchester, the locality of common lodginghouses in the former portion of the city being specially affected. The movements of tramps are credited with having to some extent contributed to the spread of small-pox, the year 1894 witnessing 11 reimportations, the means of getting revaccination performed at common lodginghouses wherein cases had arisen causing much concern by reason of their ineffectual character.

Dr. Niven would wish to see all common lodginghouse-keepers under the necessity of demanding evidence of recent vaccination on the part of all clients for shelter. He states that there seems to be a growing disposition to neglect the protection afforded by revaccination in infected households, but he does not show, apparently, how far the patients suffering from small-pox in Manchester had been revaccinated or what was the nature of primary vaccination in persons attacked.

Some very useful figures are, however, given as to the different classes of persons taking small-pox in regard of vaccination and non-vaccination. Freezing of the 996 hospital cases, Dr. Niven tells us that there were 68 deaths, a mortality-rate of 7.03 per cent.; the facts for several age-groups being as follows:

Age Periods.	Vaccinated.			Unvaccinated.			Doubtful.		
	Cases.	Deaths.	Mortality per cent. of Cases.	Cases.	Deaths.	Mortality per cent. of Cases.	Cases.	Deaths.	Mortality per cent. of Cases.
0—5	1	—	0.00	25	8	32.00	1	—	0.00
5—15	86	—	0.00	35	7	20.00	11	—	0.00
15—25	262	2	0.76	23	5	21.74	9	1	11.11
25—45	422	26	6.16	16	5	31.25	19	4	21.05
45—65	65	6	9.23	2	2	100.00	11	1	9.10
65+	5	—	0.00	1	—	0.00		1	50.00
All ages	841	34	4.04	102	27	26.47	53	7	13.31

From these data we see that up to the age of 15 years the vaccinated sufferers were proof against death by small-pox; that those doubtful as to vaccination were in like happy case, their vaccination, if ever performed, having apparently faded away. At no age group is the mortality among the vaccinated as high as 10 per cent., whilst three-quarters of the mortality among the unvaccinated occurs in persons under 25 years. Taking all ages together, the death-rate in the unvaccinated was to the vaccinated at 6 to 1. It is the oft-repeated tale of disaster in the unprotected class of sufferers.

Had the rate of mortality in the vaccinated class been identical with that in the class of unvaccinated patients, the deaths occurring would have been *not 34 but 222*.

Dr. Niven reports that in 1894 there were 63 cases in which the diagnosis of small-pox was erroneously made by the certifying practitioners; in other instances small-pox was in question, though not suspected; and in view of the evidence as to the mistaken diagnosis of medical men in the matter, Dr. Niven deems it an urgent duty of medical schools to provide instruction in the diagnosis of small-pox, the necessity for practical acquaintance with infectious diseases being made obligatory at examinations.

PROPOSED HOSPITAL FOR INFECTIOUS DISEASES NEAR DUBLIN.

The sanitary authorities in Dublin are promoting a scheme for a new hospital for infectious diseases, to be erected outside the city. The institution is to be erected and supported by a levy on the rateable property of the associated Poor-law unions, and in the event of an epidemic, temporary hospitals may be established. At the conference which was held it was stated that the cost of maintenance would be about £10 000 a year. The proposal has already brought out much opposition, and it is, we are informed, not at all likely that it will be carried out in its present form. Everyone admits that it is advisable to remove small-pox or cholera cases from the city; but the ratepayer looks with alarm upon a scheme which will add £10 000 a year to the rate burden to meet emergencies which may not arise for many years. The general feeling is, it is stated, fairly expressed by the resolutions of the Dublin Sanitary Association, which are as follows:

1. The scheme in question would entail a cost altogether out of proportion to its probable beneficial effect upon the public health.
2. It has not been shown that the infection of any infectious fever, except small-pox, crosses wide air spaces, and so the proposed legislation would in effect have reference to one disease only, and that a disease absolutely controllable by periodical vaccination.
3. The proposed scheme would very injuriously affect the interests of the great medical school of Dublin by interfering with the teaching of fever and its treatment by the first clinical physicians in the city and by throwing obstacles in the way of students learning fever and its treatment.
4. The dislike of patients to go and of parents to send their children to hospitals situated at a distance, and specifically called "isolation" or "fever hospitals," would lead to concealment of infectious disease and to its consequent spread in the homes of the poorer classes.

OPENING OF THE MEDICAL SCHOOLS:

Meath Hospital, Dublin.

Proposed Pathological Institute.

The introductory address at the Meath Hospital, Dublin, was delivered by Dr. E. Lennon, one of the physicians. In the course of his remarks, he advocated the establishment of a central pathological institute in Dublin, and suggested that this work might well be undertaken by the Royal Academy of Medicine. The Government had granted aid for the furtherance of medical investigation in other portions of the kingdom, and he did not see why the same should not be extended to Ireland. He calculated the cost at £2 000 for the first year, and £1 500 a year subsequently. He thought the universities, licensing bodies, and the corporation ought to subscribe to support such a project. There would be a further income from fees from students, from the examination of animals, and from special courses in bacteriology.

Dr. W. G. Smith (President of the College of Physicians) who presided, thought the forecast somewhat utopian.

Sir Thornley Stoker, President of the College of Surgeons, thought the key to the position lay in the hands of the University of Dublin. It would be delightful to believe that the numerous opposing bodies would co-operate in the somewhat Arcadian manner suggested by Dr. Lennon, but his experience led him to think that such a thing was not probable.

Sir W. Stokes believed that with an earnest effort on the part of the profession, the bodies indicated as bodies that should co-operate in this great philanthropic purpose would see the wisdom of uniting for so great and glorious an object. A vote of thanks to the lecturer terminated the proceedings.

St. Vincent's Hospital, Dublin.

The Fifth Year.

Mr. R. T. Tobin delivered the introductory address at this hospital. Speaking of the fourth and fifth years work of students under the new scheme, he pointed out that in his opinion the student did not spend his time to advantage. In place of being relegated to the hospital for his training during the second period, he was obliged to attend theschools for theoretic lectures in medicine and surgery, and for examinations in connection with these lectures, and these so dominated his views that he spent his time in hospital, not watching the changes in his patients, but on the look-out for ready-made answers to questions. If urged to make records of cases he did so reluctantly, for he knew that from an examination point of view it did not pay, and if towards the conclusion of his course he was offered the position of resident pupil in a large and busy hospital, he often refused it because he was going in for his "final," and, of course, the one thing essential was to pass. His medical education, therefore, notwithstanding a large amount of hospital attendance, was literary rather than practical. Mr. Tobin urged that hospital teaching should be made a true education by relegating students altogether to the hospitals during the second period of study. A vote of thanks was passed to the lecturer for his address.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A meeting of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held on October 23rd; Mr. T. Holmes, Vice-President, in the chair.

A letter was read from the Secretary of the Royal College of Surgeons, in reply to a letter from the Secretary of the Fellows Association, forwarding a copy of a resolution in reference to the conduct of the business at the meeting of Fellows on July 11th. The Council desired to point out that the meeting of Fellows was held and conducted in strict accordance with the regulations appertaining to the meetings, and that, as there were no notices of motion on the agenda, no discussion could properly take place, the regulations of the meeting requiring previous notice of twenty-one days.

After some discussion it was decided to reply in the form of the following resolutions, which were proposed, seconded, and unanimously carried:

1. That the Committee of the Association of Fellows regrets to learn that, in the opinion of the Council, the last meeting of Fellows "was conducted in strict accordance with the regulations appertaining to these meetings."
2. That this regret is based upon the belief of the Committee that when the regulations for the Fellows' meetings were first drawn up it was intended by the framers to give the Fellows the opportunity without definite notice (a) of making any observations necessary on the minutes, (b) of asking for any further information desired from the Council on any topic contained in the agenda, (c) of giving notice of motion for a future meeting, (d) of discussing any of the subjects dealt with in the Council's report.
3. That if the present regulations do not provide for the opportunities referred to in the preceding resolution, the Committee would respectfully suggest to the Council that the regulations should be modified in the direction indicated.
4. That a copy of the foregoing resolutions be forwarded by the Honorary Secretary to the Secretary of the College for presentation to the Council at its next meeting.

A communication was read from the Secretary of the Society of Members, and a resolution was adopted to the effect that it is undesirable that the Association of Fellows should take any conjoint action with the Society of Members in regard to their resolutions which the latter body proposes to bring forward at the meeting of the College on November 7th.

It was also unanimously agreed that the question in regard to the admission of women to the examinations at the College was not one upon which the Association as an association was called upon to express an opinion. It was further decided not to bring forward any resolution on behalf of the Association at the ensuing annual meeting.

A resolution was passed fixing the annual general meeting of the Association for Wednesday, November 13th, 1895.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

Perthshire Branch.—The winter meeting of this Branch will be held in the Station Hotel, Perth, on Friday, November 1st, at 3.45 P.M., under the presidency of Dr. Leigh Hunt, who will deliver an address. The ordinary business of the Branch, election of officers and members, treasurer's statement, etc., will then be taken. The usual dinner will follow in time to permit of country members returning home by the evening trains.—A. R. Urquhart, Honorary Local Secretary, Perth.

South-Wales and Monmouthshire Branch.—The next meeting of this Branch will be held, by the kindness of Dr. Pringle, at the County Asylum, Bridgend, on Tuesday afternoon, November 10th. Members are requested to give notice of communications to be brought before the meeting before November 3rd, to D. Arthur Davies, M.B., Swansea.

Metropolitan Counties Branch: North London District.—The first meeting of this District will be held at the London Temperance Hospital, Hampstead Road, N.W., on Thursday, October 31st, at 4 P.M. Sir W. O. Priestley will preside. Dr. W. F. Cleveland will read a paper On the Prophylactic Clothing of the Body, chiefly in Relation to Cold. The District Committee will meet at 3.45 P.M.—Hugh Woods, Honorary Secretary.

South-Eastern Branch: West Surrey District.—The next meeting will be held at the County Hospital, Guildford, on Thursday, October 31st, at 4 P.M.; Dr. J. P. A. Gabb, of Guildford, in the chair. Dinner at the White Lion Hotel at 6 P.M.; charge 6s., exclusive of wine. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends. Agenda: Arrangements for next meeting. Papers: Mr. Stanley Boyd (London): Some Surgical Cases of General Interest. Dr. Montague Murray (London): Hydrochloric Acid in the Diagnosis and Treatment of Chronic Gastric Disorders. Members desirous of exhibiting or reading notes of cases are invited to communicate at once with the Honorary Secretary, Alex. Hope Walker, The Common, Cranleigh.

Staffordshire Branch.—The twenty-second annual general meeting will be held at the North-Western Hotel, Stafford, on Thursday, October 31st, at 4.30 P.M., when an address will be delivered by the President-elect, Dr. G. Reid. Members and friends will dine together at 6.30 P.M.—G. Reid, General Secretary, Stafford.

North of Ireland Branch.—The autumn meeting of this Branch will be held in the Royal Hospital, Belfast, on Thursday, October 31st, 1899, at 12 noon. Gentlemen who wish to read papers, show patients, or bring any other business before the meeting, will kindly communicate, as early as convenient, with John Campbell, M.D., F.R.C.S., Honorary Secretary, 21, Great Victoria Street, Belfast.

Southern Branch: South East Hants District.—The next half-yearly meeting of this District will be held at the Medical Library, 5, Pembroke Road, Portsmouth, on Friday, November 1st, at 4 P.M. Agenda:—Cases: Pityriasis Rubra; Eye Cases; Case for Diagnosis; Mycosis of Pharynx, etc. Anthropological Specimens: Skulls from Australia, New Zealand, etc. Pathological Specimens: Dermic Horn; Bowel from Fatal Case of Carbolic Acid Poisoning. Microscopic Specimens: Epithelioma of Œsophagus; Mycosis of Pharynx. Communications: The Influence of Large Doses of Arsenic on Chorea, J. R. Robertson, M.D.; A Few Important Details in Aseptic Surgery, H. E. Counsell, F.R.C.S. Notices of Motion: To be proposed by Dr. Pearse, and seconded by Mr. Lord: "That this meeting recommends the Bill of the Parliamentary Bills Committee of the British Medical Association relating to midwifery nurses and their registration, and cordially endorses the vote passed at the annual meeting of 1896 in support of Mr. Lawson Tait's amendment—namely, 'That we the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act of 1858 as now existing.'" To be proposed by Dr. Pearse and seconded by Dr. Lord: "That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties, and to devote a portion of the income and funds of the Association for these purposes."—C. C. Claremont, Honorary Secretary, 57, Elm Grove, Southsea.

Bath and Bristol Branch.—A special meeting will be held in the Medical Library, University College, Bristol, on Wednesday evening, October 30th, at 7.30, Carey Coombs, M.D., President. Alteration of rules:—Dr. Michell Clarke will move the adoption of the following rule: "That papers shall not exceed twenty minutes in delivery, and that each subsequent speaker shall be limited to ten minutes." Dr. Markham Skerritt will move to alter Rule vi as follows: "After 'year' to insert 'always excepting that no member shall so retire who has not served upon the Council for the full term of four years.'" The following communications are expected: P. Watson Williams, M.D.: The Thyroid Gland and Graves's Disease. J. G. Swayne, M.D.: Cases of Induced Premature Labour in certain Diseases of the Mother not obstructing Delivery. George Parker, M.D.: 1. Perforation of Appendix in Enteric Fever. 2. Fertyphilitis; Portal Pyæmia. J. Michell Clarke, M.D.: 1. Sequel to Case of Trephining to relieve Symptoms of Cerebral Tumour. 2. Case of Birth Palsy in which an Operation was performed.—J. Michell Clarke, Clifton, W. M. Beaumont, Bath, Honorary Secretaries.

MALAYA BRANCH.

The usual monthly meeting of this Branch was held in the Raffles Museum, Singapore, on July 6th; the Vice-President (Dr. Simon) in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Representative on Council of Association.—The Hon. Secretary read a communication received from the General Secretary, asking the Branch to appoint without delay a representative to act upon the General Council of the Association. Dr. Simon proposed that Dr. Ellis be elected the representative of the Branch. This was seconded by Dr. Leask, and passed unanimously.

Notice of Motion.—Dr. Lim Bom Keng gave notice that at the following meeting he would move:

That this Branch of the British Medical Association do consider the proposed Regulations for Registration of Births and Deaths with special reference to Clause 18, and lay their views before the Government.

Dr. Jansz seconded the motion.—Dr. Middleton considered that as the subject was of great importance, a whole evening be devoted to the question. He accordingly proposed that a special meeting be held for this purpose.—Dr. Lim Bom Keng seconded the proposal, which was put to the meeting and carried. It was decided to hold a special meeting upon July 20th.

Communications.—Dr. Croucher read notes of some cases of Acute Dysentery treated with Sulphate of Magnesia. Dr. Leask strongly recommended treatment with sulphate of magnesia in inflammatory cases with high temperature and abdominal pain. Both ipecacuanha and sulphate of magnesia acted strongly upon the liver, hence their beneficial effect. When small specks of blood were seen in the motions, Dr. Leask prescribed rectal injections of solutions containing nitrate of silver. Dr. Simon considered that the action of sulphate of magnesia was due to its relieving the congestion of the lower bowel, and by clearing out its contents. He advocated nitrate of silver enemata with or without ipecacuanha in certain cases. Dr. Lim Bom Keng was of opinion that the remedy in question greatly relieved tenesmus. The indication for its use was the frequency of the motions. If too frequent it should not be given. It acted best in inflammatory cases, while ipecacuanha did best in serous discharges. Dr. Fowlie supported the idea that it acted by emptying the bowels as well as by its action on the liver. Surgeon-Captain Greig advocated more extended treatment by local applications, such as injections of ipecacuanha with opium. Dr. Highet spoke of the benefits to be derived from sulphate of magnesia in inflammatory cases. In chronic cases enemata of nitrate of silver or salicylate of soda solutions were of great value.—Dr. Fowlie made some remarks upon Dietetics in the Tropics. In the discussion which followed, Drs. Leask, Highet, Bom Keng, and Surgeon-Captain Greig joined.

Votes of Thanks.—Votes of thanks to Drs. Croucher and Fowle terminated the meeting.

DORSET AND WEST HANTS BRANCH.

The autumn meeting of this Branch was held at Boscombe on October 16th, Mr. C. H. W. Parkinson (President) in the chair. Fifty-eight members and visitors were present.

Election of Officers.—The following were elected office-bearers for the ensuing year: *President:* Mr. William Rendall of Marden Newton. *Vice-Presidents:* Mr. Thomas Frederick Gardiner of Bournemouth, and Mr. William Henry Williams of Sherborne. *Honorary Secretaries* and *Treasurers:* Dr. William Vawdrey Lush of Weymouth, and Mr. Charles H. W. Parkinson of Wimborne.

Next Meeting.—It was resolved that the May meeting should be held at Sherborne.

British Medical Benevolent Fund.—A donation of five guineas was granted to the British Medical Benevolent Fund.

Address.—Dr. Radcliffe Crocker delivered an address on the Treatment of Inflammations of the Skin.

Communications.—The following communications were presented: Mr. Kinsey Morgan, A patient with Congenital Exophthalmos, Enlargement of Right Half of Head and Right Forearm.—Dr. Ramsay (1) Uterus removed for Prolapsus; (2) Specimen showing new method of Wiring Patella.—Mr. Vernon, A case of Fractured Olecranon treated by Suture.—Dr. Evans, Patient with good recovery after Suture of Patella.—Dr. Laurie (1) Removal of a large Ovarian Tumour; (2) A case of Oöphorectomy for relief of Reflex Symptoms.—Mr. Charlton and Dr. Evans, A case of Castration for Prostratic Diseases.—Dr. Ransome, The Act of Coughing.

Dinner.—The members and friends dined together at the Hotel Burlington.

SPECIAL CORRESPONDENCE.

PARIS.

Appointment of M. Pasteur's Successor.—The Constitution of the Pasteur Institute.—The Intoxicating Principle in Alcoholic Beverages.—Paris Water Supply.—Funeral of Baron Larrey.

The Council of the Pasteur Institute—composed of M. Joseph Bertrand, M. Jules Simon, Vicomte Delaborde, MM. Wallon, Brouardel, Duclaux, Grancher, Baron Alphonse de Rothschild, MM. Magnin, Christophle, and Roux—have unanimously elected Dr Duclaux Director of the Pasteur Institute, and Dr. Roux Sub-Director. M. Vallery-Radot is proposed as member of the Council as representative of the Pasteur family. The Assembly which controls the administrative council will consider these propositions.

The Assembly is composed of thirty members. The Pasteur Institute is a private not a Government institution: it is therefore self governed, but, being recognised as "of public utility," it is under State control and is attached to the Ministry of the Interior. The members of the Assembly are those who helped to found the Institute: the Assembly elects the council of administration and controls its accounts. The receipts budget is as follows: The interest on what remains of the public subscription, which amounted to £148,000, has now increased to £160,000: £80,000 was spent on the ground bought for the Institute and in building. From £600 to £1,500 was granted by the Minister of Agriculture in recognition of the service rendered by the anthrax vaccine, by the treatment of swine fever, and by the supply of tuberculin and mallein. A subvention is granted the Minister of Public Instruction to pay the salaries of such of the Institute staff as were formerly attached to Pasteur's Laboratory, which formed part of what is called the "Hautes Études." Certain profits are made by the sale of the anthrax vaccine, and others sold at a very low price to veterinary surgeons. M. Pasteur, M. Roux, and M. Chamberland relinquished all right to participate in these profits, and they realise for the Institute an income of £800. The fees paid by the pupils who attend the lectures of the Institute are also paid into the Institute treasury. Dr. Roux's antidiphtheric service is annexed to the Pasteur Institute, but has a distinct budget. This service is organised at Garches, on the estate given by the Government to M. Pasteur for the purpose of carrying on his researches on rabies. It is managed by Dr. Roux, under the double control of the Council of the Pasteur Institute and of the Minister of the Interior. Its revenue is furnished by the interest on the sum realised by a public subscription, and by a Government grant amounting this year to £3,200. Hospitals, the army, and public charitable societies are supplied with serum gratuitously. The public pay 2s. 6d. a bottle; the profits of the sale are applied to the purposes of the Institute. The services at the Institute are as follows: Practical services, consisting of inoculations, etc.; the lectures in this service are given by Dr. Roux and Dr. Metchnikoff. The pupils are of two classes, "hearers" and "workers," who are allowed to work in the laboratories. The research laboratories are placed at the disposal of investigators, whose communications are published in the *Annales de l'Institut Pasteur.* The chiefs are—M. Duclaux for biological chemistry; M. Grancher, M. Charrin, and M. Chantemesse for rabies; M. Chamberland for microbic vaccinations and practical applications. There is a morphological laboratory under the direction of M. Metchnikoff, and a technical one under M. Roux. M. Nocard, Professor at Alfort Veterinary School, directs a veterinary service annexed to the Institute. M. Duclaux is Professor at the Faculté des Sciences. The course of lectures he previously gave at the Sorbonne are now held at the Pasteur Institute, where the Sorbonne pupils follow him. The Institute was founded in 1888, and retains its constitution and characteristics notwithstanding the death of Pasteur. His pupils will carry on the work.

At a recent meeting of the Academy of Medicine M. Daremberg stated that pure alcohol at 10° is less toxic than impure alcohol, such as *eau de vie*, and above all old *eau de vie* made from wine at 10°. *Eau de vie* made from wine at 10° is less toxic than wine at 10°. *Eau de vie* is in fact wine purified. The intoxicating element in wine is not present in the part distilled, but in the residue. Red wine is more intoxicating than white wine; the latter is produced by the fermentation of the juice of grapes, whereas the red wine is the product of the fermentation of the juice, skin, and pips of grapes. It is the bitartrate of potassium which constitutes the special intoxicating principle of red wine. French beer contains 5 per cent. of alcohol: 50 cubic centimetres injected into the veins of a rabbit produced no result. The different varieties of cider, on the other hand, were generally very intoxicating. M. Daremberg injected alcohol into the veins of rabbits rendered tuberculous three days previously. Alcohol chemically pure did no harm, but *eau de vie* and wine killed them rapidly. The wisdom of giving alcohol to tuberculous patients is therefore doubtful. The toxic quality of alcoholic drinks is not thoroughly evident when there is neither kidney nor liver trouble. Healthy subjects easily eliminate these toxic substances, which even under certain circumstances may be valuable as occasional stimulants.

At a recent meeting of the Municipal Council a resolution was passed that the administration of the Municipal Council be called upon without delay to lay before the Council the plans for bringing to Paris spring water in sufficient amount to satisfy the domestic needs of the capital until 1920; to suggest means of preventing or regulating the use of spring water in water closets; to hasten the construction of the filtering and decanting tanks for Seine water below Paris. It was also resolved that the administration be called upon to protect the Seine from contamination from the Corbeil as far as Choisy le Roi waterworks. The Council, in accordance with M. Levrand's proposition, calls upon the administration to make trials of different means for the limitation of the supply of spring water during the exceptionally hot summer weather; to construct without delay fresh reservoirs; to hasten the execution of the schemes proposed for giving Paris additional water supplies; also to hasten the carrying out of the system of double canalisation for bringing Seine water and spring water into the Paris houses, each system of pipes being entirely separate.

The funeral of Baron Larrey took place on Friday, October 18th. Four funeral orations were delivered: one by a mem-

ber of the Academy of Sciences, another by a member of the Academy of Medicine, a third by the general inspector of the Health Society, the fourth by a professor of the Val de Grace. The religious ceremony took place at the Val de Grace, and the body was afterwards placed in the family mausoleum at Père la Chaise.

FLORENCE.

Midwives in Italy.—Exhumation of the Remains of Giuliano and Lorenzo de' Medici.—Excavations in Florence.—Grandi, the Child Strangler.—News.

In addition to a National Federation of Midwives there are at least seven societies of midwives in Italy, all of which are sending representatives to the third National Congress of Midwives. Among the subjects proposed for discussion are the proposed abolition of midwives and the subversion of social order. The connection between the two heads of this subject will not be obvious except possibly to midwives. The status and duties of a midwife are well defined in the Official Sanitary Regulations:

No one shall attend a woman in childbirth who has not completed her two years' course of studies at a maternity hospital, passed her examinations, and taken the diploma. The diploma must be registered at the office of the commune in which she lives. The midwife must call a doctor if the labour or puerperium is abnormal. In the absence of the doctor she must advise the Sindaco (Mayor) of the abnormality. If she has attended a case of puerperal fever she must within five days disinfect herself, and not attend another case without the sanction of the sanitary officer. She must keep a register of births. She must attend the poor gratuitously. She must wash her hands frequently in boracic acid, always wash the genitals before making an exploration, and perform the latter as seldom as possible. After the birth she must examine the placenta, irrigate the vagina with solution of boracic acid, and maintain great cleanliness for a period of at least eight days. The infant must be washed with tepid water that has been boiled, and its eyes bathed with antiseptic solution.

Prior to the second half of last century the attendance on childbirth appears to have been exclusively in the hands of women, and one of the few books for the instruction of midwives in the performance of their duties was by Scipione Cercurio. Besides giving full instructions for the performance of Cæsarean section, this work treats of the origin of monsters, on the influence of the stars on pregnant women, and on conception by devils. Systematic instruction in the mechanism of labour was organised in various Italian towns, notably Bologna, Milan, Turin, and Florence in the latter half of the century, and was conducted by means of models of the pelvis and dummy infants, and by demonstrations on the cadavers of women who had died in childbirth. At that period the qualifications of midwives varied greatly in different parts of Italy. Thus, some were requested only to watch for abnormalities, and inform the doctor of them. Others were required to perform Cæsarean section, and an edict was issued in Sicily whereby neither barbers nor midwives were allowed to attend women in labour unless they were capable of performing Cæsarean section. In other parts, the chief qualification was a knowledge of reading and writing, so that the midwife might administer the sacrament in case of necessity. An opuscule was written about this time by Roncalli Perolini on a method of performing baptism *in utero* by means of a bladder of water, a siphon, an intra-uterine tube, and a vaginal speculum. With the change in requirements the mortality from puerperal fever has fallen enormously. The modern Italian midwife occupies a definite position, and seems to perform her functions without much friction. She is neither doctor nor monthly nurse, but is called upon to conduct normal labour with all the precautions dictated by our present day knowledge, and to recognise and summon skilled aid in case of departure from the normal.

On October 2nd, in the presence of Professor del Lungo, Cav. Pichi, Monsignore Athilio Giovannini, Professor Villari and others, the tomb reputed to contain the mortal remains of Lorenzo and Giuliano de' Medici was opened. Two skeletons were revealed which bore evidence in support of the accuracy of the current report. Within the tomb two wooden coffins were found, one on the top of the other. The first was short, and in a good state of preservation: the second was longer, and mouldering. The cover of the upper one bore the following inscription, roughly written in ink: "Giuliano di Pietro di Cosimo de' Medici." Within the coffin was a skeleton, with the femora and tibia flexed on the thorax. The cranium bore marks of two injuries inflicted with a cutting instrument; traces of another incised wound were found on the tibia. Giuliano, as will be remembered, fell a victim to the Pazzi conspiracy, as narrated by Machiavelli in his history of Florence. In the second coffin the skeleton was reduced to pulp; but Lorenzo is known to have been buried with his brother Giuliano, and the chief lines of the cranium were seen to correspond with those of his portrait; besides, there was a bony excrescence beneath the nose which Lorenzo is known to have had. The two crania were photographed. Thus the Florentines may rest content that they possess the mortal remains of two illustrious members of the most illustrious family connected with Florence at the time of the renaissance of arts and letters in Europe. The name Medici recalls the early connection of the family with the profession of medicine before it rose to eminence in the political, mercantile, and social world.

Excavations conducted in connection with the renovation of the archiepiscopal palace in Florence have revealed the remains of an old Roman thermal establishment in the square between the palace and the baptistry. The sanitary reforms in the centre of Florence have been the means of bringing to light extensive Roman remains at a depth of two or three metres beneath the surface.

The child strangler, Grandi, has just completed his term of twenty years' penal servitude. His head is of the characteristic criminal type, and he will pass the remainder of his life within the precincts of a lunatic asylum.

The information that a woman bitten by a sow near Liena has been sent to the Istituto Antirabbico at Rome reminds us that Italy, untrammelled by the clamour of irresponsible faddists, is ahead of us in the practical application of some of the indications afforded by recent scientific research.

Dr. Benedetto Cimino complains that while Professor Maragliano is allowed to experiment largely with his anti-tuberculous serum at Genoa, he himself is not allowed to introduce his anticarcinomatous serum into Italy. No new remedy may be used in Italy until its employment has been sanctioned by the Direzione Generale di Sanità.

CORRESPONDENCE.

THE MALARIA PARASITE.

SIR,—In most of the recent correspondence on the subject of the malarial parasite sufficient attention has not been paid to the variability of its distribution in the blood. In fatal cases it is the common thing to find that whilst in *one* organ, that is the brain, over one-third of the red corpuscles contain intracorpuscular bodies, in other organs only a small proportion contain them, though in the case of the spleen there may be many pigmented leucocytes. In these cases very few intracorpuscular bodies, or perhaps none, may be found in the peripheral blood when examined before death. Dr. Thin records a case in which the intracorpuscular bodies were found only in the intestinal vessels.

In cases which were similar but not fatal, though the intracorpuscular bodies may not have been found in the blood, pigmented leucocytes are so abundant in the peripheral blood that it is clear that the intracorpuscular bodies must have been present in some part of the body.

It seems to be generally assumed though not definitely stated that a certain proportion of the blood corpuscles are attacked and that their distribution is determined solely by mechanical principles. Instead of this it seems to be the case that the blood corpuscles in certain organs are attacked or that the attacked corpuscles accumulate in certain organs of the body whilst only stray ones are found in the general circulation.

Though I am quite aware that many competent observers have found them in the great majority of cases diagnosed as malarial, several points have to be considered in this connection:

1. Cases of acute malaria arriving in England must be of exceptional severity to have lasted so long.

2. Malaria has no definite physical signs and symptoms beyond those of pyrexia with longer or shorter intermissions, and these symptoms are common in the tropics from

filariasis, anæmia, chronic enlarged spleen, etc., without any sign of acute malaria being found after death. If all cases in which any of these conditions are found are excluded from the list, many cases of malaria will also be excluded with them, and if only those in which the parasite is found be included (as I believe is done in some places), there will be no failures at all.

3. Many of the slighter cases of malaria do not require treatment as in-patients, and consequently in a crowded hospital, where only cases of urgency are taken in only the more severe forms will be examined. In the blood of these the plasmodia will be more frequently found than in the ordinary cases.

As regards the existence of the intracorpuscular bodies, there can be no doubt that they are both numerous and readily seen in certain organs in every fatal case.

The opposition is, I feel sure, to some extent caused by the too dogmatic statements made as to their frequency. Men are constantly told that these intracorpuscular bodies are always present, and again that a child may recognise them. Ordinary observers, after examining the blood in several cases, and seeing what they know to be vacuoles, crenated corpuscles, blood platelets, etc., which closely resemble the illustrations of the nonpigmented intracorpuscular bodies, fail to see the true parasite, and naturally entertain doubts as to its very existence. In many of these cases I believe they did not see it because it was not present.

If, on the other hand, it were clearly stated that to find the bodies in an ordinary transient attack of malaria in the small quantity of blood that is examined is only rather more probable than to find filaria in the daytime in a case of filariasis, we should have a truer representation of the usual experience in British Guiana at any rate.—I am, etc.,

C. W. Daniels M.B.Cantab.
British Guiana Medical Service.

Cressington, Oct. 8th.

ARE COLLIERS EXEMPT FROM CANCER?

Sir,—In answer to the above query, I think it may be affirmed that colliers are relatively less liable to cancer than almost any other class of the community. The following considerations bear out this statement. There are few districts where cancer is less prevalent than in the great colliery centres of Derbyshire, South Wales, Durham, and Lancashire. Among the English counties having the highest cancer mortality, the colliery counties are conspicuous by their absence. Of the forty places in England and Wales where the highest cancer death-rates are known to prevail, there is not a single colliery centre.

At the same time it should be remarked that in mining districts like Cornwall, and in great quarrying centres like North Wales, the cancer mortality is as low as in the colliery districts. Moreover, in most industrial centres outside colliery and mining spheres the cancer mortality is remarkably low.

The great proneness of the agricultural community to cancer contrasts markedly with the foregoing. Roughly speaking, cancer is more than twice as prevalent in the agricultural districts than it is in the colliery, mining, and industrial centres. Of 250 men with cancer under my observation, 14 were agricultural labourers but only 1 was a collier.

As a rule, the cancer mortality is lowest where the struggle for existence is hardest, the density of population greatest, the tubercle mortality highest, the average duration of life shortest, the general mortality highest, and where sanitation is least perfect—in short, among the industrial classes; whereas, among the wealthy and well-to-do—where the standard of health is at its best and life is easiest—and among the agricultural community, there the cancer mortality is highest.

In London and its vicinity, where the wealth of the nation is clotted, there the cancer mortality is highest; and it is a significant fact that the mortality is highest of all in those parts of the metropolis where the well-to-do most abound. The average cancer mortality for all London in 1884 was 1 in 1,465; in the great industrial centres of the East End the mortality was as follows: Bethnal Green, 1 in 2,886; Shoreditch, 1 in 2,482; Stepney, 1 in 2,341; St. George-in-the-East, 1 in 2,245; Poplar, 1 in 2,173; Mile End, 1 in 2,200. In these centres the cancer mortality is as low as in the colliery and mining districts. What a contrast with the foregoing is well-to-do, easy-going Richmond, with a cancer mortality of 1 in 960! It is high time that such questions should be thoroughly investigated.—I am, etc.,

W. Roger Williams.

Preston, Oct. 19th.

Sir,—In the annotation in the British Medical Journal of October 19th, under the heading "Are Colliers Exempt from Cancer?" allusion is made to the immunity from cancer which is believed by Mr. T. Law Webb, of Ironbridge, to exist among the colliers of Shropshire, and a desire is expressed that surgeons practising in other colliery districts should state their experience on this point.

For the past fifteen years I have been practising as a colliery surgeon at Haydock, Lancashire. The population of this place was at the last census 6,585. Probably at least three-fourths of the working male inhabitants are employed in coal mines. My general recollection as a practitioner had certainly given me no reason to believe that cancer was unusually rare among colliers. However, as medical officer of health for the urban sanitary district of Haydock I have the death returns of the district registrar for a number of years back. I have taken the trouble to go through these returns for the ten years 1885-94, and have tabulated the deaths certified as due to cancer or malignant disease. The result is as follows:

Year.	Estimated Population.	Sex.	Age.	Condition of Life.	Cause of Death.
1885	6,127	M.	75	Overlooker at colliery	Cancer of stomach.
1886	6,191	M.	48	Coal miner	Epithelioma of buttock.
		M.	77	Coal miner	Cancer of stomach.
1887	6,255	M.	[illegible]	Colliery labourer	Malignant disease of elbow.
		M.	62	Farmer	Cancer of stomach.
		M.	78	Coal miner	Cancer of stomach.
1888	6,320	F.	61	Grocer	Cancer of stomach.
		F.	67	Widow of colliery engine winder	Cancer of uterus.
		F.	59	Wife of plumber	Cancer of uterus.
		F.	65	Widow of labourer	Malignant disease of bowel.
1889	6,386	M.	52	Coal miner	Cancer of rectum.
		M.	63	Coal miner	Cancer of rectum.
		F.	62	Wife of coal miner	Cancer of stomach.
1890	6,452	F.	55	Wife of coal miner	Malignant disease of uterus.
		F.	58	Wife of coal miner	Cancer of liver.
		M.	73	Pony-tender in coal mine	Cancer of liver.
1891	6,568	M.	67	Police constable	Malignant disease of intestine.
		M.	56	Farm labourer	Cancer of liver.
		F.	67	Widow of coal miner	" "
1892	6,624	—	—	—	—
1893	6,697	M.	66	Joiner and carpenter	Malignant disease of stomach.
		F.	49	Widow of colliery engine winder	Cancer of liver.
		M.	63	Coal miner	Malignant disease of rectum.
		F.	54	Widow of canal boatman	Malignant disease of uterus.
		M.	53	Coal miner	Malignant disease of liver.
1894	6,770	M.	60	Coal miner	Malignant disease of stomach.
		F.	17	Daughter of coal miner	Osteo-sarcoma of femur.
		F.	57	Widow of coal miner	Malignant disease of rectum.

Several "non residents" who died from cancer at Haydock Lodge Lunatic Asylum have not been included.

It will thus appear that in the ten years 1885 to 1894, 27 deaths were registered as due to cancer and malignant disease, including 15 males and 12 females, and that of the 15 males, 11 were employed in coal mines. In so far, then, as the district of which I have special knowledge is concerned, there does not seem to be any ground for believing that colliers enjoy immunity from cancer. However, the population of this district, as a whole, apparently have some degree of relative immunity, for the average yearly population on the ten years in question being 6,447, the annual average mortality from cancer has been 0.418 per 1,000, whereas for the whole of England and Wales for the ten years 1884 to 1893 (the annual report of the Registrar-General for 1894 being not yet available) the average annual mortality from cancer was 0.633 per 1,000. Whether this relative immunity may be due in any degree to the large proportion of workers in coal mines among the population, and any circumstances attending their calling, is more than I can undertake to say.—I am, etc.,

T. E. Hayward.

Haydock, St. Helen's, Oct. 21st.

THE INTRODUCTION OF SURGICAL ANÆSTHESIA.

SIR,—I regret to see, at page 915 of the BRITISH MEDICAL JOURNAL of October 12th, a reflection cast on the mode in which Mr. Liston received the first intimation from America of the great discovery of anæsthesia. There is no fault to be found with Sir Russell Reynolds's graphic account of the first operation done by Mr. Liston under anæsthesia in England. It gives a good specimen of Mr. Liston's manner both in speech and action; but I find in it no "grudging utterance" whatever. If Mr. Liston did bear any grudge to anyone or anything in the matter, it must soon have left him, for he immediately wrote an enthusiastic letter to his friend Professor—afterwards Sir James—Simpson, sending him at the same time an instrument for giving ether, the anæsthetic first used. This was, I am very sure, the first intimation we had in Edinburgh of the grand discovery, for if Simpson had heard of it earlier he was not the man not to have gone in for it at once. He lost no time in giving the ether a trial, and it was arranged that Mr. Naysmith, the well-known dentist and surgeon, would extract a tooth under it, and Dr. James Duncan do an operation—I think the removal of a leg in the Edinburgh Infirmary. I was then Simpson's colleague, and as he was unfortunately called away after the arrangements were made, I had to give the anæsthetic first to Mr. Naysmith's patient, and next day to Dr. Duncan's. In both cases the success was perfect.

I quite agree with what is said about the way in which the discovery was received by many members of the profession and by others; but it is not fair that Mr. Liston's well-known mode of speech should be taken advantage of to cast a slur upon his generosity and good feeling.—I am, etc.,

Currie, Midlothian, Oct. 16th. GEORGE S. KEITH.

"CISTERNS AND THE CONSTANT SERVICE."

SIR,—In connection with your remarks on the above subject in the BRITISH MEDICAL JOURNAL of October 19th, I venture to ask you to print for the information of your readers the following resolution, which after full discussion was passed *nem. con.* by the large meeting of metropolitan medical officers of health:

That this Branch is of opinion that in London storage cisterns should be retained for domestic purposes in occupied dwelling-houses supplied with water under the constant service system, and that a draw-off tap should be affixed to the rising main for the supply of water for dietetic uses.

You are aware that considerable districts in London are still supplied on the intermittent system, and it is probable that in such districts the water is not "on" for more than one hour in the day. But the houses being possessed of storage cisterns, there never need be any lack of water, assuming the sufficiency of such cisterns. In the course of the recent inquiry into the causes, etc., of the water "famine" at the East End, two hours was mentioned as the shortest duration of the daily supply of water—one hour in the morning and one hour in the evening. It must be manifest, therefore, that had domestic storage been in existence, there would have been no "famine." There is always a liability to the water being turned off, for a longer or a shorter time, in districts under constant service, and when this happens houses without storage become insanitary, and much inconvenience arises. The health officers of the metropolis, therefore, taking the facts into consideration, came to what I think to be a reasonable conclusion—namely, that it is not safe to dispense with the use of cisterns for ordinary purposes, but that water for drinking should be obtained direct from the main or service pipe. A combination of storage for use in flushing waterclosets, etc., and for the supply of water to kitchen boilers, or for the maintenance of a hot water circulating system, etc., together with such a cistern as Dr. Talbot's for the supply of drinking water would, in effect, provide what the health officers desiderate. Dr. Talbot proposes to supply the waste preventers to waterclosets direct from the main. But this plan, as I pointed out, and as Dr. Talbot himself allowed, is open to objection, seeing that the house would at once be deprived of water for sanitary purposes whenever the supply, from whatever cause, should be discontinued, whilst the reserve in his cistern would probably be insufficient to provide for the needs of the household, even allowing that people would take the trouble to flush closets, etc., by hand during the intermission of supply. I really fail to see what other conclusion was open to us than that set out in the resolution which has failed to secure your approval.—I am etc.,

Kensington, Oct. 19th. T. ORME DUDFIELD.

FEAR IN ANÆSTHESIA BY CHLOROFORM.

SIR,—During my recent holiday in England I attended several of the London hospitals and observed closely the mode of administering chloroform and the results in these institutions. It was over twelve years since I had last witnessed chloroformisation in England, and I had practically forgotten what the process there looked like. What struck me chiefly was the look of terror on the faces of most of the patients as they prepared themselves to submit to the anæsthetic—thus the stertor, the struggling, and the shallow breathing, during which I was frequently in terror lest I should indeed witness a death from chloroform. Nothing could form a greater contrast with all this than the happy anticipation of freedom from pain which, I may say, invariably characterises our patients in the East when chloroform is about to be administered for any purpose. When unconsciousness is setting in frequently a certain amount of struggling takes place, but it is hardly ever violent except in the case of the few who, unhappily, have been the victims of drink.

During the ten years I have been attached to the General Hospital, Madras, in which chloroform has been administered about 2,000 times a year, the above has been my invariable experience. During that period not a single death from chloroform occurred. I am aware that Surgeon-Lieutenant-Colonel Lawrie made a statement to the contrary at the Royal Medical and Chirurgical Society last year, but his statement was incorrect, as I informed you immediately after it was made, and he took no trouble to substantiate it. It was, however, absolutely not the fact. Two deaths occurred during the ten years while the patients were under chloroform—one from hæmorrhage and one from suffocation by stercoraceous vomit.

If Dr. Lauder Brunton would turn his attention to this immunity from danger which accompanies the use of chloroform in India some clue might be obtained towards solving its dangerousness in England. It is a point well worth the exercise of the great abilities of that distinguished therapeutist.—I am, etc.,

JOHN SMYTH, M.D.,
Surgeon-Major I.M.S., Officiating Senior Surgeon, General Hospital, Madras.

September 5th.

THE NOMENCLATURE OF THE *BRITISH PHARMACOPŒIA*.

SIR,—In the numerous papers which have recently appeared in the BRITISH MEDICAL JOURNAL, proposing certain alterations to be made in the forthcoming new edition of the *British Pharmacopœia*, I have not found any remarks on the subject of nomenclature, which appears to me well worth considering and discussing at this time.

I have met with numerous instances in the course of my professional life where I wished that it had been possible for me to prescribe certain drugs without letting the patient know what he was taking. Not a few patients are in the habit of reading the prescriptions which are given them, and become alarmed when they see such drugs as nux vomica, strychnine, arsenic, potassium bromide, chloroform water, or hydrate of chloral prescribed. They are often under the impression, which is mostly utterly baseless, that certain drugs do not agree with them, and this leads to long and tedious discussions after the consultation is practically finished.

In the old *London Pharmacopœia* a step in the right direction was taken by introducing the "pilula saponis composita" as a preparation of opium, which could thus be prescribed without the patient being aware that he was taking it. A similar useful innovation has been made in the last edition of the *British Pharmacopœia* by terming antipyrin "phenazone."

"Fowler's solution" is as well known to the public as "liquor arsenicalis;" but why should we not have such a synonym rendered official as "liquor asiaticus" or perhaps "Hevozti," after the German physician of the 17th century

who first used arsenic for ague and its sequels long before Fowler, Pearson, and Heim did so. Tinctura nucis vomicæ might have the synonym "tinctura amara" attached to it. Potassium bromide might be allowed to be prescribed as "sal alterans;" liquor strychnin as "liquor Pelletieri," after the French chemist who discovered the alkaloid in 1818, or as "liquor Ignatii" for obvious reasons. Syrupus hydratis chlorali might receive the synonym of "syrupus Liebreich," and for liquor morphiæ we might be at liberty to use such as equivalent as "liquor Sernuteri," after the German apothecary who in 1805 discovered that alkaloid; while "aqua formyli" might occasionally stand for aqua chloroformi. By adopting such or similar terms as official synonyms, many patients might be made happier, and a good deal of trouble saved to prescribers.—I am, etc.,

Harley Street, Oct. 8th. JULIUS ALTHAUS, M.D.

PROFESSIONAL ADVERTISING.

SIR,—Will you allow a provincial medical man, who was formerly a hospital physician, to say that he has read with much interest the letters appearing in the BRITISH MEDICAL JOURNAL on professional advertising, especially those of "Accipe" and "One Who does not Ride a Hobby?" Clergymen of all denominations advertise their sermons, and where they will preach in the daily papers; also, if well-known, their sermons are reported in the newspapers. Lawyers and solicitors have their speeches given for the edification of the public, members of the musical profession advertise their terms, and also have notices—good, bad, and indifferent—of their performances in the public press, but the medical profession must not even be named unless one happens to be on the "top rung of the ladder," and attending some well-known celebrity, or giving a lecture for some charitable object. If things go on as they are it will be looked on as unprofessional to have your name on a brass plate or hall door. Now as a result of this, as well as being overstocked, younger members of the profession take to advertising so-called dispensaries, also as authors of books and pamphlets, whether right or wrong, and, as one who has nothing to gain, I think there should be more latitude allowed for the general practitioner, for really, after all, medical practice in open surgeries is a "business" more than a profession.—I am, etc.,

October 9th. ANGLO-CELT.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND ADVERTISING.

SIR,—I am directed by the President and Council of the Royal College of Surgeons in Ireland to forward to you the annexed paragraph, with the request that you will give it the same prominence in the BRITISH MEDICAL JOURNAL as that of the leaderette to which it refers.—I am, etc.,

ROBT. H. WOODS, L.R.C.S.,
Dublin, Oct. 17th. Sec. of Council.

UNPROFESSIONAL ADVERTISING IN HIGH PLACES.

In reference to the paragraph which appeared in the BRITISH MEDICAL JOURNAL on September 14th, last, under the heading of "Unprofessional Advertising in High Places," the Council of the Royal College of Surgeons in Ireland desire that it should be known that their attention was called to the publication referred to, and an ample apology having been received from the writer of the article in the *Irish Field*, it was resolved that his apology be accepted.

CERTIFICATED MIDWIVES AND BOARDS OF GUARDIANS.

SIR,—Dr. Reginald Pratt's letter comes opportunely. The Local Government Board has, I venture to believe, recognised the correctness of the position which the vast majority of practitioners have assumed towards the midwife question, and has acted accordingly.

In our profession organised bodies, in the shape of corporations and associations doubtless exist, but it is not owing to any activity on their part that the Local Government Board has been induced to move. Public opinion has been formed on the question by individuals. Is not this a blot upon our present system of government? We subscribe to associations, and corporations obtain our fees: have we not a right to expect something tangible in return? Dr. Pratt's letter, I think, shows the value of public expression of definite opinion, as I have no doubt that the policy of the hour is in the first place to insist on a fair share of representation on the General Medical Council; and, in the second, to take steps to force the Council of the British Medical Association to take active steps to carry out the intention of the resolution proposed by Dr. Welsford at the last annual meeting. The corporations being past redemption can be neglected.—I am, etc.,

Hatfield, Oct. 22nd. LOVELL DRAGE.

"CONSUMPTIVE BOWELS" IN YOUNG LIFE.

SIR,—I have read Dr. Walter Carr's paper on this subject in the BRITISH MEDICAL JOURNAL for September 21st (p. 717) with much interest. I have given elsewhere[1] my reasons for thinking that food has less to do with tuberculous infection than is generally supposed. Out of 70 children under 5 years old who died with more or less generalised tuberculosis at Guy's Hospital in ten years, in only 28 could the intestines or their glands have by any possibility been the primary seats, and in many of these other parts appeared jointly responsible for systemic infection. These 28 cases constituted barely 11.4 per cent. of the total cases of systemic infection of all ages during the same period, and of course a very much smaller percentage of the total cases of tuberculous disease. I should say about 5 per cent. of all medical cases were under 5 years of age at Guy's.

On further analysing my notes, however, I find that of 21 children under 2 years of age, 9 showed tubercle in the intestine or mesenteric glands which could not have come to them by way of the lungs, for in no case were any tuberculous masses breaking down. Yet in only 1 of the 21 cases were the lesions such as were at all likely to have given recognisable symptoms during life. In 12 cases the primary seats were elsewhere.

The age period of 10 to 20 appears to furnish a larger proportion of abdominal to other tuberculosis than any other, for of 35 cases 16 came under that category. Out of a total of 246 of all ages, 70, or 28.4 per cent., were possibly abdominal in their origin.

While no one can deny the great relative preponderance of abdominal tuberculous affection under 5 years of age, I for one do not admit that great preponderance which is assumed. Still less do I admit that this is a matter of feeding. For (1) the children of the people who seek hospital accommodation get very little milk, and (2) dirt swallowing is a potent factor which must not be overlooked. All little children swallow much dirt, especially the poor. From the mouth, nose, and upper pharynx tuberculous organisms may find their way to cervical glands, as, it is true, may be also the case with food-remains in the mouth, or be carried down to the stomach when its secretion is alkaline, and thence travel safely to the intestines and glands.

I think we must look to a greater vulnerability in the infantile alimentary tract for its greater proneness to tubercle and not to food.—I am, etc.,

Croydon, Oct. 7th. J. M. HOBSON, M.D.

THE EDUCATION OF THE STUDENT IN PRACTICAL MIDWIFERY.

SIR,—In the BRITISH MEDICAL JOURNAL of September 28th, p. 808, I supplied a table showing the requirements of the medical examining bodies in practical midwifery, with the view of pointing out that these requirements are very inadequate.

In the JOURNAL of October 5th, p. 863, Dr. Archer, while stating to your 19,000 readers that it is not his habit to read my "lengthy effusions," calls attention to my "misleading" figures relating to Dublin University. In my letter there is a printer's error, an "0" having been printed in instead of a "6." That this is none other than a printer's error will be proved by referring to a similar table in the *Medical Press* of November 5th, 1890, and also to p. 137 of the Blue Book on Midwives Registration, June, 1892.

The next point your correspondent wishes to show where I am in error is when I said that students presenting themselves for their final medical at Dublin University had not to present certificates showing that they had attended a stated number of lying-in cases. I maintain the accuracy of this statement. When working up this table in 1890 to pre-

[1] *Public Health*, January 7th, 1893.

sent to the Select Committee on Midwives Registration, I sent a circular type-written letter to twenty-one medical authorities. The reply from Dublin University was that no stated number of lying-in cases was required. In order to verify the accuracy of this statement I have to-day referred to the Calendar of the University of Dublin, 1890. On page 203 the following regulation appears: "He must also have lodged with the Registrar of the School of Physic his certificate of attendance on practical midwifery." This regulation therefore makes no reference to any number of cases of labour. That of 1895 does.

Your correspondent mistakes the dates, and in his anxiety to show that my figures are "misleading" he makes a quotation from the Dublin Calendar, 1895, p. 186. In doing so, however, he only gives strength to our contention that since 1890, when I began to show that the training of the student in practical midwifery was very insufficient, the medical authorities have tried, in some little way, to improve matters. In proof of this I may refer to the 30 cases now required by Dublin University; to the 20 cases now required by Oxford University, where previously neither attendance upon lectures in midwifery nor clinical instruction were required; and to the statement of the Dean of the Medical School, Liverpool, where he says that the training of students in this branch is under consideration. I fear, however, that although 30 cases of labour must be "attended" by students when presenting themselves for final examination, this "attendance" is often of a visionary description. I would like to see it provided that the student must himself "personally conduct" not less than 30 labours; and under "the direct supervision of a medical practitioner;" and that the names of the women, with the place and date on which the confinements were attended, be noted on the student's certificate. At present a large number of students attend confinements, either by themselves or under the training of a midwife. Fancy a student receiving his clinical medical or surgical training from a medical herbalist or bonesetter! Yet the two cases are parallel.—I am, etc.,

Liverpool, Oct. 14th. ROBERT R. RENTOUL.

*** The table was printed correctly from Dr. Rentoul's manuscript.

INADEQUATE SALARIES OF PUBLIC HEALTH APPOINTMENTS.

SIR,—Would you allow me to say a few words in support of the letter in your issue of October 19th, signed "Public Health." I should, however, prefer to discuss the matter not from the officials'—or, as some would perhaps say, the pecuniary—point of view, but from the broader aspect of the public good.

Your correspondent refers to a case in which £100 a year is the remuneration proposed to be paid for the services of a county medical officer of health. County councils are very much given to follow one another's example, and I believe I am stating an open secret when I say that this amount of salary was adopted from the example of another county which was one of the latest to appoint a county medical officer of health. In this case the county council was able to secure the services of a retired medical officer of health of some eminence and blessed with ample private means for £100 a year.

Now, is it for the advantage of the country that the post of medical officer of health for a county council should be regarded as almost honorary in character, and rewarded with a corresponding salary?

Owing to the working of the Excepted Borough Clauses of the 1888 Act, the districts over which county councils have sanitary jurisdiction are almost entirely made up of comparatively small towns and purely rural districts, and anyone that is well acquainted with the sanitary progress of the last twenty years knows well that it is precisely in these districts that little (if any) sanitary progress has been made, and that so much remains to be done. This will probably be admitted, but the question will naturally follow, What are the local district medical officers of health doing? I am a local medical officer of health, and in reply I have to state that they are doing, and have done, their duty in annually and periodically reporting the condition of their districts to the local authorities by whom they are appointed. No medical officer of health worth his salt would do otherwise, even although he may be, as most are, subject to periodic re-election. Having done this much, he has no power to do more, even if inclined to be Quixotic enough to try to force schemes of sanitary improvement down the throats of his sanitary board before whom his re-election (or the reverse) comes on, as in my own case, in the course of few months.

That there is abundance of work for county medical officers of health, and that they are welcomed by the district medical officers of health, has been amply proved in the case of those counties where such officers have been appointed at a living wage.—I am, etc.

October 21st. A DISTRICT M.O.H.

CYCLING FOR MEDICAL MEN.

SIR,—The editorial note upon this subject which appeared in the BRITISH MEDICAL JOURNAL for August 24th, and in which my opinion was given, has brought to me many inquiries regarding cycling, and my observations have been criticised in the lay press (the *Manchester Guardian*) by a correspondent who professes to be an expert. He writes in support of the tricycle, stating that it is not so much inferior to the bicycle as I have stated, and he remarks that with old people especially the tricycle is best. He refers to those who have lost their power of balance, or who are incapacitated by some physical weakness.

In giving the opinion above referred to, I confined myself to answering the questions of the correspondent "An Old Member," and therefore I was not advocating cycling for incapables or cripples, but for active medical men, and I maintain that for that purpose there is no comparison between the bicycle and the tricycle. If the journeys to be made are simply round about a small town, some men might, perhaps, prefer a tricycle, but for any lengthened distance there can be no question that the bicycle has an enormous advantage. When we are dealing with patients, and especially with cripples of various kinds the case is quite different, and as a rule a tricycle is necessary. For instance, we may have an individual paralysed in both legs, when it is obvious that if he cycles he must ride a tricycle worked with the arms; or one leg only may be deficient, or various other complications may exist which must be dealt with according to their individual peculiarities.

The chief point to be noted is that in riding a tricycle any extra effort, either in putting on pace, or riding against wind, or on a heavy road, causes a strain upon the heart which with the bicycle I have not experienced. With the latter we may get tired, or even in time exhausted, but without that embarrassment of the circulation which can be so easily produced with the heavier and more laborious machine.

In the case of heavy men the chief difficulty is the seat. I have tried a great variety, and find the pneumatic seats very comfortable to sit upon, but not quite so agreeable when working the machine.

After repeated trials, I have selected a hard smooth leather seat with a short peak, which with some further modifications will, I think, be perfectly satisfactory. I shall be happy to communicate the full particulars of this seat when I have completed my experiments.—I am, etc.,

Queen Anne Street, W., Oct 19th. NOBLE SMITH,
Surgeon to the City Orthopædic Hospital.

THE MADAGASCAR JIGGER.

SIR,—Your interesting note on *pulex penetrans* reminds me of an unusual experience I met with in Eastern Equatorial Africa in 1875.

Whilst sauntering in the early morn along a native track about eighteen miles inland, my attention was attracted by a curious agitation across the pathway, as if a stream of living dust was being driven out of the dry and dusty jungle. A nearer approach and examination proved the phenomenon to be a migratory movement of fleas. The column of these *aphaniptera* was about two feet in breadth, and consisted of an innumerable host rapidly traversing both the ground and air by characteristic leaps and bounds. I watched the onward and regular procession of this mighty swarm for a quarter of an hour, and left the formidable multitude undiminished in numbers, and apparently under orders for a neighbouring village.

Herr Hildebrandt, travelling for the Berlin Naturalist Society, was at that time amongst us. He had neither seen nor heard of such an uncommon enterprise amongst fleas, and considered this to be an almost unique experience. At that time East Africa was not a chigoe-infected district, but if it travels after the manner of the above it is no marvel that the continent should be overspread in the course of a few years.—I am, etc.,

Darlington, Oct. 7th. EDWD. W. FORSTER.

VOLUNTEER MEDICAL SERVICE.

SIR,—As it is probable that a Commission may be appointed to consider the various questions which are raised by the commanding officers of the volunteer force, and as such officers are about to meet to ventilate the various matters requiring consideration at the War Office, I would suggest that one question should be the desirability of asking for a small annual grant for the stretcher section of each regiment. Such a grant has been conceded to the signallers, and a small annual sum on the same or similar lines granted for ambulance work would interest the stretcher bearers and encourage them to keep up their efficiency year by year. Ambulance work is most important in time of war, and in camp and other manœuvres is of much practical utility, knowing, as one does, that lives may easily ebb and pass away when a little skilled knowledge of the simplest kind would avoid many such catastrophes. To acquire even that simple knowledge regimental stretcher bearers give up much time in attending the classes of instruction and the necessary drills in addition to their many regimental requirements. The grant need only be small (say 7s. per efficient bearer), but to be earned the work must be a reality, and complete efficiency insisted on each year. At each inspection at the present time the section has to be present, and its efficiency has to be tested by the inspecting officer, who reports officially on its condition. Surely if its existence and efficiency be thus recognised, a small grant might be conceded which should be expended in providing all ambulance requisites and appliances such as may be necessary for the proper and satisfactory teaching of the various classes. These stores should be reported on each year by the senior medical officer, who would be responsible for them.

I cannot but think that this suggestion will commend itself to all commanding officers who have the welfare of their men at heart, and who may only require the matter to be brought under their notice by their regimental medical officers, who are now asked to endorse and urge the adoption of this suggestion which I have thus ventured to propose.—I am, etc.,

M. BAINES, V.D.,
Surgeon-Lieutenant Colonel.

Headquarters, 1st Middlesex V.R.E., College Street, S.W., Oct. 8th.

THE RARITY OF SUDDEN DEATH IN CHILDREN.

SIR,—In the BRITISH MEDICAL JOURNAL of October 12th you call attention, in reviewing Dr. Luff's *Forensic Medicine and Toxicology*, to the rarity of the occurrence of sudden death in children; but surely the cases have not been, as you suggest, so few as to render any reference to the subject superfluous in a work on forensic medicine. I am reminded of a case which occurred under somewhat peculiar circumstances in the out-patient department of St. Thomas's Hospital in May, 1893. The child, a healthy-looking infant of 3 months, died in its mother's arms whilst preparations for an operation upon it (circumcision) were being made. The child appeared to die quite suddenly, without convulsion, cry, or other warning. It was at once taken in hand, but there was never any attempt at respiration, and no heart sounds could be detected. Inversion and artificial respiration met with no response; a finger passed into the throat detected nothing of the nature of food or foreign body, nor was any reflex excited by this procedure. No food had been given to the child, and there was no suspicion of foul play. It is perhaps a pity that there was no *post-mortem* examination in this case.

A point of interest is that had the event occurred ten minutes later it would have added another to the list of "deaths under chloroform." At the same time one cannot help reflecting whether it is not just possible that had the child been at the time under anæsthesia the fatality might, owing to the altered circumstances, never have occurred.—I am, etc.,

Upper Tooting, Oct. 19th. EDWIN SMITH, M.B.Lond.

LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS AND THE TITLE OF "PHYSICIAN."

SIR,—I think many licentiates of the London College will thank "F.R.C.P." for his letter in the BRITISH MEDICAL JOURNAL of October 19th. As we licentiates hold our diploma only during "good behaviour," and taking into consideration the great distinction and prestige of the College itself, I should imagine that we have as much right to the title of "Physician" as an M.D. of any university in the United Kingdom. I believe that a large majority of us "live up" to the traditions of the College and obey its by-laws both in letter and spirit, although comparatively few of us have the chance of becoming Members or Fellows.—I am, etc.,

October 20th. L.R.C.P.LOND.

OBITUARY.

SURGEON-GENERAL G. A. F. SHELTON, M.B.

WE have to chronicle the death of yet another retired surgeon-general—the fifth within a month—a mortality altogether unprecedented in a necessarily limited class in so short a time.

Surgeon-General Shelton died on the same day as Sir Thomas Crawford—October 12th—in Bolton Street, Piccadilly, in his 74th year. About a year ago he had a slight stroke of paralysis, from which he never fully recovered, and succumbed to a second attack after a short illness. Born in 1821, he was the second son of Captain Shelton, of Rossmore, co. Limerick—a gallant officer, who, as captain of the 28th Regiment, lost an arm at Waterloo. He was educated and graduated at Trinity College, Dublin, and entered the Army Medical Service in 1845, and served for a number of years in the 48th Regiment, including the Crimea. He gradually rose to be Surgeon-General, and his last years in that rank were spent at headquarters, where his great urbanity made him many friends. He retired in 1882.

The older generation of army medical and many other officers will long remember Shelton in his prime—the fine, handsome, courteous, and witty Irishman—the best of companions and warmest of friends.

DR. FREDERICK BERNARD BETTS, M.R.C.S., L.R.C.P., died on September 4th, at Antofagasta, Chili, after an illness of eight days, due to septic pneumonia. Dr. Betts, who was in his 29th year, received his medical education at the Westminster Hospital, where he entered in 1884. He obtained the diplomas of the Conjoint Board in 1889, after a student career remarkable for industry and ability. Subsequently he held all the resident posts at the Westminster Hospital. Failing health induced him to take the appointment of Surgeon in the R.M.S. *Iberia*, in which he made three voyages to South America. He then served as Resident Medical Officer to Queen Charlotte's Lying-in Hospital. On relinquishing this office he was appointed Surgeon to the Huanchaca Silver Mine and Railway at Antofagasta, where he went in 1893. Shortly after his arrival in South America he obtained the degree of M.D. from the University of Santiago. At Antofagasta he had already earned the esteem of those with whom he came in contact, and his funeral was attended by over 2,000 persons, including the foreign Consuls. The *Chilian Times*, in an obituary notice, said of him: "Young, gifted, terribly in earnest, and thoroughly devoted to his profession, he was only happy when busy relieving the pains and sufferings of his fellow men." In this country his death is keenly felt by those who knew him, as well as by his relatives.

WE regret to report the death, by suicide, of Surgeon-Major NASH, of Herbert Road, Dublin. He had been suffering from sleeplessness, and on October 21st he rose early, wrote a letter, and then shot himself through the heart with

a revolver. The deceased had served in the 27th Enniskillens, and was in his 67th year. Since his retirement from the service, he had taken a prominent part in municipal matters, and he was very much respected and beloved.

We have to record the death of Dr. Thomas Groom, of Whitchurch, who is said to have been the oldest medical practitioner in Shropshire. He died on October 7th, and had he lived a fortnight longer would have attained the age of 86. He was the fourth son of the late Mr. John Groom, of Hardwick Grange, but was born at Waverly Hall, Shropshire. He was apprenticed to the late Dr. Gwynne, of Wem, and studied subsequently at Guy's and St. Thomas's Hospitals. Having obtained the diplomas of L.S.A. (1833) and M.R.C.S. (1834), he commenced practice in Whitchurch, and for many years held a leading position in that town and neighbourhood. He was an ardent sportsman as well as a successful practitioner, and enjoyed a wide popularity. In 1861 he was elected a Fellow of the Royal College of Surgeons. For some years he had retired from the more active duties of his profession, but he had so endeared himself to a large circle of friends by his cheerful and genial disposition that his funeral called forth many tokens of the esteem and regard in which he was held. He was twice married, but leaves no family.

The death is announced of Mr. Johnson Martin, of Great Lever, near Bolton, who was one of the oldest and best known residents in the district. He was born in 1821, and was the son of Dr. Robert Martin. He was educated at the Pine Street School of Medicine, Manchester, now merged in Owens College, and was apprenticed to his brother, Thomas Martin, of Little Hulton. Mr. Martin took the diploma of L.S.A. in 1851, and afterwards studied at King's College Hospital, finally taking the diploma of L.F.P.S. and L.M. of Glasgow in 1867. For many years he filled the post of medical officer and public vaccinator for the Lever District of the Bolton Union, and for a period of five years was medical officer of health to the rural sanitary authority, being very active in his efforts to promote sanitation.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Joseph Oettinger, Emeritus Professor of the History of Medicine in the University of Cracow, one of the founders of the *Przeglad Lekarski*, and author of numerous writings on medico-historical, hygienic, and political subjects, aged 77; and Dr. A. Grenson, Physician to the Hôpital des Anglais, Liége, and formerly Lecturer on Anatomy in the University of that city.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 5s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A Surgeon-Captain, who has been home a year, will exchange after January next for a whole or part tour abroad. India (Punjab or Bengal) preferred. Apply to Hakim, British Medical Journal Office, 429, Strand, W.C.

THE NAVY.

The following appointments have been made at the Admiralty: John L. Barrington, Staff-Surgeon, to the *Astræa*, November 5th; Henry S. Jackson, Staff-Surgeon, to the *Forte*, November 5th; Frederick W. Stebbeken, Surgeon, to the *Inflexible*, November 4th; Gordon G. W. Henry to be Surgeon and Agent at Forfock and Muncheed, October 16th; W. J. Carmichael to be Surgeon and Agent at Collieston, October 19th.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Joseph W. O'M. Martin, M.B., died at Dublin on September 16th. He was appointed Assistant Surgeon, April 1st, 1871; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; and Surgeon-Lieutenant Colonel, April 1st, 1891; quitting the service on retired pay, September 9th, 1891. He was in the Zulu war in 1879 (medal with clasp), and in the Boer war of 1880-81, when he was in medical charge of the garrison of Wakkerstroom during the defence of that town. He also served in the Soudan campaign in 1885, receiving the medal with clasp and the Khedive's bronze star.

Officers of the Army Medical Staff with less than seven years' service may in future be allowed to exchange with officers of the Indian Medical Service.

CHANGES OF STATION.

The following changes of station amongst the officers of the Army Medical Staff have been officially notified to have taken place during the past month:

		From		To
Surgeon-Colonel	H. S. Muir, M.D.	Chester		Secunderabad.
Brig.-Surg.-Lt.-Col.	C. F. Pollock, M.B.	Punjab		Bengal.
,,	W. H. M'Namara, M.D.	Aldershot		Egypt.
,,	J. G. Williamson	Dover		Jamaica.
,,	R. Harman, M.B.	Devonport		Dover.
Surgeon-Lieut.-Col.	D. B. Brown	Pierhead		Punjab.
Surg.-Major	H. C. Kirkpatrick, M.D.	Gosport		Winchester.
,,	E. R. Power, M.B.	Devonport		Plymouth.
,,	M. L. Lane, M.B.	Portsmouth		Bombay.
,,	A. Peterkin, M.B.	Shorncliffe		Madras.
,,	J. H. A. Rhodes	Curragh		Punjab.
,,	G. J. Coates, M.D.	Cork		Bengal.
,,	M. W. O'Keeffe, M.D.	Belfast		Punjab.
,,	G. E. Weston	Gosport		Bombay.
,,	J. C. Haslett, M.D.	Devonport		Bengal.
,,	H. S. M'Gill	Dublin		Galway.
,,	V. E. Hunter	Portsmouth		Gosport.
Surg.-Capt.	R. J. A. Durant	York		Madras.
,,	G. Birt	Punjab		Bengal.
,,	H. J. Fletcher, M.B.	Alter		Gibraltar
,,	F. A. Saw, M.B.	Chester		Birmingham.
,,	A. Kennedy	Dublin		Malta.
,,	T. Browning	Limerick		Tipperary.
,,	G. F. H. Marks, M.D.	Shorncliffe		Lydd.
,,	R. Holyoake	Tower		Warley.
Surg.-Lieut.	F. R. Buswell	Curragh		Madras.
,,	F. A. Symons, M.B.	Formoy		,,
,,	J. B. Anderson	Chatham		Bombay.
,,	P. Evans	Portsmouth		Gosport.
,,	A. E. Milner	Gosport		Portsmouth.
,,	H. W. Vaughan-Williams, M.B.	Cork		Formoy.
,,	D. Lawson	Portsmouth		Gosport.
,,	L. F. Smith, M.B.	—		Aldershot.
,,	R. J. Blackham	—		,,
,,	S. H. Fairrie, M.B.	—		,,
,,	G. T. K. Maurice	—		,,
,,	R. Fawssett			Portsmouth.
,,	J. V. Forrest, M.B.	—		,,
,,	H. W. Grattan	—		Dublin.
,,	F. E. Gunter	—		Dover.
,,	J. H. Campbell	—		Dublin.
,,	J. Grech	—		,,
Quartermaster	E. Thowless	Natal		Cape Town.
,,	W. J. Blackman	Cape of G. Hope		Natal.

Surgeon-Lieutenant-Colonel O. F. Molloy, Retired List, has vacated his position in medical charge at Galway.

INDIAN MEDICAL SERVICE.

Brigade-Surgeon-Lieutenant-Colonel S. O'B. Banks, Bombay Establishment, is promoted to be Surgeon-Colonel from September 18th. He joined the service as Assistant-Surgeon, October 1st, 1886, and was appointed Brigade-Surgeon-Lieutenant-Colonel, November 19th, 1894. He was in the Abyssinian war in 1867-68, and was at the capture of Magdala (medal).

Deputy-Surgeon-General Robert William Cockerill, late of the Madras Establishment, died on October 8th. He joined the Ordnance Medical Department in 1854, and first saw service in the Crimean war. He was present at the battle of Inkerman, and was wounded in the advanced trenches before Sebastopol. He received the Crimean medal with two clasps, and the Turkish medal. In 1858 he joined the Indian Medical Department, and, proceeding in medical charge of the Madras troops, served though the China campaign of 1857-58, being present at the capture and destruction of Namtaw, and receiving the China medal. In 1869 he was appointed to the Madras General Hospital and Medical College, where he held various professorships till his retirement in 1885.

The following promotions of Surgeon Lieutenants to be Surgeon-Captains from July 27th, and which have been already announced in the British Medical Journal, have received the approval of the Queen:—*Bengal*—P. B. Haig, T. W. A. Fullerton, R. H. Mallock, E. V. Hugo, M.D.; H. G. Melville, A. O. Hubbard, C. G. R. Scott, H. A. Smith, D. R. Green, G. McL. C. Smith, H. M. Earle, J. G. Hulbert, Maurice P. C. Gabbett, J. L. Macnab. *Bombay*—F. E. Swinton, S. H. Burnett, Thomas Jackson.

Brigade-Surgeon-Lieutenant-Colonel Andrew Barry, M.D., Bombay Establishment, has retired from the service, which he entered as Assistant-Surgeon, March 31st, 1865. He served in the expedition against the Waghears in 1865-66, including the operations of the Kattywar Field Force in the Burda Hills; in the Abyssinian campaign in 1867-68 (medal), and in the Afghan war in 1879-80, when he took part in the march to Candahar with the force under Major-General Phayre (medal).

Surgeon-Colonel S. O'B. Banks, Bombay Establishment, is appointed Principal Medical Officer, Nagpore District, *vice* Surgeon-Colonel H. Cook, M.D., whose tenure of service expired on September 18th.

Surgeon-Captain F. E. Swinton, Bombay Establishment, has been appointed personal assistant to the Principal Medical Officer, Bombay Command, from October 26th, on which date Brigade-Surgeon-Lieutenant-Colonel G. W. R. Robertson, M.D., completes his tenure of service.

The Secretary of State for India has approved of the orders issued by the Government of India in regard to the continuance of the local allowance admissible to surgeon-captains and surgeon-lieutenants on duty in the Naga, North Lushai, and Chin Hills and Manipore, for a period not exceeding three months, while they are attending a course of military instruction in or out of those localities.

Sanction has been accorded to the withdrawal from the Tochi Valley of the Field Hospital Corps as soon as the regimental hospital can be formed. As regards the medical arrangements for Wano, that post is

to be formed into a permanent cantonment with a reduced garrison, so that the Field Hospital service is no longer required, and regimental hospitals will be established as soon as practicable. Orders for demonstrating No. 14 Field Hospital Corps will therefore issue in due course.

THE VOLUNTEERS

Surgeon-Major T. R. Pearson, M.D., 1st North Riding of Yorkshire Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Lieutenant-Colonel, October 16th.

Captain J. F. Blake Campbell is appointed Surgeon-Lieutenant in the 1st Cheshire Engineers, Fortress and Railway Forces Royal Engineers, October 16th.

Surgeon-Captain J. Denholm, M.B., 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers, has resigned his commission, with permission to retain his rank and uniform, October 16th.

DEARTH OF CANDIDATES FOR THE A.M.S.

The causes of the unpopularity of the A.M.S. as a career are clearly pointed out in a letter to the *Army and Navy Gazette* of October 5th, and there are few who will not agree with the reasons therein set forth. One important point, though, is omitted in that letter, namely, the difficulties medical officers encounter in obtaining leave, pointed out by a correspondent in our columns on October 19th. These difficulties are always emphasised during the relief season. The fact must be reasserted that the strength of the A.M.S. is barely sufficient for the duties it is called on to perform, and no margin exists for contingencies. This statement is applicable not only to Great Britain but to India, from whence complaints are constantly received. Economy is the order of the day, and if it is to be carried out it must be at the expense of the Army Medical Staff.

APPOINTMENTS IN THE ARMY MEDICAL SERVICE.

The *Broad Arrow* of October 12th notifies the following changes in the administrative rank as about to be carried out: Surgeon-Colonel Maxham, P.M.O. York, to South Africa, in relief of Surgeon-Colonel J. B. Hamilton, P.M.O. Cape Town; Surgeon Colonel T. A. Hughes, P.M.O. Devonport, to Chester, as P.M.O in succession to Surgeon-Colonel Muir, embarked to India; Surgeon-Colonel Catherwood, P.M.O. Colchester, to Gibraltar, in relief of Surgeon-Major-General Lewer, to be retired by age. This points to Gibraltar becoming a surgeon-colonel's administration, instead of as heretofore, a surgeon-major-general's billet. At the same time, Devonport will become a surgeon-major-general's, in lieu of a surgeon-colonel's, administration. Thus the rumoured abolition of one surgeon-major-general would appear to be without foundation.

BARRACKS IN DUBLIN.

A correspondent, writing to the *Army and Navy Gazette* in reference to the death of Lieutenant Bethell in Dublin, makes an attack upon the system by which troops are located in what he terms loathsome quarters. Mr. Bethell died of scarlatina; how contracted is not known. But with regard to the barracks we may point out that for any insanitary condition existing in them the military authorities are responsible, and not the corporation. The Medical Department and the Engineers ought, between them, to be able to secure healthy quarters for the troops, and we think that they are primarily responsible if any well grounded complaint can be made.

THE INDIAN MEDICAL SERVICE.

A very important letter, bearing on Mr Ernest Hart's address, appears in the *Times* of October 1st, headed "Promotion in the Indian Medical Service," signed I.M.S. The writer adverts to the present system of promotion being clearly indefensible and insists on the need of a Promotion Board, which would be, he says, more satisfactory to all concerned. He suggests that this board should be constituted by the Commander-in-Chief as President and the two Surgeon-Major-Generals at headquarters (Simla) as members; thus bringing the matter of promotion for the I.M.S. into accord with that now existing for the A.M.S.

THE ARMY HOSPITAL NATIVE CORPS.

Owing to the transfer of the Quetta District from the Bengal Presidency to the Bombay Command it has been found necessary to revise the Army Hospital Native Corps. The Bengal A.H.N.C. has accordingly been reduced to the extent of the authorised establishments for the Quetta District, and the Bombay Command A.H.N.C. has been increased by as much.

THE CHITRAL DESPATCHES.

Despatches respecting the operations of the Chitral Relief Force under Sir Robert Low have been published. In reciting the operations Sir George White, the Commander in Chief in India, speaks as follows: "To the careful medical arrangements and to increased sanitary precautions may be ascribed, in Sir George White's opinion, the comparative immunity from disease and the general good health that the troops have enjoyed under very trying conditions. These results could not have been attained without the great forethought and administrative experience of the late principal medical officer, Her Majesty's Forces in India, Surgeon Major-General Bradshaw, C.B., and of the officer now filling that appointment, Surgeon Major-General A. A. Gore; and their efforts have been well seconded by Surgeon-Colonel T. Maunsell, principal medical officer with the force and the medical officers under his orders." Sir Robert Low, in bringing to notice those officers who had specially distinguished themselves, mentions Surgeon-Lieutenant D. W. Sutherland, Bengal Establishment, for the promptitude and coolness he displayed in attending on the wounded under short range fire. Respecting the principal medical officers he says: "Surgeon-Colonel T. Maunsell, Army Medical Staff, principal medical officer with the force, is an officer of ability and experience, and his management of the medical and sanitary arrangements connected with the force have been most successful. Surgeon-Colonel G. Thomson, M.B., Indian Medical Service, Principal Medical Officer Line of Communications, an officer of judgment and experience, administered his department in a very satisfactory manner."

Other medical officers especially brought to notice for their services are: Surgeon-Lieutenant-Colonel W. Donovan, Army Medical Staff; Surgeon-Lieutenant-Colonel P. F. O'Connor, Bengal Establishment; Surgeon-Lieutenant-Colonel W. A. Summonds, Bengal Establishment; and Surgeon-Major G. Coutts, M.B., Army Medical Staff.

ARMY MEDICAL OFFICERS AND SANITARY REFORM.

A Correspondent sends us a long communication on this subject of which the following is a summary. Medical officers have almost insuperable difficulty in getting sanitary recommendations carried out for several reasons. They can only recommend, it is for the commanding officer to take executive action; if he declines or neglects to do so, there are no means of bringing him to book, and even if disease or death results from his inaction, there is no punishment as in the French army. According to Section 21, par. 114, Queen's Regulations, all sanitary questions in a district submitted to the general officer commanding should be referred to the principal medical officer, who submits them to him, and if so desired, deals with them "by order" of the general. the same as officers on his "staff" deal with military matters "by order." But is the said regulation acted on? Some member of the House of Commons might find out when and where. The apathy of the generals and the jealousy of the staff regarding "by order" powers have stood in its way. There can be no doubt such regulations would be less likely to be dead letters if the Director-General formed part of the proposed new War Office Boards and Councils, and had thus direct access to the Secretary of State for War. Sanitary engineering must be made a branch of study of the Royal Engineers, in whose hands sanitary improvements are carried out; there is a sad waste of public money through ignorance or indifference towards this matter. There is the question also whether senior medical officers stand in the way of the views of their juniors, and "water down" the reports of the latter, so as to avoid awkward interpellations in Parliament. Cannot original reports be sometimes published, and not all held to be "confidential" or "privileged"?

*** There may be, and no doubt is, a good deal in what our correspondent alleges, for he is a keen and well-informed critic of our defective military system. But we cannot for a moment believe there is actual indifference among commanding officers, their staff, or Royal Engineers, towards sanitary matters, any more than among principal medical officers. Ordinary incidental defects and repairs are defrayed from the consolidated sum voted annually to the Royal Engineers; larger works by special grants. It is in the latter the pinch comes. There can be no doubt that much money is wasted in attempted remedying of sanitary defects in our hopelessly imperfect old barracks, which it would be cheaper in the end to level at once, and rebuild.

A SELFISH POLICY.

Esprit de Corps writes: Selfishness is undoubtedly the keynote of failure in the Army Medical Service, and yet the policy of every man for himself and the devil take the rest is very shortsighted. Although it brings occasional success it can never result in real respect nor in developing the respect of others.

There are at present 500 officers in the Department, yet, with rare exceptions, all are afraid to make the slightest move, official or otherwise, towards progress. The idea is to "sit tight." Let others work, as, for instance, the Editor of the British Medical Journal, and a few officers of note, but we will be "cautious." It is "dangerous" to agitate, such a policy is both mean and contemptible. All are ready to confide in half whispers what they know is rotting the Department, but to have the courage of one's opinions is a different matter. Each one thinks, why should I make myself a martyr? Then, let us ask, whose duty is it to recommend those changes which are so necessary? Clearly it is the seniors'. But they will not do it. Here, again, we are brought face to face with that selfishness which is so striking a characteristic of the Army Medical Service as compared with regimental officers.

But mere passive selfishness is not the worst. Combatant officers tell us we have no such enemies among them as we have in our own corps. There is a current story that a member of the department, now retired, refused leave to the officers of his division on the ground that he would thus strengthen his claim for an increase in numbers. It is said that at the same time he was actually submitting proposals to the authorities for a diminution in the staff. Going back a quarter of a century, tradition has it that an old army surgeon collected over 50 candidates for the Army Medical Department at a time when the War Office was at its wits' end to get candidates owing to its own discouraging action. Returning to recent times we find long articles in the *United Service Magazine* describing the efforts of the Army Medical Staff in India, on the ground that since we were dissociated from regiments we have swamped our sanitary work and hence entirely fail to be increased! Yet such absurd nonsense passes muster as the outcome of intelligent experience. When the history of our corps comes to be written, as it will before long, these efforts will not pass unnoticed.

It is not an easy matter to act a loyal part in the Army Medical Service. The traveller on this honourable path involves himself in difficulties. He does not accept a snub with grateful smile and humble demeanour. He stands up for the honour of his scientific work, and refuses to regard himself as a low-class contractor, honoured by the notice of other army men. He supports his juniors and takes their responsibilities on his shoulders, instead of doing the reverse. And it is an open question whether in the long run he does not succeed as well as the man who plays an underhand game, and gives his department away on every opportunity.

Times are changing. The new Commander-in-Chief knows better

than most men how much the integral value of a corps depends on its training, its esprit, its [illegible]. He will not fail to take into account and estimate properly the efforts of those who, while developing the status and unity of the Army Medical Service are pari passu increasing its efficiency.

There is excellent material to work upon. We have numbers of men who in divers ways bring credit on the Department; but this credit is to a great extent lost by the stupid prevalent idea that each man's success or happiness depends on his own efforts. It is only by cultivating one another that we can ever hope to succeed. We contain within us the elements of success. Could we but succeed in binding them together we could not fail to develop a corps which would be an honour alike to the medical profession and the British army. To do this every officer must contribute his quota. Professional work, sporting renown, social and literary successes, all help: it remains for the twelve Surgeon-Generals and thirty Surgeon-Colonels to put the house in order. That is what they are for; that is what we, the rest of the Army Medical Staff, expect of them.

*** We print the above long extracts from our correspondent's letter, not because we are prepared to endorse its censures or conclusions, but on the principle that it is well at times to read the sentiments of an outspoken critic. Our only comment is this—it is very well to lament the intense selfishness and individualism of one's fellows, but it is necessary to remember two conditions: "Suppose a change of places?" and "It is hard for thee to kick against the pricks."

THE ARMY MEDICAL SCHOOL.

Observer.—The discussion raised as to the failures last session has been productive of good in so far that a change in the curriculum of studies at Netley is contemplated during the session now commenced. More time will probably be devoted to laboratory and microscopical work, while clinical instruction in the wards (of which candidates on joining have already had a good deal) will be curtailed.

DIPHTHERIA AT ALDERSHOT.

Reviewer.—Strange to say this important subject was never alluded to during the Army Estimates, which were rushed through. To this day the public is in ignorance of the report sent in by the Professor of Military Hygiene to the War Office on the Aldershot insanitary conditions which led to enteric and diphtheria. So far back as March last Brigade-Surgeon-Lieutenant-Colonel Notter, under orders from the War Office, visited Aldershot to investigate the water supply and other matters.

SOLDIERS IN CIVIL HOSPITALS.

A Correspondent states he was surprised to find five soldiers of a Highland regiment under treatment in the surgical wards of the Royal Infirmary, Edinburgh, and was told, on inquiry, that there was nothing unusual in that. The question suggests itself, is the military station hospital in that city full, or unequal to accommodate all the sick of the garrison? Or is the medical staff so short-handed as to have to be supplemented by civil aid?

BEARER COMPANIES.

Surgeon-Captain James Turton (South Eastern Volunteer Infantry Brigade, Bearer Company, Brighton) asks: (1) What volunteer brigades have bearer companies attached to them? (2) To what battalions in the respective brigades are such bearer companies attached? (3) Whether any of the bearer companies are administered independently of battalion organisations? (4) Do sergeants of brigade bearer companies hold substantive or supernumerary rank?

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Recognised Hospital.—The North Staffordshire Infirmary, Stoke-upon-Trent, has been recognised by the Special Board for Medicine as a place of clinical study.

Recognised Teachers.—Mr. W. C. D. Whetham and Mr. J. W. Capstick, Fellows of Trinity, and Mr. R. H. Adie, Lecturer at St. John's, have been recognised as Teachers in Physics and in Chemistry respectively for the M.B. degree.

UNIVERSITY OF EDINBURGH.

General Council.—The statutory half-yearly meeting of the General Council of the University of Edinburgh will be held on Friday, October 25th. Perhaps the most important business before the meeting will be the election of two assessors of the General Council in the University Court in place of Dr. Patrick Heron Watson and Dr. John Duncan, whose period of office expires at this time, but who are eligible for re-election. It is understood that Dr. John Duncan is not desirous of allowing himself to be nominated for re-election.

At the autumn *sederunt* of the examiners the following gentlemen have passed the final examination, and will, a few days hence, be admitted to the degrees of M.B. and C.M., under the old regulations:

J. Affleck, A. W. M. A. Ayatullah, W. J. Bell, E. J. Bray, J. Bruce, R. B. Campbell, E. W. S. Carmichael, J. M. Crawford, D. Crerar, D. F. Dewar, J. H. Dixon, G. C. Elliott, A. T. Evans, D. Evans, W. Evans, R. W. L. Fernandez, W. Fitzgerald, A. N. Fleming, G. A. Fothergill, F. M. Gibson, B.Sc., R. C. L. Guthrie, J. J. Hewison, W. Hewison, J. Hirst, W. Johnson, C. C. Lall, J. H. Lamb, G. R. Leighton, G. R. Livingston, A. M. Love, G. D. McRae, J. Massey, G. H. Masson, W. A. W. Moore, P. J. Munn, S. G. Ogilvy, A. J. Park, W. J. Penfold, A. L. Pentland-Smith, M.A., B.Sc.; R. B. Purves, J. H. D. Roberts, R. S. Roger, R. L. Roe, D. Royer, A. P. Ross, L. C. Saldanha, A. T. Sampson, J. G. C. Scott, R. L. G. [illegible], S. H. Smith, A. J. A. Theobald, C. G. Thompson, F. W. Twedale, J. W. de Vos, L. A. Williams, F. T. Wills, W. H. Wilson.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

The following gentlemen passed the First Examination of the Board under the "Four Years'" regulations in the subjects indicated:

Chemistry, including Chemical Physics.—L. P. Anderson, University College, Liverpool, and Owens College, Manchester; A. O. Ashe, King's College, London; J. S. Duncan, Westminster Hospital; J. M. S. Duncan, London Hospital; W. H. Edwards, Guy's Hospital; W. H. Read, private study; and J. A. Wolverson, Mason College, Birmingham.

Materia Medica.—H. A. Ahrens, King's College, London; R. I. Argles, St. Mary's Hospital; G. W. B. Beverley, University College, London; T. L. Butler, St. Mary's Hospital; J. Cater, King's College, London; T. J. Chidley, Carmichael College, and Royal College of Surgeons, Dublin; G. E. Duncan, Guy's Hospital; W. H. Edwards, Guy's Hospital; M. F. Ellis, Yorkshire College, Leeds; C. T. Fox, University College, London; G. S. Haynes, St. Bartholomew's Hospital; J. P. E. Henery, St. George's Hospital; E. L. N. Hopkins, Middlesex Hospital; A. J. A. [illegible], University College, London; W. J. May, Charing Cross Hospital; F. E. Meade, St. Bartholomew's Hospital; W. Musselwhite, Guy's Hospital; E. A. Nicholls, London Hospital; H. L. W. Norrington, University College, Bristol; A. R. O'Flahertie, London Hospital; W. G. Silvester, Mason College, Birmingham; E. L. Wilcox, University College, London; W. J. H. Williams, St. Mary's Hospital; and O. C. Youell-Carter, Charing Cross Hospital.

Elementary Anatomy and Elementary Physiology.—P. M. S. Bennett, Middlesex Hospital; F. J. A. Beringer, London Hospital; W. Dutton, Owens College, Manchester; A. Holroyd, Yorkshire College, Leeds; N. Walmisley, St. Bartholomew's Hospital; and F. W. Whyte, Queen's College, Belfast, and Mr. Cooke's School of Anatomy and Physiology.

Elementary Anatomy only.—S. S. Agnew, Queen's College, Cork, and Belfast.

Elementary Physiology only.—W. E. Nelson, Cambridge University.

The following gentlemen passed the First Examination of the Board under the "Five Years'" regulations in the subjects indicated:

Chemistry and Physics.—F. B. Alderson, Firth College, Sheffield; R. J. Bell, Charing Cross Hospital; W. F. O. Bennett, Firth College, Sheffield; K. H. Beverley, University College, Bristol; A. G. Brinton, Mason College, Birmingham; G. A. Carter, Royal College of Surgeons, Edinburgh; A. E. Causton, Guy's Hospital; A. A. F. Clarke, St. Thomas's Hospital; J. R. Cox, School of Science, Cheltenham; A. S. David, London Hospital; A. M. Davis, Mason College, Birmingham; H. P. S. Devitt, University of Cambridge; R. Dunstan, London Hospital; W. V. C. Francis, Westminster Hospital; R. J. Fyffe, Firth College, Sheffield; R. Gaud, London Hospital; E. W. Goble, Guy's Hospital; W. R. P. Goodwin, St. Mary's Hospital; S. W. Green, University College, Liverpool; W. E. Gribbell, St. Mary's Hospital; A. Hagon, University College of South Wales, Cardiff; T. B. Haig, St. Bartholomew's Hospital; R. W. B. Hall, Guy's Hospital; T. A. B. Harris, Firth College, Sheffield; R. T. Harrison, St. George's Hospital; E. M. W. Hearn, London; W. G. Hopkins, St. Mary's Hospital; S. J. Kerfoot, London Hospital; R. Lamb, University College, Liverpool; C. E. H. Leggatt, St. Mary's Hospital; A. C. Lewis, Guy's Hospital; W. H. Lowsley, Guy's Hospital; E. P. Mead, London Hospital; D. A. H. Moses, St. Bartholomew's Hospital; E. G. Narramore, School of Science and Technology, Liverpool; W. H. Passmore, Charing Cross Hospital; C. R. Porter, London Hospital; P. G. Reilly, London Hospital; F. Rowland, Mason College, Birmingham; E. E. Semmence, Royal College of Surgeons, Edinburgh; W. C. Speirs, St. Mary's Hospital; H. V. Wells, St. Mary's Hospital; H. G. Woodyatt, Owens College, Manchester, and University College, London; T. Young, St. Bartholomew's Hospital.

Practical Pharmacy.—W. Aston, Mason College, Birmingham; H. R. Beale, St. Thomas's Hospital; J. R. Beale, St. Thomas's Hospital; T. W. Brown, St. Bartholomew's Hospital; R. W. Bradley, St. Mary's Hospital; H. S. Capper, University College, London; P. A. Cornish, Middlesex Hospital; H. E. Crawley, Oxford University; J. F. Cunningham, St. Thomas's Hospital; A. S. David, London Hospital; E. A. Edington, University College, London; R. J. Fyffe, Firth College, Sheffield; H. Hawker, University College, London; E. M. W. Hearn, London Hospital; J. Hoyle, Owens College, Manchester; D. Jeaffreson, St. Bartholomew's Hospital; W. E. Ruttledge, University College, London; C. S. Scott, St. Bartholomew's Hospital; T. S. Smith, St. Mary's Hospital; H. Z. Stephens, St. Thomas's Hospital; F. W. Twort, St. Thomas's Hospital; A. E. Vine, Middlesex Hospital; C. H. Wood, University College, London.

Elementary Biology.—G. Barnes, St. Mary's Hospital; C. H. Brangwin, Guy's Hospital; C. A. D. Bryan, Guy's Hospital; G. A. Carter, Royal College of Surgeons, Edinburgh; G. E. Cope, Westminster Hospital; A. G. C. Davies, Guy's Hospital; S. G. Harrison, Charing Cross Hospital; L. V. Hill, Firth College, Sheffield; A. R. M'Enery, University College, Bristol; H. E. Morris, Guy's Hospital; E. G. Narramore, School of Science and Technology, Liverpool; R. G. Newton, Oxford University; S. K. Roberts, St. Bartholomew's Hospital; J. F. Robinson, Birkbeck Institute; E. E. Semmence, Royal College of Surgeons, Edinburgh; H. B. Sloane, St. Bartholomew's Hospital.

Elementary Anatomy.—D. G. R. S. Baker, University College, London; A. G. Brinton, Mason College, Birmingham; G. A. Carter, Royal College of Surgeons, Edinburgh; G. K. Cathcart, St. Bartholomew's Hospital; C. D. A. Dowman, St. Bartholomew's Hospital; F. E. Everington, St. Bartholomew's Hospital; A. H. Foster, St. Mary's Hospital; D. S. Graves, Guy's Hospital; S. M. Green, University College, London; W. L. Griffiths, University College, London; C. E. Hicks, Guy's Hospital; D. M. Jones, St. Mungo and Anderson's

College, Glasgow; A. Lister Kay, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; H. T. J. Murdoch, Yorkshire College, Leeds; J. [illegible], St. Bartholomew's Hospital; J. L. [illegible], University College, Liverpool; E. L. [illegible], Royal College of Surgeons, Edinburgh; W. C. Spiers, St. Mary's Hospital; A. M. S. [illegible], University College, Bristol.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At the annual stated meeting of the Royal College of Physicians of Ireland, held on St. Luke's Day, the following officers were elected for the ensuing year:—*President*: T. W. Grimshaw. *Vice-President*: Andrew J. Horne. *Censors*: J. Redmond, H. C. Tweedy, A. J. Horne, and H. C. Earl. *Treasurer*: L. Atthill. *Registrar*: G. P. L. Nugent.

Additional Examiners, to take the Place of an Absent Censor.—Medicine: E. E. Lennon. Medical Jurisprudence and Hygiene: S. T. Gordon. Midwifery: R. A. Flynn.

Examiners for the Licentiate in Midwifery.—W. J. Smyly and F. Hastings Tweedy.

R.C.P.I. Examiners under the Conjoint Scheme with the R.C.S.I., not including the above Censors, who also examine at the Fourth Professional.—Biology: E. MacDowel Cosgrave. Chemistry and Physics: H. T. Bewley and E. Lapper. Materia Medica and Pharmacy: G. F. Duffey and F. J. B. Quinlan. Physiology, Pathology, and Medicine: J. M. Purser, H. C. Earl, J. W. Moore, and J. O'Carroll. Hygiene and Forensic Medicine: C. Norman.

Examiners for the Conjoint Diploma in State Medicine.—Hygiene: F. J. B. Quinlan. Chemistry: E. Lapper. Meteorology: J. W. Moore.

R.C.P.I. Examiners, Preliminary Education.—Science: E. MacDowel Cosgrave. Languages: H. T. Bewley.

Representatives on the Committee of Management.—J. Magee Finny, Sir C. J. Nixon, and G. P. L. Nugent.

Representative on the General Medical Council.—L. Atthill.

King's Professor of Materia Medica in the School of Physic.—W. G. Smith.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, October, 1895.—The following candidates passed in:

Surgery.—E. C. Adams, Royal Free Hospital; F. C. Collinson, Leeds; E. M. Gough, Royal Free Hospital; R. Hedden, Guy's Hospital; H. Hughes, Liverpool; A. S. Lawrence, Middlesex Hospital; H. W. Silver, Charing Cross Hospital; G. C. Stamper, Guy's Hospital; D. P. Stewart, Liverpool; W. E. Tarbet, Sheffield; M. Thorne, Royal Free Hospital; and R. P. H. Whitmarsh, St. Thomas's Hospital.

Medicine, Forensic Medicine, and Midwifery.—A. P. Coker, Middlesex Hospital; W. A. Harmer, Aberdeen; R. Jones, St. Mary's Hospital; F. C. Langford, Charing Cross Hospital; M. Thorne, Royal Free Hospital; C. Welch, London Hospital; and H. Williams, Middlesex Hospital.

Medicine and Forensic Medicine.—F. C. Hart, Cambridge and Guy's Hospital; and S. R. Merry, Charing Cross Hospital.

Medicine.—H. England, Sheffield; and J. W. F. Graham, St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—E. G. Adams, Royal Free Hospital; H. G. Jones, St. Mary's Hospital; and T. H. B. Yorath, St. Guy's Hospital.

Forensic Medicine.—H. W. Ramsay, St. Mary's Hospital; and A. M. St.J. Wright, Madras.

Midwifery.—G. P. Y. Hulbert, Birmingham; G. C. Jackson, Cambridge and St. Mary's Hospital; G. C. Stamper, Guy's Hospital; and C. S. Vale, Paris.

To Messrs. England, Graham, Hedden, H. G. Jones, R. Jones, Lawrence, Ramsay, Stamper, Whitmarsh, and to Miss Gough and Miss Thorne was granted the diploma of the Society.

MEDICO-LEGAL AND MEDICO-ETHICAL.

FORESTERS' COURT AND CURTAILMENT OF SURGEON'S FEES.

M.R.C.S., L.S.A.—A correspondent writes complaining of the treatment he has lately received from a Foresters' Court to which he is surgeon. It would appear from his statement that, owing to financial difficulties, it was necessary to raise money, and the court thereupon determined to levy a toll of over 15 per cent. of his fees on their surgeon. The latter naturally objecting to this, a fresh election of court surgeon was made, in which another practitioner, who was willing to do the work at the reduced rate, was proposed and elected, but following immediately on this an amendment was proposed and carried that the old surgeon be re-elected. The Chief Ranger thereupon asked him whether he was willing to accept the reduction, and this he declined to do, but it would seem that in spite of this the court continued to employ his services for the next six months. On his then demanding payment, the secretary declined to pay more than the reduced fees, intimating that he must get the difference from the individual members who had signified willingness to pay the old rate. It is added that shortly after the election a circular had been sent out to all the individual members of the court to ascertain their views on the subject, and all with the exception of twenty-seven had expressed a desire to go on at the old rate. The secretary's contention, therefore, would seem to be that the surgeon must recover the reduction from those members who voted for the old rate. This is all very well, but each member of the court, according to their receipt card, has paid the full contribution, and consequently objects to pay it over again. If the facts are correctly stated, it would appear that the court in its corporate capacity has applied to other purposes money ostensibly paid by members to the surgeon's fund.

Our correspondent wishes to know what remedy he has. We believe the action of this Court in using members' subscriptions towards the medical fund for any other purpose is not in accordance with the rules of the order, so that the details of the case should be laid before the Foresters' High Court, which might not unlikely redress his grievance.

It is possible, if not probable, that our correspondent could, if he thought it wise so to do, recover the residue of his fees in the county court, if he distinctly intimated at the time of his re-election that he would not accept less than the old rate of payment, seeing that after this the Court accepted his services.

With regard to time of payment to medical officers of friendly societies it is usually at the end of the quarter, although there are exceptions.

The action of our correspondent's brother practitioners in the neighbourhood is much to be regretted. They would have acted more wisely had they done their utmost to assist him in resisting this reduction.

THE MEDICAL ELECTRODE COMPANY.
BANKRUPTCY COURT, SATURDAY, OCTOBER 12TH.
(In the Department of the Official Receiver.)
Re MARY ANN HILLOCK.

THE receiving order was made against this bankrupt on September 3rd, she being described as of 146, Southampton Row, widow, trading as the Medical Electrode Company. The summary and observations have just been issued, from which it appears that she returned to England from America in [illegible], and commenced business at 91, Edgware Road as agent for a proprietary medicine, which she gave up after nine months. She then started business at 33, Berners Street, selling the medical electrode invented by her, afterwards moving to No. 41, where she continued as M. Hillock and Co. and the Medical Electrode Company, being shortly afterwards joined by another person. The partnership continued down to February, 1892, when, her partner having shut her out, she took legal proceedings and recovered possession in April, whereupon the business was sold for advances previously made to her, and she was employed as manageress at a weekly salary until December, 1893, when the business, then removed to Great Russell Street, was closed. In June, 1894, she repurchased the business for arrears of salary, etc., due to her, amounting to about £100, and has since traded alone as the Medical Electrode Company at 146, Southampton Row. The debts are £1,521 6s., and the assets *nil*. She attributes her insolvency principally to the action of her late partner, also to bad trade consequent on the failure of a certain medical battery company. The debts, over 260 in number, appear to be almost entirely for advertisements, most of which she alleges were improperly contracted by her late partner. No books of account had been kept.

FEES FOR MEDICAL REPORTS.

LOCUM TENENS, while acting as such at an infirmary, received a request from the employers of a man, who was sent to the infirmary and died, for a report on the case. The report was accordingly sent to the firm in question by the gentleman acting as *locum tenens* for the house-surgeon of the infirmary, with the request that the usual guinea for a medical report should be paid. The firm declined to pay anything, and our correspondent inquires whether in the interests of the medical profession he should take steps to recover the fee in a court of law. It may be mentioned that the authorities in the infirmary in question support the contention of the firm to whom the report was furnished, that no fee should have been charged; while the house-surgeon of the infirmary supported the view of our correspondent that he was entitled to the fee, and that he, the house-surgeon, always claimed the fee in similar cases.

⁂ We think that in the case of all such reports which are not absolutely *ex-officio*, an undertaking should be required for payment of the proper fee before the report is furnished. We doubt if the fee could be recovered in the present case, or even if it were that it would form a precedent in other cases, as there might always be more or less varied circumstances attending them, rendering it necessary for each case to be decided on its merits.

BOND OR CONTRACT NOT TO PRACTISE.

A CORRESPONDENT asks for our opinion on the following case:

A. (principal) advertises for an unqualified assistant. B. (assistant) applies and is accepted, and, on request, signs a bond not to engage in business as a medical practitioner either as principal or agent, master or servant for the space of five years from the date of the termination of service. Penalty, £10 per week as liquidated damages. It appears that at the time of service B. was an unqualified man but has since become duly qualified at the request of A., and the service seems to have terminated some four years ago. There are circumstances relating to negotiations between A. and B. with reference to the sale to the latter of a share in A.'s business, which have been broken off in consequence of the sale of the share by A. to another practitioner, and in respect of which B. complains. We think it unnecessary to particularise these points here, as they do not appear to affect the legal aspect of the question submitted.

⁂ It is difficult to express any opinion without seeing exactly the form in which the bond was given. As quoted above, it seems that the contract not to practise was not limited to any defined district, and if this is so it might be considered invalid on this ground. If, however, the district to which the restraint was intended to apply was fair and reasonable as regards space, we think the bond would be upheld, and the fact that B. was an unqualified man at the date of service does not, in our opinion, militate against this view of the question.

ASSISTANTS AS *LOCUM TENENS*.

JUSTITIA.—A practitioner seems hardly justified in engaging another to act as his assistant, and then employing him as a *locum tenens*. As our correspondent remarks, "There is all the difference in the world between being *locum tenens* with all the work and responsibility upon one's shoulders, and being assistant and having only part of the work and part of the responsibility." There can be no doubt that these two offices are quite distinct, and command very different rates of remuneration, and under such circumstances an assistant would be fully justified in looking for extra payment for his services.

"POACHING."

AJAX writes: A. and B. are country practitioners whose districts meet at a certain point. A. has fitted up a surgery at a shop in B.'s district and attends there regularly twice a week to see patients and dispense medicine. What steps can B. take to put a stop to this?

*** We do not think any steps can be taken by B. to prevent A. from continuing the course he has adopted. B. cannot have an exclusive right to practise in any given district.

TOUTING SOCIETIES AND PERSONAL ADVERTISEMENT.

NEMO asks whether there is any objection to supplying labels with his name, address, and hours of consultation to agents of the London and Manchester Assurance Society, provided that they promise not to enrol any members who are the patients of other practitioners, and only put them in the books of members legitimately accepted for himself. There is every objection. The use of labels bearing the practitioner's name and address for any purpose is at the present day more than questionable, and when they are entrusted wholesale to an ordinary commercial agent for distribution with no better guarantee against abuse than an understanding like the above, such a practice must be strongly condemned. As to the absence of "touting" on the part of the agents of the London and Manchester Assurance Society in our correspondent's neighbourhood, and the great discretion they display in only taking "poor" patients, some of his brother practitioners might tell him another tale. It is the object of these agents for their own sake to get as many members as they can, and in doing this it is not to be expected they will be at all scrupulous in observing professional decorum. It moreover, assists them greatly if they can show to members of the public credentials from any well known practitioner in the neighbourhood where they are canvassing, and for this purpose labels would be a veritable godsend.

D. S.—The enclosed prospectus of the London and Manchester Assurance Society, advertising broadcast the names of medical practitioners, many of whom are doubtless men of the greatest respectability, is, unfortunately, only a sample of circulars which are being distributed largely by this society in nearly every part of the country. We have frequently commented on the professional degradation involved in such forms of advertisement, and have over and over again expressed surprise that the small emolument likely to be gained by such practices should be sufficient to tempt practitioners.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

COUNTY MEDICAL OFFICERS OF HEALTH AND LOCAL APPOINTMENTS.

ACCORDING to the *Liverpool Post* the proposition of the Cheshire County Council that Mr. Vacher, the county medical officer of health, should act as health officer for the districts in the Mid-Cheshire combination, has not met with acceptance on the part of the local authorities concerned. The vacancy arises from the death of Mr. Makinson Fox, who had held the appointment for many years. One of the districts has decided to withdraw, but the rest are apparently disposed to remain in combination for the purpose of appointing a successor to Mr. Fox. The secession of Altrincham is to be regretted, but scarcely so the decision to decline the overtures of the county council. The administrative county of Cheshire is large enough to afford ample scope for the energies of a first rate county medical officer, and Mr. Vacher's ability and experience have long ago placed him in the front rank. The county is wealthy enough to place the appointment on a proper footing without any bargaining with local authorities. In the early days of county sanitary government, when there was no experience to go upon, it seemed probable that advantage would be taken of the permissive clause which sanctions such arrangements. Worcestershire began work in that way, and Essex has just followed suit, but in both instances there was a special reason in the fact that the newly appointed county officer already held office under local authorities in the county; but the few years which have elapsed since 1888 have not been without their lessons. The pioneer counties have demonstrated that a great deal of useful work is possible, even with the apparently shadowy and indefinite powers at first given, and there have been already many additions of no small importance. From the standpoint of both classes of authorities, county and local, the dual tenure is of doubtful convenience. Districts in which the county officer is also health officer under the Public Health Act are not in the same position with regard to the county council as are the other portions of the county, and in the event of the county medical officer having to advise the county council to bring pressure to bear in a district for which he was medical officer of health, his divided allegiance would not improbably prove irksome to himself and unsatisfactory to at least one of the contending parties. The smaller counties, which may with more reason plead inability to support an efficient staff of their own, may perhaps find it expedient to adopt some such course as that which Cheshire contemplated, although a better way would be to combine with a neighbouring county standing in like need; but Cheshire is scarcely a minor county.

SANITARY RELATIONS OF PLUMBERS.

AT the opening lecture of the eighth session of the Glasgow Technical College Plumbing Classes on October 12th, Mr. Peter Fyfe, Chief Sanitary Inspector, City of Glasgow, gave a suggestive and stimulating address to the students. In the introduction of his lecture he emphasised the absolute need in the present day of combining the theoretical and the practical, of uniting sound theory to sensible practice. He said the theoretical faddist and the rule of thumb man were equally unfitted for the problems now confronting us. It was too often taken for granted by young men entering on a trade that all had been discovered that was worth discovering, but to the plumber the door was open to much greater things in the future than had been accomplished in the past. Especially the continual development of great cities called upon the plumber for the highest exercise of his resource. Even the great water carriage sewage system, which had been carried to such perfection, was capable of much improvement. Again, plumbers were becoming more and more concerned in the efficient distribution of hot water. In the cold winter months a free distribution of cheap hot water was really a hygienic consideration. The man would be a public benefactor who discovered a simple and efficient remedy for the hot water starvation prevalent amongst the poorer classes. This would involve a complete grasp of the principles of hot water circulation, pressure reduction, friction in pipes, and heat absorption. In the new field of applied hydrodynamics the plumber might find an important place. In large cities hydraulic power was now being distributed, and recently there had been inaugurated in Glasgow municipal hydraulic works, from which such power would be dispensed through the principal streets at a pressure of eleven hundred pounds to the square inch. With this high pressure small rotative motors would come into the market, such as impulse turbines, to drive light machinery. It would also afford the means of generating the electric current. Mr. Fyfe then discussed the equipment necessary to fit plumbers for the duties of sanitary inspectors, including the power of writing intelligent reports, skill in drawing, and the study of such subjects as ventilation, heating, the elements of chemistry, etc.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,526 births and 3,873 deaths were registered during the week ending Saturday, October 19th. The annual rate of mortality in these towns, which had been 19.4 and 21.0 per 1,000 in the two preceding weeks, declined again to 19.1 last week. Among these large towns the lowest death-rates were 10.4 in Derby, 13.1 in Nottingham, and 13.6 in Croydon; the highest rates were 26.5 in Salford, 25.7 in Burnley, and 31.5 in Blackburn. In the thirty-two provincial towns the mean death rate was 19.8 per 1,000, and exceeded by 1.9 the rate recorded in London, which was 17.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.3 per 1,000; in London the rate was equal to 2.8, while it averaged 3.6 per 1,000 in the thirty-two provincial towns, and was highest in Salford, Burnley, and Blackburn. Measles caused a death-rate of 3.2 in Swansea and 5.7 in Blackburn; whooping-cough of 1.1 in Gateshead: "fever" of 1.7 in Bolton and 1.9 in Sunderland; and diarrhœa of 3.5 in Salford, 3.8 in Gateshead, 5.3 in Burnley, and 6.5 in Blackburn. The 107 deaths from diphtheria in the thirty-three towns included 76 in London, 5 in West Ham, and 4 in Manchester. One fatal case of small-pox was registered in London, but not one in any of the thirty-two large provincial towns. There were 119 small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital on Saturday last, October 19th, against 234, 198, and 158 at the end of the three preceding weeks; 7 new cases were admitted during the week, against 21, 17, and 9 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 2,838, against 2,807, 2,802, and 2,827 at the end of the three preceding weeks; 241 new cases were admitted during the week, against 339, 282, and 332 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, October 19th, 553 births and 339 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.5 to 19.3 per 1,000 in the three preceding weeks, declined again to 18.7 last week, and was 0.4 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.7 in Perth to 22.5 in Aberdeen. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Aberdeen and Dundee. The 288 deaths registered in Glasgow included 20 from diarrhœa, 5 from whooping-cough, 4 from scarlet fever, and 4 from diphtheria. Three fatal cases of "fever" and 2 of diphtheria were recorded in Edinburgh.

ENGLISH URBAN MORTALITY IN THE THIRD QUARTER OF 1895.

THE vital and mortal statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending September last, 82,001 births were registered in these thirty three towns, equal to an annual rate of 31.1 per 1,000 of their aggregate population, estimated at rather more than ten and a half millions of persons in the middle of this year. In the corresponding periods of the three preceding years the birth-rates in these towns were 32.1, 31.5, and 29.8 per 1,000 respectively. In London the birth-rate last quarter was 30.4 per 1,000, while it averaged 31.5 in the thirty-two provincial towns, among which it ranged from 22.1 in Huddersfield, 24.4 in Halifax, 25.2 in Brighton, and 25.7 in Croydon to 34.4 in Preston, 35.3 in Gateshead, 36.2 in Salford, and 36.4 in Liverpool.

During the quarter under notice 58,278 deaths were registered in the thirty-three towns, corresponding to an annual rate of 20.2 per 1,000, against 17.9, 21.5, and 18.4 in the third quarters of the three preceding years, 1892-3-4. In London the rate of mortality was equal to 18.6 per 1,000, while it averaged 21.3 in the thirty-two provincial towns, among which it ranged from 12.8 in Croydon, 14.4 in Bristol, 15.0 in Huddersfield, 15.4 in Swansea, and 15.6 in Halifax to 25.6 in Manchester, 26.0 in Sunderland, 26.1 in Wolverhampton and in Preston, 27.2 in Salford, and 28.2 in Liverpool. The 58,278 deaths registered in the thirty-three towns last quarter included 13,134 which were referred to the principal zymotic diseases, equal to an annual rate of 5.0 per 1,000; in London the zymotic death-rate was equal to 4.3 per 1,000, while it averaged 5.5 in the thirty-two provincial towns, and ranged from 1.8 in Plymouth, in Bristol, and in Huddersfield, 2.1 in Halifax, 2.2 in Croydon and in Swansea, and 2.9 in Brighton to 7.8 in Salford, 7.9 in Bolton, 8.1 in

Sunderland, 8.4 in Blackburn and in Preston, and 8.7 in Hull. The 13,134 deaths referred to the principal zymotic diseases in the thirty-three large towns included [illegible] which resulted from diarrhœa, 1,346 from measles, 907 from diphtheria, 805 from whooping-cough, 517 from "fever" (principally enteric), 514 from scarlet fever, and 53 from small-pox. The [illegible] fatal cases of diarrhœa considerably exceeded the number recorded in the corresponding period of last year; in London the death-rate from this disease was equal to 2.49 per 1,000, while it averaged 4.10 in the thirty-two provincial towns, among which diarrhœa showed the highest proportional fatality in Leicester, Bolton, Salford, Preston, Sheffield, Hull, and Sunderland. The deaths referred to measles, which had been [illegible] and 1,172 in the two preceding quarters, further increased to 1,346 during the three months ending September last; in London the measles death-rate was 0.69 per 1,000, while it averaged only 0.38 in the thirty-two provincial towns, among which this disease was proportionally most fatal in West Ham, Manchester, Salford, Oldham, and Blackburn. The fatal cases of diphtheria, which had declined from 1,058 to 761 in the three preceding quarters, rose again to 907 during the three months under notice; in London the death-rate from this disease was as high as 0.55 per 1,000, while it averaged 0.30 in the thirty-two provincial towns, among which diphtheria showed the highest proportional fatality in West Ham, Wolverhampton, Cardiff, Birkenhead, Salford, and Burnley. The deaths from whooping-cough, which had been 1,146 and [illegible] in the two preceding quarters, further declined to 805 during the three months ending September last; in London the death-rate from this disease was equal to 0.24 per 1,000, while it averaged 0.35 in the thirty-two provincial towns, and was highest in Wolverhampton, Liverpool, Bolton, Bradford, and Gateshead. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of "fever"), which had declined from 684 to 324 in the three preceding quarters, rose again to 517 during the quarter ending September last; in London the "fever" death-rate was equal to 0.15 per 1,000, while it averaged 0.23 in the thirty-two provincial towns, among which "fever" showed the highest proportional fatality in Liverpool, Bolton, Salford, Burnley, and Sunderland. The fatal cases of scarlet fever which had declined from 598 to 334 in the six preceding quarters, rose to 514 during the three months under notice; in London the death-rate for this disease was equal to 0.23 per 1,000, while it averaged 0.17 in the thirty-two provincial towns, and was highest in Wolverhampton, Liverpool, Manchester, and Salford. The deaths referred to small-pox in the thirty-three towns, which had been 29 and 15 in the two preceding quarters, rose again to 53 during the three months ending September last, of which 31 were registered in London, 17 in Oldham, 2 in Liverpool, 2 in Manchester, and 1 in Preston.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under one year of age to registered births, was equal to 252 per 1,000 last quarter, against 186, 250, and 169 in the corresponding periods of the three preceding years. In London the rate of infant mortality was 232 per 1,000, while it averaged 272 in the thirty-two provincial towns, among which it ranged from 141 in Bristol, 157 in Huddersfield, 166 in Halifax, and 177 in Swansea to 325 in Bolton, 340 in Leicester, [illegible] in Preston and in Hull, 367 in Wolverhampton, and 370 in Burnley.

The causes of 641, or 1.2 per cent., of the deaths in the thirty-three towns during the third quarter of this year were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London did not exceed 0.6 per cent., while it averaged 1.6 in the thirty-two provincial towns. The causes of all the deaths during the quarter in Croydon were duly certified; in the other towns the lowest proportions of uncertified deaths were registered in Plymouth, Nottingham, Derby, Bolton, and Oldham, and the highest in West Ham, Birmingham, Liverpool, Huddersfield, and Sheffield.

MILKBORNE DIARRHŒA.

An outbreak of milkborne disease in the city of Manchester at the close of last year finds record in the annual report of Dr. Niven. The malady was characterised by diarrhœa, sickness, and abdominal pain. The cases, so far as could be ascertained, numbered [illegible] in [illegible] houses, or just [illegible] per cent. of the houses served by one and the same milk seller. No case proved fatal, but the occurrences were over within the space of a few days in early November. It was soon seen that the milk supply was a community of condition so far as all the patients were concerned, and it was discovered that raw milk drinkers were the chief sufferers, though one lady was positive as to the boiling of the milk in her affected household, and it had been warmed, as in tea and coffee, in other cases. A typical household may be quoted: Three attacks, four escapes; three attacked had unboiled milk; of the escapes, two never used the milk, one took it only boiled, and the fourth only in tea. Dr. Niven visited the farm whence the milk came, and found that it was the milk of that farm, and not the added milk from a more distant farm which supplemented the farmer's stock that had caused the epidemic, the home farm milk only being sent into the affected district. Near the farm were [illegible] tons of privy midden refuse; two streams ran near the farm, one being fouled by the drainage of the tip, and the other being contaminated by sewage. The water used for washing the pails was kept in a foul cistern, and was used in a tepid state; and the cows drank from a pool which received the drainage from the cowshed midden. The stored milk could be contaminated by the emanations from the cowshed. A sample of the milk tested bacteriologically showed a bacillus having the characters of the coli communis. It was with difficulty that lists of customers could be obtained from the farmer, and in circumstances which threw doubt on their correctness. The farmer for a time concealed the fact that at the dates when the milk must have been infective he had a cow suffering from garget, and that he had her removed from the farm and slaughtered for food before Dr. Niven heard of the facts. Later on the farmer volunteered information that showed that the period of the cow's acutest illness coincided with the period of epidemicity of the malady, and he himself ascribed the outbreak to the milk of this cow being mixed with

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Third Quarter of 1895.

Towns.	Estimated Population in middle of 1895.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 births.	Rate per cent. of Uncertified Deaths.
33 Towns	[illegible]	[illegible]	[illegible]	31.1	20.2	5.0	13,134	53	1,346	514	907	805	517	[illegible]	252	1.2
32 Provincial Towns	[illegible]	[illegible]	[illegible]	31.5	21.3	5.5	8,420	22	593	261	[illegible]	564	[illegible]	[illegible]	272	1.6
London	4,392,346	[illegible]	[illegible]	30.4	18.6	4.3	4,714	31	753	[illegible]	[illegible]	241	150	[illegible]	232	0.6
West Ham	[illegible]	[illegible]	1,185	38.1	19.1	6.0	374	—	127	11	30	11	16	188	241	2.5
Croydon	[illegible]	[illegible]	368	25.7	12.8	2.2	62	—	1	2	1	7	3	48	178	—
Brighton	[illegible]	769	477	25.2	16.0	2.9	87	—	3	—	5	2	3	74	[illegible]	2.1
Portsmouth	174,751	1,228	762	28.1	17.5	4.2	184	—	2	1	1	20	7	153	[illegible]	[illegible]
Plymouth	89,096	642	372	28.9	16.7	1.8	39	—	8	—	—	3	1	27	181	0.3
Bristol	228,139	1,686	818	28.5	14.4	1.8	103	—	1	4	9	4	7	78	141	1.0
Cardiff	165,637	1,347	698	33.9	17.7	4.1	161	—	14	—	14	10	5	118	254	0.9
Swansea	97,008	798	372	33.0	15.4	2.2	52	—	13	—	4	3	6	26	177	0.8
Wolverhampton	85,760	703	389	33.0	20.1	7.6	163	—	7	8	14	14	6	115	367	1.3
Birmingham	494,761	[illegible]	2,315	31.8	18.7	4.4	[illegible]	—	2	39	31	[illegible]	34	[illegible]	[illegible]	[illegible]
Norwich	[illegible]	[illegible]	561	31.8	21.0	5.8	154	—	—	5	7	14	4	124	[illegible]	[illegible]
Leicester	[illegible]	[illegible]	919	29.5	19.0	7.3	365	—	5	4	7	20	8	311	340	[illegible]
Nottingham	[illegible]	[illegible]	1,042	29.3	15.4	5.2	293	—	—	9	6	2	11	[illegible]	[illegible]	0.4
Derby	100,272	730	421	28.8	16.6	4.2	106	—	—	1	1	9	6	89	244	0.3
Birkenhead	107,460	817	490	30.5	18.3	4.3	112	—	—	3	6	13	5	85	247	1.4
Liverpool	503,967	4,874	3,549	38.4	28.2	6.8	858	2	61	43	39	[illegible]	40	[illegible]	[illegible]	2.4
Bolton	119,237	986	737	33.1	24.8	7.9	236	—	6	4	5	[illegible]	15	[illegible]	325	0.3
Manchester	524,685	4,394	3,349	33.0	25.6	5.6	733	2	133	47	11	[illegible]	15	[illegible]	[illegible]	1.3
Salford	[illegible]	[illegible]	1,414	34.3	27.2	7.8	[illegible]	—	38	30	17	[illegible]	14	[illegible]	[illegible]	1.0
Oldham	141,079	1,015	[illegible]	28.9	20.0	4.3	151	17	22	3	5	[illegible]	2	[illegible]	[illegible]	0.4
Burnley	99,591	785	[illegible]	31.6	24.6	7.1	177	—	1	4	[illegible]	[illegible]	7	132	370	[illegible]
Blackburn	127,615	983	[illegible]	30.9	25.0	8.4	[illegible]	—	97	—	—	20	5	141	[illegible]	[illegible]
Preston	112,633	965	[illegible]	34.4	26.1	8.4	237	1	7	—	—	6	7	[illegible]	[illegible]	[illegible]
Huddersfield	99,482	549	371	22.1	15.0	1.8	45	—	4	6	4	1	2	[illegible]	157	[illegible]
Halifax	93,813	571	[illegible]	24.4	15.6	2.1	[illegible]	—	—	3	4	2	3	[illegible]	166	1.1
Bradford	226,334	[illegible]	1,177	26.0	20.9	5.5	[illegible]	—	—	3	5	37	7	[illegible]	314	0.9
Leeds	386,545	3,014	[illegible]	31.0	20.9	5.8	573	—	10	18	14	24	30	[illegible]	307	0.7
Sheffield	342,729	[illegible]	[illegible]	33.7	22.0	6.7	579	—	13	5	12	31	24	[illegible]	309	2.3
Hull	216,752	[illegible]	[illegible]	32.6	26.3	8.7	468	—	2	5	6	13	11	[illegible]	268	2.1
Sunderland	137,705	[illegible]	[illegible]	34.1	26.0	8.1	277	—	1	3	—	10	[illegible]	[illegible]	342	1.2
Gateshead	95,671	844	[illegible]	35.3	19.6	4.1	99	—	1	4	2	17	4	71	231	0.6
Newcastle-on-Tyne	207,031	1,580	[illegible]	30.2	19.7	5.1	161	—	22	4	12	9	5	[illegible]	[illegible]	[illegible]

the general supply from his sheds. The evidence given by the farmer was however, very misleading, and information was forthcoming to show that the locality hit by the disease was almost wholly supplied by the implicated farm, and almost wholly affected in its constituent houses. Indefinite as the facts are as to the precise cause of the condition of the milk which induced illness in its consumers, Dr. Niven points out that all the factors for rendering the milk infective were present at the farm and its surroundings, and that the presence of the bacillus coli communis at least demonstrated the contamination of the milk by excremental matter.

TUBERCULOUS CATTLE.

If an abuse of the tuberculin test brought to notice by Mr. M'Connell, M.R.C.V.S., is becoming as common as he represents, legislation is urgently needed. In a letter to the *North British Agriculturist*, he says that the test is being "pretty extensively employed" by owners of cattle to detect tuberculous animals, those in which disease is indicated being generally drafted out from the healthy ones, and sent to the public markets for sale. Suppose that twenty tuberculous cows are found in a herd and thus disposed of, they may be spread about over twenty different farms, carrying contagion to each herd in which one of them is placed. Mr. M'Connell admits that a few public-spirited stockowners are making a proper use of the test by isolating cattle found diseased and fattening them off, but they, he adds, are the rare exceptions. He mentions a case in which nearly three-fourths of a herd of cows, 94 in number, were found to be tuberculous, and all, or nearly all, sent to the markets and sold. There should be a very heavy penalty on the sale of a tuberculous animal known to be thus diseased, in order to check the atrocious practice to which Mr. M'Connell calls attention; and equally necessary is a penalty on the sale of milk from a cow known to be tuberculous; but if legislation went no further than this it would do little besides partially stopping the use of the tuberculin test, which it is desirable rather to encourage, if not to make obligatory. Compensation for condemned animals, and the inspection of those fattened when they are slaughtered, must also be dealt with in any legislation intended to protect the public against the terrible risk of infection from tuberculous meat and milk to which they are at present exposed.

PAYMENT WITHOUT RESULTS.

The Whitstable Urban District Council, having withdrawn from the East Kent combination, have had to decide upon the salary to be paid to their future medical officer of health. At first they assessed the value of his services at £20 per annum, but this was advanced to £30. Now the Local Government Board have declined to approve of anything less than £40, and the district council have finally decided, by a majority of six to three, to revert to the original sum of £30, and pay the whole out of the local rates. This is an odd decision in some respects, since it leaves the Whitstable ratepayers no better off than if the Local Government Board proposition, with its corollary of repayment of half the salary out of county funds, had been accepted. It simply deprives their officer of that half of his proper salary which does not come out of the local rates, and the intending candidates for the not very lucrative appointment will doubtless take note of this. It ought to be added, however, that there seems to be something exceptional in the working of the Public Health Act in Whitstable, for one of the councillors, who certainly ought to know, urged in justification of the reduced salary the unexpected argument that all the medical officer of health had to do was to certify cases of infectious disease. Nowhere else does this unusual responsibility fall to the lot of the health officer, much less constitute his whole duty, and the Local Government Board would probably have a good deal to say if this view were put into practice. But however little the majority of the district council may intend their officer to do, their decision ought to be popular with neighbouring councils, for Whitstable has to contribute its share to the county funds out of which half the salaries of the health officers of other districts are repaid, although it prefers on high economical grounds to take nothing in return. The economy may not be altogether apparent, but there is the decision.

EDINBURGH MILK SUPPLY.

Considerable doubt has of late been felt and expressed as to the legal powers of the local authority of Edinburgh to regulate the milk supply of the city, especially that coming from entirely outside sources. The Town Clerk has now prepared a report, in which it is stated that the local authority—the magistrates and council—has ample powers to maintain a constant and systematic inspection, and to take measures for enforcing proper accommodation for cows, cleanliness in the utensils and premises connected with the milk trade, and immunity from contamination by infectious disease within the city. As to the regulation of milk supply coming from places further than the city boundaries, the report runs:

"In cases where milk is supplied within the city, coming from byres outside the city, the inspectors (under the 1891 Act) can at all times enter those byres and inspect and examine the cows therein; and, in the event of any animals suffering from tuberculosis or any disease which might render the use of their milk dangerous or injurious to health, the owner must put away the animal at once, or cease altogether to supply milk to the city. If he continue to supply milk to the city and retain the diseased cow, he is presumed to be selling its milk, and may be punished accordingly. Where milk is coming into the city from farms or other places outside the city, and infectious disease breaks out among persons residing thereon, in such circumstances as the inspector considers imply risk of contamination, the magistrates can issue an order prohibiting any milk from entering the city from any such place until it is certified free from infection."

It is suggested that the local authority should now specially appoint the medical officer of health, and those present inspectors of markets who are qualified veterinary surgeons, for the purpose of inspecting and examining so as to prevent milk being supplied from cows suffering from tuberculosis.

Further, an arrangement ought to be come to with the county authorities so as to get immediate intimation of cases of infectious disease. To the same end milk dealers should be asked to co-operate.

There now exists an overlapping of authority and of officials which does not tend to the public good. Therefore the whole subject of the appointment of inspectors should be reconsidered and adjusted.

PREVALENCES OF FILTH DISEASE.

Accounts reach us from various centres of local prevalence of enteric fever, and all of them relate circumstances which are far from complimentary, either to the districts concerned or to the health bodies of those districts. Thus, from Batley rural district comes the story of enteric fever prevailing at Liversidge, of the local hospital being full, of many other cases undetailed in the houses in the village, of an overworked inspector, and of the place dependent on wells for its water supply, many of them, it is feared, containing unwholesome water, to the drinking of which the disease prevalence seems to be ascribed. Another local epidemic ascribed to the agency of drinking water is at Clayton-le-Moors in Lancashire, where a score of cases have occurred, and where there has been dissatisfaction for some time as to the quality of the water, especially since the reservoir has been low. One danger to the water system is that many farms are situate on the gathering ground, though no fault has seemingly been found with any at present. A prevalence of a somewhat different type is that at West Bromwich, where the Board of Guardians have passed a resolution calling the attention of the town council to the disgraceful condition of the property in which cases of typhoid fever are arising. The action of the health authority has been called in question, and recriminations have been freely made as to the insanitary state of house property held by guardians and council members. Added to these facts there have been several fever patients taken to the workhouse, and thence to the Poor-law infirmary, and we learn that the town council have themselves no isolation hospital to which cases of infectious disease can be removed. It is the old story over again of unpreparedness for the sickness which comes sooner or later to the district, which is not ready for the prompt isolation of the earliest cases, by which means death, suffering, and the rates are so often saved, and the good name of a locality spared. Filth, whether of air, water, soil, and lack of means of combating disease when present will ever be the forerunners of disease and distress.

EMERGENCY AT CAMBORNE.

The story comes from Camborne to the effect that scarlet fever is prevailing there and that there being no hospital accommodation the affected are living in houses where the isolation is of the most elementary character, the neighbouring children, indeed, running in and out of the infected houses with impunity. But the urban District Council seem none the less satisfied to let the matter of the provision of hospital accommodation be decided by the "views of the ratepayers" instead of proceeding to the question at once with a view of staying the present mischief, even if it be by some temporary method. Greatly as we are opposed to temporary hospitals there are times when it is unwise not to take the matter up as an emergency expedient, and since the council are looking to the item of expense as standing in the way they had best consider the cost of the alternative of a do-nothing policy and see which is likely to be the dearer to the pockets of the ratepayers.

HOSPITALS FOR INFECTIVE DISEASES IN IRELAND.

Last week a meeting of representatives of various sanitary authorities was held in Dublin, under the presidency of the Lord Mayor, for the purpose of considering a scheme for the erection of hospitals for infectious diseases in the County Dublin. Sir Charles Cameron and Dr. Stafford, Local Government Board inspector, addressed those present, and pointed out the importance of having cases of infective disease treated outside the city. A subcommittee was appointed to consider the scheme, and to report upon it to a general meeting.

THE COVENTRY BOARD OF GUARDIANS AND THEIR DISTRICT MEDICAL OFFICER.

We learn from the *Coventry Standard* that at a recent meeting of the guardians there was a long and animated discussion as to the adoption of the report of a committee which had been appointed to consider the question of remuneration of the three district medical officers, and had recommended an increase from £63 to £80 a year each. It appears that since these stipends were fixed—thirty-five years back—the population has increased almost 50 per cent.; and, although this has been the case, the increase of salary recommended was only about 25 per cent. of that hitherto paid. It could hardly have been expected that this recommendation would have met with any opposition whatever. It is difficult to see on what grounds the increase of salary recommended by the committee should have been so small; there may, however, have been some reason for this which to us is not apparent. It is, however, satisfactory to find that, notwithstanding the strenuous opposition of four members of the Board, the recommendation of the committee was carried; and this will soon, doubtless, be sanctioned by the Local Government Board. The majority of the Coventry guardians appear inclined to make progress in the right direction, but we fear they require a little more pluck.

SMALL-POX IN BRISTOL IN 1894.

E. D. S.—Dr. Davies speaks of "two cases occurring in sequence," but he nowhere leads to the supposition that there were other cases undealt with in his able and detailed report on the epidemic.

NOTIFIED CASES IN COMMON LODGING HOUSES.

R. T.—We should certainly regard a private medical practitioner notifying cases under the Infectious Disease (Notification) Act in persons who, being destitute, were lodged in common lodging houses, as entitled to the higher fee of 2s. 6d., such cases not being in any sense located in a "public institution," whatever may be the ultimate destination of the pauper patients.

THE ARGUMENTS OF ANTIVACCINATORS.

VACCA.—In addition to Mr. Ernest Hart's book on *Truth about Vaccination*, Dr. J. C. McVail's work on *Vaccination Vindicated* (Cassell) might be consulted with advantage, the fallacies of antivaccinators being well exposed in its admirable pages. The reports of the Royal Commission on Vaccination, so far as issued, can be obtained from Messrs. Eyre and Spottiswoode, East Harding Street, E.C., but we believe we are right in stating that the issued volumes only contain the evidence given prior to [illegible]

INDIA AND THE COLONIES.

INDIA.

Cholera and Contaminated Well Water.—In the report on the sanitary administration of the Punjab for the year 1894 Dr. Mulroney, Civil Surgeon, furnishes interesting particulars of a limited outbreak of cholera in the villages of Ratoki and Pakhupura, in the Amritsar district. The connection with the water supply is well brought out. A woman of Ratoki drank from a shallow pool which, from its position on the road side, was liable to contamination by passing pilgrims. About thirty hours thereafter she was seized with cholera. On April 27th her soiled clothes were washed on the parapet of one of the two village wells. On April 30th cholera broke out among those of the villagers supplied from this well, those who got their water from the other well being exempt. From April 30th to May 5th there were in all 49 seizures with 13 deaths. After that date the disease ceased. Half a mile from Ratoki lies Pakhupura. On May 5th a woman from Pakhupura paid a visit to Ratoki and drank from the contaminated well. The same day she returned to Pakhupura. On May 6th she was attacked with cholera and died. While she was ill her son washed her soiled clothes on the parapet of one of the three village wells. On the following day, May 7th, cholera broke out among those who drank from this well. During the night six were attacked, all of whom died. On May 8th 8 were attacked, of whom 2 died. That day the well was closed. All those attacked had drank from the contaminated well, those who drank from the other wells in the village escaped.

Scheme of Medical Organisation.—The following circular has, says the *Times of India*, been issued by Messrs. Bhalchandra Krishna, J. A. Da Gama, N. H. Choksey, and Khoja Abdulla, Honorary Secretaries of the Bombay Committee for Medical Reform in India:—"The movement for medical reform in India for a separation of the Civil and the Military Medical Services, with reconstitution of the civil branch and advancement and proper recognition of its subordinate grades, having enlisted general approval and sympathy, both in India and in England, it has been the feeling of several members of the profession in India and their friends in England that the time has arrived for a united and sustained effort to secure success to this movement by a thorough organisation. The objects the reform aims to attain are, as is now well known, catholic in character, and comprise not only the good of the Indian profession in its various grades, but also the interest and welfare of the public at large and the taxpayer in particular, who would be materially relieved of a considerable portion of the burden of the present military charges. The reform seeks to throw open to the profession at large, and the Indian profession in particular, the fields and opportunities of scientific work which have hitherto been denied them. A fair field and no favour to talent wherever found, and merit and special training—the only passport to seats of learning and scientific work—are the guiding principles of the proposed reform. It seeks to completely do away with the great evil and mischief now at work in the medical administration of the country, and which is the result of a system which, in the words of Mr. Ernest Hart, is radically wrong, the Indian Medical Service man being expected by Government to be fit for any post that may be vacant, a system in which men work their way up by seniority to positions for which they are quite incapable. To compass these ends the reform advocates: (1) Separation of the civil from the military medical service of the country, with the formation of one military medical service for India, divided into a European army branch and a native army branch, and in fact the military members of the Indian Medical Service are at present under the orders of the head of the European branch medical service called the Army Medical Service. (2) Reorganisation of the Civil Medical Service, reconstituting it as a purely civil medical service recruited from the open profession of medicine, with a due leaning towards the utilisation of indigenous talent and proved merit and ability, other things being equal. (3) Proper recognition and advancement of the civil assistant surgeons and hospital assistants, and their absorption into the Civil Medical Service of India. In order to bring about these results both time and money are required; a sufficiency of funds will secure the desired persistent agitation so necessary to the success of every reform movement. It is proposed to agitate the matter, both in India and in England, by representations in proper quarters, and by sending a delegate to England, who would place before the British public, the profession, and the authorities the case of the profession in India, and enlist their sympathy and co-operation in securing the favourable attention thereto of those in power in England. The House of Commons will be appealed to, and it is confidently hoped that it will not be long before some at least of the reforms set forth above are taken up and carried out. In order to make the movement thoroughly representative of the Indian profession, local committees, styled the Bombay, Calcutta, Madras, and Lahore, etc., committees for medical reform in India are being organised, and a fund called the Indian Medical Reform Fund has been started. The funds collected by the several committees will be amalgamated into one general fund, and the same will be utilised to the best advantage towards the objects of the reform as above set forth. It is gratifying to notice in the BRITISH MEDICAL JOURNAL of July 13th that the organ of the British Medical Association is convinced that our reform programme must sooner or later be adopted. And soon after this has come the glad and reassuring cable message of a warm advocacy of the reform by the British Medical Association at their annual meeting in London on August 1st. Such influential support will, no doubt, lighten our work and hasten action by the authorities. A summary of the whole programme endorsed by the BRITISH MEDICAL JOURNAL is thus pithily given in its issue of July 13th: '(1) The need of putting a stop to military surgeons going into civil employ or duty. (2) To cause all military surgeons now in civil work to return to military duty. (3) To throw the so-called "expert" or "specialist" posts and leading appointments open to competition in India and in England. (4) To install the uncovenanted as the nucleus for the Indian Civil Medical Service, and to fill up all civil vacancies from the special admissions that will be made to this service. (5) To utilise military surgeons and assistant surgeons with British and Indian troops under a central organisation, which is tantamount to the amalgamation of the Army Medical Staff and Indian Medical Service.' This appeal, the outlines of which were settled at a preliminary meeting held on July 3rd last, were unanimously adopted at a well-attended meeting of members of the local profession held on September 15th, and it was resolved thereat to solicit the support of all friends and well-wishers of our movement. Your cordial co-operation is earnestly requested, and you will, we feel sure, assist and advance this movement with your subscription and your influence."

Sanitarium for Women.—A project, which promises to be of substantial utility, says the *Times of India*, has just been brought to a successful issue. Some time since Dr. Pechey Phipson formulated a scheme for establishing a sanitarium for women and children at Nasik, a situation which recommends itself by its dry bracing climate to convalescents from Bombay, inasmuch as it is available in the rains as well as in the fair season. Nasik indeed, is so favoured a site that in Sir George Campbell's days an effort was made to persuade the Government of India that its permanent capital should be located there. Instead, however, of having a Government house at Nasik we have now an at least equally well located institution in the shape of a group of cottages occupying an area of ten acres, which has been presented by Mrs. Phipson and intended to serve the purpose of a home for convalescents from Bombay. The cottages have been provided at the cost of a number of friends of various communities whom Mrs. Phipson has been able to associate with her in the good work, for as the institution is intended to benefit Europeans, Hindus, Parsees, and Mohammedans alike so people of all these races have come forward to provide funds. The cottages are now ready for occupation by convalescents, not by sick persons. They are offered rent free, two of them being available for Europeans, two for Parsees, three for Hindus, and three for people of other races. It is an interesting experiment which has thus been set afoot, and it may be expected to be of real service to people who are ill situated for providing themselves with the particular advantages which it offers.

Assam Dispensaries.—Surgeon-Colonel A. Stephen, M.B., in his report on hospitals and dispensaries in the province of Assam for the year 1894, shows that progress is being made in providing medical relief for the inhabitants of this sickly territory. About half a million of patients were treated in 98 institutions, the cases treated representing about [illegible] per cent. of the population of the province. About one fifth of the patients suffered from malarial fevers, and another fifth from skin diseases. Intestinal worms, rheumatism, ulcers, bowel complaints, and spleen contribute large numbers. The disease called kála-azar (the black sickness) which is thought by some to be a malignant type of paludism, and by others a result of ankylostomiasis, prevails severely in some places, and special dispensaries have been opened for the treatment of this malady. Nine hundred and eleven surgical operations were performed in the dispensaries, with a death rate of 3.5 per cent. It is noteworthy that [illegible] of these were obstetric. Eye and stone operations are rare in Assam, and there is no operation for elephantiasis in the list. Local bodies contribute largely to the support of these institutions. The Government of the provinces supplement local effort generously.

Enteric Fever.—Some cases of enteric fever, says the *Indian Daily News*, still appear in Cawnpore. A short time ago two girls in the High School died from this disease, and during the past week there have been two more fatal cases among girls, though not in the school. All the cases have occurred in cantonments, though reported to be the healthiest part of the station.

Sanitary Needs of India.—The most conspicuous feature of the report for the past year of the Sanitary Commissioner for the Central Provinces is, says the *Times of India*, the mortality from fever. The total number of deaths was [illegible], or considerably more than [illegible] in excess of the figures for 1894, and out of this total [illegible] deaths are attributed to fever, an increase in twelve months of nearly [illegible]. These figures aptly illustrate Brigade-Surgeon Lieutenant-Colonel Hill Climo's contention that, under the existing system, matters are going from bad to worse, and that disease, and especially enteric and malarial fever, is obtaining the mastery. When the mortality from this source alone is more than double that from all other causes combined, it is surely time to ask for very careful inquiry with a view to finding a remedy for so startling a state of affairs, for it seems tolerably certain that a large proportion of these cases were remedial had proper precautions been adopted. Cholera, which is generally regarded with such horror, was not responsible for one-fortieth of this excessive mortality, while the deaths from dysentery and diarrhoea numbered less than 17,000. Strangely enough this unprecedented fever mortality is not commented upon in the Sanitary Commissioner's report, and receives only the barest mention in the Government resolution on the report. It would almost seem as if it had been taken for granted, and that there was really nothing out of the way about a mortality which carried away [illegible] per 1,000 of the population. The local Government observe that the report is "deficient in fulness of information," and that it is hard to gather from it a comprehensive view of the whole scope and progress of sanitary work during the year. It is, indeed, for the sanitary condition of the towns, jails, villages, and fairs throughout the whole province is dismissed in half-a-dozen lines.

Commissioned Medical Officers for Indian Railways.—The *Times of India* announces that the Surgeon-General with the Government of Madras has suggested that the chief medical officer to all state railways should be a commissioned officer belonging to the Indian Medical Service, so that the number of military medical officers at the disposal of the Government of India as a war reserve may be increased. This suggestion has been approved by the local government, and, in the event of

its sanction by the Government of India, the East Coast Railway will have a commissioned medical officer as its chief medical adviser.

CEYLON.

Sanitation in Ceylon.—It is interesting to observe from the *Ceylon Hansard* how frequently the debates in the Ceylon Legislative Council turn upon sanitary matters. Among other affairs which have been brought forward we note the endeavour made by Dr. P. D. Anthonisz to establish a sanitary department for the purpose of organising measures conducive to the prevention of the spread of contagious diseases in the island. If the statements made by him are to be accepted as representing the actual state of affairs, there can be little doubt that a reform is necessary; yet, apparently under guidance of the Colonial Secretary, the motion was negatived. It is difficult to understand the complacency with which the existence of outbreaks of disease among the natives is sometimes regarded by those in authority. The Colonial Secretary is reported to have said: "I think from the opinions formed from the frequent reports and the experience of a small-pox epidemic in another colony, that we have passed through the epidemic fairly well, considering the densely-populated and closely-packed character of this town. There were about 1,700 cases only, about half of which proved fatal." He ended by saying that there was no want of power on the part of the medical authorities, and that he did not see the necessity for the appointment of another Board. But no attempt was made to controvert the statement of Dr. Anthonisz that great and overwhelming as were the powers of the authorities they were not exercised. Especially was this the case in regard to vaccination and revaccination, the performance of which he urged as being even more important than the provision of enlarged hospital accommodation.

THE INDIAN PRESS ON MR. HART'S ADDRESS.

A **correspondent** signing himself "Verax" writes to the *Pioneer* adverting to the articles which appeared on September 6th and 8th, and quotes the cases of Surgeon Major de Renzy, Sanitary Commissioner, Punjab, and Dr. Furnell, Sanitary Commissioner, Madras, as sufferers for advancing the waterborne theory of cholera. The writer also draws attention to the fact that Dr. Cunningham's report of 1879 contradicts the opinions advanced by him on cholera in 1887, a point not clearly indicated in the *Pioneer* articles.

HOSPITAL AND DISPENSARY MANAGEMENT.

GLAMORGAN COUNTY ASYLUM.

Overcrowding is hampering this Asylum Committee in their efforts to keep the institution in a proper state of repair, and despite the opening of a male infirmary, the pressure upon the accommodation continues. Dr. Pringle, in referring to this want of room, says the evils of overcrowding are so serious, involving as they do impairment of health, and lessening of the powers of resistance to disease, as well as causing irritability and quarrelsomeness, and rendering the management of the patients more difficult, that it is better to have too much room than too little for those who are unable to help themselves. That this must be a serious question is emphasised by the fact that wards that have only proper accommodation for sixty patients are now occupied by ninety. Any surplus accommodation provided could be immediately, and very profitably, occupied by private and out county patients, and the necessary separate treatment for idiots and imbeciles. The average daily number resident during the year was 1128.7, while the admissions reached the high total of 291. The percentage of recoveries on the admissions was 24.6, and the death-rate was 7.8 upon the total number under treatment. General paralysis seems greatly on the increase, for whereas in the five years 1882-6 this form of disease constituted 7.8 per cent. of the admissions, during the last five years the proportion has risen to 15.2, and, as Dr. Pringle points out, this increase is half as great again in females as in males. This increase is serious, and compares most unfavourably with the asylum statistics in England and Wales, the proportion he states being 15 for males and 3.7 for females in a total of 9.1. The Commissioners in their report express their feeling of great satisfaction at the amount of work the Committee have undertaken and are still undertaking in their efforts to ameliorate the condition of the lunatics belonging to this county.

THE EAST RIDING ASYLUM, BEVERLEY.

The average number of patients daily resident during the year ending March 31st last was [illegible], namely, [illegible] private patients, [illegible] out-county patients, and [illegible] East Riding patients. The average cost per head per week for their maintenance was only 8s. 4d. per week. The general health of the patients has been satisfactory and the buildings in good condition. Eighty-six patients were admitted, including the [illegible] out-county patients from Northumberland, and Dr. Macleod very properly draws the attention of his Committee to the dwindling surplus accommodation of the asylum which must be supplemented ere long by the erection of new buildings. The recovery rate was [illegible] of those admitted, and the death-rate [illegible] per cent. of the daily average number resident. No accident is recorded, and there was no outbreak of epidemic disease.

THE CITY OF LONDON LUNATIC ASYLUM.

During the year 1894 there were 565 patients under treatment at this institution, and 473 remained on the books on December 31st, showing an increase of 27 on the year. The average number daily resident was 458. There were [illegible] patients admitted; 65 were discharged, and 29 died. The recovery rate was [illegible], calculated upon the admissions, and the death-rate was in the proportion of 5.18 per cent. upon the total number under treatment. No death is recorded as having resulted from accident or injury, and no inquest was necessary. The committee is to be congratulated upon the success attending the reception of private or paying patients, who numbered 57 at the close of the year. The throwing open of the doors of the asylum for the admission of those who have by reverses of fortune become crippled in their resources is a humane and wise action, which is a boon to the community and at the same time a source of valuable income to the institution. The health of the patients was good, and Dr. Ernest White has every reason to believe that the low death-rate and excellent health of the patients is in no small degree owing to the fact that the institution is situated upon a most salubrious site. Beer as an article of diet has been abolished and milk substituted with benefit to all concerned. The courses of lectures to the nurses and attendants have been continued.

KIRKLANDS ASYLUM.

The annual report of the Kirklands Asylum for Glasgow, Govan, and Lanark gives the total number of patients under treatment for twelve months as 287, with a resident population of 230. The recovery rate calculated on the admissions was 46.7 per cent. and the death-rate was [illegible] per cent. of the average number resident. Two cases of sudden death showed on *post-mortem* examination the cause to have been heart disease, and no serious accident occurred. Dr. Skene, the Medical Superintendent, gives an interesting account of the occurrence of a severe outbreak of influenza. A patient from an infected district, himself recovering from a severe attack, was admitted with a cut throat, from attempted suicide. He was placed in the sick room and within a few days influenza broke out among the sick-room attendants and patients. This extended till there were 30 cases in bed at one time. Dr. Skene notes that although the sexes mixed freely at their meals and entertainments the epidemic did not appear on the female side of the asylum, which leads him "to conclude its greater communicability among persons sleeping together." Dr. Campbell Clark, who had been Medical Superintendent since the opening of the asylum, has recently been appointed to the new Lanark Asylum, and the Committee speak in high terms of his efficiency and ability while at Kirklands.

DUNOON CONVALESCENT SEASIDE HOMES.

The twenty-sixth annual report of this institution is an excellent record of philanthropic work. During the year the homes have received nearly 4,000 persons, at an expense of over £7,000. The annual meeting was signalised by the intimation of a donation of £800 from Mr. Alexander Sinclair, of the *Glasgow Herald*, to endow a bed specially for the benefit of printers and others connected with publishing, Mr. Sinclair taking the opportunity of the completion of 50 years' connection with the *Glasgow Herald* to do this generous act.

MEDICAL NEWS.

Dr. W. S. Hedley has been appointed medical officer in charge of the Electrical Department which has been formed at the London Hospital.

Mr. Henry Harben has presented a cheque for £1,000 to the funds of the North London Hospital for Consumption at Hampstead. This is the second donation of a similar amount from Mr. Harben to the hospital.

Mr. Hardinge Frank Giffard, barrister-at-law, has been appointed Secretary to the Commissioners in Lunacy in the place of Mr. George Urmson. The post is worth £800 a year. Mr. Giffard is a member of the Inner Temple, was called to the Bar in 1887, and is attached to the North-Eastern Circuit.

Irish Medical Schools' and Graduates' Association.—The autumn general meeting of this Association will be held at the Café Monico, 6.30 P.M., Tuesday, November 12th. The autumn dinner at the Monico the same evening at 7 P.M. The Lord Chief Justice of England will be the guest of the Association.

David James Graham, M.B., C.M., (James Scott Scholar of the University of Edinburgh), and Robert William Beesley, M.B. and C.M. (Buchanan Scholar), have been appointed house-surgeons to the Edinburgh Royal Maternity and Simpson Memorial Hospital for the quarter beginning November 1st.

Mr. B. I. Barnato and several other friends have sent to the Lord Mayor, through Mr. H. C. Burdett, cheques for £15 000, £1,000 of which is to go to the Hospital Sunday Fund, £600 to the Hospitals Association for the establishment of a reference library on all subjects connected with hospitals and charities, and the remainder to other indicated charities.

The Cholera.—Up to the evening of October 16th there had been altogether 18 cases of cholera and 9 deaths at Damietta. The disease is said to be of a mild type. Cordons have been established wherever a case has occurred, so that each centre of infection is isolated. The Turkish authorities have imposed ten days' quarantine on all arrivals from Damietta. On October 21st there were 2 further cases at Damietta, while at El Menzelah and its vicinity there were altogether 30 cases

and 12 deaths on October 20th and 21st. The cases have only occurred among the poorest class of the city. The cholera is reported to be gradually decreasing in intensity throughout the whole of the southern provinces of Russia. On October 21st and 22nd there were 23 further cases of cholera and 10 deaths at El Menzelah.

The Pathological Society of Manchester.—The annual meeting of this Society was held on October 9th at Owens College Medical School, Professor Sheridan Délepine in the chair. The following officers were elected for the session 1895-96: *President:* H. R. Hutton, M.B. *Vice-Presidents:* T. Harris, M.D.; W. Thorburn, F.R.C.S. *Treasurer:* T. N. Kelynack, M.D. *Secretary:* R. B. Wild, M.D. *Committee:* A. Brown, M.D.; T. A. Goodfellow, M.D.; A. T. Helme, M.D.; E. T. Milner, M.B.; E. S. Reynolds, M.D.; W. P. Stocks, F.R.C.S.; A. T. Wilkinson, M.D.; J. B. Wolstenholme, F.R.C.V.S. *Auditors:* D. Headridge, L.D.S.; J. W. Smith, F.R.C.S.

It has been determined to postpone the final interment of M. Pasteur, which was to have taken place at the Pasteur Institute on October 26th, the date of the centenary of the French Institute. It was thought that on the occasion of the centenary of the Institute many of the foreign members might also wish to take part in M. Pasteur's funeral. It is now found, however, that the vault and some of the sculpture cannot be ready in time. Many of the learned societies in Great Britain had determined to send delegates to the funeral. Lord Kelvin was to represent the Royal Society, Sir Joseph Lister and Sir John Evans intended also to be present, and Sir William Priestley was to represent the University of Edinburgh.

In his sermon at the celebration in St. Paul's Cathedral of the thirty-first anniversary of the Guild of St. Luke, the Bishop of St. Andrews referred to the value of the Medical Mission. He expressed the fervent hope that the result of the festival might be, not only liberal subscriptions, but also a large accession of members, drawn not from the clergy and nurses only, but from the medical profession. The preacher paid an eloquent tribute to the skill and self-sacrifice of the medical profession, and the love and gentleness of the nurses. The offertory was partly devoted to the Medical Missionary Fund of the Guild.

Hospital Sunday Fund.—Mr. Henry C. Burdett, the secretary of the Loan and Share Department of the Stock Exchange, handed on October 22nd to the Lord Mayor a cheque for £3,400 collected in the Stock Exchange, through Messrs. Burdett and Harris and Messrs. Pim, Vaughan and Co., on behalf of the Hospital Sunday Fund, in response to the appeal recently made in the *Hospital* newspaper. This contribution raises this year's fund to over £50,000, a sum never before received since its foundation in 1873. This result also enables the council to claim the promised additional contribution of £100 from Mr. T. A. Denny. The Lord Mayor requested Mr. Henry C. Burdett to return his sincere thanks to the donors, and congratulated him on his own indefatigable efforts in the interests of the fund.

Princess Christian paid a visit on October 19th to the Hostel of St. Luke, 16, Nottingham Place, W. Her Royal Highness was received by the Chairman, Canon Utterton, who, in describing the objects and the work of the Institution, stated that the purpose of the Hostel was to provide medical and surgical treatment and a nursing home for the clergy of the Church of England, their wives and their children. Three classes of patients were received: those who could afford to pay the usual fees of the medical men attending them and also for their board; those who could not afford the medical fees but could pay something for their board; and those who were admitted entirely free of payment. Since the establishment of the Hostel 112 patients had been received and 44 operations had been performed.

The Muzzling Order in Middlesex.—An order has been issued by the Clerk to the Middlesex County Council from the Council's offices, Guildhall, Westminster, establishing the following regulations: "1. No dog shall be allowed in or on any public place within the administrative county of Middlesex unless such dog is muzzled with an efficient cage muzzle, so constructed as to render it impossible for such dog wearing the muzzle to bite any person or animal, but not so as to prevent it breathing freely or lapping water. 2. Any dog found without being muzzled in the manner prescribed will be liable to be seized by the police and detained. 3. Any dog so seized and not claimed within four days from the date of the seizure thereof shall be slaughtered or otherwise disposed of as the Executive Committee may think fit."

Horse Meat in Germany.—Some interesting details have been furnished recently as to the preparation and sale of horse meat in Germany. It is asserted that in the large cities the consumption of horse flesh is almost as great as that of beef or mutton, whilst even in the small cities it is, despite prejudice, daily growing larger. In the big cities some of the shops are devoted exclusively to the sale of horse meat, which is used only by the poorer classes. The German artisan is finding out that at 3½d. per lb. horse meat provides him with a food described as excellent in every particular, and the supply is now scarcely equal to the demand. The German butcher used to procure worn-out horses at £1 to £2 each, but as the supply of animals of this type is exhausted he has now to pay £9 or £10. Hence, though the the poorer classes have been attracted to horse meat because of its cheapness as compared with beef, the butcher has been compelled to advance his prices. It is contended that as the horse supply of the United States is practically inexhaustible, and as horses can be raised in the West almost as cheaply as cattle, and can be slaughtered just as easily, also, that as they can be shipped across the sea much more cheaply than cattle, and can be sold, either on the hoof or dressed, at prices certainly not exceeding 3½d. per lb., horse meat can be sold at a price not higher than that which the German artisan has hitherto paid. The flesh is consumed in Germany both salted and smoked as well as fresh, and the American producer is able to supply it in all three conditions. The importance of the subject is obvious to the American exporter, whose beef and beef products are now excluded from the German markets, and to the horse breeder, whose invested capital at present brings in very unsatisfactory returns.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street, S.W.—Surgeon to Out-patients; must be F.R.C.S.Eng. Applications to the Honorary Secretary by November 2nd.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salaries, £70 and £50 respectively, with board, washing, and attendance at the Institution. Applications to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham, by November 9th.

BRISTOL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon; doubly qualified. Salary, £60 per annum, with rooms and attendance (not board). Applications and testimonials, endorsed "House-Surgeon," to H. Lawford Jones, Secretary, before November 6th.

BROWN ANIMAL SANATORY INSTITUTION.—Professor Superintendent. Salary, £250 per annum. Applications to the Registrar of the University of London, Burlington Gardens, W., by November 16th.

CARLISLE DISPENSARY, Carlisle.—House-Surgeon. Salary, £120 per annum with apartments, not board. Applications to Mr. G. A. Lightfoot, Honorary Secretary, 14, Bank Street, Carlisle, by October 26th.

CATERHAM ASYLUM.—Second Assistant Medical Officer under Metropolitan Asylums Board. Must not exceed 30 years of age, and must be registered and qualified to practise both medicine and surgery in England. Will be subject to annual election after the completion of his third year of office. Salary, £100 per annum, rising £10 annually to £130. Forms of application may be obtained at the offices of the Board, Norfolk House, Norfolk Street, Strand, W.C. Applications and testimonials to T. Duncombe Mann, Clerk to the Board, before October 30th.

CITY OF DUBLIN HOSPITAL.—Visiting Surgeon. Applications to Mr. Arthur Dawson, F.R.C.S.I., Hon. Sec., Medical Board, City of Dublin Hospital, Upper Baggot Street, Dublin, before November 8th.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 168, Buchanan Street, Glasgow, by November 6th.

HORNCASTLE URBAN DISTRICT COUNCIL.—Medical Officer of Health. Appointment for one year. Salary, £45 per annum. Applications to John Panton, J.P., Chairman of the Council, by October 31st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—House-Physician and also House-Surgeon; unmarried. Appointment for six months. Salaries, £20 each, with board and residence in the hospital. Applications and testimonials to the Secretary before October 30th.

HULL BOROUGH ASYLUM.—Assistant Medical Officer. Must be registered, unmarried, and not more than 30 years of age. Salary, £100 per annum, with board (no liquors), lodging, and washing. Applications and testimonials, endorsed "Asylum Medical Officer," to the Town Clerk, Town Hall, Hull, by October 30th.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—Non-Resident Assistant Medical Officer. Salary, £50 per annum. Applications to R. Stonex, Secretary, 22, St. Mary's Gate, Manchester, before October 30th.

LIGHTBURN HOSPITAL FOR INFECTIOUS DISEASES, Shettleston, near Glasgow.—Resident Physician; duly qualified and registered. One with Public Health qualification and a knowledge of Bacteriology preferred. Salary, £120 per annum, with board, lodging, washing, and attendance. Applications and testimonials to W. H. Hill, Clerk to the Joint Committee, 104, Ingram Street, Glasgow, by October 30th.

LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon; doubly qualified. Salary, £80, with residence and maintenance. Applications to R. Haigh, Hon. Sec., Berey's Buildings, George Street, Liverpool, by November 2nd.

NORTH WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer and Assistant Resident Medical Officer. Appointments for six months. Salary at the rate of £50 per annum attached to the senior post. Applications to Alfred Craske, Secretary, by October 28th.

ROYAL BERKS HOSPITAL.—Consulting Dentist; must be registered Licentiate in Dental Surgery. Applications to the Secretary ten days before the election on November 5th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Assistant Surgeon. Applications to the Secretary by October 29th.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. Salary at the rate of £60 per annum, with furnished apartments, attendance, coal, and light. Applications to the Directors by October 31st.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, AND MEDICAL MISSION DISPENSARY FOR THE POOR, Plaistow, E.—Resident Medical Officer; double qualifications; under 40. Applications to Rev. T. Given-Wilson, M.A., Vicar of Plaistow, E.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Honorary Surgeon. Applications to H. Peter Bodkin, Hon. Sec., 22, Gordon Street, Gordon Square, W.C., by November 2nd.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House-Surgeon (non-resident); doubly qualified. Must reside near the hospital, and devote the whole of his time to the institution. Salary, £120 per annum. Applications and testimonials to H. G. Sanderson, Secretary, by November 5th.

SUNDERLAND INFIRMARY.—House-Physician. Salary, £80, rising £10 annually to £100 with board and residence. Applications to the Chairman of the Medical Board by November 7th.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon; doubly qualified. Salary, £120 per annum, and £30 per annum for dispensing, with furnished apartments and attendance. Applications and testimonials to Tyson Kitchen, Secretary, by November 9th.

MEDICAL APPOINTMENTS.

BENNETT, Hughes, M.D.Edin., F.R.C.P.Lond., appointed Consulting Physician to the Hospital for Epilepsy and Paralysis, Regent's Park.

BOTTOMLEY, B.A., M.B., B.C.Cantab., appointed Senior Resident Medical Officer to the Royal Free Hospital, *vice* W. A. Bowring.

CRAIG, J. A., M.B., B.Ch.R.U.I., appointed Second House-Surgeon to the Royal Southern Hospital, Liverpool.

EMSON, A., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Workhouse and Dorchester District of the Dorchester Union, *vice* G. A. George, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

EVALL, Mr. E. P., appointed Medical Officer for the Waterbeach District of the Chesterton Union.

GUTHRIE, Leonard, M.A., M.B.Oxon., appointed to the charge of In-Patients, in addition to that of Out-Patients, at the Hospital for Epilepsy and Paralysis, Regent's Park.

HIGGINSON, De G., appointed Medical Officer of the Workhouse and the First District of the Church Stretton Union, *vice* A. J. Fleming, M.D.R.U.I., M.Ch., L.R.C.S.I.

KIDD, Dr., appointed Resident Medical Officer of the Dundee Hospital for the Sick Poor, *vice* Dr. Croll.

LAMPLOUGH, C., M.R.C.S., L.R.C.P.Lond., appointed Resident Clinical Assistant to the St. Marylebone Infirmary, Notting Hill, *vice* L. N. Gibbes, resigned.

LINDSAY, D. Lauder, L.R.C.P. and S.Edin., L.F.P.S.Glasg., appointed House-Physician to the Glasgow Royal Infirmary.

MARTIN, Richard S., L.R.C.P., L.R.C.S.Edin., L.F.P. and S. and L.M.Glasg., appointed Medical Officer and Public Vaccinator for the Lever District of the Bolton Union, *vice* Dr. Johnson Martin, deceased.

POOLE, S., M.B., C.M.Edin., appointed Medical Officer for the Second Wolverhampton District of the Wolverhampton Union *vice* A. Freeman, L.R.C.P.Edin., L.M., M.R.C.S.Eng.

POWERS, C. H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Gosforth District of the Whitehaven Union.

PROUDFOOT, Frank G., M.A.St.And., M.B., C.M.Edin., appointed House-Surgeon in the Radcliffe Infirmary, Oxford.

ROUÉ, W. Barrett, M.D., M.S., appointed Consulting Physician to the Bristol Hospital for Sick Children and Women.

STEELE, William H., M.B., C.M.Edin., appointed House-Surgeon to the Lancaster Infirmary.

THOMAS, T. W., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Caerphilly District of the Pontypridd Union, *vice* J. Llewellyn, deceased.

THOMPSON, J. R., M.B., B.Ch.R.U.I., appointed Third House-Surgeon to the Royal Southern Hospital, Liverpool.

WATT, J. L., M.A.Aberd., M.B., C.M., appointed Medical Officer for the Second Division of the Third District of the St. Germans Union, *vice* A. B. Cheves, M.D.Aberd., L.R.C.S.Edin., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE. London Throat Hospital, Great Portland Street, 8 P.M. Mr. G. C. Wilkin: Nasal Polypi.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. C. B. Keetley: Cases of Intestinal Resection and Intestinal Excision. Mr. H. Allingham: A Series of Cases of Intestinal Resection.

TUESDAY.

LONDON POST-GRADUATE COURSE. Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: Developmental Insanity, Circular Insanity.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

WEDNESDAY.

HOSPITAL FOR CONSUMPTION, Brompton, 4 P.M.—Dr. J. K. Fowler: On Bronchitis.

NORTH-WEST LONDON CLINICAL SOCIETY, North-West London Hospital, Kentish Town Road, 8.30 P.M.—Presidential Address by Sir Richard Quain, Bart., F.R.S., on Some General Remarks on Professional Topics.

WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Dr. Ball: Throat Cases (Post-graduate course).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Gowers.

THURSDAY.

LONDON POST-GRADUATE COURSE, Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Beevor: Muscular Atrophy. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Mr. W. A. Lane: Selected Surgical Cases. Central London Sick Asylum, Cleveland Street, 5.30 P.M. Dr. T. Henry Green: Cases in the Wards.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. Goodhart will open a discussion on Spasmodic Asthma and its Treatment.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 2 to 5 P.M.—Professor Crookshank: Lecture; Tuberculosis and Leprosy. Practical Work; Staining Sputum and Sections.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, W., 8.30 P.M.—A Discussion on Gastric Ulcer will be opened by Dr. Hood and Mr. Bruce Clarke. Drs. Alderson, Drewitt, Campbell Pope, S. Taylor, and Mr. Keetley will take part in the discussion.

WEST KENT MEDICO-CHIRURGICAL SOCIETY, 8.15 P.M.—Mr. Mayo Collier: Chronic Nasal Obstruction.

SATURDAY.

LONDON POST-GRADUATE COURSE. Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Climacteric and Senile Insanity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

EDWARDS.—On the 17th inst., at Banbury, Oxon., the wife of Henry J. Edwards, L.R.C.P. and S.Edin., of a son.

NORTH.—On October 16th, at Westfield House, Stapleton Brampton, Cumberland, the wife of Thomas North, B.A., M.B., of a daughter.

SCOTT.—On October 12th, at 10, St. George's Terrace, Sheffield, the wife of George H. Scott, L.R.C.P., M.R.C.S., of a son.

MARRIAGES.

FRANEY—LANSDOWN.—October 16th, at St. Paul's Church, Clapham, Arthur Britton Franey, L.R.C.S., L.R.C.P., of Hadleigh, Suffolk, only son of Edward Franey, M.R.C.S., L.S.A., Banbury, Oxon., to Amy Estelle, daughter of the late T. W. Lansdown, J.P., of Plymouth, and Mrs. Lansdown, 90, Brownfelde Road, Clapham, London.

STEEGMANN—BARNETT.—On October 15th, at St. George's Church, Barrow-in-Furness, by the Ven. Archdeacon Phillips, Edward J. Steegmann, M.B., of Grove Park, Chiswick, to Mabel, daughter of Rear-Admiral Barnett, of Barrow.

DEATH.

BETTS.—September 4th, aged 28, at Antofagasta, Chilli, of pneumonia, Frederick Bernard Betts, M.R.C.S.Eng., L.R.C.P.Lond., eldest son of J. F. H. and Catherine J. Betts, of 33, The Chase, Clapham Common.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

X. Z. asks for information as to climate of Devonshire, whether bracing or otherwise, especially in the neighbourhood of Okehampton.

M. A. C. would be glad if any member would inform him what treatises have been written on the subject of aphasia, and where they might be obtained.

STROPHANTHUS.

DR. E. D. SHIRTLIFF (Holmwood, Malvern) asks for information as to the physiological action, subsidiary effects, and therapeutic uses of strophanthus, and as to the indications for strophanthus in disease as distinguished from the indications for digitalis.

HYPODERMIC MEDICATION.

DR. JOHN SCOTT (Manchester) asks for opinions on the efficacy of those pellets which dissolve in the barrel of the hypodermic syringe. It has been stated that these pellets are useless, "since the active substance supposed to be used will not by itself dissolve without trituration."

CYCLING FOR WOMEN.

W. H. asks for opinions on the effect of cycling on child-bearing. The idea, he writes, is becoming popular that in a great measure it produces sterility in women, and that in the event of pregnancy the labour is rendered very difficult and dangerous. I have given my opinion against the theory that cycling tends to produce sterility, and also that I believe if the muscles opposing the passage of the child in labour are unduly strengthened, then from the same cause those of expulsion would also be correspondingly strengthened, and in consequence the state of affairs remains unaltered.

THE L. A. H. DUBLIN.

S. M. inquires whether a L. A. H. Dublin, registered 1883, has power to recover in a Court for medical attendance; also what is the single qualification possessed by the holder of such diploma.

*** A Licentiate of the Apothecaries' Hall, Dublin (1883) has power to recover fees in a Court of law for medical attendance. The "single" qualification he possesses is the right to practise medicine, as distinguished from the right to practise both medicine and surgery, which is sometimes referred to as a double qualification.

ANSWERS.

T[illegible].—The information supplied does not warrant us in expressing any opinion.

H. J. W.—We are informed that the trusses referred to are looked upon as out of date. We have been unable to ascertain the address of the maker.

MALTA.—The English translation of *M. Pasteur, Histoire d'un Savant par un Ignorant* was published under the title *Louis Pasteur, his Life and Labours*, by Messrs. Longmans, Green, and Co., in 1885. The original French work was written by Pasteur's son-in-law M. Valery-Radot. To the English translation by Lady Claud Hamilton is prefixed an interesting introduction by the late Professor Tyndall.

ATTEMPTED GUNSHOT SUICIDE.

A CORRESPONDENT is thanked for interesting details of this painful case, but it is undesirable any opinion should be here expressed as to the treatment adopted.

THE EXAMINATION FOR F.R.C.S.Edin.

TORY.—In reply to a similar inquiry, it was stated in the BRITISH MEDICAL JOURNAL of April 7th, 1895, that no books are generally recommended to be read for the Fellowship examination of the Royal College of Surgeons of Edinburgh, and that it would suffice to read any of the standard textbooks, such as those of Erichsen, Treves or Holmes. As to genito urinary surgery, our Edinburgh Correspondent stated in the JOURNAL of May 4th, 1895, p. [illegible], that the articles on genito-urinary surgery in the works of Holmes or Erichsen, with the addition of the chapters in Treves's *Manual of Operative Surgery*, would be sufficient for the examination so far as reading is concerned. A good work on abdominal surgery is Mr. Greig Smith's volume with that title.

AMBULANCE LECTURES.

IN reply to an inquiry by "I. C. S." in the BRITISH MEDICAL JOURNAL of October 19th, the Secretary of the National Health Society begs to call attention to their first aid textbook, entitled, *Aids to the Injured and Sick*, by H. W. Gell, M.A., M.B.Oxon., M.R.C.S., price 3d., or, bound in cloth, 6d. The Secretary also directs the attention of "I. C. S." to *The Human Body*, by Owen Lankester, M.R.C.S., which contains a coloured mannikin, showing the position and relative size of the various organs of the human body, arranged in a movable form. The Society has also in its possession a large collection of anatomical and other diagrams to the use of which members of the Society are entitled. Membership is constituted by the payment of one guinea annually. A list of the Society's publications and all further particulars can be obtained on application to the Secretary, 53, Berners Street, W.

OVERLAPPING OF THE TOES.

MR. T. S. ELLIS (Gloucester) writes: I would point out to "A Member" my reasons for believing that a foot such as he describes must be functionally defective, but that the condition does not require operative treatment. If the second toe be raised above the level of the others it will, when packed in a middle-pointed boot or sock, interfere with that free movement of the great toe necessary for effective function. This latter in rest is inclined upwards and outwards, somewhat over the next (as indicated in the frontispiece of *The Human Foot*), and in action moves downwards and inwards away from the others.

I suggest as a remedy for the case in question this exercise, to be done with bare feet. Let him stand with hands on hips and throw the body backward till it is in danger of falling, then spring forward, gripping the ground with the toes, as he must do in order to form fixed points from which the extensors can act in drawing the body forwards. Every toe will soon find the ground level. Let him wear boots with plenty of room on the inner side and socks with a special stall for the great toe. He should acquire a habit of pressing the toes against the ground as he walks, and should not turn them outwards in the conventional manner.

"LENNOX."

L. W.—It would appear that this person, since he does not assume any medical or surgical titles, does not come within the scope of the Medical Acts, and cannot be dealt with under the Apothecaries Acts. A case like this shows how imperative it is to amend the Medical Acts, so as to make "practising for gain" a penal offence by unqualified and unregistered persons. Any person who has been treated by "Lennox," being led to believe that he was a duly qualified medical practitioner, and who has paid for such treatment, could of course bring an action against him for obtaining money under false pretences. The newspaper which permits "Lennox" to prescribe for correspondents in its columns is rapidly becoming the organ of the unqualified, and its pages are full of abuse of all regular practice. This is matter for regret, as its proprietor is well known for his munificent donations to cottage hospitals and convalescent homes, a strange contrast and one difficult to comprehend.

CIVILIAN PRACTITIONERS IN MEDICAL CHARGE OF TROOPS.

H. G. D.—Unless there is a definite arrangement to the contrary, it is, we believe, understood that civilian practitioners undertake these military medical duties at contract rates. Supposing, however, that Army Form O 1667 is used as the form on which to base the account, there is nothing in it entitling the claimant to charge for camp inspection. Further, there is a note that for special cases remuneration will be allowed according to the circumstances and nature of the case, and surgical appliances (splints) will be paid for according to circumstances. Another paragraph says that no collective charge as to surgical appliances or attendance will be allowed on any pretence whatever, so that the charge for the compound fracture is not admissible, neither is there anything in this form which entitles the claimant to charge for examining men for foreign service.

The regulations under which civilian practitioners are employed are clearly set forth in pp. [illegible] of the Army Medical Regulations. Briefly they may be summed up as follows: That principal medical officers will make arrangements and submit them to commanding officers, who will cause the arrangements made and the remuneration sanctioned to be promulgated in Army Orders. Civilian practitioners may be employed under the terms specified in the Royal Warrant relating to pay without reference to any higher authority, but no exceptional rate will be admitted without the recommendation of the Director-General and the sanction of the Secretary of State. Should a body of troops be left without medical aid the commanding officer is instructed at once to report it to the principal medical officer, in the meantime making arrangements to meet the emergency; the terms to be at once reported to the Director-General. Under ordinary circumstances no claim will be entertained unless made in conformity with the rates laid down in the Royal Warrant relating to pay, etc., and unless it is submitted by the commanding officer through the principal medical officer to the Director-General on Form O 1667, unless under some very exceptional circumstances, in which case full explanations are required and Form O 1667 accurately filled in. The form also must be signed by the commanding officer, the principal medical officer of the district, and the Director-General.

NOTES, LETTERS, Etc.

The Reese Fund.

Mr. Thomas Watkins (Castle Banks, Ystradgynlais, near Swansea) Honorary Secretary of this fund, desires to acknowledge the receipt of a subscription of £1 from A. B. The late Dr. Reese, of Ystradgynlais, was killed by lightning while on his way to a patient, leaving his widow and eleven children, of whom four are quite young, unprovided for. At a public meeting held on August 7th, a committee was formed to raise a fund to place a memorial stone over Dr. Reese's grave, and to present a testimonial in money to his widow. The treasurer of the fund is the Rev. E. L. D. Glanley, Rector of Ystradgynlais. We are informed that it has been decided to close the fund on November 2nd, and that further contributions are greatly needed.

"A Real Medical Triumph"

We have received a very long letter from Dr. Heryng, of Warsaw, relative to a paragraph which appeared under the above heading in the British Medical Journal of August 17th. In that paragraph certain statements made in an article published in the *Pall Mall Gazette* of August 13th as to the results of the treatment of laryngeal tuberculosis by [illegible] were criticised as being likely to excite false hopes in sufferers from that affection. Dr. Heryng says the article referred to appeared without his consent, and we of course accept his statement on that point. The fact remains, however, that he is somewhat unfortunate in the possession of indiscreet friends who sing his praises in the lay press. We do not wish to be understood as suggesting that Dr. Heryng himself is to be held responsible for these newspaper puffs, but we must be allowed to express the opinion that they are deplorable. By far the greater part of Dr. Heryng's letter is taken up with an elaborate vindication of his scientific position on the question of the treatment of laryngeal tuberculosis, which has never been impugned by us; on the contrary, as he himself acknowledges in his letter, we fully admitted the services which he has rendered to medicine in this matter. His views on the subject, as we gather from his letter and from his writings on the subject, are in substantial agreement with those expressed in our article; it therefore appears unnecessary to reproduce them here. In short our strictures were not directed against Dr. Heryng but against a lay newspaper which had published an article highly laudatory of the treatment of a painful and deadly disease which we considered likely to mislead a class of sufferers peculiarly liable to be misled by delusive hopes of cure.

Against the Pipe.

In the monthly letter of the Committee of the English Anti-Tobacco Society to members and friends, there occurs the following passage:

The smoking nuisance (through the addition of myriads of urchins, ragged and otherwise, to the smoking army) is extending at such a rate that unless those who are daily nauseated by it make an immediate and resolute stand for their rights they will soon be left without any hope of escape from a pest which robs them of so much of the physical enjoyment of life.

The health authorities are, the Committee thinks, "by the provisions of the Health Act empowered to suppress nuisances of all kinds in their respective districts on complaint being duly lodged and proof forthcoming, and we have little doubt that if the subscriptions were raised to adequately support a test case, a decision would be given which would demonstrate public smoking to be an illegal, unjust, ungentlemanly, and therefore an unchristian habit."

Forms for "Birth and Death Returns."

A specimen copy of a form designed by Dr. Vincent for use in connection with returns furnished by subdistrict registrars to medical officers of health has been received from the publisher, F. W. Count, East Dereham, Norfolk. The form appears well adapted for the purpose for which it is designed; it is claimed that it possesses the advantages of allowing adequate space for necessary details, and of saving time in filling up by the use of abbreviations. The price of the form is 4s. for 50 and 7s. 6d. for 100.

The Public and Medical Etiquette.

F. writes: The following letter received from a lady is interesting as an example of ideas of medical etiquette among the public: "Dear Dr. ——, My maid's sister is lying very ill of typhoid fever at 56, rue ——, and I do not feel quite satisfied that she is being treated according to modern principles. I should be immensely obliged if you would look in at her as soon as you can, and see what you think of the case and the doctor's prescriptions."

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Acetone; Mr. J. Abbott, Tunbridge Wells; Dr. J. Adam, Dingwall; Dr. H. E. Armstrong, Newcastle-on-Tyne; Dr. J. Abcarius, Beyrout. (B) Messrs. F. Bayer and Co., Elberfeld; Mr. G. Bischof, London; Mr. W. M. Browne, Edinburgh; Dr. J. B. Bradbury, Cambridge; Sir Hugh Beevor, London; Mr. W. A. F. Bateman, Richmond; Mr. J. P. Bush, Clifton; Dr. J. B. Brierley, Manchester; Mr. J. J. Bell, Cornholme; A. G. Bateman, M.B., London; G. H. Berry, M.B., Edinburgh; Dr. J. Brown, Bacup; F. C. Bottomley, M.B., London. (C) Dr. L. T. Coltburst, Kinsale; Dr. D. Couper, Dennistown; Mr. F. Charlton, Salisbury; Dr. W. S. Church, London; Cremation; C. A. C.; C. P.; Mr. W. F. Clay, Edinburgh; Dr. A. F. G. Codd, Bromley. (D) Dermographic Lupus; D. A. Davies, M.B., Swansea; District M.O.H.; Dr. W. M. Doble, Chester; Dr. T. O. Dudfield, London. (E) C. R. Edmondson, Liverpool; Dr. A. Elliot, London. (F) R. Freer, M.B., Rugeley; F. C. W.; Fiji; F.R.C.S.Eng. (G) J. F. R. Gairdner, M.B., Glasgow; Dr. A. Grant, Liverpool; Mr. J. G. Grey, London; Mr. H. H. Graham, Newark; Mr. F. F. German, Seaforth; Mrs. E. Groom, London; J. Galloway, M.B., London; Professor Gould, London. (H) Dr. W. M. Hutton, Edinburgh; Mr. W. Hooper, New Brighton, Dr. T. Heryng, Warsaw; Sir George Humphry, London; T. E. Hayward, M.B., Haydock; W. Hoskins, M.B., Broxbourne; H. T. Hinton, M.B., Heytesbury; Mr. W. Hodson, Epsom. (I) I.M.S. (J) Dr. Johnston, Leith; A. Jamieson, M.B., Belfast. (L) Mr. T. H. Lovegrove, London; Mr. J. R. Lunn, London; L.R.C.P.Lond.; Dr. M. Lindsay, Derby; Live and Let Live; Mr. H Lund, Manchester. (M) Dr. H. Maloine, Paris; Mr. F. Marsh, Birmingham; Dr. T. Mitchell, Gorseinon; Dr. J. W. Moore, Dublin; Mr. J. MacMunn, London; Mr. J. H. Marsh, Macclesfield; Dr. C. MacBride, Wigtown; Dr. L. W. Marshall, Nottingham; M.B., M.A.; Mr. C. S. Martin, Bolton; Malta; Dr. H. Malet, Wolverhampton; Dr. G. O. C. Mackness, Broughty Ferry; M. A. C. (N) Dr. W. Newman, Stamford. (O) Dr. T. O'Reilly, St. Louis; Mr. H. B. Osborn, Bagshot; Mr. M. J. O'Connell, Cork; Dr. L. H. Ormsby, Dublin; Omega. (P) Paddy; Mr. H. R. Proctor, London; Mr. K. P. Popat, London. (R) Dr. Robertson, Ventnor; Mr. E. Rae, Lyndhurst; G. B. Robinson, M.B., Morpeth; Dr. B. Rogers, Wakefield; Mr. C. Rigola, Bournemouth; Mr. J. J. Raye, Edinburgh; M. Rattray, M.B., Portobello; Dr. W. B. Roué, Clifton; Dr. E. S. Reynolds, Manchester. (S) Mr. G. H. Scott, Sheffield; W. R. Smith, M.B., Rhyl; F. A. Southam, M.B., Manchester; Mr. A. T. T. Stone, Bristol; Mr. E. D. Shirtliff, Malvern; Mr. T. O. Simpson, Wakefield; The Earl of Stamford, London; Mr. G. W. Sequeira, London; E Smith, M.B., London; Mr. W. H. Symons, London; Dr W. E. Smith, London; Dr. J. Scott, Manchester. (T) Mr. J. Telford-Smith, Lancaster; Trinidad; Mr. R. F. Tobin, Dublin; Mr. H. Taylor, Guildford; Toby; C. Todd, M.B., London; Dr. W. S. Tebb, Bournemouth. (V) Dr. E. Vaudrey, Derby; Veritas. (W) Mr. W. H. B. Winchester, London; Dr. T. J. Walker, Peterborough; W. Williams, M.B., Portmadoc; Mr. F. A. Waddy, Calne; Mr. G. E. Walker, Liverpool; Mr. T. Watkins, Ystradgynlais; Mr. V. Wood, London; Mr. M. Wordie, Bishop Auckland. (X) X. Z. (Y) Mr. P. M. Yearsley, London; etc.

BOOKS, Etc., RECEIVED.

Archiv für Verdauungs-krankheiten mit Einschluss der Stoffwechselpathologie und der Diätetik. Redigirt von Dr. J. Boas. Band I, Heft I. London: Williams and Norgate. 1895.

Was ist Suggestion und Hypotismus? Eine psychologisch klinische Studie. Von Dr. W. Hirsch. London: Williams and Norgate. 1895. 1s. 2d.

Die menschliche Verantwortlichkeit und die moderne Suggestionslehre Eine psychologisch forensische Studie. Von Dr. W. Hirsch. London: Williams and Norgate. 1895. 1s. 2d.

Die Beziehungen der Nase und ihrer Nebenräume zum übrigen Organismus. Akademische Antrittsvorlesung. Von Dr. P. H. Gerber. London: Williams and Norgate. 1895. 1s. 2d.

Practical Chemistry. By S. Macadam, jun., F.I.C., F.C.S. Second Edition. Edinburgh: The Darien Press. 1895.

Transactions of the Pathological Society of London. Vol. XLVI. London: Smith, Elder, and Co. 1895.

A Smaller Atlas of Illustrations of Clinical Surgery. By Jonathan Hutchinson, LL.D., F.R.S. London: West, Newman, and Co. 1895.

De la Stérilité chez la Femme. Par Dr. Auvard. Paris: L. Battaille et Cie. 1895. Fr. 5.

Technik der histologischen Untersuchung pathologisch-anatomische präparate. Von Dr. C. Kahlden. Jena: Gustav Fischer. 1895.

Pathologie und Therapie der Perityphlitis (Appendicitis simplex und Appendicitis perforativa). Bearbeitet von Dr. E. Sonnenburg. Leipzig: F. C. W. Vogel. 1895. M. 5.

A Manual of Veterinary Physiology. By Veterinary-Captain F. Smith, F.R.C.V.S. Second Edition rewritten. London: Bailliere, Tindall, and Cox. 1895.

*** In forwarding books the publishers are requested to state the selling prices.

REMARKS
ON
THE NAUHEIM (SCHOTT) TREATMENT OF HEART DISEASE.

Read at the Meeting of the Birmingham and Midland Counties Branch, October 10th, 1895.

By ROBERT SAUNDBY, M.D., F.R.C.P.,
Professor of Medicine in Mason College: Physician to the General Hospital, Birmingham.

GENTLEMEN,—When I put down my name to read a paper upon this subject, I intended it to be the result of several months' clinical experience; but, having accepted the invitation of your secretaries to read it at this meeting, I have been obliged to content myself with something less, and I must ask you to excuse me if I am able to do little more than summarise information already published.

Nauheim is a small town in the Grand Duchy of Hesse, about forty minutes' journey by rail due north, from Frankfort, and only a pleasant day's excursion by carriage from Homburg, where I was staying for a few days last August. When I visited Nauheim Dr. Schott received me in the kindest manner. He began by taking me to see an American doctor who was undergoing the treatment, and who was very much interested in the system and familiar with its details. He showed me notes of a number of cases which had been under Dr. Schott's care, and after looking over them we walked to Dr. Schott's house, where we were joined by Dr. Bezly Thorne.

Dr. Schott introduced a German doctor who was also under treatment, and who kindly allowed me to examine him. His heart was greatly dilated: to the left 1½ inch beyond the vertical nipple line, to the right 1 inch beyond the right edge of the sternum, above to the upper border of the left third costal cartilage. There was no murmur except a slight systolic blowing in the pulmonary area. His pulse was 120, of low tension, and unequal in force and volume. Dr. Thorne made him go through the first and second exercises (see below), which took three or four minutes, and I was then asked to percuss his heart again. I may mention that I had been unable to localise the apex beat. On this second percussion I was startled to find that the area of dulness had receded by about an inch in every direction. The pulse was 112, but I could not recognise by the touch any alteration in its character. As I was unwilling to admit that the heart had actually retracted to such an extent so quickly and after two such very simple movements, I suggested that perhaps the lungs had expanded so as to overlap the heart. Dr. Schott said they were quite used to that objection; but had I been able to localise the apex beat I could not have doubted if that had receded, which he assured me it did. Moreover, he added, if I had percussed out the liver dulness I should have found that the upper margin remained unaltered instead of receding downwards, as it should do if the lungs were more fully expanded.

After this we went to see the baths, first climbing up to the reservoirs in which the brine is stored and its carbonic acid allowed to escape. The water, which flows up in two great white bubbling fountains, becomes an exceeding quite yellow from the precipitation of iron previously held in solution by the gas. This gas-free water is used for the earlier baths, but later on in the course the water is drawn by another set of pipes direct from the spring, and is highly charged with CO$_2$, and in the strongest bath of all, the so-called "carbonated," the bubbling water is allowed to flow in and out of the bath in a continuous stream, while the patient lies in a good imitation of a steel suit.

I did not have an opportunity of seeing a patient in the bath, but Sir T. Grainger Stewart and Dr. Hogan (who were staying at Homburg) told me they saw and examined a man whose heart was greatly dilated and his pulse 144 irregular, small, and irritable. After 3 (or was it only 2?) minutes in the bath (reservoir water) the pulse had fallen to 114, and in six minutes to 108, whilst it had become evidently better filled. After eight minutes they percussed his heart, and found that the dulness had receded an inch in every direction. Unfortunately they omitted, as I did, to take the level of liver dulness, but I shall refer to this later on, and will show that there is no reason to doubt the correctness of these observations.

HISTORY.

The beneficial effects of Nauheim baths in the treatment of chronic cardiac disease were first proclaimed by the late Professor Beneke, about 1872 before which time there existed an unfounded dread of employing them in these cases. A few years afterwards his teaching was reinforced by monographs from the pens of Drs. August and Theodor Schott, and the Nauheim bath treatment for heart disease gained considerable repute in Germany. The success obtained by the Zander movement cure induced Dr. A. Schott to devise a system of mild gymnastics or drill for the treatment of neurasthenic and hysterical patients, of whom a considerable number came annually to Nauheim. Some of these patients had rapid weak hearts, and it was discovered with some surprise that the exercises, instead of quickening the heart's action slowed and steadied it; further experience showed them that this result followed also in organic disease of the heart, so that a method originally devised for steadying and strengthening the nervous system proved to be a valuable adjunct to the bath treatment of cardiac disease. This little history was told me by Dr. Schott himself, and noted down at the time. The method thus evolved was put into practice and described in the medical press without attracting much attention. Undoubtedly our present knowledge of the subject is due almost entirely to the enthusiastic work of Dr. Bezly Thorne, who was first led to its study by observing that cases of cardiac disease which had been sent to Nauheim for rheumatic or gouty complications retained so much improved that he was impressed with the importance of the new system, and made himself thoroughly acquainted with its details by repeated visits to Dr. Schott.

The more he saw of the method and the more he learnt of its results the more convinced he became that a real discovery had been made of the greatest utility, and one which was capable of general application. In May of last year he published an account of it in the *Lancet*, which was in the main a reproduction of an article Dr. Schott had contributed to the same journal three years previously, but he was more successful in arousing attention, and from that time the profession has gradually evinced more and more interest in the work, a large number of English patients have been sent to Nauheim, and articles on the subject have been published by Sir P. Smyly, Dr. Wethered, Dr. John Broadbent, Sir William Broadbent, Dr. Allen Starke, and Mr. Armstrong. In all these the method is spoken of with favour, and some important results are given.

Dr. Bezly Thorne has increased our debt of obligation to him by publishing an admirable handbook, which explains the system very clearly, and by means of excellent illustrations enables anyone to learn the exercises.

The employment of regulated muscular exercises in the treatment of heart disease has been also supported by Dr. Lauder Brunton, Dr. Symons Eccles, and Dr. Harry Campbell, although the two last do not mention the Nauheim method.

THE BATHS.

The medicinal waters of Nauheim are derived from [illegible] springs, of which four are used for drinking and three for the baths. The bath waters contain from 2 to 3 per cent. of sodium chloride, 2 to 3 per 1000 of calcium chloride and carbonate of iron, and a very large amount of carbonic acid gas. The waters used for drinking contain the same constituents, but in varying proportion, the Kur and Kaiserquelle being mainly saline, while the Ludwigsbrunnen is alkaline, and the schwalheimerbrunnen iron in type.

The baths are given at a temperature of from 92° to 98° F., and their duration is from six to eight minutes. The course begins with a 1 per cent. salt bath at 96°, and as time goes on the amount of solids may be gradually increased, the temperature lowered to 85°, and the time of immersion increased to twenty or thirty minutes, but throughout the course must be interrupted by frequent intervals of rest.

[illegible]

Later on the baths contain the water charged with carbonic acid gas, and finally, in suitable cases, the "Strombad," with its continuous rush of foaming water is permitted. After each bath the patient should rest an hour. The lowest temperature and maximum duration mentioned above must be approached very cautiously, and should not be employed in grave cases. The immediate effects of the bath are to reduce the rate of the pulse and to increase its force and tension; at the same time the area of cardiac dulness retracts in all directions. After the baths these effects gradually disappear, but it is claimed that at the end of the course, which should last at least six weeks, and often may be prolonged with advantage, permanent improvement is effected. It is also maintained that early rheumatic valvular affections are cured, murmurs disappear, and myocarditis is arrested.

It is well known that a bath of lower temperature than the body causes more or less contraction of the vessels of the skin, while a bath which is hotter dilates them; moreover, the gaseous or saline contents do not stimulate to greater vascular contraction; on the contrary, they favour dilatation. All authorities are agreed that a cool bath eventually lowers the number of heart beats, though some have observed an initial rise, possibly due to psychical influences, while in baths hotter than the body or of the same temperature the frequency of the pulse is increased. The question is whether this reduction of the number of the heart beats is merely the result of the operation of Marey's law—contraction of the vessels of the skin increasing the blood pressure and thereby slowing the heart—or whether it is the consequence of a reflex inhibitory influence, as Dr. Schott believes.

Leichtenstern, although writing with some scorn of those "who (pleading like Cicero *pro domo*) contend that lukewarm or cold baths, and especially salt baths rich in carbonic acid, are a tonic of the first rank for a weakened heart," says that if the effect is produced by the vascular contraction of the skin stimulating the left ventricle, such baths are not without danger, but "it is different if the cool simple or salt bath is to act as a regulator of the heart's activity, the possibility of which has not yet been shown by any proof. If it were in that way possible to bring a heart which was arhythmic and wearing itself out in unusually frequent and fruitless contractions to a more regular and slower action, in that case the systole would be prolonged and more yielding, the emptying of the ventricle would be completed, the diastolic pause lengthened, and along with that the removal of the fatigue products favoured and the nutritive condition of the heart's muscles improved." This is the *modus operandi* of the baths according to Dr. Schott, but it has certainly not been demonstrated.

The following diagrams and pulse tracings, taken from cases treated during the last few weeks in the wards of the General Hospital, support the general proposition, namely, that the baths diminish the area of dulness, while increasing the force and tension and diminishing the frequency of the pulse. (See Figs. 1, 2, 3, 4, 5, 6, and 7.)

I have been much impressed by the testimony of my friend, Dr. Allen Sturge, of Nice. He went to Nauheim in June, 1894, to try to get cured of an irritable heart, the consequence of an attack of influenza in the previous February. At the commencement of treatment his pulse was 100, and his heart's apex was 2 cm. external to the vertical nipple line. After five weeks' treatment by baths and massage only, without exercises, his pulse had fallen to 64, the heart's apex receded to 1 cm. inside the nipple line, and he was completely restored to health. In his case, Dr. Sturge explains, the exercises seemed to make his heart more irritable.

In the opinion of Dr. Schott and of Dr. Bezly Thorne these baths may be chemically prepared, and Mr. Armstrong, of Buxton, has given the following formulæ for a series of such artificial baths, in which the quantities are calculated for 40 gallons of water:

Bath No. 1. Sod. chlorid., 4 lbs.; calc. chlorid., 6 ozs.

Bath No. 2. Sod. chlorid., 5 lbs.; calc. chlorid., 8 ozs.

Bath No. 3. Sod. chlorid., 6 lbs.; calc. chlorid., 10 ozs.; sod. bicarb., 6 ozs.; acid. hydrochlor., 7 ozs.[1]

Bath No. 4. Sod. chlorid., 7 lbs.; calc. chlorid., 10 ozs.; sod. bicarb., 8 ozs.; acid. hydrochlor., 12 ozs.

Bath No. 5. Sod. chlorid., 9 lbs.; calc. chlorid., 11 ozs.; sod. bicarb., 1 lb.; acid. hydrochlor., 1¼ lb.

Bath No. 6. Sod. chlorid., 11 lbs.; calc. chlorid., 12 ozs.; sod. bicarb., 1½ lb.; acid. hydrochlor., 2½ lbs.

I have been using only the first four of these baths, which are probably those most likely to be employed commonly, and find no difficulty in arranging them in our hospital bath room. A porcelain bath is of course likely to suffer less from the effects of the chemical constituents, but so far our metal baths do not show any indication of being injured.

The Exercises.

The exercises are called by Dr. Schott "Widerstands-gymnastik," or resistance gymnastics, and consist in slow movements executed by the patient and resisted by the physician or operator. A short interval is allowed after each movement, during which the patient sits down. The exertion employed must be very small, and should cause no increase in respiratory movements, flushing, or pallor. The patient should be loosely and lightly clothed, and instructed to breathe quietly. The resistance made should be of such a kind that the patient may always feel himself easily the master. The operator must not grasp or in any way constrict the limb, but should oppose by the hand held flatly. The movements are nineteen in number:

1. Arms extended in front of body on a level with shoulder, hands meeting; arms carried out until in line, and brought back to original position.
2. Arms hanging at sides, palms forwards; arm flexed at elbow until tips of fingers touch shoulder, back to original position; one arm only moved at a time.
3. Arms down, palms forward, arms carried outwards and upwards until thumbs meet over head; back to original position.
4. Hands in front of abdomen, fingers flexed so that second phalanges touch those of opposite hand; arms raised until hands rest on top of head; back to original position.
5. Arms down, palms against thighs, arms raised in parallel planes as high as possible; back to original position.
6. Trunk flexed on hips; return to original position.
7. Trunk rotated to left, to right; return to original position.
8. Trunk flexed laterally.
9. As No. 1, but fists clenched.
10. As No. 2, but fists clenched.
11. Arms down, palms against thighs, each in turn raised forwards and upwards until arm is alongside of ear, then turned outward, and arm descends backwards.
12. Arms down, palms to thighs, both together moved backwards in parallel planes as far as possible without bending the trunk forwards.
13. Thighs in turn flexed on trunk, opposite hand resting on chair.
14. Lower extremities in turn extended fully, and bent on trunk forwards and backwards to extreme limits of movement, opposite hand resting on chair.
15. Legs in turn flexed on thigh, both hands on chair.
16. Feet together, lower extremities in turn abducted as far as possible, and brought back to original position, opposite hand on chair.
17. The arms, extended horizontally outwards, are rotated from the shoulder-joint to the extreme limits forwards and backwards.
18. The hands in turn are extended and flexed on the forearm to extreme limits, and brought back in line with arm.
19. The feet in turn are flexed and extended to extreme limits, and then brought back to their natural position.

These exercises are easily learnt, and nurses make very good operators, as they do not resist too much. I found difficulty in making my resistance sufficiently weak, and I should be afraid that this would stand in the way of training male operators generally; at any rate they would need careful selection.

The effects of the exercises are the same as those of the baths—namely, the area of cardiac dulness is reduced, while the pulse becomes slower and stronger. It is very difficult to get trustworthy sphygmographic evidence of the effects of the baths and exercises, as the adjustment of the instrument

[1] Dr. Thorne uses Sandow's effervescing tablets as more convenient and not destructive to baths, etc.

affects the result so greatly that two tracings taken at different times are only roughly comparable.

It is not to be expected, and certainly not to be desired, that the changes in the pulse should be very marked, and consequently the minute characters of the tracing become important. Dr. Stacey Wilson is familiar with his own pulse tracing, and kindly allowed some continuous sphygmograms to be taken before, during, and after a simple resisted movement. He has calculated the averages for the two experiments as follow:

Experiment I, October 5th:

	Amplitude.	Tidal Wave.	Dicrotic Notch.	Dicrotic Wave.
Before movements ...	12.0	4.2	4.2	5.0
During ,, ...	14.4	5.4	5.4	5.4
After ,, ...	15.4	5.6	4.0	5.7

Experiment II, October 7th:

Before movements ...	17.0	5.0	5.5	7.0
During ,, ...	17.7	5.8	6.2	8.0
After ,, ...	17.3	5.75	5.5	7.6

These figures show that the amplitude of the pulse and its tension and force, so far as these are indicated by the sphygmograph, were all increased during the movements, and immediately afterwards.

I also show you pulse tracings and diagrams of the heart's dulness taken from patients before and after the exercises, and you see that the effect is in the mean the same as that of the bath, namely, the cardiac area of dulness is diminished, while the force and tension of the pulse are increased. (See Figs. 8, 9, 10, 11, 12, 13, and 14.)

I have carried out the treatment by baths and exercises for the last three or four weeks on several patients in the General Hospital.

Case I.—The first is a case of Graves's disease associated with glycosuria. His pulse is always rapid, and often very irregular. The exercises were begun on September 9th, but were stopped on October 2nd, as his pulse was very seldom slowed after them, and its general condition was not at all improved. He has had baths up to No. 4, and these up to the present have had no permanent effect on his pulse. This shows the immediate effect of a bath on his pulse rate:

Before bath	105	per minute.
1st minute	103	,,
2nd ,,	103	,,
3rd ,,	102	,,
4th ,,	100	,,
5th ,,	104	,,
6th ,,	106	,,
7th ,,	104	,,
8th ,,	103	,,

Ten minutes after 106 per minute.

The pulse was irregular at first, but became quite regular and of much higher tension. We shall continue the baths for a time, as he likes them, but their effect on the progress of the disease is doubtful.

Case II is a boy with a dilated heart and mitral disease. In the course of treatment he developed symptoms suggestive of slight pericarditis, for which the baths and exercises had to be omitted for some days. Hence the case has not been a very fair one. The bath and movements have generally slowed his pulse, and in the bath there was considerable reduction of the area of cardiac dulness in all diameters (see Figs. 4, 5, 6, and 9).

Case III was also a boy with valvular disease and a dilated heart. His temperature was not very steady on admission, and became so irregular that the treatment was stopped and will only be resumed when he improves.

Case IV is a boy with mitral disease and a dilated heart. He has only been under treatment about a fortnight, so that it is too soon to speak of results, but he is going on well (see Figs. 7, 10, 11, and 12).

Case V is another boy with mitral disease and a dilated heart under the care of Dr. Wilson. He is a very suitable case, as he has no recent acute trouble of any kind, while the other three have each had recently more or less rheumatism. The movements and bath slow his pulse, and in the bath the heart's area and position altered as shown in the diagram. As can be seen the area contracted very much, but the apex tilted up and beat outside the nipple line in the fourth interspace. Was this due to rotation of the heart or to contraction of the right side, so as to bring up to the front the left ventricle, which had been previously pushed away from the wall of the chest? The boy has improved, as Dr. Wilson will tell you (see Figs. 1, 2, 3, 8, 13, and 14).

Cases for which the System is Suitable.

The system is claimed by Dr. Schott to be of special value in all cases of chronic heart disease except where there is advanced degeneration of the myocardium, or aneurysm of the heart or great vessels, or advanced arterio-sclerosis. It has proved of great service in all forms of valvular disease, in congenital cardiac defects, in simple dilated hearts without valvular disease, in the functional cardiac debility of anæmia, however induced, in nervous irritable hearts, in simple tachycardia, and in the rapid heart of Graves's disease. Dr. Thorne is led, partly by theoretical considerations, partly, no doubt, by experience, to speak hopefully of its prospects in the early stages of arterio-sclerosis and aneurysm, but I shall have occasion to show that his theoretical grounds are not altogether indisputable; and although the method, if cautiously employed, may do no harm, and may even strengthen the heart, it is not likely to do any good to these conditions and may prove disastrous. Therefore I think it wiser to advise that Dr. Schott's limitations should be regarded as the rule in practice.

Rationale of the System.

The theory adopted by Dr. Schott, and which he stoutly maintained in Dr. Bezly Thorne's presence, is that the baths and the exercises act upon the heart through the nervous system by evoking a reflex influence which stimulates the action of the cardio-inhibitory or regulator nerves, thus slowing and strengthening the pulse; and though some of his friends in England take a different view he told me he adheres to this explanation. Dr. Bezly Thorne, on the other hand, believes the baths and exercises alike favour the circulation by dilating first the muscular arteries and afterwards those of the skin and thus relieve the heart from backward pressure. This view is supported by Sir William Broadbent and by his son, Dr. John Broadbent. The theory of Dr. Thorne is not consistent with the pulse tracings and manometric observations of Dr. Schott, nor with the physiological law that the heart beats vary inversely with the blood pressure.

If the effect of the baths and exercise be to diminish the blood pressure, the heart's action—following Marey's law—should be quickened; but all are agreed that the pulse is slowed. Sir William Broadbent recognises this difficulty, and endeavours to avoid it by retaining Dr. Schott's hypothesis of a reflex nervous effect on the heart as a second string to his bow. He says: "It is not by any means denied that this (that is, reflex nervous influence) plays some part in the process, more particularly as diminished peripheral resistance has been shown experimentally to accelerate the action of the heart, whereas it is here accompanied by diminished frequency of the pulse. My observations, however, have led me to the conclusion that the primary and principal effect is on the peripheral circulation." It seems to me that before coming to this conclusion Sir William Broadbent could hardly have had his attention directed to the pulse tracings and measurements of pulse pressure published by Dr. Schott and republished by Dr. Bezly Thorne, or he must have overlooked them. So far as my tracings go they agree with Dr. Schott's, and at least some opposing evidence of the same kind should be advanced by those who differ from him.

Dr. Thorne supports his theory by quoting from Dr. Lauder Brunton's Harveian oration of last year. In that address Dr. Brunton drew attention to some experiments of Ludwig, which show that when under the influence of stimulation of the vasomotor centre, the arterioles of the skin and intestine contract, the blood accumulates in the muscles, and the tendency of the blood pressure to rise is partly counteracted. But this certainly does not justify the conclusion that no rise takes place, which would be opposed to very common experience. Further, Dr. Brunton endeavours to show that during muscular exercise a similar transfer of blood to the muscles takes place, and acts in the same way. But he does not show that such transfer has the effect of doing more than counteracting the tendency to raise the blood pressure. Indeed, in another place he says, "Muscular exercise, there-

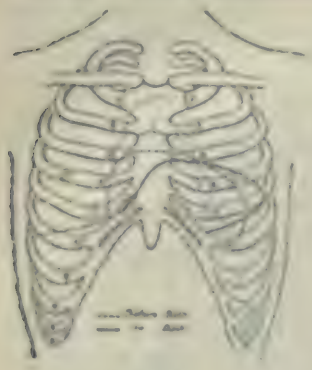

Fig. 4

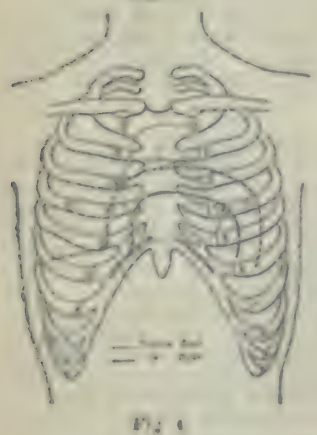

Fig. 4

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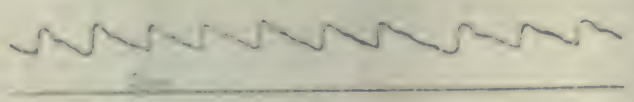


Fig. 3

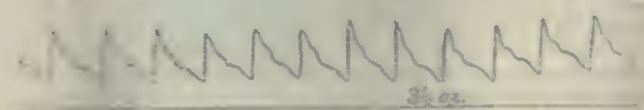


Fig. 5.

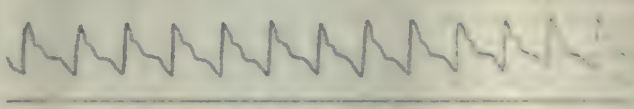


Fig. 6.

Figs. 4, 5, and 6, are from another patient (Case II) in which the retraction of the heart is better shown.

Fig. 1.—Diagram (Case V) showing the alteration in the area of cardiac dulness in the bath; the dotted line shows the outline of the heart's dulness before the bath when the patient was in bed, the continuous line was mapped out in the bath.

Fig. 2 is a pulse tracing from the same patient before the bath.

Fig. 3 was taken in the bath; it shows a stronger and fuller pulse under half an ounce more pressure.

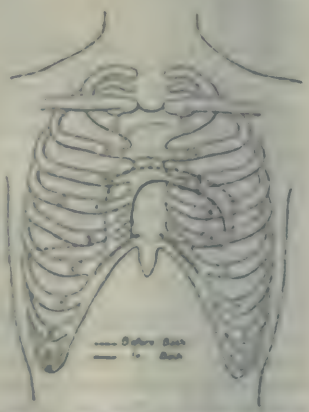
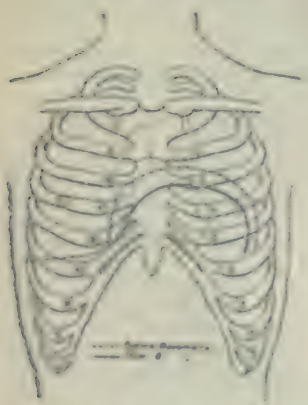
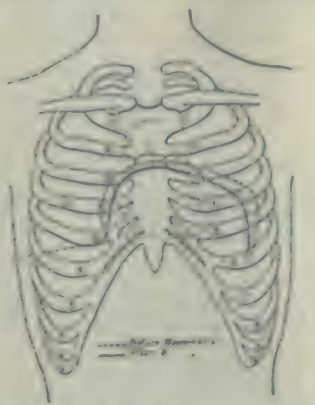
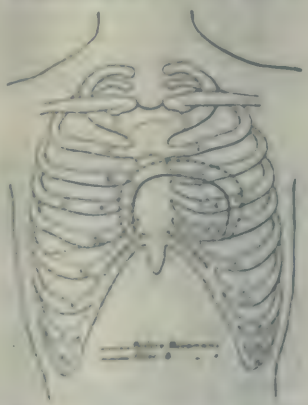


Fig. 7.—Diagram (Case IV) to show the retraction of the heart during the bath.







Figs. 8, 9, and 10.—Diagrams taken from patients (Cases IV, II, and V) in the General Hospital, to show the reduction of the cardiac area of dulness after the Schott movements.

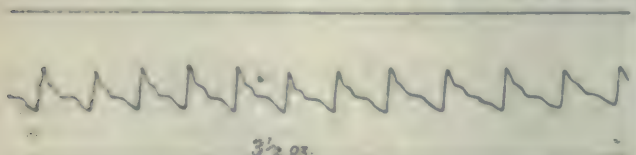


Fig. 11.—Pulse tracing taken before the movements (Case V).

Fig. 12.—Pulse tracing from the same patient taken immediately after the movements, showing marked increase in tension (Case IV).

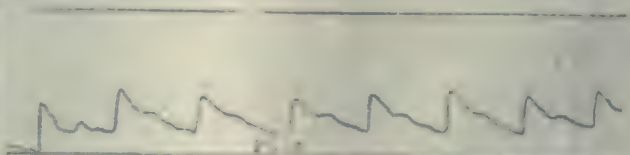


Fig. .—Pulse tracing taken before the movements (Case V)

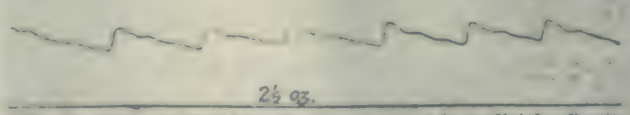


Fig. 11.—Pulse tracing from the same patient immediately after the movements, showing a smaller pulse of higher tension (Case V).

fore, has a special tendency to raise the blood pressure in the arterial system, and consequently to increase the resistance which the left ventricle has to overcome." This tendency may be moderated by the means he has suggested, but is it not going too far to claim that the blood pressure is thereby actually lowered? If such a fall takes place, it should be assigned to diminution in the force of the heart from fatigue, such as of course may occur after over-exertion, but of that there is at present no question.

I think no one can deny that the tracings and measurements before us show that the effects of the baths and exercises are to slow the heart and raise the blood pressure. If that be so, no explanation can be accepted which is inconsistent with the evidence. But I must guard myself against being supposed to support Dr Schott's theory. I agree with Sir William Broadbent that the principal and primary effect of the baths and exercises is on the peripheral circulation, but that effect is to raise the blood pressure, and the heart becomes slower in accordance with Marey's law. The beneficial results of the Schott system depend, in my opinion, upon the very careful and easily regulated method by which the extra work is imposed upon the muscular wall of the heart, which is thereby developed and strengthened, as any other muscle is developed and strengthened, by systematic graduated exercises and not by any hypothetical reflex nervous effect upon the heart.

This view seems to be terribly alarming to some of the advocates of the Schott system, apparently because it suggests that the method might be dangerous under certain conditions. But if there is no danger, why does Dr. Schott object to its use in grave myocarditis, aneurysms, and advanced arterio-sclerosis? If it only regulates the heart's action it can do harm, but it does more than that: it raises the blood pressure, increases the tension of the walls of the heart and arteries, and where myocarditis is very advanced or the vessels are ready to give way from disease of their walls, it may produce disaster.

I see only good from the recognition of these limitations to the system, and I consider that a sound estimate of the mechanism involved will tend to prevent its indiscriminate use, while the success which has attended the practice of Dr. Schott and his followers assures us that, followed out on his lines and within the limits he has laid down, it possesses no dangers which should deter us from recommending its use to our patients in suitable cases.

Mountain Climbing.

It is the practice at Nauheim to supplement the cure by sending people to climb gradients at one of the higher health resorts in the Taunus, Black Forest, or Switzerland. This exercise, which is known to be not without danger, may be safe enough for hearts which have been already strengthened by the graduated Nauheim system; it was long ago advocated by Dr. Stokes, though it is generally associated with the name of its more recent advocate, Professor Oertel, of Munich.

Stokes, speaking of the treatment of fatty heart, says: "We must train the patient gradually but steadily to the giving up of all luxurious habits. He must adopt early hours, and pursue a system of graduated muscular exercise; and it will often happen that after perseverance in this system the patient will be enabled to take an amount of exercise with pleasure and advantage which at first was totally impossible, owing to the difficulty of breathing which followed exertion. This treatment of muscular exercise is obviously more proper in younger persons than in those advanced in life. The symptoms of debility of the heart are often removable by a regulated course of gymnastics, or by pedestrian exercises, even in mountainous countries such as Switzerland, or in the Highlands of Scotland or Ireland. We may often observe in such persons the occurrence of what is commonly known as "getting the second wind," that is to say, during the first period of the day the patient suffers from dyspnœa and palpitation to an extreme degree, but by persevering, without over-exertion, or after a short rest, he can finish his day's work, and even ascend high mountains with facility." He adds in a footnote that he has seen the most beneficial effects on the weakened hearts of young men "in persons who had spent the summer walking through the Alps, when during exercise they were under constant perspiration." He concludes his remarks by urging caution in advanced life, where the disease of the heart is frequently complicated by atheroma of the aorta and affections of the liver and lungs.

Oertel, whose writings on the treatment of diseases of the circulation, evince great breadth of view and a desire to grasp the fundamental principles involved, believes that the damaged heart suffers most from the excess of fluids in the body, owing to diminution in the secretion of the kidneys and the sweat glands, and this source of oppression is increased when obesity is also present. His system, therefore, aims first at reducing the amount of fluid, then in regulating the amount when this diminution has been secured. To do this he seeks to increase the action of the skin, lungs, and kidneys, while limiting the amount of fluid ingested; but he admits that it is difficult by drugs to stimulate these organs efficiently, and he therefore recommends increased muscular activity by long walks, ascents—in short, by mountain climbing, which leads to increased water excretion from the skin and lungs. He also speaks well of Turkish baths, vapour baths, and hot packs. With these means he gives an albuminous diet (eggs), and restricts the amount of fluid taken to about half a litre (15 ounces) daily.

It is apparent that both Stokes and Oertel regard mountain climbing rather as a means of eliminating water than as directly aiding the heart, either by reflex inhibition, lowering vascular tension, or by exercising the heart, and so causing it, like any other muscle, to wax stronger by use. This last view certainly seems the most reasonable, and it is, as I understand, on this principle that Dr. Schott recommends it for suitable cases. He has quite abandoned Oertel's dietary, except where the heart condition is complicated by obesity, when he employs it in a modified form.

Conclusion.

A system like Dr. Schott's, which has been slowly evolved and perfected by years of careful clinical work, comes to us claiming attention chiefly from its practical results, and is, in my opinion, in no way discredited by any differences or doubts as to the proper theory upon which it is based. The latter only becomes important when new developments of the system are started, based on doubtful theories and lacking the support of his long experience.

I hope you will allow me to express my strong sense of the danger there is of checking the fair trial of this promising method by the hasty extension of it to cases forbidden by Dr. Schott, and against which he especially warns us. Worked carefully and conscientiously on the lines laid down by its originator it seems capable of being usefully introduced into our hospitals, into private practice, and especially into the practice of physicians at watering-places like Droitwich and Buxton, where many cardiac patients go annually for the treatment of their rheumatic and gouty ailments.

The system is fully at work at Llangammarch; Mr. Armstrong has been pursuing it for the last two years at Buxton, where he has arranged very good baths in a hydropathic establishment, and has nurses trained to conduct the exercises. I believe it is also carried out at Sidmouth, and I hope Dr. Roden will be able very shortly to give a fair trial to the Schott method in conjunction with the brine baths of Droitwich, modified to correspond with those of Nauheim.

We who have not the advantage of practising at health resorts know the drawbacks which attend any attempt to carry out systematic treatment on patients who are not detached from their business or domestic cares or their ordinary pursuits and pleasures, and for this reason its introduction into family practice will be limited. But in hospitals, where the patients are completely under control, I trust a fair trial may be given to it, for it is of importance that we should accumulate a wider experience than we already possess before we can say more than that it offers a fair prospect of success. There is one large group of cases in which private practitioners may be able to apply this treatment with advantage. I refer to the numerous cases of weakened heart after acute diseases: acute rheumatism, scarlatina, influenza,

etc., which are at present allowed to take their chance of strengthening under the not always satisfactory plan of ordinary walking exercise, the regulation of which is left very much to the patient's feelings and temperament. If, before any ordinary exercise were allowed, a course of Schott treatment could be carried out, it seems reasonable to hope that the heart would be better prepared to endure the less easily regulated strain of walking.

From my small experience I would suggest that the effect of the baths should be tried first, and that afterwards when the exercises are introduced their influence upon the pulse rate and tension should be carefully watched, as they do not always suit irritable, nervous hearts. Dr. Sturge's case is an instance in point, and the patient in the General Hospital with Graves's disease, whose heart slowed and improved in the bath, was not benefited by the exercises—that is, the pulse was not slower or improved in character or rhythm.

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[The discussion on this paper will be found on p. 1129.]

ON THE TREATMENT OF DISLOCATION OF THE PERONEUS LONGUS TENDON.

By W. J. WALSHAM, F.R.C.S.,

Assistant-Surgeon, Lecturer on Anatomy, and Surgeon in charge of the Orthopædic Department, St. Bartholomew's Hospital.

Dislocation of the peroneus longus, though perhaps not very common, is a well-recognised condition. The dislocation may occur suddenly, as the result of a twist of the foot; or the displacement may take place slowly through the gradual yielding of the fibrous sheath. In either case it is found that the tendon during certain movements of the foot slips from its groove from behind the external malleolus on to the external surface of that process. The displacement gives rise to much lameness, pain, and inconvenience, and the treatment hitherto recommended has not, as far as I know, proved very efficacious.

When the dislocation occurs suddenly, pain is experienced at the moment of the accident, and the tendon can be felt crossing the outer surface of the malleolus, or slipping in and out of its groove on moving the foot. Subsequently the tendon is liable from time to time to be spasmodically jerked out of its groove with a smart snap, which can be felt by the patient and heard by the observer.

No pressure with the fingers or with any apparatus with which I am acquainted is sufficient to resist the force with which the tendon is thrown forward during the spasm of the muscle on to the outer surface of the malleolus. The spasmodic displacement gives rise to considerable pain, often rendering walking without a stick almost impossible, and of course putting active exercise, such as dancing, tennis playing, etc., out of the question.

The apparatus usually advised in our works on surgery, namely, a crescent shaped, graduated pad placed over the tendon and fixed by a lacing ankle-piece, is, in my experience, of little service. Either the pressure is insufficient to confine the tendon to its groove, and it slips out occasionally in spite of the pad, or if the pressure is increased sufficiently to confine the tendon, a pressure sore soon forms. The division of the tendon with or without twisting of its proximal end for the purpose of causing it to inflame and so adhere to its sheath, though recommended by some surgeons, seems at the best to have little to be said in its favour. The spasmodic jerking of the tendon over the malleolus is no doubt prevented, but the function of the tendon is lost, and the patient in the future subjected to the many evils attending paralysis of the peroneus longus.

In a case recently seen with my friend Dr. Cooper Key, we conceived that it would be possible to make a new sheath for the dislocated tendon, a procedure as far as I know that has not hitherto been done or proposed. The operation consisted in making an incision about three inches in length over the tendon as it lies behind the external malleolus, exposing the malleolus and lower end of the fibula, and turning down from it a flap composed of the thickened fascia and underlying periosteum. The flap was then carried over the tendon and sutured to the fibrous tissues lying at the back of its normal groove. In the case in which this operation was performed, although—and notwithstanding strict antiseptic precaution—some suppuration occurred, the result was eminently satisfactory; the patient who for four years previously had been lame and compelled to walk with a stick, and had been debarred from all active exercise, when last heard of was able to walk quite naturally and well. The tendon remained in its groove and could be felt sliding in it freely on the various movements of the foot. A brief note of the case is appended:

A young lady, aged 22, four years ago whilst skating caught her foot in a hole in the ice, sustaining a severe sprain of the ankle. Ever since she has been lame, and from to time during walking the peroneus springs forward with a distinct and audible snap, giving rise to a sharp and momentary attack of sickening pain. She has worn various kinds of bandages, anklets, and specially made boots, but they have been of little or no service. She has also worn a night instrument for fixing the tendon. Of late she has used a boot with outer and inner leg irons, with T-strap and specially shaped pad lacing over the tendon. At the present time she has a pressure sore from the use of the pad, which has now, under Dr. Cooper Key's care, almost healed. On January 17th, the pressure sore having quite healed, the operation above described was performed, and the tendon having been satisfactorily fixed by the new sheath in its groove, the skin wound was completely closed and the foot placed in plaster-of-paris. Some slight suppuration occurred. On March 6th, the note states: The wound soundly healed; the tendon moves freely behind the malleolus, and shows no tendency to displacement. The patient walks well and has no pain, but the ankle feels a little stiff after sitting any length of time. Ordered massage. May 17th, excellent result in every way. The tendon moves freely, it does not come out of groove. She can walk five or six miles without any lameness or inconvenience.

At the meeting of the International Congress of Zoologists a communication which excited a great deal of interest was one from M. Dubois, a surgeon in the Dutch army, who has discovered a large number of fossil remains in Java, including fragments which indicate the existence of a creature, it is claimed, nearer to the "missing link" than anything yet discovered. A discussion followed, in which Professor Virchow took the principal part. During the Congress it was announced that the Senate of the University of Utrecht had conferred the degree of Doctor in Zoology and Botany upon Sir William Flower.

ON THE PATHOLOGY AND CLINICAL HISTORY OF SOME RARE FORMS OF BONY ANKYLOSIS.[1]

By HOWARD MARSH, F.R.C.S.Eng.,

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Not many years ago all that was taught about bony ankylosis could be summed up in two propositions: (A) That the only manner in which a joint could recover after it had been involved in suppuration was by the development of bony ankylosis. (B) That there was only one cause for bony ankylosis, namely, suppuration. It is now known that neither of these propositions is correct. (A) Suppuration is not necessarily, either in acute or chronic cases that recover, followed by bony ankylosis. This is illustrated in regard to acute cases, in pyæmia, acute suppurative arthritis following wounds, the acute arthritis of infants, and in other instances. In all these conditions, if the joint concerned is freely opened, irrigated, and drained aseptically, perfectly free movement may be preserved. Sometimes, if a joint distended with pus, as the consequence of pyæmic infection is merely evacuated by aspiration, complete repair follows. Generally, however, when acute suppuration involves a joint, unless efficient treatment is at once employed, ankylosis will take place; but then, in the majority of cases, it will not be bony but fibrous in its character. Undoubtedly some of the most complete examples of bony ankylosis that can be found are those which have followed acute suppuration. But the point I wish now to emphasise is that bony ankylosis does not necessarily, or even commonly, follow acute suppuration. In chronic cases attended with suppuration bony ankylosis, instead of being the rule, is quite the exception. Thus, in tuberculous disease—for example, of the hip or the knee—should ankylosis follow, this, in the great majority, will not be bony but fibrous. (B) Bony ankylosis often occurs in joints quite independently of the suppurative process. It is to this part of the subject that I wish to invite particular attention. Bony ankylosis, apart from suppuration, is met with in the following groups:

I. *In Tuberculous.*—All are familiar with four results of tuberculous joint disease: (A) Perfect recovery when treatment is adopted early, and is adequately carried out. (B) Fibrous ankylosis; this, in a degree which varies widely in different instances, is very common. (C) Bony ankylosis after suppuration—as is seen, for instance, sometimes after hip disease. (D) Complete destruction of the articulation, calling for excision or amputation. But there is a fifth group. (E) In this group inflammation is from the first plastic, and is followed by the development of complete synostosis. In these cases the inflammatory process is never active. There is little, if any, alteration of the articular ends, and the usual symptoms of inflammation—swelling, heat, and pain—are so little marked that the condition of the joint may for some time entirely escape notice.

CASE I.—A girl, aged 11, in bed with Pott's disease, was found to have her elbow completely stiff. She had complained of no pain, and the only thing her mother had noticed was that she used the limb awkwardly in feeding herself. On examination the elbow joint presented a natural appearance, but it was completely stiff, and the muscles were wasted. The stiffness proved to be permanent.

CASE II.—A girl, aged 9, had tuberculous disease of her knee. There was some synovial swelling, accompanied by flexion and slight heat. Leather splints were applied. Heat and swelling gradually subsided, but the joint became completely stiff. The child has now been using the limb freely for the past five years, and the knee is still quite fixed.

I believe that in both these cases bony ankylosis has occurred. Of course there is no proof of this without maceration of the specimens, and examination of them in longitudinal section; but that bony ankylosis may occur in such instances is proved by the following example.

CASE III.—The elbow joint of a girl, aged 14, had gradually, without symptoms, become fixed at an angle of about 130°. To improve this position Dr. Walter Roughton, of New Barnet, performed excision. During the operation he found that complete bony ankylosis had taken place. (See Fig. 1.)

Fig. 1.—The elbow-joint seen in longitudinal section. The humerus and olecranon are completely synostosed.

This specimen is of great value. It is the only one of its kind that I have seen.

I have met with several instances in which tuberculous joints have become thus quietly completely stiff. It seems important to bear these plastic cases in mind. I know of no method by which bony ankylosis can be averted. It takes place, as the above examples show, whether or no splints are used, but should it occur while the limb is in splints the patient and his friends will ascribe it to the treatment that has been adopted.

I believe that this plastic form of tuberculous inflammation may also involve the spinal column. Fig. 2 shows two

Fig. 2.—Complete bony ankylosis between the bodies and neural arches of the second and third cervical vertebræ (No. 1015, Museum of St. Bartholomew's Hospital).

[1] Read in the Section of Surgery at the Annual Meeting of the British Medical Association held in London, July-August, 1895.

cervical vertebræ very firmly ankylosed. They are not altered in shape, or eroded even superficially. No history of the specimen is known; but I believe the condition has resulted from tuberculous inflammation, followed by the organisation of the inflammatory products into bone.

2. I would now ask whether bony ankylosis occurs in Charcot's disease, apart from suppuration attending perforating ulcer? The great majority of observers, I believe, would answer in the negative. Yet, I think, there is evidence to throw some doubt on this conclusion.

Charcot[2] has described a tabetic foot in which the under surface of the astragalus presented bony vegetations. The scaphoid and cuboid were scarcely recognisable, and the internal cuneiform was fused with the first metatarsal, and the middle cuneiform with the second metatarsal bone. All the tarsal and metatarsal bones were spongy and friable. Charcot remarks that these complex lesions, occurring apart from traumatism and suppuration, can only be classified as definite osseous and articular changes accompanying tabes.

Fig. 3.—Bony ankylosis of the foot (Museum of the University of Cambridge).

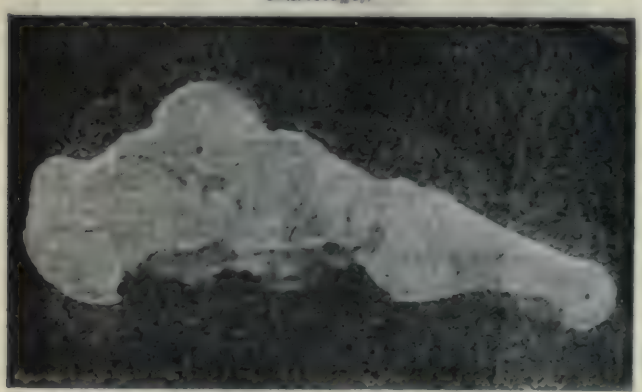

Fig. 4.—Bony ankylosis of the foot. Some of the tarsal joints are obliterated, but others are but little changed, and ankylosis is due to the formation of plates and vegetations on the surface of the bones (Museum of the University of Cambridge).

Figs. 3 and 4 represent two remarkable skeletons of feet, kindly lent to me by Sir George Humphry, from the Museum of the University of Cambridge. These feet are the seat of almost universal bony ankylosis, owing to the fact that the superficial surfaces of the different bones are covered with vegetations and continuous bony deposits, which bridge over the intervals between them. On section, however, it is discovered that some of the tarsal joints themselves are very little changed. Their cavities can still be traced, and even the articular cartilages can be recognised. Some of the tarsal and phalangeal joints, however, have undergone such complete synostosis that no vestige of their cavities remains. The history of the cases from which these specimens were derived is unfortunately unknown. I have never seen such conditions before. How are the appearances to be explained? At first sight they might be attributed to suppuration—possibly of septic origin. But, in the first place, there is very little alteration in shape, and very little erosion of the bones, such as would be expected in widespread suppuration; secondly, many of the joints are but little changed; yet in septic cases it is upon the joints themselves, through their synovial membranes, that the main stress falls; thirdly, the sesamoid bones of the great toe are much increased in size—a change that, so far as is known, could not be produced merely by inflammation going on to suppuration. The complete bony ankylosis which is present in some of the phalangeal joints is a condition that may follow suppuration. But here, again, the bones are not eroded or altered in shape; they are simply synostosed. The formation of osteophytic outgrowths and low buds and vegetations, which is so marked a feature in these specimens, and which was present in Charcot's case, is well shown in a tabetic foot in the Museum of St. Bartholomew's Hospital (No. 691*x*). In this specimen, although no suppuration had occurred, the tibia and the fibula are ankylosed together by bone. These examples appear to show that bony ankylosis, apart from suppuration, may occur in Charcot's disease.

3. In a case in which the median nerve had been divided and the hand had become clawed, Mr. Bowlby found[3] that bony ankylosis had occurred in one of the interphalangeal joints of the ring-finger, while several of the other finger-joints were stiff, although as yet ankylosis had not taken place. This specimen is the only example of bony ankylosis after nerve-section that I have met with.

4. It is well known that in gout and (5) gonorrhœal rheumatism bony ankylosis occurs entirely apart from suppuration.

6. In some instances severe contusion of the articular surfaces of a joint may be followed by bony ankylosis. I have seen this result follow in the temporo-maxillary joint after a heavy fall upon the chin.

7. Bony ankylosis is not very uncommon in the spine in the more extreme forms of lateral curvature. It has occurred in specimens No. 2103 and 2104 in the Museum of the College of Surgeons and in *x*52 and *x*54 in the Museum of St. Thomas's Hospital. The vertebræ are fused together in the concavity of the curve. Similar examples may be found in almost every large pathological museum.

8. I now pass to a group of cases in which multiple bony ankylosis has occurred where no suppuration has taken place.

Case iv.—In 1889 a groom, aged 22, was admitted into St. Bartholomew's Hospital. Four years before he was said to have had rheumatic fever, for which he was in bed for thirteen weeks. At the end of this time he was able to walk, but his joints gradually became stiff, and for three years he had been bedridden. On his admission the hips and knees were flexed, and the feet were in a position of talipes equinus. All the joints of the lower extremities were firmly fixed. His remaining joints were all free. Beginning with the right limb, I performed, on successive occasions, in order to remove deformity, osteotomy of the ankle, excision of the knee, and osteotomy of the femur below the trochanters. After the last operation the wound suppurated. He was at the time in very poor general health, and, developing lardaceous disease, he ultimately died of exhaustion. All the six large joints of the lower extremities proved to be ankylosed by bone.

Case v.—Dr. Hilton Fagge relates the following instance[3] A man, aged 34, was admitted into Guy's Hospital in 1874. In the previous year his spine became stiff, and formed a rounded curve; later the right hip became fixed. He died of chest troubles following difficulty of respiration. At the *post-mortem* examination the arches and the spinous processes of the dorsal vertebræ were found completely ankylosed, and so were the articular processes (Fig. 5). The vertebræ were much softened, and could be cut with a knife, and the spine had become fractured in placing the body in the shell. The ribs were firmly and extensively ankylosed to the vertebræ. The right hip was also ankylosed.

Case vi.—Dr. Griffiths, of Cambridge, has given me notes of the following case. Three years ago a woman, aged 20, had the first phalangeal joint of the index finger swollen and painful. Pain and swelling after a time subsided, but the joint was left ankylosed. Other finger-joints underwent similar changes, then the wrists, and later the elbows swelled and were painful, and they also ultimately became quite

[2] *Progrès Médical*, 1882, p. [illegible].

[3] St. Bartholomew's Hospital Museum.
Path. Soc. Trans., vol. xxvii., 1877, p. [illegible].

stiff. In an attempt to improve the position of the left elbow the bone was fractured. At the present time several finger-joints, both wrists, and both elbows are quite stiff. Some other joints are rather swollen, but in several Dr. Griffiths finds no swelling, no nodules, and no thickening of the bones. The ankles are swollen, but movement in them is free. The knees are somewhat swollen and stiff, other joints are natural.

I have mentioned that bony ankylosis may occur in the spine in tuberculous disease, in lateral curvature, and in such cases as that recorded by Dr. Fagge.

Fig. 5.—Dr Fagge's specimen of bony ankylosis of the spine (*Trans. Path. Soc.*, vol. xxviii, p. 30).

Fig. 6.—Ankylosis of the spine produced by ossification of the anterior common ligament (Museum of the University of Cambridge).

9. It is well known that bony ankylosis is also common in the spine in Osteo-arthritis. On examining specimens illustrating this condition—and they can be found in any large museum—it is seen that the ankylosis is produced either by (*a*) ossification of the anterior common and other ligaments (Fig. 6), or (*b*) by the formation of buttresses of bone passing from one vertebra to another (Fig. 7). In many instances the ribs are firmly ankylosed to the bodies

Fig. 7.—Ankylosis of the spine produced by the formation of bony buttresses (Museum of the University of Cambridge).

and transverse processes of the vertebræ by ossification of the costo-vertebral and costo-transverse ligaments.

On making a longitudinal section of the spinal column, it is found that the ankylosis is entirely limited to the external surface of the vertebræ. The spaces between the bodies, which are occupied by the intervertebral discs, are seen in dried specimens to be in no way encroached upon. It will thus be observed that bony ankylosis, apart from suppuration, may occur in the spine, as in the limbs, in three different ways: (*a*) by direct and complete fusion of the component bones (Fig. 5, Fagge); (*b*) by ossification of the ligaments (Fig. 6); and (*c*) by the development of bony buttresses or plates, the joints remaining unaffected (Fig. 7). I may add that bony ankylosis may involve the spine only, or the spine may be involved in common with the limbs.

I have ventured to bring these different forms of bony ankylosis without suppuration under the notice of the meeting, first, because it may be useful to collect and arrange them for clinical study; and secondly, in the hope that those who take part in the discussion may throw some light on their pathology. The examples I have related seem to show that bony ankylosis is sometimes a reparative and sometimes a degenerative process. When it occurs in acutely inflamed joints, for example in the course of pyæmia or of acute suppurative arthritis following a punctured wound, bony ankylosis is reparative, and closely resembles the union of a fracture. It is reparative also when it occurs in tuberculous disease of the joints or spine. In all these instances inflammatory exudation is converted into normal bone to the advantage of the individual concerned. In other cases bony ankylosis is associated with and is a part of wide degenerative changes in the structures involved. In Fagge's case, as already mentioned, the vertebræ could be cut with a knife, and the spine had been fractured while the body was being lifted to place it in the shell. It was degenerative in the case recorded by Charcot and in the feet lent by Sir George Humphry. It is degenerative, again, in gout, and after nerve injuries, as well as when it is multiple, as in Case IV. It must be termed degenerative also where it replaces the normal structures by a tissue which is inappropriate for the discharge of the func-

tions of the part, for example, in ossification of the ligaments of the spine, and of the joints and ligaments of the ribs.

The true pathology of many forms of bony ankylosis, such as those illustrated by Cases IV, V, and VI, is at present, I believe, unknown.

I will not occupy the time of the Section by entering at any length on the clinical aspect of cases of bony ankylosis. I will only enumerate four propositions: 1. Whenever this condition seems likely to occur, great care should be taken to keep the joint concerned in a useful position. 2. We know of no means by which a threatened bony ankylosis can be averted. 3. The use of passive movements cannot prevent bony ankylosis. Indeed, by maintaining irritation and promoting inflammatory exudation, it is likely to produce a directly opposite result. 4. When bony ankylosis has occurred, excision or osteotomy may be freely employed, in order to correct any deformity that has taken place, for by methods that are now available these operations are attended with scarcely an appreciable risk.

[The author is indebted to Messrs. Cassell and Co. for permission to reproduce these illustrations from his work on *Diseases of the Joints and Spine* (Cassell and Co., 1895).]

Mr. TARGETT laid stress on the distinction between ossification of the vertebral joints and of the ligaments, comparing the latter to myositis ossificans. He had never seen ossification in Charcot's disease without previous suppuration, that is, perforating ulcer. The disease was almost always attended with atrophy of bone, which was not shown in the specimens exhibited. He therefore doubted whether Charcot's disease was present in these cases. The most rapid and complete ankylosis without suppuration was found in puerperal fever and other kinds of sepsis. Dr. Fagge's case may have been one of quiet tuberculous ankylosis, since there were tuberculous deposits in the mesenteric glands.

Mr. BOWLBY remarked that in one of the feet shown there had undoubtedly been suppuration, which, however, was far anterior to and quite independent of the ankylosis. The case was one of undoubted tabes. In his case of ankylosis following injury to the median nerve there was partial ankylosis of all the joints of the hand. After nerve injuries the joints supplied by them undergo changes somewhat like those in acute rheumatism, becoming swollen, tender, and partially ankylosed. These changes are not, as a rule, permanent, but there may be a deposition of fibrous tissue in the ligaments, particularly on the flexor surface of the hand, often leading to permanent stiffness. He agreed with Mr. Marsh's division of bony ankylosis into degenerative and reparative. He also pointed out that many joint lesions were due to disease of the central and peripheral nervous system, such as syringomyelia and disseminated sclerosis, and said that in the near future osteo-arthritis would probably be shown to have the same origin. Mr. Bowlby believed that many cases of bony ankylosis without suppuration lie latent in museums through having no histories attached.

Mr. BLAND SUTTON refused the title of quiet tuberculosis as applied to the axis and cervical vertebræ shown by Mr. Marsh, on the ground that the time of life was too late. Similar specimens, with the occiputs joined on, were to be found in most museums. Many had been turned up in graveyards, and one was found in a mummy from the Pyramids. The condition was not thoroughly explained in all cases, but Mr. Arbuthnot Lane had suggested that the skeletons were those of costermongers and others accustomed to carry weights on their heads. Mr. Sutton had confirmed this in the case of the Paris oxen, which are yoked by the horns. He also pointed out that in the veterinary museums at Alfort and Camden Town there are numerous skeletons of horses showing ankylosis due to ossification of the anterior common ligaments and ligamenta subflava. This may cause snapping of the vertebral column in horses cast for operation.

Mr. ELLIS (Gloucester) referred to the condition known as hallux flexus, rigidus or dolorosus, which he considered due to the outward pressure of the median-pointed boot pressing the great toe under the adjoining ones. The joints most exposed to irritation are most subject to this disease, and ankylosis is here reparative.

Mr. MARSH, in answer to Mr. Bland Sutton, said that in his experience tuberculous disease of the spine might occur with well-marked angular curvature up to the age of 70, and he had heard of it at 90. Ankylosis of the spine from ossification of ligaments was more than a pathological curiosity in man; if it was complete the patient was very helpless; and when it was associated—as was often the case—with ankylosis of the ribs, it was very likely, if bronchitis or pneumonia occurred, to interfere with respiration so seriously that the result was fatal.

ON SPLENECTOMY, WITH NOTES OF THREE CASES.[1]

By W. D. SPANTON, F.R.C.S.Eng.,
Surgeon to the North Staffordshire Infirmary.

I HAVE now performed the operation of splenectomy three times—two of the cases being followed by a fatal result, one by recovery—and they are sufficiently typical to afford an opportunity to consider the subject in its general aspect, and to endeavour to deduce from them some observations of practical importance. It is only during the last few years that the propriety of such an operation has gained favour. In this respect the operation stands by no means alone, for almost all formidable surgical procedures have had to pass through a similar ordeal, and it is only by experience that we are enabled to eliminate cases unsuitable for operation, and to perfect our methods of performing it so as to render it at the same time justifiable and reasonably safe. The records of the cases are as follows:

CASE I.[2]—Mrs. S. B., aged 47, married, admitted into North Staffordshire Infirmary under Mr. Spanton, September 1st, 1883. Patient always strong, no illness until the present. Twelve children, all living, youngest 4 years old. Never been abroad, and never lived in ague district. Illness commenced two years ago with pain and enlargement on left side of abdomen. She thought at first that she was pregnant. The pain has never been very acute, but chiefly of a dragging character.

The enlargement of the abdomen increased gradually, and twelve months ago she became an in-patient in the medical wards on account of the inconvenience it caused her. At that time she was able to get about to do her household work, and was fairly stout and strong.

The tumour then was very distinct, and had all the characters of an enlarged spleen. It extended to within about 1½ inch of Poupart's ligament; in fact it covered nearly half the abdomen. Since leaving the infirmary she has been under medical treatment outside, but without any benefit resulting.

There had been no ague fits or any attacks of that nature before her first admission, but during the last few months she has sometimes felt cold, which has been followed by a free perspiration. For the last twelve months she has lost flesh rapidly and has got so weak that she cannot get about to do anything. Digestion fairly good, no sickness, no marked anæmia, catamenia absent for about twelve months.

Urine contained phosphates but no albumen. Blood examined under microscope was found to present no marked deviation from a normal specimen; the white corpuscles were not increased and the red ones were well formed. The patient had an anxious expression, appeared much troubled about her complaint, and was prepared to submit to any operation. She suffered from severe pain in the head and in the abdomen while in the infirmary, and the temperature varied from 100° to 103°F. She had no distinct shivering attack but perspired much when the pain was most severe. A consultation was held and it was decided to operate, but on account of her condition it was thought advisable to postpone it until the temperature had subsided.

On September 11th she seemed much better, the pain was less and the temperature was only 99°F. It was therefore arranged for the operation to take place on the following day.

The patient was removed to Victoria Ward on September 12th, but no purgative was given and no enema administered because a few days before she had a tendency to diarrhœa.

[1] Read in the Section of Surgery at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

[2] This case was briefly reported in the BRITISH MEDICAL JOURNAL, 1883.

September 12th. In very good spirits, very little pain except in the region of the spleen, temperature 99°F., no diarrhœa, slight cough, and a few *râles* audible on the right side of the chest, but no dulness on percussion and no physical sign on the left side.

The tumour was smooth on the surface, very hard, and extended from the fifth rib above to Poupart's ligament below; forward it extended across the middle line to the outer margin of the right rectus. The notch could be felt two inches below the umbilicus, and one inch to the outer side. The margin above and below this was smooth and regular, convex from above downwards, with the convexity towards the right. The tumour could be lifted forwards by pressure in the left flank, and the right margin was sufficiently thin for the hand to be passed behind it. In front, where the experiment was practicable, the abdominal wall could very readily be separated from the tumour. It occupied a larger portion of the right side of the abdomen when the patient lay on her right side, but quickly assumed a different position when the position of the patient was changed. The liver dulness extended a little distance below the ribs, there were no enlarged glands in the axilla or groin, and no congestion of the superficial veins of the abdomen. The heart was normal.

The operation was commenced at 4.40 and concluded at 5.55. An incision was made in the median line, from near the xiphoid cartilage, 9 inches downwards. The small lobe of the liver first came into view, and next the great omentum; the omentum was drawn to the right, and the spleen was then exposed; it had a very congested appearance, and the veins of the great omentum were considerably enlarged. The spleen was lifted upwards, and a large vessel ligatured beside some smaller ones.

It was proposed to pass one large ligature round the base of the tumour as a preliminary measure, but this could not be done without breaking down its connection with the diaphragm. Many vessels were also ruptured in the attempt. Two ligatures were, however, passed in this way, the one from the inner and the other from the outer side. The spleen was then quickly removed, and it was found that the ligature had secured most of the vessels.

Some smaller ones were tied with thick silk, and Tait's clamp was applied to that part of the pedicle formed by the gastro-splenic omentum. The large vessels were tied with whipcord, by means of a double threaded aneurysm needle. There was a considerable amount of hæmorrhage at the commencement of the operation, for in the endeavour to lift the spleen from its bed, some vessels on its under surface were ruptured, but after these had been secured there was no great hæmorrhage throughout the operation. The amount of blood lost was estimated by those present at a pint.

After the clamp had been applied all hæmorrhage appeared to have ceased. A small lateral incision was made in order that the clamp might be brought to the surface, and secured without any tension in the pedicle. The whole wound was then closed by means of silk sutures, the clamp lying over the left rectus in a vertical direction. The spray (Sanitas) was playing over the patient before the operation, but was discontinued when the incision had been made. The wound was dressed antiseptically. During the removal of the spleen the bowels were prevented from protruding as far as possible by means of warm chamois leather and sponge cloths.

The pulse was good after and during the operation. The patient was removed to the bed which was at the side of the operation table, and an enema of brandy and milk given. She soon rallied and was able to describe her symptoms. She said she felt sick but had very little pain. The retching was troublesome, but otherwise everything appeared to be going on favourably. The pulse remained good.

At about 9.20 P.M. she became suddenly worse, and the nurse noticed her colour change, and the breathing became "gasping." When seen by the house surgeon a few minutes afterwards the pulse had nearly disappeared, and from the dusky appearance of the countenance and the character of the breathing internal hæmorrhage was diagnosed.

A consultation was held with Mr. Spanton by means of telephone, but under the circumstances it was not thought advisable to reopen the wound.

Death occurred at 9.50 P.M. Weight of spleen, 8 lbs. 1 oz. (after draining). Measurements, 14 inches by 8 inches, by 5½ inches greatest thickness. Structure simple hypertrophic.

At the *post-mortem* examination eighteen hours after death rigor mortis was well marked. The abdominal cavity contained about a pint and a-half of blood, chiefly clotted; a large silk ligature was found lying loose on the blood clot, but the mouth of a large vessel could not be detected. The kidneys were normal, heart normal, liver enlarged but otherwise healthy. The lungs had the character of bronchitis, which was more marked on the right side and at bases. The brain was not examined.

Remarks.—The fatal result in this instance was clearly due to hæmorrhage, although at the time of closing the wound everything seemed secure. The pedicle was very large, and the vessels in it enormous, and this led me to leave on it the clamp as a safeguard. The bleeding probably occurred in this, as in some other recorded cases, from a vessel not included in the main pedicle, and the loose ligature pointed to this, although no open mouth was apparent. In the light of more experience I think that if the suspensory ligament had been dealt with first the result might have been different. The tumour was very large, very friable, and the pedicle was comparatively short, all of which tended to make excision more difficult, especially in one's first operation of the kind.

CASE II.—Mrs. M., aged 52, married, admitted into the North Staffordshire Infirmary, January 20th, 1891, for enlarged spleen. Patient says she was quite well until eighteen months before, when she had typhoid fever, and was never well after. She had, however, been subject to epileptic attacks for some years. About a year before admission she first noticed a lump in the abdomen, which was then about the size of an orange, and steadily increased. Latterly she had become much paler, and suffered from severe attacks of sickness.

In the autumn of 1890 she was a patient in the medical wards for anæmia; had become much weaker since then; for the last month had been confined to bed, and was unable to stand without help.

On admission she was pale, emaciated, and feeble. Had frequent attacks of severe vomiting, accompanied by diarrhœa and often dyspnœa. Systolic murmur at base. Chest signs negative. Abdomen: A large firm tumour felt occupying left hypochondriac, iliac, and umbilical regions, extending to the middle line and downwards to a point 2½ inches below umbilicus. A very distinct notch could be felt just above the level of the umbilicus. It was freely movable, and caused pain of a dragging character. The blood showed an excess of white corpuscles relatively to red. Urine was normal. After consultation it was decided to perform splenectomy, as the patient was steadily and rapidly losing ground after a full trial of medical and general treatment.

Operation, February 3rd, 1891.—Chloroform. An incision, 10 inches in length, was made in the left linea semilunaris, and the spleen readily exposed. There were no adhesions, and the tumour was withdrawn without difficulty. The pedicle was transfixed and tied with five interlocking silk ligatures, and divided. The bleeding was slight. Wound closed with silk sutures; no drainage. Alarming symptoms of collapse occurred when the tumour was being drawn out of the abdomen, but passed off after it was separated. The patient, however, never thoroughly rallied from the shock, and died eleven hours afterwards.

The tumour weighed 5½ lbs., and appeared to be simply hypertrophic. *Post mortem* a considerable quantity of blood clot was found in the peritoneal cavity, but no open vessel nor loose ligature was seen.

Remarks.—In this case the patient was in a wretched state of health, although there was no very marked leucocythæmia. In fact, she remained florid to the last, but became much emaciated, so that she was confined to bed for some time before operation was resorted to. There was some hæmorrhage, it is true, but the death was, I think, attributable to shock, which was almost fatal during the operation. The pedicle was wide and short, so that it was difficult to avoid dragging upon it while the ligatures were being applied. I think, too, it would have been better had ether been employed as an anæsthetic.

CASES OF SPLENECTOMY WITH RESULTS. TABLE I.—*Leucocythæmic Cases.*

No.	Date.	Surgeon.	Place.	Sex.	Age.	Nature of Disease.	Result of Operation.	Weight of Spleen.	*Post-mortem* Notes.	Remarks.
1	1866	Bryant	England	M.	?	Leucocythæmia	Death from hæmorrhage in 90 minutes	4 lbs. 7 ozs.	1½ lb. of blood in abdominal cavity	Severe hæmorrhage at operation.
2	1867	Koeberlé	Strassburg	F.	42	,,	[illegible]	1 lb. 8 ozs.	—	—
3	1868	Bryan	England	F.	?	,,	Death from hæmorrhage in 15 minutes	10 lbs. 6 ozs.	1 pint of blood in region of spleen	Severe hæmorrhage at operation from adhesions.
4	1873	Watson	Edinburgh	M.	?	,,	Death from hæmorrhage and shock	12 lbs.	—	—
5	,,	Spencer Wells	England	F.	42	,,	Death from peritonitis on [illegible] day	16 lbs. 8 ozs.	—	—
6	1876	,,	,,	F.	25	,,	Death from hæmorrhage in a few hours	Over 11 lbs	—	—
7	1877	Billroth	Vienna	F.	42	,,	Death from hæmorrhage in 4 hours	6 lbs. 9 ozs.	Two litres fluid blood	Severe hæmorrhage from adhesions at the time of operation.
8	,,	,,	,,	F.	30	,,	Death from hæmorrhage in 1 hour	11 lbs. 11 ozs.	—	—
9	,,	L. Browne	England	M.	29	,,	Death from hæmorrhage in 5 hours	18 lbs. 8 ozs	—	—
10	,,	Fuchs	Behar	F.	40	,,	Death from hæmorrhage in 16 hours	19 lbs. 13 ozs.	—	—
11	,,	Simmons	Sacramento	M.	44	,,	Death from hæmorrhage in 2½ hours	7 lbs. 8 ozs.	—	—
12	1879	Urbinato	Cesena	F.	?	,,	Death from shock in 4 hours	?	—	—
13	,,	Geisel	Essen	F.	40	,,	Death from hæmorrhage in 16 hours	9 lbs. 15 ozs.	—	—
14	,,	Czerny	Heidelberg	F.	24	,,	Death from hæmorrhage in 4 hours	?	—	—
15	,,	Arnison	England	F.	27	,,	Death from hæmorrhage in 5 hours	7 lbs. 13 ozs	—	—
16	1879	Miner	—	F.	4	,,	[illegible]	?	—	—
17	,,	Poucel	—	M.	30	,,	Death from shock in 2[illegible] hours	?	—	—
18	1881	Franzolini	Udine	F.	32	,,	Recovery	Over 3 lbs.	—	Knowsley Thornton classes this under Hypertrophy.
19	,,	Haward	England	F.	40	,,	Death from shock in 6 hours	7 lbs. 8 ozs.	—	—
20	,,	Terrier	—	F.	34	,,	Death (? cause)	?	—	—
21	1884	Redygier	—	F.	?	,,	,,	?	—	—
22	1885	Fritsch	Germany	F.	28	,,	Death from hæmorrhage in 5 hours	?	—	—
23	,,	Rowell Park	—	F.	?	,,	Death from hæmorrhage in 5 hours	?	Bleeding from diaphragm	—
24	1891	Tricomi	Padua	F.	26	,,	Death from shock in 7 minutes	?	—	—
25	1892	Lawson Tait	Birmingham	F.	36	,,	Death from hæmorrhage in 44 hours	18 lbs.	—	—

CASE III.—I was asked by my friend, Dr. Coulson Bull, to see Mrs. E., married, aged 38, on account of an abdominal swelling, to which the patient's attention had been drawn owing to severe pain in the left hypochondrium, which Dr. Bull attributed to localised peritonitis. She was then suffering much, and we came to the decision that the tumour was splenic and demanded operation. She was therefore admitted into the North Staffordshire Infirmary, and the following notes were then made by the house surgeon, Mr. Sawers:

Admitted February 27th, 1895, complaining of a swelling of abdomen on the left side, and pain of a dragging character.

History.—For the last four years the patient had had a heavy dragging pain in left hypochondrium, worse when moving about. Since Christmas, 1894, she noticed that she was getting larger, and that there was a tumour in the left side of the abdomen, which had become rapidly larger during the last few weeks. She had lost flesh, and been subject to profuse perspirations.

Present State.—A rather spare woman, with little subcutaneous fat; lips a good colour, skin somewhat sallow, cheeks flushed, tongue clean and dry. Abdomen distinctly fuller on left side. There is a readily felt tumour occupying the left hypochondriac, lumbar, and umbilical regions. The anterior border reaches from the tip of the left ninth rib to about 2 inches below the umbilicus, and at its lowest point touches the middle line. The border is rounded and firm; no definite notch can be made out. The lower border runs somewhat upwards and outwards. The tumour does not completely fill up the loin, there being felt a posterior border which runs vertically upwards from about 1 inch behind the anterior superior spine of the ileum to the margin of the ribs. The tumour is everywhere firm to the feel, is somewhat tender, especially posteriorly, and moves on respiration. Percussion note dull all over tumour, and dulness extends upwards to the level of the eighth rib in the mid-axillary line. Measurements—anterior border, 6 inches; greatest breadth, 7 inches; length of absolute dulness, 9½ inches. Blood corpuscles were counted, red 80 per cent.; no increase of white corpuscles. Urine normal, heart normal, chest normal except slight crepitation at left base.

Operation, March 11th.—Ether. An incision about 6 inches long was made in the left linea semilunaris, commencing just below the costal margin. The spleen then came into view, and was partially brought forward through the wound. A few adhesions between the surface and the abdominal wall were ligatured in two places and cut through. The suspensory ligament was then double ligatured and separated, and the spleen then easily brought outside. The pedicle was transfixed with a blunt needle, and tied in two portions, one of which included the splenic artery before its division, the ends of one of the threads being carried round the whole and tied. Strong silk was used. The pedicle was then divided and the spleen removed. The splenic artery and vein were ligatured separately afterwards; the wound closed with deep and superficial silk sutures. Very little blood was lost during the operation, which lasted about thirty-five minutes.

CASES OF SPLENECTOMY WITH RESULTS. TABLE II.—*Non-Leucocythæmic Cases.*

No.	Date.	Surgeon.	Place.	Sex.	Age.	Nature of Disease.	Result of Operation.	Weight of Spleen.	*Post-mortem* Notes.	Remarks.
1	[illegible]	Zaccharelli	Naples	F.	21	Hypertrophy	Recovery	2 lbs. 15 ozs.	—	—
2	1711	Ferrerius	St. Carnigan	F.	[illegible]	Spleen in peritoneal abscess	,,	?	—	—
3	[illegible]	Wittenbaum	Rostock	F.	20	Hypertrophy	Death from hæmorrhage in 6 hours	5 lbs. 5 ozs.	—	—
4	[illegible]	Schultz	Darmstadt	?	?	Spleen protruding from wound	Recovery	?	—	—
5	,,	Küchler	,,	?	?	Hypertrophy	Death from hæmorrhage in 2 hours	8 lbs. 5 ozs.	—	—
6	[illegible]	Spencer Wells	England	F.	36	,,	Death from (?) thrombosis on 7th day	6 lbs. 15 ozs.	—	First English case.
7	[illegible]	Baker Brown	London	?	?	,,	Death at the operation	?	—	—
8	[illegible]	Péan	Paris	F.	[illegible]	Cystic spleen	Recovery	2 lbs. 8 ozs.	—	—
9	[illegible]	Urbinato	Cesena	?	?	Hypertrophied wandering spleen	Death from peritonitis on 3rd day	2 lbs. 14 ozs.	—	—
10	,,	Koeberlé	Strassburg	F.	[illegible]	Hypertrophy	Death from shock in 17 hours	?	—	—
11	1876	Péan	Paris	F.	[illegible]	,,	Recovery	2 lbs. 7½ ozs.	—	—
12	1877	Pollak	—	?	?	,,	Death (?) cause	—	—	—
13	,,	Martin	Berlin	F.	[illegible]	Wandering spleen	Recovery	Slightly increased in weight	—	—
14	[illegible]	Aonzo	—	?	?	Hypertrophy	Death (?) cause	—	—	—
15	,,	Honzo	—	F.	24	,,	Death from shock	—	—	—
16	,,	Volnay d'Orsay	America	?	?	,,	Recovery	—	—	—
17	,,	,, ,,	,,	?	?	,,	Death (? cause)	—	—	Possibly the same as No. 14.
18	,,	Czerny	Heidelberg	F.	[illegible]	Wandering spleen	Recovery	—	—	—
19	[illegible]	Credé	—	M.	[illegible]	Cystic spleen	,,	—	—	—
20	,,	Celso Bonora	—	F.	[illegible]	Hypertrophy	Death from hæmorrhage	—	Bleeding from diaphragm	—
21	,,	Charleoni	—	F.	[illegible]	,,	,, ,, ,,	—	—	—
22	1887	Gussenbauer	—	F.	[illegible]	,,	Death (? cause)	—	—	—
23	[illegible]	Spanton	Hanley	F.	47	,,	Death from hæmorrhage in 7 hours	8 lbs. 3 ozs.	—	—
24	1884	Billroth	Vienna	?	?	Lymphosarcoma	Recovery	—	—	—
25	,,	Knowsley Thornton	England	F.	23	Hypertrophy	Death from hæmorrhage in 5½ hours	—	—	—
26	,,	,,	,,	F.	19	Cystic spleen	Recovery	1 lb. 11 ozs.	—	—
27	1889	Orlovsky	Russia	F.	[illegible]	Hypertrophy	Death from hæmorrhage on 4th day	—	Bleeding from diaphragm	—
28	,,	Albert	—	F.	[illegible]	,,	Recovery	—	—	—
29	,,	Pro-kovnik	—	F.	[illegible]	,,	,,	—	—	—
30	,,	Demat	—	F.	[illegible]	,,	,,	—	—	—
31	1894	Ceci	Genoa	F.	17	Wandering hypertrophied spleen	,,	4 lbs. 13 ozs.	—	—
32	,,	Nilsen	America	F.	[illegible]	Hypertrophy	,,	Nearly 2 lbs.	—	—
33	,,	Bergmann	Berlin	F.	[illegible]	,,	Death (? cause)	—	—	—
34	1895	Podrez	—	F.	[illegible]	Hypertrophy	Recovery	—	—	—
35	,,	Ribera	—	M.	[illegible]	,,	Death in 24 hours	—	—	—
36	,,	McGann	Pittsburg	?	?	Wandering hypertrophied spleen	Recovery	14 ozs.	—	—
37	1895	Cassini	Italy	F.	[illegible]	Hypertrophy	,,	6 lbs. 12 ozs.	—	—
38	,,	Lenoman	Trieste	F.	[illegible]	Wandering hypertrophied spleen	,,	2 lbs.	—	—
39	,,	Spencer Wells	England	F.	[illegible]	Hypertrophy	,,	1 lb. 14 ozs.	—	—
40	,,	Polk	—	F.	[illegible]	Wandering spleen	,,	—	—	—
41	,,	Meyers	—	?	[illegible]	Hypertrophy	,,	—	—	—
42	,,	Leopard	—	F.	[illegible]	,,	,,	—	—	—
43	1895	Fritsch	Germany	F.	[illegible]	Lymphosarcoma	,,	—	—	—
44	,,	Spencer Wells	England	F.	[illegible]	Wandering spleen	,,	—	—	—
45	,,	Smith	[illegible]	M.	[illegible]	Hypertrophy	Death from shock same day	—	—	—
46	,,	Mas	Valencia	?	[illegible]	Hydatid	Recovery	—	—	First case in Spain.
47	,,	Wright	Manchester	M.	[illegible]	Hypertrophy	Death from hæmorrhage in 36 hours	1 lb. 8 ozs.	Bleeding from diaphragm	—
48	1895	Spanton	Hanley	F.	[illegible]	,,	Death in 11 hours from shock	2 lbs.	—	—
49	,,	Tricomi	Padua	F.	[illegible]	Wandering hypertrophied spleen	Recovery	1 lb. 3 ozs.	—	—
50	1895	Bland Sutton	London	F.	[illegible]	Wandering and rotated spleen	,,	1 lb.	—	—
51	,,	Tricomi	Padua	F.	[illegible]	Hypertrophy	,,	2 lbs. 3 ozs.	—	—
52	,,	Lindfosa	[illegible]	F.	[illegible]	Wandering spleen	,,	—	—	—
53	,,	Treub	Leyden	?	[illegible]	Hypertrophy	,,	—	—	—
54	1895	Rogner	Berlin	M.	14	Injury	,,	—	—	—
55	,,	Ceci	Genoa	F.	16	Hypertrophy	,,	3 lbs. 11½ ozs.	—	—
56	,,	,,	,,	M.	[illegible]	,,	,,	—	—	—
57	1895	Murphy	Sunderland	F.	[illegible]	Abscess and hypertrophy	,,	1 lb. 8 ozs.	—	—
58	,,	Malins	Birmingham	F.	[illegible]	Enlarged rotated spleen	,,	2 lbs. 3 ozs.	—	—
59	1895	Spanton	Hanley	F.	[illegible]	Hypertrophy	,,	6 lbs. 4 ozs.	—	—

NOTES ON SPLENECTOMY, DERIVED FROM THE TABLES.

(1) TABLE I.—*Leucocythæmia*: 25 cases (5 males, 20 females); 24 died. Death rate 96 per cent. The case that recovered (a woman) is considered by Knowsley Thornton to have been one of simple hypertrophy.

(2) TABLE II.—*Non-Leucocythæmic Cases*: 59 cases (8 males, 51 females); 38 recovered; 21 died. Death rate 35.59 per cent. The following are the details of the table:

	Cases.	Recovered.	Died.
(1) Hypertrophy	34	15	20
(2) Wandering...	9	9	0
(3) Rotated	3	3	0
(4) Lymphosarcoma... ...	3	... ...	3
(5) Cystic, including hydatid	4	4	0
(6) Other cases, including injury	4	3	1

Death-rates for Each of the last Three Decades (exclusive of Leucocythæmia).

	Number of Cases.	Deaths.	Death-rate per cent.
1865–74	5	4	80.00
1875–84	20	9	45.00
1885–95	29	6	20.68

The tumour was examined by Dr. S. King Alcock, who reported as follows: "Weight was 6 lbs. 4 ozs. The structure is practically normal throughout, and there is no excess of fibrous tissue, the capsule being exceptionally delicate."

Patient bore the operation well. For the first two hours she was somewhat collapsed. After that time the temperature rose rapidly, and at 6 P.M. was 103° F., pulse 130, perspiring very freely, complaining of severe pain in the region of the spleen. No vomiting. At 9 P.M. temperature 100° F., pulse 124. A hypodermic injection of morphine was given.

March 12th. Passed a good night, slept about four hours; still much pain; passed flatus and urine. Temperature 98.4°, pulse 108; much thirst; ordered enema of warm water.

March 13th. Still much pain, cough troublesome, perspires freely. Temperature 99°, pulse 116. Wound looking healthy and dry.

March 14th. Less pain, taking food well.

March 17th. Very comfortable, hungry; had simple enema which acted well. Pulse 106, temperature 98.4°. Still perspiring freely.

March 19th. Sutures removed, wound quite healed, patient comfortable and cheerful. Temperature 98°, pulse 100.

March 22nd. Evening temperature rose to 103°, and complained of pain in left hypochondrium. No cause could be found. Tongue clean and appetite good.

March 23rd. Temperature again normal and pain gone.

March 31st. Since last note the temperature has risen each evening, ranging from 101.8° to 103.6°, and with this has always been associated pain over the site of the pedicle. From this date the temperature came down to normal and remained so. She rapidly gained strength and flesh, and returned home quite well on April 23rd.

The patient is now quite active, and says she feels better than she has felt for several years.

Remarks.—In this instance the patient had suffered more from actual pain than either of the others, owing to the peritonitis no doubt; and it is of interest to note that this in no way interfered with a satisfactory result. The signs of shock which came on suddenly as soon as I made an attempt to lift up the spleen led me to consider how to free it without dragging on the pedicle, and finding that it was held principally by the suspensory ligament I decided to deal with this first. After the division I was gratified to find that one could lift up the spleen without inducing any further signs of collapse, and it was then possible to reach the splenic vessels without difficulty before their subdivision, as already described. From a physiological point of view it is interesting to mention that a small spleneulus was found in the gastro-splenic omentum, which was of course left untouched. One feature very marked in this case was also observed in the other two, the existence of very profuse perspirations before operation, which disappeared afterwards. In the absence of any signs of suppuration and of any marked rigors this is interesting. I cannot explain it. The rise of temperature occurring about the eleventh day after operation has been observed in some other recorded cases and was curious, lasting several days; it was no doubt caused by some inflammatory changes in the neighbourhood of the stump of the pedicle, some localised phlebitis most probably; but this is only what might be expected when one considers how largely the venous element is concerned in it. It serves to enforce the necessity of securing every vessel if possible, a point on which all operators are agreed. This patient is now (July, 1895) perfectly well, and leading a more active life than she has been able to do for the last four years.

Splenectomy has now been performed in this country sufficiently often to enable us to draw some conclusions as to the range of its usefulness. I have endeavoured to tabulate all the recorded cases up to the present time, including many which have already been published in the tables of Collier and Thornton and elsewhere. Mr. T. T. Cockill has traced out for me as far as possible every case which appears in the table; no doubt many operations have been performed which have not been put on record, both successful and unsuccessful, and these must necessarily be left out of calculation. We have, however, 84 cases, and some interesting data can be deduced from them. We find that among the leucocythæmic cases, out of 25 only 1 recovered. It is now generally acknowledged that splenectomy in such cases is attended with too great a risk to be justifiable. This is not due to any greater difficulty in the operation, but to the gravity of the disease itself, which seems to render any surgical procedure most unsafe. So that we may, I think, accept the dictum laid down in the recent textbooks that in all cases in which leucocythæmia is present splenectomy ought not to be performed.

Among 38 cases of hypertrophy we find 20 deaths after operation. These are the cases which present themselves to the surgeon as causing most discomfort, and seem most to demand surgical interference. The solid mass dragging on the stomach and causing pressure on adjacent organs render life intolerable, and in many of them some form of local peritonitis is set up which adds to the pain and danger.

It will be observed that in all my cases the spleen was of considerable size, much larger than the majority of those I find recorded. In Case III it is much the largest among those who recovered.

It is curious how a solid tumour of this kind, of even moderate dimensions, will cause a much larger amount of discomfort proportionately to a fluid tumour of the same weight. In my third case this was especially marked, as the patient became very ill and emaciated from the constant dragging and distress caused by what proved to be a simple enlargement. As soon as this was removed her general health at once began to improve, and she rapidly gained flesh. This affords a strong reason for removal of the organ, which may be diverting material which ought to be utilised elsewhere.

Of the remaining other conditions for which splenectomy was undertaken we find wandering and rotated spleens; lymphosarcoma; cysts, including hydatid; injury, and abscess.

Taking the last three decades, we have this remarkable result:

During the first,	1865-75	a mortality of	80.0	per cent.
" second,	1876-85	" "	45.0	"
" third,	1886-95	" "	20.68	"

For wandering spleen it would seem quite feasible to adopt splenorrhaphy, as we do in cases of wandering and movable kidney. I have not met with any instance which caused sufficient discomfort to warrant the procedure, though I would certainly be disposed to adopt it in a suitable case in preference to the great risk of splenectomy.

With regard to the operation itself, the chief risks appear to be shock and hæmorrhage. In a very large proportion of the fatal cases one or both of these conditions have been the cause of failure. So that our chief aim must be in the direction of averting shock and security against subsequent hæmorrhage. With regard to shock, it is easy to understand why it should be formidable from the intimate connection of the spleen with the large solar plexus, but in most of the recorded cases I find it was first noticed when an attempt was made to remove the organ from the abdomen. In my own cases this was most marked the moment the spleen was pulled upon in the slightest degree; and in my last case I was so struck by this, that it occurred to me that it might be caused as much by the dragging upon the diaphragm as by any interference with the gastro-splenic pedicle. Acting on this hint I decided to begin by dividing the suspensory ligament. This was transfixed, ligatured, and set free, and the moment this was done all signs of collapse or shock passed off. I think that this is an important point, for if we can in this way overcome the first tendency to shock and at the same time set free the pedicle proper, one of our chief difficulties is overcome. I found it quite easy to deal with the vessels in the pedicle, and it seemed to simplify the subsequent proceedings wonderfully. It may not be possible to adopt this course in some cases, but I feel sure that when it can be done it will greatly simplify the operation, and enable the vessels to be secured more readily and certainly.

I find in almost all the published records that the suspensory ligament has been dealt with last (as in my own first two cases) and I desire therefore to draw special attention to this matter. Then as to the best mode of securing the vessels, I think no rule can be laid down. Where the splenic artery and vein can be ligatured separately it is a great gain, but more often the vessel divides far before it reaches the spleen, and, as in my first case, a very broad pedicle with many vessels is what we must deal with.

If a double ligature will suffice that is probably the best, taking care after dividing the pedicle to put a separate silk ligature on each open mouth. Some of the deaths from hæmorrhage have been attributed to a "small" vessel slipping from the main pedicle ligature, and the course I suggest will entirely frustrate this danger. At the same time it is very essential to ligature every bleeding point in any adhesions, for everything in this neighbourhood is usually very vascular.

In my successful case, every care was taken to tie any vessels and make everything secure, and yet the operation was completed in a little over half an hour. This, too, is important, not to keep the patient longer than is absolutely necessary under operation, and it is better to make a large incision so that the tumour may be easily removed and there may be ample room for dealing with the pedicle, with as little dragging and disturbance as possible.

When we consider that during the last thirty years, as shown by the table, the mortality with a larger number of cases has been reduced from 80 per cent. to 20.66 per cent. on the published cases, we may I think fairly say that splenectomy has a grand future before it, though the cases in which it must be demanded are few and far between; and it ought not in my opinion to be resorted to unless the patient's condition is such a miserable one as to demand it. Every other resource must be well tried first, though up to the present time the results of medical treatment in cases of true hypertrophy seem to have been most unsatisfactory.

The operation will probably be necessitated only in the case of injury and large tumours, non-malignant, whether solid or cystic; and I can hardly imagine its justifiability with the present rate of mortality, in any cases of small or simple movable spleens.

TWO CASES OF SUPPURATING HYDATID OF THE LIVER, PROJECTING BACKWARD, DRAINED THROUGH THE CHEST WALL AFTER RESECTION OF RIB.

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THESE two cases happened to come under my care almost at the same time, and they taught me so clearly the difficulties of diagnosis and of treatment that must always be present when a hydatid of the liver presses upward and backward, but not forward, that I venture to submit them to this meeting. The necessity of saving time must be my excuse for passing over similar cases reported by Mr. Tyson, of Folkestone, and other surgeons.

Instead of relating these two cases one after the other in the usual way, I will put the chief features of each case side by side, hoping in this way to show more clearly the conclusions to be drawn from them.

1. *Previous History of Case 1*.—The patient was a gentleman, aged 30; he had lived in England nearly all his life, and had never been in Australia; he lived a quiet temperate life, and he had never had syphilis. His present troubles began seven years ago. He was on that occasion taken ill, somewhat suddenly, with sharp pain and tenderness in the region of the gall bladder, vomiting, and jaundice, and he was laid up for several weeks. He was seen by a physician, who diagnosed the case as one of small calculi or gravelly deposit in the gall bladder; and another medical man, who saw him about this time, was of opinion that the gall bladder could be felt enlarged. From this time onward he was subject to similar attacks, which occurred suddenly and at irregular intervals about twice a year. Between the attacks he was in his usual good health. In some of the attacks he was not jaundiced, but, with this exception, they were all much alike, sudden in their onset, slow to pass away, marked by severe pain and tenderness about the region of the gall bladder, with vomiting; and in the later attacks the pain used to shoot round to the back and up to the right shoulder. In the autumn of last year (1894) he had an attack of unusual severity, which lasted many weeks; his pain was aggravated by obstinate constipation with accumulation of wind in the bowels. On his recovery he went to Worthing, and was under the care of Mr. Collet there. On December 13th he had for the first time a rigor. On the 21st he had another, and again on the 22nd; and on the 24th there were signs, not well marked, of a slight pleural effusion in front immediately above the liver; about this time also he began to be troubled with sweats, which were sometimes very profuse. But, strange to say, the signs of effusion passed away, and so did the attacks of sweating, and during the greater part of January and the first half of February his temperature was about normal, and he seemed once more convalescent. But on February 14th he again had a rigor, with temperature 102°, and in March his temperature was of a marked hectic character, 101° or 102° every night; he was frequently in pain, and was plainly losing ground.

Previous History of Case 2.—The patient, a man aged 50, had served in the army but had never lived abroad. He had, many years ago, had syphilis, and he admitted that he had been given to drink. Two and a-half years ago he had been in the West London Hospital for five weeks; his board had been headed "hepatitis." He suffered on that occasion from pain in the region of the liver, shooting up to the right shoulder; this pain was said to be continuous, not paroxysmal, worse on deep inspiration; he also had pains in the bowels. Shortly before his admission he had been jaundiced. He complained also of pain in his right side, and it was noted that he had some tenderness over the ninth rib, and that there was "a doubtful feeling of fulness" on that side. For three weeks his temperature was of a hectic character, rising to 101° or 102° every night. Then the fever ceased; the pain also ceased, and he left the hospital. For two and a-half years nothing was heard of him. Then he came back, having had a second attack of jaundice, followed by the return of his old pain, and he was admitted into the hospital on May 3rd.

2. *Condition of Case 1 just before Operation*.—This patient, though he did not appear in immediate danger of his life, was very weak and feverish, restless and depressed, suffering from acute lancinating pains not only in the region of the liver, the right side, and the right shoulder, but also up the spine to the back of the head, and down the backs of both thighs to the calves. There was no enlargement of the front of the liver, nor could its edge be felt below the ribs, nor was there any increase of the liver dulness in front. Behind, in the line of the angle of the scapula, there was slight dulness over the lower ribs, from the seventh to the tenth, and the intercostal spaces here felt somewhat firmer than natural. And it is worth noting that when this area was percussed, the patient himself felt a distinct thrill or impulse in the region of the liver. The significance of these signs and of the whole history of the case was pointed out to me by Dr. Douglas Powell, who kindly saw the patient more than once, and made the diagnosis of suppurating hydatid.

Condition of Case 2 just before Operation.—This patient was now desperately ill, having refused operation up to the last moment, and he had taken a great change for the worse in the last twenty-four hours. He was, moreover, in every way a bad patient for operation; he had been given to drink, and though he was only 50, his arteries were atheromatous, and he had marked arcus senilis. Worst of all, there were signs that peritonitis had set in. For eight days his temperature had been ranging from 100° to 103°, and had now fallen suddenly. His tongue was dry, his pulse quick and weak; he was jaundiced; he suffered with frequent vomiting and persistent diarrhœa, and was utterly exhausted. His liver, which had been well below the ribs on admission, was now 3½ inches below them in the nipple line, and its vertical measurement in this line was 6½ inches, but the surface thus exposed did not feel tense, nor did it raise the abdominal wall over it to any marked extent. In the mid-axillary line the dulness began at the lower border of the seventh rib. The breath sounds at the base of the lung were normal. His general condition seemed almost hopeless; his face was drawn, his breathing shallow and painful, his abdomen tense and distended. Dr. Ball, who has kindly let me report

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

this case, had in vain urged operation to the patient; he had steadily refused it till it now seemed impossible that he should recover after it.

3. *Operation in Case 1.*—This was done on March 28th, with the advice and help of Dr. Douglas Powell, Mr. Edgar Willett, and Mr Meakin. I began by putting in an exploring syringe through the ninth space, just below the angle of the scapula; the needle was thrust straight forward for 3½ or 4 inches, and was felt to enter a cavity, and pus was drawn off at once. I left the needle of the syringe *in situ* to serve as a guide, in accordance with Mr. Godlee's teaching, and resected 3 inches of the ninth rib, in the line of the angle of the scapula. It was necessary to resect the rib thus freely, as the subcutaneous fat was of considerable depth, and it was of great importance to have plenty of room to work in. The pleura was freely laid open, and a quantity of air was sucked into the pleural cavity with each inspiration. There were no pleural adhesions, and no fluid in the pleural cavity. The lung was not seen. The diaphragm was very tense, and was pushed up so high that it was almost vertical; it moved in respiration, but not freely. There was a clear space, from half an inch to an inch between it and the chest wall. In accordance with Mr. Godlee's teaching I stitched the diaphragm to the pleura, so as to shut off the pleural sac, using a strong curved needle on a long handle, and putting in two stitches, one for each edge of the incision through the pleura. The needle must be passed first through the diaphragm, taking firm hold in it, and then through the pleura; it was impossible to pass it the reverse way, as the diaphragm kept moving out of reach. Then I incised the diaphragm between the stitches, punctured the cyst, dilated the opening, laid the cyst freely open, and fastened it in the wound. About a quart of purulent fluid and cysts was let out. The cavity was well washed out, and drained with a very large tube.

Operation in Case 2.—As the liver reached downward for three and a-half inches below the ribs we hoped that we should get at the cyst by an anterior incision. I therefore opened the abdomen through the right rectus muscle. More than half a pint of turbid fluid mixed with lymph escaped from the abdominal cavity. The parietal peritoneum was slightly roughened, the liver itself was smooth, lax, and of the natural shape; it was evidently depressed by some growth in the upper posterior part of it. I explored it in two places to a depth of two or two and a-half inches with an exploring syringe, but nothing came but blood. The punctures kept oozing; this was stopped by putting a fine stitch through each of them. I now made a small incision over the dull area behind, and thrust the exploring syringe well forward through the eighth space in the posterior axillary line, and drew off pus. I left the needle *in situ* to serve as a guide and closed the anterior incision and resected two inches of the ninth rib in the posterior axillary line. As the bit of rib was being removed we heard a faint whistling of air, as if there were a small wound of the pleura, but this stopped as soon as the bit of rib had been removed. I came straight down on the naked fibres of the diaphragm close to their insertion into the tenth rib and I did not see the pleura at all. I incised the diaphragm, punctured the cyst, and laid it freely open, letting out a large quantity of turbid fluid and cysts. A large tube was put in and the patient was got back to bed with all possible speed as he was very badly collapsed.

4. *Result of Operation in Case 1.*—This patient did well steadily, after he had once recovered from the shock of the operation. The day after the operation the lung seemed acting well, and no trouble came of the air that had been drawn into the pleural cavity. The pulse varied most, ranging from 68 to 110: the respiration was always between 18 and 22; the temperature only once rose to one degree above normal. The discharge was profuse, sometimes mixed with bile, or with shreds and strips of membrane. The drainage tube was finally left out just four weeks after the operation. When I last heard of him, three weeks ago, he was in excellent health and strength. He had then a very narrow straight sinus about 3 inches long, but nothing came from it, and it gave him no trouble.

Result of Operation in Case 2.—The account of this patient's condition just before operation shows that we had to deal with a case that was already hopeless. At the operation we found, as we had expected, that acute peritonitis had already set in; he never rallied, and died about 20 hours after the operation. *Post mortem*, a large thick-walled hydatid cyst, 8 or 9 inches in diameter, grew from the upper posterior aspect of the right lobe of the liver. It was still nearly full of cysts of all sizes. No part of its wall could have been reached through the front of the liver. There was peritonitis with effusion, and in the right pleural cavity there was about a pint of sero purulent fluid with flakes of lymph floating in it. This had evidently been effused some time before the operation.

Remarks on the Two Cases taken Together.

First, as regards diagnosis. The first case had been diagnosed seven years ago as a case of disease of the gall bladder. The second case had been diagnosed two years and a-half ago as a case of hepatitis. There were many reasons why a right diagnosis was at first quite impossible. The disease in both cases advanced, not regularly, but by fits and starts; a short, sharp attack of illness was followed by a long period of apparent health. The first patient had many attacks of this character; the second had an interval of two years and a half between his first attack and his second. Again, there was no bulging or tension of the liver in front in either case. In the first patient the liver never came below the ribs to any notable extent, and at the operation could not be felt below the ribs at all. In the second patient it is true that the liver descended far below the ribs, but there was no projection or tension; it just came down as it would in a case of simple enlargement of the liver.

Six things at last showed that the original diagnosis was wrong in each case:

1. The occurrence of rigors.
2. The occurrence of frequent attacks of sweating.
3. Diffusion of the pain beyond its original limits; at first the pain was felt only in the region of the liver; then it radiated to the shoulders; finally, as years went on, it was felt in the spine and along the great sciatic nerves.
4. Increase of pressure upward and backward on the pleura and on the diaphragm, leading to shortness of breath, loss of appetite, and vomiting, and finally revealing itself by slight increase of dulness in the lines of the posterior axillary fold and of the angle of the scapula.
5. The temperature during the last few weeks before operation in each case was that of suppuration. In the first case the temperature rose every night to 101° or 102°; in the second it ran high, both night and day, for a fortnight.
6. In spite of most careful treatment and nursing both the patients were going steadily down hill, losing flesh and strength and sleep and hope, with a steady increase of fever and of pain.

Next, as regards the operation. I leave out of consideration the attempt made in the second case to reach the disease by an anterior incision. As regards reaching the disease from behind, the important question is this: Shall I go through the pleura, and shut it off by stitching the diaphragm to it before opening the cyst, or shall I be able to reach the cyst without opening the pleura? Now, from several observations which were made in the *post mortem* room by Dr. Risien Russell (to whom I wish to express my gratitude) and by myself it appears that if one opens the tenth space, either in the posterior axillary line or in the line of the angle of the scapula, one would probably, but not certainly, open the pleura. Of course it might be possible to reach a cyst, placed as these were, by making an incision below the tenth rib; but the lower one goes the greater is the risk of getting below the cyst altogether. It seems so far as two cases can prove anything that one should be guided by the indications given by percussion. Where dulness can clearly be made out there the exploring syringe should be put in and thrust well forward. If it draws off pus, then one should go along its track, even though it involves laying the pleura open.

Alcoholism in France.—The following statistics by M. Magnan give an idea of the prevalence of alcoholism in the department of the Seine. Among 3740 patients (2,072 men and 1,668 women) admitted to the Sainte Anne Asylum in 1894, there were 775 suffering from alcoholism; of these, 624 were men and 151 were women.

CASE OF NASAL POLYPI ASSOCIATED WITH TACHYCARDIA,

RELIEVED AFTER REMOVAL OF THE OBSTRUCTION IN THE NOSE.[1]

By W. SPENCER WATSON, F.R.C.S.Eng., M.B.Lond.,
Late Surgeon to the Throat Department, Great Northern Central Hospital.

F. G. R., aged about 35 years, married, and temperate, a clerk in a Government office, consulted me by Dr. Sansom's advice on December 23rd, 1893. He had noticed some obstruction of the nose for about four months, and latterly (for about twelve weeks) the difficulty of breathing through the nose had been much aggravated, especially at night. He had also lately suffered from an uneasy consciousness of rapidity of the heart's beat, not, however, amounting to palpitation nor to stoppage, but sufficiently unpleasant to alarm him and make him anxious.

The pulse-rate, as observed by Dr. Sansom, was 120 per minute, the tachycardia being persistent. There was an area of precordial pain below the nipple and over the site of the left ventricle; no murmurs were heard. There was marked anæmia. He looked ill, being pale and having an anxious expression.

Polypi were easily detected in both nasal fossæ, the lower channels of which were not completely blocked, so that nasal breathing was still possible, though with some difficulty.

On December 23rd, 1893, cocaine was applied, and polypi were removed from the right nostril.

On December 28th and 31st further operations were performed on both sides.

On January 11th, 1894, the breath channels were almost clear, but some polypi were still visible. He expressed himself as much improved in general health since the operation.

Between January 18th and December 13th, 1894, further operations were performed on eleven occasions.

On January 4th, 1894, the patient's nose was perfectly free from obstruction, and he had no cardiac trouble, but slight bronchial catarrh.

On January 18th he was much better; but there was still a small polypoid growth, which was cauterised by pointed electric cautery.

On March 19th he came to report himself. The nasal breathing was quite free; he had passed through the severe winter with comfort, and had had no cardiac trouble nor bronchial catarrh since the last note. He was looking well, and seemed bright and cheerful.

Remarks.—The tachycardia was probably of reflex origin. This symptom is in my experience of intranasal disease, not common; but Dr. Sansom has met with similar cases, and at once recognised the probable connection of the cardiac and nasal trouble in this case. It is important, therefore, that in the absence of cardiac murmurs the search for intranasal disease should never be neglected when ever there is tachycardia with anæmia and precordial pain. The precise mechanism of the reflex irritation is not quite obvious.

A report by the Clinical Research Association, November 29th, 1894, stated that microscopic examination of the specimens removed demonstrated that the gritty, bone-like substance in one of them was cartilage embedded in dense fibrous tissue, and bounded on the one hand by a very vascular layer, and on the other supporting small polypoid growths. Histologically these growths were composed of loose connective tissue covered with nasal mucous membrane. They presented also a few glandular tubules, and some of these were dilated into small cysts.

[1] Read in the Section of Surgery at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

THE DARJEELING WATER SUPPLY.—A contract for filtering the water supply at this station by the Pasteur system of filtration has been, the *Pioneer* says, concluded with a Calcutta firm.

SAMUEL NOTHARD, of Canteen Street, Todmorden, was bitten by a rabid dog, on September 1st, and sent on September 6th to the Pasteur Institute, Paris. He went through a full course of treatment, but on Monday, October 14th, developed marked symptoms of rabies, and died on October 17th.

VOCAL DEFECTS AMONGST SCHOOL BOARD TEACHERS, WITH SPECIAL REFERENCE TO THE OCCURRENCE OF TEACHERS' NODES.[1]

By WILLIAM MILLIGAN, M.D.,
Senior Assistant Surgeon, Manchester Institution for Diseases of the Ear; Senior Assistant Physician, Manchester Hospital for Diseases of the Throat; Lecturer upon Diseases of the Ear, Owens College.

HAVING had frequent opportunities during the last few years of studying the effects of prolonged use of the vocal organs amongst school board teachers, I desire to lay before you a few general observations bearing upon the etiology and mode of production of certain pathological conditions affecting the vocal cords at times to such an extent as to prevent the individual from following out his or her occupation. These observations have been mainly confined to the study of changes occurring in the laryngeal cavities of female school board teachers, partly because they have appeared to me to suffer in this respect more frequently than male school board teachers, and partly also because in certain schools female teachers are the more numerous body, and as a consequence come more frequently under observation. The pathological changes encountered appear to bear a direct relation to the length of time during which the individual has taught. For convenience of description the lesions found may be classified as follows:

1. Subacute and chronic laryngeal catarrh affecting mainly the true vocal cords.
2. Chronic catarrhal laryngitis with subsequent paresis of certain laryngeal muscles.
3. Chronic catarrhal laryngitis with a varicose condition of the smaller vessels of the true cords.
4. Chronic catarrhal laryngitis with secondary pachydermic changes, local or generalised.

These various stages may pass almost insensibly from the one to the other, so that when the stage of actual node formation is reached we must recollect that it is in reality the outcome of a gradually progressive series of pathological changes.

The catarrhal laryngitis from which so many teachers suffer appears to be from the commencement of a chronic catarrhal nature. Slow and insidious changes, due to a hyperæmic condition of the blood vessels of the true cords, are set up, ending in a gradual hyperplasia of the submucous connective tissues, and followed by paresis of certain laryngeal muscles. These changes may progress somewhat rapidly, and at an early stage minute nodes may appear. Thus M. G., aged 14½, commenced her duties as a pupil teacher at the age of 13 years 3 months. Her general health had never been very good, and at the time of admission to hospital she was found to be distinctly anæmic.

Upon examination, the laryngeal mucous membrane was found hyperæmic and hypersecretory. Slight paresis of the tensors was present, and upon the edge of the right cord a minute node was seen to be forming. Usually, but not always, the changes are symmetrical. In one case in particular the left vocal cord was found distinctly granular, almost in its entire length, but no departure from the normal was observed upon the right side. The actual position of the nodes seems to vary but little, and in my experience they have been situated upon the edge of the cords at the junction of the anterior with the middle third. Usually they are about the same size, although cases have been seen where one node was distinctly larger than the node upon the opposite cord.

Thus L. S., female, aged 20, had taught as a school board teacher for six years. For three years before applying at hospital her voice had given her trouble, being easily fatigued and at times very husky. She had taught classes of various sizes, but usually the number of pupils ranged from 60 to 100. The school at which she taught was situate in a noisy thoroughfare. The room where her classes met there were three classes in the room) was large, and fairly well venti-

[1] Read in the Section of Laryngology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

lated. Her general health had always been good. Upon examination the laryngeal mucous membrane was hyperæmic, and well marked nodes were seen upon the edges of the vocal cords, that upon the left cord being somewhat the larger. Numerous cases such as the above could be cited.

In investigating the causes of these various lesions, certain significant factors appear to me to throw light upon the particular condition which is found. In the first place, the hours during which the teacher is required to teach are, in many instances, somewhat long. Thus it is by no means uncommon for a teacher to have to teach for from five to six hours (Saturday and Sundays excepted) in a large schoolroom where, perhaps, several other classes are being held at the same time. As a consequence of this the voice has to be raised considerably beyond its normal pitch, with the result that marked vocal fatigue is soon induced. An extra strain being thus put upon the laryngeal structures a hyperæmic condition is set up, resulting as time goes on in secondary changes in the mucous membrane taking place. In addition, in many instances girls assume the duties of pupil teacher at an early age, 13 to 16, before the vocal organs are in a position to stand any undue strain, and just at the age when the first great tax is being put upon the female economy. I have been struck on several occasions by finding that the most aggravated forms of school board-laryngitis have occurred amongst girls who began their career as pupil teachers at this early age, and cannot dissociate the *post hoc propter hoc*. Again, the fact that in the majority of schools the rooms are large and are occupied by several classes at the same time with the result that the teacher, in order to be properly heard, must raise her voice and keep her voice at a raised pitch, must in the long run have most injurious effects.

The fact also that the school is frequently placed in a main thoroughfare along which there is a constant stream of traffic with consequent noise entails undue vocal exertion, and if the windows of the schoolroom have to be kept open, as so often is the case, to ensure fairly efficient ventilation, it will be easily seen what constant and excessive demands are made upon the vocal apparatus of the individual teacher. The long hours, the close rooms, the constant mental strain, and the general want of outdoor exercise must also be important factors in inducing that condition of anæmia so frequently met with amongst female teachers, a condition which, while lowering the general vitality, must react injuriously upon an already weakened vocal apparatus.

I would also like to point out the frequency with which nasal, but more especially post-nasal catarrh, is encountered amongst these teachers, and to suggest that its presence may have something more than a casual relation to the perverted laryngeal condition.

The general effect of these various etiological factors working separately or in a combined manner is, as has already been pointed out, to induce in the first place a hyperæmic condition of the laryngeal mucosa. As a result, slight hyperplasia of the connective tissues ensues with thickening of the vocal cords and consequent imperfect coaptation during phonatory efforts. Should the same predisposing causes act during a prolonged period, a secondary inflammation of the musculature takes place with resulting paresis of various laryngeal muscles. These changes may be readily observed.

Thus F. S., female, aged 16, had taught as pupil teacher for eighteen months previous to applying at the hospital. Her general health had on the whole been good, although when first seen she appeared anæmic and had a venous murmur over the cardiac region. She had taught a class of from forty to sixty children in a room in which three other classes were held at the same time. For the first year she had noticed no apparent defect in her voice, but very shortly afterwards she complained of a marked sense of laryngeal fatigue with an accompanying degree of loss of voice. Upon examination the laryngeal mucous membrane was found to be hyperæmic, the true cords slightly swollen and covered with a small quantity of tenacious mucus. She was advised to rest the voice by taking a complete holiday for two months, and to use a sedative inhalation for five minutes twice daily so as to wash out the larynx as it were with a medicated vapour. At the end of two months she resumed her scholastic duties, and was not seen again for twelve months. When she did reapply at the hospital, she stated that during the preceding three months the voice had given her a great deal of trouble, that she readily became very husky, that she suffered from a sense of rawness and oppression over the larynx, and that towards evening she became almost aphonic. Upon examination, marked chronic catarrhal laryngitis was found, with paresis of the tensors, and, in addition, the presence of small nodes upon the edges of both cords at the junction of their anterior and middle thirds.

In a few cases marked varicosity of the blood vessels running along one or both cords has been observed, and in one particular case a small angiomatous tumour appeared quite suddenly after a too prolonged use of the voice.

In the majority of cases which have come under my care, both in private and in hospital practice, definite nodes have been seen upon laryngeal examination. These nodes have varied from the size of a pin-point to that of a millet seed; have at times been situated upon one cord, although usually upon both, and have without exception occupied the free edge of the cord at the junction of its anterior and middle thirds. In appearance they have shown an almost pearly-white colour, and usually a small vessel has been traced running from the surface of the cord to the base of the node.

With regard to their actual nature, by some they are regarded purely as the products of an underlying inflammatory process, and are hence called "inflammation nodes." Others look upon their occurrence as the direct result of mechanical irritation due to the effects of prolonged muscular strain.

Fraenkel[2] regards them as being of glandular origin, but Coyne[3] and Kanthack[4] deny the existence of glands towards the free edge of the vocal cords. Stoerk,[5] on the other hand, finds that the nodules are most frequently formed of connective tissue, of elastic fibres and proliferated epithelial cells, while Türck and Wagnier[6] regard them as related to the condition of chorditis or trachoma of the vocal cords, consisting of a localised thickening due to small confluent tumours caused by hypertrophy of the chorion and epithelium. My own observations lead me to the belief that the node is the outcome of a localised inflammatory process, a chorditis; that on account of frequent mechanical irritation and muscular over-strain congestions, hæmorrhages, and serous transudations occur with the result that a hypertrophy of the epithelium and submucous connective tissues takes place. I am inclined also to think that the second node is in some cases at any rate due to the mechanical irritation produced by the first formed node. No doubt in the majority of cases the same causes acting equally upon both cords during the same time and in the same manner, affect both cords equally, but this is not always so. It is not uncommon to find patients suffering from hoarseness and partial loss of voice, who, upon examination, present the clinical picture of a single sessile node at the junction of the anterior with the middle third of the cord, while in other cases one occasionally sees a well-marked node upon one cord with a commencing node upon the other.

Thus E. H., female, aged 26, was seen in consultation on account of huskiness and partial loss of voice. The patient was very fond of music, and having had a good voice was accustomed to sing at times for hours together. After a time the voice became easily fatigued, and this was soon followed by huskiness and inability to take high notes. Upon examination a minute node was seen upon the free border of the right cord at the junction of the anterior with the middle third. The left cord appeared normal, save for a slight congestion of the superficial blood vessels.

Again, M. T., female, aged 23, school board teacher, came to hospital complaining of marked vocal fatigue, accompanied by a considerable degree of hoarseness. She had begun teaching as a pupil teacher when aged 14, and had taught ever since. Upon examination a well-marked node was seen upon the free edge of the right vocal cord, and a smaller node (quite half the size) occupying a corresponding position upon the left cord. The impression formed from observing this

[2] *Berliner klin. Woch.*, October 28th, 1889.
[3] Recherches sur l'anatomie normale de la muqueuse du larynx, *Th. de Paris*, 1874.
[4] *Virchow's Archiv.* 1889. Bd. 118, p. 136.
[5] *Rev. Trans. de Laryngol., d'Otolog., et de Rhinolog.* 1888.
[6] *Klinik der Krankheit des Kehlkopfes.* Wien, 1880.

case was that the node upon the left cord was probably the outcome of mechanical irritation produced by the larger node upon the right cord.

In the treatment of the above described changes in the laryngeal mucosa it appears to me that almost more is to be expected by way of preventing such conditions from arising than is to be attained by any form of local treatment. In the first instance, I am fully convinced that girls are allowed to undertake the duties of pupil teacher at far too early an age. An intelligent girl, with an aptitude for work, can pass the sixth standard by the time that she is from 13 to 14 years of age, and is then eligible for the post of pupil teacher. Having acquired such a post, she has immediately to tax the resources of her vocal apparatus to such an extent that the organ is unable to stand the strain and consequently breaks down either in whole or in part. Much good could, I think, be done by raising the age at which girls should be allowed to assume the duties of teacher to a time when the component parts of the larynx are in a more stable condition than can possibly be the case at the age of 13 to 14. Then again the vicious system of holding three or four classes in one room, at times with no separation between them but the breadth of a form, at other times separated merely by curtains, should be entirely abolished, and each class be allowed to meet in a separate well-lighted and well-ventilated room. I would also like to suggest at this point the great advisability of having the benches for the pupils placed in tiers, one above the other, so that the teacher, when speaking, would be obliged to speak up to her audience, and so would have to hold the head erect and the neck straight, in this way giving play to the thoracic muscles, an immense advantage to anyone who has to speak for any length of time. In the majority of schools I understand that the benches are ranged one behind the other upon the flat, but in a few recently built schools (I am alluding specially to Manchester schools), a partial system of benches in tiers has been introduced. In those towns where the schools occupy prominent sites in busy and noisy thoroughfares, I think much would be gained by paving the adjoining street or streets with wood or asphalte, in order to reduce the roar of the traffic as much as possible. I feel satisfied that if these precautions were adopted there would be less giving way of teachers' voices, with resulting better general health, and as the natural outcome more spirited and more efficient teaching of the young. In addition a short course of instruction upon the best methods of voice production and voice preservation prior to the teacher undertaking her regular duties would, I feel sure, be attended by much ultimate gain.

Physiological rest to the affected organ is of course of prime importance, but unfortunately this means time and prolonged holiday, which many a teacher cannot secure, partly on account of want of funds and partly for fear of losing her situation should the period of rest require to be somewhat prolonged. In early cases, where, perhaps, the only appreciable changes are congestion and inflammatory thickening of the mucosa, a short period of vocal rest, combined with the local application of weak mineral astringents and the cautious use of steam inhalations, will often produce beneficial results. I have also seen much good attend the nightly application of Leiter's cold coil, applied over the larynx for from half an hour to an hour at a time.

In cases where paretic conditions of the laryngeal muscles exist, and where, after any superficial inflammatory condition has been got rid of, the daily application of the continuous current will be found most effectual. In these cases, however, where definite nodes have formed, be they only the size of millet seeds, I must confess to great disappointment from the use of topical applications or in fact from any form of local treatment. The local application of such astringents or caustics as nitrate of silver, chloride of zinc, or of chromic acid is praised by many. Others prefer the application of solid nitrate of silver, while still others speak favourably of the galvano-cautery. Personally I have fought shy of the use of the cautery point for fear of producing such an amount of cicatricial contraction that the last state of the patient might be worse than the first. In one case, however, in which, with certain misgivings, I did make use of it the result was, on the whole, favourable. At the same time it appears to me to be a method of treatment requiring the greatest care and nicety. In those cases where the nodes are of such a size as to enable one to use a crush forceps or a fine snare, no better method of treatment can be adopted, but these cases are the exception rather than the rule.

It has been my experience to see a very considerable number of patients suffering from the presence of nodes upon their vocal cords and the difficulties encountered in trying to secure the return of a voice fit again to withstand the strain of teaching have been such that in several instances the patients have been obliged to give up their vocation as teacher and take to some other walk in life. This, after years of special training as a teacher, is necessarily a very serious matter, and if any preventive measures could be adopted to remove, if possible, those factors which appear to predispose to the formation of such pathological changes, great gain would necessarily accrue.

CHORDITIS TUBEROSA.[1]

By ALEXANDER HODGKINSON, M.B.,
Physician, Hospital for Consumption and Diseases of the Throat Manchester; Lecturer on Laryngology, Owens College, Manchester.

Whilst most authors recognise the fact that this disease occurs in those who use the voice excessively, and that the affection is accompanied by a more or less inflamed condition of the cords, there is considerable variation even amongst leading authorities as to the essential nature of the relationship of these conditions as regards the causation of the disease. Whilst some believe that inflammation causes the node, others believe that the node gives rise to the inflammation. The object of my communication is to show that two factors—a swollen condition of the cords and excessive use of the voice—are essential to the production of "teachers' nodes;" also to show the way in which these factors produce the nodes; and shortly to discuss the treatment. The nodes occur on one or both cords at the junction of about the anterior and middle thirds. A depression may take the place of the node at the corresponding point of the other cord. When the cords are swollen they become jammed by the swelling in the anterior commissure for about one-eighth of an inch, so as to be incapable of vibration for this extent of their length. But immediately posterior to this jammed immovable portion, between the immobile part and the freely movable portion of the cords, are portions of swollen cords, which though just in contact are capable of vibrating, but in consequence of this contact friction occurs during vibration of the cords. This friction produces the node. The position may vary within certain limits, with variation in the amount of the swelling. This attrition spot, even before the formation of the node, is indicated by a pure white spot seen during phonation, a spot caused by churning up of the mucus to froth by the vibrating portions of the cords in contact. The same phenomenon, to a less marked degree, may be seen anterior to the processus vocales. This "froth spot" may be taken as an indication of the probable formation of a nodule unless the swelling of the cords disappear or the voice is rested. The reason why a node forms on one or both cords is probably due to the fact that only one or both cords are swollen respectively.

Dr. Delavan (New York) called attention to the dire effect on a child's voice of attempted conversation with the deaf, and urged greater care in this direction. He had found treatment of singers' nodes unsatisfactory; whilst rest and local applications would relieve the conditions for awhile, it was apt to recur upon renewed use of the voice. In some cases he had found it very difficult, if not impossible, to eradicate. Operative measures he had never been satisfied to adopt.

Dr. A. Bronner thought girls suffered more than men, as they were less apt to yield to the necessity of stopping work early enough.

[1] Abstract of a paper read in the Section of Laryngology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

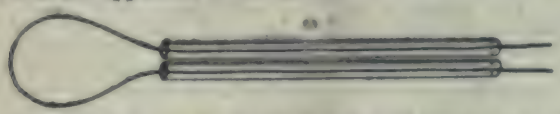
A METHOD OF REMOVING NASO-PHARYNGEAL TUMOURS TO PREVENT BLEEDING FROM THE PEDICLE.[1]

By GEORGE STOKER, M.R.C.P.I., M.R.C.S.Eng.,
Physician, London Throat Hospital.

The removal of naso-pharyngeal tumours is always accompanied with difficulty to the operator, and often with danger to the patient. The difficulties and dangers are produced and increased by the nature of the operation performed and the occurrence of serious bleeding. The bleeding comes from the pedicle or point of attachment of the tumour. Some operations consist in dividing the palate in order to get at the tumour and secure room for manipulating its removal. Other operations consist in removing portions of the superior maxillary bone with a view of reaching the naso-pharynx from the front. Such operations cannot but be regarded as being most serious, and presenting in themselves greater sources of danger to the patient than the removal of the tumour itself, and are therefore, if possible, to be avoided and only undertaken when no other alternative exists. The method I propose, and which I have practised, is an alternative, and I consider it a safe one as it enables one to control bleeding if it occurs. The steps of the operation are as follows:

1. The patient when anæsthetised is placed in the "head down position" either by hanging the head over the end of the couch or by placing a hard thick pillow underneath the patient's shoulders.

2. A strong whipcord is then threaded in the instrument shown in the appended illustration.



3. The loop is passed up the nostril, preferably the larger one, and then brought down into the mouth between the anterior surface of the tumour and the posterior surface of the soft palate, and then passed backwards behind the tumour and pushed right up to the point of attachment of the pedicle by the forefinger of the operator's left hand, whilst traction is made on the cord with the right hand.

4. The whipcord ligature is then twisted tight by means of the handle through which it is threaded, care being taken that it is not twisted so as to cut, but only to compress the pedicle.

5. The wire *écraseur* or galvano *écraseur* is then passed through the other nostril, and pushed up to within about a quarter of an inch of the whipcord ligature.

6. The pedicle is then cut through with the wire, and if bleeding occurs the pedicle can be further compressed by the whipcord ligature as necessity may arise.

7. The whipcord ligature can be left *in situ* as long as necessary, and when removed it must be very gradually loosened, and the left forefinger of the operator passed into the naso-pharynx when this is being done, in order to prevent the ligature slipping off too quickly, as if bleeding begins it may be necessary to recompress the pedicle, and leave the ligature *in situ* till further healing takes place.

This is the exact method I have employed with great success, and I have much confidence in recommending it.

A CASE OF COMPLETE LARYNGECTOMY.[1]

By PROFESSOR J. SOLIS COHEN, M.D.,
Philadelphia.

DR. BRYSON DELAVAN showed on behalf of Professor J. Solis Cohen, D. H., aged 48. The history was that a large papilloma of the larynx had been successfully removed by Lefferts in 1876. There was no recurrence for ten years. Then the growth returned. Various methods of intralaryngeal treatment were employed, with unsatisfactory results. In 1891 the patient began to be much worse, and applied for treatment. He was then suffering from great dyspnœa, pain, cough, and dysphagia. The growth had penetrated the larynx externally, and projected externally in a mass larger than an almond. Complete laryngectomy was performed in April, 1892. In the course of the operation, and when the larynx had been partially removed, Dr. Cohen says:

"The epiglottis being healthy, I made an incision through the hyo-epiglottic membrane, and cut the epiglottis square off. The larynx was then tilted forward. Knowing that there has been difficulty in nourishing patients after this operation, I determined to save the entire œsophagus if possible, instead of severing it at the level of the cricoid cartilage, and by careful manipulation I was able to strip the œsophagus and the mucous membrane from the tips of the arytenoid cartilages and larynx down to the base of the first ring of the trachea without perforating it. The larynx, with the first ring of the trachea attached to it, was then severed from the trachea, and the trachea was stitched to the skin in two flaps formed by the sides of the original tracheotomy incision, which had embraced the second and third rings. The soft parts were then brought loosely together with sutures, without any dressing in the pharynx; and a small, soft rubber stomach tube was inserted into the stomach through an opening left in the upper portion of the dressing. This was done, thinking that there might be a necessity to use it for introducing nourishment; but it was found unnecessary, and it did some harm. An hour had been occupied in the whole procedure—anæsthetisation, operation, and dressing. The patient was then put to bed. He was carefully watched. I stayed with him for sixteen hours; and during that time I instructed a number of young men connected with the throat and surgical clinics of the hospital how to take charge of the case. Two members of these staffs were with him constantly for eighty hours. Twice during that time the man would have died had not skilled hands been present to remove mucus from the tracheal tube. It is to the close attention of these young men

The Patient after Operation.

for the first eighty hours, and to the admirable service of our chief surgical resident, Dr. Hager, that this man chiefly owes his life, for the attention after such an operation is far more important in a clinical point of view than the operation itself, all-important as it is. There was a good deal of oozing alongside of the œsophageal tube. On the third night this tube became detached, and we did not reintroduce it. Enemata were used for four or five days, and then gradually food given by the mouth. At each attempt at swallowing a piece of gauze was applied above the tracheal wound, and the parts were pressed close together while the patient swallowed. There was a little trickling for a few days, but this

[1] Read in the Section of Laryngology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

ceased. It was interesting to watch the œsophagus during swallowing before the external wound contracted. It was easy to see that the œsophagus opened when the man took water. There has been some doubt whether there is a mechanical distension of the mouth of the œsophagus in glutition, or whether there is some such action of the œsophagus itself. In this case it certainly did open to receive the water. The man has made an uninterrupted recovery. There has been no attempt made to use a voice tube."

Dr. Bryson Delavan said: Let me call your attention to several points of interest which this case illustrates. The man breathes freely with the aid of a tube. He is able to phonate with sufficient power and volume as to be heard distinctly at a considerable distance. He can even sing, although the latter expression must not be understood as meaning too much. He swallows both liquids and solids with ease, and can perform the act of smoking. He is not subject to any troubles of the bronchial tract, and he enjoys good health, although unable to do any kind of hard work. In the course of the operation the external integument was slightly inverted, with the result that several hair follicles were included. From these a number of hairs have grown, and their presence in the inside of the pharynx has been so annoying that it has been necessary from time to time to remove them. The special advantages of the operation have already been alluded to. They are admirably exemplified in this case, and it is chiefly on account of them that I have brought him from the United States to exhibit him to you.

A CASE OF DISLOCATION OF THE FEMUR ON TO THE PUBES, FRACTURE OF THE NECK, AND REMOVAL OF THE HEAD OF THE BONE.

By GEORGE J. W. FLOWER,
Honorary Surgeon to the Yeovil Hospital.

I was called on the evening of July 4th to see A. H., aged 48, who had been under my care for eight or nine years, suffering from locomotor ataxy. He had managed to get about fairly well with the aid of a stick, but on this particular occasion, in stepping off the pavement to allow some people to pass, had fallen and dislocated his hip, the head of the femur being forced on to the pubes. All immediate attempts at manipulating the bone into place having failed, I asked one of my colleagues to visit the patient with me, for the purpose of administering ether, and otherwise rendering me assistance. The anæsthetic having been given, manipulation was recommenced; when suddenly, as the limb was being rotated, the head of the bone separated with a snap from the shaft, which then assumed its proper axis, leaving the head of the bone under the femoral vessels, so that the femoral artery could be felt pulsating over it. The limb immediately presented a dusky—I might almost say purple—hue, from venous congestion, and became cold. It was obvious that the only possible course was to cut down upon and remove the head of the bone; and this was accordingly done by means of an incision of about 5 inches in length, and just to the outer side of the vessels. The anterior crural nerve and the femoral vessels were turned aside, and the head of the bone (see illustrations) was removed with the lion forceps. The incision was closed with chromic gut sutures, dressed with iodoform and double cyanide gauze, and a Desault's splint applied. The wound healed by first intention, and at the end of three weeks I put on a plaster spica, and allowed the patient to get up and walk on crutches. He did remarkably well, the shortening is very slight, certainly not more than an inch or an inch and a-half.

I reported the case and showed the patient at the meeting of the Dorset and Hants Branch on October 10th, 1894, on account of its several peculiarities. A dislocation on to the pubes is rare in itself, but the question as to whether in this instance the neck of the bone was partially fractured by the accident and completely broken by the rotation, or whether the disease from which the patient suffered had made the bone so friable that it could be fractured by simple rotation, remains undecided. Then, again, the fact of the head of the bone having been left under the femoral vessels and obstructing the circulation of the part constitutes, I think, an accident which has not been hitherto reported. I may say that the bone had the appearance of undergoing some form of degeneration, the layer of compact tissue being remarkably thin.

In support of the theory that the bone was rendered friable by disease and fractured by the rotation, it may be said that in locomotor ataxy the bones have a tendency to atrophic changes, and Dr. Charcot, in 1868, described a peculiar form of disease resembling osteo-arthritis with absence of pain, and often great deformity as occurring in the ataxic, and at the same time mentioned this tendency to atrophy of bone and liability to fracture.

The accompanying illustrations show the naked-eye appearance of the fragment and the plane of its separation from the shaft.

October 24th, 1895.—It is interesting to note that now, fifteen months after the accident and operation, the patient walks as well, if not better, than he did before it happened.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CASE OF DIPHTHERIA TREATED BY ANTITOXIN.

The following notes seem to us to be worthy of publication whilst the antitoxic treatment is on its trial.

G. K., aged 8 years, daughter of Dr. Kirk, was found on August 26th, 1895, suffering from a sore throat and enlargement of the submaxillary glands, a high temperature, and a thickly furred tongue. Dr. Kirk at once swabbed out the throat with a strong solution of nitrate of silver, which caused the membrane to separate and to be removed, but it was readily reformed. The following day the throat was swabbed out with liq. ferri perchloridi and glycerine twice a day, and the patient given a saline mixture and 5 grains of antipyrin on the night of August 28th. She took fluid nourishment well.

Mr. Berry saw her on the morning of August 29th. The tongue was thickly coated, and on the right tonsil there was a sloughy patch the size of a sixpence, and a second one behind it the size of a pea, with a good deal of tenacious mucus in the naso-pharynx, but the posterior wall of the pharynx appeared free; the application of the iron and glycerine had apparently removed the membrane. The temperature was 103·8° F. It was decided that the antitoxin treatment should be employed, and Dr. Peck, the medical officer of health to the Ormskirk Rural Sanitary Authority, kindly came over in the evening and gave her a dose of antitoxin by injection in the cellular tissue near to the inferior angle of the scapula.

On August 30th Mr. Berry saw her again. She had passed a restless night, but slept towards morning. The mucus in the throat was less tenacious, and she had vomited a quantity

of thick-looking secretion. The slough appeared healthier, and the patient was much brighter. The temperature was 101.6° F. At night the temperature was 101.6° F. The patient keeping better and taking plenty of nourishment, it was decided that no more antitoxin was required. On August 31st the throat was much better, the temperature was 100.8° F. On September 1st she was much better, took food well, and the temperature was 99.4° F. On September 5th the throat was quite well, and the temperature had been normal for three days. Quinine in half-grain doses and tr. ferri perchloridi was the medicine given throughout the case after using the antitoxin.

A couple of swabs from the throat taken on August 31st, were sent by Dr. Kirk to the Lister Institute of Preventive Medicine for examination, and he received the following report:

The membrane sent by Dr. Kirk, of Hindley, has been examined by Mr. Nolan, of this Institute, and the bacillus diphtheriæ has been isolated. The case therefore is one of genuine diphtheria. M. ARMAND RUFFER, Director.

There is no doubt that the early active treatment in the first instance and the use of the antitoxin as soon as it could be obtained had a beneficial effect. The gradual decline of temperature as the throat improved was very marked, but the loosening of the tenacious mucus a few hours after the use of the antitoxin was very characteristic.

WM. ROBEY, F.R.C.S.I.,
Hon. Surgeon Royal Albert Edward Infirmary, Wigan.
J. KIRK, L.R.C.P.Edin.,
Hindley.

AN EASY METHOD OF REDUCING RECENT DISLOCATION OF THE SHOULDER-JOINT.

In the beginning of March, 1895, I was summoned to attend a Coolie employed in the Naval Dockyard, on examining whom I found suffering from a subglenoid dislocation of the left humerus. I at once reduced the dislocation by grasping the elbow of the affected arm in my right hand, pressing two fingers of my left hand on the head of the bone in a direction slightly outwards and upwards, at the same time pressing the elbow upwards, the head of the bone at once shooting back into the joint.

On August 1st, 1895, another Coolie employed in the Naval Dockyard came to me with a subcoracoid dislocation of the left shoulder. By pressing the head of the bone in the opposite direction to that which this injury always takes, and which I need not mention, with two fingers of my left hand, and at the same time bringing the elbow of the affected arm slightly forwards, and pressing it to the side with my right hand, I reduced the dislocation with the greatest ease. I have not seen this method of reducing dislocation of the shoulder-joint described in any of the textbooks. In each case the dislocation was almost instantaneously reduced, and with a very slight amount of pain to the patient. In each case the reduction took place about two hours after receiving the injury. Both patients were well-developed, muscular men. I think this simple way of reducing recent dislocations of the shoulder-joint is well worth a trial before proceeding to the more elaborate methods mentioned in the textbooks; if it succeeds it is sure to cause much less injury to the joint than the method usually adopted. In neither of my cases was there any subsequent pain and inflammation of the shoulder-joints. The first patient resumed work in a month and has had no recurrence of the lesion since; the second patient—though it is only a fortnight since the injury happened to him—says he feels all right, and is annoyed because he is not yet allowed to use his arm. W. HALLARAN,
Trincomalee, Ceylon. Surgeon-Captain A.M.S.

THE Surgeon to the Mikado, who dressed the wound of Li-Hung Chang after the attack made upon the Chinese plenipotentiary at Simonoseki, has at Li's request had the Order of the Double Dragon, Third Civil Class, conferred upon him by the Emperor of China.

THE Legislature of Wisconsin has appropriated 50,000 dollars (£10,000) as a contingent fund to be used by the Health Board, if necessary, at any time during the next two years, to prevent the introduction of cholera.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

THOMAS BUZZARD, M.D., F.R.C.P., President, in the Chair.

Friday, October 25th, 1895.

INTRODUCTORY ADDRESS.

THE PRESIDENT delivered his introductory address deferred from last meeting. After expressing his thanks for the great honour the Society had conferred upon him by electing him to a post which was unsurpassed, in his estimation, by any that could fall to the lot of a practising physician, he remarked that some of the aspirations which had been expressed at the foundation of the Society, twenty-eight years ago, had not been perhaps altogether fulfilled. The application of drugs and medicaments for the cure or relief of disease—the existence of which appeared to be looked upon as a foregone conclusion—overshadowed everything else in the first President's address, which contained no hint of investigation of disease with a view to its prevention as work to engage the attention of the Society. The last quarter of a century had wrought an extraordinary change, a signal illustration of which was to be found in the revolution brought about as a result of Pasteur's immortal researches, extended and applied to surgery by the genius of Lister. The success in the treatment of myxœdema, a disease the investigation of which was so largely identified with the Clinical Society, was an example of the application of the scientific method in medicine as striking as anything to be found in the domain of physics. The success in the treatment of vast numbers of cases of paralysis and convulsive disorders which had followed the discovery of their frequent dependence upon syphilis was another example of scientific therapeutics, as contrasted with the tentative application of drugs which was formerly the rule. And so, also, the recognition of the influence of alcohol in the causation of a form of progressive paralysis opened the way at once to success in treating such cases. With our present knowledge of that which was formerly most frequently unsuspected, we could picture to ourselves the numerous cases of this description which, even at the time of the Society's formation, must have gone steadily on to death uninfluenced in any degree by the various drugs and other measures which were employed. How little would here avail the most careful trial and comparison and statistics of the effect of this or that drug! In the absence of the key to the cause of the disease, success in treating it would be impossible. Reference was made to the question of the causation of disease by micro-organisms, and it was remarked that in disease of the nervous system the infective origin of leprosy, tetanus, hydrophobia, and diphtheritic paralysis admitted of no reasonable doubt. He suggested that there was a most interesting field for inquiry as to the possible dependence of many chronic diseases of the nervous system upon a source of infection. Infantile paralysis (acute anterior poliomyelitis) there could be little or no doubt, from the occurrence of many epidemics of the disease, was an infective disorder. It was possible, he thought, that the form of progressive muscular atrophy in which the lesion occupied the same anatomical position would be likewise found to be of infective origin. Insular cerebro-spinal sclerosis, there were strong reasons for believing, owed its origin to some influence of this description. The suggestion that chorea and some forms of epilepsy had an analogous origin was yet but a conjecture, which appeared, however, to be worthy of investigation. As regards such "family" diseases as certain myopathies, and the so-called Friedreich's ataxy, the supposed hereditary element might prove, he thought, to be open to a similar explanation to that which many of us experienced respecting tuberculosis and cancer, and that what appeared to be an inheritance might be, at least in great part, the result of exposure of members of the same family to a local source of infection. The subject was one which must be approached from several sides, especially the clinical, bacteriological, and chemical. He could imagine no more important inquiry, and no society, the members of which were so well qualified to do justice to it as that which he had the honour to address.

Mr. Christopher Heath proposed a vote of thanks to the President for his address; this was seconded by Dr. Radcliffe Crocker, and carried unanimously.

The President returned thanks for the vote, and remarked that the surgical members of the Society would have no more sympathetic listener to their papers than himself.

Impetigo Contagiosa Gyrata.

Dr. Radcliffe Crocker read this paper. He said that the eruption was a new form of impetigo contagiosa in this country which had cropped up in the last two years, and that well-marked cases were rare. It was characterised by the formation first of a pink papule the size of a hemp seed with a slight indication of a vesiculation at the apex; this enlarged and formed first a tense and later a flaccid bulla from a quarter to a third of an inch in diameter, with sero-purulent contents; a faint narrow red areola surrounded the bulla. The bulla dried into a thin scab while enlarging at the periphery; within there were still indications of fluid, while beyond that the areola had become pronounced. When the centre cleared, a thin greenish crust on the ragged inner edge enclosed the clear centre and was itself surrounded by a red areola. The largest single lesions were about 1 inch in diameter, but some of them coalesced and formed compound lesions of several square inches in area first, and a gyrated outlined patch was thus produced. In one patient the whole back was covered with these gyrate patches, but in many patients there were only a few lesions. From unruptured bullæ pure cultures of staphylococcus pyogenes aureus were obtained, and in some cases an ordinary form of impetigo contagiosa was present simultaneously with the gyrate eruption either in the patient or in some other member of the family. The author was not aware that this form of eruption had been previously described except by Dr. Patrick Manson, who had described a pemphigus contagiosus tropicus, and judging from Dr. Manson's description, this other affection above discussed appeared to be identical.

The President asked if the author could suggest any plan of diagnosis other than that by cultivations which would enable one to distinguish this disease from the non-contagious pemphigus often found in cases of disease of the nervous system.

Dr. Patrick Manson said that the description given by Dr. Crocker did not coincide with that of pemphigus contagiosus as seen by him in China. His own cases had not such a large surrounding area of redness. In China, too, the disease was entirely confined to the hot period of the year, and was only then epidemic. He had found the application of a solution (1 in 1,000) of perchloride of mercury, and dusting with powdered boric acid, led to marked improvement and rapid subsidence of the disease. It was a diplococcus, not a staphylococcus, that characterised the Chinese cases. For these reasons, therefore, he thought the cases seen by him differed from the eruption described by the author.

Dr. Crocker, in reply, said that the diagnosis generally turned on the mode of development of this eruption, and accidental distribution of the lesion, which occurred where one would expect it to be planted by the nails. The bullæ were flattened, not tense like those of pemphigus. If one compared the description given by himself of his cases with that by Dr. Manson of the Chinese cases, it would be seen that the points of resemblance were striking. Possibly the two sets of cases might be due to different micro-organisms, as different pathogenic agents often produced morphologically identical symptoms.

Primary Sarcoma of the Patella.

Mr. R. W. Parker read the sequel to a case of removal of the patella for primary sarcoma. The patient, a girl, aged 13, was shown to the Society, after the operation nearly seven years ago, as recorded in the *Transactions*, vol. xx, p. 254. The growth was intimately connected with the patella, which was removed. The girl recovered with a stiff joint, and remained well for three years. Then a slight local recurrence took place in the scar, which was excised, after which the girl remained well for a further period of three years. Then some new growth occurred in the lymphatic glands deep in the pelvis. An attempt was made to remove them, but was only partially successful. The girl died after some weeks of exhaustion. At the necropsy masses of glandular new growth were found deeply seated in the pelvis. There were no secondary deposits in any of the organs, nor in any bone. The original growth was a firm spindle-cell sarcoma.

Mr. Howard Marsh said that sarcoma of the patella was a very rare disease. He had seen one case years ago at St. Bartholomew's Hospital. Sir James Paget dissected it all away, and thereby opened the knee joint—a serious thing in those days. The patella was often enlarged in osteo-arthritis and syphilis. He had recently had a case of primary sarcoma of the synovial membrane of the knee joint. The disease had been diagnosed as tuberculous. It was removed. The patient subsequently returned with pain, which Mr. Marsh thought was due to adhesions after the operation. Under chloroform he bent the joint, and it then gave way. The disease had since recurred, and probably amputation of the limb would be necessary.

The Treatment of Acute Pleural Effusion by Early Incision.

Dr. Albert Wilson (Leytonstone) read a paper on this subject. The experience of three successful cases was given in favour of free incision into the pleural cavity, with drainage, as soon as the effusion was so large that it would not be reabsorbed. It was urged that in empyema the lung might be bound down by adhesions, and compressed so as to be unable to expand again, and a case was quoted to illustrate this. The same occurred in minor degree in pleural effusion if drainage was delayed. A case reported by Dr. Morrison in the British Medical Journal of July 13th, 1895, illustrated this. The first and second cases of pleural effusion were simple, and recovered in about ten days. The effusion was large in the second case (5 pints), and the apex beat was under the nipple. The heart returned to normal position, and the lung expanded within half an hour without distress or shock to the patient. Friction sounds indicated effusion of lymph on the pleural surfaces. On the third day the pleural cavity was shut off by the lung; then it was found some air and fluid was sealed up lower down, so the pleural adhesions were detached to allow of drainage. Two days after the operation there were no abnormal physical signs. This was eleven years ago. The patient died two years afterwards, the result of an accident. Meanwhile she was healthy. The third case, in May, 1895, that of a young lady, was complicated with severe influenza and pneumonia. When the operation was done the patient was almost moribund, being kept alive by constant oxygen inhalations and strychnine injections. Within forty-eight hours the lung had completely expanded. On the fourth day the lung closed the wound; about 6 pints of fluid had been removed from the right side. A week later she was very ill from the pneumonia on the opposite (left) side. A fortnight afterwards the right side was normal. For some weeks the temperature kept rising at night, and she seemed in a rapid decline. So she went to Margate, where she regained the power of walking. In August Dr. Nichols reopened the incision, and about 4 ounces of sweet pus escaped; possibly the lung had closed the wound too soon, hence the great importance of always detaching the lung and draining the lower part. Incision was between the ninth and tenth ribs, in the post-axillary line. Five months after the operation the cavity would hold 4 or 5 ounces of fluid, and retracted about 2 inches all round the wound. The temperature kept up, and the case looked very unfavourable, like general tuberculosis. It was found that drainage was imperfect; that always about 2 ounces of pus were retained, and by inserting a small india-rubber drainage tube downwards this part was kept empty. Thus the temperature at once fell to normal, and kept so, until finally the cavity was closed and the wound healed in January, 1895, nine months after the operation.

Dr. S. West was surprised that incision was recommended for these cases, seeing that treatment by paracentesis was very successful. By incision a simple serous effusion was usually converted into an empyema, which, if not very grave in children, was certainly serious in adults. The lung expanded well after paracentesis, unless operation were but long delayed. It was interesting to hear that the lung expanded so soon after incision; this was contrary to the usual teaching. He had recently published the case of a lady who had had a pleuritic effusion for eighteen months, and was almost

moribund when first seen. Paracentesis frequently repeated so much improved the patient that incision could be performed. In that case, notwithstanding the length of time during which the disease had lasted, the lung completely expanded after incision, and eventually recovery was complete. One should, however, be careful not to operate upon an adult by incision unless compelled by the obduracy of the case to other milder plans of treatment.

Mr. HOWARD MARSH agreed with the author's suggestion, because it was in agreement with the practice pursued for the cure of effusions in other parts of the body. For acute serous effusion into joints, acute hydrocele, and acute periostitis, with effusion and high temperatures, a free incision was made, and the cavity washed out, with the result that in ten or fourteen days the patient quite recovered. The same treatment was also adopted for acute effusion into the abdomen. He ventured to prophesy that the paper would not only draw attention to the treatment of this disease, but would have marked influence on practice in the future.

Dr. S. WEST suggested caution when dealing with the pleura surgically. Caution was then necessary far more than when the peritoneum was concerned. There were cavities and cavities, and all could not be treated in the same manner with impunity.

Dr. WILSON, in reply, said that all his three patients were in a bad way when the operation was done. He thought he could not give enough relief to the tension by aspiration; incision took away all the tension. Further, he made his incision as low down and as far back as possible, in order that, whether the patient were lying or sitting, the drainage from the chest might be uninterrupted.

MEDICAL SOCIETY OF LONDON.

Monday, October 28th, 1895.

Sir J. CRICHTON BROWNE, M.D., F.R.S., President, in the Chair.

CASES OF INTESTINAL RESECTION AND INTESTINAL EXCLUSION.

MR. C. B. KEETLEY read notes of three cases of intestinal resection and intestinal exclusion. Case 1. The patient, a girl, aged 17, had been ill for a year, her illness having commenced after exposure to damp cold. She was in a hectic condition, and passed pus *per rectum*. There was a large abscess in the lower abdominal wall, which he opened, and subsequently the wound partially closed, the lower part, from which a fistulous tract led to the rectum, being packed with gauze. A few days later a fistula opened into the small intestine. Some time after he performed laparotomy, and the small intestine proximal to the fistula was divided and united end to end by Maunsell's method to the gut distal to the fistula, which led to the rectum and skin respectively. The patient is actually in good health, and wears a colotomy truss over the fistulous opening in the abdominal wall. Case 2 was that of a girl, aged 15, who presented two tumours in the abdomen below, and to the right of the umbilicus. The lower tumour was fixed, and the upper one movable. She was much emaciated, and was greatly troubled by persistent vomiting. There was also hæmorrhage *per rectum*. He made an incision over the lower swelling, and came upon the ascending colon, within which he could feel a tumour. He opened it, and found that the interior of the gut was occupied by a growth involving the origin of the ileo-cæcal valve. He resected it, cutting off the tumour flush with the cæcum, and invaginated it into the cæcum by Maunsell's method, except that the peritoneum was not included. Six weeks later he made an attempt to remove the enlarged glands, and in doing so he divided the mesocolon. This led to sloughing of the ascending colon and the formation of a fæcal fistula. The patient ultimately succumbed to obstruction due to recurrence. Case 3 was that of a middle-aged man, with a large tumour in the left side of the abdomen, which was readily movable. He opened the abdomen through the left semilunar line, and found that the growth surrounded the splenic flexure, including the whole of the omentum and a piece of the small intestine. The operation of removing the tumour took him 3½ hours, and the patient died twenty-four hours later.

A SERIES OF CASES OF INTESTINAL RESECTION.

MR. HERBERT ALLINGHAM said he had operated on 10 cases, in all, of which number 6 recovered and 4 died. In 4 of the successful cases the intestines were empty prior to resection, whereas in all the 4 fatal cases the intestines were distended when the stricture was resected. This seemed to show that distension of the intestines at the time of resection enormously increased the risk attending the operation. The explanation of this circumstance was probably that large quantities of fæces pressed down towards the site of union, and constantly disturbed it by the peristaltic waves they set up. Moreover, the patient under these circumstances is, so to speak, poisoned by the fæcal accumulation, thus hindering union of the divided ends of intestine. In large intestine cases fæces may block the bobbin and even tear it away. It follows that large intestines must not be resected when the gut above the stricture is distended by fæces. Stricture of the small intestine might be resected even when distended, because the fæces are usually liquid. When the intestines are distended the gut just above the stricture should be fixed to the abdominal wall; in fact, a colotomy should be performed, by which means the intestine can be thoroughly emptied. Later on the colotomy wound should be resected, and an end-to-end anastomosis done. In some cases it is possible to bring the stricture piece out through the abdominal wall, and in such case it should be fixed there, and the gut above it opened. Later on the strictured piece of gut can be resected, and the end-to-end anastomosis done. Some form of bobbin or button was, he thought, absolutely necessary in intestinal cases of resection or anastomosis.

After some remarks by the PRESIDENT, the SECRETARY read a note from Mr. Mayo Robson, who explained his use of the decalcified bone bobbin in intestinal operations. He said he had employed it in a great number and variety of cases, and it had always appeared to him to act as a support to the sutures, in fact as a splint to the sutured bowel. He claimed for it that it prevented tension, with the consequent risk of sloughing, and protected the joined mucous surface against contamination and cicatricial contraction. The raised ends of the bobbin prevented slipping, and as it underwent absorption, no foreign body was left to set up irritation in the bowel. Its lightness prevented any dragging.

MR. BIDWELL called attention to a method of intestinal suture which had not been mentioned, namely, that introduced by Halstead of Baltimore, who had pointed out that the serous and muscular coats were not by themselves strong enough to resist the traction of sutures. He therefore advocated the inclusion of the submucosa in the suture. In all his own cases of intestinal suture he had used this suture in combination with others. He had had one very successful case by Maunsell's method. In his case, as in one of Mr. Keetley's, there was some fæcal discharge from the wound, and this led him to think that Maunsell's method was not altogether reliable. The addition of a further row of sutures would make the operation too long, and for this reason he preferred to use Mayo Robson's bobbin. He added that experience was a very important factor, and each surgeon would probably be most successful with the particular form of suture with which he was familiar.

MR. BRUCE CLARKE urged that no absolute rule could be laid down as to the best method of uniting any two pieces of intestines; indeed, the great difficulty in his experience had always been to ascertain exactly what was the matter. Two or three years ago he had shown at the Clinical Society a boy with a big hernia, for which he had already been operated upon without benefit, so that when first seen a large portion of his large and small intestines, together with the cæcum, was outside the abdomen. It took him three-quarters of an hour to make out the exact condition of affairs, and finally he decided to resect a large portion of intestine, as this seemed to be the only way of putting things right. He therefore took away the cæcum, with several inches of large and small intestine, uniting the ends by suture. The result was perfectly successful, and in six weeks the boy was up and about. If one clamped the gut the mucous membrane protruded and could easily be joined end to end by a continuous suture, carrying the last stitch into the interior of the gut. Then the two ends of the peritoneal and muscular

coats were united so as to bring a large portion of their surfaces into contact. Maunsell's plan of doing this had proved quite satisfactory. He had employed this method of suturing in a couple of cases of gastro-enterostomy, but of course these were not cases in which one expected the patients to survive long. There must, however, be more than one row of sutures. The objections to the use of the bobbin were that it allowed of leakage, and he knew personally of two cases in which the bobbin had caused death by setting up perforation. He believed this had occurred in several other cases. A few instances of this kind would, he urged, be sufficient to prove that they had not yet devised a perfectly satisfactory method of suturing intestine. He did not think the bobbin or button should become the routine treatment in all intestinal cases.

Mr. Lockwood said that all surgeons who had had to deal with these cases would probably confirm what Mr. Allingham had said as to the circumstances under which resection ought not to be done. Circumstances must determine what should then be done. His own experience in this direction had not been large. He had twice had an opportunity of resecting and suturing intestine, and had employed the method described by Mr. Bruce Clarke. One was successful, but an intussusception case died of peritonitis. He declined to admit that the use of bobbins, etc., was necessary in resection of the small intestine, but he admitted that the large intestine was more tolerant of foreign bodies. From the cases he had seen he had acquired a strong bias against the use of mechanical contrivances in the surgery of the intestine. Mr. Allingham's results, he pointed out, were not more satisfactory than similar operations performed on gangrenous gut in hernia under much more adverse conditions; in other words, he had not shown that preponderating measure of success in favour of their use which alone would warrant their use becoming a matter of routine. He added that Mr. Mayo Robson's paper lost much of its value because he spoke in general terms and did not give figures.

Mr. Hutchinson, jun., mentioned, with regard to the risk of cicatricial contraction after resection of small intestine, the case of a patient on whom three years ago he resected 5 inches of small intestine which was gangrenous in a femoral hernia, who was now in the best of health. He used the continuous suture for the mucous membrane, with as many interrupted sutures as could conveniently be inserted. Such a case was satisfactory enough, but he had had three other cases of the same kind, all of which proved fatal.

Mr. Stanmore Bishop said that from his comparatively small experience of these operations he concluded that the button presented serious drawbacks; he alluded in particular to the holes in the side of the button, which, when the gut was pressed against them by the fingers, were very apt to cut through the walls. He was having some made with the metal turned in so as not to present a cutting edge. He thought that Jessett's bobbin presented certain advantages over that invented by Mayo Robson. He pointed out that celerity did not possess the importance which some attached to it. He had never seen a case of gangrenous gut in hernia in which he had thought it safe to unite the ends of the gut at once. The reunion therefore became a secondary operation in which celerity was not a matter of the first importance.

Mr. Keetley, in reply, agreed that speed was of less importance than doing the work properly. It was much more important to keep the patient warm and to avoid loss of blood than to hurry over the concluding steps of the operation. He remarked that temporary faecal fistulæ seemed to follow every method of operating, and he suggested that in many instances the escape of faecal matter took place previously to the operation. He added that silken sutures might also act as intestinal irritants when free in the gut.

Mr. Allingham, in reply, reiterated his confidence in the use of the bobbin, especially as it underwent absorption, and could not cause obstruction or irritation.

Scarlet Fever Epidemic in Edinburgh.—One hundred and seventeen cases of scarlet fever were reported in Edinburgh last week, as against 87 in the preceding week, with 2 deaths for this week, and 3 in the preceding week.

BRITISH GYNÆCOLOGICAL SOCIETY.

Clement Godson, M.D., President, in the Chair.

Thursday, October 10th, 1895.

Specimens.

Mr. E. Tenison Collins (Cardiff) showed a very large Spleen removed *post mortem*. Before operation it was thought to be an ovarian tumour; abdominal section showed its true nature. The medical attendant who was present would not sanction its removal, so the abdomen was closed without proceeding further. The patient, however, died the same evening from shock. No hæmorrhage was found at the necropsy. Dr. Heywood Smith had lately had a case sent to him as ovarian. Examination showed it to be spleen. He asked Mr. Bland Sutton to see it with him. Mr. Sutton advised removal, and performed the operation. The patient made a good recovery. Mr. H. B. Gardner and Mr. J. W. Taylor spoke on the subject, and Mr. Collins replied.—Mr. J. W. Taylor (Birmingham) showed a large Uterine Myoma removed by abdominal pan-hysterectomy. Operation was urgently required on account of hæmorrhage. The shape of the tumour rendered the use of the clamp impossible or dangerous and oophorectomy would have been useless. The patient did well, and was discharged three weeks after operation.—Mr. R. H. Hodgson showed a specimen of a large and partially solid Ovarian Tumour. The evacuated fluid measured 3 quarts, and the remaining solids 4 lbs. The patient made a good recovery.

The late Dr. Thomas Keith.

The President announced the death on the previous day of Dr. Thomas Keith, a distinguished Honorary Fellow of the Society. It was an irreparable loss both to the Society and to the world at large. He asked the Fellows to pass a vote of condolence with the family of Dr. Keith in their sad bereavement.

Dr. Robert Barnes and Dr. Bantock supported the President's motion in sympathetic terms, and the vote was passed unanimously.

A New Method of Performing Abdominal Hysterectomy, with Five Successful Cases.

Mr. Bowreman Jessett read this paper. He pointed out that the methods of performing the operation might be divided into three classes: (1) Extraperitoneal method of dealing with the stump by the use of Koeberlé's clamp; (2) the subperitoneal method of dealing with the stump after removal of the tumour; (3) total extirpation. The objections to the extraperitoneal and subperitoneal methods were discussed. By total extirpation of the whole organ all these objections were overcome, and the author submitted certain operative details which he had carried into practice with the most satisfactory results. Hitherto, operators after removal of the entire uterus with its tumour had laced or stitched the two peritoneal surfaces of the flaps together across the pelvis, thereby restoring the floor of the abdominal cavity. Difficulty hitherto had been experienced in opening up the roof of the vagina, some accomplishing this *per rectum*, others by having an assistant's finger passed into the vagina. To overcome this difficulty, Mr. Jessett had had a bivalved speculum made, 2 inches long, which an assistant passed into the vagina when the tumour was delivered through the abdominal wound; by having this instrument pushed well home, the roof of the vagina was put upon the stretch, and it was easy after the anterior and posterior flaps were reflected from the tumour to cut down upon the ends of the blades before and behind, and then to ligature the uterine arteries on each side; by dividing the tissues between these ligatures and the cervix, the uterus and tumour were lifted out. By lacing the flaps across there was a large raw surface left which would, or might be, a source of septic trouble afterwards. To overcome this he proposed that long loops of silk, some four to six in number, should be passed through these flaps at their edge, so that the knot was made to come out through the speculum in the vagina by catching the loop in a specially made instrument. When all these loops were passed they were drawn taut, and the peritoneal flaps were in this way everted, and doubled upon themselves into the vaginal roof. The vagina was then packed with strips of iodoform gauze, the speculum withdrawn, and the abdominal

wound closed. All the patients on whom Mr. Jessett had performed this operation had convalesced easily and well; in fact, just as after an ordinary ovariotomy or vaginal hysterectomy. He read short notes of five cases on whom he had operated successfully by this plan. The chief points in the operation were: (1) The use of the long speculum passed up the vagina, by means of which the uterus is somewhat lifted up and the roof of the vagina put on the stretch, which enables the operator to cut with precision into the vagina from above. (2) The treatment of the peritoneal flap; by everting and drawing these down through the vagina, the two peritoneal surfaces are brought into accurate apposition, and, by being doubled on themselves, raw surface is apposed to raw surface, and also free drainage is established at the lowest point of the abdominal cavity, through the vagina if required. (3) The flaps being drawn down in this fashion form a plug to the roof of the vagina, and the floor of the pelvic cavity is much firmer than if the peritoneum is simply laced across; moreover, by this method a large raw area is left which is much more likely to cause suppuration. (4) By removing the whole uterus in this manner there is very little hæmorrhage, and no need for the use of elastic ligatures or other means for constricting the neck of the tumour. (5) The patients suffer no more pain or inconvenience after the operation than after an ordinary ovariotomy. There is no dragging on the stump, and the abdominal wound is not dragged in afterwards as in those cases which have been treated by the *serre-nœud*.

The PRESIDENT thanked Mr. Jessett in the name of the Society for his valuable and interesting paper.

Dr. PURCELL said the chief difference between Mr. Jessett's method and that of Martin, of Berlin, was that the former opened the vagina from above whilst Martin worked from below. He called attention to the great advantages of Trendelenburg's position in this operation.

Dr. HEYWOOD SMITH asked Mr. Jessett whether an ordinary glass speculum would not answer as well as the special one as a guide for opening into the vagina, and also what was the special advantage of the drainage tube in these cases.

Mr. TAYLOR expressed his indebtedness to Mr. Jessett for the work he had done. It seemed to him, however, that no one method could be of general application. For instance, there were cases where the inversion of the broad ligaments would answer as well as the formation of flaps. Dr. Purcell was mistaken in supposing that Martin always adopted one method.

Dr. BANTOCK said the operation would in future rest between extraperitoneal treatment of the stump and total extirpation.

After some remarks by Dr. LEITH NAPIER, Mr. JESSETT replied, and then demonstrated upon the phantom the successive steps of the operation.

HARVEIAN SOCIETY OF LONDON.

Sir JOHN WILLIAMS, Bart., M.D., President, in the Chair.

Thursday, October 17th, 1895.

THE CLIMATE OF EGYPT.

DR. E. SYMES THOMPSON read a paper on this subject. Discussing the advantages and the dangers of the various routes, he said the short sea passage and the long railway journey were often more fatiguing than the long sea route. Invalids should land at Alexandria, the night landing in the Canal was always dangerous. A short stay at Ramleh, both before and after the journey up the Nile might be made by those who left England in October, and returned in May. The sulphur baths of Helouan, fifteen miles south of Cairo, were useful to those unequal to the fatigues and excitement of the capital. The Mena House Hotel, on the edge of the Desert, close to the Great Pyramid, afforded a sunny haven for persons unable to ascend the Nile. It was not usual to leave Cairo, whether in dahabeih, steamer or railway, before December. Luxor and Assouan were very warm in November, January and February being the best months. In mid-February the temperature at Assouan rose to 100° in the shade, and the same temperature was recorded a week later at Luxor. In January the winds at night were very cold on the river, and the chill at sundown was dangerous to invalids, who must studiously keep under cover. The extensive alluvial plain around Luxor made it less dry than the desert. Assouan was free from alluvium, and therefore drier, but the wind was apt to be strong. The dangers of life on a dahabeih must be carefully avoided, and the "post steamer" was often found better suited to delicate people. The unbroken sunshine was remarkable; the sun was practically never hidden by cloud. The hotels at Luxor and Assouan were commended. The maladies apt to occur in Egypt were described, and the diseases in the treatment of which the Nile was of service were considered in detail. The soothing influence of the warm dry air was of value in bronchial affections with emphysema, in cases of quiescent phthisis in all stages, especially where the lung affection was of pneumonic, broncho-pneumonic, or pleuritic origin, and particularly where such disorders were consequent on influenza, measles, or enteric fever. Disorders of the nasal, pharyngeal, and Eustachian membranes formed a considerable proportion of the cases treated with benefit in Egypt. Consideration was given to the influence exerted on the gastro intestinal mucous membrane; chronic dysenteric and allied affections should not be sent to Cairo, but chronic forms of digestive disorders benefited at Assouan. Hypochondriacal, hysterical and neurasthenic affections, and conditions of mental strain and nervous breakdown were among the cases most favourably influenced; and every year proved the value of the climate in chronic renal disease, whether of calculous or gouty origin, conditions of deterioration and even degeneration of cardiac, cerebral, or renal tissue were favourably influenced by the sunshine and by the restful life in the dry air. The electrical condition of the desert air tended to interfere with natural sleep in healthy persons, but those previously troubled with insomnia gained ground. In conclusion a comparison was drawn between Egypt, the Alps, the Riviera, the Canaries, and the Cape.

Dr. JALLAND said Assouan had the best climate in Egypt. The cold weather was short there; it was clean, and did not suffer by the inundations.

Dr. CANNY recommended Luxor; the air was driest there. He thought that patients might go to Egypt about the 10th of November—a date earlier than Dr. Thompson counselled.

Dr. SQUIRE, Dr. CHAPMAN, and Dr. WHARRY also spoke; and some remarks by the PRESIDENT terminated the proceedings.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

A. W. MAYO ROBSON, F.R.C.S., President, in the Chair.

Friday, October 18th, 1895.

PRESIDENT'S ADDRESS.

THE PRESIDENT delivered an address on the Surgery of To-day as compared with that of Twenty-five Years Ago, illustrated by the work in the General Infirmary at Leeds.

SYMPHYSIOTOMY.

Dr. BRAITHWAITE read notes of a case in which he had performed symphysiotomy.

SPLENIC LEUKÆMIA FOLLOWING A BLOW ON THE ABDOMEN.

Dr. CHURTON showed an ironworker, aged 28, whose spleen filled the greater part of the left abdomen and extended beyond the middle line. Red blood cells diminished in number; leucocytes, 1 in 10. Patient looks well; face and lips red, eyes bright, movements brisk, but he is unfit for heavy work (tachypnœa). Family healthy. No illness until this, though careless in food and drink, and has lived in a very damp house and was often wet at work. In 1887 he was kicked in abdomen rather severely, but not disabled. In 1892 a piece of steel weighing 2 lbs. flew off a mass of steel struck by a hammer of 85 tons impact, and travelling in an upward direction from 2 feet above the ground struck him at 8 yards' distance on the left abdomen, about 2 inches from the median line and just above the umbilical horizontal line. The shock may thus have been directed through the colon and spleen, injuring both. He fell violently, but resumed work after three hours. The skin was deeply bruised for two or three weeks; diameter of bruise about 3 inches. Eight or nine months after the blow he began to feel weak; three months later the spleen was found to be enlarged; gradually quick-

ness of breathing came on; he left his work in March last. When first discovered two years ago the spleen was about half its present size; probably, therefore, it had taken one year to attain that size; it seemed possible that after the blow micro-organisms from within had traversed the damaged intestine and invaded the similarly damaged spleen.

The Relation of Influenza to Diseases incidental to the Seasons.

Dr. Bampton (Ilkley) submitted as a rational explanation of the bewildering and chameleon-like behaviour of influenza in different seasons, and in the same individual, the following propositions: 1. That we recognise a pure type of influenza. 2. That we meet with influenza *plus* the disease peculiar to the time of the year, for example, influenza *plus* bronchitis, influenza *plus* follicular tonsillitis, influenza *plus* summer diarrhœa. We have then to deal with compound diseases. 3. We may meet with two specific epidemic diseases running concurrently, for example, mumps *plus* influenza. We then have to deal with a dual disease, each modifying the other. 4. We recognise the lowering of the resisting power during an attack of influenza, bringing into evidence the disease diathetic to the individual, and *vice versâ*. We then again have to deal with duality in disease. 5. The modern explanation of the classic clinical saying "that in times of epidemics all diseases are apt to assume an asthenic type" is that at such times we have the specific epidemic germ grafted on the ordinary disease. The ordinary disease has added to it all the potentialities for evil of the specific germ of the disease then epidemic. Recognition of this has an important bearing upon rational and successful treatment.

Excision of Larynx.

Mr. Ward read a paper on excision of the larynx illustrated by cases in which he had performed the operation.

Card Specimens.

Dr. Adolph Bronner (Bradford): Lower Turbinated Bones removed for Nasal Obstruction.—Dr. Trevelyan: A Becker's Microtome.—Dr. Barrs: Spastic Paraplegia, Pseudo-hypertrophic Paralysis, case of Athetosis.—The President: Case of Gastrostomy, with Sphincter formed by the Rectus Muscle; Myomata Uteri removed *per Vaginam*; Multiple Fibroids removed by Abdominal Hysterectomy with a new treatment of the Pedicle.—Mr. Littlewood showed a man, aged 69, on whom he had performed Suprapubic Prostatectomy on August 22nd, 1895, removing ℥xi of prostate. Patient had complete retention with foul urine before the operation; now the urine is clear, and passed every three or four hours during the day and once or twice during the night. Mr. Littlewood also showed a specimen of Malignant Disease of the Cervix Uteri removed by Vaginal Hysterectomy. The broad ligaments were very wide, as there was a hydrosalpinx on one side and a small ovarian cyst on the other; these were removed, the patient making a good recovery.

MIDLAND MEDICAL SOCIETY.

T. Edgar Underhill, M.D., in the Chair.

Wednesday, October 23rd, 1895.

Thyroid Tumour.

Dr. Gamgee showed a man, aged 20, who had had a thyroid tumour the size of a large orange, and causing difficulty in breathing for the past two months. Operation on September 12th, 1895. Both superior thyroid and right inferior thyroid arteries tied. Two small processes from upper part of the gland and a process at lower part, into which left inferior thyroid artery entered left in position. Complete relief of symptoms.

The Lungs in Acute Pneumonia.

Dr. Foxwell showed the lungs of a man dead of acute pneumonia. The interest lay in the great thickness of the visceral pleura over the greater part of each lung. The thickening was entirely fibrous, and on the surface lay recent lymph. The parietal pleura were not thickened, and adhered to the visceral only by slight recent inflammatory bands. The illness began with diarrhœa, followed in 3 days by stabbing pains in the chest. Widespread moist friction sounds were first heard, the pneumonic signs appearing later and very gradually, and never amounting to marked dulness or intense tubular breathing. The pneumonia crept over the greater part of both lungs. The presence of friction and absence of flatness in the percussion note prevented recognition of the old thickened pleuræ. The peculiarity of the dulness and breath sounds were considered as probably due to the partial distension of both chest-wall and lung, owing to the restraining pleura. The cause of the thickening was doubtful. No history of alcohol or syphilis obtained. When a child, patient had had rheumatic fever twice, but the heart was healthy. Still, one or both of these attacks may have been accompanied by pleuro pneumonia, with the resulting slow fibroid growth, resembling scar tissue. The case showed well the great difficulty sometimes arising in diagnosing thickened pleura in acute pneumonia, and therefore the great value of a knowledge of the previous state of a patient in making a prognosis.

Specimens.

Dr. Short showed a Portion of Intestine from a case of Enteric Fever. The Peyer's patches were unusually large, with a deep and extensive ulceration. Tremor of the hands had been a marked symptom throughout. Towards the end of the third week of her illness the girl, who was subject to epilepsy, had a severe fit. After this the pulse rapidly failed, and she died in about twenty-four hours. Dr. Short also showed the Liver, Stomach, and Pancreas from a woman aged 64. The stomach was divided into two cavities by an indurated cicatricial band, which appeared to be secondary to a large transverse ulceration. There were several hard nodules in the pancreas and neighbouring glands, strongly suggesting a malignant origin. The liver showed a large abscess towards the posterior part and several smaller ones in various parts of the gland; whilst scattered all over it were numerous soft hæmorrhagic foci, obviously rapidly breaking down. Nothing was found elsewhere to suggest a pyæmic origin. The marked feature of the case was the latency of the symptoms up to a few days before death.—Dr. Marris showed a specimen of Intrapericardial Aneurysm of the Aorta with Chronic Adhesive Pericarditis.

Umbilical Growth.

Mr. Heaton showed a growth removed from the umbilicus of a boy aged 4½. The child was brought with a history that when he strained he "passed water from his navel." On making him cry a small jet of a clear yellow fluid ran from the umbilicus. A fine probe passed down a fistula at the navel downwards and backwards for 3½ inches. The fluid was clear, light yellow, had a peculiar soapy feel, and was strongly alkaline, in fact, chemically resembled succus entericus. A large thick-walled pear-shaped sac found passing downwards and backwards, and adherent by a band of fibrous tissue to the small intestine. Sac partially excised in September, 1893. In August, 1895, the remaining part of sac was removed, and showed on microscopic examination the structure of small intestine. The vitello-intestinal duct forming the direct communication between the intestines and the yolk sac had been only partially obliterated. The end nearest the intestine was represented by a fibrous cord. Its outer half opened at the umbilicus, and became distended by secretion into a thick-walled muscular sac.

Amputation of Entire Upper Extremity.

Mr. Chavasse read notes of a case and exhibited a male adult upon whom a primary amputation of the entire upper extremity had been performed for a machinery accident in May last. After the initial shock had been overcome, recovery was rapid and healing complete in a month.

CLINICAL SOCIETY OF MANCHESTER.

S. Buckley, M.D., President, in the Chair.

Tuesday, October 15th, 1895.

Senile Bradycardia.

Dr. Wilkinson showed a case of senile bradycardia. The patient was a man, aged 62, who had been under observation at the Manchester Infirmary out-patient department for many months. He had double annulus senilis, atheromatous radials, pulse full (large excursion with sphygmograph),

tension average; rate 32 to 38, in recumbency 26. When first seen there was absolute suppression of the alternate beat. Now as a rule two heart beats were heard for each pulse beat, some of the secondary beats being palpable and seen in the sphygmogram. At times the stethoscope revealed a first sound coincident with pulse wave, a pause, a louder first sound, a second sound, and then pause. The sounds and impulse were usually weak and the heart itself somewhat dilated. The sphygmogram was contrasted with one taken from a case of true bradycardia with epilepsy. The latter tracing exactly reproduced the one given by Dr. Balfour in his work on *The Senile Heart*. The patient had also an enlarged liver, uniform, painless, and probably fatty; in addition, failure of memory for recent events and frequent attacks of loss of consciousness for the last eight or nine years. The attacks never occurred by night nor when sitting, only on exertion; they lasted five minutes. The preliminary was more akin to vertigo than true faintness, and he always fell backwards, to which fact his head testified. There was no cold sweat, no biting of the tongue, no frothing at the mouth, and he said no spasm; loss of consciousness was complete. He had never been seen in a fit, and the attacks under treatment had very materially diminished in frequency. The combination found effectual was the perchloride of iron with liq. strychninæ.

Alcoholism and Tuberculosis.

Dr. Krlynack read a short paper on the occurrence of pulmonary tuberculosis in the subjects of alcoholic neuritis, based upon a pathological investigation of eight fatal cases, in seven of which there was more or less well-marked tubercle of the lung.

Encysted Vesical Calculi.

Mr. Southam mentioned the case of a man, aged 53, on whom suprapubic lithotomy had twice been performed, a number of calculi being removed on each occasion from a small sacculi situated at the base of the bladder, with which it communicated by a narrow opening. After the second operation, which was performed two years and a-half ago, a permanent suprapubic opening was established in the hope that, by regular irrigation of the bladder, the attacks of cystitis, to which the patient was very liable, might be prevented, and at the same time an exit provided for any calculi which might again form. This treatment had been attended by satisfactory results, for the cystitis had been kept in check, and a few months ago a stone had been discharged through the suprapubic opening.

Splenic Enlargement.

Dr. Williamson showed a case of splenic enlargement which he believed to be the early stage of so-called splenic anæmia. There was no excess of leucocytes in the blood, and the lymphatic glands were not enlarged. The spleen was increasing in size, and epistaxis had recently become a troublesome symptom. In a similar case, in which there was no excess of leucocytes in the blood up to the last, he had found the splenic pulp, on pathological examination, to be crowded with numerous large cells, each containing several (five to eight) red corpuscles.

The British Laryngological Rhinological and Otological Association.—At a meeting on October 18th, Dr. Stoker, President, in the chair, Dr. R. N. Wolfenden was elected hon. treasurer and Mr. Richard Lake, F.R.C.S., joint hon. secretary. The following cases were shown: Dr. Edward Law: a case of Double Antral Disease.—The President: (1) a case of Syphilitic Ozæna treated successfully by the local application of Oxygen Gas, (2) a case of Paresis of the Left Vocal Cord.—Dr. Dundas Grant: (1) a case of Sunken Cicatrix of the Left Membrana Tympani treated by Intratympanic injections of Paroleine, (2) Cholesteatoma of the Middle Ear.—Dr. William Hill: case of Regeneration of Left Inferior Turbinate Body after Turbinotomy.—Mr. Bark showed a Rhinolith.—Dr. Dundas Grant opened a discussion on the treatment of Ménière's symptoms. They depended either upon disease affecting the auditory nerve directly (in its intracranial course, or in its labyrinthine distribution) or directly, from increase of tympanic pressure due to various causes in the middle ear. The treatment depended upon the localisation of the lesion, and upon its constitutional character when of this nature. Such conditions as the congestive, anæmic, hæmorrhagic, and acute inflammatory, as also neuro-vascular disturbances and arterial tension, whether affecting the labyrinth directly or indirectly, called for treatment on the general principles indicated by those conditions. In inflammatory effusions of the labyrinth pilocarpin was of undoubted value, when not contra-indicated by debility. Vertigo arising from indirect irritation of the labyrinth, secondary to middle ear changes, required treatment suggested by the latter, notably restoration of ventilation in occlusion of the Eustachian tube with in-drawn membrane, removal of granulations causing pressure, tenotomy of the tensor, etc. In "pseudo-Ménière's disease," in which the degree of vertigo was slight, and which was due to a hypersensitiveness to stimulation of the vestibular nerve, and which must be restored by strychnine, arsenic in increasing doses, the bromides, etc.; but quinine in small tonic doses was here of special value. Dr. Macnaughton Jones and the President took part in the discussion.—Mr. Lake read a paper on a case of Keratosis Obturans, a chronic desquamative dermatitis resulting from the prolonged irritation by hard plugs of cerumen of the walls of the external auditory meatus. In patients of markedly neurotic tendency on absorption of moisture by the mass, with complete occlusion of the meatus, a mild form of melancholia was apt to accompany the increase of deafness. This symptom disappeared with removal of the plug. The best solvent previous to syringing was a collyrium of salicylic acid dissolved in glycerine and water in the presence of a little morphine. In the after-treatment he prescribed an ointment of oleate of lead (10 per cent.) applied with a brush.—Subsequently the President delivered his inaugural address.

North-West London Clinical Society.—At a clinical meeting on October 16th, Dr. Sibley in the chair, the following cases were shown: Mr. Jackson Clarke: (1) A case of Aural Polypus cured by the Application of Alcohol; (2) a patient in whom he had effected Perineal Drainage for the cure of Cystitis.—The Chairman: (1) Exophthalmic Goître treated by Suprarenal Extract; (2) a case of Abdominal Aneurysm.—Dr. Cagney: A Child with Infantile Paralysis which he had treated energetically during the acute stage.—Mr. C. P. Allen: Cases of Dermatological Interest. Dr. Boulting, Dr. Bulger, Mr. C. G. Brodie, Dr. Campbell, and Dr. Henschell joined in the discussion on the cases.—Dr. Harry Campbell gave an experimental demonstration of the Pulse and Arterial Tension with an apparatus of his own invention.

North London Medical and Chirurgical Society.—At a meeting on October 10th, Mr. Charles Kisch, President, in the chair, an address was delivered by Mr. J. H. Targett on the Pathology of Certain Forms of Vesical Tumour. It was copiously illustrated throughout by lantern slides, prepared from photographs of the actual specimens. The first group of preparations illustrated the appearance of certain large single sacculi connected with the urinary bladder by narrow orifices. Much interest was especially taken in the description of sacculi occurring in the lower part of the bladder in the region of the trigone, and probably the result of failure in proper development of this region. Methods for the recognition of these sacculi during life were suggested, and the complications which arose owing to their growth were referred to. In certain cases the possibility of their removal was discussed, and operation was considered to be advisable by the speaker. The second variety of tumour brought forward was the recto-vesical hydatid cyst. It was shown that the cyst originated in close relation with the bladder walls—in fact, in the muscular or fibrous coats—and that therefore the usual statement made in textbooks that they were found in the pelvis, having gravitated to that position from the liver or some other situation in the abdominal cavity was quite erroneous. The operative treatment adopted by Mr. Bond for this class of tumour was recommended and explained. Some exceptionally beautiful preparations were shown of the "villous papilloma" with all the epithelium *in situ*. In connection with these, the speaker

mentioned the difficulty of recognising shreds of such papillomata in the urinary excretion. The most that might be expected to be observed was the very delicate fibrous strand forming the "core" of one of the villous processes. Even should this be found, the diagnosis as to whether the tumour was malignant or not was in no degree advanced for such a complication, as the occurrence of an apparently benign villous growth, covering or depending from a carcinoma, was at times met with. The mode of extension of malignant growths formed a very interesting section of the demonstration. The last subject touched on was the possibility of the ureters becoming proposed and simulating polypi.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.—The first meeting of the session was held on October 26th, at the St. Marylebone Infirmary, J. R. LUNN, F.R.C.S., President, in the chair. There were several visitors present, amongst whom were Drs. Colcott Fox, Geo. Stoker, and Mr. H. Spencer.—Dr. COLCOTT FOX delivered a short address on Ringworm. He deprecated the constantly recurring craze for some new parasiticide, which invariably ended in disappointment, chiefly because the proper method of application was not intelligently carried out. He then briefly described the irritant treatment, recommending the use of an ointment containing red oxide of mercury. Dr. F. S. Toogood (Lewisham Infirmary) spoke of the danger of producing permanent baldness by over-irritation.—Dr. GEO. STOKER described his method and exhibited his apparatus for the treatment of Ulcers of the Leg by the Oxygen Bath.—Mr. J. R. LUNN exhibited cases of Pemphigus Exfoliata; Pemphigus Rash produced by the internal administration of iodide of potash; Functional Chorea; Ankylosis of Lower Jaw relieved by operation; Tabetic Feet, Congenital Pemphigus, Charcot's Disease of the Shoulder-joint. Mr. LUNN also showed a card specimen of Aneurysm of the Thyroid Axis cured by operation.

BOURNEMOUTH MEDICAL SOCIETY.—The annual meeting was held on October 25th at the Hotel Mont Dore, when the Committee's annual report and the balance-sheet were submitted.—Mr. C. H. W. PARKINSON, the retiring President, gave up the chair in favour of Mr. D. C. EMBLETON, President-elect.—The following officers were elected for the ensuing year:—*Vice-President:* Mr. G. Mahomed. *Treasurer:* Dr. Causey Morgan. *Secretary:* Dr. H. G. Lys. *Librarian:* Dr. S. L. Clift. *Committee:* Mr. A. C. Kemble (Poole), Dr. W. H. L. Marriner, Dr. C. D. Muspratt, and Dr. F. W. Ramsay.—The annual dinner took place after the meeting. Twenty-three members and seven guests were present.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the South-Western Division was held at Wonford House, Exeter, on October 15th. Dr. Morton, Dr. Rutherford, Dr. McLean, and Dr. Lasbett were elected members of the Association.—Dr. DEAS opened a discussion on The Uses and Limitation of Mechanical Restraint as a means of Treatment. Dr. Deas's remarks were followed by a prolonged and interesting discussion. Dr. MORTON read notes on three cases of Spontaneous Gangrene. It was agreed that Dr. MacDonald's paper on the Nursing Staff should be the subject for discussion at the next meeting. The spring meeting was fixed for Tuesday, April 14th, 1896.

REVIEWS.

DISEASES OF THE SPINAL CORD. By BYROM BRAMWELL, M.D., F.R.C.P., F.R.S.Edin., Assistant Physician to the Edinburgh Royal Infirmary, etc. Third edition. London: William F. Clay. 1895. (Demy 8vo, pp. 672, 170 illustrations. 16s.)

DR. BYROM BRAMWELL'S work has been so widely read in this country and abroad that the issue of a third edition, thoroughly revised and brought up to date, will be heartily welcomed. In the new edition many of the defects in the earlier have been remedied. The illustrations are not now confined to drawings of pathological sections, but include abundant representations, taken during life, of Charcot's joint disease, of the various forms of muscular dystrophy, and many other conditions, which have been most effectively reproduced from photographs. Whole sections have been added on muscular dystrophies, syringomyelia, and other conditions which have recently attracted attention. The other parts have been expanded and brought thoroughly up to date.

We are glad to see that Dr. Bramwell resists the temptation to linger over rare and interesting conditions; and is most liberal in the space he gives to the commoner diseases which every practitioner is sure to meet, such as infantile paralysis, locomotor ataxy, and disseminated sclerosis. The lectures on disseminated sclerosis in particular show how thorough has been the revision of the work. Dr. Bramwell has incorporated the gist of the important discussion initiated by Dr. Buzzard at the Newcastle meeting of the British Medical Association, and the discussion on the differential diagnosis of this disease which is so common, but so often mistaken for pure hysteria, is admirably clear and up to date.

Where the standard is throughout so high, it is difficult to single out articles of special excellence, but the lectures on the Progressive Muscular Dystrophies and on Syringomyelia may be recommended as giving as clear and accurate accounts of these important conditions as is to be found in the English language. The section on Railway Spine also, which concludes the book, is most instructive and judicial in tone. We strongly recommend the book to busy practitioners who desire a full, accurate, and pleasantly-written textbook on diseases of the spinal cord. The manner in which the book is printed and illustrated reflects much credit on the publisher.

DIET IN SICKNESS AND HEALTH. By Mrs. ERNEST HART, formerly Student of the Faculty of Medicine of Paris, and of the London School of Medicine for Women. With an Introduction by Sir HENRY THOMPSON, F.R.C.S., M.B.Lond. London: The Scientific Press. 1895. (Demy 8vo, pp. 232; 17 illustrations. 3s. 6d.)

THE importance of the subject to which Mrs. ERNEST HART has devoted this volume will not be disputed by any practical medical man. A great physician desired that the only inscription under his name on his tombstone should be "He fed fevers," but, to judge by their practice, it would seem that too often the most careful housekeeper is disposed to believe that the culinary art is wasted in cooking for the sick or the convalescent, whereas it ought here to find its highest expression. "No man," to quote the pregnant words of the introduction which Sir Henry Thompson has written for this volume, "is a really accomplished physician or surgeon who has not made dietetic principles and practice an important part of his professional education." The truth will be admitted also of his further remark that "a certain familiarity with the resources of the cook is essential to furnish a suitable daily *menu*, which shall be agreeable to the invalid, and as much as possible varied within the narrow limits which are dictated by the circumstances of each case."

The volume opens with chapters on food and food values, on stimulants (alcohol and coca), and restoratives (tea, coffee, cocoa, chocolate). Thereon follow chapters on underfeeding and overeating, with special sections on the feeding and diet of the aged. The consideration of the arts of "thinning the fat" and "fattening the thin" is followed by a series of chapters on digestion and indigestion. The diet suitable to various other disorders of the digestive system is next described. Much space is judiciously assigned to diet in diabetes, and the authoress is able to show how much variety may, with care and intelligence, be introduced into the commonly dreary dietary of the victims of this disorder; numerous recipes are given, and this is, indeed, a characteristic of the book in every section, for it is essentially a practical guide. Complete *menus* are given, also, of many breakfasts, luncheons, and dinners suitable for the consumption of diabetics. In succeeding chapters, gout and chronic Bright's disease are treated in much the same way, though not at so much length. The volume contains, also, some notes on diet in fever, and in typhoid fever in particular.

This is a brief outline of the general scope of the work. As

to how Mrs. Ernest Hart has discharged her self-imposed task, we shall, for obvious reasons, prefer, rather than express any opinion of our own, again to quote from the introduction the words of Sir Henry Thompson, than whom there could be no more competent critic of a subject which he has himself so much illuminated by his admirable essays. "I do not hesitate," he writes, "to express my opinion that the present volume forms a handbook to the subject which will not only interest the dietetic student, but offer him, within its modest compass, a more complete epitome thereof than any work which has yet come under my notice. It is so because its accomplished author has the advantage of possessing not only a remarkable acquaintance with the various branches of medical knowledge, after many years devoted to their study, but also in no less degree that which has been conferred by long culinary and housewifery experience. I can strongly commend this book, therefore, as one of large usefulness in its selected sphere."

Studien über Klinik und Pathologie der Idiotie. [Studies in the Clinical History and Pathology of Idiocy.] By Dr. Carl Hammarberg. Translated into German by Walter Berger, and edited by Professor S. E. Henschen. Leipzig: Koehler. 1895.

A career of great promise was cut off suddenly and unexpectedly when Carl Hammerberg died on November 1st, 1893, at the age of 28. He had already published some of the results of his careful work, and in the monograph which Dr. Henschen has issued in sumptuous form as the most suitable memento of his young friend and assistant we have the record of researches carried out in the thorough and conscientious manner which distinguishes the neurological laboratory of the University of Upsala.

The object of the investigation was to determine the alterations in number, size, form, and minute structure which the cells of the cortex cerebri undergo in various atrophic conditions, congenital and acquired. Had the author lived, it is probable that he would have supplied neurologists with most of the statistical data so greatly needed by everyone who turns his attention to this subject.

It is difficult to speak with patience of the opinions expressed by pathologists from time to time as to the nature of the changes in nerve-cells which accompany mental disturbance. For the most part they are so perfectly innocent of anything resembling "control" as to be valueless, and there is danger lest after many disappointments we fall into a sceptical attitude of mind and reject all records of changes in grey tissue as unworthy of consideration. The time allowed for *post-mortem* change, the method of hardening, and the method of staining have as a rule a great deal more to do with "departures from the normal type" than the disease. Hammarberg's results are more interesting as supplying definite data regarding the influence of these conditions and processes on the tissue than they are as positive contributions to our knowledge of the micropathology of the cortex, although they are not wanting in interest in this latter respect also.

Section I deals with the influence of hardening reagents, etc., and with the methods which may be trusted for enabling us to count the number of nerve-cells in each stratum of a piece of cortex of definite size. Few investigations are more difficult.

Section II deals with the minute structure of the different regions of the cortex having regard especially to the number, size, and stratigraphical distribution of the cells in men, women, and children at various ages.

In Section III an account is given of the structure of the cortex in nine cases, which illustrate all three classes of idiocy as classified by Schüle in Ziemssen's Handbook. These reports will form an excellent standard for anyone who may undertake similar work in the future.

Had the author lived he would probably have added a large number of cases worked out on the lines which he has laid down with so much care; but, fortunately, he seems to have analysed his results as he obtained them, and the editor has therefore been able to append to the monograph Hammarberg's own generalisations, which are of great interest and importance. He finds in all his cases a deficiency in the number of functional nerve cells in the brain, not only relatively to the whole cortex (which is of course abnormally scanty in the idiot), but relatively to the area of cortex examined. The cortex remains in an undeveloped or embryonic condition. As a rule the arrest in development is complete only in a small portion, but the growth of the cortex is influenced throughout its whole extent by this patch of undeveloped tissue. The psychical condition of the patient depends upon the period at which arrest of cortical development occurred.

Incidentally the author is able to show that many histological changes which have been described as characteristic of idiocy are artificially produced; when proper care is taken in the preparation of the brain these appearances are not to be seen.

Professor Henschen is to be congratulated upon issuing a monograph which is, at the same time, a valuable contribution to neurological science and a lasting memorial of his gifted assistant. We understand that the proceeds of the sale of this book will be given to Dr. Hammarberg's family.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

OPHTHALMIC TROPACOCAINE TABLOIDS.

Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C., prepare for ophthalmic use a compressed tabloid of tropacocaine, a base occurring associated with cocaine, cocamine, and other bases in Java coca leaves, and to some extent in other coca leaves. Attention was first drawn to this base at the meeting of the British Medical Association at Nottingham by Dr. A. P. Chadbourne, of Boston, U.S.A., who in a paper read before the Section of Pharmacology and Therapeutics described the results of an investigation carried out in the Pharmacological Institute of Berlin University. He showed that in many respects the physiological action of this base differs from that of cocaine. It is a powerful local anæsthetic, and in the eye does not cause ischæmia, or any irritation or hyperæmia. It was found to be only half as poisonous as cocaine, and local anæsthesia was produced more rapidly than by cocaine, and apparently by less concentrated solutions. At the Bristol meeting of the British Medical Association it was stated by Mr. T. J. Bokenham that tropacocaine was found to be perfectly satisfactory for the removal of foreign bodies from the eye, and that it deadened the pain caused by the removal of misdirected eyelashes and the application of caustics to the lids. It is also superior to cocaine in that it produces no paralysis either of the iris or of accommodation.

The name "tropacocaine" is chemically inappropriate because the base is not an analogue of cocaine, but is really one of the class named by Ladenburg "tropeines." Liebermann[1] has shown that the composition of this base is not analogous to that of cocaine, and that when split up under the influence of hydrochloric acid it yielded instead of ecgonine a base isomeric with tropine from atropine, the other product of the transformation being benzoic acid. The new coca base was named benzoyl pseudotropeine, and Lieberman succeeded in reproducing it artificially. The name "tropacocaine" was substituted for benzoyl pseudotropeine as being more suited for medical use, and suggestive of the chemical relations of this base to atropine and cocaine.

The tropacocaine tabloids are readily soluble, and can be applied directly to the eye. They also possess the great advantages of portability and permanence.

JEREZCONA WINE.

Messrs. Hertz and Collingwood, 38, Leadenhall Street, E.C., have introduced, under the name of Jerezcona wine, a solution of the hydrobromic acid extract of cinchona bark in sherry wine. The wine used as the solvent is in every respect

[1] *Berichte*, xxiv, 2,366.

a very good one. The preparation has a very pleasant taste, the bitterness of the extract being scarcely perceptible. The idea of administering the alkaloids of cinchona bark combined with hydrobromic acid is an excellent one, for therapeutic authorities are agreed that hydrobromic acid possesses the power in most cases of preventing that unpleasant train of physiological symptoms which quinine produces in many persons. When it is desirable to give quinine as a tonic, Jerezcona wine can be recommended as a most agreeable form of prescribing it.

PNEUMATIC TYRES AND QUIET CARRIAGES.

A perfectly noiseless carriage free from shock or vibration has long been a great desideratum, but until recently an unobtainable luxury. For doctors who commonly spend many hours a day in their carriages the demand for improvement in this respect has, however urgent, been so long ungratified that the rumbling noises and succession of petty shocks endured in riding in a brougham over good or bad roads has come to be regarded as a necessary and essential discomfort. The introduction of cycling, however, led to a still more urgent demand for some means of diminishing the shock and incessant vibration of rapid transit, and the ingenuity thus sharpened produced a vast improvement in the Dunlop pneumatic tyres, which has now been successfully applied to hundreds of thousands of cycles. Since 1883 this pneumatic tyre has been successfully applied on a large scale to some thousands of carriages, and it is said with complete success. The jolting motion of a carriage on the old iron-shod wheels is completely obviated by the use of these tyres, a conversation is as easy as in the study armchair, and vibration is reduced to an absolute minimum. We find that with wheels so fitted it is impossible to tell whether the carriage is passing over wood pavement, newly made roads, or granite setts, thus the perfection of ease is obtained, while the carriage is absolutely noiseless. The reduction in the draught of the carriage is estimated at at least one-third, so that horses are thus enabled to travel further and faster with less labour. A great saving is claimed in horse flesh. This economy extends even more markedly to the wear of the wheels and of the carriage generally, and while the Dunlop pneumatic tyres are so durable that they are guaranteed to last far longer than solid rubber tyres, they are found to be especially suitable for use on the roughest roads. In towns and streets fitted with tramways they have the great advantage of not catching in the tram-lines, so that skidding is obviated. The tyres are fitted to the existing wheels of a carriage without difficulty, and the appearance of the wheel is practically unaltered. They are so durable that they are calculated to run 30,000 miles, and no one who has tried a carriage fitted with these pneumatic tyres is likely to be satisfied with anything less comfortable. We are inclined to think that they are essential for ambulance and invalid carriages, but as a matter of comfort, health, and luxury they will probably be considered hardly less desirable for everyone who has much use for a carriage, and especially for a close carriage, and we look to see them come into very general if not universal use. Their quietness would be a public boon. If all that is claimed for them in respect to saving of the wear and tear of horse flesh, and therefore diminution of cost of the stable, and to the great saving in the life of the carriage owing to the absence of vibration and shock, be true—and there is good reason to consider that the latter are not overestimated—the prime cost of the tyres will be quickly saved; this is to consider the question as a mere matter of economy, apart from the enormous increase of comfort and diminution of fatigue.

LATTICE ELASTIC STOCKING AND LEGGING.

The "Varilat" Lattice Elastic Stocking Company (70, Fenchurch Street, E.C.) have prepared a fenestrated stocking of red rubber, which is intended to afford in cases of varicosity of the lower limb a sufficient degree of protection and support without exerting too much pressure and causing obstruction of the enlarged veins. The support is given by bands of elastic of sufficient width traversing the limb like lattice work. The support, it is asserted, is ample, and the short columns of blood in the veins between the bands are sustained in transit. This appliance seems well adapted to meet a want and to prove not only soft and comfortable to the wearer, but also cleanly and lasting, and in the long run less costly than other forms of elastic stocking. In severe cases, however, it will probably be found necessary to apply a continuous and more extended pressure in order to assist undue bulging of the thin-walled and distended vessels.

IRON COMFITS.

Messrs. Roberts and Co., 76, New Bond Street, W., are the agents for a French pharmaceutical preparation made by A. Cognet, pharmacist, of Paris. The basis is oxalate of iron, a compound stated by Dr. Hayem, Professor at the Paris Medical Faculty, to be superior to all other ferruginous preparations. The oxalate of iron is combined with quassine, the crystalline neutral bitter principle obtained from quassia wood. The elegant and very tempting form in which the combination is made, that of a pink sugar-coated pill or comfit, will ensure their easy administration.

THE HEALTH AND SANITATION OF CALCUTTA.

The report of Dr. W. J. Simpson, Health Officer of Calcutta, for the year 1894, gives an exhaustive and most interesting account of the sanitary condition and requirements of the capital town of the Indian Empire. The year was, meteorologically, a normal one; but the price of food was higher than usual, and Calcutta, in common with the surrounding districts and towns, was very sickly. The death-rate—32·9 per 1,000—was in excess of any of the preceding five years. Children under 1 year of age died at the rate of 402·4 per 1,000. There was a marked and alarming rise in the prevalence and mortality of fever. Dr. Simpson discusses this subject at length in connection with the question of drainage. He shows that the "canal area" of the town, "undrained, waterlogged, and sewagelogged," presented the highest fever rates; and contends that remedial measures are urgently and immediately required. He condemns the present drainage and sewerage system of Calcutta, which has cost the city some 100 lakhs of rupees, in uncompromising terms. In this he is fully supported by Mr. Baldwin Latham, who in the year 1891 made a most careful investigation of the system, indicated its grave defects and faults, and made a number of suggestions for their remedy.

Calcutta is a very difficult subject for effective drainage, but the statement that "the outfall is obstructed by tidal influences, and the sewers leak and contaminate the soil," is of itself sufficient to prove that the present state of the combined underground drainage and sewerage is dangerous to health in the highest degree. The increased supply of water to the town and the improved arrangements for flushing have added to the volume of material which these pipes are unable to dispose of, and which consequently stagnates and deposits its solid elements, while the liquid soaks into the soil. The frequent rain storms which occur in the hot and rainy season cause, in combination with defective outfall and other aggravation of habitual faults due to physical obstacles, mistaken designs, and bad construction. Mr. Latham's views and suggestions have now been before the Commissioners for over

four years, and in the face of the serious increase of fever mortality, which in India is always attributable to defective drainage, it is full time that something were being done. Cholera, though far below the level of former years, was twice as fatal in 1894 as in the preceding year. Dr. Simpson devotes many pages of his report to an account of an investigation made by himself and Professor Haffkine regarding the presence of comma bacilli in tank, well, and hydrant, river and canal waters, milk, curds, flour, air, and drains. They discovered bacilli in 91.3 per cent. of tanks around which cholera prevailed. The hydrant waters were found to be free of these organisms. The other materials gave uncertain results, and further inquiries in this line are obviously necessary. The results of vaccine operations, conducted according to Haffkine's plan both in Calcutta and elsewhere, are detailed at length. These results have been already fully described and discussed in the BRITISH MEDICAL JOURNAL. They are on the whole promising.

Small-pox prevailed in Calcutta with epidemic activity, causing 405 deaths. It is shown conclusively that the mortality among the vaccinated was trifling as compared with the unprotected. Vaccination was pushed, and other appropriate sanitary measures resorted to. Calcutta is a very difficult place to vaccinate. The inhabitants are largely migratory, and unprotected subjects are constantly entering the town, while infants are removed or lost sight of before the year within which the law requires vaccination has expired.

The most important part of Dr. Simpson's report is that which is devoted to the need of proper building laws and regulations to prevent overcrowding, and the production of conditions which render the sanitation of a town impossible. He proves by descriptions and plans that building operations are being at present conducted in a manner which is most detrimental to health, and is likely in the future to become more so, while the discretion which the law allows to the Commissioners is exercised in opposition to the views of their own sanitary and engineering executive in the direction of sanctioning constructions which are inconsistent with the most elementary rules of healthy urban existence.

The health officer's representations are sound, and indicate most conclusively the need of new building regulations framed on scientific principles, and administered with firmness, if Calcutta is to be saved from sanitary disaster and extravagant expense in the future.

The report presents in great detail the work done by the health department, which appears to be energetic and wisely administered. Many of the elaborate statistical tables appended are either valueless on account of the imperfection of registration, or fitted rather for departmental use than general information. It seems a pity that a document which, unlike most Indian sanitary reports, contains so much really good sanitary information, should be burdened with so large a load of petty or unreliable arithmetical material.

THE LABORATORY OF CHEMICAL PATHOLOGY AT UNIVERSITY COLLEGE, LONDON.

THOUGH the importance of the application of chemical methods to the study of pathological problems may be very generally admitted, hitherto this has remained in this country little more than a pious opinion very suitable to be the topic of an introductory address or some annual oration. A serious attempt to carry the principle into action is deserving of hearty recognition.

Some years ago Dr. Vaughan Harley was appointed teacher of chemical pathology in University College, London. Through the initiative of Mr. Victor Horsley, the professor of pathology, Dr. Harley was some time ago nominated assistant professor of pathology, and has been placed in charge of a laboratory which has been assigned for the purpose by the Council of the College. The laboratory consists of three rooms fitted with the necessary apparatus, and there are in addition a balance room, and a dark room which can be used for the purposes of the laboratory. The largest of the rooms is fitted as a class room, and in it courses of chemical pathology are given. These classes (which have hitherto been attended principally by qualified men) afford a general introduction to the clinical applications of chemical pathology. The courses are practical throughout, the member himself performing all the examinations and analyses. The first course, entitled clinical chemistry, deals with the blood, with the secretions of the alimentary canal, with sputum, with pathological fluids such as exudations and cyst contents, and with the urine. The course of chemical pathology deals with the methods employed in the investigation of diseased processes and in original research. Under this head we find the more complicated examination of the blood, more advanced work as to the chemical changes in the saliva, and the gastric and intestinal contents as to the chemistry of the sputum, as to the bile, and as to pathological fluids. Milk also is examined in this course, and there is an advanced course on the urine.

Another room belonging to the department is fitted up for research work, and among those who are now or were recently working there are several investigators who have received grants from the Scientific Grants Committee of the British Medical Association. In a third small room is a blood-gas pump worked by a water motor, and a large respiratory apparatus, after the plan of Zuntz, for the analysis of respiratory gas exchange under various pathological conditions.

The complexity of the processes involved in accurate chemical work in pathology, and the tedium of repeating many times the same manœuvres, must always deter many anxious for immediate results from this field of work, but Dr. Vaughan Harley has devoted much thought and ingenuity to simplifying the actual work and shortening the time which analyses take. In the research room, for instance, the apparatus is so arranged that the fat extractions and estimations of nitrogen can be made six at a time, and other time and labour saving devices are in use. An adequate apprehension also of the difference in the standards of accuracy required for original chemical research, and for the establishment of clinical facts within a reasonable margin of error, is also apparent in the arrangement of the class-room. This is a point of no little importance, for if chemical pathology is to render to practical medicine the services which it is undoubtedly possible for it to give, it must be by the adoption of approved processes in which the margin of error is known, and is within the range of accuracy required for clinical work.

The department which we have here briefly described deserves to be better known and more generally utilised by those who have the opportunity of giving a few months, or even only a few hours a week for a few months, to the acquisition of knowledge, and we may perhaps add dexterity, which, if they serve no higher purpose, will at least render the ordinary clinical analyses more accurate and more speedy.

The importance of providing facilities for such classes has, we understand, been appreciated by the authorities of University College, Liverpool, where Professor Rubert Boyce has been enabled recently to establish courses of a character similar to those at University College, London.

THE opening meeting of the Odontological Society of Great Britain will be held on Monday next at 8 P.M., when the President, Mr. David Hepburn, will deliver his inaugural address, and the discussion on the Immediate Regulation of Irregular Teeth will be resumed.

GEHEIMRATH DR. FRANZ KÖNIG, Professor Ordinarius of Surgery in the University of Goettingen, has accepted an invitation to succeed the late Professor von Bardeleben in the Chair of Surgery at Berlin. Professor König is well known by his contributions to surgical literature, notably his *Lehrbuch der Speciellen Chirurgie.*

HOSPITAL SUNDAY FUND.—The £904 announced as having been received by the Hospital Sunday Fund from the Guesdon bequest represents three-quarters of a year's interest on the sum of £45,346 Consols, being part of the residue of his estate, amounting to over £200 000 which Mr. W. A. Guesdon bequeathed to his English executors—Messrs. James Robert Laing, Edward Hunt, and William Astle—to be applied by them at their discretion to such philanthropic and charitable purpose as they should consider most deserving of support.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 2ND, 1895.

THE FIFTH YEAR.

The introductory address lately delivered by Mr. Tobin, F.R.C.S.I., to the students of the St. Vincent's Hospital, Dublin, contains many topics of more than purely local interest. As will be seen from the brief abstract published on October 26th in our columns, the difficulties of the Dublin teachers are similar to those which press with scarcely less insistence upon their brethren in the metropolis, and the remedies for them are, perhaps, hardly so easily come by as Mr. Tobin, with the enthusiasm so well befitting the beginning of a new session, would have us suppose.

Mr. Tobin, with a patriotism at once warm hearted and clear eyed, notes that the Dublin hospitals no longer attract outsiders in any considerable numbers. Nowhere, says he, as you walk round St. Stephen's Green or College Green, have you to make way for Australians, Americans, Hindus, Japanese, as you would have to do in the neighbourhood of the chief schools in Scotland or Germany. And why? Mr. Tobin finds an explanation in the simple fact that "they attend better to their business." For ourselves we do not forget that Edinburgh has but one Royal Infirmary, whilst Dublin, with a population adequate, perhaps, to the maintenance of one Protestant and one Catholic hospital upon a generous scale, endeavours to maintain a host of small mutually competing hospitals which are under no circumstances likely to attract those foreigners who desire to see as much as possible with the least possible expenditure of time. In London the difficulty is somewhat the same, though with us the remedy is probably to be sought, not in the suppression of the smaller general hospitals, but in a better disposition of them according to the needs of the vast population they exist to benefit, or—as a less costly alternative—in the establishment of outpost stations with the best ambulance service attainable.

Mr. Tobin, however, seems to be even more concerned with the vexed question of curriculum than with the proportion of hospitals to population. Five years the General Medical Council, whose writ runs even in Ireland, demands of the medical student, and how best is he to spend the appointed time? Mr. Tobin as a clinical teacher first and foremost is all for clinical work, so much so that he advises the student even in his first year, and certainly in his second, to go round the wards. Herein the authorities of most of our London schools would hardly be found to agree with him, though it used to be the case—and for all we know may be so now—that six months' hospital practice was required of the Cambridge student before admission to the Second M.B. It is nevertheless pretty generally thought that a student is wise to defer "walking the hospital" till the examination in anatomy and physiology has been passed, though it is too much to demand of poor human nature that the average man will entirely forego in his ardent novitiate the sanguinary attractions of the operating theatre, unless rigidly excluded therefore by the great goddess, asepsis. Some day her sway will be absolute, but the time is not yet. The gravamen, however, of Mr. Tobin's charge appears to be that the student's education is every day becoming more and more a matter of cram and examination knack, and less and less a training of the faculty o observation, in which, as he rightly insists, the chief value of education lies. This degeneration he attributes mainly to the prevalent habit of neglecting bedside work in the hospitals for attendance upon the lectures given by the professors attached to the licensing bodies, and students are, he believes, encouraged in their courses by the manner in which the regulations for examinations have been framed. "The regulations," Mr. Tobin states, "order that the theory of medicine and surgery is to be condensed each into a course of fifty lectures to be given in schools which are in reality schools of anatomy, physiology, chemistry, and physics, and they refuse to recognise systematic theoretic lectures given in hospitals in conjunction with practical work; and further the regulations are armed with a revolver, in the shape of examinations, which enforces the obedience of students."

Now, if this quotation represents the actual state of affairs in Dublin, there can be no doubt that Mr. Tobin is justified in raising his protest. Clinical observation and clinical teaching must ever be the basis of every right system of medical education, and the "set and rounded discourse" admired by our predecessors is, with the easy accessibility of textbooks and monographs, every day becoming of less importance. To diminish the number of systematic lectures whilst increasing the number of clinical lectures and catechetical classes is the aim of most of those who are now striving for reform in educational methods. Such reform must of necessity be slow, opposed as it is to the conscientious convictions of those seniors who have failed to realise how altered are the present conditions from those which prevailed in their student days.

The last suggestion of Mr. Tobin which we have space to notice is that candidates for the final examination should be examined by the teachers of the hospital from which they present themselves. We are aware that the plan thus advocated has commended itself to many good authorities, and did, indeed, find a place in one of the numerous schemes for the reform of the London University. Nevertheless, we are bound to say that the abuses which such a system might entail appear to us to outweigh its supposed advantages; and whilst the clinical side of medicine should be well represented upon the court of examiners, it is better in our judgment that the examiner should have no previous acquaintance with the examinee.

With this short notice we take leave of Mr. Tobin's suggestive address, which may be commended in its entirety to the careful consideration of all those who wish to see the Dublin schools take their rightful place in the ranks of medical progress.

THE INFECTIOUS HOSPITAL PROVISION FOR LONDON.

THE Sanitary Committee of the Marylebone Vestry have recommended the Vestry to convene a conference to consider the position of the Asylums Board to provide adequate accommodation for the infectious sick. We are not surprised that this course should be adopted, for year after year the Asylums Board has failed to find accommodation for some of the many sick who seek admission into its hospitals. But the question which underlies this proposal is what is adequate accommodation? Does it mean that the total number of persons who may desire or whose friends may desire that they shall enter the hospital are to be received? Or does it mean that only those are to be received whose circumstances demand they shall be isolated at the expense of the ratepayers? If so, who is to decide between those who must be removed and those who shall remain at home? The constitution of the Asylums Board must be considered in this connection, for it is not constituted in such a way as to indicate that it is to provide for any but the poor; and yet it is expected, through the system of admission which has been designed in connection with it, that it shall open its doors to all comers. The Sanitary Committee of the Marylebone Vestry propose two points to be considered: (1) Whether it shall be elected directly by the ratepayers as a separate Board; or (2) whether its powers and administration shall be transferred to the County Council. We do not think any doubt will be entertained by the more thoughtful of the delegates who attend the conference as to which of these two alternatives is the better.

It is practically impossible for two bodies to represent London for the purposes of disease prevention each directly elected by the ratepayers. With the duty of hospital provision must eventually be associated vaccination, and such duties of inquiry into infectious disease causation and prevention as may properly belong to a central metropolitan health authority. This, we take it, is inevitable, and it needs but little foresight to appreciate the confusion that would result from the existence of two bodies having duties so closely allied as those of the Asylums Board and County Council would then be. The only question therefore which remains is whether the Asylums Board should remain as it is, and the scope of its duties be more clearly defined. Experience has, we think, shown the impracticability of adopting this course. To have the Metropolitan Asylums Board as an indirectly elected body over whom the ratepayers have no control means to leave it subject to the supervision, in all its actions, of the Local Government Board. The past has shown the result of such an arrangement. The managers are necessarily restricted in their work, for the Local Government Board cannot divest itself of its responsibility, and when a breakdown occurs the two Boards endeavour to cast the blame on each other. Then the Asylums Board endeavours to do in a few weeks work which requires as many months or longer, and the ratepayers are left to pay the price which hurried work always costs. It is time that an end was put to this unsatisfactory position, and we trust the action of the Sanitary Committee of the Marylebone Vestry will lead to the complete change which all who have studied metropolitan health administration must have seen to be necessary, and thus bring the hospital provision of the metropolis into line with the machinery of disease-prevention which already exists, and which includes all the medical officers of health of London.

THE CASE OF MISS LANCHESTER.

THIS week the above case has caused a great deal of stir, and as it concerns the treatment of a lady as an alleged lunatic it deserves immediate notice, though possibly at present we have not the whole of the evidence necessary to judge of the conduct of the medical men concerned. We have, however, substantially their statements and those of the other parties. The case then appears to be that a lady who for some time had been living an independent life, and who had made up her mind that women should be emancipated, had openly declared her intention of disregarding social rules and living with a man below her in station. Such conduct was considered by her parents as evidence of insanity, and they wished to save the lady from her own act. Parents still believe they have some rights, and that they have an interest in the good name of the family, but they must be careful not to transgress the law in trying to do good to an individual. The lady was forcibly seized by her relations after having been seen, and certified as of unsound mind, by a leading physician, and on an urgency order she was taken to an asylum; she was seen by the Commissioners, who, according to one evening paper, expressed regret that they could only advise the lady but could not control her acts. They were convinced that her symptoms did not represent any definite mental disease, and that therefore they must order her discharge from certificates. No complaints of any kind are made against the asylum. The point remains for consideration, whether the physician was justified in signing a certificate of lunacy under the circumstances.

Recently papers were read before the Association on Insanity of Conduct, the authors maintaining that the only evidence of mental disorder may be seen in the acts while the faculties of mind may appear to be normal. This, of course, is a doctrine involving far-reaching consequences and opens very dubious questions

It is possible that the conduct of Miss Lanchester appears to be highly unreasonable; but everything depends upon the way in which a change in character has developed. No one will deny that the disregard of moral and social laws is among the earlier symptoms of insanity; therefore, if a person who has always led a strictly conventional life suddenly gives rein to his feelings, we are prepared to watch for other symptoms of loss of control. If, on the other hand, the change in character and in acts follow a slow course of development which bears a direct relationship to the surroundings, it cannot be considered or treated as disease.

It would be a reversion to the long past to treat individual disregard of social conventions as criminal or lunatic. Dr. Blandford, who gave the first certificate, is an alienist physician of long experience, eminence, and high character. He studied at Oxford, and graduated M.A. and M.D. in 1854, when this distinction was rarer than it is now. He is lecturer on psychological medicine at St. George's, and the author of the article "Insanity" in Quain's *Dictionary of*

Medicine, and has filled more than one high office in his department of medicine.

All who know Dr. Blandford are certain that he has been influenced solely by conscience and conviction as to the act he performed in signing an urgency order. We feel very strongly, however, that the urgency order is a very powerful weapon which must not be used recklessly, or it may be distrusted by the public. It is a most valuable means for rapidly placing very violent patients under control, but it is not intended for the speedy removal of persons who may have followed a course of conduct offensive to the opinions of their relations.

Dr. J. B. Russell, the accomplished senior Medical Officer of Glasgow, has been compelled, we regret to know, to apply for six months' leave of absence, following on a prolonged and severe attack of illness. The Council, in granting the request, have coupled their consent with the expression of their hope that at the end of that time "he may be able to renew his valuable services to the city," and his professional brethren, who may be presumed to look upon his work with even more discerning eyes, most cordially re-echo the hope and endorse the language in which it is expressed.

EDINBURGH ROYAL MEDICAL SOCIETY.

The session was to have been inaugurated on October 25th with an address by Dr. Clouston, of the Royal Edinburgh Asylum, who unfortunately was prevented by illness, and the evening was occupied with papers by Dr. Purves Stewart and others. It is expected that Dr. Clouston will give his inaugural address on an early day.

THE GENERAL MEDICAL COUNCIL.

We understand that, owing to unforeseen difficulties of a legal nature which have intervened to delay the building works at the house of the General Medical Council in Oxford Street, it will probably be necessary to postpone the meeting of the Council. In the ordinary course it would have commenced on November 26th, but it is possible that it may be found most convenient not to assemble the Council until after Christmas. There appear to be indications that the vigorous action of the Council in recent years in penal cases has had a very favourable effect. We understand that the number of cases now under investigation by the law officers of the Council, in which it is charged that the regulations of the Council as to "covering" or irregular practice have been violated, is comparatively small, and that but few are as yet in a sufficiently forward state to be brought before the Council for adjudication.

NURSES IN IRISH WORKHOUSES.

We are naturally much interested in the struggles which are just now going on between the Irish Local Government Board and many Boards of Guardians in that country on the nursing question. Our own views are now pretty well known, based as they are upon the reports of our Commissioner in Ireland. We sympathise with the Local Government Board in their contest, because, although two out of the three members of that body are Roman Catholics, writers who ought to know better are attacking them as if they were making an assault upon religion. We are sorry to say that that is a great difficulty in dealing with many reforms in Ireland, and in this particular instance a very dishonest attempt is being made to prevent improvement by arousing animosities and by imputing motives which certainly do not exist. It is a pleasure, then, to see the fair judgment of such papers as the *Irish Daily Independent* and the *Leinster Leader*, both of which have approved of the proposed change from untrained to trained nursing. For the first time, by means of our Commission, the Irish public is getting a general view of their workhouse system, and particularly of the neglect of the sick poor, and it passes our comprehension how any people—always excepting Boards of Guardians—could try to thwart a movement which only aims at improving conditions which are a discredit to the humanity of the country.

SIR CHRISTOPHER NIXON.

On Thursday, October 24th, Sir Christopher Nixon, Physician to the Mater Misericordiæ Hospital, Dublin, was entertained at dinner in the Shelbourne Hotel, in celebration of his having been recently knighted. The Right Reverend Monsignor Molloy occupied the chair, and there was a large company, including many members of the profession. Amongst those present were the Right Hon. C. Redington, the Roman Catholic Bishop of Galway, Sir John Banks, Sir Thornley Stoker (President of the Royal College of Surgeons), the President of Queen's College, Belfast, and the President of Maynooth College. The Chairman proposed the guests's health, and Sir Christopher Nixon, in replying, declared the honour which his friends had done him to be the greatest reward of his life.

THE REGIUS PROFESSORSHIP OF SURGERY AT DUBLIN.

The Council, in whose hands lies the appointment to the Regius Professorship of Surgery in the University of Dublin, vacant by the death of Sir George Porter, met on October 23rd. There were three candidates—Dr. E. H. Bennett, Professor of Surgery in the Medical School; Sir W. Stokes, Professor of Surgery in the Royal College of Surgeons; and Dr. C. B. Ball, University Anatomist. The proceedings were complicated by the candidature of Dr. Bennett, whose position as Professor of Surgery was supposed by some to exclude him from this appointment. A great deal of discussion ensued, and finally the meeting was adjourned to November 6th. The contest excites much interest.

CHURCH CATARRH.

To those who are not in perfect health few things are more calculated to give rise to any malady to which they may have a tendency than sitting in a chilly church after the sharp walk which the ineradicable tendency to starting late seems to impose on all churchgoers. Perhaps the worst error in warming churches is committed by those who put off the commencement of the process until Saturday night, or may be Sunday morning, and then fire up hard to get things ready for 11 o'clock. The windows are kept closed for fear of losing heat; the stagnant air, with which those who visit churches on the week-day are so familiar, is warmed up for Sunday use, but the walls remain cold, and when service commences, hot and even burnt as the air may feel, there is no warmth in the building. Worshippers are thus subjected to the worst possible combination of surroundings—bad ventilation, foul atmosphere, draughts from internal currents, and the respiration of hot air while sitting in a building which is cold. The problem is not how to warm the air alone, but how to warm the church itself. This is necessarily a slow process, and it is doubly slow where, as is commonly the case, the attempt is made to use the same apparatus to warm the church that is employed for warming the incoming air. Unless, as in some cathedrals, stoves are placed actually within the church so that radiant heat is available, we doubt whether it is possible in cold weather to make a building fit for Sunday use without keeping up the fire all the week. This is not so much a matter of coals as of labour and supervision. A little fire all the week, with only just enough ventilation to keep the air sweet, will do far more to make the fabric warm than a great blaze for a few hours; and

after all, what is wanted much more is to warm the fabric, so that every stick and stone shall radiate a sense of comfort. When churches are too hot from over-firing, people catch cold in consequence of the draughts which are produced and from the chill on coming out again. These are what one may call honest colds—stiff necks, neuralgias, lumbagos, and sometimes "cold in the head"—things they might catch anywhere from sitting in a draught even of pure air. Unfortunately too often the heat is the heat of closeness rather than of excess of fire, and then the results are much more deadly. Added to the evil of the draughts are the toxic effects of breathing again the breath of others, and absorbing the exhalations of their fellow worshippers. From such influences arise too often those depressing colds which, in fact, were till 1889 called "influenza colds," with streaming eyes and nose, feverishness, and depression, drifting sometimes into an almost suppurative post-nasal catarrh, with great exhaustion.

RATIONAL DRESS IN FACTORIES.

The frequency with which grave or fatal accidents, occurring among the women workers in factories, are proved to have been caused by the entanglement of their loose skirts or, more rarely, of large sleeves or long hair in some part of the moving machinery has suggested, as a field of work for the promoters of "rational dress" among women, the "mill" as offering more solid advantages than the road, the river, or the moor. But men's dress, though as a rule safer, is in some respects open to improvement, the frock coat of the higher artisan and the blouse of workmen of all classes on the Continent being especially dangerous. Prompted by such considerations Mr. H. Lion, a manufacturing clothier at Düsseldorf, has devoted attention to the production of a "normal dress" for the working man, close fitting without interfering with the freest movement; cheap, durable, and washable without loss of colour. He seems to have attained his end in a strong blue canvas or sailcloth. He has also succeeded in rendering the material quite incombustible by impregnating it with a solution such that, though the strength, colour, and washability of the material are in no way diminished, it will stand several minutes' exposure to a powerful gas flame with no result beyond the singeing of the loose fibres or nap. Fireproofing of fabrics is far more generally practised in Germany than it is elsewhere, and we may take this opportunity of mentioning one example which is well deserving of imitation. In all the principal towns each party of the fire brigade summoned to a fire is accompanied by at least one "Seaphander," a man, whose face is protected by a special vizor and respirator, while his body is clad in a dress into the material of which asbestos enters largely, and is absolutely fireproof. He carries a large sack of the same stuff on his back, enabling him to enter parts of the building impracticable to anyone else, and to carry out the occupants—one adult or two or three children in the fireproof bag.

UNQUALIFIED ASSISTANTS.

It is difficult to imagine why medical practitioners should continue to risk the dangers they incur by the employment of unqualified assistants. The attendance, if charged for, is a fraud upon the patients, as is pointed out most clearly in the official memorandum issued by the General Medical Council in the following words: "The administrators of the law regard as implicit fraud any claim of payment for the service of such substitute assistants, when it is represented as 'medical attendance.'" In addition to the danger of an action for obtaining money by fraud the medical practitioner runs another risk of being reported to the General Medical Council for "covering," and if convicted is likely to have his name erased from the *Register*. It would be as well if members of the profession who employ unqualified assistants would realise their danger, as there is no doubt that the public is awakening to a sense of the fraudulent nature of such unqualified assistance. In a case lately heard before Mr. Wyatt, deputy coroner, in which an unqualified assistant of Dr. Phelan, of 54, Rodney Place, Walworth, had attended and prescribed for the child on whose body the inquest had been held, the coroner, after hearing the evidence, made the following statement: "I am very sorry to say that this sort of thing prevails to an enormous extent. It is nothing short of a fraud on the public. We coroners are powerless in the matter. These cases ought to be taken up by the Medical Society." What "Medical Society" the coroner referred to was not clear, but there is no doubt that if he would forward a copy of the depositions to the General Medical Council that body would cause an inquiry to be held and act accordingly. One incident in the case is worth recording. One of the jury asked Dr. Phelan: "Does your assistant make a practice of attending your patients?" to which the answer was given: "He is just as clever as I am, although not registered." How can the public be expected to differentiate between the qualified and the unqualified, and to understand the advantages which a medical qualification gives when a medical man, himself qualified, can see no difference between the medical knowledge he possesses and that of an unqualified person? Until the members of our profession refuse to associate with or to allow their patients to be treated by unqualified persons very little can be done against the rampant quackery and illegal practice of those outside the profession.

THE SICK POOR IN IRISH WORKHOUSES: CLONES.

In reading over our Commissioner's report of the visit to Clones Union, we have before us an object lesson of the weakness of the Poor Law as at present administered. In the hospital there are a number of sick and helpless inmates, some of them very ill; for instance, a patient who had fractured the neck of the femur, an unruly pauper suffering from rheumatism and placed in a room alone, a case of burn caused by falling on the fire in a fit, and to these we can add the helpless cases of both sexes. The hospital holds forty beds, the average occupied being twenty-five. To nurse these patients we read there is one nurse, untrained, assisted by females with illegitimate children, described by the medical officer in his report as being "ignorant and indifferent"; these two characteristics, of course are excellent qualities in a nurse. The male side of the infirmary is locked at night, and the patients are left in the dark with such aid as they can render to each other; the females also are in the dark, and share with the illegitimate infants the attention of the "ignorant and indifferent" mothers. The sanitary appliances are so contrived that the atmosphere of the wards is saturated with the odours of the excretions of the patients for the eleven hours or so during which the wards are locked. Of the weariness and helplessness of the patients, the longing for a change of posture to relieve the pain of a rheumatic limb or the aching of a fractured bone—on this we will not enlarge, for the thought is too full of pain; we are writing for those who know how human suffering can be alleviated by timely and skilled assistance, and our readers can fill in the blanks for themselves; but the moral that we wish to point through the suffering of these neglected paupers in the Clones Union Infirmary is that the machinery that administers the Poor Law breaks down in dealing with the sick and infirm. A fully qualified doctor is appointed, and by his instructions he is to advise his Board in all questions that relate to the physical well-being of the paupers; added to this, on account of the recent action of the Irish Medical Association, he is required to render a detailed report of the nursing, sanitation, and domestic condition of his department. Dr. Henry, the medical officer of this union, has complied with this instruction, has condemned in no

measured terms the inefficiency of the nursing staff and the insanitary condition of the infirmary; he is met with "the Committee do not recommend any alteration in the system of nursing or the sanitary arrangements." What is to be done next? The medical officer cannot censure his employers; he cannot raise one finger to improve the conditions surrounding his patients, and by his outspoken report he may have offended some of those among whom his work lies. Now, then, is the time for the central authority to step in, and by placing a minimum standard in these particulars before the guardians, and making use of the coercive powers with which the Local Government Board is entrusted when all other and milder means shall have failed, to secure for the sick and infirm pauper the care and such conditions that his state demand, and for the medical officer independence.

THE THREATENED EPIDEMIC OF INFLUENZA.

It would, happily, appear that the epidemic of influenza, which it was feared was about to develop in London, has not made any progress, but, on the contrary, shows signs of dying away without causing much sickdess. The number of deaths attributed to this cause, which had risen to 8 in the week ending October 19th, fell to 4 in the succeeding week, and, what is even more reassuring, mortality from diseases of the respiratory organs is considerably below the average. The effect of influenza in increasing the number of deaths from respiratory diseases is well known, and while the mortality from these diseases remains below the average for this time of the year, it is fairly safe to assume that epidemic influenza has no hold on the health of the population.

THE DANGERS OF GAS.

The explosion in the Strand has drawn attention to one of the great dangers to which we are exposed from leaky gas pipes, but it would be very wrong to imagine that fire and explosion are the only evils to be anticipated from such conditions. The list of deaths from gas poisoning is by no means a small one, and although by virtue (a most blessed virtue, too) of its offensiveness the presence of gas is generally detected before serious harm has been done, the cases of deteriorated health due to the breathing of a gas-tainted atmosphere are innumerable. The poisonous substance in gas is carbon monoxide, but it is probable that the purest forms of hydrocarbon also tend to produce the headache, sore throat, digestive disturbance, and morning languor which are so often complained of by habitual gas breathers. Both smells and ill-health attributed to defective drains are often a consequence of leaky gas pipes. It seems not to be generally recognised that gas fittings wear out with comparative rapidity, and that they require a complete overhauling every few years. Gas pipes go with a house, they are passed on from tenant to tenant without examination, nails are driven into them, they are hammered up without any solder, joints are made by irresponsible people, and the wonder is not that accidents happen now and again, but that they are so few. A leakage far too small to cause explosion injures health, and we cannot too strongly urge that the proper corollary of gas in a bedroom is an open window. There are many houses, however, in which no amount of domestic carefulness will give protection from the evils caused by gas. It is not every house that is cut off from the street by an open area, and when this is not the case the householder is at the mercy of those responsible for what lies under the roadway. One of the evils of the tight closing of the doors and windows which is so common in winter is that the ground air is drawn into the house. In towns ground air is often highly charged with gas, especially since impervious pavements have become so common, and the responsibility for this should be made to rest on those who cause this defilement. The suppliers of gas, whether companies or municipalities, are permitted to tear up our streets at strange and inconvenient times by Act of Parliament, but no Act of Parliament has ever given them leave to foul the subsoil with coal gas, or to allow so deleterious a substance to escape into our dwelling-houses. Such an escape is undoubtedly a nuisance, and injurious to health. But to prove its origin is not easy, and this is the barrier behind which public bodies shield themselves from attack.

THE HYPNOTISM OF "TRILBY."

Mr. Ernest Hart writes: *Trilby* as a drama by no means corresponds in the development of its hypnotic motive and action with the originally artistic and yet scientifically well-drawn conception of Mr. Du Maurier in his novel. It is, perhaps, dramatically more effective, but it is the hypnotism of the platform and the stage play, and not that of Nature and pathology. In the *Trilby* of Mr. Du Maurier, the influence of direct, open, and positive suggestion, which is the real working power of all "hypnotic" conditions, is the mainspring of the action. The all-sufficient subjective change wrought by this agency is admirably used and developed with subtlety and fine literary effect. In the stage version a new hypnotism appears. Svengali—a magnificent study by Mr. Beerbohm Tree of the weird, unclean, spider-like mesmerist of the school of the popular imagination—a twentieth century Mephistopheles—possesses all the mystic powers of the mystery worker of romance, with a suggestion of decadent demonism. As an impersonation it is one of the highest efforts of histrionic skill seen in modern times. Svengali has a "force" which he passes into Trilby; he hypnotises her from behind unseen; he draws her to him from another room by "force of will;" he is exhausted by the transference to her of "his life." All this is very effective from the stage point of view, but it clothes a vulgar error with the glamour of genius, and it possibly may renew for a time the vogue of the follies and frauds of the sham "hypnotism, mesmerism, and new magic," which I had hoped almost to have driven from the notice of reasonable men. Meantime all London will be drawn to see a most remarkable presentment of the platform "mesmerist," outwardly at his best, or at his worst. Miss Baird's beautiful personality and well-conceived presentation of the hypnotised pupil and victim of Svengali is most attractive and remarkable for some fine touches of intuition and observation.

SIR HENRY THOMPSON.

Sir Henry Thompson's very wide circle of medical friends will feel much pleasure at the complete and conclusively satisfactory result of the action in the Probate Court with which he was concerned. It involved a considerable legacy bequeathed to him by a very old friend, who had been his wife's guardian up to the date of her marriage and for all the subsequent years until his death. This gentleman, who was a solicitor and a bachelor, was well known in the medical quarter of London, in which he resided, and was in frequent communication until the last with members of the profession, for whom he had rendered many small services. The will was executed some years before his death, and his diaries were produced for the whole of that year, showing him to have been actively engaged in legal work and in the fullest possession of his faculties. It was alleged, in opposition to the will, that he was of unsound mind at the time of executing it. Sir J. Russell Reynolds was called to give evidence of a conclusive character as to his soundness of mind and a mass of other evidence was in readiness. Before many witnesses, however, had been heard, the judge expressed his opinion of the validity of the proof of the testator's perfect sanity and disposing power, and the jury at an early stage expressed their satisfaction with this evidence and their opinion that it was unnecessary to hear more on that side, and called for any evidence on the other side. None, however, was tendered, and a verdict was therefore entered in favour of the will, Lord Justice Lopes expressing the opinion

that he had never heard stronger evidence than that adduced, and that in any case he should have ruled in favour of the defendant. Many exaggerated, not to say foolish and ill-advised, preliminary paragraphs have been published in various places, to which Sir Henry Thompson had the dignity and wisdom to make no reply or comment. The result was one which necessarily followed from the overwhelming strength of the bare facts proved. There may have been some temporary annoyance for Sir Henry Thompson, under the circumstances, to endure; but he is all the more to be congratulated on the reticence and firmness with which he dealt with the matter, although of the ultimate decision there could be no question.

THE RADCLIFFE INFIRMARY, OXFORD.

AT the last quarterly court of the governors of the Radcliffe Infirmary an attempt was made to reduce the power of the medical staff on the Committee of Management. The following resolution was proposed by Viscount Dillon, and seconded by the Rev. C. J. Fletcher:

> That the resolution of January 22nd, 1873, with reference to the honorary medical staff be rescinded, and that the honorary medical staff be represented on the Committee of Management by one physician and one surgeon, such representatives to be elected annually by the whole of the honorary medical staff.

This was opposed by Mr. A. Winkfield amongst others. In his speech Mr. Winkfield first of all thanked those other members of the court who had spoken against the resolution for their kind references to himself and his colleagues. With regard to the history of the matter Mr. Winkfield pointed out that trial had been made of a partial representation of the medical staff on the Committee of Management and of affairs as they were at the present time—namely, the whole of the staff being members of the Committee. The former system had failed, and no adequate reason had been given for altering the latter. Mr. Winkfield showed to the court that the medical officers of the institution were the most regular in attendance at the meetings of the Committee, and that no body of men could have the good of the institution more at heart. In the end the motion was defeated, 4 voting for it and 23 against.

THE BASIS OF MODERN ADVANCE IN TREATMENT.

A FAVOURITE subject for Presidential addresses is the marvellous advance that has characterised both the medical and the surgical treatment of disease during the last twenty or thirty years. Dr. Buzzard went to this source for inspiration when addressing the Clinical Society last week at the beginning of his Presidency. He did not, however, lose himself in a flood of details, but philosophically traced them back to the principles on which the details depend; and thereby avoided the common failing of inability to see the forest because of the trees. The great therapeutic advance has not, as he remarked, followed the lines it was expected to pursue at the birth of the Clinical Society in 1868; it has not chiefly resulted from a better knowledge of drugs and of their power over the body in health and disease. Although there have been small and fairly encouraging advances in this direction, the great bulk of modern therapeutical progress has resulted from the deeper study of disease itself, from a better knowledge of its natural history, and especially of its causes. Pasteur's and Lister's researches have led to "advance in the treatment of disease a thousand-fold more important . . . . . than the effects wrought by any drug which has appeared or is likely to appear in our *Pharmacopœia*." For instance, the accurate study of the clinical symptoms and morbid anatomy of myxœdema, coupled with experiment on the lower animals, has "resulted in the discovery of a therapeutical method the success of which is not only extremely remarkable as regards the particular disease treated, but the principle involved in which is likely to have still more important and widely-extending effects when more generally applied." The dependence of the disorder upon disease of the thyroid gland led to the employment of that gland as a remedy for the cure of the disease; and the happy result that ensued was the direct outcome of a rigid recognition of scientific method. In neurology, peculiarly his own domain, Dr. Buzzard showed that affections now known to be due to syphilis or alcohol were formerly uninfluenced in any degree by the various drugs and other remedies employed. In the absence of the key to the cause of the disease success in treating it is almost impossible. In regard to maladies produced by micro-organisms, too (the list of which is daily extending, and in which Dr. Buzzard expects some day to find included many diseases not now generally recognised as having such origin), he hazarded the prophecy that the astounding advance in the prevention and treatment of disease already made is probably as nothing compared with what the future has in store. He considers that recent advances in pharmacology have added to the means of palliating suffering and modifying the symptoms of disease which transcend all experience in the past, and furnish therapeutic agents of the greatest value; but such considerations do not shake his conviction that the chief advance in treatment has resulted from, and will continue to be the product of, deeper knowledge of the natural history of disease itself.

THE HOSPITAL SUNDAY FUND.

A MEETING of the Distribution Committee of this fund was held on October 30th at the Mansion House. It was stated that the receipts up to date were £61,500, of which £45,700 had already been distributed, and a further division of £15,850 among the various hospitals, dispensaries, and convalescent homes was recommended.

GUY'S HOSPITAL.

MR. GLADSTONE'S attention, as an old governor of the institution, having been drawn to the financial affairs of Guy's Hospital (whose income, owing to agricultural depression, has been reduced from £40,000 to £20,000), he has written an earnest appeal for help. Addressing himself to the treasurer of the hospital, Mr. Gladstone says: "I wish, but vainly wish, it were in my power to bring London, and not least, the City of London strictly so called, to understand the greatness and urgency of the case. In your report as treasurer you inform us that, from want of pecuniary means, 100 beds are at the present time, and have been for some past period, unemployed and useless. This statement is of itself sufficiently grave, but it is not all, nor is it the gravest of what you have to tell. We have to make ourselves understand that the arrest and contradiction of efficiency thus indicated will be followed, at the close of the present year, by a further and, I fear, yet heavier downfall, and that, unless a courageous and serious effort is made to avert the calamity, an appreciable portion of Guy's Hospital must become a solitude. But such a solitude would be, indeed, a desolation." Dr. Samuel Wilks, as chairman of the Sustentation Fund of Guy's Hospital, has written endorsing Mr. Gladstone's appeal for public support "of an institution which has become almost one of the necessities of life in the working classes." He expresses the opinion that it is the obvious duty of employers of labour to assist those institutions which daily relieve their men gratuitously when wounded or otherwise injured. Contributions may be sent direct to Guy's Hospital, S.E., or to its bankers, Messrs. Lloyds, 72, Lombard Street, E.C.

DIFFICULTIES UNDER THE VACCINATION ACTS.

THE delay in the presentation of the report of the Royal Commission on Vaccination has had many ill results to the country at large in consequence of the steadily increasing number of children growing up in an unvaccinated condition, and the results will only be fully measured as time

goes on and the children come under the influence of small-pox infection. Another result, of a local character in the present case, has been brought to our notice—namely, in the Cricklade and Wootton Bassett Union, wherein the vaccination of children by the public vaccinator has fallen off so greatly as to have brought down the remuneration of one officer from £15 to 19s. 6d. in a half year. Even this modest sum was only earned at the cost of driving some fifty miles, and giving thirteen different stational attendances. This result is directly attributed to the non-reporting of the Vaccination Commission, and it is but a solitary example of what is happening in many parts of the country. Expert public vaccinators and painstaking vaccination officers all over the provinces, and in London too for the matter of that, are performing duties which hardly pay expenses, and all the time they see children escaping the law's requirements in a matter of prime importance to every individual, the vaccinated and unvaccinated alike. Each person permitted to violate the vaccination laws becomes a distinct danger to the community, and the Commission would seem to be incurring a great responsibility by their continued delay, having in view the ever-increasing tendency of Boards of Guardians and individuals to shelter themselves behind the Act of the non-appearance of the final report when shelving the matter of vaccination. The question has long ago passed out of the range of party politics, and has become one of national import. The country has much at stake, both from a health and financial point of view, so long as vaccination remains unenforced.

THE WEST HAM SCHOOLS.

There have been 29 cases of diphtheria, with 2 deaths, among the children in the West Ham schools. The schools also have been attacked by measles and German measles. The latter "developed seriously," and these diseases are to be attributed, in the opinion of the medical officer, "entirely to overcrowding." In spite of this opinion it was desired that more children should be admitted to the schools, but in the report of the medical officer he states with emphasis that he "will not even consent" to the further admission of children until the numbers were reduced to the proper standard as approved by the Local Government Board. He advocated that those children who were at present waiting in the workhouse to be admitted should be either boarded out or accommodated in temporary buildings, for it would be impossible to allow children again to enter the schools until at least two months had elapsed from the occurrence of the last case. A discussion followed the reading of the report, in which the usual ignorance of the guardians concerning the work they have undertaken was exhibited. One gentleman confused the Sheffield scheme of scattered homes with the Romford village community. The sole conclusion arrived at was a resolution to ask the Local Government Board to give the guardians "a free hand" to deal with the children as they thought proper, a request which the Local Government Board may very well think it advisable to refuse. A Board, composed of persons who are either too ignorant of elementary hygienic principles, or so indifferent to the welfare of the children under their care as to overcrowd them until they are decimated by preventable diseases is not fit to have "a free hand" to guide or to control them in the future.

EDINBURGH AND LEITH ON THE HOSPITAL QUESTION.

The First Division of the Court of Session on October 29th disposed of an appeal by the Corporation of Edinburgh against the judgment of the Leith Dean of Guild Court, refusing their petition for a warrant to erect a temporary hospital at Quarry Holess, Easter Road. The Edinburgh Corporation proposed to erect the hospital upon ground belonging to them as administrators of the Trinity Hospital, and in a report by William Bentson, master of works, no objection was taken to the proposed structures. The only respondent was John Welsh, solicitor, who raised questions of heritable right. The Dean of Guild Court (Baillie Archibald dissenting) refused the application, on the ground that the Edinburgh Corporation had no right to erect the hospital there, at all events, without the consent of the Town Council of Leith. The Division to-day recalled the Dean of Guild's judgment, and remitted back to the Dean of Guild to proceed with the application as should seem just, holding that the grounds upon which the Dean of Guild Court proceeded were not before them, and that that Court had no business to conjure up objections with which as a court they had nothing to do. It will be remembered that this matter came up at an adjourned meeting of the Leith Dean of Guild Court, when the Provost, who of late has been making himself conspicuous along several lines, intimated that there was no use discussing the matter—that he would not grant permission to Edinburgh for the proposed hospital under any circumstances. He has now been sharply taught that there are certain laws in existence for the guidance and control of persons like himself.

VIRCHOW ON PASTEUR.

At a meeting of the Berlin Medical Society, held on October 16th, being the first since the recess, Professor Virchow, in speaking of the members who had died since they had last met, referred to the late M. Pasteur as the most eminent of them all. That Society, he said, had conferred its honorary membership on the departed French *savant* in 1892. Professor Virchow emphasised the universal importance of Pasteur's proof of the inadmissibility of the theory of autobiogenesis. Pasteur was not friendly to the German Empire, but that had not affected the Society's opinion of his merits. In order to understand his feeling towards the German Empire it was necessary to remember that he earned his first title to fame at Strassburg University, now a German seat of learning. Professor Virchow concluded by remarking that a final judgment as to the value of Pasteur's inoculations against hydrophobia was not yet possible, but it was already necessary to admit that it had formed the starting point of a new departure in medicine.

AN IRISH "CURE" FOR HYDROPHOBIA.

The Newry Board of Guardians have again presented to a wondering world an example of the wrongheadedness which seems sometimes to seize upon public bodies. Three men presented themselves at a recent meeting of the Board, stating that they had been bitten by a rabid dog; and a report was read from Dr. Mills to the effect that he had made a *post-mortem* examination of the dog, and was satisfied that it had suffered from a very virulent form of the disease. The three men asked to be sent for treatment, and Drs. Beamish and Smartt recommended that they should be sent to the Pasteur Institute in Paris. According to the report in the *Belfast News Letter*, it was suggested by certain guardians that the men should be sent to "M'Govern of County Cavan," who, "it was stated would only charge about £3 for each person, whereas if they would send them to Paris it would cost the ratepayers £25 each." M'Govern, it may be remembered, is a man who professes to have inherited the secret of a sure cure for hydrophobia, and has been taken under the protection of certain persons who are in chronic opposition to any improvement in rational medicine founded on experimental research. The guardians decided to take the more economical course, and the men were given £1 apiece for expenses, and sent, along with a little girl who had also been bitten, to M'Govern of County Cavan. There has arisen since a complication which would be merely amusing if the matter were not in its nature so serious. It would appear that there are two M'Govern's in the field. At the last monthly meeting of the Board of Guardians two letters were read. One was from Philip

M'Govern, of Glan, co. Cavan, stating that he had treated the four patients, that he had sent them home "cured," and that he would make his charges very reasonable. The other was from John Laurence M'Govern, of Corroque, Dowra, co. Cavan, and in it he stated that he was the person who possessed the proper cure for hydrophobia, and that the four persons sent to him had been intercepted at Belcoo railway station, and taken to Philip M'Govern's house for treatment. The guardians, it was stated, had intended to patronise Laurence, but the men expressed themselves perfectly satisfied, and "the matter dropped" so far as the guardians are at present concerned. But it can hardly rest here. The clerk to the guardians made a most surprising statement as to the attitude of the Local Government Board in Ireland towards this pretended cure. He is reported to have stated that about four years ago the guardians sent four persons to M'Govern, and that the Local Government Board disallowed the expenses. M'Govern, however, sued the guardians and got a decree, and the Local Government Board finally gave way, and allowed the amount of M'Govern's bill, with costs, to be paid. It is to be hoped that on the present occasion the Local Government Board will show a little more backbone, as otherwise its deplorable concession of four years ago will be converted into a dangerous precedent.

THE REFORM OF GERMAN LUNATIC ASYLUMS.

The need for reform in the administration of lunatic asylums and in the care of lunatics in Germany was the main topic of discussion at the meeting of the German Association of Alienists which met recently at Hamburg. A series of resolutions were adopted affirming that all institutions for the care of persons mentally unsound should be under the immediate direction and control of specially trained medical men, whether the inmates of such institutions were or were not supposed to be susceptible of cure. The desirability of giving special instruction in lunacy to medical students and requiring a more rigid examination in the subject was insisted on, as was also the necessity for diminishing the overcrowding which exists in many German asylums, especially in Prussia. In view of the popular indignation excited earlier in the present year by the laying bare of many crying abuses, it is believed that the present is an opportune moment for a strong expression of opinion by alienist physicians.

DIPHTHERIA IN LONDON.

Our attention is drawn to the fact that in one fortnight the deaths from diphtheria have increased from 44 to 76 per week, and we are asked whether the total notifications have increased *pari passu* with the deaths, pointing out the bearing of such increase upon the question as to the utility of the serum treatment. The following are the figures in regard to diphtheria in the metropolis during the past six weeks:

	Week ending—					
	Sept. 21	Sept. 28	Oct. 5.	Oct. 12.	Oct. 19.	Oct. 26.
Total notifications	265	269	263	324	310	319
Total deaths ...	37	56	44	56	76	61
Admissions to Asylum Board Hospitals	113	111	87	160	114	113
Deaths in Asylum Board Hospitals of cases admitted as diphtheria ...	14	20	21	20	16	22

It will be seen from this that the fact of deaths from diphtheria having increased in one particular fortnight from 44 to 76 per week can hardly be taken as a complete presentation of the existing condition of affairs. It is satisfactory to note that there was a decline last week in the mortality from diphtheria in London. The deaths referred to this disease in the metropolis, which had been 44, 56, and 76 in the three preceding weeks, fell to 61 during the week ending Saturday last, October 26th, but exceeded by 22 the average number in the corresponding week of the ten preceding years, 1885-94. Of the 61 deaths recorded last week, 39 were of children under five years of age, and 20 of young people aged between 5 and 20 years; while only 2 fatal cases occurred among persons aged upwards of 20 years. After distributing the deaths from diphtheria that were recorded in the Metropolitan Asylum Hospitals and other public institutions to the sanitary areas in which the patients had previously resided, it appears that 7 cases belonged to St. Pancras, 6 to Islington, 6 to Poplar, 6 to Greenwich, and 4 to Hammersmith sanitary areas. The number of diphtheria patients under treatment in the Metropolitan Asylum Hospitals and in the London Fever Hospital, which had been 659 and 667 in the two preceding weeks, had further risen to 675 on Saturday last, October 26th; 115 new cases were admitted during the week, against 90, 102, and 115 in the three preceding weeks.

THE ISLINGTON INFIRMARY AND THE SICK POOR.

At the meeting held on October 17th the attention of the Islington Board of Guardians was called to the serious nature of the overcrowding of the patients in the infirmary. From the statistics given it was made clear that there were at the present time 102 patients in excess of the certified number, and it must be noted that the winter is only approaching, and that when it does come this excess is sure to be increased. It will be remembered that the Local Government Board has repeatedly requested the Islington authorities to increase the infirmary accommodation, and that last year a site for the new building was actually bought at a heavy cost at Bowes Park. Since the date of the purchase nothing has been done, and the magnificent park has been left absolutely unused except for "treats" for the school children and guardians' "outings." In the meantime the poor suffer; the medical officers have had their work increased without any additional pay or assistance, and the largest and richest parish in the metropolis has still the smallest and most inadequate infirmary in proportion to the number of ratepayers in the district. This is most discreditable to the guardians, and it behoves the Local Government Board to act with the necessary promptitude, and to enforce its legitimate demands, so repeatedly made and so constantly ignored. The present infirmary, with its 595 patients, has still only two medical officers without the assistance of even one clinical clerk or dresser. At the same meeting of the Board it was decided that the additional medical officer, so imperatively called for, should not be selected until the infirmary accommodation is completed. It is rather surprising to read in the report in the *Islington Gazette* that this resolution was carried on the motion of Dr. Jackson, a medical member of the Board. We can hardly realise that a medical man could formulate such a resolution in face of the undoubted fact that the excess of patients is so great. Even if there were only the certified number in the infirmary, namely, 493, the paucity of medical officers would still remain apparent. Overcrowding of patients in public infirmaries cannot be permitted, and the Local Government Board will no doubt see that its instructions and orders are carried out, as the present state of things is dangerous and discreditable in the extreme.

Presentation.—On retiring after twenty-two years' practice in Lee, Dr. Hutchins Williams was recently presented with a handsome centrepiece, goblets, peg cups, and fruit dishes in silver. Mrs. Williams was presented with a gold bracelet.

ROYAL COLLEGE OF PHYSICIANS.

The Admission of Women to the Licentiateship.

An extraordinary Comitia of the College was held on Thursday, October 24th, Sir J. Russell Reynolds, Bart., President, in the chair.

It was announced that on the recommendation of the headmaster of Epsom College the Jenks Memorial Scholarship had been awarded to Mr. Douglas Turner.

Communications were received from the Royal College of Surgeons, reporting the proceedings of the Council of that body, and inviting the Colleges to appoint delegates to confer with delegates from their own body on the question of altering the arrangements of the Five Years' scheme adopted in 1892, and with the approval of the College the President nominated Drs. Ord, Moore, Liveing, Cayley, Poore, and Taylor.

On the recommendation of the Treasurer it was decided to accede to the request of the headmaster of Westminster School, made through Dr. John Ogle, for the loan for one evening only of the portrait of Sir Thomas Millington, in the possession of the College, and suspended in the hall.

The consideration of a petition from the officers and teachers of the London School of Medicine for Women, supported by many signatories, was then taken up.

Dr. Charles West, as the senior Fellow present, rose to oppose its acceptance, and after premising that the question had been debated in the College eighteen years previously, when a similar petition was rejected by 68 votes to 18, he proceeded to ask what were the motives which influenced women in wishing to enter the medical profession; the reply to this he found in an address by Mrs Garrett Anderson, the Dean of their medical school, and the motives appeared to him to be quite unworthy. Up to 150 years ago one department, namely, that of midwifery, had been entirely in the hands of women, but they had done absolutely nothing to advance its practice, and it had been left to a man—Ambroise Paré—to introduce turning, whilst the invention of the forceps had been due also to a man—Chamberlen. In America women had practised medicine for fifty years, but he was not aware that they had made any contribution to our knowledge, and in the subject of children, which was supposed to be one for the study of which they were particularly adapted he had failed to find any contribution to practical medicine made by a woman. The admission of women to the medical profession was not a mere social change, it was a social revolution, and it did more than concern the dignity of the College, for it concerned society at large, and the position of women in that society. If women were admitted to the licence the other diplomas must also be open to them, and not only the offices in the College, but even the presidential chair. In conclusion, he moved that

> The College having maturely considered the petition, declines to grant the prayer of the petitioners.

Sir Joseph Payne said that the question whether it was expedient to admit women to their diplomas was one that concerned the dignity, welfare, and prestige of the College, and he felt that to alter the constitution of the College in this way was a dangerous experiment. When a career was open to women in the Senate, at the Bar, and in the pulpit, he would be willing to reconsider his opinion, and not till then. In reference to the question of the usefulness in India of women doctors, without in any way denying what had been said in their behalf, he wished to say that up to twenty years ago, when he was in India, he had never known any instance where in a case of serious illness any difficulty had been placed in the way of a physician or surgeon entering a harem, and if he found it necessary the patient was always uncovered. By declining to receive women he denied that they would be in any way persecuting them.

Sir B. W. Richardson, after referring to former decisions of the College on other subjects, which he said time had shown to be gravely erroneous, hoped that the College would now accede to the petition, for he felt sure that the admission of women into the College would be certain to come to pass. He thought it was not consistent to exclude them at the bedside when they had all seen that the functions of the head of the State could be so eminently filled by one as by our present Queen. As to the danger of one of the women occupying the Presidential chair, he thought, considering how few Presidents the College had, no notice need be taken of the argument.

Dr. Hare thought that this was an infinitely important subject. He admitted that women could acquire knowledge, but denied that they could create or advance it, and instanced music and mathematics in support of his views. He quite agreed that we had had excellent Queens, but then they had men for their Ministers, and there was as yet no instance of a female Prime Minister.

Sir W. Broadbent, who spoke as one of the petitioners, said there was no reason why we should deny to women the same lofty motives that we claimed for ourselves. Most of the speakers had addressed themselves to the question of the admission of women into the profession, which was not the point at issue, and he denied that the admission of women into the profession had proved to be a failure. If the College had governed well in regard to men it would do also for women, and he thought it would be well that they should be within the jurisdiction of the College. In regard to the question of their usefulness in India no one would say that the zenanas were open to ordinary practitioners, and there were thousands of women in India suffering for lack of proper medical advice. Women desired some higher status and recognition than the L.S.A., and it was a distinct disability to them not being able to get the licence of the College.

Dr. Barnes said that the medical education of women must necessarily be imperfect and incomplete, and that was a fundamental objection to them. As to practice in India, he said that great progress had been made in the last few years, and the natives in many parts were now following European practice.

Dr. Douglas Powell, whilst agreeing with all those who opposed the petition, urged that there was nothing in the practice of medicine that men could not do as well as or better than women. The profession was overstocked already, and to dilute it or further overstock it with women would only tend to cheapen and degrade it. The College was looked upon as a referee in questions of public health and many social questions, and he thought it would be a very grave thing for them to decide that it was advisable that women should enter the medical profession; the question had never been debated in a medical body possessed of such authority as the College. The duties of a woman lay in the household, and in bearing, rearing, and educating children.

Dr. Payne said that Dr. West and those who thought with him had used precisely the same arguments that were used in the discussion eighteen years previously, but in the interval the state of affairs had much changed, and the position of women now was very different to what it was then. The excess of women over men was something like one million, and in the middle and professional classes there was an ever increasing number who had to earn their own living; their entry into the professions was simply the result of economic laws forcing them on, and it was only natural that they should aim at some of the more remunerative callings. Even if we desired to discourage them from entering the profession we could not altogether prevent them, and he thought it was our duty to let be, and let those who were able to follow the practice of medicine do so.

Sir R. Quain gathered that the argument was that because there was a surplus of women they were to be shoved into the College, and he objected very strongly to it; the pulpit and the Bar were more fitted for their intellect than medicine. It seemed to him that men were becoming effeminate and women masculine.

The President, after referring to a letter from Sir William Jenner in opposition to the petition, said that in his judgement women were physically, mentally, and morally unfitted for the practice of medicine, and he thought that of all professions it was the one for which they were least fitted. He was told that in India there was now no difficulty as to medical men seeing patients in the zenanas in cases of illness.

A show of hands was then taken, and the President declared Dr. West's motion carried; a division having been demanded was taken with the following result: For the motion, 59; against, 50; majority, 9.

The Comitia was then dissolved.

We have been asked to publish the following letter, which was circulated among Fellows of the Royal College of Physicians shortly before the meeting reported above:

We the undersigned Fellows of the Royal College of Physicians of London, gravely impressed with the far-reaching importance of the question, now before the College, whether to admit women to its diplomas, desire to place on record our reasons against granting the prayer of the petition recently presented by the officers and teachers of the London School of Medicine for Women.

In common with a large body of medical men—probably a great majority—we hold, and always have held, that the admission of women to the medical profession is most undesirable; and, whilst fully admitting the ability of women to comply with more examinational tests, we are none the less convinced that they are by nature unfitted for the pursuit and practice of the medical profession.

Although some holding this view have nevertheless deemed it both consistent and desirable not to oppose the admission of women, but have, on the contrary, given substantial aid to the attainment of that object, yet we see no reason to depart from our original carefully grounded objections, and while recognising with regret the action of other bodies, desire to offer all legitimate opposition to the same course being followed by the Royal College of Physicians.

We are unable to admit the force of the arguments urged in favour of the admission of women to the diplomas of the College, on the ground that other corporations and universities have admitted them, and we fail to recognise any hardship in the refusal. The number of universities and medical corporations of the United Kingdom which now admit women to their degrees or diplomas is sufficient to secure a full and complete trial of what at present is but an experiment—an experiment which another generation may show to be a mistake. In the metropolis itself the London University and the Apothecaries' Society open their doors to women, and thus offer ample opportunities for qualification.

To the argument that the admission of women to the College is "inevitable," we desire to offer the fullest resistance; believing that the principle is wrong, we refuse to submit to considerations of expediency, and regard it as a duty which we owe to the College, to the profession, and to the public at large to prevent, to the utmost of our ability, the Royal College of Physicians being made a portal to the obtaining that which our reason and judgment condemn.

On two points we have reason to believe considerable misconception exists. Inasmuch as the Licence of the College gives a title to proceed to the Membership, and that the Members are potential Fellows, it would be difficult if women were admitted to the lowest to exclude them from the higher diplomas. Those who support their admission must be prepared to admit them to the councils and administration of the College, and to place the highest offices in the College within their reach.

It is also urged that, in view of the possibility of the Royal College becoming associated for examinational purposes with a reconstituted London University, such a circumstance would of necessity compel the College to admit to its diplomas all candidates, irrespective of sex, in whose examination the College took a share. But this is not so. In all discussions in the College on the University question, the full power of the College to confer or withhold its diplomas by the vote of the Fellows, as at present (independently of the results of examination), has been fully reserved.

On the ground, therefore, of our objection on principle to the admission of women to the profession, and having regard to the extensive opportunities they already possess for obtaining a registrable qualification, we protest against this College, the most ancient and influential Medical Corporation in the kingdom, being forced into a position from which there would be no receding, and which could only be occupied with loss of dignity and prestige, in order to satisfy what we believe to be the improper demand of an inconsiderable minority.

CHARLES WEST.	SAMUEL GEE.
RICHARD QUAIN.	J. FAYRER.
WILLIAM JENNER.	HENRY GERVIS.
JOHN W. OGLE.	J. MITCHELL BRUCE.
CHARLES J. HARE.	W. H. ALLCHIN.
F. W. PAVY.	DONALD W. C. HOOD.
W. H. DICKINSON.	PATRICK MANSON.

October 29nd, 1895.

"*" The foregoing statement has only been prepared within the last few days, and no extended attempt has been made to obtain signatures. The College officers have not been asked to sign.

The following is the text of the petition of the London School of Medicine for Women:

To the Registrar of the Royal College of Physicians of London.

Sir,—We the undersigned desire respectfully to petition the Royal College of Physicians of London to admit to its examinations and diplomas students of the London School of Medicine for Women.

A similar request was made many years ago to the Royal College of Surgeons of England, and refused; but we venture to hope for a different result upon the present occasion, when both Colleges will be approached. That request was made at a time when the admission of women to the medical profession was a question still *sub judice*. Doubts were then felt as to the effects which such a change would have upon the profession, and upon women themselves. Years have since passed; the main question has solved itself, and doubtful points have been settled by experience.

At the beginning of the present year there were over 200 women upon the *Medical Register*, of whom more than 150 had been educated at the London School of Medicine for Women. One after another Universities and Examining Boards have admitted women to their degrees and diplomas, so that few now remain closed. In the charters of recently established Universities the right of women to a degree is recognised. Several medical schools for women have been opened in England and Ireland, and the total number of women studying medicine has steadily increased. Many women, both in this country and abroad, hold appointments on the staff of hospitals for women and children; some of these hospitals are worked entirely by women, and cases of all kinds and of all degrees of severity are received. Public bodies, like the General Post Office, the Metropolitan Asylums Board, and various county councils, have appointed women as assistant medical officers in the institutions under their control.

The British Medical Association, the Medico-Psychological Association, the Society of Arts, and the Associated Boards of Great [illegible] admit women as members. In short, the recognition of women in the profession is going on steadily and experience has proved that those evils have not resulted which it was feared might follow the admission of women to the study and practice of medicine, and that there is a demand for women as medical practitioners.

The London School of Medicine for Women now numbers on its books 150 students. The results of its teaching, as shown by the position taken by its students in public examinations, are excellent. The biological, chemical, and physiological laboratories are adequate, though the Council desire to improve them, and are raising a fund for rebuilding the school. The Royal Free Hospital, to which students of the London School of Medicine for Women alone are admitted, provides ample clinical opportunities, and the teaching of the staff is organised upon the best lines.

We therefore submit that the London School of Medicine for Women, with the Royal Free Hospital, is worthy of recognition by the Royal College of Physicians of London. The [illegible] position is a source of serious inconvenience and loss to the school and to its students. If desirous of taking a diploma from a College of Physicians or Surgeons the students are compelled to travel to Ireland or Scotland, and thus incur unnecessary expense and fatigue in connection with their examinations.

On the above grounds, we earnestly hope that the Royal College of Physicians of London will accede to our petition, and will open its examinations to the students of the London School of Medicine for Women.—We are, sir, your obedient servants,

The following signatures will be found attached to the petition from the London School of Medicine for Women:

Elizabeth Garrett Anderson, M.D., Dean and Lecturer on Medicine.
Julia Cock, M.D., L.R.C.P.I, and L.M., L.R.C.S.E., Sub-Dean.
A. T. Norton, F.R.C.S., Treasurer and Lecturer on Surgery.
Isabel Thorne, Honorary Secretary.
Sir Gainsford Bruce, Chairman of the Committee of the Royal Free Hospital.
Charles Burt, Chairman of the Weekly Board of the Royal Free Hospital.

ROYAL FREE HOSPITAL STAFF.

John Cockle, M.D., F.R.C.P., F.R.C.S.	Willmott Evans, M.D., B.S., F.R.C.S.
William Rose, M.B., B.S., F.R.C.S.	Samuel West, M.D., F.R.C.P.
Frederick J. Gant, F.R.C.S.	Harrington Sainsbury, M.D., F.R.C.P.
A. Boyce Barrow, M.B., F.R.C.S.	Thomas C. Hayes, M.D., F.R.C.P.
James Berry, M.B., B.S., F.R.C.S.	James Calvert, M.D., F.R.C.P.
J. Grosvenor Mackinlay, F.R.C.S.	F. W. Andrewes, M.B., F.R.C.P.
William H. Battle, F.R.C.S.	J. Walter Carr, M.B., B.S., F.R.C.S.
H. Work Dodd, F.R.C.S.	Louisa B. Aldrich Blake, M.D., B.S.
E. W. Roughton, M.D., B.S., F.R.C.S.	

LECTURERS AT THE LONDON SCHOOL OF MEDICINE FOR WOMEN.

Stanley Boyd, M.B., B.S., F.R.C.S., Lecturer on Anatomy.
H. B. Donkin, M.D., F.R.C.P., Lecturer on Medicine.
Mary L. Dowson, L.R.C.P.I., L.R.C.S.I., Lecturer on Forensic Medicine.
A. Dupré, F.R.S., F.C.S., Lecturer on Toxicology.
W. D. Halliburton, M.D., F.R.C.P., F.R.S., Lecturer on Physiology.
Charles Mercier, F.R.C.S., Lecturer on Mental Pathology.
Mary A. D. Scharlieb, M.D., B.S., Lecturer on Midwifery and Gynæcology.
A. Quarry Silcock, M.D., B.S., F.R.C.S., Lecturer on Pathology.

Sir William H. Broadbent, Bart., M.D., F.R.C.P.	T. Lauder Brunton, M.D., D.Sc., F.R.C.P., F.R.S.
Sir James Paget, Bart., F.R.C.S.	Thomas Bond, M.B., B.S., F.R.C.P.
Sir Henry Acland, Bart., K.C.B., M.D., F.R.C.P., F.R.S.	Charles J. Cullingworth, M.D., F.R.C.P.
Sir Thomas Crawford, K.C.B., M.D., F.R.C.P.I., F.R.C.S.I.	W. R. Gowers, M.D., F.R.C.P., F.R.S.
Sir Alfred Garrod, M.D., F.R.C.P., F.R.S.	Victor Horsley, F.R.C.S., F.R.S.
Sir Henry Thompson, F.R.C.S.	Norman Moore, M.D., F.R.C.P.
Sir William Roberts, M.D., F.R.C.P., F.R.S.	Frederick Treves, F.R.C.S.
Sir Spencer Wells, Bart., M.D., F.R.C.S.	J. Knowsley Thornton, M.B., C.M.
Samuel Wilks, M.D., F.R.C.P., F.R.S.	E. A. Schäfer, F.R.S.
J. Hughlings Jackson, M.D., F.R.C.P., F.R.S.	Augustus Waller, M.D., F.R.S.
Thomas Buzzard, M.D., F.R.C.P.	Francis Yeo.
H. Charlton Bastian, M.D., F.R.C.P., F.R.S.	Richard Barwell, F.R.C.S.
Thomas Barlow, M.D., F.R.C.P.	Herbert W. Page, M.B., F.R.C.S.
W. Orange, C.B., M.D., F.R.C.P.	John H. Galton, M.D.
	Frederick T. Roberts, M.D., F.R.C.P., M.R.C.S.
	Jonathan Hutchinson, M.D., F.R.C.S., F.R.S.
	E. Ray Lankester, M.A., LL.D., F.R.S.

It appears from statistics published recently that the medical faculties of the German Universities contain more students than any other. There are 8,361 students of medicine, 8 132 of law, 7 519 of philosophy, and 4,597 of theology. The University with the largest number of students in all faculties is that of Berlin with 4,265, next comes Munich, then Leipzig, and then Bonn. The University with the largest proportion of medical students is Warzburg.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

SPECIAL COMMISSION OF THE "BRITISH MEDICAL JOURNAL."

VI.—CLONES UNION, CO. MONAGHAN.

THIS is a second class house, but as is the case with so many workhouses it is more than half empty; the number all told on the day when we made application to go over the house was only 80, and we were informed that of late years the number of inmates had not exceeded 100; of these 80 inmates more than half are either helpless or children. The union stands close to the town of the same name.

THE INFIRMARY,

to which part of the house we directed our steps first, is a two-storeyed building stated to hold 40 beds, and has an average of 25 patients under treatment. Structurally it compares favourably with other houses lately visited; the walls have a smooth surface, a dado of grey colour is painted behind the beds for about 4 feet from the floor, the rest being white-washed, the ceilings and pitched roof are plastered and white-washed. Here, however, the improvement ends; the windows are small and ill-fitting, placed on one side only; small square apertures in the opposite wall do duty for windows, the fire-places are old and inadequate, and the wards generally destitute of comforts for the patients. The wards occupy both floors, but that for males on the first floor was in the hands of the workmen, consequently that on the lower floor was more crowded than usual. Small wards for isolation have been taken off the ground-floor wards; they are cell-like structures, holding 1 or 2 beds; indeed, they appear to have been the idiots' quarters before a door was opened in the party wall. This construction makes the whole ward practically one, hence the use of these wards for isolation must be very limited. We found the same arrangement on the female side. The narrow beds are used throughout the infirmary, with straw ticks and pillows. We were informed that some hair mattresses are ordered for use on these frames, but the introduction of the hair mattress on this old frame will not add to the width or the length. Between the beds is a tier of shelves divided in the middle to hold mug, medicine bottle, or personal possessions; there were a few arm-chairs for the patients, and the inevitable bench.

THE PATIENTS

also in their appearance and in that of their beds contrasted favourably with some houses we had visited; they looked cleaner and more tidy, but when we went into detail we found the nursing was sufficient neither in quantity nor quality. The one nurse is untrained, and she has for assistance mostly women with illegitimate children; these pauper nurses are described by the medical officer in his report to the guardians "as ignorant and indifferent;" there is no night nurse, and, to quote from the same authority, "the patients on the male side are locked up without a light, and with such help as a fellow patient can render them." On the female side, also, the wards are left without a light through the night; the only light for the long winter evenings in the wards is a paraffin lamp. As we walked through the wards we noticed a case of fracture of the neck of the femur, fracture of the radius, cystitis, rheumatism, a burn—the patient having fallen into the fire in a fit—bronchitis, phthisis, and other chronic cases; an unruly man, a case of rheumatism, was placed apart in the small room by the stairs called the day room. From this list our readers will see that there are several patients requiring skilled nursing; one would rather not think too minutely of their condition.

LOCKED UP AT NIGHT IN THE DARK,

dependent on each other for assistance, say to the fractured femur or the rheumatic patient. We noticed, in traversing the wards, some utensils left unemptied by the beds, and, as the wards are locked during the night, the pails and buckets must remain so until the morning. The patients have no change from the wards, nor have the wards any relief from the patients, as there are no day rooms, but such as are taken for other purposes, and, even if not so appropriated, they are hardly suitable for use by sick or convalescents, being dreary, dark, and bare. That on the female side has a flagged floor, and is made use of as

THE INFIRMARY KITCHEN.

Here the cooking is done by the nurse, or, to speak more accurately, by an inmate under her supervision. There is no range, simply an open wide-mouthed fireplace, and the kitchen was very bare of cooking utensils, or of the means of serving the food to the patients. The diet consists principally of milk, bread, tea, and broth. We were glad to see that the day's supply of milk was kept in a cupboard, and the bread in a box in the kitchen. The deficiency in the kitchen is in process of being remedied, as we read in the last report that the guardians have authorised the placing of a range in this little kitchen, and the providing of cooking utensils, plates, knives, and forks. We are sure that this step on the part of the guardians will soon repay itself in greater economy in the preparation of the food and its distribution, both sources of great waste in these institutions.

THE FEVER HOSPITAL

has not been occupied for several years, and it is entirely dismantled. It is of the usual construction, and has its kitchen and laundry, with separate apartments for the nurse.

THE INFIRM WARDS

provide accommodation for about 18 men and the same number of women, and are situated in the wings of the body of the house; they were not more than half full when we saw them. The men were all out either at work or in the yard. The women, of whom about 6 are feeble-minded, were in their ward, under the charge of one of their number, who, as we entered the ward, was scolding and arguing with one of the feeble-minded in a loud, angry voice, justly drawing on herself the correction of the matron; but, as we noted the incident, we saw how unfit this inmate was to be placed in authority over helpless or imbecile paupers. The wards are badly lighted and ventilated, having one window at each end of a long room. The walls are rough and whitewashed, unrelieved by pictures or colouring, open rafters, narrow beds down each side, benches, one old fireplace, and evidence of the one paraffin lamp during the dark winter evenings. We saw one basin, over which hung a roller towel for common use, changed, so we were informed, twice a week. The men have a boarded floor dayroom adjoining the ward; that for the females has been appropriated to the nursery, and, by order of the authorities, the old women may not go into this day room.

THE NURSERY,

a flagged room, large, dark, and unfurnished, was tenanted by a mother and her child. A room adjacent is the maternity ward. It is quite small, holding one bed for the patient and another for the pauper in attendance on the confinement; the confinements average from six to eight in the year. The dormitory over the nursery is appropriated to the nursing mothers.

THE LAUNDRY

is rather better found in the way of apparatus; we saw a wringer and a mangle; but the drying room requires enlargement and ventilation. A disused Turkish bath, or rather hot-air bath, has been turned into a drying room, in which is placed a small ironing stove; it has no ventilation or outlet for the steam, so that the clothes dry very slowly, nor is the space nearly large enough for the number of clothes that pass through the laundry. The workhouse kitchen exhibits the primitive arrangements of a past date; the coppers are practically of no use, having been superseded by a stove and a portable cauldron which at the present time suffices for the simple diets of the inmates.

BATHS AND WATER SUPPLY

are non-existent; there is one movable bath for the hospital,

which when required can be filled and emptied by hand labour only. No water is laid on, either hot or cold; there are no indoor conveniences, and those outside are privies, on the waggon system; the absence of indoor closets involves the insanitary practice of using open pails and buckets. In the body of the house there is a fixed bath for the children's use with a cold water supply only. As we were passing through the yards to see the outside places, we noticed that most of the airing courts were overgrown with rank grass, and that no seats were provided for use out of doors.

Recommendations.

It is evident that the two improvements most urgently required are in the nursing of the patients and the provision of healthy sanitary appliances, and to these points we should endeavour to draw the attention of the guardians; but when we turn to the report of the medical officer placed before his Board in obedience to the instruction of the Local Government Board, we read that the committee appointed to inquire into the condition of the hospital "would not recommend any alteration in the system of nursing or the sanitary arrangements!" This Board, then, must be left to the central authority, and we trust that the sword of vengeance will soon fall.

THE BANBRIDGE BOARD: THE MEDICAL OFFICER AND THE PRESS.

This Board has been living in a fool's paradise, out of which it has been rudely shaken by the action of its medical officer, and now that it finds itself exposed to the trenchant criticism of an independent public, and that the "model workhouse" with its "model Board" is classed among such no'er-do-weels as (say) Cootehill, for instance, it is lashing its sides with fury. Dr. Hawthorne made a report on the state of the workhouse, in obedience to the mandate of the Local Government Board. That report was published in the *Banbridge Chronicle*, and "a Dr. Moorhead" has had the audacity to place this report before "a Medical Officers' Association," and from that report to class this model house among the "worst class." In this report we read that "the wardsmen and women are all paupers, the latter having illegitimate children, and in many cases are most undesirable and inefficient in attending to the comfort and helping in the nursing of the sick. The male wardsmen are all old and infirm patients in most cases, too infirm to discharge the duties required of them. The narrow beds, as described in Sir Philip Smyly's letter, are still in use in the lunatic wards, the upper wards of the infirmary, the children's wards, and the fever hospital; pails and buckets take the place of night conveniences; there are no knives, plates, or forks in use throughout the house. The food is good, well cooked, but badly served. The ventilation is bad." Dr. Hawthorne apologises for the mischief he has done, but we leave our readers to judge with whom the truth lies. We are sorry for the affliction that has overtaken this model Board, and we would advise them to keep their proceedings from coming before the public in future.

THE SIXTH ITALIAN CONGRESS OF INTERNAL MEDICINE.

Professor Baccelli's Presidential Address.—The Serotherapy of Tuberculosis.—The Next Congress.

The Sixth Congress of Internal Medicine was opened in Rome on October 22nd, under the presidency of Professor Baccelli. There was a large attendance of members of the profession from various parts of Italy.

Professor Baccelli in his opening address, after some introductory remarks, went on to speak of the great problems of etiology, which no longer included only the morphological appearances of the pathogenic micro organisms, but the study of toxic products. From pathology to the double sphere of practical medicine, and from the latter to the former motion was perennial, continuous. Intuition, however, and the conviction of new truths frequently appeared to the eyes of the clinician long before the laboratory furnished experimental proofs. The latest studies in Italy attested the truth of this. The scientific movement of the present time was most intense around the treatment of infectious diseases, and serotherapeutics held the place of honour. The therapeutic concept of Behring was justified by the results, but the critical judgment even here clipped the wings of an ill advised enthusiasm. Serotherapeutics in diphtheria now constituted the method which numbered the greatest successes. To-day through the labours of one of their colleagues, serotherapeutics was proposed also in tuberculosis. In the later times Italian labours in other provinces of pathology, especially in the nervous system, were creditable alike to the authors and to their country. While respecting all, they must not allow the scientific world to maintain that those new truths which had their birth in Italy had been discovered elsewhere. One of them had demonstrated some years ago to Naunyn that the views expressed by him as to the murmur in the diseased heart had already been taught by an Italian clinician. To-day the same statement might be repeated in reference to some late French works attesting as theirs the lines of propagation of mitral murmurs (especially insufficiency) which for thirty years had been taught and published in Italy. The address was much applauded.

A discussion on Serotherapeutics was then opened by Professor Foà, Director of the Anatomico-Pathological Institute of Turin. After referring to his own investigations and to those of others, he summarised the present condition of the subject. Hitherto the most certain and efficacious results had been from toxic infections; the latest researches, however, showed the possibility of obtaining effects quite as certain in septic infections. The concept that every infection reduced itself to a pure poisoning, and that every reaction consisted in the production of the counter-poison, was, perhaps, too absolute. In the case of diphtheria, serumtherapy had issued triumphant from the test of practice, and statistics showed the sensible diminution of the mortality obtained by the new treatment. Serumtherapy had been less efficacious in acute cases of tetanus. The tetanic manifestations in such cases would indicate grave organic lesions already complete, against which serumtherapy did not prevail; it was, however, the best preventive remedy. In typhoid and cholera serumtherapy had not found any application up to now. The grave difficulty probably depends on the notable difference existing between the experimental results and the natural condition of the infections in man. The latest researches of Foà have solved the problem of serotherapeutics in diplococcic infection of the rabbit; it remains to study the problem in the larger animals, which allowed the results to be applied to man. Serumtherapy must not be allowed to hinder the development of prophylaxis. Both aimed at the prevention of diseases, and serumtherapy, where it shows itself in preventive immunisation, became a prophylactic measure.

Professor Maragliano, Director of the Institute of Clinical Medicine, Genoa, followed. He referred to his researches on tuberculosis. He said he had clearly explained the materials he used in the vaccinations, and he summarised the new results obtained with his treatment by many Italian and foreign physicians. A total of 215 cases had up to now been reported. The treatment was used in cases of most diverse character, and all confirmed the value of the treatment. He concluded his address with the following propositions: 1. Therapeutic serums, to develop their special action, require the active concurrence of the affected organism. 2. The value of serumtherapy can be determined only by clinical observation. 3. Serumtherapy can develop its special action as much in acute as in chronic infections. 4. The therapeutical serums introduced up to the present in practice in Europe are absolutely innocuous. 5. Serumtherapy in its clinical application has up to now given indeterminate results in streptococcic and typhoid infections, doubtful in tetanus, promising in pneumonia, which awaits only a methodical clinical consecration; positive in tuberculosis, which only wants the confirmation of an extensive trial; incontestable and surely triumphant in diphtheria.

A discussion on the Retardation of Nutrition was opened by Professors De Renzi and Reale of Naples. An interesting discussion followed in which Professors Bianchi, Devoto, De Dominicis, etc., took part.

Several other important papers were read at the Congress, but exigencies of space prevent our giving even the titles or the names of the authors. The Congress came to a close on October 25th after a vote of thanks to Professor Baccelli. It was decided that the next Congress should be held in Rome in October, 1896, and the following officers were elected: Professor Baccelli, President; Professors Muri and De Renzi, Vice-Presidents: Professor Maragliano, Organising Secretary; and Professor Rossoni, Treasurer.

It was the general opinion that this Congress was the most successful that has yet been held. The only disappointment in connection with it was that Professor Maragliano had not explained his method of obtaining the antituberculous serum, as many of the members had expected he would do.

THE "DAILY CHRONICLE" AND THE PRISONS.

In the British Medical Journal of October 5th we remarked that "nothing comes out more clearly in the recently issued Blue Book of evidence taken by the Departmental Committee on Prisons than the failure of certain noisy and neurotic critics to prove their charges of maladministration against the prison authorities." We added that "our prison system rests entirely on Acts of Parliament which have been passed for the guidance of prison authorities; and the evidence from beginning to end proves that the Commissioners of Prisons have administered these Acts with loyalty and fidelity, and that the transfer of the prisons to Government has been to the public advantage in the way of economy, uniformity of discipline, and improved sanitation, while it has distinctly tended at the same time to the advantage of the prisoners themselves." It is admitted by the Committee that the direct gains to the community in economy and improved sanitation, as reflected in the reduced death-rate, would of themselves have sufficiently justified the changes made in 1877. This being the case, we much regret that the *Daily Chronicle* should repeat its misrepresentations, and should persist in its attempt to mislead the public on so important a subject as the administration of our prisons.

What may be its motive we do not know, but it is evident that our contemporary wishes to induce the public to believe that the rate of insanity in English prisons is abnormally high, and that this rate of insanity is due to ill-treatment of prisoners. In its issue of October 28th the *Daily Chronicle* states that, according to the Prisons Committee, the insanity is produced "by the very low and distasteful dietary to which habitual petty offenders are almost continually subjected." We have diligently searched through the report of the Committee, but have failed to find any statement of this character. We have found, however, a statement of a very opposite purport and drift at page 33 of the Committee's report, par. 92. It is to the effect that it is "inevitable" that the ratio of insanity should be greater in prison than outside. The Committee add that "the average prisoner in height, weight, strength, and mental condition is markedly below the average of the outside population."

The population of the prisons is a fluctuating population, which is in a state of perpetual change, and is renewed about thirteen times every twelve months. At every local prison fresh prisoners are constantly arriving, some of whom are lunatic. The sane prisoners are discharged on expiration of sentence, while those who are unsound in mind are sent to asylums. What possible benefit or advantage of any kind can be derived from comparing a fluctuating population of this character with a population which is stationary, or from attempting to deduce that the prisoners who are insane on their admission (and who are speedily certified as such) become insane after admission as the result of inhuman treatment? In making these reckless statements the *Daily Chronicle* is bringing a serious charge against the medical officers of prisons, many of whom are leading practitioners in the towns in which the prisons are situated. The medical officer of every prison possesses powers of interference transcended only by those of the Secretary of State, and if there is a particle of truth in the statements of the *Daily Chronicle*, every medical officer must have seriously neglected his duty. We shall prefer to believe that a humane, accomplished, and high-minded body of men have faithfully fulfilled their obligations, until we meet with some reason to the contrary much stronger than anything yet adduced.

With regard to the death-rate, we have referred to the annual report of the Medical Inspector of Prisons for the year ended March 31st last, and can find nothing in the smallest degree to justify the *Daily Chronicle* in stating that this report is "misleading and fallacious." The facts are given in the plainest manner, and we have seldom seen any return more complete than that which gives the particulars of the death of each prisoner who died during the year (Appendix No. 19). The number of deaths from natural causes in the local prisons of England and Wales was 109, or 7.6 per 1,000 of the average daily population. Thirty-four prisoners were released on medical grounds, exclusive of pregnancy, or at the rate of 2.3 per 1,000. Reckoning all the releases on medical grounds as deaths, and adding them to the actual deaths, the mortality for the year was 9.9 per 1,000. Ninety prisoners died during the first five months of imprisonment, and 5 died who were in or had just passed through the sixth month, making a total of 95 who died during the first six months of imprisonment. As the total number of deaths from natural causes was 109, it follows that only 14 died during the period following the sixth month.

With these facts before us we cannot but regret the attempts of our contemporary to throw odium upon the administration of an important public department. The inmates of our prisons are subjects of constant solicitude from the moment of their admission to that of their liberation; they are provided with many comforts, and receive a diet that would be considered luxurious by many a free labourer. If they fall ill they are admitted into hospital, where they have the benefit of skilful medical attendance, and enjoy "medical comforts" and delicacies in profusion which would be quite out of their reach in their own homes. Public servants are, of course, always open to fair criticism, but the attack made in this instance appears to be quite unfounded.

THE OPENING OF THE GLASGOW MEDICAL SCHOOLS.

Work at the Glasgow medical schools was begun last week. Formal openings of any special kind are not the fashion in Glasgow, or indeed in any of the Scottish schools. In this, as in many other respects, it is the University that sets the fashion. Until the recent changes by the University Commissioners, the session at the medical classes began a week or ten days sooner than that of the other faculties, so that the formal opening of the University session did not occur till after the medical session was well under way. The medical classes were, therefore, allowed to begin their work quietly, any public trumpeting being obviously improper before the dignified solemnity of the public opening of the University by the Chancellor or Vice-Chancellor had occurred. The extramural schools have not thought it necessary to take advantage of this situation by providing any brilliant oratorical opening of their session, and have contented themselves with a semi-public opening by one of the staff in turn. Some of the professors or lecturers take the opportunity of the opening day of the class to give an address on a subject outside the exact limits of their own commission, but even in this there is no uniformity. Last week, for instance, Professor Joseph Coats opened his class of pathology with an address on Ludwig and Pasteur, and Professor Napier opened the session at St. Mungo's College with an address on "The Senses."

ROYAL NATIONAL PENSION FUND FOR NURSES.

A Third Gift of £22,500 to the Donation Bonus Fund.

We have the pleasure to announce that Her Royal Highness the Princess of Wales, as President of this Fund, was welcomed home on her return from Denmark on Saturday, October 26th, by a third gift of £22,500 for her nurses, as follows below, making the Donation Bonus Fund of this Society upwards of £67,000, in addition to the £11,179 standing to the credit of the Janius S. Morgan Benevolent Fund. This further sum of £22,500 has been subscribed since the Princess of Wales received the third and fourth thousand nurses at Marlborough House at the end of July.

It is the aim of the Princess of Wales Pension Fund for Nurses to encourage every nurse in the British Empire to save each year, if possible, from one-eighth to one-sixth of her earnings, as a provision against sickness, old age, and incapacity for work. Full inquiries and a careful estimate of all the circumstances of the case have convinced the Council that no member should receive sick pay or a pension of less than 10s. per week when she becomes incapable for work from any cause. Anyone may, however, join for an annuity of any amount. In the hope of placing all nurses in a position to secure the minimum provision, it is necessary to add £20,000 to the credit of the Donation Bonus Fund for every 1,000

nurses who join the Society. When 5,000 nurses have become members, and the Donation Bonus Fund amounts to £100,000, it is believed that the compound interest that will accumulate during (say) each twenty-five years will suffice to provide for every nurse of each series 10s. a week, with the aid of her own contributions. If this prove true, and whenever this occurs, the capital sum of £20,000 will be freed for the benefit of the next successive 1,000 nurses. In other words, with £100,000 in hand the fund ought to work automatically, or nearly so. These calculations may, however, be upset by the great popularity of the Pension Fund, for nurses are joining in such large numbers that the new policies issued in the first three weeks of the present month amounted to no fewer than 103. Up to this date the money contributed to the Donation Bonus Fund has come almost entirely from the merchant princes of the City of London, the general public, who owe so much to nurses, having so far contributed almost nothing. No appeal for funds has been nor ever can be made for this fund, but everybody has an opportunity of spontaneously contributing through the Society's bankers—the Bank of England.

The following is a list of the donors of the £22,500 completed this week:

	£	s.	d.
Mr. J. B. Robinson	5,000	0	0
Messrs. Wernher, Beit, and Co.	5,000	0	0
Mr. Walter H. Burns (a further)	2,000	0	0
Lord Iveagh	2,000	0	0
Mr. J. Pierpont Morgan (a further)	2,000	0	0
Messrs. N. M. Rothschild and Sons (a further)	1,000	0	0
Mr. D. Marks	[illegible]	0	0
Messrs. Marks, Bulteel, and Co.	[illegible]	0	0
Mr. E. A. Hambro (a further)	[illegible]	0	0
Messrs. L. Hirsch and Co.	[illegible]	0	0
Messrs. Ansell, Mankiewicz, and Tallerman ...	[illegible]	0	0
Mr. E. Cassel	[illegible]	0	0
Mr. Robert Gordon (a further)	[illegible]	0	0
Mr. G. Bulteel	[illegible]	0	0
The Hon. Egremont Mills	[illegible]	0	0
Mr. E. Rawlings (a further)	100	0	0
Mr. C. Morrison (a further)	100	0	0
Mr. H. L. Raphael	100	0	0
Mr. D. J. MacRae	[illegible]	0	0
Messrs. De la Rue, Bellairs, and Pearson ...	[illegible]	0	0
Messrs. Hyam Brothers	[illegible]	0	0
Mr. Carl Hanau	[illegible]	0	0
Mr. Harry Pearson	[illegible]	0	0
The Duke of Northumberland	[illegible]	0	0
Mr. Jeffery Whitehead	[illegible]	0	0
	£22,500	0	0

LITERARY NOTES.

It is stated that a biography of Professor Huxley is being prepared by his son, Mr. Leonard Huxley, who will be greatly obliged if those who possess letters or documents of interest will send them to him at Charterhouse, Godalming. They will be carefully returned after being copied.

An article on Louis Pasteur, by Dr. Sims Woodhead, appears in the November number of *Science Progress*.

A new periodical, issued by the United States Weather Bureau and entitled *Climate and Health*, has recently appeared. It is edited by Dr. W. F. R. Phillips, under the direction of Professor W. L. Moore, the new chief of the Weather Bureau, and, as its name imports, it is devoted to climatology in relation to health and disease. By showing the statistics of mortality and morbidity side by side with those of climate, it is hoped that new facts as to connections between sickness and weather changes may be discovered.

Mr. W. B. Saunders, of Philadelphia, announces the appearance on January 1st, 1896, of an *American Yearbook of Medicine and Surgery*, which he intends thenceforward to publish yearly. The book is to be edited by Dr. George M. Gould, with the assistance of a competent staff. It is the special purpose of the editor, as indicated in the prospectus, not only to review the contributions to American journals, but also the methods and discoveries reported in the leading medical journals of Europe, thus making the work "characteristically international." A feature of the book is to be an abundance of original and selected illustrations.

Mr. James Couldrey, of Scunthorpe, near Doncaster, writes to point out that the words, "He giveth his beloved sleep," quoted in Huxley's epitaph, are from the 127th Psalm, and in the New Version they read, "Giveth unto his beloved sleep," with a marginal note "or 'in sleep.'" This phrase, according to Mr. Couldrey, has a totally different meaning from that which the writer of the epitaph intended.

Mr. George Wherry, Surgeon to Addenbrooke's Hospital, in an "Alpine Letter," published in a recent issue of the *Cambridge Chronicle*, calls attention to the fact that a Swiss guide can go face forward and walk [illegible] on a slope, while the amateur following has to go on his toes or turn sideways at the steep part. The explanation of this is not quite clear. Probably it is largely a matter of balance, but, as Mr. Wherry suggests, there may be some extra mobility in the ankle of the guide accustomed to climb from a very early age. To throw light upon the point, Mr. Wherry induced Captain Abney to take photographs of guides in the act of climbing a rock. These, when compared with similar photographs of an amateur, may throw light on this curious bit of physiology.

Messrs. Kegan Paul, Trench, Trübner and Co. will issue in November the first number of a new series of the *Popular Science Monthly*. This periodical is edited by Professor William Jay Youmans, who established it more than twenty years ago. It records all scientific facts and discoveries as they present themselves, and is a register of all scientific developments. It strikes us as a happy thought on the part of the publishers to introduce to European readers a magazine which has been so long known and appreciated in America.

The sixteenth and final volume of the first series of the *Index Catalogue* of the library of the Surgeon-General's Office of the United States Army has recently been published. It includes 12,759 author titles, representing 4,897 volumes and 11,613 pamphlets. It also contains 8,312 subject titles of separate books and 13,280 titles of articles and periodicals. Owing to the large increase in the library since the publication of the *Index* was begun a second series is needed and the manuscript has been prepared; it will probably make five volumes of the same size and style as those already published. It is stated that the present volume is probably the last that will be issued under the personal supervision of Dr. John S. Billings. The Surgeon-General's library now contains 116,847 books and 191,598 pamphlets, practically all of which have been obtained in the course of the last thirty-five years, while at least one-sixth of the whole have been presented either in exchange or as free gifts to the library.

The *Medical and Surgical Reporter*, which recently migrated from Philadelphia to New York, has apparently not found that city favourable to its journalistic health. At any rate after a very brief stay there it has returned to its native place, where it will be edited by Dr. Harold H. Kynett.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

At the annual general meeting of the Royal Academy of Medicine in Ireland, held on October 25th, in the Royal College of Physicians, Dublin, the following officers were elected for the year 1895-6: *President:* James Little. *General Secretary:* William Thomson. *Secretary for Foreign Correspondence:* J. W. Moore.

Medical Section.—*President:* T. W. Grimshaw. *Council:* J. Hawtrey Benson, J. Craig, H. C. Drury, F. A. Hayes, A. Montgomery, J. O'Carroll, A. R. Parsons, J. M. Redmond, W. G. Smith, H. C. Tweedy.

Surgical Section.—*President:* Sir Thornley Stoker. *Council:* C. B. Ball, E. H. Bennett, A. Chance, H. Fitzgibbon, Kendal Franks, E. Hamilton, F. T. Heuston, J. Lentaigne, A. Meldon, Sir Wm. Stokes.

Section of Obstetrics.—*President:* Lombe Atthill. *Council:* G. Cole-Baker, R. H. Fleming, Robert A. Flynn, J. H. Glenn, A. J. Horne, F. W. Kidd, J. L. Lane, A. V. Macan, R. D. Purefoy, A. J. Smith.

Section of Pathology.—*President:* Connolly Norman. *Council:* A. H. Benson, H. Bewley, Edmund J. M'Weeney, J. O'Carroll, A. C. O'Sullivan, A. R. Parsons, R. Glasgow Patteson, J. M. Purser, J. A. Scott, J. B. Story.

Section of Anatomy and Physiology.—*President:* John Symington (Belfast). *Council:* A. Birmingham, D. J. Coffey, D. J. Cunningham, H. C. Earl, Alex. Fraser, R. H. Woods.

Section of State Medicine.—*President:* J. M. Redmond. *Council:* E. Macdowel Cosgrave, Thomas Donnelly, Ninian Falkiner, D. Edgar Flinn, J. W. Moore, H. C. Tweedy.

THE LANCHESTER CASE.

Dr. Blandford's Certificate.

Dr. G. **Fielding Blandford** has favoured us with the following statement: "I was asked by Mr. Lanchester and two of his sons if I would see his daughter on the following morning, and was told that she intended to go at once and live in illicit intercourse with a man in a station of life much below her own. They said that they thought she was not in her right mind. I went to the house as arranged, and with two of her brothers visited Miss Lanchester, who was at breakfast. Her brothers questioned her as to her intention of living with the man. She declared that she would do so, that it was right to do so, and in answer to a question said she would not marry him, even if he would marry her. She could give no reason for this conduct beyond saying that marriage was immoral. How it was she did not explain. She also said that if she married she should lose her independence. I pointed out that if she had children and was deserted she would have very little independence, but she only replied that he would not desert her. She could, she said, earn her own livelihood if he did. I reminded her that if she had the encumbrance of a family she would not be able to do this. Something was said at the end of the interview about a community of goods, and she explained her views on this. The interview lasted half an hour. I came to the conclusion that Miss Lanchester was of unsound mind for these reasons: I was informed that there was insanity in her family, her grandmother and an uncle having been insane; that she had always been eccentric, and had lately taken up with Socialists of the most advanced order. She seemed quite unable to see that the step she was about to take meant utter ruin. If she had said that she contemplated suicide a certificate could have been signed without question; I considered I was equally justified in signing one when she expressed her determination to commit this social suicide. She had a monomania on the subject of marriage, and I believed that her brain had been turned by Socialist meetings and writings, and that she was quite unfit to take care of herself."

The following is the form of statement which it is necessary should be filled up in urgency cases:

53 Vict. c. 5—Form 9.

(STATEMENT ACCOMPANYING URGENCY ORDER.[1]

I certify that it is expedient for the welfare of the said ______
______ [or for the public safety, *as the case may be*] that the said ______
should be forthwith placed under care and treatment.

My reasons for this conclusion are as follows: ______
______
______
______
______
______
______]

4. The said ______
appeared to me to be [*or* not to be] in a fit condition of bodily health to be removed to an asylum, hospital, or licensed house.[2]

5. I give this certificate having first read the section of the Act of Parliament printed below.

Dated this ______ day of ______
One Thousand Hundred

(Signed) ______
of[3] ______

Extract from Section 317 of the Lunacy Act, 1890.

Any person who makes a wilful misstatement of any material fact in any medical or other certificate, or in any statement or report of bodily or mental condition under this Act, shall be guilty of a misdemeanour.

Dr. Finny's Certificate.

Dr. W. E. St. Lawrence Finny, of Clifton Hill, who signed the second certificate, has been good enough to inform us that, acting on the request of Mr. and Mrs. Lanchester, whose family medical attendant he is, he called on October 25th at the Priory, Roehampton, and had an hour's interview with Miss Edith Lanchester. From the character of the statements made to him by her, and her general demeanour, he felt it to be his duty to sign the certificate in the ordinary form at about 2 P.M. on that day. At 3 P.M. Mr. Lanchester called at the Priory, and took Dr. Blandford's and Dr. Finny's certificates to a magistrate who, however, was not at home. The Commissioners in Lunacy attended at the Priory at 5 P.M., and after an interview with Miss Lanchester, ordered her release, so that it would appear that she was never in fact detained on Dr. Finny's certificate. Under these circumstances it does not seem necessary to make public the further observations of Dr. Finny as to Miss Lanchester's condition at the time of his interview with her.

Miss Lanchester at the Asylum.

From inquiries which we have made we understand that on arrival at the Priory Miss Lanchester immediately demanded to see the medical officer. On seeing him she entered fully, and with considerable volubility, into the position of affairs which had led to her removal. Doubtless this was quite natural, but it tended to give a certain support to the allegations in the certificates. We believe that these certificates pointed out her apparent inability to recognise the moral obliquity of the step which she proposed to take, and detailed certain facts in regard to family history—in which there is undoubted taint of insanity—and other matters which were such that the medical officer felt that, the certificates being quite in order, he had no alternative except to admit her as a patient.

On admission, she was given into the charge of a companion, and, at her own request, was at once provided with some refreshment. In the later part of the day she displayed considerable emotion at her position, but she passed a good night.

In consequence of statements made in the certificates and for other reasons—especially the fear of any rash act on her part—it was thought well that she should not be left without supervision, and for the first two nights a nurse sat up with her. The talkativeness or excitement, however, which had shown itself on her first admission soon passed away, although whenever the subject which had led to her removal was mentioned she showed perfect willingness to discuss it; but she did not, as at first, refer to it unless the topic was introduced. On the third night it was not thought necessary that she should be sat up with, but the nurse slept in the room with her.

As soon as she was admitted proper copies of the certificates were forwarded to the Lunacy Commissioners in time to arrive at the office the same (Friday) afternoon. The father of the patient was at the same time given to understand that if she was to remain at the Priory a second certificate from another medical man would have to be obtained, and that arrangements would have to be made to present these before a justice of the peace in order that an order for admission might be issued.

It should be noted here that although Miss Lanchester had rooms in London, she had by no means severed her connection with her home. She had her own room at her father's house, and generally went down there about once a week.

We believe that the usual medical attendant of the family, although he had not actually attended the patient, had from his knowledge of the circumstances and the family history arrived at the conclusion that her conduct was fully in accord with the idea that she was insane, and after visiting her on Monday he certified to the effect that he considered her of unsound mind.

On Monday, however, she was visited by the Lunacy Commissioners, who after full inquiry came to the conclusion that in the terms of the Act the patient appeared to be "detained without sufficient cause," and ordered her discharge. They did not, however, as has been reported in some papers, immediately set her at liberty, but ordered that she should be discharged on or before November 1st.

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[1] If an urgency certificate is required it must be added here. (Form No. 9.)

[2] Strike out this clause in case of a private patient whose removal is not proposed.

[3] Insert full postal address.

Under these circumstances Dr. Chambers, knowing that she certainly would not return to her father's house, and not feeling justified in turning her out without any arrangements having been made for her reception, took her as a guest in his own house pending further arrangements, and communicated with the Lunacy Commissioners.

At the office of the Commissioners the father of the patient met Mr. John Burns, and with him returned to the Priory. Later on Mr. Sullivan appeared, and when Miss Lanchester left she was accompanied by Mr. Burns and Mr. Sullivan, the arrangement being that she should return to her rooms in London in the house of Mrs. Gray.

We believe that after her discharge had been decided upon, the Commissioners urged upon her in the strongest terms the necessity of reconsidering her intentions as to her future arrangements, pointing out the disastrous consequences which might follow upon her proposals, and expressing their sorrow that they were unable to sanction stronger measures, with the object of protecting her from herself, and it seems not improbable that the influence of those with whom she has associated herself may have some effect in emphasising this advice, and bringing about some legal form of marriage in place of the arrangement she had thought of. It is quite clear that the very last thing which practical Socialists would desire would be the popular association of their ideals with a loosening of the marriage tie. It is a sad case, and one which it is difficult to think of without forebodings.

The outside public may, however, derive from it the very comfortable assurance that no one nowadays can be detained in an asylum on a false pretence of lunacy, however wildly people may talk, comparing urgency orders to the *lettres de cachet* of old.

The Provisions of the Lunacy Act.

We turn to the consideration of the provisions and safeguards with regard to the kind of order ("urgency order") on which the subject of the recent affair was removed from her home.

In cases of urgency where it is expedient, either for the welfare of a person (non pauper) alleged to be a lunatic, or for the public safety, that the alleged lunatic should be forthwith placed under care and treatment, such person may be received and detained in an institution for lunatics ..... upon an urgency order, made, if possible, by the husband or wife or by a relative of the alleged lunatic, together with a statement of particulars, accompanied by one medical certificate. A medical statement as to the reasons for urgency must also be contained in the certificate. The urgency order and statement of particulars, the medical certificate and statement, must all be in the several forms prescribed by the Act. The person signing the urgency order must have personally seen the alleged lunatic within two days before the date of the order; the alleged lunatic must be received within two clear days of the medical examination; the order, then, is in force for seven days from its date, or until a pending petition for a reception order (if there be such) is disposed of. For longer detention, the whole full proceedings are necessary, namely, petition to the "judicial authority," with statement of particulars, two medical certificates on examination, and order for detention signed by a judicial authority. These are the chief provisions; a number of other existing and minor provisions and safeguards would be tedious in recital. The great point is that the urgency order is of very brief force, and the whole machinery for ordinary reception orders must be put into action, and the whole business done fully from the beginning in order to secure detention under a regular reception order should the same be found necessary. Properly used the provisions as to urgency orders are immensely to the welfare of a few lunatics and in favour of the public safety. They are the outcome of a recommendation made by the Parliamentary Select Committee on Lunacy Law in 1878—a Committee before which the burning lunacy questions were thoroughly threshed out, and which reported so fully after hearing patiently all shades of opinion. This Select Committee appointed by Parliament reported that "the difficulty which presents itself at the outset is the universally conceded importance of the speediest possible treatment of the first symptoms of derangement. This might doubtless be carried on, and in many instances better carried on, outside the walls of an asylum, but in most cases such would be obviously impossible, nor would an intermediate hospital, which has been suggested, effectually prevent the taint of insanity from attaching to temporary cases. Any impediment to the rapid conveyance of a patient to an asylum might, in some instances, render the case hopeless."

The urgency order is a most valuable provision in some cases, as, for example, when a person becomes deranged at home or in lodgings, and is violent, dangerous, destructive, or bent on suicide, and perhaps making violent attempts to that end.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

SOUTH-WALES AND MONMOUTHSHIRE BRANCH.—The next meeting of this Branch will be held, by the kindness of Dr. Pringle, at the County Asylum, Bridgend, on Tuesday afternoon, November 19th. Members are requested to give notice of communications to be brought before the meeting before November 3rd, to D. ARTHUR DAVIES, M.B., Swansea.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE first meeting of the Branch was held on October 10th, Dr. CARTER, President, in the chair. Sixty-two members and visitors were present.

New Members.—The following members of the Association were elected members of the Branch: Elizabeth Beilby, M.D., Northern India; R. W. Henry, M.B., Eye Hospital, Birmingham; O. R. Lewis, M.B., Perry Barr.

Proposed Ethical Committee.—The question of forming an Ethical Committee was discussed. The Branch agreed as to the desirability of appointing such a Committee, and referred the matter to the Council to formulate a scheme.

Gastro-Enterostomy.—Mr. HASLAM showed a man, aged 54, on whom he had performed a gastro-enterostomy to relieve the symptoms of a pyloric obstruction from growth. The abdomen was opened in the middle line above the umbilicus, and the pylorus was found as an indurated mass of tissue closely adherent to the neighbouring structures, so much so that excision was not practicable. The jejunum was attached to the anterior surface of the stomach by an oval Murphy's button, and the abdominal wound closed. The patient did well, and had only vomited three times since the operation. He was able to eat ordinary food, and had no pain whatever; he had gained 10 pounds in weight, and was apparently quite well. The button had not yet passed, nor could any trace of it be made out.

Spontaneous Perforation of Pregnant Uterus.—Mr. CHRISTOPHER MARTIN showed a pregnant uterus, removed by abdominal section, in which spontaneous perforation had

been caused by hydatidiform disease of the chorion. The patient was aged 38, married five months, and three months pregnant. She was perfectly well until forty-eight hours before the operation, when sickness and diarrhoea set in. Next the symptoms of abortion occurred. Eight hours before operation Dr. Wilson, of [illegible] Heath, removed from the vagina a large mass of "hydatid mole," but no instrument was introduced into the uterus. When seen shortly afterwards by Mr. Morton she was blanched and collapsed, with a thready pulse of 130, and obviously suffering from acute internal hæmorrhage. The uterus was enlarged and empty, and digital examination discovered no sign of perforation. The abdomen was opened without delay and found full of blood. On the right side of the anterior surface of the body of the uterus was a raised oval purple swelling as large as a walnut, in the centre of which was a ragged perforation the size of a threepenny-piece, through which a tuft of chorionic vesicles was projecting. The tissue of the uterine wall around this perforation was undermined and infiltrated with chorionic growth. Mr. Morton at once decided to perform total extirpation of the uterus. The broad ligaments on either side were rapidly ligatured and divided down to the vaginal roof, the bladder was separated from the uterus, the vagina opened and the uterus removed. The abdomen having been washed out, the ligatures on the broad ligaments were drawn down through the vagina, the latter packed with iodoform gauze and the abdominal wound closed. The patient, though put back to bed nearly pulseless, rallied well, and on the 12th day was out of danger. Mr. Morton said that spontaneous perforation of the gravid uterus caused by infiltration of its wall with hydatidiform chorionic villi was exceedingly rare. He could find only 2 other cases on record. All of these had died, one from peritonitis and the rest from intraperitoneal hæmorrhage. His own case was apparently the only one which had been saved by surgical interference.

Disseminated Tubercle of Lung.—Dr. Foxwell showed the middle lobe of the right lung of a man who had died of tuberculous phthisis. When first examined, six weeks before death, the physical signs over this lobe were: movement limited, only impaired percussion note, breath sounds feeble, apparently distant but vesicular. Though no [illegible] sound could be obtained, Dr. Foxwell suspected a small pneumothorax whose communication with the lung had become closed, the breath sounds heard being those of the adjacent fairly healthy tissue. Repeated examination during the next fortnight did not alter this opinion, though it grew less certain. But before death the breath sounds had become harsher and louder; one or two clicks could be detected, whilst the percussion note became [illegible]. The diagnosis now lay between emphysema and disseminated tubercle. The latter was chosen, as the breath sounds were far less grating than those usually heard over a patch of emphysema with no tympanitic resonance, and the clicks were [illegible]. The post-mortem shown confirmed the diagnosis, the tubercles just beneath the anterior surface occurring singly, but some two-thirds of an inch from this small nodules appeared, the tubercles forming there being [illegible] though moderately pigmented. This striking confirmation of the exactness of Walshe's classical description of the signs of miliary tubercle is, in Dr. Foxwell's experience, sufficiently rare to make it worthy of record.

The Nauheim (Schott) System of Treatment of Heart Disease.—Dr. Bezly Thorne read a paper on this subject, which is published at p. [illegible].—Dr. [illegible] Thomas said he was by no means opposed to the view held by Dr. Schott as to the methods inducing more powerful contractions of the myocardium, but, at the same time, clinical observation of cases in which there existed an obstacle to the rapid filling of the arteries, such as obstruction in the course of the pulmonary circuit and aortic stenosis, in which it had been found necessary to take precautions in order to avoid [illegible], had led him to believe that an increase of arterial capacity was induced independently of ventricular contraction, and perhaps in point of time antecedent to it. He believed that both causes co-operated in relieving the heart, and therefore in diminishing the area of dulness. With regard to the objection that increase of arterial capacity had been observed to accelerate the pulse, he thought that it was quite conceivable that it would do so if the heart were not, at the same time, stimulated to more powerful contraction. With reference to Graves's disease, he had [illegible] experience showed that in that class of cases improvement came very slowly, and that the expectation of immediate or rapidly ensuing relief was sure to be disappointed. As regards aneurysm of the arch of the aorta, he was aware that eminent authorities were opposed to the application of the Schott methods, and he admitted that such cases should be dealt with in the most careful and cautious manner. Out of three cases which were present to his mind, two, however, had shown marked improvement, and Dr. Schott himself was disposed to modify the adverse opinion he had formerly expressed. With regard to dietary prescriptions, his observations had led him to believe that strict limitation of fluids was not only useless but actually harmful. He contended that abstinence from water exercised an inhibitory influence on renal excretion, and promoted the storage in the blood stream of the products of imperfect digestion and of depraved metabolism, inducing arterial and capillary contraction, and increasing peripheral resistance. He advocated, however, a limitation of carbohydrates and the free use of nitrogenous foods, on the ground that the former supplied materials productive of gastro-intestinal fermentation, and that the resulting deranged acid encouraged the retention, if not the formation, of uric acid and of other poisonous ingredients of the blood. On the subject of acute diseases, he said that he had been taught by Sir William Jenner years ago to believe that all such affections induced degeneration and enfeeblement of the heart, and he therefore held that one of the great dangers of convalescence might be averted by a judicious resort to the methods under consideration. He had especially observed that resolution and repair were hastened in an extraordinary degree after acute affections of the air passages and of the substance of the lungs. He added that it would be difficult to exaggerate the benefit which might be gained in the stage of heart weakness so characteristic of the post-influenzal condition. Stress was laid on the importance of removing patients during treatment, and for a short time afterwards, from habitual surroundings. If these conditions were observed, he said that the results of treatment in England would be scarcely less satisfactory than those attained in Nauheim.—Sir Walter Foster could confirm many of the statements made. Some of the cases of cure might seem remarkable, but they could be explained by the effects of better local nutrition associated with improved general conditions. As regards the action of the baths on the pulse he recalled some experiments of his own made many years back in connection with sphygmographic work in which he found baths of the same temperature followed by similar results. The stimulating effect of these highly-charged baths and the pressure they exerted on the surface of the body would have considerable effect on the venous circulation. He himself thought the muscular movements of Schott also acted by helping the venous circulation, and by lessening the tendency to stagnation in the veins gave a lift to the heart, and so brought about the increased arterial tension and improved heart action. A method that aided the filling of the arteries in cases of chronic heart disease was potent in improving the strength of the heart itself as well as the general nutrition. Hence the after-effects of this method of treatment. He could not help, however, uttering a warning against its application to the treatment of aneurysm.—Mr. Wm. Armstrong (Buxton) said that from experience of nearly 100 cases of various cardiac affections treated by him at Buxton by Nauheim baths and exercises, he was distinctly of opinion that, used with care and in properly selected cases, these Schott methods were capable of doing a great amount of good in a class of ailments in which the effects of the ordinary methods of treatment were so often disappointing. At the same time he wished to protest, as strongly as possible, against their indiscriminate use in all cardiac cases; this course might be most dangerous to the patient, and certainly would tend to prejudice the good faith of the medical profession against a valuable method of treatment. He had arranged for use in Buxton baths of six different strengths, the first two containing sodium chloride and calcium chloride, and the later ones, in addition to these ingredients in in-

creased quantities, sodium bicarbonate and hydrochloric acid to evolve carbonic acid gas. The movements, nineteen in number, were given by carefully trained attendants, who were instructed in three strengths of resistance: (1) gentle, (2) medium, (3) firm. Sometimes only two or three movements out of the nineteen were given at one time, and in cases where the patient's state necessitated it were given in the sitting or lying instead of in the standing position. There was no question that these baths and movements produced a slowing, steadying, and strengthening effect on the cardiac action. The cases he had found most benefited by this treatment were endocardial exudations after acute rheumatism, functional cardiac affections, cardiac neuroses such as pseudo-angina, the influenzal and alcoholic hearts, many mitral affections, cardiac dilatation, the "flabby" heart and the early stage of fatty heart. He considered the treatment much less useful in aortic than in mitral affections, and would not advise its use in aneurysm, arterio-sclerosis, and very carefully only in true angina. Mr. Armstrong added that one benefit of these artificial baths was that he had been able to give this treatment in Buxton in the winter just as well as in the summer.—Dr. SIMON thought it right to approach the Nauheim treatment in a spirit of careful scepticism. He did not cavil at the results; he accepted them on the authority of those who brought the cases forward. He asked only if it was necessary to attribute the good effects of the treatment to the particular methods adopted, and if it would not be possible to obtain equally good results by a careful use of massage and ordinary exercise under medical supervision as careful and as continuous as that necessitated by the Schott methods. He thought the greatest good to be derived from the promulgation and practice of Dr. Schott's methods was to remove from the minds of the laity and medical profession alike the too prevalent idea that heart disease meant a life of inactivity and a future of apprehension of the effects of even moderate exercise.—Dr. SAUNDBY briefly replied, and pointed out that the treatment occupied a position between massage and ordinary exercise where nothing intervened at present.

SHROPSHIRE AND MID-WALES BRANCH.

THE annual general meeting of this Branch was held on October 15th, Dr. CURETON, President, in the chair. Thirty-eight members were present.

Election of Officers.—Mr. J. D. Lloyd (of Chick) was appointed President-elect. Mr. Harold H. B. MacLeod was appointed Assistant Honorary Secretary. The other officers of the Branch and the members of the Council were re elected.

Confirmation of Minutes.—The minutes of the preceding meeting were read and confirmed, and the report and financial statement of the Branch Council was read and adopted.

New Members.—The following were elected: C. E. Baddeley, M.D., Newport; J. Esmonde, Pontesbury; G. Higginson, B.A., M.B., Church Stretton; G. L. Procter, M.B., C.M., Dawley.

Vote of Thanks to the Retiring President.—A hearty vote of thanks was accorded to the retiring President, Mr. J. McC. McCarthy, St. George's.

President's Address.—The PRESIDENT read an address on the need for further legislation for inebriates, in which he urged the amendment of the Act now in force in the following directions—namely: 1. The voluntary admission of a patient in the presence of a clergyman, lawyer, or medical man, instead of his being obliged to go before the justices to sign for his admission. 2. The conferring on the proper authorities the power to commit habitual drunkards to retreats. 3. The giving power to guardians to detain pauper habitual drunkards for proper treatment. 4. The providing at public cost for the treatment of inebriates who cannot pay, or who can pay a little, towards their board and treatment. 5. For securing the return of an escaped patient without being obliged, as now, to obtain a warrant, and the taking of a patient before a magistrate.—A discussion followed, in which Drs J. T. GWYNN, THURSFIELD, and Sir WALTER FOSTER took part.

Communications.—Dr. W. N. THURSFIELD read a short paper on the Exit Gates of Infection in Scarlet and Typhoid Fevers. In the former he drew special attention to infection emanating from the throat and naso-pharynx during the first few days, and continuing in discharges from the throat, ears, nose and suppurating glands, even after all desquamation is at an end. In regard to typhoid he adduced evidence showing that urine in the form of bedroom slops is sometimes the source of infection, and insisting that such slops should be disinfected as thoroughly as the discharges from the bowel, and that all excretions should be looked upon as possible sources of infection. In this connection he alluded to the recent discovery of typhoid bacilli in the urine. Sir WALTER FOSTER, Mr. LLOYD, and Mr. CÆSAR spoke on this subject.—Dr. ALFRED EDDOWES read notes on the Pathology of Acne and Sycosis, illustrated by photographs and Microscopical Preparations, and gave many valuable suggestions for their treatment.—Dr. FREDERICK EDGE read a short paper on Vaginal Cœliotomy, detailing eight cases in which he had operated successfully.—Mr. T. LAW WEBB demonstrated an Improved Method for Obtaining Portions of Mucous Membrane for Diagnostic Purposes. Using an aspirator, a glass tube, and a pair of scissors, he showed how a portion of tissue could be readily drawn up into the tube and snipped off for examination.—Mr. J. McC. McCARTHY showed cases of Sutured Tendons.—Mr. T. LAW WEBB showed (for Dr. CHARNLEY) Microscopical Sections of (1) Epithelioma of the Buccal Region in man aged 65; (2) Sarcoma of Posterior Pole of Eye in very early stage, three months' growth.—Mr. CÆSAR showed a case of Alopecia Areata improving under treatment.—Dr. GARDNER showed a case of Brachial Neuritis in a striker, due to percussion.—Dr. PACKER showed a case of Ectopia Vesicæ with Epispadias.

Dinner.—The usual dinner was held at the Music Hall in the evening, forty-two members and their friends being present.

OXFORD AND DISTRICT BRANCH.

A GENERAL meeting was held on Friday, October 25th, at the Radcliffe Infirmary, Mr. SYMONDS, President, in the chair. More than fifty members were present.

Confirmation of Minutes.—The minutes were read and confirmed.

New Member.—Dr. Winslow was elected a member.

Medical Aid Associations.—The afternoon was occupied by a discussion on the question of members meeting in consultation medical officers of medical aid associations, and finally it was carried:

That a copy of the resolution of January 28th, 1894, be sent to every member of the Branch, with a request that he will answer "Yes" or "No" to the same.

A small Subcommittee was appointed to carry out the preceding resolution, and to define which clubs should be included.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.

A MEETING was held at the Chichester Infirmary on October 16th; Dr. PAXTON, of Chichester, presided.

Registration of Midwives.—Mr. G. B. COLLET, of Worthing, opened a discussion on the registration of midwives. The general sentiment of those present was favourable to registration, and it was thought that the fears which had been expressed that registered midwives would irregularly practise medicine and surgery to the detriment of fully qualified practitioners were groundless.

Ichthyosis.—Dr. PAXTON read the notes of a case of ichthyosis. The patient was an adult female. The body and limbs, except the face, hands, and feet, was covered with a thick, dry, scaly covering, which had transverse and longitudinal cracks upon it, and was likened to a crocodile's skin. The condition was congenital; there was no family history of a similar condition. The case was treated with extract of thyroid gland; three tablets daily were given. In three weeks the chest was clear, and the abdomen and back were clearing; handfuls of scales were shed into the bed. Further treatment with two tablets a day for three weeks did not produce much more improvement, and the patient left the hospital, as she would not endure the irksomeness of remaining in bed. She said her skin was better than she ever remembered it. The disease did not cause any great amount of discomfort.

Causation and Mode of Healing of Empyema.—Mr. BILTON

Pollard (London) read a paper on the causation and mode of healing of empyema of the pleural cavity, considered in relation to prognosis and treatment. He first drew attention to the varying character of the contents of different empyæmata, and stated that those in which the pus contained large masses of lymph, or was thick and creamy, healed best; whilst the cases in which the pus was thin or sanious were the least favourable. The fact that the pus was offensive, apart from its other characters, did not much influence the course of healing. The character of the pus was dependent on the micro-organisms it contained. Pneumococci, staphylococci, and streptococci are found sometimes alone, sometimes mixed in varying proportions. The streptococci are the most virulent, are most numerous in thin pus, and indicate an immediate necessity for free drainage. It was then pointed out that the conditions of rapid and complete healing of the empyema were negative pressure in the pleura, expansibility of the lung, and the contact of the two layers of the pleura sufficiently long for adhesions to form. Where all these conditions can be induced by simple aspiration, a cure may be effected by that means. More frequently, these conditions cannot be established, and then aspiration does not bring about a cure. The method of Bülau (siphon drainage of the pleura) is theoretically perfect, but practically is inconvenient and liable to fail through the apparatus getting out of order. In the cases where aspiration and siphon drainage do not succeed harm will have resulted from the delay in using other modes of treatment. In all cases resection of a piece of rib, free incision of the pleura, and continuous drainage are recommended as the best treatment. The mode of healing of a pleural cavity which had been freely opened for empyema was considered. The theory of Roser, that adhesion of the viscera to the parietal pleura was brought about by granulation commencing at the angles where the two layers of pleura were in contact and thence extending over the whole surface of the lung, was rejected on the grounds that (1) this theory involved adhesion of the collapsed lung to the chest wall, and that those cases in which the collapsed lung was bound down to the pleura were those in which healing took place least readily; (2) that complete healing frequently took place in three weeks or less—a time too short for the filling of the pleura with granulations. The theory of Weissgerber, in which direct adhesion of the parietal to the visceral pleura takes plage without granulation, was held to be more probably correct. The contact of the two surfaces which must take place before adhesion can occur is brought about as follows: Coughing raises the pressure of the air inside the lung above that on the outside, and the lung expands somewhat; the entry of blood into the vessels of the alveoli assists in maintaining the increase of bulk; a dressing over the wound in the chest wall soon acts as a fairly perfect valve, making the entrance of air in inspiration difficult; the lung continuing to expand under the influence of repeated coughs comes in contact with the chest walls, and the two layers of pleura are held together by a kind of sucker-like action till adhesions have formed. This sucker-like action was proved to exist by cases of surgical emphysema, from a wounded lung caused by a broken rib, occurring without pneumothorax. To obtain free drainage an incision should be made over the eighth or ninth rib, a little below and outside the inferior angle of the scapula; a portion of the rib should be excised; any masses of lymph which do not come away should be removed with a sponge, or if necessary with forceps or scoop, since if left behind they form an uneven surface which would interfere with the sucker-like adhesion of the two layers of the pleura. It was advised that empyemata with fœtid discharge should not be irrigated, as the discharge usually becomes quickly sweet after drainage; where it remains fœtid, immersion in a boracic acid bath was advocated as being safer and more efficient than irrigation. The prognosis depends upon the extent to which the lung expands immediately after evacuation of the pleura; if it is felt to expand well, the case will heal quickly; if it does not expand well, healing will be delayed or may not take place; in the latter case expansion of the lung may be assisted by making the patient breathe compressed air, or by raising the intrapulmonary pressure by making the patient cough or causing him to play upon wind instruments. In double empyema the prognosis is worse. Simultaneous drainage of both pleuræ was considered the best treatment, and cases in which this had been successfully done were related. The fact that both pleuræ could be opened simultaneously and respiration be still carried on was illustrated by a boy who was admitted to hospital having fallen from a window upon area railings; a spike had passed into each pleura and air entered freely, but respiration was sufficient and the patient made a good recovery.

Votes of Thanks.—Votes of thanks were accorded to Dr. Paxton and Mr. Pollard for their papers.

WEST SOMERSET BRANCH.

The autumnal meeting of this Branch was held at Taunton on October 25th; Mr. W. Walter Walter, President, in the Chair. There were fifteen members present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

President-Elect.—It was announced that H. T. Rutherfoord, M.D., Taunton, had been elected by the Council President-Elect for the year 1896-97.

New Member.—David Brown, M.D., Taunton, already a member of the Association, was elected a member of the Branch.

Letter from Dr. Winterbotham.—A letter from Dr. Winterbotham, expressing his thanks for the vote of sympathy which was passed at the last meeting, was read.

Club Practice.—Mr. C. E. Abbott read a paper on club practice and its abuses, which was well discussed by the meeting; and a resolution in the following terms was then passed:

That a committee consisting of the following gentlemen—namely, Dr. Macdonald, Mr. Willcocks, Mr. Husbands, and Mr. Abbott, of Taunton; Dr. Meredith, Wellington; Mr. Wilberforce Thompson, Bridgwater; and Mr. Marsh, Yeovil, with power to add to their number—be appointed to inquire into the abuse of clubs, and report to the Council what action can be taken thereon. Mr. Abbott to be convener.

Communications.—The Secretary read a short paper sent to him by Dr. James Stewart on Inebriety among the Cultured and Educated Classes.—Dr. Lyndon (Wellington) read notes of a case of Compound Comminuted Depressed Fracture of the Skull. The patient, who had made a perfect recovery, was in attendance.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

The autumn meeting was held at Stirling, on October 22nd. Dr. McVail was in the chair, and there was a good attendance of members.

Confirmation of Minutes.—The minutes of the previous meeting were read and signed.

New Members.—The following new members were elected: Dr. Hosack Fraser (Bridge of Allan), Dr. Chalmers (Stirling), and Dr. Lumsden (Denney).

Financial Report.—Dr. Fergusson (the Hon. Treasurer) presented his report of the income and expenditure of the Branch, and the report was adopted.

Report of Council.—The report of Council for 1894-95 was received and adopted.

Election of Office-bearers.—The following were elected office-bearers for the ensuing year:—*President:* Dr. Fraser (Kilsyth); *Vice-President:* Dr. Macpherson (Larbert); *Hon. Treasurer:* Dr. Fergusson. *Hon. Secretary:* Dr. Lewis. *Members of Council:* Drs. Strachan, McVail, Cribbes, and Baird. *Representatives on General Council and Parliamentary Bills Committee:* Dr. Strachan.

Next Meeting.—It was suggested that the next meeting should be held at Alloa, and it was remitted to Council to fix definitely.

Medical Defence.—A resolution from Edinburgh Branch on this subject was read.

Medical Clubs, etc.—A circular from the North of Scotland Branch was read, and after discussion it was resolved to refer the subject to a committee consisting of the Council, with the addition of Messrs. Ronald, Milne, Highet, and Haldane.

Midwives Registration Bill.—The amended form of this Bill was presented.

Presidential Address.—Dr. McVail delivered an address on-

titled Gleanings from Practice, in which he referred to club practice and its relation to the supply and demand of doctors; to the death of Dr. Thomas Keith and his work; to the treatment of wounds and the experience gained in ten years' surgery in Kilmarnock Infirmary; to the effects of chill and its treatment; to diaphoresis and antipyretics; and to the *vis medicatrix Naturæ*.—Several members took part in the discussion that followed, and Dr. McVail received a very hearty vote of thanks for his interesting address.

HALIFAX, NOVA SCOTIA, BRANCH.

The annual meeting of this Branch was held at Halifax on October 3rd, Dr. Mason (President), in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—Surgeon-Colonel O'Dwyer, M.S., and Fleet-Surgeon Grant, R.N., were elected members of the Branch.

Report of Council.—The Secretary read the annual report of Council, showing the Branch to be in a very flourishing condition. Eleven meetings had been held during the past year; a large number of papers were read and cases shown. Regret was expressed at the removal of Surgeon-Colonel Archer and Surgeon-Captain Barefoot from this station.—The report was on motion adopted.

Treasurer's Report.—The Treasurer's report was received and referred to the Auditing Committee.

Election of Office bearers.—The following were then elected office bearers for the ensuing year:—*President:* Thomas Trenaman, M.D. *Vice-President:* M. Chisholm, M.D., L.R.C.P. *Treasurer:* M. A. B. Smith, M.D. *Secretary:* G. Carleton Jones, M.D., M.R.C.S. *Council:* Surgeon-Colonel O'Dwyer, Drs. Tobin, Farrell, Campbell, Milsom, Almon, and Kirkpatrick.

Representative on the General Council: William Tobin, F.R.C.S.I.

CORK AND SOUTH OF IRELAND BRANCH.

The annual general meeting of this Branch was held at Cork on October 26th, Professor E. R. Townsend, M.D., President, in the chair.

Confirmation of Minutes.—The minutes of past meetings were read and confirmed.

Treasurer's Report.—The Treasurer's report showed a credit balance of £9 19s. 5d.

Election of Office-bearers.—The following were elected officers for 1895-96:—*President:* Dr. N. J. Hobart. *Vice-President:* Dr. Curran (Killeagh). *Ex-President:* Professor E. R. Townsend, M.D. *Representative on Council of British Medical Association:* Dr. A. W. Sandford. *Representative on Parliamentary Bills Committee:* Professor E. R. Townsend. *Honorary Treasurer and Secretary:* Dr. Philip G. Lee (25, Patrick's Hill, Cork). *Council:* T. B. Moriarty, M.D., Professor S. O'Sullivan, M.D., F.R.C.S.I., A. W. Sandford, M.D., T. Gelston Atkins, M.D., O. T. Woods, M.D., J. Cotter, M.D., F.R.C.S.I., Professor H. Corby, M.D., R. Burke, M.D. (Douglas), P. J. Macnamara, M.D., F.R.C.S.I. (Kilmallock), W. A. Cummins, M.D., P. J. Cremin, M.D., D. B. O'Flynn, M.D. (Glanmire).

Hospital Abuse.—It was decided that the Honorary Secretary send copies of the British Medical Association notices to the secretaries of the committees of the different hospitals, asking them to get sanction of their Board to have these notices hung up in the different waiting rooms and externs. It was further proposed that the subject of hospital abuse and the rest of the agenda paper be reconsidered at an adjourned meeting to be held in one month's time; a week's notice to be given to each member.

Dr. Ryan, a medical man in the South of Ireland, who as a lad of 20 served in the Anglo-American ambulances in 1870 from the battle of Sedan onwards, through the campaign on the Loire, and during the occupation of Orleans by the Bavarians, their expulsion therefrom by the French, and the subsequent capture of the city by the Prussians, is, according to the *Athenæum*, about to bring out a narrative of his experiences. It will be published by Mr. Murray, under the title of *With an Ambulance during the Franco-German War*.

SPECIAL CORRESPONDENCE.

PARIS.

A Threatened Strike among the Dressers of the Paris Hospitals.—The New System of Out-Patient Visiting—Death of a Doctor from Starvation.—A Statue to Pasteur.—Fire at the Trousseau Hospital.—General News.

On October 22nd, the competitive examination for hospital dresserships and clerkships ought to have been held. Precautions had been taken against disturbance by the students but without very satisfactory results. An *externe* addressed his comrades before the examiners arrived. He told them that the Assistance Publique intended to stop the 30 francs a month hitherto paid to *externes* of hospitals situated at a distance from the central parts of Paris. He urged them to prevent the examination from taking place, and afterwards to hold a meeting at the École Pratique. His speech was loudly applauded and a good deal of disorder ensued. When the examiners arrived they were greeted with applause, but Dr. Lepage, the president, who is the son-in-law of the Director of Public Assistance, was not allowed to speak. His words were drowned by imitations of the cries of animals and indescribable uproar. After a time the examiners left the amphitheatre, and the students betook themselves to the École Pratique, where a meeting was held with thoroughly negative results. For many of the candidates this incident is of great importance, on account of the approaching time of military service; if no examination is held this year it means a year lost for them. On the following day a further meeting was held at the Faculty of Medicine, at which the same disorder prevailed. M. Brouardel, the Dean of the Faculty, nevertheless succeeded in making himself heard. He insisted on having peace and order, and offered to treat with the Assistance Publique on behalf of the *externes*. This offer was enthusiastically accepted. A strike was suggested, but the proposition was immediately rejected in the interests of the patients. A deputation to M. Peyron, the Director of the Assistance Publique, was decided on. The case from the point of view of the Assistance Publique is as follows: The idea was to place all *externes* on the same footing; the allowance made to the *externes* of what are called "eccentric hospitals" was no longer reasonable, inasmuch as the extension of the City of Paris has lessened the distances, and Beaujon, Lariboisière, and Necker Hospitals, etc., are almost as easily accessible as others. By the stoppage of this allowance a saving of £292 a year will be effected. The latest news concerning this rebellion announces coming peace, or at least a truce. At a meeting of the Municipal Council, M. Alpy declared that in the Budget of 1896 the allowance to the *externes* ought not to be omitted. M. Strauss received a deputation of the *externes* at the Hotel de Ville, who promised them that the Municipal Council would immediately consider the question. At a meeting of the students, October 27th, the Director of the Public Assistance sent them a message confirming the favourable intentions of the Municipal Council. The majority of the students immediately voted that the examinations be held as usual if they be open to lay as well as military candidates. This decision will be presented to M. Peyron by a deputation of hospital dressers.

It is not only among the students that rebellion against the Assistance Publique is rife. A number of hospital physicians have protested against the new regulation creating "*circonscriptions hospitalières*," and against out-patients being seen by a physician not attached to the hospital, but appointed specially to give these consultations. Professor Dieulafoy, of the Necker Hospital, has publicly announced his attention of giving the consultation to the out-patients. This resulted in a larger number of students (about sixty) attending the consultation. Professor Dieulafoy, who, escorted by this imposing group of students, made his appearance in the consulting room at the same time as Dr. Méry, formerly *interne*, who had been officially appointed by the Assistance Publique to take charge of the out-patient department. The latter, with great good sense and tact, deferentially left the place vacant for his older and more influential

colleague. After the consultation Dr. Dieulafoy and his body guard withdrew. The administration has this time admitted the patients indicated by Dr. Dieulafoy to the hospital; but as to what will occur on another similar occasion the event will show.

The *Journal de Médecine* calls attention to the sad case of Dr. Armand de Langlard, who after fifty years of honourable practice found no other way of escaping starvation than suicide. The same *Journal* estimates that there are 2,500 medical men battling with starvation, borne down by heavy rent and taxes. Year by year the number of medical men increases, while owing to the progress of hygienic science, and still more to the disastrous competition of the hospital out patient rooms and private gratuitous clinics, the number of patients decreases. It is the doctors themselves, says M. Lutaud, who have created their own misfortunes. They have taught lady patronesses of different societies to diagnose diseases, to dress and bandage wounds, to vaccinate their own children and those of their neighbours. Medical science is vulgarised in every way. Doctors write in important daily papers explaining how bronchitis and cramps of the stomach are to be cured, and in fashion journals they teach how to cure pimples and avert headaches. Furthermore, they have urged that hospital treatment be paid at the rate of 4s. 2d. per day; the middle classes profit by this tariff to become hospital patients, their conscience at ease since they pay. Five hundred thousand gratuitous consultations are given yearly in Paris dispensaries, and in this way a large amount of fees is diverted from the medical profession. M. Lutaud includes in his indictment the Associations des Dames, more or less patriotic, which send forth thousands of women who, because they have attended a few medical lectures and walked the hospitals for a few weeks, believe themselves to be something very like doctors and treat their families and friends. This school of medical half-knowledge has been created and kept going by medical men, who are now being crushed by the work of their own hands.

The Conseil Municipal of Arbois, the birthplace of Pasteur, has decided to erect a statue to his memory, and that hence forth the municipal college shall be called the Pasteur College. The remains of their *savant* remain at Notre Dame until the exact spot for his last resting-place at the Rue Dutot is decided on. The date of the final burial is not yet fixed.

A fire broke out at the Trousseau Hospital, which was happily discovered at the onset. Forty-five children were laid up with scarlet fever in the pavilion threatened by the flames. They were cleared out and lodged in the pavilion of "doubtful cases." This "contact" is to be regretted, though under the circumstances apparently inevitable. The cause of this misfortune is the faulty installation of the *calorifère*.

M. Paul Strauss, at a recent meeting of the Paris Municipal Council proposed that poor children should be provided with sterilised milk in the crèches and in dispensaries.

ROME.

The Health of the Pope.—An Outbreak of Diphtheria at Udine.—The Transactions of the Eleventh International Medical Congress.

Disquieting rumours having lately appeared in a portion of the Italian press, as well as in some of the foreign papers, as to the health of the Pope, I have just had an interview with Professor Lapponi, the Holy Father's physician. The professor informed me that the Pope's health at the present time is perfect, and that since I had my interview with him in January last Leo XIII has had no illness excepting a slight cold in the spring. His Holiness takes his daily walk in the Vatican gardens; he eats, works, and sleeps as usual, and, notwithstanding that the venerable Pontiff is in his 87th year, his mind is as clear and active as it ever has been. As a proof this Dr. Lapponi cited the Pope's letter to Cardinal Rampolla, published on October 8th. Professor Lapponi has requested me to contradict a statement which appeared a few months ago in an English journal that His Holiness was subject to fainting fits. The professor says that this statement is not founded on fact, as the Pope is not nor ever has been subject to such attacks; nor has Dr. Lapponi at any time made such a statement to any correspondent.

An outbreak of diphtheria has been reported at Udine, amongst the children of families emigrating to America, who are in the habit of crowding the outskirts of the town before embarking. The disease has rapidly spread amongst the children and several deaths have taken place. The authorities are taking every precaution to prevent the disease further spreading, and have made arrangements to avoid this crowding together of families emigrating in the future.

The second, third, and fourth volumes of the *Transactions* of the Eleventh International Medical Congress have been published, and by this time it should be in the hands of all the members. The fifth and concluding volume, it is expected will be published very shortly.

ALLAHABAD.

[From an Occasional Correspondent.]

The Doctrine of the Tea Kettle and the Pasteur Filter.

The use of the Pasteur filter is being greatly extended. Meanwhile, since the rousing crusade commenced last Christmas in Calcutta by Mr. Ernest Hart in favour of the tea kettle and the filter as a great means of preventing enteric disease, great progress has been made. The following interesting comments appear in the *Pioneer Mail* of October 3rd, relating to enteric fever and the boiling of water: It is said that the proposed experimental use of boiled water by a whole battalion of British infantry at Dinapore has been sanctioned. The tea-kettle theory will then be put to a tolerably severe test. It seems, however, that the experiment is not the first extended trial to which the theory has been subjected. The wing of the Derbyshire Regiment at Benares have boiled all their drinking water since April 1st last, and the results have not been encouraging. On the contrary, it is stated that the admissions for enteric fever have been nearly double that of any previous year. On the other hand, it is also stated that at Mean Meer, owing to the boiling of water supplied to the British troops throughout the hot weather, there has been practically no enteric in cantonments during the summer. Another small preventive has also given good results, namely, a daily dose of quinine, which has caused a falling off of cases of simple fever as compared with previous years.

BRISTOL.

The Sanitary Control of the Meat Trade.—Injudicious Hospital Advertisement.

The sanitary conditions of the private slaughterhouses are under consideration. The chief obstacle to the compulsory closure of private houses is the fact that the sanitary authorities have not the power—so long as the house is licensed and fulfils their requirements—to act, for they appear to have had in the past a different opinion of what constitutes sanitary requirements from those recommended by the Local Government Board. Bristol is the centre of the meat supply of the West of England, a large number of cattle being imported from abroad, and a still larger number sent in by train or driven in from the surrounding counties. Bristol has, or had till quite recently, only one meat inspector, and his duties included the supervision of fruit and vegetables. At the entrance to the floating harbour is situated a slaughterhouse, the property of the city, for the slaughter of imported cattle. There are also 55 private slaughterhouses, none of which wholly fulfil the requirements of the Local Government Board: 44 are quite unfit, 21 are passable, and 20 are classed as fit by the medical officer of health. In these private houses over 196,000 animals were killed during last year. These private slaughterhouses are mostly ordinary houses in which the back yard or garden has been roofed over and paved with flagstones. As often as not, the house pump, watercloset, yard sink, and steps to the cellar are included, and the meat is in many cases exposed to the effluvia of manure. The climax was reached in one case where the cattle were driven through the sitting room of the house to get to the yard, the owner appearing to think that the periodic shifting of his furniture was an ordinary event of business routine. It is believed that if a public abattoir was built with proper facilities for approaches, near the cattle market, and with properly ventilated slaughter rooms and hanging rooms and cooling

chambers, butchers would prefer to send their animals there for slaughter. The resolution framed by the Sanitary Committee stated that in their opinion a public abattoir was advisable, and the city engineer was requested to obtain particulars as to the cost in other towns of erecting such buildings, and the extent to which they are used.

The Committee of the Hospital for Children have in their wisdom hired a stall at the Handicrafts Exhibition, and display there various surgical appliances, with cots containing bandaged dolls. For some time the nurses were obliged to attend, but, owing to the strong objections made by them and their refusal to come from behind a screen at the back of the stall, the obligation has been withdrawn, as have various pamphlets containing the names of the medical officers. Exhibitions of this sort defeat their own ends, as nothing but condemnation of the want of taste is heard on all sides. It is believed that the takings—for of course money boxes are well to the front—will barely pay expenses.

MANCHESTER.

Tuberculosis in Lancashire.—Royal Infirmary.—Owens College Medical School Extension.

A RETURN has just been issued by the Government showing the number of carcasses seized in consequence of the animals having suffered from tuberculosis. In Manchester, during the year ending March, 1894, 337 carcasses were seized; in the present year, ending March last, the number is given at 302. In Liverpool, the corresponding numbers are for the present year 945 as against 1,505 for 1894; while at Birkenhead the increase is alarming from 142 in 1894 to 1,004 in 1895. The local authorities in Manchester state that in addition to the carcasses condemned by the justices, there have been during the present year 78 seizures of carcasses which were tuberculous.

It is stated that the Manchester Infirmary Board have re-resolved to sanction an expenditure of £1,000 in preparing plans and estimates for an entirely new building. The "site" question will doubtless prove the crux of the problem.

The very satisfactory entry of medical students at Owens this year has proved, we believe, a source of gratification and encouragement to the College authorities. It is, perhaps, difficult for those residing elsewhere to realise what the Council of Owens College has done for the development of the medical department of Owens College. When one takes into account the fact that—without State aid of any kind—new museums, laboratories, class rooms, etc., for the study of subjects ancillary to medicine, namely, zoology, botany (and geology), no less a sum than £90,000 has been "found" by the Council amongst the local friends of the College; that the present addition to the Medical School—already a very large building—has cost £40,000, it will be seen that the enterprise of the Council of Owens College is second to none in the kingdom. When the Infirmary Committee referred to above has arrived at a conclusion regarding the proposed infirmary extension—as doubtless they will soon—there ought to exist in Manchester a combination of facilities for the study of the clinical and also of more purely medical aspects of our profession, which will at least be worthy of the city of Manchester. Apart altogether from the degree-granting power of the Victoria University—which has its seat in Manchester—the enterprise of its three Colleges—Owens, University, and Yorkshire—in equipping laboratories such as are not to be paralleled in the metropolis is a powerful factor in inducing provincial students to study at the nearest provincial college.

BEQUESTS AND DONATIONS.—The late Mr. Henry Nathan has bequeathed to the Metropolitan Free Hospital, Gray's Inn Road, the London Hospital, and the German Hospital, Dalston, £50; and the Jewish Society for the Relief of the Aged and Needy, the Jewish Widows' Home Asylum, the Birmingham General Hospital, the Birmingham Children's Hospital, and the Birmingham Queen's Hospital £100 each.—The late Mr. Bernard V. Hall, merchant and shipowner, of Liverpool, has left by his will the following bequests:—Liverpool Royal Infirmary, £5,000; Royal Southern Hospital, Liverpool, £2,500; Royal Northern Hospital, Liverpool, £2,500; Ladies' Charity and Lying-in Hospital, £1,000.

CORRESPONDENCE.

LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS AND THE TITLE OF PHYSICIAN.

SIR,—In reply to direct inquiry on the above subject, the Registrar of the Royal College of Physicians (Dr. E. Liveing) has been good enough to place at my disposal the following information, which cannot fail to be of interest to the Licentiates of the College.

The question was considered by the College in 1870 and referred to the Standing Counsel of the College, Sir Roundell Palmer (afterwards Lord Selborne) and Mr. Denman, Q.C., for an opinion, which was given as follows:

Question submitted to Counsel: Is a Licentiate of the College of Physicians a physician, and may he so entitle himself?

Answer: We are clearly of opinion that the Licentiates of the Royal College of Physicians who have obtained their licences to practise physic subsequently to December 22nd, 1858, are entitled to call themselves Physicians and to hold appointments as such under 21 and 22 Vict., c. 90 and 36, if duly registered as Licentiates of the College according to Section 27 and Schedule D of the same Act.

(Signed) ROUNDELL PALMER.
Lincoln's Inn, Feb. 25th, 1870. GEORGE DENMAN.

At a meeting of the College on April 11th, 1870, it was resolved that copies of this opinion should be sent to the journals, and it is recorded in the *Lancet* and BRITISH MEDICAL JOURNAL under date of April 23rd, 1870.

Until it has been overruled in a court of law, the opinion of two such eminent lawyers as Lord Selborne and Mr. Justice Denman will probably be sufficient for those Licentiates who, like myself, contend that we have a right to entitle ourselves Physicians.—I am, etc.,

HENRY N. HOLBERTON, L.R.C.P.Lond., etc.
East Molesey, Oct. 26th.

SIR,—The letter published in the BRITISH MEDICAL JOURNAL of October 19th from your correspondent "F.R.C.P." states that when the class of licentiates was established on its present basis the College consulted the standing counsel to the College, Sir Richard Webster, the present Attorney-General, on this very point, who gave it as his opinion that those on whom the College conferred its licence were thereby legally constituted physicians. Your correspondent speaks with confidence on the point. If, however, by the expression "its present basis" he refers to the basis established in 1861 I think he must have fallen into an error as to Sir Richard Webster having then given any opinion on the subject, as the present Attorney-General was not called to the Bar till some years later than 1861. Whoever the Attorney-General was to whom "F.R.C.P." refers, it would be, I think, very satisfactory if he would furnish you, Sir, with a copy of the opinion for publication.

From the general tone of his letter I gather that it is intended as an authoritative answer to the question raised as to the views of the Fellows and Licentiate Members of the College on the point under discussion.

Assuming that your correspondent's memory is correct as to the effect of the Attorney-General's opinion, that opinion coincides with the opinion expressed in your article, and, if he speaks on behalf of the College, seems to emphasise what was stated in that article, that the title of Physician is now and for the future to be regarded according to its primary signification rather than from the more limited restriction of that title which in the medical world prevailed up to 1861, and still prevails up to to the present time in the public mind, the public regarding the physician as the "pure consultant." That primary signification (I quote from a leading English dictionary) is defined to be "a person skilled in physic or the art of healing; one whose profession is to prescribe remedies for diseases."—I am, etc.,

October 28th. LEX.

*** Our correspondent "F.R.C.P." evidently confounded Sir Richard Webster with Sir Roundell Palmer, but the correction, far from weakening, rather increases the authoritative character of the opinion, since we now have it on the authority of two eminent lawyers, who were afterwards distinguished ornaments of the Bench that a Licentiate of the Royal College of Physicians is entitled to call himself a Physician. It has, indeed, always seemed to be very difficult to imagine by what other title he could call himself in virtue of his licence.

IRISH WORKHOUSES: "BY THEIR FRUITS YE SHALL KNOW THEM."

SIR,—I have read with great interest the reports of your Special Commission on the management of the Irish workhouses, and I sincerely trust the whole range of workhouses in Ireland may be gone through.

During the time that I acted as house-surgeon at one of the ophthalmic hospitals in Dublin we frequently received cases sent up from the country workhouses for operation or other treatment, and of these workhouses it may assuredly be said: "by their fruits ye shall know them." Most frequently the patients, who were very ill clad, presented the appearance of having never been washed, and I have over and over again found not only their heads but their eyebrows and eyelashes covered with pediculi. In one case—a young girl with ulcer of cornea in which the iris had prolapsed—the very lashes and brows had vermin clinging to nearly every hair. Can there be a more fitting commentary on the state of affairs described in your Commissioner's reports?

In many cases the Boards of Guardians are composed of men who have been elected simply for their political exertions on behalf of the dominant party; their ignorance is often only equalled by their carelessness, and, while the Boards of Guardians will exert all their energies to flatter a demagogue or to condemn anyone who takes a different view in politics from theirs, few seem to care for the lot of the unfortunate paupers who are entrusted to their care. No reform will come if matters are simply left to the guardians themselves. There is need of a strong central authority, and perhaps of financial assistance—for many of the districts are very poor—before any really efficient reforms can be carried out. The remedy must come from without, and the action of the BRITISH MEDICAL JOURNAL in appointing this Commission ought to be the herald of brighter times to come.—I am, etc.,

Great Malvern, Oct. 26th. HENRY W. JACOB, M.D.

THE MANIA FOR "SENSATIONS."

SIR,—Unfortunately the eager desire to manufacture "sensations" is by no means abating, as the following recent experience of my own will show.

On October 11th, I had occasion to operate on a girl of 19 years to remedy the condition of total absence of the vagina with an enlarged uterus distended with retained menses. Dr. Henry, of Lewisham, administered chloroform, and the girl's aunt was present. I shall send you full details of the case, but it will suffice here to say that the patient died on the tenth day after the operation. I gave the usual death certificate, stating as the cause of death "peritonitis, diarrhœa, and septicæmia after operation for complete vaginal atresia with retained menses on October 11th." This was duly presented to the local registrar, who, without making any inquiries, refused his certificate, directed that funeral arrangements should be delayed, and said the case must be reported to the coroner. The relatives were much distressed and surprised. We, of course, recognised that the registrar, with that small amount of knowledge which is undoubtedly a source of danger, had regarded "retained menses" as a sort of synonym for pregnancy. He had evidently at once, without further inquiry, suspected me of a trivial offence known in law as "wilful murder." He reported the case to the coroner, and in consequence a policeman (the coroner's officer) called on the relatives of my deceased patient, and subjected those ladies to close cross-questioning as to the condition of the genital organs of the deceased, and all the details of the delicate operation to which she had been subjected. They assured the officer that they were fully satisfied with my skill and care in the case. After this I received a request from the coroner for full details of the case, which I of course furnished, at the same time telling him a good deal of what is vulgarly called one's "mind" in reference to what had happened.

Of course, the coroner being a doctor the burial certificate was at last granted without an inquest, and this most painful episode terminated. I am carefully considering what steps I shall now take, but I feel sure that all my professional brethren will agree with me that this kind of thing is absolutely intolerable. I may say that the registrar had not the shadow of a ground for suspicion beyond his ignorant attempt to read between the lines of my certificate. I understand that the registrar afterwards excused his action by referring to recent "disclosures" as to medical men.

This is the serious side of it, but I hope the day has not yet come when it will be necessary to have a policeman present whenever a dangerous operation is performed in a private house.—I am, etc.,

Highgate, N., Oct. 27th. HUGH WOODS, M.D.

THE EDUCATION OF THE STUDENT IN PRACTICAL MIDWIFERY.

SIR,—It may interest Dr. Rentoul to know, in spite of his evidence from the Calendar and his circular letter, that in 1889 the authorities of Dublin University did then require a certificate of thirty attendances, ten of which had to be personally conducted. This statement is based on personal experience.

In this instance Dr. Rentoul's agitation of 1890 cannot have produced the result he takes credit for.—I am, etc.,

Stapleton, Oct. 28th. THOS. NORTH.

CERTIFICATED MIDWIVES AND BOARDS OF GUARDIANS.

SIR,—I have read Dr. Lovell Drage's letter with much satisfaction. It is as he says most important that the Council of the British Medical Association should take active steps to carry out the intention of Dr. Welsford's resolution. The Branches have spoken clearly enough on the matter, and we are not without friends on the Council, but in electing future members of the Council it behoves us to select men who represent our views.—I am, etc.,

Southampton, Oct. 26th. J. F. BULLAR.

CLUBS, CHEAP PRACTICE, AND UNDERSELLING.

SIR,—In the BRITISH MEDICAL JOURNAL of September 28th, under the above heading, there appears a letter signed "C. Penruddocke, M.R.C.S.," of Wylye, Bath.

Under pretext of drawing attention to a subject of general interest, the writer makes an attack upon "a graduate of a northern university," who "some little time ago purchased a practice in a neighbouring village." The reference is a little obscure, but a client of ours who answers the description feels that some of his brother professional men may consider that the accusation of professional misconduct has been made against him. As a fact, his attention was only recently drawn to the letter by a professional man in London who knows him and the district.

So far as our client is concerned, the accusations are entirely false.—We are, etc.,

Watling Street, E.C., Oct. 24th. FISHER, CARTER, AND MOIR.

"A DANGEROUS VOYAGE."

SIR,—In your editorial in the BRITISH MEDICAL JOURNAL of October 26th, entitled "A Dangerous Voyage," a rumour current here is given a publicity and importance which is not justified by the facts.

I was in attendance upon the Liverpool cotton broker who died of typhoid fever, in conjunction with one of our consulting physicians. We both gave as our opinion that, while there was no doubt of the immediate illness called by the offensive smells of the Manchester Ship Canal, the period of incubation was too short to account for typhoid from that source.

The Canal voyage was on September 21st, and the patient was ill on the 29th, I seeing him first on the 30th.—I am, etc.,

October 30th. M.D.

SEATS FOR CYCLES.

SIR,—In connection with this topic, and with Mr. Noble Smith's letter of October 26th, I wish to say that I have received many letters from cyclists of all ages who have adopted the seat formed of two circular air pads side by side, and so placed with regard to the pedals and handles that the ischial tuberosities are seated upon the centre of the capped air pads instead of the usual plan, in which the seat or saddle is so far forward over the pedals that no saddle without a peak is a practicable thing. I venture to call attention again

to my letter of a few weeks past, in which I gave the relative position of seat, pedals, and handles, with the Burgess seat on the modern safety cycle, positions which I have arrived at after twenty-five years of cycling experience; but once place such a seat too far forwards and it becomes impossible to ride on it, all its great advantages being lost.—I am, etc.,

A CYCLIST OF TWENTY-FIVE YEARS' EXPERIENCE.

October 27th.

THE ADMISSION OF WOMEN TO THE EXAMINATIONS OF THE CONJOINT BOARD IN ENGLAND.

SIR,—The cheers with which the announcement of the small majority against accepting the petition of the London School of Medicine at the Royal College of Physicians were received by the defeated party prove that it will be counted, and not unjustly, as a moral victory. Although the arguments used by those speakers who urged the rejection of the petition of the London School of Medicine for Women were directed mainly or entirely against the admission of women to the medical profession at all, yet it is morally certain that the result of the vote would have been different if this had been the issue. However unpalatable it may be to ladies who have entered the medical profession, I think it ought to be said that another consideration had sufficient weight with a certain proportion of Fellows to prevent them from supporting the acceptance of the petition. It was felt that if women were admitted to the examination for the licence they could not be refused admission to that for the Membership, and finally to the Fellowship. There is a traditional belief that the Fellowship should be given, not as a recognition merely, or indeed at all, of success in practice, but of a desire and effort to contribute to the advance of medicine not only as an art but as a science. Now I fear that it must sorrowfully be confessed that the women who have so far entered the medical profession, however successful some of them may have been as practitioners, have shown little, if any, disposition to add to the sum of medical knowledge. Their contributions to current literature, whether in this country or abroad, but perhaps especially in this country, have been insignificant both in quantity and in quality. The reduction of the majority from one of 59 in a house of 86 to one of 9 in a house of 109 probably indicates that another application will have a different fate, and I venture to suggest that if the moral of the recent division is rightly understood the admission of women would be carried, not only by a large majority, but with practical unanimity.—I am, etc.,

October 28th. SYMPATHISER.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 5s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A MEDICAL OFFICER of field rank, who expects to go to India about the middle of January next, wants to exchange with an officer who will have one year or longer to remain at home. Liberal terms. In reply state date of arrival home. Answers to be sent to G., 23, Herbert Place, Dublin.

THE NAVY.

THE following appointments have been made at the Admiralty: RICHARD T. P. GRIFFITHS, Fleet-Surgeon, to the *Alexandra*, October 25th; CHARLES A. MACAULEY, M.D., Staff-Surgeon, to the *Pembroke*, October 25th; ALFRED PATTERSON, Staff Surgeon, to the *Endymion*, October 25th; MICHAEL RONAN, B.A., Staff Surgeon, to the *Warspite*, October 25th; ERNEST D. MINTER, Surgeon, to the *Pembroke*, October 25th; MONTAGUE L. B. RODD, Surgeon, to the *Grafton*, October 24th, and afterwards to the *Redpole*, undated; FRANK E. ROCK, M.D., Surgeon, to the *Endymion*, October 24th; REGINALD T. A. LEVINGE, Surgeon, to the *Vernon*, October 24th; FREDERICK D. LUMLEY, Surgeon, to the *Pigmy*, October 24th; FREDERICK J. A. DALTON, Surgeon, to the *Plover*, October 24th; JOHN C. DUNSTON and PERCIVAL M. MAY, Surgeons, to Hongkong Hospital, November 1st; HENRY N. STEPHENS, Surgeon, to the *Centurion* additional for the *Isis*, November 1st; WILLIAM B. MACLEOD, Surgeon, to the *Hearty*, November 1st; JOHN H. PEAD, M.A., M.B., Surgeon, to the *Alacrity*, additional, November 1st; ARTHUR E. KELSEY, B.A., M.D., Surgeon, to the *Daphne*, undated; HENRY HARRIS and WILLIAM SPRY, Surgeons, to the *Grafton*, undated; E. S. MILLER, M.B. and H. H. PEARCE, Surgeons, to the *Wildfire*, October 26th; CECIL H. ROCK, Surgeon, to the *Fiend*, October 26th; THOMAS W. PHILLIP, M.A., M.B., Surgeon, to the *Jackal*, October 24th; EDWARD S. P. EAMES, Surgeon, to the *Blenheim*, October 24th; JOHN MCELWEE, M.D., Surgeon, to the *Centurion*, October 25th; WALTER J. BEARBLOCK, Surgeon, to Plymouth Hospital, October 28th. HERBERT CANTON, Staff Surgeon to the *Immortalité*, November 19th; JOHN S. LAMBERT, Staff Surgeon, to the *Narcissus*, November 19th; HUGH W. MACNAMARA, Staff Surgeon, to the *Cordelia*, November 12th; THOMAS T. JEANS, Surgeon, to the *Immortalité*, November 19th; NORMAN S. SMITH, Surgeon, to the *Narcissus*, November 19th.

ARMY MEDICAL STAFF.

SURGEON-COLONEL W. D. WILSON, Principal Medical Officer, Secunderabad and Bangalore Districts, having completed his term of service, is directed to proceed home.

Brigade-Surgeon-Lieutenant-Colonel H. W. A. MACKINNON, D.S.O., retires on retired pay, October 26th. His commissions are as follows: Assistant-Surgeon, October 2nd, 1865; Surgeon, March 1st, 1878; Surgeon-Major, October 2nd, 1877; Brigade-Surgeon-Lieutenant-Colonel, March 14th, 1889; having received the rank of Lieutenant-Colonel, October 2nd, 1885. He served in the Egyptian war of 1882, and was at the battle of Tel-el-Kebir, where he was slightly wounded (medal with clasp and Khedive's bronze star); he was also in the Burmese expedition of 1885-6, with the Upper Burmese Field Force under Sir George White, part of the time as Principal Medical Officer (mentioned in despatches, nominated D.S.O., and received the Frontier medal with clasp).

Surgeon-Colonel H. S. MUIR, on arrival in the Madras Command, has been appointed Principal Medical Officer of the Mandalay and Chin Hills District, Burmah, *vice* Surgeon-Colonel A. F. Churchill, transferred to the Secunderabad District.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT-COLONEL SAMUEL SMITH, having resigned his Volunteer appointment, ceases to be an officer of Army Medical Reserve, October 26th.

Surgeon Lieutenant F. J. L. WARWICK, M.B., 1st Tower Hamlets Volunteer Rifle Corps, to be Surgeon-Lieutenant, October 26th.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL H. B. PURVES, Bengal Establishment, civil surgeon, Howrah, has permission to retire from the service from December 6th next. He was appointed Assistant Surgeon, October 2nd, 1865, and became Brigade-Surgeon-Lieutenant-Colonel, October 2nd, 1885. The remaining extra pension of £100 a year will be allotted to him.

Surgeon-Majors J. W. CLARKSON and J. PARKER, M.D., Bombay Establishment, having completed twenty years' full pay service, are promoted to be Surgeon-Lieutenant-Colonels from September 30th.

Surgeon-Captain C. J. SABKIES, M.B., having completed twelve years' full pay service, is promoted to be Surgeon-Major, September 29th.

Deputy Surgeon-General ROBERT SANDER BATESON, late Bengal Establishment, died on October 24th, at the age of 63. He entered the service as Assistant Surgeon, February 20th, 1856, and was appointed Brigade-Surgeon, October 21th, 1882. He retired, with the honorary rank of Deputy-Surgeon-General, September 1st, 1886. He served in the Indian Mutiny campaign in 1857-59, and was at the action near Agra and the engagement at Dowsa against Tantia Topee. He had received the Indian Mutiny medal.

THE VOLUNTEERS.

THE undermentioned officers have resigned their commissions, October 26th:—Surgeon-Lieutenant T. J. SCHOLLICK, 2nd Volunteer Battalion the Queen's Royal West Surrey Regiment; Surgeon-Lieutenant R. J. BUCHER, 1st Volunteer Battalion the Royal Fusiliers; Surgeon Captain T. F. MACDONALD, M.B., 1st Dumbartonshire; Surgeon-Lieutenant R. S. C. DUDFIELD, M.B., 26th Middlesex (Cyclist).

Surgeon-Captain R. T. CÆSAR, 2nd Volunteer Battalion the Hampshire Regiment, is promoted to be Surgeon-Major, October 30th.

VOLUNTEER MEDICAL STAFF CORPS.

ACTING CHAPLAIN THE REV. W. KERR SMITH, M.A., Leeds Company, has resigned his appointment, October 30th.

BEARER COMPANIES.

SURGEON-CAPTAIN R. REGINALD SLEMAN ("Artists'" R.V.) writes: I beg to answer the questions on bearer companies given in the BRITISH MEDICAL JOURNAL of October 26th, p. 1070. (1) The names of volunteer brigades which have bearer companies will be found on pages 31e to 34i of the *Army List*. The Surrey brigade, however, which has a bearer company, has been omitted. (2) There is no official information on this point, as it is neither given in the *Army List* or Volunteer Regulations; but the following will be found correct:

Name of Brigade.	Battalion from which the Bearer Company is Enrolled.
Welsh Border	1st Herefordshire R.V.
East London	1st Tower Hamlets R.V.
Portsmouth	1st V.B. Hampshire Regiment.
South Eastern	1st V.B. Royal Sussex Regiment.
Home Counties	3rd V.B. Bedfordshire Regiment. 1st Bucks R.V.

In most of the other brigades which possess bearer companies the *personnel* is drawn from the regimental stretcher bearers, so that the first line of assistance in the field is wanting. (3) I know of no instance

where the bearer company is administered independently of the battalion organisation. (4) Where the bearer company is enrolled on the strength of a battalion or battalions not previously up to its establishment the sergeants hold substantive rank.

Brigade Surgeon-Lieutenant Colonel Peyton Giles, Welsh Border Brigade Bearer Company, sends some additional information. He writes: The Welsh Border Brigade bearer Company has been quite independently administered, earned, received, and spent its grant since organised May, 1890. Sergeants of brigade bearer companies are substantive. Formerly they had, in order to qualify for their proficiency grant, to be examined by the adjutant in squad and company drill and musketry as for the grant of a combatant, plus anything or standard the brigade-surgeon exacted. As a fact, from the commencement I never promoted even to a lance corporal until the man had passed an examination equivalent to the same rank in the A. M. S. C., but with Sleman. I find that for corporal of the A. M. S. C is considered enough for a sergeant of a Volunteer bearer company, and no examination by the adjutant in drill and musketry. Practical experience enables me to give this advice to those commanding bearer companies:

1. Promote no one except he has been examined, and let the examinations be competitive and as practical as possible. Give notice at headquarters at least a month previous to the date of the examination.

2. In deciding upon the promotions, consider the personal qualities of the men competing, and promote no one who has not moral power with the men, and if in doubt give a lance stripe and confirm if satisfactory.

3. Give a written paper on squad and company drill, guard-mounting, orderly duties, first aid, dispensing, hospital routine, diets, and nursing, and a practical examination on company drill, bearer company drill, and first aid.

When it has been decided who shall be promoted, send the names in for confirmation of the officer commanding at the orderly-room for publication in the battalion orders.

If the medical officer is diffident or deficient in his drill either the adjutant or a combatant brother officer who is a good drill can always be obtained as an examiner. On no account whatever should the verdict be in the power of any non-commissioned officer.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ANDERSON v. GORRIE AND OTHERS.

SUPREME COURT OF JUDICATURE (COURT OF APPEAL).

Before the LORD CHANCELLOR, the MASTER OF THE ROLLS, LORD JUSTICE LOPES, and LORD JUSTICE KAY.

In this case the plaintiff, Dr Anderson, applied to the Court for leave to restore a notice of motion to the list for hearing, the motion being to have a judgment of the Court of Appeal set aside as being null and void, or voidable. The plaintiff appeared in person.

Dr. Anderson said that in the case of Anderson v. Gorrie and Others, which was an action against the judges of the Supreme Court of Trinidad, tried before the late Lord Chief Justice Coleridge, the jury found that the defendant Cook aggressively and with malice overstrained the judicial powers to the prejudice of the plaintiff and the wilful perversion of justice, and gave a verdict for him for £600. Judgment, however, was entered against him on the ground that an action could not lie against a judge. From that judgment he brought an appeal to that Court, and what purported to be the judgment of the Court was pronounced, upholding the judgment of the Court below. Since then certain facts had come to his knowledge which he was advised (speaking with all respect) disqualified Lord Esher from presiding on that occasion, and rendered the supposed judgment invalid, or void, or at any rate voidable. He was obliged to come to that Court, but he found it constituted in such a way that under the circumstances he did not conceive that it could satisfactorily deal with his application, which was that a court should be properly constituted.

The Lord Chancellor said that, assuming Dr. Anderson's complaint was a good one, it was a matter for appeal to the House of Lords.

Dr. Anderson said that, as his appeal had not been finally heard and determined, the Court had it in its power to set the matter right, and finally hear and determine it. His point was that the Master of the Rolls was disqualified from hearing the appeal from the judgment at the trial. An action had been brought by a barrister against the Master of the Rolls for words spoken on the bench, and that action was subsequently dismissed as frivolous and vexatious, on the authority of the decision of the Court of Appeal in Anderson v. Gorrie.

Lord Justice Kay: What you ask for is leave to appeal against the decision of this Court to another Appeal Court of equal jurisdiction. We can give you no such leave.

Dr Anderson said that that was totally at variance with his real application.

The Master of the Rolls: What is it you want done now?

Dr. Anderson said that he had given notice of motion to set aside the judgment as voidable, or null and void, and in August last the Court had ordered the motion to be struck out of the list. He therefore served a notice of motion to restore the original motion to the list, and he now applied to have the motion heard, and that the Court should be properly constituted for hearing it.

Lord Justice Kay said supposing the Court now ordered that a Court of Appeal should be constituted excluding Lord Esher, that order would be utterly wrong, because they could not hear such an appeal.

Dr. Anderson submitted that it was not an appeal, but an original motion.

Lord Justice Kay: You have told us that this Court has decided against you, but you think the decision is wrong because Lord Esher was a member of the Court.

Dr. Anderson: No; that is not what I say. I say that the case never was decided, and what was pronounced that day was not a decision, because the Court being so constituted could pronounce no decision.

Lord Justice Kay said that while the order stood it was an order that would have to be obeyed. In order to get it set aside, Dr. Anderson must go to some Court competent to set it aside; this Court was not competent to set it aside.

Dr. Anderson respectfully submitted that the Court had power over any order which was not a complete and good order. If he could show that there was a real interest on the part of Lord Esher that disqualified him from sitting and invalidated the judgment, then he thought he could make good his point that no order as that occasion was made, no judgment was pronounced; that what now stood in front of him was only in the form of a judgment, but had no substance. In the case of Dimes v. Cottenham the judgment of the Lord Chancellor was set aside for interest; and he thought he should be able to show that in the case of Lord Esher there was an exactly comparable interest to the interest Lord Chancellor Cottenham had when his judgment was set aside.

The Master of the Rolls: How can you do that? You are stating things which are not true.

Dr. Anderson: I have never done so.

The Master of the Rolls: The interest of Lord Chancellor Cottenham was a money interest. Now you are saying that that is on all fours with my case, because you say that in some action a man brought against me, which the Court held he ought not to bring, that makes me an interested party in all cases which are to come before this Court. You are a person, I believe, who has been a lawyer, and to say such things as that is absolute and ridiculous nonsense.

Dr. Anderson: I am quite content that your lordship should call it nonsense, but I am not content that your lordship should say it is not true. I do not think I should come here after all I have suffered to be told that I make statements that are not true.

Lord Justice Lopes said that if Dr. Anderson's contention was correct that Lord Esher was disqualified. So too was disqualified, because he had had several actions brought against him, which had been dismissed as frivolous and vexatious.

Dr. Anderson said there was a distinction between the two cases. At the moment when Lord Esher took part in his case there was a similar action pending against his lordship, and the precedent made in his (Dr. Anderson's) case became the precedent by which the action against Lord Esher was dismissed. Without the judgment in which his lordship took part, the law of the country, as previously explained, was the other way. The decision in Anderson v. Gorrie in the Divisional Court was that such action was not frivolous and vexatious.

The Master of the Rolls: What action?

Dr. Anderson: The action against a judge on the ground alleged in Anderson v. Gorrie had been decided by the Divisional Court not to be a frivolous and vexatious action; and if I can show that this action against your lordship was on all fours with that——

The Master of the Rolls: It is too outrageous. The action, I think, was brought by a Mr. Yeatman; about it I never knew anything, except handing it over to the Solicitor for the Crown to deal with; but I believe it was an action in respect of something which he said I said to a jury seven or nine years before. It is too outrageous that the time of the Court should be occupied with such absurd nonsense.

Lord Justice Lopes said, even assuming that what Dr. Anderson had said was correct, in his opinion he could not come to that Court.

Dr. Anderson submitted that the Court could deal with the case. He thought he should be able to show that the Court had the power and the duty to constitute a court.

Lord Justice Lopes: Such an application has never been made before from the beginning of time.

Dr. Anderson: And the circumstances under which I am making the application never occurred before from the beginning of time. I do not believe, in the history of England, in the whole of the records such a verdict as I obtained in this case was ever found.

Lord Justice Kay: Or that in the history of this Court any man before you had the courage to raise the point.

Dr. Anderson: There are two points, I say, which without the least disrespect——

The Master of the Rolls: You may depend upon it, so far as I am concerned, I do not want your respect.

Dr. Anderson: I will accept that. Perhaps an occasion will occur when you will.

The Master of the Rolls: I cannot imagine it.

Dr. Anderson: If your lordship will say these things to me, I am sorry to have to answer them. I feel it places me in a false position.

Dr. Anderson then cited the case of Dimes v. Grand Junction Canal Company (3 H.L.C., 759), Abraham v. Reece, and Regina v. The Justices of Great Yarmouth (8 Q.B.D., 525, *Law Reports*) in support of his argument. He contended that the Master of the Rolls was disqualified by interest from hearing the appeal, and that therefore the judgment should be set aside.

In giving judgment, the Lord Chancellor said that in his opinion there was not the smallest ground for the application, and he could not help feeling that it was the greatest possible abuse that the time of the Court should be occupied in repetitions of nonsensical observations over and over again, and in a tone which he hoped would not be imitated hereafter. The first proposition was that the Court was not competent to deal with a question coming before it in the regular course, because one of its members had had an action brought against him, and that inasmuch as another decision of the Court established the proposition that no proceeding judicially entertained, or of a judicial office, could an action lie, then another judge was to be disqualified because he might have an interest in establishing the proposition that no judge could be sued. He could hardly give adequate verbal expression to such nonsense; the thing was too absurd to be treated gravely. Secondly, the proposition was that if there were the least pretence for saying that there was ground upon which the Court was incapable of sitting and determining the case, that inasmuch that it was a voidable judgment the inference was that they could hear it again. He should have thought to anyone familiar with legal procedure it would be intelligible that if that were a true proposition, and the judgment was voidable, it would be a matter of appeal. There was not the smallest pretence for the application, and he regarded it as a somewhat mischievous proceeding that so much time should have been wasted upon a matter with regard to which he should have thought no intelligent man

would have had the smallest doubt. He was therefore of opinion that the Court ought not to grant the application.

The Master of the Rolls said he should advisedly take part in the present judgment because he thought that the argument which had been used against his taking part in it was absolutely contemptible. At the same time he only took part in it to say that he agreed with every word that the Lord Chancellor had said.

Lord Justice Lopes, in concurring said the only way in which he could characterise the application was by describing it as a wanton and unjustifiable waste of time.

Lord Justice Kay said he also agreed with what the Lord Chancellor had said. There was no suggestion whatever, capable of being maintained, that Lord Esher had such an interest as preventing his hearing the case; and if there were, the application was a most frivolous and absurd one. The proper course to take would be to go the House of Lords. That Court had no jurisdiction whatever to rehear a case which, according to Dimes's case, was a final judgment until it was set aside—not void, but voidable only. In his opinion it was neither void nor voidable, and on both grounds the gentleman who had been taking up so much of the time of the Court was utterly and entirely in the wrong.

AN UNQUALIFIED PRACTITIONER FINED.

At the Stipendiary's Court at Tunstall on October 24th William Benjamin Davies, of The [illegible], New Road, Talk o'-th'-Hill, was summoned for having wrongfully assumed the title of surgeon, implying that he was thus recognised by law, contrary to the 40th Section of the Medical Act, on July 26th and September 3rd. Mr. E. A. Paine prosecuted on behalf of the Medical Defence Union of London, and Mr. E. A. Ashmall appeared for the defence. According to the report in the *Birmingham Gazette*, Mr. Paine said that under the Act the *Medical Register* for the current year was evidence as to whether a medical man was qualified or not, and defendant's name did not appear in the *Register*. He had a sign in his window bearing the name "Dr. Davies, Surgeon," and on the dates named had prescribed for a man named James Allen, of Kidsgrove, charging him 2s. 6d. on each occasion for bottles of medicine, and signing his certificate exempting him from work as "M.D." Mr. Ashmall, on behalf of the defendant, pleaded guilty, and represented to the Court that the defendant had studied for the medical profession, but on account of an affection of speech had been dissuaded from entering for the final examination. He was in poor circumstances, in delicate health, and had a weakly wife. He asked for leniency. The stipendiary said the offence was a very serious one, and fined the defendant £10 and costs in each case, £22 4s. in all, or two months' imprisonment.

INSURANCE CASES.

W. is the regular medical adviser of a family named D., S. is a leading surgeon in the same town. Mr. D. sustains some minor injuries by a fall from his trap. W. is called to attend him, and is asked to report to an accident insurance office. He reports, describing nature of injuries, and stating his opinion that the patient will be able to resume part of his work in about fourteen days. Mr. D. and the office have some correspondence as to the lump sum to be paid in settlement of the claim, and the office requests S. to visit and examine Mr. D., which he does without any communication whatever with W., either before or after the visit. 1. Was this a proper proceeding on the part of S.? 2. If not, what should W. now do?

"*" The principle laid down in the appended rule is that by which S. should have been guided, to which, in response to our correspondent's second query, we may add that it would be well to solicit his (S.'s) attention: "When, moreover (an oft-recurring incident) an employer or other person becomes anxious and apprehensive in regard to the illness of an employee, or in the case of an impending action for damages and the like, and for his personal satisfaction requests his own family or other doctor to visit the patient and report to him thereon, it is the duty of the deputed practitioner to point out to the employer or other interested party their respective ethical obligations in the matter, and, prior to making such visit, to solicit and obtain the sanction of the medical attendant in the case, otherwise he will commit a grave breach of professional etiquette, and entail upon himself a just rebuke."—*Code*, ch. ii, sect. 5, rule 15.

OLD PRESCRIPTIONS.

M.D. writes: I am attending a patient who has cancer of the uterus, and who has several times expressed to me a strong disinclination to take morphine. Recently her symptoms have aroused my suspicions, and on inquiry I found from a relative that she was taking some drops supplied to her by a lady who takes an interest in her. On referring to the London chemist who supplies these "drops" I am informed that they contain "hydrochlorate of morphine, with an excess of hydrochloric acid," and that the lady to whom they are sent has been warned to be careful in their use. On expostulating with the lady I am told that the drops are made up from the prescription of "a first-rate London physician," and that she cannot see any harm in supplying them to the patient without my knowledge, at the same time agreeing to accede to my wishes. Further inquiry leads me to believe that the prescription was originally given to the mother of the lady in question, and that she died some years ago. Since then the prescription has been frequently used for other people in a would-be charitable manner. Will you kindly inform me whether the law permits a chemist to continue for years to make up a prescription containing full doses of morphine, well knowing that he is not dispensing it for the person for whom it was originally ordered?

"*" It is the business of a chemist to dispense drugs according to prescriptions presented to him for that purpose, and there is no legal restriction to prevent him from supplying drugs in that way. When the nature of the medicine ordered appears exceptional it is customary to refer to the prescriber, if that be possible; if that cannot be done, and circumstances appear to justify refusal to supply a medicine, that course may be adopted sometimes. But it is always a delicate matter for a dispensing chemist to exercise his discretion in that way upon his own responsibility. Very often it may be impossible to determine whether a prescription is or is not to be regarded as a medical instruction for the supply of medicine. The circumstances of the case referred to by our correspondent forcibly illustrate the possible evils and difficulties connected with the customary practice, but it is not easy to suggest a remedy for them that would be effectual.

PUBLICATION OF TESTIMONIAL BY PATIENT.

A CORRESPONDENT asks for our advice as to the proper course to adopt under the following circumstances: In conjunction with three other gentlemen he performed an operation on a patient, and subsequently there appeared in a local newspaper (apparently inserted by or on behalf of the patient, and paid for, we are informed, as an advertisement) a testimonial speaking in terms of commendation of the manner in which the operation had been performed, and expressing the "heartfelt thanks" of the patient and her friends to our correspondent. The latter now inquires what action he and the gentlemen in question (who are naturally annoyed at such publicity) can take in the matter by way of reparation. The publication in question is injurious in so far as it might raise a presumption of having been inserted by way of advertisement on behalf of our correspondent, and that he might be called upon by the General Medical Council for an explanation: but while proceedings against the parties or the proprietors of the newspaper would secure the result of vindication in this respect, such proceedings would necessarily involve considerable anxiety and possible expense: and under the circumstances we think our correspondent should rely on his standing and reputation to rebut any suggestion of improper professional conduct, rather than embark in an expensive action.

A letter to the newspaper in question might be written for publication (subject to the approval of the three other gentlemen referred to), but this course is open to the objection of reviving the original testimonial. Our correspondent has probably administered a warning to the newspaper in question.

A PADDY.—Professionally regrettable and ethically wrong as is the line of conduct imputed to B in relation to A, it is, we fear, the natural outcome of a more or less unethical mind, incited thereto by the unfriendly feeling existing between them. Be the unexplained cause what it may, we would express a hope that, however great the provocation has been, or may be, A will avoid retaliation and continue to act in strict accordance with the ethical rules referred to in his letter as those by which his individual conduct has therefore been guided.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

EXAMINERS FOR MEDICAL DEGREES.—The following appointments of examiners have been made in reference to the First and Second Examinations for the M.B. degree:—Physics: Mr. H. F. Newall and Mr. S. Skinner. Chemistry: Mr. F. H. Neville and Mr. S. Kuhnemann. Biology: Mr. A. C. Seward and Mr. J. J. Lister. Pharmaceutical Chemistry: Mr. A. Ivatt and Mr. R. H. Adie. Human Anatomy: Professor Macalister and Professor Paterson. Physiology: Mr. W. B. Hardy and Professor Halliburton.

ENTRY OF MEDICAL STUDENTS.—The final returns show that 167 freshmen have entered on the course for the M.B degree.

EXAMINATIONS.—The Registrary publishes the following particulars in reference to the forthcoming examinations for medical and surgical degrees in the present term:

Examination.	Names to be sent in.	Fees and Certificates.	Examination Begins.
First M.B.—			
Chemistry, etc.	November 23 ...	November 30 ...	December 6
Biology	,, 23 ...	December 3 ...	,, 9
Second M.B.—			
Pharmacy	,, 23 ...	,, 6 ...	,, 12
Anatomy, etc.	,, 23 ...	November 30 ...	,, 6
Third M.B.—			
Surgery, etc.	,, 27 ...	December 4 ...	,, 10
Medicine, etc.	,, 27 ...	,, 4 ...	,, 10
M.C.	,, 27 ...	,, 7 ...	,, 13

DEGREES.—At the Congregation on Thursday, October 24th, the following degrees in medicine and surgery were conferred:—M.D.: M. G. Foster, M.A., M.B., Trinity; R. R. Law, B.A., M.B., B.C., Christ's. M.B. and B.C.: F. W. Garrad, B.A., Clare.

UNIVERSITY OF EDINBURGH.

A SPECIAL graduation ceremonial was held on October 26th; the Vice-Chancellor, Principal Sir William Muir, presiding, when the fifty-eight gentlemen whose names appeared in the BRITISH MEDICAL JOURNAL of October 26th were formally admitted to the Degrees of M.B and C.M. At the same time eight gentlemen were admitted to the Degree of M.A.

GENERAL COUNCIL.—The statutory half-yearly meeting was held on Friday, October 25th. The only business of medical interest was the election of two Assessors to represent the Council of the University Court, the term of office of Drs. Patrick Heron Watson and John Duncan having come to an end. Dr. Duncan had intimated that he did not desire re-election. It was therefore unanimously agreed to elect Drs. Patrick Heron Watson and Joseph Bell as the new Assessors.

UNIVERSITY OF GLASGOW.

PROFESSIONAL EXAMINATIONS.—The professional examinations at Glasgow University for degrees in medicine are just concluded. The entries for the final first examination numbered 6, including 2 women candidates; for the second 55, including, also, 1 woman; and for the third 64, including 4 women. The passes numbered 3, 10, and 34 for the first, second and third respectively, the remainder having either failed or withdrawn. Under the new regulations there were 138 for the first, including 10 women. Of the total, 71 passed in one or more subjects, 56 failed, and 11 withdrew. Of the women, 9 passed. For the second there were 74 entries, of whom 8 were women. The passes were, in anatomy 36 (26 failures), in physiology 42 (32 failures), in materia medica 37 (18 failures); of the women, 7 passed in one or more subjects.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following gentlemen, having passed the necessary examination for registered practitioners, have been admitted Licentiates of the College:

E. Barker-Barber, L.S.A. Lond., and H. E. Watts, L.S.A. Lond.

OBITUARY.

LAUNCELOT W. ANDREWS, M.D. Lond.

UPON the many students of St. Bartholomew's Hospital between 1882-92 the news of Launcelot Andrews's untimely death will fall as a sudden shock and as a grievous personal loss. Some of his friends had had the painful satisfaction of saying goodbye to him in the last two weeks, when it became evident that his life must shortly close, but to most of his old fellow students this announcement will be one of almost appalling suddenness. In the earlier part of the year one of his testicles was removed for what turned out to be carcinoma. He resumed his work with full vigour and enthusiasm, but after a summer holiday in Switzerland returned to town only to be struck down by a recurrence of the growth in the abdomen, which first showed itself by very obstinate vomiting. This disease rapidly progressed, and he died at 7 A.M. on Tuesday, October 29th, being devotedly nursed by his wife, who is thus left a widow with one son.

Launcelot Andrews, born on March 1st, 1864, was the eldest son of the Rev. W. R. Andrews, of Teffont Ewyas, Wiltshire. He was educated at Haileybury College, where he made many friends, and was a prominent member of the School XV. In 1882 he entered at St. Bartholomew's Hospital, and began working for the London M.B. degree, which he passed in 1889, proceeding to the M.D. in 1892. He was a Member of the Royal College of Surgeons, a Licentiate of the Royal College of Physicians (1889), and a D.P.H. of Cambridge (1893).

From the first Andrews was marked out by his single-hearted enthusiasm and energy; whatever he had in hand, whether work or play, was pursued with an earnest delight in its performance, and it would seem with no further end in view. In his first year he was a member of the Rugby football team, which won the cup (1893), and from that time he was a prominent figure in all the various activities of the schools, a fact that is shown by his long association in various official capacities with the Abernethian Society, of which he was at one time president.

After qualifying he was House-Surgeon to Sir W. Savory, House-Physician to Dr. Andrew, and Ophthalmic House-Surgeon to Mr. H. Power, besides being very frequently *locum tenens* in the only other appointment he did not officially hold—the midwifery assistancy. After such a prolonged term he was naturally extremely loth to leave and to sever his ties with the hospital.

However, he started on general practice at Stamford, but soon returned to London and set up in Cheyne Gardens, Chelsea, where, happily married, he busied himself in practice and in attendance, first as an assistant at the electrical department at his old hospital, and then for a longer time as Clinical Assistant at the Royal South London Ophthalmic Hospital. The latter post, and the office of Surgeon to the Sloane Square Dispensary, he held to the last. Active in body, pure in mind, and with wide sympathies, it is not too much to say that, short as it was, he lived to the full an active and blameless life, the characteristics of which were an intense interest in all things human and an unswerving rectitude of conduct.

NORMAN MCLEOD CLERK, M.B., C.M., of Rothesay, who died in July last, was a son of the Rev. Dr. Clerk, Minister of the parish of Kilmallie. After a full course in arts in the University of Glasgow, with the view of settling as an agriculturist he emigrated to Buenos Ayres, where he remained until, with other Englishmen, he was forced to leave in consequence of one of the revolutions so common in that country. On returning to Scotland he entered himself as a student in medicine in the University of Glasgow, and acquitted himself during his whole curriculum in such a manner as to gain first class certificates in almost all departments. After obtaining the degrees of M.B. and C.M. in 1882, he became one of the House-Surgeons in the Western Infirmary under his uncle, whom he assisted besides in his private practice. He then obtained the appointment of Assistant Medical Officer to Smithston Asylum and Poorhouse, Greenock. While there, however, he had an attack of rheumatic fever, which probably laid the foundation of that delicacy in health which attended him more or less afterwards. He afterwards settled in Rothesay as successor to the late Dr. Maddever. He there pursued his profession in a truly professional spirit, and gained the affection and esteem of all who came under his care. Since a bad attack of influenza in 1892 he gradually declined in health and strength. The end at last came suddenly.

MANY medical men who have studied in Vienna within the last ten years will hear with great regret of the death last week, at the early age of 32, of Mrs. GORDON, wife of the Rev. Francis Gordon, of that city. Not only did Mrs. Gordon assist her husband in his duties as Honorary Secretary of the Anglo-Wiener Medical Association, but she entertained, in a most hospitable manner, English and American doctors visiting Vienna. Numbers of young medical men look back with pleasure to the quiet Sunday evening suppers at her house in Landesgerichts Strasse, when for a few hours they were made to forget that they were "strangers" in a strange land.

MR. GEORGE REDFORD, F.R.C.S., died at Cricklewood, N.W., on October 26th, in his 80th year, after a lingering illness. He was the son of the Rev. Dr. Redford. Mr. Redford has been well known for many years in art circles as a cultivated and accomplished critic. He was an excellent judge of pictures, especially the old masters. In early life Mr. Redford practised as a medical man, and was for some years in the Army Medical Service, having volunteered at the time of the Crimean War. In later years he was officially associated with the Art Treasures Exhibition at Manchester, and also as one of the Commissioners of the Leeds Exhibition.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 4,111 births and 1,761 deaths were registered during the week ending Saturday, October 26th. The annual rate of mortality in these towns, which had been 21.0 and 19.1 per 1,000 in the two preceding weeks, rose again to 19.7 last week. Among these large towns the death-rate ranged from 10.7 in Croydon, 13.1 in Huddersfield, and 13.5 in Brighton to 21.4 in Liverpool, 25.5 in Salford, and 33.9 in Blackburn. In the thirty-two provincial towns the mean death-rate was 21.4 per 1,000, and exceeded by 2.9 the rate recorded in London, which was 17.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.9 per 1,000; in London the rate was equal to 2.5, while it averaged 3.1 per 1,000 in the thirty-two provincial towns, and was highest in Swansea, Burnley, and Blackburn. Measles caused a death-rate of 1.2 in Oldham, 1.7 in Swansea, and 5.6 in Blackburn; whooping-cough of 1.2 in Warrington, 1.3 in Leicester, and 2.3 in Burnley. 2.2 in Bolton, and 2.3 in Sunderland; and diarrhœa of 1.6 in Swansea, 2.2 in Blackburn, and 4.9 in Burnley. The mortality from scarlet fever showed no marked excess in any of the large towns. The deaths from diphtheria in the thirty-three towns included 6 in London, 4 in West Ham, 4 in Birmingham, 3 in Cardiff, and 3 in Wolverhampton. One fatal case of small-pox was registered in London, but not one in any of the thirty-two large provincial towns. There were the small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate small-pox Hospital on Saturday last, October 26th, against 108, 124, and 119 at the end of the three preceding weeks;

14 new cases were admitted during the week, against 17, 9, and 7 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was [illegible], against 2,802, 2,837, and 2,836 at the end of the three preceding weeks; [illegible] new cases were admitted during the week, against 252, 332, and 241 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, October 26th, 876 births and [illegible] deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.3 and 18.7 per 1,000 in the two preceding weeks, rose again to 18.9 last week, but was 0.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.6 in Edinburgh to 21.1 in Paisley. The zymotic death-rate in these towns averaged 2.3 per 1,000, the highest rates being recorded in Edinburgh and Dundee. The [illegible] deaths registered in Glasgow included [illegible] from "fever," 4 from scarlet fever, 3 from diphtheria, 3 from whooping-cough, and 4 from diarrhœa. Four fatal cases of diphtheria were recorded in Edinburgh.

THE DIAGNOSIS OF DIPHTHERIA.

On the recommendation of the Medical Officer of Health (Dr. Cameron) the Committee of the Leeds Town Council have entered into an arrangement with the Professor of Pathology of the Yorkshire College to investigate on their behalf such doubtful cases as may be reported to him from time to time by the practitioners in charge. It is intended to place at the disposal of any medical man a small "culture outfit," by which he will be enabled to inoculate from the secretions of the throat a small quantity of jelly contained in the sterilised test tube. This will be sent to the Medical Department of the Yorkshire College, cultivated under favourable conditions, examined microscopically, and the result will be reported to the practitioner. The general measures taken for the prevention of infectious diseases, including diarrhœa, have been pushed forward with energy, and year by year, as the city extends and the population grows, the work is necessitating an enlargement of the staff to the department of public health. During the whole of the municipal year the notification of infectious disease has been in operation with a minimum of friction and very considerable advantage to the community in checking the spread of disease.

TYPHOID FEVER AT WEST BROMWICH.

Local reports as to the prevalence of typhoid fever in West Bromwich show that since April, [illegible] the Board of Guardians have been called upon to deal with [illegible] cases of the disease in [illegible] families, with the result of [illegible] persons rendered chargeable to the union. The significance of these figures is the more apparent when it is further stated that in the case of [illegible] of the families the members became pauperised only on the occurrence of the disease. In other words, it would seem that in 30 of the 33 attacks it was only the breaking out of disease that led to the necessity for Poor-law relief applications. This being so, one is led to ask why the Board of Guardians have had to take charge of the cases, and not the local health body—namely, the town council. The reply appears to be that the cases would never have been received into the workhouse if the town council had had any isolation accommodation for the fever patients. The facts would then seem to point to the pauperisation of persons by reason of the neglect of a very apparent duty on the part of the health body in not providing beds for the treatment of fever attacks. And complaint is made that this neglect has saddled the union generally in the shape of rates for West Bromwich cases. The prevalence has been a fatal one, 3 heads of families having died, and 10 deaths in all having occurred. Nor is this a solitary experience of fever in the borough, as it is the third outbreak in the same locality of the borough within the last two years, and the health officer has strongly animadverted on the "foul and open middens" so largely prevailing, giving it as his opinion that so long as the system is allowed to continue, so long will fever continue to recur. The circumstances seem such as to warrant much that has been said in the local press against the inactivity of the health body, and it is time that they bestirred themselves in the direction of additional hospital accommodation, and more especially in the adoption of such sanitary measures as will help to keep the needed isolation buildings empty of cases of a disease of a preventable nature. The iniquity of an open midden system is one that should not be tolerated in a town of the character of West Bromwich; and, if the present trouble only ends in the substitution of a water-carriage system of excrement removal for the prevailing middens, it will have at least accomplished something towards the extinction of typhoid in the place.

YARMOUTH BOARD OF GUARDIANS.

We are very pleased to note that at a recent meeting of this Board a resolution moved by the chairman, "That the salary of Dr. Collier as district medical officer be increased by £20," was, after considerable opposition carried by 11 to 7. The salary has been hitherto £50 per annum. The increase decided upon by the board appears to us to be a very moderate one, when the amount of work done and responsibility incurred is taken into consideration.

BASINGSTOKE UNION INFIRMARY.

We are compelled to refer to this subject again, though hardly with the hope of inducing wiser counsels to prevail. The inspector, Mr. Baldwyn Fleming, has laid the whole case for and against the new infirmary before the guardians in a most exhaustive speech, wherein he touched upon all points that related to the discussion. We trust that the final word has not been spoken, and if that final word comes from the Local Government Board we are convinced that the sense of the country will be in favour of the department putting considerable pressure on the guardians to compel them to follow the only reasonable plan, one that is at the same time humane and economical, that is, to build a new infirmary. We cannot understand a Board who listened to the eloquent pleading of the inspector passing a resolution to patch up the old wards, by using a chapel as a ward, placing the females in the present infectious hospital, and by thus scattering the patients over the building to increase the difficulty and mar the efficiency of the nurses' work. The report which we published of our Commissioner's visit to this house (September 21st) must convince our readers of the futility of the patch which the Board is trying to put on.

THE BLACKFRIARS SALVATION ARMY SHELTER.

The hearing of the summons in this case was again resumed on October 24th at the Southwark Police-court before Mr. Slade. Further evidence was called for the defence, and the case was adjourned until November 14th.

A correspondent directs our attention to a note on the subject of this shelter in the British Medical Journal of October 19th, in which he says we were "somewhat inclined to doubt the accuracy" of a particular analysis. We of course intended simply to record the opinions expressed by a witness under examination. Any comment upon the questions at issue must for the present be reserved.

CISTERNS AND THE CONSTANT SERVICE.

Dr. W. H. Symons, D.P.H., F.I.C. (Marlborough Hill, N.W.), writes: In an editorial paragraph in the British Medical Journal of October 19th you draw attention to a form of cistern which Dr. Talbot has provisionally patented. The mere fact of having an inverted bee-hive shaped cistern of from [illegible] to [illegible] gallons capacity would not preclude the accumulation of deposits of micro-organisms, nor would it insure a complete daily change of water, even if the draw-off tap were at the apex.

For many years, when I have been consulted as to the best means of obtaining a small pure supply of water for drinking purposes, I have recommended, what I adopted myself in the absence of constant service, tapping the lowest portion of the pipe which leads up to the high service cistern. This pipe is usually 1 inch in diameter, and generally more than 30 feet in length, and therefore will contain over 1 gallon, and supply average wants for cold drinking water. The pipe serves as a cistern which is thoroughly flushed out by the hundreds of gallons of water which daily pass through it. The cost of the alteration need not be more than 5s.; but it is necessary to ascertain that the water has no appreciable action upon the large surface of metal pipe, and that foul air is not sucked in through the terminal tap to replace the water drawn off. If a sufficient supply cannot be stored in this way, the capacity of the pipe may be increased by inserting in its course a larger earthenware pipe, terminating in a cone at either end where it joins the metal pipe; or, what is still better, a small glass-covered earthenware or glass cistern may be so placed as to intercept the water supply. The ball-cock should be in the main cistern, but the water from the tap, led first to the bottom of the small cistern and then by an overflow into the large cistern, in this way the small cistern is automatically flushed every day by a very large volume of water; of course a second pipe to the draw off tap is necessary. The cistern for drinking water should be so placed that it may be easily inspected, that it is in pure air, and if possible exposed to sunlight.

I have no further acquaintance with Dr. Talbot's proposal than is obtained from reading the British Medical Journal, but I very much question whether any patent would prevent the free adoption of either of the plans I suggest. I advocated this system in the *Standard* of November 19th, 1892, and have no doubt the same ideas have occurred to many others.

⁂ So long as interruptions are possible we must provide against the consequent deprivation of water by some reserve, but such that it shall be renewed daily. There is danger of contamination in the entrance of dust and vermin, and the accumulation of deposits in cisterns as commonly fixed in the most improper positions, covered, if at all, with loose boards cut away to admit the supply pipe, and with flat or uneven bottoms. A cistern such as that recommended in an article in the *Sanitary Record* of October 18th, in the form of a cylinder 5 feet in depth, ending below in an inverted cone 1 foot deep, would, if 2 feet in diameter, hold 100 gallons, or if 3 feet, 230 gallons, the cover fitting as close as the lid of a saucepan, and the supply pipe soldered into the side like the overflow, would preclude the entrance of dust, etc., and its conical bottom and outlet render deposits impossible. Even if the water were turned on for one hour only, the cistern would receive enough for the day's wants. There is, however, nothing to prevent the drinking water being drawn directly from the main, colder, though scarcely purer.

INDIA AND THE COLONIES.

INDIA.

Cholera in Burmah.—The Brahmaputra and Irrawaddy valleys have (says the *Bombay Gazette*) sometimes been described as the true home of cholera, and if true home means permanent residence, the epithet is not without warrant. The annual Sanitary Administration Report for Burmah throws some light upon the subject. In 1894, in no month of the year was cholera absent from the province, and it caused the death of over [illegible] persons. The highest mortality always corresponds with the full establishment of the rains, the minimum with the cold, dry weather. Thus, in July 1,450 people died: in January only 221. Looking back over the past decade we see how the death-rate from the disease varies. In 1888 it reached the high figure of about 16,000; in 1890 it declined to little more than 1,000; in 1892 it rose to over 8,000. In the ten years nearly 53,000 people have died, or an annual average of 5,000. As to the propagation of the disease the most the local medical authorities can tell us is what we knew before—that it seems to spread along the lines of human communication.

MEDICAL NEWS.

Dr. Phineas Abraham has resigned the post of Physician at the Western Skin Hospital, Great Portland Street.

During the past week fourteen cases of rabies, all occurring in the west end of the county, have been reported to the Middlesex County Council.

The first meeting for the session of the Epidemiological Society will be held on Friday, November 15th, at 8 P.M., in the rooms of the Medical Society of London, when Mr. T. W. Thompson will read a paper entitled "Considerations in respect of 'Return' Cases of Scarlatina."

The first lecture of the Royal British Nurses' Association for the present session will be given at 17, Old Cavendish Street, on Friday, November 22nd, by Dr. Louis Parkes, M.O.H. Chelsea, "On the Importance of Breathing Fresh Air."

Presentation.—Mr. Alfred Power, medical officer of the Caylloma Silver Mining Co., Peru, was, on the termination of his period of office, presented by the staff of the mines with a handsome present, and an address expressing their sense of his kindly and skilful discharge of his medical duties.

Charing Cross Hospital Old Students Dinner.—The annual dinner of past and present students of the Charing Cross Medical School was held on Wednesday, October 23rd, at the Holborn Restaurant, Mr. C. J. Worlett, F.R.C.S., being in the chair. After the toast of "The Queen," the Chairman gave that of "The Medical Staff," which was responded to by Dr. Watt Black. Mr. Waterhouse proposed "The Past and Present Students," responded to by Dr. W. Travers and Mr. Lloyd. Dr. Routh proposed "The Visitors," for whom Mr. Sheild replied; and Mr. Morgan gave the toast of "The Chairman." About 155 gentlemen were present, and the meeting was generally felt to have been as successful as any of its predecessors, the success being accentuated by the songs contributed by Dr. Mott and Messrs. A. E. Reade, Hudson, and Leake.

St. George's Hospital Medical School.—On Monday, October 28th, in the theatre of the School, Dr. Howship Dickinson distributed the certificates of honour given to students who had gained scholarships, exhibitions, and prizes during the year. The recipients were: Mr. Walwyn Thomas, £100 Exhibitioner and Treasurer's Prizeman; Mr. Sidney Smith and Mr. Frank Morley, Brackenbury Prizemen in Medicine and Surgery respectively; Mr. E. T. Fison, Special Certificate of Honour in Medicine; Mr. R. A. Cooper, Brodie Prizeman; Mr. H. S. Barwell, Henry Charles Johnson and Proficiency Prizeman; Mr. R. E. Drake-Brockman, Brodie Prizeman; Mr. C. R. Keyser, Sir Charles Clarke's Prizeman; Mr. T. M. Neatby, Proficiency Prizeman; Messrs. H. S. Pendlebury, H. G. Deller, and Howell Evans, Entrance Scholars in Science; Messrs. T. C. English, H. A. Chaplin, L. F. Cope, and Lawrence Jones, Entrance Scholars in Arts. Addressing the students at the close of the ceremony, Dr. Dickinson warned them against the danger of becoming one-sided—a danger to be avoided by a legitimate degree of indulgence of an Englishman's natural taste for sport and by the cultivation of the great masters of English literature. For the works of Milton, Addison, and Gibbon the speaker claimed special attention.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salaries, £60 and £50 respectively, with board, washing, and attendance at the Institution. Applications to the Secretary, Children's Hospital, Steelhouse Lane, Birmingham, by November 8th.

BRISTOL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon; doubly qualified. Salary, £100 per annum, with rooms and attendance (not board). Applications and testimonials, endorsed "House-Surgeon," to H. Lawford Jones, Secretary, before November 6th.

BROWN ANIMAL SANATORY INSTITUTION.—Professor Superintendent. Salary, £600 per annum. Applications to the Registrar of the University of London, Burlington Gardens, W., by November 15th.

CITY OF DUBLIN HOSPITAL.—Visiting Surgeon. Applications to Mr Arthur Benson, F.R.C.S.I., Hon. Sec., Medical Board, City of Dublin Hospital, Upper Baggot-street, Dublin, before November 5th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon; must be duly qualified to practise medicine and surgery, and be conversant with the Welsh language. Salary, £60 per annum, with board, residence, and washing. Applications and testimonials to W. Vaughan Jones, Secretary, by December 2nd.

GLASGOW MATERNITY HOSPITAL.—Obstetric Physician and Assistant Obstetric Physician. Applications to Arthur Forbes, Secretary, 148, Buchanan Street, Glasgow, by November 8th.

ROYAL BERKS HOSPITAL.—Consulting Dentist; must be registered Licentiate in Dental Surgery. Applications to the Secretary ten days before the election on November 6th.

ROYAL PORTSMOUTH HOSPITAL.—Assistant House-Surgeon; appointment for six months. Honorarium of £25 15s., and board and residence, and is renewable for a further period of six months. Applications and testimonials to J. A. Eyerley, Secretary, before November 14th.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House-Surgeon (non-resident); doubly qualified. Must reside near the hospital, and devote the whole of his time to the institution. Salary, £100 per annum. Applications and testimonials to H. G. Sanderson, Secretary, by November 5th.

SUNDERLAND INFIRMARY.—House Physician. Salary, £80, rising £10 annually to £100, with board and residence. Applications to the Chairman of the Medical Board by November 7th.

TOWNSHIP OF TOXTETH PARK.—Junior Assistant Resident Medical Officer for the Workhouse Infirmary. Candidates must be registered and doubly qualified. Salary, £75 per annum, with board, washing, and apartments. No extra fee. Applications, endorsed "Junior Assistant Medical Officer," to James Moulding, Clerk to the Guardians, 15, High Park Street, Liverpool, by November 6th.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon; doubly qualified. Salary, £120 per annum, and £20 per annum for dispensing, with furnished apartments and attendance. Applications and testimonials to Tyson Kitchen, Secretary, by November 9th.

MEDICAL APPOINTMENTS.

Bateman, C. E. G., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Workhouse and Walsingham District of the Wainsgham Union, *vice* F. Bayes, M.R.C.S., resigned.

Boulton, A., M.R.C.S.Eng., appointed Medical Officer of Health to the Horncastle Rural Sanitary District, *vice* H. George, M.D.St.And.

Carmichael, W. J., M.B., C.M.Aberd., appointed Surgeon and Agent to the Coastguard at Cullercoats, and Medical Officer for the parish of Stains, *vice* Dr. Jameson, resigned.

Edwards, Norman Fox, M.B., Ch.B.Vict., appointed House Physician to the Swansea Hospital.

Evans, Arthur Henry, appointed Resident Obstetric Assistant to the Westminster Hospital.

Flemyng, Dr. G. E., appointed Medical Officer for the Downham District of the Ely Union, *vice* H. Hulbert, B.A.Oxon., L.R.C.P.Lond., M.R.C.S., resigned.

Garstang, Thos. W. H., M.R.C.S., Medical Officer of Health to the Knutsford Urban District Council, appointed Medical Officer of Health to the Bucklow Rural District Council, *vice* Altrincham Rural Sanitary Authority.

Gibbs, F. R., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Eighth District of the Wycombe Union, *vice* W. G. Weaver, L.R.C.P. Lond., resigned.

Gordon, W., M.A., M.D., B.C.Cantab., M.R.C.P., appointed Physician to the West of England Eye Infirmary, Exeter.

Hardie, John, M.B., F.R.C.S.E., appointed Examiner in Anatomy at the Royal College of Surgeons, Edinburgh, *vice* Macdonald Brown, F.R.C.S.Eng., retired.

Jolly, R. W., M.R.C.S.Eng., appointed Medical Officer of Health for Peterborough, *vice* W. E. Payley, M.B.Durh., F.R.C.S.Eng.

Morley, H. W., M.R.C.S., L.R.C.P., formerly Assistant House-Surgeon, appointed House-Surgeon to the Royal Portsmouth Hospital, *vice* T. H. Bishop, M.B., resigned.

Pattinson, H. A., M.R.C.S.Eng., L.R.C.P.I., reappointed Medical Officer of Health to the Seaton Urban Sanitary District.

Pollard, C., M.D., F.R.C.S., appointed Medical Officer for the Holt District of the Martley Union, *vice* W. A. S. Walsh, M.R.C.S.Eng.

Randell, R. M. Henry, M.D.Lond., M.R.C.S.Eng., appointed Honorary Medical Officer to the Beckenham Cottage Hospital.

Stevens, F. J., B.A.Oxon., M.R.C.S., D.P.H., appointed Medical Officer of Health to the Camberwell Sanitary District.

Tibbetts, T. M., M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health for the Quarry Bank Urban Sanitary District, *vice* Dr. W. H. Thompson, deceased.

West, Waldemar S., M.A., M.B., B.C.Cantab., appointed Resident Medical Officer to the Royal Hospital for Diseases of the Chest, City Road, E.C.

DIARY FOR NEXT WEEK.

MONDAY.

London Post-Graduate College, London Throat Hospital, Great Portland Street, 8 P.M. Dr. Wheeler: Sequelæ of the Pharynx and Larynx.

Odontological Society of Great Britain, 49, Leicester Square, W.C., 8 P.M.—Inaugural Address by the President, Mr. Lionel Heppurn. Clinical communications by Mr. C. J. Boyd Wallace and Mr. J. Mann Nevell.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Craig: Alcoholic Insanity.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Dr. Snow: The Non-existence of Round celled Sarcoma as a Distinct Class of New Growth. Drs. Garrod and Hopkins: On the Recurrence of Large Amounts of Hæmatoporphyrin in the Urine after the Administration of Sulphonal. Mr. Beadles: The Relation of Biliary Calculi to Malignant Disease of the Liver. Mr. Jackson Clarke: Dermoid Tumour of the Testis. Mr. Edmunds: Cystic Accessory Thyroid. Card Specimens:—Mr. Beadles: Ureter Obstructed by Calculus. Dr. Willcocks: Perihepatitis and Thrombosis. Dr. Walsham: Pulmonary Stenosis. Mr. Edmunds: Myxoma of Breast.

WEDNESDAY.

HOSPITAL FOR CONSUMPTION, Brompton, 4 P.M.—Mr. R. J. Godlee: On the Surgical Anatomy of the Chest.

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown. Papers:—Professor G. E. Curatulo (introduced by Dr. Griffith): On the Influence of the Removal of the Ovaries on Metabolism in connection with Osteomalacia. Mr. J. Bland Sutton: On a Case of Tubo-Uterine Pregnancy: Primary Intraperitoneal Rupture: Recovery. Dr. A. E. Giles: A Case of Uterus Duodelphys, with remarks on the Clinical Importance of this Malformation. Special General Meeting [illegible] of revision of Chapter VI of the By-laws.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Beevor.

THURSDAY.

LONDON POST-GRADUATE COURSE, Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Bastian: Cases in the [illegible] for Sick Children, Great Ormond Street, 2 P.M.—Mr. W. A. Lane: Surgical Cases. Central London Sick Asylum, Cleveland Street, 5.30 P.M. Mr. Jonathan Hutchinson: Cases in the Wards.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. Goodhart will open a discussion on Spasmodic Asthma and its Treatment.

NEUROLOGICAL SOCIETY OF LONDON, Mr. Jonathan Hutchinson's Museum, 1, Park Crescent, 8.30 P.M.—A Clinical Demonstration (Drawings and Photographs) of the Trophoneuroses of the Skin, more especially Herpes and Morphœa.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 3 to 5 P.M.—Professor Crookshank: Lecture, Actinomycosis and Glanders. Practical Work; Staining Sections and Cultivations.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Mr. Mansell Moullin: Suprapubic Cystotomy and Prostatectomy in Cases of Multiple Calculi. Mr. Golding-Bird: A Case of Intussusception through a Patent Meckel's Diverticulum. Mr. Langton: A Case of Osteopsathyrosis (Fragilitas Ossium), in which after firm union of several fractures had taken place, distortion occurred in some, several years afterwards. Dr. Althaus: A Case of Brain Tumour successfully Healed by Internal Medication.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Insanity and Syphilis; Insanity with Organic Brain Disease.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

EDWARDS.—On October 27th, at 55, Harley Street, W., the wife of F. Swinford Edwards, F.R.C.S., of a daughter.

MORSON.—On October 28th, at Springfield, Chelmsford, the wife of J. Lindale Morson, M.B., B.C.Camb., M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

TUTHILL—WATKIN-DAVIES.—On October 24th, at St. Michael's, Abergele, by the Rev. F. P. Watkin-Davies, Rector of Llanrwst, Denbighshire, brother of the bride, assisted by the Rev. Canon Evans, Rector of the parish, Alfred Tuthill, M.B., of Upper Portstone, Dorset, youngest son of the late Captain William Tuthill, King's Regiment, Lieutenant of Magalan, Maynooth, to Catherine Grace, youngest daughter of the late Rev. David Watkin-Davies, Rector of Llanrwst and Llysfaen.

LEWIS—LEWIS.—On October 23rd, at St. Catherine's Church, Penygraddi, by the Rev. Prescelter Lewis, B.D., Vicar of Ystradyfodwg, assisted by the Rev. E. J. Williams, B.A., Vicar of Llanas Powis, and the Rev. J. P. Gwynne, M.A., Vicar of Penygraddi, James Sloan Lyttle, M.D., M.Ch., M.A.O., Llanrwst, Penygraddi, to Edith Mary, eldest and only surviving daughter of the late Rev. Moses Lewis, Vicar of Llanwonno.

DEATH.

GORDON.—On October 24th, at 15, Pembroke Avenue, London, N.W., Ethel Beatrice, wife of the Rev. Francis Gordon, of Vienna, aged 32.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN NOON ON TUESDAY. TELEGRAMS CAN BE RECEIVED ON THE SUNDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

E. H. F. writes: Is there any post-graduate course where one can have practical instruction in putting up fractures, reducing dislocation, etc.?

X. Y. Z. asks where he can purchase good second-hand surgical instruments.

A MEMBER asks to be advised as to the best plan of treatment in the case of a tall girl, about 13 years of age, becoming "round in the shoulders," and somewhat stooped.

MR. CHARLES ROBERTS (The Lodge, Eastbourne) would be glad to know where he can purchase a large outline diagram of the brain and nervous system—apart from all other structures—suitable for a schoolroom lecture on physical education.

J. F. F., who has a patient, aged 20, male, with very small chest which he is anxious to see developed, asks to be recommended a trustworthy and competent Swedish drill instructor and masseur, who would attend at a private house.

Q. asks for information as to the following points in connection with starting a parish or district nurse—trained, of course. What remuneration should she require? Is it advisable to make any charge on those who benefit by her services? Where should one apply to obtain a likely person for this position?

C. P. writes: A girl, who in youth suffered from caries of the spine, has slight dilatation of the stomach, and is troubled with a gurgling, churning noise at every inspiration and expiration. I have dieted her, keeping down the liquids, and also used oil of rue, but with no marked effect. Can any readers recommend anything to remove the unpleasant noise in her stomach?

E. H. asks for advice in the treatment of a patient who has on the buccal mucous membrane about two small white ulcers about 2 lines in diameter. E. H. has given washes of boracic acid, alum, dilute nitrate of silver, and finally used the mitigated caustic stick; potassium chlorate has been given internally, also ferr. et ammon. citrat. The patient is in good health, but the ulcers increase rather than diminish in numbers; they are painless.

SALIVATION IN PREGNANCY.

F. is attending a primipara, aged 28, 3½ months pregnant, who has been salivated since the end of the first month. The case has defied all the varied drugs he has tried, and the textbooks he has consulted give little or no information. He will therefore be glad of any suggestion for the cure or alleviation of the distressing symptom.

THE PRESENCE OF VISITORS IN THE OPERATING THEATRE.

MEMBER B.M.A. writes: Is it not in accordance with the traditions of the profession that medical men shall be made welcome to the operating theatre of a public free hospital by their brethren upon the staff of the same? An instance in which the presence of uninvited local medical men has been treated as an intrusion suggests the advisability of a clear understanding upon the question. Young men whose professional duties are light are unwilling to find themselves in a state of rust and incompetence, and appreciate the opportunities for observation afforded by a hospital.

*** We agree with our correspondent that any member of the profession desiring to attend operations at a general hospital should be received as a visitor, not as an intruder. He should if necessary make himself known to the operating surgeon or to some other member of the surgical staff in the theatre, and should ask leave to watch the operations; and he should be careful neither to stand too near the sur-

geon nor to take a place that can impede those who have the care of the case or those students who are present at the operation. A good surgeon likes to have his skill seen and understood, and is glad that the lessons to be learned from the operation should not be lost for want of an audience. Such operations as ovariotomy, which may involve the use of a small theatre, and special precautions for the prevention of infection, can hardly be considered as free to the profession. But as regards the presence of members of the profession at the usual operations of a general hospital, we believe that the interests of the hospital and the advancement of surgery demand that visitors should be made welcome, and to treat them as intruders is neither good policy nor good manners. They on their part must be careful to remain outside the immediate circle of the surgeon and his assistants, and to stand or sit where they cannot obstruct the view of the students.

Foreign Homes for Inebriates.

F.R.C.S. asks if there are any homes for inebriates abroad where dipsomaniacs can put themselves under restraint for a year or two, and be thoroughly and efficiently looked after; or if there are any practitioners abroad who will undertake the management of such cases. The great difficulty is to induce dipsomaniacs to put themselves under restraint in homes in England, and he thinks if it was a question of going abroad the difficulty would be much less, in the same way that men will take life at home will do any kind and any amount of mental work abroad.

*** We cannot recommend individual practitioners or special homes. To advise English patients to place themselves under restraint in other countries involves serious responsibility.

ANSWERS.

Gallicus.—The conditions under which medical practice is permitted in France will be found briefly stated in the Educational Number of the British Medical Journal, September 7th, 1895, p. 626, and more fully in the Educational Number for 1894, September 1st, p. 504.

A Member.—The fourth edition of Professor Lombroso's *L'Uomo Delinquente* was published, according to its title page, at Turin, in 1889. A French translation, however, which purports to be made from the fourth edition, bears date 1887. As far as we are aware the work has not been translated into English.

Acetone will find an account of recent work on the chemistry of the carbo-hydrates in Watt's *Dictionary of Chemistry*, or more briefly in Halliburton's *Essentials of Chemical Physiology* (London: Longmans, Green, and Co. 5s.), and also in v. Jaksch's *Clinical Diagnosis*, translated by Dr. Cagney (London: Charles Griffin and Co. 25s.). The paper on creatinine alluded to is not yet published.

L. R. C. P.—We may refer our correspondent to the article on Degrees for Practitioners published in the Educational Number of the British Medical Journal of September 7th, 1895, p. 610. We are not acquainted with any university in the United States or Canada which would grant the degree of M.D. "without other than a clinical examination." We believe that most of the "Diploma Mills," as they used to be called in United States, have ceased to operate, their products being now generally esteemed worthless.

M.B.M. Assoc.—1. There is a large number of medical practitioners in New Zealand in proportion to the population. 2. A Branch of the British Medical Association is in course of formation in New Zealand, and Dr. Murray Aymsley, of Christchurch, N.Z., is acting in the matter. A correspondent, being a member of the North Wales Branch, should communicate his departure to the Honorary Secretary, D. Jones Morris, of Portmadoc.

Treatment of Gout.

J. A.—Sir A. B. Garrod, in his *Treatise on Gout and Rheumatic Gout*, writes of Laville's tincture as follows: "It is stated to be a peculiar preparation of colchicum and colocynth, and to be free from colchicum, but, unfortunately, no stress can be laid upon such statements in regard to secret medicines." He states that it resembles colchicum in its action, and adds: "I do not think the moderate use of Laville necessarily very injurious, but it is the reckless employment which is to be so much deprecated." (2) An article on Piperazine, by Dr. John Gordon, was published in the British Medical Journal of June 16th, 1894, p. 1341. Abstracts of foreign papers on its use will be found in the Epitome of the Journal for 1892.

Hot Salt Water Baths.

Physician writes: In reply to "M.D.'s" query (in the British Medical Journal of October 19th) for the best substitute for hot salt water baths at home, I think he will find "Broad Salt," from Droitwich, a most satisfactory substitute. It can be obtained of local agents at 2s. per hundredweight, or of the manager of the Droitwich Salt Works by the ton. About 1 pint to 12 gallons of water makes a good bath, and if the salt is put in a loose calico bag impurities are kept back, and patient and bath are preserved from any accidental grit. It dissolves quickly in hot water. I have so employed it for years.

F. C. W. writes: In reply to "M.D.'s" query in the British Medical Journal of October 19th, the Great Eastern Railway Company deliver sea water from Lowestoft at 6d. per 3 gallons, or a good substitute is Tidman's sea salt dissolved in rain water.

Strophanthus.

Dr. C. H. Ford-Ranstead, Surrey, writes: In answer to Dr. Shirtliff's queries as to strophanthus, the following facts, culled from notes of Professor T. R. Fraser's lectures, may be of service. The seeds contain a glucoside, which is the active principle, and which is very soluble in water. The drug has a powerful effect on striped and voluntary muscle; it produces irregular twitchings in individual fibres. The muscle then becomes more and more tense, until a state of tetanus is attained, when it is then acid. The action upon the heart is much more rapid than on other muscles. Strophanthus is possibly the most active lethal agent known, more than ten times so than aconitine, in the frog. It has only a trifling action upon the blood vessels. In small doses, besides increasing the contraction of the heart, the diastole of the ventricle is also increased; hence there is a larger amount of blood propelled into the aorta. The spinal cord is faintly affected; a little sensory paresthesia may be brought about, and anæsthesia of the conjunctiva can be produced. As regards its therapeutic uses, strophanthus may be given in the same cases as one would give digitalis, with the exception of hæmorrhages. On account of its being almost destitute of action upon blood vessels, the drug may be useful in certain cases in which one would hesitate to give digitalis, because of the latter's possessing this very action. It acts more rapidly, and has only a slight tendency to produce cumulative effects, because of its great solubility, whereas from digitalinum there is the possibility of the formation of several insoluble bodies.

Nail Biting.

Dr. W. Wilberforce Smith (London) writes in reply to a query in the British Medical Journal of October 19th: My experience is as follows: It is no mere habit, but belongs to a group of habitual purposeless, fidgety movements—such as contorting the facial muscles, grunting, picking off the skin above the roots of the nails, etc. Such movements are controlled by the will only so long as attention is fixed on preventing them. Nail biting and finger picking are continued by young ladies who are ashamed of the resulting disfigurement. It is chiefly noteworthy that such movements are mostly associated with marked general muscularity, often of a wiry kind. They belong to an important larger group which I classify for myself as muscularity with neurosis. To remedy a tendency to nail biting, a fuller daily exercise of the unsatisfied muscular system is essential. To stop the fidgety movement let some more adequate movement be immediately practised, such as going upstairs.

Another Member writes: I myself was quickly, safely, and pleasantly cured of the habit. The remedy was very simple, namely, a bribe of half-a-crown from an old lady if I did not bite my nails for a month. I honestly won the money, and have never had the slightest inclination to bite my nails since. Perhaps a larger dose of silver or even one of gold might be required in some cases.

NOTES, LETTERS, Etc.

T. writes: In your obituary notice of Dr. Thomas Groom, of Whitchurch, that gentleman "is said to have been the oldest medical practitioner in Shropshire." This is not quite correct, as there is happily living at Much Wenlock Mr. William Penny Brookes, F.R.C.S., who in August last entered on his 87th year.

We have received some further copies of the circular from W. Coleman, Norwich, of Coleman and Co., Limited, suggesting to medical men that they should take up debentures in that company for the sale of various preparations of meat extract. We are authorised to state that the firm issuing these circulars is not in any way connected with J. and J. Colman, of Norwich.

"Lennox": A Disclaimer.

Mr. Lennox Browne (Mansfield Street, W.) writes: Will you be so good as to publish this disclaimer of any identity between myself and the individual who answers questions on diseases of the throat, nose, and ear in the pages of the *Echo*, for, in spite of a protest from me published in that paper, and of disclaimers kindly admitted in your medical contemporaries, there is hardly a week passes that I do not receive a letter indicating that the confusion still exists in the minds of both patients and of professional *confrères*.

*** We publish the above disclaimer with pleasure. No one could imagine that Mr. Lennox Browne would prescribe for patients gratuitously in the columns of a halfpenny newspaper. The use of the word "Lennox" is calculated to deceive an ignorant public, and to make them believe that they are being advised by a duly qualified surgeon, but there is, unfortunately, no copyright in a "personal" name.

"Lennox."

We have received what purports to be an answer to the comments we made last week upon the practice of this person, but as the communication is unsigned it cannot, of course, be dealt with.

Artificial Feeding of Babies.

Dr. Percy Boulton, M.D., etc. (London, W.), writes with reference to a paragraph on p. 794 of the British Medical Journal, September 28th, 1895, that it is not known in England that in Germany Soltau's system of sterilising milk for artificial baby feeding is as simple and as near perfect as possible. The whole of the milk required for a baby during a long journey can be prepared beforehand by any intelligent person. Each bottle contains sufficient milk for one feed only. It is used by removing an india-rubber disc and placing a teat in its stead, and the baby sucks direct from the bottle. The paraphernalia consisting of bottles, discs, wire bottle frame, and a tin pan, can be got at any town in North Germany.

"What a Fashionable Doctor Makes."

Under this heading a paper bearing the exalted name of *Pall Mall* has lately published some strange revelations. The *Pall Mall* man consulted a "prominent specialist on certain diseases." There were twenty patients in the waiting room; the fee was five guineas; and the *Pall Mall* man was told (by the footer) that the prominent specialist saw fifty patients daily at home, besides visiting fifteen or twenty more. He also states—but this does not appear to be on the footer's authority—that "many patients pay ten, twenty, and fifty guineas for a consulta-

tion." He found that not a few fashionable doctors made from £[illegible] to £[illegible] a day for weeks together, and that several of them made at least £10,000 a year.

This is good news indeed. We congratulate the prominent specialist, and only regret that we cannot extend our congratulations to the fifty patients, [illegible] of his time and [illegible]. But we feel sure that the [illegible] advantage of the [illegible]. It is not [illegible] to follow the [illegible] to answer a fool according to his folly, if the answer is to be published [illegible]. But, after all, no harm has been done, and the paper, whose title we have already five times mentioned, may next week be pleased to give us some revelations, no less wonderful, of the slender earnings of the average consultant.

HOSPITAL ABUSE AT BRIGHTON.

Several correspondents have written to us in regard to an article which appeared in the JOURNAL on October [illegible], with the above title. Dr. [illegible] draws attention to the fact that the abuse of lying-in charities does not prove abuse in the case of charities which do not attend lying-in cases. This may readily be granted, but the letter by Dr. Waring, on which our article was a comment, did not limit its strictures to lying-in charities, and we quoted from his statement that [illegible] patients were last year admitted to the various hospitals and dispensaries of the town, although the whole population amounted only to 150,000. Dr. F. H. Waddy, however, draws attention to another aspect of the case. He states that in the case of most of the charities the subscriber's letter serves the patient for one month only, at the end of which time he has to obtain a fresh recommendation, which is entered in the register as a fresh case; and he also points out that many cases come from outside the area included in the estimate of the population of Hove and Brighton. These points he illustrates by extracts from the medical officer's report of the Throat and Ear Hospital thus: "The hospital system of monthly registration indicates 1,119 patients. [illegible] On revising the records of cases it is found that [illegible] different persons have applied for relief during the year [illegible]. About [illegible] per cent. of the total number of patients have come from the country. When this deduction has been made there remains a total of nearly 700 local patients who have received the benefits of the hospital during the year, [illegible] for the first time." It will thus be seen that [illegible] patients [illegible] not been previously taken into account. The ground is thus shifted, and a new evil is laid bare. We have no information as to how far this system of monthly registration prevails at Brighton; but, so far as it is in use, it obviously gives a very exaggerated view of the work done by those charities which adopt it.

It seems to be the opinion of many that all is fair in charity, but if charities are content to give a fictitious value to their work for the sake of attracting subscriptions, they must be content also to put up with the suggestion of abuse which is founded upon their published figures. These are matters which the managers of the various Brighton charities ought to clear up by showing on some uniform basis what is the real amount of work which they are doing. We fear, however, that in regard to the lying-in charities it will be impossible to give any satisfactory information. If it is true, as we are informed, that upwards of one third of the births in Brighton and Hove during 1894 were attended by one charity alone, there must be something wrong, and although we willingly admit that no proof is thereby given that all charities are equally badly managed, we consider that the gross figures given as to the numbers treated by the Brighton hospitals and dispensaries are sufficient to raise a strong suspicion on the subject. What we have said, however, regarding the lying-in charities is sufficient to justify us in expressing the opinion that charity in Brighton is "laxly administered" and "grossly abused." It is impossible to believe that poverty is so widespread in that town that in one third of the births the mothers are unable to provide themselves with necessaries.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Mr. J. Abbott, London; H. Armstrong, M.B., Liverpool; Anxious Member of the British Medical Association; Mr. E. P. A[illegible], Dublin; Mr. D. Andrews, Belfast. (B) G. W. Brown, M.B., [illegible]; Mr. T. H. Bickerton, Liverpool; W. M. Brown, M.B., Rothesay; Mr. Lennox Browne, London; Mr. J. A. Byerley, Southampton; Dr. W. Blair, Jedburgh; Mr. W. Briggs, Toronto; J. F. Butler, M.B., Southampton; Dr. C. H. Bond, Banstead; Dr. J. Brady, [illegible]; Mr. S. A. Bennett, London. (C) Dr. W. H. Calvert, Melrose; Mr. [illegible] Copperfield, Liverpool; Mr. D. F. B. Coates, Stoke-on-Trent; Mr. A. [illegible]land, London; Mr. C. C. Claremont, Southsea; [illegible]; Dr. J. Craik, London; Mr. R. Coates, Newport, Mon.; [illegible] Correspondent; A Cyclist of Twenty-five Years' Experience; [illegible]; [illegible], Grahamstown; Mr. [illegible]. (D) [illegible] Draper, Mossley. (E) Mr. F. F. [illegible], Eastbourne; [illegible], Birmingham; Dr. [illegible]. (F) Dr. J. H. Farrar, London; [illegible]. (G) Mr. T. W. R. Garstang, Knutsford; [illegible]; [illegible], M.B., Bordighera; Mr. J. Garner, Birmingham; Mr. T. P. Gostling, Worcester; Mrs. M. Gray, London. (H) Hygiene; Mr. W. R. Hooper, London; Mr. F. W. T. Hodder, Jersey; Dr. E. Hanly, Hove; Mr. H. N. Holberton, East Molesey; Mr. E. Hawke, Shortlands; Dr. F. Hinds, Worthing. (I) Index. (J) Dr. J. Johnston, Aberdeen; Dr. H. W. Jacob, Great Malvern; Mr. W. A. Jolly, London. (K) Mr. J. Kendall, Coniston; Mr. C. T. Kingzett, London; Dr. Kelly, Taunton; Mr. J. M. Kirkman, Wootton Bassett; Dr. A. Kisstein, Berlin. (L) Mr. T. H. Lovegrove, London; Dr. V. Lenobel, Vienna; Lennox; Dr. C. J. Lewis, Stirling; Dr. Lys, Bournemouth. (M) M.D.; Mr. H. H. B. McLeod, Shrewsbury; M.B., B.S.; M.B.; Mr. W. H. Morris, Swansea Medical Staff; W. P. Morgan, M.B., Seaford; Dr. P. W. MacDonald, Dorchester; Dr. F. C. MacNalty, Winchester; Member; H. G. Mossop, M.B., Newhaven; Mr. J. A. Marsden, Wigan; Mr. W. L. Morgan, Oxford; Mr. W. H. Maling, Sunderland; Dr. T. H. Morton, Sheffield. (N) T. North, M.B., Stapleton. (P) W. Parkinson, M.B., London; Dr. R. Pardon, Belfast; Mr. J. Porter, Sangor. (R) Mr. C. Roberts, Eastbourne; Mr. G. Q. Roberts, London; Rus in Urbe; Mr. H. Rainsford, London; Miss A. Ravenhill, London; Rus; Dr. B. Rogers, Clifton. (S) Subscriber, M.B.Cantab.; J. Steel, M.B., London; M. B. Saunders, M.B., Philadelphia; Dr. W. C. Steen, Belfast; Mr. J. Smith, London; Dr. C. Shaw, Belfast; Mr. M. Sturges, Broadstairs; Dr. W. Sterne, Johannesburg; Mr. M. R. Smith, London; Mr. W. Steer, London; Dr. J. A. Smith, Brondesbury; Mr. W. Spurgin, London. (T) Mr. J. Taylor, Tandragee; Dr. W. B. Thorne, London; T. M. Tibbitts, M.B., Cradley Heath; Mr. [illegible] Todd, London; Dr. F. S. Toogood, London. (U) Mr. T. Unicume, Headcorn; Urbs; Dr. A. R. Urquhart, Perth. (V) Dr. E. Vaudrey, Derby. (W) Dr. H. Williams, London; W.; Mr. W. H. B. Winchester, London; Mr. A. Wheeler, Darlington; Mr. H. S. Walker, Leeds; Mr. J. G. Walker, St. Austell; Mr. J. Walker, London. (X) X. Y. Z.; etc.

BOOKS, ETC., RECEIVED.

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SOME CLINICAL OBSERVATIONS
AND
PROFESSIONAL REMINISCENCES,

Being the Presidential Address to the North-West London Clinical Society on Wednesday, October 30th.

By Sir RICHARD QUAIN, Bart., M.D., F.R.S.,
President of the General Medical Council.

My good friend Dr. Cagney has by some magnetic influence induced me to address you this evening, which, being my seventy-ninth birthday, I might have spent by my own fireside. I may tell you that to-night.

Cholera.

To begin, then, with a few words of a personal character, I should say that in the year 1831 I became the pupil of an Irish surgeon-apothecary in Limerick. It was the year of the invasion of cholera. I recall one incident which impressed me. When my master had gone out in the morning, an old gentleman, between 70 and 80 years of age, called. He said: "Mr. Quain, I think I am very bad. Can you give me something? my bowels are bad." I said: "I am afraid you have got this disease." I gave him the routine remedy of that day. This varied, but probably at that time it was what was called "Ponsonby's drops"—a solution of camphor in spirits of wine, introduced by Lord Ponsonby, then Ambassador at Vienna; and I believe that and cold water did as much good in cases of cholera as any of the remedies that had been tried for it. The leading physician of the day in Limerick was Dr. Lyons, and his invariable practice was to give half a drachm of calomel and a couple of grains of capsicum, followed by further doses of calomel. My master being unable to go and see the old gentleman to see how he was, I knocked at the door and inquired, and the answer was, "Sir, he died an hour ago." That was a shock for a pupil fresh from school, who had been talking to this old gentleman at noon, to find that he was dead at six in the evening. The disease was very violent in Limerick at the time. It was limited to a district. This brings me to a very interesting and remarkable point. Why is it that we are protected, and that cholera is prevented from invading us? It is very much owing to the researches of a man, probably hardly known to any of you—Dr. Snow. He it was who pointed out that cholera was propagated by polluted water. This conclusion was the result of close research, Snow's investigations being opposed by such eminent men as Dr. Baly and Dr. Gull. They did not believe that cholera was thus propagated. At last there occurred a very bad attack in the neighbourhood of Golden Square, and the Broad Street pump became historical. Snow found that the people who drank water from that pump suffered from cholera, but those who did not, and took other water, escaped. An old lady and her niece migrated to Hampstead from this district, and died of cholera. There was not a case of cholera at Hampstead, but Snow showed that these good people had the water sent to them daily from their favourite pump to Hampstead. Nothing could be more confirmatory of the fact that cholera was propagated by poisoned water. These researches were extended by Sir John Simon and his able lieutenants, Drs. Parkes and Netten Radcliffe. Yet to-day possibly nine-tenths of the people now living do not know of Dr. Snow. There is no memorial; no monument. His name is unknown; but I hope, before I leave this earth, I shall secure something in the shape of a memorial to him. Probably the best of all would be, on the Thames Embankment, a granite fountain with the inscription that Dr. Snow had saved millions of lives. He was a graduate of the University of London, a member of the College of Physicians, and lived in Savile Row. He died at 50 years of age. He was a most unobtrusive man, and is best known as having written on chloroform and anæsthetics. We found memorials to all classes of people, and he is forgotten. He has been instrumental in saving the lives of millions. Had he been a successful general, responsible for the deaths of thousands, he would have received a peerage and a pension.

The Growth of Medical Societies.

In my early days there were only four societies of this character in London—the Hunterian, the Medical and Chirurgical, the Westminster, and the Medical Society; now there are twenty. The extension of these societies is a proof of their value, otherwise they would not exist. It would be well if they could be more concentrated. It was suggested at one time that the Medical and Chirurgical Society should be a great centre for all other societies. I have in my possession a series of rules and regulations that were prepared to convert the Medical and Chirurgical Society into the Royal Medical Society of London. It did not succeed, and so we are now divided. The Pathological Society was the first branch from the Medical and Chirurgical Society. It was suggested that there should be pathological evenings at the latter, but the idea was abandoned. The Pathological Society was then founded, and it has had great success. I was one of the founders. The real founder was a man whose name probably you have never heard, Dr. Bentley. That is another name that I hope to rescue from oblivion. Dr. Bentley was a Guy's Hospital man in practice in the City, and having seen in the Dublin Pathological Society the advantage that would result from such a Society in London, he applied to a number of physicians and others connected with hospitals. They embraced the suggestion, and the result was the Pathological Society of London. Dr. Bentley did more, for he was the founder and originator of the Victoria Park Hospital.

Turning to the clinical societies and their work, I do not know anything more important than the application of knowledge to the relief or cure of disease in the wards of hospitals. I was reading the other day an observation of Mr. Thistleton-Dyer, of Kew, with reference to botany. He finds that the study of botany is now unhappily almost a thing of the past, that the modern university student of botany puts his elders to the blush by his minute knowledge of some small point in vegetable pathology, but he can tell little as to the contents of a country hedgerow, and if an unfamiliar plant is put in his hand he is very much at a loss how to recognise its family. Now these clinical wards of the hospitals very much resemble the hedgerow, and people who devote themselves exclusively to limited investigations would feel as much at a loss in the rows of beds in a hospital as the man did in the hedgerow of Mr. Thistleton-Dyer. I therefore urge above all things the study of all the phases of disease and its treatment. It is very well to borrow the ideas of those devoted men who work at special subjects, it may be in anatomy, physiology, or pathology, but we must seek to apply this valuable knowledge practically. It is our whole study, and our whole aim and object, to prevent or cure disease, and nothing contributes to this desirable end more than a clinical hospital, where you can study the phases of disease, and bring your remedies to bear upon their treatment. I therefore heartily wish success to your hospital and to your society.

Albuminuria and Mercury.

Now, gentlemen, I have met very many remarkable cases in my lifetime, and I would like to bring some of them before you. I particularly refer to cases of albumin in the urine. It is unfortunate that the name of "Bright's disease" was given to the presence of albumin in the urine. It scares everybody. "It is Bright's disease," they say. That is a specific thing for which there can be little help. That is, as I say, a great mistake. I had a case brought before me of a gentleman, a very active literary man, whose whole life was work. He lived generously, he worked hard, and the malady for which he came to me was the presence of albumin in the urine. The urine contained a marked quantity of albumin; there was a specific gravity of about 1015, and there were a very few casts. I recommended him to get his liver unloaded by small doses of calomel. He found so much benefit from this, that he kept a little ivory box in his pocket with a certain number of half-grain calomel pills, and whenever he felt his digestion out of order or a headache,

he took one. That treatment went on for 25 or 26 years. During all this time he was in most active work, yet he had copious deposits of albumin in his urine. But now here is a very remarkable point. This patient at one time developed an indurated growth in the form of a ring round the corona glandis. There was no abrasion, no swelled glands.

Mr. Henry Lee saw the patient with me. Mr. Lee said, "Upon my word, I do not know what to make of it, but I think he had better be treated as if he had syphilis."

We agreed to administer blue pill every night, and this gentleman being a man of tremendous energy, very go-ahead in everything, we found that after two or three days he was taking 25 grains of blue pill a day. Not only that, but he also practised mercurial inunction. He was so eager to get rid of this "filthy thing," as he called it, that he actually exposed his limbs to mercurial vapour, and he did get rid of it. All this mercury did not affect the albumin in the slightest degree; it did neither good nor harm. Mr. Lee said he did not think it would do harm, because in a case of albuminuria, in which he gave a mercurial bath, the albumin was diminished. I want to impress this one point upon you: that there has been a morbid feeling as to the impropriety of giving mercury in albuminuria, dropsy, and so on. It may sometimes do harm, but I am quite sure of this, that mercury is often invaluable. I believe it relieves the congestion of the abdominal organs, the liver and kidneys.

The case I have just related is not an exceptional case. I was consulted by the parents of a young lady, 18 years of age, who when menstruating bathed in the sea. The menses stopped and œdema set in. This happened in May. I saw her in the following November; she had albuminous urine and general œdema. I did not quite see my way to using mercury, and I recommended hot-air baths, salines, and so on, but they had no effect. At last I determined to try mercury, and I gave her 3 grains of Plummer's pills—which would be equivalent to nearly three-fifths of a grain of calomel—three times a week; she took also some citrate of potash daily. By degrees all the œdema disappeared and the albumin got less. It never left her entirely. She got well, and was under my observation for eight years. I should say that she took 3 grains of Plummer's pill three times a week for a year, then twice a week for a long period, and then once a week. She went to the Cape of Good Hope, and when she came back she became engaged to be married. Unfortunately, after being married two years, she had congestion of the lungs following influenza, and died.

What I wish to impress on your mind is that under certain circumstances mercury is a most useful remedy in albuminuria, and it should not be avoided. In fact, the objection to it originated with Dr. Blackwall, of Exeter, who wrote in the year 1818 or 1820 on dropsy connected with kidney disease. He very nearly anticipated Dr. Bright. If you read the two side by side there is very little difference. At any rate, Dr. Bright's name unfortunately was given to mere albuminuria; and it is very difficult to say what "Bright's disease" really means. On one occasion an Irish lady had heart disease, congestion of the kidneys, and a good deal of albumin in the urine. I saw her with Dr. Richard Wheeler, and he let drop the words "Bright's disease." "Oh! have I Bright's disease? Well," she says, "I shall see Sir William Gull, and I will ask him." Sir William Gull came. He saw the lady, and after a consultation she said: "Now Sir William, have I got Bright's disease?" "Madam," he said, "what is Bright's disease?" It was an instance of his tact; he evaded the subject, and went away. After he had gone, she said: "But he never told me." "Oh," I said, "he asked you what was Bright's disease, and you did not tell him." "How should I know?" said she. "Well, you don't know, and neither does he."

Speaking of Bright's disease, I was sitting next to Dr. Bright in one of the early meetings of the Pathological Society, and I happened to have the drawing, now in my hands, which I have given to the College of Physicians. It represents two distinct forms of Bright's disease—the large white and the contracted. I said: "Dr. Bright, which of these is Bright's disease?" "Oh, well," he said, smiling, "I will take them both." It is very unfortunate that the name "Bright's disease" should be used indiscriminately as it is, because it is applied to many cases which have nothing of so-called Bright's disease about them. I will mention an illustration of that. I had a patient, a lady, who asked me to look at her boy, the only son and heir to a very large fortune. He was quite a skeleton, a wretched little fellow, 6 or 7 years old. I examined his urine, and I was very much surprised to find both sugar and albumin. I told her so. In the course of the afternoon her husband came and said: "You have shocked me about my boy; you find sugar and albumen in his urine; could that have arisen from eating sugar?" I said: "What does he eat sugar for?" He said: "His uncle consulted Sir William Gull about him, and Sir William Gull said as the boy was constipated, that he should eat plenty of bread and brown sugar." The boy liked the prescription, and indulged immensely in bread and brown sugar—any quantity. Of course this diet was stopped, and the boy got well. I lost sight of him for five or six years, and then he was brought to me from Eton. The servant who brought him said: "Eton is broken up, there is some scarlet fever there and floods, and the master desired me to bring the boy to see you. He has a sore throat and is not very well." I examined the boy, and found he had a great quantity of albumin in his urine. His throat was sore, but he had no rash; his figure was like a pouter pigeon, the abdomen marvellously distended. I said, "What have you been doing?" "Oh," he said, "I have been eating too much." It turned out that he had two hampers a week. Two other boys in the same house with him had two more containing pies and tarts, and all sorts of things, and this poor fellow had an enormous liver. I was very shocked, but his father telegraphed from Ireland, "Send him home: I have a very good doctor here." He went to Ireland, but the doctor there said, "Take him back again; I can have nothing to do with him." So the father and mother came over and brought him here, and I looked after him for a few days. The next thing I heard was that he had fallen from his horse when riding in Rotten Row, and was taken to St. George's, and there he was under the care of Mr. W. Rivers Pollock, the house-surgeon, and Mr. Dent. Of course the father and mother were very much alarmed. They asked me to go and see him. Mr. Dent and Mr. Pollock said: "We are sorry to tell you, but he has fracture of the orbital plate, and hæmorrhage all round the eyes, with albuminous urine. We thought it a very serious case." The boy was treated with simple diluents, and the albumin gradually disappeared. After a while he got better, and was taken to the hotel where his parents were staying; then when he returned to a diet of ordinary fare the albumin returned. The parents were so anxious about it that I had a specimen of the urine three times a day sent to me to be analysed, and each time with a bill of the fare of what he had eaten before. I tried to discover what suited him and what did not. I found that after a luncheon of cold chicken and tongue there was a great quantity of albumin. However, he got better. He went to Ireland, and the next thing I heard of him was that he was at Cambridge, and very fortunately he came under the care again of Mr. Rivers Pollock, who was then at Addenbrooke's Hospital. The boy was quite well, and was the master of the harriers. He grew into a healthy young man and is now married, so that you see albuminous urine does not mean a serious Bright's disease that cannot be cured.

Disorders of the Liver.

This case, gentlemen, brings me to the subject of disorders of the liver. Now, when we remember that every animal in creation from the highest to the lowest has a liver, or something equivalent to it, it must be an organ of very great importance, and I believe sufficient notice is not taken of it. I have seen myself a sequence of sugar and albumin and urea appearing alternately in the urine. I wish I were skilled enough in organic chemistry to explain this, but it is not within my power to do so. I will give you an illustration. It was formerly said that the proportion of urea you may find in the urine depends entirely on the quantity of urine that is passed. On one occasion I was consulted by a gentleman living in the Temple. He was a young man under 40 years of age, with large means. I saw him with Mr. Savory—afterwards Sir William. He said: "This man is dying; I do not know what is the matter with him. All his family die in this way." The patient was a good-looking fellow, whose complaint was: "I cannot do anything,

doctor; the fact is I am no use." "Are you very weak?" "Yes, I am very weak; I do not care to walk or to do anything." I said: "What do you eat?" He said: "I like vegetables. I take little but vegetables and very little stimulant." I said to Savory: "How about his urine?" He said: "His urine is all right." I said: "I should like to have some of it." It came to me, and I found that it had a specific gravity of about 1035, and was loaded with urea. The next meeting I had with Savory I said: "I think I have a clue to it." When asked if he passed much urine, he said he was weary of performing the act of micturition, passing from six to eight pints daily.

Now that single case upset the whole theory that when there is excessive urea it is owing to the diminished secretion of urine. In his case the secretion was enormous. He was well purged with colocynth and blue pill, and got well, this treatment being pursued for years. That case led me to think how much the liver had to do with the excretion of urea. A French writer, Dr. A. Martin (Paris, 1877) has pointed out that the amount of urea in the urine is very often a test of diseased or congested condition of the liver. I have found that information very useful in like cases. People come to you and say: "I am so depressed; I am so languid, I can do nothing." Examine the urine, and in nine cases out of ten in that condition you will find excessive urea. Put the liver right, and you will generally cure the patient.

The late Mr. Carlyle was a patient of mine. As all the world knows, he was a man of great judgment and great power of observation. With regard to himself, the only remedy I could ever get him to take was grey powder. He lived to 82 or 83. Grey powder was his favourite remedy when he had that wretched dyspepsia to which he was subject, and which was fully accounted for by the fact that he was particularly fond of very nasty gingerbread. Many times I have seen him sitting in the chimney corner smoking a clay pipe and eating this gingerbread. He overcame the difficulties incident to this habit by his grey powder, which did him much good.

A very interesting and remarkable case was that of a nobleman 63 years age, a man of great intelligence, of very amiable character, and clever. He had been a patient of Dr. Lombard, of Geneva, the physician who first indicated a difference between typhoid and typhus fever. Lord A., as a boy at College, had acute rheumatism and endocarditis, and it was many years after that that he first came under my notice. I found him in the month of November suffering from a mild form of influenza. It was on one of those foggy days by which we are so much afflicted, and he said, "I won't stop here; I am going to the South of France, but I should very much like to see Bence Jones and Dr. Watson before I go." When they met, Bence Jones said, "Well, that man ought to have died long ago; I told him so." True enough, this gentleman always met Bence Jones afterwards by shaking hands with him and saying, "Jones, you may shake hands; I am not a ghost." However, Drs. Watson and Bence Jones agreed that he should go to Paris, and he went. He was under the charge of Dr. David Christison, the son of Sir Robert. He arrived at Paris in the evening, and the next day but one I got a telegram: "Lord A. is very ill; pray come to-night." I went over and arrived in the morning, and met Dr. David Christison. He said, "He is very ill; he has congestion of the base of his left lung." I knew at that time he had albuminous urine; he was suffering from mitral valve disease with some enlargement of the heart. Nothing could be more unfavourable than his aspect, for he was very ill. Sir Joseph Olliffe had called in Baron Louis and M. Trousseau; they prescribed a mild dose of grey powder and antimonial powder. Trousseau said that he should take nothing beyond "tisane."

As this was contrary to the suggestion I had made to Dr. Christison as to the importance of maintaining his lordship's strength I was sent for. Seeing how low the patient was I immediately prescribed for him the mistura spiritus vini Gallici. I believe this to be a valuable remedy in many cases. In the first edition of the *Pharmacopœia* published by the General Medical Council it was left out, but it has since been restored. I also applied a blister. When Trousseau arrived, between 10 and 11, with Baron Louis and Sir J. C. [illegible] I said: "Knowing his lordship, I felt it necessary to give him brandy." "What?" said Trousseau, "do you cure Bright's disease in London with brandy?" "No, we do not," I replied; "but I should like to keep his lordship alive while your remedies are doing him good." As the result of the treatment Lord A. got much better, and I went away after eight days leaving him better. Baron Louis then came to see me, and was rejoiced to find how well he was. He, however, said: "I know at the Hôtel Bristol there is some magnificent burgundy. He must be tired of the brandy; give him some burgundy." The patient took it for three days, and then his kidneys stopped secreting and there was more albumin than ever in the urine. I was recalled, went on again with blue pill and squills and so on, and Baron Louis was sent for. I said: "M. Louis, this is the effect of the burgundy." "No," he said; "it is the over feeding; you have given him so much to eat. What will you do?" I said: "We will give him blue pill." He said: "Do you cure Bright's disease in England with blue pill?" I said: "I do not know that anything will cure his lordship now." Fortunately, the blue pill did good; the dropsy went and he got very much better, though he remained extremely low and had aphthæ of the mouth.† He had a very sore back; though he lay on a water bed, a portion of the sacrum was exposed; but, notwithstanding that, he got better, was moved, and finally came home to his country house in England, and went on extremely well for the remainder of the summer. But in November he went out for a drive on the Downs; he got cold and had pleurisy. He got through it, but eventually he died suddenly at the end of March from heart disease. However, he might have been well now if it had not been for this undue exposure on a cold winter's night. M. Trousseau introduced this case into one of his clinical lectures, winding up with the sentence, "Had he been a Frenchman he must have died."

Some Remarkable Cases.

Passing now to one or two rather remarkable cases, I was asked to see a gentleman in Harrington Square, aged about 40, with Mr. Claremont, of Hampstead Road. He said, "This is a very curious case. The man has a morbid impression that his bodily smell is most offensive. He is engaged in business as a solicitor. He meets his partners, and conducts business with them, but he has tact to hide it from them." The patient was in his bedroom, dressed exquisitely cleanly. He said, "Well, sir, I am very sorry to bring you here. My smell must be most offensive to you; in fact," he said, "I am afraid your horses will feel it at the door." That was his strong impression, and even the pictures in the dining room were covered up to keep them from this offensive master. I examined his abdomen, and found a swelling in the iliac region. I said to Mr. Claremont, "He has a fæcal accumulation there." He said, "All my smell comes from there." Mr. Claremont subsequently had to open a very fœtid cæcal abscess. We know that there is nothing more intolerable than the stench of such an abscess. But how will you account for his impression? There, however, is the fact: Mr. Claremont and I witnessed it. He was perfectly cured by the discharge of this abscess.

There was a second case of another kind. I was asked by Dr. Walsh, who afterwards left London, to see a patient with him, a man of rather eccentric habits. It was said that he had been shut up for three or four days, and that when the door was opened he was found lying on the bed quite insensible. No food was to be seen beyond the remains of a mutton chop which he had provided for his parrot. We were told that he was always talking about "a block," and the fear of this block prevented him from eating. We brought him to, but he died in the night. A *post-mortem* examination revealed that he had a lump of fæces in the rectum as hard as iron—there is no knowing how long it had been there. It was as big as a man's fist. It was perfectly true that the poor man had a block and he had starved himself to death in consequence.

I will now mention a case or two of another kind. I was required by Mr. Wakley, the coroner, to make a *post-mortem* examination of a man whose story was this: He was a [illegible]. He came in to his dinner, went to the scullery, washed his

† I had more than 100 telegrams from him during the illness, and went 4 times to Paris.

hands, and when he came out he said to his wife, "It is all over, I have taken poison." "What have you taken?" "Arsenic." She carried him off to the Western General Dispensary, where my excellent old friend, Dr. Humbey, at that time was resident medical officer. He was out, but there were two young pupils of his there, very good fellows, who thought it was a very important case, and they would treat it pretty actively. They gave him tartar emetic, pumped out the stomach, and pumped oxide of iron into it, and a good many other operations they performed. The poor man was extremely ill, had vomiting, with profuse painful diarrhœa, and died in twenty-four hours. The beadle of the coroner went to the chemist, and said, "How did you come to sell this man poison?" He said, "I sold him no poison; I thought he was off his head when he came." "What did you give him?" "Oh, I gave him some alum and cream of tartar, and labelled it 'poison.'" He swallowed this. When I made the *post-mortem* examination, to my amazement I found a very great deal of arsenic in the stomach. That was rather puzzling. I said, "If it is in the stomach it ought to go further down." So I searched the intestines, but there was no trace of arsenic anywhere. The simple explanation of it was this: These two young fellows, horrified to find the man had died without taking arsenic, pumped some into the stomach. Mr. Wakley was a very stern man, but of most amiable and excellent disposition. He said, "Now, Quain, this is a dreadful thing. These people might be declared guilty of manslaughter; at any rate, it is a great contempt of court. I will commit them." I begged him not to do so, saying, "You will ruin them. I am sure it was all well intended." Finally the coroner was persuaded to let the matter drop. But it was a very remarkable case. I might have had some hesitation at first about it had not the quantity of arsenic been so enormous. I should mention that there were two intussusceptions in the ileum.

The General Medical Council.

I have occupied a great deal of your time, but will you excuse me, as President of the General Medical Council, saying to you a few words on that much abused body? I have been a member of the General Medical Council more than thirty years, and I feel assured that body will have an enormous influence for good on the medical profession hereafter. I remember that when general political reform was in the air there was also a question about medical reform, and the great cries of that day were, "Let the profession govern itself, with uniformity of qualification and reciprocity of practice." At that time, as you may know, people educated in Ireland were not qualified to practise in England and Scotland, and *vice versâ*. Uniformity of qualification has hardly yet been reached, but reciprocity of practice has been fully established. That was asked for, and very many appeals were made to Government and Parliament for medical reform. Some people wanted very much, some wanted very little, and between the extremes what one Government proposed was that the Government should appoint the General Medical Council, and to have a Government stamp of registration—that is to say, to take the control of the medical profession entirely out of its own hands, and to give the fees that were paid altogether to the State as a tax. That was very much opposed, and was never carried, but the Government saw their way to a change, and the beginning of it was that a Board was constituted in 1832, called the Board of Health. At that time Sir Benjamin Hall, a very radical man in his tendencies and a homœopath, was President. We went to him to ask him to give us a medical Bill. He said, "What do you want?" He said, "Do you mean to tell me I am not to go and consult anybody I like?" We answered him: "Yes, consult whom you like. You may go to the greengrocer: we have no doubt he is accomplished in simples, but we won't allow him to be called Dr. Green." He assented to that, and said: "Let me remind you how it was when Lord Althorpe was Chancellor of the Exchequer," and he told us this story: There was a suggestion before the House that nobody should be allowed to prescribe unless qualified, and Lord Althorpe said: "The last financial statement I had to make, I was coming down to the House. I was suffering intensely from gout, so that I thought of turning back and postponing it, but," he said, "I went into a chemist's in Parliament Street, and he gave me some medicine that relieved me immediately. Am I not to get such a thing as that?" he said, "the thing would never be tolerated." Well you know that tradition exists in the House of Commons, and I believe nobody would ever there say: "You must prevent people from prescribing." You may prevent them from calling themselves or pretending to be doctors, and I believe in our Act we have enough to prevent that, and I trust whether we get further legislation or not we shall be able to prevent people calling themselves doctors and imposing on the public. That is quite as much as we shall get.

But with regard to the Council itself, if you have before you the names of the very distinguished men, from first to last, who have taken a share in it—Brodie, Green, Watson, Burrows; and men from Edinburgh—Christison, Syme; and from Dublin—Stokes and Corrigan—men of the very highest type, and those equally great men, their successors—I believe these men have always worked for the advantage of the medical profession; but they have been prevented by jealousy, one body of another—rivalries—what Sir Dominic Corrigan called the "battle of the shops," and have never had free scope. By degrees a better feeling has come about, not by legislation or by prosecutions, but by what Mr. Syme called "moral suasion." I believe that the bodies are coming round to see that it is most desirable for their own interests, and for the interests of the profession, that they should have honest and sufficient examinations, and that in a little time you will see, under the guidance of the General Medical Council, by their visitations of examinations and by not proceeding harshly or quarrelling, a very great advance will be made in the education of the medical profession. When I first joined it I remember the examination of the College of Surgeons extended over one hour—half anatomy and half surgery; now the conjoint examination is spread over more than thirty-two hours, so great is the advance; and this examination must of course lead to improved education. The period of study was at one time two and a-half to three years; now it is five. I believe very much of this change is due to the General Medical Council. They have had great difficulties to meet—the "battle of the shops" and so on; but I believe you will all live to have the government of the profession in your own hands. We are compared sometimes with the lawyers, but if you look at the solicitors they have no power. However infamous a man's conduct may be, they must bring him before a court of law. We need not do that. The highest court has pronounced that if we declare a man's conduct "infamous," there is no appeal. It is so, and therefore it makes us extremely careful in coming to a decision on that point. But there are degrees of disgrace less than infamy which ought to be corrected. This should be done by the medical authorities in their by-law. At this moment I have before me the case of a grocer in Liverpool who gives with a quarter of a pound of tea a ticket to three doctors, and any one of them can be called in. These doctors are the hirelings of this man, and he says to his customer: "If you buy a quarter of a pound of tea a week, or for two or three weeks, you will be entitled to receive medical assistance." Can greater prostitution of an honourable profession be? Again, with regard to the fee of £5 paid for registration, it compares favourably with the stamp tax of £80, and £25 paid by a solicitor on admission, besides the annual tax of £9 for the certificate.

There are many other things I might have said, but I will not detain you longer, and I thank you very much for the attention you have given me.

Professor Riedel, of Jena, has been called to the Chair of Surgery at Göttingen in succession to Professor König.

We are pleased to note that Dr. Urbano Orad, the medical officer of the Spanish army whose death in Cuba was recently announced in the British Medical Journal, is still alive and has nearly recovered from his wounds.

On Monday, November 4th, the President of Council of the British Medical Temperance Association gave a breakfast to a number of medical students in the Throne Room of Crosby Hall, Bishopsgate Street, London. Speeches were delivered after breakfast showing the advantages of total abstinence from alcohol, especially to medical students.

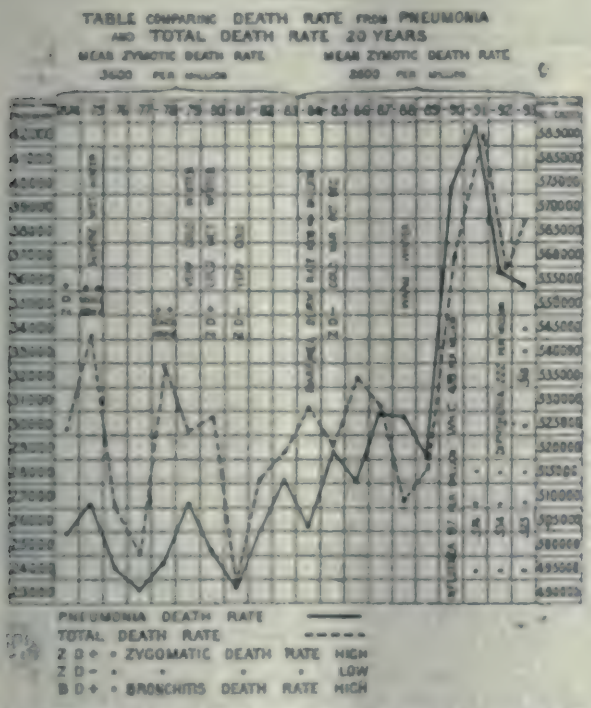
A DISCUSSION ON ACUTE LOBAR OR CROUPOUS PNEUMONIA; ITS ETIOLOGY, PATHOLOGY, AND TREATMENT.[1]

I.—R. Douglas Powell, M.D., F.R.C.P.,

Physician Extraordinary to the Queen; Physician to the Middlesex Hospital; Consulting Physician to the Hospital for Consumption, Brompton.

I much wish that, in response to the flattering invitation of the Council that I should introduce the subject of pneumonia for discussion, I could have reported some notable diminution in its mortality, some more strenuous measures adopted for its prevention and treatment. With our better defined knowledge of the disease, we are perhaps on the borderland of new methods, but to-day I must regard myself rather as commissioned to elicit evidence and information from many here well able to give both, and, by formulating the subject, to endeavour to bring out those points which most require elucidation.

Table I.

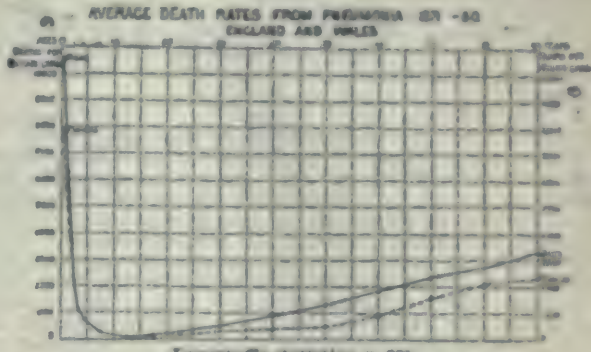


A glance at this table (Table I) will show that whilst in the last as compared with the preceding decade the death-rate from zymotic diseases has very greatly declined, that from pneumonia still holds its own at 24,000 and upwards; the mortality from phthisis has also been shown by the statistics of Longstaff in the same time to have diminished by about 18 per cent.,[2] yet pneumonia, the claims of which to classification amongst zymotic diseases have become much stronger of late, still frustrates our preventive and therapeutic measures.

Pneumonia stands out too with appalling conspicuousness in the frequency with which it attacks the maturely useful members of the community (Table II), one-third of its death-rate occurring at that period of life when the individual is in the zenith of working power for the family and the community, and apparently in the fulness of health and vigour, thus causing many an almost sudden bereavement in the midst of apparently unclouded happiness and prosperity. Pneumonia then is a disease which the Council has well selected for special consideration at this Congress.

Now, Sir, to describe the clinical features of pneumonia, its symptomatology, and rough pathology to an informed audience such as this, would indeed be impertinent waste of time. The striking incidence and stormy course of the disease have marked it out for observation from the earliest days of medicine; but neither will I spend time in alluding to matters of historical interest, for we have to deal with the disease of to-day in that light which the present phase of our knowledge reflects upon it.

Table II.



Longstaff's statistics, p. 379.

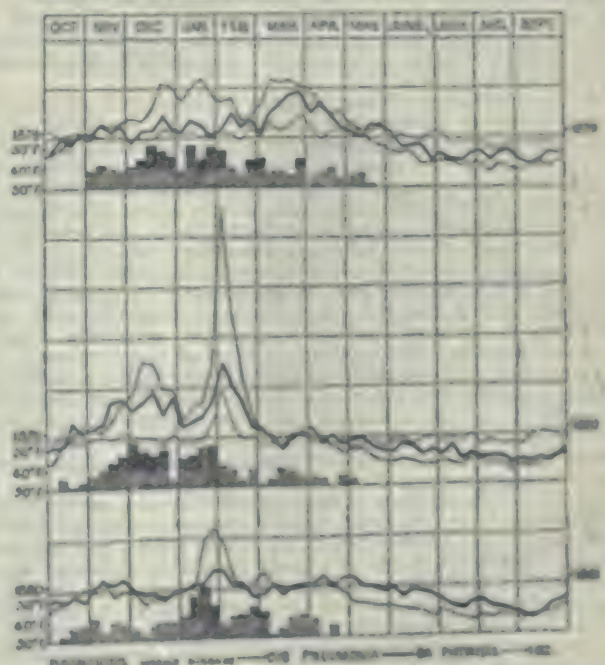
The etiology of pneumonia has always exercised the minds of thoughtful physicians, and many of the following statements regarding it are in accordance with current opinions:

1. The prevalence of the disease has long been observed to bear no direct relationship to severity of climate. Unlike bronchitis, its distribution has but little connection with mere latitude.

2. Nevertheless, taking a given climate such as our own, the pneumonia rate, contrary to our experience in its latitudinal distribution, shows a distinct and close relationship to seasonal periods of depressed temperature. A glance at Longstaff's statistical tables for the years 1878-82 will at once show this (see Table III).

Table III.

Weekly Deaths from Bronchitis and Pneumonia in London.



The grey shaded areas indicate mean weekly temperatures below 40° F. The black indicate mean temperature below 40° F. Longstaff.

[1] In the Section of Medicine at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

[2] Longstaff's *Statistical Enquiries*, p. 233, taking the mean diminution at all ages.

3. Changeableness of temperature, such as prevails at certain seasons of the year in our climate and in many other localities, has a marked influence in increasing the prevalence of pneumonia. We may safely accept the conclusions arrived at by Dr. Coupland and the late Dr. Sturges that "It is in the regions that are called temperate and in their exposed places that pneumonia is especially prevalent. When north and north-east winds prevail, when the configuration of a country is favourable to currents of cold air, in such places as Madrid, Genoa, Florence, Naples, Gibraltar (different in other respects, but alike in this), in the high plateaux of countries whose lowlands are strangers to the disease, as in Africa and Mexico, pneumonia finds its chief victims."[3]

4. It is difficult, indeed impossible, to estimate in any statistical manner the important element of *personal imprudence* in the etiology of pneumonia; but it is an element that must necessarily tell with increasing force in those places (*a*) where the vicissitudes of natural climate are greatest, and (*b*) where, as in our crowded communities, exposure to frequent changes of temperature is a consequence of our social life and manufacturing and office labours. A better knowledge of hygienic laws may lessen this cause. He is a contemptible man who is always thinking of his own skin, but he is imperfectly educated and thoughtless of the purposes of life who refuses to take note of his health surroundings. My experience would lead me to affirm that at least one third of the cases of pneumonia as we meet with them arise from foolish and thoughtless disregard, especially by elderly people, who should be wiser, of simple precautions against chill. And it is in this regard that the fatalistic and, I believe, entirely inadequate view that we at all frequently acquire pneumonia as we acquire typhoid fever or scarlet fever or diphtheria by the reception of an organism is unfortunate, as tending to enhance carelessness. It is probable, as I shall presently point out, that we are always—no doubt more particularly so in epidemic seasons—in the presence and possession of pneumonic organisms; but it rests much with us whether we shall bring about the conditions favourable for their aggressive germination.

5. Apart from the evidence furnished by its prevalence at periods of seasonal lowness and variability of temperature, there is the experience of the fact that in a certain number of cases, estimated by Grisolle and Ziemssen at about 20 per cent., chill—that is, suddenly or rapidly depressed surface temperature—is an important element in the etiology of pneumonia.

6. The pathology of chill, the exact phenomena as regards temperature of surface and internal parts, vasomotor reactions and other nervous phenomena with which it is attended, and especially the relationship, encouraging or otherwise, which these phenomena bear to the viability and multiplication of certain microbic organisms, such as those of pneumonia, malaria, influenza, and possibly rheumatism and tubercle, is a subject upon which little has been done, and which would be admirably suited for experimental inquiry. Whilst an even body temperature can be maintained by warm-blooded animals under general conditions of extreme cold and warmth, it is very probable, perhaps clinically almost certain, that the compensatory powers of the organism can be surprised and defeated by sudden local exposure to change of temperature, and especially under conditions of depressed vital force. It is a common and very instructive experience how such exposure will produce severe nasal catarrhs, which, when thus acquired, are very readily transmitted to others by contagion.

7. As a complication of acute febrile disease, except in the hypostatic form, or from embolic causes, pneumonia most commonly arises at the period of low or subnormal temperature. This chart (Table IV.) is of a kind with which we are all very familiar. I have elsewhere commented upon this incidence of specific diseases at low temperatures, pointing out that the most favourable temperature for the cultivation of most specific organisms is that at or rather below the normal temperature of man. (See Table V.) I shall again allude to this point presently.

[3] *Pneumonia*, Sturges and Coupland, second edition, p. 308.

TABLE IV.—*Chart showing the Onset of Pneumonia Complication during Period of Depressed Temperature.*

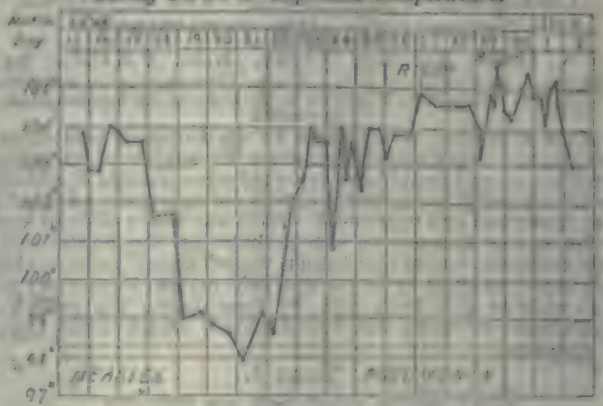


TABLE V.—*Temperatures Favourable or Otherwise to Microbic Cultivation.**

Disease.	Cultivations Grow							
	In Perfection.		Feebly.		Not at all.			
					Highest.		Lowest.	
	Deg. C.	Deg. F.	Deg. C.	Deg. F.	Deg. C.	Deg. F	Deg. C.	Deg. F.
Pneumonia ...	35 to 37	95 to 98.6	22 to 24	71.6 to 75.2	40 to 42	104 to 107.6	18	64.2
Tubercle ..	37	98.6	30	86	40	104	28	82.4
Enteric fever .	35	95	20	68	43	109.4	14	57.2
Influenza ...	37	98.6	18	64.4	?	?	15	59
Diphtheria ...	37	98.6	22	71.6	59	138.4	15	59

* Slightly corrected as regards pneumonia from table given in address on a Right Perspective in Medical Thought and Practice by the author, *Lancet*, October 20th, 1894.

If these matters were better understood, and the simple precautions they suggest were more observed, there would, in my opinion, be a considerable shrinkage in the mortality from pneumonia and some other diseases.

8. There are, of course, other favouring conditions, some of which might perhaps be called exciting causes of pneumonia, such as depressed conditions of vitality, the rheumatic state, the uræmic state, diabetes, mental shock, etc., but I pass them by and come to the question which will, I trust, engage the earnest attention of some here who are much better qualified than myself to answer, or at least throw much light upon it, namely:

9. How far is pneumonia a disease essentially and alone associated with the reception and active cultivation of a specific micro-organism? I have already clearly betrayed my bias in favour of the view that pneumonia, undoubtedly a specific disease, and probably of microbic origin, yet for its efficient etiology requires something more than the mere reception of a microbe; that it requires at least conditions, climatic and others of a more general kind, to make its specific cause operative. Can we give to this specific cause a name and an identity? The weight of current opinion at the present time is undoubtedly in favour of the specific cause of pneumonia being a micro-organism, and among this minute but busy class of beings there are three favoured candidates for the honour of disseminating pneumonia amongst us, namely: Friedländer's bacillus pneumoniæ, Fraenkel's pneumococcus, and Klein's bacillus pneumoniæ. Of these, the organism which is at present in most favour, having been found in the greatest number of cases of the disease is Fraenkel's pneumococcus. There are some points in the history and conduct of this organism, however, which have yet to be discussed before it can be finally accepted as specific:

(*a*) The many synonyms that have been accorded to Fraenkel's pneumococcus since its recognition by himself and by Sternberg as a factor in pneumonia, and the many conditions under which it has been found are suggestive of a wider range of activity than can be accorded to any other organism of specific rank, although in this respect the bacillus of tubercle and the poison of syphilis may be regarded as coming near to it. For synonyms we have amongst others micrococcus Pasteuri (Sternberg, 1880), found in the blood of rabbits inoculated from his own saliva), micrococcus sputum septicæmiæ (Fraenkel, 1883), diplococcus pneumoniæ (Weichselbaum, 1886), bacillus salivarius septicus (Biondi), lancet-shaped micrococcus (Salaman), streptococcus lanceolatus Pasteuri (Gamaleïa).

(*b*) Originally found in the saliva the pneumococcus of Fraenkel, besides being almost constantly (about 80 per cent.) present in pneumonic exudation and sputum, has been found in 60 per cent of cases of purulent meningitis,[4] in about 20 per cent. of cases of ulcerative endocarditis,[5] in about 25 per cent. of cases of otitis media,[6] besides, as is to be expected, it is prevalent in joint, ear, meningeal and pyæmic complications of pneumonia. These several diseases have no clinical or pathological relationship to pneumonia. True, they are inflammations, but whereas pneumonia is *par excellence* a fibrino-corpuscular and non-suppurative inflammation, these have the common character of being all suppurative.

(*c*) The above-named inflammatory lesions are, however, rare as complications of pneumonia, although the pneumococcus is known to prevail in the blood, tissues and air passages during the attack. On the other hand, pneumonia has not been a frequent complication of them, with the exception of an unusual prevalence in Osler's cases of ulcerative endocarditis.[7]

(*d*) Fraenkel's pneumococcus is almost equally to be found in all cases of pneumonia, whether typically croupous or pythogenic, or influenzal.

(*e*) There appears to be a minority of cases in which Fraenkel's pneumococcus is not to be found, but in place of it Friedländer's bacillus, and in a still smaller number of cases neither of them, but another bacillus differing in character from both of them yet considered responsible for, and capable of reproducing by inoculation of pure cultivations, pneumonia with great certainty, namely, Klein's bacillus pneumoniæ, found in the cases of the Middlesbrough epidemic.[8] It would appear from Ballard's report that sewer gas emanations were responsible for this outbreak.

(*f*) Cultivations of these various cocci do not, when inoculated into animals, produce pneumonia with a certainty at all comparable to that with which tubercle bacilli produce tuberculosis, but more commonly cause some form of septicæmia, which has, perhaps, too easily been accepted as valid evidence of the specific properties of the organism.

(*g*) The frequent discovery—first by himself and Sternberg—of Fraenkel's pneumococcus in healthy saliva, nasal mucous, ophthalmic secretions, and the like is a very remarkable fact, showing that even supposing this organism to be specific of pneumonia its presence is harmless unless the conditions be brought about under which its active and aggressive germination is promoted. I have long held the belief already expressed that we have in and about us samples of many sorts of diseases only waiting that opportunity for active onslaught which our imprudence or misfortune will sooner or later give to some one or other of them.

10. How far is pneumonia a disease brought about by conditions favourable to the aggressive germination of an organism ever more or less present.

It seems then to me that Fraenkel's pneumococcus is only one amongst several micro-organisms presenting claims to be the specific cause of pneumonia, that it is inadequate as a sole cause to produce pneumonia, being found in other diseases and in healthy secretions, and that even if we can establish by further inquiry more firmly its specific character, or replace it by another microbe better equipped, pneumonia will still resemble such diseases as tuberculosis, erysipelas, acute rheumatism, tonsillitis, perhaps influenza, in requiring for its efficient etiology certain conditions of impaired vitality, local or general, to enable the poison to become aggressive. It is by ascertaining and avoiding these conditions that we may do much to prevent and to combat the disease.

Leucocytosis has attracted much attention of late. This table of six cases taken consecutively briefly records the present position of facts. We observe that the white cells are invariably increased in pneumonia—as in all pyrexias—during the fever stage, whilst the red cells are unaltered; that they are diminished below the normal with the critical fall of temperature, to increase again with relapses.

TABLE VI.

LEUCOCYTOSIS IN PNEUMONIA

Cases	Date	Temp	Red corpuscles	White	Result
Male æt 22	Feb 7	104·8°	4 900 000	1 to 120 red	
Right [illegible]	" 8	99·2°	4 900 000	1 - 300 -	
Left "	" 11	104·4°	3 800 000	1 - 300 -	
Male æt 23	[illegible]	103·6°	3 200 000	1 - 100 -	
Right apex	" 16	98·8°	4 550 000	1 - 450	
Female æt 27	Mar 30	102·0°	3 200 000	1 - 280 -	
Left base	Apr 3	98·0°		1 - 450 -	
Male æt 20	Apr 27	102·8°	[illegible]	1 - 150 -	
Left apex	May 7	98·0°		1 - 450	
Male æt 23	May 13				
Double	[illegible]	101·8°		[illegible]	Death
Male æt 19	May 24	103·4°	4 950 000	1 - 240 -	
Right apex	" 27	98·6°	5 000 000	1 - 450 -	

In 23 cases sputum examined. Pneumococci were found in all, but no relation could be found between the number of cells and the height of the temperature or the severity of the attack. After the crisis the organisms were almost lost to sight.

11. With regard to septic or pathogenic pneumonia, I have only one or two remarks to make:

In the first place, the disease in its essential minute anatomy is the same as croupous pneumonia, but the distribution is in smaller areas, more scattered, more limited to one side or lobe, more liable to metastatic changes of site.

Secondly, the temperature is from the first more fluctuating in character, and subsides, as a rule, with no critical fall.

Thirdly, the organism found in pathogenic pneumonia is still the same—Fraenkel's bacillus—and the onset of the attack is generally attributed to the same obvious cause as in ordinary cases; but there is, in addition, some history of exposure to foul drains or sewer gas odours. It is very probable that some other organisms obtain an effectual lodgment besides the pneumococcus under conditions favourable to cultivation. I am reminded of cases which I have seen in which the patient, whilst engaged in some unhealthy pursuit—for example, in the dissection of an animal far advanced in decomposition—has been exposed to severe chill—for example, by walking without an overcoat against a bitter wind at Brighton, the result being an acute pleurisy with purulent effusion. Similarly, a rheumatic endocarditis, by exposure to drain emanations, is very apt to become an ulcerative endocarditis.

12. It must not be omitted in the etiology of pneumonia to observe that certain diseases favour its occurrence—that is, are concerned in its etiology; tuberculous predisposition favours susceptibility to pneumonia; pneumonia occurs frequently

[4] Netter, 1889, 70 cases, mostly complicated with other inflammations of a septic kind.

[5] Weichselbaum, 1888, 27 cases quoted.

[6] Lévy, Seitzgeier, Leicher, 1888, 31 cases.

[7] Professor Osler's experience (Gulstonian Lectures, BRITISH MEDICAL JOURNAL, 1885, vol. i, p. 1163) would seem to be quite exceptional, namely, of [illegible] autopsies observations at the Montreal General Hospital, 16 cases of acute endocarditis, of which 11 were ulcerative. I cannot myself recall a single case of ulcerative endocarditis as originating in pneumonia. There must have been some peculiarity in the sanitary surroundings of the cases of Osler to account for the prevalence of ulcerative endocarditis amongst them rather than the presence of the pneumonia microbe, and it is to be noted that in 5 of the 11 cases purulent meningitis was also present.

[8] Bacteriological inquiry by Klein, supplementary to Dr. Ballard's Report on the Pneumonia Epidemic at Middlesbrough, Medical Officers' Reports, 1888.

amongst the precursory diseases of the phthisical; influenza is still more directly a predisposing cause.

Influenzal pneumonia is commonly regarded as an inflammatory neurosis, and there is very much in its clinical characteristics to justify this view; nevertheless, the pneumococcus is as rampant a concomitant of influenzal as of other pneumonias, and there can be no doubt that the two poisons are at work in congenial co-operation.

13. Infection as a cause of pneumonia, as in tuberculosis, is a possibility, and some striking instances are forthcoming in regard to both diseases, but, nevertheless, when the etiological conditions common to members of the same family, or closely associated persons, are duly recognised and accounted for, but small need remains for direct infection in the etiology of the disease.

I have no personal knowledge of such, although as a matter of logical inference there can be little doubt of the possibility of its occurrence; but when we consider the small number of cases in which the question of infection arises; and bear in mind that epidemic influence (which may be a subtle change in atmospheric or other conditions favourable to the aggressive germination of micro-organisms which seem to be always more or less at hand) accounts for those cases amongst them in which the disease clusters in large groups; and that the apparently contagious spread in households is often accounted for by sewer-gas emanations common to the inmates; and further that such predisposing diseases as influenza are highly epidemic, there remains in truth not much etiological ground left for the contagionists to occupy.

Pathology.

I do not propose to touch upon the minute pathology of pneumonia further than I have been obliged incidentally to do in discussing the etiology of the disease.

Treatment.

In discussing the treatment of pneumonia, my time being very short, I shall not deal *seriatim* with drugs or methods, but shall discuss a few of the essential points only, points, however, which appear to me to dominate the whole line of treatment of the disease.

Attendant upon the pyrexial state pneumonia has, in common with other acute inflammatory fevers, certain conditions—as dry skin, loaded excreta, coated tongue, disordered intestinal secretions, and tension of pulse—which justify and call for what may be termed the routine treatment of pneumonia of the present day, namely, the saline treatment and the administration of occasional mercurial laxatives, and a liquid unstimulating dietary, with complete rest in an airy room, at a temperature of above 60° F., with a proper degree of moisture.

With regard to this treatment I have only two or three remarks to make:

1. It has a distinct value in materially depleting the vascular system from the venous side by means of increased functions of skin, kidneys, and bowels.

2. It is unnecessary and therefore harmful, to give the routine mixture oftener than four times in the twenty four hours, leaving the intervening periods free, if necessary, for the administration of more concentrated remedies for special indications.

3. Indifferent doses of quinine or salicine may be given with the mixture to fulfil indications as regards general tone, rheumatic symptoms, etc.

4. In pathogenic cases the routine saline treatment would be replaced by quinine or salicine, in effervescence or otherwise, and in doses amounting to 20 or 30 grains of quinine, or 60 grains salicine in 24 hours

5. My own observations, taking me back to a time twenty-five years ago, when, bleeding having been abandoned, antimony was still employed in pneumonia, and to more recent times when aconite was much in favour, impress me with the belief that both drugs are to be condemned for routine treatment, and that in uncomplicated cases of pneumonia the saline is the best routine treatment, and in the majority of cases the only treatment that is necessary to promote the favourable issue expected. Drugs of the aconite and antimony type soften the pulse, and cause the skin to act by directly depressing the heart's action. I would give a distinct preference for the citrates of ammonia and potash with some excess of ammonia if necessary, rather than the acetates, inasmuch as the latter seem to me, when given in considerable doses, to irritate the pulmonary and bronchial membrane, and to increase cough. In cases of distinctly low type, such as apex pneumonias of adults (apex pneumonia in children counts for nothing) and in drunkards free doses of tincture of perchloride of iron may be usefully given with the saline.

Pyrexia.—With regard to the fever of pneumonia, I would observe that it is a brief fever, lasting from five to ten days, that up to 104° F. it is symptomatic of, and normal to, the disease, those cases being, as a rule, most favourable in which it is most marked. If we accept, and we can little doubt, the view that pyrexia is a result of microbic activity, and admit (Table V) that that microbic activity commences and is most active at the lower ranges of the human temperature, and is inhibited at the higher ranges; secondly, as was so acutely suggested by Sir W. Broadbent in his address, that the products of microbic action, accumulating like those of the yeast ferment, tend in time to check further fermentation; thirdly, that the increased leucocytosis of fever is a provision for the phagocytic removal of torpid or inert coccus elements (see Table VI), we perceive the unwisdom of materially reducing the temperature normal to pneumonia, and that to do so by remedies which do not lend themselves to restrain microbic activity is distinctly harmful.

Cantani[9] observes that "fever is the general reaction of the organism against the disease; it is a reaction phenomenon, the measure of the intensity of the infection on one side and of the power of reaction of the body on the other. Fever can be of use to the patient by injuring the vitality, multiplication, and perhaps also the virulence, of the living disease-producer in the body, through the high temperature of the blood and tissues; by raising the resisting power of the tissue elements in their phagocytic importance. Further, the tissue changes resulting from the fever can so change the food for many microbes that their virulence is lessened, their further multiplication in the body made impossible: they are biologically sterilised, and chemically their ptomaine production made innocuous."

With regard to antipyretics, he contrasts the action of quinine in malaria with antipyretics such as antipyrin, etc., in febrile processes, and points out that in all such affections it is a remedy like quinine that we want to discover which will affect the cause of the fever just as quinine reduces the fever of malaria by influencing the cause. Remedies like antipyrin, etc., cut short the fever by increasing the giving off of heat from the body, or by diminishing the heat production, and this can only do harm in that the cause of the fever is in no way affected, but the reaction weapon of the organism weakened.

In cases, then, of pneumonia, with what may be regarded as the temperature normal to the disease, ranging between 103° and 104°, no special antipyretic measures are indicated unless such symptoms as delirium, restlessness, brown tongue, should indicate that the patient's nervous system is peculiarly sensitive to pyrexial conditions, in which case 5-grain doses of quinine and tepid sponging, especially with the addition of some stimulating evaporant such as eau de cologne, will reduce the temperature within the degree of comfort, that is, to between 102° and 103°.

When the temperature ranges above 104° it is *per se* an element of danger, tending, in addition to the unusual severity of the disease which it indicates, to damage the viability of tissue and to paralyse innervation, and most importantly that of the pneumogastric which controls heart and respiratory action.

In distinct hyperpyrexia the cold bath, the cold pack, or cold sluicings, and the cold cradle[10] are the only measures of any use, large doses of quinine aiding to maintain the reduction of temperature, but the bath should be very short,

[9] *Transactions of the International Medical Congress of Berlin*, 1890. Compare also Roy, BRITISH MEDICAL JOURNAL, 1893, vol. ii, p. 312. See also Hale White, BRITISH MEDICAL JOURNAL, 1894, Discussion on Pyrexia at Bristol, British Medical Association; and Douglas Powell, M.D., Address on Right Perspective in Medical Thought and Practice in Medicine, *Lancet*, October 20th, 1894.

[10] Used both at the London and Middlesex Hospitals with distinct advantage in maintaining a moderate temperature.

TABLE VII.—*Elements of Danger in Pneumonia.*

Symptomatic.	Pathological.	Effects.	Treatment.
High fever, above 104°	Microbic activity Exhausted nerve centres	Shock	Bathing; quinine.
Pain	(1) Over-distension of capsule of lung from exudation and hyperæmic swelling	Sleeplessness Nervous exhaustion	Morphine preceded by accumulative stimulants and food. Leeches; ice applications.
	(2) Pleurisy	—	Blister - hot poultices (except very young and very old persons).
Rapid pulse (120) and breathing (40)	(1) Impaired pneumogastric innervation	—	Strychnine, caffeine, atropine.
	(2) Impaired nutrition of heart from insufficient and badly-aërated blood supply	Cardiac failure	Oxygen inhalations (earlier employment).
	(3) Over distended right cavities	—	Stimulants.
	Depleted left cavities	—	Digitalis and strychnine; blood letting, local or general, portal depletion.
Extending physical signs	Extending exudation	—	Acid tonics, perchloride of iron, after fifth day; oxygen inhalations (later employment).

N.B.—The above table is designed to show in brief the elements of danger in severe cases of pneumonia, and to indicate the lines of action to meet or anticipate them.

probably at most ten minutes, so that the temperature be not reduced below 102°. On this account the pack and cold sluicing are more manageable than the bath for adults.

Too much must not be expected from this treatment of hyperpyrexia, as such temperatures as 106° are of themselves often of fatal augury on other grounds. In children the temperature can be easily held in sufficient control by frequent use of a bath at from 90° to 100°, and cold affusion to the head and neck, if necessary.

I have frequently observed that in small doses—2½ to 5 grains—in combination with quinine, antipyretics of the phenacetin class will usefully help to lower the temperature by a degree or so, and increase the action of the skin without depressing the patient. Pure willow salicin sometimes has a better effect than quinine.

The treatment of *pain* brings forward the still vexed question as to the use of poultices, and whether they should be hot or ice cold. Fully admitting the difficulty of weighing evidence, when the conditions of the problem are naturally so varied as those of pneumonia, I cannot say that I have any evidence that either hot or ice applications have any influence upon either the intensity, extension, or resolution of pneumonia.

The treatment of pneumonia by ice applications, which has been so strenuously and ably advocated by Dr. Lees, and has been advocated with more or less enthusiasm by many other physicians, is still a vexed question.

An inquiry made at all the great London hospitals, which has been most courteously responded to by the registrars, to whom my best thanks are due, elicits the fact that icebags are not largely used; that no special benefit upon the pneumonia has followed their use, their employment having been chiefly for the relief of pain and to lower pyrexia.

It seems, if I may venture to say so, that the icebag treatment of pneumonia has at once suffered and profited by its strenuous and perhaps too enthusiastic advocacy, and that what reputation it has gained has been more in the treatment of pneumonia of children than in adults, and its efficacy must therefore be rather gauged by the average mortality of children from pneumonia.

The tendency is in hospital practice, and is becoming so in private practice, to discard local applications in pneumonia, except for special reasons; and one strong argument in favour of their disuse is that their application involves more or less restraint and fatigue of the respiratory movements by the swrappings necessary to keep them in place. This especially applies to moist applications. Practical experience seems to go with theoretical knowledge in refusing any notable effect of ice applications upon the course of pneumonia; and my own prejudice is against them in ordinary cases, on the ground that I have observed increased inflammatory lung infiltration follow their use for hæmoptysis, and that they are harmful in bronchitis. The following points are, however, distinctly in favour of their use in certain cases—namely, in cases in which there is great local discomfort with restlessness and a high temperature:

1. In the presence of high temperature they produce no hurtful effects, whilst they have the good effect in many cases of reducing the temperature some one to two degrees.

2. In the presence of pain, especially of the less acute kind, presumably due to general tumidity of a lung stretching its capsule, they give comfort and relief.

3. The icebag of Lees can be applied without impeding chest movements.

The pain of pneumonia is due to one of two causes, either the overdistension of the capsule of the lung from excessive swelling of the organ analogous to the pain of hepatitis, or pleurisy analogous to perihepatitis. Icebags will relieve the first of them. I should myself, however, generally prefer the free application of leeches.

The second is, in my experience, best relieved by the application of a blister for six or eight hours, with five or six hot linseed poultices applied over it in quick succession, so as to make it rise quickly and fully. In children, however, care should be taken with the use of blisters, and poultices alone, or the icebag should replace them. Leeches are sometimes valuable, and a small subcutaneous injection of morphine may be used to relieve the immediate suffering after the cause has been allayed by the local remedy.

The *nerve shock* and *agitation* of the early hours of pneumonia bears a very close relationship to the pain present, and to the rapidity with which the respiratory surface is being cut off by the extending exudation, in both respects being closely analogous to the effect of extensive pleurisy and rapid effusion.

To meet both the indications the addition of small doses of morphine to the routine mixture is very valuable in sustaining the patient during the first forty eight hours. After this time the use of morphine requires the most careful consideration; on the one hand, it tends to check secretions and to increase cyanosis, and to enervate the patient in the struggle that is before him; on the other hand, in the overwrought nervous systems with which we have often to deal, intolerant of suffering or discomfort, disturbed and fretted by thoughts and surroundings, exhausted by want of sleep, the skilful use of morphine is of the greatest value.

In the presence of active delirium, with prolonged sleeplessness, I am convinced that the proper treatment is a full or rapidly accumulating dose of alcohol with food, followed at the right moment by a sufficient dose of morphine with atropine subcutaneously. If cyanosis be a marked feature, and if there be a tendency to break out into sweating (an almost invariable accompaniment of cyanosis) oxygen must be administered freely whilst the patient is under the narcotic.

Coming now to *cardiac failure*, there seem to me to be three conditions which we have especially to bear in mind as leading up to it:

1. Impaired nerve power on the part of the pneumogastric branches of the cardiac plexus.

2. Impaired nutrition of the hard-working heart muscle from insufficient and badly aërated blood supply.

3. A mechanical tendency to over-distension of the right heart cavities, and to depletion of the left cavities of blood.

With these three factors contributing to heart failure clearly before us, and with clinical evidences of rapid compressibility, smallness, and vacillation of the pulse and of enlarging and labouring right ventricle indicating them, we have at hand remedies of great power to do what may be done in any given case.

I have spoken of morphine with atropine as, cautiously and properly used, being very valuable in saving from nervous and cardiac exhaustion. The addition of atropine would be especially suitable in the later periods of pneumonia.

Strychnine and caffeine are, however, the two drugs which are of the highest value in maintaining the innervation of the heart in many cases of pneumonia; perhaps in all cases of any severity, a moderate dose of 2 to 5 minims of liquor strychninæ may be given four or six times in the day from the fourth to the fifth day onwards through the crisis.

Let me here point out that it is perhaps best in all cases, but most important when carbonate of ammonia or any other alkali is being given, to place the strychnine in a separate bottle, and either mix it with the dose of saline at the time of taking, or give it separately with the stimulant or food at some separate time, since the strychnine, thrown down in the presence of an alkaline carbonate, tends to accumulate at the bottom of the bottle.

In very severe cases of pneumonia, too, the stomach sometimes becomes paralysed and acutely dilated, and ceases to absorb, so that no immediate effect, but considerable ultimate danger, would result from introducing dose after dose of strychnine under such circumstances. In all severe cases it is indeed safest and best to administer such drugs subcutaneously.

The effect of strychnine in increasing power and lessening frequency of heart's action is undoubted. I have used caffeine much less; it appears to me to have the same effect as strychnine, being perhaps on the one hand less reliable, and on the other, there being less danger from an incautious dose.

The value of oxygen in the treatment of pneumonia has, I think, been somewhat misinterpreted. It is twofold: (1) No doubt, in the first place, it will help to keep the patient alive on a small respiratory surface, which would otherwise be inadequate for that purpose, and a very few cases may thus be saved. (2) But the second action of oxygen is a more important one, and applies to many diseases besides pneumonia—namely, the direct effect of its inhalation upon the heart by sending more richly oxygenated blood to its left cavities and to its muscular walls.

The general practice of the London hospitals is only to use oxygen in desperate cases for the treatment of cyanosis, with the effect of maintaining life a little longer, but with no other good result. I would venture to urge its use also, and indeed, rather as a cardiac tonic, to anticipate, and if possible avert, heart failure by helping cardiac nutrition. Oxygen also lessens that restlessness which is attendant upon defective aëration and hurried breathing. Its effect is to lower the pulse-rate and to diminish the number of respirations.

Overloading of the right ventricle and depletion of the left is the cause of death in many cases of pneumonia. The right ventricle becomes overtaxed from obstruction to circulation through the lungs in consequence of excessive exudation. With its increasing distension and failing power to empty itself during systole, engorgement of the whole venous circulation increases, whilst the left cavities of the heart become starved of blood. In a few plethoric people this may come on acutely in the very early stage of the illness, but we more often see it in the later period, its occurrence being characterised by increasing epigastric pulsation, and smallness and emptiness, with increasing rapidity, of the radial pulse. The question of blood letting in pneumonia is rarely raised now, but these are the two conditions which warrant its use, either by the free application of leeches or a moderate venesection. I have only myself hitherto used venesection in acute distension of the heart with bronchitis and pulmonic engorgement, but I have seen very marked benefit, even from the free application of leeches in pneumonia, and in some cases a moderate blood letting is certainly indicated. These are the cases also in which digitalis becomes valuable in addition to strychnine; and I am confident that I have seen this danger warded off by its timely use, although digitalis has little effect in diminishing pulse frequency in pneumonia. A dry diet and the judicious use of mercurial an saline purgatives help further to lessen the burden on th right ventricle.

Can we do nothing to check the *extension of exudation and œdema* of the working lung? It has seemed to me important in this regard to throw aside the saline treatment at about the fifth day of the disease. Carbonate of ammonia, valuable at a pinch for two or three days, loses its useful effect and appears to me to impair the blood condition after that time; at least I have often observed benefit arise from replacing it by dilute phosphoric acid or other mineral and bark and strychnine. The late Sir Andrew Clark had, during the last few years, come to the opinion that perchloride of iron was of value in checking excessive exudation. I am much inclined to the same view, and have long been convinced of its value in adynamic cases.

These cases raise again the question of the value of ice applications in checking the local extension of pneumonia. Dr. Lees eloquently and confidently advocates their use, and points out that increased resonance and subcrepitant *râles* may be heard over the part to which the ice is applied, whilst the fever temperature is maintained, showing the general disease to be active whilst its local effects are restrained and reduced by the application. I cannot accept this argument as at all conclusive, for it is a very common experience, if it be not universal, to observe that redux crepitation generally appears after the fourth or fifth day of consolidation over a given area of lung quite apart from the activity of the disease, which may be manifesting itself by extending consolidation above or in the other lung.

My task now draws near its close, for I wish to limit this discussion to pneumonia, and time does not permit me to touch upon other than its immediate complications.

It will be asked, What about the microbes and their treatment? And one of the very kindly critics of my work on *Diseases of the Lungs* rather severely fell upon me for not speaking at greater length and with greater emphasis upon the subcutaneous antitoxin treatment of pneumonia advocated by Klemperer. But, Sir, that book was designed as a practical work, and I cannot say that even yet the antitoxin treatment of pneumonia has come within the range of practical medicine. It is adopted in no London hospital, and we are not even yet quite sure of our microbe, nor do we know that we have yet a safe antitoxin.

My colleague, Dr. Coupland, the other day had a desperate case of pneumonia in his ward, whilst I had a severe case which had just reached the crisis. I thought it right to raise a blister in my case with a view to injecting some of the serum into his, but before the blister rose my patient had a severe relapse, so that the treatment did not come off.

The practical difficulties of carrying into effect antitoxin treatment of pneumonia are great. It is difficult to find a convalescent patient ready and willing to supply the blood. The period of immunity is of very short duration, so that even immunised serum from animals will be difficult to obtain in constant and efficient supply.

I cannot say that I should feel justified in any but a desperate case, with our present imperfect knowledge, in injecting a patient; and that is frankly how I find the case to stand at present. With such crude ideas as we have on this subject, it would be quite unjustifiable to let loose upon the medical public a method of treatment that is fraught with its own dangers. I am hopeful, however, that we may hear to-day some hint at least of progress on the lines that have proved valuable in some other acute specific diseases.

II.—J. W. Washbourn, M.D., F.R.C.P.,
Physician to the London Fever Hospital; Assistant Physician to Guy's Hospital; Demonstrator of Bacteriology, etc.

In discussing the paper to which we have been listening, I will confine my remarks to the opinions I have derived from a fairly extensive experimental experience of the disease.

At the outset I will say that I look upon acute croupous pneumonia as a specific disease produced by the invasion of the lung with the pneumococcus of Talamon, Fraenkel, and Weichselbaum. The microscopical changes in the affected lung are those of a simple fibrinous inflammation possessing no specific character which distinguished it from an inflammation caused by other micro-organisms.

The formation of fibrin in the alveoli is in excess of that found in other inflammatory conditions of the lungs, but this is only a question of degree. The most characteristic point in the morbid anatomy of acute croupous pneumonia is the way in which the inflammation spreads so as to involve the whole of one or several lobes. Nevertheless, the inflammation may remain localised to a small portion of the lung, as in the so-called "deep-seated" pneumonias.

In broncho-pneumonia fresh portions of the lung become infected by the conveyance of micro-organisms from one bronchiole to another; but in croupous pneumonia contiguous portions of the lung become infected by the passage of the micro-organisms through the alveolar walls. It is this mode of invasion which distinguishes a lobar from a lobular pneumonia.

In spite of these distinctions we must consider the growth of the pneumococcus, and not the anatomical changes produced, as the essential factor in the disease. There appear to be rare cases of acute lobar pneumonia which are not caused by the pneumococcus, and which I would exclude from the category of acute croupous pneumonia. That such cases should occur is in accord with what we should expect from analogy with other diseases. For example, other micro-organisms than the diphtheria bacillus are capable of producing a membranous inflammation of the fauces, and other micro-organisms than the tubercle bacillus will produce chronic infective granulomata.

Should further experience confirm the occurrence of these non-pneumococcal pneumonias, I believe that careful clinical observation will enable us to distinguish them from the ordinary pneumococcal forms. As far as we can judge, they appear to be more infectious than ordinary pneumonias, as, for instance, in the Middlesbrough epidemic, investigated by Professor Klein.

I have never met with such infective pneumonias, and have never failed to demonstrate the presence of the pneumococcus in any of the many cases of acute croupous pneumonia I have examined *post mortem*.

The demonstration of the pneumococcus requires some care, for the micro-organism is not easy to cultivate, and in the later stages of the disease it dies out and is replaced by other micro-organisms which have secondarily invaded the lung. In the recently-affected parts the pneumococcus is present in large numbers and to the exclusion of other bacteria. The inoculation of animals is the most reliable method of demonstrating the pneumococcus.

Different animals vary in their susceptibility, the mouse and the rabbit being exceedingly susceptible; the guinea-pig is less susceptible, and the fowl quite immune.

Septicæmia is the usual result of inoculation, but under certain circumstances pneumonia is produced.

Intratracheal inoculation in dogs frequently causes pneumonia, and it is stated that inhalation with certain varieties of the pneumococcus invariably produces pneumonia in rabbits. Sometimes we meet with pneumonia in rabbits after subcutaneous or intraperitoneal inoculation, especially with attenuated cultivations.

The pathological changes produced in animals depend upon the susceptibility of the animal, the virulence of the pneumococcus, and the mode of infection. Subcutaneous inoculation in rabbits may produce no local reaction, or an œdematous, fibrinous, or purulent inflammation. After death the blood may be found crowded with or may be quite free from cocci. Recovery usually ensues when an abscess forms at the spot of inoculation. After intraperitoneal inoculation peritonitis is almost always observed. In some cases the animals die at a late period with marked emaciation, and no cocci can be found in the blood or organs.

Several varieties of the pneumococcus have been described differing from one another in the symptoms they produce in animals. The most marked of these varieties is the one met with in cases of meningitis. I believe that these varieties only differ from one another in virulence, and that by suitable means they can be converted into one type. It is, however, an important point to remember that the pneumococcus in the human subject does vary enormously in virulence, for it will partially explain the severity of the symptoms in different cases.

I have already stated that the pneumococcus may rarely produce in the human subject a lobular and not a lobar pneumonia. But this by no means exhausts its *rôle* in human pathology. It may cause fibrinous pleurisy, empyema, meningitis, acute otitis media, peritonitis, ulcerative endocarditis, arthritis, and suppurative lesions in other parts of the body. These conditions may be primary or may be secondary to an attack of pneumonia. I believe that in all these cases the pneumococcus gives a peculiar type to the disease, but this may be marked by the local inflammation. When, for instance, the meninges of the brain are attacked, the usual toxic effects of the pneumococcus are overshadowed by the cerebral symptoms caused by the interference with the functions of the brain.

I am quite satisfied that when the pneumococcus invades the pleura, producing either a fibrinous pleurisy or an empyema, the constitutional symptoms are precisely similar to those of pneumonia. It is only by a careful physical examination that such cases can be distinguished, and even this may at times fail. I believe that many of the cases considered to be empyemata, following upon pneumonia, are really cases of primary empyemata, without any previous affection of the lung.

Now, the fact that the pneumococcus is found in so many diverse conditions has been urged as an argument against the view that it is the cause of pneumonia. I cannot consider this argument valid. It is a general law in pathology that the same micro-organism may produce a different train of symptoms according to the part attacked. The tubercle bacillus causes a different type of disease when it attacks the joints, lungs, peritoneum, or brain. I think we ought to speak of a pneumococcal otitis or a pneumococcal pleurisy just as we speak of a tuberculous otitis or a tuberculous pleurisy.

Although the pneumococcus is the cause of croupous pneumonia, yet for the disease to develop there must be other factors than the mere presence of the micro-organism. There must be some predisposing cause, for the pneumococcus is widely distributed, and is often present in the mouths of healthy individuals without producing any ill effects.

Under ordinary circumstances the protective mechanism of the body prevents invasion; but should the cocci be introduced in very large numbers, or should the natural resistance of the body be lowered, invasion occurs and the disease develops. In many cases both these factors operate. The introduction of a large number of germs perhaps determines the seasonal prevalence of the disease.

As to predisposing causes influenza is the one best known. It is quite common for patients convalescent from influenza to fall victims to a lobar pneumonia caused by the pneumococcus. The attack of influenza has so lowered the resistance of the body that it yields to the invasion by the pneumococcus. We must distinguish an acute lobar pneumonia occurring during convalescence from influenza from a pneumonic consolidation of the lungs occurring during the attack. The former is caused by the pneumococcus, and only differs from a primary attack of lobar pneumonia in increased severity; the latter is due to the influenza bacillus, and presents a different clinical aspect. Sometimes a pneumonia, caused by the pneumococcus, does occur during the acute stage of influenza, but this is uncommon. In scarlet fever we meet with an analogous condition. During convalescence from this disease patients are liable to be attacked with a membranous inflammation of the throat caused by the diphtheria bacillus, differing from ordinary diphtheria only in increased severity. During the acute stage of scarlet fever a membranous inflammation of the throat is common, but is not caused by the diphtheria bacillus. In rare cases, however, a true diphtheria complicates the acute stage of scarlet fever.

The other predisposing causes of pneumonia, such as cold and fatigue, are not capable of direct proof. Experimental evidence tells us that exposure to cold and fatigue renders animals susceptible to bacterial infections which in the normal condition they were able to resist. It is interesting to note in this connection that the growth of the pneumococcus outside the body is greatly influenced by very slight changes in the composition of the medium. By analogy we might suppose that slight changes in the composition of the body fluids would be favourable or unfavourable to the

growth of the coccus; but this analogy must not be strained, for it would be incorrect to compare too closely the conditions within the body with those occurring in test-tube experiments.

With regard to the manner in which the symptoms of pneumonia are produced, I have no doubt they are caused by the formation of toxins which act deleteriously on the various tissues of the body. The rapid breathing may in part be explained by the physical interference with respiration, but only in part, for with the crisis the respirations slow down, although the consolidation of the lung remains. When the lung is extensively involved the mechanical effect upon the respiration is of serious import. At the same time, with a larger area involved more toxins are produced and more danger arises from this cause.

Our knowledge of the toxins of the pneumococcus is still very defective. In artificial cultivations only feeble toxins are produced, and it is thus difficult to study their action carefully. There is, however, sufficient evidence to show that the toxins produce similar constitutional symptoms to those caused by infection with the pneumococcus.

Compared with such animals as the mouse or rabbit, the human subject must be looked upon as resistant to infection with the pneumococcus. As a rule the cocci remain localised to the lung, and are prevented by the natural resistance of the body from spreading to the other organs, and from multiplying in the blood. In fatal cases the cocci may be found in small numbers in the various organs.

The inflammatory changes in the lung are of a beneficial nature, having for an object the localisation and destruction of the cocci. The natural reaction of the body to the infection is shown by a leucocytosis of the blood. It would appear that when this occurs the case is favourable, but should it be absent a fatal termination is to be apprehended.

The crisis in pneumonia is of great interest. Often quite suddenly the temperature falls, and the constitutional symptoms subside. This is not due to a sudden destruction of the cocci; for living cocci can be demonstrated in the sputum for some time afterwards. There is good reason for supposing that it is due to the formation within the blood of a substance, perhaps improperly called an antitoxin, which protects the body against the injurious effects of the pneumococcus. Such a substance has been found in the blood of patients after the crisis. Injection of the blood serum of patients convalescent from pneumonia is capable of protecting animals against infection with the pneumococcus. My own experiments, as far as they go, confirm these results.

There are doubtless other factors concerned in recovery, such as phagocytosis and a destruction of the cocci by the fluids of the body. The question is of the greatest importance, for its solution will place us in a position to successfully treat the disease.

Various observers have shown that the blood serum of animals rendered artificially immune possesses the power of protecting other animals against infection, and of curing the disease in an early stage. My own experiments confirm this statement.

Attempts have been made to apply this principle to the treatment of pneumonia in the human subject, but at present only with partial success. The difficulty is to obtain a powerful serum in sufficient quantities. I believe this will only be a question of time, and that ultimately the same success will be attained in the treatment of pneumonia as has already been obtained in the treatment of diphtheria.

The last point I will touch upon is in reference to certain sequelæ that possibly may follow upon an attack of pneumonia. In a few cases after inoculation of the pneumococcus in rabbits the animals have died at a late period without any living cocci being present in the body after death. In two cases I found a chronic parenchymatous nephritis. Now the observations of Fraenkel and Reiche have shown that epithelial changes are frequently to be found in the kidneys of the human being after death from pneumonia. In view of these facts I think it probable that some cases of chronic nephritis are due to an antecedent attack of pneumonia.

Still more interesting are the observations of Professor Welch, who has shown that after injection of the pneumococcus or its toxins, necrotic foci frequently occur in the liver. Inflammatory changes take place around these foci and ultimately lead to the formation of fibrous tissue. Rarely a degeneration of the liver cells occurs. In a private communication Professor Welch informs me that he has found similar foci in the human liver after pneumonia. These observations are of great importance in connection with the etiology of cirrhosis of the liver. It is usual to attribute this disease to the abuse of alcohol, and no doubt this view is correct in the majority of cases. Nevertheless, cases do occur in which no connection with alcohol can be obtained. I think it quite likely that some of these cases may be due to an antecedent attack of pneumonia.

III.—A. G. Auld, M.D.,

Assistant Physician to the Royal Infirmary, Glasgow.

Like Dr. Douglas Powell and Dr. Washbourn, I regard the disease termed pneumonia as a specific fever, but a fever which has almost invariably a marked local manifestation in the lung. It is not necessary, in my opinion, that the lesion of this fever should be situated in the lungs, for it may be found in the meninges of the brain, and very possibly also in the peritoneum. With respect to the local process in the lung, it has been regarded by some, and in particular by the late Sir Andrew Clark, as not a real or genuine inflammation, but a spurious or abortive one.

Without entering into the arguments for this view, I may say that the processes of leucocytosis and phagocytosis which we find in pneumonia seem to me to warrant the view that the lung in pneumonia is really inflamed in accordance with the notion of inflammation which the great work of Metchnikoff has given us. Granting that the pneumococcus of Fraenkel is, in the great majority of cases, the cause of the disease, we have an abundant production of these cocci in the lungs, and in addition to this there is, no doubt, the elaboration of a toxin by these bacteria, which gains admission to the general mass of the blood. The result of the bacterial infection is the production of a leucocytosis, which is most marked at the height of the fever. The leucocytosis diminishes with the temperature, and in cases terminating by lysis the leucocytosis likewise displays correspondingly gradual declension. In regard to the local lesion, we have an exudation which differs considerably in different cases. These varieties indicate the degree of virulence of the inflammation. When the exudation is chiefly fibrinous, we have usually rapid resolution, but when there is much effusion of leucocytes, there is a condition of greater gravity. The severity of the disease, and this is usually found in debilitated constitutions, calls forth this marked emigration of leucocytes, which, though a bad sign as far as the patient is concerned, is, nevertheless, a good thing in itself, and must be regarded as a defensive process. Just as the fever is a constitutional means of defence, so the corpuscular exudation is a local means of defence. The occurrence of consolidation I regard as a salutary event, for by it we have the imprisonment of an enormous number of microbes whose powers for evils are thus checked. Now what occurred at the crisis? I believe we have in this the production of an antitoxin in the blood which directly meets the toxin. This is also usually the signal for a change in the consolidated condition of the lung, but this is not always so. Sometimes the consolidation remains, at least for a time, and this is an important point in connection with the pathology of the disease, which, however, I cannot enter into. Dr. Douglas Powell has indicated a doubt whether we can ascribe pneumonia to any one microbe in opposition to the opinion expressed by Dr. Washbourn. It seems to me that Dr. Powell's contention cannot afford to be set aside, and further investigation is required. I may mention that in a case of acute pleurisy with slight pneumonia, I injected some sputum into a rabbit with the result that an intense membranous pleurisy resulted. Now in this case the pneumococcus was found and was supposed to be the cause of the disease, yet how was it that the organism when injected preferred to attack the pleuræ? There must have been some attraction to the pleura which was not fully explained by the theory which Dr. Washbourn has propounded, or else there must have been a different organism.

IV.—J. Dreschfeld, M.D., F.R.C.P.,

Professor of Medicine in the Victoria University, and Physician to the Manchester Royal Infirmary.

Few pathologists doubt that Fraenkel's diplococcus is the exciting cause of croupous pneumonia, but other micro-organisms may give rise to an inflammatory infection of the lung which produces symptoms like those of croupous pneumonia. Thus Friedländer's bacillus was found in some cases of wandering pneumonia. Several members of the same family were affected, and the naked-eye and microscopic investigation discovered appearances of croupous or lobar pneumonia. I want to draw attention to influenza pneumonia (1) which at the time of an epidemic croupous pneumonia, due to Fraenkel's coccus, is usually very prevalent; (2) patients with influenza are very much predisposed to take croupous or lobar pneumonia; and (3) there is a pneumonia due to the influenza bacillus, and which pathologically is in most cases, but not in all, lobular or pseudo-lobar pneumonia. Clinically we have here various types—a wandering pneumonia is the commonest type, apex pneumonia is another type, and central pneumonia with few physical signs (slight dulness, distant bronchial breathing, a few crepitations) is a third type. A common feature of these types is that there is a more or less remittent pyæmia, that the disease ends in lysis and not in crisis, and that the sputum is purulent but not rusty. Microscopic examination of the sputum shows, as has first been demonstrated by Pfeiffer, masses of very small and slender bacilli—the influenza bacilli. Influenza pneumonia is highly infective, and is often complicated with empyema, which however, as a rule, subsides without surgical interference. Occasionally acute influenza pneumonia leads to a subacute form, with the physical signs and general symptoms of acute tuberculous phthisis. The examination of the sputum assists us in the true recognition of this form, the prognosis of which is fairly good, recovery frequently occurring after an illness of several months' duration.

V.—J. E. Pollock, M.D., F.R.C.P.,

Consulting Physician to the Hospital for Consumption, Brompton.

I would more gladly add some fragment of additional knowledge to this discussion rather than criticise modern views from the standpoint of clinical experience, but I feel that all modern experiment from the laboratory must be brought down to the level of clinical experience to become practical. We cannot but admire the elaborate researches which have brought to our knowledge the fact that many diseases are found to be connected with microbes peculiar to them. These facts are undeniable, and secured to us by evidence, but the deductions from them which are now so universally received are themselves subject to the errors of evidence. These deductions as advocated are (1) that the microbe found in the organ locally affected is the cause and not the consequence of the disease. (2) That such disease is communicable by inoculation, and even by contact of the healthy with the diseased person, and from this results the therapeutic necessity for isolation of such persons. (3) That the disease can only be generated by such means, that is, contact or inoculation. (4) As all persons so exposed do not get the disease, it is necessary to argue that there is a previous receptivity in certain individuals, receptivity due to heredity or general weakness lowering resisting power. The evidence obtained in the laboratory must be received subject to the test of clinical experience. Regarding the direct causation of pneumonia, in the vast majority of cases it is due to chill, as, for instance, in a case of death on the fourth day from double pneumonia in a person previously in robust health, and with no antecedents of disease, personal or hereditary. Such cases are within the experience of all of us, and occur without the possibility of contagion. Further, the evil social consequences of the contagious theory as regards tubercle and pneumonia, the subjects of which are according to it to be marked "dangerous," and deprived of the attention of wife, or husband, or parent. Finally, while acknowledging the great and important discoveries of the laboratory, I would still plead for the necessity of such conclusions being tested by clinical experience.

VI.—A. Foxwell, M.D., F.R.C.P.,

Physician to the Queen's Hospital, Birmingham.

Nine years ago, in a paper in the *Practitioner*, I endeavoured to show that this was a specific constitutional disorder. My reasons were briefly three (1) Nearly always other portions of the body are involved in the disease. Generally these are certainly of subsidiary importance but not invariably. Sometimes the other tissues bear the brunt of the attack; for example, a case is diagnosed as one of acute peritonitis, but later pneumonia is discovered and our nomenclature is altered. (2 The inflammation of the lung is of very various anatomical form. (3) There may be no lung inflammation, and yet all the clinical symptoms of "pneumonia" are present. (4) The *Symptomen-complex* of the disease remains one and the same through all these vicissitudes. Like tubercle, so may "pneumonia" not always be constitutional. We may have a purely local inflammation of the lung without pyrexia or other constitutional symptoms, just as we may have tuberculosis of the cervical glands; so, too, I believe pneumonia is sometimes represented by a local inflammation which does not involve the lung, for example, simple acute meningitis, pleurisy, or peritonitis. Our routine treatment at the Queen's Hospital, Birmingham, for failing heart is the subcutaneous injection of strychnine in doses of 3, 4, or 5 minims given every eight, six, or four hours. Packing with ice-cold water I consider most valuable in all cases of restlessness and insomnia in children; it is also the best method in my opinion for the reduction of excessive temperature.

VII.—W. J. Tyson, M.D., M.R.C.P.,

Folkestone.

It would be difficult to say anything new in connection with the everyday subject of pneumonia, and our task has been rendered even more difficult by the admirable, full, and lucid description which we have just heard. I wish to say a few words in respect to the classification of pneumonia. It seems to me that before long the word pneumonia must be accompanied with a foregoing adjective stating what form of the disease we are dealing with. There are so many types of pneumonia, widely differing from one another, which are now classed under the common term of pneumonia: for instance, there is alcoholic pneumonia, influenza pneumonia, septic pneumonia, symptomatic pneumonia, and many others, differing from one another anatomically, pathologically, and therapeutically, yet all are more or less classed under the head of pneumonia. The words meningitis and peritonitis are almost anachronisms without adjectives stating the course of the meningitis and peritonitis, for without the qualifying word the disease is not diagnosed, and therefore cannot be treated. I have no doubt that in time our friends, studying the laboratory aspect of pneumonia, will be able to explain more fully than they have yet done the various clinical types which we who are in the active practice of clinical medicine are in the habit of meeting with, recognising, and treating according to type.

VIII.—Geo. W. Balfour., M.D., LL.D.,

Consulting Physician to the Edinburgh Royal Infirmary.

Mr. Chairman and Gentlemen,—The history of medicine teaches us that there is probably no disease which has been claimed to be cured by so many divers forms of treatment as pneumonia. Cullen, Gregory, and their followers insisted that they could cure this disease with large bloodletting, and that this was the only rational treatment; Rasori and Laennec supposed they had been equally successful with contra-stimulant doses of tartar emetic; while Hahnemann and Fleischmann with infinitesimal doses of phosphorus, and Bennett with his restorative system, claimed to have almost annihilated the mortality of pneumonia. And if Skoda with his extractum graminis, and Dietl with his aqua colorata were not so presuming, they at least plumed themselves on being quite as successful as their compeers. Even in our more modern days the case is not different, for we can scarcely take up a medical periodical in which some one does not proclaim the discovery of some new specific for the treatment of pneumonia. And yet the mortality from pneumonia bulks as largely as hitherto. The success claimed to be

attained by treatments so various, and so antagonistic in their mode of action, seems to indicate that in pneumonia treatment has but little influence in promoting recovery. It may be that in the near future the discovery of a new antitoxin may place in our hands a specific for the cure of pneumonia, but at present we must be content to relieve suffering and to obviate the tendency to death.

Death in pneumonia, whether it arises from sudden syncope, pulmonary œdema, or gradual sinking, is invariably connected with cardiac failure as its beginning and its end, and whatever impairs cardiac energy increases the danger to life.[1] Hence advanced age, pre-existing disease, or preceding bodily or mental exhaustion, however induced, are all serious complications, and if we delete from the death-roll of pneumonia all those cases in which one or other of those conditions has been present, we practically eliminate all the fatal cases. Unfortunately we have no treatment that can nullify the ill-effects of age, of pre-existing disease, or of exhaustion, but at least we can avoid any treatment likely to produce or increase any of these ill-effects. Indeed, there is a pretty general consensus of medical opinion that when any of the conditions mentioned are present, depressing or perturbative treatment is specially to be avoided. But if depressing and perturbative treatment is to be shunned when elements of danger already predominate, it is difficult to see why they should ever be employed, as in themselves they are fraught with menace to the cardiac energy.

There are two circumstances liable to happen in the course of a pneumonia which are supposed to be specially detrimental to the heart; the one is excessive consolidation of the lung, and the other an excessive rise of temperature. Excessive exudation in any situation impoverishes the blood and enfeebles the vigour of the heart, but in this respect it is not more injurious within the pulmonary tissue than it would be anywhere else, while as a possible cause of strain to the right heart it is of small moment, as the instant the temperature falls convalescence proceeds uninterruptedly, the heart making no account of the apparent obstacle. This, moreover, is a matter over which treatment has but little influence, as limitation of the exudation depends upon arrest of the disease, and as yet we possess no certain means of attaining this result.

A high temperature undoubtedly exhausts nervous energy and enfeebles muscular power, and must therefore impair cardiac vigour; but the pyrexia in pneumonia is usually moderate, and an exceptional or dangerously high temperature may be accepted as an indication of some serious and probably fatal complication. Antipyretic treatment is, therefore, much less applicable to the treatment of pneumonia than to that of other diseases, where the local lesion is of less ominous import.[2] Moreover, powerful antipyretics possess a distinct danger of their own, which is probably not less than that they are employed to avert.

There is, however, one antipyretic, formerly much used as an antiphlogistic, as the equivalent of blood-letting,[3] which skilfully used has distinct advantages of its own. It is true that when the full antipyretic action of digitalis happens to coincide with the natural crisis of a pneumonia, the rapid and often considerable fall of temperature, sometimes amounting to four or more degrees within a few hours, occasionally gives rise to some anxiety, an anxiety apt to be accentuated by the coexistence of a feeble and irregular pulse. This feeble irregular pulse has been accepted as an indication that digitalis enfeebles the heart, and ought to be shunned in the treatment of pneumonia, or only employed exceptionally when the heart is strong and vigorous, but the case is quite otherwise; the feeble and irregular pulse of critical or precritical cardiac collapse, that occasionally occurs when no digitalis has been given, is best treated by free stimulation along with large doses of digitalis, and I have occasionally employed with success as much as a whole drachm of the tincture of digitalis every hour or every two hours, and repeated from six to twelve times. The feeble and irregular pulse accompanying a pneumonic crisis where digitalis has been freely employed is quite another story; it is not an indication of cardiac debility but of digitalis poisoning, such as might happen under any circumstances when digitalis has been equally freely employed. This condition is alarming and not free from danger; when it accompanies pneumonia the recumbent posture must be strictly enforced and stimulants administered. We gather from Withering[4] that the presence of inflammation inhibits the action of digitalis, so that very large doses indeed are required to lower the pulse or depress the temperature in pneumonia, as much as from 100 to 120 grains being often required for this purpose. Even when such large doses of digitalis have proved successful in lowering the temperature the disease is not always arrested, and the rusty sputa may continue for some days along with a slow pulse and a low temperature.[5] There seems, therefore, some risk to be run, and no certainty of any important gain, from pushing digitalis in this extreme manner. On the other hand, if we use this drug in moderation throughout the disease, we gain two advantages: In the first place, the antipyretic virtues of the drug probably aid in bringing about an early crisis, and in making it more complete; and in the second place, the tonic action of digitalis on the heart enables us to keep that organ well in hand; this may in some cases avert cardiac collapse, it certainly enables us to rouse a failing heart with less loss of time than when digitalis had not been given from the commencement.

In order to secure all the advantages obtainable from the use of digitalis, without any of its disadvantages, I am in the habit of prescribing half an ounce of the ordinary infusion of the *Pharmacopœia*, to be given every four hours till the crisis occurs. Afterwards this drug is either stopped, or given for a short time at longer intervals, appropriate tonics being subsequently substituted.

Apart from those conditions already referred to as likely to determine the early occurrence of general and specially of cardiac exhaustion, there are several accessories of the disease which have a similar tendency, and which must be combated if we desire to conduct our patient safely and comfortably through his illness. These accessories are sleeplessness, pain, and cough; the two latter are often a cause of the insomnia; but sleeplessness itself is frequently only a symptom of nervous exhaustion; or it may initiate this condition, as it will most certainly aggravate it. Opium has long been employed for the relief of these symptoms, but certain untoward effects, apt to follow its use have prevented opium being so much trusted in pneumonia as it is in some other inflammatory affections. Many years ago the inhalation of chloroform was employed by some German physicians in the treatment of pneumonia with very considerable success, a success that was all the more remarkable from having been pretty equally distributed among all the physicians concerned.[6] Under this treatment pain vanished; insomnia was replaced by a childlike slumber; the cough ceased, and the rusty glutinous expectoration was speedily changed to a scanty mucous phlegm; the temperature dropped, the pulse-rate fell, and the patient speedily convalesced. But the employment of chloroform by inhalation was wasteful, troublesome to manage, and not devoid of danger, some of the few deaths that occurred having been credited to the treatment rather than to the disease. The difficulties, dangers, and expense attendant on giving chloroform by inhalation were greatly overcome by giving it by the mouth, one drachm so given producing safely results only to be attained at some risk by the inhalation of an ounce.[7] The giving of chloroform by the mouth in such cases had only one drawback: it did not relieve pain so quickly as when it was inhaled. In every other respect it acted quite as beneficially. Probably the relief of pain was only a question of dose, but this matter did not require to be further investigated, as just at this time Liebreich's fortunate discovery of chloral presented us with a drug which seems to possess all the advantages of chloroform, coupled with greater facility of administration.

In lethal doses chloral causes a fatal depression of temperature; it is therefore an antipyretic. Chloral slows the heart, and dilates the arterioles. It is an excellent hypnotic; it is

[1] "The danger in pneumonia threatens principally the heart of the patient. Death results from insufficiency of the heart."—Jvergenson, *Ziemssen's Cyclopædia of Practical Medicine*, vol. v, p. 168.

[2] *Pneumonia*. By Octavius Sturges, M.D. London: 1876, p. 288.

[3] *Lancet*, 1837, vol. ii, p. 609, etc.

[4] *An Account of the Foxglove*. Birmingham: 1785.

[5] Traube, *Gesammelte Beiträge*, Berlin: 1871-78, Bd. II, S. 910.

[6] *Lancet*, 1889, April 13th, p. 695.

[7] *Lancet*, *loc. cit.*

also an analgesic, and it diminishes and ultimately abolishes all the reflexes. It would be difficult to find another drug with so many virtues likely to be useful in the treatment of pneumonia, and withal so manageable in its administration. It is not strange that it has been found extremely serviceable.

If we hold to the old-fashioned view that pneumonia is a reaction to an injury received, then by its action on the reflexes chloral must modify this reaction, checking wholly or in part the series of organic changes through which unmodified diseased action must run. This action is specially valuable in those exhausted and irritable constitutions in which reaction is apt to be both excessive and dangerous. In this theory of inflammation dilatation of the arterioles is not without its use; the free circulation sweeps away in its torrent all the stasic elements, and the influence of the morbid stimulus gradually dies away as the normal nutrition of the part becomes fully restored.

On the other hand, if we regard pneumonia as due to the action of a coccus, a bacillus, or any other form of microbe, the flushing of the part affected by a free circulation of healthy blood cannot be a matter of indifference, as by flooding the part with phagocytes it must tend to cut short the disease by destroying its cause.

Whether, therefore, we hold old or new views as to the causation of pneumonia, the treatment of it with chloral would seem to be perfectly appropriate from a physician's point of view, while a patient cannot but be pleased with a remedy which soothes pain, stops cough, and prevents insomnia. Chloral does all this, and it does more—it really seems to cut short the disease, or, as it may be put, it favours an early crisis.

Having seen pneumonia treated in almost every conceivable manner, from large blood-lettings to coloured water, I have no hesitation in saying that, so far as I am capable of judging, the treatment of pneumonia by chloral is that which gives the patient most relief from his sufferings, which more than any other favours an early crisis, which so far as I know has no drawback, and, if it does not diminish the mortality, has assuredly no tendency to increase it—a negative virtue which cannot be affirmed of every other form of treatment.

I always prescribe Liebreich's chloral as the only safe form of the drug, and in pneumonia I give it dissolved in the infusion of digitalis, for its antipyretic virtues partly, but mainly to have the heart well in hand. The dose of both drugs must vary with the age of the patient: for an adult I give half an ounce of the infusion of digitalis every four hours; of the chloral I give 20 grains for the first dose and 10 grains every four hours subsequently; and these doses must be continued till the temperature falls to normal, when they are stopped and an appropriate tonic administered. A jacket poultice is a useful adjuvant, though this may be very conveniently replaced by a jacket of Gamgee tissue. An appropriate diet cannot of course be dispensed with.

I have employed this treatment for over twenty years with the greatest satisfaction, and all who have used it on my recommendation have been well pleased with its results. It does not cure all cases—nothing can do this—but it relieves the suffering of all, and many appear to have to have the disease cut short. If we get the patient within twenty-four hours of its onset, and begin with 20 grains of chloral, the first dose often suffices to remove both pain and cough; the patient dozes all day and sleeps sound at night; the rusty glutinous sputa either cease entirely or become changed to a scanty mucous phlegm, easily expectorated; the pulse drops; the temperature falls; the disease is arrested, and the patient gradually convalesces. If the disease is farther advanced before treatment is commenced a longer time may be required to produce an equally satisfactory result. In all but the most serious cases the chloral treatment is successful, and even in them it confers a relief obtainable under no other form of treatment, and in fatal cases this amounts to a veritable euthanasia.

IX.—Christian Baumler, M.D.,

Professor of Pathology and Therapeutics in the University of Freiburg.

Professor Baümler said he would confine his remarks to the question of using cooling measures—the cold bath, cold wet packing, etc.—in the treatment of pneumonia, and more especially to the question whether these measures were merely symptomatic or curative ones—meaning by the latter term such measures as were likely to assist the organism in its endeavours to get rid of an infectious disease. Roughly speaking, the means the body avails itself of for that purpose were phagocytosis, the casting out of the products of the disease and of the microbes, and the generating of antitoxic substances. The speaker passed rapidly in review the various changes that are produced by cooling measures on the circulation (increase of blood pressure, slowing of the heart's action, increase of secretions, especially of the kidneys, liver, and other emunctories), on the respiration (deepening and slowing it), on the nervous system (causing sleep, quieting restlessness, creating desire for food and drink), and from these effects he came to the conclusion that cooling measures were not merely antipyretic and symptomatic measures, but that they fell in with the natural processes which led to the spontaneous cure of the disease. Statistics also conclusively proved the good results of such treatment, another very important effect of which was considerably shortening convalescence.

X.—T. Clifford Allbutt, M.D., F.R.S.,

Regius Professor of Physic, University of Cambridge.

Professor Clifford Allbutt considered that the disease was not due to a single cause, but to the combined effect of the micro-organism and the antecedent cause. He then referred to the question of leucocytosis as a diagnostic sign. In his opinion leucocytosis was more marked in the pure than in the mixed forms of pneumonia. He then referred to the use of oxygen, but did not consider that it was of very much value. With regard to drugs, in his opinion perchloride of iron in large doses was a valuable remedy. Finally, he alluded to the importance of bearing in mind the fact that after the crisis had occurred the conditions were still unaltered with regard to the lung, and hence the patient required still to be treated with the utmost care.

XI.—G. A. Gibson, M.D., F.R.C.P.Ed.,

Assistant Physician, Royal Infirmary, Edinburgh.

Dr. Gibson stated that he had intended to confine himself in the few remarks which he proposed to make to the question of leucocytosis in pneumonia, but that he could not allow the expression of opinion made by Dr. Pollock to pass without, like Professor Clifford Allbutt, recording his dissent. Although speaking purely from the clinical point of view, he felt impelled to state frankly that he was one of those who regarded the work of the bacteriologists as of the highest value, and he might as a simple illustration of his meaning merely mention that although clinicians had for well nigh a century been observing cholera, they had to await the work of the bacteriologists before knowing the cause of that disease. He thought it his duty, therefore, to deprecate the line of argument adopted by Dr. Pollock. In regard to leucocytosis as seen in pneumonia, it appeared to him to be only part of a wide subject. Leucocytosis was seen as a physiological occurrence during healthy digestion, and also during pregnancy. It was found in acute and chronic suppurations, in carcinoma and sarcoma, as well as in rickets; it was, therefore, of variable causation, and it was a most interesting fact that in such acute cases as scarlet fever it was not present. Experimentally it could be induced by the injection of staphylococci and streptococci, or their toxic products. Now, believing that the leucocytes had their origin in lymph tissues, and that some of them when entangled in the bone marrow, and even possibly to a certain extent in the spleen under certain conditions, received an endowment of hæmoglobin so as to become hæmocytes, it was evident that leucocytosis might be brought about by over-production or under conversion—which of these predominated it was difficult to say. From the practical standpoint he was inclined to think that those cases of simple lobar pneumonia in which leucocytosis was most pronounced were those in which recovery was most common, and he cited one instance out of many under his care in the Royal Infirmary of Edinburgh, that of a feeble woman, who, in spite of a double aortic lesion, made an excellent recovery from a severe attack. In her case the ratio

of white to red blood corpuscles was 1 to 70. Holding this opinion he could not but have a leaning towards the view that the leucocytes might have conservative functions; and, without committing himself to the fascinating doctrine of phagocytosis, he thought it likely that the white corpuscles might have the function of destroying the toxins circulating in the blood.

XII.—J. Sinclair Coghill, M.D.,

Senior Physician to the Royal National Hospital for Consumption, Ventnor.

Dr. Coghill considered that the time had come to revise the terminology of the various morbid processes grouped under the generic name of pneumonia. They were at present unscientific and misleading. This was especially the case with the terms "lobar" and "lobular" pneumonia, applied to two diseases differing essentially in course, gravity, and histological elements. The terms "lobar" and "lobular" merely indicated the extent to which the lung was affected in two markedly differentiated diseases. The term "pneumonia" should be confined strictly to the "croupous form." The designation "croupous" should certainly be discarded, as it was entirely inappropriate. What is now called "catarrhal pneumonia" would be much more correctly described as "pulmonary catarrh," while "septic pneumonia" would be better named "secondary pneumonia" or "infective pneumonia." With reference to the etiology of the disease he did not think the relation of the chill to the subsequent morbid process was sufficiently investigated. The important *rôle* it plays in the inception of pneumonia is very far from being satisfactorily explained in this and other diseases, such as the malarial group. The rapidity with which the symptoms develop and extend after the rigor is very remarkable, whether or not due to the rapid extension of microbic invasion, as discussed by Dr. Pollock. As regards treatment the indications were afforded by the general constitutional state, and by the interaction of the cardiac and pulmonary circulations. We had the heart pumping blood under increased pressure into the lung already congested; it was therefore necessary up to a certain point to reduce the force of the heart, with a view to limit further congestion. In what were called the "good old times" this was done by free blood letting; we could now accomplish the same purpose by lowering the cardiac energy with the judicious employment of drugs, especially aconite, and, as the expression went, "to bleed the patient into his tissues." But a point is reached when reaction sets in, and the fatigued heart tends to fail. Then comes the necessity for reversing the treatment, and restoring the cardiac energy with digitalis and other appropriate tonics. And this is further indicated as a means of helping to remove the exudatory products. It is to be remembered that heart failure is by far the most common mode of death in pneumonia. He briefly related his personal experience of two grave attacks of pneumonia in illustration of these views. The sequelæ of the so-called "croupous and septic pneumonics," whether in the form of abscess, excavation, or limited empyema, present favourable opportunities for successful surgical interference in the form of "costal resection." He had found them singularly tolerant of manipulation and amenable to treatment.

XIII.—Francis Hawkins, M.B.Edin.,

Physician to the Royal Berkshire Hospital, Reading.

Dr. Hawkins said: Some few years ago, when writing on pneumonia, I defined it as "an acute infective disease consisting of an inflammation of the pulmonary tissue in which, from the presence of fibrin and leucocytes within the alveoli and smaller bronchi, the whole or the greater part of one or more lobes is rendered solid." A more extended clinical study of this disease has led me to become still more convinced that pneumonia is an infective disease, but whether the cause is due to the direct influence of any active organism or whether it be due to some injurious product or both I am not able to say. My reasons for regarding this disease as infective were based upon two clinical facts: first, because we find that many varying physiological functions become disturbed, or I may say that there are many indications of the approaching pathological changes which we term croupous pneumonia long before any actual change in the lung manifests itself by recognised physical signs; even one of the earliest physical signs—I mean a dull tympanitic note—is not present, or I should say may not be present till some time after many general physiological disturbances have been present; more especially is this noticed in children, where sometimes not even until the crisis is passed are any definite physical signs discoverable, and yet for days the child may suffer from vomiting, drowsiness, and even diarrhœa. Then, again, one case recently under my care had a temperature two nights following of 107.4° before any definite sign of pneumonia could be discovered. Secondly, we have evidence of the pulmonary consolidation existing for—I think if my memory serves me, the longest period of time has been forty days when all evidence of fever has left. That chill is intimately associated with the onset of pneumonia there is in the records of clinical cases abundant evidence, but I have myself often wondered if the chill felt, and often thought to be due to change of temperature, has not really been due to the poison—the parasite. In fact, the chill is the early evidence of its onset. In the notices of this discussion no mention was made as to external violence or injury in reference to etiology. The fact that injury has in many instances preceded pneumonia is to my mind of some interest, not only as being a cause in the same sense as chill, but because the association of an injury as preceding pneumonia may be analogous to what we meet with as surgical scarlet fever—another disease which is certainly infectious and more than probably infective. In the paper to which I alluded some few minutes ago I made mention of six cases where injury was the antecedent of pneumonia. In the *Lancet* of January 20th, 1894, Dr. Paterson, of Cardiff, records five cases, and the late Dr. Hadden, assisted by Dr. Hector Mackenzie, in an analysis of 708 cases, found 17 instances where accidents preceded the pneumonia, and were considered to be causal rather than accidental. The lung change is, I think, due to, if not caused directly by, the infective process. As to the communicability of pneumonia I myself have no data. The *Analysis* by the late Dr. Hadden contains notes of cases in which two or more persons in the same house were attacked, and in current literature one is familiar with examples of probable infection. It may be so in some cases, but certainly not in all; neither does it, I think, necessarily follow that an infective disease must be infectious.

XIV.—D. B. Lees, M.D., F.R.C.P.,

Physician to St. Mary's Hospital and Lecturer on Medicine to the Medical School.

Dr. Lees said he would confine his remarks to the question of treatment. Two points seemed to him of special importance. The first was the necessity for obtaining sleep during the first three or four nights of the disease, and of obtaining it by means of drugs which should not depress the heart. The second was the great value of venesection in the later days of the disease when a small pulse, a congested or pale face, and great dyspnœa indicated approaching paralytic distension of the right heart. With regard to the use of the ice-bag, he claimed that: (1) It relieves pain very quickly and is pleasant to the patient. The cold is anæsthetic, and is hardly ever objected to, after the first few minutes. The constrained position is sometimes complained of, but this can easily be obviated by the nurse. (2) It dilates the superficial vessels. (3) It improves the physical signs locally. Very evident improvement in resonance over the area where the ice-bag has been applied may often be observed even after twenty-four hours; this he had often found. He had also observed the vanishing of bronchial breathing, and the replacement of sharp crepitation by moist double *râles*. He had also seen scanty viscid sputum become more watery and more copious. (4) It reduces temperature, and (what is of greater importance) it often reduces the frequency of the pulse. (5) By its sedative action it often enables the patient to obtain sleep without hypnotics, and by the improvement which it causes in the inflamed lung it obviates the necessity for venesection. (6) It secures a more rapid convalescence. Failure to obtain improvement by the use of ice is usually the result of too great timidity on the part of the physician. There is a question of dose involved, just as in the case of drugs. No one would expect to cure malaria by a single grain of quinine, or tertiary syphilis by two grains of iodide, and in the discussion on the treatment of diph-

theria, great stress was laid on the necessity of a sufficient dose of antitoxin. Similarly with regard to the external use of ice. The lung is a large organ; an ice-bag covers only a small area. Even in babies two ice-bags are often necessary, in adults three or four, if the treatment is to be fairly tested. Further proof of the local influence of ice in repressing visceral inflammation may be easily obtained by observing the rapid cure which it effects in acute sciatica, and the quick disappearance of a pericardial or pleural rub in cases treated with it. And the microbic nature of pneumonia offers no difficulty in the acceptance of the local action of ice, for Dr. Burdon Sanderson has pointed out that the pneumococcus is specially susceptible to changes in its environment. In the use of this treatment for young children certain precautions are advisable. Two hot water bottles should first be placed in the bed, to keep the lower limbs and abdomen thoroughly warm. The temperature should be taken every half-hour for the first three hours, then hourly. If any blueness of the hands or lips is noticed, the ice should be removed for an hour, and afterwards it should be applied for two- or three-hour periods with one- or two-hour intervals.

He briefly referred to three cases in illustration. The first was an infant, aged 16 months, now under his care in the Hospital for Sick Children, Great Ormond Street. Three hours after the application of an icebag over the inflamed lung the pulse-rate had fallen from 180 to 140, and the temperature from 103° to 98·4°; the ice was then used for two-hour periods with intervals of the same length. During each application the pulse fell by twenty beats or more, and the temperature about two degrees. During each interval the pulse-rate became increased by twenty beats, and the temperature again rose. This occurred five or six times in succession, and afforded striking evidence of the effect of the ice. Along with this there was very slight spread of the inflammation and speedy arrest of it.

The second case was that of a girl, aged 9, under his care in St. Mary's Hospital. On admission she had a greatly dilated heart, probably due to previous pericarditis and fresh pyrexia. In a few days a loud pericardial rub was heard at the base of the heart. Under the use of salicylates, leeches, and an ice-bag, rapid improvement was obtained, but some hours later she was worse, a loud rub was audible over the whole heart, and in addition there was pneumonia at the left base, with dulness and bronchial breathing. The temperature was subnormal, and it was an anxious question whether the further use of ice was possible. But two similar cases in young children, in which the ice had been omitted on the addition of pneumonia to pericarditis had both died, and he therefore determined cautiously to push the treatment. This was made possible by the zeal of the house-physician, Dr. Gordon, who watched the case all the night. He was able to keep the ice-bags on for three-hour periods, with one-hour intervals, four more leeches having been first applied. When Dr. Lees saw her next morning, the bronchial breathing had vanished and the pericardial rub was much softer. She improved rapidly and steadily from that time.

The third case was one which he had published some years ago, in which pneumonia attacked the only working lung of a boy in whom the other lung was collapsed from old empyema, as was proved on *post mortem* examination three months later. Dulness, bronchial breathing, high temperature, and rapid cyanosis proved the advent of pneumonia. Yet by early and persistent application of an ice-bag the spread of the pneumonia was arrested, and the child recovered from what, apart from the ice, must have been a fatal attack.

Dr. Lees concluded by urging the members of the Association to give a careful, patient, and sufficient trial to this plan of treatment.

XV.—F. M. Pope, M.D.,

Physician, Leicester Infirmary and Fever House.

Dr. Pope had seen that, in a ward containing several typhoid patients free from pneumonia, if a case of pneumonia was introduced, in a few days other cases would arise. He thought that these were undoubted cases of infection, and considered that under such circumstances the cases having pneumonia should be isolated. He also referred to the benefit he believed he had observed to follow the use of spiritus etheris nitrosi, and stated that he had endeavoured to substitute a more stable nitrite for the ethyl nitrite of this preparation, but found that a similar benefit did not follow the use of sodium nitrite in 1- to 3-grain doses, owing, he supposed, to its less diffusibility.

XVI.—R. Shingleton Smith, M.D., F.R.C.P.,

Senior Physician, Bristol Royal Infirmary; Lecturer in Medicine, University College, Bristol.

Dr. Shingleton Smith called attention to the statistics of Pétresco, of Bucharest, whose mortality in a series of 1,300 cases has amounted to only 2 per cent., and urged that in a disease of which the usual mortality is 1 in 5, it is quite justifiable to push an active drug like digitalis to even toxic doses rather than to leave the patient to the natural history of such a fatal disease.

XVII.—William Squire, M.D., F.R.C.P.,

Physician, St. George's, Hanover Square, Dispensary.

Dr. William Squire said he could wish the discussion had been more restricted to acute lobar pneumonia. He showed at Manchester years ago how frequently this form of pneumonia occurred in children. Since then he had seen convalescence as rapid, complete, and surprising as any recorded in books or described by Dr. Lees as resulting from ice treatment. The name of croupous ought not to be longer applied to this form of pneumonia. It was used at first abroad under a mistake. It is misleading, and confuses our views of pneumonia. Clinically neither croup, diphtheria, measles, or influenza are ever followed by what has been so inaptly called croupous pneumonia.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

DISLOCATION OF PERONEUS LONGUS TENDON.

As attention has recently been drawn to this accident by Mr. Walsham (British Medical Journal, November 2nd), and as it is of very rare occurrence, the report of a case in point may prove interesting.

Mr. A. B., aged 26, out with a party of friends in September, 1894, was playing a game which consisted in "hopping" a considerable distance, when suddenly he felt something give way in his ankle with a very audible snap, and it seemed as though, to use his his own words, he had been struck violently on the ankle with a stone. He was unable either to walk or stand, and had to be removed to his home in a conveyance.

On examining the ankle twenty-four hours afterwards, there was slight swelling and discoloration behind the external malleolus of the right foot but no fracture was found, and to all appearance only signs of a slight sprain. On forcibly extending the foot, the tendon of the peroneus longus was felt to leave its groove behind the malleolus and to lie on its external surface; it could be easily replaced, but not so easily retained in its proper position, if the foot was extended. The external malleolus was very prominent, owing partially to there being a slight condition of talipes valgus present, which latter, no doubt, partially conduced to the dislocation. The tendon was replaced and kept in its position by firmly strapping the ankle; the strapping was allowed to remain on for three weeks, the patient going about on crutches. After that time an elastic anklet was worn, and the patient allowed to use the foot a little; since then the tendon has remained in position, and the patient can walk and run without any inconvenience.

Wm. Allen, M.B. and C.M.Glasg.,
Late House Surgeon, North Lonsdale Hospital.
Barrow-in-Furness.

ASEPTIC CATHETERS.

Dr. Ward Cousins, in the British Medical Journal of January 19th for this year, called attention to the difficulty of cleansing and deodorising catheters, and advocated steaming them by means of a boiler capable of bearing a pressure

of 80 lbs. to the square inch, and then polishing the interior with a steel stilet. This method is effectual, but it is only suited to metal instruments, and cannot be carried out by an old man with enlargement of the prostate, who has, perhaps, to pass a catheter many times during the twenty-four hours and often at night, and who is always on the borderland of septic cystitis. To meet this difficulty, Messrs. Maw, Son, and Thompson have at my suggestion made some flexible instruments which can be cleansed and kept aseptic and ready for use with much greater ease. I have had the inner surface made as smooth and finished as highly as the outer. The urine does not wet it or soak into it. There are no roughnesses or irregularities to which it can cling and form a bed for septic organisms. Anyone who will split open an old catheter, one that has been in use for some time, and inspect the interior will see at once what I mean. If one of these new instruments after being withdrawn from the bladder is dropped at once, end upwards, into a deep bottle filled with a solution of boracic acid every trace of urine is washed out from it and replaced by the antiseptic, and the catheter is fit for immediate use again. The method is so simple that it can be carried out even in the dark, and so effectual that it is almost impossible for the most ignorant and careless to make a mistake.

Wimpole Street, W. C. MANSELL MOULLIN,
Surgeon to the London Hospital.

SIMULTANEOUS DISLOCATION OF BOTH SHOULDERS.

C. B., aged 64, fell from a ladder in April last whilst thatching a cottage, dislocating both shoulders (the subglenoid variety), and fracturing his left thigh in the lower third. The dislocations had to be reduced under an anæsthetic, as the man was very muscular.

The progress of the case has been quite satisfactory, especially as regards the fracture, the patient having already walked with crutches six miles in one day. But the shoulders required much passive movement, which it was not easy to apply at first, as the least movement caused much pain in the fractured thigh, besides which the patient had to be kept extremely quiet to combat the shock of the accident, the effects of which lasted a long time, and he had also suffered much previously from rheumatism.

I have not met with anyone who has seen a case of dislocation of both shoulders.

Daventry. CHAS. E. OLDACRES, M.R.C.S., L.R.C.P.Edin.

CERVICAL RIBS.

WITH reference to the remarks on cervical ribs in the EPITOME of October 19th, I should like to mention that I saw a lad lately with a cervical rib on each side, that on the right side being more prominent than the one on the left. The symptoms on each side consisted of a bulging prominence at the outer margin of the sterno-mastoid, just above the clavicle, with supraclavicular pulsation; while on palpation a bony tumour could be felt traceable to the spine. There were no symptoms of interference with the functions of adjacent structures, and both extremities were freely movable.

Canterbury. S. F. CLARK,
Surgeon-Captain A.M.S.

TREATMENT OF SALIVARY FISTULA.

THE great difficulties attending the satisfactory treatment of salivary fistula are universally recognised; it has, therefore, occurred to me that the few following remarks may be of interest respecting a case lately under my care which was brought to a successful issue:

On August 9th a gentleman consulted me respecting an abscess which had opened externally on the left cheek, and from which there was a copious flow of saliva. The abscess I found was due to the presence of two decayed teeth, which I advised should at once be extracted. That a very considerable communication into the duct had been established was made evident from the facility with which fluids could be injected through the external opening into the mouth.

Having treated the abscess antiseptically until a healthy condition was established, I pared the edges of the wound and scraped the interior, on the chance of getting primary union, which, however, I scarcely expected. I then brought the edges together by means of two harelip pins introduced at right angles one eighth of an inch from the margin, over which a figure-of-8 was made with carbolised silk, exercising at the same time as much pressure as possible, and finally sealing up the opening with gauze and flexile collodion. This dressing was allowed to remain undisturbed for forty-eight hours, during which time the patient was directed to lie on the opposite side and not to move the jaws either by speaking or eating, the food given being of the most nourishing description, but in a semifluid state.

At the expiration of this time the dressing was carefully removed. The pins were found to have set up some irritation, so they were taken out and reintroduced in a similar manner but in fresh places; they were allowed to remain for another forty-eight hours, when they were removed finally. Unfortunately union had not taken place, but the flow of saliva was stopped and the parts looked healthy. The strictest quiet was enjoined, and the cavity was lightly plugged with gauze steeped in a solution of zinc sulphate gr. ij to ℥j, with the addition of a small quantity of compound tincture of lavender. A pad of lint steeped in boracic solution was applied over all and kept in position by means of elastic suitably fitted. This was continued till October 30th, when the cavity had filled by granulation; skin was forming, and he was now practically well.

Of course this treatment is only applicable when satisfactory evidence exists as to the parotid duct being unobstructed. Had it failed I should have been obliged to establish a fistulous opening through the cheek into the mouth in the usual way, and endeavour to direct the flow of saliva from the outside opening into it—a very troublesome proceeding if it can be avoided.

Harlesden Road, N.W. W. T. EAMES,
Inspector-General R.N. (Retired).

A FATAL CASE OF COCAINE POISONING.

ABOUT 7.40 A.M. on October 7th I was asked to see M. C., who was said to have swallowed some cocaine. On arriving a few minutes after I found a doctor in attendance and the patient dead. Her parents made the following statement: M. C., aged 16 years, arose about 6.30; after dressing she went into her father's bedroom, and swallowed some cocaine from a vial on the dressing table to allay the toothache. She then went downstairs. She had just taken two mouthfuls of hot tea when she felt faint, and in trying to go upstairs fell. She was then assisted upstairs, and sat down on a chair; she then had a convulsion and fell on the floor. Her father coming in asked her what she had been taking, and she said that she had taken cocaine for the toothache. Immediately thereafter she had a series of six convulsive fits in succession, the arms and legs being most affected, the face least; there was frothing from the mouth, towards the end blood-stained. She never regained consciousness, and at 7.30, when the first medical man arrived, he found no signs of life.

It was about 6.50 A.M. when she swallowed the drug, so that death took place in forty minutes. The quantity she had taken was about ℥ij of a 10 per cent. solution, equal to gr. 12 of the salt. The large dose, the fact of its being taken the first thing in the morning on an empty stomach, and the hot tea taken immediately after, would all tend to quicken the effect. The medicine was contained in an ordinary clear glass vial, and the patient's father had procured it without any prescription. There was no *post-mortem* examination.

Leith. G. M. JOHNSTON.

THE Medical Guild, Manchester, held its quarterly meeting on October 31st, under the chairmanship of Mr. Alderman Walmsley, J.P. An interim report on provident medical aid was presented by the Council. The report dealt with friendly societies' sick clubs, provident dispensaries, and medical aid associations. After some discussion it was directed to be completed and forwarded to every member a month before the next quarterly meeting. It was resolved, also, on the motion of Dr. Brierley: "That the Council be instructed to draw up a scheme of provident medical aid on the basis of a wage limit constructed on a sliding scale."

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

SOUTHPORT CONVALESCENT HOSPITAL AND SEA-BATHING INFIRMARY.

CASE OF ADDISON'S DISEASE WITH PYREXIA.

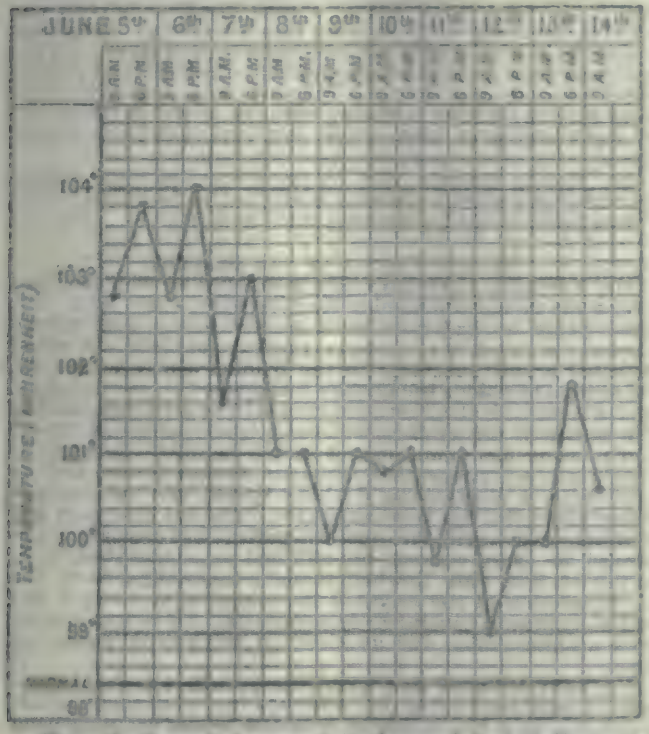
(By F. W. Fish, M.B., Ch.B.Vict., Resident Medical Officer.)

History of the Case.—H. G., aged 30, a married woman, was admitted on May 24th, 1895. She dated her illness from September, 1894, when she was confined. Up to that time she had enjoyed fairly good health. Directly after her confinement she had an attack of influenza. From this time she began to feel "weak" and "out of sorts," and had gradually got weaker. In September last she noticed that her skin was assuming a yellow hue, which never disappeared. Vomiting also began last September, and continued "on and off." There was no history of phthisis in the family nor was the patient herself phthisical.

When admitted she was thin and complained of languor and weakness. For some little time she was able to get about slowly, but soon had to take to bed.

The bronzing of the skin was well marked. The conjunctivæ were not "jaundiced." Small black spots (so-called "freckles") were very evident about the body, but especially so on the back of both hands. Palpation over the right hypochondrium elicited pain, but the liver was not enlarged, nor were there any signs of malignancy. The pulse was small, feeble, and regular. She suffered persistently from chilliness, vertigo, headache, dyspnœa, and palpitation on the least exertion. Nausea and vomiting were present, especially towards the end. There was also some diarrhœa. She had lost a considerable amount of flesh during the last few months.

Microscopic examination of the blood (to exclude pernicious anæmia) showed it to be normal. The course of the temperature is shown in the accompanying chart.



Towards the end she complained a good deal of dimness of vision. The breath and skin yielded the "cadaveric odour" which has been described in this disease. Consciousness remained till the last. She gradually sank to a comatose condition, and died on June 14th, 1895, three weeks after admission.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Henry Trentham Butlin, D.C.L., F.R.C.S., President, in the Chair.

Tuesday, November 5th, 1895.

The Non-Existence of "Round-Celled Sarcoma" as a Distinct Class of New Growths.

Dr. Herbert Snow, in reading a communication on the above subject, made the following observations: A generation since, the term "soft cancer" was loosely applied to any malignant tumour of soft consistence, no matter from what tissue it had sprung. At the present day, the word "sarcoma" is frequently used in a similarly vague sense; and in particular "round-celled sarcoma" may denote almost any rapidly-growing mass of round or oval cells, whose origin is often doubtful. The lesions thus designated fall into 3 groups, and are either (*a*) carcinomata, (*b*) lympho-carcinomata, or (*c*) blastomata. Of the first, the huge encephaloid cancers of the female breast are the type. There is only slight concurrent enlargement of the axillary glands. Examined at the core, they consist of a loose mass of cells and cell *débris*, with little acinar structure. A thin section, however, from the growing margin will display the familiar acini of mammary carcinoma. True sarcoma is rather rare in the breast, except in association with cysts. The second group, lympho carcinoma, springs from adenoid tissue in some form or other, to which appertains the bone marrow. As well as in the more external lymph glands, the growth may develop in those of the abdominal cavity and mediastina, in the tonsils, spleen, omentum, etc., this variety also comprises the central tumours of bone. The third, blastoma, springs from uneffaced embryonic vestiges; it may very largely consist of round celled parenchyma, but this is most commonly mingled with other structures—tubules, cysts, acini, etc., its favoured sites are the kidney, ovary, and other derivatives of the Wolffian body. After careful study for many years past of all the specimens which presented themselves, the author had been forced to the conclusion that no tumour solely composed of round cells originates in the connective tissues. That every sarcoma properly so called contains abundant spindle-celled tissue, or spindle cells ranged in bands; and that none can be held genuine without this pathognomic badge.

Mr. Bowlby criticised the speaker's position by saying that the question was one of the use attaching to terms; what Dr. Snow had exhibited as round-celled sarcoma, he should name carcinoma, and what was exhibited as sarcoma he should call sarcoma. He did not for a moment allow that the only form of true sarcoma was spindle celled; and he denied that connective tissue was always present in round-celled sarcomata. That melanotic carcinoma at times arose in the skin was proved, but this did not show that none of the melanotic tumours arising in this situation were sarcomata.

Mr. W. G. Spencer remarked that melanotic carcinoma was not uncommon in pug dogs, arising in the skin. In regard to the unique position Dr. Snow claimed for spindle-celled carcinomata, the round-celled forms were transitional towards such. The term "blastoma" he thought of no real value; a growth was epithelial or it was of connective tissue origin, or it was of both, and it could be named accordingly, without adopting so ambiguous a word as "blastoma."

Mr. Jackson Clarke agreed with Mr. Bowlby that Dr. Snow's specimens had been named in an inverted order, and that the growths called sarcomata were carcinomata, and vice versâ.

The President remarked that he could have followed the author had he exposed the difficulties connected with the histological diagnosis of round celled sarcomata, and that was the subject he expected to have heard discussed.

Dr. Snow, in reply, maintained that every melanotic

tumour arising in the skin must be an epithelial growth, since only the normal epithelial cells were pigmented, and so every pigmented tumour of the eye must be a sarcoma, since there was no pigmented epithelium in this situation. The term blastoma he held to be a useful one to cover the very complex forms of new growths met with in infancy and childhood.

Notes on the Occurrence of large Quantities of Hæmatoporphyrin in the Urine of Patients taking Sulphonal.

Dr. Archibald E. Garrod and Mr. F. Gowland Hopkins, after pointing out that hæmatoporphyrin was present in traces in normal urine, and in larger amounts in many morbid conditions, proceeded to discuss its occurrence in much larger quantities still in the dark red urine of some patients who have, as a rule, taken sulphonal for some time. The evidence connecting this with sulphonal was discussed, and an epitome was given of the associated clinical symptoms and *post-mortem* appearances in the published cases. The patients are nearly always women who have taken the drug without ill-effects for weeks, months, or even years previously. Abdominal pain and vomiting are prominent symptoms, and death in collapse frequently follows shortly upon the onset of the symptoms, which may only develop after the drug has been discontinued. Alkaline treatment appears to have been useful in some cases. Clinical histories of three cases (of women taking sulphonal), supplied by Drs. J. Delpratt Harris, W. M. Abbot Andersen, and M. J. Nolan were then given. All the cases ended fatally, but no *post-mortem* examinations were made. In one instance sulphonal had been taken for four years, and in another the symptoms only commenced ten days after the drug was stopped. The authors then gave a detailed account of the general and spectroscopic characters of the dark red urines of these patients. Tube casts were present in each instance. Even the trace of iron found in normal urine could not be detected. Various methods were employed for the extraction of the hæmatoporphyrin, and it was found that the soda and ammonium chloride methods, which work so satisfactorily in ordinary cases, were quite unable to cope with the amount of the pigment present in these specimens. Repeated extraction with acetic ether was found very useful for the partial separation of the abnormal pigments present. In each instance the colour of the urine was only in part due to ordinary hæmatoporphyrin. In one case there was present much of a pigment derived from hæmatoporphyrin, which yielded two absorption bands like those of oxyhæmoglobin. In a second case another derivative of hæmatoporphyrin was found, and in all the dark tint of the urine was largely derived from a reddish-brown pigment, such as was observed by Hammarsten, which yielded no spectroscopic absorption bands. The views of Stokvis as to the origin of urinary hæmatoporphyrin were referred to.

The Relation of Biliary Calculi to Malignant Disease of the Liver.

Mr. Cecil Beadles observed that the origin of gall stones was still wrapped in mystery. By some it was held that the predisposing cause was inspissation of the bile, due to obstruction. This question, however, he did not intend to discuss, but to speak of the relation between biliary calculi and malignant disease of the liver. There were two chief views held upon the subject: one, that the carcinoma was caused by the calculi—the irritative theory; the other, that the new growth, by leading to obstruction, produced inspissation of the bile, and so the formation of the calculi—the concentration theory he might call it. It was of paramount importance to distinguish between primary and secondary carcinoma. Secondary growths were widely scattered; primary arose in the neighbourhood of the gall bladder. The secondary carcinomata were not associated with gall stones in any notable proportion, and the coexistence of the two might be held as a coincidence merely. On the contrary, in most cases of primary carcinoma there was an association with calculi. The author held the view that the irritation set up by the calculi was an exciting cause of the new growth, though these were probably not the only sources of irritation. Nevertheless, a great number of instances in which biliary calculi were associated with carcinoma could be cited, and the proportion in which malignant disease arose was perhaps not greater than that in which carcinoma of the lip followed upon smoking. Especially in aged females were gall stones found after death, and this where there was no history of any such disease during life; the percentage in males was considerably less. He then proceeded to give details of the instances of association as collected by himself.

Mr. S. G. Shattock, in commenting on the paucity of histological details, recalled the fact that carcinomata of the liver were of two kinds: columnar-celled, arising in the ducts and gall bladder and polyhedral celled, arising in the secreting tissue. Did the disease arise in the gall bladder evidence of this would be afforded by the histological characters of the new growth.

Mr. W. G. Spencer likewise pointed out that the author had confused carcinoma of the gall bladder and carcinoma of the liver, the two not being synonymous.

Dr. Voelcker also maintained the importance of this distinction. In all the cases of primary carcinoma of the gall bladder he had seen, there were biliary calculi. The growths themselves were columnar-celled in kind. In no instance of primary carcinoma of the liver itself, however, had he seen gall stones. In his judgment the great commonness of gall stones and rarity of carcinoma of the gall bladder militated against there being a causal relationship between the two.

Mr. Beadles, in reply, stated that in his detailed report he had given the histological details of the cases: in the thirteen examples he recounted the origin of the growth appeared to be in the neighbourhood of the gall bladder.

Card Specimens.

Mr. Beadles: Ureter Obstructed by Calculus.—Dr. Willcocks: Perihepatitis and Thrombosis.—Dr. Walsham: Pulmonary Stenosis.—Mr. Edmunds: Myxoma of Breast.

LIVERPOOL MEDICAL INSTITUTION.

Chauncy Puzey, F.R.C.S., President, in the Chair.

Thursday, October 31st, 1895.

A Method of Producing Rapid Delivery in Puerperal Eclampsia.

Dr. T. B. Grimsdale related a case in which delivery was effected by deep incisions made into the cervix. Before the operation the os would just admit the finger; as soon as the incisions were made the forceps could be applied, and a living child was extracted in three or four minutes. The incisions were four in number, radiating from the centre of the os and at right angles to each other, and extended from the os through the cervix to the vaginal reflection.

Dr. Briggs thought that in many cases so rapid a withdrawal of the uterine contents would not be desirable.

Drs. Imlach and Davies also made remarks.

Villous Tumour of the Bladder.

Mr. Newbolt showed a young man, aged 21, who had been under his care at the Stanley Hospital since June, 1894. For three years he had great pain on micturition, with sudden stoppage of the flow and frequent passage of blood. A sound detected a soft substance in the bladder which easily bled. On several occasions the bladder was opened above the pubes, and a quantity of villous growth could be seen surrounding the orifice of the urethra, and covering the whole surface of the mucous membrane except at the summit. Removal of considerable portions of the tumour was made from time to time with a Volkmann's flushing spoon, the hæmorrhage being controlled by very hot water. The last operation was performed in April, 1895, and the patient had now much improved in every respect, but still had occasional sharp pain in the left loin. Mr. Newbolt thought this was probably due to contraction of the orifice of the ureter, or blocking of the orifice by growth causing hydronephrosis. There was now no pain on micturition and no bleeding, but a small deposit of pus.

Mr. Paul believed that when the growth was very extensive it was impossible to eradicate it: and that in Mr. Newbolt's case the spooning operation would probably have to be repeated.

Drs. Briggs and Ross also made remarks on this case.

Professor Fraser's Antivenene.

Dr. Logan showed the antivenene as a liquid serum and in the crystalline form.

Mr. Nicholson said that in Rangoon, twenty-five years ago, he came across a man who had been slowly inoculating himself with cobra poison by means of tattooing. He appeared to be quite immune against the bite of the cobra, but not from other poisonous snakes. There was no doubt as to the scientific value of Professor Fraser's work, but he doubted whether the antidote would have any practical value in India. It must be remember that considering the enormous population of the country, death from snake bite was very infrequent, and that every case of snake bite was not necessarily fatal; on the contrary, numbers of persons recovered, and many antidotes gained great credit in consequence.

Twenty-three Cases of Typhlitis with their Subsequent History.

Mr. Murray said that these cases were collected from the records of the Children's Infirmary since 1886. Though the numbers by no means included all the children suffering from typhlitis and under treatment during that period, they represented all the cases of which he had notes, and whose subsequent history he had been able to trace; with one exception, no case was more recent than two years ago: (*a*) There were 9 patients in whom there was inflammation of the vermiform appendix, with most probably a slight and strictly localised peritonitis; these all recovered under medical treatment, and remain well, though 3 of them were relapsing cases. The period that has elapsed since their admission varied from three to seven years. (*b*) Ten cases where there was a localised peritoneal abscess due to inflammation of the appendix, the abscess was simply opened and drained. Nine of the children remain well, the time that has elapsed since operation varying from three to six years. One died from suppurative peritonitis owing to an accident during the syringing of the wound. (*c*) Three cases where the appendix rapidly became gangrenous or perforated; all of them died.

Dr. Glynn referred to the difficulty sometimes experienced in distinguishing between inflammatory induration in the region of the cæcum and malignant disease.

Mr. Rushton Parker said that he had seen several cases of typhlitis in adults where it became a question of abdominal section, but recovery took place under rest and opium. He was convinced that promiscuous operation was not indicated in these cases whether attended by intestinal obstruction or not.

Mr. Paul said that in recurring appendicitis the inflammatory changes in his cases were almost entirely limited to the lymphoid structures. In his experience fæcal concretions were so constantly found in the most acute and fatal cases that he thought they must be directly related to the cause of mischief. There was a class of cases in adults which could not be freed from recurring danger without operation, and the operation itself, if undertaken at the right time, was almost always successful and devoid of risk.

Mr. Rawdon referred to the difficulty sometimes experienced in children and young adults in differentiating typhlitis from morbus coxæ.

Mr. Larkin believed that there was a relation between typhlitis and enlargement of the tonsils, both being similar lymphoid affections. The recurrent cases of appendicitis were a distinct clinical group, and could only be cured by removal of the appendix.

Mr. A. Davis said that a high temperature and extensive induration did not necessarily call for operative interference, and he related a case where, under the influence of rest and opium, the patient made a rapid and complete recovery.

The President and Drs. and Messrs. Banks, P. Davidson, Boyce, and Abram also took part in the discussion.

Edinburgh Royal Infirmary.—At a meeting of the managers of the Edinburgh Royal Infirmary on Monday, November 4th, it was determined by a majority of nine to eight to use the legacies which have recently been left to the infirmary, amounting to £75,000, to pay off the debts on the institution. These debts amount to nearly £41,000. The remaining sum of £34,000 it was agreed to use towards the extension of the infirmary.

REVIEWS.

Diseases of the Joints and Spine. By Howard Marsh, F.R.C.S. New and Revised Edition. London: Cassell and Co. 1895. (Cr. 8vo, pp. 548; 79 illustrations. 12s. 6d.)

A second edition of this book was a matter of course; and until the time comes for a third edition it is hard to see how the book could be made much better than it is now. It is clear, well arranged, full of practical work, and excellent alike for reading and for reference. The chapters on Charcot's Disease, on Bone-setters, and on the different forms of Epiphysitis, are models of good clinical teaching; and the chapters on Diseases of the Spine, now first published, are admirable. The illustrations are well chosen; the whole book is the outcome of wide experience, careful observation, and what is called "surgical instinct." It is clinical from beginning to end, and is not greatly concerned with questions of pathology. Mr. Marsh is a master of the art of telling the history of a case; one can almost see the patients and watch the treatment; and the cases are so numerous that each chapter is a perfect clinical lecture, pleasant to read, and hard wholly to forget. He has learned how to write as he would speak; and thus the book is dedicated to Sir James Paget not only in the letter but also in the spirit; it has the same purity of style, the same wealth of experience, that are so welcome in *Paget's Clinical Lectures and Essays*—which Mr. Marsh "had the good fortune to edit"—and in the writings of Watson, Hilton, and Gowers.

It is not a book made out of books, but a book out of which other books will be to some extent made. Almost all that is published by physicians and surgeons is soon forgotten and out of date; but those writings live long which are the clear records of good clinical work, properly arranged and simply written.

The rules in Mr. Marsh's book as to the duration of treatment in each disease are excellent. He is still the leader of those who oppose early excision in hip disease; and his defence of non-excision is the best that can be made of a cause that is not unlikely to fail. He is not in favour of the treatment of congenital displacement of the hip-joint by prolonged extension; but the chief reason against this treatment is not that it is useless, but that it may impede the development of the chest, or may set up a lateral curvature of the spine. The displacement of muscles or tendons by injury or disease he is prevented by want of space from considering; nor does he enter the field of orthopædic surgery. These suggestions may find an answer in the next edition; for the present, we are only concerned to welcome his work as a most valuable and acceptable contribution to the advancement of the art of surgery.

The Surgical Diseases of Children and their Treatment by Modern Methods. By D'Arcy Power, F.R.C.S. London: H. K. Lewis. 1895. (Cr. 8vo, pp. 548, with 60 illustrations. 10s. 6d.)

We have here a most careful and complete account of the surgical diseases of children and their treatment. Mr. D'Arcy Power was already known as a good surgeon, well versed in pathology, and an excellent teacher and examiner. He now has the further distinction of being the author of a book in which surgery, pathology, sound teaching, and hard work all meet together. As surgeon to the Victoria Hospital for Children he has gained a wide experience of the treatment of their surgical diseases. He seems to have noted all his work as he did it, and has thus been able to turn it all to good account in a book full of practical rules, valuable cases, and those small hints and suggestions that are of more worth than the repetition of the great facts of all the textbooks.

Among the chapters which are especially useful come those on intracranial disease and its surgical treatment, on hernia, and on tuberculous disease of bones; this last disease being especially associated with his name. Mr. Power will never take any credit to himself that does not rightly belong to him, for he is almost too scrupulous to mention everybody whose least remark or theory he is quoting, with the result that his index (from A to C only) gives more than fifty

references to other writers. And since he is much given to the classics and to the study of history—as in his excellent account of the illnesses of Samuel Pepys and his wife—we find mention of many other notable names; he has even diagnosed the case of Philoctetes as "infective osteo-myelitis terminating in sclerosis;" though we would suggest that this diagnosis does not cover all the symptoms. But the love of Greek is the root of much evil; and we hope that in a second edition Mr. Power will avoid such words as colopexy, orchidopexy, arthrodesis, hypertrichosis, and, worst of all, osteopsathyrosis. It is certain that he must then also correct the large type and the waste space on some pages (for example, on pages 284 and 509), which somewhat confuse the reader and spoil the look of the page.

But these are very trivial defects; and he has given us a well written, complete, thoughtful survey of the vast field of children's surgery. The book is full of good practical teaching, conveyed in a clear and pleasant style. We would quote as especially good the paragraphs on psoas abscess, and those on intubation of the larynx. We hope that in a second edition he will reconsider the term "typhoidal osteo-myelitis;" and that he will weigh again his words regarding Sayre's jackets, Lannelongue's "sclerogeny," and the unduly elaborate treatment of coxæ.

The illustrations are admirable; there is a full index and an admirable list of references. We congratulate Mr. Power on a very fine piece of work, which every surgeon ought carefully to study.

Diphtheria and its Associates. By Lennox Browne F.R.C.S.Ed. Illustrated by the Author. London: Bailliere, Tindall, and Cox. Philadelphia: J. B. Lippincott Company. 1895.

As was to be expected, we have in the book before us a good summary of what, up to the time of the publication of this work, was known of diphtheria as regards etiology, pathology, and treatment. After giving a "definition and synopsis," from which it may be gathered that Mr. Lennox Browne is thoroughly convinced that diphtheria pure and simple has for its specific pathological factor the Klebs-Loeffler diphtheria bacillus, he gives an interesting though very brief chapter on the history of diphtheria, in which he points out that, although the disease has been known from a very early period of medical history, it had not been thoroughly studied until Bretonneau took up the consideration of the question, and published his work on *Special Inflammations of the Mucous Membranes* in 1826. From that time to the present most important contributions have been made to the pathology of the disease until 1884, when Loeffler described so fully the Klebs-Loeffler bacillus, out of which has arisen most of our present knowledge.

In the chapter on Etiology are given the various predisposing causes of the disease. This is followed by an account of what is at present known of the methods of contagion and dissemination, and also the possibility of inoculating the disease, along with which, of course, he considers the question of the relation of the diphtheria bacillus to true diphtheria. In connection with the organisms found in cases of diphtheria Mr. Lennox Browne gives a number of photographs, some of which appear to be very well reproduced. He then goes into the question of the poisons formed by the Klebs Loeffler bacillus, and the action of these toxins on the heart and the nerves, giving in this section what has been done by Vincent, P. Meyer, and Sidney Martin. As regards the morbid anatomy and the changes that take place in the mucous membrane, the author follows the general descriptions of recent observers. He describes the ordinary methods of bacteriological diagnosis, and then gives an account of the clinical diagnosis of "diphtheria and its associates." This part of the work is rendered additionally valuable by a number of very beautiful coloured drawings made by the author from cases followed by him under Dr. Gayton's supervision at one of the fever hospitals in London. This constitutes the only really original part of the work. There are also a number of photographs of diphtheria bacilli and of the other organisms found in these cases, which cannot but be valuable as records of appearances presented by the cases described. As regards the elements of prognosis, those dealing with the general statistics of diphtheria are interesting from many points of view, especially those in which large numbers of cases are analysed, where such method of analysis is permissible. Where, however, the data are derived from a comparatively small number of cases, they do not appear to be so entirely satisfactory. As regards treatment, Mr. Lennox Browne apparently lays most stress on local and constitutional measures directed to keeping up the strength of the patient, in which he will be followed by most of those who have to treat these cases, but we imagine that his deductions concerning the serum treatment of diphtheria will not be so generally accepted as much of the other part in this section.

In cases of laryngeal stenosis, intubation is preferred to tracheotomy, though it is pointed out that it may become necessary to perform tracheotomy in certain cases. The chapter on Intubation and Tracheotomy is one of the best in the book.

The book is well printed, the illustrations are excellent, and for the reader who wishes to have at command a good summary of what has been written on this subject, we recommend this essay with its appendix on the serum treatment of diphtheria. In the case of such a controversial question no one can expect to read what Mr. Lennox Browne has written without finding some, or perhaps even many, points with which he cannot agree, but the hundred cases which the author tells us he has studied in the North-Western Fever Hospital under Dr. Gayton, form an admirable text for the essay that Mr. Lennox Browne presents for the consideration of his medical brethren.

Myxœdema and the Thyroid Gland. By John G. Gimlette, M.R.C.S., L.R.C.P. London: J. and A. Churchill. 1895. (Cr. 8vo, pp. 128. 5s.)

This work first appeared as a thesis in Portuguese, and was composed to obtain the necessary qualification to practise in that country. Since then it has been amplified and written in English. The subject matter is dealt with under the heads of (1) the history, etiology, symptoms, and complication of the disease; (2) the anatomy, histology, and physiology of the thyroid gland; and (3) pathology and treatment of myxœdema. This disease is a subject of paramount interest at the present moment, as it illustrates a new departure in therapeutics which has been applied, although with less success, to other diseases. This small work furnishes a good summary of the subject; due credit is given to the various authorities quoted in it.

Die Zuckerkrankheit und ihre Behandlung [Diabetes and its Treatment]. Von Professor C. von Noorden. Berlin: A. Hirschwald. 1895. (Royal 8vo, pp. 212. M.5.)

The author has already obtained so wide a reputation by his investigations on diseased metabolic processes that a book from his pen on such a subject as diabetes is sure of a favourable reception. This work has already appeared in English in the *Twentieth Century of Practice*, vol. ii. It contains eight chapters arranged as follows: 1. The physiology and general pathology of sugar in the body. 2. The theory of diabetes. 3. The etiology. 4. The pathological chemistry. 5. The complications. 6. The general clinical picture, course, and progress. 7. The treatment. 8. The examination of diabetic urine for sugar, acetone, aceto-acetic acid, and oxybutyric acid.

In a book so full of investigation it is only possible in a short review to deal with a few points of more special interest. The relation of the pancreas to diabetes is discussed under experimental diabetes as well as under the etiology and treatment of the disease. It is only too obvious how imperfect our knowledge is of what has been termed pancreatic diabetes in the human subject. The author observes that by bringing all cases of diabetes into relation with the pancreas the development of our knowledge of diabetes is in danger of being restricted. Treatment of diabetes by pancreatic preparations has hitherto been but slightly encouraging.

Under the pathological chemistry the dependence of glycosuria on the kind of carbo-hydrate given, on the use of fat and

alcohol on muscular exertion, on the condition of the nervous system and digestive organs, and on complicating diseases (fever, etc.), is a matter of practical interest. The author observes that acetonuria and diaceturia appear when for any reason the diabetic obtains insufficient nourishment. It is a pressing indication to revise the diet sheet. The excretion of oxybutyric acid of more than a few grammes and extending over a few days is of the worst significance. The treatment is given at much length, and nothing can be more important than the stress laid on the different dietetic treatment required for the different varieties of the disease.

This book simply abounds in information and is a most important contribution to a scientific and accurate study of diabetes.

NOTES ON BOOKS.

A Manual of the Practice of Medicine. By FREDERICK TAYLOR, M.D., F.R.C.P., Physician to and Lecturer on Medicine at Guy's Hospital. Fourth Edition. (London: J. and A. Churchill. 1895. Cr. 8vo, pp. 974. 15s.)—The popularity which this excellent *Manual* has obtained in early editions has been so considerable that we need do little more than announce the appearance of a fourth. The chief changes have been in the articles on the specific infectious diseases, and in the discussion of immunity and related subjects. In treating of malarial fevers, a description of the plasmodia has been introduced, and elsewhere additions have been made to the descriptions of tropical diseases. The section dealing with appendicitis has been recast, and descriptions of acromegaly and mycosis fungoides have been introduced. The work thus maintains its character as a textbook at once comprehensive and concise.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D., F.R.C.P., Senior Physician to Queen's Hospital, Birmingham. Seventh Edition. (London: H. K. Lewis. 1895. Cr. 8vo, pp. 568. 10s.)—Dr. Carter tells us in the preface to this—the seventh—edition of his textbook that his object has been to provide broad truthful sketches of the various types of disease, as distinguished from a mere epitome or compendium of exhaustive treatises. The author has hit the happy mean, and has his reward in a multitude of readers. The present edition contains a section on diseases of the skin, by Mr. Malcolm Morris, who has succeeded in a few pages of clear exposition in giving the student a clue to what he too often regards as the bewildering maze of dermatology. The article will distinctly add to the value of an already popular textbook.

The Student's Practical Materia Medica. By GRACE HAXTEN GIFFEN, L.R.C.P. and S.E., Senior Demonstrator of Anatomy, Ladies' School of Medicine, Chambers Street, Edinburgh. (Edinburgh: E. and S. Livingstone. 1895. Crown 8vo, pp. 86. 2s.)—This little work is a classification of the facts relating to drugs, which the student is advised to commit to memory before going in for examination in materia medica. The seven chapters into which the book is divided form an outline of materia medica, readily scanned, and which will assist the memory in retaining doses, preparations, compositions, strengths, etc., which the student often vainly endeavours to learn whilst wading through the ordinary manuals. Exception might be taken to some of the definitions, but on the whole the work is well done, and undoubtedly will be of service to candidates as a memory refresher before examination.

Bibliographie der Deutschen Helminthologie. Von Medicinalrath Dr. J. CH. HUBER. Heft 2. (München: J. F. Lehmann. 1895. Demy 8vo, pp. 307 to 381. M. 3.60.)—The present number of this invaluable bibliography deals with two nematodes—sustrongylus gigas and trichina spiralis. As in the preceding volumes, the arrangement is excellent. The bibliography appears to be practically complete. The work is invaluable to helminthologists. It should find a place in every medical and natural history library.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

TABLOIDS OF SULPHITE OF MAGNESIUM.

THE use of sulphite of magnesium as a local bactericide in the treatment of follicular tonsillitis, aphthæ, and sarcinæ has been recommended by Dr. Brownlow Martin. This salt, when brought into contact with mucous surfaces is decomposed into sulphurous acid and magnesia.

Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C., prepare tabloids of sulphite of magnesium, which are very convenient for the purpose intended. The tabloids have rather a pleasant taste, and immediately give off sulphurous acid when moistened with water slightly acidified with hydrochloric acid.

PALATINOIDS OF PEPTONATE OF IRON AND SULPHATE OF MANGANESE.

MESSRS. OPPENHEIMER, SON, AND CO. (Limited), 14, Worship Street, E.C., have sent a specimen of their recently introduced palatinoid, containing peptonate of iron and manganese sulphate. This combination appears to be in demand for the treatment of chlorosis and anæmia. The palatinoid, a kind of double convex cachet, is an excellent method of administering certain medicines; they readily open in warm water, and allow the contents to escape.

TERROL.

TERROL is a yellowish liquid of the consistence of thick syrup, somewhat resembling in appearance, especially when cooled, soft vaseline. The product is stated to be extracted from petroleum. Its characters correspond with those of the hydrocarbons of the paraffin series, which consist of a semi-solid mixture containing some of the softer or more fluid petroleums. It has been introduced by the Terrol Company, Devonshire Road, Forest Hill, London, S.E., as a tasteless substitute for cod-liver oil.

Petroleum is by no means a new remedy. In France *Huile de Gabian*—a similar product—has been long famous for the treatment of lung disease; its action being supposed to resemble the terebinthate or balsamic substances. The crude oil is preferred to the refined petroleum, and it is said to be a valuable remedy, not only in bronchitis, but all other mucous affections, as well as many other internal lesions.[1] Wielezyk states that the petroleum miners in the Carpathians are exceptionally free from bronchitis and diseases of the skin.[2] More recently the semi-solid petroleums appear to have come into use in the United States. Dr. M. M. Griffith[3] asserts that the crude semi solid petroleum (red wax), as it accumulates on the casings, etc., of the oil wells, is an invaluable remedy in chronic bronchitis and incipient phthisis. Dr. N. Randolph, an American physician, has shown that these petroleums are valueless as food stuffs, and that when taken internally in doses of 3 to 4 drachms they act simply as a feeble laxative. At the present time in this country the general opinion appears to be that the semi-solid petroleums, although probably not digested or assimilated, act as demulcents or antiseptics in the intestinal tract.

Terrol is recommended as a substitute for cod-liver oil. How cod-liver oil acts is still undetermined, but there can be no doubt that great benefit is sometimes derived from its administration. What we can say positively of terrol in relation to cod-liver oil is that terrol is tasteless and odourless.

THE ELECTROTHERM.

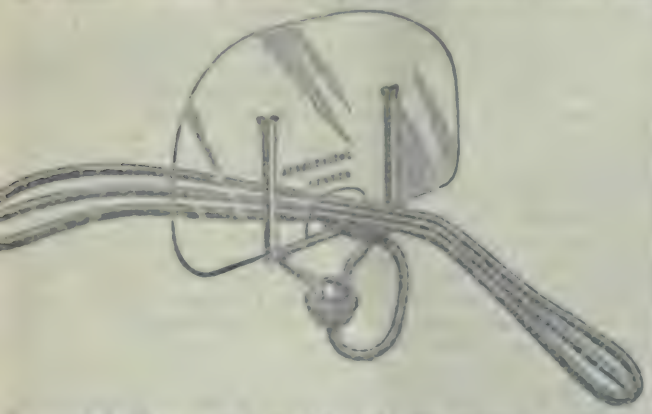
AMONG the various uses to which electricity may be applied is the local development of heat. The electrotherm, which is now being introduced by Messrs. Witty and Witty, Limited, 88, Leadenhall Street, E.C., is intended to take the place of

[1] *Bull. et Mem. Soc. Therap.*, June, 1892, p. 168.
[2] *Ibid.*
[3] *N. Y.*, May, 1893.

poultices, fomentations, hot water bottles, foot warmers, etc., wherever electricity is available; in other words, wherever the electric light is in use. The apparatus is very simple, consisting of a flexible pad or sheet composed of asbestos, with an embedded wire which when attached to the socket of an electric lamp offers sufficient resistance to the current to produce a constant and uniform degree of heat. It is made either as a foot warmer for the floor, which we should imagine might, if properly regulated, be of considerable service to people with feeble circulation engaged in sedentary work, also as a foot warmer for use in bed, and in a waterproof material as a substitute for poultices and fomentations. A special form is made to take the place of the jacket poultice, for which purpose it has the great advantage of not requiring to be changed. In fact, the great benefit which is likely to accrue from the use of this apparatus is that the heat can be so regulated as to remain uniform during long periods. It can be fitted with attachments to fasten either into an ordinary plug or into the socket of an electric light burner.

TONGUE DEPRESSOR AND GUARD.

Dr. Alex. Woodman Dowding, of Wanstead, Essex, has designed an attachment for a light form of tongue depressor for the protection of the face during the examination of the fauces in cases of diphtheria. The tongue depressor, constructed of stout plated wire, is well curved and generally of convenient form. Upon it is slipped a detachable carrier, which holds a small sheet of mica of the shape indicated in the drawing: the carrier slides backward and forward on a bar on the under surface of the tongue depressor. The holder for the mica plate is supported on a ball-and-socket joint, so that this shield is freely movable. It is light, transparent and easily kept clean. In cold weather it should be warmed before use.



In non-infectious cases the shield and carrier can be removed altogether. Dr. Dowding tells us that he has been led to design this tongue depressor and shield owing to the fact that on two occasions he had himself contracted diphtheria, the infection being conveyed to him by material coughed up while he was engaged in examining the patient's throat. The apparatus which he has designed is made by Messrs. Arnold and Sons, of West Smithfield, E.C. It is simple in construction, light, handy, and not likely to get out of order. It will undoubtedly afford protection against direct conveyance of diphtherial material from the patient's throat to the medical man's mouth, a mode of infection which in all probability has been responsible for a large proportion of the saddest cases of death from diphtheria among members of the medical profession.

OIL STOVES.

The stoves of the Hygienic Heating and Lighting Company, 13, Southwark street, S.E., are good examples of the modern oil stoves now so commonly used for the heating of halls and other places where there is sufficient ventilation to allow of the dilution of the carbon dioxide produced by the combustion of the oil.

In regard to the general principles which should be borne in mind in arranging for the use of flueless stoves, we would refer to articles which have appeared in the British Medical Journal, 1894, vol. ii, pages 1091 and 1219; and 1895, vol. i, page 119.

The stoves of the Hygienic Company named "Columbus" appear to be well-made and serviceable articles; the oil chamber is connected with the wick cylinder only by a single small tube, and the entering current of air is so arranged as to keep the chamber cool; the lamp shade is made of mica, so as to avoid risk of fracture, and within the wick tube a water reservoir is placed, with the object of preventing the dryness of air which is imagined to accompany the use of a stove. It is stated that the water evaporates from this reservoir at the rate of about 3 ounces per hour. In view, however, of the fact that, in the same time, three-quarters of a pint of oil is consumed, all the hydrogen in which is turned into watery vapour, which escapes into the air, we are not inclined to attribute much importance to the water reservoir as a hygienic appliance.

SERVICES ADMINISTRATION AND NEEDS OF THE INDIAN MEDICAL SERVICES.

[From the *Madras Mail*.]

An address was given by Mr. Ernest Hart before the meeting of the South Indian Branch of the British Medical Association, held in the Madras Medical College on February 7th, 1895.

The meeting was specially convened to welcome Mr. Ernest Hart, the Editor of the British Medical Journal, and Chairman of the Parliamentary Bills Committee of the British Medical Association. The chair was taken by Surgeon-Major-General C. Sibthorpe, who is also the President of the Branch Association. There was assembled a large audience of medical gentlemen resident in Madras and the surrounding districts. Among those present were Surgeon-Lieutenant-Colonel Markey, C.B., P.M.O. Madras District; Surgeon-Lieutenant-Colonel Bevan, Secretary to Principal Medical Officer, Madras Army; Brigade-Surgeon-Lieutenant-Colonel W. Price, M.D., Principal, Medical College; Surgeon Lieutenant-Colonel Allinson; Surgeon-Lieutenant-Colonel W. G. King, Sanitary Commissioner; Surgeon-Lieutenant-Colonel Browne, Professor of Surgery; Surgeon-Lieutenant-Colonel Hazlett, Surgeon-Major Browning, Surgeon-Major Maitland, Surgeon-Major Pope, Surgeon-Major Sturmer, Professor of Midwifery; Surgeon-Major VanGeyzel, Chemical Examiner to Government: Surgeon-Major Damla; Surgeon-Captain Robertson, Professor of Hygiene; Surgeon-Captain Williams, Surgeon-Major Poynder, Army Medical Staff; and Surgeon-Lieutenant Elliot. Dr. H. Rangappa, Dr. C. B. Rama Rao, and other leading native doctors were also present. The upper benches in the Hall were filled with the male and female students of the Medical College.

The Chairman, in introducing Mr. Hart to the meeting, said that they all knew of the admirable work which he had done in improving the condition of the sick poor in workhouses, and in bringing about that great reform in the treatment of the sick which led to the creation of the Metropolitan Asylums Board and its hospitals in London. They knew the influence which he had exercised throughout Europe more recently. Mr. Hart had continued the same work, and was now extending reforms to the provincial workhouse infirmaries. With reference to the military service of the Army Medical Staff and Indian Medical Service, he had always been in the forefront to assist them in their endeavours and to get their service placed in such a position that they would be able to carry out efficiently the duties required from them by Government, and which they owed to the British public.

Mr. Hart, who was received with prolonged cheers, said: It is to me an unexpected surprise, as it is a great pleasure, not unmingled, however, with a stringent sense of responsibility, to be thus publicly welcomed by this most important Branch of the British Medical Association. It must in any case be a source of deep gratification to be the recipient of this most honourable and kind reception. We in England have long been accustomed to look upon the Indian Medical Service as representing individually the flower of the medical

profession. They are for the most part selected out of the most able of our younger graduates. Only those who feel themselves able to go through a special examination, beyond and above those which qualify for general practice in England, present themselves for the severe test by which alone the high marks which qualify for the Indian Medical Service can be obtained. Made up of the pick of the younger members of the profession, polished and sharpened for the work from their special training and subsequent examinations at Netley, they enter this service well prepared and thoroughly equipped for their work in this great field. It is not surprising that they have attained a justly high reputation for the admirable efficiency with which they perform their difficult duties, and that they succeed in rendering services to the people of India and to the British Empire which are in their character and extent quite unprecedented. We have to look only to broad facts. They have reduced the mortality of the British and Indian armies serving in this empire from 69 per 1,000 to 15. Thus they have reduced enormously the mortality of our soldiers within a very few decades. They have thus practically added to the strength of the army another army of equal size and efficiency, or, to put it, perhaps, more clearly, if less picturesquely, they have reduced the mortality, the invaliding, and therefore the cost of the army by one-half. It would be easy to amplify these figures, but it is, to you at least, unnecessary; but it is safe to say that, but for the services thus rendered, the strain upon the financial and vital resources of the empire in maintaining the army which holds India secure would be well nigh, if not altogether, unbearable. To the Indian and British medical officers serving here it is now well recognised that the empire largely owes it that it is possible to hold India without quite extravagant expenditure of life and resources. Nor are their services less in respect to the Indian Medical Service to the civil population, for we in England, perhaps, hardly realise that the Civil Medical Service of India is only the Army Medical Service under another name, and that almost, if not quite, the whole, of the enormous service rendered to the empire by the diminution of mortality in the great cities and provinces of India is also due to the efforts of the Indian army medical officers lent to the Civil Medical Department and serving under another title.

"Smashing the Dial."

Perhaps I may be permitted to indulge here in a curious little reminiscence of my own early life, which not only binds me by a specially close tie to the interests of the service, but which throws one of those strange side-lights upon history that show on what small threads great events may hang. It occurred now more than thirty years ago, not many years after the first introduction of the system of competitive examination by which it was determined to be absolutely necessary to guard the entrance into the Army Medical Service of India in order to ensure efficiency. The Government found, however, that the supply of candidates for admission under the system of competitive examination was failing dangerously short and that the vacancies could not be filled. In other words, the attractions presented by the Service to men of adequate capacity were insufficient to induce suitable men to apply for the appointment. The obviously proper course was to bring the conditions of service up to such a level as to make them sufficiently attractive to adequately instructed and capable candidates. Economy dictated the opposite course, and in one of the cold fits of financial retrenchment which so frequently come over Parliamentary Governments, the Government resolved to take the retrogressive step of destroying the examinations, and going back to the old way of nomination without examination, which had so completely failed before. It was true that a century's experience had shown that such a test was absolutely necessary, and its institution was the outcome of searching inquiry and overwhelming evidence; but the fear that it would be necessary to improve the status of the medical service before candidates could be secured for examinations, sufficed to induce the Government to undo all that had been done, and to revert to the bad old days. This Bill had already passed its second reading under Government auspices when my attention was called to it. I was then a very young man, and happened to hold an important position in relation to the editing of a great medical paper. There was no time to be lost, for the Bill was already down for its third reading. I took active steps and prepared a very urgent and strongly worded remonstrance for publication, headed "Smashing the Dial." I had enjoyed then the friendship of a man since celebrated for his services in the East—Mr. Pope Hennessy. I laid the whole matter before him, furnished him with details, and gave him the proof of the article, which was to be published on the following Friday. Mr. Hennessy was fired with the same indignation as myself at this reckless sacrifice of the great interests of India and the Army Medical Service generally to prejudice and to a sudden cold fit of economy. He organised a strong opposition amongst his Irish colleagues. It was a Conservative Government, and he and his colleagues formed a most essential part of the Conservative majority of that day; they acted on this occasion as a compact and independent body. Mr. Hennessy rose in his place and denounced the proposals of the Bill, and read the statement which I had put before him to the House. The Opposition suddenly organised took the Government by surprise, and strange and rare as the event is in Parliamentary history, he succeeded in defeating the Government on the third reading of its own Bill. It was by this singular incident in Parliamentary history that the competitive examinations, which have proved so highly and important an element in maintaining the efficiency of the Indian Medical Service were preserved; and thus I am able to congratulate you and to congratulate myself that by a timely watchfulness this evil scheme of destruction of the efficiency of the service was completely baffled and, needless to say, has never been revised. Since the date of my becoming an active member of the British Medical Association I have organised a Parliamentary Bills Committee, which has on more than one occasion had to act in concert with you for the securing of further means to promote the efficiency of the service, and it has been and is to me, and I am sure to the whole Association, a matter of the deepest satisfaction that you are convinced that our efforts in that direction have not been without value, as indeed your recognition on this and on former occasions of such service has sufficiently testified.

Watching a Great Machine at Work.

One of the most interesting and important incidents and conditions of my present most interesting and most delightful visit to India has been the opportunity of watching this great machine at work, of making the personal acquaintance of the distinguished men who are presiding over its activity, and of a large number of those, such as yourselves, who are the individual factors in its successful operation. I may say unaffectedly, emphatically, but without exaggeration that what I have seen and learnt after the fullest opportunities of investigation has filled me with an unmingled admiration of the surprising extent and variety of the work done, of the unstinted labour and enthusiasm with which this vast field of medical activities is covered. The Government, knowing well by experience with what unflinching devotion the medical officers of the services in India take up and carry on whatever duties are assigned to them, has not hesitated to extend the sphere of duties and to develop them in every direction, until we find Indian medical officers running through a whole gamut of performances of which few of us in England have an adequate idea, and of which certainly I had been far from forming anything like a complete conception. I venture to think, however, that the increasing urgency of great works of preventive medicine, the large development of scientific capacities and the unmurmuring acceptance by Indian medical officers of duties of whatever various kinds laid upon them, have reached a point at which the machinery is already dangerously strained, and indeed I am not sure but that it is and has been now for the last few years at a point which may be designated as the breaking point. I am deeply impressed with the fact that already and for some time the duties laid upon Indian medical officers are altogether out of proportion to the salaries allotted to their various duties, and what is from the Imperial point of view far more important, that it is quite impossible that the whole of them should be satisfactorily fulfilled otherwise than on paper.

Exorbitant Duties.

At the great Calcutta Congress, which has been so conspicuous a success and so valuable a precedent, the President, Surgeon-Colonel Harvey, in his admirable introductory address, spoke emphatically on this subject, but with the careful reserve of his official position. I was able to speak with less restraint and in language of somewhat more emphatic protest, and I ventured to enumerate by way of illustration the exorbitant list of duties imposed upon individual officers in the N. W. P. and in Bengal within my own recent observation. In one instance which I quoted there were fourteen separate kinds of duty imposed upon one gentleman having a million and a-quarter inhabitants under his sanitary supervision. He had been called upon to administer a gaol of 1,200 persons, to supervise a great number of dispensaries, to check and to be responsible for the vaccination of the whole district, to perform duties as police medical officer both civil and military, to superintend a great lunatic asylum, to preside over a medical school, and under strict injunction never to be absent more than seventy-four hours at a time from his residential centre. Happily this list and this illustration have attracted attention at home and throughout India, and have been much commented on in official and unofficial circles and by the newspapers. Happily, too, it has excited critical comment in the leading journal of Great Britain. In one of those most able series of weekly letters on Indian affairs in the *Times*, the writer, without denying the facts, deprecates any change on financial grounds, and alleges that this sort of thing is common throughout the whole Indian administration, and that Indian medical officers, like other officers, must be expected to be thus loaded beyond European precedent with unlimited variety and extent of work. I have a profound respect for the remarkable ability and the encyclopædic knowledge which characterise the authorship of these articles. I will not, therefore, attempt to discuss what may or may not be the range of duties in other departments. But I wish only to say that no reasonable human being who is at all cognisant of the possibilities of human endurance or the contingent possibility of the efficient performance of the range of duties enumerated can possibly believe that any one man could do the work here allotted.

Department Strained to Breaking Point.

And the fact is that, overwhelming as are the labours of Indian medical officers in civil employ, it may be fearlessly affirmed that the present strain put upon the energies of the Service is quite beyond its endurance, and ensures that the work shall in a great many of its departments be performed on paper rather than in reality. In order to determine how far this condition is general, I have availed myself of the unusual opportunities which I have enjoyed here for investigation and independent criticism to ascertain whether the instances to which I referred were unusual or not. I find the same state of things to prevail in South India as in the North, and in this great Presidency as in those to which I have referred. Let me give you a few details only of what I find to be the state of things in this great medical centre of Madras, a premier Presidency and one of the greatest centres of medical instruction and activity.

In the Madras Presidency.

Here are a few examples of the amount and variety of administrative and expert duties assigned to medical officers in civil employment:

1. The Surgeon of the First District is expected to perform the following duties: The supervision of 132 inmates at the Monegar Choditry, a poorhouse for natives. He is the Superintendent, and has medical charge of the Rayapuram Native Infirmary, with 104 beds, with an average daily sick of 60, and a total treated of 3 045 in 1893. He has the supervision of the North Black Town Dispensary, with a daily average attendance of 235, and a total admission of 4 428 in October, 1894. He gives clinical instruction in medicine and surgery and midwifery to 141 native pupils of the hospital assistant class, in their first and second year of study; in this he is assisted by an assistant military surgeon. He has the supervision and medical charge of Sir Savalay Ramasawmy Moodeliar Lying-in Hospital with 36 beds. He has the supervision and medical charge of the Government Leper Hospital with 208 beds, nearly always full. He has the supervision and medical charge of the Criminal Leper Wards with 32 beds. He is assisted in this work by the civil apothecary. He has also the medical charge of the Civil Debtors' Gaol, the average number confined in which is about 30. He is the Medical Inspector of Emigration for the Natal and Mauritius Depôts, and has the medical responsibility for the embarkation of coolies, of whom in 1893 and 1894, 1,843 embarked and 188 returned from Natal. From Mauritius in the same period 115 embarked and 811 returned. His district medical work includes the granting of health and sick certificates to Government servants. In 1893, 233 health certificates and 103 sick certificates were granted. Cases for a Medical Board numbered 132. He is also the medical attendant on Government servants drawing above Rs.200 a month residing in his district. He has, finally, the medical charge of the Police Lock up in Black Town. His work occupies him daily from 7 A.M. to 12.30 P.M., without taking into consideration the evening visits he has to pay.

2. The Professor of Anatomy is also the Fort Surgeon and Fort Sanitary Officer. He is the Port and Marine Surgeon, Port Health Officer and Inspector of Seamen. His duties include attendance on the officers and non-commissioned officers of the district staff and their families who reside in the Fort; the medical attendance on the warrant and non-commissioned officers and their families residing in the Ordnance, Camp, Equipage, and Commissariat Lines and H. E. the Governor's Band, the whole consisting of 7 officers, 76 men, and 198 members and their families. He is assisted in these duties by a selected military assistant surgeon, who is borne on the strength of the Station Hospital. He has also the medical charge of the Fort Dispensary, which is situated in the Government quarters occupied by him in the Fort, where all the sick followers of the Ordnance and Military works, who report sick are treated or are transferred to the General Hospital. These followers number about 550, with a daily average sick of about 20. He examines these followers upon their enlistment and before they proceed on field or foreign service. As the Fort Sanitary Officer he has periodically to inspect the whole Fort and its surroundings. These duties take an hour daily of his work. As Port Surgeon and Port Health Officer he has to inspect the vessels before granting bills of health. This duty varies according as there is an epidemic prevalent in Madras or not. He has also to inspect all vessels arriving in Madras with a contagious disease on board. The number of bills of health granted during the past three years averaged 62 to 82, and would be more only that some of the most important steamer companies are satisfied with bills of health for steamers being endorsed. During an epidemic in Madras, however, these duties are greatly increased. Another duty he has to perform is the superintendence of the Port Dispensary, which is in the subordinate charge of a civil apothecary, who assists generally in the Port duties and attends all cases of accident or emergent sickness brought to him or to which he is called. In addition, the most important duty of all with which he is entrusted is that of Professor of Anatomy, which requires him to lecture an hour daily during the week. In this connection of course he has also the supervision of dissections and the dissecting room. He has, however, the assistance of a demonstrator.

3. The duties of the Civil Surgeon at Cochin are as follows: He has to look after a European and Eurasian population consisting of 1.312 souls. The Municipality, of which he is the Medical Officer, has a population, including the *taluq*, o nearly 20 000 souls. The Municipal Hospital has an averag daily sick list of from about 125 to 150 out-patients, with 3 in-patients. The number of major operations in 1892 was 95, in 1893 it was 67, and in 1894 it was 89. About 1.000 British ships call at the port every year,, and there are very often over 200 native craft in the backwater, of which he, as Port Surgeon, has the supervision. Cochin is moreover liable to frequent epidemics on account of the lax supervision there is over these native craft and boats coming from the native States. The number of bills of health he had to give to ships in 1894 was 59. He has to attend to all cases of serious accident or sickness when a ship arrives in port. He has also the charge of the sub-gaol and supervises the Passport Lazaretto, which

is now practically a leper hospital, fifteen miles from Cochin, where are treated about 33 in-patients. There is also a Native Infantry Hospital at Trichur, forty-five miles from Cochin, which he has to inspect once a month with the Lazaretto. Owing to motives of economy I believe it has been proposed to hand over the whole of these duties to a civil apothecary, a gentleman of a lower grade of medical education, and whose maximum pay is Rs.200 per month.

The Durbar Physician of Travancore.

4. The following are the duties of the surgeon-lieutenant-colonel who holds the position of Durbar Physician to the Travancore State as set out in the Travancore Administration Report for 1893. He has the medical supervision and administration over the following hospitals and dispensaries in the headquarters at Trevandrum:—A general hospital of about 120 beds, a maternity hospital of from 15 to 20 beds, a separate native hospital of 103 beds at Tycaud, a lunatic asylum which contains about 200 insane in the year. He has also charge of the Central Gaol Hospital, and is Superintendent of the gaol with 700 prisoners. He has also to supervise two dispensaries in the palace and one in the fort. He administers a medical department consisting of 2 assistant-surgeons, 35 apothecaries and locally trained hospital assistants, 20 compounders, 2 matrons for the two maternity hospitals, 14 midwives, and 24 sick nurses. Omitting the medical institutions at headquarters already named, there are 14 hospitals and 15 dispensaries throughout the State under his supervision to be inspected, spread over an area far greater than the county of Yorkshire.

The Principal of the Medical College.

5. The Principal of the Medical College is a Professor of Medicine, in which subject he lectures to all the senior students daily. He has the supervision of the whole medical college with its 10 professors, and 8 assistants, and 420 students. He is also the Senior Medical Officer of the General Hospital, and as such is responsible to Government through the Surgeon-General for the expenditure in the hospital, the total of which in 1893 was Rs. 1,65,000. He has at present 23 beds in the General Hospital in his care, from which he gives clinical instruction. And, finally, the whole of the discipline of the hospital, with its 303 beds and its large staff, is under his control.

Covering the Deficit of Officers.

By way of general review it may be noted, as it is well known, that in the Standing Order in the Army Regulations it is laid down that the minimum establishment for the requirements of the army and all other sanctioned appointments will always be maintained. This will include a prescribed margin for absentees on furlough and sick leave. That prescribed margin is one of 25 per cent. of the sanctioned appointments, a list of which is published in the regulations. That arrangement, however, is largely annulled by a singular system which it is difficult for the uninitiated to fully fathom and master. It is, however, somewhat of the following nature: In order to meet the absolute necessities of the service a certain number of posts had to be created. These posts, although their duties and the provision made for the fulfilment of their duties are very real, are supposed to be outside the cognisance of the Secretary of State, as they have not received his sanction and do not call for any provision by him; he is not called upon to provide for them, nor are they taken into consideration when the number of men required for the establishment is settled by Government from year to year. Here, therefore, is a large margin of duty to be performed, for which by an official fiction provision need not be made, although really it must be made. Thus to bring up the establishment in this Presidency alone to the required status—if all the *de facto* appointments were *de jure* sanctioned—there will be required, I believe, this year fifteen medical officers to be recruited in England; but six only, I understand, will be forthcoming. Again, if the appointments were sanctioned now the present state of affairs could not be remedied till the August examination held in London in the current year, and the officers would not arrive in India till May, 1896. But the indications are—I will venture to say the moral certainties are—that the required number will not be forthcoming even then. I am well aware that the excuse, which no doubt is valid to the official mind as a reason for delay, is that the question is still pending as to the adjustment of the service in the three Presidencies under the new army scheme. The question has, however, certainly in respect of some of the appointments, been pending for the last ten years, and it would be difficult to predict when a final decision will be arrived at, and it would be still more rash to hope that when concluded it will tend to increase the strength of the commissioned medical officers of this or any other Presidency.

Where to Find the Much Needed Officers.

The Government of India is, as I venture to think, very properly and reasonably anxious that every effort should be made to lighten the expenditure on the medical establishment by employing to as large an extent as is in any way possible skilled indigenous medical practitioners. I should be false to all my political and social convictions if I did not at once express warm and hearty sympathy with this view, not only or merely on grounds of financial economy—the necessity for which I am deeply convinced of—but also from the highest administrative considerations and from a sense of the importance to the development of the country of every measure that can utilise native capacity. On the other hand, if one examines the obstacles which interfere with a desirable increase in this direction, I think it will be seen that the chief obstacle lies with the action of the Government itself. Efficiency, technical knowledge, and adequate education are essential conditions for the successful working of any medical service, and the minimum of medical education which is accepted now throughout Great Britain as the standard of ordinary general practice is a course of five years in a medical school and hospital. It will not, of course, be pretended that the medical schools of India are at all superior to those of the great centres of medical teaching in Great Britain, and if five years is there now an imperative minimum for practitioners of whatever class it is obvious that nothing less can be safely accepted here as a minimum qualification for holding a post of trust, supervision, and isolated individual executive duties of the higher class.

Falling-off of Diploma Candidates.

Very few I believe, however, of the natives of India desiring to enter the Medical Service of the Government take a five years course of this or any other medical university which would entitle them to the diploma of M.B. and C.M. corresponding to the ordinary university qualification in England. Even of the indigenous students who take a four years' course of medical training, and qualify for the L.M. and S., the numbers are falling off rather than increasing, so that if it be desired, as I know it is desired, that native well-qualified assistants should find suitably wide employment in the public medical service, it is necessary that the cause of the decline should be ascertained; and from the best information it will be found that in order to make the inducement sufficient, the salary available must be increased. The maximum salary now available in the service for these men is shown by the following scale:

				Rupees.
First 2 years ...	...	...	...	[illegible]
3—7 years	...	...	...	[illegible]
8—14 ,,	...	...	...	[illegible]
15—21 ,,	...	...	...	[illegible]
22—27 ,,	...	...	...	[illegible]
28—35 ,,	...	...	...	150 + 50

Thus it has come about that the hopes which were entertained that the natives of India would voluntarily pass through a four years' course of medical training, and having obtained the qualification of L.M. and S., would come forward in adequate numbers to fill the vacant posts, have been frustrated, and in order to carry out the benevolent intentions of Government and the aspirations for economy combined with reasonable efficiency in which we all sympathise, it will be necessary that the rate of pay of the subordinate appointments should be raised to such point—whatever that may be I shall not attempt to determine—as will make the service attractive to fairly well educated natives. Have I not rightly said that the machine is being strained to the breaking point? It is certain, and I venture to say it here

without fear of contradiction even from your respected Chairman, whose official position is for the moment not at all in question, but who has certainly good opportunities of knowing facts. For the actual work of this Presidency it cannot be doubted, and I believe it is indeed well known to all, that at least another fifteen medical officers are required even to carry on the work of the Presidency and of the Indian Army Medical Service here, on its present scale and with its present heavy requirements. Men cannot get furlough. Duties of the highest importance have to be carried on either in a perfunctory manner or at the cost of excessive labour and of great injury to health.

Special Hardships.

There is much more that I should like to say to you, but my time is drawing to an end, and I fear I must now cease. (Loud cheers and cries of "No, no," and "Go on.") Well I cannot allow myself to trespass much further on your time; but I should like to say a few words as to the special hardships which, most unwisely in my opinion, and I think in the opinion of everyone who calmly examines the subject, the Government now inflict upon the British and Indian Medical Services. The British army medical officer serving in India is from the very outset heavily mulcted by the mere fact of being called upon to serve in India. It is an astonishing fact that at the present moment every young medical officer, surgeon-lieutenant, receives £30 annually less pay when serving in India than if he were serving in Great Britain or in any other part of the British dominions, and every surgeon-captain £50 less by being put upon Indian Medical Service. And now under the new regulation of reducing the salary of the surgeon-major generals any distinguished officer attaining that high position will in future draw less in India than he will if serving in the same position at home. The present rate of pay was fixed in 1780, when it represented at least double the value that it now has. What else can be the reason for this than an overwhelming desire for retrenchment I do not understand. Again, every other branch of the service gets a mess allowance; £100 a year is granted, for example, to the artillery messes, where there will be only three or four officers, and in the military medical messes, where the number averages from 9 to 15, this allowance is withheld. No reason can be assigned for it that I know of. It is only an example of the many disadvantages under which the Medical Services here carry on their duties. The Brigade-Surgeon-Lieutenant-Colonel in India is still denied the extra pay which was long since granted by Royal Warrant, and is withheld with confessed and acknowledged injustice in India without any other reason assigned than that the Government of India objects to make the allowances. The British medical officer serves here a tour of six years, while every other officer serves only five. As regards the charge allowance in dealing with officers of the Army Medical Staff out here, the Government of India has departed from a system under which it pays its Indian medical officers and places the medical officers of the Army Medical Staff in charge of large Station Hospitals, and gives them no extra allowance according to the importance of these charges. Hence I consider it takes one of the strongest incentives to good work from these officers.

Conclusion.

Mr. Hart said that he had great pleasure in having had the opportunity of addressing a meeting like that. He hoped in future that these local Branches would be able to take their proper position as intelligent observers and regarding the important branches of the medical profession.

Brigade-Surgeon-Lieutenant-Colonel W. Price proposed a hearty vote of thanks to Mr. Hart, which was carried unanimously.

After the meeting Mr. Hart proceeded to the Madras Club, where Surgeon-Major-General Sibthorpe and the officers of the Army Medical Staff and Indian Medical Service entertained him at dinner.

*** It has become desirable to publish this address in consequence of the controversial debate which has arisen on the subject of the existing organisation of the medical and sanitary services there in relation to the address of the President of the Public Medicine Section. At a meeting of the South Indian Branch a resolution was passed describing Mr. Hart's statements as erroneous and defamatory. In respect to the latter complaint, it may be noted that the speaker laid special stress on "the remarkable ability, the enormous power of work, and the excessive overwork of the Indian medical officers; the terrible servitude which enforces on them the attempt to perform a vast amount of duties which cannot be performed." As to the facts which are pronounced erroneous, they will be found more fully stated in the address here printed, which was delivered before the same Branch in India with great acceptance, and which sets out a series of facts which were furnished by the highest authority in Madras, and of which the accuracy is thus far undisputed.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

VII.—LISBURN WORKHOUSE INFIRMARY, CO. ANTRIM.

Dr. Mackenzie, the medical officer of the workhouse, having kindly undertaken to show us over the infirmary, we turned our steps one morning towards the union, which is a little way from the town. It was market day, and the Board was gathering for the meeting, the guardians standing in groups about the lodge. As Lisburn is the county town, standing in the midst of a thriving district, we were prepared to find a large house, and hoped that it might show some improvement on those recently visited. How far our hopes were realised we leave our readers to judge for themselves. A cultivated garden, and ivy and other creepers growing over the lodge, redeemed the aspect of the building from the usual dreariness.

The Infirmary

forms, as usual, the third block of the plan, and has a capacity for 100 beds, exclusive of the fever block. It is a two-storeyed block, but the ground floor is disused; there is an average of 60 patients. Most of these are chronic patients, as the County Infirmary takes the acute and operation cases. The women are in four wards, having a total of 40 beds; one of these is a long ward in which young children are placed, as well as the adult sick and infirm. The other wards are smaller; that for the lying-in women being in communication with the long ward. The men's wards are smaller; there were 22 patients in three wards. The surgery and nurses' room are on the ground and first floors. The infirmary stands east and west; the windows face each other, and ventilation is by means of the upper half of the window, which falls inwards on toothed bar. The walls are plastered and whitewashed, roof pitched and plastered, the fireplaces very old and wasteful, and can hardly suffice to warm the wards in severe weather. The bedsteads are narrow iron frames, with straw tick and pillow, resting against the wall, as there is no head to the bed; there are a few tables between the beds, and a few arm chairs and benches. The floors throughout are boarded, and we saw some pictures on the walls. There are no screens to secure privacy, and the beds are too crowded for the cubic space. From the appearance of the wards we should imagine that it was the intention of the builder to provide space for a single line of beds, but that pressure on the accommodation had doubled in number.

The Nursing

is in the hands of a head nurse who has been trained by Dr. Mackenzie; she has an assistant, and there is a night nurse. The paupers who work in the wards are supposed to be kept to scrubbing and cleaning, but as the number of patients is quite beyond that which two nurses can possibly attend to, we conclude that either the work is left undone, or that the

paupers are pressed into the service. Several patients were in bed; there was a sad case of cancer of the jaw in a male, which required careful dressing to keep it in a wholesome condition; one of strumous disease of the arm, and the rest appeared to be old age, paralysis, and infirmity. A bed card stating name, age, sex, and disease is hung by a string over each bed.

On the Landing

outside, and in close proximity to the wards, there are water-closets, one on each side, but these from some cause were a great failure as sanitary appliances; the flush was inadequate, the pan encrusted with filth, and the odour powerful. These small enclosures serve also as cupboards for pails and brooms, which were mixed up with bedpans, etc., and among this heterogeneous lumber was a pailful of pieces of bread. We understand that these places are condemned, and it is time, for such ill-ventilated closets are a standing offence to sanitation. The privies outside are also condemned; those into which we looked were in a most insanitary condition; soil and moisture over the floor and fittings, and no attempt at keeping the miserable structure in even an outward state of cleanliness.

The Lunatics,

whose department is under the roof of the infirmary, are housed on the male side in a lean-to addition to the cells, forming a corridor, in which their beds are placed head to foot along the outside wall. Stone-paved floor, whitewashed walls, small windows, bad fireplaces, crowded quarters. Is it possible to imagine any place more unfit for the occupation and treatment of this unhappy class? The cells are rarely used, and Dr. Mackenzie was urging the Board to convert one of these into a padded room. We saw one cell tenanted by a pauper who had been drinking. The head nurse is held responsible for the lunatics; among the males her assistant is a lunatic, in whose care they are left at night, with occasional visits from the night nurse. The females are better lodged; the lean-to corridor is not used for sleeping quarters, the beds being placed in a dormitory better lighted and better ventilated; the cells are only occasionally made use of for unruly patients. The epileptics and imbeciles are kept here with the lunatics. This ward is stone paved. One woman was in charge of a special attendant. The airing courts are square, shingled, enclosed spaces off the infirmary and the lunatic wards. The doctor is trying to induce the Board to erect sheds and seats in these courts, for no day rooms are attached to these blocks.

The Fever Hospital,

a detached two-storeyed building of more modern construction, was in use at the time of our visit, two male and two female patients being under treatment. On the ground floor are two wards on each side of the middle staircase, and on the first floor a long ward in each wing, the lower wards only being occupied by the above-mentioned patients, cases of fever. The long wards have not been used since the last cases of small-pox were nursed in them. One nurse is in charge of this block, with pauper assistance. The hospital is self-contained, having kitchen, laundry, and nurse's quarters. The sanitary appliances in this department are of modern construction and well flushed, with provision for cross ventilation, but there is no intercepting lobby, and with all the windows shut—as they were when we went in—the place was quite foul. (Was this shutting of the windows the work of the pauper helps?)

The Nursery

is as usual in the body of the house, forming part of the able-bodied women's quarters. It is a stone-paved room, with a railed-in grate, a small window, dirty whitewashed walls, and open rafters; but for the presence of the four infants and their wooden cradles and their pauper attendants we should have taken it for a stable or a barn. There was no nursery apparatus, such as bath or washing-stand, and the poor children did not appear to be very wholesome; the fretful wail of discomfort was the only apparent sign of child life. These hapless infants sleep in the dormitory above with their mothers, on straw ticks laid on the floor. From the nursery we went to see

The Aged Men and Women,

and for these poor creatures we found no better provision for either cleanliness or comfort. The dormitories, one in each wing, are like that of the nursery, except that the floor is raised about 6 inches on either side of the ward, leaving the middle pathway of stone pavement on a lower level. The day rooms also are flagged. There is a window at either end of these long wards; the walls are rough surface, colourwashed, the rafters open, rows of harrow beds and straw ticks against the walls, one old fireplace, quite insufficient to warm a long, narrow room in winter, no artificial light during the night, benches for the poor old people to sit on. We saw a group of wretched women listless and inert in the ward. It is a

Living Death

for the old men and women in an Irish workhouse. The conveniences for night are the open buckets and pails with which we are now familiar. The ventilation, by means of the two windows, is quite insufficient even in fine weather; in the winter and at night there must be practically none, for the poor fireplace would not give off sufficient heat to allow of open windows.

The Kitchen and Laundry

are both behind the times; in the former are two large boilers, heated by steam, so that all food must be cooked by boiling only; the latter is small and crowded, though we were glad to see some machinery, such as mangle and wringer, for the proper handling of the clothing. The "feeding troughs" are used for serving the Indian meal and milk that forms the midday meal of the inmates in the body of the house. In the infirmary there is a serviceable range, and the cooking is supervised by the nurse. This range also heats the water for the wards.

The Sewage

from the infirmary and the fever hospital is carried into the town system, that from the body of the house drains into cesspools. There are no baths, but we were given to understand that the whole of the water and sanitary system is to be remodelled. We trust that the alterations will include indoor conveniences for the aged and infirm, and baths for the infants.

Recommendations.

Desiring to ascertain whether the sick poor in Irish hospitals are treated on the same lines as those in a workhouse infirmary, we visited the County Infirmary in Lisburn, and were pleased to find that in appointments and management it was on a level with some of our small country hospitals on this side the water. We would therefore ask the guardians of the Lisburn Union to follow our example, and study in the hospital of their own town what should be the treatment of the sick and infirm. The necessary improvements would include a wooden dado round the walls, improved fireplaces, new bedsteads and mattresses, a reduced number of beds to each ward, and the provision of comfortable chairs for the infirmary patients. The whole system, in so far as it affects the aged, the lunatics, and the infants, requires humanising, and the wants of each class need to be considered and provided for, for at present these three classes appear to have been overlooked.

A Resident Medical Officer for the Bradford Workhouse.

This Board has passed a resolution to appoint a resident medical officer. From the discussion it appears that there are sometimes over 1,000 inmates in the house, of whom over 300 are in the infirmary, so that the Board is taking a right step in thus securing adequate medical attendance for this large number of inmates. The details have yet to be settled, but the principle is agreed to, and to the mover and the seconder passed a well deserved tribute of praise to the good work done by Dr. Proctor, who had held the appointment for many years.

Ballibrough Union.

We have received the following communication from the Board of Guardians of the Ballibrough Union; Resolved at the meeting held October 28th, "That we, the guardians of the Ballibrough Union, have read a report from a commissioner of the Irish Medical Journal relative to the state of this workhouse, consider that the report is exaggerated, and we invite either the Local Government Board inspector, or any other suitable person, to inspect the workhouse, as we know that the house is both clean and comfortable, and that the inmates are com-

fortable, as reported by a committee who visited the workhouse on October 16th. We also wish to state that we are waiting for a report from the Local Government Board, when we will have the changes according to the Local Government Board's specification carried out, both as regards the infirmary and the sanitary arrangements of the house. We tender our thanks to the Board for its courtesy in sending us a copy of the resolution, and we await the result of the invited inspection with curiosity and equanimity.

WELL-VACCINATED LOCALITIES.

DR. W. SCOTT TEBB (Bournemouth) writes: I am afraid I cannot agree with the statement contained in your issue of September 21st, that the towns which have suffered most from small-pox epidemics are those known as the woollen districts, namely, Bradford, Keighley, Dewsbury, Leicester, etc.

From a number of medical officers' reports, and also from the columns of the BRITISH MEDICAL JOURNAL, I have been able to ascertain the towns which in recent years have had the heaviest incidence of small-pox. The following table gives the ten towns which presented the highest small-pox attack-rates. In the case of Dewsbury, not happening to have the medical officer's report, I have taken the figures from the Registrar General's returns; and, for the sake of comparison, at the end of the table I have given the statistics for Keighley and Leicester:—

Small-pox Epidemics.		Population.	Attacks.	Attack rate per million.	Deaths.	Death-rate per million
1. Willenhall	1894 ...	17,684	442	47,613	47	2,656
2. Sheffield	1887-8 ...	[illegible]	7,[illegible]	20,500	670	2,177
3. Walsall	1893-4 ...	74,000	946	12,818	83	1,121
4. Warrington	1892-3 ...	54,000	674	12,481	65	1,204
5. Brighouse	1892-3 ...	23,000	150	6,934	18	832
6. Dewsbury	1891-2 ...	102,345	—	—	132	811
7. Birmingham	1889-4 ...	408,231	3,197	6,351	248	493
8. Darwen	1892-4 ...	84,000	513	6,107	44	524
9. Oldham	1892-4 ...	136,000	651	4,807	102	748
10. Bradford	1892-3 ...	216,262	999	4,378	104	474
Keighley	1893 ...	32,670	72	2,245	7	218
Leicester	1892-4 ...	184,547	385	1,034	21	113

To estimate the amount of vaccination in the population, I have taken out the proportion of attacks vaccinated from the medical officers' reports, subtracting doubtful cases of vaccination from the total attacks before calculating the percentages. The figures are shown in the following table:

Small-pox Epidemics.		Attacks.	Vaccinated Attacks.	Percentage of Attacks Vaccinated.
Warrington, 1892-3		674	601	89.1
Willenhall, 1894		[illegible]	789	89.0
Birmingham, 1889-4		2,945	2,616	88.8
Sheffield, 1887-8		7,036	5,891	83.3
Halifax, 1893-4		513	426	82.8
Bradford, 1892-3		899	704	78.3
Brighouse, 1892-3		146	110	75.3
Walsall, 1893-4		926	687	74.1
Oldham, 1892-4		165	117	70.9
Leicester, 1892-3		345	192	55.6
Keighley, 1893		72	31	43.0

If it be maintained that in an epidemic the proportion of the population vaccinated is lower than the proportion of the attacks vaccinated, we are confronted with the proposition that small-pox picks out the vaccinated; if, on the other hand, you say that the proportion of the population vaccinated is higher than the proportion of attacks vaccinated, then it follows that the inhabitants of Birmingham, Warrington, Sheffield, and Willenhall were almost every one of them protected, which is a very grave reflection on vaccination.

On the whole, I think we may take these statistics as a fairly approximate estimate of the vaccination of the population, especially as they are corroborated by other experience. Thus, in Warrington my table gives 89.1 per cent. of attacks vaccinated, and in the medical officer's report I find that at the time of the epidemic an examination of 7,522 school children revealed the fact that 7,135, or 94.8 per cent., were vaccinated; now, bearing in mind that school children would probably be slightly better vaccinated than the general population, there is very little difference between the two estimates. Likewise in the Sheffield epidemic the proportion of attacks vaccinated comes to 83.3 per cent.; it is known that for a large number of years over 80 per cent. of the births had been vaccinated, and in 1862, at an inspection of the borough school children, 86 or 87 per cent. were found in that state; therefore at the time of the epidemic the probability is that 83.3 per cent. will not be very far out as an estimate of the proportion of the population vaccinated.

Now let us take the towns in the order of their vaccination, as estimated by the percentage of attacks vaccinated:

Warrington, Willenhall, Birmingham, Sheffield, and Halifax come out the highest with 89.1, 89.0, 88.8, 83.3, and 82.8 per cent. of the attacks vaccinated respectively; as regards small-pox incidence, they occupy the first, second, fourth, seventh, and eighth places on the list in my first table. Next come Bradford, Brighouse, Walsall, and Oldham, with 78.3, 75.3, 74.1, and 70.9 per cent. of attacks vaccinated; these towns are worse vaccinated and have less small-pox, occupying the third, fifth, ninth, and tenth places on my list.

I have no data for Dewsbury except the returns of the Local Government Board, which refer to a district fairly corresponding with that of the Registrar-General's Reports. Thus for the six years 1886-91 an average of 50.9 per cent. of the births were vaccinated, which is lower than Bradford with 68.5, but nothing like so low as Leicester with 5.3 per cent., or Keighley[1] with 8.3 per cent.

Leicester and Keighley had respectively 55.6 per cent. and 43 per cent. of the attacks vaccinated. These are the lowest percentages in my table. Such being the case, the question is, Did small-pox run riot in these towns? My table proves the contrary; thus Birmingham had 3 times and Warrington 6 times the attack-rate of either; Sheffield had 11 times the attack-rate of Leicester, and 10 times the attack-rate of Keighley: while Willenhall had 25 times the attack-rate of Leicester, and 20 times that of Keighley.

Thus I maintain that such towns as Birmingham, Warrington, Sheffield, and Willenhall, where over 80 per cent. of the population is vaccinated, had a very heavy incidence of small-pox; while Leicester and Keighley, where, roughly speaking, only about half the population is vaccinated, had in comparison with well-vaccinated districts very trivial epidemics.

*** We willingly give space to the letter which Dr. Tebb has written to us on the subject of "Well-vaccinated Localities," inasmuch as it is typical of the fallacies into which the anti-vaccinator is apt to fall in dealing with a matter which has nothing of help for him when put forth in plain and unvarnished statements. The antivaccinator never seems able to deal with the question of vaccination in relation to small-pox except by side issues, which remind one of the well-known simile of a herring drawn across the track. The one point on which vaccination takes its stand as a useful and necessary prophylactic is that it can be shown by plain matter-of-fact statistics to have saved thousands of lives, which but, for its preventive power, would, humanly speaking, have been sacrificed to small-pox. We have dealt with this main subject at length in the columns of the BRITISH MEDICAL JOURNAL of March 2nd of the present year, and in succeeding numbers. We therefore do not propose to treat of the matter *de novo*, but only so far as Dr. Tebb's letter calls for comment on certain of the ground already gone over.

Dr. Tebb holds that it is not right to state that the woollen districts have suffered most from small-pox, or that well vaccinated towns have been most free from the scourge, and he quotes figures to demonstrate his argument; but prior to the receipt of this letter we had already stated in our issue of October 19th that "it is unvaccinated and badly vaccinated sections of communities (rather than whole populations, which are variously circumstanced as to vaccination) that

[1] In Keighley the Local Government Board returns refer to districts with a population double the size of that dealt with in the report of the medical officer of health.

suffer most from small-pox." We shall deal with this point further; but for the rest we are quite prepared to admit that well-vaccinated towns are at times affected seriously by small-pox, though this most largely in proportion to their unvaccinated sections.

Now, Dr. Tebb is contending that the proportion of vaccinated sufferers in a small-pox epidemic is a criterion of the proportion of vaccinated individuals in the community generally. This is an erroneous assumption. He would have us think that Leicester has, on this basis, 55.6 of its population vaccinated, and this proportion only. The assumption is absurd. We have the word of the medical officer of health that at the time of the recent epidemic of 1892-93 the percentage of persons vaccinated in that borough was as high as 98. Again, Dr. Tebb puts Sheffield as having only 83.3 per cent. vaccinated at the time of the great epidemic of 1887-88, whereas a little trouble in the shape of reference would have told him that an enumerated census of the town *qud* vaccination showed that 97.9 per cent. of the population were vaccinated. We take these merely as samples of the data which Dr. Tebb is putting forward.

According to his argument, we are here stating the case against ourselves, since if the proportion of vaccinated persons be higher than the proportion of vaccinated sufferers by small-pox, then that "is a very grave reflection on vaccination," because most of the people are protected. But is it so? Most assuredly not. Taking the set of towns finding place on page 487 of the BRITISH MEDICAL JOURNAL of March 2nd, 1895, we have totalled the attacks according as they occurred in children under and in persons over 10 years of age. The results show that the attacks in vaccinated children under 10 years of age (474) were only 41 per cent. of the total attacks at those ages (1,154). And were the deaths in like proportion? The deaths among the vaccinated children (8) were as low as 3.5 per cent. of the total deaths at those ages. In other words, the deaths (222) in unvaccinated children were more than nineteen times more numerous in proportion to cases than those in primarily protected children, all classes of vaccination being taken as representing "protection." For we see of the actual mortality in these two classes that, whereas the rate per cent. of cases in vaccinated children taking small-pox was (474 cases, 8 deaths) 1.7, it was in the unvaccinated (680 cases, 222 deaths) as high as 32.6 per cent.

But what of ages over 10 years, wherein it is admitted primary vaccination loses some of its protective influence, the more so as life advances? This, that in the same towns, the total of vaccinated attacks was 6,961, as compared with only 628 unvaccinated patients. The former was, therefore, 92 per cent. of the latter. Were the deaths in like proportion? Not so; the deaths in vaccinated persons (320) were only 55 per cent. of the total (582). But how about the actual proportion of deaths to cases in the two classes? The facts show that in vaccinated patients the deaths (320 in 6,961 cases) were 4.6 per cent., and that in unvaccinated sufferers (262 deaths in 628 cases) the percentage was 41.7, that is, it was 9 times greater in proportion among the unvaccinated.

Now let us look at samples of the towns of which Dr. Tebb treats in other directions. Taking first Sheffield, we know that at the time of the 1887-88 epidemic there were 97.9 persons in every 100 of population vaccinated; but whilst only 88 per cent. of the attacks were in these persons (March, 1887, to February, 1888) the proportion of deaths in this class was not even half that ratio, being, indeed, only 42 per cent. On consideration of the first ten years of life, we see that in the last decennial period for which returns of vaccination officers are issued, namely, 1882-91, as many as 95 out of every 100 children were vaccinated in Sheffield, but that neither the vaccinated children suffering from small-pox, or dying of that disease, were in like proportion to total cases and deaths. Far from it; for whilst the attacks in vaccinated children were only 61 per cent. of both classes, the deaths in these protected children were no more than 3 per cent. of the total mortality in the first ten years of life.

Looking at Leicester, one of the strongholds of the anti-vaccinator, in much the same way, we find that its 78 per cent. of vaccinated population in the epidemic of 1892-93 suffered attack to the extent only of 55 per cent. of the total attacks; and that the mortality was in the vaccinated only 5 per cent. of the total. In respect of ages under 10 years, the facts show that, of the children born during 1882-91, there have escaped on an average 63 per cent. yearly as regards vaccination; but the proportion of attacks and deaths among the unvaccinated sufferers by small-pox do not tally with that ratio. Again—far otherwise; for the attacks were in the unvaccinated to the extent of 99 per cent., and the deaths to the extent of 100 per cent.

We need not go deeper into the matter. Only one word in conclusion. It may be—indeed, it often is—matter for surprise that so many vaccinated persons contract small-pox, that is, once-vaccinated persons. We deplore that the data show this to be the case. But the explanation is not far to seek. There is vaccination and vaccination; and it is the sort of vaccination that has for its corollary in the early years of life an attack of small-pox that is such a discredit to the use of the prophylactic. This sort of vaccination is not worthy of the name, and is commonly performed by incompetent persons or by persons who pander to the misguided demand for the fulfilment of the letter of the Vaccination Acts rather than the spirit of those laws. One mark and otherwise inefficient vaccination, which is so increasingly in vogue, this it is which brings discredit on vaccination, and leads to much of the small-pox which is to-day in our midst. So long as the State rules and regulations are not binding on private medical practitioners, so long will vaccinated persons continue to contract small-pox. Not until every person in our country is required to be properly vaccinated, and at the right time also properly revaccinated, can we hope to see small-pox banished from our populations.

SHELLFISH AND WATERBORNE DISEASE.

AT the opening of the winter session of the Hull Scientific and Naturalists' Club, held on October 31st, Mr. HOLLINGWORTH, the President, delivered his presidential address on the Artificial Cultivation of Edible Molluscs. He said that in recent years the natural supply had fallen short of the demand, and artificial cultivation of those shellfish most consumed have been resorted to. He then dealt with the mode of cultivation adopted in the case of oysters, mussels, and cockles, showing how liable these were to contamination by sewage matter when laid down in proximity to towns, harbours, and river mouths. In this connection he showed how the conveyance over their beds of sewage matter containing germs of cholera and typhoid was capable of being a source of grave public danger. Basing his argument upon the Government reports of the cholera outbreaks in England in 1892 and 1893, he showed that, whilst in 1892 35 cases were imported into British ports, in every case the local sanitary precautions were sufficient to prevent any extension of the disease beyond those importing it, and that in 1893 13 cases were imported, with no extension in 11 cases. But in that year cholera broke out in 50 separate localities, attacking 287 persons, of whom 135 died; and out of these 50 localities, in 42 only single cases occurred, a circumstance hitherto unprecedented in the history of cholera, and pointing to special modes of infection. Of these cases, 40 per cent. had eaten or handled shellfish within twenty-four hours of being attacked, and in most cases that shellfish had come from the Grimsby and Cleethorpes beds. All the cases (except the imported ones) occurred after the middle of August; that was subsequent to the date when cholera was known to have been imported into Grimsby. He next showed on maps the relative position of the oyster, mussel and cockle beds, and the different sewage outfalls at Grimsby and Cleethorpes, pointing out how strong was the presumption that infection of these beds by sewage matter was not impossible. He pointed out, too, what he considered a dangerous practice, namely, that of placing oysters and other fish in fish docks and near sewer outfalls, as occurs in many places, in order to "fatten" them for the market. In this way he accounted for several outbreaks of typhoid in different parts of the country, details of which he gave. Fish, being the natural scavengers of our coast, would be, he believed, more commonly a source of infection to consumers if they were not rendered innocuous by the process of cooking; but in the case of oysters, which were usually, and of mussels,

which were commonly, eaten raw, this did not obtain. Mr. Hollingworth closed by urging the great importance to local authorities of taking steps to prevent any infection of local food industries.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on October 25th. There were present: Dr de Havilland Hall, Chairman; Dr. G. E. Herman and Mr. H. H. Crutton, the Treasurers; Dr. J. Pickett, Mr. J. Brindley James, Dr. Major Greenwood, Dr. W. Knowsley Sibley, Dr. Walter Smith, Mr. Edward Bartlett, Dr. F. J. Allan, Mr. F. Swinford Edwards and Dr. J. B. Ball.

The audited accounts for the three months ending September 30th, 1895, were presented, and showed that the business was progressing prosperously and on the soundest lines, and the Secretary reported that an unusually large number of applications for the papers of the Society had been received during the previous month.

As usual, the Committee were mainly occupied in the examination and discussion of the sickness claims. The Society is now in its twelfth year of working, and the original members are for the most part reaching the time of life when illness is apt to be severe. So far the sickness experienced has been well within the amount anticipated and provided for in the tables of premiums, but the amount paid for sickness claims is growing and must be expected to grow for some years to come. Not only does the number of claims get larger each year but the severity of the illnesses causing them and the duration of the periods for which the members are incapacitated also show a tendency to increase.

During the last financial year more than one-third of the sickness claims were caused by influenza. During the last quarter very few have arisen from this cause, but several notices of influenza claims have been received in the last few weeks, and it is feared that a large number of them will have to be met during the coming winter.

Prospectuses and all particulars may be obtained from Mr. F. Addiscott, Secretary, Medical Assurance Society, 33, Chancery Lane, London, W.C.

ROYAL COLLEGE OF PHYSICIANS.

The ordinary quarterly comitia of the Fellows was held on Thursday, October 31st, Sir J. Russell Reynolds, Bart., President, in the chair.

The President announced that Dr. Hale White had been appointed Croonian Lecturer for 1897, in place of Dr. Greenfield, who had resigned through ill-health.

On behalf of Sir Richard Quain, the Treasurer asked permission for the meetings of the General Medical Council, owing to alterations to their own premises not being completed, to be held in the College for one week commencing from November 25th, and it was unanimously agreed to. On twelve previous occasions a similar request had been made and granted.

Messrs. J. H. Dauber, M.B., M. S. Lowenthal, M.D., E. S. Smith, M.D., and H. C. Thomson, M.D., were admitted Members of the College.

The licence was granted to 126 gentlemen, of whom all but two presented themselves under the regulations of the Conjoint Board.

Two communications were received from the Colonial Office, the first enclosing a report upon the recent epidemic of plague at Hong Kong, the second enclosing a powder used by a Chinaman in Java as a secret remedy against diphtheria, and inviting an expression of opinion from the College in respect of it; it was decided that the College could not have anything to do with a secret remedy. A communication was also received from the University of Edinburgh announcing the award of the Murchison Scholarship to Mr. Neil MacVicar, M.B., C.M., and one from Mr. Edgar Willett thanking the College for the loan of preparations to the British Medical Association. A letter was received from Mrs. Blenkins offering a collection of pathological preparations made by her late husband, mostly during the Crimean war and the Canadian rebellions, and the matter was referred to the Curators of the Museum. The late Mr. George Blenkins, who at the time of his death was Inspector-General of Hospitals, was for many years surgeon to the Grenadier Guards, and in the year 1851 he received the thanks of the College accompanied by a purse of £50 and a cup value £20 for his labours in completely renovating the College Museum. A letter was also received from the Secretary of the Cambridge Antiquarian Society announcing that they were about to publish an illustrated catalogue of plate and other antiquities, and asking permission to take a photograph of the caduceus and cushion presented to the College by Dr. Caius, and of the portrait of Sir William Browne, and it was decided to grant the permission asked.

The Treasurer reported the fact that he had attended the preliminary funeral of M. Pasteur as the representative of the College, and that no other medical corporation in England had been represented at it.

The annual balance sheet was received and adopted.

The quarterly reports of the Finance Committee and of the Examiners for the Licence were received and adopted.

Reports from the Committee of Management and from the Laboratories Committee were received and adopted, and Dr. Ord was re-elected to represent the College on the former and Dr. Pye-Smith on the latter.

A list of books presented during the past quarter was laid on the table, and the thanks of the College returned to the donors.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Annual Meeting.

The annual meeting of Fellows and Members was held on Thursday afternoon at the College, Lincoln's Inn Fields, Mr. Christopher Heath, President, in the chair.

The President, in placing before the meeting the report of the Council for the year ending July 11th, 1895, said that it was his duty and pleasure in the name of the Council to welcome the Fellows and Members to the meeting, and to remind them that they were the corporation of the College. That was a act which was very often overlooked. The report included the business transacted by the Council of the College between July 12th, 1894, and July 11th, 1895; and therefore, although there was mention of a deputation of Fellows which took place on June 10th, there was none of the Members' deputation which took place on July 26th. On that subject he would merely say that the Council appointed a committee to receive those deputations, and to report to the Council upon the matters brought before them. Owing to various circumstances it was impossible to bring that report up to the October meeting of Council, but it would be brought up next week to the November meeting.

Dr. John Ince, M.R.C.S., then moved:

That the Fellows and Members, here assembled in annual meeting, desire to thank the Council for the interesting and important report now presented; and particularly their approval of the new By-laws, Sections IV and XVI, and of the Regulations of the Council, Section XXV, relating to the meetings of the Fellows and Members of the College.

He said he owed an apology for appearing again with a motion of that nature. It was the third time he had done so, and he trusted it would be the last, because it should be moved by a Fellow rather than by a Member. The motion was desirable, and indeed necessary, for three reasons: first, the President deserved thanks; secondly, it furnished a *locus standi* for discussing the various points contained in the presented report; and, thirdly, it must be remembered that as yet annual meetings were held solely by the favour of the President and Council. They were not statutory, either by the charter or by any by-law; they were convened and conducted, not by by-laws, but by revocable regulations of the Council, and they depended entirely upon the good behaviour of the Members. He hoped that before long the annual meetings would be expressly and permanently recognised by at least a new by-law. Dr. Ince was proceeding to discuss the question of the post-graduate course when he was reminded by the President that the report contained nothing on that subject.

Mr. Gant seconded the motion.

Mr. GEORGE BROWN said he did not see how the motion could be accepted. He was sure that the Council needed no thanks from the Members for what they had done in connection with the College. He moved the previous question.

Mr. BRINDLEY JAMES seconded the amendment, which, on being put to the meeting, was carried by 17 votes to 5.

Mr. JOSEPH SMITH, M.R.C.S., then moved:

That this meeting requests the Council to take steps to obtain an amended charter, which shall contain the following provisions: (a) That no alteration in the constitution and external relations of the College shall be effected without the consent of the body corporate, convened to discuss such alterations. (b) That the present annual general meeting be made statutory, and that the report of the Council shall be submitted for formal adoption. (c) That the number of the Council be increased to thirty-two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council.

He said it had frequently been asked by members of the Council, "Who are these men who are agitating for this reform of the College? What are their numbers? Are they men of any importance?" Such members must know perfectly well that for the last ten years resolutions asking for reforms in the constitution of the College had been carried by crowded meetings of men from all parts of England, who had come up at great cost and risk to support the very resolutions which the meeting was now asked to sanction. And yet there were members of Council and Fellows who were continually throwing in the eyes of their fellow members the eternally old tale that this agitation was only carried on by an insignificant few. When he went before the Committee the President asked, "What are the numbers of your Association?" His reply was that it did not matter whether the Association numbered 5 or 5,000; they spoke in the name of those men who had met in that room for years, and also in the name of the 5,000 men whose names were attached to petitions at present lying in the Home Office, asking for the very reforms which were now sought. With regard to the first clause of the resolution, the intention was that no alteration in the constitution and external relations of the College should be legal without the consent of the body corporate, so that the Council would not be able to exclude the Apothecaries' Hall or deal with matters of that sort without the consent of the Fellows and Members. Mr. Smith was proceeding to discuss the next provision, when

The PRESIDENT suggested that the paragraphs should be taken separately.

Mr. DICKINSON, in seconding Clause 1, said the old charter showed that Members had some inherent rights beyond those of entering the library, attending lectures and using the common room. The Charter of 1800, which was obtained under somewhat doubtful circumstances, the object being very largely to exclude the Members from all share in the government of the College, clearly stated that the Fellows and Members were one body corporate and politic; that they had a perpetual succession under a common seal; that in any legal action taken by or against the College the Members were all implicated; and that the building belonged to the Members absolutely from cellar to roof, together with all other property held by the College. In the face of these facts was the continued exclusion of Members from all share in the election of the Council either just or generous? Communities of that kind, whether called brotherhoods, guilds, or corporations, had existed for centuries, and were just as necessary now as ever. Such guilds contained three leading features—their members were all equal before the guild; every member was entitled to the support of the brotherhood in any quarrel which they considered to be just; and they had an equal share in the jurisdiction, which meant administration. The Members of the College of Surgeons, on the contrary, were not equal; there was a superior order of members who exercised all their inherent rights; they got no support from the College in any disputes or difficulties with outsiders, and there was no share either in jurisdiction or administration. These things ought not to be. The only real objection to their claim which they had been able to extract from the Council was that they did not consider it desirable to diminish the privileges of Fellows by depriving them of the exclusive right to elect and constitute the Council. To this he replied that the Fellows as such had not by the Charter any stake in the property of the College, and that it was only as Members that they had any claim upon the Council. It was true that by the Charter of 1843 the Fellows were entitled to the exclusive privilege of electing the Council, and with that privilege he had no wish to interfere. What was proposed was to enlarge the Council, adding representatives from the Members. Surely the Fellows did not think so meanly of the Members as to refuse to sit with them upon the Council of their own College? He did not think so meanly of the Fellows, and was convinced that if they could be satisfied that these reforms would be of benefit to the College as a whole, they would allow no lower motive to influence them.

The resolution was then put and carried *nem. con.*

Mr. JOSEPH SMITH, in proposing the second paragraph, providing that the annual general meetings should be made statutory, and the report of the Council submitted for formal adoption, said it was useless having an annual meeting and a report unless that report could be criticised and amended if not satisfactory. If the meeting had not that power it was perfectly useless for them to come together. The Members were the mainstay of the College, and to a considerable extent the mainstay of the Fellows. They were the body corporate in that respect. At present, as Dr. Ince had said, they held those meetings upon their good behaviour. It was quite within the option of the Council to say: "We will have no more of you, and if you come here we will send for a policeman and send you away," as had been done on a previous occasion.

Mr. DICKINSON seconded the resolution, which was carried with one dissentient.

Mr. JOSEPH SMITH, in moving the third paragraph of the resolution, said that the Members asked that the constitution of the Council should be increased from 24 to 32—that the 24 Fellows should remain, and that the Members should have 8 representatives. There were something like 900 or 1,000 Fellows, who had the power to elect 24 members of council; they, 14 000 or 15,000 Members, asked in the very humblest manner to have the power to elect 8. This was not unfair, seeing that the Members contributed something like £15,000 a year, as against the £1 100 which the Fellows contributed. It would be quite impossible for the eight representatives to interfere with the twenty-four, or to endeavour to swamp them. At the present time they had no power over the election of the Council, over the finances, or over internal and external relations; if they had he was quite certain that the fatal mistake of amalgamating with the College of Physicians, leaving the Apothecaries' Hall out, would not have been perpetrated. They all admired the gentlemen who sat on the Council for their surgical attainments, but they did not feel that they could have anything in common with the body of general practitioners; it was quite impossible that they should do so. He remembered the President many years ago—he was then a reformer—asking, would not his position be a grand one if he were elected by the whole body corporate; not, as now, simply by Fellows? The President was the President of the Fellows, and not President of the College of Surgeons *de facto*, although he might be so by law. The Members had lost all interest in the affairs of the College. Was it good, he asked for any body of men to be practically self-elected?

Mr. DICKINSON, in seconding the third paragraph of the resolution, said that the Fellowship was essentially an academic distinction, and was mainly valued by the Fellows as such without reference to their position on the Council. He admitted that from an academic point of view the Fellowship had been a distinct success, but he protested against the continued usurpation by a limited class of members, however superior, of the functions that belonged to the corporation as a whole. The Fellows had had for over fifty years a right to elect a governing body, and it was not proposed now to oust them from their right, but merely to add eight representatives of the 16,000 Members to the Council. Except for obtaining hospital and such-like appointments, the Fellowship was of very little use to anyone in practice. What the public wanted was "M.D." If the College could grant

the degree of M.D. there would be hundreds of applicants for it, and that degree the College ought to have been able to offer a long time ago. He was sure that if Members were added to the Council, those Members would press the matter of M.D. forward.

Dr. Ince and Dr. Alderson having spoken,

Mr. Timothy Holmes said the proposal was a very moderate one, and still left to the Fellows the entire government of the College. It was impossible for eight Members to carry their own propositions in any case in which the Fellows were not seriously divided in opinion.

The resolution was then carried with two dissentients.

The Admission of Women.

The President stated that the Council desired to afford the Fellows and Members present at the meeting the opportunity of expressing their views upon the question of the admission of women to the examinations for the diploma of Member. The Council had received a letter from Mrs. Garrett Anderson, forwarding a memorial asking that the students of the London School of Medicine for Women should be admitted to the examinations of the College, and enclosing various documents relating to such petition. It was a very important and vital question, and the Council wished to have the benefit of the advice of the meeting upon it before arriving at any decision.

Mr. Joseph Smith asked if the College were bound to follow the lead of the College of Physicians in the matter.

The President said that under present circumstances no man could receive the Membership of the College without at the same time becoming a Licentiate of the College of Physicians. The vote taken a short time before at the College of Physicians had been passed by the Fellows only, but at present the College of Surgeons could not issue their diploma without the concurrence of the College of Physicians, or *vice versâ*. That, of course, was an arrangement which was not finality. Any resolution passed by the College of Physicians would not be binding upon the College of Surgeons.

Mr. George Brown said that the fact of the Council asking the opinion of the meeting upon the matter proved that the action of the Members and Fellows in almost unanimously inviting them to apply for a new charter was a wise one. He had not seen any arguments put forward why women should be admitted as Members of that body; he did not believe in the equality of the sexes, and if he had an operation to be performed in which life was in danger, he should hesitate to trust his life in the hands of a woman. In the interests of the public they should not admit women to their body.

Mr. Joseph Smith moved:

That, so many portals being open to women to obtain a surgical diploma, it is not expedient that this College should admit women to the examination for the diploma of Member.

Mr. Brindley James, in seconding the motion, said he felt it would be a very sad day when the Royal College of Surgeons of England, which was the grandest body in the world, should be under petticoat government. If women came into the College of Surgeons, they would want to become Fellows and Examiners, and take a seat on the Council, and if that came to pass, undoubtedly they would be under a certain amount of petticoat government. For himself, he objected to women entering the profession.

Mr. Lucas said that as a member of the Convocation of the University of London he had watched this question from its inception to the present time. He had heard that staunch Conservative, Sir William Jenner, rise in his place and say, "I have one daughter, and that a very dear daughter, but yet I would rather follow her to her grave than see her entering the medical profession." A great change had come over the profession since then. Women had been admitted first to degrees of the University of London, and afterwards to the Convocation of the University of London, and were now recognised as part of that body. He as an examiner of the University of London had examined those women who had presented themselves for medical degrees during the last four years. He believed, compared with the average medical student, the average medical woman was perhaps below the medical student, but here and there surpassed the ordinary medical student. When there were such women as those, the College of Surgeons ought not to let any little petty jealousy or fear prevent them from doing those women justice. He hoped that the meeting would not be dragged at the tail of that very conservative body, the College of Physicians, but do justice to the women and admit them. He was no enthusiast in the question, and it was because he was not an enthusiast in favour of medical women that he would do his utmost to give them every chance. If they were admitted to other degrees, why should they be excluded from this degree? It was absurd to suppose that there could be any competition between men and women. If a woman took her diploma she might, perhaps, beat a man, and take a higher position; but, surely, the strength which belonged to his masculinity would put him above any fear that she should come in any way into competition with him. Let women be admitted, let them have the degrees, and all the rights in connection with them; to exclude them would be most unjust and unfair, and it was because he believed it to be both unjust and unfair that he moved the following amendment:

That in the opinion of this meeting women should be admitted to the diplomas of this College.

Dr. Barnes said that surgery, of all other things, was the highest grade of the profession, demanding, as it did, the highest talent, skill and mental and physical powers, and those, he thought, did not belong to women. Women might undertake the inferior grades of obstetrics and gynæcology, but he was of opinion that the Council of the College had been somewhat at fault in opening the door to them, and he maintained that women were not qualified to undertake the higher branches of obstetric medicine in connection with surgery. Surgery belonged to men and strength, and where strength was there the great amount of gentleness lay. It was simply a horrible thing for him to see women operate. They might be gentle in their minds, but they certainly had not the power which was necessary to perform serious surgical operations. He thought it was a degrading thing to admit women to the study of medicine in any branch, and it applied most strongly to surgery.

Mr. Norton seconded Mr. Lucas's amendment. Most examinations he said were open to women nowadays, and he saw no reason why the College of Surgeons should exclude them, all the more so because that would not prevent them from entering the profession. There must be some private reason if they decided to exclude them from the examination. The point had been raised that they were not prepared to undertake such duties. Women, however, had been ten or twelve years in the profession, and therefore he thought were in a position to undertake such duties. Only perhaps 2 or 3 per cent. of those men who passed the examination of the College of Surgeons became operators, and in the same way, no doubt, comparatively speaking few women would lay themselves out as operating surgeons. Everyone of them without exception would be quite prepared to undertake the emergencies of minor operations, whilst only few probably would devote themselves entirely to larger operations as was the case with men. The question of rivalry must present itself amongst members of the medical profession, but it was quite a small question, for women Members of the College would mostly be women practising abroad in the Colonies, and in India especially, where they had already done great service as was well known, in undertaking the treatment of women there. Women in India were not allowed to see men, and therefore women must enter the profession if good was to be done in that country where these questions came in.

Dr. Alderson admitted that a great change had come over the profession, but that change had not been for the better. What had women done to aid surgery or medicine? He thought the body would not gain by admitting women to its examinations.

On Mr. Lucas's amendment being put, it was declared by the President to be lost, 48 voting for it and 58 against.

Mr. Joseph Smith's original motion was then carried.

A vote of thanks to the President terminated the proceedings.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 9TH, 1895.

LUNATICS AT LARGE: A PUBLIC DANGER.

Public attention has been strongly directed by a recent case to the provisions of the lunacy law under which certain urgent cases may be placed quickly under care and treatment in an asylum, either for their own welfare, or for the safety of the public in relation to the element of urgency; and, in some quarters, opinions have been freely expressed to the effect that such provisions should not be permitted to exist. They were inserted and introduced by the present Lord Chancellor for the public good. In a relatively small number of the cases of indubitable sudden insanity that occur those particular provisions are of the very greatest possible value in the interest of the lunatic's welfare and of the public safety.

So complicated, protracted, and, in some cases difficult, is it to place an insane person under care and treatment by the ordinary provisions of the Act, that a provision for urgent cases is really necessary; and detention under the urgency order is for so short a time, and surrounded by so many precautions as a merely temporary measure, that it merely enables time to be secured for the carrying out of the full ordinary provisions of the Act with all their safeguards of the personal liberty. But it is not on this aspect of the subject that we intend to dwell; and we merely pause to protest against the suggestion that the procedure in placing a lunatic under care should be one similar to that for a criminal conviction in a court of law and its full publicity. What has the unfortunate lunatic done that he should practically be indicted for his disease, and, if found guilty of it, be sentenced in due course, and with full publicity? Why should he be reduced to the position of a criminal on trial?

So far from the certification and detention of lunatics, and even of dangerous ones, being too easy, as is so freely alleged in some quarters, there appear to be greater difficulties in certifying and in detaining in asylums even dangerous lunatics, than public safety requires; and it is from the point of view of public necessity and safety that we refer to some recent occurrences in different parts of the country.

Only a few weeks ago, and since then, we referred to several cases, as, for example, to the case of a lunatic discharged from an asylum who attacked several persons, strangers to him, with dangerous and, in some instances, fatal results. Also to the case of a lunatic woman who causelessly attacked and killed another woman, a perfect stranger to her; and to the case of a lunatic who, seeing a woman asleep in a public ground, smashed her head in with a hammer. Indeed, it is not pleasant to rub shoulders in a crowd with, or to meet on a lonely road, a homicidal madman armed with some implement such as hammer, spade, axe, or pitchfork.

Recently, at Doncaster, an Irish labourer was charged with attempting to murder three men. The prisoner, while sleeping in a room with seven other men, suddenly appeared to be seized with frenzy, and began stabbing his fellow-lodgers with a large knife. One of them was stabbed in the abdomen, and was afterwards reported as being in a serious state, and likely to die. The prisoner, who has been certified to be insane, made a rambling statement when charged, and was committed for trial at the assizes.

And, again, the other day a postman was indicted for the wilful murder of his infant son. He had been out of work for two years, and the wife went out to earn money by charing, he remaining in charge of the children. On one occasion when she returned husband and child were missing. The dead body of the child was found. The husband pledged some clothes for four shillings on that day, and came to London. He was arrested, and practically admitted what he had done. The only question was as to the condition of the prisoner's mind at the time of the murder. Several medical men gave evidence concerning his state of health, and the jury found him guilty, but that he was insane at the time he did the act; and he was ordered to be detained during Her Majesty's pleasure.

Whether or not we have a similar case in the tragedy at Earl's Court, in which a woman of a very retiring and reserved nature, never mixing much with her neighbours, and separated from her husband, first strangled her pretty little girl, aged 4 years, and then hanged herself, certain it is that the public newspapers afford every week abundant evidence that many dangerous lunatics are evidently amongst us, and that on public grounds it is necessary that no undue difficulties should be raised to freeing the public of the danger, and that the separation of dangerous lunatics from their fellows in the general public should be facilitated rather than hampered.

DISEASE AND INSANITY IN PRISONS.

A morning contemporary has again launched its wrath against modern prison administration; taking for its object the statistical reports of the Medical Inspector of Prisons, which are stigmatised by our contemporary as "misleading and fallacious." Various figures which appear in those reports are adduced as showing that imprisonment in England causes a higher lunacy rate and mortality than exists amongst the free community. The writer goes on to say that Dr. Bridges, a member of the recent Committee of Inquiry into prison management, "will have nothing to do" with such misleading comparisons.

Criticism based on a fair and equitable desire to arrive at a better state of things is of course always commendable; but we cannot see the wholesome purpose of the kind of twisted arguments brought to bear by our contemporary. Witness what Dr. Bridges actually said in relation to these prison results as put forward by a writer in the *Fortnightly Review*. Referring to certain figures, intended to show the ill-effects of imprisonment on the mental condition of

prisoners, Dr. Bridges says: "When carefully examined, the inferences drawn by this writer seem not to be justified."[1]

The fallacy of attacking our present system on the strength of mere numerical comparisons with the free community was admitted during the examination of some of the medical witnesses called at that inquiry. The fact is that the sooner we admit that the conditions of mental and bodily health, as deduced from the statistics of a prison population compared with a free population are not at all reliable, the better will be our chance of viewing the matter correctly. A caged bird can never exhibit precisely the same conditions and circumstances as a bird at large; and a man shut up must of necessity, owing to his peculiar environment, show some results quite different from a free man. Thus the imprisoned man will not be run over by a van when drunk, but he may pine for his accustomed intoxicant, and even fall into a condition of delirium tremens for the very want of his habitual stimulus. Thus, here we can conceive a delirium actually consequent upon his imprisonment. But shall we therefore urge that all felons shall have the means of free drinking supplied them? Again, many natures require much amusement and excitement if they are to maintain a high level of mental briskness; but because a man has overdone his search for excitement, and has landed himself within the clutches of the law, are we to say that prisoners shall play at baccarat and have merry-go-rounds to preserve their laughing and rollicking expressions?

The time appears to us to have come when wise men should look upon imprisonment as being an abnormal condition brought about by the abnormal actions of abnormal persons, and as having naturally some abnormal results. Amongst these results we actually find an abnormally small amount of serious illness, no drunkenness, an abnormally small amount of the usual ailments of life, and if we were to see an abnormally large amount of mental unstableness, which we do not admit, it would be no more than the natural consequence of the depressing influence which any punishment must produce on the punished.

As long as mankind in general considers that a breach of law ought to entail punishment, so long must we see some distinct objective results of that punishment, whatever form they may take. If the penal condition is made to entail very arduous work, which is rare now in our prisons, then the body must of necessity show results where a weak point is touched; but if the punishment assume for a generation the phase of solitary confinement, then the mental weak points will be found out, and we get depression of spirits. But for any reasoning person to suppose that the free and the incarcerated are to offer exactly similar statistics of health is on the face of it absurd.

To take the question of insanity. A horde of lowly educated and ill-nourished individuals come under the daily care and notice of a medical man for a certain period of their lives. A certain number are found during this period to be insane. Had these not been in prison they would seldom have been seen by a doctor, and their weak points would seldom have been found out. Prison detects the weak point, and the numbers of the insane appear larger than amongst the free population. Some, too, of course exhibit the unavoidable results of a mental trial on a weak organism. If the whole population suddenly came under the notice of a body of dentists the proportion of teeth found carious would increase suddenly among the community, but caries would not have resulted from these people being seen by the dentists. Just in the same way it is illogical to say that a prison population is lowered in mental tone because the deficiency comes under constant skilled observation.

It would be puerile to imagine that imprisonment never produces insanity, just as it would be obviously false to say that sudden success and wealth do not at times have the same effect; but anyone scientifically conversant with modern prison matters, and not merely judging from hearsay, is aware that, consistently with some remnant of punishment still being endured, the modern prisoner is, if anything, too well cared for in body and mind. The modern danger is really lest we should lose sight of the fact that imprisonment is meant to be deterrent.

In connection with the subject which suggested these remarks, we cannot help thinking, if one official is to be held responsible for the mental and bodily wellbeing of a nation's criminals, that the largest power and influence ought to be attached to such an office. The influence of the medical inspector should be improved to the extent of his ranking at least as high as a commissioner of prisons, and by his suggestions and recommendations being advanced immediately into the hands of the Secretary of State. It would then be more reasonable for the public to insist upon urgent remedies being promptly applied, when an official directly in contact with the chief of the Home Department had cognisance and responsibility, than as now, when the medical inspector is subordinate to, and merely the servant of, the Commissioners. This very matter is strongly commented upon by Dr. Bridges in his final remarks on the prison system in connection with medical responsibility and official work, and is urged in the body of the report.

[1] Memorandum on Insanity in Prisons, attached to Report from the Departmental Committee on Prisons.

THE MORTALITY OF MEDICAL MEN.

Some little time ago we commented on assurance statistics issuing from Australia which went to show that medical men should be placed among the hazardous lives, their mortality not being much below that of publicans. We have now to call attention to some very impressive and suggestive facts from a paper communicated by Dr. Kortright to the *Brooklyn Medical Journal* on the Mortality and Causes of Death in Medical Men. The paper is based on an analysis of the mortuary records of 450 physicians who lived and died in New York and Brooklyn and the vicinity during the past eight years. The average age of death was 54·6 years and the mortality was 25.53, as compared with a mortality of 15.93 in clergymen and 20.23 in lawyers. The rate of mortality among members of the medical profession was only exceeded by saloon keepers, butchers, quarrymen, and poor factory operatives.

Suicide is four times more common among physicians than among other adult males. Under this head are included many cases of accidental poisoning. This large mortality from the self-administration of powerful drugs should be a warning to medical men of the danger they incur from such a practice. The death-rate from consumption among doctors is about

half the general rate; on the other hand the death-rate from typhoid fever is exceptionally high—4⅓ per cent. having died from this cause as against an average rate among adult males of 1½ per cent.

One point comes out in a forcible manner from these statistics and that is the high death-rate due to arterial sclerosis and other degenerative changes. The mortality among doctors from these causes was 35 per cent. whereas among all adult males it is only 25 per cent.

There can be but little doubt that these degenerative changes are the outcome of the irregular life led by the average medical man. His meals are taken at all hours of the day, the food is often eaten hurriedly, prolonged abstinence is made up for by a too large meal or an extra amount of alcohol; he is overworked at times, and gets too little sleep. If he is feeling ill and indisposed for work, unlike other men, he cannot easily take a rest, so that he keeps on his weary round long after he is absolutely unfit for either mental or physical exertion.

The practical conclusions that we would deduce from the foregoing are the importance of at least three weeks' complete rest and change during the course of the year; extreme moderation in the use of stimulants, which should only be taken with meals and never as a substitute for food; meals should be taken as far as possible at regular times, and they should not be hurried over. If there is any evidence of commencing failure of health, arrangements should be made to give up night work for a time. Above all things it should be borne in mind that worry does more harm than work, and that by the employment of a little method the daily work of life may be carried on with less friction and mental strain. Should an incapacitating illness occur, the knowledge that his immediate needs will be provided for by an assurance society will be a source of comfort to the patient; hence the desirability of all medical men joining a society such as the Medical Sickness, Annuity, and Life Assurance Society, which provides for weekly pay during incapacity either from sickness or accident. If the patient has others dependent on him, then the fact that in his days of health he took out a life assurance policy will diminish his anxious forebodings as to what will become of those near and dear to him should he be prematurely called away.

Regarding the decision of the Royal College of Physicians to refuse their licence to women practitioners, the *Yorkshire Daily Post* says that the medical profession is overstocked, and any discussion on the subject must be largely influenced by this consideration. In the *Peebleshire Advertiser* last week there was actually an advertisement for a parish medical officer at a salary of £6 a year, and it is stated that already the parish council has a choice of several applicants.

The new French Ministry includes three representatives of the medical profession. M. Berthelot, the Minister for Foreign Affairs, is a member of the Institute and of the Academy of Medicine; he took the M.D. degree in 1865. M. Viger, the Minister of Agriculture, and M. Combes, Minister of Public Instruction, are also Doctors of Medicine. MM. Berthelot and Viger have each already formed part of several Ministries. M. Combes, who now for the first time holds a portfolio, is Vice-President of the Senate, in which he sits for the Charente Inférieure.

THE BRITISH MEDICAL BENEVOLENT FUND.

The appeal from Sir William Broadbent, the Treasurer of the British Medical Benevolent Fund, published at p. 1195, will not, we feel sure, be made without effect to a profession which has always shown itself admirable in its readiness to help its less fortunate members. The stories of misfortune, often very little deserved, which come before the Committee are in many instances of the saddest possible nature.

THE HUXLEY MEMORIAL.

We learn from our Transatlantic contemporary *Science* that an American Committee is being organised to act in concert with the English Huxley Memorial Committee. The latest reports from Professor Howe indicate that practically all the American men of science who have been approached have signified their willingness to serve. The biologists in particular are likely to be well represented, and the leaders in every field of scientific work will co-operate. It is hoped and anticipated that the contributions from the United States will rival those of Great Britain.

A FORGOTTEN MEMORIAL.

At the last meeting of the College of Physicians it was mentioned that a brass tablet was about to be erected in the College library commemorating the services to the College of Sir Henry Halford, who was President for twenty-four years. A resolution to this effect was passed in 1844, but has for some unaccountable reason been overlooked. It is, however, never too late to mend, and arrangements are being made to erect the tablet over the central fireplace and immediately under the portrait of Harvey. When it is remembered that it was entirely owing to Sir Henry Halford that the College secured their present premises, the remissness of the Fellows fifty years ago seems unaccountable.

CYCLE AMBULANCES.

The use of ambulances mounted on cycle wheels and driven by one or more cyclists appears likely to extend. The city of Birmingham was presented with a cycle ambulance some months ago. In this pattern a frame carrying a hooded detachable stretcher is supported on two bicycles, which could each be ridden by a cyclist.[1] We now learn[2] that a German surgeon, Dr. Hoenig, has designed an apparatus which he calls a cyclo-ambulance. It consists of a car covered in with canvas, which contains a folding litter, and rests on four side wheels, and a fifth wheel in front pedalled by a cyclist. A seat and pedals are also provided at the back for another cyclist. The top part of the car can be lifted off, a patient can then be placed on the litter, and the top replaced on the axles. The patient can be watched by the cyclist at the back through a glazed window; but the patient is also provided with means of attracting the attention of the cyclist by using the rubber ball of a cycle horn. An aperture in the side of the car affords access to the patient when he is in need of help. The ambulance is reported to be in experimental use in Berlin, and is easily steered and manipulated.

TRAINING NOT DANGEROUS.

The death of Mr. Cotton—"Benjy Cotton"—has brought up again the old homilies about the mischief of training and of athletic exercises. These bogies have been dispelled over and over again, but the ordinary man does not seem to get this into his mind. The man in the street hugs the old fallacy that whatsoever happens after any prominent antecedent is a consequence of it. Mr. Cotton is a great oarsman; he dies in early life, therefore his death was due to over-training or over-rowing. The late Dr. Morgan long ago proved up to the hilt that healthy young men, properly

[1] This ambulance was described and figured in the British Medical Journal of April 20th, 1895, p. 880.
[2] *Revue du Cercle Militaire.*

trained, seem to stand any manly exercise; and nothing can be less wholesome than to have our young men anxiously balancing this risk and that until they sink together to the level of games like lawn tennis, which bring out no qualities of courage or endurance. Careless as some of our youths often are, they seem to come to little harm, save from loafing and self-indulgence—habits fortunately not yet prevalent among young Englishmen. We can relieve the anxious minds of our daily contemporaries: Mr. Cotton's death had nothing whatever to do with muscular exertion. Here and there a man may suffer in health from unregulated exercise; men are now and then killed in the hunting field; but such an accident in a sound man is too rare an event to spoil our pleasure in seeing the popularity of sports which strengthen both mind and body. Nor are we rebuffed by the awful example adduced by the *Westminster Gazette* of poor Hector Maclean, who, at the height of his physical prowess, "was carried off in a few days by typhoid fever." Sad indeed was the result, but athletics give us no immunity from infectious disease.

THE DANGERS OF THE BARBER'S SHOP.

A case was tried the other day in which a man claimed damages from a barber on the ground that he had contracted contagious skin disease in his shop. The legal aspects of this particular case do not concern us, but it is important as directing attention to a source of danger, which, though generally recognised even by the public, is still very insufficiently guarded against. There can be no possible doubt that skin disease is not infrequently communicated by contaminated instruments in shaving and hairdressing even in high-class establishments where the use of proper precautions might reasonably be expected. From time to time, dermatologists in hospitals have the opportunity of seeing what may be called epidemics of "barber's itch" among the patrons of a particular tonsorial artist. The disease communicated is sometimes ringworm, which is the parasitic form of sycosis, or a non-parasitic form due to infection by cocci, and other forms of disgusting, disfiguring, and often painful disease have been known to originate from the same causes. The infective material is probably conveyed, not by the razor, which is well stropped and afterwards dipped in hot water, but by the brush or the sponge. The remedy is clearly that barbers and hairdressers should not be satisfied with mere cleanliness, but should use proper antiseptic precautions in their ministrations. The observance of such precautions is compulsory in certain parts of Germany and in other countries, and when the London County Council has a little time to spare from the purging of the music halls it might with advantage bestow some attention on the physical purification of the barber's shop. In the meantime customers might do something for their own protection, if they were to make a point of keeping their own brush, sponge, etc., in a special cupboard at the establishment which they frequent.

EXIT EUSAPIA!

The collapse of Eusapia Palladino, one of the chief priestesses of the latter-day occultism, is highly satisfactory to all lovers of truth as the exposure of a particularly impudent system of imposture. The event has a much greater importance, however, as an additional exposure of the facility with which cultivated minds of a certain type can be cozened by clever trickery. It takes little to delude them, because their "suggestibility" (if the word may be allowed) makes themselves active helpers in the process. The maxim *Populus vult decipi* applies to philosophers not less than to the vulgar; they believe because they wish to believe. Nothing can be more amusing to a cynic than to see persons, often of a high order of intelligence, accept the foolish wonders of spirit-rapping and table-turning with a simple faith which they scornfully refuse to more sacred mysteries. For years men skilled in all the learning of schools and trained to some extent in scientific observation have been sitting at the feet of this illiterate woman, reverently waiting for the stirring of the muddy waters of deception, which they eagerly drink in as manifestations of a "new psychic force." It would be comic if it were not deplorable to picture this sorry Egeria surrounded by men like Professor Sidgwick, Professor Lodge, Mr. F. H. Myers, Mr. Andrew Lang, Dr. Schiaparelli, and Professor Richet solemnly receiving her pinches and kicks, her finger skiddings, her sleight of hand with various articles of furniture as phenomena calling for serious study, if not as direct revelations of the Unseen. It is saddest of all to think of Lombroso, who must know more than most men of human imposture, in this circle of devotees.

> Who could not laugh if such a man there be?
> Who but must weep if Atticus were he?

The fact is, however, as was pointed out by Mr. Ernest Hart in his article on The Eternal Gullible in the *Century*, men of science are not as such particularly well qualified to judge of matters in which the disturbing influence of the "personal equation" has to be taken into account. They are apt to be misled by starting from the assumption that all persons may be taken, for the purposes of experiment, as equally trustworthy. In studying the phenomena of occultism of any kind, it is essential to bear in mind that there is a twofold source of fallacy—in the facts and in the interpretation thereof. Everything that appears to be inexplicable is not necessarily supernatural. What is wanted before everything else is the detective skill of the expert. Had Mr. Maskelyne not been present at the recent sitting at Cambridge, Eusapia's shrine would probably not have been deserted even now. Indeed, there is Professor Lodge, "of the unfaithful, faithful only he," whose robust faith in the earlier manifestations is still undisturbed. And yet the whole thing is such a transparent fraud! Else why all these jealous precautions, extending to details of dress? Why all this careful darkening of the stage before the performance unless it be because the children of darkness hate the light? Then, what can be more childish, more utterly futile than the manifestations themselves? The silly games at "touch," and the purposeless evolutions of chairs and tables might amuse a child of five at a pantomime, but what is to be said of learned professors and earnest and otherwise intelligent men and women seeking spiritual edification in such foolery? Is any human being likely to be the better or the wiser for the rappings of "John" or the scribblings of "Julia"? With so many serious problems awaiting solution it is not only deplorable but in the highest degree discreditable that minds made for better things should waste their powers in dabbling with what is simply despicable and degrading imposture.

THE SICK POOR IN IRISH WORKHOUSES: LISBURN: "A LIVING DEATH."

Our Commissioner, in describing the conditions which surround the old and infirm in this workhouse, speaks of their life as being "a living death." We have been much struck in reading the report of this workhouse and of others to note how very little—indeed, we might say nothing—is done to alleviate a lot that is sufficiently hard. The guardians provide four walls and a roof, scanty firing and meagre food, poor clothing, not always either clean or sufficient, and with this provision are satisfied with the good deed done for the aged men and women who come on the rates. If the subject is discussed in the press or in a friendly conversation, the argument is urged that the pauper is at least no worse housed, clothed, or fed than the independent labourer, and we accept the statement, but we must point out that the independent labourer is free to go in and out, to choose his associates, to meet his friends, and to order his life as he pleases. These privileges are valid compensations for the hardships of his lot. His food also may be even more com-

mon than that of the pauper, but at least he may vary it if he likes in mode of cooking if not in kind, and the outside world with its interests offers some variety to the monotony of his life. To the pauper the priceless boon of liberty is denied. The long dormitory with its comfortless beds, hard benches, imperfect light, low temperature, white-washed walls, and unchanging inmates, is his prison, the yard is his exercise ground, and the meal of bread with milk or Indian meal and milk is the one excitement of the day. Night brings with it the door locked on the outside, the feeble light of the lamp, enough to show a long row of beds, each with its occupant, some shivering in the chill air of the ward, the foul-smelling buckets, and perhaps the foul-tongued conversation, and this for eleven hours out of the twenty-four, the morning's light only bringing with it the same dreary round—is not this "a living death?" Now what have these paupers done that so severe a punishment should be meted out to them? They have by their labour contributed to the national wealth, but they have no wealth of their own to keep them in old age, and why? Wages were low, or sickness set in, or economic changes altered the state of the labour market, or a large family absorbed the family income, or drink and improvident habits brought the man down, but none of these reasons are crimes against society. We maintain that the pauper has a right to just so much freedom and consideration as shall be possible in community life. Moreover, we would urge that the man who by his labour has added to the wealth of the nation has a claim on that nation which is not met by providing him with four walls and a roof, and the doling out of such meagre necessaries as suffice to keep body and soul together. Guardians in this matter are only administering a law which is bad in itself, but do they do all that lies in their power to ameliorate its hard conditions? We think not, and until alteration in the law for which we strive is brought about, we ask them to give a little thought to those poor old men and women among whom by the changes of life they may one day find themselves.

THE THREATENING EPIDEMIC OF INFLUENZA.

The statistics of the health of London issued by the Registrar-General down to the present time do not prove that there is any increasing prevalence of influenza. Altogether last week 7 deaths from this cause occurred in the metropolis—2 in North, 3 in East, and 2 in South London. At the same time, it must be confessed that in ordinary medical practice all over, and not least in the West, cases are cropping up which are undoubtedly influenza, and that in some instances the disease has attacked many of the members of a household in succession. The cases which have hitherto come to our knowledge have been of a comparatively mild type, the catarrhal symptoms being prominent, the nervous less marked, though instances of severe neuralgic pains during the attack and of much depression afterwards have not been wanting.

BOVINE TUBERCULOSIS.

The importance of the relation of bovine to human tuberculosis is gradually becoming recognised; but the disease in the cow has itself great economic significance, apart from the fact that it may be a source of danger to the human being. Measures dealing with the disease are being discussed in many different countries, and relate to two different aspects of the subject, namely, what means are to be adopted for preventing the transmission of the disease to the human being by means of meat and milk, and what are those which can be recommended for exterminating the disease in cattle. The latter includes the former, since if the disease is exterminated, infection from meat and milk ceases. But is it practicable? The French Minister of Agriculture proposes to bring forward a measure which provides for the compulsory slaughter of every obviously tuberculous animal; for the compulsory testing by tuberculin of suspected animals, and the subsequent slaughter if the reaction is positive; partial compensation being allowed for animals killed. In a large agricultural country such a compulsory measure, as the *Journal of Comparative Pathology and Therapeutics* points out, would be very expensive, the cost for the first year amounting to £200,000. There are some who advocate the Danish system, the essence of which is a voluntary testing and slaughtering or isolation of tuberculous animals, the Government defraying the expense of the tuberculin and the testing. The sixth International Veterinary Congress, held at Berne, voted against the Danish system and against the other suggestions which were made. Perhaps the time is not yet ripe, from a broad political point of view, for the extermination of bovine tuberculosis by radical measures. But there is no doubt that expense ought to be no great obstacle, since the result obtained would greatly improve the breed of cattle as well as their utility to man in the quality of the milk and meat which they afford. A more practical view of the matter to take, before this extermination is decided upon, is to learn the danger to mankind from the consumption of tuberculous meat and milk, and this might certainly be accomplished to a great extent by the Government.

CONTAMINATED OYSTERS.

A number of ladies and gentlemen—probably about twelve—who attended the Stirling County Ball on October 1st, have since been seized with typhoid fever, the result, it is alleged, of eating contaminated oysters. Three deaths have now occurred as a result of this more or less mysterious affair. Perhaps the assumption that oysters were the cause is hasty and premature. There are possibilities of fallacy, and these must be carefully excluded before a correct judgment can be reached. The matter is being thoroughly investigated by the various authorities concerned.

MR. CHAPLIN AND THE ISLINGTON GUARDIANS.

We are glad to learn that Mr. Chaplin, the President of the Local Government Board, has promptly directed his attention to the subject of the treatment of children detained in the Islington Workhouse under remand from the police-court, and has taken steps to remedy the serious neglects therein found by Sir John Gorst and Mrs. Barnett when they recently visited the Cornwallis Road Workhouse of that parish. It will be remembered that according to Mrs. Barnett's published statement they found six boys in a room 15 feet square, without tables or chairs, eating their dinners on the floor; for washing purposes a pail was brought in. In this ward the boys lived, ate, and slept, sometimes for three weeks and sometimes longer. In the week previous to the visit there were fifteen lads sleeping there, three in a bed. The girls were no better off. On these facts being brought to the attention of Mr. Chaplin, he at once sent an inspector to visit the workhouse, and arranged that the existing state of things should be immediately remedied, and it was promised that this should be done, and it was, we believe, carried out on October 25th, the complaint having been made on the 23rd. The Local Government Board in communicating with the Board of Guardians on the subject, informed them that although they recognised the difficulty in which the guardians may have been placed owing to want of adequate workhouse accommodation in the parish, which has been so long under consideration, they felt that a very grave responsibility rests with the guardians, and especially with the Visiting Committee of the workhouse, for having permitted such arrangements to be made with regard to the children referred to whilst detained in the workhouse as have been shown to have existed. The guardians have stated in a letter to Sir John Gorst that this class of children has always given them much trouble and has been difficult to deal with. The guardians have pointed out

that the Industrial Act of 1866, under which these children are sent to the workhouse, was passed before the School Board came into existence. Now, however, many of these children are in custody through the action of the School Board officers, and the workhouse is not the proper place for them. The guardians are of opinion that they ought to be remanded to the truant schools of the School Board, where there would be proper provision for their care and control at a small expense. Mr. Chaplin may be congratulated, and certainly deserves credit, for the promptitude and efficiency of his action in this respect, and Mrs. Barnett will have the satisfaction of knowing that her visit, and the prompt action of Sir John Gorst and herself, have had an immediate and most beneficial effect.

THE GENERAL MEDICAL COUNCIL.

We understand that—as a circular letter addressed to the members of the General Medical Council elicited the fact that in the opinion of a minority, large enough to possess the statutory power to demand a meeting of the Council, it was desirable to hold a meeting at the usual date in November—it has been determined to summon a meeting on November 26th. It is intended that the Committees shall meet at the Council Office in Oxford Street, but the full meetings of the Council itself will be held at the Royal College of Physicians. This will be, we believe, the thirteenth occasion on which the College has extended this hospitality to the Council. Judging from the amount of business which, so far as is at present known, is likely to come before this meeting, the session will not, in all probability, be prolonged. Certain penal cases adjourned from last May will come up for consideration, and a few new cases may be submitted by the Penal Cases Committee, but the most important item of business is an application from the Apothecaries' Hall of Ireland for the appointment of assistant examiners in surgery, and a communication from the Privy Council as to the continuance of the Conjoint Board between the Royal College of Surgeons and the Apothecaries' Hall of Ireland for the purpose of examining candidates who have already passed part of the examinations and may be preparing for the remainder. Reports from the Visitors and Inspectors of examination will probably be ready for presentation, as also the report of the Inspector of Public Health examinations.

DR. HERZ.

The following is an authentic report of the recent and present condition of Dr. Herz. Dr. Frazer and Dr. Lauder Brunton saw Dr. Herz together on October 22nd. On examining the heart the apex was not felt, and the cardiac dulness was normal; but there was a loud, double, bellows murmur over the aorta, the systolic part of it being propagated up towards the clavicles; and the diastolic part, which was loud and prolonged, was propagated down the sternum almost to the nipple. At the apex there was a loud, twangy systolic murmur, and there was a great deal of tenderness over the area round the apex. The anginal pain, which has been so severe, had somewhat shifted its position, being less severe towards the apex and more severe and more continuous at the base of the heart. The pulse was from 80 to 84, and was irregular, the pulse rate varying in successive minutes. The arteries were seen to be locomotive, the locomotion being very well marked in the radial artery between the finger and thumb, and in the dorsal arteries of the feet. The spleen was enlarged, the splenic dulness being three inches and a-half in the axillary line, and the spleen itself very tender. The liver was also tender, but normal in size. The patient feels faint on sitting up, and, in addition to the anginal pain, suffers greatly from pain in the head, which was located on the left side in the upper parietal region. He has also a feeling of great constriction round the neck. The extremities are very cold, requiring the constant application of hot-water bottles, and the left leg is markedly colder than the right. Vomiting has been very troublesome. A report to the effect that it was impossible for Dr. Herz to travel without great danger to his life was sent to France, supported by the medical authorities who had seen Dr. Herz before—namely, Sir Russell Reynolds, Sir Richard Quain, Sir William Broadbent, Sir George Johnson, Professor Ferrier, and Professor McHardy. Since the 22nd Dr. Herz has not been so well, and his heart symptoms have been very distressing.

COST OF THE RECENT ANNUAL MEETING.

The Honorary Treasurer's balance-sheet has been printed, and a copy forwarded to each of the 922 subscribers to the Arrangement and Reception Fund. The nett receipts figure at £4,396 2s. 3d., and are comprised under three heads, namely: Subscriptions, £3 269 4s.; surplus from museum account, £1,122 15s. 8d.; and interest on deposit, £4 2s. 7d. Excluding the 300 guineas contributed by the Metropolitan Counties Branch, the other 921 subscriptions average the large sum of £3 4s. each. The nett expenditure is £2,613 4s. 11d., and the balance remaining in the treasurer's hands, after payment of all expenses, is as much as £1,782 17s. 4d. The Executive Committee has consequently resolved to return at once to every subscriber one-half of his or her subscription. This procedure, involving an outlay of about £1,674 12s., will still leave an estimated surplus of about £108, the disposal of which will rest with the General Committee.

DIPHTHERIA IN LONDON.

The mortality from diphtheria in London showed a marked increase during last week. The deaths referred to this disease in the metropolis, which had been 56, 76, and 61 in the three preceding weeks, rose again to 72 during the week ending Saturday last, November 2nd. This is, with one exception, the highest number recorded in any week for nearly two years, and about double the corrected average for the corresponding weeks of the ten preceding years. Only 4 of the 72 deaths from diphtheria last week were of persons above the age of 20 years; 35 were of infants and young children under 5 years of age, and the remaining 33 deaths were nearly all of children between 5 and 10 years of age. After distributing the deaths that occurred in the Metropolitan Asylums Hospitals and other institutions to the sanitary areas to which the patients belonged, it appears that diphtheria was proportionately most fatally prevalent in West London, 5 deaths being recorded in Kensington, 4 in Hammersmith, and 4 in Chelsea sanitary areas. Three cases belonged to Hampstead, 7 to Islington, 4 to Mile End Old Town, 5 to Battersea, and 9 to Greenwich sanitary areas. There were 671 cases of diphtheria under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, November 2nd, against 659, 667, and 675 at the end of the three preceding weeks; 102 new cases were admitted during the week, against 115 in each of the two preceding weeks.

SIR THORNLEY STOKER.

On November 2nd Sir Thornley Stoker, President of the Royal College of Surgeons in Ireland, was entertained at dinner in the College by a large number of his professional friends. The special object of the demonstration was to offer their congratulations on his having recently received the honour of knighthood. About 150 persons sat down to dinner. The chair was occupied by Sir Charles Cameron, and there were also present the Right Honourable the Lord Mayor, the Right Honourable C. R. Redington, the Right Honourable J. M. Meade, Sir John Banks, K.C.B., Sir Edward Sullivan, Bart., Sir Christopher Nixon, Mr. W. Thomson (Vice-President of the College), Dr. Woodhouse, Mr. Swanzy, Professor Bennett, Mr. C. B. Ball, Mr. Maldon, Mr. Jacob, Mr. Lentaigne, Professor Cunningham, Mr. Chance, Dr. Tichborne, Mr. Heuston, Mr. Kendal Franks,

Mr. Story, and Mr. Nixon. The toast of "The Guest" was proposed by the Chairman in very eulogistic terms, and was received with great enthusiasm. Sir Thornley Stoker replied in an exceedingly graceful speech, which concluded in these words: "I accept the sign of your friendship and esteem. I leave here chastened and full of hope and resolve. You have given me a clean leaf on which to write my life in its future relations with those among whom I live and work. I pray that the page may be unsoiled by error or misdeed, and may be worthy of the trust you repose in me." Professor Cunningham proposed "The city we live in," and this toast was responded to by the Lord Mayor.

THE DEFICIENCY OF ACCOMMODATION IN THE METROPOLITAN ASYLUMS BOARD HOSPITALS.

Reference was made in the British Medical Journal of November 2nd to the recommendation of the Sanitary Committee of the Marylebone Vestry that a conference should be convened with the object of considering the question of hospital provision for cases of infectious disease in London. At a recent meeting of the Vestry of St. George the Martyr, Southwark, the failure of hospital accommodation was the subject of report by the medical officer of health. Dr. Waldo stated that "The greatest number of cases refused admission on a single day during the two weeks under report was seven, five of whom suffered from scarlet fever and two from diphtheria. Of this number—living with parents, brothers, and sisters—three dwelt in one room, two in two rooms, and two in three rooms." Dr. Waldo suggested the need for a more careful selection of cases removed to hospital by the Asylums Board, and the further need for the "speedy erection on the sites already acquired of increased accommodation to meet the requirements of the sanitary authorities."

ECCE ITERUM—MISS COBBE!

It will be remembered that the result of Miss Frances Power Cobbe's last battle with the physiologists was that she fled from the field *relictâ non bene parmulâ* (in the shape of Dr. Berdoe). Since then Miss Cobbe's attitude towards the physiologists has been that of Sir Andrew Aguecheek towards the antagonist whom he had rashly defied: "Plague on't! An I'd have thought he was valiant and so cunning in fence I'd have seen him damned ere I'd have challenged him!" But her spirit is as truculent as ever, and looking about for some feebler folk on whom to avenge her defeat with safety she has lighted on certain Jesuit professors. These theological doctors seem to have been imprudent enough to hint that after all man is of more account than many sparrows, and Miss Cobbe straightway cursed them with a vigour which St. Ernulphus (whose comprehensive malediction may be found set forth at length in *Tristram Shandy*) might have envied. In the *Contemporary Review* for November she is gently but firmly dealt with by Father Tyrrell, S.J. The Church of Rome is not generally credited with any excess of zeal for the cause of science, and we can hardly hail Father Tyrrell as a whole-hearted ally, inasmuch as while allowing the right of vivisection in the abstract he ranks himself with the antivivisectionists in the concrete. He has evidently no patience, however, with the perverted sentimentalism which makes the health of a guinea-pig a more sacred thing than the life of a child. For this expression of a purely academic opinion Miss Cobbe subjects him to a process which may be termed moral vivisection. Father Tyrrell complains that in the discussion of a question which is purely philosophical she has industriously gone out of her way on every available opportunity to vilify his religion, and to say everything that could be most offensive to him as a Catholic, a priest, and a Jesuit. Miss Cobbe wields her pen with all the cruelty that she falsely attributes to vivisectors; she writes with the purpose of inflicting pain, and too plainly takes a pleasure in doing so. Fortunately the torture is not applied scientifically, and the toxins of her rancour hurt herself more than her intended victims. We thank Father Tyrrell for teaching us the word "zoolatry," which exactly expresses the state of mind of the antivivisection fanatic who makes the feelings of animals the object of a tender regard which he is far from showing for those of men.

"MASSACRE OF THE INNOCENTS."

Under the above title the *Sun* has been doing excellent service by publishing a series of statements and communications tending to show the facility with which illegal abortion can be procured, the methods by which it is done, and the manner in which so-called "stillborn" children can be disposed of. No doubt there is a considerable amount of truth in the statements made respecting these matters, and the evidence lately given before the Certification of Death Committee of the House of Commons revealed the defects in the law which our contemporary so prominently brings to public notice. In pursuing inquiries on these subjects, much care and caution have to be exercised, otherwise too much zeal in the course adopted may lead to erroneous conclusions and the publication of unreliable reports. We notice that Dr. Ady, of Brixton Hill, on behalf of himself and his daughter, Mrs. Graham, has written a trenchant letter to the editor of the *Sun* of November 5th, in which, after alluding to the visit they received from certain persons, who reported thereon, he says that "the narrative as given was a distinct perversion of the truth from beginning to end," and he further requests "that, in common justice to himself, prominent publicity should be given to his communication." This, we are glad to record, has been done. As we understand, the police authorities have been made fully acquainted with details, and that inquiries are still pending, we refrain at present from further comments.

A CONVALESCENT HOME FOR MIDDLE-CLASS CHILDREN.

At the invitation of the trustees of the Yarrow Home a large party visited Broadstairs on October 26th to inspect that institution. The Home has been founded and endowed for the benefit of children recovering from illness, who may be expected to derive permanent advantage from a temporary stay at the seaside. They are admitted irrespective of nationality or creed, but a certain degree of social selection is enforced, it being stipulated that their home-training shall have been such as to make them fit companions for other respectable and well-mannered children. In considering the best direction in which to devote a large sum of money in the most useful manner for the benefit of children, it was felt that the wants of the very poor were already to some extent provided for by existing agencies, but that there were many people of very limited means, but at the same time highly respectable, too sensitive and self-respecting to seek help from ordinary charities or to let their wants be known outside their own circle, who in time of adversity suffer much privation, and whose children lack many of the aids to recovery after illness which are open to those who are either above or below them in the social scale. It was deemed that the granting of assistance to such people, by providing a seaside home for their children when in weak health or when recovering from illness, would be one of the best directions in which a benefaction could be applied. Hence the erection of this convalescent home for the reception of fifty boys and fifty girls of the class mentioned. As examples of the class for which it is provided the prospectus mentions "the children of the minister of limited means, the widow who had seen better days, the unsuccessful professional man, the struggling artist, the clerk with a small income, the skilled foreman—all of whom are under the obligation of maintaining a respectable appearance on very limited means." Every precaution will be taken to exclude children carying infec-

tion, and the institution is not to be used as a holiday resort, nor for children suffering from incurable complaints, nor are patients requiring active medical treatment to be admitted. The land on which the building stands is situated on the south side of Broadstairs, and has an area of over ten acres, and although it does not actually touch the sea front, control has been secured over all intervening land, so that it shall not be shut in. The building is a handsome structure, with plenty of air and light, and provided with ample space in its corridors, verandahs, and play rooms for amusement and variety, even in bad weather. Provision is made for warming the air in the corridors, lavatories, and bath rooms, by hot-water radiators, so as to make it a comfortable residence in the winter months. It is evident that the planning of the building has been a matter of very anxious consideration, and that Mr. Yarrow and his able architect, Mr. Barrow Emanuel, have spared no pains in the endeavour to make the institution perfect in every detail; and although there are various points in regard to which it would not be difficult for those accustomed to hospital construction to suggest alterations, perhaps improvements, the results of the architect's efforts have been the production of a building which is on the whole admirably suited to its purpose, and one could not but feel how much better off a convalescent child would be in such a home, at the nominal cost of 5s. a week, than in the ordinary seaside lodgings to which it would otherwise be committed, even if it got to the seaside at all. At the termination of the inspection of the buildings, Mr. Yarrow explained that one of his objects in asking medical men to visit the institution was that they might see for themselves what sort of a place it was, and the sort of patient to whose use he wished it to be devoted, for he felt sure that none knew so well as doctors of those hard cases for whose benefit it was intended. Sir William Broadbent afterwards spoke as to the necessity of such an institution, and expressed the high appreciation of those who had seen it of the well-directed generosity which had led to its erection and endowment.

REGIUS PROFESSORSHIP OF SURGERY IN DUBLIN.

The Academic Council of the University of Dublin met on Wednesday, November 6th, to elect a Regius Professor of Surgery, in succession to the late Sir George Porter, Bart. There were three candidates, and the voting ultimately resulting in a tie between Dr. Ball and Sir W. Stokes, the Provost's casting vote was given to Dr. Ball, whom he declared nominated to the Board for election. It appeared, however, that it would be necessary to consider a technical point which was raised, and the meeting was accordingly further adjourned to Friday, November 8th.

THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

We are glad to find that the arrangements which have been made by the honorary librarian to obtain and preserve in the Library of the British Medical Association a complete set of the theses presented and sustained at the Medical Faculty of Paris are becoming more and more valued as the existence of the collection becomes better known. The intrinsic importance of the theses varies very greatly, but it is rare to find one which does not possess at least some temporary value. Very frequently, on the other hand, these essays are of great practical importance. Owing to the system commonly followed in Paris a thesis frequently embodies the practice and matured opinion of some one or more of the leading teachers of the Paris hospitals, the custom being for the professor to assign to some promising pupil, who has reached the stage in his academical career when it is necessary to produce a thesis, the duty of working up some particular point in pathology or in therapeutics. These points are sometimes, no doubt, very minute, but the work is as a rule very thoroughly done, and the inquirer, who finds an extensive, if not complete, bibliography of the subject, will not ask too curiously whether it is due to the industry of the aspirant or of somebody else, some convenient "ghost." The fact remains that a collection of these theses is a mine of information on topics of current medical and surgical interest. We believe that nowhere in London, and probably nowhere in the United Kingdom, can a complete set of these theses for recent years be consulted except in the Library of the British Medical Association. The set for the academic year 1894-95 is now complete: it comprises 537 theses as compared with 547 in the previous year. The index of authors and subjects prepared at the end of each year has now been issued for 1894-95, and has been placed in the Library.

PROFESSIONAL DEFENCE.

On November 2nd, Dr. C. J. Allan, Lasswade, was the recipient of a very gratifying testimonial from a large body of the profession in Scotland, and of the public in his district, in connection with his successful and public-spirited resistance to a lawsuit under circumstances which have been more than once referred to in the British Medical Journal. The proceedings were held in the Town Hall of Bonnyrigg and the meeting was presided over by the Provost of the place. After referring to Dr. Allan's integrity and devotedness to work, and the nature of the attempt made to damage his good name, the Chairman, on behalf of a large body of subscribers, asked Dr. Allan's acceptance of a surgical dressing case, along with a cheque for some 200 guineas. Thereafter a deputation from the Edinburgh Branch of the British Medical Association was introduced, consisting of Dr. R. W. Philip, Honorary Secretary, and Dr. P. A. Young. The latter gentleman, who had been an old class-fellow of Dr. Allan's, presented him in the name of his colleagues in the Edinburgh and other Branches of the British Medical Association, with a cheque for close on £100. This was followed by a further gratifying testimonial from Dr. Allan's professional brethren in the immediate neighbourhood of Lasswade, which had been subscribed to with remarkable unanimity and cordiality. Dr. Allan, in a frank and modest reply, said that he had not in the present instance fought solely for his own hand. He felt that if he had drawn back he would have played a coward's part in respect of the interests of the profession at large. Thereafter Mrs. C. J. Allan was presented with a tea and coffee service by Mr. A. P. Purves, W.S., on behalf of a number of friends, as a token of their appreciation of her untiring co-operation with her husband in every movement affecting the interests of the people of the district.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

The Berlin correspondent of the *Times* states that the official statistics of the cases of diphtheria treated by the antitoxic serum which have just been published, give some interesting details as to the success of the new method. The investigation of this subject was set on foot by the Ministry of Medical Affairs, which addressed its inquiries to physicians, both in public and private practice. Answers to the number of 1,349 were returned dealing with 6,626 cases, of which 2,460 were treated in hospitals. Out of the total of 6,626 patients, 86.5 per cent. recovered, and 12.9 per cent. died, while the remainder were still under treatment. Of the hospital patients 80 5 per cent. recovered, and 19 5 per cent. died. The mortality was highest (34 per cent.) in the Government district of Liegnitz, and lowest (7 per cent) in that of Munich. In 4,871 cases the physicians expressed their views as to the value of the antitoxic serum. In 55.6 per cent. of these cases the remedial effects of the serum are characterised as certain, and 30 8 per cent. as probable, while in 13 6 per cent. the method apparently produced no effect. The serum was described as "decidedly harmful" in only 60 cases, of which 42 recovered and 18 died, and as "innocuous" in 4,544 cases. In these 60 cases the patients

suffered from cutaneous eruptions, albuminuria, pains in the joints, disturbance of the heart's action, nephritis in three cases, and general debility. It is not, however, believed that the inquiry has proved that such symptoms are of more frequent occurrence in consequence of the antitoxic treatment, though cutaneous eruptions and pains in the joints may, it is thought, be looked upon as likely to accompany the method. The authorities have come to the conclusion that the treatment with the serum exercises a favourable influence on the course of the disease, and that a continued employment of it is justified.

A FRESH ENCROACHMENT.

The number of attempts which are now being made in various directions to curtail the liberty and diminish the modest emoluments of the medical profession is extraordinary. The latest is not one of the least audacious. The Portpatrick Parish Council advertised recently for a Parochial Medical Office and Public Vaccinator, at the munificent salary of £40 a year. Among the conditions attaching to the appointment was the following: "He shall attend private patients at the scale of fees fixed by the Parish Council, copy of which can be obtained from the Clerk." The attention of the Local Government Board for Scotland was called to this proviso as to private fees for cases, and we have before us a letter in which the Secretary to the Board states that "the parish council are not entitled to dictate to their medical officer what fees he is to charge his private patients." The parish council have now rescinded the resolution as to the scale of fees for private patients, but the fact that such a proposal has been made officially is a sign of the times, which is rendered the more serious by the fact, which we quote on the authority of the *Eastern Morning News*, that no fewer than twenty-two legally qualified medical men were candidates for the appointment, apparently under the conditions as originally advertised. Our contemporary adds: "It would appear that the competition amongst medical men is so severe that even these hard conditions do not prevent a rush of applicants for an ill-paid post. Yet one reads that there are 2,000 medical students attending the lectures at Edinburgh University this session. Where are they all to find employment?"

NEGLIGENT SALE OF POISONS.

The steps taken during the last two or three years by the Pharmaceutical Society, and also by the police authorities, to enforce observance of the law relating to the sale of poisons cannot fail to be productive of benefit to the public by lessening the danger of accidental poisoning and even helping to prevent the misuse of poisons for suicidal or other unlawful purposes. The propriety of restricting the sale of poisons, and even of potent medicinal preparations to the hands of persons possessing special knowledge of their dangerous nature is so obvious that the argument against this restriction on the ground that it confers a monopoly of the supply of poisonous articles is not worth consideration. It is not for the benefit of chemists and druggists that the sale of poisons has been placed exclusively in their hands, but solely for the public good. At the same it is essential that the persons who are authorised by law to sell poisons should be scrupulously observant of the precautions which the Legislature has held to be requisite in dealing with poisons. Labelling and the registration of sales in the poison book ought always to be strictly carried out by them. That this is not always done appears from the evidence given at two recent inquests held by Dr. Danford Thomas and Mr. Braxton Hicks. In one case cyanide of potassium was sold, and in the other a vermin killer containing strychnine, but neither of the sellers kept a poison book, or registered the sales in the manner directed in the Pharmacy Act. This is negligence of a kind that the Pharmaceutical Society would do well to take cognisance of, not only because of the danger attending it, but also because it might be made use of as an argument against the restriction of the sale of poisons to chemists and druggists. Fortunately neglect of this kind constitutes an offence which can be dealt with by the police authorities independently of the Pharmaceutical Society, and it is highly desirable that the provisions of Section 17 of the Pharmacy Act should be made use of when occasion arises.

ABSTINENCE AND SAFE RAILWAY TRAVELLING.

Over a million of men are employed on the railways in the United States, and of late years there has been a growing feeling on the part of railway directors and managers to promote the sobriety of the men by official measures. The most thoroughgoing action is that of the Chicago and Alton Company, one of whose rules is that any conductor, trainsman, engineer, fireman, switchman, or other employee who is known to use intoxicating liquors will be promptly and permanently discharged. Several other companies have a similar rule. Nearly all the leading American railroads forbid the sale of intoxicants at restaurants on the line, and forbid their employees to enter a drinking saloon. These rules have been rewarded by the increased safety of the passengers as well as of the employees, the health, activity, and efficiency of the latter having improved by the increase of abstaining practices.

COUNTY SANITARY SURVEYS.

A report recently issued from the pen of Dr. W. Williams, the county medical officer of health for Glamorganshire, on a sanitary survey of the county carried out by himself, is worthy of especial notice, and calls for great commendation as a piece of county work of a high order of merit. With the beneficial effects of the cholera sanitary survey conducted during recent years by our State Department of Public Health at Whitehall most of our readers are fully aware, and the effect has been of a far-reaching nature, since the surveys have been of a practical character that appealed to all sanitary bodies who had the good of their areas of jurisdiction at heart, and seemed well fitted to meet the needs of a variety of districts, especially in so far as the scope of their recommendatory portions was concerned. But even so, this State survey did not cover the whole of England and Wales, or anything like it. We are wondering whether, for example, it more than touched the fringe of Glamorganshire, and in these circumstances Dr. Williams has done wisely in his decision to go through his county, district by district, in much the same way as did the officers at Whitehall in their round of inspections. The method of his reports says much for the plan of campaign adopted, and certainly he has amassed an array of well-marshalled facts which will be of the greatest possible help to him and his Council in future dealings with the constituent authorities of the county. He treats of each district from the point of view of past sanitary history, so far as records show it, and then, coming to quite recent times, he sets forth sanitary conditions more or less immediately prior to his own survey, and concludes with an account of the district as he found it at the time of his special visit. We venture to think also that the report is a document which will be helpful outside as well as inside the county, and trust it is but the precursor of many another. Indeed we would wish to see each county health officer setting about the accomplishment of a like task, and carrying it out in the same liberal-minded manner and the same painstaking efficiency. If each county had but its proper equipment in the shape of a medical officer of health, and he had compassed such a piece of work as is now in question, our country would be in possession of such information as would enable the authorities, both local and central, to lay hands at once upon any spot where inherent dangerous defect prevailed, and thus ease the way for any drastic remedy which seemed to be called for.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at 429, Strand, on October 23rd.

Present:

Mr. ERNEST HART, in the Chair.

Dr. J. WARD COUSINS, President of Council.

Dr. S. H. AGAR (Henley-in-Arden).
Dr. D. B. BALDING (Royston).
Dr. R. W. BATTEN (Gloucester).
Mr. GEORGE BROWN (London).
Dr. J. S. CAMERON (Leeds).
Dr. W. A. CARLINE (Lincoln).
Dr. W. F. CLEVELAND (London).
Mr. GEORGE EASTES (London).
Mr. E. H. GALTON (London).
Dr. BRUCE GOFF (Bothwell).
Mr. J. D. HARRIES (Shrewsbury).
Mr. J. H. HEMMING (Kimbolton).
Dr. C. HOLMAN (London).
Mr. EVAN JONES (Aberdare).
Dr. W. J. MICKLE (London).
Dr. C. H. MILBURN (Hull).
Dr. J. W. MILLER (Dundee).
Mr. C. H. WATTS PARKINSON (Wimborne Minster).
Dr. H. H. PHILLIPS-CONN (Reading).
Dr. G. E. SHUTTLEWORTH (Richmond Hill).
Dr. R. SOMERVILLE (Galashiels).
Mr. C. T. STREET (Newton-le-Willows).
Mr. J. TAYLOR (Chester).
Mr. T. J. VERRALL (Brighton).
Dr. W. L. WINTERBOTHAM (Bridgwater).
Dr. S. WOODCOCK (Manchester).

Letters and telegrams of apology for non-attendance were received from Dr. Bridgwater, Dr. A. J. Harrison, Mr. Victor Horsley, Mr. Jones Morris, Dr. Murphy, Dr. James Ritchie, Mr. D. Spanton, and Dr. Urquhart.

The resolution of the annual meeting appointing the Committee was read.

On the motion of Dr. CLEVELAND, seconded by Mr. GALTON, Mr. Ernest Hart was reappointed Chairman of the Committee.

The minutes of the last meeting were confirmed.

The CHAIRMAN said the first things they had before them were resolutions of the annual meeting referred to the Committee that day from the Council. The first item was the following resolution:

That in the opinion of this meeting it is expedient that an Act of Parliament should, as soon as possible, be passed providing for the registration and education of medical, surgical, and obstetric nurses; and the Council of this Association are therefore requested to consider this matter, and to take such measures as may seem to them advisable to obtain such legislation.

The Council having referred the matter to them, he thought that before the Committee could with advantage take any practical steps in the matter it would be very necessary to ascertain the opinion of the various nursing bodies. He thought the best way to enable the Committee to form an opinion was that the representatives of the nursing bodies should be invited to attend a conference, when the whole matter could be discussed.

After a good deal of discussion it was proposed by Mr. C. H. WATTS PARKINSON, seconded by Dr. WINTERBOTHAM, and carried unanimously:

That the Chairman be instructed to call a conference of the representatives of the various nursing bodies, to obtain the opinions and ascertain their views on this subject.

The next item for the Committee was the following resolution of the general meeting.

We also instruct the Council to take immediate steps to have Section 20 of the Metropolitan Poor Law Act, 1869, repealed, which prevents workhouse infirmaries from being used for the clinical instruction of medical students in practical midwifery, while pupil midwives are now admitted; and also to petition the committees, medical staffs, and, if need be, the subscribers to the City of London Lying-in, the British Lying-in, and the Clapham Maternity, to withdraw their rule which excludes male medical students from clinical instruction at these hospitals, seeing that these are now used by pupil midwives.

The best plan would probably be to adjourn their action in this matter until they got further information on the points. They did not know the precise wording of the rules of the various institutions. If the matter was adjourned, they could get information and copies of the rules of the various institutions, which could be sent out to the Committee for their information, and the matter could be discussed at the next meeting.

The recommendation of the Chairman was approved.

The CHAIRMAN said that the following resolution, which was passed in the Public Medicine Section of the recent annual meeting, had also been referred to the Committee:

That in the opinion of this Section, and in view of the fact that the Royal Commission on the effect of tuberculous food on human health by the terms of their appointment were restricted to tuberculosis, it is desirable that a Royal Commission be appointed to consider the whole question of meat supply and inspection, and that a copy of this resolution be sent to all the Ministers of State.

He said that the matter was a very serious one affecting the public health, and he proposed that representations on the subject should be made to the Presidents of the Local Government Board and of the Board of Agriculture.

It was proposed by Mr. HEMMING, seconded by Dr. SPOTTISWOODE CAMERON, and resolved:

That the Chairman be requested to make representations to the effect of the resolution passed in the Public Medicine Section of the recent annual meeting to the Presidents of the Local Government Board and the Board of Agriculture.

The CHAIRMAN said the next item for the Committee was the following resolution, also passed in the Public Medicine Section of the annual meeting:

That this Section desires to reiterate the opinion which has been expressed at previous meetings of the Association, that the interests of the public, no less than the just demands of medical officers of health, require that the same security of tenure which is enjoyed by medical officers of health of the metropolis and Scotch counties and Poor-law medical officers should be conceded to medical officers of health, and requests the Parliamentary Bills Committee to take such steps as may be expedient to bring this matter under the notice of the Local Government Board, with the hope that the Committee will see their way to print and circulate Dr. Whitelegge's address as an excellent summary of the merits of the question, together with an abstract of the discussion.

The Committee would remember that a deputation from the Committee went to the President of the Local Government Board on the subject. It was received by Sir Walter Foster, who received the suggestions very favourably in a general sense, but he pointed out that the power was not in the hands of the Local Government Board, but the sanitary authorities. Probably the best course to adopt would be to renew that deputation, since there was a new Government in power.

After some discussion it was proposed by Dr. WARD COUSINS, seconded by Mr. GEORGE BROWN, and resolved:

That the President of the Local Government Board be requested to receive another deputation on the subject of the tenure of office of medical officers of health.

The CHAIRMAN said he had received a letter from Mr. Victor Horsley, stating that as the Subcommittee to which the Amendments of the Medical Acts and the Midwives Bill had been referred had not met since the last meeting of the Committee owing to the vacation, he had nothing further to report.

Dr. WOODCOCK said the Subcommittee had drafted another Bill for the registration of midwives, which had been referred to the Branches for their opinion and the Subcommittee were still awaiting those opinions.

Dr. WARD COUSINS (President of Council) said seeing that the Registration of Midwives Bill, which was before Parliament, had been withdrawn, would it not be well to wait until they had some other Bill on the subject before Parliament for the Committee to act?

Dr. WOODCOCK said, to a large extent, the Committee succeeded in getting the last Bill withdrawn on the promise that the attention of the profession would be drawn to the subject, and likely to give the Legislature some guidance in the matter. The Lancashire and Cheshire Branch had appointed a Committee to consider the matter, and they had commenced the revision of the Bill, making certain alterations, additions, and amendments, and they hoped to present something which would be acceptable to the profession and the public.

On the motion of Dr. WOODCOCK it was resolved:

That the following subcommittee be appointed to take over the same reference as the previous subcommittee, and be requested to consider

any resolutions of the general meeting or of Branches referring to the Midwives Bill, and to report thereon: The Chairman, Dr. Bateman, Dr. Batten, Mr. George Brown, Dr. Spottiswoode Cameron, Dr. Galton, Mr. Victor Horsley, Mr. Evan Jones, Dr. Milburn, Dr. Shuttleworth, Dr. Somerville, and Dr. Woodcock.

NURSING IN PROVINCIAL WORKHOUSE INFIRMARIES.

The CHAIRMAN said that, as a new Government had come into power, he thought that it would be very desirable that they should call the attention of the President of the Local Government Board to the question of nursing in workhouse infirmaries which had been dealt with in the reports of the JOURNAL. The Committee would remember that they had a letter from Mr. Shaw Lefevre promising that the whole matter should be carefully considered, and a great deal of good had been done by the Local Government Board and its inspectors taking up the question; and if an abstract of facts was now sent to the new President it would be very useful.

It was proposed by Dr. SHUTTLEWORTH, seconded by Dr. MILBURN, and resolved:

That an abstract statement relating to the administration and nursing of provincial workhouses be sent by the Chairman to the President of the Local Government Board, and to ask his attention to the same.

CASES OF GRIEVANCE.

The CHAIRMAN said they had next to consider certain cases of grievance which had been brought to the notice of the Committee. The first was that of Surgeon-Captain J. F. S. Fowler, who was forced to resign his commission under painful circumstances. He happened to be present at the committing of an act of indecency by some young militia officers; he interfered to stop it, and, as a matter of fact, did stop it, but he did not report the matter, as he did not consider it his duty to do so, medical officers having no disciplinary power over combatant officers. Moreover, the senior captain of the regiment was present. Dr. Fowler had, however, been forced to resign his commission for not reporting the occurrence. He (the Chairman) had all the papers of the case, and was inclined to think that Surgeon-Captain Fowler had been very hardly used. The Committee would remember that on a previous occasion when there were grievances of army medical officers before them, they referred the matter to a Subcommittee of Surgeon General Cornish, Mr. C. N. Macnamara, and himself, to consider all the facts and take what steps they thought necessary; and perhaps they would refer this matter to the Subcommittee, adding to it the name of Deputy Surgeon-General Don.

On the motion of Dr. SOMERVILLE, seconded by Mr. GEORGE EASTES, it was resolved:

That the case of grievance of Surgeon-Captain Fowler be referred to a Subcommittee consisting of the Chairman, Surgeon-General Cornish, Mr. C. N. Macnamara, and Deputy Surgeon-General Don, with power to take what steps are deemed necessary, and, if necessary, to get some member of Parliament to bring the matter up in the House of Commons.

The next case was that of Surgeon Francis J. Lea, late a medical officer of the Royal Navy, who was dismissed the service after trial by court-martial on April 30th of the current year on a charge of "insubordination and contempt." The facts of the case were set forth in the BRITISH MEDICAL JOURNAL of June 15th, 1895. Mr. Lea had further sent a summary of the case to the individual members of the Committee. He was anxious that the Parliamentary Bills Committee should send a letter to Mr. Goschen, and particularly wished that the medical aspects of the case should be brought to the notice of the naval authorities, which Mr. Lea believed had never been done. He looked upon the captain as being in a state of health that made it dangerous for him to be in active command of the ship, and accordingly placed him on the sick list. For this he was tried by court-martial, and dismissed the service. Several members of Parliament considered that Mr. Lea had been very badly treated. Mr. Lea was particularly anxious that the case should be submitted to an expert in mental diseases. This was a case which the Committee might also refer to the Subcommittee, adding to it a lunacy specialist, Dr. Mickle.

The proposal of the Chairman was approved.

The next case was that of Surgeon-Major Gardner, whose case was referred to a Subcommittee of the Parliamentary Bills Committee. Surgeon-Major Gardner asks that their recommendations should now be submitted with the view of pressure being brought upon the Secretary of State for War to reinstate him.

The last case was that of Dr. Lionel Smith, which had already been several times alluded to in the BRITISH MEDICAL JOURNAL, Dr. Smith now suggested that the Committee should again write to the Secretary of State for the Colonies. Dr. Smith thought that Mr. Chamberlain's reply was curt and disrespectful to the Committee. He (the Chairman) did not know what further steps they could take.

DEATHS UNDER ANÆSTHETICS.

TRACHEOTOMY IN APPARENT DEATH FROM CHLOROFORM.

DR. F. C. MACNALTY, M.A., M.D. (Winchester) writes: In cases of death from chloroform, the means used to restore animation seem so unavailing that I venture to suggest immediate tracheotomy as a remedy. The instant rush of air into the lungs would act as a great stimulant to the nerve centres which would have the best effect. Those who have performed tracheotomy must be aware of the instantaneous relief it gives, and from my own experience I believe it would set going the functions which are in abeyance.

CHLOROFORM.

Mr. W. H. MALING (Sunderland) writes: I was very glad to see Mr. E. C. Cripps's letter in the BRITISH MEDICAL JOURNAL of October 19th, drawing attention to the fatalities during the administration of chloroform, and had hoped that the seriousness of the matter would have induced others to take it up. On looking through the JOURNAL for this year I find that, including the case given in your last number, 23 deaths under anæsthetics have been recorded, and possibly there are others that are not reported. In all these cases except one, in which the A. C. E. mixture was used, chloroform was the lethal agent. In the place of this record—over two deaths a month—it certainly appears "almost criminal" to persist in administering such a dangerous drug. It seems to me that to a certain number of the profession the idea of giving an anæsthetic is synonymous with the administration of chloroform. Why is this? Why is not ether given more often? There are very few cases in which it is inadmissible, and in the minds of those who have had experience of both anæsthetics there exists no shadow of doubt that it is infinitely safer than chloroform. I feel sure that were every case requiring an anæsthetic to be carefully considered, and unless any grave contraindication to its employment existed, ether were selected in preference to chloroform, the mortality during anæsthesia would be very largely reduced.

Mr. H. LATHAM, Senior House-Surgeon, forwards us the following report of a death under chloroform which took place at the Stockport Infirmary on October 23rd: The patient, a young woman aged 18, was admitted on the previous evening suffering from an extensive empyema of the right side. It was thought advisable to place her under an anæsthetic the next morning for the purpose of relieving her by either resecting a portion of a rib, or by free incision in an interspace and drainage. Consequently on the next day chloroform was administered on a piece of lint. Her breathing before the administration was somewhat embarrassed, but the heart was fairly good. A few minutes after starting the administration the breathing suddenly ceased, the lips became livid, and the pulse was imperceptible at the wrist. Not more than a drachm and a-half had been administered, and not more than four minutes had elapsed from the commencement. The operation had not commenced when the breathing stopped, as the patient had only arrived at the tonic stage. Artificial respiration was kept up for over half an hour without avail; hot cloths were applied to the precordial region, and the battery was freely made use of. As a last resource a knife was plunged into the pleural cavity, and close on two pints of purulent matter came away. The patient gave no signs of recovery from the first.

We have been favoured by Dr. E. M. HAINWORTH with the following report of a case of a chloroform fatality, which recently occurred at the Hull Royal Infirmary on October 15th. H. J., a bricklayer, aged 60, a short, very stout and

thick-necked man, was admitted with a ruptured eyeball, which necessitated excision. He had some bronchitis and an aortic murmur. The heart sounds, however, were loud, and the pulse regular and strong. On account of the bronchitis chloroform was given, and anæsthesia easily induced. He had just lost his reflexes, and the operation was about to be commenced, when he turned blue in the face and stopped breathing. Artificial respiration was performed, and inversion, amyl nitrite, the battery, and ether and strychnine injections were tried without any subsequent effort at respiration, although the heart continued to beat for about ten minutes. *Post-mortem* examination showed there was atheroma of the aorta, old disease of aortic and mitral valves, a large quantity of fat about the heart, and slight fatty degeneration of the cardiac muscle. In the lungs were signs of bronchitis. Between 2 and 3 drachms of chloroform (Duncan and Flockhart's) were given.

THE ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

The new Royal Edinburgh Hospital for Sick Children, which has been built in the Sciennes Road, on the site previously occupied by the Merchant Maiden's Hospital, was formally opened by Princess Beatrice last week. Because of the recent bereavement of Prince Henry, the ceremonial part was curtailed as much as possible. The proceedings took place in the Bathgate Ward, in presence of a distinguished company.

The Rev. Dr. Cameron Lees, Dean of the Thistle and of the Chapel Royal, having offered the dedicatory prayer, Mr. Hall Blyth, chairman of the directors, gave a brief sketch of the rise and progress of the institution. The hospital, he said, was originally started by a few gentlemen in Edinburgh in the year 1859, in which year the mortality among children under 5 years of age in the eight principal towns of Scotland was more than 46 per cent. A small house in Lauriston Lane was first acquired, and six months after its opening the directors reported to the first meeting of contributors that there were 10 cases in the wards, and that a very large number of less serious cases had been treated at the outdoor dispensary. Now, 700 indoor patients and over 8,000 outdoor were treated annually. In 1863 the Queen graciously extended her patronage to the hospital, and it became the Royal Edinburgh Hospital for Sick Children. Some years ago the directors found that the limited and imperfect accommodation in the old and oft-extended building in Lauriston Lane compelled them to look afield for a new hospital. They were finally determined to this by an epidemic which broke out among the nursing staff, investigation of which led them to the conclusion that the building was unfit for use as a hospital. The old hospital having been thus condemned, temporary accommodation was got at Plewlands, where work has been carried on for the last three years. In addition to the nursing of sick children, the hospital has for the last few years become a great school for the teaching of diseases peculiar to children, and, recognising this, the directors have made every provision for teaching being carried on under the most approved methods, and theatres for lectures and demonstrations have been provided on the two main floors. The directors owed much to the medical staff and the matron, who had given the whole details of the building their earnest consideration, and had, from time to time, made many valuable suggestions. Thus far the general public had not responded as they ought to have done to the appeal for subscriptions to the building fund, but one munificent benefactor had given £11,500—£6,500 for building one of the wings of the hospital and £5,000 as a fund for endowing ten cots in that wing which Her Royal Highness would be asked to name the "Lady Caroline Charteris Memorial Wing." Not only so, but Lady Jane Dundas had just intimated to the directors her intention of giving a further sum of £7,000, so that all the twenty-four cots in the upper ward of the west wing might be endowed by her in memory of her sister. The total cost of the new hospital, including the acquisition of the site, furnishings and fittings, the dispensary department, the nurses' annexe, the mortuary, laundry and machinery, electric installation and heating machinery will be about £47,000. Thus the hospital would be started with a debt of £10,000. The old hospital was capable of accommodating 73 patients; the new would accommodate 120.

Her Royal Highness then formally declared the hospital opened, after which the Lord Provost proposed a vote of thanks to the Princess. The Princess was conducted over the hospital, and handed to each of the nurses present a silver badge commemorative of the occasion, the gift of the four physicians of the hospital—Drs. James Carmichael, John Playfair, Joseph Bell, and T. Burn Murdoch.

A ward on the first floor of the building in the east wing was formally named the Beatrice Ward. The Lady Superintendent, Miss Piggott, was then presented with a gold badge, and Mr. Hall Blyth, on behalf of the directors, asked Her Royal Highness to accept a gold enamelled badge as a souvenir of the occasion. These last were replicas of those given to the nurses.

The site of the hospital is on a level piece of ground of about an acre and three quarters in extent. It has a south frontage of 384 feet, and a west of 264 feet. The plan of the main hospital building is in the form of the letter "E." The administrative block is in the centre, and the wards in the two arms cut off by disconnecting cross-ventilating doors. The wards run north and south; the open side of the "E" is towards the south; the administrative block runs east and west. The central block is five storeys in height, the two upper being in the roof. The ward wings are three storeys in height, the upper being partly in the roof. The principal wards are on the ground and first floor, those upon the third floor being spare observation and isolation wards. The kitchen, with larders, milk house, and stores, is on the fourth flat. The dormitories and bedrooms for the domestic staff on the fifth or attic floor. The main entrance is from the south in the centre of the building, and there is a large entrance hall, across the end of which a corridor 10 feet wide extends right and left nearly the whole length of the building. To the right and left of the entrance hall are the suites of rooms for the matron and the resident physicians, and opposite the entrance hall in the centre of the administrative block to the north is the surgical theatre, which has a gallery to hold eighty-four students. To the right of this is the principal staircase, and to the left the service staircase. To the north-east and north-west corners are rooms for the visiting physicians and surgeons, one for each ward. Each of the four principal wards is 84½ feet long, 23 feet wide, and 15 feet high. They are arranged for twenty-four cots, thus allowing 1,215 cubic feet of air space to each child, and 81 superficial feet of floor space. The floor is laid with teak, the walls are finished with polished Parian cement, and the angles are all rounded. There is a small kitchen for each ward, and at the south end of the turret, disconnected by a cross-ventilated lobby, is a bath room, lavatory, a slop room, and a watercloset. The medical lecture theatre is on the first floor; and in the central block on this floor are the Board-room, museum, ophthalmic room, dispensary, assistant matron's room, staff dining room, and nurses' sitting room. On the second floor the wards are divided into observation, isolation, and spare wards, each with kitchen and lavatory accommodation. In the front are a suite of bed rooms and sitting room for the staff nurses, while in the north side are the bed rooms of the ordinary nursing staff. On the fourth floor are kitchen, scullery, larder, milk house, general stores, servants' hall, sewing and linen room, mattress room, etc. There is a hydraulic lift in the well of the service stair. The building is lighted by electricity, generally by duplicate set of boilers, engines, and dynamos arranged so that either engine may be driven from either boiler in case of accidents. There is a large set of accumulators for night stores. There are open fireplaces in the wards and a hot water heating system.

The building is of red sandstone, and is without unnecessary ornament. The design is based on the English renaissance of the sixteenth century. There are several adjuncts to the main building, namely, the nurses' annexe with bedrooms for the night nursing staff, laundry buildings, out-patients' department, mortuary and pathological room, boiler houses and engine room. These are connected by covered corridors with the main building. The out-patient depart-

ment, the laundry, and electric light building on the west side are detached from the main building. The architect was Mr. G. Washington Browne, A.R.S.A.

Their Royal Highnesses were entertained at dinner in the evening at the Balmoral Hotel by the Lord Provost of Edinburgh, the Very Rev. Dr. Cameron Lees, Dr. James Carmichael, Dr. Joseph Bell, and Mr. Hall Blyth, C.E.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

South Eastern Branch: East Sussex District.—The next meeting will be held at the Hospital, Hastings, on Thursday, November 28th, at 3.30 P.M. Dr. Allen will preside. Notices of papers and other communications to the meeting should be sent forthwith to the Honorary District Secretary, J. W. Batterham, Bank House, Grand Parade, St. Leonard's.

South-Eastern Branch: East Kent District.—The next meeting of this District will be held at the Kent and Canterbury Hospital on November 21st, at 3 P.M., Mr. Robert Hicks, of Ramsgate, in the chair. Tea and coffee will be served in the Board Room of the hospital after the meeting. All members of the South-Eastern Branch are entitled to attend these meetings and to introduce professional friends. Agenda:—Dr. Coppinger: Pneumonic Dilation; Aspiration; Rare Sequelæ. Dr. Robinson: Peptonising by Boracic Acid in Milk. Dr. Tyson: Appendicitis.—Thos. F. Raven, Honorary District Secretary, Barfield House, Broadstairs.

South Wales and Monmouthshire Branch.—The next meeting of this Branch will be held, by the kindness of Dr. Pringle, at the County Asylum, Bridgend, on Tuesday afternoon, November 19th.—D. Arthur Davies, M.B., Swansea.

BATH AND BRISTOL BRANCH.

A special meeting was held on October 30th in the Medical Library of University College, Bristol; Carey Coombs, M.D., President, in the chair. There were also present fifty members and two visitors.

Alteration of Rules.—Dr. Michell Clarke moved, and Dr. J. Stewart seconded, "That papers shall not exceed twenty minutes in delivery, and that each subsequent speaker shall be limited to ten minutes." Dr. Skerritt moved in Rule 6, after "year," to insert "always excepting that no member shall so retire who has not served upon the Council for the full term of four years." These additions to the rules were carried by the requisite majority of two-thirds.

Communications.—Dr. Watson Williams read a paper on the Thyroid Gland and Graves's Disease. After recapitulating the chief points in the symptomatology, he discussed the arguments for and against the origin of the disease in a perverted action of the thyroid gland and the question of surgical interference. In the discussion which followed, the President, Messrs. W. H. Harsant, C. A. Morton, F. R. Cross, Drs. Michell Clarke, Shingleton Smith, E. Long Fox, Chas. Steele, T. Fisher, and J. Stewart, took part, and Dr. Watson Williams replied.—Dr. J. G. Swayne read a paper on Cases of Induced Premature Labour in certain Diseases of the Mother not obstructing Delivery. Drs. Aust Lawrence and W. C. Swayne discussed the paper.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

A meeting of the North London District was held on October 31st at the London Temperance Hospital, Hampstead; Sir W. O. Priestley in the chair.

Paper.—Dr. Cleveland read a paper on the Prophylactic Clothing of the Body, chiefly in relation to Cold.—The President spoke approvingly of the paper, and alluded to the prevalence of injurious scantiness in the clothing of women and children. He quoted M. Pasteur's experiment, showing that a fowl could be rendered susceptible to inoculation with woolsorter's disease by cold, although not susceptible under its usual circumstances.—Dr. Norman Kerr gave some personal experiences of the effects of Arctic temperatures.—Dr. Bailey spoke of the evident infectiveness of common catarrh.—Dr. Cleveland replied.

Cases.—Dr. Collins and other members of the staff showed several very interesting cases in the wards of the hospital.

Votes of Thanks.—Votes of thanks were unanimously passed to Dr. Cleveland, to the hospital staff, and to the hospital authorities.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

The autumn meeting of this District was held at Reigate on October 10th, Mr. J. B. Hallowes, of Redhill, in the chair.

Confirmation of Minutes.—The minutes of the Croydon meeting were read and confirmed.

Next Meeting.—It was resolved that the next meeting of the Branch should be held at Upper Norwood on the second Thursday in March, 1896, and that Dr. J. H. Galton be invited to take the chair.

Discussion on Diphtheria.—This discussion was opened by Dr. Sidney Martin, Mr. H. G. Plimmer following him, and showing cultures and slides. The medical aspect of the disease was then reviewed by Dr. Washbourn, and Dr. C. Holman, Dr. J. H. Galton, Dr. Adeney, Dr. Ogle, Dr. C. Owen-Fowler, Mr. J. S. Turner, and Mr. Maude joined in the discussion which followed Dr. Washbourn's paper. Mr. C. J. Symonds then dwelt with the disease in its surgical aspect, and this paper was spoken to by Dr. Walters. Dr. Philpot (medical officer of health for Croydon) wound up the discussion with a paper on the Disease in its Relations to Public Health. Over fifty members and visitors attended the meeting, and showed great appreciation of the thorough manner in which the various papers treated of the disease in its different aspects.

Dinner.—After the meeting thirty members and visitors dined together.

SYDNEY AND NEW SOUTH WALES BRANCH.

The usual monthly meeting of the Branch was held at the Royal Society's Room on August 30th, Dr. E. J. Jenkins, President, in the chair. Thirty seven members were present. The minutes of the previous meeting were read and confirmed.

Personal Changes.—The President announced that Dr. E. T. Thring had been elected Honorary Secretary; and that since the last meeting Dr. Huxtable had died, and that the Council had forwarded a resolution of sympathy to Mrs. Huxtable. Dr. Cragg commented upon the loss sustained by the Branch through the death of Dr. Huxtable.

New Member.—The following new member was announced: Dr. Goldsmid, of Cobar.

Communications.—Dr. Wilkinson exhibited a patient suffering from Persistent Dropping of Fluid from the Nose. Drs. Goode and Sydney Jones made some remarks upon the case.

Dr. Clubbe read a paper on seven cases of Laparotomy for Intussusception in very young children. A discussion ensued in which Drs. Jenkins, O'Hara, Scot Skirving, Gore Gillon, Cragg, William Chisholm, Spencer, Thring, and Sydney Jones took part. Dr. Clubbe replied.

PROCEEDINGS OF THE COUNCIL.

At a meeting of the Council, held at the office of the Association, 429, Strand, London, W.C., on Wednesday, October 23rd, 1895:

Present:

Dr. J. Ward Cousins, President of Council, in the chair.
Sir J. Russell Reynolds, Bart., F.R.S., President.
Mr. Henry T. Butlin, Treasurer.

Dr. James Barr, Liverpool.
Dr. G. B. Barron, Southport.
Dr. Rayner W. Batten, Gloucester.
Dr. Michael Beverley, Norwich.
Mr. Langley Browne, West Bromwich.
Dr. J. Spottiswoode Cameron, Leeds.
Dr. John Campbell, Belfast.
Mr. Andrew Clark, London.
Dr. H. Radcliffe Crocker, London.
Dr. E. H. Dickinson, Liverpool.
Dr. J. Langdon H. Down, London.
Brig.-Surg.-Lt.-Col. E. F. Drake-Brockman, London.
Dr. David Drummond, Newcastle-on-Tyne.
Mr. George Eastes, M.B., London.
Dr. W. A. Elliston, Ipswich.
Dr. D. W. Finlay, Aberdeen.
Sir B. Walter Foster, M.D., M.P., Birmingham.
Dr. J. H. Galton, Upper Norwood.
Dr. Bruce Goff, Bothwell.
Dr. William Gordon, Exeter.
Dr. Ogilvie Grant, Inverness.
Dr. H. Handford, Nottingham.
Mr. John D. Harries, Shrewsbury.
Mr. J. Hughes Hemming, Kimbolton.
Dr. C. Holman, London.
Mr. T. Vincent Jackson, Wolverhampton.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. Jordan Lloyd, Birmingham.
Mr. C. N. Macnamara, London.
Mr. H. J. Manning, Salisbury.
Dr. J. W. Miller, Dundee.
Mr. R. H. B. Nicholson, Hull.
Mr. C. H. Watts Parkinson, Wimborne Minster.
Dr. Charles Parsons, Dover.
Dr. F. M. Pope, Leicester.
Mr. Henry Power, London.
Dr. Robert Saundby, Birmingham.
Dr. Alfred Sheen, Cardiff.
Dr. E. Markham Skerritt, Clifton.
Mr. Noble Smith, London.
Dr. R. Somerville, Galashiels.
Mr. Henry Stear, Saffron Walden.
Mr. James Taylor, Chester.
Dr. J. Roberts Thomson, Bournemouth.
Dr. Theophilus W. Trend, Southampton.
Mr. T. Jenner Verrall, Brighton.
Dr. W. F. Wade, Birmingham.
Mr. F. Wallace, London.
Mr. Joseph White, London.
Dr. W. L. Winterbotham, Bridgwater.
Dr. S. Woodcock, Manchester.

The minutes of the last meeting having been printed and circulated, and after amendment by the insertion of Sir Walter Foster's name as being present at the Council meeting of July 31st last, were signed as correct.

Read letters of apology for non-attendance from Dr. Bridgwater, Mr. Wheelhouse, Dr. Philipson, Mr. Jones Morris, Dr. Oswald, Dr. Urquhart, and Dr. Russell.

The following resolution, which was passed as a rider to the interim report of the General Practitioners Committee at the annual meeting held in London on July 30th last, was then considered:

That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical, or surgical, or midwifery practitioners other than those recognised under the Medical Act, 1858, as now existing.

Resolved: That a copy of the resolution be forwarded to the General Medical Council.

The second rider, of which the following is a copy, which was also carried at the same meeting, was then considered, namely:

That in the opinion of this meeting it is expedient that an Act of Parliament should, as soon as possible, be passed providing for the registration and education of medical, surgical, and obstetric nurses and the Council of this Association are therefore requested to consider this matter, and to take such measures as may seem to them advisable to obtain such legislation.

Resolved: That the rider be forwarded to the Parliamentary Bills Committee, and that they be requested to report to the April meeting of the Council.

The following resolution, which was also carried as a third rider to the report of the General Practitioners Committee, at the annual meeting held in London was then considered:

That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties, and to devote a portion of the income and funds of the Association for these purposes.

Resolved: That a Special Committee be appointed to take the resolution of the annual meeting into consideration, and report to the next meeting.

Resolved: That the following be the Committee:

The President of Council, the Treasurer, Dr. Bridgwater, Dr. Ogilvie Grant, Dr. Gordon, Mr. Hemming, Mr. Macnamara, Mr. Jones Morris, Dr. Parsons, Dr. Roberts Thomson, Mr. Verrall and Mr. Wallace.

Read resolution of annual meeting of members of July 31st:

That we view with deep concern and regret the recommendation of the General Medical Council to the medical examining bodies that they should admit students to their final examination who present a certificate stating that they have "conducted personally" only three, and "been present at" only nine confinements: and as the General Medical Council has refused in November, 1890, to alter this recommendation, we instruct our Council to petition the General Medical Council to recommend that no student be admitted to his final medical examination until he presents a certificate showing that he has personally conducted at least thirty confinements under the direct supervision of a registered medical practitioner.

We also instruct the Council to take immediate steps to have Section 20 of the Metropolitan Poor Act, 1869, repealed, which prevents workhouse infirmaries from being used for the clinical instruction of medical students in practical midwifery, while pupil midwives are now admitted; and also to petition the committee, medical staffs, and, if need be, the subscribers to the City of London Lying-in, the British Lying-in, and the Clapham Maternity to withdraw their rule which excludes male medical students from clinical instruction at these hospitals, seeing that these are now used by pupil midwives.

Resolved: That to the words "medical practitioner" be sent to the General Medical Council, and the latter part of the resolution be sent to the Parliamentary Bills Committee.

Resolution of the annual meeting, copy of which is as follows was then considered:

That as Sections 7 and 8 of the Medical Act, 1858, provide for the election of only five direct representatives to the General Medical Council by the registered medical practitioners resident in the United Kingdom, and as Section 10, Subsection 1, Paragraph c of this Act provides that the General Medical Council may represent to the Privy Council that it is expedient to confer upon the registered medical practitioners resident in any part of the United Kingdom the power of returning an additional number of direct representatives to the General Medical Council; and as the General Medical Council has, in November, 1880, in November, 1891, and in November, 1892, refused absolutely to make such representation; and as the number of registered medical practitioners has increased from 22,713 in 1876 to 32,634 in 1894; and as we medical practitioners were not given our proper number of direct representatives in 1886; and as the registered practitioners contribute all the income of the General Medical Council, by which the Medical Acts are administered, while the twenty universities and colleges represented on the General Medical Council do not contribute any income to it; and as the representatives of the universities and colleges are elected to the General Medical Council by their small Convocations, Senates, and Councils, and not by open vote of all their medical graduates only; and as other important councils, having similar but larger duties to the General Medical Council (such as the Councils of the Incorporated Law Societies of England and of Ireland, the Councils of the Pharmaceutical Societies of Great Britain and of Ireland, and the Council of Veterinary Surgeons) consist of direct representatives only, this Association instructs its Council to take immediate steps to have a Bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one additional direct representative to the General Medical Council.

Resolved: That the General Medical Council be informed that the annual meeting has passed this resolution, and that the Council of the Association has under consideration the means for giving effect to the recommendation.

Read protest of the South Indian and Madras Branch, of which the following is a copy:

The members of the South Indian Branch of the British Medical Association have read with much surprise the resolutions which were passed in the Section of Public Medicine at the annual meeting of the Association lately held in London, and founded on the address delivered by the Editor of the BRITISH MEDICAL JOURNAL. They wish to point out that the whole of that address, so far as it refers to the civil portion of the Indian Medical Service, is full of inaccuracies and unjust statements, calculated to reflect discredit in a most unwarrantable manner upon a large body of the profession in India. They feel certain that, had the members present at that meeting been in possession of the true facts regarding sanitary progress in India, and the work done during the past thirty years in India, in both the civil and the military departments, they would not have been induced to accept all Mr. Hart's statements, and to pass such an ungenerous resolution which reflects adversely on them and on the Government they have the honour to serve. They trust that the Council will see fit to give the same publicity to this protest as they have given to the Editor's erroneous and defamatory statements.

Resolved: That the protest of the South Indian Branch be published in the JOURNAL.

Read minutes of the General Practitioners Committee of October 22nd.

Resolved: That the minutes of the General Practitioners Committee of October 22nd be received and approved and the recommendations contained therein carried into effect, and that the resolutions passed at the Ethical Section at the late annual meeting be referred to this Committee—namely:

That this meeting is unanimously of opinion that a suitable authority should have powers of control over irregular practice, of the same kind as those exercised by the Incorporated Law Society and the Inns of Court respectively, and urges the Council to approach the Government with this view, with a preference for this Association as the controlling body.

That the Ethical Section of the British Medical Association has revealed the urgent need of some practical steps being taken to deal effectively with the present deplorable lack of *esprit de corps* and want of co-operation in the profession generally, and of which so much undue advantage is taken by the public. As it is to be hoped that much of the existing undesirable state of affairs arises more from ignorance than deliberate intention on the part of those concerned, we respectfully urge on the Council to take such steps as may direct the attention of professors and teachers in the various colleges and medical schools to the advisability of pressing on their pupils on every suitable occasion the importance of the subject, not only as regards their own, but their future patients' interests. We also strongly suggest that special provision should be made in every medical teaching centre for inculcating this most important part of the duties of the medical practitioner or otherwise to do as they in their wisdom may think fit.

That, in the opinion of this Section, members of the British Medical Association should not hold office in any hospital which is not really, as well as ostensibly, a public institution; and members of the medical staff at a hospital having pay wards should not gratuitously attend the inmates of such wards.

That it be a recommendation to the consideration of the Council, in the first place, to include an Ethical Section in the annual programme. In the second place to recommend to each Branch the expediency of constituting its executive council an Ethical Committee, to consider questions arising within its area, and settle them if possible; or failing this to refer them to the General Council of the Association. Thirdly, and it is further suggested to the Council the expediency of their forming an Ethical Committee to receive and report upon such matters as may be referred from the Branches or in other way arising.

That in the opinion of this meeting the employment of unqualified assistants in visiting patients is injurious to the interests of the public as well as those of the profession.

That in the opinion of this Section any practitioner who wilfully violates generally received rules of professional ethics should not be met in any professional intercourse whatever save in cases of urgent danger to an individual patient.

That advertising in every shape is highly derogatory to the profession, and that the Council be requested to use every effort to suppress it.

That the Council be requested to take steps to prevent members of the British Medical Association accepting posts in medical aid or other kindred societies; and that, in the opinion of the Section, no practitioner who accepts office in any society of this kind ought to be eligible for membership of the Association.

That it be suggested to the Council to open a fund, to be subscribed to by members of the Association, to assist to indemnify bodies of medical men practising in the United Kingdom in their contests against the combined action of the friendly and other benefit societies.

That the Council be requested to communicate with the universities and medical corporations, with a view of discouraging their graduates and diplomates from taking office under medical aid associations or undertaking any engagement or appointment calculated to degrade the profession.

Read resolutions passed at the annual meeting in the Public Health Section, of which the following are copies:

That the Public Health Section of the sixty-third meeting of the British Medical Association begs to recommend that representations be made to the Secretary of State for India as to the utter inadequacy of the sanitary administration of the Government of India to give the most elementary protection to the public health of the inhabitants of Her Majesty's Indian empire, and that a copy of Mr. Ernest Hart's address be forwarded to the official authorities at home and in India requesting their attention to the points urged therein.

That in the opinion of this Section, and in view of the fact that the Royal Commission on the effect of tuberculous food on human health by the terms of their appointment were restricted to tuberculosis, it is desirable that a Royal Commission be appointed to consider the whole question of meat supply and inspection, and that a copy of this resolution be sent to all the Ministers of State.

That this Section desires to reiterate the opinion which has been expressed at previous meetings of the Association, that the interests of the public, no less than the just demands of medical officers of health, require that the same security of tenure which is enjoyed by medical officers of health of the metropolis and Scotch counties and Poor-law medical officers should be conceded to medical officers of health, and requests the Parliamentary Bills Committee to take such steps as may be expedient to bring this matter under the notice of the Local Government Board, with the hope that the Committee will see their way to print and circulate Dr. Whitelegge's address as an excellent summary of the merits of the question, together with an abstract of the discussion.

Resolved: That the first resolution be laid on the table.

Resolved: That the last two resolutions be referred to the Parliamentary Bills Committee.

Read resolution and communication of the Psychological Section.

THE PRIORY, ROEHAMPTON, S.W.,
5th August, 1895.

DEAR SIR,—I enclose copy of a resolution which was passed at the Psychology Sectional Meeting on Friday, August 2nd. Will you kindly forward it to the proper quarter, also kindly acknowledge its receipt? With apologies for troubling you.—Yours truly, JAMES CHAMBERS,
An Hon. Sec.
F. FOWKE, Esq.

Recommendation to the Council of the British Medical Association from the Section of Psychology. The following resolution was adopted at the Sectional Meeting on Friday, August 2nd:

That in view of the desirability for a closer comparison of the experiences of alienists with those of neurologists in reference to the psychical relations of epilepsy, to which attention has been called in Dr. Gowers's address, a recommendation should be forwarded to the Council of the British Medical Association that a committee be appointed to collect information on the subject. It is further recommended that a grant be made to defray the expenses of the inquiry.

The committee to consist of the following:

Dr. Gowers	Dr. C. E. Beevor	Dr. Mickle
Dr. G. M. Robertson	Dr. Conolly Norman	Dr. James Taylor.

Resolved: That the officers of Section be requested to inform the Council the nature of the proposed inquiry and the probable amount of grant required.

Read resolution passed in the Section of Diseases of Children, of which the following is a copy:

11, CHANDOS STREET, CAVENDISH SQUARE, W., August 2nd, 1895.
Section of Diseases of Children.

DEAR SIR,—I beg to transmit to you for submission to the Council of the British Medical Association the following resolution, which was adopted unanimously by the Section of Diseases of Children at its meeting this day:

"That this Section thinks it desirable that in the new edition of the *British Pharmacopœia* the maximum doses of powerful drugs suitable for children at various ages should be indicated."

I am, dear Sir, yours faithfully,
JOHN H. MORGAN,
President of the Section of Diseases of Children, 1895.

FRANCIS FOWKE, Esq.,
General Secretary, British Medical Association.

Resolved: That the resolution be referred to the Therapeutic Committee.

Read letter of Mr. Garrett Horder with suggestions for the arrangements of the annual meeting.

Resolved: That Mr. Horder be informed that the arrangements of the annual meeting are in the hands of the Council, and due consideration will be given to his letter.

Read letter from Dr. William Mitchell, calling attention to testimonials from medical men in circulars.

Resolved: That the attention of the Council having been called to the testimonials of medical men issued in circulars,

the attention of the members be called to the resolution of the Council (3279). "Resolved: That in the opinion of this Council the granting of testimonials, which are used for the purpose of advertising proprietary drugs and similar articles, is inconsistent with the dignity of the profession, and opposed to its best interests."

Resolved: That a copy of the resolution be sent to those members whose names appear on the advertisement.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain a report upon various JOURNAL matters as to the payment of articles, etc., and editorial matters. The accounts for the quarter amounting to £3,097 4s. 11d and auditors quarterly report.

In reference to letter from the Statistical Department of the London County Council, informing the Council of the Association that a quinquennial census will be taken for London next year, and stating the opinion of the Local Government and Taxation Committee of the London County Council that such census will not be of much value beyond the single purpose for which it is taken if it is confined to a mere enumeration of population, and not extended to the other subjects dealt with in the census of 1891.

Resolved: That the Council of the British Medical Association think that it is desirable that a census in every sanitary district having a population in 1891 of more than 50,000 should be made in 1896, and should include an enumeration of the inhabited houses, etc., and the names, ages, and sex of their occupants on the night of the census, the Council being of opinion that vital statistics based upon results of a census taken more than five years ago are far from reliable.

Resolved: That in the opinion of the Council of the British Medical Association no enumeration for the purpose of the Equalisation of Rates (London) Act, 1894, will be reliable unless the enumerators also record the names, ages, and sex of the persons present in each house on the night of the census.

Resolved: That copies be sent to the London County Council and the Local Government Board.

Read letter from Surgeon Francis J. Lea, complaining of his dismissal from the Navy.

Resolved: That the letter of Surgeon Francis J. Lea be referred to the Parliamentary Bills Committee.

Resolved: That Messrs. Price, Waterhouse, and Co. be reappointed public auditors for the ensuing year, in accordance with By-law 26.

Resolved: That of the 123 candidates whose names appear on the circular convening the meeting, 122 be and they are hereby elected members of the Association.

Resolved: That the minutes of the Premises and Library Committee of the October 22nd be received and approved and the recommendations contained therein carried into effect.

The President of Council reported that up to the present time there was no invitation received for 1896.

SPECIAL CORRESPONDENCE.

PARIS.

The French Surgical Congress.—The Hygiene of Crèches.—Proposed Bacteriological Laboratory for the City of Paris.

THE French Surgical Congress held its first meeting on October 21st. A considerable number of the leading members of the medical profession were present, but there were some conspicuous absentees. Dr. Eugene Boeckel, of Strasburg, in his presidential address, paid a tribute to the memory of Alphonse Guérin, Baron Larrey and Verneuil, and finally Pasteur. Among living medical celebrities, Sir Spencer Wells came in for his share of praise. The general meeting of the members took place on Friday, October 25th, at 8 o'clock—or, more correctly speaking, it ought to have taken place; but as at such an early hour there were only a few stray members, the Committee of the Association did not appear until 8.30. Professor Bousquet, of Clermont Ferrand, asked that in future the general meeting should be held at 11.30; he also complained of the absence of cordiality among the Paris hospital surgeons in their relations with the members of the Congress who wish to visit their wards and be present at their operations during the session of the Congress. The financial condition of the Congress is excellent, and will be still more satisfactory as time goes on. The Congress intends to be its own printer and publisher. The annual banquet took place on October 24th—a bad preparation for the next morning sitting at 8 o'clock. About sixty members were present. M. Eugène Boeckel, the President, made an eloquent speech, and M. Delorme, M. Demons, and M. Joannesco spoke in the name of the military, provincial, and foreign surgeons.

M. Napias, at a meeting of the Société de Médecine Publique d'Hygiène Professionnelle, drew attention to the necessity of strict supervision of the organisation of *crèches*, which are in danger of becoming "infant depositories" generally unhealthy and even dangerous to life. Each child should have all its own toilet requisites set strictly apart for its own use. The question of feeding is another vital matter needing reform. In some of the *crèches* M. Napias told the Society that sterilised milk is used in litre measures; when the feeding hour comes it is poured into the feeding bottles and mixed with water from the pump. He suggests that the staffs of the *crèches* should be better versed in the elements of their business, and that the mothers be given some simple instruction in the principles of hygiene. The children are frequently ill on Mondays after passing Sunday with their parents, and being fed on food unsuitable to their age.

M. Dubois has urged on the Municipal Council that the bacteriological laboratory of the City of Paris should make such researches, analyses, and diagnoses as may be required by the Paris medical men and those of the Seine department in connection with those contagious diseases of which the bacillus is known. He also urges that children who have recovered from diphtheria should not be allowed to return to school without a certificate from this bacteriological laboratory.

The Société d'Agriculture and the Société de Médecine Vétérinaire de Milan have opened a subscription to collect funds for the erection of a statue to Pasteur.

BERLIN.

Professor von Pettenkofer on the Causation of Cholera.

IN the Berlin weekly *Die Nation*, Professor Pettenkofer has published an article on "The Cholera Epidemic of 1892," in which he combats what he calls the "bacteriological-contagionistical view" of the causes of cholera. His chief arguments are: (1) That the Hamburg cholera epidemic of 1892 ran almost exactly the same course as the epidemics of 1832 and 1848; that, in fact, the mortality in 1892 was greater than in the two previous great epidemics, the numbers being—in 1832, 11.29 per 1,000; in 1848, 10.50 per 1,000; and 1892, 13.44 per 1,000; and this in spite of the vigorous measures taken from a bacteriological point of view. These measures, he adds, have in Hamburg shown themselves to be absolutely ineffectual. (2) That the contagiosity of cholera receives no support from the history of the Hamburg epidemic of 1892. Pettenkofer quotes from Wolter's publication on the epidemic, that in 12,473 cases, of which 6,746 ended fatally, the attack remained isolated in the household, and that only in 4,483 cases—about a quarter of the total number—with 1,859 deaths, was more than one person in a household attacked.

The relative immunity of Altona Pettenkofer alleges to be owing to other causes than the water supply. And in regard to the fact that six Hamburg institutes, where the water was not the ordinary town supply, remained immune, Pettenkofer quotes Wolter, who states that sixteen other institutes in Hamburg, although supplied with water by the town waterworks, remained immune as well.

In conclusion, Pettenkofer expresses the opinion that the many millions which have been needlessly wasted for contagionistic measures would have been better employed in improving the sanitary conditions of the dwellings.

FLORENCE.

Deaths from Preventable Diseases.—Taxation in Italy.—The Water Supply of Florence.

IN an article in *La Salute Pubblica*, Signor Cerutti has expressed the opinion that the satisfactory results of drainage methods in England depend on the efficiency of individual house

drainage as distinguished from public drainage. English residents in Italy would endorse this opinion. Signor Cerutti's suggestion that British sanitary legislation is somewhat oppressive probably gives the key to the whole situation. Legislation alone will not reduce the death-rate to its minimum. In Italy a popular appreciation of the dangers of defective sanitation is wanting. It rests with the medical profession to preach the doctrine of sanitary reform. At present the scholastic bacteriologist inclines to the belief that bad smells are innocuous unless specific cultures can be obtained from the sewage emanations whence they originate, and thus lends the weight of his influence to the maintenance of a most defective state of sewage removal. In the city of Florence there has been a marked decrease in the annual average number of deaths from preventable diseases for the past five years as compared with the preceding lustrum. The only exception is diphtheria, but the official memorandum states that this is apparent only and not real, accounting for it on the ground that formerly deaths from diphtheria were frequently registered as croup. The number of deaths from diphtheria registered by the Florence municipality for the first eight months of this year is 26, as compared with 54, 72, and 42 for the years 1894, 1893 and 1892 respectively. This decrease is largely due to antitoxin treatment but partly also to improved sanitary conditions.

The Italian Council of State has just approved the imposition of a new tax on gas and electric light. This will doubtless have the effect of checking the already somewhat belated generalisation of these methods of illumination in Italy. At the same time there has been a sudden and inconsistent elevation of the assumed amount of income of the professional classes on which the amount of income-tax is based, which will mean a heavy additional burden on the shoulders of the foreign medical man; the heavy tax on tobacco has stimulated an active contraband trade in that article over the Swiss frontier.

Recent events at San Marcello will give an idea of the difficulty attending the procuring of a further water supply for Florence. An eminent engineer, Signor del Poggetto, had developed a scheme in conjunction with the municipal authorities of Florence for the appropriation of a spring, with the laudable object of supplementing the somewhat scanty water supply to that city. The men employed at certain neighbouring pin factories, and some agricultural labourers, got wind of the scheme, and made a demonstration in force to obstruct the preliminary operations. The intruders were forced to retire, but returned on September 24th, supported by a band of sixteen carabineers. Local interests were again equal to the occasion, and mustered to the number of 500 operatives, who in spite of drawn bayonets, surrounded the intruders, and marched them back to San Marcello. Judicious *pourparlers* and a certain "dignified restraint" on both sides, averted a general engagement, and, apart from a broken arm and a flesh wound, no serious consequences ensued. Local authorities qualified to judge maintain, moreover, that the water in question is not good enough for Florence.

CORRESPONDENCE.

THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—I am sorry once more to be obliged to make an appeal to the profession on behalf of the British Medical Benevolent Fund, but for the last few months we have at every meeting of the Committee overdrawn our account at the bank, and have even then been unable to afford assistance in many cases where it was felt that help ought to be rendered.

In September £44 was all the money available, and six grants were made amounting to £50. At the meeting on Tuesday, October 29th, there were twenty cases to be considered besides those postponed from September, and only £34 were in hand to meet the claims, and till the end of the year there is no prospect of improvement in our financial condition unless through the response of the profession to our appeal.

During the year 174 cases have come before the Committee, and 119 grants have been made amounting to £1,038. This gives an average of about £9, but, as a matter of fact, our grants to be of the greatest use require to be £12 or £18 so as to enable a monthly instalment of £1 or 30s. to be paid throughout the year, and lately we have been obliged to reduce the allowance to the inadequate sum of £5 or £6 sometimes with the promise that a second application may be sent in at the end of six months if funds permit.

Applications and the severity of the cases which come before us increase year by year, and the subscriptions and donations, on which we depend, do not keep pace with them. We have over 100 annuitants, selected from among the applicants who are over 60 years of age, but the special function of the donation department, for which I now plead, is to relieve those who, owing to death or illness, find themselves in difficulties which timely help may enable them to overcome, and naturally winter is the season in which such cases are most numerous and urgent.

The working expenses of the Fund are extremely small; there is no rent for offices, no expenditure on advertisements, and no payment of officers, except for clerical assistance, which is absolutely necessary, as the mere writing connected with the investigation of cases and the collection of funds and keeping accounts has become more than can reasonably be expected from men who have other work to do.

The cases selected for relief at the last meeting are illustrations of the everyday work of the Fund:

1. A widow, aged 55, whose husband had become incurably insane after two years' illness; she has three young children, and is penniless. Granted £12.
2. A medical man, aged 78, quite unfit to work. Two daughters at home, one an invalid, the other recovering from scarlet fever. Granted £12.
3. A widow with young children, and unable to earn anything on account of influenza. Granted £6.
4. A lady, 66 years of age, and quite deaf. Granted £3 for six months.
5. A lady who has maintained herself as a midwife, but is now too infirm to undertake cases. Granted £6.
6. A governess, aged 33, who has been obliged to give up work on account of illness. Granted £5.

These cases show the urgency of the distress, and I may mention that a member of the Committee who was present at the meeting has already sent me a donation of twenty guineas.—I am, etc.,

W. H. BROADBENT,
Treasurer, B.M.B.F.

Brook Street, Nov. 5th.

THE SCHOTT TREATMENT OF HEART DISEASE.

SIR,—I have read with great interest Dr. Saundby's account of the Schott method of treating certain forms of heart disease, and have been greatly struck (as one could not fail to be) with the enormous diminution of the area of cardiac dulness which followed a few minutes in a bath or an equally short time occupied in the so-called Schott movements. These changes in the area of cardiac dulness are so remarkable—so much more remarkable than the changes produced in the pulse rate and the sphygmographic tracing—that I venture to make a few remarks upon them.

Now the volume of a sphere is stated to be $\frac{4}{3}\pi r^3$ where $\pi = 3.14159$ and r is the radius of the sphere. If for simplicity's sake we take π as equal to 3, and if we suppose that the dilated heart is a sphere with a radius of 3 inches, then the volume $= \frac{4}{3} \times 3 \times 27 = 108$ cubic inches. If this sphere diminishes in bulk so that the radius is reduced to 2 inches instead of 3, then $V = \frac{4}{3} \times 3 \times 8 = 32$. In other words, the volume of the sphere is less than $\frac{1}{3}$ of its former self.

The heart, of course, is not a sphere, and the above calculation is merely to show that the contraction of a spheroidal body amounting to an inch in all directions means, relatively, an enormous decrease in volume, and with an organ as big as a dilated heart such a decrease must be absolutely very great. When the heart shrinks in the thorax what takes its place? Either the thoracic wall must recede, or the lung must dilate.

The assumption that because the upper margin of the liver is not depressed the lungs undergo no extra expansion, seems to me rather gratuitous. I can at will assume an abdominal respiration with great depression of the diaphragm and protrusion of the abdominal wall, or I can make my respiratory movements assume a thoracic type with great movement of the upper part of the chest, and with very little or no diaphragmatic and abdominal movement. In the latter case the upper part of the lungs undergo an extensive dilatation, while the lower lobes remain quiescent.

If it be possible for the upper lobes to expand in this way,

then not only would this extra inflation tend to overlap the heart, but by exercising pressure would be capable of altering the position of the apex. Therefore I think that Dr. Schott's contention that the fixity of the line of liver dulness and the movement of the apex show that the diminution of the area of cardiac dulness is not due to pulmonary expansion, stands in need of more careful consideration. When a man sits in a bath the pressure of the water is proportioned to the depth to which his body is sunk, and it is obvious that the abdomen has to bear more pressure than the upper part of the thorax. If, therefore, the respiratory movements and the inflation of the lung takes the path of least resistance, it follows that the upper lobes of the lungs would dilate, while the lower lobes, owing to the diaphragm being "loaded" with the pressure of the water, would be relatively quiescent.—I am, etc.,

Wimpole Street, W., Nov. 5th. G. V. Poore.

THE ADMISSION OF WOMEN TO THE EXAMINATIONS OF THE CONJOINT BOARD.

Sir,—In rejecting the petition from the London School of Medicine for Women, the argument was used that medical women in this country had as yet made no contribution to practical medicine. This is perfectly true; but the reason is not one of sex, but of time and opportunity. What chance have we women had of perfecting ourselves in surgery or even in general medicine? We are entirely shut out from appointments in the general hospitals, and even from most laboratories. Besides, although there may be 200 women on the *Register*, most of them have qualified within the last ten years.

Surely, the learned Fellows of the College would not wish us to publish our immature experiences? As regards original research, very few women can afford it. When a parent has been liberal enough to send his daughter to the medical school, he naturally expects her to earn her own living after having qualified. Besides, mere numbers do not count for much, as it must be admitted that many women still enter the profession from unworthy motives—though not in the sense meant by Dr. Charles West. Many of them are religious enthusiasts, who want to go out as medical missionaries, and they take an interest in their medical work only in so far as it is a means to an end. Others, still, believe that self-sacrifice is a specially feminine virtue. Those who take up medicine from love of the work or to earn a living—the only two worthy motives—are unfortunately few.

Dr. Hare denies that women can "create or advance knowledge," and instances mathematics and music. Has he never heard of Sonja Kovalevsky, whose published work was nearly all original, and who has been universally recognised as one of the first mathematicians of the century? And why? Simply because she was able, at an early age, to escape from her gaolers and devote herself entirely to her work. And as music appears to have a closer relationship to the senses than to the intellect, it is not difficult to understand why musical distinction has hitherto been a masculine prerogative.

Why my professional sisters are so keen to have this diploma I never could understand. What more do they want now, when most of the universities are open to them? Last year 26 new students entered the school, and of these 23 were students of the London University. If the College were opened to women I am afraid that the percentage of university students would decrease. And on this account the decision of the College is not altogether a matter for regret.—I am, etc.,

November 3rd. A Medical Woman.

Sir,—The Fellows of the Royal College of Physicians, by their vote of October 24th, declined to admit ladies to the examinations for their diploma, but in so doing they did not place any fresh impediments in the way of their gaining a sound medical education or right to qualify, so that their vote was productive of no real good to their own body or the public whom they may say they sought to protect. Still, by their vote they placed themselves on a very high pedestal, for they virtually refused to co-operate with such well-known bodies as the Universities of London and Paris, and yet I am sure they would never for one moment assert that their examinations are at all comparable with those carried on by the above-named bodies.

My own opinion is that it would be best to let everyone qualify who could, and each would, without any external interference, soon settle down in the position for which they were individually best suited.—I am, etc.,

Surbiton, Nov. 4th. F. P. Atkinson, M.D.

UNQUALIFIED LADY DOCTORS.

Sir,—The recent decision of the Royal College of Physicians, and the impending question of the formation of a body to be euphemistically called "registered midwives," appear to me to render it imperative that the whole question of the relationship of women to medicine should be exhaustively reconsidered. The public are in perplexity, waiting for light, while the medical profession, in London at all events, offers either no guidance or, worse still, gives inconsistent advice.

Among the many questions involved in the inquiry is that of the position at present occupied by the "certificated" nurse. That these nurses are in reality acting as unqualified assistants, and are being "covered" by physicians and surgeons of standing, I suppose very few will care to deny. To employ an unqualified assistant to visit, prescribe, and operate upon patients has been justly condemned and wisely punished: but it is at present quite open to any medical man to employ a nurse in that capacity without incurring odium.

I hold no brief either for or against nurses. They are being made use of by the medical profession on the one hand, and by the public on the other, and they are no doubt now becoming alive to the fact. I would, therefore, lay before your readers the following propositions for solution:

1. Ought a nurse to call regularly on a male patient for the purpose of passing a catheter?
2. Ought a nurse to administer an anæsthetic?
3. Ought a nurse to prescribe?
4. Ought a nurse not specially qualified to dispense medicines?
5. Ought a nurse to administer hypodermic medication?
6. Ought a nurse to undertake the sole responsibility of a case of midwifery? (It is not possible to draw a distinction between natural and abnormal labour.)
7. Ought a nurse to receive a case of lunacy into her house, either uncertified or as a single patient?

Now all these are being done by nurses, and it therefore is evident that unless the Royal College of Physicians is prepared to publicly condemn such practices, they have by their recent decision laid themselves open to a charge of inconsistency.

The College has decided that women are not fitted to practise medicine, and refuses to assist in educating them for that purpose. Are not these women still less fitted for the position to which they have quietly attained, by reason of the lack of this very education? The whole situation appears to be rapidly deserving the designations of ridiculous and scandalous.

Women *are* acting as doctors with the connivance of both the public and the medical profession. The College has, therefore, no right to refuse to openly recognise what it secretly allows. Our true policy is to open the profession widely to women, and sternly and severely to repress unqualified practice, whether on the part of men or women.—I am, etc.,

November 2nd. Sigma.

REGISTRARS AND DEATH CERTIFICATES.

Sir,—As many medical men are unaware of the regulations issued to registrars with regard to the acceptance of death certificates without inquiry, it may be well to give them here.

Registrars are instructed by the Registrar-General, before registering, to report to the coroner:

1. All deaths occasioned directly or indirectly by violence.
2. All deaths occurring under suspicious circumstances.
3. All deaths the cause of which is stated to be "unknown."
4. All deaths which are stated to have been "sudden," and respecting which no certificate issued by a registered practitioner is produced.

5. All deaths of infants in houses registered under the Infant Life Protection Act, 1872.

No fault can be found with the above, but some registrars seem, as in the case I reported last week, to stretch Regulation 2 most unduly, and also to report cases on other grounds most needlessly to the coroners. A doctor sends me the following instance of a needless inquest:

Dr. Millar, of West Green Road, Tottenham, certified a death as follows: Primary: Mollities ossium; duration 1½ year. Secondary: Fracture of thigh; duration 3 months. The registrar, having regard, I suppose, to Regulation 1, referred the matter to the coroner on account of the fracture. The deputy coroner held an inquest, and Dr. Millar complained of the action of the registrar. The jury expressed the opinion that the case ought never to have come before them. The coroner agreed with this opinion. In this case neither registrar nor coroner was a medical man.—I am, etc.,

Archway Road, N., Nov. 3rd. HUGH WOODS.

THE LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS AND THE TITLE OF PHYSICIAN.

SIR,—Many members of the British Medical Association will be glad to see that a Licentiate of the Royal College of Physicians of London has a distinct right to the title of a physician, according to the learned opinion of the legal authorities named in the BRITISH MEDICAL JOURNAL of November 2nd.

It would be an undoubted advantage to the members of our great Association if an equally high legal opinion were taken on the debateable point of the use of the prefix "Dr." by Licentiates of the Royal Colleges of Physicians. I am myself a Licentiate of the Edinburgh College of Physicians, in addition to my other qualifications, and I have on several occasions had communications addressed to me by the officials of that College with the prefix "Dr." to my name. Now if a Licentiate of these corporations has a right to the title of Physician, then surely, if we drive the matter to its logical conclusion, he has an equal right to the prefix "Dr.," for whoever heard a physician addressed as "Mr. So-and-so." I believe I am speaking the sentiment of the majority of our members in saying that we should be delighted if the Council of the British Medical Association would obtain a legal opinion on the point, especially as it would tend somewhat to set at rest the minds of those who take the double qualification, and would in no way hinder University education; for graduates of Universities only have a right to the use of the initials "M.D."—I am, etc.,

Nottingham, Nov. 2nd. WILLIAM TIBBLES.

SPLENECTOMY.

SIR,—In his article on Splenectomy, Mr. W. D. Spanton gives two tables: one containing leucocythæmic cases, the other non-leucocythæmic. The former contains twenty-five cases with only one recovery, and in this instance there is reason to believe, with Mr. Knowsley Thornton, that the case was not one of leucocythæmia. The conclusion, therefore, to be drawn is that splenectomy is contra-indicated, and in this Mr. Spanton concurs. The second table includes cases of hypertrophy, so called, abscesses, cystic spleen (including hydatids), "lymphosarcoma," etc. In commenting on this table Mr. Spanton says that "among thirty-eight cases of hypertrophy were found twenty deaths after operation." This term "hypertrophy" seems far too vague, and certainly requires some definition. We cannot gather from the cases included in Table II. what the cause of the hypertrophy was. We cannot look upon hypertrophy of the spleen as a simple or uniform condition, and it seems to me that the cause of the enlargement is not sufficiently taken into account in considering the advisability of splenectomy. Thus enlargement of the spleen is found in a series of cases which have been described as "splenic anæmia," and in them enlargement of the organ is most probably the result of an underlying and grave disorder, and brought about by an effort on the part of the spleen to eliminate or neutralise morbid products in the blood. In these cases the spleen would seem to be to a certain extent a safeguard, and its removal is as little likely to be followed by success as in leucocythæmia. Moreover, I have known the spleen in such cases decrease in size, and then a patient become worse. I cannot therefore agree with Mr. Spanton when he says that the size of the spleen, by causing pain and discomfort, affords strong reason for removal of the organ, "which may be diverting material which ought to be utilised elsewhere." On the other hand, hypertrophy may be due to syphilis or chronic engorgement from rotation. In these a better result would be expected, as the condition is a more purely local one. This was so in Dr. Malins's successful case, in which the enlargement of the spleen was due primarily to syphilis and subsequent rotation and engorgement, the patient's general condition being fairly good.

Another point to which I would like to draw attention is that in the "anæmic" cases, the coagulability of the blood being greatly reduced, the danger of hæmorrhage is much greater. Therefore, in considering the question of splenectomy in "hypertrophy" of the spleen, it would be important to bear in mind that the enlargement of the organ may be due to a general and widespread disorder, as leucocythæmia, splenic anæmia, or else to a local lesion, as chronic engorgement with rotation, abscess, etc. If operation be reserved for these latter the results of splenectomy would probably be more satisfactory than they have hitherto been.—I am, etc.,

Birmingham, Nov. 2nd. DOUGLAS STANLEY, M.D.

SIR,—Since my paper on splenectomy, published in the BRITISH MEDICAL JOURNAL of November 2nd, was read at the London meeting, I have been enabled through the courtesy of Mr. J. Bland Sutton to add 16 other cases to the list then tabulated, and among them an unprecedented record of three successive successful cases by Mr. Bland Sutton, which were published in the *Lancet* of October 19th. The additional cases give the following figures as the total up to that date; and it is very interesting to note that the last 17 recorded by various surgeons have all recovered. The figures now should stand as follows:

Table I.—Leucocythæmic ... ... 25 cases 24 deaths.
Table II.—Non-Leucocythæmic ... 75 „ 28 „

This gives the death-rate for the last three decades thus:

1885-75 ... ... 75·00 per cent.
1[illegible] ... ... [illegible] „
1[illegible] ... ... 16·21 „

A progressive decrease as instructive as it is encouraging.—I am, etc.

Hanley, Nov. 4th. W. D. SPANTON.

REGULATIONS AS TO OUT-PATIENTS.

SIR,—We shall feel much obliged for information respecting the regulations made with regard to the admission of out-patients at any of the London or provincial hospitals or infirmaries.—We are, etc.,

C. A. GRIFFITHS, F.R.C.S.,
T. GARRETT HORDER, M.R.C.S.

Cardiff, Nov. 1st.

WELL-TO-DO PATIENTS IN RATE-SUPPORTED HOSPITALS.

SIR,—Your article upon the "Infectious Hospital Provision for London" in the BRITISH MEDICAL JOURNAL of November 2nd touches upon one very important point, a point which should be remedied as soon as legal powers can be obtained. At a recent meeting of the Metropolitan Asylums Board I obtained from the Chairman the following information—that anybody, rich or poor, can avail themselves of the fever hospitals under our control, and that no legal steps can be taken to enforce payment from those who are in a position to pay for such treatment. This reply was given in answer to a question addressed by me, because I knew that only quite recently certain persons well able to pay for medical attendance had been treated in some of the fever hospitals of the Metropolitan Asylums Board.

It is, in my opinion, manifestly unjust that the poor who cannot procure proper isolation and efficient nursing, and can ill afford to pay for medical help, should be deprived of a single bed by persons who can obtain such assistance at their own homes, but who prefer, on account of their own surroundings, to avail themselves of outside help.

If this is allowed, and I understand the law does allow it,

here can be no limit as to the amount of accommodation which the Metropolitan Asylums Board may be called upon to provide, to say nothing of the injury done to the medical profession by the gratuitous treatment supplied to the well-to-do.

Immediate isolation of the infected poor is absolutely necessary, as the cases occurring in crowded localities tend to spread infection. It is in this way that the large ratepayer benefits, but not as a large ratepayer does it entitle him and his family to free attendance and housing during infection.—I am, etc.,

Maddox Street, W., Nov. 2nd. SAMUEL OSBORN, F.R.C.S.

THE TREATMENT OF DISLOCATION OF THE PERONEUS LONGUS TENDON.

SIR,—In the BRITISH MEDICAL JOURNAL of November 2nd, Mr. W. J. Walsham records a case of dislocation of the tendon of the peroneous longus, in which he obtained a most excellent result by operation, a new sheath being made for the tendon by turning down a flap of fascia and periosteum from the external malleolus. Mr. Walsham states that he is not aware that similar treatment has "hitherto been done or proposed."

There is, however, an interesting paper in the *Centralblatt für Chirurgie*, 1895, p. 569, by Professor Kraske, of Freiburg, in which are references to various attempts which have been made to remedy luxation of the peroneal tendons by operation. Thus. Albert and Lannelongue, acting upon the supposition that the displacement resulted from shallowness of the groove on the malleolus. obtained permanently good results the former by deepening the groove with a gouge, the latter by heightening the outer lip of the groove with a periosteal flap. Albert had suggested, as another method, the formation of a new sheath with a flap of periosteum, and Kraske, regarding this as the most rational treatment, adopted it in a case of dislocation of both peroneal tendons of four years' standing. The flap, which was turned down from the malleolus, included a thin scale of bone in addition to the periosteum, as recommended by König. The result was excellent.

I have thought it worth while to draw attention to this independent testimony to the value of Mr. Walsham's method of treatment.—I am, etc.,

Weymouth Street, W., Nov. 5th. RAYMOND JOHNSON.

THE TREATMENT OF FRACTURES OF THE FEMUR.

SIR,—The views expressed by Sir William Stokes in his paper on the subject of Fractures of the Femur so nearly coincide with those I entertain, and which, now nearly forty-three years ago, I submitted to the notice of the profession, that I feel sure a very little further reflection will adjust the difference.

The important axiom laid down by Sir G. M. Humphry, and endorsed by Mr. Bryant, and accepted by the meeting, should never be lost sight of—namely, that "a fracture of any part of the skeleton, at any time of life, will unite if the parts can be kept in contact, the keynote of union." It consequently follows, the more perfect the contact the more perfect the union.

Sir William Stokes lays down as the principles of treatment he advocates fixation, rest, and moderate extension. Rest, that is physiological rest, cannot be attained unless fixation, or, in other words, perfect coaptation, is secured. The means by which he proposes to accomplish this is by moderate extension, the very force he condemns as destructive of union by exciting antagonistic contest between mechanical and vital forces. This is at least illogical. Surely as soon as the desired position of the parts is obtained all destructive contest should cease. The error here lies in the non-recognition of the physiological value of muscular contraction.

Nature has provided herself with a reserve of muscular energy, the force of which only becomes apparent through accident or disease. It is this reserved energy which accurately adjusts the strength and density of bones to the power of the muscles. Under its influence absorption and deposition are carried on. It is only by restoring its marvellous influence that perfect physiological rest and functional activity can be secured. At the same time, it becomes a far more effective means of fixation than any mechanical contrivance can be. To withhold or in any way to minimise its action impedes union.

The principles of treatment I advocate are reduction, coaptation, retention. The apparatus required to accomplish this should have the power of adjustment to the natural form of the limb throughout its entire length, and of preserving such form, so that when applied it is easily secured, and retentively holds the parts in perfect apposition.

Several forms of my apparatus are in the Museum of the College of Surgeons. It obtained "honourable mention" at the International Exhibition, 1862, the only one of the class so distinguished.—I am, etc.,

Blackheath, S.E., Oct. 31st. W. H. B. WINCHESTER.

DIPHTHERIA ANTITOXIN AS A CULTURE MEDIUM FOR THE DIPHTHERIA BACILLUS.

SIR,—In the BRITISH MEDICAL JOURNAL of October 12th I was much exercised in my mind to learn that Drs. Wright and Semple, of Netley Army Medical School, suggest the use of diphtheria antitoxin as a culture medium for the diphtheria bacillus. I have not had an opportunity of verifying their experiment; but if it is a reliable one I wish to point out that it appears to upset my view of the value of the antitoxin as an antidote to diphtheria poisoning. I have always understood, although I may be open to correction, that the antitoxin contained a something—possibly a ferment—which, when introduced into the body of a patient suffering from the disease, effectually prevented the subsequent growth of the Klebs-Loeffler bacillus. If this is not so, what is the use of the injection?—I am, etc.,

Brighton, Oct. 14th. W. A. HOLLIS.

CANCER STATISTICS.

SIR,—Will you allow me in the interests of accuracy to draw attention to Mr. Roger Williams's statistical methods as exemplified in the BRITISH MEDICAL JOURNAL of October 26th? I am not concerned at present with the question as to whether colliers are comparatively exempt from cancer, but merely with the trustworthiness of Mr. Williams's figures.

Mr. Williams remarks: "Of 250 men with cancer under my observation, 14 were agricultural labourers but only 1 was a collier." Such a statement is obviously valueless unless we know the proportion of agricultural labourers to colliers in the population from which Mr. Williams's patients were drawn. Failing this, the value of the above-quoted statement would be slightly increased if it were known in what district or districts the above-named cancer patients lived.

Leaving this minor point, we come to what may be described as Mr. Williams's chief dictum, a dictum of great importance if it will bear the test of facts. He states: "In London and its vicinity, where the wealth of the nation is clotted, there the cancer mortality is highest; and it is a significant fact that the mortality is highest of all in those parts of the metropolis where the well-to-do most abound." He arrives at this conclusion by calculating the deaths from cancer in proportion to the total population in each district. Thus stated, the deaths from cancer (taking two extreme cases given by Mr. Williams) were 1 in 2 885 in Bethnal Green as compared with 1 in 960 in Richmond. It would thus appear that "well-to-do, easy-going Richmond" had a mortality from cancer three times as great (for the same population) as that of Bethnal Green, where "the struggle for existence is hardest.....the general mortality highest, and where sanitation is least perfect."

Is this conclusion trustworthy? Its trustworthiness evidently depends on the age constitution of the two populations; for we know that 1 out of 21 men, and 1 out of 12 women who reach the age of 35 years, die eventually of cancer, while at ages below 35 the mortality from cancer is comparatively insignificant.

Now we have not before us the relative age constitution of the populations of Richmond and of Bethnal Green; but we know that a high birth-rate (continued for a long period like that of Bethnal Green) means a comparatively young population, while a low birth rate (like that of Richmond) means a comparatively old population. The birth-rate of Bethnal

Green is about 36, that of Richmond about 23 per 1,000 inhabitants. This makes no allowance for the effect of migration, Richmond being a favourite place of retirement for aged persons, and Bethnal Green receiving a steady annual influx of young (and therefore non-cancerous) lives.

It will be evident from these considerations that a very large proportion (possibly the whole) of the difference between the cancer mortality of Richmond and that of Bethnal Green is caused by age constitution of the two populations, and does not indicate any difference whatever in the true cancer mortality of the two districts.

Until Mr. Roger Williams presents us with a comparative statement of the cancer mortality in the contrasted districts, giving the death rate from cancer at each decennial group of ages per 1,000 living at the same group of ages, we must ask that his figures and the conclusions he draws therefrom shall be regarded as valueless.—I am, etc.,

Brighton, Oct. 25th. ARTHUR NEWSHOLME, M.D.

ENTERIC FEVER IN INDIA.

SIR,—With reference to this disease which is at present occupying both the military and medical press, I would ask space to make the subjoined remarks.

Some twelve years ago I brought forward the results of personal inquiries and observations on this disease (Alexander Prize, 1881) tending clearly to the conclusion that the Indian disease was essentially the same as the European, clinically, pathologically, and etiologically, following the same laws, and doubtless due to the same one cause; the source of the virus being regarded as existent in the native haunts, and possibly some cases being lineally descended from other cases among Europeans through the excreta. The views then enunciated did not obtain acceptance, yet subsequent observation has but still further corroborated these deductions, and I suppose that now but few doubt the truth of the same.

Assuming the identical nature of the disease wherever met on this globe we have in the army in India, as explanatory of its presence, the marked susceptibility of the youthful soldier there sent, the insanitation of the native towns, accumulated results of ages, and probable transfer of disease among Europeans and half-castes from imperfect destruction of disease germs in the excreta. So long as the majority of the soldiers approximate 20 years of age it is difficult to perceive how the results can be otherwise than they are, other conditions remaining the same; extend the age period for India to 25 and decrease will ensue.

Again, we cannot isolate ourselves from the native community, nor can we annul, except after a lengthened period, the outcome of ages of sanitary neglect; but what we can do, while improving the native conditions, is to more strictly watch over the media of transfer of the disease—air, water, food—by augmented supervision and proper sanitary control, all food supplies (including drinks) being furnished solely from Government sources.

Again, we may thoroughly render harmless, by heat as I suggested, the excreta, and so oppose lineal descent among ourselves. In the near future, however, numerical reduction of the disease is only to be anticipated, not extirpation. Take the condition of the Ulsoor tank at Bangalore as reported in the BRITISH MEDICAL JOURNAL of October 5th. As it now is, so it has been for years past in spite of representation. What a condition for disease transference does this disclose!

The past history of this otherwise healthy and really European (climatically) station is a noted one touching enteric fever, and especially the locality adjoining the Horse Artillery lines; here the disease has run riot, and not limited to Europeans, time after time. Over and over again have troops contracted the disease passing up country after landing and on transfer from station to station, and in no small number of instances—especially in the hills—has the disease thus entered stations, rarely, however, effecting a lodgment.

One point forcibly struck me in wading through official documents, and that was the marked coincidence in incidence details of enteric fever and cholera among the troops—sometimes absent in stations, sometimes present—occasionally approximating an epidemic, though generally as isolated cases; sometimes restricted to a corps in a station, a company, even a bungalow or room, not uncommonly contracted on the line of march; these features showing very clearly that the modes of access of each virus to the human frame were essentially the same and the surrounding conditions the same.

It is to the recognition by the higher military and medical authorities of the identity of the Indian to the European disease, with action on this line, and to the improved medical and sanitary status on the basis advocated by Mr. Ernest Hart that hope lies in the future. The authorities have not been without ample information in the past, but they have thought fit to ignore the work and reports of the executive rank; instead of action from within, it has been left to an independent outside source to parade the facts, and it is sincerely to be trusted that the outspoken, truthful remarks at the Public Health Section of the late British Medical Association meeting will not remain equally a dead letter.—I am, etc.,

Lee, Oct. 7th. FRANCIS H. WELCH, F.R.C.S., Retired Surgeon-Colonel M.S.

IMMUNITY FROM THE EFFECTS OF SNAKE VENOM.

SIR,—In connection with the recent experiments and discoveries on the production of immunity to snake venom, communicated to the Royal Society of Edinburgh by Professor T. R. Fraser, I think the following experience will be of interest to the readers of the BRITISH MEDICAL JOURNAL, and perhaps throw some light upon the hitherto mysterious immunity enjoyed by the snake charmers of India and Ceylon.

In June, 1890, a Tamil snake charmer visited a village in the neighbourhood of my station (Mahurata) with two cobras (*Naja tripudians*), which he exhibited with more or less profit to himself. The exhibition consisted of the usual "tootling" on a bamboo flute, and of striking the cobra with the fingers and irritating it into raising its crest, expanding its hood, and biting the hand of the exhibitor, which is moved from side to side within striking distance of the cobra, so as to draw blood. The snake charmer then applies one of his "snake stones," apparently pieces of charred bone, to the puncture, and puts the snake back into his basket. In the case I am about to describe, a Singhalese man, aged about 45, who was evidently rather the worse for drink, witnessed the exhibition, and became fired with a desire to show that he could do as much as the snake charmer. He seized one of the cobras with one hand, and with the other he irritated the snake as he had seen the snake charmer do. The snake bit him on the back of the left hand. The snake charmer immediately applied one of his snake stones to the wound, but within three hours the Singhalese was dead. An inquest was held by the deputy-coroner of the district, and I was summoned and requested to hold a *post-mortem* examination. At the inquest the snake charmer stated that he could not explain why death should have resulted from the bite in the case of the Singhalese, notwithstanding the immediate use of his "specific" snake stone. He (the snake charmer) was bitten frequently every day by the snakes at his exhibitions. He would let both his snakes bite him in the presence of the coroner and myself. He thereupon took both snakes, one after the other, and went through the usual performance. I saw both snakes bite him on the back of his hand. He applied his snake stones to the puncture, and no change was observable locally or constitutionally either then or the next day, when he was taken before the police magistrate fifteen miles away and discharged.

I saw the deceased about two hours after death. There was a dark bluish ecchymosis surrounding two small punctures on the dorsum of the left hand. On incising into this, the subjacent tissue was found infiltrated with dark fluid blood, and the cellular tissue at the seat of the bite was softened and already disintegrating. The veins generally were tinged with dark fluid blood, and the thoracic viscera had the appearances usual in death from asphyxia. There were a few punctiform ecchymoses and extravasations on the pericardium and pleura. There was a strong alcoholic odour in the contents of the stomach.

The question that occurred to me at the time was why should one man succumb and the other be in no way affected? Both were bitten by the same snake, both were treated by the

same supposed miraculous snake stone. Professor Fraser's theory of immunity is the only one that can afford any explanation. How, then, did the snake charmer attain immunity? Snake charmers always try to get their snakes young, I cannot ascertain definitely whether they extract the poison fangs, but many people hold that view; but the fangs are supposed to grow again. The snake charmer, it is said, irritates the snake with a piece of stick round which a piece of rag is wound. The snake snaps at this and then empties its poison fangs, and this frequent ejaculation may be supposed to result in the secretion of a virus of minor intensity. The snake charmer, if bitten then, would receive into his tissues frequent doses of venom of feeble intensity, and thus in the course of time attain immunity against the venom of full intensity. This hypothesis is, in my opinion, the only one that can afford a solution to the problem as to why a snake charmer in India and Ceylon is immune against the venom of a snake which would be speedily fatal to an individual not so immunised.—I am, etc.,

HARRY BAWA, F.R.C.S.Edin.,
District Medical Officer.

Maturata, Ceylon.

THE MILK STANDARD.

SIR,—Certain statements that have appeared in the papers as to the results of analyses of milks during the late dairy show at the Agricultural Hall call for serious investigation, since if verified they cannot but reopen the whole question, and if allowed to pass unchallenged will certainly be used by the defence in future prosecutions. The standard hitherto usually adopted by analysts has been 87.5 water and 12.5 solids=9.3 solids not fat, and 3.2 fat. Some few, as Dr. Vieth, Mr. O. Hehner, and Mr. Bell, are inclined to think this estimate of solids other than fat too high, but it is generally believed, and admitted even by these gentlemen, that the fat usually exceeds 3.2, and indeed may in good samples be over 4 per cent.; but it is now alleged, on the authority of the judges, that many of the 126 cows entered for competition, including 9 out of 17 shorthorns, 4 redpolls, 2 crossbreeds, 2 Jerseys and 1 Guernsey, failed to show on analysis of their milk even 3 per cent. of fat. There can be no suggestion here of adulteration, since the animals would have been selected for their supposed value as milkers as well as for breed and beauty, but one would like to know the method of analysis employed, and whether the samples were taken from the morning or evening "meal" or both, and the whole well mixed. It can scarcely be imagined that the "fore milk" only was sampled, though such a gross blunder would account for anything, as Mr. Wynter Blyth found the "fore milk" of a Guernsey to contain only 0.35 of fat, while the "strippings" or milk last drawn gave 5.95, the mean of the whole volume being 4.

The allegation as to the shorthorns is of the most importance, since, on account of their hardiness, they form by far the greater majority of the herds in the midland counties, which supply the London market with milk.—I am, etc.,

D. P. H.

October 28th.

"THE MARCHING POWERS OF OUR SOLDIERS."

SIR,—In a short article under the above heading published in the BRITISH MEDICAL JOURNAL of September 7th, you refer to the shoeing of the army as one of the defects leading to inefficiency, and though you rightly point out that it is the "fitting" which is mainly responsible, you do not, I think, quite do justice to the army boot itself. Continued personal experience has convinced me—and many others—that the "ammunition boot," as it is called, properly treated, is a most excellent article. I have walked and shot and marched many hundred miles in it, and know no better. Perhaps snipe shooting in the paddy fields of Burmah, varied by rough hill and jungle work in the dry season, may be accepted as a good tests; and I have ammunition boots which have stood this test for two years, and are still in use. But they need intelligent treatment—and feet as well. As the boots are issued in sizes from 4 to 12, and of four different breadths for each size, it would be an abnormally difficult foot that could not be fitted. Two pairs should always be kept in actual use. They should be easy—easy enough to take two pairs of thick socks, for good padding is essential. They should never be allowed to get dry or hard; should never be put in the sun or near a fire; and should be well rubbed with fat or dubbin while damp. In this state they can be blacked, but will not, of course, take a high polish. I lay great stress on plenty of padding in the shape of woollen socks; put on enough to fill the boot well and your feet will never suffer; if one thick pair is not enough, put on two or more; keep all your old merino socks to fill up with. Tommy never wears more than one pair (worsted), and those generally have holes; so have mine, but they are covered with other socks, and do not coincide. I used to suffer badly from corns, blisters, and tender feet; now twenty miles a day through mud and rough jungle will make no impression.

It takes three minutes to thoroughly rinse and squeeze two pairs of socks: they dry sufficiently in a night, but a day's sun improves them. Boots will dry in a night sufficiently if kept off the ground; five minutes suffices to grease boots well, and after greasing a few hours' sun is good. Fifteen minutes occasionally with needle and mending will keep socks going indefinitely. If this small expenditure of time and trouble is worth while for shooting, *a fortiori* it is worth while for campaigning or marching.—I am, etc.,

F. P. NICHOLS, M.B.Cantab.,
Surgeon-Major, A.M.S.

Shwebo, Upper Burmah, Oct. 6th.

THE D.P.H. (EDINBURGH CONJOINT BOARD).

SIR,—Perhaps my experience as a candidate at the above examination may prove useful to some of your readers who contemplate entering for the diploma. I would strongly impress on them the fact that a very full and complete course of special study in one of the Edinburgh laboratories is absolutely essential for success. No one who is in practice should attempt it unless he can have at least six months for special study. The practical examination in chemistry is searching—detection of metals and alkaloids in meat; estimation of carbonic oxide (CO) in air; whilst the bacteriological work necessitates a very thorough knowledge of processes and minutiæ of laboratory work and ability to recognise cultures and micro slides. The paper in chemistry consisted of questions or estimation of amount of dissolved oxygen in water—a process, I believe, seldom used by our analysts—and a careful description of the steps necessary to detect chicory in coffeee. Of 7 men only 2 passed. One had failed at a previous examination, and the other had devoted six months specially to the subjects for the first half of the examination. For the Final Examination only one candidate presented himself.

If this note prevents others from presenting themselves under the mistaken idea that the Edinburgh Colleges offer facilities to men engaged in private practice for obtaining a qualification in Public Health after a short course of study my object will be secured. I may mention I had at considerable inconvenience and great expense taken out a six-months course of work with the county analyst and entered under the old regulations.—I am, etc.,

A CANDIDATE.

October 10th.

OBITUARY

INSPECTOR-GENERAL SIR WILLIAM MACKENZIE, M.D., K.C.B., C.S.I.

INSPECTOR-GENERAL SIR WILLIAM MACKENZIE died at his residence in Gloucester Terrace, Hyde Park, on October 29th. Born at Dingwall, Ross-shire, in 1811, he graduated A.M. of King's College, Aberdeen, in 1830, M.R.C.S.Lond. in 1832, and entered the Madras Medical Service in 1835. He served with the Ellickpur Force of His Majesty the Nizam of Hyderabad's Army in 1841, and again in 1851 against insurgent Rohillas. He was Staff-Surgeon to the 1st Brigade Central India Field Force, under Major-General Sir Hugh Rose (Lord Strathnairn), during the whole of the campaign of 1857-58. He graduated M.D. of Aberdeen University in 1856. He was present at the following actions: Engagement with the enemy before Dhar, cavalry action at Chickliah, Siege of Dhar, operations at Mundersore on the November 21st, 22nd, 23rd, and 24th, 1857; Siege of the Fort of Chanderee from March 6th till the

final assault on March 17th, 1858; general action of the Betwah on April 1, 1858; the assault on the Fort of Jhansi, April 3rd, and subsequent operations; the taking of Koonch, May 7th, 1858; the engagement at Goolowlee, May 23rd, 1858; capture of Calpee, May 22nd, 1858; engagement at Morar, June 16th, 1858; and subsequent attack on Gwalior, with pursuing column under General Napier (Lord Napier of Magdala), and engagement at Jowrah Allipore. He served as staff-surgeon to the Berar Field Force from November, 1858, to March, 1859, and was present at the engagement of Chichumbah on January 15th, 1859. For these services he was, in 1859, created a Companion of the Order of the Bath, and in 1867 he received the same rank in the Order of the Star of India; was appointed honorary physician to the Queen, 1857, and was advanced to the Second Class (Military) of the Order of the Bath on the occasion of Her Majesty's jubilee. He was Inspector-General of the Madras Medical Department, and retired in 1871. He wrote a treatise on the medical topography of Ellickpur and papers on the Indian materia medica. He also translated into Hindustani Gregory's *Practice of Physic* and Thomson's *Conspectus of the British Pharmacopœia*. The funeral took place on Monday, November 4th.

The death is announced of Dr. William Partridge Mills, of Ipswich, at the age of 79. He was born at Lavenham, but went to reside at Ipswich very early in life. He was articled to the late Mr. W. Hamilton, surgeon, of Ipswich. He subsequently studied at Middlesex Hospital under Dr. Sweetman and Dr. Copland, where he carried off several prizes. He settled down in Ipswich after having passed his examination at the Royal College of Surgeons and at Apothecaries' Hall. He became L.R.C.P. in 1852, and graduated M.D. in the same year at St. Andrews. Dr. Mills had been for many years an alderman of the borough of Ipswich, and during the greater part of his life had been very closely connected with the benefit societies; not only was he prominently identified with Oddfellowship, but he took an equal interest in the sister Order of Forestry, his connection with which dated back nearly half a century. He was also a very ardent Freemason.

The news of the sudden death of Mr. Richard Basil Morley, L.R.C.P., L.R.C.S.Ed., at the early age of 43, when in apparently perfect health, came as a painful shock to his many friends in Leeds. He was the son of the late George Morley, for many years Lecturer on Forensic Medicine at the Leeds School of Medicine. Mr. Basil Morley began his medical career comparatively late in life. Of genuinely scientific tastes, he had found business uncongenial, and he entered as a student at the Leeds School of Medicine, where he was greatly distinguished amongst the men of his year. He qualified in 1883, and became resident officer at the Leeds Public Dispensary. He then began to practise at Chapel Allerton, Leeds, and during the past nine years had earned for himself a name for thoroughness of work and kindliness to the poor. Mr. Morley was always a lover of Nature, and delighted especially in country work. The cause of his death was cardiac syncope. He had ridden out three miles into the country upon his bicycle to visit a poor patient, and sitting by her bedside, he suddenly fell forward from his chair, and almost immediately expired. The very large number of mourners who filled the churchyard at his funeral testified to the public esteem which he had won in his short professional life.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Paul Schuette, formerly Medical Director of the Elizabeth Children's Hospital, Berlin, aged 48; Dr. Philipp Bertkau, Professor of Zoology in the University of Bonn; Dr. Janicke, Medical Director of the Augusta Hospital, Breslau; and Dr. Ferdinand Bauernfeind, formerly a well-known specialist in children's diseases in Vienna.

Erratum.—In the obituary notice of Dr. L. W. Andrews in the British Medical Journal of November 2nd, p. 1178, it should have been stated that he was L.R.C.P. in 1888 (not 1889), and that he was a member of the Rugby Fifteen which won the Inter Hospital Cup in 1888 (not 1889).

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Staff-Surgeon A. W. Russell has been promoted to be Fleet-Surgeon, October 11th. He was appointed Surgeon, September 30th, 1874, and Staff-surgeon twelve years thereafter.

The following appointments have been made at the Admiralty: William G. Peck, B.A., M.B., Surgeon, to the *Essex*, November 1st; Harry Spicer, M.B., Surgeon, to the *Benbow*, November 1st; Harold P. Jones, to the *Alexandra*, November 1st; Archibald McKinlay, Fleet Surgeon, to the *Howe*, November 2nd.

The retirement of Fleet-Surgeon George Kell, which appeared in the *London Gazette* of November 1st, is cancelled.

ARMY MEDICAL STAFF.

Surgeon-Colonel C. MacD. Cuffe, C.B., has been transferred from Allahabad to the Rawul Pindi District, to act as Principal Medical Officer on the staff of Major-General Moorsom, commanding a First Class District in the Punjab.

INDIAN MEDICAL SERVICE.

Surgeon-Lieutenant-Colonel W. M. Courtney, Bengal Establishment, is permitted to retire from the service from December 7th. He was appointed Assistant-Surgeon, October 1st, 1869, and became Surgeon-Lieutenant Colonel, October 1st, 1889. He served with the Duffla expedition in 1873-74; with the Burmese expedition in 1886-87 in medical charge of No 18 Field Hospital with the 4th Brigade Upper Burmah Field Force (medal with clasp); and with the Chin-Lushai Force, under Brigadier-General Symons, in 1889-90 as Senior Medical Officer in charge of the General Hospital (clasp).

Surgeon-General James A. C. Hutchinson, M.D., Bengal Establishment, died at Bedford on October 28th, aged 67. He entered the service as Assistant Surgeon, November 20th, 1850; became Deputy-Surgeon-General, March 31st, 1877; and retired, with the honorary rank of Surgeon-General, September 28th, 1884.

ARMY MEDICAL RESERVE.

Surgeon-Lieutenant Hewartson Clark, M.D., 1st Banff Artillery (Southern Division Royal Artillery), is appointed Surgeon-Captain, November 2nd.

THE VOLUNTEERS.

Surgeon-Lieutenant-Colonel C. C. Greig, 2nd Volunteer Battalion the Gordon Highlanders, has been awarded the volunteer officers' decoration.

Surgeon-Captain J. S. Carleton, 1st Gloucestershire Artillery, and Surgeon-Captain W. M. Vores, M.B., 2nd Volunteer Battalion the Royal Sussex Regiment, are promoted to be Surgeon-Majors, November 6th.

THE "RINGAROOMA."

In the *Times* of November 6th, the following appears among the appointments made at the Admiralty on November 5th:

"Captain.—W. L. H. Browne, to the *Ringarooma*, to date November 10th."

This announcement is interesting in connection with the case of Surgeon Francis J. Lea, who was dismissed the service last April after trial by court-martial on a charge of "insubordination and contempt." Mr. Lea attempted to put his commanding officer, Captain S. A. Johnson, on the sick list, as he considered him to be in an unfit state of health to be in command of the ship. We understand that the term of Captain Johnson's command would not in the ordinary course expire before the end of January, 1896.

MILITARY WAR TRAINS.

The Canadian Pacific Railway, after many months of labour, have constructed at an enormous cost two special military or war trains, comprising 14 cars for men, 2 cars for cooking, 2 Pullman cars for officers, 2 cars for arms and stores, and 2 dining cars. The officers' cars are luxuriously fitted out, and contain state rooms, lavatory, smoking room, etc. Each train is composed of 11 cars and engine, and gives ample sleeping accommodation for 306 men and 15 officers, although over 100 more men could find room. The men's cars are well finished and furnished with modern improvements. The kitchen car has all the utensils of a large-sized hotel, and requires 6 cooks and 2 helpers. This one car can turn out over 1,500 meals a day. During a trip from Halifax to Vancouver on the war train 5,500 meals for officers and men are prepared. The Canadian Pacific Railway expect to cover the distance from the Atlantic to the Pacific in five and a-half days.

MILITARY ASSISTANT SURGEONS (INDIA).

An addition has been made to Army Regulations, India, Vol. vi, Medical, as para. 278C. It runs as follows: Promotions in the place of a military assistant-surgeon dismissed the service or reduced to a lower rank or class by sentence of a court martial, will be made into effect from the date on which the officer concerned ceases to draw pay of his former rank or class, as the case may be, which will be that following the day on which the order was communicated to him.

EXCHANGES A.M.S. AND I.M.S.

It was announced some weeks ago that by Article 267 of the new Pay Warrant (1895) exchanges would be permitted between officers of the two medical services. A correspondent in the *Pioneer* of October 3rd states that the most important points to be considered are (1) a comparison between the pay of a surgeon-captain of from five to twelve years' service in the two branches, and (2) the difference in the two services of the pensions attainable after thirty years' service in connection with the

ordinary expectation of life on retirement and subsequent enjoyment of that pension. As regards the first, there is roughly, he says, a loss of Rs. 200 a month for seven years to the I.M.S. officer, or Rs. 16,800, or very nearly £1,000. In respect of the second item, the *Pioneer* correspondent states, taking ten years as the expectation of life on retirement after thirty years' service, there would be a loss of £300 a year for ten years to the I.M.S. officer, or £3,000 in all. So that, he sums up, it may be roughly stated that £3,000 would be a fair amount of compensation to be paid by the A.M.S. officer on exchange. It must be noted that exchanges by the new Pay Warrant are permitted only to A.M.S. officers under the rank of surgeon-major.

THE MEDICAL OFFICERS OF THE FRENCH ARMY AND THE MADAGASCAR EXPEDITION.

GREAT dissatisfaction appears to exist in the Medical Department of the French Army at what they consider to be the shabby way in which they are treated in the matter of the decorations of the Legion of Honour. It is said that when General Duchesne, after his terribly fatal though bloodless campaign in Madagascar, sent in his list of names for the Cross of the Legion of Honour, he "forgot" to include in it any officer of the medical staff. His attention having been called to this omission, he sent a second list, comprising the names of all the medical officers who took part in the expedition. This might, of course, be taken to mean that all these officers had deserved the decoration, but it is open to a less flattering interpretation. The fact is that throughout the campaign the work of the medical staff was hindered and crippled in the most deplorable manner by military pedantry and obstructiveness. It is the instinct of the military mind to make the task of the Medical Department as difficult as possible, and then to lay on it all the blame of the inevitable breakdown. Apart from the Madagascar expedition, French medical officers complain that the number of decorations falling to their share is much smaller than it used to be some thirty years ago. The matter is said to have attracted the notice of the late Minister of War, General Zurlinden, who, it is believed, was about to remedy this grievance had not the blind Fury with th' abhorrèd shears inopportunely slit the thin-spun thread of his official life.

The *Matin* publishes the diary of an officer who recently returned home from the campaign in Madagascar, showing that if the health of the troops was so deplorable, the fault lay in the first place with General Metzinger, who believed that the fever was a myth. But a large part of responsibility also rested with General Duchesne, who, according to the officer's diary, constantly refused to allow the surgeons to take the prophylactic measures which they declared to be indispensable. Detachments were compelled to start without drugs, and the commanders disregarded all hygienic precautions, even on account of those who were already ill. The Pasteur filters, which have been so effectual in the army stations, were left behind. Aperient medicines were likewise wanting, and the result was that on September 1st the Director of the Medical Department reported that there were 8,000 men sick in the various hospitals. The number of deaths in the expeditionary force was 45 a day, and on September 30th the total number of deaths amounted to about 4,000.

THE CIVIL ARMY MEDICAL DEPARTMENT.

WE have received some very strongly worded letters which we deem it inadvisable to print, not from want of sympathy, but because we think everything that might be misconstrued should be avoided at the present juncture. They comment upon an incident at a late review by the new Commander-in-Chief at Dublin, which has caused much surprise and regret in military circles in Ireland. It is stated that a bearer company of the Medical Staff Corps saluted at the march past with "drawn swords," strictly according to regulation, upon which Lord Wolseley remarked they should not do so, as they were only a "civil branch" of the service. The *Irish Times*, in a leader on the subject, says: "It is clear, however, that the words were not employed in any public manner so as to have been in the ordinary way reported as a statement deliberately and intentionally made." We do not know whether they were so employed or not, but we deeply regret that they were used at all. We hope the Army Medical Service is entering on a better era under the new *régime* at the War Office, and entirely deprecate ill-advised speech or action which would increase tension or arouse ill-feeling. We do not know what changes, if any, may be in contemplation in the medical service, but have already expressed an opinion that, unless a very different policy is adopted from that pursued towards it in past years, the army may soon find itself without medical officers, "civil" or otherwise. The breach between it and the schools is rapidly widening, and unless bridged over in a conciliatory spirit, will soon be impassable for educated gentlemen. The solution of the difficulty will thus rest with the public and Parliament, and will pass from the control of the military authorities, which, for the sake of the army at large, would be very undesirable.

TITLES ON VISITING CARDS.

MEDICAL ETIQUETTE asks whether it is correct for an army medical officer to put M.D. on his card—thus: Surgeon-Major ———, M.D.

"*" It is a matter of taste. We have frequently seen cards thus: ——— ———, M.D., Surgeon-Major, Medical Staff. We know of no law, written or unwritten, on the subject.

ENTERIC FEVER AT BANGALORE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL WM. F. BURNETT (in charge of Station Hospital, Bangalore) writes: I will be glad if you will permit me to correct some inaccuracies in the statement made in the JOURNAL of September 21st in connection with enteric fever at Bangalore. The Ulsur tank has not been used as a drinking water supply for the European troops since May, 1893; from that date the drinking water has been obtained from a large well south-east of British Cavalry Barracks, the water from which has invariably proved good and wholesome on analysis. Cleanliness in transit to barracks is carefully attended to. For some years past the drinking water for the European troops at Bangalore has been boiled prior to distribution. Quartermaster-General's Memo., No. 1,225, of October 21st, 1880, sanctions extra fuel for the purpose. It will thus be seen that no change has been made during the year in the purification process with the exception that recently filtering has been discontinued by order and boiling alone resorted to. With the exception of the regrettable outbreak amongst young officers, the garrison has escaped fairly well this year. Up to date we have not reached half the number of cases we had last year, and the enteric season may now be considered practically over. The total number of cases amongst officers was five, with three deaths. In one instance the disease was contracted at another station.

THE PURCHASING POWER OF THE RUPEE IN INDIA.

VINCIT VERITAS (Punjab) writes: In the numerous letters which appear on the subject of the value of the rupee, your correspondents appear to take it for granted that in India the rupee has a purchasing power equal to 2s. We find in the Punjab that the smallest tradesman and pedlar make the depreciation of the coin an excuse for advancing the price of all their wares. The price of articles which form staple foods are in many cases the same as at home—namely, milk, 4d. per quart; butter, 1s. 2d. per lb.; flour, 2d. per lb.; sugar, 3d. to 4d. per lb.; potatoes, 1d. to 2d. per lb.; bread, 1d. per lb. Sago, tapioca, and farinaceous foods are all nearly double in price; oatmeal six times the price. Fruit nearly the same as at home, and much inferior in quality and variety. Eggs are much cheaper, but being small and poor in quality are really as expensive; these foods are indifferently cooked; while with the poor, thin meat of India costs, with serving, as much, if not more, than at home. With servants and house rent at £100 a year, service in the "shiny" on the English rate of pay increases the weight of the liver and spleen at the expense of the purse.

BEARER COMPANIES.

SURGEON-CAPTAIN R. REGINALD SLEMAN writes: I feel certain that my friend, Brigade Surgeon-Lieutenant-Colonel Peter Giles, Welsh Border Volunteer Brigade, will agree with me that the bearer company of this brigade is on the strength of the 1st Herefordshire Rifle Volunteers. His letter, which appeared in the BRITISH MEDICAL JOURNAL of November 2nd, seemed to imply that a brigade bearer company need not be upon the strength of any battalion; but this is not so really, as will be seen by referring to Volunteer Regulations, Paragraph 30, which states that "the members of the bearer company will continue to belong to their own battalions." As to the examination of sergeants for proficiency certificates, it is true that they have to pass in the same subjects as corporals of the Army Medical Staff Corps for promotion. The regulation is a recent one as far as bearer companies are concerned. It has applied to sergeants of the Volunteer Medical Staff Corps for some time. The subjects of the examination are many, and include nursing, first aid, the management of wards, the practical use of the bath, ward and clinical thermometers, stretcher and wagon drill, guard mounting, etc., so that it is a good test of the man's abilities.

REGIMENTAL STRETCHER BEARERS AND "FIRST AID TO THE WOUNDED."

INQUIRER writes: In the British Army two men per company in every regiment are ordered to be trained in rendering "first aid to the wounded." These men are to be placed under the medical officer with the regiment before a battle. They advance after the fighting line, and afford, so far as they can, aid to the injured, but they must not lose touch of their regiments. The bearer company then coming up deals with the wounded. Will any of your readers inform me how the "aid" expected to be rendered by the trained regimental stretcher bearers in the British Army is officially arranged to be rendered in the armies of France and Germany? Is it by trained members of the several regiments engaged, as with us, or by separate organisations like our bearer companies?

REDUCTIONS OF SURGEON-MAJOR-GENERALS.

INDEPENDENCE gives as his opinion that one of the reasons for the reductions in the highest rank is, that these officers are apt to be too outspoken on army sanitary reform. Having reached the top of the ladder, they have nothing more to gain by judicious reticence, and are therefore a thorn in the side of the War Office and the military hierarchy.

INDIAN MEDICAL SERVICE.

I. M. S. writes: May I correct a statement recently made in the BRITISH MEDICAL JOURNAL that "an Indian medical officer is not eligible for regimental duty till he has acquired a knowledge of the native language"? Although that is the regulation, he may be appointed to a native regiment on first arrival in India, and frequently is, owing to the paucity of medical officers. But he cannot draw the staff pay till he has passed the "lower standard" in Hindustani.

FORWARD writes on the same subject: Fancy an officer fresh from England having to examine and treat a sepoy with whom he cannot converse! It clearly indicates the officer must be entirely dependent on his native hospital assistant as an interpreter.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PROSECUTION UNDER THE LUNACY ACT.

A VERY long letter has been received from Mr. F. R. Evans, the medical man concerned in the recent lunacy case at Birmingham. The chief portions of it are as follows:

"I did not personally plead ignorance as a defence. It would have been false, dishonourable, and disastrous for me to have done so. I was saturated with knowledge, not only of the Lunacy Acts 1890-91, but also with the equally-important Commissioners' and Lord Chancellor's statu-

tory rules, besides leading cases. I had had lunacy cases before, and I was not such an imbecile as to trifle with pains and penalties. What I did admit in my address to the learned Recorder was that I regretted I might have misconstrued the equitable significance of two words—a pardonable error even when committed by lawyers, but unpardonable by me.

"I received a lady patient on May 21st. As she was only suffering from simple mania, and not consequently, in my opinion—I am not, however, allowed an opinion or discretion by the recent decision—'certifiably insane,' I accepted her under the Act as a 'voluntary border.' I did not, therefore, require a licence, reception order, or urgency order. Before the statutory twenty-four hours for reporting to the Commissioners in Lunacy had expired, the trustees under her late husband's will had filed a petition for an inquisition in the Court of Chancery. That is on May 22nd; no secrecy there. Now, if she had been 'so found' then, the Commissioners would have been foiled decidedly. Owing, of course, to the usual delays, they reached me through common law quibble.

"The case came before the Chief Clerk on the 27th. He was informed that she was at my house and under my care; being satisfied, he adjourned for a further report on her condition without making an order as permitted under the Act. On June [illegible] I sent up my affidavit and those of two other practitioners, certifying improvement. On the 17th, being again satisfied, he did not make an order, but duly appointed (*sic*) a chancery visitor, and adjourned to July 17th for further report. In equity, if not in law, she was clearly under chancery jurisdiction. She was 'pending,' being so found by inquisition. But still more, under the Lord Chancellor's 2nd Rule, cases 'pending' are to be treated as 'so found,' and persons acting thereunder are to be indemnified against loss. In consequence of this construction, I did not keep a register of mechanical restraint, register of seclusion, or furnish any of the returns required in the case of commissioners' patients, for none such are required in the case of private chancery patients. The Masters in Lunacy do not require such jejune formalities, only general information regarding the bodily and mental condition from the chancery visitor, leaving the physician discretion in the matter of treatment, as for his own sake he will do his best. On June [illegible] two practitioners visited on a magistrate's order and certified that the patient was not under 'proper care and control.' In consequence of this she was removed to an asylum, where she died twelve days afterwards, I believe from exhaustion......

"The patient, aged [illegible], suffering from simple mania, alcoholic gastritis, acute bronchitis, dilatation of left ventricle, with mitral murmur, was admitted May 21st. There were no signs of paralysis, meningitis, or ocular abnormalities, though the retinal vessels were slightly turgid, membrane of both ears normal, urine free from albumen, sugar, and casts; specific gravity 1025. Pulse varying from [illegible] to 120, fairly normal in rhythm and tension; no signs of vascular degeneration. She would, and was allowed to, wander about the first night and next day, followed by an attendant. On 22nd developed 'acute mania'; on 23rd received whole bath, temperature [illegible]; wasted, weighed 81 lbs. nude, but great muscular strength. Confined in a barred single room, kept in bed by postural straps—namely, one across the chest and under the arms, which were quite free, the feet kept in the centre by ankle straps, which allowed limited motion, quite unconscious of their presence, and consequently did not fret or struggle to get free. No medicine or stimulants given throughout. Soda water first two days, afterwards [illegible] to 80 ounces milk, 6 eggs, and 3 ounces cornflour in a semi-fluid mixture, poured into the pharynx and swallowed automatically owing to inattention. Rapidly passed into mania gravis and on May [illegible] into acute delirium. Bronchitis cured by inhalations; dilatation and murmur increased."

Here follow remarks on acute delirium, and on the objections the writer has to the "possible alternatives to postural straps" in this particular case; and a few more clinical notes.

"Professional Discretion. This is a matter of supreme importance to the general practitioner. The Birmingham Recorder has decided that I had no right to use mechanical restraint, it not being necessary for medical purposes under Section 40. Although I from the dock emphatically affirmed that in my discretion 'rest' was a medical treatment and was absolutely necessary to avert death, it mattered not. Although counsel cited 'authorities' it mattered not, the witness disagreed with all, and no more authorities were permitted to be cited.

"Now, if I have not any discretion of my own, from whom must I get it, especially in an emergency? Must I ask the poor father of the child suffering from diphtheria for a stamped deed of indemnity against prosecution, lest some practitioner who only believes in intubation may witness against me, or the man who advocates antitoxin only do likewise? Or must I demand the opinions of all the specialists around, requiring their fee in advance, lest some of them may appear against me in case I should be indicted? Or shall I proclaim myself a coward by abandoning the case? I know not; medical witnesses, in my experience, act the part of prosecuting counsel......

"Now in my 40th year, I can truthfully assert that I have never shirked any case in surgery, midwifery, or gynæcology to which I was summoned. I fortified myself to meet each exigency. I never contravened the ethical code in the slightest degree. Then why this prosecution? Shall my hair be turned white and the flesh worn off my bones by disturbed dreams of docks and visions of prison cells? Must I at 40 abandon the profession in despair, with my youth gone, my spirits broken, and a financial wreck?"

ECONOMICAL FISCALS.

THE following paragraph recently appeared in a Glasgow newspaper concerning the attempt of the Procurator-Fiscal to conduct the fatal accident inquiries with the minimum of expense for professional witnesses:

"In an inquiry held the other day the subject had died in the infirmary, but instead of summoning the doctor who had signed the death certificate, the nurse who had attended the man was put into the box. —'What was the cause of death?' queried the Fiscal.—'I don't know,' was the reply.—'Oh, but the man died, didn't he.'—'Yes.'—'And you attended him?'—'Yes.'—'And yet you don't know what he died of?'—'No.'—'Did the doctor not say what he died of?'—'No.'—Such was the turn the examination of the nurse took. I cannot say that she had been primed beforehand by the doctor, but she couldn't have served the profession better if she had."

Dr. D. D. Mackintosh writes us on this subject that a like case has recently occured in his practice. On October 4th a number of men were working at an excavation when one of the sides fell in, burying a man. When called, Dr. Mackintosh found that the man had been killed, the cause of death being fracture of several ribs which had also pierced the lung, fracture of the right thigh bone, and fracture of the spinous process of the fourth dorsal vertebra. The local police inspector attended also, and requested from him a report on the cause of death, which he gave. At the subsequent inquiry, Dr. Mackintosh was not called as a witness. One of the labourers, after giving his own evidence, was recalled and examined as to the cause of death, when he said that the doctor had given it as his opinion that death was due to the back being broken. Dr. Mackintosh sent in a demand for a fee of one guinea to the Fiscal for his report, who replied that as he had not been called at his instance the fee could not be paid. Dr. Mackintosh asks what practitioners should do when a like case occurs again?

TOUTING.

H. T. H.—Assuming that our correspondent's statement fairly represents the facts, there can be no doubt that the conduct of B. in distributing his testimonials among A.'s patients, and in the neighbourhood generally; also in touting for patients and seeking to undercharge A., and in inducing cottagers in various villages to sell for him on commission, pills, castor oil, etc., constitutes a grave breach of medical ethics, the rules of which he will do well to study and to practise, otherwise such derogatory proceedings cannot fail sooner or later to recoil upon himself, and deservedly so.

M.B.CANTAB.—Although the courtesy of the faculty and of the public (outside of the University precincts) have for a long period accorded the title of "Dr." to M.B. graduates, it is deemed in better taste to avoid such prefix on their visiting cards and doorplates. If, however, it is desired that the degree should appear, M.B. would be a suitable inscription.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the third, or summer, quarter of this year, and to the marriages during the three months ending June last. The marriage-rate was equal to 16.0 per 1,000 of the population, and exceeded the average rate in the corresponding periods of the ten preceding years.

The births registered in England and Wales during the three months ending September last numbered 231,724, equal to an annual rate of 30.2 per 1,000 of the population, estimated by the Registrar-General to be nearly thirty and a-half millions of persons in the middle of this year. This rate last quarter showed a recovery from the exceptionally low rate in the third quarter of [illegible], but with this exception it was the lowest birth-rate in the corresponding period of any year since [illegible]. The birth-rates in the several counties ranged from 22.5 in Rutlandshire, 23.8 in Westmorland, and 24.0 in Huntingdonshire to 34.6 in Monmouthshire, 35.0 in Staffordshire and in South Wales, and 36.0 in Durham. In thirty-three of the largest English towns the birth-rate last quarter averaged 31.1 per 1,000, and exceeded by 3.9 per 1,000 the general English rate. In London the birth-rate was 30.4 per 1,000, while it averaged 31.5 in the thirty-two provincial towns, among which it ranged from 22.1 in Huddersfield, 24.4 in Halifax, and 25.2 in Brighton to 35.3 in Gateshead, 36.2 in Salford, and [illegible] in Liverpool.

The births registered in England and Wales during the quarter ending September last exceeded the deaths by [illegible]; this represents the natural increase of the population during that period. It appears from returns issued by the Board of Trade that [illegible] emigrants embarked during last quarter for places outside Europe from the various ports of the United Kingdom at which emigration officers are stationed. Of these, 40,007 were English, 8,019 Scotch, 16,651 Irish, and [illegible] of foreign origin. Compared with the averages in the corresponding periods of recent years, the proportion of English emigrants showed a decrease, while those of Scotch and Irish emigrants showed an increase.

During the third quarter of this year the deaths of [illegible] persons were registered in England and Wales, equal to an annual rate of [illegible] per 1,000 of the estimated population; this rate was [illegible] per 1,000 above the mean rate in the corresponding periods of the ten preceding years. The lowest county death-rates last quarter were 11.6 in Rutlandshire, 11.7 in Somersetshire and in Westmorland, and 11.8 in Devonshire; while the highest rates were 19.7 in Northumberland, 21.9 in Durham, 22.2 in Lancashire, and 22.5 in the East Riding of Yorkshire. In the urban population of the country, estimated at about twenty and a-half millions of persons, the rate of mortality during the quarter under notice was 16.9 per 1,000; while in the remaining and chiefly rural population of nearly ten millions it was 14.4 per 1,000. These rates were respectively 1.0 per 1,000 above, and 0.1 per 1,000 below, the mean rates in the corresponding quarters of the ten preceding years. Among thirty-three of the largest English towns the mean death-rate was [illegible] per 1,000; in London the rate was 18.6 per 1,000, while it averaged [illegible] in the thirty-two large provincial towns, and ranged from [illegible] in Croydon, 14.4 in Bristol, 15.0 in Huddersfield, and 15.4 in Swansea, to 26.0 in Sunderland, 26.1 in Wolverhampton and in Preston, [illegible] in Salford, and 28.2 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of about three and a-half millions, the mean death-rate was 18.4 per 1,000, or 1.8 per 1,000 below the mean rate in the thirty-three large towns.

The 133,309 deaths registered in England and Wales during the three months ending September last included 18,118 which resulted from diarrhœa, 2,350 from measles, 1,695 from diphtheria, 1,891 from whooping-cough, 1,495 from "fever" (including typhus, enteric, and ill-defined forms of "fever"), 1,200 from scarlet fever, and 99 from small-pox; in all, 26,848 deaths were referred to these principal zymotic diseases, equal to an annual rate of 3.35 per 1,000, against an average rate of 2.73 in the corresponding quarters of the ten preceding years. The mortality from diphtheria and from diarrhœa showed an excess, while that from scarlet fever, whooping cough, and "fever" was below the average. Of the 99 fatal cases of small-pox registered last quarter in England and Wales, 31 occurred in London, 17 in Oldham, 5 in other parts of Lancashire, and 21 in the West Riding of Yorkshire.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under one year of age to registered births, was equal to 201 per 1,000, which exceeded the mean proportion in the ten preceding corresponding quarters by 41 per 1,000, owing to the fatal prevalence of summer diarrhœa. In London the rate of infant mortality was 222 per 1,000, while it averaged 273 in the thirty-two large provincial towns, among which it ranged from 141 in Bristol, 157 in Huddersfield, and 168 in Halifax to 365 in Preston and in Hull, 367 in Wolverhampton, and 369 in Burnley.

The mean temperature of the air during last quarter at the Royal Observatory, Greenwich, was 62.8°, and was 2.7° above the average in the corresponding quarters of 124 years; the mean temperature showed an excess of 1.0° in July, 1.3° in August, and of 5.7° in September. The rainfall during the quarter amounted to 6.46 inches, which was 0.83 of an inch below the average.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,542 births and 4,464 deaths were registered during the week ending Saturday, November 2nd. The annual rate of mortality in these towns, which had been 19.1 and 19.7 per 1,000 in the two preceding weeks, further rose to 21.9 last week. The rates in the several towns ranged from 12.3 in Croydon, 14.2 in Huddersfield, and 15.0 in Halifax to 30.8 in Salford, 33.1 in Blackburn and 35.5 in Liverpool. In the thirty-two provincial towns the mean death-rate was 22.4 per 1,000, and exceeded by 1.2 the rate recorded in London, which was 21.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.9 per 1,000; in London the rate was equal to 2.8 per 1,000, while it averaged 3.0 in the thirty-two provincial towns, and was highest in Burnley, Salford, and Blackburn. Measles caused a death-rate of 1.8 in Wolverhampton, 3.0 in Salford, and 9.0 in Blackburn; scarlet fever of 1.0 in Birkenhead and in Salford; whooping-cough of 1.4 in Bradford; and "fever" of of 1.7 in Sheffield, 2.0 in Salford, and 2.7 in Sunderland. The 108 deaths from diphtheria in the thirty-three towns included 72 in London, 7 in Birmingham, 6 in West Ham, and 4 in Manchester. Three fatal cases of small-pox were registered in West Ham, and 1 London, but not one in any other of the thirty-three large provincial towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital, which had been 158, 119, and 114 at the end of the three preceding weeks, had further declined to 106 on Saturday last, November 2nd; 29 new cases were admitted during the week, against 9, 7, and 14 in the three preceding weeks. There were 2,041 scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, against 2,897, 2,838, and 2,833 at the end of the three preceding weeks; 215 new cases were admitted during the week, against 332, 241, and 269 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 2nd, 822 births and 591 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.7 and 18.9 per 1,000 in the two preceding weeks, rose again to 20.5 last week, but was 1.4 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.1 in Leith to 22.5 in Paisley. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Aberdeen and Greenock. The 288 deaths registered in Glasgow included 11 from whooping-cough, 10 from diarrhœa, 5 from scarlet fever, 4 from "fever," and 3 from diphtheria.

THE HEALTH OF MIDDLESEX.

The annual report upon the health of the administrative county of Middlesex for the twelve months ended March last, prepared by Dr. Sykes, shows that the birth-rate was 28.7 per 1,000 in the urban districts and 26.2 in the rural districts. The total for the county was 28.5, and for England and Wales 29.6; while the deaths were 12.7 for the county against 16.6 for the whole country. The highest death-rate was in Edmonton, where it was 17.7, but this included the deaths in two workhouses within the district. The lowest was in Ealing, 9.6. Dealing with the infectious diseases hospitals, Dr. Sykes says one-half of the county is unprovided with them. From the figures supplied it would seem that only 12 children born in the county during the year were unvaccinated. The laundries in the county are numerous, but Dr. Sykes says only 8 out of 33 districts appear to give them any attention, and in only half of the number of districts are the bakehouses more or less regularly visited, although such inspections are of great importance. The same thing to a large extent applies to dairies, cowsheds, and milk shops. Referring to the water question, Dr. Sykes, who is the medical officer of St. Pancras, says: "As illustrating one of the dangers of the intermittent supply of water, Dr. Ridge (Enfield) records that there have been some complaints of the water as delivered. The water supply being intermittent, sewage-contaminated water was able to get into a defective pipe, and was distributed when the water was turned on. This revealed a great cause of waste; the pipes had been in the earth twenty years, and there can be no doubt there are many others in the same condition, which accounts for many of the complaints of the supply of muddy water. It is desirable that water meters should be affixed to the mains at suitable points, which would at once show when and where waste was occurring, and would thus soon repay their first cost." At Uxbridge, which is served by one of the numerous water companies, Dr. Rayner says many of the service pipes have been laid forty years, and Dr. Fletcher Little says cisterns require frequent inspection and cleansing, and cleaning four times a year would prevent them getting into an insanitary state. "Chronic ill-health is often traceable to this cause. All drinking water should be drawn direct from the supply pipe as it enters the house from the mains." On this, Dr Sykes says, "may be added the urging of the provision of a constant service." Dr. Dodsworth, of Chiswick, concurs in this view, and Dr. T. Watson, of Tottenham, complains that the water companies (the East London and New River) have cut off supplies for the non-payment of rates, and this caused the houses to become unfit for habitation and a danger to the neighbourhood.

MILK TYPHOID.

A report by Dr. John T. Wilson, Medical Officer of Health for Lanarkshire, dated October 21st, regarding the epidemic of enteric fever at Shettleston, has just been published. Dr. Wilson states that the present prevalence of enteric fever in Shettleston—twenty five cases have been reported up till October 20th—exceeds that of previous years. The thirty-five cases occurred in twenty-three houses, the incidence being greater in the newer tenement houses than in the old cottage class of property. Up till October 5th the features of the outbreak were those presented by the usual autumnal prevalence of the disease, although occasionally associated with sanitary defects. But the sudden increase in the ensuing fortnight, and especially the fact that four members of one family took ill on the same day and two members of another family on another day, pointed to a common cause, such as contaminated water or infected food. In eight families with fifteen cases it was found that the milk had been obtained from a dairy situated in the centre of Shettleston. From this dairy, which supplied sixteen families in the vicinity regularly with milk, a case of enteric fever was notified on September 28th, and upon the usual inquiry being made by the sanitary inspector it was found that the patient had been ill since September 14th, and nursed during that time by one of the family, who also took part in the dairy work, attending milk vessels, etc. The sanitary inspector at once advised the immediate stoppage of the dairy business, which the owner willingly carried out. Of the sixteen families supplied by the dairy up till September 28th, seven, or over 40 per cent., have now suffered from the disease, as well as two other inmates of the dairy itself who also consumed the milk. These facts, Dr. Wilson says, seem to implicate this dairy as a probable agent in disseminating the disease. He further points out that a case has occurred in a family where two of the members were employed in a milkshop. The sale of milk here was stopped a few days after the date of attack. The disease, the medical officer further says, has in most cases been of a mild type, but two deaths have already occurred.

EDINBURGH AND LEITH AGAIN.

The petition by the Lord Provost, magistrates, and Town Council of Edinburgh for warrant to erect a temporary hospital has again come before the Leith Dean of Guild Court. As was reported in the British Medical Journal at the time, the Dean of Guild Court rejected the petition in August, on the ground that the petitioners had no right to erect and administer an hospital for infectious diseases within the bounds of the Burgh of Leith. The Edinburgh Corporation appealed to the Court of Session, and the Judges of the First Division sent the petition back to the Dean of Guild Court for procedure, and added that the Court had no right to conjure up objections which were not before them. At the meeting this week the Provost of Leith again came to the front, and said: "This is no doubt an important case, and seeing that three of our number demit office to-night, I would propose to the Court that we should continue this case for another fortnight. By that time it will be before the Town Council. They have never heard of it, unless from the papers, which have not stated the case very much in the way that was in accordance with what we thought. By next Court the Town Council will consider the matter, and give the Dean of Guild Court authority to oppose this. I personally would oppose it to the bitter end; that is my opinion about it." In vain did the agent for the Corporation plead that this was an extraordinary mode of transacting business. The Provost went on: "I will give you my reasons: I hold this is illegal. And further, I am not going to argue the case with you. You are not going to come here and ram this case down our throats."

ZYMOTIC MORTALITY IN LONDON.

The accompanying diagram shows the prevalence of the principal zymotic diseases in London during each week of the third quarter of the current year. The fluctuations of each disease and its fatal prevalence as compared with that recorded in the corresponding weeks of recent years, can thus be readily seen.

Small-Pox.—The deaths referred to small-pox, which had been 5 and 10 in the first two quarters of the year, further rose to 31 during the three months ending September last, and were 12 above the corrected average number in the corresponding periods of the ten preceding years, 1885-94. Of these 31 deaths, 6 belonged to Camberwell, 4 to Whitechapel, and 2 each to Strand, Shoreditch, Bethnal Green, Lambeth, and Plumstead sanitary areas. The number of small-pox patients in the Metropolitan Asylums Hospitals, which had been 16, 54, and 33 at the end of the three preceding quarters, had increased to 227 at the end of September last; 583 new cases were admitted during last quarter, against 79, 155, and 92 in the three preceding quarters.

Measles.—The fatal cases of measles, which had been 390 and 564 in the two preceding quarters, further rose to 753 during the three months under notice, and were as many as 245 above the corrected average number. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in St. Pancras, Holborn, Clerkenwell, St. Luke, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Bermondsey, and Camberwell.

Scarlet Fever.—The deaths referred to this disease, which had been

141 and 166 in the first two quarters of this year, further increased to 253 during the three months ending September last, but were 23 below the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas this disease showed the highest proportional fatality in Strand, Shoreditch, Whitechapel, St. George-in-the-East, Limehouse, and Poplar. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 1,455, 1,455, and 1,845 at the end of the three preceding quarters, had further risen to 2,740 at the end of September last. The number of cases admitted into these hospitals, which had been 1,881 and 2,290 in the two preceding quarters, further rose to 3,816 during the three months ending September last.

Diphtheria.—The fatal cases of diphtheria in London, which had been 433, 438, and 446 in the three preceding quarters, further rose to 602 during the three months under notice, and were 176 above the corrected average. Among the various sanitary areas this disease showed the highest proportional fatality in Kensington, Fulham, St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Camberwell, and Greenwich. The cases of diphtheria admitted into the Metropolitan Asylums Hospitals, which had been 1,229, 804, and 1,117 in the three preceding quarters, further rose to 1,235 during the three months ending September last, and 664 patients remained under treatment in these hospitals at the end of the quarter.

Whooping-cough.—The fatal cases of this disease, which had been 511 and 443 in the two preceding quarters, further declined to 261 during the three months ending September last, and were little more than half the corrected average number; among the various sanitary areas whooping-cough showed the highest proportional fatality in Fulham, Clerkenwell, St. George Southwark, Newington, and Lambeth.

Fever.—Under this heading are included deaths from typhus, enteric fever, and simple and ill defined forms of fever. The deaths referred to these different forms of "fever," which had declined from 283 to 81 in the three preceding quarters, rose again to 139 during the three months ending September last, but were 11 below the corrected average number. Of these 139 deaths from "fever," 1 was certified as typhus, 135 as enteric fever, and 3 as ill defined fever. Among the various sanitary areas the highest proportional fatality of "fever" was recorded in Hackney, Shoreditch, St. George Southwark, Woolwich, and Plumstead. The Metropolitan Asylums Hospitals contained 117 enteric fever patients at the end of September last, against 104, 73, and 147 at the end of the three preceding quarters; 224 new cases were admitted during last quarter, against 183, 168, and 222 in the three preceding quarters.

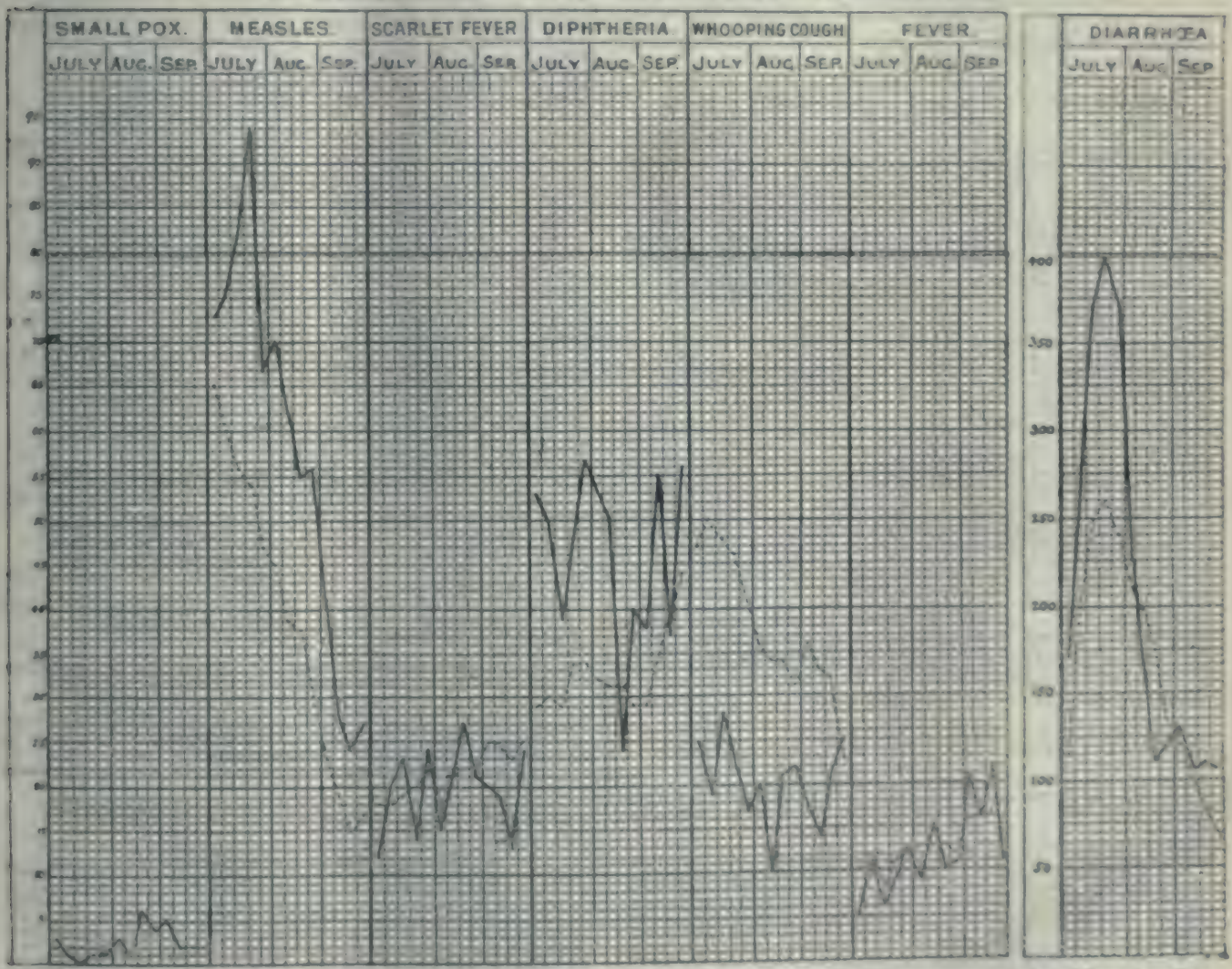
Diarrhœa.—The 2,655 fatal cases of diarrhœa registered in London during the three months ending September last exceeded by 492 the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Westminster, Strand, Holborn, Clerkenwell, St. Luke, Whitechapel, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, and St. Olave Southwark.

In conclusion, it may be stated that the 4,714 deaths referred to the principal zymotic diseases in London during the third quarter of this year were 663, or more than 16 per cent. above the average number in the corresponding periods of the ten preceding years, 1885-94, owing principally to the high mortality from measles and diarrhœa. Among the various sanitary areas the lowest zymotic death-rates were recorded in St. George Hanover Square, St. James Westminster, Hampstead, Stoke Newington, St. Martin-in-the-Fields, London City, and Lee; and the highest rates in St. Luke, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and St. George Southwark.

DISEASED MEAT.

A PARLIAMENTARY paper has just been issued relating to the seizure and condemnation of carcasses and animals in the years ending March 25th in 1894 and 1895, distinguishing, as far as practicable, the number con-

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE THIRD QUARTER OF 1895.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding week of the preceding ten years, 1885-94

demned in consequence of the animal having suffered from tuberculosis. The number of carcasses seized by medical officers of health and inspectors of nuisances rose from [illegible] in [illegible] to [illegible] in [illegible]. In [illegible] [illegible] carcasses, and [illegible] [illegible] carcasses were condemned by justices. The number of carcasses so condemned in consequence of the animal having suffered from tuberculosis rose from [illegible] in [illegible] to 167 in [illegible]. The returns, however, in many cases show that the carcasses were destroyed without being taken before the justices, and that some of the carcasses so destroyed were those of animals which had suffered from tuberculosis. Some local authorities have furnished information as to carcasses voluntarily surrendered by owners and subsequently destroyed, and pieces of meat, not being whole carcasses, which had been seized and condemned.

WATERBORNE TYPHOID AT TORONTO.

A TYPHOID fever epidemic is threatened in Toronto. Some time ago the water conduits burst, and since that time the city has been without pure water. The effect is now apparent from the returns of the local Board of Health. For the first fifteen days of the present month [illegible] cases of typhoid fever were reported, against 20 in the whole month of October last year and 27 cases in October, 1893. There are a large number of patients at the different hospitals: At Grace Hospital there are 36, at St. Michael's [illegible], and at the General [illegible].

HAMPSTEAD AND VACCINATION.

At the meeting of the Hampstead Board of Guardians on October 31st, Mr. J. S. Fletcher, J.P., L.C.C., the chairman, called attention to the unsatisfactory position in which Boards of Guardians are placed by reason of the delay in the publication of the report of the Royal Commission. The following resolution was passed: "That the delay in the publication of the final report of the Royal Commission on Vaccination encourages persons who are opposed to vaccination to disobey the law, and is embarrassing to Boards of Guardians, inasmuch as it is their obnoxious duty to prosecute transgressors of the law while it is being the subject of parliamentary inquiry as to its usefulness or necessity." This was carried, and it was further resolved that copies of the resolution be forwarded to the Home Secretary, the President of the Local Government Board, and to each of the Metropolitan Boards of Guardians.

THE NEWCASTLE PORT SANITARY AUTHORITY AND DR. ARMSTRONG.

AT a meeting of the Newcastle-on-Tyne Port Sanitary Authority, held on October 28th, the clerk read a letter from Dr. J. F. Armstrong, stating that he had noticed in the papers the resignation of Dr. Henry Armstrong, and as his deputy he begged to tender his resignation also. Alderman W. D. Stephens, J.P., moved that the resignation of Dr. J. F. Armstrong be accepted, but that he be asked to act in his present position until the end of November. The motion was agreed to. The adoption or otherwise of the minutes of a committee consisting of the whole Board recommending the acceptance of Dr. Henry Armstrong's resignation of medical officer of health was then considered. Mr. Kirby moved, and Mr. T. D. Marshall seconded, that the resignation be accepted, and that the Board express its high appreciation of his past services, and recognised his uniform kindness in the performance of his duties. Dr. Adam Wilson spoke of Dr. Armstrong's great services to the Board, and said that it was not only a local but a national misfortune, for they could not afford, without great loss, to part with the services of such a medical officer of health as Dr. Armstrong. It was decided that Dr. Armstrong be asked to continue his services until December 31st. The Clerk (Mr. R. Sheriton Holmes) in answer to questions, said the salary of Dr. Armstrong had been £170, and the salary of the assistant was £50. It was agreed on the motion of Alderman Hindmarsh that the authorities advertise for a medical officer of health at a salary of [illegible] a year, the gentleman appointed to live in the borough of Tynemouth or South Shields. It was moved that the House Committee meet to define the duties of the medical officer, and this was seconded and carried. The Chairman said before the meeting separated he was sure they all regretted that Dr. Armstrong had felt it his duty to withdraw from the position he had held. He thought Dr. Armstrong was a man of so much experience that they might ask him to accept the position of consulting medical officer to the authority, at an honorarium of, say, 50 guineas, just to cover expenses which he might be put to if called upon. In case of an outbreak of cholera, etc., where they were required to spend a good deal of money, they would find Dr. Armstrong's services very valuable to them. Alderman W. D. Stephens seconded. He said he had the greatest respect for Dr. Armstrong, and felt the greatest regret that he had seen fit to withdraw. On the suggestion of Alderman Hindmarsh, the Chairman agreed to withdraw his motion in order that it might be placed on the agenda for the next meeting.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

BOTANY.—Dr. H. Marshall Ward, F.R.S., has been elected to the Professorship of Botany vacant by the death of Professor C. C. Babington. Mr. F. F. Blackman, Demonstrator in Botany, has been elected to a Fellowship in St. John's College.

STATE MEDICINE.—The Syndicate report that the increasing importance of bacteriology in its relation to public health has necessitated an extension of the time devoted to the subject in the half yearly examinations, and the appointment of a fifth examiner specially conversant with it. The two parts of the examination in October and in April will in future be held in successive weeks. At the last April examination there were [illegible] candidates, of whom 13 passed; and in October there were [illegible], of whom 14 passed. Thirty-one successful candidates received the University diploma in Public Health during the year. The fee for each part of the examination will in future be six guineas instead of five, except in the case of candidates who have already been admitted to the examination.

MUSEUM OF ZOOLOGY.—Lord Tankerville has received the thanks of the University for his present of the skeleton of a Chillingham bull.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE following gentlemen, having conformed to the By-laws and Regulations and passed the required Examinations, have been admitted Licentiates of the College:

Abbott, J. E., Leeds
Ash, P. B., Leeds
Ashwin, E. H., Guy's
[illegible], L. D., Middlesex
Barton, T. A., St. Bartholomew's
Beadles, A. H., St. Bartholomew's
[illegible], G. C., Birmingham
Bell, T. D., University College
[illegible], M. M., Moscow
*Best, W. H., London
Bodman, J. H., St. Bartholomew's
Bostock, E. B., Birmingham
[illegible], T. A., Cambridge and St. Bartholomew's
Boyton, A. J. H., St. Bartholomew's
Breton, L. M., St. Thomas's
Brown, R. C., Melbourne and Westminster
Bull, H. A., St. Thomas's
[illegible], G. E., University of California and Geneva
Campbell, A. J., St. Thomas's
[illegible], A., Birmingham
[illegible], W. A., Guy's
[illegible], G., St. Bartholomew's
[illegible], G. A., Oxford and St. Thomas's
Clark, R. F., Guy's
Connell, A. M., University College
Cooke, A., Oxford and London
Cooke, M. A., St. Bartholomew's
Coutts, F. J., University College
Cox, H. F., King's College
Creasy, L. E., University College
Crosby, A. H. P., Middlesex
Crossley, [illegible], Manchester
Dempsey, P. J., Dublin
Dhingra, B. L., Lahore and University College
Dudley, A. D. P., University College
Dun, R. C., Edinburgh and Berne
Dyball, B., St. Thomas's
Eames, C. W., Edinburgh and Leeds
Evans, E. L., Cambridge and St. Bartholomew's
Fairbairn, J. S., Oxford and St. Thomas's
Farmer, W. H., St. Bartholomew's
Fincham, E. C., St. Bartholomew's
Fleming, W. L. R., Westminster
Fletcher, R. H., University College
Flower, A. F. A., St. Bartholomew's
Frazer, W. D., St. Thomas's
Ganner, J., Birmingham
Genge, G. F. S., Westminster
Giblin, W. W., St. Bartholomew's
Gilmour, R. W., St. Bartholomew's
Gross, C. F., King's College
Hardcastle, W., Charing Cross
Hardy, F. S., Sheffield and University College
Harris, N. MacL., Toronto
Hartley, T. S., Leeds
Hay, J., Liverpool
Hayden, G. A. T., London
Hearnden, H., Guy's
Heptonstall, R. H., Leeds
Hewetson, H., Guy's
Hill, E. G., St. Mary's
Holme, C. W., Edinburgh
Hora, J., Guy's
Hubert, W. A., St. George's
[illegible], A. H. H., Guy's
Hughes, L. [illegible], University College
[illegible], F. H., Edinburgh and University College
[illegible], R. D., Dublin
[illegible], F. W., St. Thomas's
[illegible], T., University College
Lawrence, A. S., Middlesex
Lelean, P. S., St. Mary's
Leon, J. T., St. Mary's
Lermitte, E. A., Newcastle, and St. Bartholomew's
[illegible], C. H. S., Madras, and Guy's
[illegible], F., Guy's
[illegible], W. T., Bristol
Mackenzie, A., Cambridge and Leeds
Macmillan, N. H., Edinburgh
Madden, F. B., St. Bartholomew's
Manby, W. F., Cambridge, and King's College
Marshall, G. [illegible], Middlesex
Martineau, A. J., St. Thomas's
Mayne, B. J., Middlesex
Miller, G., St. Bartholomew's
Muggleton, F. C. H., London
Murray, J. H., University College
Myrtle, G. Y., Leeds, and St. Mary's
Nott, H. W., Liverpool
Nuttall, A. W., Birmingham
Ormerod, E. W., Bristol
O'Sullivan, D., London
Pearse, J. S., Middlesex
Penny, W. R., Westminster
Pepper, H. W., Birmingham
Perkins, G., Madras, and University College
Perry, W. D., Middlesex
Pritchard, H. W., Manchester
Ransome, A. C., Cambridge and St. Mary's
Rawson, W. F., Leeds
Rees, D. C., Charing Cross
Rogers, A. A., St. Bartholomew's
Rundle, C., St. Mary's
Savin, L., Middlesex
Sears, A. E., London
[illegible], F. W. [illegible], St. Bartholomew's
[illegible], H., St. Thomas's
[illegible], S. E., University College
Simpson, C. E., St. Thomas's
Smith, F. A., St. Bartholomew's
Sparrow, B. R., Liverpool
Stonehouse, H., Leeds
Stuart, W. L., Guy's
Thornton, F. E., St. Thomas's
Trotter, R. H., Leeds
Tyson, W., Cambridge and Guy's
*Wakefield, C. F., Guy's
Watson, F. J., Cambridge and St. George's
Wilde, A. N., St. Bartholomew's
Williams, F. D'A. M., Bristol
Willmore, W. [illegible], Birmingham
Wilson, H. E., Bristol and Birmingham
Wolfenden, H. C., Birmingham
Wood, R. M., King's College
Worthington, J. Y., London

* These candidates have not presented themselves under the regulations of the Examining Board.

ERRATUM.—The name of Mr. A. W. M. Auden was accidentally omitted from the pass list for M.B. and C.M. of the University of Edinburgh in the BRITISH MEDICAL JOURNAL of October 26th.

HOSPITAL AND DISPENSARY MANAGEMENT.

ROYAL ALBERT ASYLUM, LANCASTER.

FROM the report presented to the annual meeting of this institution, held on October [illegible] at Southport, it appears that there were in the asylum on June 30th 542 patients (370 males, 172 females), and that the average number resident during the preceding twelve months had been 540. Dr. Telford Smith, the medical superintendent, states in his report that during the year 17 deaths had occurred, and that of these 70 per cent. were due to tuberculous diseases. The death-rate calculated on the average number resident was 3.14 per cent., a percentage approximating very closely to the average annual mortality since the opening of the institution twenty-five years ago. The general sanitary condition of the

asylum and its various branches had been good, and there had been an entire absence of infectious disease. The [illegible] Infirmary had been extended by the addition of isolation wards, and the average number of patients under treatment there had been about [illegible]. Feebleness of mind is in most cases accompanied by feebleness of body, and ample infirmary accommodation is therefore necessary in an institution for idiots, even for those suffering from ordinary ailments, whilst in time of epidemic facilities both for isolation and quarantine are indispensable. Dr. Telford Smith emphasises the desirability of dealing with the epileptic patients in a class apart, their association with the other inmates being a matter of difficulty and even danger. He concludes an interesting report by testimony in favour of the thyroid treatment of sporadic cretinism, and adverse to that of microcephaly by craniectomy, referring to results in cases he has had under observation for some years.

Sir John Hibbert, Chairman of the Royal Albert Asylum and of the Lancashire County Council, in moving the adoption of the report, stated that it was computed that in the northern counties there were [illegible] weak-minded persons under 20 years of age, whilst their institution, the only one in the north of England, had accommodation for no more than [illegible]. Referring to returns recently published by the Lunacy Commissioners and by the Local Government Board, he mentioned that in England and Wales there were 535 children under 16 years of age returned as idiots or imbeciles in lunatic asylums and 485 in the workhouses in addition. Neither the asylum nor the workhouse was a fit place for an idiot child. He urged upon the provincial authorities, and especially the Lancashire Asylums Board, the desirability of following the lead of the metropolis in providing suitable training and care for the imbecile class. He mentioned several remarkable cases of improvement in discharged patients, amongst whom one was receiving [illegible] a week at the trade which he had learned at the asylum, and two others were serving with credit in the army. There were, moreover, numerous cases in which notable improvement in habits and conduct had been effected by training, very much to the relief of the parents when their children returned home.

We are glad to see that this asylum, which though fundamentally a charity, receives a certain proportion of patients paid for either by their friends or by Poor-law guardians, continues to be well supported, committees of ladies in various parts of the district tending valuable aid in the collection of subscriptions. During the year reported on as much as £19,018 8s. 11d. had been received from all sources on maintenance account, and the inclusive weekly cost of maintenance had been at the rate of 12s. 11½d. per head.

DERBYSHIRE COUNTY LUNATIC ASYLUM.

The forty-third annual report of this institution deals with the events of 1894. Here, as in so many other county asylums, the great cry is for more room, as the asylum is overcrowded. Fortunately the Committee have taken an enlightened view of the situation, and new buildings which will relieve the pressure are well in hand. Meanwhile Dr. Murray Lindsay tells us that the congested condition of the asylum alluded to in the report for 1893 has continued during a considerable portion of last year, notwithstanding the removal of some chronic cases. He also pleads with some force for the provision of accommodation for private patients, and quotes the success which has attended the admission of private patients in other county asylums. The admissions during the year were 156, the highest number recorded in any year since the asylum was opened forty-three years ago, and this large number would have been further increased if the asylum had been capable of receiving all the Derbyshire patients. Of the 103 patients discharged, 66 were recovered, being at the rate of 42.30 per cent. to the admissions. No fewer than 4 were discharged "not insane." The death-rate was 9.78 per cent. to the daily average number resident. Among the causes of death general paralysis heads the list. No inquest was deemed necessary. The Asylum Committee are to be congratulated upon having adopted a "pension scheme as the scale for guidance of the Visiting Committee." This has given great satisfaction to the staff, and the good example thus set should soon be followed in every public asylum in the kingdom. Dr. Murray Lindsay, whose labour in the cause of pensions for asylum workers has been carried on unsparingly for some years, has now the satisfaction of seeing his labours crowned with success in the institution which he so ably superintends.

INDIA AND THE COLONIES.

INDIA.

The P. M. O. Madras.—In reply to a query from the Madras Government as to whether it is intended to reserve the appointments of Personal Assistant to the P. M. O. Madras Command for officers of the Army Medical Staff, and whether there is any probability of an officer of the Indian Medical Service always holding the appointment of P. M. O. Madras Command, the Government of India has stated that when the appointment of P. M. O. is held by an officer of the Indian Medical Service, the appointment of Personal Assistant should be held by an officer of the Army Medical Staff, and vice versa. As regards the appointment of P. M. O., it may be held by officers of either the Indian Medical Service or Army Medical Service. As the post of Personal Assistant is not an additional appointment, officers selected to hold these appointments must be taken from the authorised cadre.

Sanitation in Bangalore.—It has been the subject of local controversy for years back, but the Government of India, prompted by Mr. Lee Warner, late Resident, acting on the advice of the Residency Surgeon, have now taken the matter into their own hands. By way of combating the recent outbreak of cholera, a medical expert has been placed on special duty to enforce sanitary measures and to draw up proposals for a reconstruction of the Municipal Sanitary Department, should that be found desirable, as, says the *Pioneer*, no doubt it will.

Typhoid at Bangalore.—"Medical Staff" writing to us in reference to typhoid fever in Bangalore, sends us the following particulars. The water from the Ulsoor tank is pumped to the European barracks, bakery, and to the European and three native hospitals. The Europeans only use this for washing purposes, and some corps use it for cooking. The catchment area for this tank is the Bangalore bazaar, and the water is very bad. The drinking water for European troops is carried daily from the [illegible] well to the barracks and hospitals. It is there filtered and boiled. The water as it comes from the well is of good quality chemically. Officers live in private bungalows, and there is no doubt that many of them use the Ulsoor tank water. It appears, also, that orders for the boiling of water at Bangalore were issued some time since, but according to the evidence forwarded to us, these orders appear to have been carried out very fitfully in many places or not at all. It is hoped that now attention has been called to the matter, steps will be taken to provide a pure water supply, and to make adequate filtering arrangements. The filters in use appear to have been of an inferior quality, and it is proposed to substitute for them the Pasteur filters, which will no doubt bring about a very different result. Our correspondent writes: Mr. Ernest Hart has not initiated the boiling of water, but he has, however, strengthened our hands, and I for one thank him.

The Cultivation of Cinchona.—An interesting statistical table which has just been compiled by Mr. O'Conor on the cinchona industry for the past ten years points conclusively to its steady decline. In [illegible] Madras possessed some [illegible] acres, Bengal [illegible], Mysore [illegible], and Coorg 1,707, or a total of 14,491 acres. The figures, however, just to hand for 1894-95 show that the respective areas under cultivation now are: Madras 5,819, Bengal 2,508, Mysore 350, and Coorg only 33 acres, or a total of 8,710 acres.

The Sanitary Needs of India.—The report of the Sanitary Commissioner of the Central Provinces of India for the year 1894 is characterised by the Chief Commissioner in his review as being deficient in information. He complains that it is hard, not to say impossible, to gather from it a comprehensive view of the whole scope and progress of sanitary work during the year. There is no information as to the [illegible] of municipalities or schools or other public institutions, the sanitary condition of towns, gaols, especially inspected villages and fairs, is disposed of in a few lines. This is attributable to the inevitable change in the personnel of the appointment of Sanitary Commissioner.

CEYLON.

Sanitation in 1894.—The Administration report recently submitted by Dr. Kynsey, Principal Medical Officer of Ceylon, for the year 1894, contains matter which demands the earnest attention of the Colonial Government. Three importations of cholera from India took place, but the spread of disease appears in each instance to have been arrested by prompt and effective preventive measures; [illegible], however, [illegible] cases, of which 80 proved fatal, had occurred in the localities and communities to which infection had been introduced by boatmen and pilgrims. The fact that only 10 cases of small-pox, with 1 death, happened in the whole island during the year is a legitimate subject for congratulation. Deaths from malarial fever are unhappily on the increase. How far this is due to greater activity in pushing irrigation works is a very serious question. The Governor of Ceylon, in his recent address to the Legislative Council, remarks that what is needed for the development of Ceylon is, "first, irrigation; secondly, irrigation; and, lastly, irrigation." And it appears that Rs. 22,91,408 have been expended on irrigation works during the last five years. No doubt increased irrigation means more agriculture, more and cheaper food, and better drinking water, but the experience of India has unfortunately furnished sure and large proof that irrigation without adequate drainage means more fever and enhanced mortality. Drainage works must keep pace with irrigation, else increase of malarious disease is certain. There appears, also, to be a pressing need for dealing effectively with flood water in Ceylon. The island is visited with frequent rain storms, which cause the submergence of large tracts of country, and if the water is not speedily removed it stagnates and produces conditions eminently favourable to severe outbreaks of fever and dysentery. If irrigation is a prime condition of agricultural prosperity in Ceylon, drainage is undoubtedly a cardinal postulate of health.

Medical Administration.—His Excellency Sir Arthur Elibank Havelock, G.C.M.G., Governor of Ceylon, in his opening address to the Legislative Council, made the following interesting observations on the progress which has taken place during the last twenty years in respect of arrangements for public medical relief: "The Medical Department of Ceylon has always occupied a prominent place in the administration of the country. Its operations have vastly extended during the last twenty years. In 1875 there were [illegible] hospitals and asylums, and [illegible] dispensaries; in 1894 there were 108 hospitals and asylums, and [illegible] dispensaries. In 1875 there were 16,000 persons treated in hospitals, and [illegible] in dispensaries; in 1894 the numbers respectively were [illegible] and [illegible]. The expenditure on medical aid, which in 1875 amounted to Rs. [illegible], had risen in 1894 to Rs. [illegible]. The expansion of the work of this department during the five years from 1890 to 1894 was probably more rapid than during any previous quinquennial period. The amount of public expenditure increased from Rs. [illegible] in [illegible], to Rs. [illegible] in 1894. The system of European medical treatment is rapidly gaining the confidence of the native population. I am convinced that in no way do the poorer taxpayers of Ceylon get a better return for their money than by the benefits they derive from the Medical Department. I am strongly impressed with the belief that the medical aid given by the Government to the people contributes more largely to the mitigation of misery than any other of the many blessings of British rule in this country."

The latest statistics place the number of medical men in Paris at 2,922, of whom 52 are foreigners. From this it is calculated that there is 1 French doctor to every 1,000 French people in Paris, whereas there are nearly 3 foreign doctors to every 1,000 foreigners.

The November number of *Science Progress* contains an interesting notice of the life and work of the late Professor Carl Ludwig, from the pen of Professor W. Stirling, of Owens College.

MEDICAL NEWS.

The Duke of Westminster was present at the Westminster Hospital at a reception which was held on November 1st to celebrate the reopening of the hospital, which has undergone extensive renovation and some very important improvements. The cost of the improvements had been large, but an appeal was issued, and the response made was most liberal. In all upwards of £5,200 had been received, which covered the extraordinary expenditure; at least £200 was in the form of annual subscriptions. The Duke of Westminster congratulated the supporters of the hospital on the improvements effected.

The autumnal meeting in connection with the Earlswood Asylum for Idiots was held on October 31st, for the purpose of electing forty applicants, when it was reported that the institution continued to make steady progress. Many of the pupils had developed an aptitude for learning that was scarcely anticipated, and those in the workshops and on the farm had rendered most useful service. The majority of the cases received were much benefited, and many of them were taught useful trades. The basket making lately introduced into the girls' school had turned out a great success. All the shops continued to do good work, many of the pupils being self-supporting while under supervision. During the winter, dances, minstrels, concerts, variety entertainments, and schoolroom parties had been the chief sources of entertainment, and an orchestra had been organised.

The International Sleeping Car Company have made the following arrangements for the winter season in the South of France: 1. The Calais Mediterranean express will be re established, and will run every Thursday (commencing November 7th) in connection with the 9 A.M. service from London (Victoria and Charing Cross), calling at Marseilles, Cannes, Nice, Monte Carlo, Mentone, etc., reaching Vintimille at 12.36 P.M. the following day. Baggage will be registered through to destination and examined *en route*. This train will be composed entirely of the company's sleeping and dining cars. 2. A Mediterranean express will also leave Paris (P. L. M. Station) every Tuesday and Saturday at 5 30 P.M., reaching Vintimille at the same time as Thursday's train from Calais. 3. The Nice express will leave Paris (Gare du Nord) at 7.44 P.M. daily, to which, between the Nord and Lyons Stations, a restaurant car will be attached. 4. The *Rapide* will leave Paris (Gare de Lyon) for the Riviera every evening at 8.25. Through tickets, single and return, are to be obtained at the company's offices at 14, Cockspur Street, S.W., where places must be reserved in advance.

MEDICAL VACANCIES.

The following vacancies are announced:

BROWN ANIMAL SANATORY INSTITUTION.—Professor Superintendent. Salary, £200 per annum. Applications to the Registrar of the University of London, Burlington Gardens, W., by November 15th.

CLIFTON DISPENSARY, Doury Square, Bristol.—Resident Medical Officer; not exceeding 30 years of age; doubly qualified. Salary beginning at £150 a year, increasing annually by £10 to £200, with furnished rooms only. Applications to R. C. Macfie, 42, Royal York Crescent, Clifton, Bristol, before November 23rd.

COUNTY DOWN INFIRMARY, Downpatrick.—Registrar, Compounder of Medicine, and Assistant to the Surgeon. Salary, £63, with board, fuel, and washing. Applications to Dr. Tate by November 14th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon; must be duly qualified to practise medicine and surgery, and be conversant with the Welsh language. Salary, £80 per annum, with board, residence, and washing. Applications and testimonials to W. Vaughan Jones, Secretary, by December 2nd.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House Governor, by November 30th.

GENERAL HOSPITAL, Northampton.—House-Surgeon; doubly qualified; unmarried, and not under 23 years of age. Salary, £120 per annum, with furnished apartments, board, attendance, and washing. The Assistant House-Surgeon is a candidate, and, if appointed, the Committee will proceed with the election of Assistant House Surgeon. Salary, £80 per annum, with furnished apartments, board, and attendance. Applications to the Secretary by November 23rd.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer; doubly qualified age must not exceed 25 years, and must be unmarried. Salary, £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications, endorsed "Application for Appointment of Medical Officer," to the Committee of Visitors, Knowle, Fareham, by November 20th.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Vacancy on the Honorary Medical Board. Applications to the Secretary by November 16th.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Soho Square.—Resident Medical Officer. Appointment for six months. Board, residence, laundry, and an honorarium of 10 guineas; doubly qualified. Applications to the Secretary by November 11th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road.—Two Qualified Medical Women as House-Surgeons. Applications to Margaret M. Bagster, Secretary, by November 27th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £40 per annum, with board and lodging. Applications to the Secretary by November 14th.

ROYAL PORTSMOUTH HOSPITAL.—Assistant House-Surgeon; appointment for six months. Honorarium of £15 15s., and board and residence, and is renewable for a further period of six months. Applications and testimonials to J. A. Byerley, Secretary, before November 14th.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House-Surgeon. Appointment for six months. Gratuity of £10. Applications to T. A. Fisher Hall, Secretary, by November 15th.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, AND MEDICAL MISSION DISPENSARY FOR THE POOR, Plaistow, E.—Resident Medical Officer; doubly qualified. Salary, £80 per annum, with board, washing, and attendance. Applications to the Chairman of Committee, the Rev. T. Given-Wilson, M.A., Vicar of Plaistow, London, E.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser; registered and unmarried. Salary, £105 per annum, with lodgings, attendance fire, and lights. Applications to Arthur Fisher, Honorary Secretary, by November 26th.

VICTORIA UNIVERSITY, Manchester.—External Examiner in Pharmacology and Therapeutics and in Surgery. Appointment for three years. Applications to Alfred T. Bentley, Registrar, by November 30th.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House-Surgeon. Salary, £80 per annum, rising £10 annually to £100, with board, residence, and washing. Applications to the Secretary by November 22nd.

MEDICAL APPOINTMENTS.

BROWN, John, M.D.Vict., D.S.Sci., reappointed Medical Officer of Health for the Borough of Bacup and Physician to the Sourhall Fever Hospital.

BURNETT, W. E. S., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Tintwistle Rural Sanitary District.

CLENDINNEN, William McEntire, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health to the Coseley Urban District, *vice* J. J. Clendinnen, L.R.C.S.I., deceased.

COOKE, Mr. T., appointed Medical Officer of Health to the Limehurst Rural District Council.

DUMMERE, Howard H., L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer for the No. 4 District of the Bromley Union.

EDWARDS, N. F., M.B., Ch.B.Vict., appointed Assistant House-Surgeon to the Swansea Hospital.

FENN, Robert M., M.B., C.M., appointed Honorary Assistant Physician to the Manchester Hospital for Consumption and Diseases of the Throat and Chest.

FRASER, Peter, M.D., B.Sc., appointed Medical Officer of Health to the Carnarvon Joint Sanitary Authority.

GIBSON, D., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the North Mynton District of the Hull Union.

HALL, Dr. Alfred, appointed Medical Officer of Health to the Mayfield Rural District.

JACKMAN, J. J. H., L.R.C.P., L.R.C.S.I., appointed Medical Officer for Waterford Workhouse and Fever Hospital, *vice* P. J. Whitty, M.R.C.P.I., L.R.C.S.I.

JAMES, Philip, F.R.C.S., appointed Surgeon to the Wellington Hospital, New Zealand.

KEIFFENHEIM-THURRIDGE, L. W. A., M.D.Durh., M.R.C.S., L.R.C.P., appointed Medical Officer of Health to the Hoo Rural Sanitary District, *vice* A. C. A. Packman, M.D.Durh., M.R.C.S.Eng.

KNAPP, E. M., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Aston, Ingham, and Linton Districts of the Ross Union.

LEWIS, C. E. M., M.A., M.B., B.C.Camb., appointed Assistant Resident Medical Officer to the North-West London Hospital.

LIGHTWOOD, C. E., M.B., B.Ch.Vict., appointed one of the House-Physicians to the General Infirmary, Leeds.

LITTLEJOHN, Herbert, M.B., D.P.H., C.M., appointed Medical Officer of Health for Scarborough, *vice* H. G. H. Monk, M.R.C.S.Eng.

MCKENZIE, A., B.A.Cantab., M.R.C.S., L.R.C.P., appointed one of the House-Surgeons to the General Infirmary, Leeds.

MACNIDDER, James, M.B., C.M.Edin., appointed Medical Officer for the Town District of the Hull Union.

MORRIS, Dr. H., appointed Medical Officer for the Silverdale District of the Tunstall Union.

MORRIS, T. H. P., M.R.C.S., L.R.C.P.Lond., appointed House-Surgeon to the Stourbridge Dispensary.

NICHOLSON, J., M.R.C.S., L.R.C.P., appointed Resident Medical Officer at Ida Hospital of the General Infirmary, Leeds.

OLIPHANT, Frank, M.B.Edin., appointed Senior House-Surgeon to the Chesterfield and North Derbyshire Hospital, Chesterfield.

PHILLIPS, E. V., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer of Health to the Oxenden Rural Sanitary District, *vice* T. Macauley, M.R.C.S., resigned.

POWELL, Dr., appointed Medical Officer of Health to the Llandyssul Rural District Council.

RICHMOND, R., M.D., appointed Medical Officer of Health to the Dunmow Rural Sanitary District, *vice* B. Ronald, resigned.

STEWARD, E. S., M.R.C.S., L.R.C.P., appointed Resident Ophthalmic Officer to the General Infirmary, Leeds.

STOTT, W. A., appointed Pathological Curator to the General Infirmary, Leeds.

TAIT, A., M.B.Lond., appointed Resident Obstetric Officer to the General Infirmary, Leeds.

TIBBITTS, Dr., appointed Medical Officer of Health to the Quarry Bank Urban District Council.

TRETHOWAN, William, M.B., C.M.Aberd., appointed Honorary Assistant Surgeon to the General Hospital, Perth, West Australia.

TRIBE, A. Gladstone, L.S.A., appointed Surgeon of the Abergorky and Ynlswen Collieries, Rhondda Valley, *vice* R. C. Joyce, M.B., resigned.

TROTTER, R. H., M.B., B.Ch.Vict., appointed one of the House-Surgeons to the General Infirmary, Leeds.

TWOHIG, John L., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Golcon Dispensary District.

WHITE, O. M., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the No. 6 District of the Bromley Union.

WILSON, A., L.R.C.P., M.R.C.S.Eng., reappointed Medical Officer for the South Myston District of the Hull Union.

WOODCOCK, Arthur Ernest, L.R.C.P. & S.E., appointed Certifying Factory Surgeon, *vice* M. E. B. Nicholson, M.R.C.S., L.S.A., deceased.

WRAY, G. B., M.R.C.S.Eng., L.S.A., D.P.H., appointed Medical Officer of Health to the Basford District Council.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, London Throat Hospital, Great Portland Street, 8 P.M. Dr. Whistler: Tuberculosis of the Larynx.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Clinical Cases. Dr. Sansom: Addison's Disease treated by Suprarenal Extract. Mr. Harold: Congenital Feeble-mindedness associated with Congenital Deficiency of the Chest Wall and with Cardiac Disease. Mr. Wallis: (1) Wired Patella for Fracture in a Man aged 70; (2) Compound Comminuted Fracture of the Skull with Facial Paralysis. Dr. L. Guthrie: Spina Bifida Occulta with Paresis of Leg; (2) Postero-lateral Sclerosis. Mr. S. Edwards: Case after Nephrectomy for Injury, with Specimen. Dr. Savill: Cases of Telangiectasis. Mr. S. Boyd: Temporary Resection of Upper Jaw for Naso-pharyngeal Growth.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Craig: Impulsive, Homicidal, and Moral Insanity.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, 5 P.M.—Dr. J. B. Bradbury: The Bradshaw Lecture on Some New Vaso-dilators.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 8.30 P.M.—Dr. Frederic Hewitt and Mr. A. M. Sheild: On Posture in its Relation to Surgical Operations under Anæsthetics (Adjourned discussion). Dr. R. A. Gibbons: Renal Colic in Infants.

WEDNESDAY.

HOSPITAL FOR CONSUMPTION, Brompton, 4 P.M.—Dr. Maguire: On Hæmoptysis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Gowers.

HUNTERIAN SOCIETY, 8 P.M.—Clinical evening. Mr. W. Campbell McDonnell: Case of Congenital Ataxia. Mr. Targett: Excision of Tempero-maxillary Joint in a Child. Dr. Sequeira: Nystagmus. Dr. Glover Lyon: Imperfectly developed Pleura. Dr. Fred. G. Smith: Paroxysmal Hæmoglobinuria with Local Asphyxia. Sir Hugh Beevor, Bart.: Cases of Cervical Herpes and of Retracted Lung in a Boy of 4. Dr. Ellis: Cases of Distension of Left Frontal Sinus, and of Horizontal Nystagmus.

WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Dr. W. A. Turner: Neurological Cases (Post-Graduate Course).

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 P.M.—Cases, Specimens, etc., will be exhibited by Dr. J. B. Ball, Dr. F. W. Bennett, Mr. A. A. Bowlby, Dr. A. Brunner, Mr. H. T. Butlin, Dr. Wm. Hill, Dr. A. A. Kanthack, Dr. Percy Kidd, Dr. Edward Law, Dr. Somes Spicer, and Mr. W. H. Stewart.

SOUTH-WEST LONDON MEDICAL SOCIETY, 235, Lavender Hill, 8.30 P.M.—Dr. Chas. W. Chapman on Heart Disease in the Young: its Management and Treatment. At 8 P.M. Dr. Chapman proposes, if possible, to show patients illustrating his paper.

THURSDAY.

LONDON POST-GRADUATE COURSE, Hospital for the Paralysed and Epileptic, Queen Square, 3 P.M.—Dr. Taylor: Syphilitic Disease of the Nervous System. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Mr. John H. Morgan: Cases from the Surgical Wards. Central London Sick Asylum, Cleveland Street, 5.30 P.M.—Dr. W. Hale White: Cases in the Wards.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY, Great Northern Central Hospital, Holloway Road, N., 8.30 P.M.—Clinical evening. Cases will be shown by Mr Brooke, Mr. Hamilton, Mr. Mower White, Mr. T. P. S. Beale, Dr. E. C. Beale, and Dr. James Galloway.

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Specimens.—Dr. Elder, Mr. Skene Keith. Papers.—Dr. Elder (Nottingham): The present condition of a Patient operated upon April, 1894, for Double Ovarian Papillomata; also Notes on a Porro's operation. Mr. Skene Keith: Unusual Complications in Two Cases of Removal of the Ovaries. Dr. Halliday Croom: Glycosuria complicating an Ovarian Tumour and Ovariotomy. Dr. John Shaw: Short note on a Complication impeding the Convalescence of a case of Oöphorectomy.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—Card Specimens at 5 P.M. by Mr. Wray, Mr. S. Stephenson, Dr. A. Brunner, Mr. Hartridge, Mr. Tweedy, Mr. Work Dodd. Papers at 8.30: Mr. W. H. Jessop: Some Cases of Graves's Disease, with Destruction of Eyes. Mr. Chas. Wray: The Treatment of Detachment of the Retina. Messrs Eales and Sinclair: Case of Uveal Cyst of the Iris.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 3 to 5 P.M.—Professor Crookshank: Lecture: Typhoid Fever and Diphtheria. Practical Work: Staining Sections and Cultivations.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, W., 8 P.M.—Mr. T. W. Thompson: On Considerations in Respect to "Return" Cases of Scarlatina.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, W., 8.30 P.M.—Adjourned discussion on Gastric Ulcer to be opened by Mr. Keetley. Drs. Dennett, Chippingdale, Messrs. S. Edwards, Wharry, Bidwell, and Eccles will take part in the discussion.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Craig: General Paralysis of the Insane.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS

CHEYNE.—On October 31st, at 75, Harley Street, W., the wife of W. Watson Cheyne, F.R.S., of a daughter.

DEMPSTER.—On November 3rd, at Viewley, Redhill, the wife of J. H. Dempster, L.R.C.P., M.R.C.S., of a son.

HICKLEY.—On October 27th, at 302, South Lambeth Road, S.W., the wife of A. Mackenzie Hickley, L.R.C.P.Lond., M.R.C.S.Eng., of a daughter.

MARRIAGES

LINNELL—WHITWORTH.—On October 31st, at All Saints Church, Turvey, by the Rev. G. F. W. Munby, Alfred Linnell, of Paulerspury, third son of the late James Edward Linnell, of The Hill, Paulerspury, to Mary Blanche Joanna, younger daughter of the late John Whitworth, of Turvey.

MACMUNN—WEBB.—On October 30th, at St. Luke's, Iron Bridge, by the Rev. C. Dunkley, Vicar of St. Mary's, Wolverhampton, assisted by the Rev. George Wintour, Rector, Charles A. MacMunn, M.A., M.B., Wolverhampton, to Susan Bartlett (Susie), third daughter of the late Matthew Webb, M.R.C.S., of Iron Bridge.

SIMPSON—HERBERT.—On November 5th, at St. Mary's Parish Church, Folkestone, by the Rev. Canon Woodward, Vicar of the Parish, James Christian Simpson, M.D.Edin., of Culverden Grange, Tunbridge Wells, son of the Rev. James Simpson, LL.D., Senior Minister of Dysart, Fife, N.B., to Margaret Primrose, eldest daughter of the late Nicholas Herbert, Esq., South Kensington.

SMITH—ALCOCK.—On October 24th, at St. Paul's Church, Burslem, Staffordshire, by the Rev. Malcolm Graham, Vicar of St. Paul's, assisted by the Rev. N. Edwards, Rector of Burslem, and the Rev. H. S. Hulse, Greenwich, Alfred Tennyson Smith, M.B., C.M., of Orpington, Kent, to Catherine Maud King, eldest daughter of J. Alcock, Esq., J.P., Surgeon, Burslem.

DEATHS.

BALL.—On November 6th, at his residence, Mille Crux, York, Alfred Ball, M.R.C.S., aged 69.

NEWBIGGING.—On October 5th, at Willowmere, Cape Colony, of phthisis, Robert Pope Newbigging, B.A., L.R.C.S. & P.Edin., eldest son of the late Robert Newbigging, of Madras, aged 40 years. Indian papers please copy.

REAN.—On October 26th, at 19, Richmond Place, Brighton, William Henry Rean, M.R.C.S.E., L.S.A., aged 40 years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MR. JAMES H. MILLAR would be glad to have the address of Dr. Impey, of the Leper Settlement, Robben Island, who is at present believed to be in this country.

NEUROSIS writes: I shall be obliged if any reader of the BRITISH MEDICAL JOURNAL can tell me of a home for a respectable woman in poor circumstances, afflicted with paralysis agitans. She could pay 12s. a week.

A MEMBER would like to know the advantages or disadvantages, as compared with K I., of the iodide of strontium, from someone who has had experience in the use of the latter drug. Is the iodide as effective specifically as that of K.I.? And how does the strontium compare with the potassium base?

RUS asks for suggestions for the treatment of the case of a gentleman who has been in India many years. He suffers a good deal from gout in his joints, and when these are troublesome the eyes are not so bad. At the present time the conjunctivæ of both eyes is inflamed and irritable, constant tendency to rub them; looking at any object makes them much worse; wind, cold, heat, and even exposure to air, start irritation. There are minute eczematous papules and vesicles scattered over face as far as the malar prominence, as high as the middle of forehead, over the eyelids, and down the alæ of nose, the whole of these parts being slightly moist with discharging serum.

CLIMATE AND CANCER.

DR. PERCY NEWELL (Crowborough, Sussex) asks where he can obtain information as to the influence of climate on cancer and cancerous diseases. He has been frequently told by patients that medical men have told them that dry bracing climates aggravate cancer existing already.

DISINFECTION OF TYPHOID STOOLS

MEMBER asks for reference to a published account of experiments on the relative value of various antiseptics in destroying the infectiveness of typhoid stools.

THE LANCHESTER CASE.

M.B., C.M. writes: After reading Dr. G. Fielding Blandford's statement in the BRITISH MEDICAL JOURNAL of November 2nd, I should like to ask the following question: Would I or any other doctor be justified in signing an urgency order in the case of a man expressing exactly similar views as Miss Lanchester has done—that is, substitute the word *he* for *she* in the above statement all through?

TREATMENT FOR PSORIASIS.

J. F. D. asks for advice in the treatment of a lady, aged 32, who has been suffering from a chronic form of psoriasis of the fingers of both hands for the last eight years, and it has a tendency to spread upwards. The skin of the affected parts has become cracked, hard, and very rough. The chief complaint is unbearable itching, for which most of the ordinary remedies have been tried without success. There is no constitutional affection of any kind, except that she has had fever for the last two years, especially at night, and various antifebrile remedies have been tried without success.

THE PASTEUR FILTER.

INDEX (Norwich) asks to be referred to a description of the Pasteur filter. He also wishes to know where they are to be obtained.

*** The London agents for the Pasteur filter are Defries, of 147, Houndsditch, London, who could, we presume, furnish the particulars asked for.

ANSWERS.

IF A. T. is incapable of writing his own lectures, we advise him not to give them.

R.W.G.—We have referred our correspondent's letter to Mr. Stephen Paget, who informed us that he has forwarded a copy of the *Records of Harvey*. Mr Stephen Paget adds that he has several copies of the work, which he would forward to anyone else who wants one.

DR. W. M. K.—We have referred our correspondent's query to Mr. Stephen Paget, F.R.C.S., Secretary of the Association for the Advancement of Medicine by Research, 57, Wimpole Street, W., who will supply the information asked.

SURGEON-MAJOR F. J. LAMBKIN, A.M.S. (Newcastle, Jamaica), writes In reply to "C. J. K.," who, in the BRITISH MEDICAL JOURNAL of June 29th, asked for information relating to hypodermic medication in syphilis, that in the Army Medical Report for 1894 full information will be found in a paper by Surgeon Major Lambkin.

W. P., M.B., writes in reply to "C. P.," in the BRITISH MEDICAL JOURNAL of November 2nd, p. 1142: I would suggest that all pressure due to corset and dress be diminished as much as possible, that the regimen be continued, and that the following medication be adopted: R Aloin gr. ½; ferri sulph. gr. ½; ext. nucis vom. gr. ½; pulv. myrrhæ gr. ½; saponis gr. ½. Ft. pil. 1 sum. semel. bis vel ter die post. cib. sumend. And when this pill is not taken: R Ext. nucis vom. gr. ½; pulv. myrrhæ q.s. ut ft. pil. 1.

MR. L. A. BIDWELL, F.R.C.S., Hon. Sec. to the staff of the West London Hospital, writes, in answer to E. H. F.'s query: May I be allowed to state that gentlemen attending the post-graduate teaching at the West London Hospital, will find opportunities of assisting in putting up fractures and reducing dislocations. I shall be glad to supply full particulars.

INJUDICIOUS TESTIMONIALS.

R. H. D.—It is undesirable for a surgeon to state in a testimonial to an optician that he has often had occasion to consult the optician about the proper spectacles to use, but the giving of such a testimonial would not, we apprehend, be held to constitute the offence of covering an unqualified practitioner.

SALIVATION IN PREGNANCY.

M.R.C.S. writes: In answer to "F.," in the BRITISH MEDICAL JOURNAL of November 2nd, p. 1142, I would advise liq. arsenicalis mj every fifteen minutes for an hour before leaving the horizontal position in the morning.

ROUND SHOULDERS.

M.D. recommends "A Member," who asked a question on this subject in the BRITISH MEDICAL JOURNAL of November 2nd, to study Roth's book on the *Treatment of Lateral Curvature of the Spine*. Mr. G. Steele Perkins (Wimpole Street, W.) and Mr. Gerard Smith (Gloucester Place, W.) both offer to advise "A Member" privately.

MR. C. E. ABBOTT, M.R.C.S. (Taunton) writes: I would suggest the probability of scoliosis. The rational treatment is careful attention to secure an improved position. This can be attained by regular exercise of the upper part of the trunk and neck, also deep breathing, as described by the writer of an article on Lateral Curvature of the Spine in Heath's *Dictionary of Surgery*, pp. 910-913. Braces and such-like appliances are to be avoided.

FEES FOR INSURANCE CASES.

A. C. writes: Are there any definite rates fixed for examining candidates for life assurance? There is an immense amount of work done of this nature, and I think it is time that some steps were taken to secure a uniform rate. Could not some committee inquire into the matter, and recommend some charges, below which practitioners could be advised to refuse to undertake the work?

*** We have referred this letter to [Dr. F. de Havilland Hall, who writes: I raised the question of the desirability of having some definite scale of charges for reports in cases of assurance at a recent meeting of the Life Assurance Medical Officers' Association, but it was ruled that the Association was formed for the discussion of subjects relating to the medical aspect of life assurance, and that it could not entertain the question of fees.

I think it would be in the interest of the companies as well as of the medical examiners if a table of fees could be drawn up. The only way to do so in my opinion would be for a representative meeting of the chief medical advisers of the various classes of assurance offices to discuss the matter, and submit their views to their respective directors.

NAIL BITING.

M.D. writes: Though the habit of nail biting is, as Dr Wilberforce Smith suggests, most often observed in neurotic children, it commonly arises in a physical defect. In most nail biting children it will be found that the nails are unduly thin or brittle, or present both defects. The child is constantly breaking its nails, and then bites them to remove the torn portion. In all cases of nail biting the nails should receive constant attention. They should be kept well trimmed, all ragged edges being smoothed away with sharp scissors at least twice a week. This will not cure an inveterate nail biter, but it will check the formation of the habit, and even in the worst cases will reinforce other means which may be tried.

DORSET writes: For twenty years and more I bit my nails, and then at last got over the trick, but in its place I have acquired the worse, because more painful, habit of finger picking, that is, tearing at the portions of skin around the roots of the nails. The habit comes on me at longer or shorter intervals, and continues until my finger tips are so sore that I am compelled to leave off. I pick the fingers of the right hand far more than the left, and I generally do it when engaged in reading some absorbing book. All efforts on my own part and that of

my friends to break me of this habit have been unavailing. I am now 40 years of age, and I do not know that I have any other markedly neurotic tendency. Of course this habit in a medical man is a very bad one, as besides the disfiguring appearance there is always the danger of septic inoculation. To prevent this I often wear a finger stall. My eldest son, now aged 6 years, has bitten his nails ever since he was a baby, and when very young he used to lie in his cot with his foot in his mouth biting his toe nails. This he is now fortunately unable to do. He is in all other respects a perfectly healthy normal child. I had an aunt subject to epilepsy, a sister subject to cataleptic seizures, and an uncle is now living under my care suffering from senile dementia. I would gladly cure myself of the habit if I could, but am afraid that it would take a very great many half-crowns of "Another Member" before such a consummation would be attained.

F.R.C.S., who asked the question on this subject, writes that in the child of 10, whose case prompted his inquiries, he had tried in many ways to stop it, putting on gloves of a night time for weeks together, painting the finger-tips with solutions of aloes and cayenne pepper, and offering all kinds of bribes without effect. With reference to Dr. Wilberforce Smith's reply, "F.R.C.S." writes: He states, "it is no mere habit, but belongs to a group of habitual, purposeless, fidgetty movements," etc., which means it is not a habit, but belongs to a group of habits. I know the group, but that does not alter a fact. His remedy is "a fuller daily exercise of the unsatisfied muscular system." My child has full meals and plenty of exercise.

NOTES, LETTERS, Etc.

Dr. Albert E. Cope Public Vaccinator St. George Hanover Square (Vauxhall Bridge Road, Westminster, S.W.), writes: In view of your leaderette on "Difficulties under the Vaccination Acts," in the British Medical Journal of November 2nd, p. 1118, I beg to forward under separate cover a copy of the *Local Government Chronicle* of October 13th, 1895, containing an account of a meeting of the London and District Poor Law Officers' Association, at which a paper was read on the question you introduce by Mr. C. O. Elkerton, Vaccination Officer for St. George, Hanover Square. The failure of the Commission to report makes the work of the vaccination officer much more hard, but we are fortunate in this district in the possession of a Board which supports the carrying out of the law anent vaccination.

Medical Officers and Guardians.

The following appears in *Punch:*

Board and Residence.—Here is a gem from the Bandon Quarter Sessions: Their Medical Officer of Health, Dr. Magner, was suing the guardians of the Clonakilty Union for failing to erect a fence round the dispensary residence. Counsel argued that the true cause of all this was that Dr. Magner happened to be a gentleman of independent mind, who had not, like others in the same position, the *savoir faire* to cuddle guardians. His Honour: Do you mean to say that any unfortunate medical officer has to cuddle Boards of Guardians? A very unpleasant duty certainly. Mr. Powell: Well, they had to attend the meetings, and, perhaps, stand drinks, and things of that kind.

> Who would not be such a medical officer,
>   Practised in keeping his Board well in hand?
> D'you think that he offers them cocoa or coffee, sir?
>   No; but it's whisky he's called on to stand.
>
> Paupers fall ill, and his task is to cure 'em;
>   In fights with infection he comes up to time;
> 'Gainst bad sanitation he's paid to secure 'em;
>   His drains may be poor, but his "drinks" must be prime.
>
> Is any guardian cantankrous? He "cuddles" him
>   (So did a counsel obscurely declare);
> And should this fail, then his "Irish hot" fuddles him;
>   For what is a doctor without "*savoir faire?*"

Remuneration of Civilian Medical Practitioners in Charge of Troops.

Civil Surgeon in Charge of Troops writes: I have been much interested in the answer to a correspondent appearing in the British Medical Journal of October 26th which deals with the question of the remuneration of civilian practitioners while in medical charge of troops. I remember when the Army Estimates for Medical Services were being discussed in the House of Commons a year or two ago, a sum exceeding £[illegible] was assigned for private medical practitioners, so that the number of civilian practitioners who are in charge of troops must be a large one if I am to judge by the yearly amount I receive for discharging the duties of medical officer at a station where the average strength is about [illegible], and assuming that all, or a very large majority, are, like myself, paid at contract rates; for I take it, that it is only at small stations with a strength somewhat similar to that which obtains at the one I am in charge of that officers of the Army Medical Staff are replaced by civilian practitioners. I hope, therefore, Sir, that you will allow some small space in the Journal for an expression of opinion from any of the latter who may feel aggrieved over this very important question of "pay," and that we may rely on your powerful help and sympathy. Until, I think, 1892, in the case of a civilian practitioner employed at contract rates, the amount was calculated on the maximum number present at the station in each month; since then the calculation is based on the average number present during each similar period; this change seriously diminishes the "sum total," more especially at a station where the troops are constantly changing for musketry practice. The alteration appears equitable enough, and no one could grumble at it if the contract rated remuneration were not so ridiculously inadequate, for the duties of the civilian medical officer are by no means trivial, as he has, in addition to attending and supplying medicines to those who "come sick" and are in hospital, to attend various Boards, make sanitary inspections and reports, make countless returns—weekly, monthly, quarterly, and annual (for the correctness of the contents of all of which he is responsible, the preparation of some of them being most involved and intricate, such as the annual return of sick, which demands no small attention and time on his part)—keep a lot of books, such as the medical casebook, sanitary diary, etc. It will be thus apparent that the duties of the civilian practitioner in charge of troops are not very dissimilar, if not practically identical, with those of the regular army medical officer, while the contrast in the "pay" of both, even assuming the latter to be merely a surgeon-lieutenant, is very great indeed. In conclusion, I trust that the civilian medical practitioners in charge of troops throughout the kingdom will join together and take such steps as will ensure their receiving a nearer approach to adequate remuneration for their services than they at present enjoy.

Coleman and Colman.

Dr. J. Foster Palmer (Chelsea College, S.W.) writes: Like many other members of the profession, I have received a large number of circulars from Messrs. Coleman and Co., of Norwich, manufacturers of Wincarnis and other meat extracts, but in justice to them I am bound to say that there has never been the slightest hint or suggestion of any connection with Messrs. J. and J. Colman, the well-known mustard makers. Neither the names nor the initials correspond, and any confusion which has arisen can only have been the result of extreme carelessness and inattention on the part of the recipient.

The "Medical Directory."

Dr. W. Allen Sturge (Nice) writes: In the British Medical Journal of September 21st you published a note from me complaining of a change introduced by the proprietors of the *Medical Directory* in their treatment of "Medical Practitioners Resident Abroad." I think it right to inform you that I have just received a courteous letter from the editors of the *Directory* in which they tell me that on further consideration the proprietors have decided to rescind the new regulation in question. As it is too late to make the necessary alterations to give effect to this decision this year, the rule now rescinded will govern the list of "Foreign Practitioners" in the forthcoming *Directory*, but in all subsequent issues the details of the list will appear under the same conditions as before.

A Correction

Dr. Illingworth (Ventnor) writes to correct the report of his remarks made upon the paper on the Functions of the Laryngeal Ventricles and Ventricular Bands, by Dr. Alexander Hodgkinson, published in the British Medical Journal of October 26th, page 1023. Dr. Illingworth is reported to have said that "he considered phagocytosis a mischievous doctrine." He desires to say that his observation was that it was "mischievous enough without having its effects attributed to the wrappings up of dust by mucous corpuscles."

Laceration of Perineum.

Dr. H. Willson (Weybridge) writes: A primipara, aged 21, was confined somewhat precipitately on July 22nd, at full term, of an undersized male child. She received no assistance till the placenta was expelled, and no medical aid was sought till July 25th, when I found an extensive irregular tear, commencing in the left labium one inch anterior to the fourchette, extending through the sphincter to the muscular coat of the rectum, and to within a line of the anus, besides reaching two inches into the vagina. On the following day, after injecting half a grain of hydrochlorate of morphine into the buttock, the patient was placed in the lithotomy position, the vagina being well plugged. After cleansing, cocaine solution was freely applied, some shreds of mucous membrane removed, and the edges brought together, three deep wire and three superficial catgut sutures being employed. The bowels were relieved on the tenth day. The result was most satisfactory, only a small sinus remaining when the stitches were removed, and this has since healed. I am induced to report this case because of the length of time—four complete days—before the operation, and to confirm the fact that severe injury to the external organs may occur, though no instrumental or other aid be given.

Absence of Occipital Bones.

Dr A. Lees Smith (Burnley) writes: I delivered a young woman of a full-time male fœtus last week. It was living up till the time of birth. It was fully developed in every way, except that there was no occipital bone. There was no skin over the space, only the membranes.

*** A specimen of occipital deficiency is to be seen in the teratological collection, Museum of the Royal College of Surgeons, No. 389, but in that case hydrocephalus existed and other malformations. Our correspondent should, if possible, have his case thoroughly examined. It probably represents a very early stage of the form of monstrosity known as anencephalus.

Prescription by Post.

Our attention has been called by several correspondents to an advertisement which has appeared in various morning papers purporting to emanate from a "M.D." and "West End Physician," who offers to prescribe "for all ailments on receipt of full particulars of symptoms, age, etc. Fee 2s. 6d." The address to which the patients are to write is given as "M.D., care of Kelly, 2, Southampton Buildings, Holborn." "A cowl does not make a monk," and the titles "M.D." and "West End Physician" do not necessarily imply that it is a duly qualified medical man who thus disgraces himself. Should it turn out, however, on inquiry that the advertiser is a registered practitioner, the attention of the General Medical Council will be called to the case.

The Case of Dr. Anderson.

Truth, October 31st, says: I see that the Court of Appeal summarily disposed last Friday of Dr. Anderson's application to have his case reheard. After what has previously happened this is not surprising, but I confess I find it surprising that the judges should have said, as they are reported to have done, that "they had never heard such nonsense talked before." This "nonsense" seems to have been the contention that the Master of the Rolls was an interested party in the judgment he gave. What are the facts? That at the time of hearing Dr. Anderson's appeal Lord Esher was defendant in an action of precisely the same nature as Dr. Anderson's action against Mr. Cook, and that the judgment which Lord Esher delivered in Anderson's case was alter-

wards used as authority for disposing of the action against his lordship. No one who knows his lordship would suspect him of an intention to manufacture an authority for use in his own case, but to say that his judgment may not be an unbiassed one under such circumstances is only to say that he is subject to the ordinary infirmities of humanity. To his colleagues Lord Esher may appear a being of supernatural attributes, but those who assert that his lordship is only human ought not to be told that they are talking "nonsense."

PROFESSIONAL ADVERTISING.

DR. J. S. OWENS (Gorey, co. Wexford, Ireland) writes: May I be allowed to point out what seem to me to be errors in the reasoning in Dr. Potter's paper read before the Section of Ethics upon Professional Advertising, and appearing in the BRITISH MEDICAL JOURNAL of September 14th. He very correctly begins by assuming that it is absolutely necessary to answer two questions with reference to professional advertising before condemning it: (1) What it is exactly, and (2) Why it is scandalous? Having defined professional advertising, he proceeds to give four reasons why it is unethical:

1. From a public aspect. Dr. Potter seems to assume that in an advertisement to the public the medical man must promise some definite cure or result. If such were the case it certainly would be as he says "not only undesirable but fraudulent," but leaving out such promises there is still a very large field for advertising (for example, qualifications, experience, etc.) to which this objection does not apply, as it is not necessary to promise anything in an advertisement except the advantages of your particular "services," consequently the argument with reference to medicine that "just because it cannot guarantee certain and definite results it cannot like the manufacturer or the merchant honestly advertise," seems to me to be based on a fallacy.

2. In answer to the question "Where lies the precise demerit of professional advertising from a purely medical point of view?" Dr. Potter says "that it consists in this, that the professional advertiser tries to take unfair advantage of his professional brethren who do not advertise." This answer could be used equally well to support the adoption of advertising by the whole profession, for it does not show anything unethical in advertising itself.

3. "That if medical advertising were to become general, medical science would cease to advance, etc." Is not the truth of this statement assumed without sufficient proof? Would it not be just as fair to say that the greater competition which would be produced by advertising would act as a stimulus to the advance of science? Scientific advance depends much upon the efforts of those whose greatest stimulus is personal inclination.

4. With reference to his fourth reason, it seems to me that it also assumes without sufficient grounds that if advertising were to become general, it would so degrade the motives of medical men that they would consider money-getting as of first and healing of only second importance.

The root of the objection to professional advertising springs from the fact that whether rightly or wrongly it is regarded as compromising to the dignity of the profession, and consequently to the orthodox medical practitioner it is forbidden ground, so that when other medical men advertise it is taking an unfair advantage of the orthodox.

THE L.S.A. LONDON.

L.S.A. writes: At an extraordinary meeting of the Royal College of Physicians of London held on October 31st, Sir William Broadbent is reported to have said that "women desired some higher status and recognition than the L.S.A., and it was a distinct disability to them not being able to get the licence of the College." It is extremely rare to find any misunderstanding now existing with regard to the status and privileges of a licentiate of the Society of Apothecaries whose diploma has been granted since June 30th, 1887, but apparently Sir W. Broadbent is under such a misapprehension. The diploma of the Society of Apothecaries dated after June 30th, 1887, is of precisely the same character, and confers precisely the same privileges, as the diploma of the Conjoint Board of the Royal Colleges of Physicians and Surgeons of London. The examinations for the diploma are of the same standard as those of the Conjoint Board, and the sufficiency of the examinations held by the Society is proved by the recent report of the visitor and inspector appointed by the General Medical Council under the provisions of the Medical Acts. Furthermore, any such licentiate is also eligible for appointments in the army, navy, and Indian medical services.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Dr. R. B. Anderson, London; Mr. G. E. Aldridge, Weston-super-Mare; Dr. F. P. Atkinson, London; Mr. A. W. M. Auden, Edinburgh; W. Allen, M.B., Hawkshead; Miss C. E. Abbott, Taunton; D. W. Aitken, M.B., Edinburgh. (B) J. S. Bolton, M.B., Oldham; Dr. T. G. Brodie, Surbiton; Dr. J. Brown, Bacup; F. W. Burton-Fanning, M.B., Norwich; Mr. A. S. Barrett, Taunton; Dr. F. Beach, Kingston Hill; J. F. Bullar, M.B., Southampton; Mr. J. C. Barnett, London; Sir W. H. Broadbent, London; W. T. Brand, M.B., Bradford; Mr. L. A. Bidwell, London; J. W. Batterham, M.B., St. Leonard's-on-Sea; Mr. T. Blair, Leeds. (C) Dr. M. Cameron, Glasgow; Cilycwym; Mr. J. Court, Staveley; Dr. W. F. Cleveland, London; Miss M. Canning, London; Dr. A. E. Cope, London; Mr. H. Coates, Salisbury; Dr. T. F. Chavasse, Birmingham; Dr. H. Campbell, London; Mr. H. Clarke, Norwich; Mr. A. Cumberland, London; Civil Surgeon in Charge Troops; A Constant Reader. (D) Dr. H. M. Duncan, London; C. B. Dobell, M.B., Tewkesbury; Mr. J. Dredge, London; Dorset. (E) Mr. F. R. Evans, Birmingham; Messrs. Entwistle and Kenyon, Accrington; Dr. F. Edge, Wolverhampton. (F) F.R.C.S.; Mr. A. Fisher, Tiverton; Mr. E. Felce, Norwich; Dr. J. C. Ferrier, London; R. M. Fenn, M.B., Wigan; Mr. S. H. Fairrie, Aldershot. (G) Mr. J. A. Goodchild, Bordighera; Mr. R. W. Gentles, Derby; Mr. C. Grant, Malta; Mr. C. A. Griffiths, Cardiff. (H) Dr. C. F. Harford-Battersby, London; Mr. Nelson Hardy, London; Mr. E. M. Hainsworth, Hull; Dr. J. B. Hellier, Leeds; Dr. D. M. Hutton, Edinburgh; E. Hay, M.B., London; Messrs. Harrington, Latham, and Co., Coventry; H. G. A. (I) Dr. F. Isdell, London; Mr. E. Ibbotson, Walthamstow. (J) Mr. P. James, Wellington, N.Z.; J. F. D.; R. Johnson, M.B., London; Mr. W. James, London. (K) Mr. D. Keele, London; Dr. W. M. Killen, Belfast; Mr. W. Kelly, Liverpool; Messrs. King King and Co., Bombay. (L) H. Latham, M.B., Stockport; Late House-Physician; L.S.A.; C. M. Lewis, M.B., King's Lynn. (M) Dr. A. C. Munro, Paisley; D. D. Mackintosh, M.B., Aboyne; M.D.; Medical Woman; M.R.C.S.; Mr. J. H. Miller, London; Mr. J. Metcalfe, Bradford; Member; Dr. S. Martin, London; Mr. K. Marsden, London; Dr. F. C. MacNally, Winchester. (N) F. Napier, M.B., Glasgow; F. P. Nichols, M.B., Shwebo, Upper Burmah; Nemo; Non sum qualis eram; Mr. P. Nowell, Crowborough; Dr. W. J. Naismith, Ayr; Mr. W. Neale, Mountmellick; Neurosis. (O) Mr. S. Osborn, London; Mr. F. Oliphant, Chesterfield. (P) Mr. H. J. Prangley, London; Mr. A. Pocock, London; Dr. H. Purdon, Belfast; Mr. J. R. Pleace, London; T. J. Paton, M.B., Hull; Mr. J. F. Palmer, London; Physician; G. S. Perkins, M.B., London; Perplexed; Dr. J. C. H. Peacocke, Satara; Mr. T. Partridge, Stroud; Parish Council. (R) Mr. T. J. Robman, London; Dr. H. D. Rolleston, London; Mr. T. F. Raven, Broadstairs; Dr. A. Routh, London; A. E. Rice, M.B., Folkestone; Dr. J. Ramage, London; W. Russell, M.B., Liverpool. (S) Dr. H. M. Snow, London; Mr. A. L. Smith, Burnley; Mr. G. Smith, London; Socialist; Mr. J. Smith, London; Sigma; Dr. D. Stanley, Birmingham; Dr. W. A. Sturge, Nice; T. E. Sandall, M.B., Alford; Mr. W. D. Spanton, Hanley; Mr. R. M. Smith, Hythe; Dr. A. Stewart, Manchester. (T) Mr. A. Thomson, Maidenhead; T. A.; Mr. W. Tibbles, Nottingham; Dr. N. Tirard, London; Mr. E. T. Thompson, Bath. (U) Mr. A. Upton, Brighton. (V) C. C. Vigurs, M.B., Newquay; Vincit Veritas. (W) Dr. F. Warner, London; Dr. A. T. Wear, Newcastle-on-Tyne; Mr. F. H. Welch, London; Mr. W. H. B. Winchester, Blackheath; Mr. C. F. Wightman, Chichester; Dr. W. White, Manchester; Dr. H. Woods, London; W. P., M.B.; Mr. L. Williams, Sidmouth; Dr. C. Wigan, Portishead; Dr. J. Wallace, Greenock; Mr. J. Williams, Barrow-in-Furness; Mr. N. Wood, London; etc.

BOOKS, ETC., RECEIVED.

A Book for Every Woman. By Jane H. Walker, L.R.C.P.I., L.R.C.S., M.D.Brux. Part I. The Management of Children in Health and out of Health. London: Longmans, Green, and Co. 1895. 2s. 6d.

An Atlas of the Fertilisation and Karyokinesis of the Ovum. By Edmund B. Wilson, Ph.D., with the co-operation of Edward Leaming, M.D., F.R.P.S. London and New York: Macmillan and Co. 1895. 17s.

Steam Laundries and Public Health: A Guide for Public Officials and Traders. London: The Sanitary Publishing Co. 1895. 6d.

Health and Condition in the Active and the Sedentary. By N. E. Yorke-Davies, M.R.C.S. 3rd Edition. London: Sampson Low, Marston and Co. 1895.

Directions for Work in the Histological Laboratory. By G. C. Huber, M.D. 2nd Edition. Ann Arbor, Michigan: George Wahr. 1.50 dols.

A Woman's Words to Women on the Care of their Health in England and in India. By Mary Scharlieb, M.D., B.S.Lond. London: Swan Sonnenschein and Co. 1895. 6s.

Transactions of the Dermatological Society of Great Britain and Ireland. Edited by J. H. Stowers, M.D., and A. M. Sheild, M.B., F.R.C.S. Vol. i. London: H. K. Lewis. 1895. 5s.

Traitement de la Syphilis. Par Charles Maurinc. Paris: G. Masson. 1895. Fr. 15.

Transactions of the Medico Chirurgical Society of Edinburgh. Vol. xiv. Session 1894-95. Edinburgh: Oliver and Boyd. 1895.

*** In forwarding books the publishers are requested to state the selling prices.

THE BRADSHAW LECTURE
ON
SOME NEW VASO-DILATORS.

Delivered before the Royal College of Physicians of London.

By J. B. BRADBURY, M.D., F.R.C.P.,

Downing Professor of Medicine in the University of Cambridge; Physician to Addenbrooke's Hospital.

[After an expression of thanks for his selection for the office of Bradshaw Lecturer and a reference to the terms of the foundation, Professor Bradbury continued as follows:]

Having recently undertaken, in my capacity as Downing Professor of Medicine in the University of Cambridge, to teach and advance to the best of my ability the subjects of pharmacology and therapeutics, it occurred to me that I could not do better on the present occasion than address you on a subject in this department of medicine; and here I wish to express my obligation to my assistant, Mr. Marshall, who has rendered me invaluable aid in conducting the experiments mentioned in the lecture.

I propose, then, to ask your attention to certain vessel dilators which, so far as I am aware, have not previously been brought before the notice of the profession.

The vaso-dilating action of nitrites and nitro-glycerine has long been known, and the whole subject of their action was ably reviewed and further extended by Professor Leech in the Croonian Lectures of 1893. These compounds possess a powerful though more or less evanescent action; and as in some conditions it would be advantageous to possess a drug having a more prolonged though less powerful effect, it has been the endeavour of pharmacologists to discover such a substance. Professor Matthew Hay[1] experimented with ethyl-nitrate, nitro-cellulose, and allied bodies, but came to the conclusion that these were of no practical value. Later Dr. Leech, investigating the action of the nitrates of the fatty series, found that all these bodies possessed a dilating effect, generally of a prolonged kind.[2] He suggested them as remedial agents, but at the same time pointed out their liability to cause headaches. Still more recently Dr. Lauder Brunton has experimented with hydroxylamine hydrochlorate, but he found this compound liable to produce gastric disturbance.[3]

As all the alcoholic nitrates previously examined had been found to be vaso-dilators, and as nitro-glycerine, the only multivalent nitrate used, has a powerful influence in this direction, it seemed not improbable that the drug in quest might be found among the nitrate derivatives of the higher-valent alcohols or their allies. The nitrates of erythrol, mannitol, and some of the sugars were therefore examined; later, the series was extended; but it is mainly to the results of the examination of the bodies just mentioned, and their possible bearing on therapeutics, that I ask your consideration.

Chemically, nitrates consist of an NO_3 group united to a radicle by a bond of O, thus $R{-}O{-}N\langle^{O}_{O}$. True nitro bodies, on the other hand, consist of an NO_2 group, united to a radicle by the N atom directly, that is without the intervention of an O atom—for example, $R{-}N\langle^{O}_{O}$.[4]

Preparation.—All the substances I have experimented with were obtained by nitrating the alcohols or corresponding compounds by means of a mixture of nitric and sulphuric acids at a low temperature. The product obtained was well washed with water and dilute alkali solution until free from acid, and was subsequently dried. The solid nitrates were afterwards crystallised from ethylic alcohol or ether. From the alcohols the following series was prepared:

Methyl Nitrate	$CH_3{\cdot}ONO_2$
Glycol (Ethylene) Dinitrate	$CH_2{\cdot}ONO_2$ $CH_2{\cdot}ONO_2$
Glycerol Trinitrate (Nitroglycerine)	$CH{\cdot}ONO_2$ $CH_2{\cdot}ONO_2$ $CH_2{\cdot}ONO_2$
Erythrol Tetranitrate	$(CH{\cdot}ONO_2)_2$ $CH_2{\cdot}ONO_2$
(Arabinol Pentranitrate)	$CH_2{\cdot}ONO_2$
Mannitol Hexanitrate	$(CH{\cdot}ONO_2)_4$ $CH_2{\cdot}ONO_2$

Arabinol pentanitrate, which would occupy the place intermediate between the erythrol and mannitol compounds, has not yet been prepared.

Among the sugars the nitrates of dextrose, levulose, and saccharose have been investigated. Constitutionally these bodies differ from the alcoholic nitrates in containing an aldehyde or ketone group, and fewer nitrate (NO_3) groupings. Other nitrates—those of cellulose and starch—have also been examined, but as these have no bearing on therapeutics I shall not deal with them further.

The composition of the nitrates used was determined by means of a Lunge's nitrometer. This gives off all the nitrogen in these compounds as nitric oxide (NO), from which the number of NO_3 groups in the body can be determined.

Properties.—Of the nitrated alcohols the first three are liquid at the ordinary temperature of the air, the others are solid and crystalline. When pure they are colourless, and if kept in a dark and moderately cool place are stable. Exposed to sunlight and warmth they gradually decompose, turning yellow, and giving off nitrous fumes. Heated rapidly, or subjected to percussion, they explode. Methyl nitrate distils at 66° C.; but the boiling points of the glycol and glycerol nitrates have not been determined, as these bodies rapidly decompose as their boiling points are approached. Erythrol nitrate melts at 61° C., and the mannitol compound, according to Socoloff, at 113° C. All these nitrates are more or less soluble in water, their solubilities showing a gradual transition from the methyl—the most soluble—to the mannitol, the least soluble. In all cases the solubility in water is slight, but in alcohol and ether they are readily soluble.

The nitrated sugars, as I have obtained them, are white or slightly yellow tenacious masses, decomposing readily, and difficult to prepare in the pure state. Like the corresponding alcoholic esters they are readily soluble in alcohol and ether, and slightly so in water.

All the nitrates when heated with alkalies give the nitrite reaction, that is, they liberate iodine from a slightly acidified solution of potassium iodide, and produce certain colour reactions (the meta-phenylene diamine test, etc.).

Pharmacological Action.

All soluble organic nitrates of the composition $R{\cdot}ONO_2$ hitherto examined dilate blood vessels and change the normal spectrum of the blood. Their activity, however, varies within wide limits, and appears to be due to their different solubilities and liability to decomposition. The latter is, perhaps, the more potent factor,[5] as methyl nitrate—the most soluble compound—has a comparatively slight vaso dilating effect. On the other hand, glycol dinitrate—the least stable—has a powerful action closely resembling that of nitro-glycerine. Its effect, however, is more transient. The erythrol and mannitol nitrates and the nitro-sugars, being less soluble than the other compounds, have a correspondingly weaker effect, but, as we shall see, their action is more prolonged.

The vaso-dilating action of these bodies has been determined by means of perfusion experiments on both warm- and cold-blooded animals, and the duration of this action by their effect upon the blood pressure in animals and the pulse in man. Nitro-glycerine has been largely experimented with, but as the vessel-dilating effect of this drug is now so well known I shall say little further about it.

Perfusion Experiments.—The method of perfusion through excised organs, which we owe to the genius of Ludwig, demonstrates absolutely the direct effect of drugs upon blood vessels. In such experiments there is no question of nervous action except it be a purely local one. But whether the effect of an agent be upon the terminal nerve fibrillæ and intramural nervous ganglia or upon the muscular tissue of the vessel walls is of little moment. For all practical purposes it is sufficient to know that a drug acts either directly or indirectly, that is chiefly upon the peripheral vessels or upon the vaso-motor centre.

For determining the action of these agents upon the vessels a

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[1] *The Practitioner*, vol. xxx, p. 241.

[2] British Medical Journal, 1893, vol. ii, p. 758.

[3] *St. Bartholomew's Hospital Reports*, xxx, p. 189.

[4] Although I may occasionally use the expression nitro compounds, all the bodies we are dealing with are in reality true nitrates. Unfortunately, the term nitro is applied to these bodies has become so familiar from long use that it is difficult to discard it altogether.

[5] See Ed. Hay, *loc. cit.*, p. 250.

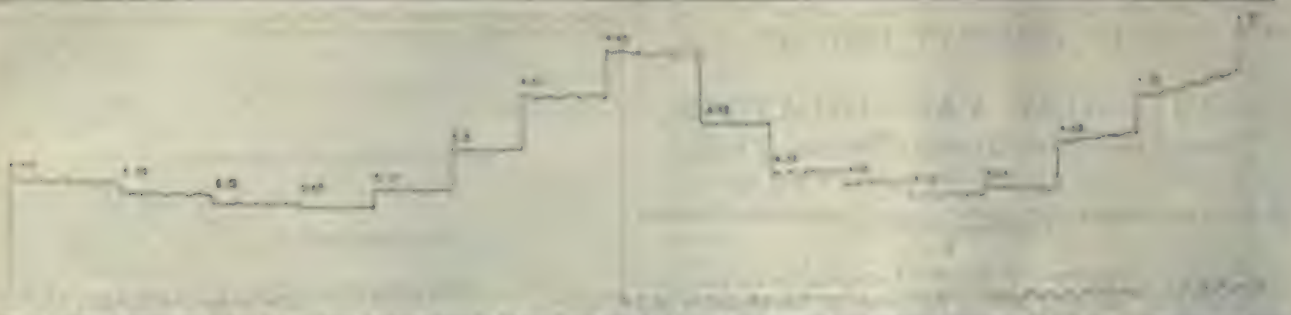

Fig. 1.—Glycol dinitrate 0.0125 g. per kilo. body-weight in 33 per cent. alcohol, injected through catheter into stomach at 4.31 P.M. The time in this and other tracings marks seconds.

of warm-blooded animals the kidney of the sheep, as being the most readily procurable, was used. For the effect on cold blooded animals frogs and water-tortoises were employed. But in all the general effects obtained were the same, and I shall therefore confine myself to my experiments on the former.

In all the experiments, with the exception of those of methyl nitrate, a presumable[6] strength of 1 of drug in 10,000 of blood was used.[6] By means of ovens the excised organ and blood were kept at the normal temperature (37° to 38° C.) and the blood was perfused under a constant pressure (70 mm. Hg.). The outflow of blood from the vein was measured at intervals of a minute, first during the passage of normal blood and subsequently during the flow of nitrated blood. Methyl nitrate in the strength of $_{10000}$ has scarcely any dilating effect. In $_{10000}$, however, it transformed a normal venous flow of 23 c.cm. a minute to one of 38 c.cm. a minute. After the perfusion of normal blood the venous outflow again reached its former level. A second and a third time vascular dilatation was produced by the nitrated blood, and each time was followed by contraction when normal blood was perfused. The other nitrates are much more powerful. Dinitrate of glycol perfused in the strength of $_{10000}$ increased the outflow from 9 c.cm. a minute to 23 c.cm. a minute, and nitro-glycerine in the same strength converted a normal outflow of 9 c.cm. into one of 19 c.cm. a minute. In both cases contraction immediately followed the perfusion of normal blood, and a second and third time marked dilatation was produced by nitrated blood. Erythrol and mannitol nitrates also caused marked dilatation, the former increasing the venous outflow from 13 c.cm. to 35 c.cm. a minute, the latter from 6 c.cm. to 11 c.cm. a minute. A nitrate of dextrose containing four NO_3 groupings, and therefore corresponding to a tetranitrate, when perfused increased a normal outflow of 14 c.cm. to one of 26 c.cm. a minute. Similar results have been obtained with the other nitrated sugars.

There can, therefore, be no doubt as to the capability of these bodies to dilate blood vessels; but, as I have previously intimated, what we want to know for therapeutic purposes is the duration of their action. This is shown in the blood pressure and pulse tracings.

Blood-pressure Tracings.[7]

The blood pressure tracings were mostly taken from rabbits which were kept under the influence of urethane, a drug exerting scarcely any effect upon the blood pressure.

In the case of the glycol and glycerol nitrates, an amount of drug corresponding to 0.0125 gramme per kilogramme of the body-weight was introduced. In this dose methyl nitrate had scarcely any effect, and therefore a dose of four times this amount—namely, 0.052 c.cm. per kilo. body-weight—was used. Even in this dose, the effect was slight and transient. With the solid bodies, doses of 0.025 gramme and 0.05 gramme per kilo body-weight were used, but, as part of the substance could be extracted from the contents of the stomach after the completion of the experiment, this does not represent the amount absorbed. In the case of the liquid bodies, the substance was dissolved, and in the case of the solid bodies, in part dissolved and in part suspended in weak ethylic alcohol, the mixture being injected through a catheter into the stomach.

Both glycol dinitrate and glycerol trinitrate (nitro-glycerine) have a powerful action. The former (Fig. 1) in 1 minute reduced the blood pressure from 112 mm. Hg. to 85 mm., and in 4 minutes to 42 mm. The pressure then gradually rose, and 14 minutes after the administration stood at 106 mm. Hg. Later the blood pressure again fell, probably owing to further absorption of the drug, and later still commenced to rise again. Under similar circumstances nitro-glycerine produced an almost identical effect. In 1 minute the pressure was reduced from 100 mm. Hg. to 76 mm., and in 3½ minutes to 37 mm. It then commenced to rise, and 17 minutes after the administration of the drug stood at 71 mm.

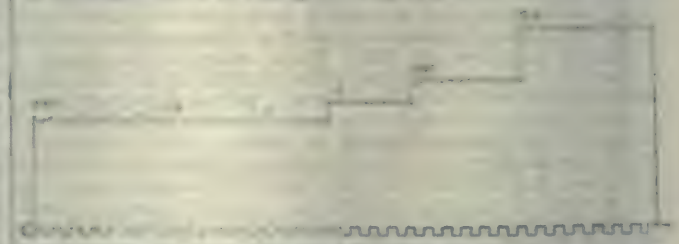

Fig. 2.—Erythrol tetranitrate 0.05 g. per kilo. body-weight in 10 per cent. alcohol injected through catheter into stomach at 12.2'.

The effect of erythrol and mannitol nitrates is much less evident. No abrupt fall of pressure occurs, but there is also no subsequent return to normal; 28 minutes after the introduction of erythrol nitrate (Fig. 2) a fall of pressure from 85 mm. Hg. to 63 mm. occurred, and 30 minutes later the fall was further increased to 54 mm. The subsequent fall was trifling; 2 hours 48 minutes after the administration of the drug the pressure was 46 mm. Hg., and an hour later it stood at the same level. In the meantime the cannula had been changed from the left to the right carotid owing to a clot having formed in the former vessel. After mannitol nitrate a similar effect occurred (Fig. 3); 12 minutes after the introduction of the drug the blood pressure had fallen from 98 mm. Hg. to 84 mm. An hour later it had fallen to 60 mm. Subsequently a slight rise followed by a fall occurred; 4 hours 12 minutes after the commencement of the experiment the blood pressure still remained at 58 mm. Hg.

Fig. 3.—Mannitol hexanitrate 0.036 g. per kilo body-weight in 33 per cent. alcohol injected into stomach at 10.48'.

The effect of methyl nitrate upon the blood pressure is slight. After introducing 0.125 c.cm. of the substance (that is, about four times the quantity used in the case of the other

[6] I say 'presumable,' because in a few instances, notably those of the nitrates of mannitol and the sugars, complete solution of the drug may not have occurred.

[7] I take this opportunity of thanking Professor Schmiedeberg, of Strassburg, for allowing my assistant the use of his laboratory for this purpose.

liquid nitrates) dissolved in 5 c.cm. of water into the stomach (Fig. 4), the blood pressure fell from 96 mm. Hg. to 70 mm.

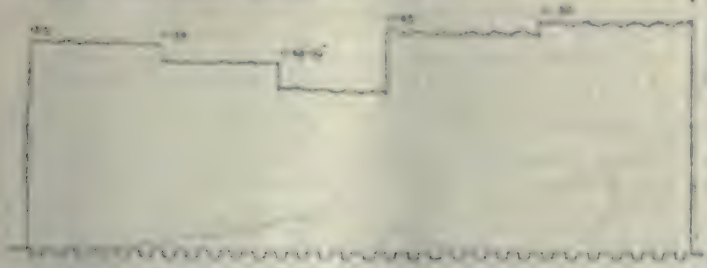

Fig. 4.—Methyl nitrate [illegible] c.cm. per kilo. body weight, dissolved in water injected into the stomach at 11.41'.30".

in the course of a minute, but immediately commenced to rise again; 6 minutes 30 seconds from the commencement of the experiment the pressure was 80 mm., and 11 minutes later was practically normal.

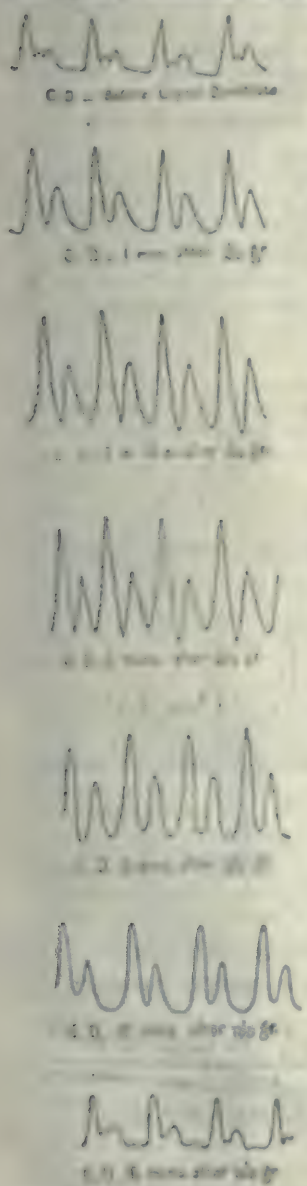

Fig. 6.—Glycol dinitrate.

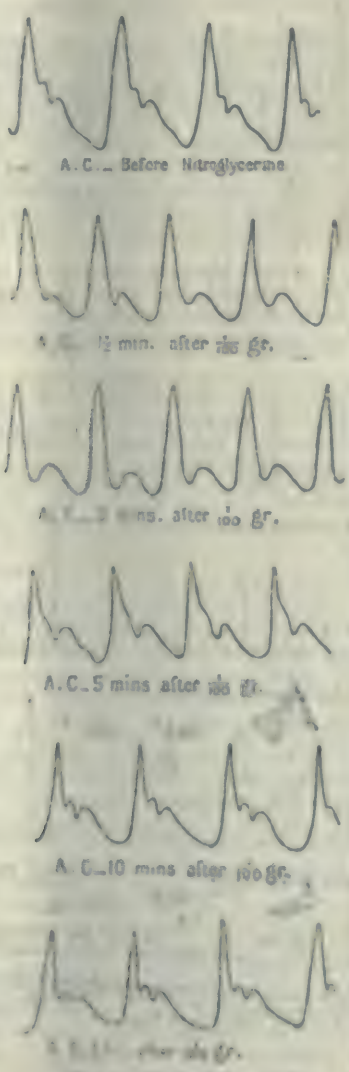

Fig. 7.—Glycerol trinitr. te.

A consideration, therefore, of the action of these drugs upon blood pressure leads us to the conclusion that the nitrates of erythrol and mannitol have a less marked but more prolonged action than those of glycerol and glycol, and that methyl nitrate has comparatively little action. These relations are again brought out in the accompanying pulse tracings. These have been selected from a number taken under varying conditions of health and disease, and they show in a graphic manner the fall of arterial tension and its relative duration; they are, in fact, a complement to the experiments which I have already described.

Pulse Tracings.

The tracing of methyl nitrate (Fig. 5) shows, perhaps, a more marked fall of arterial tension than we should expect from the previous experiments, but the dose is an excessive one, being 1,000 times that of the glycol and glycerol nitrates, and 10 times that of the solid nitrates. It is, however, essential for practical therapeutics that we should know the dose sufficient to produce a salutary effect, and hence the comparatively large dose given. The arterial tension was reduced in little more than a minute, continued to fall for 16 minutes, and then gradually returned to normal. Six hours after the administration of the drug the tension was still considerably below normal—a condition not reached until the following morning.

Glycol dinitrate in 1/30 grain doses, like nitro-glycerine, quickly reduces tension. The tracings (Fig. 6) were taken from a young woman suffering from anæmia. The normal tension of the pulse was somewhat low, but in less than a minute it was reduced still lower, and in 3 minutes was hyperdicrotic. The effect, however, was very transient, and in 16 minutes the pulse had almost reached its normal degree of tension. Fig. 7 shows the effect of a corresponding dose of nitro-glycerine. It is a little peculiar in that it exhibits a more transient effect than usual with nitro-glycerine, but otherwise it presents the same features as those obtained by other observers.

The pulse tracings of the solid nitrates show a marked difference. Thus during the time in which nitro-glycol and nitro-glycerine present their period of greatest activity these show little or no action. After the administration of 1 grain of erythrol tetranitrate (Fig. 8) no very marked effect is noticed until 50 minutes have passed; the tension then falls gradually for about 1½ hour more, and afterwards as gradually returns. In the present case 5 hours 15 minutes after the administration the pulse tension had not yet reached its previous level. In the same dose mannitol hexanitrate produces a very similar effect (Fig. 9). The pressure in the arteries is scarcely affected until nearly an hour has passed, and it has not reached its former level even after 5 hours. But the relative effects of the various members of the "nitrite group" will perhaps be better understood by reference to a diagram (Fig. 10). This has been constructed from sphygmographic tracings controlled by perfusion and blood-pressure experiments, and although it does not pretend to minute accuracy, except as regards time relations, it will nevertheless serve the purpose I have in view. The time is stated in minutes and hours, and the fall of arterial tension is represented by a fall from the base line, which in its turn is supposed to represent the normal tension. It will be seen that erythrol tetranitrate and mannitol hexanitrate are quite inactive during the period of greatest activity of the other members of this series, but that their effect is markedly prolonged.

Insusceptibility.

In individual cases slight differences in the extent and duration of action of these bodies are noticed, and occasionally cases are met with comparatively insusceptible to their influence. Thus, in some cases of advanced heart disease where the artery presents a feeling of fulness, but yet remains easily compressible (virtual tension of Broadbent), vaso-dilators have often little effect. In these cases the arteries, like the heart, have lost their normal tone, are considerably dilated, and, though possessing a sense of fulness and, on superficial examination, of resistance, are yet arteries of low tension. Coupling with this fact the tendency to fibrous tissue formation in the various organs in this

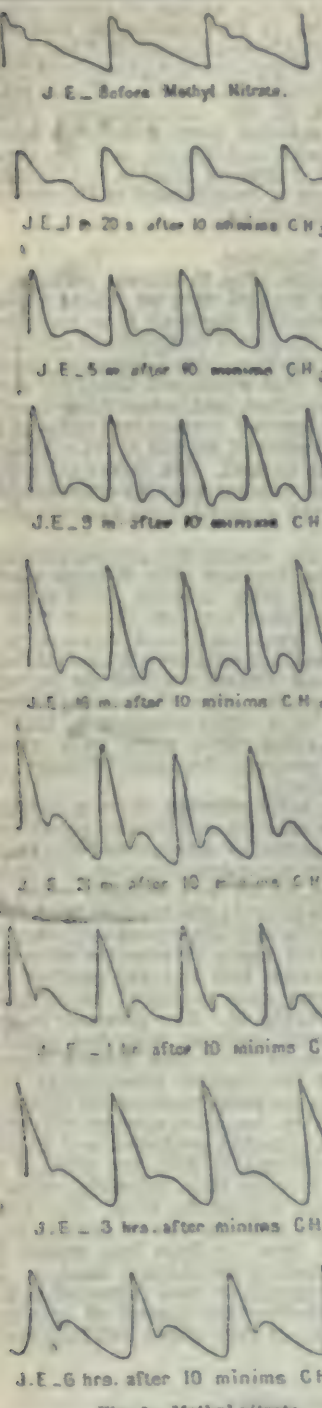

Fig. 8.—Methyl nitrate

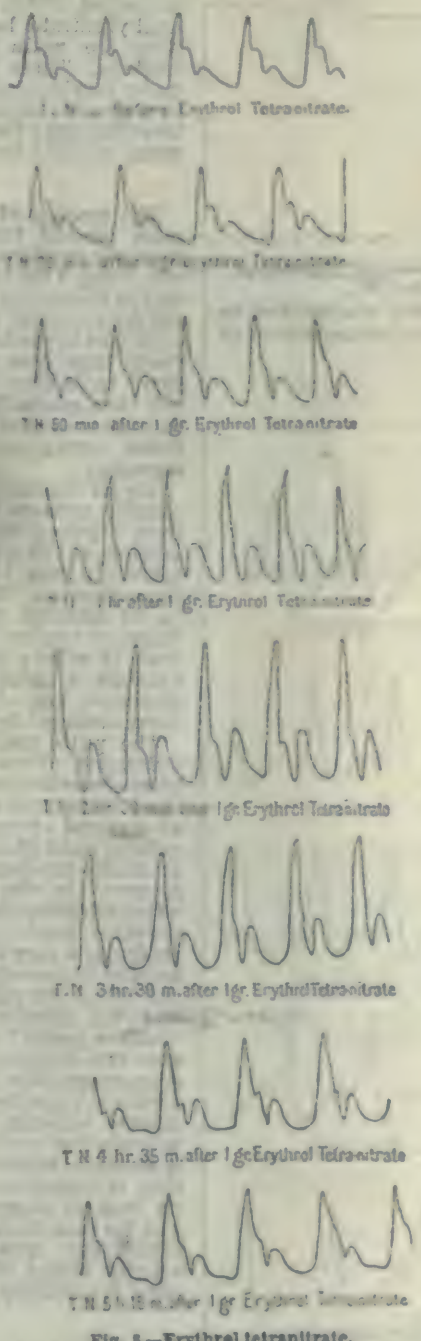

Fig. 8.—Erythrol tetranitrate.

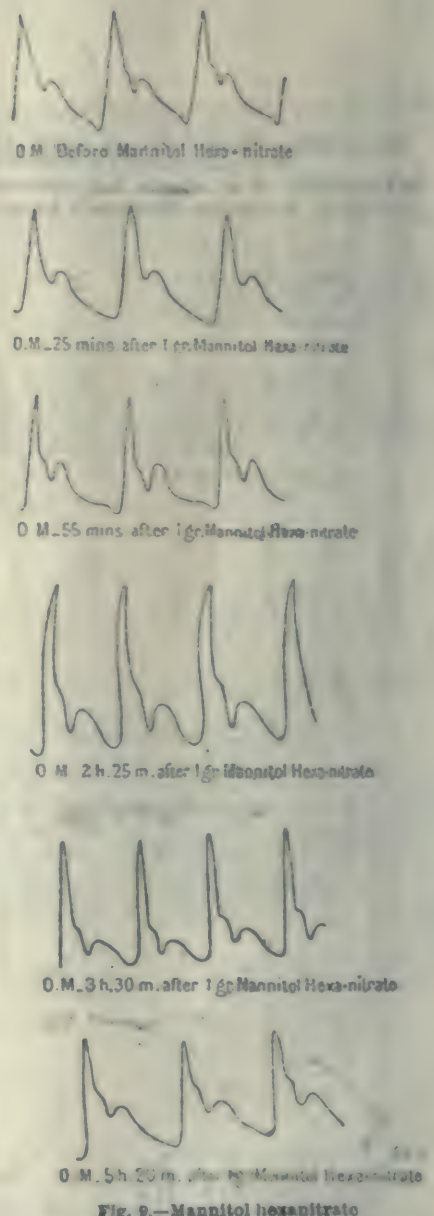

Fig. 9.—Mannitol hexanitrate

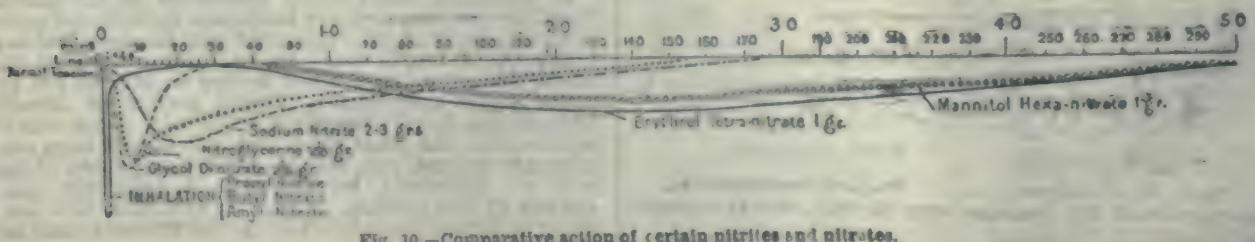

Fig. 10.—Comparative action of certain nitrites and nitrates.

condition, we have some explanation of the comparative irresponsiveness of these cases.

In some cases of not far advanced Bright's disease in which the tension is very high, and is evidently due to causes existent in the blood, a comparatively large dose of nitro-glycerine or its allies is necessary to produce any marked reduction of tension. But apart from such pathological conditions, we now and then come across individuals who can bear large doses of these drugs with impunity. Even in animals there seems to be considerable variation of susceptibility to the action of vessel-dilating drugs, and particularly of the organic nitrates. The reason is not always clear. Habitual use tends to diminish their action, but this is obviously not the explanation in many cases. With the solid nitrates the amount of food in the alimentary canal at the time of administration, as well as its reaction, will have an important influence in determining the amount of drug dissolved, and therefore absorbed. It may be that under the influence of the alkaline juices of the intestine these nitrates are converted into nitrites (for example, sodium nitrite), but I am rather inclined to believe that this change, if it occurs at all, takes place in the blood or in the cells which form the walls of the blood vessels. Hitherto, however, I know only of one case, a man suffering from dilated heart, the result of alcoholism, in which these drugs failed to have any distinct effect.

The action of organic nitrates upon other organs is of little practical importance. Upon the heart the direct effect of these compounds is very slight. Indirectly, owing to the diminished work consequent on dilatation of the blood vessels, increased rapidity and sometimes palpitation (especially after glycol and glycerol nitrates) are noticed. Certain nervous effects have been attributed to nitro-glycerine, but none have, as yet, followed the administration of the solid organic nitrates. The effect upon the urinary excretion is practically *nil*. These bodies, as far as they have been investigated, are not diuretic.

As ordinarily administered the organic nitrates possess no cumulative action. The continued use of nitro-glycerine produces a lessened susceptibility to its effects, but this has not yet been noticed after the administration of the erythrol and mannitol compounds.

Reviewing the action of these compounds upon the vascular system in regard to their practical application to the treatment of disease, I think we may, at the present at least, discard methyl nitrate as being the least likely to prove of clinical value. Glycol dinitrate again is so similar in action to nitro-glycerine and, at the same time, so much more expensive, that it also is not likely to enter into our stock of remedies. The longer acting nitrates, however, may prove of value.

Therapeutic Indications.

From the pharmacological action of these two nitrates, it would seem that the chief indication for their use is a condition in which the heart is labouring under increased work imposed upon it by contracted arteries. As life advances the hitherto elastic vessels become converted into more or less rigid tubes, the fibrous adventitia is thickened, and fibrous tissue replaces, to a greater or less extent, the muscular and elastic tissue of the middle coat. As a result, increased work is put upon the heart, and hypertrophy results. Sooner or later, however, central or peripheral degeneration occurs: either the heart fails from the increased strain put upon it on the one hand, or causes rupture of a vessel from excessive power on the other. In disease the normal evolution may be compressed into a much shorter space of time; thickened arteries and hypertrophied hearts may be found comparatively early in life; and the final results may be the same. If by any means we can dilate the vessels we diminish the work of the heart and the pressure upon each unit of area of the artery, and thus in both ways avert the tendency to death. Our difficulty hitherto has been, not so much to reduce arterial tension when desired as to keep the tension steadily below a certain level. Both nitro-glycerine and sodium nitrite have been used for this purpose, but their administration is attended with some inconvenience. As we have seen (Fig. 10) these drugs have comparatively little action after two hours, and it would therefore be necessary to give them at least every two hours to produce continuous low tension. Even then there would be considerable variation in the arterial pressure. By the substances I have described the tension is not brought so low but the reduction is of longer duration and the pressure is less liable to fluctuation. They are also, as far as I am aware, free from poisonous properties, a quality readily explained by their slight solubility.

Cardiac Pain.

Under this name I include all forms of pain accompanying diseases of the heart or vessels. I adopt it in preference to angina pectoris, as the limits of this disease appear to vary with different authors; and while some would almost confine it to Heberden's classic form, others would extend it to cover the whole realm of cardiac pain. Is cardiac pain always accompanied by contraction of the arterial walls, and if so, is it the relation one of cause and effect? Since Dr. Lauder Brunton's discovery, the question has been asked many times, but there has been no unanimous answer. Some observers state that obvious increase of tension does not always accompany heart pain, and I agree with them; but, as Dr. Leech pointed out, the increase may be more relative than absolute. In a heart weakened by disease, a very slight increase of resistance may prove too much for the heart to overcome. This slight increase may be due to a general effect almost inappreciable in any one artery, or to an effect localised in one or more areas. Of greater significance is the fact that vaso dilatora do not always relieve angina like pains, especially if these occur in cases of far advanced heart disease with a low tension pulse. In such cases morphine is of much greater value.

Can attacks of anginal pain be prevented by keeping arterial pressure below its normal level? Obviously this is the only way in which the solid organic nitrates can be of service. When an attack has come on, it is necessary to resort to more quickly acting drugs, and in cases of a sudden and severe nature inhalation of the fatty nitrites is advisable. For cases in which the pain is less severe and of longer duration the administration of nitro-glycerine or sodium nitrite is perhaps more beneficial. But if we can prevent the advent of these attacks, a great stride ahead will have been made. Much may be done by the exhibition of purgatives and attention to the general health, but in the majority of instances something more is needed. This something is I believe a vaso-dilator. Hitherto nitro-glycerine and sodium nitrite have been the drugs mainly used; but their evanescent and varying action render them unsuitable. Nevertheless, I have seen cases in which the continuous administration both of nitro-glycerine and sodium nitrite seemed to prevent the occurrence of anginal attacks, and other physicians have reported similar results. In many of these cases, however, attacks occasionally developed, and it is quite possible that longer acting remedies, such as erythrol nitrate, might have prevented them altogether.

Chronic Bright's Disease.

The most important change, and the one which affects us most closely, is the arterial thickening attending Bright's disease. This leads to hypertrophy of the heart, and both combined to a high tension pulse. Sooner or later, if the patient does not succumb to uræmia or some intercurrent disease, the increased vascular strain begins to tell either upon the heart or on the vessels, often on both. Either the symptoms of heart failure develop or attacks of apoplexy occur. Previous to such terminations headache, mental inaptitude, weariness, and similar symptoms are not uncommon, and sometimes these may be noticed, with a high tension pulse, where no other direct evidence of renal disease exists. In all such cases the longer acting vaso-dilators are often beneficial. I do not wish to convey the impression that I regard the thickened condition of the arteries as the primary cause of the high tension of Bright's disease. This, I believe, is due in the first instance to an impure condition of the blood, and the correct treatment under the circumstances is to rid the blood as far as possible of this impurity. Once, however, the fibroid and muscular thickening in the arteries is produced it becomes a danger in itself. It is a condition we cannot cure, and our treatment must therefore be symptomatic. By keeping down the arterial pressure in such conditions we may not only alleviate unpleasant symptoms, but

may also prevent the onset of such disastrous conditions as cerebral hæmorrhage. The fibroid thickening of the blood vessels does not annul the action of these nitrates, though it diminishes to some extent their power.

I do not anticipate any beneficial action from these drugs upon the kidney disease itself. They are not diuretic, at the same time they are not irritant to the kidney, and, given even in acute inflammatory conditions of these organs, are not likely to produce ill effects.

Aneurysm.

In cases of aneurysm (I confine my remarks at present to those coming under the care of the physician) it is very necessary to keep the circulatory system as far as possible in a state of physiological rest. This is best accomplished by dilating the peripheral arteries, and for this purpose potassium iodide has for some time been the drug most in vogue. Without detracting in the least from the value of potassium iodide in this condition, it seems to me that the nitrates of erythrol or mannitol will accomplish this end better, and will give more satisfactory results in cases not of syphilitic origin. The pain which accompanies aneurysm is not often relieved by vaso-dilators, and, therefore, I do not anticipate any benefit from the drugs I have described. Usually the pain is a pressure effect which is only relieved by the administration of morphine.

Raynaud's Disease.

Of other conditions connected with the contraction of blood vessels Raynaud's disease is one that has been successfully treated with nitro-glycerine. If vaso-dilators are of value in this condition, it seems to me that erythrol nitrate, as tending to keep up a more constant dilatation, would be of greater value.

Dyspnœa.

With regard to respiratory conditions, I do not anticipate any beneficial effects from these bodies. In various forms of dyspnœa—uræmic, asthmatic, bronchitic—nitro-glycerine and the nitrites are sometimes of value, but they often fail to relieve. By their means sibilant rhonchi may be converted into sonorous, and sometimes may even disappear altogether, but I do not agree with Professor Fraser[1] as to the rapidity of this change. The change of pitch seems to occur *pari passu* with the fall of arterial tension, and in the majority of cases the effect is not marked. Where loud and numerous moist sounds are present even less effect is obtained. Seeing, then, that the action of these comparatively powerful vaso-dilators is not very distinct, we should not expect the less powerful drugs I have mentioned to exercise much influence. They may prove of prophylactic value in the dyspnœa occurring in Bright's disease, for example, but beyond that it would be useless to hazard conjectures. In chronic bronchitis and other conditions in which the dyspnœa is of cardiac origin, amelioration might be obtained from these compounds. In such cases the weak heart is unable to drive the blood with sufficient power along the arteries, stagnation therefore occurs in the veins, and the pulmonary system is often the first to suffer. Thus aëration is limited by the pulmonary lesions on the one hand and the cardiac on the other. By dilating the vessels, and thus relieving the heart, the circulation becomes more efficient and the blood is better aërated. But under such conditions, digitalis is usually of much greater benefit. Headache occurring in a case of chronic bronchitis, with full, rather tense pulse, disappeared after the administration of erythrol nitrate.

Headache.

It is also very probable that anæmic headaches, occurring in patients with a high tension pulse, may be relieved by this drug, but my observations on this condition have been confined to those with a low tension pulse, and here the results have been somewhat conflicting.

Nervous Diseases.

Although nitro-glycerine has been given in many nervous affections, I do not think much benefit will follow the use of erythol or mannitol nitrates in these diseases. Migraine and neuralgia are oftentimes accompanied by reflex contraction of the blood vessels, and the use of vaso-dilators has sometimes proved curative. The solid organic nitrates, however, are much too slow in action to be of benefit, though it is possible they may prevent attacks of migraine if administered continuously.

The drugs might also be used by those who believe in the value of nitro-glycerine in epilepsy, but as I have rarely used this drug in this affection my experience on this point is limited. Other nervous diseases—epileptic vertigo, cerebral congestion, and tetanus—in which nitro-glycerine has been used, are not likely to yield to treatment with the nitrates under discussion.

In many other conditions nitro-glycerine is said to have proved of value. In various forms of poisoning (opium, coal gas, etc.), in vomiting from any cause (pregnancy, sea-sickness), in lienteric diarrhœa, in diabetes mellitus, in hysterical paralyses, and many other affections, nitro-glycerine is said to have proved curative or ameliorative. This is difficult to understand, and in most cases the results obtained were probably coincidences. I do not think that other organic nitrates will give beneficial results when administered in these or similar affections, and therefore I do not advise the use of the nitrates under consideration in such conditions.

Dose and Administration.

The dose of the solid organic nitrates may be taken as 1 grain; more may be given if it is thought necessary, but usually this amount will suffice. They may be taken in the form of pills or tablets, or in alcoholic solution. The last method I prefer. A solution of erythrol nitrate in the strength of 1 in 60 may be made and 1 drachm may be taken in an ounce of water every four or six hours. Mannitol nitrate is not quite so soluble, but a 1 per cent. alcoholic solution can be prepared, of which 1½ to 2 drachms may be taken in water. The solutions thus made are stable and free from irritating properties.

Conclusion.

In conclusion, the only condition in which I think these nitrates will be of benefit is one that I have already alluded to, namely, high arterial tension. Whenever we wish to keep down the blood pressure for a length of time, then I believe these nitrates will be of value. Such a result may be necessary for many reasons; a few I have attempted to indicate. It may be that the therapeutics of the drugs will widen with our increasing knowledge; it may be that the limits I have laid out for them will be much diminished; but whichever it be, I thought that a lecture devoted to the pharmacological action and therapeutic indications of a drug of which we stand so much in need would not be alien to the noble purpose which the foundress of this lecture had in view.

Although I know of no evil effects having followed the administration of these drugs, and though no such effects are anticipated, I ought to say that the research on these compounds is not yet complete.

[1] *International Journal of the Medical Sciences*, vol. xcv, p. 122.

Carbolic Acid Poisoning.—In the course of an address to the Sheffield Chemists' Association last week, the President of the Pharmaceutical Society is reported to have said that the Council intends to make a renewed attempt to have carbolic acid placed on the poison schedule of the Pharmacy Act, together with a number of other articles. This is satisfactory intelligence, and so far as carbolic acid is concerned the daily occurrence of deaths caused by it either accidentally or in cases of suicide affords strong evidence of need for protective regulation of its sale. It seems unaccountable that a poison which occupies such a conspicuous position in the returns of the Registrar-General should have been allowed so long to be supplied indiscriminately in all kinds of shops to children as well as adults, and without any provision against accident. The fact that carbolic acid is useful as a disinfectant for sanitary purposes cannot be urged as a justification of this laxity, since there are various forms in which it would be equally serviceable for such purposes, and at the same time unlikely to be swallowed in the way that so frequently happens with carbolic acid in its natural condition.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OTOLOGY,

At the Annual Meeting of the British Medical Association, in London, July-August, 1895.

By Sir WILLIAM DALBY, M.B., F.R.C.S.Eng.,
Consulting Aural Surgeon to St. George's Hospital.

Before we commence the work of this Section, I permit myself to say a few words of introduction: but in conformity with the wishes of the Council, which anticipate my own views of the matter, I refrain from occupying your time by anything in the nature of an address.

In consequence of the meeting of the International Otological Congress at Florence we shall not have the assistance of many Continental visitors who otherwise would have come to this meeting; but, on the other hand, Scotland, Ireland, and the provinces will, I believe, be represented more completely than is usual at our annual gatherings.

The programme is before us, and besides papers of considerable interest we shall have the privilege of hearing from Professor Macewen, whose brilliant achievements in cranial surgery are so familiar to us, his views on the grave questions involved in operative measures which become necessary when the process of inflammation has proceeded from the middle ear to the cavity of the cranium.

As to other matters before us, I am conscious—as everyone must be who sincerely wishes to advance our speciality—that, dealing as we do with so small an area of the body, it is difficult to be quite certain of very much progress after every annual meeting. Still, if we conduct our deliberations in the truly scientific spirit, I feel sure that each one of us has in his practice observed some points which have escaped the notice of others. It is in this way that we have individually at various times been able to give and receive something which has been of permanent value to those who follow our art, and I hope that this meeting may be an occasion for much interchange of ideas and experiences.

In regard to the treatment of the various forms of "nerve deafness," I wish to say that the words in which this discussion have been described were not chosen without due deliberation. The term "nervous deafness" is intended to include not only disease of the nervous apparatus, but loss of hearing due, as we know it to be, to causes which affect the whole nervous system generally; also loss of hearing due to shock or to emotional and mental influences; lastly, those conditions which, beginning as they do within the tympanic cavity, and at first simply interfering with the conduction of sound, finally are found to involve the perceptive as well as the conducting media, and to be the starting point apparently of subjective nervous phenomena. In short, the title of the discussion has been made purposely vague in order that when the subject of treatment is discussed it should be incumbent on the speaker to be exceedingly definite as to the precise nature of the cases for which the treatment is proposed; for in debating or writing upon so difficult a question, nothing is so obstructive to real progress as dealing with generalities. What we desire is thoroughly to thresh out the subject, so that we arrive at the approximate value of various methods of treatment which seem to require a more complete accuracy as to the conditions which they are supposed to combat. We know that we are often unable to point to a definite organic change within the nervous apparatus, but at least we wish to be able to point to the *modus operandi* of the remedy upon the function of the special sense. This anxiety for a more firm basis on which to place various remedies applies especially to the use of pilocarpin and electricity.

At one time great hopes were entertained in the profession as to the value of pilocarpin, and yet when the subject was discussed at a recent meeting of this Association at Newcastle it found very little support, even from those who had given it a fair trial. Again, it cannot fail to have been observed how in many nervous disorders great temporary benefit has followed the use of electricity, but the permanent effects have very frequently not been maintained.

We hope at this meeting to hear something definite as to the real value of both these agents, and to receive some helpful suggestions as to the conditions, if any, where they may be expected to prove useful.

It is noteworthy that in our list of papers we have none upon a subject that must incessantly agitate the minds of aural surgeons. I refer to the operative proceedings upon the tympanic membrane and cavity of the tympanum for the relief of chronic change; for notwithstanding all the disappointments in this direction, the fact remains that some of us (and I include myself in this number), after years of careful observation, are still in a position to make a selection of cases in which we are reasonably confident that if we could make a permanent and large opening in the tympanic membrane the hearing would be restored to a most useful extent. It is, I believe, in this complete knowledge that the impulse is to be found for all the operations that have from time to time been proposed. It is to an incomplete knowledge in the selection of cases that the great proportion of failures have occurred. Impressed as I am with the brilliant future of surgery in all its departments I cannot but believe that some day or other (it may be at a distant date) one of us is destined to solve this much-debated problem.

A CASE OF PULSATORY TINNITUS.

By Sir William Dalby, M.B., F.R.C.S.,
President of the Section.

The President showed a patient, a young lady aged 15, with whom a loud grating sound in the left tympanic cavity could be head by the bystanders. The sound was something like the loud tick of a watch, and was synchronous with the pulse for several beats; it then stopped for a brief interval, and was then resumed. This remarkable symptom came on suddenly in February, 1894, and had remained ever since. At that time, as now, she was in excellent health, and the symptom is neither more nor less pronounced than it was seventeen months ago. The beats can be observed to vary in number. Thus it was noticed to beat 7 times—an interval, then twice—an interval, then 4 times—an interval, then 13 times. The hearing is not affected. No position or movement of the body, or indeed any condition that has up to now been noticed, appear to modify it. Both tympanic membranes are normal. Sir William Dalby had only met with two other cases of a similar nature.

A DISCUSSION ON THE TREATMENT OF NERVE DEAFNESS.[1]

I.—Dundas Grant, M.D., F.R.C.S.,

Surgeon to the Central London Throat and Ear Hospital.

The indefiniteness and discordance of the reports as to the methods and results of treatment of so-called "nerve deafness" are eminently embarrassing to the earnest practitioner of aural therapeusis, whether he be a tiro in the art or an experienced professor. In the first place, the looseness of that very convenient and possibly indispensable term, "nerve deafness," is the source of endless discrepancies. I feel sure that nothing like certainty in treatment can be attained without greater accuracy in the diagnosis of the different forms of disease to which the term is applied; but, as time will not permit of my dealing with the subject of diagnosis, I will pass on to the means of treatment at our disposal, which are many in number but of specially local character. They include the application of cold by means of icebags or Leiter's coils; the application of heat—of some value as a local sedative, but in general to be avoided as tending to lower the vasomotor tone; local depletion, by means of living or artificial leeches on the mastoid vein or of free puncture of the turbinated bodies; general depletion—by venesection in the arm or the neck—effects less directly the same purpose when general plethora calls for it.

Derivation Directed towards the Intestines, the Kidneys, the Skin, or the Nose.—Derivation to the intestines is an old and valuable method of treatment in all cerebral congestions or inflammations. When the labyrinth is the seat of invasion.

[1] Communicated to the Section of Otology, 1895.

traditional as well as modern scientific therapeutics would indicate the free administration of purgative doses of calomel. The skin as a means of derivation may of course be set in action by heat or sudorifics. I have elicited from several patients affected with chronic internal ear disease of syphilitic origin that they always heard better after profuse perspiration, whether induced by a Turkish bath or by active exercise. We now possess, however, a remedy—pilocarpin—which combines with this action that of a stimulant to the absorbent system. There is considerable evidence of its efficacy in aiding the removal of pleural and peritoneal effusions; and when the effusion takes place in the perilymphatic or endolymphatic spaces of the labyrinth, it appears to have even a special value if only it is employed at a stage when the effusion is still susceptible of absorption—that is to say, before it has become organised so as to mat together the delicate structures in the organ. It must also be premised that the primary action of the lesion—effusion or hæmorrhage—has not been so tempestuous as physically to damage the nerve terminations irretrievably. In all cases, therefore, of recent effusion into the labyrinth, whether hæmorrhagic, serous, or purulent, it is our absolute duty to avail ourselves of this valuable remedy, whatever other means we may use in addition. In old-standing cases it should only be used, if at all, with the greatest caution, as the probability of any benefit being obtained is of the slightest, and the risk of injury from the remedy is not inconsiderable. The patient should be made well aware of these conditions before the treatment is undertaken. In cases of intermediate duration there is every justification for its use.

In anæmia of the labyrinth it is absolutely contraindicated; in congestion it is advisable, in hæmorrhage indispensable. In acquired syphilis it is, within a year of the primary inoculation, to be employed in mild form along with mercurial treatment, with every certainty of recovery being brought about; but in advanced tertiary cases, although the prognosis—especially if the deafness has been of considerable duration—is most hopeless, the remedy should be used alone and thoroughly before the institution of any other antisyphilitic treatment. If within a fortnight no remedial effect is produced, the drug should be laid aside as not likely to be of further use, and in its place we should resort to iodide of potassium in doses as large as 30 grains thrice daily, with or without inunction of mercurial ointment. Hereditary syphilis of the labyrinth is notoriously rebellious to all treatment, but Professor Gradenigo has published a case, Dr. Wm. Hill has mentioned to me another, and Professor McBride has reported one at least in his practice in which the pilocarpin treatment has produced beneficial results. I have myself seen considerable improvement in a well marked case, but my experience affords me no hope in old-standing cases of obtaining what may be termed a cure.

Those cases in which labyrinthitis arises from mumps call unmistakably for pilocarpin. In leukæmic labyrinthitis its use is justifiable but secondary; in infectious cases it is called for as soon as restoration of strength justifies its use. The comparison of two cases published in the *Archives of Otology*, vol. xiv, p. 138, emphasises the value of the drug in such affections. Rheumatic labyrinthitis from exposure to cold is certainly an indication for its employment. In traumatic effusion the uncertainty of the diagnosis renders the use of the remedy questionable, where concussion may be present and be followed by recovery, which in case of destructive hæmorrhage, neither pilocarpin nor anything else could bring about.

Labyrinthine disturbance due to sudden loud noise calls for its use early, along with inflation and suction, especially if there is concomitant definite vertigo, but in gradual labyrinthine deafness, due to prolonged exposure to noise, as in boiler-makers, it should be avoided.

Toxic deafness calls for other treatment. In senile deafness it is contra-indicated, and new growths, it need hardly be said, are not affected by it.

Derivation to the nose has been already referred to, and whether as a highly sensitive area suitable for the practice of counter irritation or a vascular one connected more or less directly with the ears and highly convenient for depletion it may be submitted to galvanic cauterisation or to puncture of the inferior turbinal.

Rest, both functional and physical, is a factor too little called into requisition. In labyrinthine hæmorrhage attended by vertigo rest of the body is to be strongly insisted on, with a view to the avoidance of the attacks. In pernicious anæmia, and particularly leukæmia, it should be absolutely enforced, with the aim of avoiding further effusions. Functional rest is all important in cases of nerve deafness due to prolonged exposure to noises.

The use of local antiseptics in the ear is particularly indicated in suppurative inflammation of the middle ear and in infectious disease—scarlatina and diphtheria—affecting the naso-pharynx; they should be used in the nose as well. The general antiseptic most indicated in such cases is the biniodide of mercury, there being good reason for avoiding quinine and salicylic compounds.

Sedatives are of great value in the stage of extreme mental disturbance induced by sudden labyrinthine effusion, and also in that of the mental depression sometimes reflexly induced in the subjects of deafness, whether of tympanic or labyrinthine origin. Among local sedatives may be ranked the galvanic current, the positive pole being applied by means of a small pad to the tragus, the negative by means of a large one to the back of the neck. The strength of current may be gradually increased to 4 or 5 milliampères per ear, and great care should be taken to avoid sudden interruptions. This treatment, as a sedative, is only of use in tinnitus accompanying slight nerve deafness.

With a view to promoting the absorption of plastic effusions recourse has long been had in therapeutics to such remedies as mercury and iodine or iodide of potassium. In the early stages of syphilitic infiltration, when it is presumably more liquid and therefore more readily absorbed, we should supplement, and possibly for the time supplant, these by the use of pilocarpin.

I may in this place mention the mode of dosage which I am accustomed to employ. A solution of the strength of 1 in 24 is prepared, and on the first occasion (if an adult) 2 minims = $\frac{1}{12}$ grain = $\frac{1}{3}$ centigramme, is injected. Each time an addition is made of $\frac{1}{12}$ grain, till as much as $\frac{1}{4} = \frac{3}{4}$, or up to $\frac{1}{2}\frac{2}{4}$ or $\frac{1}{3}\frac{1}{4}$ has been administered, according to the patient's tolerance. Before this it is often necessary to stop the increase, or even diminish the actual dose for a day or two. The treatment should be carried on for at least a fortnight, or, if intermissions have been necessary, for three or four weeks.

Local stimulation in the form of electricity may be applied by means of the continuous current, the negative pole being placed on the tragus, the positive on the back of the neck. The strength of current may range from 3 or 4 up to about 10 milliampères. In well-chosen cases I have certainly seen good effected, and most particularly in uncomplicated labyrinthine disease caused by continuous exposure to noises, as in two railway engine drivers treated for me in the electrical department of St. Bartholomew's Hospital by Dr. Lewis Jones. Strychnine in fairly large doses is beneficial in cases of nerve deafness arising from general debility and anæmia.

Tonics are very often called for, and strychnine is one of the best, the indications for it being very simple. There is, however, another—quinine—of which the same cannot be said. We know how the drug will produce in the normal ear deafness, with diminished bone as well as air conduction, and at the same time tinnitus, often pulsating, and diminished by compression of the vertebral arteries. This would seem to indicate an arterial congestion of the labyrinth, and in cases of anæmia of the part the law of *contraria contrariis* would indicate the employment of the remedy. Unfortunately the *modus* of the physiological operation of the remedy is still a matter of controversy.

In genuine Ménière's disease, in which, from the absence of the functional indications of middle-ear disease and the presence of nerve deafness with typical Ménière's complexus, we are justified in diagnosing effusion into the labyrinth, Our resources at the commencement are bromide of potassium, and, above all, pilocarpin. At a later stage an endeavour should be made by the use of mercury and iodide of potassium to induce absorption of the exudation. If, on the other hand, the vertigo renders the patient so miserable or useless, as it often does, as to make the loss of hearing (especially if unilateral) a matter of secondary importance, then, without the slightest doubt, quinine is called for.

In a very striking case referred to me at the West End Hospital for Nervous Diseases, the patient declared himself a "new man" within a week after the starting on quinine in doses of two grains three times a day along with 20 minims of dilute hydrobromic acid.

In yet another class of cases quinine proves of considerable service, acting in these in a somewhat paradoxical manner, and in small doses toning up the nervous system with beneficial effect in cases where fatigue of the auditory nerve from overwork and mental strain gives rise to impairment of hearing and nervous tinnitus.

Depressants are called for in certain cases, such as those of sudden labyrinthine lesions in gouty subjects, and in these the specially-indicated drug is colchicum.

Suggestion is a means of some importance as an adjuvant in the treatment of hysterical deafness, because, although many of the subjects of hysteria are not readily hypnotised, the majority of them are so, and on this is founded the "auto-suggestion" theory of the disease. This means, very shortly, that the patient who is susceptible to suggestion may hypnotise herself into a condition of deafness, which must be carefully distinguished from simulated deafness. The endeavour to hypnotise her out of it should be made when the classical treatment by means of valerian, tonics, electricity, good diet and regimen, and rectification of uterine disorders leave us in the lurch. In the hysterical deafness occurring in young girls in whom the advent of the menses is delayed spontaneous recovery may be looked for on the establishment of the catamenia.

Professor Urbantschitsch has, from the brilliant results obtained by acoustic exercises in his devoted labours among deaf mutes, been led to apply these to cases of nerve deafness.

In even the very worst cases our resources are not exhausted before we submit the patient to a course of training in so-called "lip reading," the rapidity with which an intelligent person with reasonable good sight under skilled tuition becomes an adept in the art being most remarkable.

I would submit the following points for consideration:

1. The necessity of careful diagnosis of the different conditions giving rise to so-called nerve deafness.

2. The great value of treatment by means of pilocarpin in fresh exudations into the labyrinth; its comparative uselessness in old-standing changes in the labyrinth; its action when at the moment beneficial being usually only transitory.

3. The recognition of the functional character of many cases of nerve deafness.

4. The recognition of the changes in the auditory faculty produced by senility, and the avoidance of errors in prognosis and of too energetic treatment.

5. The recognition of the frequency of middle-ear disease as a cause of Ménière's symptoms.

6. The hopeful use of galvanism in functional nerve deafness, and even in pure nerve deafness produced by habitual exposure to noises in subjects who are not highly nervous.

I trust that these fragmentary introductory remarks will elicit reports as to both failures and successes on the part those who have employed the measures I have spoken of.

II.—H. Macnaughton Jones, M.D.

The more we know of the physiology of hearing and of the relative parts played in the transmission of sound waves by the tympanic membrane, ossicles, perilymph, and endolymph to the epithelial elements, utricular, saccular, and cochlear, and of our difficulty in understanding the method by which such epithelial elements convert these sound vibrations into complex sound nerve impulses, the greater difficulty we have in isolating clinically those defects in hearing to which we are inclined to apply the term "nerve deafness." Disease in certain portions of the vibratile media, as, for example, the base of the stapes, the osseous and membranous labyrinths, involving not alone their fluid contents, but possibly also the integrity of the essential functional epithelial elements of the labyrinth, brings about results which it is impossible with any claim to accuracy to differentiate from affections of the auditory nerve itself. Indeed, intratympanic changes, when associated with varying degrees of labyrinthine mischief, are in themselves most difficult to isolate apart from those of the auditory nerve. Our ignorance still of the relative parts played by the vestibular and cochlear branches of the auditory nerve in the sense of hearing, as also of the exact function, relatively and proportionately, discharged by the various epithelial elements in the macula, crista, and basilar membrane, with Corti's organ, and their connective nerve fibrillæ, renders the term "nerve deafness" a highly presumptive one. In fact, I hope I shall not be considered an otological sceptic unworthy of attention if I say that I regard it from the clinical point of view as in a great many cases the outcome of a purely empirical differential diagnosis. In saying this I am aware that I lay myself open to the rejoinder that my attitude in presenting the cases I am about to do to the Section is a paradoxical one, and I should myself hypercritically be inclined to take exception to their strict inclusion under this heading to the entire exclusion of associated extranervine pathological changes. The otologist, in this respect, has a disadvantage as compared with the ophthalmologist in the absence of that direct observation of objective nerve changes which the ophthalmoscope directly reveals when the dioptric media are healthy.

Here is an example of the class of case I refer to: A lady, aged 44, is subject to a great shock and fright. Her hearing up to this was, so far as she knew, normal; after this shock she finds a noise in the left ear, and there is deafness. She has attacks of migraine, with a sensation as if some "hot water was rushing up the back." On examination a few years subsequently the hearing of the right ear is found but little influenced. In the left the watch was not heard on contact; the acoumeter is barely heard. The tuning fork is not heard off the ear, and hardly heard in the left ear through the cranial bones, and closure of the meatus makes no difference. There are naso-pharyngeal complications, and the left nostril is much obstructed. She hardly inflates the left tympanic cavity, and there is rigidity of the membrane. The tinnitus is distressing, but the attacks of migraine have ceased.

I have made a selection of 50 cases of extreme deafness, in which I consider there can be no doubt that the auditory nerve was affected in some part of its course. The principal tests of hearing applied to all cases were the ordinary watch and chronometer, the acoumeter, and the tuning fork. Only those are recorded in which the hearing was reduced to (*a*) neither watch nor acoumeter being heard on contact, or the tuning fork being either not heard or badly heard on the head, the sound dying entirely away on closure of the meatus; or (*b*) where the watch and acoumeter were barely heard on contact, the tuning fork being very badly heard, the sound diminishing on closure of the meatus; or (*c*) lesser degrees of deafness, as measured with watch, acoumeter, and tuning fork, but in which the hearing was still greatly decreased in response to the same tests. In a number of the cases such collateral evidences of nerve involvement as migraine, tinnitus, and pain in the head, were present.

The following is an analysis of these cases, showing the causes to which were ascribed the occurrence of the deafness, and those which could be traced upon examination:

Of the 50 cases, 31 were females and 19 males; 5 were under 20 years of age, 8 between the years of 20 and 30, 14 between 30 and 40, 9 between 40 and 50, 8 between 50 and 60, 3 between 60 and 70, and 3 over 70. I have excluded every case in which there were marked evidences in the appearances of the membrane, or of gross changes in the tympanic cavity. Where such evidences were even in a slight degree present, I have noted the case as one of middle-ear involvement. In 35 of the cases both ears were affected; in 15, one. Tinnitus of varying degrees of intensity and complexity were present in 41 of the cases. The middle ear was involved to the degree mentioned in 20. There were nasal complications such as deviation of the septum and chronic hypertrophic rhinitis present in 15.

The causes ascribed and detected were as follows:

Heredity	6	Prolonged nursing	1
Deafness in family	9	Carotid disease	1
Tropical climates	5	Concussion	1
Pregnancy	3	Diving on head	2
Menopause, due to the	1	Adenoids	1
Measles	2	Albuminuria	1
Scarlet fever	2	Pain into ear	1
Gout	1	Illness in childhood (nature not known)	1
Mumps	2	Cerebral attack of uncertain nature occurring suddenly at night	1
Diabetes	1	Fracture of the base of the skull	1
Syphilis	5		
Associated with mental symptoms	2		
Mental overstrain	6		

Looking more closely into these causes, and grouping them according to their affinities, we find that in the 50 cases:

In 15 there was either distinct evidence, at one or both sides of the parentage, of hereditary deafness, or of other members of the family having suffered.

In 6 deafness was ascribed to illnesses associated with residence in the tropics.

In 5 there was a history of acquired syphilis, 2 of these cases being due to infection through conception; in 1 there was also the evidence of hereditary syphilis in the family; in 2 there was the history of severe syphilitic infection, and syphilitic reminders were present.

In 4 there was a history of measles or scarlet fever in early life, and the origin of the deafness was ascribed to these exanthems, though the ear was not affected at the time of the illness.

In 4 there was an association between the origin of the deafness and great mental strain, and in these there were present other mental symptoms, such as melancholia, depression, hallucinations of sound, insomnia, etc.

In 3 pregnancy and labour were given as the source of the deafness.

In 2 the deafness began after an attack of mumps.

In 2 there were distinct manifestations of gout.

Diabetes and albuminuria were associated with 2. The accident of a fall into the sea was the origin of 1 case, and in 2 a note was taken of the patient having been in the habit of diving on the head from heights. In only 1 case was cardiac disease detected. In the case of adenoids both parents were deaf. The concussion case was that of a man who had worked for years in a foundry and near the hammer, one ear only being affected.

I would draw attention to the following facts in regard to the etiology of these cases:

1. The proportion of females affected being 31 to 19 males.

2. The hereditary or congenital nature of a large number of these cases.

3. The causes ascribed for the deafness in several of these latter cases being such as pregnancy, residence in tropical climates, or a nasal affection.

4. The number complicated with nasal deformity or disease.

5. The large number in which the hearing of one ear remained unaffected, or in which the hearing was fairly good. Save in a few instances, where the corresponding nostril was completely obstructed, there was no special reason for this immunity.

6. Residence in India, and mental over-strain, as causes of nerve deafness.

I have chosen this 50 as the last on the list of similar patients who are constantly consulting all of us, as fairly typical ones. Do we learn any practical lesson from their histories and examinations as regards treatment? I do not enter into the treatment of each of these particular cases. If I may give a general opinion of the result in these and similar sufferers who submitted to any treatment, when told candidly that the result was quite uncertain and at best but problematical, I should describe it by the one word "unsatisfactory." In most of the cases the deafness had lasted a considerable time before I saw them. In those in which there was evidence of middle-ear implication, treatment by throat gymnastics, rectification of the nasal obstruction, Eustachian catheterisation, faradisation of the tubal muscles, massage of the mastoid, and general attention to the middle-ear ventilation, did some good, and in some instances decidedly repaid the patient for the time, annoyance, and little money expended upon it. This treatment was combined with the bromides, hydrobromic acid, and various tonics, with the usual stock remedies for tinnitus. Pilocarpin was tried in a certain proportion of the cases in which it might with any stretch of credulity be supposed that this most empirically used of otological remedies might benefit. Of galvanism I have had little experience either in diagnosing nerve deafness or healing it. I am perhaps ignorant enough, sceptical enough, or correct enough, not to believe in it. What I do believe in, in the class of cases to which I have referred, can be condensed into a few sentences.

Children of parents affected with deafness should have special attention paid to the ears during the exanthemata. Adenoids should be carefully looked after, and any nasal deformity that may exist. All through life, if the person should be exposed to such predisposing causes as those I have enumerated in this paper, any slight tinnitus or deafness should have immediate attention, and the children of deaf parents going to reside in the tropics or in miasmatic or malarial climates ought to be warned of the additional risks they run by so doing. The same remark holds good regarding pregnancy or mental over-strain or the infection of syphilis.

I believe the time of the menopause to be a critical time to those women with any tendency to nerve deafness. So is, in both sexes, the time of puberty to those predisposed to hereditary aural mischief. In short, while I attach the greatest importance to prophylaxis and early attention to general hygiene, climate, and to any defects of the middle ear, including the naso-pharynx, with the administration of suitable therapeutic remedies, I think the risk we run as aurists is of abandoning ourselves to fads and quackery in the treatment of deafness due to actual disease of the auditory nerve.

Dr. Milligan (Manchester) was of opinion that cases of pure labyrinthine disease were comparatively rare. In many so-called cases of nerve deafness the origin of the trouble was really in the middle ear. In such cases there was at times slight diminution of the bone conduction, but careful investigation will frequently show that there is better hearing in a noise, which he considered a most important clinical symptom. In cases where definite organic changes had occurred in the nucleus or in the auditory nerve, he did not believe any improvement took place under treatment. His experience in the use of pilocarpin in nerve deafness was most disappointing.

Dr. Thomas Barr (Glasgow) referred to the importance of examining thoroughly the middle ear, and if any pathological condition was found to exist to treat it by suitable remedies, as even when the symptoms point to labyrinthine disease, treatment of the middle ear might effect improvement. His experience of pilocarpin had not been favourable. The effect of the application of tones of a pitch as far removed as possible from that of the subjective sound upon subjective tumulus was very interesting. Unfortunately the improvement was only temporary.

Mr. Robert Woods mentioned a case of sudden and complete deafness both to aërial and osseous conduction in a man suffering from secondary syphilis; neither mercury, iodide of potassium, or pilocarpin had the slightest effect.

Mr. Bennett had tried pilocarpin in ten cases of congenital syphilis. In two there had been a slight improvement after the first two injections, but it had not continued; in one case, however, there had been decided improvement after several injections had been given on alternate days.

Dr. Warden (Birmingham) believed that it was too soon to decide on the value of pilocarpin in labyrinthine disease. He generally preferred the iodide of potassium, followed by tonics. Dr. Macnaughton Jones had referred to a residence in India as a cause of nerve deafness; it was a question he (Dr. Warden) thought, if the frequent use of quinine might not be responsible for it.

Mr. Field agreed with Dr. Dundas Grant and Dr. Macnaughton Jones that the present treatment of nerve deafness was unsatisfactory. It was very difficult to diagnose those cases which derived benefit from pilocarpin, although he was sure that a certain number of patients did vastly improve under the treatment, but he was bound to say that many cases which seemed suitable failed to get any benefit. He, however, believed that we should be able shortly to select with greater certainty the cases of nerve deafness that would improve under pilocarpin.

Dr. Edward Law drew attention to cases of nerve deafness in patients with a syphilitic history, and to the fact that mercury whilst relieving the other symptoms, had little or no effect on the deafness. In 3 cases he had observed slight improvement under pilocarpin, in 2 there had been slight relief from distressing tinnitus, and in 1 the hearing was said to be a little better.

Dr. Lewis Jones stated that he had carried on the elec-

trical treatment in cases of nerve deafness for Mr. Cumberbatch, Dr. Dundas Grant, and others with results which, as might be expected, had been conflicting. The various causes of nerve deafness accounted for this. Of the power of controlling the state of nutrition in sensory end organs by electricity not very much was yet known. The nerve trunks, on the other hand, appeared to respond well to electrical treatment, and neuritis in ordinary mixed nerve was certainly improved by electricity. The favourable cases which occurred from time to time in electrical treatment of disease of the optic and auditory nerve made it probable that a similar useful effect could be produced in the nerves of special senses. He had had a few successful cases. The deeply-seated position of the auditory nerve made it difficult to reach by electrical currents, for the current might already be felt very strongly at the surface, and yet be so diffused before reaching the nerve as to be practically ineffective there. The battery current should be used, and not the induction coil; a bifurcated electrode resembling a binaural stethoscope should be employed; and perhaps it was as well to treat both ears at once, even if one were much more affected than the other. By doing that the patient was made less giddy, and bore the treatment better. The cathode should be applied to the ears. By using large pads of wet cotton-wool, 10 or 15 milliampères could be borne, and the auditory nerve be appreciably influenced. The current should be half the strength when interruptions or reversals of current were to be employed. These were, in his opinion, useful. With a more perfect classification of the various kinds of nerve deafness it would probably be possible to sort out from the mass cases favourable and cases unfavourable for electrical treatment. Certainly, in electricity there was a good means of profoundly influencing the state of nutrition of a part.

The PRESIDENT (Sir William Dalby) laid considerable stress on the fact that this occasion gave the opportunity of an expression of opinion which was really of a most weighty and important character. Two points stood out in unusual prominence, namely, that the injection of pilocarpin in the opinion of those present was condemned as useless and unjustifiable; and secondly that the result of the treatment of nerve deafness by electricity in the present condition of our knowledge was most discouraging.

Dr. MACNAUGHTON JONES, in reply, said that he first employed pilocarpin for deafness in 1878 in a case of Ménière's labyrinthine vertigo following syphilis. It had done good in that particular instance. He soon found that its clinical benefits in nerve deafness were very limited. He considered its use altogether unjustifiable in a large proportion of the cases in which it had been used. In recent intralabyrinthic effusions, in cases of hypertension of the membranous labyrinth, with increase of either endolymph or perilymph, in recent syphilitic cases, in recent apoplectiform seizures, and in leukæmic cases, it was of service. We might take the effect of pilocarpin in glaucomatous and other states of the eye as an indication of what we might expect from it in nerve deafness. With regard to galvanism, he would rather attach importance to its proper application as a diagnostic test of nerve involvement than as a means of treatment. He would insist on the fact that many cases of so-called "nerve deafness" were functional. This accounted for the surprising recovery in certain instances. On the other hand a large proportion of these patients had gross middle-ear changes, and were also subject to tubal complications, the treatment of which was followed by considerable improvement. He thought that a large class of mental sufferers from nerve deafness were most benefited by simple hygienic treatment, specially adapted to the particular source of the mental disturbance. He believed in the treatment of early syphilitic cases by timely specific remedies, with pilocarpin, and subsequently iodide of potassium, or other iodides. With regard to what Dr. Warden had said in reference to India and quinine, he would point to intermittent fever and malaria as most potent causes of either primary or secondary nerve deafness, and the doses of quinine, from the known effects of the drug on the circulation of the labyrinth, was a matter for careful consideration in its administration.

The number of workers now engaged in original research at the Conjoint Laboratories of the Royal Colleges is fifteen.

TUBERCULOUS DISEASE OF THE MUCOUS MEMBRANE OF THE MIDDLE EAR AND ITS ADNEXA; AN EXPERIMENTAL INVESTIGATION.[1]

By WILLIAM MILLIGAN, M.D.,

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TUBERCULOUS disease of the mucous membrane of the middle ear and its adnexa may present itself either as a primary or as a secondary affection. The paths along which tubercle bacilli may travel to reach the middle ear are: (1) along the Eustachian tube, (2) along the blood vessels and lymphatic channels of the tympanic mucous membrane, (3) through a previously-existing perforation in the membrana tympani.

The Eustachian tube probably acts frequently as the channel along which bacilli are conveyed. It may act in a mechanical manner merely as the path along which they pass, or its mucous membrane being itself the site of tuberculous infiltration, may affect the middle ear secondarily as the result of the extension of the morbid process. Tuberculous affections of the middle ear are probably most frequently secondary affections, secondary, for example, to tuberculous disease of some internal organ, for example, of the lungs or larynx.

In such cases invasion of the tympanic mucosa may take place either as an acute or as a chronic process. In the former rapid cellular infiltration, followed by equally rapid necrosis and caseous disintegration of the mucosa occurs while tubercle bacilli may be found in the discharges from the middle ear in considerable numbers.

In the more chronic form miliary tubercles, which may at times be seen with the naked eye, are deposited within the substance of the mucous membrane. These deposits at an early stage of their existence become caseous and form superficial ulcers. Fresh inoculation takes place in the deeper layers, with the result that it becomes gradually thickened, and may, by a process of fibrous tissue formation, bring the morbid process to an end. More usually, however, extension to the bone takes place, producing a rapid cario-necrotic condition with subsequent opening up of the cavity of the internal ear, extension to the mastoid process or to intracranial structures.

It must not be assumed, however, that every case of suppurative middle-ear disease occurring in a patient already the victim of tuberculous disease elsewhere is necessarily therefore of a tuberculous nature; nor, on the other hand, must it be taken for granted that because tubercle bacilli are not found in the discharges from the middle ear in any given case that therefore the affection is non-tuberculous in nature. Most observers have found it extremely difficult to detect bacilli in pus coming from the cavity of the middle ear, and my own observations fully bear this out. Nathan,[2] in an examination of 40 cases of purulent middle-ear disease, found tubercle bacilli 12 times. In but 3 of these cases were there no signs of pulmonary phthisis, but in these 3 carious processes were present. According to Habermann[3], in certain cases of undoubted tuberculous disease of the middle ear no bacilli were found. Thus, in an examination of the ears of 21 patients suffering from tuberculous lesions of internal organs he could only distinguish the tuberculous nature of the ear affection in 5 cases. In these 5 the mucous membrane of the middle ear was swollen, and studded with occasional groups of giant cells containing bacilli. That a primary tuberculous affection of the middle ear may occur is admitted, although it is usually looked upon as of comparatively infrequent occurrence. It is extremely important, however, both from a scientific and from a clinical point of view, to be able to state definitely whether any given case is or is not of a tuberculous nature. Clinically the coexistence of certain symptoms goes far to prove that certain cases are tuberculous in origin. For example, the sudden onset of a purulent discharge, unaccompanied by any of the usual symptoms of a sthenic inflammation, and the occurrence of a perforation covered by a creamy secretion in the centre

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[1] Read in the section of Otology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

[2] *Deutsch. Archiv für klin. Med.*, 1884.

[3] *Zeitschrift für Ohrenheilk.*, Bd. vi.

of a pale, œdematous, and uninflamed membrana tympani should always excite suspicion. In addition, the general appearance of the patient, the family history, and the possible presence of other tuberculous lesions may help in establishing an opinion as to the real nature of the inflammatory process. Scientific accuracy is, however, still wanting, although even the surgeon may have a strong suspicion that the case is really one of tuberculous disease.

The great practical difficulties encountered in finding bacilli, either in the discharges from the middle ear or in the tufts of granulation tissue so frequently present in such cases, probably accounts for the few published records of well-authenticated cases. The quest for the bacillus of tuberculosis has proved frequently so tedious and so discouraging that I have in preference selected the method of subcutaneous inoculation as practised by Villemin and Delépine with a view to ascertain, if possible, the real nature of a certain class of case frequently met with in both hospital and private practice. If, with the proper precautions to be presently detailed, artificial tuberculosis can be set up in animals, the inference which one may fairly draw is that the material used for inoculation was itself of a tuberculous nature. The various observations to be presently described have been carried out in the Pathological Laboratory of the Owens College, and I desire to take this opportunity of thanking Professor Delépine for many valuable suggestions and for his kindly assistance.

As the result of a large number of inoculation experiments Professor Delépine[4] has come to the following important conclusions:

1. That the inoculation method is a method of diagnosis capable of giving results free from any ambiguity.
2. That the negative results obtained from it are nearly as valuable as the positive results.
3. That the positive results give more definite information than the discovery of the bacillus tuberculosis.
4. That definite results should easily be obtained within two or three weeks.

He has also shown that if proper precautions be taken the accidental production of tuberculosis can be definitely excluded. For this purpose his first set of experiments consisted in the subcutaneous and intraperitoneal inoculation of sterilised products (including paper), the animals being kept in cages identical with those used for other experiments and disinfected in the same way. In no case was tuberculosis produced, even after keeping the animals for several months under observation.

Secondly, subcutaneous, submucous, intraperitoneal, and intraocular injections were made of non-tuberculous material, including (1) inflamed tissue from the floor of an ulcer and also portions of an enlarged lymphatic gland; (2) pus; (3) degenerated adrenals; (4) sputum; (5) cultivations of other bacteria. Nothing resembling tuberculosis was obtained in any of these experiments. The material used for inoculation in the following cases has been obtained from scrapings of bone taken from the interior of the mastoid process of patients who from the presence of certain symptoms were probably suffering from tuberculous disease of the middle ear and its adnexa. The investigations have also been carried on in cases which clinically at any rate might fairly be regarded as instances of primary middle ear tuberculosis. For the most part, they have occurred in infants and young children. In every case the most careful examination has failed to detect any evidence of tuberculous disease in the chest or abdomen.

Schwartze[5] declares that primary tuberculosis of the middle ear or of the mastoid process is an eminently rare affection, in the diagnosis of which we cannot be too reserved or distrustful. Zaufal[6] has described two cases of primary tuberculous disease of the ear. In the one a localised mass of tubercle was found in the pars petrosa of the temporal bone, in the second the internal auditory meatus was blocked by a mass of tuberculous tissue. Knapp[7] has also described a case of primary tuberculosis of the mastoid process occurring in a patient aged 5 years, where both tympanic membranes and both middle ears were perfectly normal as far as physical examination could discover. In this case, however, the diagnosis was made upon purely clinical grounds.

Few published records of undoubted primary tuberculous lesions of the ear are found in literature, but may not this be due to the omission either of special bacteriological investigation or to the performance of inoculation experiments?

In the following experiments guinea pigs were used for the purpose of inoculation. The left hind limb was carefully shaved, washed with sublimate lotion, and then gently singed with a flat platinum knife at a white heat. A small pocket was then made under the skin at about the level of the knee joint with a freshly sterilised knife, and into this pocket a scraping of bone from an affected mastoid was introduced with freshly sterilised forceps. A piece of plaster was then placed over the wound, and the guinea pig put back into its cage and closely watched for from three to six weeks, during which time the animal was well looked after and well fed. The greatest possible care was also taken to perform the mastoid operation with the most rigid aseptic precautions. Freshly sterilised instruments were always employed. The skin around the ear having been well washed, the diseased mastoid was opened in the ordinary way, and a scraping of bone taken from an area where disease was seen to be advancing was removed, and immediately placed in a sterilised tube. The inoculation of the guinea pig was performed upon the same day as the operation, or at the latest upon the following day, the sterilised tube being meanwhile kept in a cool place. Throughout the investigation every precaution was taken to avoid any accidental contamination of instruments or of material.

The results obtained are somewhat striking, and prove, I think, that primary tuberculous disease of the middle ear is a much more frequent condition than is usually supposed to be the case. Thus, of the 10 cases to be described, 8 (or 80 per cent.) were of a tuberculous nature; 2 (or 20 per cent.) were non-tuberculous.

The clinical picture presented by most of the cases consisted in the sudden and apparently painless onset of discharge from one or both ears, the early involvement of the glands around the auricle and the frequent presence of facial paralysis.

The amount of discharge was usually fairly profuse, was at times sanious, and at an early stage became markedly fœtid. In addition flabby granulation tissue blocking the external auditory meatus, and evidently connected with a rapidly disintegrating bone, was found in 9 out of the 10 cases. The rapid and marked implication of the glandular structures around the ear suggested something more than a simple inflammatory process, while the early involvement of the facial nerve, in my experience at any rate, a by no means usual symptom in recent cases of simple inflammatory origin, appears to me to be a symptom worthy of consideration.

Cases presenting such symptoms, although they may be looked upon as being probably of a tuberculous nature, require for confirmation either the discovery of the bacillus tuberculosis in the aural discharges, or the establishment of a general tuberculosis in animals inoculated with material from the affected ear.

Cases.

1.—J. C., male, aged 10 months, was brought to hospital on account of the presence of an offensive discharge from both ears. According to the mother's statement the discharge was first noticed when the child was 4 weeks old, and apparently both ears had become simultaneously attacked. When first seen the following notes were made: right and left meati full of foul smelling pus. After syringing examination showed both meati blocked with pale and unhealthy-looking granulations. Palpation with the probe showed that the posterior meatal wall was bare and eroded, and exposed bone was felt in the depths of the ear. The glands immediately beneath the auricle were enlarged and tender. No external appearances of mastoid disease were apparent: no œdema, no tenderness. The child was pale and ill-nourished, perspired a good deal at night about the head, and was usually very restless.

Family History.—Father and mother alive and healthy. Family consists of three children; the two eldest have always enjoyed good health; the third child, the patient, has never been strong, both ears having commenced discharging shortly after birth.

Operation was advised. A few days afterwards the child was put under chloroform, and the usual mastoid incision was made. After retracting the two sides of the incision, and so exposing the mastoid cortex, a fistula the size of a threepenny bit was immediately brought into view. With a small spoon a considerable amount of cheesy *débris* was scooped out, and a large cavity in the mastoid process thus exposed. This was carefully curetted until all diseased tissue was considered to have been cleared

[4] BRITISH MEDICAL JOURNAL, September 23rd, 1893.
[5] *Handbuch der Ohrenheilk.*, 1893, Bd. ii, p. 797.
[6] *Archiv für Ohrenheilk.*, xl., 174.
[7] *Archiv. of Otology*, vol. xxiii, p. 64.

out. The bridge of bone separating this cavity from the external meatus was now broken down, and so the cavity in the mastoid process, the cavity of the middle ear, and the external meatus were thrown into one. The parts were then carefully dried, dusted freely with iodoform powder, and packed with iodoform gauze. The usual dressings were then applied.

The macroscopic appearances of the part were such as to make one suspect the presence of a tuberculous process. The left ear was accordingly during the following fortnight simply syringed with plain warm water, and a fortnight subsequently the child was again put under chloroform and the left mastoid process opened. All the instruments used during this second operation were most carefully sterilised, and were in fact removed straight from the steriliser for the immediate necessities of the operation. When the edges of the incision were retracted a precisely similar condition of affairs was seen as had been found to exist upon the right side. After the removal of some of the more superficial *débris* small scrapings were taken from the bone at three different levels. These scrapings were immediately placed in sterilised test tubes. The same afternoon three guinea pigs were inoculated with this material, the inoculation being made in each case into the subcutaneous tissues of the left hind limb at above the level of the knee-joint. A fortnight afterwards each of the three guinea-pigs was found to have distinctly enlarged superficial inguinal glands.

Dissection of guinea pig to show enlargement of the glands following subcutaneous inoculation with tuberculous material taken from the mastoid process of a child. × indicates the site of inoculation.

Towards the end of the fourth week the ganglia of both fore limbs and also the cervical ganglia were affected. Five weeks after the inoculation had taken place the guinea-pigs were killed and were at once dissected. The accompanying figure shows the glands as they are found five weeks after the subcutaneous inoculation of tuberculous material. Besides enlargement of the inguinal glands, superficial and deep, the popliteal, the sublumbar, the retrohepatic, and the peri-bronchial glands upon the same side as the lesion, were found markedly enlarged. In addition the spleen was found freely studded with tubercles, and a few were scattered here and there in the liver and lungs. (See figure.) Scrapings were taken from the interior of the subiumbar gland and stained for tubercle bacilli according to Neilson's method, with the result that considerable numbers were found in several cover glass preparations. Both mastoid wounds were carefully treated. Iodoform was freely used as the dusting powder, and iodoform gauze as the material for packing. Gradually the cavities began to granulate, until finally complete filling up took place. When last seen, seven months after the operation, a firm, although considerably depressed, mastoid cicatrix marked the site of the original wound upon each side. No pus was found either in the external meatus or in the middle ear. The membrana tympani upon both sides showed a large dry perforation, but no trace of the ossicula could be seen.

II.—J. G., aged 3 months, was brought to hospital with the statement that the right ear had been discharging for a few weeks. The right external meatus was found full of fœtid pus. After syringing, flabby granulations were seen to be present, and examination with the probe detected an extensive area of parietal caries. A large mass of glands was found immediately below the auricle, and careful palpation over the mastoid process made it probable that an area of softened bone existed.

Family History.—Father and mother active and healthy. Father had one brother, who died of phthisis. The family consisted of two children. The elder of the two died when 6½ months old from convulsions.

Operation was advised, and was performed one week later. In the interval the ear was kept as clean as possible by frequent syringing with plain warm water. The usual mastoid incision was made, and the edges having been retracted a small fistula was found upon the surface of the mastoid cortex. This was gradually enlarged by means of a Volkmann's spoon, and a considerable quantity of foul-smelling cheesy *débris* removed. A scraping from the edge of the bone where the disease appeared to be advancing was taken and immediately transferred to a sterilised test tube. The same afternoon a guinea-pig was inoculated with this scraping in the manner previously detailed. Five weeks later the guinea-pig was killed and dissected. The same glands were found enlarged as in the previous case. A scraping was then taken from the deep inguinal gland, stained for tubercle bacilli, and placed under the microscope. Several bacilli were found. The patient was treated just as in the last case, and for a time good progress was made. A large abscess, however, formed round the left hip-joint. This was accompanied by great prostration and considerable rise of temperature. The child was removed to another hospital, where this abscess cavity was laid open. Symptoms indicative of tuberculous meningitis suddenly set in, and the child died partly as the result of marasmus and partly from the effects of frequently repeated convulsive seizures. Unfortunately no *post-mortem* examination could be obtained.

III.—E. B., female, aged 8 months, was seen in consultation on account of a constant purulent and fœtid discharge from the left ear. The child had become very restless during the preceding three weeks, and was also emaciating somewhat rapidly. Examination showed that the left external meatus was full of foul-smelling pus. After this had been removed a mass of granulation tissue was detected deep down in the meatus. Palpation with a probe revealed the presence of extensive caries. The glands below the ear were enlarged and tender. No external evidence of mastoid disease was apparent.

Family History.—Father and mother alive and healthy. Of the two sisters, one had suffered from enlarged tonsils, naso-pharyngeal adenoids, and enlarged cervical glands; the other was apparently quite healthy.

Operation was advised and undertaken a week later. The mastoid process was opened in the usual way, and the cavity thus exposed, the cavity of the middle ear, and the external auditory meatus were thrown into one. A considerable quantity of cheesy *débris*, softened bone, and flabby granulation tissue was removed. The parts were well dried, dusted with iodoform powder, and dressed in the usual manner. A scraping from the bone was placed in a sterilised tube, and a guinea-pig was inoculated. General tuberculosis was set up, and after six weeks the animal was killed. Scrapings from several of the glands were taken and examined for bacilli, with the result that considerable numbers were found.

IV.—E. B., female, aged 9 months, was seen in consultation with Dr. Byrne of Chorlton-cum-Hardy, on account of a profuse fœtid discharge from the left ear. The history given was that the child's ear had begun to discharge when she was 4 months old, and that there had been a continuous discharge ever since. Shortly after the ear trouble had commenced the glands below the ear began to enlarge, and when the child was first seen a large mass of hard indurated glandular tissue was found in this situation. During the preceding three weeks well marked left-sided facial paralysis had been observed. The child was very restless at night, and perspired freely about the head. On two or three occasions the child had had convulsive seizures. Upon examination the left auditory meatus was found full of granulation tissue, and palpation with the probe revealed the presence of an extensive area of exposed bone. The tissues over the mastoid process were infiltrated, and offered a certain doughy resistance to palpation.

Family History.—Father and mother alive and healthy. Mother has had only the one child. The father's family history was good. The mother's parents are alive and healthy. The family consisted of five sons and five daughters. One son died at the age of 9 years of "decline," and one daughter died at the age of 22 of "tuberculous meningitis." The other sons and daughters are alive and healthy.

Immediate operation was advised. Two days afterwards the child was put under chloroform and the usual mastoid incision made. After the flaps had been retracted, the mastoid process was opened in the usual way, and cheesy *débris* and unhealthy-looking granulation tissue freely removed. The operation was conducted just as in the previously mentioned cases, and a scraping of bone was removed for inoculation purposes.

For the first few days good progress was made. Shortly afterwards, however, the child was again seized with severe convulsive seizures. The temperature rose, and a frequent meningeal cry was heard. At the *post-mortem* examination the lungs, liver, kidneys, and spleen were found to be perfectly normal. The glands around the ear were in a state of early cheesy degeneration. Description of middle ear: The membrana tympani was entirely gone. The stapes was the only ossicle left. The mucous membrane was pale and œdematous, and upon examination with a lens several tubercles were seen.

Upon opening the cranial cavity a small quantity of fluid escaped. The vessels of the pia-arachnoid about the base of the brain were found congested, and several groups of small tubercles were found in the meshes of the pia-arachnoid upon the same side as the diseased ear.

The guinea-pig which had been inoculated with a scraping of bone from this case became rapidly tuberculous, and when killed six weeks afterwards showed involvement of the various glands as seen in the accompanying diagram. Scrapings taken from these glands and stained for tubercle bacilli revealed their presence, and microscopic sections of pieces of liver and spleen showed well-marked giant cells. In addition, two tubes of agar-agar were inoculated with material taken from the diseased glands and pure cultivations of the tubercle bacillus produced.

V.—H. S., male, aged 3 years, was admitted to hospital under the care of my colleague, Mr. Pinder, who was good enough to allow me to see

the case. The history given was that the right ear had commenced to discharge when he was 4 months old, and had discharged ever since. Upon admission, the right external meatus was full of fetid pus, and bare bone was readily felt by means of the probe. A fortnight before admission the child had fallen and injured the right hand, which now presented the typical appearances of tuberculous infiltration of the second metacarpal bone. For many months also he had had an enlarged testicle, which during his stay in hospital suppurated.

Family History.—Father and mother alive and healthy. One other child, also healthy. No family history of tubercle.

The right mastoid process was opened under chloroform, and a large quantity of purulent *débris* and necrotic tissue scraped out. A scraping was taken and used for an inoculation experiment. Five weeks afterwards the guinea-pig was killed, and scrapings taken from the diseased glands and stained for bacilli showed their existence in considerable numbers.

VI.—B. A., male, aged 11 years, had suffered from left-sided, purulent, middle-ear disease for many years. When admitted into hospital he was found to have a large subperiosteal mastoid abscess upon the left side, a meatus blocked with granulation tissue, and an extremely offensive discharge from the ear. For some days before admission he had suffered from severe pain in the head, and had had several rigors. Under chloroform the subperiosteal abscess was opened, and a fistula found in the mastoid cortex. After enlarging this a large cavity was found filled with cholesteatomatous and purulent *débris*. When this had all been scraped out the dura mater was found exposed for an area of about the size of a shilling. The surface was dark coloured and sloughy. The cavity was well washed with weak biechloride solution and packed with iodoform gauze. The patient made an uninterrupted recovery. Scrapings taken from the mastoid and placed under the skin in a guinea-pig's left hind limb about the level of the knee-joint produced a localised area of suppuration, and a small abscess formed but quickly healed. Each week the animal was carefully examined, but no enlarged glands could be detected. Six weeks after the inoculation experiment the animal was killed. The organs were found quite healthy. There were no enlarged glands and no evidences of tuberculous deposit anywhere.

VII.—H. C., male, aged 7 months, was brought to hospital with the following history. When 3 months old the left ear began to discharge. Very shortly afterwards the glands below the auricular attachment were found enlarged and painful, and about this time (a month after the commencement of the trouble) complete left-sided facial paralysis developed. Upon examination the meatus was found quite blocked with unhealthy-looking granulation tissue, and extensive cario-necrosis was easily demonstrated to be present. There was no external evidence of mastoid disease.

The family history showed nothing of importance. The child was an only child. The mother came of a healthy family; the father also was healthy, but was addicted to drink. A mastoid operation was performed just as in the previously detailed cases, and considerable quantities of softened bone and caseous *débris* were removed. A scraping of bone taken from the advancing edge of the disease was removed and used for inoculation purposes. Six weeks afterwards the guinea-pig was killed, and found to present the appearances of advanced tuberculosis. The glands were enlarged, and on section were cheesy. The spleen was packed with tubercles; many were also found in the liver, and a few in the lungs and kidneys. Scrapings from the glands stained for bacilli revealed their presence in considerable numbers.

VIII.—G. C. T., male, aged 2½ years, was seen in consultation with Mr. Malim, of Rochdale, on account of the presence of a purulent discharge from the right middle ear, which had persisted for six months. The left ear had also been discharging, but at the time of the consultation was found perfectly dry and the membrane cicatricial. Examination of the right ear showed that Shrapnell's membrane was perforated, and that a small tuft of granulation tissue protruded through the opening. The probe demonstrated the presence of bare bone upon the posterior meatal wall and upon the roof of the middle ear. For a few weeks local treatment was tried. The tuft of granulation tissue was removed, and various astringent and antiseptic lotions were used. No real progress was however made, and as the tissues over the mastoid process became suddenly red and puffy an immediate operation was advised. The patient was put under chloroform, and the usual incision made. Upon opening the process much purulent *débris* and granulation tissue was found. This was all carefully scraped out and the cavity packed with iodoform gauze. At first the patient made good progress, but shortly afterwards the wound became very sluggish and refused to heal. The cavity was accordingly again scraped, and this time finally healed. When last seen a depressed mastoid cicatrix marked the site of the previous operation wound; the middle ear was quite dry, and the membrana tympani showed the existence of a large and dry perforation. No sooner had the right ear healed, however, than suppuration started again in the left middle ear, and was almost immediately followed by the formation of a subperiosteal mastoid abscess. When this was opened a minute fistula was found leading into the interior of the bone. The fistula was at once enlarged, and the operation conducted as in the previously detailed cases.

Inoculation made from scrapings taken from the left mastoid process was followed by the typical development of well-marked tuberculosis.

IX.—J. C., male, aged 5 months, was admitted into hospital on account of suppuration from both middle ears. The history given was that the child had from birth been very fragile, and at one time appeared to be rapidly emaciating. When 2 months old both ears commenced discharging simultaneously, and had discharged constantly until the time of admission to hospital. Upon examination the child was found to be pale and emaciated. Both ears were discharging freely. Upon the right side a subperiosteal mastoid abscess was found, and upon the left the tissues over the mastoid process appeared quite normal. The glands below both ears were found enlarged.

The family history was negative. Father alive; healthy; addicted to drink. Mother alive and healthy. No other children. Grandfather died of consumption.

Under chloroform the fistula leading into the right mastoid process was enlarged and purulent *débris* and caseous material scraped out. A week later the left mastoid process was operated upon. The surface of the bone was dark coloured and sloughy in appearance. The bone itself was very soft and friable, and when opened the process was found to contain cheesy *débris*. Inoculation made from both mastoids produced typical tuberculosis in two guinea-pigs.

The child never appeared to make any progress after the operation. Severe diarrhœa set in, which no treatment appeared in any way to influence. Symptoms indicative of tuberculous meningitis set in suddenly, and the child died thirteen days after the operation had been performed. No *post mortem* examination could be obtained.

X.—S. R., female, aged 19 years, had suffered from left-sided purulent middle-ear disease for many years. Examination showed that the left membrana tympani was almost completely destroyed, and bare bone was felt with the probe upon the posterior and superior walls of the middle ear. As ordinary methods of local treatment had been tried without avail, it was decided to perform a mastoid operation according to Stacke's method. This was accordingly done, and a scraping of bone was removed and used for inoculation purposes. The guinea-pig showed no signs of developing tuberculosis, and when killed six weeks afterwards, no enlarged glands and no deposits of tubercle in the liver or spleen could be detected. A slight inflammatory thickening round the site of the inoculation was found.

In the treatment of these tuberculous lesions where considerable destruction of bone has taken place, it is advisable to open the mastoid process at as early a date as possible, to scrape away all softened and caseous *débris*, to make free communication with the cavity of the middle ear and external auditory meatus, and to keep the parts well packed so that the process of granulation may proceed *ab imo*. Free dusting with iodoform powder has seemed to be beneficial. At times, when the granulating surfaces have shown a tendency to become sluggish, swabbing with chloride of zinc (gr. xv to ℥j) has materially expedited matters. Great attention must also be paid to the state of the general health of the patient. Tonics such as syr. ferr. iodidi, syr. iodidi, cod liver oil, etc., should be freely administered, while at the same time plenty of good milk and farinaceous food should be given. When circumstances admit, residence at the seaside or in good bracing country air should be ordered.

THE TREATMENT OF INTRACTABLE SUPPURATION OF THE MIDDLE EAR BY OPERATION THROUGH THE MASTOID,

BASED UPON EIGHT SUCCESSFUL CASES.[1]

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The present paper is based upon eight cases of chronic purulent inflammation of the middle ear, which, after the employment of all the ordinary methods of treatment through the external auditory canal and Eustachian tube, continued for months, and even years, were successfully operated upon through the mastoid. Four of these cases were operated on by Dr. Macewen and four by myself. Two were in the right ear and six in the left. Instead of describing these cases in all their clinical details, I prefer simply to place before you the salient points from which you may be able to judge of their significance:

1. In these eight cases the purulent mischief had been of very long duration. The duration of the shortest was three years, the others extended from fourteen to twenty-two years.

2. In every one, treatment through the external meatus and Eustachian tube had been previously carried out, in no case for less than a year, and in some for as long as seven years.

3. In none of the cases did the secretion before operation ever lose the odour of decomposition.

4. In every case the seat of the purulent formation was without doubt chiefly in the attic or attic and antrum, either with perforation in Shrapnell's membrane, or other clear evidence that the essential mischief was in these regions.

5. In no case were there any objective signs of mastoid complication.

6. In all the attic syringe had been employed, and in three cases the malleus had been removed in order to allow of more efficient treatment of the attic.

[1] Read in the Section of Otology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

7. In regard to age and sex, the youngest was 14 years and the oldest 32 years; six were males and two females.

Method of Operating.

The operation in each case was performed with the globular dental burr, supplemented by a gouge, as first suggested by Dr. Macewen. In regard to this method of operation, it is very important to employ burrs which are very hard and sharp, and those made at Philadelphia were found to be much the best. A dental engine of considerable power, either worked with the hand or foot, is required. The hand piece is held like a pen, and the lateral part of the burr is applied to the bone, which, as the burr rapidly rotates, is raised in flakes. To prevent excessive heat developing, as well as to allow of inspection of the parts, the burr should be momentarily removed every few seconds. It is possible with the instrument to avoid wounding any structure in however close proximity it may be. As Dr. Macewen observes, dark apertures, or a membrane such as a pyogenic membrane, or the sigmoid sinus or dura mater, are readily seen on the white polished surface made with the burr. By this mode of operating, even although there may be an abnormality in the relative positions of the interior of the cranium to the outer parts, the dura mater or lateral sinus need not be injured, although exposed. In one of these cases I encountered the sigmoid sinus, but this did not stop or interfere with the progress of the operation. In another the dura mater on the floor of the middle fossa was exposed without the least untoward result. In most cases the cortical substance was found to be very thick and hard, the cells being partially sclerosed, and converted into an ivory-like substance, the penetration of which was very difficult, and occupied considerable time. In some cases the operation was expedited by the use of a sharp gouge, if the bone were not too hard. The antrum was sometimes found surprisingly high up, even above the level of the linea temporalis, and deeply situated. In one case it was extremely small. The walls of the antrum were generally very hard, so that the strongest gouge produced little impression upon them, although the burr could always rub them down. When the antrum was freely opened, and all the morbid material removed or scooped out, the antro-tympanic passage under the roof of the middle ear was exposed by the cautious working of a small burr, so as to enable us to clear out from this space with small scoops and forceps not only the inflammatory products found therein, but also the malleus and incus, if these were found. When the tympanic cavity was situated far forward, it was not an easy matter to reach and explore it; it was then necessary to remove the postero-superior wall of the canal, or at least a portion of it (modified Stacke's operation). While working in this deep region, a reflector on the forehead was essential, with good artificial or natural light. The corresponding side of the face was carefully watched, so as to detect the slightest twitch which might indicate dangerous proximity to the facial nerve; but by keeping well up and avoiding the inner wall of the antro-tympanic passage, this nerve was in no case in the least degree injured.

After treatment.

After the thorough removal, by means of syringing with antiseptics, of all disease products as well as the pulverised bone, the dry treatment was in the first place adopted. The spaces were filled with powder of iodoform and boracic acid (one of the former to four of the latter) and stuffed with gauze. A wood-wool pad, with an aperture for the auricle was placed over mastoid and side of head, and a bandage over all. In the absence of moisture through the dressings the parts remained undisturbed for a week, and sometimes for a fortnight, when, if moisture appeared, the powder and stuffing were removed, with or without syringing the cavities. Dr. Macewen preferred the dry treatment, but I found that unless the secreting process ceased entirely and early, the continuance of the dry treatment with infrequent dressing was not satisfactory. No doubt, if it were always possible to remove every trace of disease the dry treatment would be the ideal one, but with the conditions existing in the temporal bone in such cases this is not always possible. I have found, therefore, after the first two or three dressings that careful and regular antiseptic cleansing has been required for weeks and even months. A watery solution of carbolic acid or boracic acid was injected once or twice a day through the opening in the mastoid into the external auditory canal, and *vice versâ*. A spirituous solution of carbolic acid or boracic acid poured in or injected after the syringing appeared to be sometimes beneficial. In some, after the use of this for a time, one insufflation of finely-powdered boracic acid blown into the canal and into the artificial opening seemed to bring the secreting process to an end. I had in some cases to discontinue iodoform owing to its producing severe eczematous inflammation in the neighbourhood of the wounds. The cavities were always stuffed with gauze and in the mastoid opening granulation tissue had in my cases to be scraped away with the sharp spoon or touched with chromic acid.

Results.

Of these eight cases, the first was operated upon on June 19th, 1893, the last on December 17th, 1894. In six cases the operation achieved ultimately the desired effect of bringing the discharge to an end, and in no case has there been up till now any recurrence of the discharge. In the other two there is scarcely a trace of secretion, only requiring syringing once a fortnight. The longest period which has elapsed since the establishment of the non-secreting condition has been fifteen months, and the shortest three months. From the operation to the entire cessation of discharge the time varied in the different cases from two months to eighteen months. In three cases very little discharge appeared at any time after the operation, and certainly within three months there was no indication whatever of a purulent process. In one case the dry condition was brought about six months after the operation, and in two cases the secretion had not entirely ceased until eighteen months had elapsed. Of the two still showing a very faint trace of odourless secretion, six months have elapsed since the operation in one and a year in the other. I think that, with larger experience of this operation, the time between the operation and the cure of the discharge will become much shorter. In one case two operations were performed: the first on February 26th, 1894, and the second in October, 1894. In the first the antrum was opened and a portion of the inner end of the canal was removed, while in the second operation the whole of the postero-superior wall of the canal was taken away with the outer walls of the antrum and attic ("Kuster's operation").

With respect to the artificial opening, it was found in certain cases difficult to maintain it for a sufficient length of time, owing to its tendency to contract in spite of thorough stuffing with gauze. I found, however, that while premature closure should be avoided, it was on the other hand not desirable in all cases to insist upon the maintenance of the opening till the discharge ceased. In 2 cases I found that only after the healing of the mastoid wound did the secreting process in the ear entirely cease. In other cases the opening readily remained as a tunnel-shaped passage leading into the antrum and attic becoming partially lined with epidermis, and non-secreting. In 4 cases out of the 8 the opening still remains. In one the canal leading to the attic still exists, a year and a-half after the operation. It is quite dry, partly lined with epidermis, and is kept occupied with gauze. In other 2 the opening behind has not yet, six and eight months respectively after the operation, been allowed to close, although quite superficial and perfectly dry. In the fourth, in which the whole postero-superior wall of the canal and the outer wall of the antrum and attic were removed, the external opening corresponds with the bony meatus, and leads into a cavity which has considerably contracted; it is perfectly dry and occupied by gauze.

In regard to the fate of the ossicles, the malleus was removed in 3 cases previous to the operation, and in 2 of these the incus was found between the attic and antrum, and removed. In 3 others the incus was removed at the operation, diminished in size by caries. In 1 case neither ossicle was found.

With regard to the effect on the hearing power. In 1 case the hearing was notably improved; in 3 cases it was slightly improved; in 2 it was unaltered; in 2 the deafness was increased after the operation.

In concluding, I would emphasise the fact that these 8 cases were not selected from a large series of cases because

of their success. They include without exception all the patients under my care who have been operated upon in this way since June 23rd, 1893. The results must be regarded as very encouraging, as in every instance the goal aimed at was attained—namely, the removal of a purulent process in the middle ear and temporal bone, which had for years baffled all other methods of treatment carried out personally by well-known specialists.

Dr. MILLIGAN (Manchester) agreed with Dr. Barr as to the advantage of the burr in the mastoid operation. In the treatment of those cases which depend upon suppurative disease of the tympanic attic he thought that the line of procedure to be adopted should depend upon the exact etiological factors which produce the suppuration. He had found distinct advantage in retaining a permanent mastoid fistula, not only on account of the ease with which the parts might be inspected, but also because he had found in several cases an improvement in the hearing.

A DISCUSSION ON CEREBRAL COMPLICATIONS IN RELATION TO MIDDLE-EAR DISEASE.[1]

INTRODUCED BY WILLIAM MACEWEN, M.D., F.R.S.,
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IN a Section of the British Medical Association so largely consisting of specialists, it is with diffidence that a surgeon, not only addresses them, but ventures to open a discussion. The cordial invitation, however, of the Council of the Otological Section, so courteously conveyed by your President, Sir William Dalby, caused me to dismiss the hesitancy, and I accede with pleasure to their request to open a discussion on cerebral complications arising from ear disease.

It is evident that the time at our disposal is insufficient to enable us to review even the pathology of the various forms of intracranial complications arising from middle-ear disease. It is necessary, therefore, to select a few points for discussion, without wishing to restrict others who may deem it advisable to introduce subjects which they consider of equal importance.

An opportunity has been afforded me so recently of expressing my views on abscess of the brain, meningitis, and sigmoid sinus thrombosis—the three main forms of pyogenic intracranial invasion arising from otitis media purulenta, that the Section will kindly take as read the observations which I might otherwise have found necessary to have placed before them to-day upon these subjects.

I will therefore direct your attention to three points. First, to a fallacy in differential localising diagnosis; secondly, to tubercle of the middle ear; and, thirdly, to a few points on bacteriology in aural surgery, especially regarding prophylaxis.

A FALLACY IN DIFFERENTIAL LOCALISING DIAGNOSIS.

When in a case of intracranial abscess a difficulty exists in localising the lesion to the cerebrum or cerebellum, it has been averred that the point can easily be decided by testing the function of the nerves to transmission of sound by bone conduction. It is alleged that if bone conduction be still intact the abscess is in the cerebrum, but if bone conduction be absent then the abscess is cerebellar. This statement is evidently based upon *a priori* reasoning, and it is founded upon at least two fallacies.

First, it is assumed that the path by which pyogenic organisms reach the cerebellum and there produce abscess is by way of the internal ear; and, secondly, it takes for granted that a pyogenic infective process spreading along the auditory nerve and its coverings would abolish the possibility of bone conduction. Facts are, however, decidedly against this hypothesis, and do not bear out the assumptions upon which it is founded. First, cerebellar abscess arises, as a rule, from pyogenic extension from the sigmoid sinus, and not by way of the internal ear, so that the seventh and eighth nerves in the internal ear remain unaffected and capable of performing their function, and if the mechanism of hearing remains intact the auditory will transmit sounds aërial as well as by bone conduction, notwithstanding the presence of cerebellar abscess.

Secondly, even when the internal ear is the path by which pyogenic intracranial invasion takes place, bone conduction may remain intact. A case illustrating this occurred recently, and came under my care, suffering from purulent leptomeningitis, originating in otitis media purulenta. The patient, whose aërial conduction on the affected side was almost absent, yet retained the function of bone conduction, which seemed almost more acute on the affected ear than on its fellow on the opposite side. At the *post-mortem* examination there was extensive purulent lepto-meningitis, chiefly marked in the posterior fossa surrounding the right internal auditory meatus. A marked contrast was presented between the appearances of the seventh and eighth nerves on the right side (the affected side) and the corresponding nerves on the left; while the latter occupied about one-half of the lumen of the internal auditory meatus; the nerves and their pial coverings on the right side were so swollen that they occupied the whole canal, and were even compressed by the enclosing bone, as the portions of the united nerves, previous to entering into the canal, were more swollen than those inside of the canal. A semi-purulent exudation lined the pial sheaths throughout the course of the internal auditory canal, and was seen to pass outward to the cribriform plate on the one hand and into the internal orifice of the aqueductus Fallopii on the other. The pial sheaths of the lesser petrosal nerves were likewise inflamed, though to a less extent. Yet, while this patient lived she still retained the perception of bone conduction equally on both sides. A still further fact against this theory appeared in a case previously published by me,[2] in which "the hearing was absolutely abolished by aërial and bone conduction, yet there was no abscess in the cerebellum, and there was a superficial one in the cerebrum." Probably in the latter case the abolition of the function of the auditory nerve might have been due to previous chronic processes.

It may therefore be concluded that neither in its presence nor in its absence is bone conduction a reliable sign of localisation between cerebral and cerebellar abscess.

Tubercle of the middle ear in its relation to intracranial lesions has not yet received the attention which it deserves. It is one of the less obtrusive forms of middle-ear disease, spreading slowly, occasioning little pain or uneasiness, and being often accompanied by very slight mucoid discharge. In some cases, also, the disease reaches an advanced stage without occasioning perforation of the membrana tympani, yet its extension to the membranes, especially in children, whose sutures are still open, is always liable to occur. Two such cases have been under my observation. Both died from tuberculous meningitis, and *post-mortem* examination showed that the invasion of the inner membranes was clearly traceable to the tuberculous focus in the middle ear. The invasion was by direct extension through the ununited petro squamosal suture to the membranes of the middle fossa of the skull. When the inner ear is involved, no doubt the tuberculous invasion proceeds by the pial coverings of the seventh and eighth nerves in the internal auditory canal. The grosser forms of tuberculous otitis media are familiar to every aurist, but they are not so apt to be followed by intracranial tuberculous complications, as in the advanced stages of tuberculous destruction of the middle ear, pyogenic processes are apt to be superimposed, and when this does occur the latter assumes the *rôle* (to borrow a current phrase) of the "dominant partner." Here, as elsewhere in the body, tuberculous products form excellent cultivation media for pyogenic cocci, which, when they are implanted on them, become vigorous, proliferate rapidly, and disseminate themselves into all the osseous erosions and softened membranes which the tubercle bacilli have been so insidiously and slowly accomplishing. If a breach, however small, can be found in the protective wall of granulation tissue surrounding the softened cerebral membranes, the pyogenic organisms will invade the intracranial cavity. It reminds one of the words which Shakespeare puts into the mouth of Richard II:

[1] In the Section of Otology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

[2] *Pyogenic Diseases of the Brain and Spinal Cord*, p. 285.

> For within the hollow crown
> That rounds the mortal temple of a king
> Keeps Death his court; and there the antic sits.....
> Allowing him a breath, a little scene,
> ..... and, humour'd thus,
> Comes at the last, and with a little pin
> Bores through his castle-wall, and—farewell, king!

Thus, in at least two ways, tubercle of the middle ear merits our attention in relation to intracranial complications, first, by the fact that tuberculous invasions of the membranes of the brain may occur from the foci in the internal or middle ear; and secondly, tubercle of the middle ear, by its slow disintegrating process, lays bare the intracranial contents, and exposes them to attacks of pyogenic cocci whose potency has been increased by the pabulum which the liquefaction of the tuberculous products afford.

Besides invading the cranial contents, tubercle originating in the middle ear and mastoid antrum and cells may enter the circulation, and when it does it occasionally induces miliary tuberculosis of the lungs or other organ. The possibility of doing so may be judged by the fact that the tuberculous invasion readily passes backward to the sigmoid sinus or inwards to the recesses of the petrous bone, and even occasionally penetrates the jugular fossa. Then, by the softening of the walls of the smaller, and sometimes also of the larger, vessels, the ensuing tuberculous infiltration finds its way into the blood stream. Tubercle surrounding the sigmoid sinus is in my experience of frequent occurrence, and in the *post mortem* examination of a patient who died from miliary tuberculosis of the lungs, the sigmoid sinus was imbedded in tuberculous granulations, and its anterior wall was softened and infiltrated with tuberculous foci, one of them caseating.

Those invasions of other parts of the body are secondary to the primary focus in the ear, and if tubercle of the mastoid antrum and cells is to be treated, it must be on the same footing as one deals with a localised tuberculous lesion elsewhere. Except by way of improving the hearing in such cases little good would be done by removing a small portion of granulation tissue from the middle ear. The mastoid process must be freely opened, and the whole of the recesses of the temporal bone exposed, and tubercle fully eradicated.

In contemplating the small area occupied by the middle ear and its annexes, one cannot avoid being struck by the potency of the forces which may be generated within, and which, under suitable conditions, may not only invade the intracranial contents, but within a few days may destroy the function of the whole cerebro-spinal system, or, entering the circulation, induce general toxæmia, pulmonary infarctious or infective gangrenous pneumonia. The middle ear, and especially the mastoid antrum and cells, while in a state of suppuration, acts as an incubating chamber beautifully arranged for bacteriological work such as the cultivation of the various pyogenic cocci. In it the organisms are supplied with moisture, kept in darkness, afforded abundant pabulum, and are maintained under carefully regulated thermic conditions. The access to some of these chambers is difficult by way of the external auditory meatus, while injections by that route will hardly reach them, and may even do harm by disseminating the elements which one wishes to remove. Some of these cells are filled with cholesteatomatous material, in which cocci are protected and preserved quite proof against the small quantities of antiseptic fluids which may reach it, as these merely play over the surface of the unctuous material without affecting the organisms within.

Besides the organisms contained in this store of solid culture medium others may introduce themselves, or, more probably, be introduced from without. One knows the ease by which organisms may be transferred from one liquid medium to another by merely allowing the point of a slender platinum wire to come in contact for a minute portion of a second with an affected liquid, and then transferring the wire to a sterile medium. So, if it were possible at the present day to find a surgeon who was not scrupulously careful about his examination probe or other instrument, one might expect that the hastily but imperfectly cleansed instrument might convey fresh infection from one diseased ear to another. The probe in this case would be like the bee passing from flower to flower, while its limbs coming accidentally into contact with pollen of one flower, conveys it to and deposits it upon others. The probe and the bee's limbs are accidental fertilising agents; but while the latter is a beneficent provision for the fertilisation and the possible evolution of varieties in plant form, the action of the former, whatever happiness it may afford the cocci, is apt to destroy the host in which they flourish.

Auto Inoculation.

Besides these sources of infection one can reinfect the tissues of the middle ear by performing in the midst of swarms of pyogenic organisms operations involving a breach of surface in the layer of protective granulations, and thus expose fresh surfaces to the action of pyogenic cocci. Serious intracranial invasion has followed such septic operations. I hope, Sir, I have demonstrated that one who treats ear disease can no longer be looked upon as one whose whole duty is confined to the function of hearing. He has to act upon that small area of the temporal bone so as to prevent destruction of the whole organism. Every aurist therefore must be a bacteriologist, and his operations are each of them, whether he wills it or no, bacteriological experiments.

I will conclude with the following propositions: (*a*) Infectious diseases extending to the brain and its membranes, or to the organs of the body from the middle ear and its annexes, are preventable. (*b*) When once these diseases are established in the middle ear, it is necessary to adopt means which will ensure their thorough eradication, and this must be regarded as a prophylactic measure against cerebral invasion. (*c*) When these diseases have once penetrated into the brain, not only does one require to remove the focus in the brain and that in the ear, but likewise the path between the two, by which infection has travelled.

Dr. Luc (Paris) said: I think the relation of the following case which recently came under my care is likely to prove interesting after Dr. Macewen's communication, as it confirms many of the views expressed in his excellent book with regard to the mode of infection of the cerebellum in the course of chronic suppurations of the ear, and to the possibility of recognising the formation of pus in the cerebellar substance, and treating it surgically. The patient, a mechanic, about 30 years of age, came to consult me at the end of last April, complaining of a scanty discharge from the right ear, and of a dull pain which he localised in the right half of the skull, and especially in the occipital region. The external meatus was so narrow that an otoscopic examination could not possibly give the slightest hint with regard to the condition of the tympanic membrane and of the ossicles, but making use of a Hartmann's cannula, which was pushed deeply through the canal and directed upwards and backwards, I succeeded, by injecting a boric solution through it, in expelling numberless caseous and cholesteatomatous offensive fragments. This induced me to suspect the presence of a considerable mass of the same substance impacted in the cavities of the middle ear, and I proceeded on the following day to the opening of the latter, following exactly Zaufal's method. I found the mastoid antrum transformed into a large cavity extending downwards to the insertion of the sterno-mastoid muscle, and backwards to the lateral sinus, which was exposed to the length of more than 1 centimetre. The ossicles and the oblique part of the upper wall of the auditory canal were completely destroyed. A bony projection of the superior wall of the antrum prevented me from seeing a large perforation of the tegmen, which an exploration by means of a fine probe had enabled me to suspect before the operation. My opening into the bone was a very large one, as you can easily judge from the petrous bone presented to you. I further dissected two cutaneous flaps, which were applied to the edge of the opening in the bone, with a view of creating a permanent fistula behind the ear. As I had detected no extradural abscess, and as the symptoms presented by the patient were not such as to suggest the presence of any intracranial complication, I considered my operation a sufficient one. The wound was dressed with iodoform gauze, and as there was neither fever nor headache, the dressing was only renewed after a lapse of a week. The patient then declared himself ready to resume his work. He came two days later in order to have his dressing changed, but after the lapse of two

days, I heard he was complaining of giddiness and vomiting, and could hardly stand. I found him without fever but still suffering from the above-mentioned symptoms, there being only slight headache. I referred his vertigo and vomiting to an auricular origin, having previously had several opportunities of observing similar symptoms after aural operations. He was admitted into hospital, and two days later, on May 16th, I found him without fever, and with a marked relief of his painful symptoms. I had every hope of a satisfactory result, but four days later, on May 20th, I was informed by my colleague that the patient had died on the night of the 18th. On the morning of the same day he had complained of a severe pain in the right occipital region, and had died after a very short coma without presenting the least thermic elevation. Before making the *post-mortem* examination I stated that, in view of the conditions observed during the operation on the mastoid, the patient had most probably died from an abscess in the right cerebellar region. The necropsy gave the following results: (1) A large perforation of the tegmen tympani; (2) a large perforation of the posterior wall of the antrum in front and internal to the lateral sinus; (3) no thrombosis of the lateral sinus, no extradural abscess; (4) no lesions of the temporo-sphenoidal lobe; (5) right hemisphere of the cerebellum occupied in its anterior third by a very fœtid abscess, the middle third filled with green offensive pus, and only apparently normal in its posterior third. Although the presence of a double bony perforation in the case, the one on the tegmen pointing to an abscess in the temporo-sphenoidal lobe, the other close to the lateral sinus, suggesting a cerebellar abscess, might render a diagnosis for a moment doubtful, every symptom noted pointed so unmistakably to the latter, that had I been called in time to express an opinion with regard to a surgical intervention, I should not have hesitated to state my conviction that an abscess existed in the cerebellum. I am indebted to Dr. Bodin for the following bacteriological examination of the pus collected from the cerebellar abscess forty-eight hours after death. First, the microscopic examination showed a few chains of streptococci, cocci, and ordinary bacteria. Secondly, the bacteriological examination by means of cultures gave the following results: (*a*) Colonies of typical pneumococci (Talamon-Fraenkel) in great number; (*b*) a few scanty colonies of streptococci; (*c*) numerous colonies of ordinary bacteria of putrefaction.

Mr. Marmaduke Sheild referred to the protective influence of granulations, and the danger of lacerating them whilst the middle ear was swarming with organisms. Sir William Savory had pointed out the protective influence of healthy granulation against pyæmia. He (Mr. Sheild) questioned the statement that all these cases were tuberculous, and asked Professor Macewen what test he would regard as a proof of tubercle. So far as his own experience of extensive operations of the mastoid were concerned, they were disappointing in bringing about a perfect cure, although the patients were greatly improved. It was a general principle in surgery that in operations upon carious bone, if a small focus of disease was left, suppurative processes were perpetuated; and in disease of the middle ear, caries was apt to occur about the base of the petrous bone, which was not removable, as well as in the mastoid. He concluded by asking Professor Macewen as to his treatment of the general purulent meningitis, in association with middle-ear disease; such cases were peculiarly fatal, and he (Mr. Sheild) had hitherto been very unsuccessful in dealing with them.

Dr. Milligan (Manchester) remarked that he had derived very great pleasure and profit from the paper which had just been read by Professor Macewen. With regard to the question of the value of the tuning fork as a means of differential diagnosis between cerebral and cerebellar abscess, he had not found it of any particular value. In a case of cerebellar abscess which he had recently seen, bone conduction was found to be remarkably good. He considered that tuberculous disease of the middle ear was a much more frequent condition than was usually supposed to be the case. He could not say that he had found any one symptom which might be regarded as pathognomonic of tuberculous middle-ear disease. He looked upon the painless asthenic onset of a purulent discharge from the middle ear, especially when accompanied by early involvement of the auricular glands and of facial paralysis, as highly suggestive of a tuberculous disease. In such cases he advised the employment of subcutaneous inoculation experiments as the only means of discovering the real nature of the process. He advised also very free removal of the bone and thorough packing of the cavity with pure iodoform powder. The utmost care should be taken to eradicate all tuberculous foci, as cases by no means infrequently occur where general tuberculosis is set up as the result of the presence of a tuberculous mastoiditis. In the treatment of all suppurative conditions of the middle ear, especially where granulations exist, he advocated the most rigid antiseptic treatment. Before the removal of granulations he specially insisted upon a preliminary course of treatment with antiseptics. He looked forward to the time when intracranial complications would become less frequent in consequence of earlier and more scientific treatment of purulent processes within the middle ear.

Dr. P. McBride (Edinburgh) begged to join in the general chorus of approbation which had greeted Professor Macewen's valuable contribution. With regard to the value of the tuning-fork test he was not aware of any very dogmatic statements on the matter in literature. In a paper published some years ago by the speaker, in conjunction with Mr. Miller, the suggestion was thrown out, but in the original work it was not insisted upon as by any means pathognomonic, although by some authors the paper has been quoted in this sense. If it be really so dangerous to wound granulations, the logical outcome would be that the aurist ought to give up the common and beneficial operation of removing the so called aural polypus. Are we to give up this operation which, through many years, has proved itself both useful and beneficial? If the speaker understood Professor Macewen correctly, and if he had not misinterpreted his great work, he advocated operating upon all obstinate cases of middle-ear suppuration through the mastoid. Dr. McBride's own experience with regard both to cases in which he himself had operated, and those which he had seen treated by surgeons, might be shortly stated as follows: (1) In recent cases a rapid and permanent cure often results. (2) In old-standing cases, although an absolute cure occasionally results, more frequently only more or less temporary benefit ensues. The discharge may be reduced to a minimum or even disappear for a time, but very often it gradually returns; therefore Dr. McBride believed that one was not justified at present in holding out definite hopes of cure in this class of cases, and therefore he hesitated to recommend operative interference unless symptoms other than discharge are present as well.

Professor Urban Pritchard said that at a meeting of the British Medical Association at Leeds, Professor Macewen gave otologists a kindly scolding for not more emphatically insisting on all patients with otorrhœa being thoroughly treated. He had transferred this scolding from himself to his patients with very good results; that is to say, on first seeing such a patient he gave him a good-tempered scolding; this made him carry out the directions much more faithfully, and hence with better results. Following up the remarks on antisepsis, Dr. Pritchard said he wanted to insist upon the dangerous practice of syringing with plain warm water in otorrhœa. In removing granulations from the middle ear, he always syringed previously with carbolic solution, 1 in 40, then removed antiseptically, and finally treated by again syringing with 1 in 40, and packing with double cyanide gauze. The gauze is changed once a day for four or five days, without syringing. This yielded excellent results, and reduced the danger of the infection of the deeper parts to a minimum. In cases of operating for intracranial disease, he (Dr. Pritchard) would like to express his opinion that the antrum and mastoid process should never be neglected; in fact, he considered we should begin by opening these cavities first.

Dr. Dundas Grant, as a careful student of Professor Macewen's classical work, had endeavoured to make use of the burr but had failed to make any impression with the instrument at his disposal, and had been obliged to resort to gouge and mallet. He determined to procure such burrs as Professor Macewen recommended. The description of Dr. Luc's case was identical with that of one under Dr. Grant's care. The

symptoms suggested an intracranial abscess and the situation of the carious disease pointed to the temporo-sphenoidal lobe as the probable site. The mastoid was then opened, the carious opening in the tegmen enlarged outwards, and some extradural pus removed. Exploration of the temporo-sphenoidal lobe revealed no pus but a large quantity of ventricular fluid escaped and the patient became much less drowsy. Next day he seemed so much better that operation on the cerebellum was considered uncalled for. A few hours later Dr. Grant again visited him with a view to the consideration of the necessity for operation, but was met with the report that the patient had a few minutes before been attacked with difficulty in breathing and had suddenly died. On *post-mortem* examination there was found an abscess in the corresponding lobe of the cerebellum in contact with a minute carious perforation in the posterior surface of the petrous bone, internal to the sigmoid sinus, whereas the very large carious aperture in the tegmen communicated with no disease of the temporo-sphenoidal lobe. He therefore insisted on the danger of delay in operating on suspected cerebellar abscess, and quoted the experience of neurologists that death in cases of cerebellar disease of any kind was very frequently sudden. In cases of chronic suppuration—apart from severe attacks of pain—even when not yielding to other methods of treatment, extraordinarily favourable effects were obtained by an energetic use of the alcohol treatment, a method combining bactericidal and dehydrating effects.

Mr. Robert H. Woods (Dublin) thought an aurist should not merely content himself with the examination and medical treatment of ear diseases, but should be capable of carrying out surgical procedures where indicated, even to the extent of treating intracranial complications. He then showed specimens from two patients on whom he had operated for intracranial abscess. The first case, one of cerebellar abscess, occurred in a girl aged 20, who while suffering from chronic purulent otitis media developed symptoms of right lateral sinus thrombosis. The mastoid process was opened, the middle ear cleared out, the thrombosed lateral sinus laid bare, and a cerebellar abscess evacuated. The internal jugular vein was ligatured in the neck, and the clot removed. She rallied for some days, but finally died of asthenia twelve days after operation. The second specimen was taken from a man aged 33, who had been sent into hospital as a case of fever, and who had symptoms of extradural abscess. He was operated on, and a large extra- and intradural abscess in the middle cranial fossa evacuated, the dura mater having been eroded to the size of a florin. A temporo-sphenoidal abscess was also opened and drained. He never rallied, and died seven days after operation, when it was found that in addition to the conditions diagnosed during life he had diffuse purulent leptomeningitis, and that the ventricles were filled with pus.

Dr. Thomas Barr (Glasgow) referred to the importance of the middle ear as a source of tubercle, which he pointed out for the first time at the Otological Congress in London, 1881. The subsequent history of events has confirmed the opinion expressed at that time. In regard to granulation tissue and polypi, Dr. Barr had been in the habit of using antiseptic remedies before the instrumental treatment of the growth. This is a precaution of great importance, and likely to avert serious intracranial complications, which have probably at times followed their removal. The treatment of purulent disease of the middle ear by operation on the mastoid, which has resisted all other methods, had been found, in his experience, very satisfactory. Of eight cases operated on, six proved perfectly successful, and the other two showed only the slightest trace of secretion. The use of the dental burr is of the greatest value in securing success, but it is essential that the burr should be good.

Mr. James Black referred to the use of alcoholic instillation as a subsequent treatment to the removal of granulations, and as a means of attaining a partial asepsis.

Mr. Ballance pointed out the importance of an early diagnosis of tubercle in aural disease, and the necessity of keeping up thorough and prolonged drainage through the mastoid.

Dr. Robertson agreed as to the great importance of free drainage and asepsis. He advocated the use of a lead stylet to be worn constantly in the mastoid wound; he had also found the dry treatment, with or without iodoform, more satisfactory than syringing with antiseptic lotions, provided all the necrotic tissue had been removed.

The President (Sir William Dalby) drew attention to the great value of clinical observation in separating cases of general meningitis from cerebral abscess. The defensive operation of opening the mastoid cells, making a free drainage through the tympanic cavity, and removing whatever bone was carious should be employed under the several conditions which were discussed. These included imperfect exit for pus from tympanic cavity due to bone granulation, polypus, exostosis, or hyperostosis. Especially if there were head pain or giddiness this surgical proceeding became imperative.

Professor Macewen, in reply to some of the points raised during the discussion, said that the symptoms of cerebellar abscess would depend upon the level of the pressure. It was the duty of the surgeon to operate even if the case were apparently hopeless, as he himself had seen some cases recover which had appeared very unfavourable. It was useless to attempt to eradicate tubercle by means of the syringe; if the disease was confined to the middle ear and mastoid the case could be cured by operating, but if the internal ear or the petrous portion of the bone were affected, it would be impossible to cure it. It must be recognised that suppuration would continue; it was therefore important to keep open the surface drainage. He considered that there was a certain amount of danger in syringing out cavities; he preferred if possible to keep them dry. Disease of the middle ear should be treated on ordinary surgical lines, all foci being carefully removed, and care being taken to have perfect antisepsis. He believed that the burr was much more effectual than the mallet and chisel for mastoid operation.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

UNIFORM INCOMPLETE INFLATION OF BOTH LUNGS.

On October 17th I was called upon by the coroner for this district to make a *post-mortem* examination of the body of a child, aged 3 days, who had died suddenly. The body proved to be that of a female child, plump, and weighing, I should think, about 10 lbs. The face was decidedly cyanosed, the body not markedly so. The umbilical cord was dried up, but had not begun to separate.

On opening the head I found the larger veins of the meninges engorged with blood, but there was no network of small vessels and capillaries as seen in congestion. The brain and appendages were otherwise normal.

On opening the chest it was seen that the lungs were not fully inflated, the edges only being in view, and the anterior portion of the chest cavity between the vertical nipple lines was occupied by the thymus gland and pericardium only. The lungs were dark red in colour throughout, and very much like liver in consistence and appearance. No crepitation could be elicited anywhere. They were, I should judge, of about one-third the natural bulk, and very nearly of the same specific gravity as water, barely floating; all portions of the lungs behaved in the same way. Both main bronchi contained much frothy mucus. The respiratory passages were otherwise normal.

The greater veins on the surface of the heart were engorged and prominent like the meningeal veins. There were no subpericardial petechiæ. The right side of the heart was full of abnormally fluid blood. The ductus arteriosus was patent and not greatly diminished, and the foramen ovale was almost closed. The valves were in their normal condition, and the heart seemed otherwise healthy. The stomach was distended with mucus, evidently from the respiratory passages, in which a few small white flakes of what might have been milk were seen. The mucous membrane was normal, as were the rest of the viscera.

According to the evidence the child was seen alive with its mother at 10.45 A.M.; at 11 A.M. a neighbour came to see the mother, and chatted with her for twenty minutes, then

looked at the child, and found it lying dead, face downwards, and covered with the bedclothes. The mother was an epileptic, and the neighbour thought that she had had a fit during the time she was left alone.

I gave it as my opinion that, owing to the abnormal condition of the child's lungs, a very short duration of suffocation would be sufficient to kill it, and that death was probably due to its being lain upon or rolling on to its face. The jury returned a verdict of accidental death.

Everyone connected with the child declared that it was most healthy in every way, that it cried lustily, and suckled freely.

I venture to report this case as I deem it not to be without some medico-legal interest.

Rugeley, Staffs. RICHARD FREER, M.A., M.B.Cantab.

TWO CONSECUTIVE ATTACKS OF SCARLET FEVER.

A. T. S., a boy, aged 5 years, was taken ill on May 13th last, and when seen, the day following, presented all the symptoms of scarlet fever. The rash was well marked, the temperature high, and the tonsils swollen and injected. It ran a moderately severe course, and desquamation began about the ninth to the tenth day, and continued till the eighth week.

At the tenth week, having apparently quite recovered—no kidney trouble having supervened, the urine being free from albumen throughout—the patient was allowed out for a short time, and whilst out was overtaken in a shower of rain, and probably took a chill, as he complained the same night of his throat and vomited twice during the night. Next morning both tonsils were found to be much enlarged and congested; the temperature was 104°, and again a punctate scarlet rash appeared on the chest and back, and rapidly spread over the whole body. It was deep red in colour as before and of the boiled lobster type. With this second attack bronchial catarrh and a certain amount of bronchial congestion was present, due, no doubt, to the boy's exposure to the weather. Altogether this second attack was of a more severe character. Desquamation, which was as well marked as before, commenced about the end of the first week and lasted till about the end of the eighth week, that is, to the middle of September, eighteen weeks from the commencement of the first attack.

The case appears to me to be of interest from the somewhat rare occurrence of second attacks of scarlet fever, and in the fact that the rash in the second attack was both present and well marked, and desquamation as perfect and characteristic as in the attack which immediately preceded it. In corroboration of both attacks being genuine scarlatina I may mention that in addition to the other well-marked symptoms present the rash, which lasted three days and no longer, was in each case followed by desquamation of the ordinary furfuraceous kind on the body and the usual large flakes from the extremities.

Aldgate, E.C. G. W. SEQUEIRA, M.R.C.S., etc.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

JONATHAN HUTCHINSON, F.R.S., President, in the Chair.

Tuesday, November 12th, 1895.

ADJOURNED DEBATE ON DR. HEWITT'S AND MR. SHEILD'S PAPER ON POSTURE IN ITS RELATION TO SURGICAL OPERATIONS UNDER ANÆSTHESIA.

DR. SCANES SPICER was specially interested in anæsthetics in connection with operations on the throat and nose; in no class of cases was posture of more importance. In his experience local anæsthesia induced by cocaine was more satisfactory than general anæsthesia, and in throat operations generally the sitting posture was, since it gave a better view, far more useful than the recumbent. The authors stated that nitrous oxide and ether were not dangerous in the sitting posture; he would be glad of further information on this point. Was any special precaution necessary to keep the air passages properly open in the sitting posture? Was there any special way in which the tongue should be manipulated, and how long should anæsthesia be kept up? In children he had never seen bad results from the administration of chloroform for the space of half an hour in the sitting posture. In laryngeal operations he had found Trendelenburg's posture very satisfactory.

DR. SANSOM complimented the authors on their paper, and said that, according to them, though nitrous oxide and ether were permissible, chloroform should never be given in the sitting posture, nor, unless under special circumstances, in the semi-recumbent posture. He did not understand this unless failure of the circulation was feared. He inferred from the context that the authors endorsed the very important observations of Dr. Leonard Hill on the Influence of the Force of Gravity on the Circulation of the Blood.[1] Dr. Hill concluded that chloroform paralysed the splanchnic vasoconstrictors, and thus annulled the compensatory vasomotor mechanism in regard to the intra-abdominal vessels. A direct poisoning of the cardiac muscle might be a concurring cause. Dr. Hill's observations were in complete accord with those of Dr. MacWilliam, and were at variance with the conclusions of the Hyderabad Chloroform Commission. Syncope was a very real danger attending the administration of chloroform. Ever since the introduction of chloroform there had been two modes of thought and two schools of practice. Syme taught that chloroform might be administered with perfect safety provided the administrator observed the respiration of the patient with sufficient care. Lister followed, endorsing this teaching. The Hyderabad Commission confirmed the doctrine, adding that if its rules were followed "chloroform might be given in any case requiring an operation with perfect ease and absolute safety so as to do good without the risk of evil." The doctrine throughout was that precautions as to the proportion of chloroform in the air administered were unnecessary, and that the danger of syncope did not exist; but it was right to state that the Hyderabad Commission insisted that the recumbent position on the back was essential. On the other hand, in the early days of chloroform administration and thenceforward, many observers had held different views. Snow, Anstie, Clover, and Richardson in the past and a number of practical anæsthetists of the present day held that chloroform in itself was an agent which could induce syncope, and that not only must postural and other methods be adopted to avoid the tendency to syncope, but precautions must be taken against the inspiration of a harmful percentage of chloroform vapour during the administration. Physiologists, as MacWilliam, McKendrick, Coats, Newman, and now Leonard Hill, had shown that experimental evidence was in favour of this view. Up to the end of October, 1895, there had been recorded in the medical journals 48 deaths during the administration of anæsthetics—41 in which the agent was chloroform, 3 chloroform and ether, 1 A.C.E. mixture, and 1 nitrous oxide. Of these, 39 deaths occurred before the operation was commenced; 2 just at the commencement, and 7 directly after. Was the teaching of this evidence satisfactory? The rules of the Hyderabad Commission had been widely circulated; it was only reasonable to conclude that the respiration in the cases had been closely watched, and yet a very high mortality was the commentary. In his book on chloroform, published thirty years ago, he had recorded the results of a considerable number of experiments upon animals, which tended to show that in the great majority of instances when death resulted from chloroform administration it was the respiration that ceased first. This had been confirmed by the Hyderabad Commission, and by all subsequent observers. He concluded, however, from practical observations and from an analysis of the signs in fatal cases that in the human subject the most frequent form of death was that from syncope. Notwithstanding all the valuable experimental evidence, he held this view still. He hoped he would not be misunderstood, and be represented as decrying the value of experimental evidence as obtained from the lower animals. The experiments of the Anæsthetic Committees, the Hyderabad Commission, and the private investigators, were of extreme value, as in a question of this sort it was important to obtain by all legitimate means precise data as to the *modus operandi* of anæsthetics

[1] *Journal of Physiology*, vol. xviii, 1895.

upon the lower animals. But the heart and circulation reflexes of man were not in all points as the heart and circulation reflexes of an animal. He did not think that in the fatal cases in man any morbid state of the heart itself had been an appreciably dangerous predisposition. A strong muscular heart was as likely to fail as a weak one, and perhaps the strong was more likely to fail than the weak. Of course the heart should be examined before the administration of an anæsthetic, but he was not aware of any evidence in regard to disease of the valvular apparatus or of the myocardium that would absolutely exclude anæsthesia. Yet the nervous mechanism of the heart might be fatally troubled quite independently of the other physical structures. He had seen a soldier of undoubted courage, who had been in many battles, and who gave evidence of healthy organs, fall in syncope when he was vaccinated; and had recorded cases of typical athletes, who manifested no physical signs whatever of disease of the heart, and yet fell down on several occasions in syncope. He had noted several such examples after convalescence from the acute stage of influenza. All such cases of instability of the nervous mechanism, undetectable by ordinary physical explanation, were probably the most predisposed to chloroform accidents. Dr. Hill said: "The symptoms of syncope were exactly similar to those conditions observed in an animal placed feet downwards with the power of compensation destroyed by the production of vasomotor paralysis." Syncope was very probably the result of a sudden and temporary inhibition of the vasomotor centres, especially those governing the splanchnic area. These considerations pointed to the importance not only of placing the patient on the back with the feet elevated above the head level in cases of ordinary syncope, but also of preserving, when possible, such an attitude during the administration of an anæsthetic, or at once adopting it if there should be signs of circulatory failure. From a review of all the extant evidence, the conclusion was justified that syncope was a very real danger in the course of anæsthesia by chloroform, that such syncope, brought about chiefly by a paralysis of the vasomotor mechanism, though, possibly, by a direct enfeeblement of the ventricles as a concurring cause, was shown to occur in the lower animals, and that in the human subject circulatory failure was predisposed to by emotional and neurotic conditions, which did not occur, or occurred in far less degree, in the lower animals. He considered the postural precautions advised by the authors important, not only for practice but for precept, as they tended to antagonise the, to his mind, pernicious doctrine that there was no danger in the administration of chloroform beyond the preventable danger of embarrassment of respiration.

Mr. W. SPENCER WATSON always used local anæsthetics in throat cases. Chloroform he thought should not be employed. He described a convenient arrangement for keeping patients recumbent before, after, and during operation, which was in use at the Royal Eye Hospital, and which he thought might be adopted for cases with advantage.

Mr. WOODHOUSE BRAINE joined issue with the authors on their statement that it was better for the patient to be anæsthetised on the operating table. He was in favour of inducing narcosis in bed, and then moving the patient on to the table. He did not agree that this plan was more troublesome or likely to provoke sickness; as long as the anæsthetic was carefully looked after there was no likelihood of vomiting. He did not agree with the authors' suggestion as to the arrangement of Clover's crutch. The sitting posture for the removal of adenoids was originally proposed by Sir W. Dalby in 1883, and had been followed with uniform success in many hundreds of cases without any coughing or entrance of blood, etc., into the larynx. He agreed thoroughly with the authors as to the advantages of turning the patient on to one side after the operation, and had himself done so for ten years past.

Sir W. DALBY complimented the authors on the careful and valuable paper they had produced, and ventured to suggest that they should omit some directions about the use of sponging in two of the postures mentioned, since he considered these two postures dangerous, and the authors' implication that with careful sponging the postures might be employed was, he thought, undesirable.

Dr. SEMON thought the discussion had very naturally turned on the production of anæsthesia in throat and nose cases, since it was especially in these operations that respiration became embarrassed. He drew attention to the postures employed in operations on goitre. In hard goitre especially, absorption of the rings of the trachea often occurred; if the head was rotated laterally the trachea being flexible became occluded, and death from suffocation before the operation had been begun had occurred in some cases. He quite agreed with the authors in recommending that anæsthesia should be induced in the position which the patient felt instinctively to be most comfortable, and which was so as giving the best entry of air. In this manner the tendency to reflex spasm was avoided. With regard to adenoids he thought it important not to carry anæsthesia so far as to abolish the laryngeal reflex.

Dr. LEONARD HILL, speaking as a physiologist, would not go so far as to recommend elevation or compression of the abdomen in chloroform shock. The primary cause of chloroform shock was dilatation of the heart—cardiac failure. Respiration continued after the heart had failed; this he had termed "*post-mortem* respiration." Elevation of or pressure on the abdomen would only make matters worse by farther dilating the heart. The only thing to be done was rhythmical compression of the heart, so as to drive blood into the coronary arteries. Failure of the respiration was not serious as long as the heart was acting satisfactorily. Cardiac failure did not occur in ether narcosis. As in man, so in animals, the condition of tone of the vasomotor system varied considerably. Dr. Hill described the changes in the general circulation brought about by variations in the condition of the splanchnic vasomotor system, and drew attention to the fact that mere mechanical pressure on the abdomen raised the blood pressure, and so was useful in cases of ordinary shock, but was not of the slightest good in collapse from chloroform narcosis when the heart was primarily at fault.

Dr. R. BOWLES, in experiments conducted forty years ago at St. George's Hospital, had noticed that when the body was in the prone position, raising the chest gave rise to expiration and not to inspiration. With regard to posture, he did not wish to dogmatise. Numerous physical conditions, such as obesity, length of jaw, etc., modified the conditions of respiration. Pulling on the tip of the tongue did not necessarily affect the position of the back of the tongue, as was often thought. Turning to failure of the heart in chloroform narcosis, was not the explanation that the heart was poisoned by an overdose of chloroform? It would be well to measure accurately the amount of chloroform given, with the view of avoiding this catastrophe. Apoplexy had been thought to be of two kinds—sthenic and asthenic, but he had long been convinced, and had shown, that so-called sthenic apoplexy was only incipient suffocation, and that its symptoms—among which stertor was the chief—all disappeared on turning the patient on his side. He had always maintained that in the Marshall-Hall method the heart was squeezed and the blood forced on.

Mr. G. ROWELL quite agreed with the authors' useful generalisations. He drew attention to the influence gravity exerted in the falling of the base of the tongue backwards when the head was in the mid-dorsal posture. Cyanosis, though more marked in ether narcosis, was of less importance than in chloroform anæsthesia. The extended position of the head in tracheotomy was dangerous, and death not uncommonly occurred before the operation was begun. Two cases were quoted illustrating the danger of cardiac failure in the sitting up posture. He was of opinion that the best practical guide was the respiration, and in support of this quoted the successful results of Surgeon-Colonel Lawrie. Dr. L. Hill's plan of rhythmical compression of the heart was in accordance with his own views, as expressed in the *Guy's Hospital Reports* (Accidents of Anæsthesia), 1892.

Dr. J. F. SILK said the title and the arrangement of the paper under discussion reminded him of one read by the late Dr. C. E. Sheppard on January 8th, 1891, at a meeting of the anæsthetists of Guy's Hospital. This paper had not been published, and though it was possible that it was based on extensive notes, he had not been able to make out that they were in existence. To a certain extent, also, the subject of the paper had been discussed in general works. It was important to distinguish between postures adapted for inducing

and those for maintaining anæsthesia; postures suitable for one were by no means necessarily satisfactory for the other. The difficulty in swallowing in dental cases, when the head was extended, was due rather to the mouth being forcibly kept open than to the extension of the head and neck. He could not agree with the suggestion that in shock from chloroform the abdomen should be bandaged, and was glad that Dr. Hill's physiological results were in accord with his views on this point. He inquired what posture the authors thought best adapted for cerebral operations, for in such cases gravity played an important part in influencing the circulation in the cerebral veins. As to turning the patient on one side after the operation he agreed with the authors, but thought the right side was better than the left. While the authors recommended the lateral posture as being the best for the induction of anæsthesia, he thought the recumbent was better.

Dr. F. HEWITT, in reply, said that Mr. R. Gill had stated that he did not attach much importance to posture. The opinion was at variance with that of most observers, and possibly phenomena ascribed to other causes were due to faulty posture. Mr. Gill's experience in not having seen deaths due to vomited matters entering the larynx was exceptional. In reply to Dr. Spicer, the time during which a patient could be kept under depended on the amount of ether required. Mr. Woodhouse Braine's remarks were valuable in bringing up for reconsideration the question whether the patient should be anæsthetised on the table or on the bed. The stoppage of respiration which sometimes occurred in goitre cases when the head was extended (not rotated) was as yet unexplained. He was sorry Dr. Silk had found it necessary to refer to the late Dr. C. E. Sheppard. The notes of 3,000 cases recorded by his late friend had been carefully gone over and referred to in his (the speaker's) book. At Dr. Hewitt's request, the Honorary Secretary (Dr. Mitchell Bruce) then read a letter from Dr. W. J. Sheppard, of Putney, saying that he had no knowledge of any paper on the subject of posture in relation to anæsthetics among his late brother's effects, except that published in the BRITISH MEDICAL JOURNAL, 1891, vol. ii, p. 68, and that he had recently searched without finding any.

CLINICAL SOCIETY OF LONDON.

THOMAS BUZZARD, M.D., F.R.C.P., President, in the Chair.

Friday, November 8th, 1895.

SUPRAPUBIC PROSTATECTOMY.

MR. MANSELL MOULLIN read notes of two cases, both in men over 60 years of age and heavily built. One had already passed five uric acid calculi spontaneously, the other three. In the former, when the bladder was opened above the pubes, eighteen more calculi were found lying in the post-prostatic pouch, all of them approximately of the same size and shape, and ground into a more or less cubical shape by friction. Each was a distinct calculus with a nucleus of uric acid. In the latter there was only one about the size of a penny, but a good deal thicker, and fitting accurately in the pouch. In each case there was considerable median upgrowth of the prostate into the bladder behind the orifice. This was excised with scissors and cutting forceps, a mass as large as a walnut being removed, and the route made level and as smooth as possible. No constitutional disturbance followed in either case. The wounds healed rapidly without leaving a fistula, and urine was passed by the urethra in about three weeks. Convalescence was a little delayed in one of them by an attack of epididymitis that followed the introduction of a catheter. Union was greatly helped by means of a truss, shaped something like a double inguinal truss, devised by Dr. Birch, of Clapton, so arranged as to press the deep surfaces of the wound together. The cases were brought forward as illustrating a principle suggested by Mr. Mayo Robson, that in cases of multiple or recurrent calculi, associated with median vesical enlargement of the prostate, the best operation was suprapubic cystotomy with excision of the intravesical portion of the upgrowth so as to obliterate the post-prostatic pouch. Lithotomy or lithotrity, without this addition, was in such cases little better than a temporary expedient. The removal of the projecting portion of the prostate did not add materially to the gravity of the operation so long as the urine was acid. The high rate of mortality with which suprapubic prostatectomy was credited was due to the fact that it had nearly always been performed as a last resource in hopeless cases where everything else had failed, where the patient's strength was completely broken, and where the wall of the bladder was infiltrated with septic organisms from long-continued suppurative cystitis. In cases in which the urine was acid and was kept aseptic the prognosis was entirely different.

MR. GOLDING-BIRD thought that even in old persons it was safer to employ the suprapubic method to clear the bladder, whether any prostatic growth were removed or not. He thought the risk less than when perineal lithotomy was performed.

MR. BUCKSTON BROWNE considered that excision of the median lobe of the prostate added much to the risk. He thought the author's second case might have been advantageously dealt with by lithotomy.

MR. MANSELL MOULLIN, in reply, thought the gravity of the excision depended on the amount of prostate removed. Ablation of the middle lobe, if the urine remained acid, added little to the gravity of the operation, and, as a result, after-coming calculi would be easily expelled *per vias naturales*.

INTUSSUSCEPTION THROUGH A PATENT MECKEL'S DIVERTICULUM.

MR. GOLDING-BIRD reported a case of intussusception with Meckel's diverticulum at the navel. The patient was an infant, 4 weeks old, through whose navel soon after birth a red protrusion was seen, through which motion passed shortly before coming under observation. The protrusion had increased and altered in character. Its appearance in all respects corresponded with that of an intussusception, and this diagnosis was given, it being further regarded as one of protrusion of the distal, and not proximal, bowel through the open navel. It was not possible to undertake any operation, and the child shortly died. The necropsy showed the diagnosis to have been correct. The author remarked on the rarity of these cases, and referred to a paper by Barth, which dealt exhaustively with them. That surgeon quoted a very similar case to the one now brought forward, but the intussusception was from the proximal into the distal gut (Meckel's diverticulum), and not in the reverse direction. Mr. Golding-Bird considered his case as, in all probability, unique, and pointed out that the chance of recovery could only be given by a laparotomy with (probably) resection of the affected gut, but his patient was too collapsed to permit of so grave an operation. All the cases of complicated prolapsed and patent Meckel's diverticulum that he had been able to discover had ended fatally, and therefore considerable immediate risk to life by operation was certainly warranted.

THE PRESIDENT pointed out that in ordinary intussusception the proximal portion of the bowel was usually invaginated into the distal part, but in the author's case the reverse was the case.

MR. HOWARD MARSH inquired if it would have been possible, *post mortem*, to reduce the intussusception, the Meckel's diverticulum being short.

MR. GOLDING-BIRD, replying, said that during the patient's life he considered that nothing less than resection of the bowel would have proved of use, so hard and unyielding was the part. The patient was not at the time fit to undergo laparotomy, but he had hoped to do so later on. At the necropsy reduction of the intussusception was found to be impossible.

OSTEOPSATHYROSIS (FRAGILITAS OSSIUM) IN WHICH AFTER UNION HAD TAKEN PLACE DISUNION OCCURRED AFTER THE LAPSE OF SEVERAL YEARS.

MR. LANGTON read notes of this case. The patient, aged 23, when first seen in 1883, had been the subject of several so-called "spontaneous fractures" as the result of muscular action or of very slight injury. In all except one firm union had ensued, but in one fracture of the femur, after unnecessary violence on the part of a bonesetter, the fracture never became firmly united. Subsequently two united fractures of the left femur and the right humerus became firm, then disunited, and the latter eventually became the seat of a sarcomatous growth.

Mr. Edgar Willett had been particularly struck by one specimen, that of the humerus. It looked as if fractured at the upper end, but there was in reality no bone at all between the cartilage at the upper and lower extremities. He remembered a child who had broken six of his long bones, only one of which, the clavicle, showed any signs of callus. Since then the child had been in good health.

Mr. Lunn had seen several of these cases in patients suffering from locomotor ataxy. All of them had united. The existence of the fractures had been discovered accidentally by the nurses.

The President asked whether in Mr. Langton's case sarcoma was present when the patient had his first fracture at the age of 11. He (the speaker) had recently seen 3 cases of mollities ossium: one now under care, a woman, aged 34, had fractures of both femora, and since admission she had fractured a humerus by merely raising herself upon it. Both the other patients died, with sarcoma extensively distributed. His present patient had no sign of malignancy, her general health being very good. All the patients were single women.

Mr. L. Benham asked if the bones were rarefied in the author's cases. Cancer of the long bones caused softening just as did mollities ossium.

Mr. Langton, in reply, said that sarcoma of several bones was not common, nor was it common for such a growth to remain quiescent for twenty years. Further, the other bones were quite normal, and exhibited no sign of malignant infiltration. He asked if others had met with similar cases of disunion of bone after so many years of osseous union.

Brain Tumour successfully Treated by Internal Medication.

Dr. Althaus related the case of a lady, aged 39, in whom unmistakable symptoms of a tumour in the right central convolutions became developed in 1882. The chief signs were severe headache, cranial tenderness, and tympanitic sound on percussion, a change in her manner, drowsiness in the daytime, epileptiform convulsions, paresis of the left side of the body with increased tendon reflexes, optic neuritis, impaired memory and inability to think, and sickness and vomiting. The first symptoms had appeared after parturition, and there was a history of a severe blow on the head many years ago, but no syphilitic infection. Treatment by full doses of mercury and iodide of potassium caused rapid improvement, and total disappearance of the principal symptoms in six weeks. Several relapses happened in the course of the following years, at variable intervals, and these yielded to the same treatment as readily as the first attack. The last serious relapse occurred in 1888, and a very slight one, with few symptoms, in September, 1892. Since then the patient had remained quite well, and able to enjoy life. Dr. Althaus had in similar cases seen satisfactory results from similar treatment, but the latter had generally been more protracted than in the present instance. He thought the tumour might have been a glioma, but as it was, fortunately for the patient, never seen or handled, it was impossible to determine its nature. With regard to the diagnosis, he stated that there was no other disease which would produce the whole group of symptoms which had been present, while one and all of these could be easily accounted for by the presence of a growth in the affected portion of the brain. He concluded by remarking that a case like the one related, and in which such ominous symptoms as optic neuritis, epileptiform convulsions, and loss of mental power, were traced to their origin, and removed by acting upon the seat of the malady, not only tended to give us confidence in our power over disease, but also furnished a very clear reply to that therapeutic nihilism which was so frequently paraded by those who did not know how to use the remedies which were at our disposal.

Dr. Walsham inquired the cause of the tympanitic note over the affected region.

Mr. Lunn recalled several cases of tumour following fractures. In one instance, after fifteen intervening years of health, fracture of the base was followed by the development of glioma in the anterior part of the cerebrum. He also cited other similar instances. It was quite new to him, however, to find glioma yielding to medical treatment.

Dr. Wilson related a remarkable case of supposed cerebral tumour or of tuberculous deposit in a boy aged 12, who had optic neuritis and exaggerated reflexes, and finally total inability to move the limbs. He grew worse on iodide and perchloride of mercury, and was then sent to the seaside, where, after four or five months, he improved, and at length made a complete recovery.

The President said the interest of the case was in the syphilitic or non-syphilitic nature of the lesion: if the latter the case was remarkable. Did the iodide and mercurial treatment influence non-syphilitic growths? He had diagnosed cerebral tumour from very palpable signs during life, and used the treatment as matter of routine to find much improvement in the patient's state. This, however, ceased, and the patients had died, with discovery, *post mortem*, of gliomata. On the other hand, when tumours were cured by this treatment, one was, perhaps, too apt to think they had been syphilitic. In the tongue hard tumours at first improved under large doses of the treatment, then the growth recurred and ran its course. Also with tumours of the œsophagus the same thing ensued.

Dr. Althaus said that syphilis could be absolutely excluded in the case he had narrated. The lady had had four healthy children and no miscarriages. He had never seen any other case of brain tumour recovered from. He had seen the association of injuries with such growths.

MEDICAL SOCIETY OF LONDON.

Monday, November 11th, 1895.

Sir J. Crichton Browne, M.D., F.R.S., President, in the Chair.

Clinical Evening.

Addison's Disease Treated by Suprarenal Extract.

Dr. Sansom showed a man, aged 25 years, who seven months ago began to feel weak on walking a short distance, and developed areas of pigmentation on the face, knees, etc. The pigmentation was not typically that of Addison's disease, but the patient suffered from intense headache and nausea, without vomiting. Under arsenic he had continued to lose weight, but when put on a treatment comprising the administration of one and then two tabloids of suprarenal gland three times daily, he improved wonderfully, gaining 14 lbs. in weight in a month. He was then sent to the seaside, the treatment being discontinued. He remained in fair health for a time, but latterly he had again begun to lose weight, and to suffer from his headache as before. Dr. Sansom proposed to reinstitute the suprarenal treatment, but admitted that it was quite possible the previous improvement was merely an arrest in the natural course of the malady. The urine had been found to contain occasional traces of albumen but never any sugar.

Dr. Althaus recalled a typical case of what is known as "bronzed diabetes," in which he had tried the suprarenal treatment. A great improvement had at first resulted, but it was not maintained, and the patient died.

Dr. Savill urged that the distribution of the pigment did not suggest Addison's disease, and he pointed out that the mottling over the knees resembled that seen in those who roasted the knees before the fire.

Temporary Resection of the Upper Jaw for Naso-Pharyngeal Growth.

Mr. Stanley Boyd showed a man, aged 40, who presented himself with a large naso-pharyngeal growth springing apparently from the base of the skull or front of the spine, completely blocking the right nostril, which bulged, and displacing the right eye. In order to obtain free access to the growth for the purpose of effectual removal, he exposed the superior maxilla, snipped through its points of attachment, and then, without difficulty, he tilted it out, thus obtaining free access to the growth, which invaded the sphenoid bone. As a precautionary measure he had exposed the right carotid artery before commencing the operation, in order to be enabled, should occasion arise, to control the hæmorrhage. As a matter of fact the hæmorrhage never caused any trouble, and no difficulty was experienced in replacing the jaw in position where it reunited. The resulting deformity was very small, and the lachrymal duct was not interfered with, and the patient made an excellent recovery.

Mr. Mansell Moullin related a somewhat similar operation which he had performed with the same object in view. He did not deem it necessary to expose the carotid artery, but he performed a preliminary tracheotomy, which proved a wise course, because it enabled him to keep a sponge in the mouth to prevent "sagging" of the muco periosteum of the hard palate.

Mr. Walsham advocated obtaining access to these growths by cutting through the soft palate and chiselling away sufficient of the hard palate, an operation which he had performed with complete success in more than one instance. He pointed out that this operation was vastly less severe than resection of the upper jaw; it left no scar and did not expose the patient to the risk of interfering with the lachrymal apparatus.

Mr. Wallis endorsed the view of the last speaker, and related a case in which he had himself operated on those lines. The patient, however, was in an extremely weak condition, and succumbed a few hours later.

Congenital Feeblemindedness with Congenital Deficiency of Chest Wall.

Mr. Harold showed a lad, aged 16, who presented congenital deficiency of the rib cartilages on the left side below the fifth rib, thus uncovering the precordial area. He was also congenitally feebleminded. He was also the subject of extensive heart disease.

Dr. Sansom pointed out that the hypertrophy bore mainly on the right ventricle; and he suggested that there was probably patency of the foramen ovale or ductus arteriosus.

Dr. Shuttleworth agreed that the association was common.

Wired Fracture of Patella in a Man aged 70.

Mr. Wallis showed a man, aged 70, on whom he had successfully performed the operation of wiring a fractured patella. He had remarked in the course of the operation that the dipping down of the aponeurosis would have effectually prevented coaptation of the bony fragments by the ordinary methods. Mr. Wallis also showed a lad in whom suppuration of the knee-joint had supervened consequently on disease of the tibia, who notwithstanding had preserved very good movement of the joint.

Spina Bifida Occulta.

Dr. Guthrie showed a child with spina bifida occulta, who six months ago had developed paresis of the left leg, which he attributed to degenerative peripheral neuritis of the left posterior tibial nerve.

Dr. Savill suggested that the symptoms pointed to the existence of syringomyelia, a condition not uncommonly associated with the other.

Case of Postero-lateral Sclerosis (?).

Dr. Guthrie also showed a man who for six or seven years past had exhibited symptoms suggestive of postero-lateral sclerosis, though the fact that he had several times recovered under antisyphilitic treatment made the diagnosis doubtful. The patient denied any history of syphilis.

Nephrectomy for Injury.

Mr. Swinford Edwards showed a man, aged 55, who had been brought to the West London Hospital suffering from the effects of a wound caused by falling from the third storey on to some railings. The fall had caused comminuted fractures of the eleventh and twelfth ribs on one side, and in the bottom of the wound, after removal of the clots, the kidney was seen, itself extensively lacerated and bleeding profusely. He ligatured and cut it away, and the hæmorrhage ceased. Some suppuration took place, and for a time there was a high temperature, but ultimately the man made a good recovery. He commented on the fact that on the fourth day the excretion of urea amounted to the normal, and on the fifth day the urine amounted to 50 fluid ounces daily.

Psoriasis Gyrata.

Dr. Savill showed a lad aged 15, who displayed an eruption on both arms, which began five weeks ago, and developed in the course of a week. It was symmetrically distributed over the arms and legs and around the mouth. The front of the knees was especially involved. The eruption consisted of red circular scaly patches, healing in the centre and spreading at the margins. The glands of the neck and chin were enlarged. There was no hereditary history, but he had just ascertained that there was a history of a mucous tubercle on the anus, and he was disposed to regard the eruption as syphilitic psoriasis.

Case of Double Ptosis and Crossed Diplopia.

Dr. Savill also showed, on behalf of Mr. Waren Tay, a lad, aged 12, who three weeks ago had suddenly developed double ptosis with crossed diplopia, consequent on weakness of both internal recti. The supervention of the symptoms had been preceded by headache for two or three weeks, and at about that date he had suffered from sore throat for a day or two. No one else in the house, however, had suffered from sore throat.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

A. Symons Eccles, M.B., President, in the Chair.

Friday, November 1st, 1895.

Etiology and Treatment of Gastric Ulcer.

Dr. Donald Hood, on opening the discussion from the medical standpoint, said his remarks would be confined especially to considerations on diagnosis in those cases where symptoms are indefinite, ambiguous, and often misleading. He referred to the importance of weighing well the value of the symptom hæmatemesis, and he drew special attention to the careful differentiation between various forms of acute abdominal pain with a view to diagnosis at the earliest possible moment of the existence of perforative ulcer. He gave a brief clinical picture of the most important subdivisions of groups under which gastric ulceration practically came before us for treatment. He cited a case which had been judged to be one of merely prolonged dyspepsia, but which on examination after death proved to have been one of extensive recurrent ulceration, producing much contraction of the stomach, and leading to perforation of the diaphragm. He referred also to a case of acute perforation and severe hæmatemesis in a young anæmic girl, and in connection with this he laid down certain criteria which would help to differentiate cases of hæmorrhage caused by organic breach of the stomach walls from those which frequently occurred in early adult female life without any such breach, a condition for which he proposed the name hæmatemesis puellaris.

Mr. Bruce Clarke, introducing the surgical side of the discussion, began by referring to the rarity of perforations of gastric and duodenal ulcer. He described two principal varieties: those in which collapse was the prominent symptom, and those in which the extravasation of intestinal or gastric contents was more gradual. These cases were often indistinguishable from intestinal obstruction, and indeed gave rise to it by the peritonitis which they set up. There was only one keynote to success in ruptured ulcer, and that was early diagnosis and early treatment.

Dr. Alderson thought gastric ulceration, when unaccompanied by hæmorrhage and vomiting, was frequently overlooked. He commented on the rarity with which gastric ulcer was assigned as a cause of death, and quoted the Hammersmith statistics for five years, where out of 8,305 deaths, only 11 were assigned to this cause. He narrated a fatal case from his own practice, in which at an early stage, owing to the absence of definite symptoms, diagnosis was impossible. In this case the patient was an adult male.

Dr. Campbell Pope alluded to the statement of Sohlern that in the Rhone valley, the Bavarian Alps, and in the greater part of Russia gastric ulcer rarely appeared. The inhabitants were mainly vegetarians, and thus got about one-third more potash salts in their food. Having discussed the points of diagnosis between gastrodynia, gastric ulcer, and carcinoma, he laid stress on the value of absolute rest for successful treatment, and for drugs he preferred belladonna combined with bismuth to the preparations of opium. For after-treatment he used arsenic and iron as prepared by Zambetti.

Dr. Seymour Taylor spoke only of the clean-punched-out ulcer, which was found almost exclusively in young women.

He argued that this was an almost constant incident in the clinical history of prolonged cases of chlorosis, and cited authorities who had noticed this connection. He pointed to the common factors of age, sex, and neurosis, and held that neuropathy was the starting point in chlorosis. Further, the ulcer in its appearance and character approaches those ulcerations which are distinctly neuropathic, tabetic ulcers, herpes, etc. He held that the connection was further established by treatment. He maintained that the embolic theory was untenable in view of the splendid collateral circulation of the stomach.

Mr. Keetley contrasted the signs of perforation in various situations. He advocated early operation, even at times without waiting for recovery from shock and without an anæsthetic.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

William Craig, M.D., Vice-President, in the Chair.

Wednesday, November 6th, 1895.

Cases.

Dr. Stewart Stirling showed a case of Erythema Multiforme (papulatum); also a man suffering from Lupus of the Occiput. Drawings of both conditions were also presented.—Dr. Norman Walker also showed a case of Erythema Multiforme (circinatum), and said that a brother and sister of the patient were, or had been, similarly affected.

Pathological Specimen.

Dr. James Carmichael showed a Preparation from a case of Double Intussusception.

President's Address.

The President's valedictory address was, in Dr. Clouston's absence from illness, read by Dr. George Gibson, the retiring secretary. Dr. Clouston began by saying that no member of the Medico-Chirurgical Society now living could take the president's chair without a deep sense of his inferiority in mind and attainments to many of the men who had sat there before him. When he glanced down the roll of their past presidents, and saw the names of Duncan, Abercrombie, Alison, Christison, Syme, Simpson, Goodsir, and Bennett his personal feeling was one of profound humility. They had been presided over in the past, not only by great physicians and surgeons, but by great men. We of the present day could only hope most fervidly that the race of giants that lived in those days was not impossible in the future of the profession. He thought they were justified, as students of heredity, in anticipating that this would be the case. Brain power seemed to come to mankind in waves. In one generation there was an abundance of it, surging up to the highest watermark of past times, and then again there were low tides of mental energy. If it was any consolation to them physic was not alone in the trough of the wave at present. Politics, literature, journalism, law, and divinity were all alike crying out for effectual leadership. Was there no compensation for this state of matters? If no one man made extraordinary advances, were there not ten making moderate advances? Did it not require a generation of plodders to discover the applications of the great principles and generalisations which the mighty of the past had laid down? Pasteur discovered the part which germs played in health and disease, and Lister applied that knowledge, but to get the full value of the application of both doctrines it is requiring hundreds of hard workers and experimenters in every field, so that suffering humanity may reap the full harvest. In the department of psychological medicine Conolly laid down new principles, and pointed out the falsity of certain old doctrines and the futility of certain old practices, but it had needed two generations of ordinary asylum physicians, of plain business committees of asylums, and of hard-working Commissioners in Lunacy so to apply and to extend Conolly's doctrines that those suffering from mental disease should have the full practical benefit of those principles. Dr. Clouston then referred to the good routine work that had been done in the Society during the past two years, and urged that a larger number out of the 360 members should in the future contribute to the general good. He then pictured an ideal medico-chirurgical society, and indicated how the Society could be improved and made more helpful to the profession. Dr. Clouston concluded with a tribute to three eminent members whom the Society had lost by death during his term of office—namely, Dr. Thomas Keith, Dr. Brakenridge, and Dr. T. A. G. Balfour. He said: "No more marked individuality than Dr. Thomas Keith ever walked the streets of Edinburgh, or contributed, as he did, so brilliantly to the work of this Society. How well we all can picture his keen nervous face, which might have been that of a poet, the 'far-away' look in his honest eyes, the head set forward, the anxious attitude, and the deep earnest voice. I had the privilege of often seeing him when he was in Edinburgh; and, out of my line as it was, he once asked me to be present at an ovarian operation. I was glad I went, for I then saw the true psychology of a great operator of the nervous type, who fully realised that every knife-cut and every stitch might mean life or death to a fellow-creature, whose life was as precious to her as his was to him. Many a time he told me of his sleepless nights and days of anxiety after great operations. It was a fillip to one's moral nature to know him, and a great honour for any man to have his confidence. This Society may well mourn his loss, for it was here he came to communicate the successful results of his first series of ovariotomies, when Edinburgh as yet had had no success in that operation. How many lives he saved since then! Dr. Brakenridge has passed away too. We can all remember his opening of our influenza debate three or four years ago—his precise, accurate statement of his case; conscientiousness displayed in every tone of his voice and in every operation of his mind. He was a powerful clinical teacher, a high-minded, earnest man, a subtle, accurate thinker, and a loyal friend. The profession in Edinburgh will never need to be ashamed of itself if such as he abounds here. Dr. Thomas A. G. Balfour was a frequent attendant of our meetings, and sometimes took part in our debates, often coming here after a hard day's drudgery in general practice. I have known him well since the year 1859, and a better man did not live in our city. With all his strong religious dogmatism he was full of charity and full of humour. I always used to tell him he had much of the best of the clerical mind, and some of its defects. Some of his stories were admirable, and his laugh was infectious. He had strong scientific tastes of the old-fashioned observing sort. He was beloved by his many patients, and, beyond a doubt, exerted a powerful influence for good during his long and useful life. He worthily represented those who do the hard work of our profession, and do not always receive an over-abundance of its rewards. If our family doctors were all such as he was, how well we should stand with the public!"

Dr. Joseph Bell proposed a vote of thanks to the President for his deeply interesting address, and expressed the hope that his health would speedily be restored.

Dr. James Carmichael seconded.

Election of Officers.

The following were elected office-bearers for the session 1895-96: *President:* Dr. Argyll Robertson. *Vice-Presidents:* Dr. James Carmichael, Dr. John Wylie, Dr. William Craig. *Councillors:* Dr. Dow (Dunfermline), Dr. W. Russell, Dr. Sloan, Dr. Burn Murdoch, Dr. Clouston, Dr. G. Gibson, Dr. H. L. Calder, Dr. A. D. Webster. *Treasurer:* Dr. Mackenzie Johnston. *Secretaries:* Mr. Hodsdon and Dr. Graham Brown. *Editor of Transactions:* Dr. William Craig.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

Friday, November 1st, 1895.

Conolly Norman, M.D., President, in the Chair.

Two Dental Malformations.

Dr. Fraser exhibited: (1) A wisdom tooth in the left lower maxilla. The tooth was turned upside down, its crown below pointing to the interior of the mouth and its single straight fang directed upwards and outwards to the ramus of the jaw. It was a well-formed and developed tooth, perfectly healthy and lodged in a bony cavity, into which it closely fitted. The specimen might be as old as the famous Battle of Clontarf,

for it was picked up some years since at the old Dublin graveyard of Bully's Acre, adjoining the Royal Hospital, during some excavations made near the pillar stone of Brian Boroimhe's son, who was buried there. It was brought to his recollection by the recent successful removal of an undescended wisdom tooth lodged in the upper jaw, and causing intense pain to a young gentleman, aged 22, a patient of his, by Dr. Murray. He did not remember any similar displacement, or rather total inversion, of a wisdom tooth yet described, so far as his reading extended. (2) The incisor teeth of a rabbit. In the lower jaw both incisors projected symmetrically, each upwards of an inch in length, and diverging, instead of being in close apposition; they terminated in small, bony knobs, which was not usual in such malformations. In the upper jaw, one incisor springing from the left upper maxilla was curved in a half-spiral outwards, and was nearly an inch long. The other incisor was very small and weak, and passed underneath its companion to the left side. The cause appeared to be a diseased condition of the upper maxillary bone, whence it sprang, which was carious. Whether proceeding from injury or disease it was difficult to decide. Such malformations are not by any means uncommon, and must, as in this case, entail severe starvation to the sufferer.

The PRESIDENT said the malformations resembling these often occurred in rodents.

Dr. BROWN, who prepared the specimens, said many malformations were due to fracture; in this case it seemed to be due to disease.

RUPTURE OF THE HEART.

Dr. E. H. BENNETT presented an example of rupture of the heart, of which the chief interest was that the subject of the lesion (which was caused by the explosion of a bomb which he had in his hands) lived nearly three hours after the accident. The literature of traumatic rupture of the heart was referred to, and the clinical details of the case were related.

Dr. F. NIXON had had a case of wound of the heart resembling Dr. Bennett's in some points. The man stabbed himself over thirty times in the region of the heart, quite a number of the wounds penetrating the heart substance, but only two entering its cavity. He also was difficult to keep in bed. He lived nearly twenty-four hours. He used to suffer from pain about the umbilicus. At the *post mortem* examination Dr. Nixon found the pancreatic duct filled with calculi.

Dr. FRASER thought that the distension of the pericardium brought about the delirious state, just as occurred in cases of rheumatism.

The PRESIDENT said that in any cases of aneurysm rupturing into the pericardium there was no clear fluid. In a case he saw recently the pericardium was full of nearly fluid blood, although the person had died several hours previously.

Dr. BENNETT, replying, said that the man was not drunk. There was no penetration of the pericardium from without. He never before had seen the pericardium distended with blood which was differentiated into serum and clot, as it was in this case. It was not perfectly transparent serum, but rather opalescent. The wound of the coronary vessel communicated with the cavity of the pericardium, but it was very small.

MYOMA OF UTERUS.

Mr. F. A. NIXON exhibited a myoma of uterus which weighed 21¾ pounds after removal.

LIVERPOOL MEDICAL INSTITUTION.

PATHOLOGICAL SECTION.

G. G. HAMILTON, M.B., F.R.C.S.Edin., in the Chair.

Thursday, November 7th, 1895.

SPECIMENS.

MR. NEWBOLT showed a specimen of Necrosis of the Jaw from a Polar Bear, which he had obtained from Dr. Harrison, of Clifton. There was no history of injury. The lateral incisors were carious.—Dr. BARENDT showed sections from a case of Xanthelasma associated with Jaundice.—Mr. THOMAS showed sections of Mr. PARKER'S case of Coccygeal Tumour; also specimens of sections from a Tumour of the Leg. The primary growth was removed from the skin of the leg of a man, aged 22. The growth consisted of large epithelial cells arranged in long alveoli, and was not pigmented. The secondary growths in the groin had a similar structure, but were deeply melanotic. He considered the growth to be a carcinoma arising from the abnormal cells of a mole, and not to be an alveolar sarcoma.—Mr. PAUL showed a beautiful series of lantern slides illustrating Villous, Adenomatous, and Carcinomatous Tumours of the Rectum, and a further series of slides illustrating his views as to the nature of Axillary Breast Tumours (four cases).

SUPPURATIVE MENINGITIS.

Mr. CHARLES G. LEE read notes of a case of suppurative meningitis due to chronic otorrhœa, occurring in a boy, aged 12. In this case the mastoid antrum was opened and the lateral sinus exposed; pus was found in the antrum, but the sinus appeared healthy. The patient received no benefit from the operation, and died some three days after it. The *post-mortem* examination revealed extensive suppurative meningitis, the pus lying chiefly in the neighbourhood of the cerebellar fossæ, and surrounding the medulla. On section of the petrous bone pus was found in the labyrinth.

DERMATOLYSIS.

Professor BOYCE and Dr. ALEXANDER presented a communication on this subject. The specimen was removed by Dr. Alexander from a young woman. She had been under observation for many years, and it was probable that the tumour was congenital, or started in early childhood. It had steadily increased in size, and at the time of operation formed huge pendulous folds on the side of the neck and chest. Microscopic examination showed that the tumour consisted of a neoplasis of the cutis vera, which in some places reached an inch in thickness. The new growth consisted of delicate but firm fibrous tissue, containing very numerous thin-walled vascular sinuses. There was very marked atrophy of the epithelium and of the sebaceous and hair follicles. Owing to the overgrowth of the corium the sweat glands were far removed from the skin, but preserved their relationship to the subareolar tissue, which was normal; the glands were degenerating. This case of the overgrowth of the corium was compared with the other forms of elephantiasis and molluscum, where the neoplasis commenced as a perineural (elephantiasis neuromatosa), a perivascular, a perilymphatic growth, or consisted in overgrowth of the fibrous bundles in the areolar tissue. It was an instance of the limitation of growth to a special tissue system.

A discussion followed, in which Messrs. ALEXANDER, HAMILTON, MURRAY, PARKER, PAUL, and Professor BOYCE took part.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A. W. MAYO ROBSON, F.R.C.S., President, in the Chair.

Friday, November 1st, 1895.

CASES AND SPECIMENS.

THE following were shown:—Dr. CHURTON: Blood from Patients with Typhoid Fever, showing absence of leucocytes.—Dr. DE BURGH BIRCH: A Simple Form of Microtome.—Dr. ADOLPH BRONNER: Case illustrating Victor Horsley's Method of Operating in Cases of Extensive Disease of the Mastoid Process.—Mr. W. H. BROWN: Two cases of Dislocation of Astragalus—one with fracture.—Dr. T. WARDROP GRIFFITH: Specimens from two cases of Extensive Hæmorrhage into the Pons Varolii. In both cases there was very extensive disease of the kidneys and much cardiac hypertrophy. In one case the vessels throughout the body were atheromatous, while in the other most careful examination failed to reveal any disease of the blood vessels to the naked eye.—Mr. LAWFORD KNAGGS: Case of Double Glaucoma in a young man following on Influenza.—Mr. NUNNELEY: Brain and Temporal Bone from a case of Middle-ear Disease, with Lateral Sinus Phlebitis.—Mr. LITTLEWOOD: (1) Calculus (weighing 4 ounces) with Kidney removed by Abdominal Nephrectomy; (2) Case of Dupuytren's Contraction treated by dissecting out the contracting band; (3) Large Bursa Patellæ.—Mr. SECKER WALKER: (1) A Temporal Bone from a patient operated upon two years ago for Extensive Mastoid Disease. The whole of the mastoid process had been hollowed out by ulceration,

and, after having been scraped and cleaned, a flap of skin was reflected from the back of the ear and pressed into the floor of the cavity. Ultimately the whole cavity became lined with epithelium continuous with the open air through the mastoid opening. (2) Specimens from a case of Middle-ear Disease, complicated by Cerebellar Abscess and Phlebitis of Lateral Sinus.

Porro's Operation.

Mr. Moynihan read a paper on a successful case of Porro's operation. The patient, a dwarf 49 inches in height, had been in labour for twelve hours. Müller's modification of Porro's original procedure was adopted. Both patients did well.

Mr. Brown mentioned three cases of Cæsarean section which he had performed, and said that in considering the success and failure resulting from all operations of this kind, it must be borne in mind that the cases usually occurred in poor people living in insanitary conditions. He thought Porro's operation infinitely preferable to craniotomy or Cæsarean section.

Dr. Kilner Clarke had performed Porro's operation twice, and laid stress on the importance of after-nursing.

The President considered craniotomy unjustifiable, except where the child was already dead. Porro's operation was infinitely simpler, and had the great advantage of preventing a future pregnancy.

Mr. Moynihan, in reply, said that the condition of some osteo-malacic patients had improved after the operation.

Papilloma of Bladder Complicated with Hæmoglobinuria.

Mr. Atkinson read a paper on a case of a gentleman, aged 57, who had begun early in the present year to pass blood-coloured urine at intervals. The attacks, which at first occurred about two or three weeks apart, were painless, unpreceded by nausea, rigor, or chill, or any *malaise*. They came on suddenly and departed gradually. The urine was dark and porter-like, even turbid at times, with chocolate-coloured sediment, at other times more reddish; after two or three days it became clear and normal. Mr. Atkinson first saw it in April, and found much albumen, but no blood discs. Paroxysms occurred at decreasing intervals up to June. In July, while at the seaside, patient passed undoubtedly bloody urine, the urethra sometimes blocked with clot. On return in August, Mr. Atkinson, suspecting stone, sounded with negative result. Another day, introducing a silver catheter, clear urine was drawn, but a shred of tissue in the eye of the instrument looked like villous growth. This was followed by brisk hæmorrhage. On August 23rd the bladder was explored through a suprapubic incision, and a fimbriated papilloma with broadish base attached to and about the trigone was found and removed by forceps and fingernail. The patient made a good recovery, and was out on the eighteenth day; the wound healed, and is now (November 1st) perfectly well. It should be remarked that five years ago the patient passed small stone, followed by hæmorrhage; also that he is the subject of syphilitic taint of many years back—now indicated by occasional patches of psoriasis.

The President wished to know whether there was any return of the hæmoglobinuria.

Mr. Atkinson replied in the negative.

Dr. Churton mentioned a case of hæmoglobinuria complicated by syphilis improved by calomel.

Dr. Barrs refused to believe that there was any connection between the two diseases.

Mr. Lawford Knaggs related a case of a child with syphilitic periostitis, interstitial keratitis, and its knees full of fluid; hæmoglobinuria appeared five years later.

Bullous Form of Uræmic Dermatitis.

Dr. Barrs reported the case of a girl, aged 17 years, who, after three separate attacks of dropsy due to chronic Bright's disease, developed an almost universal vesiculo-bullous dermatitis, and ultimately died in coma. At the necropsy the kidneys showed advanced parenchymatous nephritis. The eruption appeared three weeks before death, and was accompanied by intense pains in the feet, which were most affected. The plantar and dorsal surfaces of the feet were covered by one enormous blister, the fluid contents of which had an offensive odour. Dr. Barrs believed that the bullous form of uræmic dermatitis had not previously been recorded in this country.

Mr. Solly (Harrogate) thought that extensive skin diseases might cause damage to the kidneys, and, on the other hand, that kidney disease gave rise to skin affections mainly of the pruritic character, from defective elimination.

Dr. Churton had for years looked in vain for eruptions in uræmic cases.

In his reply Dr. Barrs joined issue with Mr. Solly on both his statements.

Indicanuria.

Dr. Churton read a paper on the utility of testing for indican in the urine. Indican in the urine meant that the putrefactive product was circulating in the blood and tissues, and poisoning them either by itself or by its associated toxins. It was easier to test for indican than to inquire into the probability of this toxæmia by questions as to constipation or diarrhœa, colour, flatulence, etc. Dr. Klein had found that indol was formed by the bacillus coli in meat broth at 37° C., and that a variety of this bacillus produced a toxin extremely fatal to guinea-pigs. It had also been shown that some pathogenic microbes can form their poisons only when products of putrefaction are present. It was not correct to say that disease of any kind involving the intestines was attended by indicanuria. Dr. Churton had demonstrated its absence in some cases of prolonged constipation, typhoid fever, and strangulated hernia. He doubted the existence of persistent, even slight, indicanuria in perfectly healthy persons. As examples of the utility of finding indican in the urine, he briefly described cases of delirium with convulsions; cholera nostras, with collapse; delirium with spasm of certain muscles: supposed typhoid fever (proved by treatment based upon the discovery of excessive indicanuria to be merely fæcal toxæmia); diarrhœa, probably from subacute colitis; and gout—in all of which, as in many others, the indicanuria entirely governed the treatment—namely, removal of the contents of the colon, and antiseptics. Washing out the colon—very cautiously if ulceration was suspected; calomel in small doses; salol; a milk diet, variously modified; and stimulants, if required, were the means usually employed. The colon was washed out even when non-inflammatory diarrhœa was a leading symptom, as in the cases of English cholera, for instance.

Dr. Trevelyan spoke of the importance of examination of the urine for various poisons. Typhoid bacilli had been found in the urine cases of tetany—recorded in association with gastric dilatation—and many cases of migraine, so often seemingly due to stomach derangements, might be due to poisons absorbed.

Obstetrical Society of London.—At a meeting on November 6th, Dr. F. H. Champneys, President, in the Chair, the following specimens were shown:—Dr. Cullingworth: Necrotic Change in a small Uterine Myoma occurring in a young subject.—Dr. Galabin: Œdematous Fibroid Tumour of Uterus associated with Pregnancy.—Dr. Remfry: Tubal Gestation Removed before Rupture.—Dr. Leith Napier: Solid Ovarian Tumour, probably Fibromatous. A special general meeting was also held, at which certain of the laws as revised were discussed and adopted.

Sheffield Medico-Chirurgical Society.—At a meeting on October 24th, 1895, Dr. Porter, President, in the chair, Mr. Snell introduced: (1) A woman with Embolism of the Central Artery of Retina; she had mitral and aortic disease. (2) A man, aged 48, with extreme Myosis, Argyll Robertson Pupils, and loss of Knee-jerks. He had been under observation for eight years in practically the same condition. (3) Traumatic Palsy of both Sixth Nerves. Mr. Snell, in drawing attention to the cases of this injury on record, specially mentioned the valuable papers of Purtscher and Friendwall. Altogether 57 cases were on record, and 17 were bilateral. (4) In connection with the last case, a girl with Bilateral Palsy of External Recti and Double Papillitis. Headache and sickness were the other symptoms suggesting intracranial growth.—Dr. Sinclair White exhibited: (1) A case of Trephining for Tempero-sphenoidal Abscess due to suppurative middle-ear

disease. An abscess containing 2 ounces of offensive pus was cleaned out and disinfected. Five days later a second independent abscess was discovered and treated. Although the lad appeared to be *in extremis*, he rapidly recovered after the second operation and is now quite well. (2) A large number of Gall Stones removed from a suppurating gall bladder. (3) A girl, aged 17 years, from whom the Right Astragalus had been removed eighteen months previously for a Myeloid Sarcoma. Excision was done through a single external wound. The resulting foot was both shapely and useful, the girl being able to walk several miles without fatigue. The arch of the foot was preserved, and contrary to what is generally taught there was considerable movement in the new ankle-joint. Dr. Sinclair White had not been able to find a case of excision of the astragalus for tumour on record.—Mr. DALE JAMES showed a case of Paraffin Acne. Three other boys working in the same mill were similarly affected. One of them said he could always cure it with soft soap and a flannel. While the patient was in the infirmary the eruption almost disappeared without special treatment.—Dr. ARTHUR HALL showed a case of Circumscribed Sclerodermia and two cases of Syphilodermia.—Dr. BURGESS introduced a case of Xanthoma Multiplex. The patient was a middle-aged woman who had been deeply jaundiced for over a year from hypertrophic cirrhosis of the liver.—At a meeting on November 7th, Dr. PORTER, President, in the chair, Mr. CUFF showed a young man the subject of Congenital Syphilis, with congenital malformation of both Radii. In each arm the shaft of the bone was absent. The epiphysis of the head could be easily felt on both sides below the external condyles. The epiphysis of the carpal end, small in size, could be distinctly made out on the left side; on the right an indistinct bony mass, abutting on the shaft of the ulna, probably represented the carpal epiphysis dislocated ulnarwards. The position of the hands was peculiar, each hand being dislocated towards the radial side and displaced upwards.—Dr. SINCLAIR WHITE showed a recent successful case of Estlander's Operation.—Dr. ARTHUR HALL showed a case of Lupus Vulgaris which had been treated by tuberculin with satisfactory results.—Mr. PYE-SMITH showed a large Carcinomatous Tumour of the right ovary which had been recently removed by ovariotomy from a woman aged 47. There were extensive adhesions to the bowel and uterus, but no secondary infiltrations or deposits. The left ovary was free. The patient survived the operation thirty hours. Mr. Pye-Smith also showed a Right Upper Canine Tooth which had been driven up by a kick at football two years before, and embedded in the anterior wall of the maxillary antrum. A year after the injury a sinus formed in the cheek, and had remained open ever since. Recently the lad consulted Mr. West Jones, who discovered the tooth and sent him to the Royal Hospital. The lingual aspect of the tooth was anterior; the fang, which was not quite completely formed, projected upwards.—Dr. PORTER showed an Aneurysm of the Ascending Aorta, which had pressed upon the right bronchus. There was a curious defective condition of the cartilaginous rings in both bronchi (congenital).—Mr. CUFF read the notes of a case of Hemiplegia produced by embolism of the left middle cerebral. At the necropsy there were found recent vegetations on the aortic and mitral valves, general meningitis, an embolus blocking the left middle cerebral at its commencement, and consolidations of the apex of the right lung. The PRESIDENT, Dr. KEELING, Mr. KNIGHT, Mr. PYE-SMITH, Dr. SAMSON MATHEWS, Dr. SINCLAIR WHITE, Dr. BURGESS, Dr. WILKINSON, Dr. ARTHUR HALL, and Mr. CUFF took part in the discussions.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on November 5th, A. BRONNER, M.D., President, in the chair, Dr. J. H. CRAWFORD gave a Microscopical Demonstration of Malignant Tumours, the specimens illustrating not only the different varieties of sarcomata and of carcinomata, but also the various stages of malignancy of tumours.—Dr. SHIACH showed a patient suffering from Melanotic Sarcoma affecting the Skin of the Abdomen below the Umbilicus, the inguinal glands being also enlarged, in a man aged 50. There were no signs of secondary deposit elsewhere.—Dr. H. BRONNER showed a specimen from a case of Kidney Disease due to Double Calculus. The patient was a man aged 58, of steady habits, who worked till five days before admission. He complained of diarrhœa, vomiting, and loss of flesh. The urine contained a small quantity of albumen; specific gravity 1.009; no casts. The quantity passed in 24 hours was 72 ounces. No signs of malignant disease were discovered. The symptoms whilst under observation were melæna, purpuric eruption on arms, legs, and body; dyspnœa. On *post-mortem* examination calculi were found in each kidney. The left ventricle of the heart was hypertrophied, and the aorta was thickened. The case was discussed by Drs. A. BRONNER, RABAGLIATI, and MAJOR.—Dr. RABAGLIATI showed an Ovarian Tumour which he had recently removed. The patient made a good recovery. The diagnosis of the side from which the tumour springs in these cases was discussed. Dr. Rabagliati also showed a Stomach with Two Perforations. On abdominal section he had experienced great difficulty in stitching up a perforation of the posterior wall of the stomach, the one on the anterior wall not having been noticed at the time of operation, and only discovered *post mortem*. Mr. HANDCOCK, Mr. CRAWFORD, Mr. HORROCKS, and Dr. H. J. CAMPBELL made some remarks, and Dr. RABAGLIATI replied.—Dr. BAMPTON read a paper on the Treatment and Causes of Cold in the Head of Influenzal Origin. The common methods of clothing the head and the feet were criticised, and suggestions made, especially as regards the covering of the head. The treatment which the writer had found advantageous for the symptoms met with in influenza were given, stress being laid on rest in bed, warmth, and stimulation. Drs. MAJOR, RABAGLIATI, GOYDER, FARRER, and S. LODGE, jun., made some remarks, and Dr. BAMPTON replied.

MIDLAND MEDICAL SOCIETY.—The inaugural meeting of the Society was held on November 14th, at Birmingham. There was a large attendance of medical men from different parts of the city and surrounding counties; and a most enjoyable evening was spent. The PRESIDENT (Dr. T. Edgar Underhill) held a reception from 7 till 8 P.M. There were shown Dissections and Microscopic Specimens kindly lent by Professor Windle, Dean of the Medical Faculty at Mason College, and Dr. J. Allen, Professor of Physiology. Medical and Surgical Instruments and other scientific appliances and apparatus were exhibited by Messrs. Southall and Barclay, Salt and Son, Philip Harris and Co., and Messrs. Mappin and Co. At 8 o'clock Dr. W. S. PLAYFAIR, Professor of Obstetric Medicine at King's College Hospital, delivered the inaugural address on the Nervous System in connection with Diseases of Women. At the conclusion of the address a hearty vote of thanks to Dr. Playfair for his able and instructive address was moved by Dr. MALINS, seconded by Dr. SAVAGE, and carried with acclamation.

REVIEWS.

LEPROSY IN ITS CLINICAL AND PATHOLOGICAL ASPECTS. By Dr. G. ARMAUER HANSEN, Inspector-General of Leprosy in Norway; and Dr. CARL LOOFT, formerly Assistant Physician to the Lungegaards Hospital. Translated by NORMAN WALKER, M.D., F.R.C.P.Edin., Assistant Physician for Dermatology, Edinburgh Royal Infirmary. With numerous photographs and coloured plates. Bristol: John Wright and Co. 1895.

ANY work on leprosy that bears the name of ARMAUER HANSEN claims the respectful study of pathologists and of physicians who have to deal practically with that disease. His coadjutor in this work, Dr. CARL LOOFT, is also known as an experienced worker in connection with leprosy. The English translation by Dr. NORMAN WALKER is worthy of the importance of the book.

Within 143 pages the authors have succeeded in giving a statement of all the important facts connected with the disease, including tables showing the proportion of the complication of tuberculosis with the two chief types of leprosy, the proportion of the two chief forms of the disease (the tubercular and anæsthetic-nodular and maculo-anæsthetic of

the author) in different districts, and the results of isolation in Norway. There are five plates showing tuberous leprosy of two years' duration, tuberous leprosy of six years' duration, tuberous leprosy after breaking down of the nodules, maculo-anæsthetic leprosy of two years' duration, and a case of maculo-anæsthetic leprosy after recovery. Eight chromo-lithograph plates illustrate the microscopic appearances of the disease.

The authors trace the progressive effects of the development of the bacillus of leprosy in the cells, and illustrate clearly by their plates the mechanism by which the growth of the bacillus leads to what are recognised as the pathological changes in leprous tissues. One of the first effects of the appearance of the bacillus is to produce a characteristic effect in the blood vessels. They had once the opportunity of examining a piece cut out of an erythema-like eruption, and found dilated vessels and round cells; and only after a long search a few bacilli. They conjecture that there is deposited with the bacilli a chemical poison which affects the vessels, or that the bacilli produce the poison, and that this poison has its action only in its immediate neighbourhood. The slow subtle action of the bacillus is such that, as they remark, we do not know the earliest symptoms of the disease.

Much attention is given to the distinction between leprous and tuberculous affections of certain tissues, which seem to have been often confused by previous observers. They conclude from the fact that they had never seen a leprous bronchial or mesenteric gland, that there is no leprous affection of the lungs or of the intestines, and later examinations of special preparations have only confirmed them in this view. Nor have they ever seen either a typical giant cell with marginal nuclei or caseous degeneration in the leprous tissues.

The fact that all forms of leprosy are dependent on the bacillus shows that the distinction between nodular leprosy and maculo-anæsthetic leprosy (a term which the authors prefer to anæsthetic) is simply one of degree, and it is interesting to learn that in Norway the milder maculo-anæsthetic cases are more numerous in the eastern districts, where the climate is dry, the nodular in the western district, where the climate is moist. Leprous nodes are most frequently found on the exposed parts of the skin, and it is quite possible that the form is determined by climatic influences.

The pathologist will find much to interest him in this book. He will find how well the functions of the lymphatic glands as filters is demonstrated in leprous glands. The circulation through them is not arrested, nevertheless the glands retain the infectious product, and if it passes one gland it is arrested and retained in the next. Sometimes the quantity of this infection is so small that one or two ampullæ are sufficient to retain the whole of it, indicating that the circulation in the glands does not take place exclusively through the lymph sinuses, but that the lymph reaching the glands must at once enter the ampullæ.

In an interesting chapter on treatment, the various methods and drugs used are reviewed, with the conclusion that in the few cases in which a cure results the cure is not due to the treatment, but is the natural development of the disease.

For the extinction of leprosy we must rely on isolation and cleanliness, the severity of the isolation depending on the habits of the people of the country in which it is applied. The final sentence of the book states that the authors "are firmly convinced that isolation must be carried out in some appropriate fashion."

The Growth of the Brain: a Study of the Nervous System in Relation to Education. By Harrnat H. Donaldson. London: Walter Scott. 1895. (Cr. 8vo, pp. 374.)

This work is addressed to the parent, the teacher, and the physician, with the apparent purpose of stimulating rather than giving practical guidance to those interested in education. A large number of anatomical facts, collected from many authors, will not be new to the student of anatomy, but appear in a form which may be convenient to those wishing to make brain structure a basis of their consideration of mental action. The proportions of growth in the body and parts of the brain, as stated on good authorities, indicate the course of development as it proceeds in the child. The physiological progress of the nervous system and its action on the body are well traced, and form the most valuable part of the work, which is well illustrated by charts and tables showing nerve-muscle reactions.

The last chapter deals with the education of the nervous system. We cannot agree with the author that "by virtue of their powers the cells adjust themselves to the new surroundings," or that in the very young memory is very poor. The most essential principle we need to impress on parents and teachers is that in the earliest stages the young growing brain is acquiring its co-ordination for future work at a great rate, and tending to retain the effects of all the impressions of the environment and of its training, which are largely under our control. The book is well printed, and contains 77 illustrations and 64 tables.

Contribution a l'Étude de l'Atrophie Musculaire Progressive Type Duchenne-Aran. [Contribution to the Study of Progressive Muscular Atrophy of the Duchenne-Aran Type.] Par Dr. J. B. Charcot. Paris: Felix Alcan. 1895. (Demy 8vo, pp. 159. With four plates. Fr.5.)

The object of this monograph, which is one of the publications of the *Progrès Médical*, is to show that primary progressive muscular atrophy still exists as a separate disease. Dr. J. B. Charcot traces out in a very interesting manner the history of this disease and clearly shows how, by the advance of morbid anatomy, it has been narrowed down by the elimination of primary myopathies, of peripheral neuritis, of syringomyelia, etc. To such a degree has this taken place that some authorities altogether deny its independent existence. Readers of the admirable account of spinal cord diseases by Pierre Marie, in the recent *Traité de Médecine*, will miss a separate description of progressive muscular atrophy as this distinguished observer has purposely omitted it. After giving a useful working division of the amyotrophies, Dr. Charcot relates in detail five cases of progressive muscular atrophy with one necropsy. The lesions found here are minutely described, and are such as are calculated to show the disease to be a primary affection of the anterior horns. The author also relates a case of subacute poliomyelitis with the morbid anatomy. In view of recent investigations it is interesting to note that there were considerable local vascular changes in this case. Owing to the resemblance of the case to ordinary progressive muscular atrophy the author thinks that there may be a subacute form of this disease. He draws particular attention to changes in the white matter found in the neighbourhood of the anterior horns (*faisceau supplémentaire*) in his cases, and compares them to similar changes described by other observers. He looks upon them as being a direct consequence of the lesion in the anterior horns.

This is an interesting monograph, based on personal investigation, well put together and written in the perspicuous style so characteristic of some of the best French clinicians. It is an important and apparently successful attempt to prove the separate existence of the disease in question. Coming as it does from the pen of the son of one of the chief founders of modern neurology, it naturally claims even more than the usual interest.

Handbuch der praktischen Gewerbehygiene, mit besonderer Berucksichtigung der Unfallverhutung. [Practical Handbook of Diseases of Trades, with especial reference to the Prevention of Accidents.] Edited by Dr. H. Albrecht, with many hundred figures. Berlin: R. Oppenheimer. 1895. Sections 4 and 5. (Pp. 157 and 161.)

The third and fourth sections of this important treatise on trade hygiene are before us. They do not complete the work as originally intended, but leave one section yet to be published. The subject matter of the two new sections scarcely addresses itself to practitioners of medicine. It almost wholly relates to sanitary engineering, and consequently will be especially valuable to medical officers of health and to factory inspectors who have a special interest in machinery, whose principal purpose and functions are to abstate the accidents and general drawbacks attending manufacturing operations.

The mode of construction and of action, and the purposes of such machines are copiously illustrated by a host of woodcuts, clear, and sufficiently explained to be comprehended by all who possess rudimentary knowledge of mechanics.

Chapters of wider interest occur, dealing with the ventilation and warming of workshops, with means to moisten the air and to remove dust, and with arrangements to secure warm food for operatives in specially constructed messrooms; with the construction and ventilation of waterclosets, lavatories, and washhouses; cooking apparatus, the construction of respirators, the appropriate clothing of workpeople, the making of protecting masks and spectacles, and many minor inventions to guard against the harmful incidents of trade processes, and the injuries arising from machines of all sorts.

In short, Dr. Albrecht and his associates, in producing this work on trade hygiene, have sought to make it exhaustive, omitting nothing from examination and illustration which concerns the sanitary well-being of artisans. Such a work demands a place as a book of reference in every public library, and as a valuable handbook in the libraries of sanitary engineers and medical officers of health. It shows how much time, patience, and study have been expended in Germany in developing the art and science of sanitation, and what great success has been attained.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

BEEF JUICE.

A sample of beef juice sent to us by Messrs. Fredk. Stearns and Co., 25, Lime Street, E.C., is a well made preparation having all the characters of a high class uncooked beef juice. It is readily miscible with water, rich in soluble meat constituents, and pleasant to the taste. Analysis showed that it contained 34 per cent. solid material, of which 6.5 per cent. was coagulable when the beef juice was heated, 14.5 per cent. meat extractives, and 10.5 per cent. of saline constituents, including added salt.

DIGESTIVE JAMS.

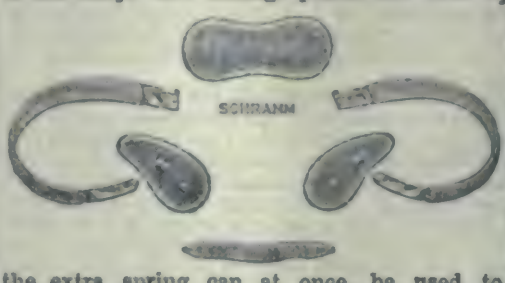
Samples of digestive jams prepared by a patented process have been submitted to us by Mr. W. Hodson, of Tadworth Farm, Epsom. It is claimed that by an entirely new process of manufacture these preserves have been rendered more easily digestible and therefore more adapted for consumption by invalids and others who are debarred from the use of jam prepared in the ordinary manner. The special feature in the preparation of these jams consists in partially neutralising the normal acidity of the fruit, and there is also an addition of pepsin. The results of our examination show that the jam so treated contained about 0.5 per cent. of free acid expressed as malic acid, or only about one-half the amount of free acid normally present in a well prepared jam; whilst the ash amounted to 0.3 per cent. The jam gave no indication of containing active pepsin. The samples were all of good flavour, well made, and from a dietetic point of view the idea of neutralising the excess of acid is a commendable one.

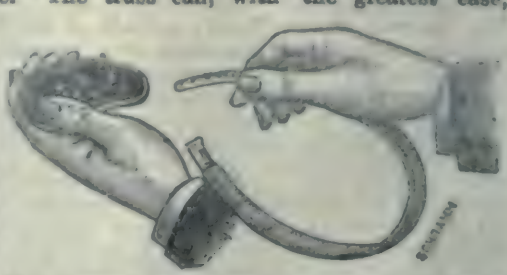
MATÉ OR PARAGUAY TEA.

Mr. Arthur Cumberland, of Catford Hill, S.E., has brought to our notice maté or Paraguay tea, for use by weak or dyspeptic persons and convalescents, for whom ordinary tea, coffee or cocoa would be unsuitable. The dried leaves of ilex paraguayensis, known as Brazilian tea, are extensively employed in South America as a substitute for ordinary tea. They contain theine, the same stimulating alkaloid that exists in tea, associated with a much smaller proportion of astringent or so-called tannin principle. An infusion made with maté in the same way that an infusion of tea is made by tea tasters in determining the value of tea was a pale-coloured liquor of aromatic tea taste, containing in 3½ fluid ounces 10½ grains of extractive. Its astringency was equal to rather more than one half that of an infusion made in the same way with ordinary tea and the theine amounted to 0.3 grain, or less than one third as much as that in a similar quantity of infusion made with ordinary tea. If the dietetic value of tea were proportional to the amount of theine present maté would not be likely in this country to supersede China or Indian tea with ordinary tea drinkers, but it may be useful in dyspeptic cases where ordinary tea is prejudicial owing to the so-called strength or large amount of astringent principle. To increase the usefulness of maté it has been prepared in the form of troches, tinctures, extracts, etc.

THE TREBLE SPRING TRUSS.

Dr. John Ramage has, after long endeavour, succeeded in designing a steel truss capable of having the pads shifted backwards or forwards, and in which the springs may be readily changed so as to afford a firmer or lighter pressure. This light and elegant appliance, suitable either for inguinal or for femoral hernia (which is made by Mr. Schramm, 24, Great Castle Street, W.), consists of a back pad joined by metal springs to two pads in front, and is constructed so that its several parts can be detached and any part can be changed or replaced. The truss can thus be made larger or smaller to meet the patient's requirements, and the springs can at any time be changed for stronger or lighter ones should the hernia increase or diminish in size. The back pad is hinged to the springs, and adapts itself to the spine, being thus conducive to the comfort of the patient, as its position is unaffected by any movements of the body. Dr. Ramage points out that by obtaining a double set of springs at a trifling extra cost the patient may guard against the danger of the truss suddenly becoming useless through accidental breakage, as the extra spring can at once be used to replace the damaged one. The truss can, with the greatest ease, be taken to pieces, and put together again without the aid of any tool. Mr. Schramm has also made for Dr. Ramage a special apparatus intended for use by the medical attendant, to measure a ruptured





patient for a truss. The limbs of this instrument are made of soft metal, and are joined to a back pad. The limbs slide upon each other in front in a metal groove, and one of them is graduated in inches. The instrument having been applied in the position thought suitable for a truss, and pressed into the shape of the subjacent parts, the number beneath the point of the unmarked arm is noted. The apparatus is then carefully removed and laid on a sheet of paper, and a pencil swept round its inner surface. Thus an accurate fit is ensured without the necessity of the patient paying a personal visit to the instrument maker.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

VIII.—LONDONDERRY WORKHOUSE INFIRMARY.

On arriving in Londonderry we at once sought out the medical officer, Dr. Browne, who kindly promised to show us over the infirmary on the following day. The house, which is of the second class, stands on a hill in the city. The grey stone building, on its platform partly of masonry and partly of natural formation, is a conspicuous object in the landscape, at any rate from the side from which we approached it.

The accommodation for the sick in the infirmary is insufficient for the needs of the union; it was crowded even in the summer. There were 67 patients in the wards, which was a little above the average for the time of year. The infirmary was built sixty years ago. The plastered walls are whitewashed, and the beams supporting the roof are rough and uneven, whilst on the ground floor the rafters are unceiled. Small windows on one side, with slit openings in the opposite wall, near the cornice, are the only channels of ventilation as well as of light, and there is no superabundance of either. For these 67 patients there is

One Nurse

by day, and she is untrained, so that it is a mere quibble to say that they are not nursed by paupers; there must be pauper nursing, or practically none at all. A night nurse, also untrained, has recently been appointed. The most serious class of cases is not often found among the patients, as some are taken to the County Infirmary in the city; yet our brief glance round showed us a bad case of jaundice, requiring careful feeding; bronchitis, which would be all the better for warmth, regular poulticing, and appropriate nourishment; heart disease in need of watchful nursing and rest; ulcers on the legs after confinement, requiring skilled dressing; and besides spinal disease, paralysis, and senility, patients who need handling and tending like an infant.

The Harrow Bed

is the only bed used in the wards, with straw ticks and pillows; a wide lining of wood is carried round the walls, so as to prevent the bedding touching the plaster; a bucket chair or two are in each ward, a table shelf for two beds, and some chairs. We also saw some box beds for helpless patients; these are filled with straw, which, in the case of a paralytic patient, can only be kept clean by daily renewal, a process costly to the ratepayers, and unhandy for the patient.

The Pauper Wardswomen

are chiefly women with illegitimate children, a special nursery being provided in the infirmary for these infants, that they may not be separated from their mothers. This arrangement deprives the infirmary of some space for sick beds. In this infants' ward were eight beds or cots. The infirmary nurse is lodged in a dark room, crowded with necessary furniture, and suggestive neither of comfort nor health. The surgery, a corresponding room, was equally unsuited to its purpose.

The Lunatics,

as this class is styled, though it consists mainly of feeble-minded and epileptics, are placed in a separate division of the infirmary. We were pleased to note a distinct improvement in the style of the arrangements made for them as contrasted with those of previously visited infirmaries. The cells are disused, and in lieu thereof the Board has provided dormitories, dining and day rooms, partly on the first floor of the infirmary wings. These rooms are light and cheerful; pictures, plants, and mats give some air of comfort, and we were informed that paid attendants had lately been appointed to each side. The condition of the lunatics in the majority of the workhouses is so scandalous that such slight attempts as these at a more humane and sympathetic treatment deserve favourable comment. We do not, however, mean to convey that the sanitation or the arrangements for the night are as they should be, but the nurse from the infirmary visits these wards during the night. The lunatics themselves looked comparatively clean and happy, and some had some slight occupation such as knitting.

The Aged and Infirm

are in their usual quarters in the end blocks of the body of the house. We noted in our round that there are no conveniences for the old people at night, except pails and buckets; and, furthermore, we ascertained that these wards are locked on the outside at 7 P.M., and not unlocked till 6 A.M. In conversation with one of the officers we were told that if by chance one of these dormitories is visited at night "the stench is very bad," the floor at times being soiled with excreta; as the officer remarked, "the old people cannot be blamed, as there is no light."

The appearance of these wards is not inviting. The harrow beds—about twenty in each ward—are close together; the walls are rough surface, colour washed, the rafters unceiled; a window at either end gives only a poor light through the long room; an old-fashioned fireplace added to the desolate look, and some pictures stuck on the walls did very little to redeem the general dreariness. There are day rooms leading out of the wards, having a long table and benches. In one of these a male inmate was making his toilet, a basin on the table and a scrap of looking glass being the apparatus. The females were in the dormitory, one old woman rambling in her talk; another with club-foot, whose most comfortable position was crouching on the ground. The old men and women and their wards looked cleaner and better cared for than in many other houses which we had visited. The master said that he wished the people in the neighbourhood would kindly send him old magazines and picture papers for his old people; he had not nearly enough for them.

The Fever Hospital

was built at a later date than the workhouse, but structurally is on the same lines. It is a self-contained building of two storeys. Four cases of scarlet fever were being nursed in the ground-floor wards; the long wards above were empty. Hair mattresses are in use on a few of the beds in this division; here, also, we saw a bath, and a closet with flush. The nurse (not trained) served for many years in the infirmary wards before she was tranferred to this section.

The Infants

are placed in a low building, forming one side of the square. The nursery is a long room with a boarded floor, a fixed bench running round the walls, and a staircase leading to the mothers' dormitory above. The room was tenanted by a solitary little mite crouching close to the fireplace, a true workhouse infant. There were a few wooden cradles at one side. From these insufficient data we were unable to form our own idea of the care bestowed on the infants, but the officer who accompanied us said that as the mothers would tell of one another if the infants' milk were taken, there was no fear of their not being properly fed. The room was clean, but very bare; the rough walls, raftered roof, small windows, and fireplace insufficient for heating the room in cold weather, were not suggestive of a nursery in the proper sense of the word.

The Sanitary Arrangements

are primitive; for indoor service, pails, buckets, or bucket chairs; these remain unemptied during the night. Though

In the infirmary the nurse may put the vessels outside on the landing, there is no closet indoors for the emptying of them. Outside are privies on the waggon system, the waggons being emptied daily on to the land. These places were kept clean as far as they could be. There is a service of cold water on the landings and a small sink for the rinsing of mugs, but there is no slop sink nor wash-up sink nor any bath. A basin and jug is provided for each ward, over which is hung a small roller towel, changed, we were told, "as often as necessary." The same provision for personal cleanliness is also made in the wards for the aged and for the lunatics. The water is drawn from the town supply; the sewage flows partly into cesspools and partly into the town supply.

THE LAUNDRY

is in many respects an improvement on others we have seen; there are drying closets heated by steam, the washing troughs are all provided with service taps, there is a copper in good repair, and the ironing room is over the washhouse. We were surprised at the absence of mangle and wringer; but these machines are evidently not much in favour in this country. In the kitchen all the cooking is done in jacketted boilers heated by steam, hence there can be no roasting or baking of the food. Soup was being prepared for the day's meal. The diets for the infirmary are cooked in the main kitchen, whence the food is distributed to the various sections on wooden trays.

RECOMMENDATIONS.

In accordance with our usual practice, we would gather together the points wherein there is urgent need of alteration, and it occurred to us that if the guardians could provide a separate building for the lunatic class, it would set free wards which might be utilised for the sick, and so relieve the congestion in the infirmary. But the crying need is a staff of trained nurses in sufficient numbers to supplant the paupers, who might be far more usefully employed in the domestic service of the house than in attendance on the sick. One nurse, and she untrained, cannot attend to 67 sick or helpless patients. Baths, closets, and a good hot and cold water service all over the place would lessen the labour and add to the efficiency of the nursing. Day rooms, by providing a place for the patients who are able to sit up, where they could have their meals, where the men might smoke, read, or play games, would diminish the crowding of the wards, and also keep them quieter for the more acutely ill. We would make the same suggestions for the improvement of the infirm wards, improved sanitation, and the brightening of the day rooms, the only home of the old people until they die. Considering the prison-like arrangement at night, there should be bells or telephones from every part to the master's house. Finally, the modern bed and bedding should supersede the harrow bed and straw tick, these latter being most unsuitable for the use of the sick, and being, moreover, liable to harbour vermin.

LONGFORD BOARD OF GUARDIANS.

The proceedings of this Board have been attracting much attention; there has been a difference of opinion between the guardians and the medical officer on the question of the nursing in the Fever Hospital. The matter is compromised by the Board advertising for an assistant nurse at a salary of £5 per annum! We quite agree with the guardian who remarked, "I don't believe you would get anyone who would pretend to anything for £5 a year—not even a servant girl." If the Board is in earnest in wanting an assistant nurse, this is not the way to set about it. Dr. Cochrane is rather extravagant in his demands; he asks for an attendant for the lunatics, and for better quarters to be provided for them than the existing prison cells; to engage an assistant nurse for the Fever Hospital, and to repair a leaky drain which discharges its contents under the infirmary windows. The medical officer is also dissatisfied with the style of labour employed to carry out these alterations, but as there are 8 males, exclusive of patients, in the house, the guardians think he surely might be content. It is only a detail that of these 38 there are only 14 under 60; out of these 14, 5 are crippled, 3 are attendants on patients, 1 is an escaped lunatic, and the residuum have the whole of the usual work to carry through.

We notice that our report on the Ballicborough Union is published in full in the *Cream Weekly News*. We hope it may have the satisfactory effect of bringing about the necessary changes.

INDEPENDENT TESTIMONY.

According to a note in the weekly edition of the *Irish Times*, an eminent M.P., a member of the present Government, has been making a personal investigation into the condition of the poor in the three kingdoms. The result of his visits to the workhouses in Ireland is thus summed up: "The opinion of this gentleman goes far to confirm much of what we have seen stated in the press and medical journals as to the wretched arrangements, or rather want of arrangements, that prevails in our Irish workhouses." We are very glad that public opinion is being directed to this matter, and on our part we promise to emphasise that opinion by the publication of the results of our Special Commissioner's visits to the workhouses of the country.

LITERARY NOTES.

Dr. MAX NORDAU has given his literary critics their revenge by the production of a novel, which is published by Mr. W. Heinemann.

We are asked to state that the Rebman Publishing Company, 11, Adam Street, Strand, will be the sole agents in Great Britain for the *American Yearbook of Medicine and Surgery*, which is to be published by Saunders, of Philadelphia, at the beginning of 1896.

The *Illinois Medical Journal* is the name of a new periodical devoted to medicine and surgery, to be published monthly at De Kalb, Illinois, under the editorship of Dr. H. E. Dunlop.

Since July of the present year a medical monthly, entitled *Cronica de Ciencias Medicas de Filipinas* has been appearing in Manila, under the editorship of Dr. Alfonso Maseras.

The editor of the *Quarterly Medical Journal* has arranged for a series of illustrated articles on "Health Resorts." The first of the series, on Harrogate, by Dr. J. Gordon Black, appears in the October number. The second article will be on Bournemouth.

The October number of the same periodical contains the text of Mr. Victor Horsley's introductory address delivered at the opening of the winter session of the Sheffield School of Medicine. The address concludes with the following passage, which we make no apology for quoting, as the highly gifted man to whom it refers was, owing to his contempt for the arts which are the stepping stones to what is called "success," little known outside the circle of his personal acquaintance during his life:

> If you ask me for a guide or example, I can at once, though not a believer in hero worship, point to one who was a striking instance of the powerful influence for good that some men evidently exert. I refer to the late Mr. Marcus Beck. He, on his part, was always fond of quoting the works of Guy de Chauliac, the best of mediæval surgeons, whose own description of what an ideal practitioner should be, presents his life and character as those of us who were his pupils and friends knew it, namely:
>
> Bold when sure,
> Cautious in danger,
> Kind to the sick.
> Friendly with fellow workers,
> Constant in duty,
> Not greedy of gain.

These words are now placed on the memorial to Mr. Beck in University College Hospital, and just as he showed us in his life how true they are, so let us also keep them before us to remind us what should be the character of our life's work.

Messrs. Macmillan and Co. have issued Dr. Lauder Brunton's Harveian Oration for 1894, "Modern Developments of Harvey's Work," in the form of a bound pamphlet. The substance of the oration was published in the BRITISH MEDICAL JOURNAL immediately after its delivery, but many readers will no doubt be glad to have in a convenient form the full text of an address which, like all that comes from Dr. Lauder Brunton's pen, is as readable as it is instructive.

A recent issue of the *Magazine of Music* contains an interesting account of the progress which has been made at Epsom College in the matter of music. For twenty-five years the work has been directed by the Rev. S. J. Rowton, Mus. Doc., and the department grew up gradually and, as it were, spontaneously. It has, however, now been organised regularly for a good many years. The chapel choir consists of sixty boys, and there are fifty-three boys learning various musical instruments. Careful rehearsals are held for an annual concert in Lent term, but the most popular musical event of the school year would seem to be the "house singing." The five houses engage in a musical contest, the competition comprising (1) solo singing, (2) chorus singing, (3) quartet singing. The whole of the musical work would appear to be voluntary, and the success which has attended the experiment of placing opportunities for instruction in their way is a pleasing example of the influence of the liberal arts in softening boys' manners and rendering them less "beastly," as a too literal translator once said.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 16TH, 1895.

THE GENERAL MEDICAL COUNCIL AND DIRECT REPRESENTATION.

THE approaching session of the General Medical Council will probably not be a heavy one, inasmuch as the number of penal cases is not large. There are, however, some other questions of great interest to be considered. The November session is that at which the resolutions passed at the annual meeting of the British Medical Association are received by the Council, and this year the registration of midwives and direct representation were the subjects of important resolutions. It is the latter question to which, we think, special attention should be drawn, for the resolution passed in London in August last, instructs the executive "to take immediate steps to have a Bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one direct representative to the General Medical Council." The Council of the Association in October directed that this resolution should be forwarded to the General Medical Council, with an intimation that the means for giving effect to the recommendation were under consideration. This is a grave position. It points to a possible conflict between the Association and the General Medical Council. The Act of 1886 provides that the General Medical Council may at any time represent to the Privy Council "that it is expedient to confer on the registered medical practitioners resident in any part of the United Kingdom the power of returning an additional member to the General Medical Council."

We wish that we could entertain the hope that this course will be adopted. On three separate occasion within the last five years the Council has deliberately rejected it. Twice they declined even to discuss the matter, and on the only occasion on which they allowed a debate they voted against any increase of the representatives of the profession by a majority of 21 to 5.

We must confess that this record makes it seem hopeless to expect any help from the General Medical Council. The Association fought for and won the recognition of the representative principle. After ten years' trial of it the profession declares it a success, and demands a larger representation. It is a just demand all round, but especially so as regards England and Wales; for we find that while Ireland has one representative for every 2,511 medical men, Scotland one for 3,224, England and Wales have only one for every 7,000 practitioners.

The General Medical Council has existed for nearly forty years, and for twenty-eight years the profession was denied any direct voice in its proceedings. All that time the fees levied on practitioners provided the funds for the Council's work. All that time the profession agitated against its exclusion, and protested that taxation should on constitutional grounds involve representation. All that time the active leaders in the Medical Reform Committee of the British Medical Association cherished the traditional knowledge that if there had been any register of the profession in 1858, the Act of that year would have given direct representation.

Those twenty-eight years in the wilderness of delayed justice, were, in 1886, rewarded by the tardy and inadequate concession of five elected representatives in a council of 30, in which the corporations possess 20 seats, or double the voting power of the independent representatives of the Crown and the profession. It only requires the bare statement of the figures to convince any unprejudiced person that direct representation is practically powerless against the interests of the corporations; bodies which the Council was created to control, and which, nevertheless, have the exceptional advantage of ruling the Council and receiving through their members the larger share of the funds to which they contribute nothing. It is not surprising that a very strong feeling exists that this position is intolerable.

We give the General Medical Council all credit for its great work in improving medical education and maintaining within its powers the discipline of the profession, but it is quite impossible that a constitution so absurdly out of keeping with modern ideas can be left unreformed. The very fact, generally admitted, that the direct representatives, even in their scanty number, have made the Council more active, especially in disciplinary work, makes the demand for a change all the more forcible. That change will have to be made. If made soon it may be confined to the comparatively narrow limits of the resolution of the annual meeting. But even now the opinion is growing that such an increase is quite inadequate, and that nothing but the power to elect a majority of the Council will be a just settlement.

At present by no combination of the other elements of the Council can the corporations be placed in a minority, and yet these bodies, of which more than half have no disciplinary powers over the men they qualify for the profession, practically control the only court empowered to remove a name from the *Medical Register*. The additional members asked for in the resolution of the Association would, we admit, increase considerably a Council which is possibly already too large. The size of the Council and the consequent costliness of its meetings is the only argument of any value that has ever been raised against the increase of direct representation. It is by no means insuperable. The Act of 1858 allowed two corporations to join in electing a single member, and that principle, which in spite of protest was departed from in the Act of 1886, must again be adopted. The present system gives comparatively unimportant medical corporations a voice equal to the greatest, and stimulates more than ever the policy of fighting for individual interests

which has been so well called "the battle of the shops." The Act of 1886, moreover, points out the way by which the amalgamation of corporations can be effected through the Privy Council, just as it points to the same way of increasing the members directly elected. That way is still open. If it is not followed, the Association is bound by the resolution to approach Parliament. In its own interests, as well as in the interests of the profession at large, we urge the General Medical Council by timely concession to avoid a conflict in which it cannot win.

MEDICAL WOMEN AND THE LONDON COLLEGES.

The Royal College of Surgeons, at its annual meeting on November 7th, followed the lead of the College of Physicians by voting against the admission of women to its examinations. At both Colleges the hostile majority was smaller than might have been anticipated. The Fellows of the College of Physicians who opposed the petition had a majority of 9 out of 109 votes; the Fellows and Members of the College of Surgeons on the same side had a majority of 10 out of 106 votes. The arguments brought forward in both the debates were mainly these: that, as the degree of the London University can be obtained by women, there is no practical hardship in refusing to them the licence and diploma of the Royal Colleges; that the practice of medicine and surgery is beyond the powers of women, even if they can pass the necessary examinations; that, if allowed to enter the Colleges, they might be elected to the Presidents' chairs; and that women have not up to the present time contributed anything important to medical literature.

With a view to these arguments being rightly estimated, the following facts seem to us deserving of attention. In 1894 twenty-six students entered the London School of Medicine for Women, and of this number twenty-three, or 88 per cent., proposed to work for the London University degree. No one contends that women are conspicuously stronger than men in mind or body. Is there any other school in London which could enter 88 per cent. of its students for the London degree with a reasonable chance of seeing them succeed? A large proportion of the 88 per cent. from the women's school will probably fail. Why should women be expected to do what men could not do? The London degree is practically an honours degree. The candidates must have exceptional abilities or they must put up with failures—possibly with many failures—and with spending seven or eight, or even ten years, in getting the degree. Why should the average woman have no choice but to work for an honours degree or to travel to Ireland or Scotland for her various examinations while to the average man the Royal Colleges in London offer what is wanted? Mr. Clement Lucas, in his courageous and excellent speech in the debate at the College of Surgeons, said that after examining at the London University for four years, he believed the average medical woman was sometimes below and sometimes above the average medical man. Clearly he had formed no distinct opinion as to any great difference between them. But when 88 per cent. from one school are contrasted with, perhaps, 10 per cent. or 12 per cent., or less, from other schools, the average attainment will naturally be lower where the least amount of selection has been made.

The assertion that women are not equal to the highest kind of practical work in medicine, surgery, or midwifery is difficult to disprove, considering the short time during which the medical profession has been fully open to women. As regards medicine proper no proof is possible. Evidence of competence can only be found in the success which individual women meet with in practice. As regards surgery and midwifery, two important pieces of solid evidence can be brought forward in support of the claim of women to be considered competent. The *St. Bartholomew's Hospital Reports* for 1893 gave a list of 32 cases of abdominal section performed in the hospital during the past year. Deducting one case, which was almost *in extremis* on admission, there were two deaths, a mortality of 6.2 per cent. During the same time Mrs. Scharlieb, of the New Hospital for Women, operated upon 34 cases of the same kind, and had also two deaths, a mortality of 5·8 per cent. The numbers are not large enough to be of any great value as statistics, but they are worth noting as evidence of competence. Turning to the question of the fitness of women for midwifery practice, the statistics of the Clapham and Battersea Maternity Charity should be noticed. The medical women in attendance there have conducted nearly 7,000 cases of childbirth; all the obstetric operations have been performed by women, and the total maternal mortality has been nine. Three of the nine deaths were due respectively to pneumonia, started two days before labour began, to erysipelas caught from a lodger whom the patient had been nursing just before labour, and to pulmonary embolism. Deducting these three cases, can six deaths in nearly 7,000 patients be said to show incapacity on the part of women for midwifery practice?

The alarm about seeing a woman possibly elected to the President's chair in either College does not appear to harmonise well with any distinct conviction of her unfitness to hold the diploma of the Colleges. Surely the Fellows may be trusted to elect as their head the most, rather than the least, approved of their body? Is it logical to refuse to admit women to the Colleges on the ground of incompetence and at the same time to urge that if so admitted there is reason to fear that they would be placed by the Fellows upon the honoured roll of their Presidents? Do the Fellows really require to be guarded against themselves to this extent?

It is true that women have so far concerned themselves with the practice of medicine rather than with scientific research or medical literature. It is not difficult to understand that the small number of hospital posts open to them, their exclusion from all the medical societies, and their sense of solitude within the profession would tend to make them slow to write and slow to speak in public on medical subjects. It is, moreover, not necessary to have written a book or to have made a discovery in order to be a good and trustworthy doctor. Very few solicitors, especially if they have a fair number of clients, write law books; why should all doctors be expected to write medical books, or even to write to the journals? How much did Sir Andrew Clark write? How much do the large majority of successful general practitioners write? The reserve which medical women have hitherto shown in this direction

may, in some cases, be cause of regret; but, probably, on the whole, it is in accordance with good sense and good taste. An epidemic among them of *cacoëthes scribendi* would be a much more serious calamity than any amount of reticence. Many of the books which issue year by year from the medical press are no doubt of value, but there are occasionally some that tend less to the profit of their readers than to that of their writers, and if women have refrained from adding to the number of books of this class it is to their credit. It will, perhaps, always be more difficult for medical women to work at literature or pure science than it is for most men. Their lives are more complex, they are more exposed to small interruptions, and they are not as strong physically. They cannot usually work as long as men can each day. They have to live by their work, and having done enough for this they must, in many cases, be content to pause. But even if future experience confirms this hypothesis, it will remain true that a woman may be an excellent doctor if she brings to the work she has chosen a sound practical knowledge of medicine and surgery, thorough honesty of purpose, good judgment, and the desire to minister, so far as she can, to the many varieties of human need with which she comes in contact.

Medical women have been already admitted to the British Medical Association by a practically unanimous vote taken amongst 16,000 members of the profession, among whom are included nearly all the Fellows of the Royal Colleges of England, thus reversing the decision of 1878. That the present decision of the Royal Colleges cannot much longer be maintained is indicated by the greatly reduced majority against the memorialists in both the recent divisions since the subject was last discussed.

THE SALE OF POISONS.

Within the last few weeks some important proceedings have been taken to give greater effect to the law relating to the sale of poisons, which has not hitherto been so thoroughly observed as we have on many occasions pointed out that it should be. The proceedings referred to being a natural outcome of the action taken some years ago by Mr. Ernest Hart as Chairman of the Parliamentary Bills Committee of the British Medical Association in regard to medicinal preparations containing poison, commonly and erroneously known as "patent medicines," their initiation affords evidence that the action then taken has had a beneficial influence, while the result now arrived at will conduce to the greater security of the public. The Act of Parliament commonly known as the Pharmacy Act, 1868, was passed "to regulate the sale of poisons" its provisions relating chiefly to retail sales and, in a minor degree, to the dispensing and compounding of poisons: it constituted persons registered in accordance with its provisions the only lawful vendors of poison by retail and, "for the safety of the public," it subjected them to certain obligations to prove their competence for selling, dispensing, or compounding poisons and likewise to observe suitable precautions in carrying out such work, under pain of liability to penalties if those conditions were neglected. In connection with the keeping of open shop for the sale, dispensing, or compounding of poisons, the use or exhibition of the term "chemist," or any qualified and equivalent form of that title, was reserved exclusively to persons registered under the Act, and the assumption of such titles by unregistered persons was made a penal offence.

It is very remarkable that, under these circumstances, the opportunity afforded for internal organisation of chemists and druggists has not been more generally taken advantage of to secure the objects of the Act and, at the same time, advance the interests of registered persons. But such is the case, and there is little doubt that the majority of chemists and druggists have regarded the provisions of the Act rather as interfering with the free exercise of their business than as affording a basis for its protection which might be developed by them almost to the extent of constituting a monopoly. The Pharmaceutical Society has actually been hampered in the performance of its public duty by the antagonism of the trade, and even of its own members, so that it was not until within the last three years that attempts were made to secure such due observance of the law as it is the duty of the Society in its public capacity to enforce. Laxity in the administration of the Act has led to very widespread disregard of its provisions by unregistered persons, and in addition to the sale of secret remedies containing poison, articles such as corrosive sublimate and potassium cyanide have been supplied in a manner dangerous to the public, by unregistered retail dealers styling themselves chemists in contravention of the Act.

The illegality of such practices has now been established by the Scottish High Court of Justiciary in two appeals against adverse decisions given by the Court of First Instance. The use of the title "chemist" by an unregistered person in connection with retail sale of poison is held to be within the statutory prohibition, even when that title is qualified by the words "photographic" or "technical," and one sale of poison by an assistant was held to render the unregistered proprietor of a shop liable to penalty incurred by keeping "open shop for retailing" poison. These decisions are in accord with those which have been given in English courts, and one of the judges before whom the appeals were argued expressed his opinion that the statute does not admit of any other interpretation. But the other two judges were somewhat disposed to take a different view, and in the course of the hearing one of them seemed to think the action of the Pharmaceutical Society was instigated only by a desire to create a monopoly in the spirit of trade unionism. Some Scottish newspapers take a similar view, in apparent ignorance of the fact that the Act imposes upon the Society the duty of regulating the sale of poisons in accordance with its provisions. The Society may be congratulated on the fact that such erroneous ideas are contradicted by the decision of the High Court of Appeal, and it is satisfactory to find that its efforts to bring about a more effective administration of the law relating to the sale of poison are being attended with success.

It is stated that Mr. Asquith and Mr. Corrie Grant have given an opinion adverse to any further action in the case of Miss Lanchester.

The Committee engaged in promoting a memorial of the late Professor Huxley finds itself divided in opinion, some members proposing to found a scholarship for the promotion of research, and the question has not yet been settled.

The Bradshaw Lecture before the Royal College of Surgeons of England will be delivered by Mr. N. C. Macnamara on Thursday, December 5th next, at 5 P.M. The subject will be Infective and Tuberculous Osteitis as Causes of Arthritis, and the Importance of their Early Treatment.

Sir Joseph Lister has been nominated by the retiring President and Council for election as President of the Royal Society. The election will take place at the anniversary meeting on November 30th. Professor Michael Foster has been nominated for re-election as one of the Secretaries, and among those nominated for election as members of Council are Sir Joseph Fayrer and Dr. W. H. Gaskell.

The Committee of the Oxford Hebdomadal Council has invited several ladies interested in woman's education to give evidence on the proposed admission of women to degrees. No action can be taken by Congregation until this committee has reported, and it is not expected that the evidence will be concluded much before the end of Michaelmas term.

LEGISLATION FOR HABITUAL DRUNKARDS.

A joint deputation from the British Medical Association Inebriates' Legislation Committee, the Society for the Study of Inebriety, and the Homes for Inebriates Association is to wait upon the Home Secretary at the Home Office, on Friday, November 15th, 1895, at 3 o'clock.

THE TEACHING UNIVERSITY SCHEME.

A meeting of the teachers of the medical schools in London has been summoned at the Laboratories on the Embankment for 5 P.M. on Wednesday next. A proposal will be submitted to sign and transmit a memorial to the Government at an early date, praying them urgently to take steps for the appointment of a Statutory Committee to carry out the recommendations of the last Royal Commission on the teaching university question.

THE REGIUS PROFESSORSHIP AT DUBLIN UNIVERSITY.

This appointment has not yet been made. We mentioned last week that an adjourned meeting of the Academic Council would be held on Friday, November 8th, to consider a technical point, but the summons was cancelled, and the nomination of Dr. Ball came before the Board on Saturday morning. Here a long discussion ensued, and in the end a division was taken on the question whether the nomination should be adopted. The voting was even, four voting on either side, so that the matter is for the moment at a standstill. It is hardly possible that the election can be referred back to the Academic Council, as that body has already declared in favour of Dr. Ball; and it is regarded as highly probable that a further consideration by the Board will only end in the same division. The latter body, however, will meet to-day (November 16th), and if no decision can be reached the question will be referred to the Chancellor of the University, the Earl of Rosse.

FURTHER INCREASE OF DIPHTHERIA IN LONDON.

The mortality from diphtheria in London showed a further increase last week, and, with one exception, was higher than in any week during the past two years. The deaths referred to this disease in the metropolis, which had been 61 and 72 in the two preceding weeks, further rose to 75 during the week ending Saturday last, November 9th, and exceeded by 32 the average for the corresponding week of the ten preceding years 1885-94. Of these 75 deaths, 55 were of children under 5 years of age, and 18 of young persons aged between 5 and 20 years; while only 2 were of persons aged upwards of 20 years. After distributing the fatal cases at occurred in the Metropolitan Asylums and other hospitals to the sanitary areas in which the patients have previously resided, it appears that 6 cases belonged to Kensington, 3 to Fulham, 6 to Chelsea, 6 to St. Pancras, 7 to Islington, 3 to Hackney, 3 to Poplar, 3 to Battersea, 4 to Camberwell, 6 to Greenwich, and 3 to Plumstead sanitary areas. The number of diphtheria patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last was 683, and 112 new cases were admitted during the week.

THE STUDENTS' UNION, QUEEN'S COLLEGE, BELFAST.

The erection of the Student's Union has been commenced. The total amount raised for this purpose is £8,000, and of this it is proposed to spend £5,600 upon the buildings, about £1,000 on the fittings and furnishing, the balance being left to provide a sufficient sum to tide the institution over the financial difficulties of the first few years of its existence. The plans, which have been prepared by Mr. Cochrane, C.E., of the Local Government Board, are much admired, and it is believed that the new block will be a very handsome addition to the fine pile of buildings belonging to the Queen's College. The Union will contain a large hall for the various College societies, which will be one of the principal features of the building. The contract provides that the Union shall be completed before September 1st, 1896. Subscribers who have not yet paid their subscriptions are requested to do so as soon as possible, as expenses have already been incurred. Remittances may be sent either to the Treasurers, Mr. T. Sinclair, D.L., and Mr. Adam Duffin, LL.D., Northern Bank, Belfast, or to any of the Secretaries, Professor Letts, D.Sc., Professor Macmullan, M.A., Dr. J. A. Lindsay, and Mr. R. T. Martin, B.A.

ANTISEPTICS IN FOODS.

The recent prosecution for selling orange wine containing a little over 3 grains to the pint of salicylic acid suggests the propriety of discussing shortly the general question of preserving foods by antiseptics. Wines are sulphured and doctored with salicylic acid, fluoborates and fluosilicates; to milk in hot weather all sorts of antiseptics are added, the chief being boracic acid, varied of late by the addition of formalin. Boracic acid or borax is also the favourite antiseptic for butters. It may indeed be stated generally that all decomposable articles not sterilised by boiling, or preserved from change by cold, are liable to be treated with small quantities of antiseptics. There may not be in any one article a percentage sufficient to cause, when given in a single dose, appreciable effect, but a person taking boraxed milk and butter for breakfast and tea, and a salicylated wine for dinner, will be consuming day by day a sufficient amount of active drugs to produce some effect on his health. Salicylic acid is a poison. In 1878 a case happened in which so small a dose as 3 grammes (46 grains) caused death in 40 hours; possibly the acid was impure. In three other cases in which decided and dangerous symptoms were produced the dose was much larger, being 15, 22, and 50 grammes respectively.[1] Salicylic and benzoic acids are, therapeutically, attenuated phenols. Phenol being most poisonous, then comes salicylic acid, and lastly, benzoic acid. It is no sufficient answer to accusations under Section 6 of the Sale of Food and Drugs Act to prove that single large doses of a particular addition have been taken by a number of persons without injury; nor indeed is it an answer if such addition is really proved to have been beneficial to health. The question is narrowed down as to whether the nature and quality was that which was demanded by the purchaser. An individual might have no objection to drink a salicylated liquid, always provided he knew that salicylic acid was there, but he would naturally feel aggrieved at buying an article which he believed to be pure if he found it to contain a foreign chemical substance. What

[1] Kobert, *Lehrbuch der Intoxikationen.* Stuttgart, 1893.

the effect of small doses of salicylic acid, say 5 grains daily, may be is at present a matter of conjecture; we know that most of it is excreted by the kidneys united with glycocoll, and also that it is a substance which readily enters into combination, forming a variety of aldehydes and esters, the physiological effect of which are not precisely the same as the free acid. It is conceivable that small quantities of salicylic acid when they come in contact with the intestinal and gastric juices are in this way changed. It is also possible that long bottling of a wine with salicylic acid will change the acid into salicylic ester or salicylic aldehyde. Schmitt, for instance, has found that although Rhine wines are sulphured the old Rhine wines contain no free sulphurous acid, the greater portion having combined with aldehyde, forming aldehyde-sulphurous acid. Be this as it may, the growing use of antiseptics constitutes a possible danger to health. Persons with sound excretory organs have for years daily taken chemicals of the kind in their food without injury, yet it can be confidently predicted that other persons with damaged or weak kidneys will be affected by minute doses. It must also be remembered that digestion in the intestines is carried on to a great extent by what, outside the intestines, would be recognised as a fermentative or putrefactive process. In short, just as the nourishment of a number of plants depends on the microbes around their rootlets, so the assimilation of our own nourishment depends to a large degree on the activity of hosts of colonies of microbes in the intestinal canal. All antiseptics, even in minute quantity, will inhibit the activity of these colonies or affect unequally various species, the net result in ordinary individuals being an impairment of digestion or an actual dyspepsia. The time has apparently come for some definite action with regard to antiseptics in foods and beverages. They should be absolutely prohibited unless a label be placed upon everything sold after being thus treated, stating the nature of the preservative in as large type as any other announcement. Then if the public like to take daily small doses of salicylic or boracic acids or of formaldehyde they can do so, but with the immense advantage of knowing what they are consuming.

UNDERFED SCHOOL CHILDREN.

At the end of last year the London School Board appointed a special committee to ascertain the number of children attending the school insufficiently fed, and to make suggestions in regard to providing any further remedy for the same. This committee have now presented their report, in which they recommend the keeping of a "continuous record" of all children receiving charitable meals through the agency of the school staff. A minority report is presented by Mr. Diggle and Mr. Sharp, which ends by saying, "What is needed for the work is not more book-keeping, but more generous sympathy." This raises the whole question of organised *versus* irresponsible charity, but surely it ought not to be impossible to retain all the benefit of the free gift, while gaining the indubitable advantages which may be derived from keeping a careful record of the recipients; and in fact the lines of philanthrophy suggested by the committee in their report should, we think, relieve them from all reproach on the ground of want of sympathy. Attention is especially directed to the change which has taken place in late years in the manner in which the pinch of poverty is most felt. It is pointed out that food is now so cheap and rent so dear that, whereas formerly actual starvation was the chief evil to be feared by the very poor, now the conditions have changed, and a family may be suffering severely from poverty, and may be deplorably situated with regard to house room, sanitation, and clothing, while yet able to obtain a sufficiency of coarse food. It therefore becomes apparent that if lists of those whom it is desired to help are carefully kept and carefully followed up, it may often prove that medical advice, a gift of clothing, or help to the breadwinner in obtaining or in keeping work, may do infinitely more good than even regular daily meals continued for several weeks. It is pointed out also that, in the economy of a poor household, help that may be relied on is worth many times more than a casual gift, and that much suffering may be caused if a meal is expected and not received. It is therefore urged that it is often better to grant meals for definite periods after consultation, if possible, with the parent, than to choose each morning the recipients of the day's tickets. A proper use of the "continuous record" will, it is hoped, also lead to the detection of many cases of neglect, not necessarily among the very poor, which at present go undiscovered. Such cases would call for the interference of the Society for the Prevention of Cruelty to Children, and in fact it is proposed to accept an offer, made by the Rev. Benjamin Waugh, to the effect that one of the inspectors of that Society should be appointed to a selected district, in which he may follow up the cases, in order that it may be seen how far the underfeeding of children is the result of parental neglect.

THE COST OF THE ANNUAL MEETING.

The Treasurer's statement of the receipt and expenditure of the last annual meeting of the British Medical Association is reassuring to towns and localities which have, we believe, been debarred from giving invitation for the ensuing annual meeting by the fear that after the lavish expenditure on the London meeting any subsequent meeting might show to disadvantage. It is, however, satisfactory to know that one half of the subscriptions received for this great assemblage have, notwithstanding the large expenditure on public receptions and on the dinner, been returned. There are also many items which would not enter into any ordinary meeting. Thus, the Ladies' Reception Committee cost £262, the badges for members £41. The cost of the local entertainments, which were arranged on a large scale, but of which the attendance was reduced by the unusual attractions of the great city, ran up to £624, whilst only £300 were received for tickets sold. This, of course, is not likely to occur elsewhere. £290 were spent on the dinner, in addition to the price of the tickets, and there were eighty-two guests. The expenses of the annual meeting, as a rule, bear a direct proportion to the size and importance of the centre, though something will depend on the amount of hospitality shown by the municipality and other public bodies. The annual meeting at Birmingham cost, in round numbers, £250; at Nottingham, £386; at Newcastle, £338; at Bournemouth, where the circumstances were somewhat exceptional, £649. The attendance is governed very much by the facilities of access, and not in proportion to the increase in the number of members of the Association. On the whole, the facts as to receipts and expenditure show that with ordinary care in an average town the expenses need not be at all considerable. We are glad to think that, although lavish expenditure on such an occasion well becomes this great and wealthy metropolis, it is by no means a necessary or even desirable element of the ordinary annual meeting of the Association.

THE SICK POOR IN IRISH WORKHOUSES: LONDONDERRY.

At a recent visit to the workhouse of the Londonderry Union our Commissioner found somewhat less squalor, neglect, and inhumanity than in other places previously seen. The feeble-minded and epileptics have paid attendants and comparatively comfortable quarters. The sanitary arrangements, though primitive, are not so indescribably foul as they appear to be elsewhere; but in spite of official denials, the nursing of the patients is practically in the hands of the paupers. Let our readers judge: There were 67 patients in the infirmary or hospital department on the day of the visit; for these there is one nurse by day and one (recently appointed) by night, the last having, in addition to her duties to the sick, the supervision of the feeble-minded at night. Neither of these women is trained. The

patients included cases of jaundice, bronchitis, ulcerated legs, spinal disease, and paralysis. It is obvious that the duties of the single nurse (for there is only one at a time on duty) must be largely confined to supervision; she cannot attend personally to the wants of 67 patients; and this, be it observed, is supervision of the incompetent, possibly of the unwilling, by the untrained. The pauper helps are mostly mothers of illegitimate children, not people whom, as a class, whatever may be said for an occasional individual, one would choose for a post of trust. What is likely to be the standard of nursing adopted by an untrained woman who has such assistants to depend on? All this is urged in the cause of humanity, but from the point of administration we wish further to note that only in the Poor-law establishments is the custom upheld of employing unskilled labour to do skilled work; the principle is faulty from the economic point of view, wasteful and impolitic, is the survival of a time when the general orders were more matters of experiment than experience, and yet, though experience decides against the custom, it dies hard.

THE COMING ASHANTI WAR.

The proposed military expedition against Kumassi will probably be a much smaller affair than that of 1873-74, when the town, after considerable fighting, was taken and destroyed. Promptness is, however, of the greatest importance, for, although the distance of Kumassi from the coast is not great, being, in fact, only 120 miles or thereabouts, the country is heavily wooded, and in the wet season very unhealthy to Europeans, especially along the lower levels. It is very desirable then that what work there is to do should be got through between the two rainy seasons. It will be remembered that in the last Ashanti war the capital was taken on February 4th, and burned on February 6th, but still the force employed was caught in the rains, so that there evidently is no time to be lost. What with Maxim guns, rockets, and repeating rifles, even a small British force need have but little fear as to the result, so far as mere conflict with the enemy is concerned, but these tropical expeditions are always to a large extent "doctors' wars," and in regard to the treatment of malarious diseases it may be doubted whether any advance has been made during the last twenty years at all comparable to the progress which has taken place in arms, material, and equipment. Much will depend on preventive measures, the choice of camping ground, a proper commissariat, and especially on pure water. The expedition must, of course, succeed from a military point of view, but the expense both of life and money will depend mainly on the medical department, and the extent to which its efforts are supported. We learn with satisfaction that a supply of portable Pasteur filters of large output, have already been provided for field use, and in adopting the means of purifying water now recognised as most reliable, apart from boiling, a repetition of the single blot on the Chitral expedition should be prevented. The further arrangements for the health of the force will be watched with interest, and in this doctor's campaign the Army Medical Department will have the best wishes of the entire profession. We have reason to believe that Surgeon-Colonel W. Taylor, now P.M.O., Dover, will be the Principal Medical Officer of the expeditionary force. Brigade-Surgeon-Lieutenant-Colonel Townsend and nineteen medical officers, A.M.S., of different ranks are under orders. A hospital ship will be equipped for the sick of the expeditionary force. Three hundred British troops are at present told off for the expedition.

THE CHILDREN'S INCUBATOR.

The Liverpool Workhouse Committee have decided to act on the recommendation of the medical officer that an incubator should be provided for infants. The doctor reported that many babies who were taken to the workhouse died from want of vital heat, and that with an incubator many lives might be saved. It was resolved to procure one to hold four children, which will be kept at a uniform temperature by means of hot water apparatus. There is no doubt of the utility of the incubator in the case of prematurely born children. Such children not only cannot withstand the influence of cold air, but cannot keep up their own body warmth. To keep them alive heat must be supplied to them. There are two incubators at present in the market. Hearson's "thermostatic nurse" is a most ingenious apparatus, by which the air in a box is kept at a uniform temperature by an automatic arrangement, which turns off the heat when the air gets hotter than a certain temperature. The apparatus can be adjusted so that it shall do this at any required temperature. This can be seen in action, hatching chickens, in the Regent Street shop any day. Applied to the rearing of poultry it acts perfectly. Its cost is about £20. In the case of babies its drawback is its cost, and that it is possible for a clumsy, meddling nurse to put the mechanism out of order. It is, moreover, a doubtful advantage for the nurse to think that she can put the baby in it and leave it for an indefinite time without attention. Auvard's is a simpler thing, and costs about £5. It is a box kept warm by hot bottles, or a hot water tank, underneath it. A thermometer in the box shows the temperature. Moist sponges prevent the air from getting too dry. A little louvre indicates that ventilation is right. The disadvantage of it is that hot water must be supplied every half hour. Hence, if used in private practice, there must be two nurses, a day and a night nurse. The expense involved in procuring an additional nurse makes the cost of the two incubators about the same. Some may think the necessity of such frequent attention to the child's requirements is a drawback, but some will hold it the reverse. The larger incubators used at the Paris Maternité, in which several children can be put, naturally do not need warming at such short intervals. Both incubators, Hearson's and Auvard's, were exhibited to the Obstetrical Society of London when they were first brought out. The child should be kept in the incubator till it is as large and as strong as an average full-time child.

DEATH OF DR. BATTEY.

Through Sir Spencer Wells we have received by cable the information that Dr. Battey died at his home, Rome, Georgia, U.S.A., on November 8th. His name is well known, for, like Pirogoff, Syme, Lisfranc, Porro, and others, it is associated with an operation. In 1872 he announced in the *Atalanta Medical and Surgical Journal* that on August 17th of that year he removed the ovaries, still in a state of functional activity, from a young lady who had suffered serious detriment to her health and peril to her life by reason of an excessive menstrual molimen, which was wholly unrelieved by the usual menstrual flow. Hegar, it is true, had removed the ovaries for intolerable ovarian neuralgia on July 27th, 1872, not a month before the date of Dr. Battey's operation. Of course, the latter authority knew nothing of Hegar's attempt, so the operation, like the discovery of the planet Neptune, may justly be credited to two different persons. Dr. Battey did not shun publicity. To him and to Hegar is due quite a new class of operation. Mr. Lawson Tait first removed the normal ovaries for checking hæmorrhage in fibroid disease of the uterus, on August 1st, 1872, a date midway between those of Hegar's and Battey's operations. The experience of over twenty years has shown that the removal of normal appendages has its uses. Altogether Tait's principle, in respect to his operation just noted, has prevailed, for many reliable authorities find that fibroids may be rendered harmless by the removal of the ovaries. The question is not absolutely settled. Some observers believe that some obscure morbid process occasionally goes on in ovaries where the uterus is subject to myoma, and it is then alone that their removal proves beneficial. Dr. Battey's practice has been extended, and, unfortunately,

much abused, nor do his principles find acceptance at the present day. He cannot be blamed for the pernicious zeal of others. In 1887, long after removal of the ovaries for neurosis had been widely condemned, he read an important statistical memoir at a meeting of the American Gynecological Society. His tables deserve scrutiny; they were drawn up on the most honest principles. Fifty four operations were recorded, 33 being written down as "cured," 8 "much improved," 5 "little improved," and 8 "not improved." Besides the tables a short abstract of each case was published in the *Society's Transactions*. As to the historical patient operated upon in 1872, Dr. Battey declared that she had been under his frequent personal observation for fifteen years afterwards, her health being completely restored. His supporters and critics must bear in mind his assertion, made in 1887: "The term Battey's operation includes this idea, namely, the importance of the artificial change of life as a remedy for disease, and is so generally understood and accepted by the profession, while the various synonyms 'oöphorectomy,' 'spaying,' 'castration of women,' etc., do not convey this meaning." The tables only include 1 case of myoma, which ought to have been excluded; 39 are put down as "chronic oöphoritis," but the pathological state of the ovaries is not explained. Hence most were probably cases where old inflammatory changes may have caused trouble, operation being justifiable; 4, however, of the 39 were associated with grave neuroses, and together with the remaining 14 represent a practice no longer in favour, neuroses such as epilepsy existing where the ovaries were presumably healthy. Nevertheless, Dr. Battey acted on scientific principles, and undoubtedly extended the area of abdominal surgery. Those who condemn his operation should bear in mind two facts. The greatest surgeons have advocated operations which, like Battey's, were only discarded when experience belied theory. The treatment of neuroses associated with the pelvic organs and of chronic inflammatory affections of the ovaries remains highly unsatisfactory. Since 1872 more than one method has come into vogue far more objectionable in many respects and not more successful. Dr. Battey was a sincerely pious man, and, like many of his countrymen, was a minister of the Gospel as well as a doctor. He was much respected in the city where he lived and practised.

DIPHTHERIA ANTITOXIC SERUM IN LONDON.

The supply of antitoxic serum by the laboratories of the Royal Colleges of Physicians and Surgeons to the Metropolitan Asylums Board for the treatment of cases of diphtheria was commenced on September 1st, and during the first five weeks 700 doses were delivered. Dr. Sims Woodhead hopes in future to be able to meet all the demands of these hospitals, which, however, are larger than was anticipated. In future, therefore, the hospitals of the Metropolitan Asylums Board will make use of this new serum, and the moment seems to be appropriate to urge on the Board the propriety of publishing with as little delay as possible a report embodying at least the statistical results so far obtained. We are informed that over six months ago the managers received an offer from the medical superintendents of their hospitals to the effect that they would be glad, after the lapse of a sufficient length of time, to present a joint report containing clinical observations and statistical tables, together with the conclusions which they might severally or collectively have reached. The medical superintendents appear to contemplate a very elaborate, and probably a very lengthy, document, which must take a long time to prepare. The profession will be very glad to learn the experience and the opinions of the medical superintendents, but it is, we believe, generally felt that the medical profession and the public have a right to ask that the experience acquired by the officers of the Board should be placed at the disposal of the profession within a reasonable time, and in particular that the statistical results should be made known. If it be true that these results have not been so favourable as the successes in the earlier months of the treatment gave reason to expect, there is all the more reason that the facts should be made public, and the reasons for a want of success, confined apparently to this country, ascertained.

MEDICAL MAYORS.

In the list of Mayors elected in the principal cities and towns of England last week we note the names of T. W. Thursfield, M.D., F.R.C.P., J.P. (re-elected for Leamington), and Dr. Townshend Chambers (Wareham). Dr. T. W. Thursfield is the son of a medical practitioner of Kidderminster, and was born in that town in 1839. He was educated at King's College School and Lancing College, and studied medicine at Aberdeen, where he took his Doctor's degree in 1860. After travelling extensively for some years he settled in Leamington, where he has lived for thirty years. Having become a Member of the Royal College of Physicians in 1861 he relinquished general practice. In 1882 he was elected Physician to the Warneford, Leamington, and South Warwickshire General Hospital, and he is Consulting Physician to the Leamington Dispensary, and to the Midland Counties Home for Incurables. In 1889 he was elected a Fellow of the Royal College of Physicians. He has been a member of the British Medical Association for nearly thirty years, and he is a past President of the Birmingham and Midland Counties Branch. Twelve years ago Dr. Thursfield became a member of the Town Council of Leamington, and last year he was unanimously elected Mayor. He is a Justice of the Peace for the county of Warwick and for the borough of Leamington. Dr. Henry Francis Townshend Chambers, the new Mayor of Wareham, studied medicine at the University of Edinburgh, and took the triple Scotch qualification in 1889. He is a member of the British Medical Association and a Surgeon-Lieutenant in the 1st V.B. Dorset Regiment.

THE DUTIES OF REGISTRARS OF DEATH.

We have received from Dr. Hugh Woods copies of a correspondence which has lately taken place between him and the Registrar-General in regard to a case details of which were given by him in a letter in our columns on November 2nd. The important sentence in the letter of the Registrar-General is as follows: "Registrars are instructed to report to the coroner, not only cases to which in their judgment suspicion attaches, but all cases of death by poison, drowning, burns, suffocation, fractures, contusions, cuts, gunshot wounds, and other injuries whether occasioned by accident or otherwise. This instruction applies to all cases, both those certified by a registered practitioner and others; and cases of death after an operation should certainly be referred to a coroner, leaving it to him to decide whether an inquest is or is not necessary. No reflection whatever on the skill of the medical attendant is intended by such reference, but the responsibility on a registrar of deciding whether a case should or should not be reported is a heavy one; and the Registrar-General is not disposed to censure any registrar for unnecessarily submitting a case to the judgment of a coroner. The Registrar-General would rather encourage all registrars to take this action in more cases as to which the slightest doubt rests in their mind whether they come within the category of deaths which must be so referred to the coroner; and, if necessary, he will take an opportunity of adding to the list of cases in the regulation issued for the guidance of registration officers, in which the reference to the coroner is to be deemed indispensable." Dr. Woods, in his reply, observes that the statement with regard to the reference of cases of death after operation to the coroner is amazing, and points out that such procedure would be most highly objectionable. We can hardly suppose that the consequences have been fully considered by the Registrar-General. So long as

coroner's methods are what they are, so long as the preliminary inquiry is entrusted to uneducated officers or to policemen, such a mode of procedure would be intolerable.

MR. CORONER WYATT AND THE POLICE.

An inquest was recently held by Mr. G. P. Wyatt on the body of an old man who, having got drunk in the Borough on a Saturday night between 9 and 10, was locked up until 5 A.M. on Sunday, when he made some complaint about his arm. The divisional surgeon was sent for, carefully examined him, and advised that his relatives should be sent for, and that he should be allowed to go out on bail. At this time there was, according to the evidence of the surgeon, no sign of any dislocation, but thirty hours afterwards, when the patient was admitted to St. Saviour's Infirmary, the right shoulder was found to be dislocated, and the right side of the chest and arm contused. The necropsy showed that the man was a drunkard, and the evidence of four police inspectors at the adjourned inquest, as well as the man's own statement to the surgeon, left no doubt that he was drunk on the night in question, yet the coroner allowed a charge to be made against the police of having arrested this man, "of very sober habits," on a charge of drunkenness; and, when asked if there was any police evidence, replied, "I believe not." As he had himself only to request the attendance of the police to be sure of having it, this answer was a little misleading to the jury, who thereupon began to make exclamations against the police. Mr. Wyatt would, we think, consult his own dignity better, as well as preserve the best traditions of his office, if he endeavoured to secure to all parties interested, on every occasion, a fair hearing.

THE SIZE OF FLUSHING CISTERNS.

In the inquiry which is in progress in regard to the demand of the London County Council that a larger flush of water than 2 gallons per cistern should be given to dwelling houses in the metropolis a great point was made of the large increase which the change would involve both in the amount of water and in the capacity of the drains. Mr. Pember went on to declare that nowhere was there greater waste of water than in London and nowhere were the sanitary fittings of the houses less perfect. In regard to the sanitary fittings we certainly sympathise with the water companies almost as much as with the tenants, but so far as waste is concerned we would point out than an efficient apparatus which will do its work thoroughly with one flush of even 3 gallons is much less wasteful than one ostensibly using only 2, but in reality requiring to be used again and again to produce the desired effect. A cistern which will not fill in the average time during which a closet is required certainly should not be accepted as efficient by the sanitary authorities, while one which will do so is sure to be used twice over if one flush is not effectual. Hence it appears probable that the waste complained of is partly, at any rate, due to the smallness of the cistern, and might be to that extent lessened by the provision of a better flush.

NURSES IN THE IRISH WORKHOUSES.

We cannot take up a newspaper without noticing how much the question of the nursing of the sick pauper is being pressed on the local authorities; we say "pressed," for we gather from a careful perusal of the reported proceedings at the guardians' meetings that as a rule these bodies regard the employment of trained nurses as an unwarrantable waste of the ratepayers' money. The arguments used are those that, having been worn threadbare on this side of the Channel, are now reappearing in new dress in Ireland: why change the order of things which has gone on for so many years? why provide a trained nurse when there are so many unemployed inmates who must be maintained in the house? why is the pauper to be nursed when the small ratepayer cannot have such a luxury? why have a nurse on at night when the inmates are so kind to each other during the night? and we are sorry to see that in many instances these arguments carry the day. As for changing the order of things, that is done every day to the manifest good of the community—witness the railways. Then the trained nurse is a distinct economy, as she does the work in a business-like manner and with economy of material, with the result that the pauper is cured, instead of being maintained by the rates for the rest of his life. The small ratepayer would be doing the best for himself if he came into the workhouse hospital to be nursed by the skilled nurse, thus averting an illness that may assume a chronic form. Whether the inmates are kind or not to each other at night is beside the question, though we take the liberty to doubt the assertion, but they have neither the knowledge nor the strength to perform the arduous work of night nursing; and moreover, we fail to see the advantage of skilled nursing by day if it is to cease with the evening.

ARGON AND HELIUM IN MINERAL WATERS.

Argon is reported to be present in some mineral waters, such as those of the simple thermal springs of Wildbad. Quite recently helium in addition to argon has been discovered in the sulphuretted waters of the Griffon spring, near Cauterets, in the Pyrenees, by Professors Bouchard and Troost, of Paris, who, judging by certain lines in the red and orange portions of the spectrum, infer also the presence of another unknown substance. We may remind our readers that on January 31st last Lord Rayleigh and Professor Ramsay read a paper before the Royal Society in which they discussed the nature of argon, a gas or mixture of gases which they have succeeding in separating from atmospheric air. One of the lines of evidence by which they proved the presence of argon in the atmosphere was that the density of "atmospheric nitrogen" was found to be higher than that of "chemical nitrogen" prepared from different compounds. This led to the conclusion that a heavy gas was present in the air. Many other lines of evidence helped to show that this heavy gas was argon. As the solubility of argon in water is higher than that of nitrogen, it is not at all surprising to hear that the former should be present in the waters of Wildbad and other waters fairly rich in nitrogen, both the nitrogen and the argon in these waters having in all probability in the first place been absorbed from atmospheric air. Indeed, one of the arguments confirming the discovery of argon as a distinct substance was that its solubility in water being said to be higher than that of nitrogen it was to be expected that the density of the mixture of argon and nitrogen, pumped out of water along with oxygen, should after the removal of the oxygen exceed that of atmospheric nitrogen—a conclusion which direct experiment showed to be correct. On April 25th and May 2nd Professor Ramsay read papers before the Royal Society on helium, a gas to be obtained from cleveite and probably from some allied minerals, lighter than any known gas except hydrogen. A comparison of the spectra of helium and argon showed that they possessed certain lines in common (chiefly in the red portion of the spectrum), and suggested that both argon and helium might be mixtures of substances, the coincidences in the red lines of the spectrum being due to their possessing some constituent in common. On the whole, it does not seem probable that a substance like argon, constantly present in atmospheric air, can when present in mineral waters exercise any special therapeutic effect or in any way help to explain the action of these waters. As regards the therapeutic significance of helium in mineral waters, it would be premature to say anything.

ITALIAN SURGICAL CONGRESS.

Serumtherapy in Tuberculosis.—Laparatomy in Tuberculous Peritonitis.

The tenth Congress of the Italian Surgical Society was held in Rome from October 26th to the 29th, under the presidency of Professor D'Antona, and it was attended by many of the leading surgeons in Italy. Professor Durante, the President of the Executive Committee, in his opening address, dwelt on the great importance of the Congress. Many interesting and able papers were read, and some of them gave rise to considerable discussion. The majority of the communications dealt with surgical tuberculosis and cerebral surgery. An important communication was made by Professors Maffucci and Di Vestea on Experimental Researches on Serumtherapy in Tuberculosis. The following is a summary of it: In the present state of the science, it is not unreasonable to suppose that Behring's law will eventually be applied also to the case of tuberculous infection, it being known that the high toxic power inherent in the protoplasm of the specific bacilli has a very important part in this infection. In the twofold condition created by the present knowledge on tuberculosis, of the almost impossible artificial immunisation of susceptible animals, and not having in mammalians a single species endowed with complete natural immunity, the most that can be done in our trials of serumtherapy is to elevate it as highly as possible in the species least susceptible to the virus and the specific poison. In the sheep it is possible to saturate the system with dead bacillary substance, perfect tolerance also existing in the direct immission into the blood of repeated and increasing doses from 3 to 7 milligrammes for every kilogramme of weight of the animal. The tolerance for the injections of living bacillary substance is undoubtedly less, which, although they do not generally render the sheep tuberculous, nevertheless provoke, through the inefficacious reactive conditions, the rapid disappearance of the virus from the organism, and this in the less vigorous and not altogether healthy subjects may in their symptomatic and anatomical complex signify a serious disorder of the general health. The physiological action of the serums of tuberculised sheep is remarkably different in guinea-pigs and rabbits. Thus while the guinea-pig tolerates without appreciable disturbance even 2 cm. per cent. of serum injected at one time into the peritoneum, much smaller doses produce the death of the healthy rabbit through very acute hæmoglobinuria, and 0.2 cm. per cent. is sufficient to kill, by the same malady, the tuberculous rabbit. Such dissolving properties on the red corpuscles of the rabbit are exhausted in time, so that in bleeding a sheep ten months after the last injection a serum is obtained completely inactive. The mixture *in vitro* of the active serum with the tuberculous virus in the proportion of not less than 4 to 1, weakened its activity, causing the death of the guinea-pig sensibly later than that of the control animals. On the contrary, the mixture in the body of the guinea-pig, that is injecting into the peritoneum an abundant quantity of the serum before the injection of the virus, had caused a more rapid production of the experimental disease. The serum in question has shown no positive prophylactic or curative efficacy against the experimental tuberculosis of the guinea pig. However, under its influence a certain slackening of the disease process was observed, through which the guinea-pigs survived for a long time the control animals, and, coinciding with this, there was a significant modification of the anatomical lesions. This modification consists in an enormous enlargement of the liver and spleen, due in the latter to hyperplasia of the follicles and the pulp, in the former to a classic form of hypertrophic cirrhosis, with grey tubercles, visible almost exclusively in the portal spaces; to which is added less extended caseation of the glands, with tendency to cicatrisation of the surrounding tissues, made especially by the epithelioid cells; no sign of caseation in the inflammatory foci of the lungs; very few bacilli are generally found. Taking everything into consideration, it appears to the authors that there is a great analogy between the effects of the serum of their sheep and the effects already attributed by Koch to tuberculin, inasmuch as the original poison of the latter, in passing through the organism of the sheep, is not much modified. Through which, and being still put more on their guard by the effects obtained on rabbits, they do not believe themselves authorised by the simple fact of the slackening of the disease process to try the action of their serum on man. For them, then, the problem of its applicability, or at least of Behring's law in the case of tuberculous infection, is still *sub judice*, and with the work done up to now they have only the pretension to have shown a more clear light as to the best and most promising way to the final examination of this very intricate question.

Professor Mazzoni read a paper on Thirty-six Cases of Laparotomy for Tuberculous Peritonitis. He had the opportunity of performing laparotomy in thirty five cases of tuberculous peritonitis, with thirty-three cures. In two cases he had repeated the operation eight and sixteen months after. The operation was performed once for intestinal tuberculosis, once for tuberculosis of the retroperitoneal glands; seven times there was tuberculosis of the uterine appendages, eight times pleuro-pulmonary tuberculosis, and sixteen times primary tuberculosis. Of those operated upon, two died seven and thirteen months afterwards, one after resection of a tuberculous knee, performed in another hospital. The other patients were living and in good health. He was content as a rule with opening the abdomen, and drying the liquid, without producing traumatisms, which he considered superfluous and sometimes dangerous. Anatomically and microscopically the form was that of diffuse tuberculosis, with very numerous typical tubercles. In the two cases in which he had operated twice, one for tuberculosis of the line of incision, the other for abdominal hernia, he observed alterations well worthy of notice. The greater number of the tubercles had disappered, the remainder were lessened, pedunculated with filiform peduncles, and with little nodules varying in size and form (round, pear-shaped); the adhesions had become thinner or were changed into filaments between the intestines and the various abdominal organs, the tubercles were projecting in the membranes. Microscopically the alterations produced by the operation were as follows: A phlogistic exudation had taken place around the tuberculous tissue, the consequence of the rich vascularisation non-existent before the laparotomy. This was demonstrated in the peripheral part of the nodules, constituted by hyaline reticulum, in whose meshes leucocytes were observed. Of the tuberculous nodules some disappeared, being replaced by a richly vascularised connective tissue, others by a process of cystic degeneration (vacuolisation of the tubercle). This may be held as the effect of a serous infiltration between the tuberculous elements, whence the formation of little cysts, which uniting through the progressive atrophy of the elements produced the cysts which completely substituted the primitive tuberculous nodules. The reading of the paper was followed by a long discussion, in which Professors Tricomi, Durante, Postempski, Cecchrelli, and others took part.

IRISH POOR-LAW MEDICAL OFFICERS.

Mr. Gerald Balfour, Chief Secretary for Ireland, received last week a deputation from the Irish Medical Association with regard to reform in the administration of medical relief in Ireland. The need for legislative provision for the retirement on pension of Irish Poor-law medical officers was urged strongly upon the attention of the Chief Secretary, and examples of the injustice done under the present system both to the poor and to the medical officers—whose salaries are quite insufficient to enable them to make provision for old age—were given. The necessity for reform in the workhouse infirmaries was also pointed out, the buildings and nursing arrangements considered adequate half a century ago being inconsistent with the health and comfort of the sick, and even with common decency. The abuses and shortcomings of the nursing system were dwelt upon, and it was suggested that Boards of Guardians should be empowered to borrow money for indispensable structural improvements. It was also urged that a Royal Commission should be appointed to investigate the present working of the Poor-law system in Ireland. The Chief Secretary gave the deputation the most

patient hearing and promised to give his most careful consideration to the whole subject.

We offer our congratulations to our brethren in the sister country on the success that has thus far attended their efforts to ameliorate the condition of the Irish pauper, and especially we have in mind Dr. Moorhead, to whose courageous and outspoken words this result is mainly due. If we take some credit to ourselves for having aroused public attention to the question as one result of our special commission we feel sure that our brethren will not grudge us this sense of satisfaction.

OPENING OF THE WINTER SESSION:

Belfast Royal Hospital.

The winter session of clinical teaching at the Royal Hospital was opened on October 31st, when there was a large muster of students. Nearly all the members of the medical and surgical staff were present. The opening address was delivered by Dr. Mitchell, one of the assistant surgeons, who chose for his topic, "Your Profession, and your Preparation for it." He welcomed the students to the renewal of their clinical studies, and was pleased to see present a considerable number of female students, for whom he believed there was ample room, both at home and in foreign lands. If any of those present had chosen their life-work without any clear idea of what it involved, or any proof of their fitness for it, he urged them at once to review their position, and, if necessary, drop out of the ranks, instead of developing into the well-known "chronic" medical student, and making a failure both of their examinations and their lives. For those whose decision was definitely taken, he urged a broader training than simply that of the medical curriculum. Society expected general culture from medical men, and was justly disappointed if it could discern no tangible fruit of their academic training. Among subjects of general interest, the history of their own country and their own times should occupy a prominent place. In coming from college to hospital for the first time, they should always bear in mind the distinction between plaster casts and dead specimens in the college museums and laboratories, and the highly sensitive human beings who constituted the material for clinical instruction. Their teachers, with every desire to afford the most ample opportunities to students, could not ignore the feelings of patients. The lecturer urged the vast importance of cultivating habits of thorough and systematic observation, on which so much of their after-success would depend. Finally, Dr. Mitchell urged his hearers not to commit the common error of devoting undue attention to rare diseases and striking operations, but to study patiently the more common affections which would constitute the bulk of their work in their future professional life. The address was listened to with much attention, and was warmly applauded at the close.

The staff of the Royal Hospital has been strengthened since last session by the election of Dr. Lorrain Smith as Pathologist to the institution. A new dead-house, pathological laboratory, and lecture-room are about to be erected at the hospital, and it is expected that the facilities for the practical study of pathology will then be ample.

St. Mungo's College, Glasgow.

The opening address at St. Mungo's College was given by Mr. Francis H. Napier, Ophthalmic Surgeon to the Royal Infirmary, Glasgow, who chose for his subject The Senses: their Use and Cultivation. In the course of an interesting review of the subject, Mr. Napier referred especially to the wonderful extent to which certain senses had been cultivated in persons deprived of one or more, instancing in particular the cases of Laura Bridgman, who was blind and deaf, and had nearly lost the senses of smell and taste, yet learnt to read and write and communicate with others, and to the case of Helen Keller, who was deaf and blind, yet, at the age of 7, learnt with extraordinary rapidity to read, to write, and to speak. The education of both these girls was achieved through the sense of touch alone. Mr. Napier then proceeded to discuss the extraordinary perfection to which this sense might be brought in the blind, and in dealing with this part of the subject he referred briefly to the "unrecognised sense" which the blind seemed to develop. "I have," he said, "personally no doubt—no one who has much to do with the blind can fail to recognise—that they possess a sense which is either absent or lying dormant in the sighted. A blind man who has been properly educated will walk along a crowded street, cross roads, and run up and down staircases with the greatest facility. I have seen dozens of blind men skating together and never coming into collision, which is more than can be said for their sighted brethren. A blind man when opposite an object can perceive whether it be tall or short, slender or bulky; he can detect a solitary object or a continuous fence. Mr. Hanks Levy says he can do all this and more; when walking along a street, he can distinguish shops from private houses, and even point out the doors and windows. He says that darkness makes no difference to him, but that a fog dulls his powers, that he seems to perceive objects through the skin of the face, and to have the impressions immediately transmitted to the brain. Covering his face with a thick veil destroys the sense altogether. He calls this unrecognised sense by the name of 'facial perception.'" Having given these and other examples of the unusual degree to which certain senses, and in particular the sense of touch, could be developed by education, Mr. Napier went on to impress on the students the importance of educating all their senses, but especially the sense of touch. At first the effort to make observations by sight and touch, which were at once comprehensive and complete, was an effort, but gradually it became almost unconscious. Mr. Napier discussed also the mental basis of sensation, and in bringing his address to a close he insisted that it was not sufficient for the brain to be a simple storehouse of impulses received through the senses—it must also be educated in order to give to these sensations their proper proportion and significance.

WELL-VACCINATED LOCALITIES.

Mr. Alex. Wheeler (Darlington) writes: Referring to your table appended to my letter in the British Medical Journal of October 19th, I would like to point out that in this table the town of Sheffield, vaccinated as much as it is possible, was afflicted with the small-pox so that 714 persons died of it, and that the city of Birmingham comes next, with equally well-vaccinated population and 211 small-pox deaths, and that Leicester has 8 small-pox deaths, all the 8 deaths being before 1884, and in the period when Leicester was vaccinating as much almost as the other towns. And since she has left off vaccinating she has only had a few units of small-pox deaths, while Birmingham has had a very large number.

Sheffield had almost all of these hundreds of small-pox deaths in the most insalubrious and evil-conditioned part of the city, and she has been spending money to improve these conditions to such an amount that it is no wonder that the small-pox deaths have been but few in the last epidemic. But Birmingham has still an immense amount of lee-way to make up in this matter of improved conditions, and she has been suffering to such an extent as to prove beyond all question that her maximum vaccination condition is of no use at all against the small-pox. In Sheffield the largest awards for Government vaccination were in the very quarters where the most small-pox abounded; and the private vaccination (so much derided as a protection) was most abundant in those parts of the borough that were most free from the small-pox.

Indeed, that old saying of the Austrians, that small-pox is a "beggar's disease," has been proved to be very near to the facts in the last epidemic. For it has been the low parts, the lodging-places of tramps, the poorly-fed unemployed—in a word, the badly-conditioned—who have gone to the small-pox hospital in the largest numbers.

Thus is a lesson of the plainest import spoken to us by the facts going on under our eyes, that if we will allow the existence of fever dens we must have small-pox, but that if we will clear fever dens away we shall have none, or nothing to cause the least alarm or danger to the public health.

Good, bad or indifferent vaccination has nothing to do with the prevalence of small-pox, and it would be proved to have nothing at all to do with the fatality either if we were to execute a most rigid examination of the vaccination register for all the confluent cases of small-pox.

*** Mr. Wheeler's letter gives us an opportunity of meeting an antivaccination argument on its own ground entirely—one that is seldom granted, by reason of the side issues so often raised. First, as regards the large number of small-pox deaths of late in Birmingham, we may state that in the recent epidemic there were in this admittedly "well-vaccinated population" only two fewer deaths in the unvaccinated minority (75) than in the major portion of the (well-vaccinated) community. Now, if we only allow 90 out of each 100 of population to have been vaccinated, then the 75 deaths in unvaccinated persons should have been not quite 8. On the other hand, had the vaccinated nine-tenths of the population suffered in the same proportion as the unvaccinated we should have seen, not 77, but 675 deaths amongst them. In respect of the mortality-rates in the two classes of sufferers, the epidemic of last year showed that, whereas there were in each 1,000 of vaccinated patients 44 deaths, there were no fewer than 335 in each 1,000 of unvaccinated patients. We need say no more under this head.

On the subject of insanitary conditions having had a preponderating influence on small-pox epidemicity in both Birmingham and Sheffield, we propose to look at the matter in each place separately. First, as to Birmingham, the published data enable us to contrast sanitation and small-pox in only one special particular, namely, on the score of the means at hand for the storage and removal of excremental filth. Dr. Hill has drawn attention to the persistence of the foul ashpit and other forms of privies in the city, all of the nineteen districts into which it is divided having these abominations in greater or less degree. All these nineteen districts had also small-pox attacks in greater or less degree. Proceeding to record for each and every district the number of houses—populations not being accessible—the number of privies, and the small-pox attacks in 1894; and then the rate per 1,000 houses of both privies and small-pox attacks; and going on further to look upon the rates for the whole city in each case (privies and small-pox) as 100, we have, in addition, set down in the table herewith what is the relation of privy and small-pox prevalence in each district to the entire city.

BIRMINGHAM: 1894.

District.	Houses.	Privies.	Small-pox Cases.	Rates per 1,000 Houses.		District Rates—City Rates being 100.	
				Privies.	Small-pox Cases.	Privies.	Small-pox Cases.
City	1[illegible]	41,429	2,074	425	19.8	100	100
All Saints* ...	[illegible]	3,[illegible]	[illegible]	4[illegible]	67.2	103	339
Rotton Park† ...	2,810	820	[illegible]	[illegible]	11[illegible].5	71	[illegible]
Ladywood† ...	[illegible]	2,[illegible]	127	[illegible]	21.4	1[illegible]	108
St. Paul's ...	[illegible]	1,372	[illegible]	416	[illegible]	[illegible]	[illegible]
St. George's ...	[illegible]	3,987	118	[illegible]	13.9	110	70
St. Stephen's ...	8,833	3,361	121	379	13.7	89	69
St. Mary's ...	[illegible]	2,[illegible]	[illegible]	441	13.2	104	67
St. Bartholomew's ...	5,194	2,415	59	[illegible]	11.4	100	58
Market Hall ...	5,031	1,646	39	[illegible]	7.8	76	40
St. Thomas's ...	5,034	2,125	61	421	12.1	[illegible]	61
St. Martin's ...	[illegible]	2,1[illegible]	48	[illegible]	[illegible]	91	44
Edgbaston ...	1,[illegible]	[illegible]	31	426	[illegible]	[illegible]	79
Deritend ...	[illegible]	3,147	44	[illegible]	7.7	[illegible]	39
Bordesley ...	[illegible]	4,[illegible]	44	[illegible]	[illegible]	[illegible]	24
Duddeston ...	5,957	2,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48
Nechells ...	[illegible]	2,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Balsall Heath ...	[illegible]	2,900	[illegible]	[illegible]	4.2	87	21
Saltley ...	2,466	1,080	[illegible]	[illegible]	[illegible]	[illegible]	44
Harborne ...	1,[illegible]	1,120	[illegible]	[illegible]	[illegible]	144	[illegible]

* Containing City Small-pox Hospital.
† Adjacent to City Small-pox Hospital.

We think the table very clearly indicates that privy nuisance and small-pox prevalence were nowise related, but that the one preponderating factor in determining the rate of small-pox incidence was proximity to the City Small-pox Hospital. And we may fairly claim that where the privy nuisance abounded, there too did accompanying insanitation abound. Indeed, Dr. Hill does not hesitate in his report to speak of enteric fever and privy conditions as being in close relation. We now pass on to Sheffield.

In Sheffield there was one factor in the nature of "sanitation" which had a determining influence on the prevalence of small-pox in one and another portion of the borough, and that factor was overcrowding. Whether on area as regards dwellings, or in houses as regards population, it will readily be conceded that with a disease of the high infectivity of small-pox, as with diphtheria or measles, there was likely to be most small-pox where there was most opportunity for mingling of sick and healthy, and especially where the housing of the people was of such sort as to necessarily bring many persons in close touch with the unisolated sick. To judge of the non-effect of sanitary conditions on small-pox prevalence, we have only to look at the data supplied by comparison of the rates of mortality from that disease and others in Sheffield. So we set out the facts in the second table herewith, choosing Sir George Buchanan's figures in his introduction to Dr. Barry's classic report on the small-pox epidemic of 1887-88. For the purposes of this table the epidemicity of the several diseases in the earlier period has been regarded as 100 in each instance, so as to form some common basis of just comparison; so that the fall in the table is always from 100, as also the rise shown.

Table showing Decrease and Increase of Rates of Mortality from certain specified Diseases in Sheffield during the later of Two Comparative Ten Yearly Periods—the Rates in the earlier period being for each Disease at each Age-group regarded as 100.

Diseases.	All Ages.	Under 10 years.	Over 10 years.
Measles	78	78	60
Scarlatina	73	72½	75
Whooping Cough	93	93	Nil
Diarrhœa	72	72	77
Diphtheria	39	33	50
"Fever"...	34	29½	39
Small-pox (16 years)	28	10	134

The table speaks for itself. We may regard, for the sake of a brief comment, "fever" as being the one disease of all others affected by insanitary conditions. This being so, we see that whereas the 100 rate has become only 34, at all ages, small-pox has fallen still further to 28. But in the case of "fever," the fall is distributed over both children and adults. Not so with small-pox. The fall is wholly in the first ten years of life. Nay, further, the fall is so enormous in the first decennium of life, that it has more, much more, than counterbalanced the large increase (the only increase in the table) in the later years of life. It is in the first ten years of life that primary vaccination exerts its chief influence of protectiveness against small-pox, and it is in this age period that small-pox has shown its chief, its only fall; and in this respect it is unique among the diseases in the table.

SMALL-POX AND VACCINATION IN WOLVERHAMPTON IN 1894.—XXIII.

DR. HENRY MALET, the health officer of Wolverhampton, in his annual report for 1894, has placed on record the facts concerning the limited outbreak of small-pox which occurred in that town in the three concluding quarters of the year, the cases totalling to 67, of which 62 are tabulated as occurring in houses in the borough, some few cropping up in the workhouse, etc. With the exception of these latter and 2 dubious attacks in the town, all the patients were isolated in hospital. But the isolation arrangements were not at all what could have been desired when the disease broke out in April of last year, and as one result of isolating the malady on the same site as scarlet fever patients, two of the latter caught the infection of small-pox, and in one of these instances the disease was conveyed to another member of the patient's family.

Few as were the cases, they still furnish evidence of the good influence of vaccination and revaccination. Treating of the houses in which the attacks were heard of, and dividing the town into two districts, Dr. Malet arrives at the following data for the whole town: In the invaded houses were

residing 272 persons, divisible into 241 vaccinated individuals, with 54 cases, 3 deaths, and 9 severe attacks; 21 unvaccinated persons, with 8 attacks, 2 deaths, and 8 severe attacks; and 10 revaccinated persons, among whom no case arose. Among the vaccinated the attacks and deaths were 22 and under 2 per cent.; but among the unvaccinated 38 and 9 respectively. Among the revaccinated, total immunity from even attack. At ages under ten years the rates of attack in the two classes were, vaccinated 8·5, unvaccinated 33·3; and at ages over 10 years the attack rates were 26 and 66·6 respectively. Not only so, but with the inclusion of 18 revaccinated persons attached to the small-pox hospital staff who escaped infection, we see that all the 23 revaccinated persons exposed to infection wholly escaped the disease. In the town the proportion of deaths among the unvaccinated community exposed to infection was nearly 8 times that of the vaccinated portion; and the proportion of severe attacks was 13 times as high. In regard to the power of propagation of the infective properties of small-pox, Dr. Malet states that any two of the severer unvaccinated cases gave off more infective material than all the 54 vaccinated cases together.

Here, then, we see complete immunity from the disease of all the revaccinated persons coming in contact with the malady, and the protective quality of primary vaccination in the first ten years of life strikingly exemplified. But Dr. Malet goes on to state very pertinently that if the whole of the vaccinated and the unvaccinated community had each been a separate social organisation, we should have seen a very different state of things from that now in evidence. Indeed we should. As society is to-day constituted it is the vaccinated members who to a large extent save the unvaccinated portion from the fearful ravages which but for the protected element would be seen among the growing numbers of our population who have not been under the surgeon's vaccinating lancet. It is in proportion as the unvaccinated element is found in the invaded households that small-pox obtains a greater or feebler hold on the inmates.

THE THREATENING EPIDEMIC OF INFLUENZA.

[Special Reports to the British Medical Journal.]

Deaths in London and West Ham.—Increased Prevalence in Surrey and the West Riding of Yorkshire.—Cases in Norwich, Manchester, Liverpool, and Halifax.

In view of the indications that influenza may be about to become epidemic once more this winter in London, we have thought it well to make some inquiries as to the existence of the disease in other parts of the country, and we are indebted to the medical officers of health of many of the counties and county boroughs for some interesting information.

First, however, we have to record an increase in the number of deaths from influenza in London. In the week ending October 19th the number was 8, in the succeeding week it was 4, but in the week ending November 2nd the number had risen to 7; in the week ending November 9th, 10 deaths in London were attributed to influenza. Of these, 5 occurred in North London (1 in Marylebone, 2 in Islington, and 2 in Hackney), 1 in Shoreditch, and 4 in South London (1 in Bermondsey, 1 in Putney, and 2 in Peckham).

The mortality from diseases of the respiratory organs has during the past few weeks shown a very rapid increase. During the past fortnight the mortality in London from these diseases has nearly doubled; for while the deaths referred to them were 235 during the week ending October 26th, they rose to 366 in the following week, and to 447 during the week ending Saturday last, November 9th. The latter number, however, exceeds by only 55 the average number in the corresponding periods of the ten preceding years, the mortality for many weeks previously having been considerably below the average; indeed, from the end of July last, the weekly deaths from respiratory diseases have been continuously below the average. With regard to the deaths from these diseases last week, it appears that the mortality from pneumonia showed the largest excess, the deaths attributed to this cause being 145, and 32 above the average; while the 230 fatal cases of bronchitis were 25 above the average number.

Last week 3 deaths from influenza were registered in West Ham, and Dr. Sanders, the medical officer of health, informs us that the facts which have come to his knowledge point to an epidemic. In Surrey it would appear that the disease which existed in nearly all parts of the county in March and April declined rapidly in May, and had almost disappeared in July. Dr. Seaton informs us that it was reported in four districts in August, in the same number in September, and in five in October. The returns for one district, Frimley, for that month show a distinct recrudescence, the disease being reported as "very prevalent." Dr. Philpot, medical officer of health for Croydon, informs us that though a few sporadic cases have been noted there are as yet no indications of a fresh epidemic in that borough, but in all preceding epidemics the prevalence in Croydon has commenced ten days or a fortnight after the disease had become established in London. He states that the first cases in previous epidemics have always been among business men going daily to London, and adds that the suburban trains give ample opportunities for spreading the infection.

The medical officer of health for Norwich informs us that there are distinct indications of an epidemic, but it is not as yet widely spread, nor are the cases pronounced. It will be remembered that certain parts of East Anglia were among the earliest districts attacked in the first epidemic of the present visitation.

There was 1 death from influenza in Manchester last week, and Dr. Nevin, the medical of health, informs us that deaths from respiratory diseases have been above the average during the last fortnight. The same is true of Liverpool, Dr. Hope reporting 1 death and a considerable increase in the death-rate from pneumonia and other pulmonary diseases. On the other hand Dr. C. E. Paget, medical officer of health for Salford, states that there are at present no indications that a fresh epidemic of influenza is commencing in that borough; and Dr. Sidney Marsden is able to speak in like reassuring terms of Birkenhead. Dr. Whitelegge, in his summary for the month of October, states that the increase in influenza and pneumonia in the West Riding of Yorkshire noted in September was continued throughout October, cases of influenza having occurred in twenty nine districts, as compared with fifteen in the previous month and ten in August. Dr. Ainley, medical officer of health for Halifax, has informed us that several cases of influenza have occurred there lately, with at least one death. In Leeds Dr. Spottiswoode Cameron states that there is nothing like an outbreak, and that no deaths from the disease have been registered this quarter, though there were 7 in the last quarter and 35 in the preceding quarter (second quarter of 1895). In Huddersfield Dr. J. R. Kaye states that there have been only a few sporadic cases, and we learn from Dr. Evans that there are no indications of an approaching epidemic in Bradford. In Hull Dr. J. Wright Mason has heard of a few cases in which the nervous symptoms were most marked, but there is no epidemic. In Lancashire, outside of Manchester and Liverpool, there do not appear to be any indications of an epidemic, though we learn of a few cases in Preston, Oldham, and Burnley, while Bolton is at present free. From Northumberland we learn that a mild type of influenza is prevalent in one or two districts only.

From Gateshead, Sunderland, Portsmouth, and Cardiff we learn that there is no reason to suppose that an epidemic is threatening, while Dr. H. M. Williams, M.O.H. Plymouth, states that it is now nearly four months since a death was registered there from influenza, the longest period of immunity from fatal cases since March, 1891. The Midlands, also, so far as our information extends, appear to be almost or quite free. One death, Dr. Alfred Hill informs us, occurred in Birmingham last week. Dr. Henry Neale reports a prevalence of severe catarrh and a good deal of pneumonia in Wolverhampton, but no typical cases of influenza; while Leicester and the county of Derby are believed to be quite free from the disease.

The most significant fact brought to notice, beyond the unmistakable recrudescence of the disease in London and West Ham, is that in the only two large districts from which we have been furnished with returns for a considerable period—that is, in Surrey and in the West Riding of Yorkshire—the disease, though not prevailing as an epidemic, has not, it would seem, been absent for months past, and that influenza would appear to have become endemic in these districts.

THE SANITARY CONDITION OF WINDSOR.

THE report by Mr. Bailey Denton on the sanitary condition of Windsor, which we published on October 26th, seems to have given rise to a certain amount of local irritation—as, indeed, it might well do.

Those whose negligence was so openly demonstrated were bound to do something, and, instead of undertaking the arduous but useful duty of reformation, they appear to have embarked on the easier course of abusing our witness and accusing him of animus. But the facts remain, and from information derived from other sources we gather that they are likely so to do. What is much wanted in Windsor is some real municipal spirit. If it is true, as we are informed, that while the people who live in the insanitary districts do not dare, the people who live near them do not care to raise any protest, or to memorialise the Local Government Board again, the matter becomes one of considerable urgency, for it is unlikely in the extreme that insanitary areas, such as were described in the report of Mr. Bailey Denton, can go on for long without acting as foci of disease and breeding spots for epidemics. It is no use pointing to the death rate as proof of healthiness. A crude death-rate standing by itself is but poor evidence one way or another of the healthiness of any place. The real question is, Have the recommendations given by the expert inspectors sent down by the Local Government Board been carried out? What has happened to the houses which they condemned? where do the slaughter-houses still stand? what is being done with the town refuse? where is there any sign of the slum areas being dealt with under the Housing of the Working Classes Act? and, lastly, what has become of the promises, made long ago, that if the Local Government Board would send down its inspectors their recommendations should be carried out? Windsor might be made into a charming place of residence, but it first must be made safe from a sanitary point of view; and however selfish people may be and however confident they may feel that they can live their own lives independent of all men, it is a fact to which the inhabitants of Windsor will probably some day receive a rude awakening that the existence of slum areas in their midst is a sanitary danger.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—A special general meeting of this Branch will be held in the Memorial Hall, Albert Square, Manchester, on Friday, November 22nd, at 3.30 P.M. Agenda.—Report of the council of the Branch on the Midwifery Nurses Registration Bill as drafted by a subcommittee of the Parliamentary Bills Committee. Report of the committee of the Branch, appointed on March 9th, 1894, "to watch the progress of, and to oppose any proposed legislation for, the registration of midwives." Mr. H. H. Preston will move and Dr. G. H. Broadbent will second: "That a vigilance committee of members of the Branch be at once elected, with power to add to their number, to watch the progress of any legislation for the registration of unqualified persons to practise medicine, surgery, or midwifery without the supervision of those already registered under the Medical Acts." Mr. Walter Whitehead will "call attention to the importance of modifying the management of the Association so as to give the members in general meeting assembled the control of the policy of the Association," and he "will move a resolution." Mr. Colin Campbell will move and Dr. J. Bramley Brierley will second: "That this Branch contribute £50 to the fund which is being raised to repay Dr. R. H. Rentoul his expenses incurred in defeating the first and second Midwives Registration Bills." Arrangements will be made for a dinner to be held at the Albion Hotel immediately after the meeting if at least thirty gentlemen notify their intention to be present to the Secretary before November 15th. Tickets (wine not included) 5s. each. Applicants for membership should at once communicate with the Secretary, JAMES BARR, M.D., Honorary Secretary, 12, Rodney Street, Liverpool.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held at the Town Hall, Walthamstow, on Thursday, November 21st, at 8.30 P.M. The chair will be taken by Dr. Daly, Vice-President of the district. Mr. Bowlby will read a paper on Diseases of the Throat and Nose in Childhood. Visitors will be cordially welcomed.—HERBERT E. POWELL, Honorary Secretary, Glenarm House, Upper Clapton.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—At the Medical Library, 5, Pembroke Road, Portsmouth, on Tuesday, November 19th, at 9 P.M., ordinary meeting. Gentlemen proposing to present any communication, case, or specimen are requested to inform the Honorary Secretary. On Friday, November 22nd, at 4 P.M., special meeting. Agenda: To consider the notices of motion by Dr. Pearse and Mr. Lord, postponed from the ordinary meeting of November 1st, and published in the BRITISH MEDICAL JOURNAL of October 26th, at p. 1069.—C. C. CLARKMONT, Honorary Secretary, 57, Elm Grove, Southsea.

SOUTH EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held at the Hospital, Hastings, on Thursday, November 28th, at 3.30 P.M., Dr. Allen (President of South-Eastern Branch) in the chair. Dinner at 5.30 at the Grand Hotel. Charge, 6s.; exclusive of wine. Professor Corfield (London) will give an address on The Water Supply of Towns. Mr. Papillon and Dr. Redmayne will show Ophthalmic Cases. Dr. Wills will read notes of a Case of Graves's Disease treated with Suprarenal Tabloids. Mr. Lamminman will speak on the Connection between Disease of and Operations upon the Female Pelvic Viscera and Effusion into the Pleura.—J. W. BATTERSHAM, Honorary Secretary, Bank House, Grand Parade, St Leonard's.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of this District will be held at the Kent and Canterbury Hospital on November 21st, at 3 P.M., Mr. Robert Hicks, of Ramsgate, in the chair. Tea and coffee will be served in the Board Room of the hospital after the meeting. All members of the South Eastern Branch are cordially to attend these meetings and to introduce professional friends. Agenda:—Dr. Gogarty: Pleuritic Effusion; Aspiration; Rare Sequelæ. Dr. Robinson: Poisoning by Boracic Acid in Milk. Dr. Tyson: Appendicitis.—THOS. F. RAVEN, Honorary District Secretary, Barfield House, Broadstairs.

STAFFORDSHIRE BRANCH.—The first general meeting of the session will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 28th. The president, Dr. Geo. Reid, will take the chair at 3.15 P.M. Agenda: Exhibition of Pathological Specimens. Living Cases. New Instruments, etc. Papers:—Dr. Maddowie: Pseudo-bulbar Paralysis. Dr. Hatton: Notes on a case of Nephro-lithotomy. Mr. Spanton: The treatment of Stricture of the Œsophagus by means of Expanding Bougies. Mr. A. V. Griffiths: A case of Inversion of the Uterus. There will be a dinner (6s., exclusive of wine) at 6 P.M., after the meeting.—F. MILNES BLOMER, Honorary Secretary, Stafford.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE first meeting of the thirty-ninth session of this District was held at St. Bartholomew's Hospital, Rochester, on October 18th, at 4 P.M., Mr. J. HOLROYDE in the chair. Eleven members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Next Meeting.—It was decided that the next meeting should be held in March, 1896, at Maidstone; and it was proposed by Mr. HALLOWES, and seconded by Dr. J. V. BELL, that Dr. F. Pritchard Davies, of Barming Heath, be invited to preside. This was carried unanimously. It was proposed by Dr. J. V. BELL that the dinner held after each meeting should be held only once a year. This was supported by Mr. HALLOWES and the CHAIRMAN, who proposed that the question be raised again at the meeting at Maidstone.

Communications.—Mr. ORMEROD read a paper on the Symptoms, Pathology, and Treatment of Congenital Dislocation of the Hip-Joint, in which he dwelt on the disappointing results obtained by mechanical contrivances, and advocated operation by exposing the joint, clearing out the glenoid cavity, and drawing the head of the femur into it, if necessary dividing the adductor muscles, and retaining the joint in this

position for one month. Mr. Openshaw stated that he had met with very favourable results. The paper was discussed by Drs. BELL and BRUNYATE, and Messrs. HALLOWES, HUGH SMITH, BRYDEN, and the CHAIRMAN.—Mr. HUGH SMITH read notes of a case of Graves's Disease and Myxœdema after Treatment with Thyroid Gland. The patient had been shown before treatment at the meeting in Maidstone in March, 1895, and then exhibited well-marked symptoms of myxœdema. Under six months' treatment with thyroid extract a marked improvement took place. Mr. Smith drew attention to the fact that several cases of exophthalmic goitre had derived benefit from thyroid extract.

Proprietary Remedies.—Dr. GROUND read a paper on The Position of the Government with regard to Proprietary Remedies. He pointed out the fictitious value given to proprietary remedies, all of which consisted of simple and well-known remedies (aloes appearing to be first favourite), or powerful poisons, which practically rendered the Sale of Poisons Act abortive. He instanced the chlorodyne preparations, which contained large quantities of morphine and chloroform, and yet could be purchased without any difficulty by the public because, being proprietary remedies, they were specially exempted from the provisions of the Sale of Poisons Act. He also showed that under the existing regulations with regard to proprietary medicines a great public injury was done, and the people left at the mercy of the advertising and unscrupulous quack; and that this country was far behind France in this respect, where the sale of secret remedies was forbidden, and Germany and Italy, where the composition of all proprietary remedies must be printed on the labels or wrappers of the box or vessel containing it, and sold only by chemists. The remedies suggested were: (1) Every proprietary medicine should bear upon each box, bottle, or packet in which it was sold a conspicuous label stating its composition; and (2) licence to sell patent medicine should be withheld from all persons having no real knowledge of the nature and action of drugs.—It was suggested by the CHAIRMAN and Dr. BELL that the attention of the Branch might be drawn to this question, but owing to want of time it was not discussed.

Dinner.—After a vote of thanks to the hospital authorities for the use of the Board Room, four members (the Chairman, Mr. Openshaw, Dr. Bell, and the Honorary Secretary) dined together at the Bull Hotel.

PERTHSHIRE BRANCH.

THE annual meeting of the Branch was held at Perth on November 1st, Dr. LEIGH HUNT, President, in the chair. Twelve members were present, and the SECRETARY intimated apologies from several unable to attend.

Confirmation of Minutes.—The minutes of last meeting were read, approved, and signed by the President.

New Members.—The following new members were duly elected: John Anderson, M.B., C.M., Pitlochrie; R. M. Clark, M.B., C.M., Royal Infirmary, Perth; Alexander MacEwen, M.B., C.M., Crieff; and David Melville, M.B., C.M., Bridge of Earn.

Election of Office Bearers.—The office bearers for the ensuing year were elected as follows:—*President:* Dr. Leigh Hunt, Perth; *Vice-President:* Dr. Macmillan, Stanley; *Secretary:* Dr. Urquhart, Perth; *Treasurer:* Dr. A. G. A. Campbell, Perth; *Council:* Drs. A. Thom, G. M. Robertson, Niven, Mackay, and Paton.

Report of Council.—The report of the Council was read, showing an increase of two members since the last annual meeting, and it was resolved to hold a special meeting for scientific purposes in the Royal Infirmary in January next.

Club Practice.—The SECRETARY submitted a circular letter as to club practice and other matters affecting the profession. The meeting passed the following resolution:

That this Branch expresses no opinion further than that recorded in their minute of November 2nd, 1894; and that it be now remitted to the Secretary to ascertain the opinion of members as to the propriety of holding a joint meeting in Perth, and to obtain guarantees for the necessary expenses of such a meeting; and, further, that it be remitted to the Council to arrange the details connected with any such meeting, or to name representatives to attend if it be held elsewhere than at Perth.

Treasurer's Report.—The TREASURER submitted his report showing a balance of £11 10s. 10½d. in his hands.

President's Address.—The PRESIDENT delivered an address on a Case of Puerperal Septicæmia, followed by Pelvic Peritonitis and Subinvolution ending in Recovery.

Communications.—Dr. FERGUSON described a case of Malformation of both Ears, and submitted photographs of the same, with remarks by Dr. Downie, of Glasgow.

Dinner.—The members afterwards dined together.

BORDER COUNTIES BRANCH.

THE autumn meeting of this Branch was held at Kendal on October 25th. Dr. SMITH (Dumfries) presided, and about thirty members and visitors were present.

New Members.—The following were elected members of the Branch: P. F. Sturridge and A. J. McCallum (Kendal), J. C. Carden and J. H. Seagrave (Milnthorpe), A. J. Newman (Bowness), G. R. Penrose (Burton, Westmorland), J. Kendal (Coniston, Lancashire), W. Wyllie and W. E. Ledgard (Kirkby Lonsdale).

Communications.—Dr. MCCALLUM (Kendal) showed a boy who had been cured of unusually severe Epilepsy by the use of enormous doses of bromide of potassium.—Dr. W. R. PARKER (Kendal) showed a Cretin recovering under the use of thyroid extract, and photographs of numerous Cretins before and after treatment.—Dr. W. B. COCKILL (Kendal) described a case of Albuminuria with atrophy of the optic nerve, closely simulating cerebral tumour.—Dr. WALKER (Kirkby Stephen) and Dr. MCCALLUM showed a number of microscopic sections of Mammary Tumours.—Dr. P. F. STURRIDGE (Kendal) communicated Notes on the Eyesight of 300 School Children.—Dr. A. J. NEWMAN (Bowness) read a short paper on Obstetric Statistics, a digest of 500 successive cases.—Dr. G. H. SEAGRAVE (Milnthorpe) read a paper on the Hypodermic use of Cocaine in Neuralgias.—Dr. TAYLOR (Kendal) described an instance of Bone-setter's Malpractice.

Dinner.—Twenty members and visitors dined together afterwards, the Kendal members and Dr. Newman being the hosts.—The PRESIDENT, in moving a vote of thanks to the entertainers, made special mention of the energy of Dr. Parker, who had charge of the arrangements for the meeting.—Dr. PARKER, in replying, said he hoped that Kendal or the immediate district would hereafter receive an annual visit from the Branch.

NORTH OF IRELAND BRANCH.

THE autumn meeting was held at Belfast on October 31st, 1895.

Confirmation of Minutes.—The minutes of the spring meeting were read and confirmed.

New Members.—The following new members were elected: Dr. Maguire, Dr. Hugh Fisher, Dr. A. A. Ferguson, and Dr. John Rusk, of Belfast; and Dr. Torrens, of Connor, and Dr. Wilson, of Galgorm.

Publication of Proceedings.—It was moved by Dr. GRAY (Armagh), and seconded by Dr. CALWELL:

That it is desirable to have the contributions read at the meeting printed and circulated among the members of the Branch.

In moving this resolution, Dr. Gray referred to the reports of meetings which appear in the JOURNAL, and expressed the opinion that they were not sufficiently full to be of service to those members who had not been present at the meetings. After some discussion, the following was moved as an amendment by Dr. LINDSAY, and seconded by Dr. STACK, and passed by a large majority:

That the Council be instructed to confer with the Council of the Ulster Medical Society with the view of determining whether a joint publication of the proceedings of the two societies is practicable.

President's Address.—Dr. STUART, the President (Ballymena), delivered an instructive and practical address on the Treatment of Purulent Collections in the Pleural Cavity. He gave the notes of several very successful and interesting cases which had been treated by operation by him. When he had concluded, Professor SINCLAIR expressed the pleasure which the members had in listening to an address on a subject of such wide interest and importance, and moved a vote of thanks to Dr. Stuart. This was seconded by Dr. LINDSAY, and passed by acclamation.

Communications.—Dr. DARLING (Lurgan) showed a patient from whom he had Excised the Scapula. He also exhibited

the excised bone, which was the seat of an Enchondroma. Professor SINCLAIR congratulated Dr. Darling on the success of the case and on the fact that this operation was the first of its kind in Ulster.—Dr. MACCORMAC read a paper on Nervous Troubles of Articulation and their Treatment.—Dr. STACK showed a Midwifery Forceps with a new form of Traction Rod. He explained that the idea was to render perfect the action of Nevill's traction rod.—Dr. R. M. FRASER showed a case of Ruptured Ligamentum Patellæ after Treatment. Drs. DARLING and FULLERTON made some remarks on the case, and Dr. FRASER replied.

SPECIAL CORRESPONDENCE.

PARIS.

The New System of Distribution of Patients in the Paris Hospitals.—Examinations for the Internat.—The Alcohol Question in France.

THERE has been a general meeting of the Paris hospital surgeons, at which the following resolution was unanimously passed: "The hospital surgeons claim for the poor sick the absolute right of choosing the surgeon they prefer to treat them. The said surgeons demand that the *circonscriptions hospitalières* be abolished." It was likewise decided at the same meeting to publish with this resolution a copy of the protest presented by the physicians and surgeons of the Paris hospitals to the Minister of Public Instruction in May last against the decree of the Director of the Assistance Publique concerning the hospital reforms approved of by the Prefect of the Seine on April 13th, 1895. The hospital surgeons and physicians expressed the belief that the Director of the Assistance Publique agreed with the views held by the Conseil de Surveillance, and that he was ready to carry out the reforms recommended in the Council's report. They are disagreeably surprised to learn that M. Peyron has changed his mind and adopts the views of the Municipal Council. Professor Lannelongue, member of the Chamber of Deputies for Gers, has explained the matter in all its details to the Prefect of the Seine, who appears inclined to maintain the views of the Municipal Council. Among all the arguments for and against the *circonscription hospitalières* there is a serious one against it. Since this system has been in force certain hospitals are overcrowded, and others are comparatively empty. At the Beaujon Hospital, being in a part of Paris where the inhabitants are all more or less wealthy, there are many beds untenanted. This is not the only hospital which, formerly full, now has wards sparsely filled. The Tenon Hospital is overcrowded. This evil result is of greater importance than the question of preventing hospital surgeons and physicians from satisfying their taste for their medical hobbies; one who has a predilection for liver diseases admitting those lucky sufferers and refusing all others; another pursuing the same policy as regards nervous diseases, and so on, *ad infinitum*. This objection, if it is an objection, exists undeniably; but the practice has a certain advantage, for it facilitates the study of special conditions, and thereby facilitates their cure: and, above all, does not empty one hospital to overcrowd another, which is a terrible indictment against the efficiency of any given hospital administration. The Conseil de Surveillance de l'Assistance Publique has met to discuss the question who is to see the hospital outpatients. M. Peyron, the Director of the Assistance Publique, proposes slightly to modify the new regulation, and allow all members of hospital staffs of ten years standing to give these consultations if they wish. Six members voted that all should have that privilege; five voted with M. Peyron. The Municipal Council and the Prefect of the Seine hold the same views as M. Peyron, who decidedly stated that when the question is again discussed at the Municipal Council, he will oppose the vote passed by the majority of the members of the Conseil de Surveillance de l'Assistance Publique.

Dr. Félix Regnault, in an amusing article in the *Médecine Moderne*, points out the defects in the system of preparing for the competitive examination passed by the candidates for the *internat* (posts of house-physician and house-surgeon in the Paris hospitals). He says the candidates neglect the hospital, neglect dissecting and operative surgery on the dead body. They read and re-read books impossible for them to master although they take notes and make extracts. The practice of meeting together to treat anatomical and pathological questions by discoursing on them during ten minutes after ten minutes' reflection M. Regnault considers deplorable. The listeners promptly interrupt the candidate when the ten minutes allowed for speaking are past, and then criticise and pull to pieces the lecture. The important point in these rehearsals of the real examination is not to exceed the ten minutes, this being also of vital importance when in presence of the real examiners. M. Regnault desires the examinations to be maintained because they oblige young men to work, but as at present arranged they oblige them to work badly.

The public interest in alcoholism and the questions connected therewith does not decrease; it reaches far and wide throughout France. M. Aiglave, Professor of the Paris Law Faculty, gave a lecture at Montpellier on the Rectification of Alcohol by the State and the System of State Monopoly he advocates. The lecture hall was crowded. Official notabilities scientists, and wine growers were present, with a considerable number of ladies.

ST. PETERSBURG.

A "Miraculous" Cure in Moscow.—Proposed Alterations in the Regulations for the M.D. Degree.—A Badge for Qualified Medical Men.—The Superstitious Murder Case in Siberia.—The Cholera Epidemic.

A "MIRACULOUS" cure has recently occurred in Moscow, where it has caused considerable excitement. It is, perhaps, a more than usually interesting instance, and therefore deserving of the permanent record given to it by Professor Kozhevnikof, who gave the details of the case at the last meeting of the Society of Neuro-Pathologists in Moscow. The professor had not had the patient under his treatment, but had seen him more than once both before and after the "cure." The patient, N. D., was a lecturer in the Moscow University. He had suffered from a severe form of sycosis menti since June, 1894, for which he underwent treatment at the hands of various specialists—among others, of Professors Kaposi, of Vienna; Schwimmer, of Buda-Pesth; Lassar, of Berlin; Pospiélof, of Moscow; and Stukovenkof, of Kief. In April last he returned to Moscow; his chin was then covered with a freely-suppurating eruption. He now sought the advice of a "wise woman," an attendant at the baths, who was in the habit of giving herbs and "simples" to her clients. In this case no such remedy was employed. N. D. was told to meet the woman next morning at 5 o'clock in the Temple of the Saviour, the colossal church on the Moskva river, which has been building all the century and is yet incomplete, in memory of the famous events of 1812. He came as told, and, while he remained a passive onlooker, the woman prayed for three or four minutes; the same thing was repeated that evening and again the following morning. But in the meantime the eruption on N. D.'s face had begun to improve; the discharge ceased, the swelling subsided, and in twenty-four hours scarcely a sign of disease was left. Such are the facts as given by the patient himself and confirmed by Professor Kozhevnikof. The professor, however, adds some important points bearing on the case: The patient is of neurotic temperament; his sister is highly hysterical; he had frequently had boils on both arms, with a marked tendency to symmetry in position; and the sycosis itself showed some signs of being, if not of nervous origin, at least under nervous influence. The impressive surroundings under which the "cure" was wrought, and the mysterious cabalistic prayer—which the woman refused to divulge, "lest it should begin to act with the person to whom she told it and cease to act with herself"—are also factors to be remembered in connection with the neurotic and impressionable character of the patient.

Eight Russian Universities—those of Moscow, Kazan, Kharkof, Kief, Yurief (Dorpat), Tomsk, Warsaw, and Helsingfors—and the Army Medical Academy in St. Petersburg grant medical degrees. Of these degrees there are two—those of *Ithar* and *Doctor Medicinæ*. Not very long ago the regulations for obtaining the lower degree were considerably altered, and

It is now proposed to make even more radical changes in the regulations relating to the M.D. degree. The main object of the proposed alterations is to raise the status of the degree. With this end it will no longer be, as now, a so-called "scientific-practical" degree, but a purely "scientific" or "learned" degree. The chief results of this change will be in connection with the extremely complex system of *tchins*, or castes, which in Russia determines the official standing of each profession and of every individual in it. These results need not be entered into here. But some other effects are worth noting. One is that fewer men will in future obtain the M.D. degree. Apart from the fact that it will be more difficult to obtain, it will no longer be necessary for certain important appointments. For instance, a *glavnui vratch* ("chief doctor," in entire control of the hospital, both medically and administratively) of any hospital will not be obliged to hold the M.D. degree, as under the present regulations. This will throw open such appointments to a far larger number of candidates. Another effect will be that under the new regulations only a specialist can become M.D. A candidate for the degree will have to select one of seventeen named specialities, and in this he will undergo a searching examination, as well as in certain subjects of general medicine. As at present, a thesis will have to be presented and publicly defended.

A bye question has arisen in connection with the recent and proposed alterations in medical degrees. Holders of the M.D. degree are entitled to wear a silver badge or medallion on their breasts—a double-headed eagle and two coiled snakes—the whole some 1½ inch in diameter. A *lékar* has no such badge to indicate that he possesses a learned degree. When recently a move was made by the veterinary profession for the right to wear a badge, it was suggested that the same right should be granted to *lékars*. It was pointed out that it would be scarcely fair (more particularly in a cavalry regiment) for the veterinary surgeon to wear a badge while the surgeon proper had none. It is probable that both will obtain the right to wear one in future.

In July last I sent a short account[1] of the trial of thirteen peasants (mostly, it seems, of the tribe of Votyaks) who murdered, in Central Siberia, a stranger whom they took for "the cholera." Their case has been submitted for consideration to a committee of the following experts: Professor Smirnof, of Kazan University; M. Bogaseski, the head of the Votyak school in Korlingan, and an ethnologist who has made a special study of the beliefs and customs of the Votyaks; M. Andreef, who has published a work on the same subject; M. Verestchagin, and Drs. Minkévitch, Kruisof, and Koshchcef.

The cholera epidemic is declining everywhere, except in Volhynia. There the figures for the two weeks ending September 23rd and 30th (old style) respectively were 1,448 cases with 608 deaths, and 1,453 cases with 582 deaths. In the same two weeks in the Government of Kief the figures were 31 cases with 24 deaths, and 28 cases with 13 deaths. Vladivostok is declared to have been free from cholera since September 25th (October 7th); and the Government of Podolia to have been free since September 17th (29th).

ROME.

Reopening of the University of Rome: Address by Professor Celli. —Professor Maragliano's Serum.

The inauguration of the scholastic year of the University of Rome took place on November 4th. The Rector, in his statistical statement for the last year, mentioned that the number of medical students was 796, which exceeded by 119 the number of the previous year. The inaugural address was given by Professor Celli, the Director of the School of Experimental Hygiene in Rome, who is also a Radical deputy. His theme was, "The Discouragements and Hopes of Social Hygiene." He described the evils produced in the working classes by insufficient and bad food. The Italian agricultural population lived poorly and with difficulty on maize, chestnuts, and even acorns. He referred to the injuries produced by malaria amongst the agricultural classes, and stated that in Italy they had over 400 000 acres of pestilential rice fields; goitre and cretinism attacked 145,000 peasants. He enumerated the injuries produced by precocious work in mines and factories; in the first where the children presented a painful affection of the bones; in the second where children under 9 years of age wasted their existence, and where anæmic and chlorotic women gave birth to generations of scrofulous and rachitic children. He described the insanitary conditions of the houses of the working classes in the cities and the country, deploring that the works of improvement undertaken by the communes, through economic necessities, had ceased since 1892. There was much to be done for hygiene in Italy; Rome, the city in which baths were the only medicine of the ancients, had not a single public bath. He alluded to the evils produced by alcohol—a sad palliative for bad alimentation. He spoke of the hopes for the future to be obtained by active legislation, provisions for safeguarding the public health, and by modern medical science. The address was loudly applauded by the crowded audience.

Since the Congress of Internal Medicine held in Rome last month, quite a war has been waged in a portion of the Italian press about the value of Maragliano's serum. This is due to two causes. In the first place the *Tribuna*, in its account of the discussion on serum therapeutics, stated that Professor Foà had admitted in his speech the value of Maragliano's serum. Foà wrote to the *Tribuna* denying that he had made such a statement. The matter was also taken up at the Congress by a young Roman doctor, who proposed that the Congressisti should record their votes in favour or against the serum. Wiser counsels, however, prevailed, and the members declined to express an authoritative opinion on the matter. The other cause is the publication of the decree of the Minister of the Interior, who, by the advice of the Director of Public Health, has prohibited the use of the serum excepting under the direct responsibility of the preparer himself. Some of the papers blame the Director for not going far enough, and say that it is the duty of the authorities to prevent the circulation of a remedy which has not yet been proved efficacious, and therefore they consider the partial permission given by them a mistake, whereas other papers, on the contrary, think the decree too stringent.

FLORENCE.

The Hospitals of Florence.—Antitoxin Treatment of Diphtheria in Florence.—Professor Maragliano's Serum Treatment.—General News.

Many institutions now engaged in active charitable work in Florence date their origin from the 12th and 13th centuries, and successive generations of Florentines have carried it on, in many cases without intermission, down to the present day. Hence we find bacteriological research and modern methods of treatment, antisepsis and hygiene, carried on side by side with traditional usages in buildings which carry the mind back to early mediæval times. There is not a single modern hospital in Florence; the new hospital for children is without the walls. Among the records of early charitable institutions of Florence are those founded by the Knights Templars and the Knights of the Order of St. John of Jerusalem in the 12th century. Then a leprosy hospital was founded by Vinciguerra Donati in 1186. Soon afterwards, in 1192, the hospital of Santa Maria was founded, but was converted into a foundling hospital in the 13th century. The principal hospital of the present day, Santa Maria Nuova, was founded in 1288, and about the same time the captains of the Bigallo determined to preside over the hospitals in order that the sick should be tended with brotherly love; the captains of Or San Micheli took into their charge orphans, the destitute and widows, and the Brotherhood of the Misericordia undertook to transport invalids to the various hospitals, and the dead to their last resting place. This brotherhood is still performing the same work of mercy, and may be daily seen robed in long white gowns which completely cover the head, and are only pierced with eyelet holes, traversing the streets of Florence with their living or dead burden. In 1340 Villani's history records that there were more than 1 000 beds for the sick poor in Florence. At the end of the fifteenth century there were thirty-five hospitals, some special, some general, and some to give shelter to the destitute. All these institutions were established by the various guilds or privately endowed, and

[1] British Medical Journal, p. 110.

if all the wealth left to Florence had been preserved to its original destination, it is said that half Tuscany would belong to institutions for the relief of the poor. In early days the moneys left to the poor generally reached their destination, a contrast says Pastarini, with present times, when much of that which was intended for the poor finds its way into the pockets of the employees of charitable institutions. Many of these charities were suppressed by the Council of Regency in 1720 and many more by Peter Leopold, who wished to centralise public institutions in the State. At the present day most of the hospitals are directly or indirectly under Government control.

Professor Mya, physician to the children's department of the hospital of Sta. Maria Nuova of Florence, gives his results of the antitoxin treatment of diphtheria as follows: The cases admitted between October, 1894, and October, 1895, number 112. All cases were verified as diphtheria bacteriologically. The rate of mortality was 18 per cent. Of cases demanding a recourse to tracheotomy, the mortality fell from 50 to 27 per cent. His method is to give one daily injection of serum for three days running, and he finds that this often suffices. He finds the treatment fails in the following classes of cases: (1) those in which the pharyngeal diphtheria is associated with early and serious affection of the submaxillary glands; (2) those in which the disease tends rapidly to involve the lower respiratory passages. The temperature is not a reliable guide to the adoption of serum treatment, as bad cases are frequently associated with a low temperature.

The following physicians record cases of phthisis treated by Professor Maragliano's method: Dr. Fusano, of Naples, records 1 case of marked phthisis which is rapidly improving, and promises to heal. Dr. Marucci, of Rome, records 12 cases which he divides into two groups: (1) those in which febrile reaction is marked; (2) those in which febrile reaction is not marked. Results: In all cases the fever has markedly diminished or disappeared; cough and expectoration have decreased; appetite and well being have supervened; weight is increasing. Dr. Rao, of Palermo, records 1 case which is rapidly improving under treatment. The tendency in Florence appears, however, to be to regard the treatment as of doubtful utility.

The King of Italy recently visited the Institution for Rachitics in Turin. In the afternoon he went to their Alpine colony. He spoke to many of the young people, and expressed his high satisfaction at the condition of the institute. He afterwards visited the Policlinic.

CHICAGO.

Local Depôts of Diphtheria Antitoxin.—Mississippi Valley Medical Association.—Death of Dr. John S. Clark.—The Medical Schools.

The Health Department has followed the New York City plan of establishing local depôts throughout the city (about fifty in number) for the distribution of diphtheria antitoxin. As yet, it may be said, the experience in Chicago is similar to that of London—namely, there has been no marked decline in diphtheria mortality; and the number of cases seems quite unchanged. Indeed, with the commencement of fall school again, and the return of thousands of children to the city after a summer vacation, the disease is noticed to be on the increase. Experiments as to immunisation by the use of antitoxin have thus far not been at all extensively taken up. Indeed, we have no large children's hospitals wherein an extended use of the drug could be given.

As hinted in a former letter, the meeting of the Mississippi Valley Medical Association held at Detroit, Michigan, September 3rd to 6th, was well attended and of interest to those giving their time to the sessions. This Association could be one of considerable importance but for two reasons. The first is its silent opposition to the national body, the American Medical Association. Becoming a member of the one disinclines one toward membership of the other; and the Mississippi Valley Medical Association, being the younger organisation, and working with ardour in the richest and most densely populated and progressive part of the country, has constantly alienated a large body of men from the parent society. If it can keep on doing this with satisfaction to its membership, well and good so far as its life is concerned, but "there's the rub," and here enters the second obstacle. The leaders in the younger body are "soreheads" from the older one. They are bright men, but for reasons best known to themselves they have stepped aside from the American Medical Association, and are now the pushers in the new organisation. The truth of the matter is that the Mississippi Valley Medical Association, as a social organisation of physicians, is a success and may for a time continue so, but as a representative scientific body it is a very decided failure.

Dr. John S. Clark, one of the oldest practitioners of Chicago, and an obstetrician of recognised ability, expired suddenly from angina pectoris early in September. Dr. Clark not only occupied a high professional position, but was also a connoisseur of high-class art, a bibliophile, and had decided musical talent. He ever delighted in his fine collection of paintings, in his books, and in a large number of fine old violins; at the same time he was always ready to attend a woman in labour or relieve another in physical distress.

Colleges open soon, and there is already promise of a continued large attendance, notwithstanding the fear in some quarters that the inauguration of the four-year course would considerably decrease numbers. A new departure occurs this year in the examination of students entering their medical course, not dissimilar to the English requirements, namely, in the State of Illinois all students matriculating at medical colleges must first pass an entrance examination before a body of examiners taken from the State University and the State Board of Health, and who are not connected with the teaching force of a medical college. This will, it is hoped, very materially raise the standard of those entering upon the medical course.

CORRESPONDENCE.

THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—I shall be glad to avail myself of your kindness to acknowledge in the columns of the BRITISH MEDICAL JOURNAL the sums already received in answer to my appeal of November 9th, and to thank most heartily those who have so promptly come to our relief. In several cases members of the British Medical Association have sent us the half of their subscriptions returned after paying the expenses of the meeting in London last summer, and we should have reason to be very grateful if this example were followed by others. The present embarrassed state of the fund is caused, not by a falling off in the subscriptions, but by the non-arrival of large donations, which are always an uncertain source of income.

	£	s.	d.		£	s.	d.
Sir Joseph Lister	20	0	0	Brigade Surgeon Clarke ...	1	1	0
Dr. Horrocks	2	2	0	Messrs. Curtis and Co.			
Dr. Bowlan	0	10	6	(subscriptions)	1	1	0
Lennox Browne, Esq. ...	2	12	6	A grateful patient of Mr.			
Dr. Douglas Powell	10	0	0	Jabez Hogg	5	0	0
Patmore Sheehy, Esq. ...	20	0	0	T. D. Ransford, Esq. ...	5	5	0
T. Charters White, Esq. ...	1	1	0	Dr. Haviland	10	0	0
Dr. Kelly	5	5	0	Dr. Swain Scriven ...	1	1	0
Dr. Barnes	10	0	0	One who has benefited, per			
Beta	10	10	0	Dr. Swain Scriven ...	0	5	0

Besides these may be mentioned a donation of £21 from Mr. France, a member of the Committee; £5 from Mrs. Cæsar Hawkins, in addition to a previous donation of £10 10s.; and £10 10s. from the Treasurer.

Subscriptions and donations may be sent to the Treasurer or to the Honorary Financial Secretary, Dr. Samuel West, 15, Wimpole Street.—I am, etc.,

Brook Street, W., Nov. 12th. W. H. BROADBENT.

SIR,—Sir W. H. Broadbent's letter in the BRITISH MEDICAL JOURNAL of November 9th tempts me once more to ask the question, Cannot some united action be taked by the Branches of our Association which will render such appeals to the profession unnecessary? With a little tact on the part of secretaries of Branches a large proportion of the members might be induced to give a subscription of five shillings a year each to this fund. This is a small consideration to each member, but in the aggregate, assuming our British membership to be 10,000, there would be a total sum of nearly £1,000 obtained

for this fund with very little trouble. We are approaching the end of the year. Let an earnest appeal be made to the Branches to ask for this five-shilling subscription with the coming year, and I am sure the result will be satisfactory. More than ten years ago I got a resolution passed that each member of our Branch should be asked to give this sum annually, and the result has been that between £33 and £34 has been sent up to the fund every year, representing a subscription of five shillings willingly paid by nearly three-fourths of the members.—I am, etc.,

Cardiff, Nov. 11th. A. SHEEN,
Hon. Co-Secretary, South Wales and Monmouthshire Branch.

P.S.—Such a scheme as this would not in any way interfere with the wishes of those who may be more generously disposed towards this fund.

SIR,—Having, in the BRITISH MEDICAL JOURNAL of November 9th, read the urgent pleadings of Sir William Broadbent on behalf of the British Medical Benevolent Fund, I have had the pleasure of sending to him the half of my contribution to the Arrangement and Reception Fund returned to me from the surplus after all expenses were paid. I offer as a suggestion that if those of us who subscribed to that fund returned their moieties to the same destination much valuable aid would be rendered to a most deserving charity. In this way probably about £1,000 might be raised before the end of the year.—I am, etc.,

Belgrave Road, S.W., Nov. 9th. T. CHARTERS WHITE.

HOSPITAL ABUSE AT BRIGHTON.

SIR,—Enclosed I forward you a copy of a joint letter, signed by a large number of old-established and well known medical men in practice in Brighton and Hove. It bears upon a most important subject, and I feel sure you will agree with me in saying that it supports the contention set forth in my previous letters, that there is an amount of hospital abuse in Brighton which demands immediate investigation and remedy.—I am, etc.,

Hove, Nov. 11th. FRANCIS J. A. WARING.

HOSPITAL ABUSE AT BRIGHTON.

GENTLEMEN,— November 4th, 1895.

We, the undersigned medical men, beg to call your attention to the gross and increasing "hospital abuse" in Brighton and Hove by a class of people well able to pay for private medical attendance. To no section of the community is this better known than to the general practitioner, who is constantly coming across people in well to-do circumstances who do not hesitate to admit that they have had tickets for either indoor or outdoor treatment at the various charities in the town. That [illegible] 113 patients were attended at these charities during 1894 are figures which speak for themselves. This is quite independent of the work-house and sanatorium, which would greatly add to the number. Of the [illegible] for births during 1894, a little over one-third were attended by the West Street Lying-in Institution. In addition to this, there were some attended in the union, and others by the Society for helping young women in their first fall. To many this would appear incredible, and we are sure that all will agree that it demands immediate explanation from that institution. We are given to understand that many of the patients are insured in the various benefit societies, where they receive a sum of money at the birth of each child to help defray expenses. We are fully convinced of the fact that the institutions most abused are the General Dispensary and those hospitals which are devoted to the treatment of special diseases. As medical men we are fully alive to the needs of the poor, who, in the hour of sickness or injury, require skilful and merciful attention; but we are also convinced of the fact that nothing is more demoralising than charity misapplied.

In conclusion, we appeal to the Committee of the different charities in Brighton and Hove to use their best endeavours to put a stop to the abuse, which is not alone an injustice to the medical profession, which does so much gratuitous work for the poor, but at the same time is an injustice to the subscribing public, who have a right to demand that their generosity is not abused:

Harold A. Baines.
E. Hargrave Booth.
Ashley C. Bringes.
Ernest Burchell.
Arthur H. Dodd.
Walter H. Dodd.
Ernest O. Gilkes.
C. F. Gumbs.
Vivian Tudor Greenyer.
Chas. J. Jacomb Hood.
Edward Hussey.
David W. Liebstein.
W. H. Nicholls.
C. B. Richardson.
Douglas M. Ross.
Edward Irwin Scott.
George Shaw.
Ebenezer Snell.
W. J. Treutler.
Eugene J. Turk Hart.
James Turton.
Alfred Upton.
Francis J. A. Waring.

To the Chairmen and Committees of the various charities in Brighton and Hove.

ENTERIC FEVER IN INDIA AND THE "WATER-BORNE" THEORY.

SIR,—I was glad to see in the BRITISH MEDICAL JOURNAL of November 9th a communication on the above subject from my old friend and colleague, Retired Surgeon-Colonel Welch, than whom I know not a more acute or accurate observer. The doctrine inculcated by this experienced medical officer is one with which I am in complete agreement, namely, "that the disease is essentially the same as the European, clinically, pathologically, and etiologically, following the same laws, and doubtless due to the same one cause." This is the doctrine taught by me at Netley, in my lectures there, and in my work on *Tropical Diseases*, published by Macmillan and Co., in 1886. A reference to this work will also show that the "waterborne" theory of enteric fever and cholera, so much insisted on of late, was in like manner an important point in my Netley teaching, as well as in the work above referred to. I have shown that it is no answer to insist, as has often been done, that enteric fever prevails often in barracks where the water supply is above suspicion, for the simple reason that our soldiers are not confined to barracks. It is notorious that they frequent "the native bazaars and villages within easy distance of our cantonments, which stand on soil for ages sodden with excremental matter, and the tanks and wells of such places are befouled with all manner of impurities."[1] Drinks of various kinds are prepared from water taken from such sources, are freely used by our young soldiers, and to this source a large amount of the cases of enteric fever can without question be traced. At p. 80 I give an example (on the high authority of Surgeon-General Sir Anthony Home, V.C.) of enteric fever clearly traced in the 2nd battalion of the 13th Regiment at Kamptee, to a well into which water had percolated from a wash-house and drain. The sufferers from the disease in this case were those, and those only, who partook of water from this well.

I take leave to add that I have been equally explicit in teaching that the great agencies in the propagation of cholera are two—human intercourse and water.—I am, etc.,

Southampton, Nov. 12th. W. C. MACLEAN.

THE SCHOTT TREATMENT OF HEART DISEASE.

SIR,—Dr. Poore has raised a very interesting discussion as to how the space abandoned by the heart in shrinking becomes occupied. I think I can throw some light upon the subject from a case now under my care.

The patient is a young girl of 16, who had acute rheumatic endocarditis in February last. By August there was very considerable auricular dilatation. I then gave her on alternate days seven saline baths, following the directions published in Dr. Thorne's book, with the result that the cardiac dulness at the base eventually receded half to three-quarters of an inch. Gradually the chest "fell in" from the second to the fourth rib over the area of dilatation. The recession of ribs and spaces was so marked that the girl's mother asked me with some anxiety as to its significance. Further, this having reached the maximum about the fifth bath, I found that the next two baths had no marked beneficial effect, and they were discontinued. The recession still exists, but is not so marked. Percussion shows that the auricles are dilating again, and I propose giving a fresh series of baths.

It is thus very evident that the lung does not dilate properly, even after a considerable period—two months—has elapsed. In this case there is very little ventricular alteration, and the apex beat, though diffused, can be localised as most intense in the normal situation. Local recession of the thoracic wall is best shown in young people, and it would be interesting to learn if this always takes place under similar conditions.—I am, etc.,

Loughton, Nov. 9th. A. BUTLER HARRIS, M.A., M.B.Oxon.

SIR,—Dr. Poore, in commenting upon the paper by Dr. Saundby upon the Schott treatment of heart disease, gives an interesting explanation for the reduction of cardiac dulness by inflation of the lungs. While a visit to Nauheim last May convinced me that the treatment carried on there is of great

[1] *Vide Tropical Diseases*, p. 79.

value in some forms of cardiac disease, the opportunity kindly given of testing the reduction of cardial dulness during a bath did not convince me that the heart I examined became diminished in size. Reduction of cardial dulness there undoubtedly was, but I could feel the impulse in the same position after as before immersion, and came to the conclusion, therefore, that the anterior border of the left lung had advanced over the heart.

It is a curious fact, however, that patients may in some degree experience immediate relief after the first bath. One gentleman told me that he could not walk from his hotel to the bath-house without a rest on the way, but could after the bath return without any such rest. What is the explanation of this relief? Is it due to the tepid temperature of the bath acting as a tonic to the vasomotor system; does slight loss of heat from the body set up weak electrical currents that combined act as a stimulus to the nervous system; or do some of the salts in solution find entry to the circulation, as Dr. Schott suggests, by the sweat glands? The last suggestion physiologists no doubt consider improbable, but it is worthy of note that Dr. Ringer and other observers have shown the value of calcium, potassium, and sodium salts upon cardiac action; of which salts the Nauheim water contains an exceptional quantity. It has occurred to me that calcium chloride might be tried internally in those forms of heart disease most benefited by treatment at Nauheim.—I am, etc.,

Clifton, Bristol, Nov. 11th. THEODORE FISHER.

"MEDICAL AID FREE, WITH A POUND OF TEA."

SIR,—It is with profound regret I have to acknowledge that up to the moment of writing I have been unacquainted with the various letters, etc., pertaining to the above subject.

I beg to state that from representations made to me prior to my acceptance of office I looked upon the matter as an ordinary "tontine society."

I, like Dr. Swanson, almost immediately afterwards, left town upon my holidays, and during my absence I was made acquainted with the mistake I had made. I immediately (prior to my return) sent in my resignation, and so terminated my connection with the firm.

Not having had the remotest notion of committing any breach of medical ethics, I trust this may be deemed a sufficient explanation of my conduct.—I am, etc.,

Liverpool, Nov. 11th. WM. M. PEERS.

SIR,—The letters and correspondence on the above subject, which, only brought before my notice a few days ago, I extremely regret, otherwise I would long since have informed you that the moment I found out it was not what it was represented to me to be, namely, a "tontine," I immediately severed my connection with the firm. I hope, Sir, that you and your readers will see that I was completely misled, and that I did the only thing that lay in my power by resigning at once.—I am, etc.,

Liverpool, Nov. 11th. J. B. FORSTER.

PORTSMOUTH MEDICAL UNION.

SIR,—I am desired by the Committee of the Portsmouth Medical Union to thank you for your assistance in the columns of the BRITISH MEDICAL JOURNAL in our "battle with the clubs" here in Portsmouth. If we can only secure the non-intervention of outsiders we shall gain the day.—I am, etc.,

T. FREDERICK PEARSE, M.D.,
Southsea, Nov. 10th. Honorary Secretary.

WELL-TO-DO PATIENTS IN RATE-SUPPORTED HOSPITALS.

SIR,—In the BRITISH MEDICAL JOURNAL of November 9th Mr. Samuel Osborn complains that well-to-do patients avail themselves of the fever hospitals under the Metropolitan Asylums Board, and states that they are entitled to, and the authorities have no power to recover fees. If this really be the law in London, it is most extraordinary that here in Willesden we seem to have adequate powers to recover expenses incurred through treating patients in our isolation hospital, and, strange to say, our legal advisers assert that we are compelled to charge the patients; the expenses of their treatment is "deemed to be a debt," according to the words of the statute, but we have the power to remit the fees if the patient is too poor to pay. This seems to me altogether too much the other way; and as our hospitals have not been abused by well-to-do patients, I have strongly opposed charging for compulsory attendance in a fever hospital as against public policy and contrary to the spirit of the Act. Opinion is very evenly divided on our Council, those against charging only gaining the day last meeting by one vote.—I am, etc.,

W. WOODLEY STOCKER, M.R.C.S.Eng., L.R.C.P.Lond.,
Member Sanitary Committee Willesden District Council, and member Visiting Committee Willesden Fever Hospitals.
Willesden Green, N.W., Nov. 11th.

PROFESSIONAL ADVERTISING.

SIR,—Will you allow me to say that I entirely agree with the views expressed by Dr. D. S. Owens in the BRITISH MEDICAL JOURNAL of November 9th on the above subject. I attended almost all the meetings of the Ethical Section at the last meeting of the British Medical Association, and I was much struck with the amount of illiberal nonsense ventilated by the various speakers. Especially did I notice the ridiculous fallacy on which Dr. Potter based one of his objections to professional advertising, which your correspondent justly exposes. Dr. Potter has no right to assume that an advertisement must necessarily be fraudulent, as it would certainly be "to promise some definite cure or result." There are myriads of advertisements which would not come under this category and to which no sufficient moral objection could apply. Dr. Potter's confusion arose from his mixing up violations of morality with violations of conventional usage. The former may be held to be unchangeable; the latter to be continually changing; and it is under the latter that the various forms of medical advertising fall. So far as I can comprehend, nothing that is straightforward and truthful can be considered in any sense a breach of morals; it may certainly be a breach of conventional usage; but on this point people have a right to and do judge for themselves in and out of professions. There is no profession that advertises more effectually than the medical in diversified oblique modes, and there is no section of the profession so notoriously guilty of oblique advertising as those who affect to maintain the so-called honour of the profession, and at the same time crush the junior members by arbitrary, unreasonable, and scandalously unfair enactments.—I am, etc.,

Glasgow, Nov. 9th. D. CAMPBELL BLACK, M.D.

EXIT EUSAPIA.

SIR,—My attention has been drawn to an article in the BRITISH MEDICAL JOURNAL of November 9th in which reference is made to experiments with Eusapia Paladino in which I have taken part. In the course of the article it is implied that I and the other investigators mentioned "accepted the foolish wonders of spirit-rapping and table-turning with simple faith" and as "direct revelations from the unseen," and sought "spiritual edification" from them. It is further affirmed that "had Mr. Maskelyne not been present at the recent sittings at Cambridge, Eusapia's shrine would probably not have been deserted even now."

I must ask leave to state that these statements and implications are one and all entirely without foundation so far as I am concerned. I have never accepted the wonders of spirit-rapping and table-turning; and if I had I should never have sought spiritual edification from them. The trickery, which the experiments at Cambridge proved to have been used by Eusapia had been long ago suggested by Professor Richet himself, and more recently had been precisely and fully described by Mr. Richard Hodgson, the Secretary of the American branch of the Society for Psychical Research, in a paper criticising the conclusions of the Italian *savants* and of Professor Lodge. It was to test the issue thus raised between two members of our group of investigators—Professor Lodge and Mr. Hodgson—that the experiments at Cambridge were arranged. Mr. Hodgson himself took part in them, and they ended in entirely confirming the opinion that he had previously expressed. And though I set a high value on Mr. Maskelyne's acumen and skill, his intervention in this case did not in fact affect the progress of the investigation.

I may add that the general drift of your article shows a complete ignorance of the work in which the group of investigators to which I belong have been engaged since the foundation of the Society for Psychical Research thirteen years ago. Throughout this period, we have continually combated and exposed the frauds of professional mediums, and have never yet published in our *Proceedings* any report in favour of the performances of any of them.—I am, etc.,

Cambridge, Nov. 13th. HENRY SIDGWICK.

*** We gladly accept Professor Sidgwick's assurance that he does not accept the wonders of spirit-rapping, and that he has not sought spiritual edification from them. This being so, however, we would respectfully ask, *Que diable est il allé faire dans cette galère?* If the Society for Psychical Research do not seek for signs and wonders, what go they out for to see? We can understand the position of those weaker brethren who expect to find evidence of a future life in mysterious taps and pinches, but how men like our distinguished correspondent and his colleagues can think such rubbish worth investigating as "phenomena" or "manifestations of psychic force" passes our comprehension. As regards Mr. Maskelyne's share in the exposure of Eusapia, there appears to be a difference of opinion between that gentleman and Professor Sidgwick, and we must leave them to settle the matter between them. It is a fact that Mr. Maskelyne was, apparently at the suggestion of Mr. Andrew Lang, called in to assist in unveiling the prophetess, and we may add that we entirely agree with Mr. Lang in relying more on the conjurer than on the psychical researchers. As regards the work of the Society for Psychical Research, our complaint against it is not that it publishes reports in favour of the performances of professional mediums, but that it wastes time which might be given to the solution of problems urgently concerning the welfare of mankind in the investigation of phenomena which have their origin in delusion when they are not the result of jugglery and imposture, and which in any case are unworthy of the notice of serious men.

THE MARCHING POWERS OF OUR SOLDIERS.

SIR,—Will you kindly allow me to confirm the letter of Surgeon-Major F. P. Nichols in the BRITISH MEDICAL JOURNAL of November 9th? He is quite right in saying the ammunition boots are good boots, "but they need intelligent treatment—and feet as well."

For India and Burmah boots of brown leather are preferable to black ones, as the black colour absorbs heat far more than brown. Excellent boots are now supplied from the army boot factory at Cawnpore, N.W.P., where Messrs. Cooper, Allen and Co., as part of their contract, not only permit continual Government inspection, but also teach classes of soldiers to make and repair boots. This is a practical detail for which the army has to thank Lord Roberts, lately Commander-in-Chief in India. Dr. Nichols is quite right to stuff the boots to prevent any friction between the boot and the foot, a fertile cause of "blisters of the feet," which produce intense agony. But in India and Burmah socks wear out very fast, and it is often impossible for soldiers and Sepoys to get new socks when the old ones are worn out. Moreover, it is difficult to get socks to fit the feet, so Messrs. Cooper, Allen and Co. have introduced a "foot cloth" of cotton, tough, but soft and flexible, which washes well and is cheaper than socks. It measures 19 by 15 inches, and can be wrapped round the foot so as to form a comfortable covering. In practice it is found that neither soldiers nor Sepoys object to wash this foot cloth, even Hindus washing it as they do their own "dhotees," or waist cloths.

I used to give my men German "foot powder" (composed of French chalk, two-thirds, and salicylic acid, one-third), which helps to save the skin from being chafed. If there were intertrigo in the clefts between the toes, I packed them with a little cotton-wool dipped in boracic acid, and this sprinkling rapidly healed the abrasion, while it had the additional advantage of deodorising the feet, which are apt to stink horribly when no water is obtainable for washing them.

There is one weak point which could be remedied with very little trouble, and no expense worth mentioning. The so-called "tongue" of leather between and beneath the laces is not proof against sand, dust, or small shingle, all of which may cause serious abrasions, and these are so painful that a man cannot march with them, still less shoot. The remedy is very simple. Put in a "full bellows tongue," as shoemakers call it, between the "quarters" of the boot, as is done for shooting boots, extending from side to side, and sewed to the quarters beyond the part where the eyelet holes and hooks are placed for the boot laces. I find a piece of leather 7 inches by 5 inches is quite large enough to extend thus from side to side, and from the "vamp" to the top of the boot at the ankle. This piece can be made of the so-called "offal," that is, the leather which is too thin to be used in any other part of the boot. This "full bellows tongue" is not only dust proof, but it also permits the boot to be opened so wide that it can be removed without hurting the wearer if he happens to be wounded, or to sprain his ankle, no mean advantage, *experto crede*. But in mountain warfare the ammunition boot requires to be supplemented by something else, for the leather sole slips on dry grass and on smooth rock, so that the wearer becomes very soon fatigued.

I am glad to be able to announce that for this also a remedy has been found as I have recently received a letter, dated October 18th, 1895, from my old friend, the Inspector General of Prisons, Central Provinces, Nagpore, India, to say that he can utilise prison labour to make "grass shoes" of jute and aloe fibre, which do not slip either on rocks or grass. Grass shoes have always been worn by the native inhabitants of Kumaon and Kashmir, so that it is well that our soldiers should benefit by the customs of these mountaineers. They are very like the "bathing shoes" now worn at home when people have to bathe on rocks or a shingly beach, and they are noiseless. They will probably become popular for sport and for lawn tennis, and as they are very cheap and have no leather in them, they can be made in prisons by all castes of Hindus without difficulty, and can be worn by all classes of natives without any caste prejudice.

It is fortunate that the invention can be so useful alike to Europeans and natives, to soldiers and to civilians.—I am, etc.,

R. TEMPLE WRIGHT.

November 12th. Brigade Surgeon-Lieutenant-Colonel, retired.

D.P.H. EDINBURGH CONJOINT BOARD.

SIR,—I agree in the main with your correspondent in the BRITISH MEDICAL JOURNAL of November 9th on this subject, and I have heard the same opinions exactly uttered by not one or two, but by many medical men. As a medical officer of health of some experience both in urban and rural districts, my opinion is that the utmost which should be expected of candidates for the chemical part of D.P.H. is that they should be able to analyse quantitatively and bacteriologically, as well as qualitatively, air and water; should be able to use the microscope intelligently in determining adulteration in common foods, and should be able to understand and interpret the results of chemical analyses of food materials.

But to expect medical officers of health to have the knowledge and proficiency of public analysts is to expect far too much. Every sanitary authority either has its own analyst or the use of the county analyst, and the places in which the the joint office is still preserved are getting fewer every year. I believe the Local Government Board sets its face against the two offices being united on the ground that such an arrangement places too much power in the hands of one man.

Is it not possible to bring about some rough kind of uniformity with regard to the regulations in connection with the various D.P.H. examinations? The number of medical men who are debarred from taking a public health degree because they are unable to disentangle the knots of red tape in the regulations of different examining bodies is, believe me, simply legion.

Some universities demand a residence of six months, others recognise only certain laboratories; others specify for study certain statutes, some of which have absolutely nothing to do with a medical officer of health; others demand that at the practical chemistry examination the candidate shall make his own quantitative solutions, and so on.

All these things make men fight shy of public health diploma work, and as a consequence our public health service does not contain everywhere what one might term expert men. The remedy for the whole matter, to my mind, would be to make the examinations above all things practical, and to have as far as possible medical officers of health as

examiners, to have uniformity of regulations, and to make the possession of a public health diploma or degree necessary for the holding of all public health appointments, small towns or villages to be combined together if necessary.—I am, etc.,

November 12th. VARIOLA.

DIPHTHERIA ANTITOXIN AS A CULTURE MEDIUM FOR THE TREATMENT OF BACILLUS.

SIR,—In reply to the letter of Dr. W. A. Hollis, in the BRITISH MEDICAL JOURNAL of November 9th, respecting the employment of diphtheria antitoxin serum as a medium for cultivating the diphtheria bacillus, I may say that I have made trial of Drs. Wright and Semple's method with satisfactory results. Three inoculations were made as directed from membrane expelled from the trachea of a severe case of diphtheria in a boy, aged 5 years, which proved fatal on the fifth day after tracheotomy and two antitoxin injections. At the end of twenty-four hours colonies had developed at the sites of inoculation, and these showed on microscopical examination crowds of short and long bacilli, with cocci. One little detail may be added to Drs. Wright and Semple's directions: the bottle can be kept at practically body heat during the daytime by carrying it beneath the waistcoat as they describe, but what is to be done at night? I placed the bottle in my axilla, secured by a string round the neck.

I take it that the antitoxic serum serves in this capacity simply as a culture medium, any special properties which it possesses being destroyed by the heat applied to produce coagulation.—I am, etc.,

Plymouth, Nov. 9th. H. W. WEBBER.

SIR,—In the BRITISH MEDICAL JOURNAL of November 9th Dr. W. A. Hollis, of Brighton, expresses the view that antitoxin contains a something—possibly a ferment—which when introduced into the body of a person suffering from diphtheria effectually prevents the growth of the Klebs-Loeffler bacillus, and that the fact that antitoxic serum is a good culture medium for the diphtheria bacillus is incompatible with any therapeutic value of this serum.

Lubarsch, in one of his earlier papers on the subject, points out the fact that the serum of animals immunised against diphtheria is an excellent culture medium for the bacillus of this disease. Not only is this true, but the bacillus actually increases in intensity of virulence—a fact first demonstrated by Gabritschewsky.

Notwithstanding, it is, I need scarcely say, a comparatively easy thing to render certain animals insusceptible to diphtheria by the use of this very serum which *in vitro* furnishes so good a nutrient fluid. This fact has been demonstrated times without number by bacteriologists; its explanation is quite another thing. The theory of phagocytosis, so brilliantly upheld by Metchnikoff, appears to furnish the true explanation of the *modus operandi* of preventive serums. These serums act as stimulants to the phagocytic cells, which then destroy the microbes by a kind of intracellular digestion. The presence in the serum of a substance or substances capable of stimulating the living phagocytic cells in the body is in no way incompatible with the nutrient properties of the serum in a test tube. Moreover, in such a disease as diphtheria, in which the blood is free from bacilli, and in which the fatal result is due to a soluble poison, the value of the serum is owing largely to the fact that the defensive cells are rendered much less susceptible to the necrotising power of the toxins. The defence is a living active process.

Perhaps the most lucid and succinct account of the present question is to be found in the remarks of M. Roux at the Congress of Buda-Pesth, *vide Annales de l'Institut Pasteur*, October, 1895.—I am, etc., WM. ST. C. SYMMERS, M.B.Aberd.

Preston, S.W., Nov. 12th.

THE MORTALITY OF THE PRESENT EPIDEMIC OF DIPHTHERIA.

SIR,—The tabular statement of the general mortality from diphtheria in the metropolis during the last six weeks published in the BRITISH MEDICAL JOURNAL of November 2nd is of great interest. On reference to it, it will be seen that the proportion of the total deaths to the total notifications does not very materially differ from that of the deaths to the admissions in Asylums Board hospitals. In the latter the mortality ranges from one death in every eight cases to one in every four, with a fraction over. In the former it varies from a little over one in every seven to one in five; in each case the greater mortality being in the later weeks. Now, of course six weeks is too short a period for safe guidance as to the average mortality or even as to the effect of a certain treatment, but it is disappointing to observe there is no such evidence of the overwhelming value of the serum treatment as one had hoped for. In the hospitals, where no doubt it is used with every skill and precaution, the death-rate is about the same as in London generally. It would be interesting and useful to know whether the metropolitan mortality from this cruel disease differs very markedly from the rate of, say, two years since.—I am, etc.,

November 6th. SENIOR.

UNITED KINGDOM POLICE SURGEONS' ASSOCIATION.

SIR,—In consequence of the circular issued by the late Home Secretary, Mr. Asquith, to those borough and county councils which had not hitherto appointed police surgeons, many new appointments have been made. Notices of some of these have been sent to us, and in each case a nomination paper has been sent. But there may have been some gentlemen appointed of whom we have not heard, and who may wish to join this Association, of which Sir H. D. Littlejohn is the President, and which has already done much to promote the interests of police surgeons. Will you, therefore, kindly allow us to state that we shall be most happy to send a printed form of application for membership to any newly appointed police surgeon, or to any other police surgeon who is not already a member.—We are, etc.,

FREDK. W. LOWSDES, 40, Knight Street, Liverpool.
H. CULLIFORD HOPKINS, 6, Bladud Buildings, Bath.
} Hon. Secretaries to the Association.

November 13th.

CANCER STATISTICS.

SIR,—The conclusions against which Dr. Newsholme animadverts are based upon the best statistical information available. These conclusions are not absolutely beyond discussion. Personally I regard the data on which they are based merely as straws, showing which way the wind blows. When much cannot be got out of a complex mass of vital statistics, I am thankful to get a little. Dr. Newsholme knows very well that the necessary data for such treatment of the subject as he lays down do not exist. It would have been more appropriate if Dr. Newsholme had addressed his criticisms to the Registrar-General rather than to me.—I am, etc.,

Preston, Nov. 9th. W. ROGER WILLIAMS.

OBITUARY.

FREDERICK COCK, M.D., M.R.C.P.

DR. FREDERICK COCK sprang from a yeoman stock, settled in Lydd, Kent, since the fifteenth century. He was educated at the grammar school at Ashford, then went to Boulogne, where he was apprenticed to the brother of Pelletier, the discoverer of quinine. He attended the art classes there, his tutor being the afterwards celebrated Mariette Bey, the Egyptologist. He also was a diligent student at the hospital. In 1847 he matriculated at University College, London, and at University College Hospital he served the office of House-Surgeon to Arnott, and was the first House-Physician to Sir William Jenner. He did much work also with Parkes. He was one of the first to whom ether was administered. The year he joined was remarkable for the men who afterwards distinguished themselves. Sir Russell Reynolds, Sir Henry Thompson, the late Wilson Fox the elder Gamgee, Sir Joseph Lister, and many other leading lights in the profession were his classmates. After taking the diploma of M.R.C.S. in 1851 he was compelled through ill-health to leave London, and proceeded to Edinburgh, where he took the degree of M.D. in 1853, with honours. It shows the insanitary condition of the

city at that time, that of seven men who went there as undergraduates, no fewer than three contracted typhus from the patients in the infirmary. Dr. Cock had it so severely that he was nine weeks in bed.

In 1854 he studied at Paris and Berlin. When at the latter place he often met at a common friend's Prince Bismarck, who even at that time had very definite ideas on the unification of Germany, and the two had many conversations on political questions. In 1855 he returned to England, and in 1856 he married and settled down to practise as a physician in the house at Westbourne Park, London, where, nearly forty years after, he died. He did work for Sir Wm. Jenner, and was appointed physician to the Farringdon and Western General Dispensaries, both of which institutions he served for many years, and to both of which he was the senior consulting physician. In 1883 he became a Member of the College of Physicians. He was a member and past-president of the Harveian Society, a member of the Epidemiological Society and the Sanitary Institute.

Of the most charitable and kindly disposition, he was universally beloved, and his skill was always at the disposal of the sick and needy, whom he helped with unsparing hand. An attack of influenza last February enfeebled him very much; since then he developed a chronic gastric catarrh, which greatly reduced him. The immediate cause of death was apparently the rupture of an aneurysm or large vessel into the gullet or stomach. During his illness he was attended by his son, Dr. F. William Cock, his old friends, Messrs. Lake and Tapson, with the occasional kindly aid of Dr. Goodhart. His funeral took place on November 9th, at Appledore, Kent. He was followed to the grave by a great crowd of old friends and patients.

We regret to have to record the death of Mr. Arthur Snrad Lawrence, eldest son of Dr. A. G. Lawrence, J.P., of Chepstow. Mr. A. S. Lawrence, who was a student of the Middlesex Hospital, obtained the double qualification at the recent examinations of the Conjoint Board. On November 1st, while riding at Chepstow, he was thrown from his horse and sustained a fracture of the skull, to which he succumbed after lying unconscious for thirty hours.

Mr. Caleb Rose, of Ipswich, who died on November 7th, was the son of Dr. Caleb Burrel Rose, of Swaffham, and was born in 1820. He studied medicine at Guy's Hospital and in Paris, and qualified as L.S.A. in 1842, taking the F.R.C.S.Eng. in 1850, and becoming M.R.C.P.Lond. in 1878. After practising in partnership with his father, he went to London in 1854, but in the course of time he suffered from asthma, and believing that a change to country air and surroundings was advisable, he went to Ipswich in 1863 with the intention of retiring from the active pursuit of his profession, but as time went on he resumed practice. The funeral took place at Ipswich Cemetery on November 11th.

Mr. William Cuthbert Blackett, J.P., of Ripon, who has just died, aged 65, was the son of Mr. William Blackett, of Durham, and qualified as M.R.C.S. and L.S.A. in 1853. He held the post of medical officer to the Durham Rural Sanitary Authority and the Brandon and Byshottles Local Board, both of which offices he resigned a few years ago, when he retired from private practice. In 1887 Mr. Blackett was appointed Chief Magistrate for the city of Durham.

Mr. W. R. Ancrum, of St. Leonard's Court, near Gloucester, who died recently, was born in 1816, studied medicine at University College, and qualified as M.R.C.S. and L.R.C.P.Lond in 1839, and F.R.C.S. and M.R.C.P. in 1851. He afterwards went to Mexico, where he practised for four years; from there he went to Valparaiso, Chili, where he practised for fourteen years. He finally retired from practice in 1860. Mr. Ancrum took a great interest in county asylums, and was for a number of years Chairman of the Committee of Visitors. He had also been for twenty-seven years Chairman of the Infirmary Governors, and in 1892 his portrait was presented by Mr. Birchall to the Gloucester Infirmary.

NAVAL AND MILITARY MEDICAL SERVICES.

CHANGES OF STATION.

The following changes of Station amongst the officers of the Army Medical Staff have been officially notified to have taken place during the past month:

		From		To
Surg. Col.	J. W. Markham, M.D.	York	...	C. of Good Hope.
"	W. A. Catherwood, M.D.	Colchester	...	Gibraltar.
Brig.-Srg.-Lt.-Col.	J. F. Supple	Jersey	...	Dover.
"	A. W. Duke, M.D.	Canterbury	...	Ceylon.
Surg.-Lieut.-Col.	A. Kirwan	York	...	Jersey.
Surg.-Major	A. E. Hayes, D.S.O.	Aldershot	...	Hong Kong.
"	P. H. Johnston, M.D.	Colchester	...	"
"	J. J. Lamprey	Leeds	...	Cork.
"	H. L. Donovan, M.D.	Tipperary	...	Madras.
"	J. G. MacNeece	York	...	Bermuda.
"	A. W. P. Inman, M.B.	Barbadoes	...	Dublin.
"	A. Hewett	Leeds	...	York.
"	J. G. W. Crofts	Fermoy	...	Athlone.
"	W. J. Baker	Chatham	...	Bermuda.
Surg.-Capt.	N. Manders	Aldershot	...	Ceylon.
"	G. E. Hale, D.S.O.	Manchester	...	"
"	M. L. Hearn	Netley	...	Straits Settlemt.
"	C. A. Lane, M.B.	Colchester	...	"
"	C. G. Woods, M.D.	Alderney	...	Portsmouth.
"	H. H. Brown, M.B.	Glasgow	...	Hong Kong.
"	T. H. Corkery	Gravesend	...	Bermuda.
"	S. J. W. Hayman	Lydd	...	Ceylon.
"	J. S. Edye	Aldershot	...	Hong Kong.
"	C. R. Elliott, M.D.	Holywood	...	Chatham.
"	G. S. Walker, M.B.	Fort Camden	...	Cork.
Surg.-Lieut.	H. E. B. Porter	Lydd	...	Brighton.
"	H. V. Prynne	Gosport	...	Alderney.
"	G. Dansey-Browning	Ayr	...	Stirling.
"	C. K. Morgan, M.B.	Canterbury	...	Edinburgh.
"	J. H. Whitehead	Cork	...	Fort Camden.
"	J. A. Murison, M.B.	"		Peebleshire.
"	F. E. Gunter	Dover	...	Canterbury.
"	J. H. Campbell	Dublin	...	Jersey.

Brigade-Surgeon-Lieutenant-Colonel H. W. A. Mackinnon, D.S.O., recently retired, has been posted to Reading.

THE NAVY.

The following appointments have been made at the Admiralty: Francis R. M. Loftie, Fleet Surgeon to the *Medea*, November 12th; Richard G. Brown, Fleet-Surgeon, to the *Medusa*, November 12th; Edgar R. Dansey, Staff-Surgeon, to the *Phœbe*, when recommissioned; John L. Bagnall-Oakeley, Staff-Surgeon to the *Sappho*, undated: Hugh St. D. Griffiths, Surgeon, to the *Swallow*, November 8th; Robert Hickson, Surgeon, to the *Vivid*, November 8th; Leo E. James, Surgeon, to the *Penelope*, additional, for Ascension Hospital, November 11th.

ARMY MEDICAL STAFF.

Surgeon Colonel W. A. Catherwood, M.D., lately Principal Medical Officer of the Eastern District, has been appointed Principal Medical Officer at Gibraltar, in place of Surgeon-Major-General R. Lower, who has been placed on the retired list owing to age.

Brigade-Surgeon-Lieutenant Colonel R. C. Eaton is appointed to officiate as Principal Medical Officer of the Allahabad and Nerbudda Districts, *vice* Surgeon-Colonel C. MacD. Cuffe, who succeeds Surgeon-Colonel T. Maunsell as Principal Medical Officer of the Rawul Pindi District.

Surgeon-Major Thomas Llewellyn Nash, M.D., died at Sandymount, Dublin, on October 22nd. He was appointed Assistant-Surgeon, February 14th, 1862; Surgeon, January 18th, 1859; and Surgeon-Major, February 14th, 1872. He retired on half-pay, October 5th, 1872.

INDIAN MEDICAL SERVICE.

Deputy Surgeon-General Robert Sander Bateson, late of the Bengal Establishment, died on October 26th. He was appointed Assistant-Surgeon, February 20th, 1856; became Brigade-Surgeon, October 26th, 1882; and retired, with the honorary rank of Deputy Surgeon-General, September 1st, 1886. He served in the Indian Mutiny campaign in 1857-59, and was present in the actions near Agra and in the engagement at Dowsa against Tantia Topee (medal).

THE VOLUNTEERS.

The undermentioned gentlemen are appointed Surgeon Lieutenants to the corps specified, dated November 13th: Robert Ball Wright, 1st Cheshire and Carnarvon Artillery; Arthur Percy Nuttall, M.B., 1st Volunteer Battalion the Lancashire Fusiliers. Louis John Gerard Carré, M.D., 1st Surrey (South London) Rifles.

Surgeon-Major E. Sharp, 2nd Volunteer Battalion the Essex Regiment, is appointed Brigade-Surgeon-Lieutenant-Colonel to the Essex Brigade Volunteer Infantry Brigades, November 13th.

THE INDIAN MEDICAL SERVICE.

An important article appeared in our contemporary, the *Army and Navy Gazette*, of November 2nd, on this subject, of which the following is a condensation. It is stated: The Secretary of State for India will be called upon at no distant date to give consideration to the reform of the Indian Medical Service. There is no doubt that the present arrangement of a civil and military branch thoroughly interchangeable has been the cause of much dissatisfaction.....owing to the advancement of officers who have spent a considerable portion of their service in lucrative civil appointments to military administrative positions, to the prejudice and occa-

sionally supersession of medical officers who have passed the greater part, if not all, their service in military employment. Already we hear that a memorial is about to be forwarded to the Secretary of State for India, dealing with the defects of the existing system, and pointing out how improvements can be effected ..... It may be assumed that local officers must be employed with Indian troops, but if so, it should be a separate military branch under the Principal Medical Officer of Her Majesty's Forces in India, with an ample cadre, so that he may not be obliged to rely on officers who are in civil employ as a reserve..... This incessant handing about of medical officers from military to civil, and civil to military, berths, cannot but be a source of irritation to commanding officers of native corps, not to speak of the unfortunate Sepoy who has thrust on him a constant change of doctors. In short, the present organisation of the Indian Medical Service is utterly indefensible from a military standpoint.....If reform of a strict separation into two branches were carried out, officers should be called upon to elect for military or civil duties..... Military rank and titles, and the wearing of uniform, should be abolished in the civil branch. It must be clearly understood that under any system of reconstruction British soldiers in India must always be treated by officers of the British Medical Service..... In 1885 Lord Strathnairn minuted a "distinct civil medical service for India quite independent of the army." It is a well known regulation that officers of the Staff Corps after ten years in civil employ are no longer allowed to return to military duty. Why should a similar rule not be made applicable to the Indian Medical Service?..... Urgency of reform is our only plea for pointing out its defects.

Bearing on the above an able letter, signed "I.M.S.", lately appeared in the *Indian Pioneer*, pointing out that the principal medical officers of the Presidencies, and almost all the brigade-surgeons, are ex-civilians. "Indeed," it says, "to such an anomalous pass have matters come that the chances of military promotion are much better for men in civil than for those in military employment..... The Surgeon General with the Government of India is a civilian..... his promotions are naturally civil .....his knowledge of the military surgeon and his work is very limited .....he honestly thinks he is putting forward the best men.....a promotion board is a necessity ....."

From other communications we have received there can be no doubt that several grievous cases of supersession in promotion of the military by the civil employ branch have lately accrued; such a system cannot go on, and calls loudly for speedy and effective reform.

BRIGADE-SURGEON-LIEUTENANT-COLONEL J. H. REYNOLDS, V.C.

On November 11th Brigade-Surgeon-Lieutenant-Colonel J. H. Reynolds, V.C., was entertained at dinner by the officers of the Army Medical Staff at Shorncliffe, previous to his departure on leave pending retirement from the service. After the toast of "The Queen" had been drunk, Surgeon-Major Twiss, A.M.S., proposed "The Health of Brigade-Surgeon-Lieutenant-Colonel Reynolds," who responded in appropriate and feeling terms.

ARMY MEDICAL REORGANISATION.

F.R.C.S. suggests that a strong consultative committee should be formed consisting of retired army medical officers of standing and experience, together with leading members of the civil medical profession and of the schools, to deliberate on the future of the Army Medical Department, and to lay the results before the new War Office. If the authorities rejected such advice and assistance, then the public would know where to fix responsibility in the future.

"*" If a reorganisation of the Army Medical Service is contemplated and carried out, it must be wholly on the responsibility of the War Office whether outside advice is accepted or not. We feel quite sure the Secretary of State for War is not above advice in such a matter, and it will be time enough to offer it when he asks for it, or when he divulges the changes, if any, contemplated. We cannot for a moment believe any radical changes will be sprung upon the department or the profession; that would be a blunder. Due warning will be given.

CIRCULARS "OFFICIALLY" ADDRESSED.

Non-Commissioned Officers complain that when official circulars are passed round in the district to which he serves, all the other heads, including the Army Service and Ordnance, are addressed as "officer commanding," while he is "medical officer in charge." At the same time he has more men under his "command" than several of them so addressed.

"*" Two reasons operate against his being addressed like the others; first, use and went of the term "in charge"; and, secondly, the fear that someone might have (officially) a fit should the term "command" be addressed to ("only") a medical officer.

DISABILITIES OF THE ARMY MEDICAL SERVICE.

Royal Corps writes: You were correct in a recent article as to the two chief grievances under which army medical officers labour. 1. The social grievance. Competition naturally draws our recruits from a limited community; some successful candidates may not be so socially desirable as others. Men of this sort in regiments are usually quickly got rid of, but it is next to impossible in the medical service. Such men are largely the cause of garrison ostracism and club blackballing. 2. Indian service. In support of your contention, I submit the consolidated pay of a junior officer at home is £300 annually, or £25 10s. a month, equal to 408 rupees a month at present exchange. The same officer in India draws 317 rupees a month, or £21 13s. sterling. This decrease is in the face of a marked increase in the pay of all other ranks while serving in India. To live as a gentleman should in India, and to provide against frequent moves, *two* rupees a month is required as a minimum. If rumour be true, the complete autonomy of the Medical Staff and Medical Staff Corps is threatened, and a reversion to a regimental system spoken of. The former is the real goal of our hopes, the latter brought disaster in the Crimea and elsewhere. We want the undivided support of the profession and schools to defend us. What we require is: (1) Recruits who are gentlemen; (2) make service in India tolerable; (3) preserve our autonomy; (4) give us field training; (5) make us a Royal corps.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ACTION AGAINST A GLASGOW DOCTOR.

In the Glasgow Sheriff Court on November 11th an action was brought by Michael M'Ginley, Castle More, co. Donegal, Ireland, who claimed £500 from James Stuart, M.D., 3, Eastpark Terrace, Maryhill. Pursuer, according to the report in the *Glasgow Evening News*, in his condescendence, stated that on May 11th he became ill, and a doctor was called in and pronounced him to be suffering from measles and bronchitis, and for these troubles he treated him for several days. The defender became aware that pursuer was lying ill, and although he knew, or ought to have known, of the nature of pursuer's illness, and that another competent doctor was attending pursuer, and in breach of professional etiquette, reported to the sanitary authorities that pursuer was suffering from small-pox, and the sanitary authorities caused pursuer to be removed to Knightswood Hospital in the small pox and fever van, where he was put into the small pox ward. Pursuer afterwards became infected with fever, and he was forced to remain in the hospital until he recovered. His health had been completely shattered, and it was unlikely that he would be able to work at his employment again. Sheriff Guthrie decided that pursuer's condescendence was irrelevant, and dismissed the case, finding pursuer liable in expenses.

In a note, his lordship says that pursuer did not aver malice and want of probable cause. He (pursuer) wished to infer that because the Infectious Diseases Notification Act of 1889 imposed a penalty upon certain persons, including every medical practitioner attending or called in to visit the patient, who failed to give notice that certain persons were suffering from infectious diseases, no one else was entitled or bound to give notice to and set the sanitary authority in motion in regard to such a patient. It must, however, be remembered that the Act of 1889 was only an improvement upon statutory enactments that had been in force since 1867. He did not doubt that medical men might act improperly in such matters, as well as unskilfully, for they were only human; and the pursuer possibly was not far from suggesting such a case, truly or otherwise. But actions of damages were not to be remitted to proof from bare suggestions. There was a further question—namely, whether the damage was not too remote. It was not clear that an informer in good faith, or even a medical man who was called upon to give a certificate to the local authority, ought to be held responsible if a local authority have, in the due exercise of its statutory powers, got a man removed to hospital while not suffering from any infectious disease, and he should there be infected by fever or small-pox. The sheriff added that he should be sorry if anything he said should suggest that he thought no action lay against a medical man who ultroneously obtruded himself upon a patient and upon the local authority for the sake of the small statutory fee, and thereby caused damage to the patient and a slight loss to a brother practitioner.

ACTION FOR SLANDER.

MANCHESTER ASSIZES.—NISI PRIUS COURT.
(Before Mr. Justice COLLINS and a Special Jury.)
BROOKS *v.* EATOUGH.

This was an action to recover damages for alleged slander. Mr. M'Call, Q.C., and Mr. Acton appeared for the plaintiff, Samuel John Brooks; and Mr. Shee, Q.C., and Mr. Byrne for Robert Eatough, the defendant. The parties are both medical men in practice.

Mr. M'Call stated, according to the report in the *Manchester Courier*, that the plaintiff bought a practice at Mossley five or six years ago, and engaged the defendant as an assistant. The practice was a successful one, and the defendant was, on his own suggestion, taken into partnership. In 1894 Mr. Healey was introduced as a third partner. By the terms of the partnership deed each party was to attend upon his own patients, and to assist with regard to the patients of the others only when asked to do so. Disagreements took place between the parties, and a dissolution of the partnership was suggested. Mr. Brooks was unable to agree to this, and Mr. Eatough and Mr. Healey instituted an action in the Chancery Court for the dissolution of the partnership. The matter was, by consent, referred to an arbitrator, who investigated certain charges made by Mr. Eatough and Mr. Healey against Mr. Brooks. In the result the arbitrator found that the charges were not true. In July of the present year the defendant went to a lady who had been attended in her confinement by the plaintiff, and, it was alleged, made certain statements to her, in the presence of another lady, reflecting upon the professional skill and the moral character of Mr. Brooks. These statements were, Mr. Brooks said, absolutely slanderous, and he had greatly suffered in his reputation and business in consequence. He did not desire, however, to make any money out of this action, and if the defendant would now withdraw the statement he had made and apologise, and indemnify him against the costs which had been incurred, there would be an end of the matter. Mr. Eatough pleaded, first, that if he uttered the slander complained of it was spoken on a privileged occasion. Then he submitted that, whether there was slander or not, whether it was spoken under circumstances that prevented it being actionable or not, the plaintiff and himself agreed to refer that among other questions to the arbitrator, and that the arbitrator had dealt with the matter, and that, therefore, it had been taken away from the jurisdiction of these courts. He did not plead justification. In his cross-examination by Mr. M'Call, Q.C., Mr. Eatough characterised the evidence of the lady to whom the slanderous statements were alleged to have been made as wholly lies. He made the same remark with regard to the evidence of the second lady who was present on the occasion. He denied that he made any references upon the moral character of the plaintiff. All he had done was to state that rumours were current as to the relationship between the plaintiff and his servant, and that he ought, not only in his own interest, but also in the interests of the partnership, to take steps to disprove them.

The Judge, in summing up, said he was clearly of opinion that this was not one of the matters which had been referred by agreement to the arbitrator, and that the arbitrator had nothing whatever to do with the point. If the jury accepted the story of the plaintiff's witnesses, then the occasion upon which the slander was spoken, if it was spoken at all, was not privileged. The jury, after a short consultation, found for the plaintiff and awarded him £50 damages. Judgment was given for that amount, with costs.

MONETARY TENDERS INVITED.

With reference to the following circular, addressed to the medical practitioners in Blackpool, by several of whom our opinion thereon has been solicited, we may note that comment, other than surprise that the proprietor of the establishment in question should have ventured to transmit such a missive to members of the medical profession, is unnecessary. Need we add that any member thereof who would think of responding thereto would be justly deemed to have departed from the honourable traditions of the profession.

"74, Withnell Road, South Shore, Blackpool,
"November 5th, 1895.

"Sir,—Having become the purchaser and proprietor of the Hydropathic Establishment at South Shore, it is my intention to offer to receive monetary tenders from duly qualified medical practitioners in Blackpool and South Shore, for the privilege of daily attendance at the hydro., and being accommodated with a room for consultation and surgery, if required, such as has been used by Dr. Kingsbury. It must be distinctly understood that this arrangement does not preclude any of the inmates of the establishment from consulting any other medical man they may wish to.

"An early tender is requested.—I am, Sir, your obedient servant,
"SAML. HORROCKS."

MEDICAL FEES AT INQUESTS.

A. C. writes to complain that after giving evidence at the coroner's court he is informed that, as medical officer to the local cottage hospital, he is not entitled to any fee, and that from the position he holds in connection with it he is excluded from receiving remuneration by Section 22 of the Coroner's Act, 1887. Our correspondent asks: "Was the coroner within his rights in withholding my fee?"

*** On referring to the section of the Act above-mentioned, our correspondent will find that when a person dies in a public hospital or infirmary, whether supported by endowments or voluntary subscriptions, and upon whom an inquest is held, then the medical officer whose duty it was to attend such person is not entitled to receive any fee or remuneration for making *post-mortem* examinations or giving evidence at the inquest; and should the coroner by inadvertence pay such fees, he will be surcharged by the County Council as making an illegal payment, contrary to Act of Parliament. We quite agree with our correspondent that the law on this matter should be altered, but until this is done we should not advise him to sue the coroner, or to refuse to give evidence. It should not be forgotten that all witnesses summoned on behalf of the Crown can be compelled to give evidence, fee or no fee, or run the risk of fine or imprisonment for contempt of court.

DECEASED MEDICAL MAN'S PRACTICE.

A COUNTRY SURGEON wishes to know if the trustees of a medical man can employ an assistant under bond till the son is qualified and able to take the practice. If not, can they sell the practice under bond to resell after a given number of years?

*** Executors or trustees have no power, in the absence of an express provision in the will, to carry on their testator's business, and doing so would render them personally liable for any loss occasioned thereby. Subject to this (and to any provisions contained in the will) we see no reason why a duly qualified medical practitioner should not be employed (under bond) to preserve the practice until the testator's son is duly qualified. We think it would be found impracticable to find a purchaser willing to become bound to resell after a given period; apart from the fact that such a repurchase might not be authorised by the testator's will.

DIPLOMAS AND MEDICAL ETHICS.

M. B.—Before proceeding to comment on the essential points of our correspondent's communication, we deem it right to remark that if he had himself undergone the ordeal of the L.R.C.P.Lond. examination he would, we opine, have refrained from characterising its title as (to quote his own words) "insignificant" when compared with the "magnificent one of M.D." Such invidious, uncalled-for comparisons are professionally impolitic and ill-judged, even if in accordance with fact, for it is not the possession of such a degree which dignifies the recipient, but his life action that reflects lustre thereon.

In reply to his special query relative to B., we may note that although sympathising with A. and C. in regard to the alleged unethical procedure of their late assistant, B., we apprehend that A. is *de facto* to blame in so far as, while wishful to pay due respect to the recommendation by a friend, he should in engaging him have treated it as a matter of business, and insisted on the customary restrictive bond; the omission to do this has not only injuriously affected himself but his brother C. also, the latter having been deceived by B.'s statement that he had signed a bond with A.

If the allegations against B. fairly represent the facts, he will, we take it, find it more than difficult to establish a successful practice in view of his professional proscription, in relation to which we would, under the exceptional circumstances, courteously remind the neighbouring practitioners that, be the conduct of the proscribed medical man what it may, none would be morally justified in a case of acute disease, in which delay would be dangerous, in refusing to give assistance.

MIDWIFERY URGENCY CALLS.

H. H. P. writes: A. and B. are two friendly practitioners in the same place. A. is sent for without any previous warning by the husband for his wife's confinement. A. is out professionally for several hours, and the messenger is told at the house to send for B. B. goes to see the patient, and has to remain with her the whole night. The next morning A. calls and sees the patient (after everything is over successfully), and afterwards goes and thanks B. for seeing to the case for him, and goes on attending the case, because he was first sent for. B., on that ground, hands the case over to A. The patient was a stranger to both A. and B. The husband simply went for the best known practitioner, who has been much longer in the place than B. Was B. entitled to keep the patient?

*** The principle enunciated in the appended rule is that by which A. and B. in the above case should be guided, to which may be added the following part of the succeeding rule: "When a practitioner is called upon by the assistant or servant of another to attend to an accident or other emergency in a family to whom both are equally strangers, the former is not entitled to take charge of the case throughout, but should act and be remunerated in conformity with Rule 7, and resign the case. When a practitioner is called in, or otherwise requested, to attend at an accouchement for another, and completes the delivery, or is detained for a considerable time, he is entitled by custom to one half of the fee," etc. *Ethical Code*, 4th edition, chap. ii, sec. 5, rules 11 and 12.

MIDWIFERY ENGAGEMENTS.

T. A. writes that he was engaged by one S. to attend his wife at her confinement. At the time his wife was taken ill, S. called in another medical man who happened to be passing. T. A. asked for payment of his fee of two guineas as arranged, and his request not being complied with, proceedings were taken in the County Court to recover the amount.

At the trial S. denied the engagement. The judge, however, was satisfied after hearing the evidence that such engagement was made, but stated that pecuniary damages had not been proved, and asked if our correspondent could quote any legal authority for damages having been obtained in similar cases. Our correspondent now requests assistance on this point.

*** We can only say that when this question was discussed in the BRITISH MEDICAL JOURNAL on a former occasion, a correspondent writing from Ilfracombe referred to a case in which he was engaged by letter (nothing turns on the point of the letter), and medical assistance was not required; he recovered his fee after declining to compromise by accepting half.[1] Again, in the BRITISH MEDICAL JOURNAL of November 24th, 1894, allusion is made to a case then recently heard at the County Court of Newtownards, County Down, in which a fee was recovered under similar circumstances. The facts were not in this instance in dispute, but it appeared that after the doctor had made arrangements to be within call, when the time came another medical man was called in by the defendant. We cannot give any reference to law reports of these cases. They were probably not published.

A. AND B. (BIRMINGHAM).—The exact nature of the appointment held by A. is too vaguely noted to enable us to express a definite opinion thereon; should it, however, in any degree embody the principle of the so-called medical aid associations, we would counsel B. to decline the suggested partnership.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

BOTH the examinations in the Michaelmas term for the degree of Bachelor of Medicine will commence at 10 A.M. in the Examination Schools on Friday, December 6th. The secretary to the Board of Studies will receive the names of candidates, either by letter or personally, at his office in the Clarendon Buildings at any time not later than 10.30 A.M. on Friday, November 22nd. The forms issued for this purpose can be had at the Secretary's office. Names will be received as late as noon on December 2nd on payment of a special fee of 2 guineas. The statutable fee (Organic Chemistry and Materia Medica 10s. each; the remaining subjects £1 11s. 6d.) must accompany the entry form.

UNIVERSITY OF CAMBRIDGE.

DEGREES.—Professor T. W. Bridge, of Mason College, Birmingham, has been approved for the degree of Doctor of Science. Mr. H. B. Sedgwick, M.A., of Clare College, was on November 7th admitted to the degrees of M.B. and B.C.

UNIVERSITY OF DUBLIN.

IRISH GRADUATES AND POOR-LAW MEDICAL OFFICERS.

MR. LECKY, the historian, who is a candidate for the vacant Parliamentary seat for the University of Dublin, has sent the following reply

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[1] BRITISH MEDICAL JOURNAL, March 10th, 1894.

to a letter addressed to him by Professor Windle, Dean of the Medical Faculty of Mason College, Birmingham. Professor Windle, who wrote as an elector, drew Mr. Lecky's attention to the grievances of the Poor-law medical officers in Ireland, to certain disadvantages attending the present regulations of the Army Medical Service, and to the exclusive rules of certain hospitals in England:

(REPLY.)

38, Onslow Gardens, S.W.,
November 6th, 1895.

Dear Professor Windle,—It would be very unpardonable of me if I did not take a deep interest in the Irish Medical School, for there is certainly no other profession in Ireland which has produced during the present century so many men who have justly won a European reputation, and it is, I am afraid, only too true that a profession which cannot appear prominently on platforms and in Parliament is apt to be neglected by politicians. Should I be elected to Parliament I would consider it my duty to look carefully into any grievance under which Irish doctors may suffer, and to use any influence my position might give me to have them redressed. The regulations of English hospitals are, of course, not within the cognisance of Parliament, but any disabilities or disadvantages under which Irish doctors suffer, and from which English doctors are exempt, ought, if possible, to be remedied. I should be glad if I could do anything to further the work. I may also add that I shall do everything in my power to support any measure which may have the effect of improving the condition of the Irish Poor-law medical officers, and I shall also use every effort to have any legitimate grounds of dissatisfaction with present arrangements which may exist amongst the members of the Army Medical Staff removed.—Believe me, yours truly,

Professor Windle, M.D. W. E. H. Lecky.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following gentlemen passed the First Professional Examination in Anatomy and Physiology for the diploma of Fellow at a meeting of the Board of Examiners on Monday, November 11th:

H. B. Angus, L.R.C.P.Lond., M.R.C.S.Eng., of the University of Durham College of Medicine; A. E. H. Pinch, L.R.C.P.Lond., M.R.C.S.Eng., and H. T. A. Aveline, L.R.C.P.Lond., M.R.C.S.Eng., of University College, Bristol; R. Forsyth, M.B. R.U.I., of Queen's College, Belfast, and Owens College, Manchester; J. F. Dobson, of Yorkshire College, Leeds; H. A. Bruce, of Toronto University; and H. H. C. Dent, of Mason College, Birmingham, and St. Bartholomew's Hospital.

Thirteen gentlemen were referred for six months.

Tuesday, November 12th:

A. Paling, M.B.Lond., L.R.C.P.Lond., M.R.C.S.Eng., and F. Mannington, of Middlesex Hospital; R. E. Newton, M.B., M.S.Glasg., L.R.C.P.Lond., M.R.C.S.Eng., of Glasgow University and St. Bartholomew's Hospital; J. Battersby, of St. Mungo's College, Glasgow; J. Mooney, of Owens College, Manchester; J. M. G. Swainson, of Westminster Hospital; P. E. Tresidder, L.R.C.P.Lond., M.R.C.S.Eng., of Guy's Hospital; and Ewan R. Frazer, of London Hospital and Oxford University.

Twelve gentlemen were referred for six months.

Wednesday, November 13th:

E. G. Arnold, L.R.C.P.Lond., M.R.C.S.Eng., of St. Thomas's Hospital and Durham University; Cyril Ware, L.R.C.P.Lond., M.R.C.S.Eng., and R. M. Cowie, of King's College, London; H. W. Bruce, W. T. Milton, P. S. Batchelor, of Guy's Hospital; T. C. L. Jones, W. J. Harding and E. G. Morland, of St. Bartholomew's Hospital; J. E. F. Palser, of London Hospital; R. C. B. Wall, of London Hospital and Oxford University.

Nine gentlemen were referred for six months.

The following are the arrangements for the Final Fellowship, for which 43 gentlemen have entered their names:

Monday, 18th. Written Examination, 1.30 to 5.30 P.M., at Examination Hall.

Tuesday, 19th. Clinical Examination, 2.30 to about 5.30 P.M., at Examination Hall.

Wednesday, 20th. Operations, 1.30 to about 4 P.M., at Examination Hall.

Thursday, 21st. Surgical Anatomy, 2 to 4 P.M., at Examination Hall.

Friday, 22nd. Viva voce Examination, 5 to 9.15 P.M., at Royal College of Surgeons.

Candidates will be required to attend on each of the above-mentioned days.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, [illegible] births and 4,492 deaths were registered during the week ending Saturday, November 9th. The annual rate of mortality in these towns, which had increased from 19.1 to 21.9 per 1,000 in the three preceding weeks, further rose to 22.1 last week. The rates in the several towns ranged from 13.2 in Croydon, 14.7 in Huddersfield, and 15.3 in Birkenhead to [illegible] in Salford, 23.4 in Wolverhampton, and [illegible] in Blackburn and in Liverpool. In the thirty-two provincial towns the mean death-rate was 22.7 per 1,000, and exceeded by 1.5 the rate recorded in London, which was 21.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.0 per 1,000; in London the rate was equal to 3.0 per 1,000, and corresponded with the mean rate in the thirty-two provincial towns, among which the highest zymotic rates were recorded in Salford, Wolverhampton, and Blackburn. Measles caused a death-rate of 1.9 in Liverpool and in Salford, 2.6 in Oldham, and 10.8 in Blackburn; whooping-cough of 2.0 in Cardiff; and "fever" of 1.3 in Salford, 1.5 in Sheffield, and 2.4 in Wolverhampton. The 150 deaths from diphtheria in the thirty-three towns included 74 in London and 4 in Wolverhampton. One fatal case of small-pox was registered in London and 1 in West Ham, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital, which had been [illegible], [illegible], and [illegible] at the end of the three preceding weeks, had further declined to 78 on Saturday last, November 9th; 14 new cases were admitted during the week, against 7, 14, and 20 in the three preceding weeks. There were [illegible] scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, against 2,628, 2,813 and 2,841 at the end of the three preceding weeks; 349 new cases were admitted during the week, against 241, 260, and 216 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 9th, 799 births and 617 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.9 and 20.5 per 1,000 in the two preceding weeks, further rose to 21.4 last week, but was 0.7 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.9 in Greenock to 29.2 in Perth. The zymotic death-rates in these towns averaged 2.7 per 1,000, the highest rates being recorded in Perth and Greenock. The 289 deaths registered in Glasgow included 8 from scarlet fever, 3 from diphtheria, 12 from whooping-cough, and 3 from "fever." Two fatal cases of diphtheria were recorded in Edinburgh, and 2 in Leith.

METROPOLITAN ASYLUMS BOARD.

At the ordinary fortnightly meeting, held on November 9th, the returns showed that 752 patients suffering from "fever" had been admitted during the fortnight. During the same period 2,281 "fever" notifications were received; thus it would appear that about one-third of the cases are being isolated in hospital. [illegible] patients remained under treatment in the fever hospitals, an increase of 2 upon the previous report. This, however, is no index of the prevalence of fever, for the hospitals are practically full, there being at the time of the report no beds available for scarlet fever patients and only five for those suffering from diphtheria. There were [illegible] notifications of scarlet fever during the fortnight, an increase of [illegible] upon the number received in the preceding two weeks. It would thus appear that the seasonal decline in the prevalence is rather late, the highest point in the curve of the mortality from scarlet fever usually occurring about the middle of October. The number of beds occupied by diphtheria patients was [illegible], there having been but little change in this respect during the past few weeks; in fact, that number about represents the total of the beds available for the purpose. It is proposed to spend about [illegible] in the enlargement and reconstruction in permanent form of the North-Eastern Hospital.

NEWTON ABBOT WORKHOUSE INFIRMARY.

Dr. Culross, the medical officer, has placed the quarterly report of the state of the workhouse before his Board. The report is pleasant reading after the sad revelations that drew the attention of the whole kingdom to this house; but, though much has been done, very much remains to be done. The plans for the new infirmary seem to be still reposing in the official pigeon-holes at Whitehall (to our certain knowledge they have been there for over six months). When the new buildings are erected many of the existing defects will be remedied, but Dr. Culross draws the attention of his Board to the grave defects in the receiving wards, which he states to be "totally unfit for their purpose," and continues: "So long as provision for dealing with cases on their very entry is inadequate, all the care that may be taken in the other departments of the house may be rendered futile." He then points to the necessity of guardians regarding the workhouse as a structure that contributes to the recovery of the patient in all its departments, and declares that excellence of the result will depend mainly upon the efficiency of the separate details. Giving instances, Dr. Culross notes the deficiency in the laundry offices, the bad state of the vagrant wards, the absence of means for dealing with the dangerous lunatics, the absence of classification, defective sanitary appliances, unsuitability of the children's nursery; all matters requiring serious consideration. Old prejudices die hard, and one that dies the most hardly is the idea that the workhouse solely is a place of discipline for the worthless, and not also a place of treatment for the sick.

DANGEROUS OR INJURIOUS TO HEALTH.

There can be little doubt that when the authors of the Public Health Act of 1875, following the language of previous Sanitary and Nuisance Removal Acts, defined a nuisance as a thing or condition of things injurious to health, they had in view not merely those in which past or present injury could be proved, but, as in civil procedure, those in which all experience and analogy point to the certainty or probability of such a result under actual circumstances, or that the insertion of the additional word "dangerous" into the corresponding section of the London Act of 1891 was intended rather to remove any ambiguity attaching to former Acts than to extend its provisions and penalties to cases hitherto, and beyond the area of the metropolis still to be, exempt from the control of the law; in fact an interpretation of its own words given by the "High Court of Parliament," in like manner as the Local Government Board explained the phrase "without proper lodging and accommodation," and the Justices of the Queen's Bench disposed of the absurd condition of "prejudice to the purchaser." Until such authoritative declaration is obtained, legal casuistry will continue to diminish the preventive value of the Public Health Act, especially in the case of water supplies. The chemical composition of water, though not always an absolute indication of its purity, may leave no shadow of a doubt as to its direct contamination with sewage, and we know that many persons, at any rate if they have acquired a certain tolerance, may drink such water for years without any evident injury, but that should the sewage in question receive an accession of enteric, choleraic, or dysenteric evacuations, the outbreak of the disease among those using the water is inevitable.

A case of this kind occurred recently at Epping, where the medical officer of health, Dr. Fowler, applied for an order to close a well, the water of which was shown by the county analyst to contain no fewer than [illegible] grains of solids to the gallon, including [illegible] grains of chlorine, with a like excess of ammonia, nitrites, etc. The bench, however, dismissed the case on the ground that ninety persons having, as the defendant alleged, drunk the water for five years with only four deaths it had not proved injurious to them, and that contamination was impossible at a depth of 12 feet. Certainly organic matter percolating downwards through 12 feet of cultivated "living" earth would undergo complete nitrification through the action of the bacteria of the upper soil; but if the sewage, which was manifestly present, reached the well by horizontal percolation through seams of gravel or fissures in the chalk it would undergo no purification whatever. We are not told the ages of the people or the causes of the deaths, but if typhoid fever, which is not unknown in Essex, were introduced into the village a serious outbreak might be expected. The argument for the defence would be equally applicable to the storage of barrels of gunpowder or petroleum in shops as showing the absence of danger until an explosion took place.

THE YARMOUTH GUARDIANS AND PAUPER LUNACY FEES.

At a recent meeting of this Board the question of fees paid for the certification of pauper lunatics was introduced by the Vice-Chairman, who considered 10s. 6d. quite enough to pay for each of these certificates. The Chairman explained that the Board could not rule this question, as the amount depended on the acting magistrate, who was empowered to order any reasonable fee to be paid. The Vice-Chairman advocated appealing to the magistrates as a body to order a fee not exceeding 10s. 6d. This the Chairman said was not likely to be entertained by the magistrates, who did not act as a body in reference to these cases. Notwithstanding this explanation, the Vice-Chairman, supported by a lady guardian and one or two others, still pressed his opposition to paying more than 10s. 6d. It may save this gentleman and his supporters further trouble if we inform them that the amount of the fee to be paid for the medical certificate required before a pauper lunatic can be sent to an asylum depends, as stated by the chairman, on the magistrate who acts in the case, and that the Board of Guardians have nothing whatever to do with the question beyond that of paying the fee after the magistrate has awarded it. This is so clearly defined by the last Lunacy Act that we are surprised to hear of any Board of Guardians wasting time by discussing the question.

AN ISOLATION HOSPITAL FOR OBAN.

We notice with satisfaction that a very generous gift has been made by the senior medical practitioner in Oban, Dr. MacKelvie, to the burgh of Oban. For some time past the necessity for an isolation hospital has been fully recognised by the local authorities. Plans have been prepared, and they have been approved by the Local Government Board for Scotland, but the inevitable question of cost cropped up. The building will at present consist of a central or administrative block and one pavilion, two wards, with accommodation in all for six beds, the remaining pavilion to be erected at a later date, and it is estimated that this will cost about £[illegible]. Dr. MacKelvie, realising the necessity for such a hospital, has now made a gift to the burgh of £1,000. The gift is unfettered by any conditions further than that during his lifetime he receives 3 per cent. as interest on the capital, and he reserves to himself the right of expending this interest upon the building, either in its extension or upon its improvements in any way that may seem best to him.

THE ALLEGED PREMATURE DISCHARGE OF PATIENTS FROM FEVER HOSPITALS.

An interesting report has been presented to the Metropolitan Asylums Board by a subcommittee appointed to make inquiries with reference to outbreaks of illness alleged to have been caused by the premature discharge of patients from the Board's fever hospitals. The cases in which this is stated to have occurred were in the proportion of 1 to every 286 discharges, but many of these cases did not develop until so long a period after the return of previous cases from the hospital as to render it improbable that the discharged patient could have been the cause of the infection of the second case. In their investigations the Committee inquired into the various methods of disinfection adopted by the various local sanitary authorities, as it seemed not improbable that in some cases the apparent reintroduction of infection might be due to the bringing into use again of imperfectly disinfected articles of clothing which had been stored away during the patients' absence in the hospital. The results of these investigations are somewhat disquieting, as showing the very imperfect methods adopted by several of the vestries. The subject was reported on by the medical officer of the London County Council not long ago. The Committee report: (1) That in Chelsea there was no steam disinfector until the end of 1893, and that, from the time such disinfector was used, "these so-called return cases have been of very rare occurrence;" (2) that in Fulham the disinfection is, or was in December, 1894, entrusted to a contractor, who keeps the bedding in a chamber for from ten to twenty minutes only; (3) that in Kensington disinfection by dry heat is applied; (4) that in Lambeth the utmost heat attained is [illegible] degrees; (5) that in Islington disinfection is entrusted to a contractor.

The average stay in hospital of the patients under the care of the Asylums Board appears to have been during the year 1894, seventy days for scarlet fever cases, and forty-two days for diphtheria cases; while, from the replies received from various fever hospitals in the provinces and in Scotland, it appears that the average stay in those places ranged from thirty-seven to seventy-two days in the cases of scarlet fever patients, and from eighteen to forty-two days in the cases of diphtheria patients.

In an appendix a summary is given of the regulations in force at the various hospitals under the management of the Board, to ensure that all patients are free from infection at the time of their discharge, regulations which if faithfully carried out ought, in our opinion, to be sufficient, being certainly considerably more stringent than the precautions commonly taken in private practice.

In conclusion, the Committee report: (a) That there is no evidence to show that any appreciable number of patients admitted to the Board's hospitals during the past two years have contracted infection from patients previously discharged therefrom. That there is reason to believe that of the so-called "return" cases some have been due to the reintroduction of infection into households, owing to the disturbance of insufficiently disinfected clothes, etc., left at home and stored away during the patients' stay in hospital. (b) That it is desirable that those sanitary authorities in the metropolitan district who have not yet provided themselves with steam disinfectors should be urged to do so with the least possible delay; and, further, that the authorities who still entrust the work of disinfection to contractors should be advised to discontinue the practice, and to have work carried out by responsible officials.

PUBLIC VACCINATION.

A Constant Reader.—A public vaccinator who deputes his work as such to an unqualified assistant has no right to hold the post, and cannot legally sign a certificate of successful vaccination performed under such conditions, neither is he entitled to the payment of fees by his Board of Guardians; and, the facts being known to the Local Government Board inspector would entail loss of award.

A NEW INFECTIOUS DISEASES HOSPITAL FOR BELFAST.

At the last monthly meeting of the Belfast City Council the following resolution of the Public Health Committee was approved of:

> Your Committee again affirm their opinion that the time has arrived when a thoroughly equipped hospital for the isolation and treatment of citizens suffering from infectious diseases should be provided for the city of Belfast, and that such hospital should consist of not less than sixty beds at an annual cost of £30 per bed; and your Committee are also of opinion that the Notification of Infectious Diseases Act should be adopted.

There is now a prospect of this too long delayed scheme being carried into effect. As to the pressing need of a new infectious diseases hospital for Belfast there can be no second opinion. The chairman of the Public Health Committee, Alderman Graham, M.D., and the superintendent medical officer of health, Dr. Whitaker, have been active in pressing the matter upon the attention of the corporation.

Parish Council (Scotland).—It is competent for the parish council to maintain A. in the position of parochial medical officer in the parish of X., although non-resident, and in spite of the fact that another medical man has become resident there. The Local Government Board will have no ground for action, and cannot refuse to sanction the appointment, unless it is alleged that the paupers in X. are not properly attended to. At the same time the parish council, in making the appointment, are bound to take into consideration the advantage of having a resident medical officer.

INDIA AND THE COLONIES.

INDIA.

Waterborne Cholera.—The *Englishman* reports that Shahabad was last year, as in the previous year, the most unhealthy of all the districts in the Patna Division. The first appearance of cholera is traced to the Kumbh *mela* at Allahabad. It first broke out in the Sadar subdivision, and then in a village near to Sasaram, and during the heat of May and June in an epidemic form throughout the district. Everything was done by the local officers and district and local boards that could be done in the way of affording medical aid, disinfecting, and introducing sanitary reforms, but with little visible effect. The disease tenaciously held its ground, as in Gaya, until September, committing greater ravages than any other district in the division. It is at first sight disappointing to find that in the town of Arrah, notwithstanding the introduction of a filtered water supply, there was an unusually severe outbreak. This is explained by the fact that, owing to the use of coarse sand in the filter beds, the water for the first few months was much discoloured, and the people on this account objected to take it. This, however, was subsequently remedied, and the purity of the water is now undisputed. The collector adds that inquiries showed that in part of the town where people overcame their prejudices and used the filtered water cholera was less prevalent than elsewhere. On the subject of the prevalence of cholera throughout the district, the Civil Surgeon remarks as follows: "There can be no doubt that the great spread of cholera was due in great part to the defective water supply of the district and from the pollution of drinking water. The corpses of those who die from cholera are very often not properly burnt, and in many instances are thrown into rivers and irrigation reservoirs without any attempt at cremation whatever. Such occurrences were brought to my notice at Dehri, and were by me reported to the magistrate, with a request that such practices should, if possible, be put a stop to." The heavy mortality from fever is ascribed, as in Gaya and elsewhere, to the unusual character of the season. The improvement in vaccination operations is also favourably noticed by the collector.

The Anthropometric System.—It is stated that the Government of India considers it essential that the anthropometric system for the identification of criminals should be extended to all parts of India, including the feudatory States, and it has requested that "arrangements" may, if possible, be made for police officers from the Bengal Presidency to visit the gaols of those States under its control and to measure criminals.

We learn that the number of gentlemen attending the present practical class on chemical pathology in the Chemical Pathology Laboratory at University College, London, recently described in these pages, is seven.

MEDICAL NEWS.

A further article on the late Professor Ludwig will be contributed to *Science Progress* by Dr. Asher, of Bern, in collaboration with Professor Kronecker. It will be published in the December number.

Mr. A. S. May, Public Vaccinator of the Forest Hill District of the Lewisham Union, has received for the tenth time the Government grant for efficient vaccination in his district.

The first meeting of the Zoological Society of London for scientific business will be held at 3, Hanover Square on Tuesday, November 19th, at 8.30 P.M. Among the contributions will be one by Mr. Swale Vincent, M.B.Lond., on the Suprarenal Bodies in Fishes.

The personal estate of the late Surgeon-General Sir Thomas Longmore, C.B., has been valued at £19,659 2s. 3d. By the will, which bears the date May 11th, 1885, his widow, Dame Mary Rosalie Helen Longmore, is appointed sole executrix, and to her the testator bequeaths all his real and personal estate whatsoever.

The opening by the Duke of Devonshire of the new Home (the "Passmore Edwards House") at the Colony of the National Society for the Employment of Epileptics at Chalfont St. Peter, which was postponed from August 7th last, has now been fixed to take place on November 26th, at 2.45 p.m.

The Christmas course of lectures adapted to a juvenile auditory will be delivered at the Royal Institution by Professor J. G. McKendrick, of Glasgow. The subject will be Sound, Hearing, and Speech. The lectures, which will be illustrated by experiments, will be delivered at 3 P.M. on December 28th, 31st, and January 2nd, 4th, 7th, and 9th.

The Royal Academy of Medicine in Ireland.—Dr. James Little, President of the Royal Academy of Medicine in Ireland, will entertain his Excellency the Lord Lieutenant at dinner in the Royal College of Physicians on Thursday, November 28th. We understand that Dr. Bennett, Professor of Surgery in the Medical School of Trinity College, will be a candidate for the Presidency of the Academy in 1897.

The annual dinner of the staff and past and present students of the Dental Hospital of London will be held on Saturday, November 30th, at the Café Royal, under the presidency of Mr. Frederick Canton. We are requested to state that any gentlemen now or formerly connected with the hospital or school who may not have received a private intimation are invited to communicate with the Dean, at the Dental Hospital, 40, Leicester Square, should they desire to attend.

The next general meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at 11, Chandos Street, Cavendish Square, on Thursday, November 21st, 1895, under the presidency of Dr. David Nicholson, at 4 o'clock. Dr. W. Gilmore Ellis will read a paper on Latah. Dr. Morrison will read a paper entitled Short Notes of a few cases of Epilepsy affecting Special Nerves and their associated Mental State. The members will dine together at the Café Royal at 6.30 p.m.

The Cholera.—The cases of cholera in Egypt since October 11th are stated officially to number 581, of which 443 were fatal. The epidemic is reported to be confined to the district south of Lake Menzaleh, mainly along the canal Bahr es Saghair, between the Lake and Mansurah. The infected district has been placed under four English doctors, with a staff of inspectors, to examine every possible boat on the canal and on the Nile between Damietta and Benha, and as far as possible to report the movements of all travellers.

Hospital Sunday Fund.—A special meeting of the Council of the Hospital Sunday Fund was held at the Mansion House on November 7th to distribute the additional awards for the year. The report of the Committee of Distribution stated that, the Lord Mayor having received additional contributions, amounting to £16,000, since the distribution made to the hospitals and dispensaries about three months ago, a special meeting of the Committee was convened to consider the desirability of making a second distribution this year, when it was unanimously resolved to recommend the Council to sanction the disposal of that sum amongst the various institutions, calculated on the bases previously approved. The usual 5 per cent. would be reserved for surgical appliances.

At the monthly meeting of the Association of Registered Medical Women, on November 5th, Mrs. Garrett Anderson was in the chair and thirty-four members were present. Miss Julia Cock, M.D., showed a case of the disease known as "sprue" or tropical diarrhœa. The patient, a young woman, had spent seven years in India. Miss Cock dwelt upon the diagnostic points which separate sprue from chronic dysentery, malaria, pernicious anæmia, and tuberculous ulceration of the intestines. The girl is now in the New Hospital for Women, and Miss Cock will be glad to show the case to any members of the profession interested in tropical diseases.

An Exhibition of Nursing Appliances.—The Trained Nurses' Club and Midwives Institute has during the past week been exhibiting a collection of appliances which its members have found useful in their work. A short inspection of the exhibits suffices to show what an amount of thought and ingenuity is being devoted to the elaboration of those accessories by which the work of nursing is facilitated. At the same time it is impossible not to see, from the very nature of the objects which are shown, how largely the modern nurse is becoming the medical man's assistant. In sterilising his instruments, in preparing his dressings, in making ready for his operations, and in fact in doing the after-dressing of the case, the well-trained nurse is evidently prepared to act as house-surgeon to the operator in private practice. There is no doubt both a good and a bad side to all this. To the operator it offers immense facilities, but the general practitioner will probably regard his fascinating substitute with mingled feelings.

Irish Medical Schools' and Graduates' Association.—The autumn meeting of this Association was held at the Monico Restaurant on November 12th, the President, Dr. Phillips-Conn (Reading), in the chair. There was a large attendance of members, including Sir Walter Foster, M.P., Inspector-General Lloyd, R.N., Dr. Stewart (Clifton), and Dr. Cagney and Surgeon-Major Carte, the honorary secretaries. The President drew attention to the severe loss the Association had sustained by the death of their late Chairman of Council, Sir Thomas Crawford, K.C.B. Dr. Abraham and Dr. Gilbart Smith proposed a vote of condolence with the family of Sir Thomas Crawford, which was seconded by Dr. Crespi and passed unanimously. The autumn dinner of the Association took place the same evening, when the guests of the evening were the Lord Chief Justice of England and Mr. Justice Mathews. Amongst other distinguished guests present were the Right Hon. Lord Battersea, the Right Rev. the Bishop of Newport and Menevia, Sir F. Osborne, Bart., Mr. Yarrow, Dr. Nicolson (Broadmoor), Dr. Frederick Roberts, Mr. Thomas Smith, Dr. Robert Anderson, and Dr. Stephen Mackenzie.

Safe Places for Poor Children.—The Metropolitan Public Gardens Association, of which the Earl of Meath appears to be the moving spirit, continues its good work of providing open spaces for the use of the dwellers in London. The importance of this work can hardly be appreciated by those who do not remember the time when—except the few parks which then existed—there were no open spaces whatever for the use of the people and the people's children. No one will deny the great benefit which the parks are to the atmosphere of London, but they are too far off from many homes, and, unfortunately, are, in many cases, under too lax a supervision to make them safe places for little children. The gardens, however, which have during recent years been opened in almost every part—planted and in summer filled with flowers and provided with seats and caretakers—are safe refuges close at home, and are of the utmost service as breathing places for the little ones. The opening of some of the school playgrounds on Saturday afternoons, under proper supervision, is another matter which has been taken in hand by the Association very much to the advantage of the younger portion of the community.

THE MAYOR OF CAMBRIDGE.—After the meeting of the Cambridge Medical Society on November 1st, a complimentary dinner was given to Mr. Hyde Hills, Mayor of Cambridge, and lately President of the Society. The chair was taken by Professor Clifford Allbutt, who, in proposing the health of the guest, referred to the exemplary manner in which he had carried out both municipal and social work. Mr. Hills, in responding, after thanking the members of the Society for the honour they had done him, dwelt upon the desirability of medical men taking an interest in municipal work which they could do with advantage to themselves and to the community. Amongst those present were Sir George Humphry, Dr. Holden, Vice-President of the Society, Dr. A. Anningson, Mr. Hough, Mr. Balding, Mr. Wherry, and Dr. Laurence Humphry.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer; unmarried. Salary, £100 per annum, with board and apartments in the hospital. Applications to Frederick W. Dingle, Registrar and Secretary, before November 26th.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, with board, washing, lodging, etc. Applications to Nathan A. Smith, Secretary, Infirmary Offices, 11, Richmond Terrace, Blackburn, by November 27th.

BRADFORD INFIRMARY.—Dispensary Surgeon; doubly qualified; unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "Dispensary Surgeon," to William Shaw, Secretary, by November 25th.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Square, Chelsea, S.W.—Honorary Surgeon. Applications to the Secretary by November 21st.

CLIFTON DISPENSARY, Dowry Square, Bristol.—Resident Medical Officer; not exceeding 30 years of age; doubly qualified. Salary, beginning at £150 a year, increasing annually by £10 to £200, with furnished rooms only. Applications to R. C. Macfie, 42, Royal York Crescent, Clifton, Bristol, before November 23rd.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon; must be duly qualified to practise medicine and surgery, and be conversant with the Welsh language. Salary, £80 per annum, with board, residence, and washing. Applications and testimonials to W. Vaughan Jones, Secretary, by December 2nd.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House Governor, by November 25th.

GENERAL INFIRMARY, Northampton.—House Surgeon; doubly qualified; unmarried, and not under 21 years of age. Salary, £50 per annum, with furnished apartments, board, attendance, and washing. The Assistant House-Surgeon is a candidate, and, if appointed, the Committee will proceed with the election of Assistant House Surgeon. Salary, £40 per annum, with furnished apartments, board, and attendance. Applications to the Secretary by November 23rd.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeon; doubly qualified. Salary, £100 per annum, with board, residence, and washing. The Assistant House-Surgeon is a candidate for the post, and, if elected, the office of Assistant House-Surgeon will be vacant. Candidates must be doubly qualified. Board, residence, and washing provided. Applications to the Secretary by November 30th.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer; doubly qualified; age must not exceed 25 years, and must be unmarried. Salary, £80 per annum, increasing to £85 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications, endorsed "Application for Appointment of Medical Officer," to the Committee of Visitors, Knowle, Fareham, by November 26th.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Resident Medical Officer. Salary, £50 per annum, with board, lodging, and washing. Applications to W. Hunt, Secretary Superintendent, by November 25th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—House-Surgeon to out-patients; non-resident. Appointment for six months but eligible for a second term. Salary, 5 guineas. Applications to the Secretary by December 3rd.

HOSPITAL FOR WOMEN, Soho Square.—Assistant House Physician; non-resident (appointment for three months) and Assistant Physician. Applications to the Secretary by November 23th.

LEICESTER INFIRMARY.—Honorary Obstetric Surgeon (temporary). Applications to the Secretary, 24, Friar Lane, Leicester, by November 26th.

LONDON HOSPITAL, Whitechapel, E.—Dental Surgeon. Applications to the Governor by November 30th.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer at the Monsall Fever Hospital; unmarried. Appointment for twelve months. Salary, £100 per annum, with board and residence. Applications to the Chairman of the Board, Royal Infirmary, Manchester, by November 30th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road.—Two Qualified Medical Women as House Surgeons. Applications to Margaret M. Bagster, Secretary, by November 27th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—House-Physician; doubly qualified. Appointment for six months; at the expiration of this term he will be required, if eligible, to serve as House-Surgeon for a further period of six months. Salary as House-Physician at the rate of £50, and as House-Surgeon at the rate of £60 per annum. Junior House-Physician for six months; doubly qualified. No salary, but board and lodging, including washing, provided. Applications to the Secretary, 37, Clement's Lane, E.C., by December 9th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand, W.C.—Clinical Assistants. Applications to T. Beattie Campbell, Secretary, by November 24th.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Appointment for six months. Salary, £50 per annum, with board and lodging. Stimulants and washing not provided. Applications to the Honorary Secretary by November 25th.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser; registered and unmarried. Salary, £100 per annum, with lodgings, attendance, fire, and lights. Applications to Arthur Fisher, Honorary secretary, by November 25th.

VICTORIA UNIVERSITY, Manchester.—External Examiner in Pharmacology and Therapeutics and in Surgery. Appointment for three years. Applications to Alfred T. Bentley, Registrar, by November 30th.

WEST NORFOLK AND LYNN HOSPITAL, King's Lynn.—House-Surgeon. Salary, £50 per annum, rising £10 annually to £80, with board, residence, and washing. Applications to the Secretary by November 22nd.

MEDICAL APPOINTMENTS.

ANDERSON, Mr. D. A., appointed Medical Officer for the Cuckfield District of the Teesdale Union.

ARCHER, H. E., M.D.Lond., L.R.C.P., reappointed Medical Officer for the No. 1 District of the Royston Union.

BECKETT, G. H. E., M.R.C.S., L.R.C.P., appointed House-Physician to the Queen's Hospital, Birmingham.

BLACKFORD, Mr., appointed Medical Officer for the Cradley District of the Stourbridge Union, *vice* W. H. Thompson, M.D.Durh., L.R.C.P. Edin.

BRUCE, Mr. J., appointed First Assistant Medical Officer to the Gordon Road Workhouse and the Infirmary of the Parish of Camberwell.

CLENDINNEN, William McEntire, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Third Sedgeley District of the Dudley Union.

COLLINS, E. Treacher, F.R.C.S., appointed Assistant Surgeon to the Royal London Ophthalmic Hospital, Moorfields, E.C.

GILFILLAN, S. J., M.A., M.B., C.M.Edin., appointed Second Assistant Medical Officer to the Norfolk County Asylum, Thorpe.

GREY, T. Campbell, F.R.C.S.Eng., L.R.C.P.Lond., appointed Lecturer on Ambulance and Nursing to the Hunts County Council.

HAINES, A. W., B.Sc., L.S.A., appointed House-Surgeon to the Queen's Hospital, Birmingham.

HAYWARD, J. W., M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Whitstable Urban District Council.

HOGG, Mr., appointed Medical Officer for the Shardlow District of the Shardlow Union, *vice* Charles Harwood, M.D., L.R.C.S.Edin.

JONES, Mr. C. A., appointed Second Assistant Medical Officer to the Gordon Road Workhouse and the Infirmary of the Parish of Camberwell.

LEES, E. Leonard, M.D., C.M.Edin., M.R.C.S., appointed Physician to the Hospital for Sick Children and Women, Bristol, *vice* W. Barrett Lowe, M.D., resigned.

LUKE, T. D., M.B., B.Ch.I., appointed Medical Officer to the parish of Durness, Sutherlandshire.

MCCOMBE, R., L.R.C.P., L.R.C.S.I., appointed Medical Officer for the No. 2 District of the Royston Union.

MACKENZIE, W. S., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health to the Altofts Urban District Council.

MACLEOD, Charles Gordon, M.B.Edin., appointed Honorary Assistant Ophthalmic Surgeon, Sydney Hospital, New South Wales.

MATTHEWS, Mr. T. G., appointed Medical Officer for the Sixth District of the Mansfield Union.

MEREDITH, F. G., M.R.C.S., L.R.C.P., appointed Obstetric and Ophthalmic House-Surgeon to the Queen's Hospital, Birmingham.

MOLES, Frederick P., L.S.A., appointed Medical Officer of Health to the Urmston Urban District Council.

NUNN, P. W. G., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Popesdown Urban District Council.

PATCH, H. H. L., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Chudleigh District of the Newton Abbot Union, *vice* F. C. W. Hounsell, B.A.Camb., M.R.C.S.Eng.

PENNY, John, M.B., C.M., B.Sc.(Public Health)Edin., appointed Resident Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat, *vice* N. F. Edwards, M.B., B.Sc.Lond., resigned.

SENIOR, A., M.B., B.C.Camb., appointed Medical Officer of Health for the Esher and The Dittons Urban District Council.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Edward Woakes: Tinnitus and Vertigo.

TUESDAY.

London Post-Graduate Course, Bethlem Royal Hospital, 2 P.M.—Dr. Percy Smith: General Paralysis of the Insane.

The Clinical Museum, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—Mr. Edmunds: Cystic Accessory Thyroid. Mr. Targett: Classification of Sarcomata connected with Bladder. Mr. [illegible]: Acute Tuberculosis of Spleen removed by Operation. Dr. Rundle: Primary Epithelioma of Ureter. Mr. D'Arcy Power: Diffuse Lipoma of Hand and Fingers. Card Specimens by Dr. Claremont and Dr. Walsham.

WEDNESDAY.

Hospital for Consumption, Brompton, 4 P.M.—Dr. C. Y. Biss: On Hæmoptysis.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3 P.M.—Lecture by Mr. Beevor.

Royal Meteorological Society, 25, Great George Street, Westminster, 7.30 P.M.

West London Hospital, Hammersmith, W., 5 P.M.—Mr. Swinford Edwards: Rectal Surgery (Post-Graduate Course).

North-West London Clinical Society, North-West London Hospital, 8.30 P.M.—Clinical Cases.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

THURSDAY.

London Post-Graduate Course, Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Dr. Tooth: Hemiplegia. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—Mr. Donald Gunn: Ocular Evidences of Hereditary Syphilis. Central London Sick Asylum, Cleveland Street, 5.30 P.M.—Mr. Thomas Bryant: Cases in the Wards.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 P.M.—Introductory Address by the President. Mr. Rickard Lloyd: Six Hours' Administration of Chloroform in a Case of Cumulative Poisoning by Hypodermic Injection of Strychnine.

Harveian Society of London, 8.30 P.M.—Mr. Juler: Pathology and Treatment of Some Forms of Iritis.

FRIDAY.

London Post-Graduate Course, Bacteriological Laboratory, King's College, 3 to 5 P.M.—Professor Crookshank: Lecture; Erysipelas and Suppuration. Practical Work: Cultivations of Streptococci.

Clinical Society of London, 20, Hanover Square, W., 8.30 P.M.—Clinical Evening: Mr. W. A. Lane: Cases of Excision of the Temporo-maxillary Joint in Children. Dr. Harry Campbell: (1) A case of Premature Puberty and (2) a case of Rheumatoid Arthritis confined to the Elbow-joints. Dr. R. Hingston Fox: A case of Meningocele. Mr. J. H. Morgan: (1) Double Penis and Malformation of Genitals; (2) Harelip and Cleft Palate, with Deformity of Ear and Face and with Auricular Appendage. Dr. Buzzard: A case of Charcot's Joint Disease. Dr. Colman: Mother and Child with Idiopathic Muscular Atrophy. Mr. O. Paget (introduced by Mr. S. Paget): A case of Myositis Ossificans. Mr. H. H. Clutton: Two cases of Deficiency of Tibiæ. Mr. C. S. Wallace: A case of Ligature of the Femoral Artery and Vein for Secondary Hæmorrhage. Dr. F. R. Walters: A case of Myxœdema. Mr. W. H. Battle: A Modified Incision for Removal of the Vermiform Appendix. Mr. Makins: A case of Ligature of Both External Iliac Arteries by the Transperitoneal Method. Mr. H. Paterson: A case of Extensive Skin Grafting.

SATURDAY.

London Post-Graduate Course, Bethlem Royal Hospital, 11 A.M.—Dr. Percy Smith: Puerperal and Lactational Insanity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

Borrowman.—At Dunreggan, Elie, on November [illegible], the wife of Philip G. Borrowman, M.B., of a daughter.

Halliwell.—On November 2nd, at Irwell, Winchcombe, Gloucester, the wife of John Halliwell, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

Holden.—On November 7th, at [illegible], Castle Hill, Reading, the wife of G. H. R. Holden, M.A., M.D., B.C.Cantab., of a son.

[illegible].—Hamilton House, Moffat, N.B., on November [illegible], the wife of David [illegible], M.A., M.B., C.M.Edin., of a son.

Morris.—On October [illegible], at [illegible], near Carmarthen, South Wales, the wife of Sylvanus [illegible] Morris, M.D., of a daughter.

MARRIAGE.

Jäger—Dowding.—On November [illegible], at St. John's, Kingston-on-Thames, by the Rev. [illegible] Letchworth, M.A., Harold J. Jäger, M.R.C.S.Eng., L.R.C.P.Lond., A.K.C., to Lucy Adelaide (Missie), only daughter of the late Rev. Chas. Dowding, Rector of [illegible], Somerset, and Mrs. Dowding, of Surbiton.

DEATH.

Cock.—November 6th, 1895, at 1, Porchester Houses, W., Frederick Cock, M.D.Edin., M.R.C.P.Lond., aged [illegible].

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

W. H. P. asks for a statement of experience as to the value of lacnanthes in chest affections.

NEMO asks: What is the best work to read up for technical lectures in first aid, etc., ordered by the County Council?

W. P. W. would feel obliged if anyone could tell him of a school or institution where a boy, aged 16, of weak intellect could be received. He is not an idiot, is very small for his age, an orphan, and when of age will be entitled to some £130, though at present he has nothing.

M. D. writes: About eighteen months ago there was in the BRITISH MEDICAL JOURNAL an advertisement of a bath towel, made of tape, so arranged that the edges of the tape formed the rubbing surface. I obtained a sample, but unfortunately have lost the address. Can any reader assist me?

INQUIRER asks (1) to be recommended to an establishment where sulphur baths could be obtained (for a case of muscular rheumatism) in London. (2) He inquires, also, whether a person suffering from delirium tremens is responsible, in the eyes of the law, for any act of homicide or other personal damage, or would he be termed of unsound mind?

M. B. Aberd. asks for suggestions as to the treatment of a case of diarrhœa in a lady of [illegible] years of age. It commenced after the birth of a child twenty-five years ago, and has been going on more or less since. The stools are watery, never formed, inoffensive, and average five or six daily. Three or four times a year she has an aggravated attack, lasting two or three weeks, accompanied by severe abdominal pain and tenderness, the stools numbering eight or nine daily and causing considerable prostration. Appetite remains good. All ordinary remedies have, I believe, been tried without much effect. Ext. belæ seems to be of some use. Her temperament is somewhat nervous.

HOME FOR INEBRIATE WOMAN.

R. C. W. asks whether there is any home for inebriates where a woman could be received for about £1 1s. a week.

*** We cannot recommend any individual practitioner or institution. Probably a list of cheap homes could be seen at the offices of the local Charity Organisation Society.

RESTRICTIVE REGULATIONS OF THE ROYAL COLLEGE OF PHYSICIANS.

ETHICS writes: I should be glad to be informed upon what grounds the College of Physicians forbids its Members to dispense medicines or sue for fees in courts of law. The first of these regulations debars nearly all the poor in rural districts from being attended by Members of the College, and the other requires men to relinquish one of the rights of a citizen, which may not be quite moral.

PNEUMATIC TYRES.

MEDICUS would feel much obliged if anyone who has had practical experience in the use of pneumatic tyres can give him information on the following points: (1) If they are easily cut by sharp, unrolled macadam; (2) as it is stated that they are so durable that they will run [illegible] miles, what is their condition at the end of one or two years' constant work? (3) is the draught of the carriage increased in wet weather? and (4) are they liable to slip or skid on roads which are much higher at the centre than the sides?

SURGICAL TREATMENT OF PULMONARY CAVITIES.

H. G. A. asks how he can obtain the more important monographs which have been published dealing with the results of draining lung cavities by surgical interference, or is there any literature of value dealing with the subject?

*** Very little advance has been made in this subject since the pub-

lication in 1887 of Mr. Godlee's Lectures on the Surgical Treatment of Pulmonary Cavities. The latest papers of interest relating to this branch of surgery are by Dandridge in the *Annals of Surgery*, February, 1894, and by Krause in the *Berliner Klinische Wochenschrift*, No. 14, 1895. We have not met with any recent monographs on the subject. The former might be obtained from Cassell and Co., and the latter probably from Williams and Norgate, Henrietta Street.

HOME FOR LEPER.

M.D. would be glad to know of any home or hospital where a gentleman of limited means affected with leprosy could be received as a permanency, and on what terms?

*** We are not aware that any institution exists in this country wherein patients suffering from leprosy or other disfiguring chronic complaints can be permanently maintained. Those who can afford it have to live in their own houses or cottages with special nurses, others have to drift ultimately to the Poor-law infirmaries, for although the general hospitals are glad to receive a case of this kind for a month or two, they cannot be kept for an indefinite time. In point of fact, there is a serious want of such an establishment for these unfortunate sufferers.

SIR RICHARD QUAIN'S ADDRESS.

DR. G. P. BERT (Strawberry Hill) writes: The profession must be very much obliged to Sir R. Quain for his splendid address. This is the kind of talk one wants to hear. But is the venerable baronet quite right about the Board of Health? My *Lancet* gives 1854 as the date of the General Board of Health. Or might there have been a Board of Health (not general) before this?

*** We have called Sir Richard Quain's attention to this point and he writes that the Board of 1832 had relation to the invasion of cholera. The General Board of Health arose from it subsequently, and took cognisance of various professional matters. Sir Benjamin Hall was President of this Board in 1854-5.

CANCER IN THE SCILLY ISLES AND JERSEY.

MR. ROGER WILLIAMS, F.R.C.S. (Preston), writes: It is alleged that in this country cancer is specially prone to be prevalent in low-lying districts, traversed by or contiguous to rivers that seasonally flood the adjacent lands. In favour of this opinion there is much to be said, but the great majority of human habitations are thus situated, and, moreover, this theory offers no explanation as to why some low-lying districts have such a much higher cancer mortality than other low-lying districts equally exposed to floodings. Under these circumstances it appeared to me that light might be thrown on the subject if we had information as to the prevalence of cancer in small islands like those of Scilly, Jersey, and Guernsey, which are destitute of rivers that seasonally flood their banks. Therefore I lately wrote to Dr. Mackam, the medical officer of health for the Scilly Isles, who has published recently an excellent account of their medical climatology, and he very obligingly furnished me with the following particulars. These show that both cancer and tubercle, especially phthisis, are fairly common in the Scilly Isles. During the last five years their population has averaged about 2,000; 5 deaths from cancer occurred during this period, which is equivalent to a mortality of 5 in 10,000 living. During the same period the English cancer mortality averaged about 6·2 per 1,000. It would thus appear that the prevalence of cancer in the Scilly Isles is somewhat less than it is on the mainland. I have been informed by a Jersey practitioner that cancer was very prevalent there, as well as in Guernsey; and I am desirous of making it known through the BRITISH MEDICAL JOURNAL that I shall feel exceedingly obliged to anyone who will be kind enough to furnish me with information on this interesting subject. Official returns, reports of medical officers of health, etc., would be exceptionally valuable; but even in the absence of definite statistical information the impressions of practitioners as to the prevalence of cancer in these islands would be of great service.

ANSWERS.

M. A. W.—If the different points named are to be covered by one book Whitelegge's *Hygiene and Public Health* (Cassell, 7s. 6d.) would be suitable.

INQUIRER.—Our correspondent might apply to the National Health Society, 53, Berners Street, London, W., which will probably be able to arrange the lending of diagrams.

DR. J. S. R.—The cheapest and most recent work is the series of articles republished in book form from the BRITISH MEDICAL JOURNAL entitled *The Truth about Pancreatism*, by Ernest Hart, to be obtained of Messrs. Smith, Elder and Co., 15, Waterloo Place, S.W.

PERPLEXED.—(1 and 2). It is contrary to the policy of the British Medical Association knowingly to elect homœopathic practitioners as members. The matter was reported on by a Committee of the Council. At the meeting of the Council on July 5th, 1895, the report of this Committee was received and adopted and ordered to be circulated to the secretaries of the Branches. (3) The General Medical Council is specifically excluded from making any inquiry as to any system of medicine which a duly qualified medical man may choose to follow. (4) We are not acquainted with any work which gives a lucid definition of what is meant by homœopathy. The definition would probably vary at different epochs. (5) We cannot undertake to explain the "intellectual processes necessary for the change from those views which a future homœopath must necessarily hold at the time of his final examination to those views which he must hold as a practising homœopath." It is one of those mysteries which no one but the authoress of a "problem novel" would attempt to penetrate.

W. P., M.R. writes: In answer to the query of "Rus," I would recommend firstly a strict regimen, namely, animal food once a day, green foods, cooked or as salads, to be partaken of freely, cured foods and sugar to be avoided; if any alcohol, stout bock and wines of a similar nature. As medicaments: ℞ Hydrarg. subchlor. gr. ½; ext. gentianæ q. s. Ft. pil. j sum. bis hebdom. h. s. ℞ Pulv. Carlsbad offer. (Kutnow's) 3ss vel 3j prima mane ex aqua.

SURGEON-MAJOR H. FERGUSON, M.B., I.M.S. retired (Birmingham) recommends "Rus" to try a course of iodide of potassium or mercury alternating with quinine, if he has not already done so, as this treatment has been successful in similar cases.

THE TITLE OF "DR."

A CONSTANT READER.—The "L.S.A." is now a complete diploma, but does not entitle the holder to style himself "Dr."

TREATMENT OF PSORIASIS.

L.R.C.P., in answer to "J. F. D." in the BRITISH MEDICAL JOURNAL of November 9th, p. 1210, strongly recommends the thyroid treatment, and refers him for guidance to an address given by Dr. Byrom Bramwell and published in the Transactions of the Dermatological Society of Great Britain and Ireland, 1891-95, vol. i.

ELECTRICITY.

A MEMBER.—The form of battery used for household electric bell is not at all suitable for electric light. We should advise "Electricity" to purchase a small accumulator, which he could have charged up from the nearest central station whenever it runs down. The cost of such an installation need not exceed a few pounds, depending of course on the kind of lamp he wishes to light. We are assuming that he wishes for a small incandescent lamp only for surgical use.

NAIL BITING.

DR. P. Z. HENDRY (Berners Street, W.) writes: The most effective method I have found of eradicating this habit is to train the subject to attend to his nails himself with scissors and file, instead of doing so, as he imagines, with his teeth. The impulsion of the nail biter occurs scores of times a day. The subject must have a pair of suitable scissors and a file at hand in his pocket to cut away shreds of skin around the nails, and pare and smooth the nails at any moment of the day. By perseverance in this method I have cured several cases, one a man over 40 years of age, in whom the habit had lasted since childhood.

BOOKS ON MEDICINE AND SURGERY.

RUS IN URBE, who asks for a list of books by reading which a practitioner of fifteen years' standing may bring himself up to date on certain subjects, will probably find the following useful: 1. Medical diagnosis: *Clinical Diagnosis*, by Rudolf v. Jaksch, translated by James Cagney, M.D. Charles Griffin and Co. 1895. Pp. 380. *Clinical Medicine*, by Judson S. Bury, M.D. Charles Griffin and Co. 1894. Pp. 468. 2. *A Text-book of Pharmacology*, by T. Lauder Brunton, M.D., F.R.S. London: Macmillan and Co. 1891. 3. Surgical treatment: *The Science and Art of Surgery*, by Sir John Eric Erichsen. Tenth edition. London: Longmans, Green, and Co. 1895. 2 vols. about pp. 1,200 each.

DEGREES FOR LONDON STUDENTS.

LATE HOUSE-PHYSICIAN draws attention to an evil which has been pointed out many times before, that is, the hardship which falls upon men, and more especially upon London students, who find towards the end of their time of study, when perhaps they are feeling greatly drawn towards medicine, that they cannot obtain a medical degree without taking up again the subjects of the preliminary examinations. The hope has long been held out that this injustice would be remedied by the establishment in some form or other of a teaching university for London, and we would suggest that our correspondent and all others who feel aggrieved in the same way should put themselves in communication with the deans of their schools and the governing bodies of their colleges in order that pressure may be brought from every side to urge on reform. For years back almost every section of the press, both lay and medical, has insisted on this matter being dealt with in a comprehensive spirit.

NOTES, LETTERS, Etc.

THERE are said to be 1,284 medical practitioners in the United States who rejoice in the patronymic of Smith.

THE AIRD JOLLY FUND.

MR. GARRY SIMPSON, Treasurer (East Acton, London, W.) acknowledges with thanks the following additional subscriptions:

	£	s.	d.
Mr. C. A. Ballance, F.R.C.S., London	2	2	0
Sir Edwin Saunders, F.R.C.S., Wimbledon	2	2	0
Dr. Beecham, Ealing...	0	10	6

SANITATION IN CAWNPORE.

THE Upper India Chamber of Commerce held a meeting on August 28th to consider this matter. The chairman showed that last year there occurred 3,800 preventable deaths in the city and cantonments, and claimed that this meant a loss of nearly 28 lacs of rupees to the community. Arguing from this he submitted that the municipality would be justified in incurring almost any conceivable expenditure to reduce the mortality to a reasonable figure. The meeting resolved to address Government, requesting the election of a committee to consider the whole question, and suggesting the appointment of two new officials—namely, a paid vice-chairman of the Municipal Board, who should be an experienced sanitary engineer, and a medical officer of health, who should be a European, prepared to devote the whole or a greater part of his time to the duties of the office.

[1] BRITISH MEDICAL JOURNAL, November 9th, p. 1210.

BRUSHING DIRTY CARPETS.

MESSRS. ENTWISLE AND KENYON write to us to say that their attention has been called to a paragraph in the BRITISH MEDICAL JOURNAL on the above subject, in which it is recommended that carpets should be brushed by an "American sweeper." As the largest European makers of carpet sweepers, they suggest that there is no reason why "American" sweepers especially should be purchased, when English sweepers can be obtained—sweepers which are in every respect more durable, reliable, and perfect in action than the great bulk of the imported ones.

LICENTIATES AND THE TITLE OF "DR."

DR. W. F. SHERARD (Putney) writes: Will you allow me to point out that a legal decision has been given upon the question of Licentiates of Colleges of Physicians styling themselves "Drs.," and that the decision has not been appealed against or upset. It is published in the BRITISH MEDICAL JOURNAL of April 4th, 1885, as follows: "Mr. M. D. Makuna was then charged with putting upon his door a plate announcing himself as 'Dr. Makuna,' thereby implying that he was a Doctor of Medicine, when he was in reality only a Licentiate of the Royal College of Physicians. Evidence was given showing that this was a general practice, and the case was dismissed with costs." Before the Stipendiary Magistrate, Petty Sessions, Ystrad Rhondda.

MR. WILLIAM TIBBLES, M.R.C.S., L.R.C.P., L.S.A., M.O.H. (Nottingham) writes: Since writing my previous letter to you upon the use of the title "Physician" and the prefix "Dr." by Licentiates of the Royal Colleges of Physicians, I have received the following letter from the Edinburgh College:

"Royal College of Physicians, Edinburgh, November 4th, 1895.

"Dear Sir,—I have received your letter of the 2nd. In reply, I beg to inform you that the subject of which you write is under the consideration of a Committee of this College. The result of their deliberations cannot be available for some little time. Meanwhile, I may say that the College has never sanctioned the adoption by its Licentiates of designations other than those legitimately implied in the licence which it grants.—I am, etc.,

"W. Tibbles, Esq., L.R.C.P.Ed., etc. WILLIAM PHILIP."

I have looked carefully through the history and laws of the College of Physicians of Edinburgh, and nowhere therein can I find any clause stating that any Fellow, Member, or Licentiate may call himself or be called, although the word "physician" is frequently used in reference to each of them. Previous to the year [illegible] this College only licensed men to practise medicine who had graduated in a University; and it was about the same time that the London College of Physicians created its new order of Licentiates; previous to that time all men licensed by these Colleges were entitled to be called physician, and were styled "Dr."; but from that time to this, the proper designation of such Licentiates has been the subject of perpetual squabbles both in and out of the press. Anything which can be done by our Association to obtain a final decision will earn the gratitude of its members.

THE ROYAL COLLEGE OF PHYSICIANS IN IRELAND AND THE TITLE OF "DR."

J. T. A. R.—We believe that our correspondent is in error in supposing that the charter of the King's and Queen's College of Physicians in Ireland conferred upon its diplomates the title of "Dr.," and that he is mistaken also in believing that in an action between Trinity College, Dublin, and the College of Physicians the Court held that diplomates of that College were entitled to style themselves "Dr." The then Registrar of the College addressed to us a letter on this subject (published in the BRITISH MEDICAL JOURNAL of January [illegible], p. 148), in the course of which he stated that the decision of the Master of the Rolls in the action referred to "was to the effect that the College of Physicians has not the power to grant the degree of M.D." The Registrar stated further that by a resolution of the President and Fellows adopted on April 5th, [illegible], the Registrar and Clerk of the College were instructed "not to use the title of 'Dr.' in officially addressing any of its licentiates, except in the case of those licentiates who, having in addition a university degree of M.D., are by it legally entitled to be styled 'Doctor.'" The following is a copy of a circular letter which the Registrar informed us he sent to all inquiries:

(Copy.) Royal College of Physicians of Ireland,
6, Kildare Street, Dublin.

DEAR SIR,—In reply to your queries I beg to inform you that, in the opinion of the President and Fellows, a Fellow, Member, or Licentiate of this College is not entitled legally to call himself "Doctor" or to use the letters "M.D." in virtue of being a Fellow, Member, or Licentiate as aforesaid.—I am, dear Sir, JOHN WILLIAM MOORE, B.A., M.D.Dubl., Fellow and Registrar.

CHURCH CATARRH.

THE REV. EDMUND IBBOTSON (Vicar of St. Michael and All Angels, Walthamstow) writes: All who attend public worship will be grateful to you for your article upon heating and ventilating churches. When the former of these two points has to be considered, it is so all-absorbing to some minds that the latter is entirely overlooked or does not meet with the thought which it deserves.

We built this church ten years ago, and at the time of laying out our plans we gave careful and practical consideration to both of these very important questions, and we have succeeded in carrying them out so satisfactorily that your readers may like to know what we did. In a word, we provided plenty of windows high up to let out the hot and exhausted air with all its impurities, and put down below Grundy's hot air apparatus. We can thus heat and ventilate at the same time, for such is the abundant and effectual stream of hot fresh air which we get in, that we can afford to open our upper windows even in very cold weather. The hot air which we receive into the church, viâ the apparatus, is perfectly pure, having come to us from the outside; when we have inhaled it, our exhalations, together with the heat from the gas, ascend and pass out at the clerestory windows, and all this while a stream of fresh air is rising from below. This system of heating and ventilating commends itself to all, because it is so practical, and its principle of action is in accordance with the laws of Nature.

There is another point quite worth consideration, which I think is much overlooked, and the effects of which are only contributed by this hot air method. The underground passages and gratings are as useful in summer to allow the ingress of cold fresh air, as they provide hot fresh air in winter. If, therefore, in summer the upper windows are opened, the cool fresh air entering the church viâ the apparatus will keep the building fresh without the necessity of opening the doors and lower windows, and thereby avoiding a draught. Hot-water pipes radiate their heat into the close air already in the church; they cannot provide fresh air.

THE VALUE OF A HEALTH DEPARTMENT.

WHEN the Health Department of New York was organised on a scientific basis in 1866 the death rate was 35.04 per 1,000. In [illegible] it had fallen to 28.31; in twenty years more the rate was further reduced to [illegible]; in [illegible] the rate was [illegible], and last year the lowest record was reached since 1814, namely, 21.05 per 1,000 inhabitants.

IRREDUCIBLE DISLOCATIONS OF THE SHOULDER.

DR. EDMOND SOUCHON, Professor of Anatomy and Clinical Surgery, Tulane University, New Orleans, U.S.A., is investigating the operative treatment of irreducible dislocations of the shoulder, recent or old, simple or complicated, and will be glad to have accounts of cases that have been operated on. He would also be grateful for records of cases of persistent or solidified aneurysm, whether operated on or not. Due credit will be given for any reports that may be sent him.

VARICOCELES AND THE SERVICES.

C. F. W. writes: In what way does a varicocele—excluding those very rare cases of excessively large varicoceles—incapacitate a man? I suppose nineteen men out of every twenty have a small varicocele, yet they do their work and live to a good old age, and never know that they are suffering—do not suffer—that they are the subjects of this complaint, all important in the eyes of the Government, at any rate. Why, then, are young men wishing to enter one of the services compelled first to undergo an operation if they happen to have a varicocele? But what I object most to is that hospitals (we are constantly getting them at the one I am connected with) have to admit these fine, healthy, young lads, and board them for a fortnight or three weeks. If the Government will insist on observing this regulation, it ought in all fairness to pay the hospitals for the board of these cases. It is hardly fair to use subscribers' money to feed perfectly healthy young patients. As the regulations stand at present we can hardly refuse to take these cases in to enable them to enter the services.

RAPID DIAGNOSIS.

MR. ALBERT EHRMANN, M.R.C.S.Eng., etc. (Bitterne, near Southampton), writes with reference to a quotation from the *Westminster Gazette*, published under this heading in the BRITISH MEDICAL JOURNAL of October 5th, to say that Pfarrer Kneipp, when receiving patients, though he smokes a big cigar, has present a duly qualified medical man who first endeavours to make a diagnosis. Though the examination is in most cases a very cursory one, yet most patients have previously consulted a medical man, of whom there were three or four in Wörishofen who adopted Kneipp's methods. Mr. Ehrmann adds: I have seen the ointment, composed of ointment of honey, containing, I believe, vermouth, used in a case of optic atrophy. After its use the patient suffered the most intense pain. Of course, there was absolutely no improvement in the condition, but then nothing is looked upon as incurable in Wörishofen.

PASTEUR FILTERS AND THE MADAGASCAR EXPEDITION.

W. D. writes: Staff-surgeon Kirker suggests in the BRITISH MEDICAL JOURNAL of October 19th that much of the fever present among the French troops in Madagascar was probably enteric, and that as these troops were doubtless furnished with Pasteur filters, the occurrence of the fever seems to point to its having been communicated otherwise than through the water. The same idea had occurred to me when I first read the announcements of the fact, and I applied direct to Paris for information. I have not been able to ascertain how much, if any, of the fever was enteric and how much malarial, but I have ascertained definitely that the troops on march had no filters at all. Pasteur filters were supplied to the whole of the transport ships, and troops arrived at Madagascar in good health. The incident therefore leaves the question of the waterborne origin of enteric fever in the same position as before.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

M.D. AND L.R.C.P.LOND. OF SOME STANDING writes: The profession in general will be greatly pleased at the firm stand made by the Portsmouth medical practitioners in refusing such paltry payment for attendance upon the juvenile members of the medical friendly societies. It would be as well if other towns would follow their example by inaugurating a medical union; surely four shillings per annum for each member is by no means regarded as excessive. The sweating system evidently is being established by these societies, so that it behoves the profession to guard its interests by resolving not to accept such paltry remuneration as the societies offer; the medical men, as others, must live, which cannot be done upon such a low scale.

Another question engaging the profession at the present time is assuming titles to which they are not entitled; it does seem that L.R.C.P.'s are physicians, but not surgeons unless they belong to a College of Surgeons; many are not living up to the traditions of the College and obeying its by-laws, which are clear, not allowing them to style themselves doctors upon their doorplates or cards. If their names were submitted to the Royal College of Physicians of London, no doubt they would quickly hear from the registrar that they were not acting in good faith, and have their attention drawn to the by-laws, which they are bound to obey.

A RUSSIAN CENTENARIAN.

ACCORDING to the *Revue* [illegible] the town of [illegible], on the Don, is often visited by a seed merchant, whose age is given as [illegible]. This patriarch, whose name is Andel Avloukpol, is a Cossack. He has been twice married, and has eight sons and three daughters living. Another son, who was the eldest, died three years ago at the age of [illegible]. The number of his grandchildren and great grandchildren is twenty-six.

Penalties for Sophistication of Milk.

Dr. W. Sedgwick Saunders, in his annual report on the sanitary condition of the city of London, calls, says the *Daily Telegraph*, the attention of the Commissioners of Sewers to the enormous double differences that exist in the penalties imposed for offences against the Excise authorities (who are generally ably represented by the legal profession) and the insignificant and trumpery fines imposed upon milkmen and small general traders who are convicted of deliberate and fraudulent sophistication of their goods. He says: It is a common experience that a policeman may be fined £20 for adding half the quantity of water to his beer that a dairyman would add to his milk at the most, perhaps, of a trifling fine. The practical inference to be drawn from these differences is that, whereas in the case of milk, a child or an invalid may be deprived of 25 to 50 per cent., and even more, of nourishment, essential perhaps to the maintenance of human life, the publican who may add the same quantity of water to his beer, which in most cases and may be a blessing in disguise, is punished in large amounts upon his pocket in the shape of fines, whilst the dairyman too often escapes with a nominal penalty. The explanation of this may be that the publican is pursued by the restless activity of an Excise officer, aided by the best available forensic talent, whilst the milkman is prosecuted in a subdued, half-hearted way by local authorities, who frequently appear indifferent as to the result. What a travesty upon justice! Dr. Saunders adds that in the City it has not been deemed necessary to institute any prosecution, although some of the articles examined have been perilously near adulteration.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Mr. H. W. Allingham, London; Mr. G. E. Aldridge, Weston-super-Mare; Professor T. McCall Anderson, Glasgow; Dr. J. Althaus, London; C. F. M. Althorp, M.B., Bradford; Dr. F. P. Atkinson, Surbiton; Dr. J. H. Abram, Liverpool; Mr. W. R. Ancrum, Gloucester; Dr. A. Alexander, London; C. Abbott, M.B., Burghead; A. M. S.; Anser. (B) Mr. S. J. Brooks, Mossley; Mr. W. Bassett, Newport; Mr. G. W. Bell, London; F. W. Burton-Fanning, M.B., Norwich; Dr. A. G. Barrs, Leeds; Mr. G. B. Browne, London; Dr. J. Barr, Liverpool; Dr. G. Buchanan, Glasgow; Dr. J. W. Byers, Belfast; C. L. Birmingham, M.B., Highgreen, Yorks; B. J. Baron, M.B., Clifton; Dr. T. L. Brunton, London; Mr. C. C. Braine, London; R. Boyce, M.B., Liverpool; G. P. Best, M.B., Twickenham; Dr. D. C. Black, Glasgow; Dr. J. W. Ballantyne, Edinburgh; Bundela; Mr. L. A. Bidwell, London; Dr. J. O. W. Barratt, London; Mr. T. B. Browne, London; Mr. M. L. Barry, London; Mr. D. Bradley, Weston-super-Mare; G. Bally, M.B., Oban; Mr. F. M. Blumer, Stafford. (C) J. A. Coutts, M.B., London; Mr. H. H. Cheesman, London; J. Culross, M.B., Newton Abbot; A Country Surgeon; Dr. A. H. Carter, Birmingham; Mr. E. T. Collins, London; Dr. A. W. Campbell, Rainhill; Dr. F. C. Coley, Newcastle-on-Tyne; Dr. S. M. Copeman, London; Dr. E. Casey, Windsor; Dr. P. M. Chapman, Hereford; Dr. T. Churton, Leeds; Mr. T. S. Cogan, Bexhill-on-Sea. (D) Dr. F. A. Dixey, Oxford; Professor S. Delépine, Manchester; Mr. C. T. Dent, London; T. K. Dalziel, M.B., Glasgow; Dr. J. Dreschfeld, Manchester. (E) Dr. W. Ewart, London; Ethics. (F) Dr. T. Fisher, Clifton; Mr. E. H. Fenwick, London; Sir J. Fayrer, London; Dr. W. S. Fenwick, London; Dr. A. Foxwell, Birmingham; W. E. St. L. Finny, M.B., Kingston Hill; H. Ferguson, M.B., Birmingham; F. A. H. G.; Dr. W. Frew, Kilmarnock. (G) Dr. G. Gordon, Glasgow; G. E. S.; Dr. K. Grossmann, Liverpool; Mr. T. C. Grey, St. Neots; Dr. E. W. Goodall, London; Dr. A. H. Griffith, Manchester; Mr. G. P. Gaskell, London; Dr. T. W. Griffith, Leeds. (H) Dr. G. Harley, London; Mr. J. Hossack, Edinburgh; Dr. W. P. Herringham, London; Dr. V. Harley, London; Messrs. Harrington, Latham, and Co., Coventry; Mr. W. F. Haslam, Birmingham; Dr. J. D. Hayward, Liverpool; Herts; H. F. Hawkins, M.B., Reading; Dr. W. S. Hedley, Brighton; Mr. P. Q. Hebert, London; Dr. P. Horrocks, London; Dr. G. H. R. Holden, Reading; Dr. A. Haig, London; Mr. A. E. Harris, London; The Humble General Practitioner; H. E. T.; Dr. T. Harris, Manchester; Dr. Thomas Hayes, London; A. B. Harris, M.B., Longton; Dr. W. Hunter, London; Dr. T. G. Horder, Cardiff; Mr. F. R. Humphreys, London; Mr. F. G. Harvey, London; Mr. J. Harrison, Bradford. (J) Judex; Dr. E. L. Jones, Cambridge; W. Jessop, M.B., London; Dr. A. H. Jacob, Dublin; Mr. R. Jones, Liverpool; Mr. J. J. H. Jackman, Dunmore East; J. W. M. (K) Dr. P. Kidd, London; Messrs. Kissow and Co., London; Mr. T. H. Keough, Shifnal; Messrs. King, Mentham and Co., Bristol. (L) Mr. J. Longton, London; Mr. J. E. Lane, London; Dr. A. P. Luff, London; Dr. E. L. Lees, Bristol; Messrs. C. and E. Layton, London; Mr. C. F. Latham, Kingston; Mr. J. B. Laverick, Saltburn; J. Lloyd, M.B., London; L.R.C.P.; Mr. W. Bevan Lewis, Wakefield; Mr. H. K. Lewis, London; Mr. J. E. G. Lawrence, Chepstow; L.F.P.S.G.; Mr. F. W. Langridge, Ilfracombe. (M) Mr. B. G. A. Moynihan, Leeds; Mr. F. G. Messiter, Birmingham; A. Milne-Thomson, M.B., Napier, N.Z.; Mr. F. P. Mole, Urmston; M.D.; Dr. J. A. MacWilliam, Aberdeen; Dr. J. Murphy, Sunderland; Dr. D. Mitchell, Rothesay; Mr. A. S. May, London; G. Macleod, M.B., Sydney, N.S.W.; Dr. H. J. H. Manley, London; Mr. J. H. Morgan, London; Dr. R. W. Murray, Liverpool; J. T. J. Morrison, M.B., Birmingham; Member. (N) Mr. J. B. Neal, London; Mr. T. H. Nicholson, Liverpool; Nemo; Dr. D. Newman, Glasgow. (O) J. Owens, M.B., Gorey. (P) Dr. J. Phillips, London; R. Parker, M.B., Liverpool; F. M. Pope, M.B., Leicester; Mr. H. E. Powell, London Dr. T. F. Pearse, Southsea; Mr. W. N. Press, Liverpool. (R) Dr. F. T. Roberts, London; Mr. B. Robinson, London; Dr. J. S. R. Russell, London; Mr. A. W. Russell, Glasgow; Dr. W. Russell, Edinburgh Rusticus; Dr. J. S. Reveley, Stockport; Mr. H. M. Rainsford, London; Mr. J. Ritchie, London; Mr. J. Robertson, St. Helens. (S) Dr. F. Semon, London; Dr. F. J. Smith, London; Dr. J. E. Squire, London Dr. M. Sturges, Broadstairs; Mr. W. D. Spanton, Hanley; Dr. W. K. Sibley, London; Sir E. Sievoking, London; Dr. C. W. Suckling, Birmingham; Mr. T. E. Stuart, Harwich; F. A. Southam, M.B., Manchester; Dr. E. Seaton, London; Mr. W. F. Sheard, London; Sir W. Stokes, Dublin; Dr. A. E. Sansom, London; Mr. W. W. Stocker, London; Dr. A. Sheen, Cardiff; Mr. W. P. Swain, Plymouth; W. St. C. Symmers, M.B., London; A Subscriber and Member of the B. M. A.; Mr. H. Sedgwick, London. (T) Dr. E. S. Thompson, London; Mr. W. T. Thomas, Liverpool; Mr. W. Thorburn, Manchester; Dr. J. Taylor, London; Dr. J. B. Tuke, Edinburgh; Mr. K. Thornton, London; Mr. W. Tibbles, Nottingham; Dr. C. L. Tuckey, London; C. H. Taylor, M.B., Derby; Dr. T. H. Thomson, Campbeltown; Dr. T. W. Thursfield, Leamington; T. D. L. (V) Dr. A. F. Voelcker, London; Vacca. (W) W. H. P.; Dr. R. T. Williamson, Manchester; Mr. W. H. Williams, Preston; W. J. Walsham, M.B., London; Dr. P. W. Williams, Bristol; Dr. R. C. Worsley, Ramsgate; Mr. A. L. Woodward, London; Dr. W. Williams, Glamorgan; Dr. F. Warner, London; Mr. J. G. Weir, London; Mr. C. C. Weeks, Pinchbeck; Messrs. W. Williamson and Co., London; Mr. T. C. White, London; Dr. H. F. Waterhouse, London; Dr. H. W. Webber, Plymouth; Dr. L. Wainwright, Folkestone; Mr. W. L. Wainwright, Brixworth; Dr. F. J. A. Waring, Hove; Dr. P. Weber, London; Dr. R. Wilkinson, London; Mr. W. P. Warren, Enfield Highway. (Y) Dr. W. Yeats, Manchester; Dr. M. Young, Brighouse; etc.

BOOKS, Etc., RECEIVED.

A Textbook on Nervous Diseases by American Authors. Edited by Francis X. Dercum, A.M., M.D., Ph.D. Edinburgh and London: Young J. Pentland. 1895.

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AN ADDRESS

ON

THE RELATIONS OF PHYSIOLOGY AND MEDICINE,

DELIVERED AT THE OPENING OF

THE SECTION OF PHYSIOLOGY,

At the Annual Meeting of the British Medical Association at London, July-August, 1895.

By DAVID FERRIER, M.D., F.R.S.,

Professor of Neuro-Pathology to King's College, and Physician to King's College Hospital.

The programme before us is so interesting and varied that, if for no other reason, it would be out of place for me to occupy your time with many words by way of introduction; but besides this there is a rule, in which I gladly take refuge, which prescribes that the Presidents of the Sections shall practically limit their introductory addresses to the regulation fifteen minutes.

When I was asked to preside over this Section my first impulse, much as I appreciated the honour, was to decline, on the ground that at such an important meeting as this, almost international in character, this chair should be filled by a physiological specialist rather than by a clinicist like myself; but on further consideration I thought that, without being regarded as a usurper, I might as a physician occupy this honourable post, if only by so doing to emphasise the intimate union between physiology and physic, which it is the object of this great Association to proclaim and encourage by establishing a special section for physiology.

In former days, and that not so long ago in the history of medicine, such an apology would have seemed quite unnecessary, for few, if any, would have been found prosecuting the study of physiology who were not also engaged in the actual practice of medicine or surgery. Things, however, have greatly changed. Owing mainly to the division of labour, which the progress of knowledge has rendered a necessity, physiology has become increasingly technical, and tended to separate itself more and more from medicine in its practical aspects. Hence there has grown up, more perhaps in other countries than in our own, a generation of physiologists who have little interest or sympathy with the practitioners of medicine; while we have still, and always have had, a class of practitioners who, though acknowledging physiology to be the institutes of medicine, do so in a purely academic sense, and say farewell to its problems and methods when once they have passed their examinations and engaged in the practical work of their profession. In both extremes there lies great danger to the best interests of the science of physiology and the science and practice of medicine.

Many of the most important discoveries in the history of physiology have been made by physicians or surgeons, who in the earlier years of their professional life, or in the leisure hours of busy practice, have found time to investigate vital problems, often to the uninitiated of apparently little practical value, but which have borne rich fruit in after-years. And it is highly desirable that this class of medical practitioner should survive and increase. The history of medicine, as Sir James Paget has forcibly shown in a recent address, has abundantly proved that the scientific spirit and the exact methods of the physiologist do not unfit a man for the practical work of his profession, or, to put it on a lower basis, diminish his prospects of success from a worldly point of view. To controvert the opposite opinion would seem almost a work of supererogation, were it not that there are still to be found many who think the so-called "practical man" is the best type of the medical practitioner.

It is customary to say that medicine is "applied physiology," and it would be very desirable if we could honestly say that this was the case. But the stock of physiological knowledge which we are able to apply effectively in the practice of medicine is infinitesimal as compared with our ignorance both of the intimate nature of vital processes and the means of regulating or controlling them. While in the diagnosis, treatment, and prevention of disease we apply to the best of our power such principles as may have been scientifically evolved, or have only a foundation in empiricism, these are wholly insufficient to satisfy our requirements, and there are so many opprobria in every department of medicine that we hesitate to specify them for fear of proclaiming too loudly our poverty and impotence.

What we most need is new knowledge, and it is the great aim of scientific medicine to endeavour to arrive at a more exact knowledge of the functions of our organism, of the conditions which cause deviations from the normal standard, and of the methods for counteracting them. This is really physiology in its widest sense as much as the experimental work of the laboratory.

The aims and the methods of the clinicist and physiologist are in many respects the same, and whether the facts are obtained by observation or created by experiment does not affect their value, provided they are dealt with on the same scientific principles. The work of the clinicist is, for the most part indeed, of greater difficulty than that of the experimentalist. Instead of being able to select his conditions and vary his circumstances at will like the experimental physiologist, the clinicist is usually confronted by a complex assemblage of phenomena, to unravel and analyse which demands the highest scientific acumen. And he who, in spite of these difficulties, succeeds in differentiating a group of related symptoms, and traces their connection with some definite lesion or morbid process, advances physiology, in my opinion, just as much as he who succeeds in solving a biological problem in the comparative simplicity and quiet of his laboratory. It rarely happens, however, that clinical research by itself is capable of arriving at that degree of certainty or completeness of explanation which the canons of inductive research demand, and but for the experimental method we might have to wait indefinitely, or in vain, for a solution of many of the problems which present themselves to the clinical inquirer.

The practice of medicine offers not infrequently rare conjunctions of symptoms, and valuable opportunities of research, too often wasted, which a little physiological training on the part of the practitioner might often have turned to good account; and the necessities of practical medicine have been the most fertile source of inspiration of physiological experiment. Much of what might otherwise have remained as vague surmise or, at most, plausible hypothesis, has been raised to the level of verified fact by well conceived and often simple physiological experiment. The experimental method is, as it were, the keystone of the arch; indispensable indeed to the security of the structure, the foundations of which, however, have been laid in clinical observation. Such has been the chief *rôle* of the experimental method in medicine; and on this ground alone it has proved its necessity to medical science, even if it cannot lay valid claim to being the sole origin of all the great discoveries of recent years.

In minute analysis of the vital processes the physiologist must necessarily diverge from the clinicist, and devote his attention to the solution of problems which may seem to have little bearing on practical medicine, merely as a branch of biological science, and in the pursuit of truth for its own sake. But the whole history of science, physical as well as biological, has shown that every new fact finds in time its appropriate place in the great edifice of knowledge, and proves its necessity just as surely as any of those whose uses are more immediately apparent.

The inability to appreciate the value of a new truth is a measure of the depth of the individual's ignorance. How portentous this can be, and yet unassociated with becoming modesty, we have unfortunately too frequent illustration in the opposition which science in general, and physiological science in particular, has had, and has still to contend with. Though, as we have said, the physiologist, in the pursuit of his analysis, tends to separate himself further and further from the clinicist, there is a danger of too great exclusiveness, and the risk is that in his speculations he may fall into errors of generalisation which a knowledge of clinical medicine would tend to correct. This has often been urged by the clinicist as a reproach against the experimentalist, and not in all cases without reason. The ultimate test of the applicability of a physiological generalisation, or principle, to man, must be its harmony with the facts of human physiology and clinical medicine. As against this, however, the

physiologist may retort, and with justice, that times without number experimental physiology has first opened the eyes of the clinicist, and taught him to see clearly where all before was darkness and confusion.

In illustration of this one need only instance the comparative order which has established itself within recent years in the facts of cerebral pathology, which before the experimental methods were, for the most part, unintelligible, and apparently full of contradictions. But while in many—perhaps I ought to say most—departments of physiology the experimental method is the most powerful weapon of inductive elimination, there are problems in the investigation of which the clinical method is indispensable, not merely as a means of testing the applicability to man of the results of research on the lower animals, but as alone capable of yielding positive testimony on questions in which the evidence of experimental physiology is at best only inferential. It is enough in this relation merely to mention the many problems of neurology involving subjective conditions, such as the kinds and qualities of sensation which cannot be satisfactorily determined without appeal to the facts of clinical medicine. And, as Professor Pavlov has show in his recent address on the relations of Physiology and Medicine,[1] the psychical factor cannot be neglected even in such apparently merely chemical problems as the phenomena of digestion. And in not a few instances the experiments of Nature, carefully investigated, have of themselves established facts of the utmost value, which experimental physiology has not succeeded in adding to.

Almost the whole of our knowledge of the so-called trophic influence of the anterior cornua on the muscles, has been arrived at by clinical observation on the symptoms of anterior poliomyelitis and progressive mucular atrophy in man; and on similar observations has been largely founded our knowledge of the segmental grouping of muscles in the spinal cord, which has only been rendered more precise by experimental research.

On clinical research primarily, and to a large extent solely, rests much of what we know respecting the paths of degeneration in the nerve centres inaccessible to the experimentalist, but often within the reach of the morbid processes of disease. The physiology of the ductless glands—namely, the thyroid, the suprarenal capsule, and the pituitary body-rests, for the most part, on clinical research, which was the first to establish the probable relation between the dystrophies of myxœdema or cachexia strumipriva, Addison's disease, and acromegaly, and abnormal conditions of these glands respectively. This, especially in the case of the thyroid, has been verified, and practical applications indicated by the valuable experiments of Schiff, Horsley, and others, but the actual methods of one of the most brilliant therapeutic triumphs of the present day, and the addition of a new chapter to the physiology of nutrition, have been largely due to the work of Murray, Mackenzie, and other clinicists.

Of recent work done in this country, I know of nothing more worthy of mention, or which serves better to illustrate the mutually complementary relations of experimental physiology and clinical medicine to each other than the researches of Head on the one hand, and those of Sherrington on the other, in reference to the segmentary relations of the visceral and somatic nerves of the head and body. Sherrington has succeeded in mapping out, with almost mathematical accuracy, the somatic distribution of the sensory nerves in the monkey, ingeniously surmounting the difficulties dependent on the partial overlapping of adjacent posterior root zones. But almost simultaneously, and following a totally different method, Head has encountered and largely surmounted even greater difficulties, inasmuch as the conditions presented to him have been infinitely more complex, and he has arrived at results which harmonise in a remarkable manner with those of Sherrington's more accurate and more simple experimental method. Head has founded his conclusions on the distribution of herpes, presumably conditioned by irritation of the respective posterior roots or spinal segments; and on the sympathetic or somatic expression of visceral irritation.

This principle, though first placed by the late James Ross on a more scientific basis than heretofore, is not a new one. It was clearly enunciated by Johannes Müller,[2] who regarded sympathetic sensations as the result of the radiation of irritation similar to that causing reflex motor reaction; the only difference being that the radiation of impressions does not reach the motor nerves, but only affects the sensory fibres arising from the corresponding part of the cord, or, at any rate, acts on these at the same time as the motor nerves. The principle was abundantly and fruitfully applied by Laycock in the explanation of angina pectoris, and many other sympathetic neuroses connected with affections of the abdominal and pelvic viscera. But in the actual demarcation of the mutually related somatic and splanchnic segmentary zones, Head has gone far beyond previous inquirers, and has not only established facts of enormous practical value, diagnostically and therapeutically, but has largely contributed to a chapter in neurology, namely, The Sensory Innervation of the Viscera, which, in spite of the epoch-making researches of Gaskell, the valuable experiments of Langley and Anderson, and the histological work of Edgeworth, is still but very imperfectly known. For, though in harmony with Gaskell's results, it is shown by the clinical method that the spinal segments which do not give origin to splanchnic nerves—namely, the segments of the brachial and crural plexuses—are not the seat of referred visceral irritation, and that therefore the sensory nerves of the viscera have the same distribution as the viscero-motor and inhibitory nerves, yet this is only a hypothesis and the segmentary relations of each viscus are at best only very obscurely indicated. By an elaborate and skilful analysis of the phenomena of referred or sympathetic pains, Head has succeeded in mapping out with marvellous detail the probable segmentary relations of each of the thoracic, abdominal, and pelvic viscera. Of still greater interest perhaps, because more obscure and more out of the range of experimental inquiry, is his determination of the zones of the head and neck which are the seat of somatic reference of irritation of the thoracic and abdominal viscera innervated by the vago-glosso-pharyngeal splanchnic nerve. These apparently have no relation to the peripheral distribution of the fifth nerve, but have a developmental significance, and throw much light on the constitution of the complex nucleus of the fifth nerve and its splanchnic connections. Much of this is at present perhaps only provisional or hypothetical, but there cannot be a doubt that the field of inquiry which Head has thus opened up promises to yield results of the greatest importance both in physiology and in practical medicine.

I might mention many other physiological questions the solution of which has depended on the mutual co-operation of clinical and experimental research, but my object is not so much to enumerate as to illustrate, and I think I have said enough to justify the thesis with which I set out: namely, that, though the methods of clinical and experimental research tend by the law of division of labour to diverge more and more from each other, yet even in the investigation of the vast majority of the problems of physiology, they are mutually complementary and necessary to each other, and therefore the tendency to exclusiveness should, as much as possible, be counteracted by preliminary clinical training on the part of the physiologist, and sound physiological training on the part of the clinicist, along with continuous sympathetic interest in each other's labours and methods, in the full conviction that too great exclusiveness can only result in narrowness of view, and be detrimental to the best interests both of medicine and physiology.

[1] British Medical Journal, May 4, p. 1004.

[2] *Elements of Physiology*, Italy, 2nd edition, p. 730.

Cholera in Egypt.—It is reported that cholera, which has been limited to Damietta and the district between Mensurah and Menzaleh, is abating. The Sanitary Council require that five days' notice should be given of the desire that a ship should pass through the Canal, and the passage can only be made at night if the ship is provided with the electric light. Pilots and sanitary officers to be put on board ships must undergo five days' quarantine or preventive isolation.

Successful Vaccination.—Mr. Henry Caudwell, Public Vaccinator of the Nos. 1 and 2 Districts of the Woodstock Union has been awarded the grant for successful vaccination for the second time.

THE RESULTS OF SECTION OF THE TRIGEMINAL NERVE,[1]

WITH REFERENCE TO THE SO-CALLED "TROPHIC" INFLUENCE OF THE NERVE ON THE CORNEA.

By WILLIAM ALDREN TURNER, M.D.,

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[From the Neuro-Pathological Laboratory, King's College.]

It has long been held, chiefly as a result of the experiments of Majendie and others, that progressive destructive changes occurred in the eyeball after intracranial section of the fifth nerve, and more especially of its ophthalmic branch. But the reason of this destruction has been a moot question. The corneal and conjunctival anæsthesia accompanying division of the nerve or its ophthalmic branch was regarded by some as aiding the retention of irritating extraneous matter, for it was observed that, if the eye were protected from the effects of such external irritants, no inflammation followed. But this view did not receive corroboration at the hands of other observers; and disorganisation of the eye was also seen, even though there was not complete corneal anæsthesia. There are on record numerous cases of anæsthesia of the cornea in which no "trophic" corneal alteration was detected; nor was the view that the ocular changes differed according as the lesion was in front of or behind the Gasserian ganglion altogether acceptable; hence much divergence of opinion still exists on the subject.

The most recent experimental work bearing on this matter is that of Gaule.[2] The general conclusion at which he arrived as a result of his observations upon rabbits was that the "trophic" alterations in the cornea which he described were due to lesion of the ophthalmic branch, or of the Gasserian ganglion, while they did not follow lesion of the nerve behind the ganglion. These changes consisted of numerous spots, some of which showed atrophy, others hypertrophy of the superficial corneal epithelium, hypertrophy of Descemet's membrane, necrosis and atrophy of the corneal ground substance, and the production of a fibrin-generating material in the aqueous humour. When it is also stated that these changes occurred from a few minutes to a few hours of the actual division of the nerve, it is difficult to believe that they were entirely due to the lesion thus practised.

In the series of experiments performed by Dr. Ferrier and myself the fifth nerve trunk, its ophthalmic branch, and the intramedullary roots were divided. The series consisted of four experiments involving destruction of the tubercle of Rolando, two of section of the restiform body including the "ascending" trigeminal root, four of section of the trunk of the nerve between the Gasserian ganglion and the surface of the pons Varolii, eight of the ophthalmic branch alone, and two of the "descending" or trophic root of Merkel.

Of the eighteen experiments in which anæsthesia of the cornea was the prominent symptom, two only showed symptoms of destructive change and panophthalmitis. In both there was evidence of septic irritation—elevation of temperature and localised fits; and in one the *post-mortem* examination showed commencing septic meningitis. The other case is somewhat more complicated, for during the first week, in which the temperature was raised and several convulsive attacks were noticed, the cornea became distinctly opaque. From this time on till the sixth week the animal was perfectly well and the cornea clear; but at about this time the temperature again rose and panophthalmitis ensued. Another feature noticed in these two cases was the diminution of the ocular tension which occurred before there was any evidence of perforation of the corneal ulcer or prolapse of the iris.

We have also observed in many of the cases a slight corneal opacity, which showed no tendency to progress, but rather to diminish as time went on after the operation. Owing to the corneal anæsthesia the lids did not approximate so closely as on the sound side; and it was in the small space corresponding to the lower pupillary margin that this opacity was detected. It was no doubt due to drying of the corneal surface and the retention upon it of extraneous matter, which was not swept away by the movements of the lids. In the remaining fifteen cases, with the exception in some of the slight drying of the corneal surface already noticed, no opacity or ulceration was detected, although the duration of life varied from forty-eight hours to four months after the section of the nerve.

Looking more especially at the cases in which the ophthalmic branch was divided, we find that of the series of eight, one only showed destructive corneal change, and in that, as already pointed out, there was *post-mortem* evidence of septic meningitis. In one case, on the fifth day after section of the right ramus ophthalmicus, both cornea were touched with a point of lunar caustic, resulting from which a slight central corneal ulcer formed in both eyes, but no progressive change ensued, and the process of repair proceeded as well in the cornea on the side on which the ophthalmic branch had been divided as on the healthy side.

In another case, in which the nerve was divided behind the Gasserian ganglion, on the eighth day after section an irritant, probably collodion, entered the anæsthetic eye. This was shortly followed by conjunctivitis, œdema of the lids, and a milky-white corneal opacity. Increasing in severity for a week, the inflammation then began to subside, and eventually disappeared at the end of a fortnight, the cornea regaining its transparency with the exception of a small central ulcer, which remained until death. In Mr. Gunn's opinion this condition was due to the shedding of the superficial corneal epithelium, and was analogous to that observed in the human eye after irritation by lime.

The two last-mentioned cases are especially instructive, for they show that whether the trunk of the nerve be divided behind the Gasserian ganglion, or whether the ophthalmic branch alone is divided, the processes of healthy nutrition and repair may go on notwithstanding the anæsthetic state of the cornea.

The cornea in those cases in which the ramus ophthalmicus was divided were submitted to careful microscopical investigation. Dr. Bulloch, who made the examinations, was unable to detect any change whatsoever, either in the epithelium, the corneal corpuscles, or the ground matrix.

In two cases the "descending" trigeminal root, or trophic root of Merkel, was divided in conjunction with the superior cerebellar peduncle. In neither of these experiments was any "trophic" effect noticed upon the eye or its appendages.

The general conclusion to be drawn from a study of these experiments is that there is no evidence of trophic influence exerted by the Gasserian ganglion upon the cornea; and that, provided septic organisms are excluded, the ophthalmic branch may be safely divided or the Gasserian ganglion removed without fear of the disorganisation of the eye. The destructive changes which occur with inflammatory conditions of the basal meninges, without the existence of an external wound, would seem on this hypothesis to be due to the presence of conditions causing inflammatory irritation of the nerve.

We may look briefly at the clinical cases, in which the Gasserian ganglion has been extirpated, with special reference to the so-called trophic influence of the fifth nerve upon the cornea.

In the series of five cases reported by Rose,[3] only one showed panophthalmitis and disorganisation of the eye, but there was reason to suspect that this was due to the destructive effects of the antiseptic or anæsthetic used at the operation. In a second case some small, subepithelial, corneal vesicles appeared two or three weeks after the operation, but they resolved under suitable treatment.

In two others in which the cornea was protected during the operation no change was detected; while in the fifth case, in which the cornea also remained clear, there was reason to suspect that the trunk of the nerve was divided chiefly behind the ganglion. In one of these cases Dr. Ferrier found, six months after the operation, several minute pin point depressions in the anæsthetic cornea, which were not detected on the sound side. During the course of this investigation we have seen such small depressions not infrequently on the

[1] Read in the Section of Physiology at the Annual Meeting of the British Medical Association, held in London, July-August, 1893.

[2] Centralb. f. Physiol., 1892, p. 209.

[3] Proc. Roy. Soc., 1892, p. 380.

anæsthetic cornea, but they appear to arise in places where the superficial corneal epithelium has been denuded.

In a case recorded by Richardson,[4] one week after the operation a slight haziness of the cornea was observed, but as this is stated to have been present before the operation, we cannot regard it as of much significance.

In Krause's case[5] two months after the operation the cornea remained perfectly clear, although there was complete anæsthesia both of the cornea and conjunctiva.

Doyen[6] one year after ablation of the Gasserian ganglion found the cornea quite anæsthetic and without any evidence of trophic disturbance.

It is, therefore, seen that, with the exception of the accidental panophthalmitis in one of Rose's cases, no progressive destructive change occurred in the cornea after operation for ablation of the Gasserian ganglion. It should be borne in mind that in none of these cases has the actual position of the lesion been definitely determined by *post-mortem* examination.

It may be stated in conclusion, therefore, that the so-called neuroparalytic phenomena associated with lesion of the trigeminal nerve are evidence of irritation of the nerve, and not of paralysis. This statement holds good, whether the lesion is situated so as to implicate the ophthalmic branch, the nerve trunk, or the intramedullary root.

ON THE INFLUENCE OF THE USE OF SUGAR ON MUSCULAR WORK.[7]

By Professor B. T. STOKVIS, M.D., LL.D.,
Amsterdam.

The influence of sugar on muscular work is so very important, from a physiological, a dietetic, an economical, and a social point of view, that I was anxious to repeat in the Pathological Laboratory of Amsterdam the well-known experiments of Professor U. Mosso and Dr. V. Harley. I invited my pupil, Dr. Langemeyer, to examine this question in view of his inaugural dissertation, and the results he arrived at by a long-continued and skilful examination, I now take the liberty to communicate to this Section.

Professor Angelo Mosso's ergograph is so well known that it seems quite superfluous to give a description of this ingenious instrument, by means of which the total amount of work done by the muscles of the middle finger in lifting a fixed weight till fatigue set in can be measured exactly, and the time during which the muscular work is done can be determined most easily. It is also known that if the separate experiments with the ergograph are repeated too frequently, exhaustion may follow to such an extent that the whole ergographic work is reduced to a minimum, and no further work can be done. Now, Professor U. Mosso and Dr. Pavletti found that in this period sugar taken in not too great quantities and not too concentrated was able to lessen the fatigue, so that a further rather considerable amount of muscular work could be done. On the other hand, Dr. Vaughan Harley stated that a great quantity of sugar taken in addition to the ordinary food increases the amount of muscular work in a most evident manner. The result of the publication of these researches was that the question is now often considered as decided, and that already in popular papers and journals the wages and food of workmen are treated as if the beneficial effect of the use of sugar on muscular work were a well-established scientific fact. Now Dr. Langemeyer's experiments prove that this beneficial effect does not exist, or, if it exists at all, can in no way be demonstrated by the ergograph. In his first series of experiments, which are to be considered as preliminary, ergographic work was done twice a day by Dr. Langemeyer and the assistant of the Pathological Laboratory, Dr. Lechensen, with the left and the right hand, over a period of eight weeks, in order to find out the physiological variations occurring during a regular mode of life, in respect to different hours of the day, to different days, etc. We shall have afterwards to return to the results of this series of experiments.

In the second series of experiments, different kinds of sugar—sweet-tasting and not sweet-tasting sugars (cane sugar, grape sugar, milk sugar), and sweet-tasting substances not belonging to the carbo-hydrate group, for example, saccharin and dulcin—were taken before doing ergographic work, in order to ascertain if the beneficial effect of sugar should be considered as the effect of a palatable condiment and due to the excitation of the nervous system produced thereby, or as the effect of a muscular food.

The result of these experiments was, in reference to the researches of Dr. Harley, which we believed quite exact up to that time, a most unexpected one. In none of the experiments was there any evidence of a beneficial effect of the use of sugar or sweet-tasting substances on the ergographic work. I have here in view the general conclusion of this series of experiments that lasted over forty days, not the conclusion which could be drawn from one single experiment, for it happened often that the amount of ergographic work was greater after taking sugar, or milk sugar or saccharin, but as often the amount of work was diminished, and in many experiments the right hand was the only one which had gained, whereas the left had lost. Yet, the total amount of ergographic work done in this series showed a real and marked increase, in reference to the total amount of work of the first series, but as this increase was a gradual one, independent of the substances that were taken, it was most natural to consider it as a simple effect of training. And so indeed it proved, for when for a control the experiments were pursued daily during more than a fortnight, in exactly the the same way, but without taking any sugar or palatable sweet condiment at all, the amount of mucular work still showed the same gradual increase, so it became obvious that the normal course of training is in no way influenced by the use of sugar.

The third series of experiments was perhaps the most interesting of all. In accordance with the experiments of Professor Ugolino Mosso and his pupils the effect of the use of sugar on almost exhausted muscles was examined in this series. It is not so easy as it seems to provoke exhaustion of the muscles engaged in ergographic work by often repeated single experiments. Even if the successive experiments done with the same hand follow each other with full speed, say after six minutes, and the weight to be lifted is a heavy one—that is, 6 to 7 kilogrammes (ordinary work is done with 5 kilogrammes)—the amount of muscular work done by trained persons still represents, after two or three hours of working, one-fourth or one-fifth of the work done in the beginning. These experiments lasted from five to six weeks, and were made by four different individuals. One of them, a tall well-grown lad of 16 years, who did not understand in the least what the experiments meant, was the only one who exhibited in the beginning of the experiments all the peculiarities of real exhaustion. After sixteen or seventeen single experiments he could not do more ergographic work. Of all, he was the most fit subject for demonstrating the beneficial effect of sugar on the exhausted muscle. Yet in his case, as in all the others, the alleged beneficial effect failed completely, at least in the first weeks, for in later weeks, training still being continued, it happened from time to time that this boy, as well as another untrained young man, after exhaustion seemed to have set in, exhibited most unexpectedly a great gain of muscular work. Once there was a gain of 3 kilogramme metres without anything being eaten, another time there was a gain of 2 kilogramme metres after the use of sugar; and, finally, an extraordinary gain of 18 kilogramme metres was found after a draught of fresh water. Without being able to decide the question whether these variations are to be considered as a mere accident or as a consequence of training, it is obvious that reliable results could not be obtained by experiments of that kind in untrained individuals. And in regard to the trained ones who took part in these experiments, I can only repeat that no effect whatsoever of the use of sugar was seen on their exhausted muscles.

In the second and third series of Dr. Langemeyer's experiments the doses of sugar were moderate ones. In his fourth and last series large doses were taken in order to examine their influence on the non-exhausted muscle, as in the experi-

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[4] *Brit. Med. and Chl. Journ.*, 1864, ii, p. 423.
[5] *Deutsch. med. Wchnschr.*, 1885, p. 561.
[6] *Gazette Méd.*, No. 8, 1884.
[7] Read in the Section of Physiology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

ments of Dr. Vaughan Harley. As the physiological variations between different days had proved greater than the variations between morning and afternoon of the same day, Dr. Langemeyer compared the ergographical work done in the morning with that performed in the afternoon, after having taken with his luncheon at 12 o'clock 100 or 200 grammes of sugar in addition to his ordinary meal. The experiments with 200 grammes of sugar lasted seventeen days, the experiments with 100 grammes eleven days, and I lay now before you a table of the amount of work done without, and after the use of sugar.

Table showing the Amount of Muscular Work done after the Use of 100 Grammes of Sugar.

Date.	Morning: No Sugar.		Afternoon: 100 Grammes of Sugar.	
	Time during Weight Lifted.	Total Work.	Time during Weight Lifted.	Total Work.
	Seconds.	Kilogramme Metres.	Seconds.	Kilogramme Metres.
March [illegible]	212	14 [illegible]	206	11.532
.. [illegible]	193	[illegible]	216	11.766
.. [illegible]	[illegible]	11 513	184	9.932
.. [illegible]	210	11 824	190	9.420
.. [illegible]	[illegible]	[illegible]	238	10 004
April [illegible]	[illegible]	11 460	240	12 448
.. [illegible]	[illegible]	14 808	284	13 624
.. [illegible]	[illegible]	14.484	246	10.616
.. [illegible]	194	[illegible]	284	13.476
.. [illegible]	244	11.360	246	13 104
.. [illegible]	280	12 760	284	14.644
.. [illegible]	[illegible]	[illegible]	242	12.104
.. [illegible]	[illegible]	[illegible]	204	13.024
.. [illegible]	[illegible]	11.160	242	13.984
.. [illegible]	[illegible]	13.224	242	13.208
.. [illegible]	208	[illegible]	244	15.564
.. [illegible]	194	12.170	272	17.134
Average	[illegible]	12 200	235	12 612

Table showing the Amount of Muscular Work after taking 200 grammes of Sugar.

Date.	Morning: No Sugar.		Afternoon: 200 Grammes of Sugar.	
	Time during Weight Lifted.	Total Work.	Time during Weight Lifted.	Total Work.
	Seconds.	Kilogramme Metres.	Seconds.	Kilogramme Metres.
April [illegible]	[illegible]	14 796	254	12 584
.. [illegible]	256	13 [illegible]	288	11.076
.. [illegible]	246	12 [illegible]	280	12.672
.. [illegible]	260	13 [illegible]	238	11.816
.. [illegible]	284	14 584	3 4	14.080
.. [illegible]	262	13 [illegible]	276	11 160
.. [illegible]	210	12 [illegible]	284	10 872
.. [illegible]	264	12 [illegible]	274	14 800
.. [illegible]	290	11 [illegible]	818	13 386
.. [illegible]	276	16 [illegible]	262	10.524
.. [illegible]	314	10 [illegible]	259	13.088
Average	281	12 [illegible]	266	12.488

As is easily seen, there is in these experiments no question of a marked influence of the use of sugar on muscular work. The difference between the work done in the morning and that done in the afternoon, after the use of sugar, is so very slight that it is of no value at all; and it is very remarkable that, notwithstanding the use of almost 4 kilogrammes of sugar, the amount of ergographic work as a whole in this series is even inferior to that obtained in the beginning of the experiments in the period of a strong training.

As a final experiment, the amount of daily ergographic work, taken every hour from 9 30 till 5.30, was noted, a separate tracing with each hand being taken, on days on which 250 grammes of sugar were taken in four equal portions, at 9, at 11, at 1, and at 3 o'clock, in addition to the ordinary diet, all other conditions remaining the same. On comparing the total amount of work on the sugar days with that obtained on the non-sugar days, the sugar days, give as the total time during which the weight was lifted, 1 hour and 48 minutes, with a work of 302 kilogramme-metres; the non-sugar days, 2 hours and 8 minutes, with a work of 354 028, that is a difference of 20 minutes and 52 kilogramme metres in favour of the non-sugar days. It is interesting to note that these differences in favour of the non-sugar days are not to be considered as an average result, but that each separate day and each separate hand shows these differences in the same sense, as is easily seen in the following table:

Table showing the Amount of Ergographic Work done by the Right Hand on Days whereon Sugar (250 grammes) was taken, and on Days without Sugar.

Date.	250 grammes Sugar.		Date.	No Sugar.	
	Time during Weight Lifted.	Total Work.		Time during Weight Lifted.	Total Work.
	Seconds.	Kilogr. Metres.		Seconds.	Kilogr. Metres.
April 29 ...	1,046	[illegible]	April 30 ...	1,293	59.732
May 1 ...	1,146	52 618	May 2 ...	1,162	54.188
May 3 ...	1,130	49.872	May 4 ...	1,098	[illegible]
Total ...	—	147 486	Total ...	—	[illegible]

Table showing the Amount of Ergographic Work done by the Left Hand on Days whereon Sugar (250 grammes) was taken, and on Days without Sugar.

Date.	250 grammes Sugar.		Date.	No Sugar.	
	Time during Weight Lifted.	Total Work.		Time during Weight Lifted.	Total Work.
	Seconds.	Kilogr. Metres.		Seconds.	Kilogr. Metres.
April 29 ...	1,216	42.104	April 30 ...	1,568	62.764
May 1 ...	1,396	57.516	May 2 ...	1,324	56.716
May 3 ...	1,260	55.008	May 4 ...	1,350	[illegible]
Total ...	—	154.628	Total ...	—	[illegible]

The divergence between Dr. Langemeyer's results and those of his predecessors is as striking as possible. How is it to be explained? I venture to state that it can be fairly explained, by regarding the different factors which may influence the amount of ergographic work. In Langemeyer's researches everything was done to avoid, as completely as possible, all psychical influences by placing a low screen between the operator and the registering apparatus so that the height to which the weight was lifted could not be seen by him. In the second place, Langemeyer succeeded, after a long time of preliminary work, in ensuring an equal method of working during the whole series of experiments. To this end, it is first necessary to fasten the arm in the instrument as tightly as possible, so that no other movement than that of the middle finger can be registered; but secondly, it is still more important that in each separate experiment there should be a perfect equality in regard to the time in which each contraction and relaxation of the finger takes place; and thirdly, in regard to the way in which the finger is moved. In regard to the time, it is obvious that the setting in movement and the relaxation of the finger, even in an interval of two seconds, can take place rapidly or rather slowly. In the first case, the interval between each single muscle contraction must be greater than in the second. Now in respect of fatigue—and all ergographic work is work till fatigue sets in—it is of course retarded by contracting the finger rapidly and letting it fall immediately after contraction, whereas moderately slow contractions and relaxations tend to induce fatigue more quickly. Therefore after the first weeks of preliminary experiments it was arranged that the contraction and the relaxation should take place, as a rule, as slowly as possible at intervals of two seconds.

It was most necessary to do so, because some persons very soon get accustomed to rapid contraction and relaxation, and thus become able to perform ergographic work six to ten times in excess to the usual work, without inducing more than the ordinary exhaustion.

Former experimenters have also drawn their attention to this point, for Professor A. Mosso spoke of it in his first communication, but is it not most remarkable that in none of the papers on the use of sugar and its influence on muscular work, this important factor is not alluded to? It is just the same with the influence of training, which, too, is never mentioned.

In regard to the third point, viz., the way in which the finger is moved, and the weight is lifted, Dr. Langemeyer found that ergographic work can be done in three ways, either by the contraction of the flexor profundus, or by the contraction of the flexor sublimis, or by contraction of the two muscles at the same time. Contraction of the flexor profundus alone produces flexion of the finger, contraction of the sublimis alone elevation, without flexion, as is easily demonstrated by mechanical pulling of the tendons of these muscles in the cadaver.

In the living subject ergographic work is usually done, and should be done, by the co-operation of these two muscles, yet a separate voluntary contraction of each of the two muscles can be easily obtained by training, in such a way that in performing ergographic work, one muscle can take the place of the other, and contraction of one is immediately followed by contraction of the other.

In this way the setting in of fatigue is again considerably retarded, and ergographic work can be performed to an amount which may many times surpass the usual work done by the simultaneous contraction of the two muscles. Ergographic work includes, therefore, many sources of error, and although I dare not say that Dr. Langemeyer's predecessors paid no heed to them, yet I am fairly persuaded that the different ways in which ergographic work can be done explain to a great extent the divergence between his results and those of former experimenters.

There is yet another point to be observed. In his preliminary experiments Dr. Langemeyer had at his disposal a great number of observations, which enabled him to be acquainted with the daily variations of the work performed under normal conditions of life. These daily variations proved, especially in the beginning of the experiments, before a real and thorough training was obtained, as great, and greater than the variations, which Dr. Harley considers as a gain caused by the use of sugar. In Dr. Harley's experiments the gain in time during which the weight was lifted, was in thirty separate tracings 519 seconds, that is, an average for one separate tracing of 17.3 seconds. Dr. Langemeyer found for himself and for Dr. Lechensen normal variations running up to 25 seconds. The gain in work was in forty separate tracings by Dr. Harley 41.938 kilogramme metres, an average of 1.3 for one separate tracing. Dr. Langemeyer found a normal variation in the beginning of his experiments of 1½ kilogramme metres and more.

To conclude, I do not hesitate to say that till now there has not been given any experimental proof of the beneficial effect of sugar on muscular work. This conclusion is not an unexpected one. Physiology teaches us that muscle is not only a most admirable living engine, in which chemical energy is transformed into mechanical work, as was so well explained last winter by my honoured friend and colleague, Professor Engelmann, of Utrecht, in his Croonian Lecture, but that it is at the same time a great storehouse of chemical substances, able to develop chemical energy. The assimilation of these chemical substances and their storage by the muscle, go on so very slowly that an immediate influence of the ingestion of food on the amount of work done by the engine is not to be expected. Manca's experiments, and the experience of daily life, teach us that even a long total abstinence from food is not able to diminish the amount of muscular power to any appreciable extent; for in muscle we have to deal with an exceedingly well provided storehouse, and with an engine working at so little expense that 80 milligrammes of sugar (glucose) are sufficient to produce an ergographic result of more than 100 kilogramme metres. In healthy persons fatigue and exhaustion, therefore, are never caused by want of food, but solely and exclusively by want of rest; and although it cannot be contended that the chemical energy produced by the combustion of sugar is one of the chief sources of muscular work, yet there is no plausible reason why, in order to promote muscular work, sugars should be added to the daily food. All other carbo-hydrates will do as well for the provision of the muscular storehouse with the necessary stock of chemical energy.

SUGAR AS A FOOD FOR MUSCULAR TISSUE.[1]

By Professor UGOLINO MOSSO, M.D.,
University of Genoa.

I am pleased at being able to be present at the communication just made by Professor Stokvis, and take this occasion to congratulate him on the stimulus he has provoked to the study of ergographic work. There is in Professor Stokvis's work a new departure which is very interesting—namely, with regard to the different muscles which can act on the middle finger. He has thus opened a fresh chapter in the study of ergographic work. I have made many experiments with this instrument during the past twelve years, and have therefore had much practice, and I am sure that one must not rely on a few experiments alone, to oppose the experiments of others. This is not the place however to examine the *pros* and *cons* of this question; we have not even the time. But I cannot help pointing out that Dr. Stokvis has admitted that he has, when working with sugar, only obtained positive results when the subject had been trained by a series of experiments, and that he had obtained no results when the subject was at the commencement of his experiments.

This is the essential point of the whole question: a muscle not yet trained can be fatigued when there still remains a considerable amount of potential energy—then sugar has not an evident effect; but if the subject is well trained to the work, when fatigued, sugar absorbed from the alimentary tract soon becomes converted into dynamic energy, and gives to muscle the force it has just lost.

I think that Dr. Stokvis's work is not complete. In a criticism of results it is necessary not only to state that one's own experiments are in opposition to the results of others, but also to find out and show the reason, for these differences. The question of the nutrition and contraction of muscle is a most complicated one. Dr. Stokvis has said nothing as to the part the nervous system plays, and this is one of the principal factors in muscular contraction. I believe that here we may find one, if not the chief, cause of these differences.

In my first work on the influence of sugar on the work of muscle, Dr. Paoletti and myself[2] established that sugar and other carbo-hydrates increase the capacity for work of muscle. We have there pointed out:

1. The minimum dose of sugar which can exert an action on muscular work.
2. The limiting quantities necessary to give a certain effect.
3. The quantity of water best suited to be given with a certain weight of sugar.
4. The most convenient method of its administration.
5. The influence of age and of fatigue.

SUGAR AS A FOOD.[1]

By VAUGHAN HARLEY, M.D., M.R.C.P.,
Assistant Professor of Pathology and Teacher of Chemical Pathology, University College, London.

Carbo-hydrates are known to be essential to animal life, while the experiments of Wislicenus and Fick, as well as Pettenkofer and Voit, have shown that muscular work owes its origin to a great extent to a breaking up of the carbo-hydrates in the animal body and not to the nitrogenous con-

[1] Read in the Section of Physiology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

[2] Prof. Ugolino Mosso e Luigi Paoletti, "Influenza dello Zucchero sul Lavoro del Muscolo," *Trans. R. Accademia dei Lincei*. Roma, 1888.

stituents. The old experiments proving that proteids alone were essential are now considered worthless, for not only has it been found that carbo-hydrates can be formed from proteids in the organism, but the same has even been done in the test tube.

The researches of Chauveau and Kaufmann have demonstrated that sugar is the principal, if not the only, source of muscular activity, for by analysing the blood going to and coming from an active muscle and comparing it with that of a resting muscle, they found that more sugar was used up by the muscle while in action than while at rest. Their experiments led them to believe that not only did 2.5 to 3 times more blood traverse an active muscle, but 4 times more sugar disappeared from it. These observers further showed the quantity of sugar required per minute by 1 gramme of muscle at rest and when actively contracting.

Seegen, however, has shown that the results they obtained were too high, for, if they were true, the muscular tissues of a man weighing 70 kilos. would use during twenty-four hours 1,470 grammes of sugar, and if he was working eight hours of this time, no fewer than 2,864 grammes of sugar would be required. This enormous consumption of sugar would represent 6,027 calories at rest and 11,672 calories in a working man, a quantity which could not possibly be expended by our known physiological laws, so that we may see that in all probability our methods of analysis at present are not sufficiently accurate to allow us to see how much sugar per minute one group of muscles requires.

Seegen again, as well as Morat and Dufourt, showed that the amount of sugar disappearing in a muscle made to contract by electrical stimulus is greater than in a muscle at rest. Seegen also showed that in a struggling dog the venous blood contained very much less sugar than the arterial, which does not occur in the resting muscle.

Having shown the physiological reasons for believing that sugar is the primary cause of muscular activity, I shall now turn to the experiments I performed at Turin with the ergograph, by which means I was enabled to show that sugar taken as a food increased the power of doing muscular work. With this instrument the work performed by a definite group of muscles is accurately recorded; and as any one group of muscles can be taken as a standard of the effects of sugar on the muscular work of the body generally, by these means it was able to demonstrate what was the effect of the addition of sugar to ordinary diet, as well as the effect of sugar when taken alone.

In experiments of this kind it is always necessary to remember that muscles by being continuously exercised gain very considerably in power, so that it is necessary to compare the work, both with and without sugar, within a very few days when one wishes to avoid this error. Professor Stokvis draws especial attention to the necessity of being accustomed to work with the ergograph, so that in this paper I need not refer to them.

That sugar alone has a very marked effect on the muscular work performed was seen by comparing the work done during the period of twenty-four hours' fasting with that done under similar conditions when 500 grammes (17½ ounces) of sugar, dissolved in pure water, were taken. Thus I find that during 30 muscular contractions from 26 to 33 per cent. more work could be done on the day on which the 500 grammes of sugar were taken than when fasting. When instead of estimating only what amount of work could be done during a definite period—that is, 30 contractions, the total increase in two similar days was no less than 61 to 76 per cent. In fact, the work done on 500 grammes of sugar was almost equal to that done on a full ordinary diet.

That sugar should prove a diet, one would naturally expect; it was therefore advisable to investigate what effect it would have on the amount of muscular work performed, when compared to an ordinary diet. The influence of sugar, when compared to a full ordinary diet, was found to be quite appreciable. During 30 muscular contractions, during a period of twenty-four hours, 2·3 to 7 per cent. more work was accomplished on the day when sugar alone was taken (500 grammes or 17½ ounces) than on that when the ordinary diet was taken. The total work on these two days showed a slight increase on the sugar day (0.538 kilogramme meters) in the one case, while in the other case the full diet day was 7.430 kilogramme meters more than on that when sugar alone was taken.

The influence of the addition of sugar to a full ordinary diet showed that when 250 grammes (9 ounces) of sugar were taken in addition there was a gain. During four days of comparison the gain on the sugar day during 30 muscular contractions was 6 and 13 per cent. and 11 and 29 per cent. The gain in total work was 22 and 36 per cent. and 19 and 29 per cent.

It must be remembered that during these days the individual was taking a full ordinary diet, containing all the nourishment necessary to keep him in good health, and the sugar was only added in addition to what appeared necessary for the organism. This very distinctly shows that even when the organism is supplied with, comparatively speaking, plenty of nourishment from which to obtain its muscular energy, the addition of sugar causes an appreciable increase in the muscular power.

Other experiments were done to see the influence of sugar added to a small diet when estimated only for a few hours after the meal. A small meal of coffee, milk, and rusks, with and without 200 grammes (7 ounces) of sugar, showed an increase of 9 to 21 per cent. of muscular power during thirty contractions, the total working power being increased 6 to 30 per cent.

When a large meal, consisting of soup, steak, omelette, bread, and wine was taken in one case without, in the other case with 250 grammes (9 ounces) of sugar, 30 contractions showed even then an increase of 2.3 to 6.8 per cent. of the work accomplished, while the total work increased 8.4 to 17 per cent.

The influence of sugar as a muscular diet was still further brought out by its influence on the diurnal variations which are known to occur in the power of doing muscular work. It is known by experiment that a fall in the power of doing muscular work occurs between 5 and 7 P.M., but I found that by taking 100 grammes of sugar a little before this time the diurnal fall was entirely obliterated. In fact, in some cases more work was obtained.

These experiments having proved the value of sugar as a muscular food, I shall now adduce some evidence in support of the view that sugar is a most valuable article of diet.

In the first place, Mr. W. Glynn, whose occupation was alternately laborious and sedentary, found that during a week's hard work in the open air he could take large quantities of sugar—of which he was extremely fond—without experiencing any inconvenience, whereas if he indulged in anything like the same extent during a week's desk work he suffered from feelings of drowsiness and indigestion. He further noticed that he could eat heartily of the most substantial food during sedentary occupation without experiencing these bad effects so long as he refrained from sugar. From this he concluded that, in his case at least, sugar was favourable to hard muscular exertion, and unfavourable to his constitution when he took large quantities of it without exercise. These experiments he has repeated for some years, and, although he is not a robust man, the amount of muscular work he can do on sugar surprises even his friends.

In the next place, Mr. C. A. Barber, late Superintendent of Agriculture of the Leeward Islands, in an article entitled Sugar Cane and Health in *Knowledge*, 1892, stated that, while 72 lbs. of sugar per head are annually used by the inhabitants of Great Britain and Ireland, by the United States 52 lbs. are used, 25 lbs. in France, and only 17 lbs. in Germany. It has been found that by adding several ounces of sugar daily to the diet of boys in schools they are rendered capable of performing an increased amount of muscular exercise.

The value of sugar is well seen in the West Indies, for when the sugar-cane crop is reaped, the negroes, however weak and starved-looking they may be, rapidly improve in condition; and although the labour in the fields is exceedingly heavy, towards the end of the harvest they are both strong and fat.

Mr. Wray states that it has been absolutely proved that a man can exist entirely on sugar. He instances a case of a crew of a ship bringing a cargo of sugar home from the tropics who by bad weather, provisions being exhausted, had recourse to their cargo of sugar; not only did it sustain

the men, but it actually cured them of scurvy, from which they had severely suffered.

Mr. Walter Pritchard states that in 1883, when among the ships discharging sugar at Leith Docks, he noticed the men ate largely of it, and they not only developed muscularly, but greatly improved in general health.

Captain H. Bourke, of the 10th West Indian Regiment, the men of which are all negroes, says "that when he was with them on active service in Africa he noticed that, when making long and fatiguing marches, they valued their ration of sugar (2 ounces per diem) nearly[1] if not quite as much as their meat ration; and that when they had no tea or cocoa in which to put their sugar they mixed it with water, and drank it thus." He further states that he frequently noticed that the men when fatigued on a long march were greatly refreshed by chewing the sugar canes that they plucked by the way. All negro races, he says, are fond of sugar, and consume immense quantities of it when they can get it. This, he thinks, perhaps accounts for their great strength and powers of sustaining prolonged and great fatigue.

The following startling, because unexpected, testimony to the bodily advantages of sugar is related at p. 286 of Douglas Sladen's *On the Cars and Off*, 1895; his exact words are: "One of the most difficult forms of nourishment to go without in the frosts of Canada as in the burning deserts of Australia seems to be sugar. Captain Armstrong told me that the only time he was ever a thief was when he had walked about twenty miles from their camp to a settler's hut to try and get provisions. His mates were all ravenous for sugar, and the settler gave him a pound which had gone bad. On his way home he apportioned himself his fair share of this sugar, because he felt that he could not wait a minute longer, and then, like a tiger which had tasted human blood, he could not resist the temptation, and, stealing of the others' shares, he ate it all and ignored the subject on his return."

Added to the above, Colonel Henry Browne, in a letter to my father, Dr. George Harley, written in the spring of last year, says that "the lumbermen of Canada, than whom no finer or more muscular men exist, eat a great deal of sugar in the form of molasses. They fill their milkless tea with it, make cakes with it, and even add it as a luxury to their fried fat salt pork, which is the only meat they get during the whole time they are in the woods cutting lumber, and this is practically half the year, their diet when at home being very much the same. The tame North American Indians, who go shooting with one, have adopted the same diet, and for toughness and endurance few can beat them. The pork is eaten for its heat-producing qualities, and I always thought the molasses might have the same effect; at any rate, I do not imagine it is taken with any reference to muscular development. A fat diet is a necessity in so cold a climate as that of Canada in the winter." That the value of sugar as a food holds good for horses is shown by the fact as stated in *St. James's Gazette*, 235, 1894, that the Emperor Azbar, of India, gave his horses 1½ lb. of sugar along with 8 lbs. of boiled peas in winter and crushed grain in summer and 2 lbs. of flour. Sir William Moore says that the natives of India when on long journeys give their horses and camels molasses refuse along with alum and opium (10 grains to a horse), and the animals thus fed are capable of sustaining a large amount of muscular fatigue.

The idea that sugar causes gout appears from experience to be totally devoid of truth. Large quantities of sugar added to the diet cause no increase of uric acid. In fact, I have found a pound or more of sugar taken daily not only causes no appreciable increase in the quantity of uric acid in the urine, but totally failed to bring on an attack of gout in a man of gouty constitution.

The popular view that sugar ruins the teeth is equally not borne out by observation, for people accustomed to taking large quantities of sugar are not more liable to bad teeth, but in many cases have exceptionally good ones. This is markedly the case with the negroes of the West Indies, who, as already stated, are accustomed to taking large quantities of sugar.

The question as to whether or not sugar causes dyspepsia is more difficult to decide. My opinion is that it is only in cases of abnormal digestive organs that an acid fermentation of sugar occurs in the stomach. If from 1 to 2 lbs. be taken daily they might cause it, but in persons who take only a few ounces per diem I have never noticed the slightest disorder of digestion to arise, although the sugar has been continued for months at a time.

I hope that by the above facts I have shown that sugar is not only an indispensable food to man, but at the same time a powerful muscular restorative, by supplying to the muscles the material from which work is produced.

Sugar is also, I believe, a nerve restorative; in my own experiments this was brought out by its effect in hindering fatigue. In the twenty-four hours of fasting, 500 grammes (17½ ounces) of sugar not only increased the amount of muscular work, but also very markedly increased the resistance to fatigue. For while during fasting a weight could only be lifted every 2 seconds from 300 to 374 seconds, when the sugar was taken it could be raised almost double the amount, being from 484 to 528 seconds. That is to say, the onset of fatigue was retarded from 154 to 184 seconds. The same influence in preventing the onset of fatigue was shown on those days in which a full diet was taken as compared to those in which sugar was added to the full diet. In the case where on two days 500 grammes of sugar was taken fatigue was hindered 12, 38, 98, and 180 seconds.

The resistance to fatigue in the case when only a small meal was taken was again negative with the left and 70 seconds with the right middle finger, while the power of resisting fatigue after a large meal was from 50 to 71 seconds. The value of sugar as a nerve restorative is well known in France and Switzerland, where when one is exhausted a glass of sugar and water is commonly given as a restorative. In what way sugar can act as a recuperative power for the nervous system is so far not to be explained, as we have no evidence that nerve cells during activity use up larger quantities of sugar than at rest, as we have in the case of the muscles. At the same time it seems a perfectly feasible supposition that this is the case, and I merely state here the facts obtained, and do not attempt to explain on any theory how they are produced.

I think that the popular experience brought forward in this paper in support of the value of sugar as a muscular food, which I gave in the Royal Society in November, 1893, and the full paper in the *Journal of Physiology*, vol. xvi, 1894, has been fully substantiated.

That any carbo-hydrate or even proteid will yield sugar to the organism from which muscular energy can be obtained is, I think, an undoubted fact. At the same time a certain amount of chemical energy is required to convert these substances into sugar, the form in which carbo-hydrates seem to be used as generators of muscular if not also nervous energy. The advantage of taking sugar as such in the diet is to economise energy and to save the tissues the necessity of wasting chemical energy. The mere fact that we have positive evidence of the advantage of sugar added to the diet as a food in the production of muscular work in the case of Professor Ugolino Mosso and myself is sufficient to justify the statement that sugar should not be looked upon as a mere condiment, but as a most valuable food stuff.

Dr. M. S. Pembrey remarked that Dr. Harley's experiments were very unsatisfactory in that a strong personal equation entered into them. It is well known that psychical states have a most marked effect on the results when working with the ergograph. Dr. Harley approached this question with a strong view as to the effect of sugar on muscular work, and moreover he could watch the tracing as it was being taken. It is most necessary in these experiments to employ subjects who know nothing of their object.

Professor W. D. Halliburton pointed out that it was well known that carbo-hydrates exerted a sparing action on proteid metabolism, and that we could seek some of the explanations of the action of sugar on muscular work in this fact. He pointed out how, empirically, we had come to know that with athletes a better result was obtained by training on proteids rather than carbo-hydrates.

Professor G. N. Stewart emphasised the fact that the organism makes the best of the actual condition of things present at any time. One taking but little proteid will do good work on it, and one taking but little carbo-hydrate will

[1] They will take as much as they can get, for they value its nutritive effects highly.

show the same. Moreover, too much may be made out of the argument based on the empirical knowledge gained in the training of athletes, for some of the hardest workers do well on less than the 100 grammes per day of proteid usually considered necessary. The work they perform is therefore largely from carbo-hydrate food.

Professor STOKVIS pointed out that many of his experiments were carried out on subjects who knew nothing of their aim. He stated, too, that the Dutch crew that had performed so well at Henley and elsewhere this year had at his instigation been trained almost entirely on proteid food, but that the crew of the previous year, which had performed no less creditably, had been trained on a carbo-hydrate diet.

Demonstration of Apparatus.

Dr. W. H. R. RIVERS (Cambridge) showed two sets of apparatus for the determination of reaction time. The time in both cases was measured by a chronoscope, which was started by the closing of an electric current synchronous with the presentation of the sensory impression. The chronoscope was stopped by the opening of the current by the person experimented upon. By the first apparatus "choice time" was determined by the opening of one of two keys, the first to be opened when the vowel "a" the second when "o" was pronounced. The second apparatus determined "association time," and consisted of a mechanism which suddenly presented a word written on paper and at the same instant closed the circuit through the chronoscope. This circuit was opened by a lip key held closed by the person observed and opened as soon as he spoke a word called up in association with that written on the paper.

Professor DE BURGH BIRCH (Leeds) showed a number of instruments adapted for teaching practical physiology. The main advantages of these instruments are their solidity and efficiency combined with small cost. In all the moving parts ball bearings are used, thus minimising the friction to such an extent that all the apparatus required for eight sets of students may be driven by less than $\frac{1}{10}$ horse power. The motive power used is a "Chicago top" water motor. The maker of the instruments is Kershaw, Kankerwell Lane, Leeds. These were further illustrated by many lantern slides showing details of the arrangement of the apparatus in the class room.

On the Perception of Luminosity at Different Points of the Retina.

Dr. F. W. EDRIDGE GREEN said: It is generally supposed that vision of all kinds is most acute in the centre of the retina—that is, that we see an object best if we look straight at it. But under certain conditions this is not the case. This fact is well known to astronomers. Sir John Herschel says:[1] "It is generally taken for granted that to see any object whatever the best way is to look straight at it, and get its image impressed on the centre of the retina. This is certainly, however, not the case with a single bright luminous point, if no brighter than a star of the third or fourth magnitude, as anybody may convince himself by trying the experiment the first clear night. When two such stars of equal magnitude, within a degree or two of each other, are looked at, nothing is easier than to make either of them disappear as if blotted out from the sky by looking full and fixedly at it, while the other remains conspicuously visible. In this way I find stars of the second magnitude considerably enfeebled, though they cannot be made wholly to disappear. Those of the first are but little affected." I have made a number of experiments in order to find out what circumstances influence this apparent disappearance of a luminous object, with the following results: A bright object cannot be influenced in any way. When a dull object is looked at fixedly (great care being taken not to move the eyes) the object will disappear from the centre, outwards, until the whole field of vision is black. The illumination must be feeble, and the source of the light must be situated behind the observer. It is of great importance to have the surroundings of the luminous point dark. I nailed a small piece of black velvet 2½ feet by 2 feet on a door 6 feet 9 inches by 2 feet 9 inches. In the centre of the velvet I put an ordinary pin at right angles to the velvet, so that only the head was visible. My left eye being bandaged, and at a distance of 11 feet, it was almost impossible to see the pin when it was looked at directly, even with a bright illumination. The pin was distinctly and brightly visible when the eye was moved so that it was seen indirectly. I then reduced the illumination, and the whole door and velvet disappeared, and the field of vision appeared as if the wall paper extended right across the door. The pattern could be made out. The disappearance commenced with an extension of the black from the velvet downwards, and then the whole door disappeared. The skirting could be seen after the other parts had disappeared. On increasing the illumination the greater part, but not the whole of the door could be made to disappear, and the disappearance was relatively evanescent; a dark object disappears when white will not. Thus a piece of white paper, an inch square, pinned on the velvet, when brightly illuminated, did not disappear with the velvet and the door, but appeared as a shining white square on the wall paper pattern which had supplanted the velvet. A feebly illuminated white could be made to disappear. When an object disappeared, the visual field appeared considerably contracted. On repeating these experiments in a room the walls of which were covered with pictures, I found that a space about 6 feet square disappeared, and was replaced by a grey cloud. The pictures on each side of the space could be plainly seen, and did not alter their positions. The luminosity of surrounding objects greatly influenced the disappearance. For instance, an isolated star in a dark sky disappeared much more quickly and rapidly than when there were several stars in close juxtaposition to the one under observation. No gap could be seen in a feebly illuminated cloud of white smoke or a number of small stars or lights. It will be noted that the experiment always succeeded best when the centre of the field of vision was occupied by a black object or a small luminous object with dark surroundings. In order to find out the points of the retina which are most sensitive to light, I substituted for the test object of the perimeter a piece of phosphorescent paper a quarter of an inch square. The above experiments show that the effect of light on the retina is not confined to the point on which it falls. This fact is also demonstrated by another experiment first mentioned by Helmholtz. Let a candle be placed in the evening in the neighbourhood of a large dark surface—for instance, of a door which opens into a dark room—and let the degree of darkness of the surface be observed while the light is alternately concealed by the finger and allowed to strike the eye. It will be readily seen that as often as the rays freely enter the eye a white luminosity appears spread on the surface, being brighter in the vicinity of the light, and spreading itself darkly over the more distant portions of the surface. The same is observed when daylight enters the eye from an orifice in a dark screen: when the orifice is covered by a coloured glass the luminosity has the colour of the latter. We know that a certain amount of light is absorbed by the pigment of the yellow spot; but this absorbtion cannot account for the phenomena referred to above. Besides, the yellow pigment is absent at the fovea centralis, whilst the experiment succeeds best with a small object, the image of which must wholly fall on the fovea centralis. The fact that if we look steadily at an object of two colours the whole field will become alternately of the one or the other colour bears on the same point. These experiments are hardly consistent with any other than a photo-chemical theory of colour perception, and have an important bearing on the relative functions of the rods and cones of the retina. The rods contain a substance—the visual purple—which is probably liberated by light, forming an actual photograph at the back of the retina: the cones acting as the terminal portions of the perceiving fibres, and conveying the impression of the photograph to the brain.

Professor H. P. BOWDITCH (Harvard) said an explanation might be found in the view that the central portions of the retina were more effective in yielding judgments of form and outline, but that intensity of light was best judged by more peripheral parts of the retina. As bearing somewhat upon

[1] *Familiar Lectures on Scientific Subjects.* By Sir John Herschel, Bart. 1867.

this subject he showed a card having a row of small circles coloured red on a blue background, on giving a slight rotatory movement to this card the red circles gradually disappeared and became coloured blue. Further, if one looks fixedly at one of these circles its centre gradually becomes black. He had no explanation to offer for this phenomenon.

On the Tertiary Degenerations in the Central Nervous System (Secondary Neural Atrophy).

Dr. Marinesco (Paris) contended that the Wallerian law of degeneration, which teaches that after section of a nerve its central end remains intact, must undergo modification. V. Monakoff, Darkewitch, and the author have brought forward facts which demonstrate the contrary. They have shown by facts derived from experiments and pathological anatomy, that when the continuity of a nerve is destroyed not only the central end undergoes a process of atrophic degeneration, but the same atrophic process overstepsthe first neuron and attacks the second, and even in some cases the third. The mechanism which determines the lesions of these neurons is of a reflex nature, and the author is of opinion that the Wallerian law must therefore be altered, and that for this law must be substituted (but only with regard to the secondary neural atrophy), the trophic theory of functional afferent and efferent excitations. This theory was put forward by the author in 1892, and accepted by many other neurologists.

Professor C. S. Sherrington considered the view put forward by Dr. Marinesco as an extremely valuable one, and remarked on the influence one nerve cell exerts over another, as for instance in tonus of muscles. In amputation stumps fibres of the anterior roots show signs of wasting, while there is still a potential tonus acting.

The Function of the Spleen as a Blood-destroying Organ.

Dr. W. Hunter described the results of experiments he had made on this point. He found that in the case of certain drugs possessing a markedly destructive action on the blood, action was greatly lessened, to the extent even of being completely abolished if the spleen be removed. Since in both cases the drug was injected directly into the circulation (intravenously), he concluded from the results that the cells of the spleen played an important part in the blood destruction.

The Mechanics of the Cardiac Cycle.

Professor J. Berry Haycraft and Dr. D. Paterson introduced a discussion on this subject. Professor Haycraft first directed attention to the commonly accepted view of the change in shape of the ventricle during systole, namely, that the side to side diameter decreases but the antero-posterior diameter increases in magnitude. This latter result he has proved to be due to the force of gravity acting upon the heart walls in its flaccid condition during diastole. The diameters of the heart all decrease in length during systole when the heart is supported in a uniform manner from all sides, as is the case with the heart *in situ* within the thorax. Animals (dogs) killed with the heart in the extreme position of diastole, as by asphyxia, strophanthus, heat, etc., were frozen, and sections cut right through the thorax in the region of the heart, and observations of its shape and diameters made. By the intravenous injection of mercuric chloride a dog was killed and the heart found firmly contracted; this, then, by a similar method yielded sections from which observations were taken. After standardising the different measurements the above conclusions could be drawn. A second point which Dr. Haycraft criticised was the generally accepted view that during systole there is a rotation of the two ventricles about a common axis resulting in a display of a greater surface of the left ventricle during systole. This observation is true when the heart is observed after removal of the sternum, but does not occur when the heart is normally supported within the thorax. The explanation of the observation is again to be found in the effect of gravity acting upon the flaccid relaxed heart, and the apparent rotation can be completely altered according to the position of the animal. If lying upon its right side, the rotation then brings into view more of the right ventricle, and so on for different positions. Moreover, if the lungs be distended so as to yield more lateral support to the relaxed heart the usual rotation may be completely abolished. This view has further been confirmed by passing light levers through the chest wall, the inner ends being brought into contact with various parts of the heart's surface. Observations of the movements of the free ends completely negative all ideas of a rotation occurring during systole. The third point raised was with regard to the time of contraction of the papillary muscle. He criticised the method employed by Professor Roy, who had formed the opinion that the papillary muscles contracted later than the remainder of the ventricular wall. Professor Haycraft had investigated this point by rapidly cutting out a papillary muscle with a piece of the ventricle wall attached, fixing this to a board so that the base of the papillary muscle was rigid, and leaving a tongue of heart wall free. This tongue was made to pull on one lever and the free end of the papillary muscle on another, and by this method, if all operations be carried out rapidly, it was shown that the two contracted quite synchronously.

Professor Michael Foster pointed out that the systole could be divided into two parts. The first commences with the contraction, and lasts until the pressure is raised sufficiently to open the semilunar valves, and the second is from that instant to the end of the systole. During the first period there is no blood leaving the ventricle, and consequently there is no change in volume; therefore all diameters cannot be decreasing.

Professor C. S. Roy did not consider the method employed for studying the time of contraction of the papillary muscle satisfactory.

Dr. Gibson (Edinburgh) showed tracings of the heart movements taken in a case of fissura sterni, and thought they showed an increase in the antero-posterior diameter during systole.

Dr. W. G. Spencer did not consider the means employed to show that there was no rotation during systole at all satisfactory, and mentioned a case in which during operation to remove a cyst the great vessels were exposed. There was then seen an extraordinary amount of twisting.

Dr. D. Paterson mentioned that the amount of mercuric chloride injected to produce a permanent contraction was very small. Further, that they had obtained rotation of the heart in either direction as they pleased by simply altering the position of the animal; and that with regard to the contraction of the papillary muscle, its action could only be properly understood on the supposition that the two contractions were synchronous.

Professor Purser asked how one could explain the fact that the apex beat is more forcible when observed in the prone position if it were true that the flaccid heart always erects itself during systole.

Innervation of the Heart.

Professor Heymans (Ghent) showed a series of histological preparations, and microphotographs from these, in illustration of the innervation of the heart of vertebrates, from which he concluded: (1) The myocardium is innervated at all levels, including the apex. (2) This innervation is sufficiently copious to allow of there being one nerve fibril for each muscle fibre. (3) Each arteriole of the coronary system possesses a set of vasomotor nerves. (4) Under the endocardial endothelium there is a nerve plexus which is sensory in function: this plexus is especially rich at the level of the valves. (5) The motor fibres of the myocardium form a network among themselves in such a manner that anastomoses exist between the ramifications of neighbouring neurons.

Dr. Lauder Brunton pointed out how valuable these conclusions were in enabling us to understand some symptoms and older observations. For instance, laudanum injected into the heart produced a great effect, whereas when applied externally nothing occurred. A somewhat similar result occurs, too, with strychnine.

Professor Heymans, in replying to some of the questions raised, stated that all his preparations had been made by Golgi's method.

Local Vasomotor Changes.

Drs. Bayliss and Starling demonstrated a method of

studying local vasomotor changes. A tube was inserted into the course of the artery supplying the organ whose vascular changes are the subject of investigation, and two points of this tube are connected with a differential manometer. The excursions of the lever of the manometer are proportional to the velocity of blood flow through the tube, so that they are diminished by local constriction and increased by local vascular dilatation. It is necessary to defibrinate the blood of the animal (a dog was used) before the experiment, in order to avoid clotting of blood in its passage through the tube.

Circulation Time.

Professor Stewart (Cleveland, U.S.A.) communicated some further researches he had made upon circulation time. The method he had latterly been employing was to inject methylene blue into a vein, and watch for its appearance in the carotid artery. It was not found necessary to open the artery. On comparing this method with the electrical method it was found that the two gave identical results. In this way he had measured the circulation time for the spleen, heart, intestine, lung, etc. The mean pulmonary time he found to be about 9.55 seconds in a dog, and by comparison with different animals he arrived at the conclusion that the mean time for the lungs varies as a diameter of a sphere of the same mass as the animal, and having the same specific gravity. Hence the circulation time increased at a less rate for different animals than the body weight. From this the circulation time for man would probably be found to be about 15 seconds.

Physical Factors in Absorption.

Professor Hamburger (Utrecht) said: I have lately been employed with the question, as to how fluids present in the peritoneal and pericardial cavities become absorbed. Presumably, there are but two ways in which this is brought about: through the lymphatics or the blood vessels, and it turns out that the lymphatics play a quite subsidiary part. Starling and Tubby some time ago indicated this, more especially for the pleural cavity, by means of other experiments. It became now of especial interest to investigate in what way this absorption through the blood vessels was brought about. It is not by osmosis; for fluids which were both isotonic and hypertonic were equally taken up. This is such a problem as was presented to Heidenhain when he saw isotonic and hypertonic fluids, both serous or non-serous, disappear from an isolated piece of intestine with both ends occluded. As osmotic forces could not explain the facts observed, he concluded that it was a manifestation of vital force. Starling and Tubby drew the same conclusion with regard to absorption from the pleural cavity. What was more natural than that I also should conceive that the serous membrane should actively take up fluids and pass them on into the vessels lying beneath? But before I was contented with this hypothesis, I wished to know whether absorption would cease at the death of the animal. But this I found was not the case, for in animals killed some minutes, or even twenty-four or more hours previously, absorption still occurred. One might raise the objection that the serous membrane had not been killed, so I injured the peritoneum, chemically and by heat sufficiently to kill the cells, and yet both in living and dead animals absorption still went on. In my opinion then, one must no longer fall back on a vitalistic explanation; and I must mention that lately, and at about the same time as myself, Leathes and Starling have, on the basis of quite different experiments, arrived at the same result. If, now, we have to reject the explanation by "vital force," we must then seek for a fresh explanation for these facts. I believe that I have found this in imbibition. According to Ad. Fick we may distinguish two kinds of imbibition: first, molecular, that is, the sucking up of fluids by homogeneous substances, such as gelatine, agar-agar, etc.; and, secondly, capillary, i.e., imbibition into porous materials, such as porcelain, connective tissue, etc. I suggest, therefore, that when fluids are present in the peritoneal cavity, the cement substance between the endothelial cells, and possibly these cells themselves, take up the fluid by molecular imbibition. Then by capillary imbibition the fluid is taken into the connective tissue spaces, whence a small part is removed by the lymph stream. The remainder is sucked up by the cement substance between the endothelial cells of the blood vessels, or even by the cells themselves. Now the power of imbibition by a tissue is limited. A given volume of tissue can only take up a limited volume of fluid, and in a short time the maximum swelling would be reached and absorption cease, did not the blood stream continually remove fluids taken up by the capillary walls. Hence absorption is very limited in dead animals, where the circulation has stopped, but, if one keeps up an artificial circulation of blood or serum, absorption becomes greatly increased. Clinical experience, too, teaches us that, with pathological fluids, absorption is greatly aided by an increase in the blood-flow. If, now, the possibility of absorption by dead tissue cannot be doubted, may we not explain it as possibly associated with a structure of the tissue still existing after death? Consequently, I have investigated the phenomena of absorption by artificial homogenous membranes. And I have succeeded. I have taken a cylindrical membrane of gelatine to represent the capillary, whilst the tissue spaces were imitated by a wider glass cylinder, into which the gelatine cylinder was placed. In order to form the gelatine cylinder, I took a cylinder made of nickel gauze and rotated this in warmed gelatine so that its meshes became filled. The cylinder is next removed and rotated round its long axis, and in five minutes the gelatine becomes solid. It is now placed concentrically within the glass cylinder and the open ends of this closed, leaving a free exit at either end of the gelatine tube. Both cylinders are now filled with fluid—serum, for instance—and if a stream be kept up through the gelatine cylinder, one finds that fluid is absorbed from the space between the two cylinders, and is replaced by fresh fluid which is allowed to flow in through a side tube. According to my view, it is in a similar way that fluids in the peritoneal cavity are taken up by the vessels of the subserous tissue. From what has been said we may conclude that absorption is thus a purely physical phenomenon. Later experiments have taught me that the hydrostatic pressure of the fluids to be absorbed plays a considerable part in absorption. I will not, however, here speak of these experiments, for they are not yet completed.

Dr. E. H. Starling offered a few remarks on the paper, in which he stated that in considering the absorption of fluids from serous cavities one must not call into play any assumption of a living activity of the endothelial walls during the process. Absorption depends on the molecular structure of the surroundings, and not on the living activity of the endothelium.

Artificial Hydræmic Plethora.

Mr. J. B. Leathes (London) described experiments showing the rate of change in volume of the fluid circulating in the vessels of an animal with artificial hydræmic plethora, after ligature of the renal pedicles. The fact that normal saline was removed from the circulation much more slowly than a subnormal saline solution was explained as indicating that in the former case filtration acted alone, and in the latter was aided by osmosis, and was therefore evidence against the assumption that the vessels were stimulated by the abnormal composition of the circulating fluid to secrete the abnormal constituents as lymph, a view which would require that the solution containing more salt should be removed more rapidly. Further evidence of the ease and rapidity with which osmotic differences between blood and tissues acted was given by the fact that the volume of fluid circulating in the vessels could be increased 70 per cent. within the space of ten minutes, by the injection of 5 grammes dextrose per kilogramme of the body weight. The osmotic pressure of the lymph was found in all cases to follow very closely that of the blood; and the flow of lymph, which is very largely increased by injections of normal saline, is scarcely at all increased if the solution injected is subnormal. Both these facts were quoted as going against the secretion theory of lymph formation.

Resistance of the Capillaries to the Blood Flow.

Dr. H. Campbell read a paper in which he sought to prove that the resistance which the capillaries offer to the blood flow is very much smaller than is usually stated—so small, in fact, as to be almost negligeable.

The Extensibility of Muscle and the Work Performed by Muscle under Varying Loads.

Dr. T. Gregor Brodie mentioned some further results he had obtained upon the extensibility of muscle. Using a photographic method of recording the alterations in length he had been able to confirm his previous results, and especially that the curve of extensibility of muscle is not a hyperbola. Secondly, studying the amount of work performed during successive contractions of a muscle with uniformly increasing load and by a method previously described, he had obtained the following results. On comparing the work done when the muscle was stimulated (1) directly and (2) indirectly, the maximum amount of work, at a single contraction, was performed when the muscle was indirectly stimulated, other things being the same. This maximum occurred, too, with a lower load than in the case of the maximum performed by the muscle when stimulated directly. The amount of work performed when the muscle was stretched by the weight during the period of rest is considerably greater than when the muscle has the greater part of the weight supported during that period.

The Regulation of Temperature in Animals.

Dr. M. S. Pembrey, who read this paper, said: The power of maintaining a constant mean temperature can be studied by observing the effect of rapid changes of external temperature upon the respiratory exchange and the temperature of an animal. In an adult mouse this power is very perfect. The mouse is able rapidly to alter its production of heat, as shown by the variation in the discharge of carbonic acid, which is a measure, although not an exact one, of the heat produced. Within ten minutes of a change from 30° to 10.5° the increase in the discharge of carbonic acid was 118 per cent.; within one minute of a change from 33.25° to 17.5° the increase was 60 per cent. The response to a rise of temperature is much less rapid; within ten minutes of a rise from 9.75° to 29° the decrease in carbonic acid was 28 per cent.; within one minute of a rise from 17° to 32° the decrease was 5 per cent. It appears that for higher temperatures a mouse regulates more by increased loss of, than by diminished production of heat. The relation between muscular activity and the production of heat is well shown; in cold surroundings the mouse is very active, whereas with a warm temperature it is quiet and often goes to sleep. The regulation by variation in the loss of heat is well marked; under the influence of a low external temperature the ears, nose, and feet become pale, whereas the effect of warmth is a flushing of these parts, and in some cases sweating occurs. The relation of muscular activity to the maintenance of a constant temperature can be studied by testing the response of an animal to changes of external temperature under conditions in which the control of the animal over its muscular system is varied. The response of the normal animal is compared with that exhibited by the animal under anæsthetics or after section of its spinal cord. Under such conditions the animal cannot regulate its production of heat, cannot maintain a constant mean temperature. The development of the power of heat regulation has also been studied. Young animals, such as the guinea-pig and chick, which are born in a high condition of development and have protective coverings, can regulate their production of heat and maintain a constant temperature. On the other hand, young animals such as mice, rats, rabbits, and pigeons, which are born blind, naked, and helpless, cannot maintain a constant temperature. As they grow the gradual development of the power of regulating the temperature of their bodies can be demonstrated.

Professor C. S. Sherrington asked whether considering the variations of temperature consequent on section of the spinal cord, that this indicated the presence of a co-ordinating centre for this complicated reflex.

Dr. Pembrey replied that if in a mouse the cord be divided below the nerves for the shoulder girdle the animal fed itself well and lived for some few days. He did not think there was a special centre.

Professor G. N. Stewart asked if the absence of heat regulation is combined with an absence or diminution of the excitability of the skin reflexes. Further, as to how the helplessness in this respect of some newly-born animals, such as the mouse, is made up for. Does the mother cover them more carefully?

Dr. Pembrey replied that he had not made any experiments in regard to the skin excitability. Mice sit constantly over their young.

Nucleo-Albumins.

Dr. W. D. Halliburton maintained that the substance formerly called cell-globulin β by him was in reality a nucleo-proteid. This was true whether it was prepared from lymphoid structures like the thymus or the stomata of the red corpuscles. It was also true for the fibrin ferment. This fact was of considerable importance, as it placed all fibrinoplastic substances prepared from the blood or tissues in the same category.

The Intravascular Coagulation Produced by Proteid-Like Substances.

Dr. J. W. Pickering said that it is well known that the intravenous injection of nucleo-proteids (nucleo-albumins) causes intravascular coagulation of the blood of dogs, rabbits, and cats. At a recent meeting of the Physiological Society and in subsequent publications[1] I have pointed out that certain synthesised colloids discovered ten years ago by Professor Grimaux, of Paris, not only gave many of the chemical reactions hitherto deemed diagnostic of proteids, but when intravenously injected into various mammals, in 1 per cent. solutions, produced extensive intravascular clotting, which often involves the whole heart, all the larger veins, and extends along the aorta. In this communication I shall confine myself to the colloid C which is formed by the passage of a current of gaseous ammonia heated to 170° C. over solid aspartic anhydride. My attention was directed to this substance two years ago by Grimaux's assertion that after the addition of small quantities of a calcium salt it coagulated when heated to 75° C. This statement I have found to be true, and further, the substance gives a typical xanthoproteic reaction, as well as colour reactions with $CuSO_4$, $NiSO_4$ and $CoSO_4+KHO$, which are strikingly similar to those given by proteids. It is also precipitated by salicyl-sulphonic acid, and the precipitate formed coagulates on heating. Neutral salts like NaCl, $MgSO_4$, Na_2SO_4 $(NH_4)_2SO_4$ separate it from solution in a manner similar to a proteid. After digestion with pepsin and 2 per cent. HCl, a substance is formed which gives a pink reaction with $CuSO_4+KHO$ like a proteose. Extended investigations on the intravascular injection of this substance, in which I have had the advantage of collaboration with Professor Halliburton, have shown the following points of resemblance to nucleo-proteids: (1) The symptoms of death are the same—respiratory stoppage, exophthalmos, dilatation of the pupils, and stretching movements. (2) Small doses administered very slowly to dogs will retard the coagulability of the blood withdrawn from the carotid, thus giving what has been termed by writers on blood coagulation a "negative phase." (3) Carbonic dioxide favours its action. (4) Intravascular injection into albino rabbits, though followed by death, will not produce intravascular coagulation. (5) When mixed with extravascular salted plasma no coagulation is induced. (6) The inhibition of coagulability produced by the injection of potassium oxalate or of "peptone" is antagonised by intravenous injection of the colloid. The results obtained were unexpected, but it is obvious that we have a substance which in both its chemical and physiological actions behaves in a manner strikingly similar to a proteid, and may possibly be termed an elementary proteid.

Mechanical Coagulation of Prothid.

Mr. W. Ramsden in this paper demonstrated that solutions of the proteids of egg-white became turbid and partly coagulated on slight agitation, the fluffy coagula formed resembling fibrin from blood in appearance and properties. This coagulation occurred equally well in a vacuum, or in an atmosphere of hydrogen, and calcium salts are unnecessary. By prolonged shaking, 96 per cent. of the total proteid of egg-white has been converted into an insoluble fibrin-like coagulum. The phenomenon is not confined to the proteids of egg-white, but is

[1] *Proc. Physiol. Soc.*, 1895. No. 2; *Jour. Physiol.*, vol. xviii, p. 54; *Comptes Rendus de l'Académie des Sciences (Paris)*, 17 Juin, 1895. To. xx, p. 1345.

also well marked with vitellin, myosin, a proteid obtained from potato-juice, crystalline vegetable vitellin from pumpkin seeds, and, indeed, in a more or less modified form in all proteid solutions hitherto experimented with which are coagulable by other means. The proteids of blood serum are not obviously affected by agitation unless they are first acidified, when violent shaking produces slight turbidity and a few microscopical coagula. It is only in the presence of a large quantity of neutral salt that the same fibrillated structures are met with as in egg albumen. If an alkaline solution of serum albumen be employed, half saturated with ammonium sulphate, the remarkable fact is observed that the "coagula" formed slowly dissolve up again in the very solution in which they have been formed. The less sulphate of ammonium present the more rapid the resolution. Presumably in the native serum albumen the same bodies are formed, but are instantaneously dissolved. This curious resolution suggests that the bodies formed in agitation are mere molecular aggregates, whether permanent coagula, as in egg-white, or temporary, as in alkaline serum albumen. Fibrinogen behaves like serum albumen. In some solutions of alkali albumen which did not coagulate on boiling, true coagula were formed on agitation. These very slowly dissolved up in the cold to reform alkali albumen; if warmed, much more rapidly. In the hot solution it was impossible to see that they had been formed at all. These facts are analogous to those observed in the alkaline solution of serum albumen. In some solutions of alkali albumen which had been boiled a considerable time, it was impossible to obtain mechanical coagula. Very feeble alkaline solutions of caseinogen behave like alkali albumen. If the agitation coagula are proved to be mere molecular aggregates then heat coagulation must be of the same nature. It is obviously important in making quantitative determinations of proteid not to effect saturation with salts on a "shaker."

Dr. HARRIS (Glasgow) asked whether the precipitate obtained by shaking solutions of fibrinogen was indistinguishable from fibrin.

Dr. E. H. STARLING pointed out that saturating solutions with salts for the purpose of separating globulins from albumens was, in the light of this communication, no longer admissible, as albumen would be also be precipitated. He further asked whether calcium salts were necessary.

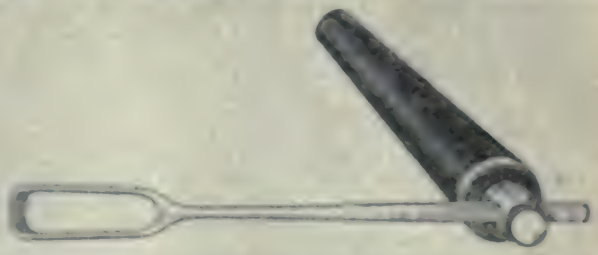
Mr. RAMSDEN replied that it was extremely difficult to make certain that a given substance was fibrin. So far as he could judge, at any rate, some of the precipitates were not to be distinguished from fibrin. Calcium salts were unnecessary for this coagulation.

SECTION OF OTOLOGY.

Sir WILLIAM DALBY, F.R.C.S., President.

TURBINOTOMY IN CASES OF DEAFNESS AND TINNITUS AURIUM.

Mr. T. CARMALT JONES, in this paper, said that operations on the inferior turbinated bones with the object of removing or destroying the bones or the tissues covering them had been in vogue for many years. These operations had generally been done for nasal obstruction, and not with the avowed object of relieving ear trouble. He thought that in some cases of deafness turbinotomy was of use, and that in cases of tinnitus aurium relief might be hoped for after the operation. He was of opinion that the removal of hypertrophied inferior turbinals, and especially of their posterior extremities, was a thing to be tried in obstinate cases of deafness when the auditory nerve was unimpaired, and in cases of tinnitus when all the other known remedies had been tried and found wanting. A patient suffering from tinnitus and deafness came asking to be relieved of the tinnitus, saying that he would not mind the deafness if only something could be done for the noises. Much ear mischief was dependent upon some unhealthy condition of the nasopharynx. Tonsillotomy had often been done for its relief and afforded none. After Meyer called attention to adenoids it became a routine course to search for adenoids and to remove them, together with the tonsils. Often when scraping adenoids he had found the posterior nares blocked by the enlarged posterior extremities of the inferior turbinated bones. He now had an instrument with which he removed inferior turbinals, and with which he was quite satisfied. This instrument was familiarly known as the "spokeshave," and he had operated on quite 500 turbinals. The instrument consisted of a cutting blade



turned towards the operator; an open space in front of the blade was bounded on each side by a metal arm which connected the two ends of the blade with a straight metal stem; a movable handle was fixed at right angles to the stem with a screw; the blade was bevelled slightly outwards, and was also curved outwards. The operation consisted in passing the instrument through the nostril from before backwards, the curve of the blade being outwards, pressing the blade gently outwards, drawing it slightly forward, until the posterior end of the inferior turbinal was felt to be in the open space, then one quick steady pull brought the cutting edge along between the turbinal and the outer wall of the nose. As the instrument was withdrawn the turbinal might come with it; it might be blown out afterwards; it might have to

be lifted out with forceps, it might be lost altogether, or, perhaps, only a shaving of mucous membrane was obtained. The pain varied; in some cases it was almost *nil*, in some it was certainly severe. The operation was frequently followed by headache. Bleeding was variable; there was always bleeding at the time; sometimes it was sufficiently copious to necessitate plugging. As to anæsthetics, ether or chloroform introduced an unnecessary element of danger. A.C.E. was sufficient for children and some adults. Nitrous oxide did very well unless there was difficulty in finding the loosened turbinal. Cocaine was of use; it shrivelled up the erectile tissue, but did not anæsthetise the bone; it checked the hæmorrhage for a time but caused freer hæmorrhage later on. In twelve cases of deafness or tinnitus, or both, where hypertrophied inferior turbinals had been spokeshaved, relief to both was noted in 8 cases, slight relief to deafness only in 1 case, no relief at all in 2 cases; 1 case of deafness with no tinnitus was improved.

Dr. Macnaughton Jones deprecated the increase of turbinotomy. His opinion was that the principal cause of obstruction was in the mucous membrane and not in the osseous structures. He believed that the relation, as cause and effect, between turbinate hypertrophy and deafness was greatly exaggerated. He (Dr. Macnaughton Jones) had considerable experience in the use of the cautery for reduction of the hypertrophied mucous membrane, and had generally found it satisfactory.

Dr. Bronner did not quite understand how the operation was intended to act. Was it to remove any obstruction? Bony obstruction was rare, and any soft obstruction could be removed by the galvano-cautery. If the operation were done to remove any local irritation at the posterior end of the lower turbinated bone, this could easily be done by the snare or cautery. The dangers of the operation were very great—primary or secondary hæmorrhage, septic infection, ozæna, etc. In Dr. Bronner's opinion it seemed to be a revival of the old-fashioned and abandoned method of removing the lower turbinated bones by the forceps.

Professor Urban Pritchard said he would like to know the number of cases that Mr. Carmalt Jones had operated on for tinnitus, and what was the proportion of improvement to the tinnitus; also he would like to know what after-dressing was used; were antiseptic dressings used?

Dr. Charles Warden quite agreed with Dr. Macnaughton Jones and Dr. Bronner that these operations were frequently performed when it was not necessary, and that milder measures effected the object desired—namely, the diminution of the hypertrophic mucous membrane, which he found in his practice was the chief condition, and which was relieved by the alkaline lotions as a wash, cocaine applications twice a day, and the galvanic cautery from time to time.

Mr. Cresswell Baber asked how Mr. Carmalt Jones explained the action of the removal of the inferior turbinated bones on tinnitus; and he also wished to know whether an œdematous condition had been observed after removal of the inferior turbinated body as recommended?

Dr. F. Spicer had much pleasure in endorsing all that had been said by Mr. Carmalt Jones. He said that there was no doubt that great relief might be obtained by this method in certain forms of tinnitus. As to the class of cases to be taken, this had not yet been determined; but, looking at the unsatisfactory results of ordinary treatment in very many cases, any suggestion which offered a fair prospect of success should be tried. As to the dangers of the operation, if proper care were taken and the patient prepared in the ordinary way, there was no danger, or but little. Hæmorrhage sometimes occurred, and for this reason he preferred to have the patient in bed for twenty-four hours after.

Dr. Pegler demonstrated a series of sections under the microscope illustrating the histology of turbinate hyperplasia. They were made from specimens removed from both the middle and inferior turbinate bodies and from the wall of the septum. There were also sections through the whole length of decalcified turbinates that had been removed with the spokeshave. Most of these latter showed practically no departure from the normal condition beyond a general increase in the number of mucous racemose glands and venous sinuses and the depth of the submucous connective tissue layer. He had not found any true hypertrophy of the visceral muscle fibre in the walls of the sinuses. These facts had nothing to do with the question of removal of the inferior turbinate body, as this operation might be strongly indicated in case of but slight enlargement, if the space occupied by the turbinate was relatively greater than the amount available in the nasal passage for the requirements of free nasal respiration. Some of the sections were from turbinate bodies as nearly normal as could be obtained, and required careful study, as the only reliable guide in investigating the departures from that condition. There were also sections through the healthy nasal mucous membrane of the ox. The next series illustrated the structure of so-called moriform hypertrophies, anterior and posterior. He pointed out the importance of distinguishing these common causes of nasal obstruction from true papillomata, with which they were still frequently confounded. They might with propriety be described as papilliform, a term aptly employed by Jonathan Wright,[1] who was one of the most recent writers on the subject. The chief histological features of these papilliform growths consisted of a projection outwards of a series of vascular loops in a bed of œdematous connective tissue enclosed by a border of ciliated epithelium. This œdematous infiltration was a characteristic of all these growths. He was inclined to think that mucoid degeneration had less to do with their production than he had hitherto believed. He had little doubt that the integrity of the walls of the venous sinuses was affected by one or the other, as Mr. Wyatt Wingrave had described, and this accounted for the attenuation of the muscular walls, as seen in some of the sections, until a mere rim was left. In earlier stages the involuntary muscle fibres were thrown into greater prominence by the surrounding œdematous infiltration of the connective tissue elements, and this he thought accounted for the apparently hypertrophic condition described by some authors. Dilatation of the vascular erectile spaces might be expected to follow the degeneration of their walls, and this condition constituted Mr. Wingrave's turbinal varix. Finally, he thought the convoluted outline of these hypertrophies was due to capillary outgrowths rather than to vasomotor influences and consequent frequent alternations of distension and contraction.

Mr. Carmalt Jones, in reply, stated that he believed that the enlarged posterior end of the turbinate acted as a foreign body and kept up Eustachian catarrh. The patients always appeared to be more comfortable after the operation, and in some cases of children where the nasal aperture was abnormally small it became gradually enlarged after the passage had been cleared.

A Hitherto Undescribed Form of Rotatory Sensation in Labyrinthine Disease.

Professor Guye (Amsterdam) said that he had occasion a few months ago to show before a medical society in Amsterdam a patient suffering from Ménière's disease, who presented a peculiar form of rotatory sensation which was not quite new to him, as he had observed the same some years ago in a small number of patients, but which had not yet been described. The patient, a man aged 47, had suffered from influenza four years ago, but had not complained of his ears at the time. Since then he had enjoyed good health. He was often exposed to cold. For the last two months he had had a ringing in his left ear, and suddenly he had in July of last year an attack of giddiness, when he fell down and vomited. This attack returned at first twice daily, and later on at intervals of from ten to fourteen days. When Professor Guye showed the case he had lain in the hospital for four weeks, and had still now and then an attack, mostly without vomiting. He heard the watch at 2m. in the right ear, not at all in the left. His was a typical case of Ménière's disease. He had also symptoms of labyrinthine disease in his left ear, giddiness, rotatory sensation in the direction of the diseased ear, vomiting, and deafness. There was no symptom of any middle-ear disease. With the first attack objects appeared turning round as a wheel, or as the hands of a clock, and in the direction of the hands. When that had lasted for some time he suddenly saw everything turning away to the right; then came sickness, vomiting, and if he did not lie down soon he would fall. The rotatory sensations in Ménière's disease were, as a rule, of two forms. Mostly patients had the sensation of

[1] *Trans. Amer. Laryngolog. Assoc.*, 1895.

rotation to the right, or to the left round a vertical axis, and, as Dr. George had shown in 1879,[2] to the right when the right ear, and to the left when the left ear was the diseased one. When the sensation was very sudden it might produce a reflex movement of rotation in the opposite direction. Some patients had, with the rotatory sensation to the right, the idea that the surrounding objects turned to the left. This was usually the case when the attack was severe. When the sensation was not so sudden and lasted a little longer they had the idea that the objects were turning in the same direction as their own head. It was rather remarkable that when they had slight fits, accompanied by uncertain gait in walking, they felt more propensity to fall to the side of the diseased ear than to the other side. The slight rotatory sensation in one direction produced the idea of rotation in that direction, which led to an involuntary, though not unconscious, movement in the same direction. When on the contrary the rotatory sensation was strong and sudden it produced a reflex unconscious movement in the opposite direction. This seemed to Professor Guye to be worthy of notice in the interpretation of experiences in animals where there was no other sign of the sensations than the movements induced by them. These rotatory sensations round a vertical axis might very plausibly be accounted for by irritation of the ampullæ of the horizontal canals. Besides this rotatory sensation round a vertical axis, patients generally described rotatory sensations forward and backward, as if they were turning over, and in some particular cases they described the sensation as if the objects did turn round before their face with the movement of a wheel or of the hands of a clock. If an explanation of these sensations was to be looked for in the theory of the functions of the semicircular canals, it must be remembered that the two vertical canals, which were sometimes called the frontal and the sagittal, but were better denominated as the superior and posterior canals, could, according to the theory of Crum Brown, afford rotatory sensations round two axes which are about perpendicular to each other, and to the vertical. The planes of these canals did not cut the horizontal plane in the sagittal or frontal, but in diagonal direction. The superior canal of the left ear corresponded to an axis going through the right eye and the left mastoid process. In a plane parallel to the canal lay the posterior canal of the right ear. The axis, corresponding to the superior canal of the right ear and to the posterior of the left ear, ran through the left eye and the right mastoid process. Slight rotatory sensation in these two pairs of co-ordinated canals could produce the impression that objects were turning as the hands of a clock, the dial of which must be thought of as standing before the patient, more to the right or to the left. More violent rotatory sensation originating in one of these canals would produce the sensation of falling forwards or backwards, and of turning round about an axis which did not lie transversely, but a little more to the right or to the left. Generally such patients felt so giddy that it was not easy for them to make accurate observations. But in patients who were intelligent enough to make reliable observations, especially when their attention had been directed to the questions beforehand, Dr. Guye thought it was important to make a note of their impressions, and, if possible, to compare them with the state of the internal ear as found *post mortem*. He thought this especially important on account of the theories of some French writers as Pengnier and Tournier,[3] who considered Ménière's disease as a neurosis occurring in mental degeneration, and the cause of which could not be found or should not be sought in the ears but in the brain, and on account of the theories of some German writers, as Bettcher and others, who looked on the static troubles produced in experiments on the semicircular canals as caused by lesions of the brain. Dr. Guye wished to draw attention to this new rotatory sensation in the first place to inquire if it had been already noticed, and, if not, to beg that it should be looked out for in future. It must not be forgotten that man alone could describe his sensations, and that in vivisections conclusions could only be drawn from reflex movements, although some English antivivisectionists had been terrified some time ago by reading that experiments on the semicircular canals had been made on deaf persons. In their innocence they had translated the German *Tauben* by "deaf persons" instead of by "doves."

[2] *Archives* [illegible], 1879.
[3] *Revue de Médecine*, 1884, p. 1.

Professor Urban Pritchard confirmed Professor Guye's observations; he agreed with him as to the semicircular canals being the seat of Ménière's disease.

Dr. T. Barr (Glasgow) stated that he had found that the descriptions given by patients of their rotatory sensations were vague and unreliable. It would be desirable to direct the patients to observe carefully the nature of the movements. In regard to the view that the semicircular canals formed the static organ of the body, that was far from being proved. In a case in which the whole of the labyrinth was removed as a sequestrum there was no disturbance of the equilibrium. Irritation, not destruction of the nerve termini in the ampullæ and utricle, seemed to be the exciting cause by reflex action upon the centre of equilibrium in the cerebellum adjacent to the auditory centre.

Dr. A. Bronner thought that the seat of vertigo was in the brain; the very fact that digitalis had in many instances such a beneficial effect pointed to a central origin. The varying forms of vertigo also spoke against an exclusive canal origin, as in this case the symptoms would be of a more uniform character.

Professor Guye, in reply, said that the functions of the semicircular canal had not yet been decided. It was of the greatest importance to impress the patient with the necessity of making accurate notes of his sensations.

Some Notes on a Case of Ménière's Disease, and on an Extreme Case of Hyperæsthesia Acoustica.

Dr. Macnaughton Jones said the simple object of reciting this case of apoplectiform labyrinthine vertigo was a clinical one. To this form of vertigo he considered it best to limit the term Ménière's affection. The vertiginous seizure had many interests other than otological in its causation. The patient, aged 70, had had absolute deafness of the right ear for nine years, for which no cause could be assigned. Neither the watch nor the acoumeter were heard on contact in this ear when he consulted Dr. Jones. One month previous to this consultation, while in an omnibus, he felt a sudden flushing of the head. This was followed by a sensation of reeling and sickness. Then there was a sound "as if he were going through a railway tunnel;" and he suddenly became deaf. On examination neither watch nor acoumeter was heard in the recently affected left ear. The tuning fork was hardly heard on the head, being rather felt than heard, and any sound dying completely away on closure of the ear. He was quite unable to stand alone unsupported, falling towards the left side. On being placed with his back to Dr. Jones, and making him turn rapidly to the left, he staggered; not so on turning to the right. He was unable to write his name legibly from inability to form the letters. He was placed on iodide of potassium, bromide of strontium, and hydrobromic acid, with subcutaneous injections of pilocarpin. A month subsequently he had greatly improved; he was able to walk without a stick, the tuning fork was heard much better, the watch was heard on contact with the ear, and the acoumeter at 2½ inches. He could now write legibly and his hand was comparatively steady. The distinctive features of this case which made it typical of its kind were: (1) The suddenness of onset; (2) one ear being affected; (3) the simultaneous occurrence of the deafness, tinnitus, vertigo, and nausea, the difficulty of writing; (4) the partial recovery of hearing after the first attack and the persistence of the tinnitus. Dr. Jones ascribed as the most frequent predisposing causes of this form of vertigo—anæmia, alcoholism, gout, syphilis, rheumatism, senile arterial changes. The complications most frequently met with were albuminuria, uric acid excess, hydræmia, rigid and tortuous vessels, cardiac hypertrophy with dilatation, closure of the nasal passages from hypertrophic changes or malformations. The warning symptoms were mainly such as might be expected from these clinical and pathological conditions—that is, sense of fulness in the head, occasional buzzing in the ears, some slight deafness of a more or less periodical nature, headache, occasional transient attacks of vertigo, susceptibility to temperature and changes of atmosphere, attacks of confusion in thought and memory. The age at which the attack was most likely to occur was after 50.

The exciting causes most to be feared were mental strain in work, mental worry in business or grief, night nursing, much railway travelling, stooping occupations, the menopause, alcohol, sedentary life, bathing in cold water or sea bathing, the hot bath, especially about the catamenial periods and pregnancy. A man or woman suffering from the warning symptoms noted should moderate or abandon work for a time, take (where possible) rest and change, avoid much railway travelling, give up alcohol or only take it therapeutically, extremes of temperature in bathing should be avoided, cardiac and urinary disorders should be carefully inquired into, and dietetic errors rectified. The special predisposing cause had to be sought for and treated. Free nasal breathing should be secured. After an attack, speaking generally, the iodides, bromides (especially those of strontium and zinc), ergotin, hydrobromic acid, the vascular tonics, digitalis and strophanthus, strychnine, small doses of arsenic, and chloride of barium were the best remedies. It was one of the few groups of cases in which pilocarpin injections might be expected to do good. The particulars of an extreme case of hyperæsthesia acustica were then given. It was hardly sufficient to explain this extraordinary sensitiveness to, and the mental effects following upon, the hearing of certain sounds, both musical notes and noises, by saying that it was due to "irritation of the auditory nerve." It seemed to him that there must be in these latter cases a condition somewhat analogous to that we are familiar with in certain cases of acute intolerance of light, both natural and artificial. The intolerance of light in cases of gouty or rheumatic retinitis, and in retinal hyperæmia, and the reflex intolerance which was present as a consequence of certain ocular conditions, might be analogous to those cases of hypersensitiveness to sound attendant upon certain middle ear disorders in reflected trigeminal irritation, and in persons whose nervous system was quite unbalanced after or during fever. But there was no condition exactly analogous in the eye to such a typical case of hyperæsthesia acoustica as the one he detailed. Here, in a woman aged 55, the hearing was, in her own language, "dreadfully acute." To hearing tests, both watch and acoumeter, she responded perfectly. Music—of which she had been particularly fond—made her "quite giddy;" she could not sit in a room with a clock, "the sound seemed so loud;" a church bell gave rise to a "babel of sounds;" she shunned a carriage in the street so great was the sense of reverberation; she could not remain in a room where her brother was speaking. Some noises sent "a shock up the spine;" most she noticed the difference in effect of certain voices. All this came on after a carriage accident and consequent blow on the head. Headache followed, and then this intolerance of certain sounds began. There had been now, at the end of seven years, a very great, though not complete, relief from the symptoms.

Professor Guye (Amsterdam) said that in many respects he quite agreed with Dr. Macnaughton Jones, but he preferred always to try and find a local cause, which could be combated by surgical means. As regards internal drugs he had often had good results from salicylate of soda.

Dr. T. Barr (Glasgow) thought that the term Ménière's disease should be limited to the sudden attack produced by a sudden affection of the labyrinth. The other forms of auditory vertigo were different in their pathological nature, and were usually due to some form of pressure on the walls of the middle ear. These were very much more common than the typical form of apoplectiform deafness.

Professor Urban Pritchard said he would divide auditory vertigo into two distinct forms: first, those cases in which the primary lesion was outside the internal ear, which he would call Ménière's symptoms; secondly, true Ménière's disease, in which the lesion was probably in the internal ear, of which there seemed to be two classes of cases: (*a*) The sudden cases in which the hearing was immediately more or less completely destroyed, with marked vertigo and rotatory movement, sickness, etc. (*b*) The chronic cases in which at first the hearing might not be affected, the auditory vertigo, etc., coming on in attacks, running a slow course, and ceasing when the function of the internal ear had been practically destroyed.

Dr. Macnaughton Jones, in reply, said it was not sound otological practice to ignore general constitutional treatment. His case was a typical one of labyrinthine vertigo of an apoplectiform nature, with, he believed, effusion of blood into the labyrinth. He could not attempt to go further than this in defining the locality of the effusion. His special object in bringing the case was in accordance with what had been said by Dr. Urban Pritchard and Dr. Barr to emphasise the point they referred to, that there was great looseness in the application of the term Ménière's disease.

On the Anatomical Connections of the Membrana Tympani, with a few Remarks on their Pathological Importance.

Mr. Richard Lake said: It must be very patent to all otologists that there is something unique in the description, as at present accepted, of the tympanic membrane when looked at from an anatomical point (briefly it is this, the drumhead is an oblique membrane closing the inner extremity of a bony canal which opens at the other externally), but it is not only this which constitutes its peculiarity: it is the fact accepted by all, that it has no connection with surrounding structures, held in position by the annulus tympanicus, and the stiffened edge of the membrane itself, almost an exact replica of a parchment drumhead proper. I must here refer to Hovell's book, where, on page 25, speaking of the membrana tympani, he goes so far ahead of his contemporaries as to say when speaking of the drum, "The former, or radiating fibres commence in the periosteum of the meatus, etc.," and I believe this to be the first if not the sole previous attempt at any description of the connections of the membrana tympani with its surrounding fibrous tissues. Such a membrane was quite suited, however, to our views of its pathology. It was from the apparent impossibility of a membrane connected only by mucous membrane and skin with the surrounding structures, being able to indulge, as it were, in an inflammation all to itself, called by a special name (myringitis), that the following solution presented itself to my mind, namely, either a pure myringitis as described did not exist, or if it did a more intimate connection of the membrana propria tympanica and other deep structures existed, and that therefore it was a secondary affection. It is, of course, quite obvious that Hovell's description is correct as far as it goes, but almost the whole of the periosteum of the meatus is continued into the membrane, probably constituting its outer fibres, and in specimen No. 2 its great tenuity is well shown; but it is a question of continuity, not of origin of fibres. This, however, is only one part of the source of its fibres: the chief source must be sought in the strong periosteum of the anterior upper wall of the bony Eustachian tube, as seen in specimen No. 1, which I send round now. In it the connection of the membrane and tube is well seen, the periosteum of the meatus being removed, also the bony wall of the Eustachian tube, and a piece of glass has been passed from the attic into the tube. The glass demonstrates at the same time a distinct semilunar fold a little above the upper extremities of the larger ossicles, apparently given off from the anterior ligament as it passes through the periosteum; superior to this curved band of periosteum there is nothing but mucoperiosteum. No. 2 shows the same, except in this specimen the periosteum of the meatus is left. Here I may remark that I have examined this microscopically, and proved that it is periosteum and not epidermis. This connection is strongest above. In No. 3, the membrane and tube are viewed from behind. In this specimen it is easy to trace the strong white glistening fibre of the periosteum, continuous on the one hand with the tubal perichondrium, and on the other into the membrana tympani. It is this part of the tube whose periosteum is shown in Nos. 1 and 2. Nos 4 and 5 are fœtal bones cut through so as to divide the Eustachian tube horizontally and the tympanum also, in 4 the annulus is left, in 5 it is removed, and I will draw your attention to the case with which the original shape has been preserved, and in both the fact that the Eustachian tube, at this period entirely membranous, is continued directly into the membrana, the opposite side of which is connected with the periosteum of the external surface of the mastoid, and also in the fœtus with the periosteum lining the mastoid antrum, or, as Cheatle suggested calling it, the tympanic receptacle, this connection exists in the adult, only very much reduced in importance. Having now, gentlemen,

placed before you very imperfectly my views on the anatomical connections of the membrane, I will ask your indulgence while I put before you a few considerations of more pathological importance. If these dissections are, as I think one may fairly assume them to be, typical, it seems to me that a primary inflammation of the drumhead, apart from traumatism, cannot exist. It may arise from diffuse otitis externa, but more frequently by direct extension from the Eustachian tube, as I myself have most clearly observed. Secondly, when an inflammatory exudation of the cavum tympani spreads outwards along the wall of the external meatus, it does so along the line of least resistance, which, as I have shown in the postero-inferior, the extension of the Eustachian periosteum preserving the anterior sections. Also I think the calcareous degeneration, when it occurs in the membrane itself, is probably due to the periosteal origin in the membrane. The presence, rare though it is, of bone corpuscles in the substance of the membrane (Politzer, Wendt, and Gruber) here receives both an explanation and a corroboration. Again, we have the presence as a normal constituent of cartilage cells, both in the edge of the membrane and external to the upper part of the malleus in the membrane. Lastly, one gets a hint as to the origin of some of these bony occlusions of the canal, as yet of uncertain origin, though I must leave this to other observers, who have more material at their command.

Dr. Edward Law said that he thought Mr. Lake was mistaken in referring the first mention of the continuation of the periosteum into the tympanic membrane to Mr. Hovell's book. He believed it was stated in the translation of Politzer's *Textbook* that the embryological investigations of Draispul had demonstrated the direct continuation of the periosteum of the annulus tympanicus into the lamina propria of the tympanic membrane.

Case of Objective Pulsating Tinnitus.

Mr. E. Cresswell Baber read notes of this case. S. C., laundry maid, aged 19, came under treatment as an outpatient at the Brighton Throat and Ear Hospital on February 18th, 1895, with a history of deafness in the left ear and a pulsating noise in the right ear for twelve months. The noises were worse when she was fatigued. She had suffered from anæmia for about twelve months. Two years before she had also had pulsating tinnitus lasting several months, which got better under treatment. Examination of the ears showed the right tympanic membrane irregular and thinned and bulged by politzerising. Left membrane presented an adherent cicatrix, not changed by infection. Watch heard at about 1 foot distance with either ear. Tuning fork on median line referred to left ear. On March 8th for the first time it was noticed that on inserting an auscultation tube into the right meatus a pulsating *bruit* synchronous with the pulse beat could be distinctly heard by the observer. The *bruit*, which was arrested by turning the head to the right, on rotating the head to the left was intensified until it became continuous. It was also stopped by slight pressure over the carotid artery. Examination of the chest showed no abnormal sounds over the heart and vessels. In the neck there was thought to be some fulness behind the right sterno-mastoid, but no tremor could be defined. *Bruit de diable* on the right side of the neck. The blood was kindly examined by Dr. Adolphus J. Richardson (whose researches on anæmia are well known) and found to contain 44 per cent. of hæmoglobin. The patient was ordered acid. hydrobromic. dil. ℥ xv, tinct. ferri perchlor. ℥ x, ter die, and under this treatment both the objective and subjective *bruits* were much diminished. She was again examined by Dr. Richardson on July 22nd, who found the hæmoglobin increased to 66 per cent. At that date the hearing with the right ear was practically normal (whisper 15 feet). Rinné's test was positive on either side and the tuning-fork was well heard on both mastoids. Since this case came under my notice I have had an opportunity of seeing another case (under the care of my colleague, Mr. Treves), in which a similar *bruit* was heard on auscultating the right meatus, but in this case there was no subjective tinnitus. Cases of objective pulsating tinnitus are in my experience very rare, but such have been reported by H. N. Spencer, Wagenhæuser, J. Orne Green, and Fitzgerald. The two recorded by Dr. Orne Green[1] do not seem comparable to these cases, as there was no *bruit* in the carotids or jugulars in the neck, nor is there any mention of anæmia. Of the two recorded by Dr. C. E. Fitzgerald,[2] one seems similar to mine; the patient was anæmic, and the noise which was in the right ear was arrested by turning the head to the right or by pressure on the carotid. In regard to the explanation of this phenomenon, Dr. Green adopts that of Sir Benjamin Richardson for subjective tinnitus in alcoholic dyspepsia, namely, that it is "produced by a reduced vascular tension especially of the internal carotid artery, which allows the walls of the artery to be in direct contact with the osseous walls of the canal in the petrous bone, and this permits the transmission of the vibrations of the blood directly to the osseous structures in close connection with the ear." It seems to me, however, that the objective noise in my cases is more likely to be the *bruit de diable* (with exacerbations corresponding to the pulse beat) conducted to the temporal bone, and this view seems borne out by the fact of its becoming louder, as well as continuous, on rotating the head of the left and by its being arrested by slight pressure, over the carotid artery, insufficient to occlude that vessel. It is possible that by looking for them in anæmic cases we shall find these objective auditory *bruits* more common than has usually been supposed.

Notes on Five Cases of Disease of the Attic, treated by Modified Stacke's Operation.

Dr. A. Bronner said: In many cases of chronic purulent otitis media we find it impossible by ordinary methods of treatment to cure the disease and stop the discharge. This is a sign that the attic or the mastoid antrum, or both, are affected. We can, therefore, not hope to effect a cure till these parts have been exposed and treated. The same applies to the cases of perforation of Shrapnell's membrane. These are fairly common but often overlooked, as the subjective and objective symptoms may be extremely slight. It is difficult to explain why, in some cases, the disease remains confined to the middle ear, in others it spreads into the attic, and yet in others into the mastoid antrum. The nature of the poison (scarlet fever, influenza, etc.) may partly be the cause, or the constitution of the patient (tuberculous, syphilitic, etc.); but in many cases the anatomy of the parts has a great deal to do with the extension of the disease. Hartmann[3] and others have shown how the number, size, and position of the mastoid cells vary in nearly every case, and how different is the size and position of the mastoid antrum. Often we find a number of small cells near to the attic, and there is then naturally a tendency for the disease to spread to these cells, and set up permanent mischief there. If these cells are in connection with other cells, then the mastoid process will most likely also become affected. When the attic has been laid open we should carefully examine the aditus ad antrum and the neighbouring cells. If we find any carious bone, granulations, or oozing of pus, the antrum should be opened at once. Before opening up the attic from behind the ear, we should try and scrape it out from the external meatus, remove any diseased ossicles, etc. With cocaine it is not very painful. I operate according to the method suggested by Stacke, but carry the incision upwards and round the top of the ear, and pull the whole of the ear forwards and downwards. In some cases it is only necessary to cut through the upper part of the cutaneous external meatus. A bent probe—Stacke's protector is too large and clumsy—is passed into the attic and the osseous wall, pars epitympanica, separating it from the middle ear, removed with the chisel. Any mastoid cells are now carefully looked for and well scraped with the sharp spoon. If there is the slightest suspicion that the lower cells or the antrum are diseased, I remove the upper and posterior wall of the osseous external meatus, and if necessary the greater part of the mastoid process. It is of great importance that a large opening be kept in the skin, so that the operated parts can be watched for some weeks. The cases which I am briefly recording are such in which there had been disease for some years, and all ordinary methods of treatment had failed to

[1] Trans. American Otological Society, 1878.
[2] Trans. of the International Medical Congress, London, 1881.
[3] Pathology and Surgery of the Ear.

effect a cure, and in which the disease had spread into the attic but had not extended into the mastoid antrum: (1) Mr. W., aged 30, has had discharge from right ear as long as he can remember. There have been frequent attacks of pain. Watch was heard at 2 inches. A small polypus was seen protruding through Shrapnell's membrane. This was cauterised with chromic acid three times in May, 1893. On June 2nd the perforation had healed. In July there was again a small polypus, which disappeared after use of chromic acid. In October the pain was very severe. In November, under chloroform, an examination was made and rough bone found. The malleus and incus were diseased and removed. There was great improvement until January, 1894, when the pain became very severe and the patient consented to an operation. A large incision was made behind the ear and the cutaneous external meatus cut through. A large number of diseased cells were found near the attic. The pars epitympanica was removed with the chisel and the cells were scraped out. Wound was kept open for six months. Recovery. (2) Miss P., aged 25, has had attacks of pain in left ear for two or three years, and slight offensive discharge off and on. The attacks are becoming more frequent and more severe. Small perforation of Shrapnell's membrane was seen. In December the opening was enlarged and the diseased incus and malleus removed. In May the pain returned. In July a large incision was made behind and above the ear, the whole of the cutaneous external meatus cut through. The pars epitympanica of the attic was removed and the attic and neighbouring mastoid cells well scraped out. The upper part of wound was kept open for two and a-half months. There has been no pain or discharge since. The hearing is slightly worse. Watch can be heard at 3 inches instead of at 5 inches. (3) Mrs. S., aged 30; there has been discharge from right ear as long as she can remember. When I saw her in January, 1894, there had been attacks of severe pain in the ear for two or three months. There was a flat polypus of middle ear, which was removed by the snare and chromic acid. A bent probe could be passed into the attic, and rough bone felt there. The attic was scraped out through the external meatus four times with a small sharp spoon, and much granulation tissue removed. As the pain and discharge did not cease I opened the attic in May. There was a very large cavity, which was thoroughly scraped. In three months the wound had healed. The hearing was about the same. Watch heard on contact. (4) Mr. T. saw me in November, 1893. There has been pain of left ear for three to four months, with slight discharge. There was a small perforation of Shrapnell's membrane. In January, 1894, the cavity was gently scraped and washed out. The diseased incus came away. In June a large incision was made behind and above the ear, the pars epitympanica removed, and the enlarged attic well scraped. The fistula healed in four months. The hearing is about the same; watch just heard on contact. (5) Miss S. saw me at Eye and Ear Hospital in October, 1893. There has been discharge from the ear for eight to ten years; never much pain. A large polypus was removed; chromic acid frequently applied and iodoform drops used. There was constant recurrence of the polypus. In February, 1894, the attic was scraped out from the external meatus. In July the attic was exposed; a large number of mastoid cells were scraped out, and the posterior and upper wall of the osseous external meatus removed. In six months the fistula had healed, and there was no more discharge from the ear. The hearing had slightly improved; watch was heard at about 2 inches instead of 1. These few cases seem to show how important it is that in all cases of chronic purulent otitis media, or of perforation of Shrapnell's membrane, we should carefully examine the attic, and if necessary lay it open and remove all diseased bone. In many cases we naturally will find that the mastoid antrum is also affected, and this must then be opened. Before operating we should of course try all the ordinary methods of treatment, enlarging, if necessary, any opening of the membrana tympani, removing any polypi or granulations, and, if possible, also the malleus and incus if these are diseased or loose. These methods suffice in a large number of cases; but if they do not we should at once proceed to open up the attic thoroughly, and operate according to ordinary surgical principles. If this method of treatment were carried out hundreds of lives would be saved every year.

On the Use of the Pneumatic Speculum in Diseases of the Ear.

Dr. J. M. E. Scattliff said that the comparatively meagre records of the use of a pneumatic (or aspirating) speculum in the treatment of ear diseases was sufficient apology for bringing forward the subject; more particularly as his remarks applied chiefly to the treatment by passive motion of adhesions affecting the chain of ossicles. "Siegle's speculum" was first introduced to his notice by his colleague, Mr. Cresswell Baber, some seventeen years ago, and since that time he had used it very constantly in the treatment of deafness where the tympanic membrane was entire. The uses of the instrument were various, but he wished in this paper especially to call attention to the following, namely: (1) The systematic production of passive motion of the ossicular joints and the stretching of contracted or adherent tendons of the intrinsic muscles of the tympanum. (2) The breaking down and stretching of adhesions (so common in all joints affected with rheumatoid inflammations, and which, owing to the structure of the intratympanic lining membrane, are even more likely to occur in middle-ear affections than in other regions, as I think Toynbee has indisputably demonstrated. (3) The breaking and stretching of bands of adhesions affecting the membrane itself, and, directly or indirectly, crippling the joint movements. (4) The relief of tinnitus consequent upon these morbid conditions. The diagnosis of these various maladies was in many cases very difficult, but as Dr. Urban Pritchard said, Siegle's speculum was often of great service in clearing this point up, and Toynbee—giving a list of over 1,000 *post-mortem* examinations—has proved these conditions to be of very common occurrence. Owing to the nature of the normal naso-pharyngeal intratympanic air supply, these ossicles were likely to become fixed in a position causing increased rather than diminished pressure on the vestibular foramen (particularly at its anterior surface) which was just the condition most likely to be relieved by the use of the pneumatic speculum. Sometimes recovery appeared to be almost instantaneous, and such a case occurred to him in the very early days of his practice, the patient being a young officer of artillery, who was rendered deaf by a violent explosion (a long time previous to his consulting Dr. Scattliff). In his case the violent shock had probably produced some traumatic condition ending in adhesion, which so luckily yielded to suitable treatment. Other cases were accompanied by distressing tinnitus, which symptom was generally relieved for a time, and often permanently, by pneumatic treatment. In the more common class of cases, however, patience and perseverance were required, and were followed by very satisfactory results; many chronic cases recovering to a marked degree. In these cases mercurial inunction over the mastoid and drops of weak oleate of mercury iodide in the meatus have been of aid, following up the treatment by passive motion.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CASE OF MELÆNA NEONATORUM.

The following case of this rare disease has come under my notice:—

On October 14th Mrs. B. was delivered of her sixth child, a boy. Everything proceeded normally and without the least difficulty. The infant seemed to be typically healthy, red and well nourished. After its birth it passed two natural motions and on being put to the breast took it readily. When it was 24 hours old it vomited a few ounces of blood and shortly after passed a large quantity of blood by the rectum, and died a few hours later.

I made a *post-mortem* examination and found the intestines full of blood and some blood mixed with milk in the stomach. I carefully examined these viscera, but could detect no ulceration of the mucous membrane. The other organs of the body seemed healthy, but the lungs looked rather red and were not thoroughly expanded. I sent the stomach and part of the

intestines to the Clinical Research Association for microscopic examination. Their report says: "Careful examination of the stomach and duodenum submitted to us has failed to discover any ulceration or other lesion of the intestinal wall, and the lung tissue is normal though not fully expanded."

One of Mrs. B.'s other children died of tuberculous meningitis, but the rest are healthy and there is no history of hæmophilia in the family.

Seaford, Sussex. WM. PRINGLE MORGAN, M.B.

ON THE IMPORTANCE OF EXAMINING THE PERINEUM IN ALL CASES OF RAPID DELIVERY IN PRIMIPARÆ.

THE perineum is necessarily examined in all cases of instrumental delivery. But, in my own experience, it is in natural delivery, and more especially in the rapid (natural) delivery of primiparæ, that a rent in the perineum is most likely to occur. Within the last few months, I have had two typical cases of "ruptured perineum" in primiparæ from rapid delivery, no "interfering doctor" being present. In both cases the perineal rent extended close up to the anal orifice, and implicated some of the fibres of the sphincter. In the first case, having nothing with me, I borrowed an ordinary sewing needle and some white (tailor's) silk from a woman present, and although using no antiseptic, except the greatest of all antiseptics, namely, cleanliness, the wound healed perfectly by first intention within a few days. The second case I sutured with carbolised catgut ligature, and it did equally well.

In neither of these cases were there any subjective symptoms, beyond the usual soreness and tenderness consequent upon delivery, and my proposed examination was considered a work of supererogation by the nurse; however, the *mend* justified the means. The perineum should always be examined in cases of rapid delivery in primiparæ, notwithstanding that the nurse assures you that the patient is "quite comfortable."

W. L'HERMEUX BLENKARNE,
Leicester. Surgeon to the Leicester Provident Dispensary.

COMMON SALT FOR RINGWORM.

I FORWARD details of a remedy for ringworm which I have used for the past seven years. So far as I know it is entirely new. I was led to this discovery by noticing the following facts:

1. Stray dogs destroyed my favourite laurels by urinating at their roots and over the leaves.

2. My dog in the same way destroys my lawn. Urine, of course, contains a certain amount of chloride of sodium.

3. My gardener destroys weeds in the gravel paths with the same chemical element, namely, dinner salt or chloride of sodium.

4. Children who are suffering from tinea tonsurans are sent to the seaside and almost invariably improve in the salt air. This improvement has been hitherto ascribed to the general favouring influence of the open air life and improved hygienic conditions under which the children live at the seaside. But when we remember the fact that the air near the sea is impregnated with minute particles of sea water containing in solution as it does a large proportion of chloride of sodium, may we not reasonably ascribe the disappearance of the skin disease rather to this circumstance?

The considerations enumerated above arrested my attention and led me to think that common salt might prove to be a valuable remedy in ringworm. I prepared a solution and applied it in the next three cases which I was called upon to treat to the diseased scalp every night for five nights, washing it off the following morning with 10 per cent. boracic acid soap. The result of this treatment was marvellous. In less than four weeks a cure was effected in each case.

In conclusion I would remark that the penetrating character of common salt is well known and indisputable.

F. J. REILLY, M.R.C.S.Eng., L.R.C.S.Ed., L.S.A., L.M.
Hackney.

THE women dentists of the United States have organised an association. It has forty-two members. There are about 150 women who pursue the gentle craft of dentistry in the United States.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

HENRY TRENTHAM BUTLIN, D.C.L., F.R.C.S., President, in the Chair.

Tuesday, November 19th, 1895.

DERMOID OF THE TESTIS.

MR. JACKSON CLARKE showed a dermoid tumour of a testis which had been presented to the museum of St. Mary's Hospital by Surgeon General Giles, who removed it from an infant, aged 1 year. The following description of the specimen was given: "A right testis containing a dermoid cyst as large as a hen's egg. The cyst is everywhere surrounded by the tunica albuginea. Its cavity is almost entirely occupied by a large intracystic projection which springs from the neighbourhood of the hilum; the remaining cleft-like space within the cyst is filled with hairs and sebaceous matter. The central part of the intracystic projection contains bone and cartilage. The microscope shows the cyst to be lined with skin provided with pilo-sebaceous follicles, sweat glands, etc. No trace of the tubular structure of the testis could be found in the loose areolar tissue which separated the outer walls of the cyst from the tunica albuginea, though the vas deferens and blood vessels are normal." The condition was a rare one, only one other case being recorded in the Society's *Transactions*, namely, by D'Arcy Power. The opinions of Lannelongue, Jacobson, Bland Sutton, and others were briefly discussed. As to diagnosis, cystic sarcomata occurring in infancy were alone likely to give even a superficial resemblance to the condition in question. When the cyst occupied the interior of the testis, the treatment was that practised by Giles in this case.

CYSTIC ACCESSORY THYROID.

Mr. WALTER EDMUNDS exhibited the above specimen, in which the cyst was about 1½ inch in diameter, its contents being a pale brown, glairy fluid. Into the interior of the cyst there projected two small excrescences, and attached to one part was a solid portion of tissue about the size of an almond. Microscopic examination showed the solid tissue to be thyroidal; a certain number of the vesicles contained colloid, but most of them were filled with proliferated cells. There was a certain amount of lymphoid tissue between the vesicles. The tumour was removed from near the angle of the jaw in a man, aged 28, and had been noticed three months. It lay some distance from the proper thyroid, which was not seen at the operation, and was apparently normal.

Mr. JAMES BERRY observed that it was necessary to distinguish between true and spurious accessory thyroids; there were three varieties. In the first the accessory gland was quite distinct from the proper thyroid; this condition was rare. The second form was commoner. In this the accessory body was connected by means of a piece of capsule to the main gland, to the upper or lower extremities of the lateral lobes, or in the line of the lingual duct. He thought that Mr. Edmunds's case was possibly one where a pedicle had been overlooked at the time of operation. Thirdly, under the term "accessory thyroids" were sometimes included adenomata arising within the thyroid proper, and becoming secondarily pedunculated, the capsule of the main gland becoming attenuated; the whole process resembled what happened in the course of a submucous myoma of the uterus. He knew of one such case, published some years ago, where the tumour before removal projected just below and in front of the angle of the jaw; at the operation the thyroid proper was seen. Death occurred a month afterwards, when it was found that the tumour had arisen in connection with the upper part of the proper gland.

Mr. J. H. TARGETT referred to a calcified cystic goitre in the Museum of the Royal College of Surgeons; the goitre lay above the division of the trachea, and presumably the proper thyroid was normal, as no contrary record was preserved.

Mr. ARTHUR BARKER inquired of Mr. Berry whether any microscopic differences existed in the three varieties he had described; clinically the distinction was of little import.

To this Mr. BERRY replied that few structural differences

were to be found; the class arising in the gland presented larger vesicles than normal thyroid tissue.

The PRESIDENT agreed with Mr. Berry's views; he could not hold Mr. Edmunds's case quite proven in respect to the exact source of the tumour.

CLASSIFICATION OF SARCOMATA CONNECTED WITH THE BLADDER.

Mr. J. H. TARGETT gave a lantern demonstration of tumours of the above class, showing chiefly their macroscopic characters. He criticised some of the current classifications of vesical growths in general. Clinically he adopted Mr. Harry Fenwick's division, namely, of those occurring in children under 10 years of age and those in adults over 40, a division parallel with that devised by Mr. Butlin in regard to tumours of the testis. As to the so-called fibrous polypus, he knew of no instance. The sarcomata in children were myxosarcomata, and he was disposed to place all tumours containing mucous tissue into a single malignant category.

Mr. HARRY FENWICK remarked that polypi like those of the nasal fossæ might sometimes be torn away from the bladder, whilst there existed a deeper sarcomatous tumour which produced the other formations, possibly by causing œdema. Fibroma he did not know of, and he cited one case of myxoma, probably connected with the urachus, in a Continental museum.

Mr. S. G. SHATTOCK could not see on what ground the author proposed to wipe out myxomata from vesical tumours. That myxosarcomata occurred, of course, could not be denied; but in some of Mr. Targett's cases the author had stated that there was no invasion of the muscular wall, and that no metastasis had occurred, although a large crop of growths was present. Had he discussed the existence of myxoma from the chemical side—that is, of a mucin-yielding tumour, the matter would have raised a difficult question. As to the presence of a certain number of unstriped muscle fibres present in some of the tumours, they might occur in a myxoma from the involved muscularis mucosæ, in the same way that elastic fibres might be met with in myxomata, these being derived from the tissue in which the tumour had originated. The presence of closely-set cells did not disprove in itself that a tumour was not a myxoma. Virchow in his original account had described cell islands in myxoma, and the speaker had often seen close collections of connective tissue cells, not leucocytes, in common nasal polypi. Mr. Targett had also figured in one case a concomitant diffuse swelling of the mucous membrane, just like that often associated with nasal polypi and well recognised by specialists.

Mr. D'ARCY POWER referred to a specimen of sarcoma of the vagina in a child, which he had shown lately at the Society, and in which there were associated polypi of the mucous kind. He asked whether a chondro-sarcoma shown by Mr. Targett was a primary growth from the bladder.

Dr. HERBERT SNOW held that the polypoid form of vesical growths in general was due to the accident of their position.

Mr. TARGETT, in reply, regarded the chondro-sarcoma as a primary tumour; the presence of mucous tissue in vesical tumours he thought due to the degeneration of that of sarcoma.

DIFFUSE LIPOMA OF HAND AND FINGERS.

Mr. D'ARCY POWER exhibited this specimen, which might be classed as one of macrodactyly. The patient was a child, and the swelling, which was at first trivial, affected the thumb and index finger. Had operation been performed early, amputation might possibly have been avoided; the extension of fat, however, progressed steadily, and amputation became necessary, any conservative operation being impracticable. The blood vessels were not enlarged, nor was there lymphangiectasis or lymphangioma; the bones were slightly rarefied. The condition was congenital and sporadic.

MECKEL'S DIVERTICULUM.

Dr. WALSHAM showed a Meckel's diverticulum the free end of which was attached to the mesentery.

ACUTE TUBERCULOSIS OF SPLEEN REMOVED BY OPERATION.

Mr. MARRIOTT communicated this case. The spleen was successfully removed from a woman, aged 30, who had a small ulcer on the vulva. The organ was considerably enlarged, and the seat of numerous tubercles, which histologically presented the structure of bacillary lesions. After excision the ulcer on the vulva healed; the latter was possible tuberculous, and the source of the splenic infection. No enlargement of lymphatic glands was observed clinically in any part of the body. The presence of bacilli had not been demonstrated.

PRIMARY CARCINOMA OF THE URETER.

Dr. RUNDLE recorded an example of the above condition. The growth was a squamous-celled carcinoma, which invaded the vesiculæ, and by the obstruction it caused had led to hydronephrosis. The specimen came from a man, aged 46.

Mr. HARRY FENWICK stated that there existed a like specimen in the Westminster Hospital Museum.

Dr. VOELCKER had put another on record in the Society's *Transactions*.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

EDWARD NETTLESHIP, F.R.C.S., President, in the Chair.

Thursday, November 14th, 1895.

THREE CASES OF EXOPHTHALMIC GOITRE WITH SEVERE OCULAR LESIONS.

THIS paper was read by Mr. JESSOP. Case I. Married woman, aged 40, had extreme proptosis of both eyes, never pregnant, menstruation always irregular, no enlarged thyroid. Operation of partial tarsorrhaphy on both eyes. Four days afterwards swelling of right conjunctiva, followed by crescentic ulcer of cornea and chemosis of left eye. Both eyes then ulcerated, and the corneæ necrosed notwithstanding active treatment. The corneæ were reduced to Descemet's membrane and perforated. Present condition staphyloma of both corneæ and extreme swelling of the conjunctivæ. The patient is still alive but very weak. Case II. A woman, aged 35, under Mr. Power. Extreme proptosis of both eyes, both corneæ sloughed. The right eye was excised. Patient became insane and died. Case III. Woman, aged 24, under Mr. Vernon. Extreme proptosis; right eye sloughed, and was excised; left eye recurrent attacks of superficial corneal ulceration. Reference was made to 25 recorded cases, 7 males and 18 females. The results in the seven males were more severe, and included 4 deaths; the ages were between 38 and 56. Of the 18 females 2 died and 10 lost both eyes; the ages were between 18 and 52. The results of 3 cases of partial tarsorrhaphy in women were 2 lost both eyes and one recovered with good vision, though there was superficial corneal ulceration.

Dr. LITTLE had never seen a case bad enough to need union of the lids.

Mr. POWER had removed the eye in his case because of the continual pain and discomfort; he thought there might have been something behind the eye. He did not think the ulceration was caused by exposure, as it was not uncommon to see cases in which the eyes were never closed even during sleep, and yet no ulceration took place.

Dr. MACKENZIE DAVIDSON had had a case lately in which both corneæ were destroyed; the patient became insane, but afterwards recovered. In another case he did tarsorrhaphy, and the corneæ were preserved. In a third case the surface of the cornea was entirely destroyed.

Mr. LANG had performed tarsorrhaphy in one case, but the stitches yielded, and both corneæ were destroyed. The stitches had had no harmful effect.

Mr. JOHNSON TAYLOR suggested that the suturing should be complete and not partial, and should be done as soon as the cornea was affected.

Mr. LAWFORD said in one case in which there was great proptosis with ulceration of cornea the lids were united at their centres instead of at the canthi; the result had been very good. He thought that union of the lids was a great safeguard.

The PRESIDENT had had five cases of exophthalmic goitre with damage to the cornea. His impression was in favour of lid suture, but it should be quite firm: in cases where the suture had been imperfect he had seen bad results. He preferred wire sutures. One case was in a man, aged 52, with extreme proptosis and ulceration of one cornea. After suture

the case did well. All cases were intolerant of any kind of irritation such as that produced by lotions or bandaging.

In reply, Mr. Jessop asked that all those who had had cases should put them on record, as there were very few reported cases, and the President's observations were interesting as showing the result of one form of treatment.

The Treatment of Detached Retina.

Mr. Wray read this paper. The results of treatment in a case in which the distorted vision began in 1885 were demonstrated. The patient was seen for the first time in January, 1893. The left eye had barely perception of light, and the right eye contained a large detached retina involving about half of the fundus. The tension was decidedly raised, but the patient was and had been quite free from pain. As the other eye was quite blind from a penetrating wound, and had been so for many years, it was removed in the interest of the good eye. No more was seen of the case until January, 1895. The eye, under ophthalmoscopic examination, was found to contain a very large detachment, considerably larger than on the occasion of the last visit, so large in fact that although the media were clear, it was almost impossible to obtain a view of the disc. The tension was still markedly raised and the cornea slightly hazy. Vision reduced to hand movements 4 to 6 inches. The case was subsequently exhibited at the Ophthalmological Society. On April 7th the patient was operated on by tapping the detachment, and a quantity of dark yellowish fluid evacuated. He was then put to bed, atropine was freely used, and the eye firmly bandaged. Daily injections of pilocarpin were ordered, but had to be discontinued on the third day, on account of the patient's intolerance of the drug. A week later ophthalmoscopic examination showed there still existed a detachment of very considerable size, though the vision was improved to fingers at three or four metres. After allowing a few days for the patient to recuperate, a second operation was done, with the result that vision improved to $\frac{6}{9}$ in a good light, and the sight has fluctuated between that and $\frac{6}{12}$ ever since. The retina now appears in perfect apposition, and there exists, as is usual in such cases, a certain amount of choroido-retinal atrophy with pigmentation at the seat of the original detachment. The fields are much contracted, doubtless from the tension. The case proves that good may result from operative treatment, even in very severe cases of several years' duration. Little was to be expected from pilocarpin, and especially in elderly people and those suffering from cardiac disease. As the perfect rest treatment with atropine and bandage entailed confinement to bed for at least three to four weeks under almost insupportable conditions, and with the prospect of almost inevitable failure, it would seem better to operate at once, especially as the operation is almost free from risk under proper surgical precautions, and most surgeons do eventually operate after the failure of the simple treatment. As regards recent cases, speedy reattachment was necessary to prevent loss of function. If the subretinal fluid existed in any amount, several weeks would be required to obtain absorption and reapposition, whereas anatomical union was desirable, and probably the absence of this latter explains many relapses. In chronic cases, there will be even less tendency to rapid absorption, and therefore it would seem reasonable to tap at once, so that the period of confinement to bed is spent in promoting an actual adhesion of the retina to the choroid. Cases unsuitable for operation are those where the macula is detached, where the vitreous contains numerous bands of contractile tissue, vascular membranes, large hæmorrhages, etc., and where the detachment is almost total, or the tension of the eye as low as − 3. A good result has been published in which the operation was done in a recent case with tension − 2. Clavelier's experiments proved that currents of 5 milliamperes could be used for a minute without causing anything beyond transient opacity of the vitreous, and one operator published eleven cases in which he used electrolysis and obtained three ameliorations and two cures. As such currents cause only a transient opacity of the vitreous and leave no ophthalmoscopic changes behind, it is just possible that the beneficial results after electrolysis were due to leakage around the positive pole during the protracted period the needle was *in situ*. Constitutional remedies directed against gout, rheumatism, syphilis, etc., are slow in their action, usually depressing, and after long trial have not yielded results to warrant persistence in their use as therapeutic agents for an emergency, but should undoubtedly be used later on.

Mr. Devereux Marshall thought it unlikely that tapping the detachment where there was a growth would help the diagnosis by the examination of the fluid evacuated, as the tumour would not be broken up by tapping.

Mr. Jessop had found, according to his experience, that after tapping the detachment returned or got worse. He had had one case in which the retina had become reapplied after treatment by rest and pilocarpin; great pigmentation followed in the reattached area.

Dr. Little had operated a good many times. He had had only two cases in which complete permanent cure was effected; he had seen no recoveries without operation.

Mr. Secker Walker advocated withdrawal of the fluid, and at the same time injection of normal saline solution into the vitreous. Temporary glaucoma ensued in one case, which passed off. The retina remained attached five weeks, but subsequently the detachment returned again.

Mr. Lang had had two cases of spontaneous cure under simple treatment by rest. He had tried puncture by various methods without success.

Mr. Tweedy had operated by every possible method; he had never seen a permanent cure; he had seen improvement. He questioned the diagnosis in cases of cure. He thought it right to do scleral puncture, however. The most successful case was that of a nurse who was myopic; the vision was reduced to hand movements. After rest and pilocarpin treatment vision was restored to J.1. The improvement lasted some time.

The President was able to give the further history of this case. He had seen the patient seventeen months later; she was quite well, and there was no sign of detachment.

Mr. Power had seen the suggestion made that an injection of fresh vitreous of a cat or dog should be made into the vitreous to reapply the retina by pressure.

Mr. Johnson Taylor asked if elaterium had been used as treatment by any of the members.

Mr. Grimsdale had seen Mr. Frost attempt to inject vitreous, but he had found it impossible to make the vitreous flow through a syringe.

HARVEIAN SOCIETY OF LONDON.

Sir John Williams, Bart., M.D., F.R.C.P., President, in the Chair.

Thursday, November 7th, 1895.

Spasmodic Asthma.

Dr. Goodhart read a paper on spasmodic asthma, which he regarded as a purely nervous phenomenon, giving reasons for this view. He dwelt also on the fact that it began most commonly in early life, and was then most tractable. In connection with treatment he considered the usual palliatives, and especially the patent and other fumes, as worse than useless. The attack itself might be relieved by injections of morphine or the administration of chloroform, and when impending was often met by a combination of potassium iodide with lobelia. A rational treatment, however, must deal with the morbid propensity, and various measures would suggest themselves under different circumstances. Generally speaking, exposure to bracing air, healthy exercise, and an ordinary careful diet was to be preferred to the system of coddling sometimes adopted.

Dr. Illingworth showed the analogy which existed not only between asthma and epilepsy, but also between that and migraine, angina, and flatulent colic: the symptoms in all being fundamentally similar—collapse, with feeble pulse, low temperature, and pain of a heavy, dull, leaden character. He grouped these together in a hitherto undescribed set of venous disorders, and named them the "anginal group." The accepted pathology he regarded as entirely erroneous. The symptoms pointed to venous congestion with consequent effusion of carbonic acid gas into the air cells. Hence the short inspiratory efforts and prolonged expiratory ones, and the relief felt by putting the head low down to allow this heavy gas to flow out. All these disorders were benefited by

nitrites, but especially by belladonna in large and frequent doses. The relief got from potassium iodide was from its fluidising effect upon the stagnating blood. Antifebrin acted well in the same way. Hay asthma he averred to be rapidly curable by inhalations and douches of solution of biniodide of mercury (1 in 1,000).

Mr. Parker Young came to the meeting to learn if there was any fresh remedy or treatment, as he, like many other members, suffered from the complaint. Out of the remedies suggested he had found fumes of saltpetre dissolved in blotting paper and the inhalation of chloroform the most efficacious. His attacks came on from hurrying and in going up a hill; the attacks of dyspnœa were very severe; formerly he also found that addressing public meetings, and excitement, etc., affected the nervous system, the pneumogastric nerve playing an important part, relief coming from vomiting, sleep, or exciting the mucous membrane of the nasal organs to copious secretion. He thought there was yet much to learn in the disease, and his experience of drugs as suggested by various speakers was not as satisfactory as he could wish. They had been tried by his friend, Dr. Lyle, sitting on his right, with not very beneficial results, although a fellow sufferer.

Dr. Edward Squire was disposed to question whether asthma was more particularly a disease of the upper strata of society. As to age, he asked whether the preponderance of children might not partly be explained by the fact that asthmatic children were brought to the doctor in the hope that the disease might be cured before they grew up, whilst the adult asthmatic, despairing of cure, and having found some remedy which eased his attack, treated himself with his favourite "fume" or powder. Dr. Squire unhesitatingly expressed his preference for the "fresh air" over the "hot house" treatment. Undue "coddling" was, in his opinion, harmful. With regard to localities suitable for asthmatics, nothing could be said in general terms; each patient must find out for himself what locality suited him best. Some asthmatics were better in the open country, some in the smoky atmosphere of a manufacturing town. As to drugs, Dr. Squire had had such satisfactory results from iodide of potassium in large doses (grs. x to xx, three times a day), that he generally prescribed this for adults. He had often seen patients, who had had frequent attacks before admission, keep free from attacks for the six weeks or more whilst in hospital. The iodide could not, however, be considered a cure for the disease, as the attacks generally returned when the remedy was discontinued. Chloroform inhalation was sometimes useful during an attack, but required to be used with care. He had seen alarming collapse follow chloroform inhalation during an asthmatic attack. Morphine hypodermically would always give relief. The various "fumes" were undoubtedly useful in many cases. He advocated examination of the nose in asthmatic patients; he had had cases in children where removal of adenoids had cured asthma. He considered the prognosis good in children, but the disease was much more intractable in adults.

Dr. Grenville MacDonald said that of 30 cases of asthma associated with nose disease he had had 20 manifestly relieved by local treatment, while of these 12 might be quoted as tantamount to complete cures. Of the 20, 4 were cases of obstruction due to septal deformities, 6 were vascular tumefaction or hypertrophy of the inferior turbinated bodies, 4 were polypus, and 4 adenoids; while the remaining 2 were instances of that curious œdematous swelling over the upper and anterior portion of the triangular cartilage so often associated with paroxysmal sneezing. The remaining 10 were all sufferers from polypus. He believed that the latter was more often associated with chronic bronchitis than simple spasmodic asthma, and must be considered as a concomitant rather than as responsible for the bronchial symptoms. From these statistics he purposely excluded cases of hay asthma; for he regretted to confess that he had but seldom found this symptom relieved by intranasal operation, although so far as the more severe symptom, the sneezing, was concerned, he was greatly encouraged at the results of treatment. He gave particulars of 3 cases of complete cure of severe spasmodic asthma which had been treated by himself, the results of operation being so immediate and so emphatic that there could be no doubt that the *post hoc* was *propter hoc*. He believed that spasmodic asthma together with paroxysmal sneezing were more frequently seen in the out-patient departments than ten years ago, and that the two could no longer be considered as among the privileges of the upper classes.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Pathological and Clinical Section.

William Thomas, M.B., F.R.C.S., in the Chair.

Friday, October 25th, 1895.

Punctured Wound of Heart.

Mr. A. Lucas showed a youth who had recovered from a stab near the left nipple, attended by severe symptoms. From the profuse hæmorrhage, profound shock, hæmothorax, and pericarditis Mr. Lucas inferred there had been a puncture of the wall of the right ventricle, and he had verified by experiments on the cadaver that in stabs similar to the one described the right ventricle was wounded.

Congenital Dislocation of both Knees Forwards.

Mr. L. Gamgee showed a child, aged 3½ months, with congenital dislocation of both tibiæ forwards and rather outwards. Both knees were in a position of marked hyperextension, and could not be flexed. The patellæ appeared to be absent.

Morbid Anatomy of the Enlarged Cirrhotic Liver.

Dr. Foxwell showed microscopic sections taken from large (92 ozs.) and small (46 ozs.) alcoholic livers, exhibiting (*a*) fibrous tissue penetrating to the centre of the lobules—that is, intralobular cirrhosis—in both livers; (*b*) a larger amount of fatty change in the small than in the large liver. These appearances were in accordance with Dr. Foxwell's belief that there is no special character in the anatomical distribution of fibrous tissue in the cirrhosis arising from alcohol, and that when the alcoholic liver is enlarged the enlargement is not usually due to fat. Another section exhibited the deposit of fibrous tissue around the hepatic vein in a case of cardiac disease. The occurrence of this central cardiac cirrhosis Dr. Foxwell did not think was sufficiently insisted upon, though he thought it arose oftener than the peripheral (portal) cirrhosis, which authors frequently described as the result of cardiac feebleness.

Splenic Anæmia.

Dr. Douglas Stanley showed the organs from two cases of "splenic anæmia." Both cases were males, and had been under observation for a considerable period. In one there had been very marked anæmia for several years, characterised by great reduction in the number of red blood corpuscles, with marked scarcity of the white. There was great enlargement of the spleen, and latterly some pigmentation of the skin. Death was due to acute peritonitis, caused by perforation of a gastric ulcer. The spleen (2 lbs. 8 oz.) was extremely firm and the capsule much thickened. On section it showed considerable fibrosis. There was nothing resembling the lesions of Hodgkin's disease. The pancreas was indurated; the liver showed some cirrhosis of recent date; the bone marrow was very red and gelatinous. The second case showed the same conditions during life, but death was due to severe hæmatemesis. Similar changes were found *post mortem*, but the suprarenals were extremely atrophic. In the first case they were not reduced in size, but were somewhat firm, and showed marked fatty degeneration.

United Intestine with Murphy's Button in Situ.

Mr. Barling showed a specimen of small intestine with a Murphy button *in situ*. The specimen was taken from a case of strangulated femoral hernia (a female, aged 34) in which the gut had perforated on the fourth, or perhaps the third, day after herniotomy. Strangulation had existed for about sixty hours, and on opening the sac a small loop of claret-coloured œdematous gut was found, which, when the constriction was divided, slipped back before any examination could be made of the lines of constriction on the gut. All went well until three days after, when the patient complained of discomfort in the abdomen, but there was no tenderness, distension, or vomiting. On the fourth day there was com-

plaint of severe abdominal pain, the abdomen was distended, tender, and very resonant in the umbilical region. The pulse had increased from about 80 to 116, and the respiration from 20 to 32. The bowels had not acted since the operation. The abdomen was opened in the middle line, and a quantity of free gas let out. Semi-purulent fluid and intestinal contents were found in the lower part of the abdomen, and there appeared to be general peritonitis. The intestines were adherent around the perforation, which lay some inches above the femoral ring, and from which leakage was still going on. About three inches of small intestine was resected, the ends were united by a three-quarter-inch button, and the belly was thoroughly flushed and drained. The patient died thirty-six hours later of an advancing peritonitis. The necropsy showed that union was going on satisfactorily, but that at one point, where the lower margin of the button impinged on the intestinal wall, the pressure had produced destruction, and only the peritoneum still remained unperforated. It was possible that the presence of peritonitis was a contra-indication to the use of the button, as when it existed, the sodden and œdematous intestinal walls were more likely to suffer from pressure by the weight of the button than the walls of healthy intestine.

Specimen.

Dr. Kauffmann showed a specimen of a "Benign Epithelial Tumour" of the soft palate.

MANCHESTER MEDICAL SOCIETY.

F. A. Southam, M.B., F.R.C.S., President, in the Chair.

Wednesday, November 6th, 1895.

Cervical Pachymeningitis.

Dr. Leech showed a patient who first came under his care nineteen years ago, being then 15. He was suffering from loss of power over both arms and the left leg. Prior to the paralysis he had had an abscess at the back of his neck, and through a sinus which resulted a piece of bone of considerable size had been discharged. Soon after admission to the infirmary power was entirely lost in the arms and legs, the muscles were rigid, the deep reflexes much exaggerated, and tremors were easily produced. The muscles of the upper extremity were wasted, and there was characteristic deformity of the hands. He had incontinence of urine and some anæsthesia. The body remained completely paralysed for many months, yet eventually he recovered. He could not stand for two years, and three years elapsed before he could walk. For sixteen years he has remained well and able to work. The right hand is a little deformed, and the reflexes are unduly marked, otherwise he is in good health.

Pulsating Orbital Swelling.

Mr. Thomas Jones showed a case in which both common carotid arteries had been tied for a pulsating swelling in the right orbit. The patient, a woman, aged 24, was confined in January, 1891, after a tedious labour of thirty-six hours. Immediately after the birth of the child the patient noticed a peculiar noise in the head, which she compared to a loud knocking at the door. This sensation was most noticeable on the right side of the head, and it was not attended with any pain. Fourteen days later both eyes became swollen, but the condition did not persist in the left eye. A little later the right eye began to protrude, and after two months the protrusion was most noticeable. She was for a few weeks under treatment, which consisted of rest in bed and intermittent pressure on the right carotid artery. No benefit being derived, she was admitted into the infirmary in December, 1891. Symptoms usually associated with orbital aneurysm were present in a more or less marked degree. Ligature of the right common carotid artery was performed in August, 1892, after a further trial of digital compression of the artery had been made. The patient made a good recovery, and there was a marked improvement in her condition for a time, until a violent attack of coughing which was attended with much straining. Pulsation and the other symptoms returned in the orbital swelling. Her condition remained stationary for many months; then she received an accidental blow from a child's elbow, and an aggravation of the symptoms followed. She was readmitted last January, and, as it was found that the pulsation in the swelling could be controlled by pressure on the left common carotid artery, this vessel was secured. The benefit was of a very temporary character. Her condition now is very much what it was when she first came under observation, and the question was discussed whether injections of coagulants into the dilated pulsating veins would not be a justifiable proceeding. If the patient gives her consent she will be again admitted for further treatment.

Abscess of Spleen.

Mr. Joseph Collier mentioned the case of a woman, aged 45, married, no history of injury, had never lived abroad, was admitted to Crumpsall Hospital with signs of left pleurisy. Later high temperature, much pain in left side, afterwards bulging in left hypochondrium, which increased; was fluctuant, and slightly pulsating. Abscess of spleen was diagnosed, with hæmorrhage from splenic substance into its cavity. Patient in very low condition. Had abscess opened, and over a pint of blood-stained pus, blood clot, and broken-down splenic substance was removed. Hæmorrhage from the remaining portion of spleen easily controlled by pressure with sponge towards hilum. Remains of spleen scraped out with lithotomy scoop, and cavity packed with iodoform gauze. No further bleeding occurred, but patient died collapsed in twenty-five hours. *Post mortem* examination showed no peritonitis, but peritoneum pushed down by abscess; there had been no hæmorrhage into the large abscess cavity. There was also left basal pleurisy. No other abscess found. No endocarditis. No evidence of pyæmia, tubercle, syphilis, or pyelo-phlebitis. Abscess was apparently idiopathic.

Ipecacuanha Alkaloids.

Dr. R. B. Wild read a paper on the pharmacology of the ipecacuanha alkaloids, in which was detailed the results of a number of experiments upon emetine and cephaeline, the two alkaloids recently described by Paul and Cownley.

LIVERPOOL MEDICAL INSTITUTION.

Chauncy Puzey, F.R.C.S., President, in the Chair.

Thursday, November 14th, 1895.

Successful Case of Cholecystotomy.

Mr. Clegg showed a young woman, aged 26, from whose gall bladder he had removed several calculi.

Drs. Rawdon and O'Hagan made remarks.

Is Cancer Curable by Surgical Operation?

Dr. Davies, in opening a discussion on this subject, said that evidence went to prove that cancer was something far other than a mere local disease. In 53 cases of uterine cancer submitted to the operation of complete hysterectomy, there was early recurrence in almost every instance. Numberless authorities advocated and described partial or complete hysterectomy, but their writings did not contain the facts as to the actual benefit derived from the operation. In his opinion patients with recurrence of the disease suffered more acutely than those in whom it had never been touched. Cancer of the alimentary tract was as unsatisfactory as the uterine form, and more reliable details of results were much needed. He held that the subsequent and remote results of operation on breast cancer were very bad, notwithstanding that the operation was becoming more and more radical, with "clean sweeping" of the axilla and even removal of the arm; statistics immediate and remote would be a great help. There was no evidence that cases of non-recurrence were also examples of early operation. Patients ordinarily lived for two or three years whether treated by surgery or left alone. When cases lived for ten or even twenty years after operation, the question to determine was whether they were ever cancer at all. Dr. Davies, in concluding, advocated the serial and methodic investigation of a large number of cases extending over many years, such inquiry to be duly audited by a competent committee.

Mr. Paul thought that in practice there was no such diversity of opinion amongst the surgical leaders as Dr. Davies had suggested. Having given the facts upon which his views were based, he expressed the opinion that cancer was local in origin, but could only occur in tissues favourably predisposed to its growth, and that it could be cured in the same sense that a tuberculous joint could be cured, by ex-

cision. He gave his results in the surgical treatment of cancer of the alimentary tract. The best successes quoted were in cancer of the lip, gum, cheek, rectum, and anus, but he believed the pylorus and colon would yield equally good results in time. Finally, he considered that surgical success depended upon early recognition, thorough extirpation, inherent favourable tendencies in the tumour, and judicious constitutional after treatment.

Mr. Banks dwelt more particularly on cancer of the breast. He believed in a cancerous diathesis, but that some local irritation was necessary to start the disease. If the portion of the economy so affected could be clean scooped-out "like the bad bit out of an apple," there was no absolute reason why the disease should not be eradicated. If once you admitted that cancer was a purely diathetical disease, you might give up all attempts at its removal, for whatever you did it would return locally or at a distance; on the other hand, if you believed too implicitly in a mere local focus which spread and affected the system, you would often be led away into rash and futile operations which could never, in the nature of things, succeed, and which did serious harm by prejudicing certain operations in the minds of the public, both medical and lay. Mr. Banks confessed that our only remedy at present, if we employed any at all, was the knife, and that admittedly a very poor one. He was taught as a student that if there was secondary infiltration of the glands all operative procedure was contraindicated, but about eighteen years ago he had begun to practise a much freer local removal of the breast, together with a clearing out of the axilla, and he believed that if this could be thoroughly done, it was a perfectly justifiable operation. He thought if we could only get people to come early enough with their breast tumours and have them removed, we might save one out of four from further invasion. While, therefore, he deprecated reckless and useless operation, he would regard anyone who should refuse absolutely to remove breast cancers on any consideration as a person perfectly devoid of reason and common sense.

Mr. W. S. Crawford advocated the curability of certain cases of mammary cancer by surgical means. He gave particulars of 4 cases in which the microscope proved the presence of cancer. The first died five years after operation from other causes; a second case was now living, three and a-half years after operation, with no return; a third died three and a-half years after operation from other causes; and a fourth where a different form of cancer had attacked the second breast three years after the first one was removed.

Dr. Imlach said that, according to some modern "localists," out of 500 operations for cancer, 100 remained free from recurrence; but, according to Sir James Paget, perhaps only one individual would remain free. He was surprised at the meagre information which was supplied by the supporters of hysterectomy for cancer. Surgeons generally complained that patients with cancer were not sent to them sufficiently early; but he believed, with Dr. Davies, that cases of non-recurrence were very seldom examples of early operation.

Dr. Alexander admitted that the results of operation for cancer were not satisfactory; but there could be no doubt that surgery was sometimes a "cure" for the disease. He cited cases from his own practice to prove this point. Apart from "cures," surgery gave distinct relief, especially in cancer of the tongue and rectum, for recurrence generally occurred outside the alimentary tract, and the patient died from exhaustion without the terrible agony experienced by those who died unrelieved by operation.

Drs. and Messrs. Briggs, J. D. Crawford, Robert Jones, J. Wallace, Carter, Rawdon, and Rushton Parker also took part in the debate.

Epidemiological Society.—At a meeting on November 15th, Mr. Shirley Murphy, President, in the chair, Mr. T. W. Thompson, of the Local Government Board, read a paper on Return Cases of Scarlatina, or cases occurring within three weeks of the return of a patient from hospital, the number of which varied unaccountably, but was as a rule about 3 per cent. on the admissions. They were popularly attributed to the premature discharge or imperfect disinfection of the patient, but by the hospital authorities to independent sources of infection, as schools, or to imperfect disinfection of the room and its contents, since secondary cases following soon after the first were of frequent occurrence. Other explanations were that infectiveness persisted after all visible symptoms had disappeared, or that the patient was saturated with the poison from long residence in an infected atmosphere. The frequency of return cases bore little or no relation to the precautions taken at the hospital, appearing to depend rather on the surroundings of the home and on the difficulty of determining when a convalescent ceased to be infectious, cases occurring even after a fortnight's quarantine in a pure atmosphere. Desquamation was generally accepted as evidence, but many high authorities attached more importance to the condition of the throat, etc., though whether chronic and recurrent catarrhs were infective was an open question. Dr. Chalmers (Glasgow) thought that overcrowding in hospitals tended to increase the persistence of the poison; and Dr. Sweeting that it favoured the occurrence of albuminuria. Dr. Goodall considered the inquiry rather one for medical officers of health, since many return cases went to other hospitals, where they were not recognised as such. He was convinced that infectivity often persisted long after all peeling and catarrhs had ceased, leading to return cases, even when months had elapsed, and when neither clothing nor houses were the same. But disinfection as carried out by the sanitary authorities was most unsatisfactory, and the poor were in the habit of evading it in the case of their best clothes. It was, however, impossible to disinfect a person as we could a coat; Nature and time only could eliminate the poison from the system. The discussion was continued by Drs Parkes, Sweeting, Pringle, Downes, Parsons, Bond, Bulstrode, Buchanan, and Sidney Davies, who supported what might be called the "old clothes" theory, and insisted on the persistence of infectiveness and of the poison in fomites, the influence of school attendance in propagating the disease, and the need for a prolonged investigation into the bacteriology of the skin, throat, urine, etc. Dr. Buchanan doubted if cases occurring much later than eight days should properly be considered as "returns," remarking that 93 per cent. of those in Dr. Chalmers's report appeared within the fortnight.

West London Medico-Chirurgical Society.—At a meeting on November 15th, Dr. A. Symons Eccles, President, in the chair, the debate on the etiology and treatment of gastric ulcer was resumed. Mr. Keetley said that in cases of perforation not diagnosed early enough, it was clear that confusion with colic or stomachache seldom arose, and that though peritonitis was recognised, the mistake was made of not at once determining the cause and dealing with it. Mr. McAdam Eccles laid stress on the value of drainage in cases of escape of the gastric contents, and for this purpose he makes a second opening lower down, which he keeps open for twenty-four to thirty-six hours. Dr. Clippingdale discussed the etiology of gastric ulcer, and assigned a leading place to local constrictions in women by corsets, in men by belts. Mr. Swinford Edwards raised the question of the value of gastric endoscopy for diagnosis previous to perforation, and narrated a case of a middle-aged man who had a copious discharge of bright red blood from the rectum. No gastric symptom was present, but at the necropsy perforation of the right gastro-epiploic artery was the only lesion found. Mr. R. W. Lloyd discussed the dietetic and medicinal treatment, and called attention to the varied localisation of pain in cases where perforation afterwards occurred. Dr. Alderson thought that local counter-irritation was a valuable adjunct to treatment. Mr. Bidwell referred to the operative treatment in non-perforating cases. He mentioned a case in which operation had been performed for persistent symptoms, and others where the symptoms were due to adhesions either within or without the stomach in consequence of the cicatrisation of an ulcer. Considering the uncertainty of the diagnosis of perforation, he held that an operation ought to be performed unless the physician could assure himself that the case was not one of gastric ulcer. Dr. Snape asked the opinion of surgeons present as to the advisability of operating in severe cases before perforation. Mr. Bruce Clarke, in reply, said that in cases of hæmorrhage threatening the life of the patient he would follow the ordinary surgical indications,

and cut down on the bleeding point. Dr. ABRAHAM called attention to a singular appearance in Dr. Alderson's case, that is, that the stomach walls appeared microscopically to be infiltrated with cells somewhat resembling those of a pigmented sarcoma. Dr. LAWRENCE urged the value of albuminate of iron. Dr. PEARSON thought that some cases of gastric hæmorrhage in girls might be assigned to vicarious menstruation.—The PRESIDENT summed up briefly, and regretted that no speaker had been able distinctly to define the various indications for operation.

HUNTERIAN SOCIETY.—At an ordinary clinical meeting on November 13th, Mr. C. J. SYMONDS, President, in the chair, Dr. F. J. SMITH read for Dr. MCDONNELL notes of a case of Congenital Ataxia in a boy, aged 6.—Mr. TARGETT showed a boy, aged 5, in whom he had excised one temporo-maxillary articulation for Ankylosis following Otorrhœa.—Dr. J. H. SEQUEIRA showed a case of Nystagmus with Facial Paralysis in a girl, aged 11, present since the age of 2.—Dr. ETTLES showed (1) a case of Horizontal Nystagmus cured by correction of the astigmatism present; (2) a case of Distrusion of the Left Frontal Sinus in a woman of 58; and (3) a case of Hyperexotropia with Divergent Strabismus and without Diplopia.—Dr. FRED. J. SMITH showed a case of Paroxysmal Hæmoglobinuria with Local Syncope and Asphyxia.—Mr. OPENSHAW showed a girl of 17 with Patches of Local Asphyxia on Toes and Heels.—Sir HUGH BEEVOR showed (1) and (2) two cases of Cervical Herpes followed by severe pain, and (3) a case of Fibroid Phthisis of the Right Lung of a boy 4 years old.—A case was shown for Dr. GLOVER LYON of Imperfect Development of the Pinna of the Right Ear.—Dr. COTMAN showed a fireman with peculiar Thickening of the Left Ankle, arising from traumatism, but causing no pain or other signs except thickening of tibia and fibula at the joint.

SOUTH WEST LONDON MEDICAL SOCIETY.—The monthly meeting of this Society was held on November 13th, when a paper was read by Dr. CHARLES W. CHAPMAN on Heart Disease in the Young. Stress was laid upon etiology, prognosis, and treatment; and an interesting discussion ensued, in which the PRESIDENT, Mr. T. S. HOWELL, Dr. A. D. ROE, Mr. A. E. DODSON, Dr. E. DUKE, Mr. T. A. J. HOWELL, and others took part.

EDINBURGH OBSTETRICAL SOCIETY.—At a meeting on November 13th, the following office-bearers were elected: *President:* Dr. A. Ballantyne (Dalkeith); *Vice-Presidents:* Senior, Dr. Halliday Croom; Junior, Professor A. R. Simpson. *Treasurer:* Dr. W. Craig. *Secretaries:* Dr. J. W. Ballantyne, Dr. F. W. N. Haultain. *Librarian:* Dr. R. Milne Murray. *Editor of Transactions:* Dr. J. W. Ballantyne. *Members of Council:* Dr. Lucas, Dr. Menzies, Dr. Stewart Stirling, Dr. Keppie Paterson, Dr. A. H. F. Barbour, Dr. James Ritchie, Dr. Andrew Balfour (Portobello), Dr. J. Jamieson. The PRESIDENT delivered his valedictory address.—Dr. R. C. BUIST (Dundee) read notes on a case of Astresia Vaginæ (with specimen), and Dr. J. W. BALLANTYNE read a paper on Teratogenesis: an Inquiry into the Causes of Monstrosities: Part I, the Theories of the Past.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At the third meeting of this Society, Dr. ALEXANDER RANKIN in the chair, a paper on the treatment of Phthisis Pulmonalis was read by Dr. EBEN. DUNCAN, sketching the line of treatment adopted in 38 cases of phthisis pulmonalis under his care in the Victoria Infirmary during the past 12 months. Excluding 2 cases moribund on admission, of the remaining 36, 4 were cured, 9 greatly improved, 16 improved, 6 remained *in statu quo*, and 1 became worse. The most important therapeutical factors were pure air (air washed and filtered before entering the wards) and an equable temperature. Medicinally, counter-irritation and antipyretics (if necessary) in the acute stage; later, frequent inhalations of a mixture of creasote, eucalyptol, and pinol in equal proportions. Internally, carbonate of guaiacol and beechwood creasote, beginning with small doses; 60 to 80 grains of guaiacol were administered four times daily without detriment; and of creasote, 25 minims in olive oil. Creasote had also been given as a suppository. Pure guaiacol had no advantage over the carbonate; applied to the skin (1 in 20 in flannel, covered with oiled silk) it brought down the temperature—in one case to 99°, with symptoms of collapse. Phenol was found in the urine when the maximum dose was reached, without impairing the renal function. In one case in which there was acute nephritis, the blood and albumen disappeared while the patient was taking large doses of the carbonate of guaiacol. There was no gastric disturbance with either drug. Where a large cavity existed, intralaryngeal injections of menthol, 15 per cent.; guaiacol, 4 per cent. in olive oil—the patient lying on the affected side—had been employed with benefit. Cod-liver oil and a generous diet completed the measures employed. In replying to the discussion which followed, Dr. Duncan advocated the erection of a hospital in Glasgow by the municipal authorities for the treatment of tuberculous diseases.

ULSTER MEDICAL SOCIETY.—The opening meeting of the session was held in the Society's rooms, Lombard Street, Belfast, on Thursday evening, November 7th, when there was a large attendance of members. The outgoing President, Brigade-Surgeon MCFARLAND, took the chair, and introduced his successor Professor SINCLAIR, F.R.C.S., who delivered an address on the Delimitations of Medicine and Surgery in Diseases of the Abdomen. An analysis of 22 cases of appendicitis occurring in his practice was presented, illustrating every variety of the disease and its treatment, and opinions adverse to the full adoption of the American indications for operation were put forward. Many cases might appropriately be left to the physicians, and the best guide for surgical interference was persistent tenderness. A distinction was made between recurrent cases with intervals of complete remission of symptoms, which inclined to obliteration rather perforation, and relapsing cases in which pain and tenderness persisted throughout the short intervals between the attacks. In these latter cases operation should be urged, as sero-purulent retention was probable and perforation likely. In the former cases it might be left to the patient to decide whether he would get rid of an inconvenient tendency. Referring to the treatment of gall stones, Dr. Sinclair expressed the opinion that this condition was not sufficiently often diagnosed by physicians, or made the subject of operation by surgeons. The treatment of stomach perforations by a transfer of them to the surgeons for operation was recommended, but a similar transfer of typhoid perforations was condemned. Even the prophylactic excision of gastric ulcers before perforation was objected to, on account of the unsatisfactory state of the symptomatology. Physicians should remain responsible for these cases until they perfected their diagnostic methods, and were able to distinguish the anterior accessible ulcers with a perforative expectancy of 85 per cent., which were fair marks for prophylactic excision. With regard to intestinal obstruction, an attempt was made to distinguish those cases which were suitable for operative treatment from those which should remain under medical supervision. Some remarks followed on malignant disease of the stomach and intestines, the latter field presenting more hopeful features than the former for surgical intervention, but the selection of cases of either sort should be made more carefully, and would be found decidedly limited in both. On the motion of Dr. MCKNOWN, seconded by Professor BYRNE, a hearty vote of thanks was passed to Dr. Sinclair.—The Society is at present in an active and healthy condition, and the membership undergoes a steady augmentation. Dr. McKisack continues to act as Honorary Secretary. The annual dinner takes place on November 28th, in the Grand Central Hotel, Belfast.

NEWPORT MEDICAL SOCIETY.—At a meeting on November 2nd, Dr. A. GARROD THOMAS in the chair, Mr. O. E. B. MANSEL read notes of a case of Typhoid Fever of ninety-six days' duration, with relapse, without complication.—Dr. R. J. PATON related a case of Rupture of the Gall Bladder; and Mr. H. B. SIDDON one of Cancer of the Pancreas.—Pathological specimens of the latter cases were shown.—Dr. D. R. Paterson (Cardiff), Dr. T. Howard Jones (Newport), and Surgeon-Major Roche (Newport) were elected members of the Society.

REVIEWS.

Twentieth Century Practice: An International Encyclopædia of Modern Medical Science by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Vol. I, Diseases of the Uropoietic System; Vol. II, Nutritive Disorders; Vol. III, Occupation Diseases, Drug Habits, and Poisons. London: Sampson Low, Marston, and Company, Limited. 1895. (Roy. 8vo, pp. 737. 89 Illustrations.)

The first three volumes of this gigantic undertaking have appeared with commendable punctuality. The editor has succeeded in obtaining the co-operation of many recognised authorities in Europe and America. The time is opportune for a new encyclopædia of medicine, since in recent years, thanks to the opening up of the new field of bacteriology, to the great strides which have been made in neurology, to the increased application of chemistry and physics, to the study of pathological problems, and generally to the greater accuracy with which clinical medicine is now studied, something like a revolution has come about.

Of the seven articles contained in Vol. I six are devoted to those affections of the uropoietic system which are now generally regarded as being within the domain of surgery. In the first of these, which deals with the diseases of the kidneys (surgical) and of the ureters, and includes also the injuries of these organs, Mr. Reginald Harrison states very clearly the present position of this important and rapidly developed branch of surgical work. This article, as might be expected from one who has done so much as the author to promote and advance renal surgery, is based much more on personal experience than on study of the work of others. It is thoroughly practical, and in its instructions as to diagnosis and treatment will be found very valuable. In his remarks on nephrectomy Mr. Harrison declares his preference in most instances of the lumbar over the abdominal method, mainly on the grounds that the former is the safer operation. The latter he would limit to some exceptional cases of floating kidney and of large renal tumour. Doubts as to the existence of a fellow kidney, or to the condition of this organ when certainly present, may now, it is held, be removed or confirmed by practice of the improved methods of electric endoscopy.

In the article on Diseases of the Bladder, also by Mr. Reginald Harrison, the most interesting sections are those relating to traumatic rupture and to the many forms, most of them of frequent occurrence and very intractable, of cystitis. The reader will find here, besides much valuable instruction on practical points, some striking and, it may be, fruitful suggestions. For instance, Mr. Harrison, though acknowledging that in cases of ruptured bladder, laparotomy is the safest course to be pursued, argues that this injury, even when involving the peritoneum, is not under certain circumstances, especially if a free and involuntary exit for the urine be at once provided, necessarily fatal. Again, he sees some hope of ameliorating the wretched state of those suffering from extroversion of the bladder, by establishing a renal fistula in one loin, and afterwards removing the other kidney.

The articles on Diseases of the Prostate and of the Male Urethra by Dr. Lydston, of Chicago, present a very clear and exhaustive review of the present state of knowledge relating to many affections to which American surgeons have of late years paid much attention. On the most recent operation for the relief of enlarged prostate, however, the author has very little to say. He states that he has had no experience of it himself, and he makes no reference to the recorded results of castration in the practice of others. He grants that this treatment is worth consideration, providing the patient's virility has disappeared, otherwise he would prefer to establish a suprapubic fistula, with or without operation on the prostate proper. The practitioner is recommended to exercise the greatest circumspection before performing castration, lest he incur trouble of a medico-legal character. As gonorrhœa—here called gonococcal urethritis—is fully discussed, together with its complications, we are led to anticipate that in this work no special article will be devoted to the subject of venereal diseases.

Mr Harry Fenwick's article on Diseases of the Urine is a very able and original contribution to clinical surgery, and is likely, when used either for close study or for reference, to be of great service in enabling the practitioner to determine the relative value, with regard to diagnosis, of the different morbid conditions of the urinary secretion. It seems to throw much light on many points hitherto more or less obscure in the symptomatology of both renal and vesical disease.

The volume concludes with a relatively brief but very instructive article on Diseases of the Female Bladder and Urethra, by Dr. Howard Kelly, who, from his well-established reputation, and his position at the Johns Hopkins University, is exceptionally well qualified to write on this subject.

Volume II deals with Nutritive Disorders; it contains articles on some of the more important diseases resulting from a faulty metabolism, and is divided into seven parts, each by a separate author. The volume contains 735 pages, and has a good index, by which reference is facilitated. It opens with a short paper from the pen of Sir Dyce Duckworth, on Addison's Disease and other Diseases of the Adrenal Bodies. That this is well up to date is shown by its referring to the important work lately carried out by Professor Schäfer and Dr. Oliver on the effects on animals of injecting into the veins the extract of the adrenal bodies and its possible future value in treating diseases which are the result of destruction of the adrenals. The article on Diabetes Mellitus is written by Dr. von Noorden, and the German version has already been reviewed separately in the the British Medical Journal of November 9th, 1895, p. 1166.

Dr. Maclagan has treated in a most masterly manner the subject of Rheumatism. After discussing carefully the various theories as to its causation, he shows how it can no longer be looked upon as a disease resulting from excessive formation of lactic acid or its accumulation in the system any more than as of neurotic origin, our present knowledge leading us to believe it to be miasmatic, much in the same manner as malaria. In describing the symptoms he shows how the present generation of practitioners are unable to realise the agony formerly suffered, the disease being so much under control by salicyl compounds. The drug should be given early, and pushed in large doses until all pain has ceased. In cases in which there is danger of heart failure salicin is to be preferred.

Gout is next taken up by Dr. Lyman, who gives us a very complete summary of the disease. He lays special stress on those signs that characterise the arthritic diathesis, and the treatment is well dealt with.

To Dr. Archibald Garrod has fallen the difficult subject of Arthritis Deformans. He points out how it is to be distinguished from gout and rheumatism, and that in its causation heredity seems to play a very small part. Since it attacks specially persons who are "run down," he recommends that the treatment ought to be principally tonic, though attention to hygiene is of the greatest importance, while the diet must not be restricted as in gout as regards animal food. Any treatment to be of any use must be persevered in for a long period of time before results can be hoped for.

The article on Diseases of the Muscles is from the pen of the late Dr. Dujardin-Beaumetz, who shows how they may often be affected, but the occurrence overlooked by other symptoms masking their condition. This article is admirably written, and, dealing with a subject which has hitherto received little attention in systematic works, is worthy of most careful perusal.

Dr. Oertel concludes the volume by a paper on Obesity, which is an excellent summary of his method of treatment.

The extent of the subjects has prevented the authors from giving complete summaries of the literature, but as a work of reference for the busy practitioner who desires to know present views rather than an historical summary it will be of the greatest service.

The memoirs included in Volume III are of a miscellaneous character, and, viewed together as a whole, savour rather of the student's midnight oil than of the atmosphere of hospital wards, factories, and workshops. This remark does not

apply to the essay by Dr. Norman Kerr, who records his matured opinions and observations, the fruit of lifelong study and research, on Alcoholism and Drug Habits. Under this latter designation is collected a mass of information not to be found in any other treatise. He is an anti-alcoholic enthusiast, and his decided views must therefore be taken with some reserve. Dr. Kerr occupies the only place accorded to British authorities in this bulky volume. All the other writers, except Dr. von Liebig of Munich, are physicians practising either in the United States or in Canada. Their contributions are marked by careful study and thoughtful consideration.

To enumerate the subjects dealt with, they are Shock and Collapse, by Dr. Shrady, Surgeon of Hospitals in New York; Sea Sickness, by Dr. Gihon, Medical Director, United States Navy (to whom are also assigned the short essays on Heat Stroke and Frostbite); Osteomalacia, by Dr. Councilman, Professor of Pathological Anatomy, Harvard University; Mountain Sickness, by Dr. George von Liebig, Docent of Climatology and Balneology, University of Munich; the Diseases of Occupations, by Dr. J. Hendrie Lloyd of Philadelphia; Vegetable Poisons, by Dr. Small of Ottawa; and Poisoning by Mineral Substances, by Dr. James Stewart of Montreal, Professor of Medicine, McGill University.

It will be noticed that some of these subjects have not received a place or anything like equal attention in many medical works, and therefore merit study as special monographs. Where they are written by experts they will secure this consideration. To write a really satisfactory essay on diseases of occupation, there is needed a special study of those maladies in connection with their causes as met with in factories and workshops, in processes of manufacture, in the surroundings and habits of operatives, in the structural arrangements and sanitation of places of work, and other details which must be examined in order to assess their effects upon health and life. Great credit is due to Dr. Lloyd for the industry and research spent in collecting information on the matters he deals with, and to his erudition and skill in critically examining and commenting on the facts and opinions he has brought together. He, however, candidly confesses that he does not write from original research respecting industrial diseases and their causes, but that his article is mainly the product of the study of some of the principal authors who have produced special treatises on trade diseases, though he has appended whatever facts hospital or other practice has afforded him.

There is one section of the article which will be of interest to all concerned in devising and amending factory legislation; this is the one which contains a summary of the enactments regulating labour in several of the most important States in the Union. Each State makes laws for its own internal economy, and consequently there are great vexations existing among their legislative provisions and administrative details. With regard to the factory laws now enforced in many States, the general deduction is that, on the whole, they are more rigid and far-reaching than those in force in Great Britain, though probably less effectively administered by the authorities.

Guy's Hospital Reports (for 1894). Vol. LI. Edited by E. C. Perry, M.A., M.D., and W. H. A. Jacobson, M.A., M.Ch. London: J. and A. Churchill. 1895. (Pp. 272.)

This volume, just issued, contains thirteen papers of varying interest and importance. Dr. Pye-Smith relates a case of Bilateral Paralysis of the Facial and Auditory Nerves, probably of syphilitic origin, though not materially benefited by iodide of potassium gradually increased to 120 grains a day. In a paper on Empyema following Lobar Pneumonia, Drs. W. Hale White and A. Chaning Pearce state that empyema has been a more common sequel of lobar pneumonia during the last few years than formerly; and that, as regards treatment, aspiration is futile, and the chest should be incised and drained. Dr. Theodore Fisher contributes an exhaustive paper on Hypertrophy of the Heart without Gross Organic Lesion, and agrees with Bollinger that over-indulgence in alcohol is a common cause of the affection. Dr. Meadows Turner contributes from the North-Eastern Fever Hospital a careful article on Scarlatinal Nephritis and its varieties, and remarks that chills can hardly account for the large percentage of nephritis, especially as in the majority of cases the complication develops whilst the patient is in bed. He examines other suggested causes of the disease, notably constipation, and fails to find one that holds in every case.

Mr. Bryant contributes an abstract of an address on Temperature after Operation, delivered in 1879, and hitherto unpublished. The author sees no reason to change the opinions he then entertained, but incidentally remarks that he now uses less opium after operations, in the belief that opium checks repair. Mr. L. A. Dunn gives an interesting sequel to a case of Fractured Pelvis with Ruptured Urethra; and in a second paper describes a case of Multiple Atrophying Sarcomata of the Head and Neck. Mr. G. B. Smith (Surgical Registrar), in a paper on the Question of Amputation in Senile Gangrene, based on a study of forty-eight cases, concludes in favour of amputating high up (through or above the knee) in all such cases, thus supporting the views of Mr. Jonathan Hutchinson. Dr. John Fawcett gives the results of an investigation on the Value of Piperazin, and concludes that the drug is almost useless as a solvent of uric acid stones, or in the treatment of gout. Mr. Newland-Pedley writes on the treatment of (1) Suppuration of the Maxillary Antrum (for which he advocates a permanent opening into the mouth to abolish retention of inflammatory secretions), and (2) Extreme Cases of Congenital Cleft Palate by Obturators and Veia. Dr. J. F. W. Silk, in a paper on the Administration of Gas and Ether, remarks that "no method (of anæsthesia production) requires more constant practice, in order to maintain and develop the skill already obtained;" he, however, considers the combination of nitrous oxide and ether as "a most valuable addition to our list of available methods of producing anæsthesia." A list, by Drs. Shaw and Perry, of specimens illustrating the Pathology of the Liver and Gall Bladder, and which were added to the Museum in 1894, is appended.

Diagnostik der Krankheiten der Bauchorgane. (Diagnosis of Diseases of the Abdominal Organs.) By Dr. Hans Leo. Zweite Auflage. Berlin: A. Hirschwald, 1895. (Royal 8vo, pp. 530. With 45 illustrations. M11.)

This work by Dr. Leo is divided into two parts, the one dealing with the physical examination and clinical characteristics of the various diseases and the other with the chemical, microscopical and bacteriological examinations now required in the investigation of such diseases. Diseases of the generative organs are not included in this book. Each section in Part I. is again divided into a general and special part; in the former a short account of the symptoms and examination of each organ is given in general, and in the latter the symptoms and course of each particular disease, with the physical diagnosis, are detailed. In Part II. the examination of the secretions of the mouth, stomach contents, fæces, urine and fluids obtained by puncture is described. This examination is given in considerable fulness, and the author's reputation lends to some parts a more than usual importance. Under bacteria, the tubercle, cholera and typhoid bacilli receive a careful description. This book may be cordially recommended. It illustrates the fruitful results obtained in modern times by that union of clinical and laboratory investigations, which in no respect interferes with the practical character of the clinician of to-day.

Meralgia Paræsthetica. By Dr. W. K. Roth, of Moscow. Berlin: S. Karger. London: Williams and Norgate. 1895. (Demy 8vo, pp. 24. 9d.)

Under this name the author describes, with fourteen illustrative cases, an affection characterised by painful sensations in the outer side of the thigh, and accompanied by a subjective and sometimes objective anæsthesia. The pain is mostly of a burning character, and is worse on standing or walking. The paræsthesia and anæsthesia are limited to the distribution of the N. cutan. femoris ext., but the burning sensation may extend beyond it. The progress of the disease is slow,

and considerable improvement may be obtained by treatment.

The author discusses the etiology of this complaint, which he looks upon as being due to a lesion of the abovenamed nerve. Some of the author's cases have been under observation for so long a time as to preclude the notion that this meralgia is only an early symptom of some spinal cord lesion. The reviewer himself has knowledge of a case extending over more than fourteen years, which, although more intense, corresponds in many particulars to the description given by the author. Dr. Roth's monograph is interesting, and may call attention to an affection which may have been either overlooked or put down to some lesion of the spinal cord.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AN ASEPTIC SPONGE HOLDER.

Dr. R. W. Felkin, of Edinburgh, has designed a sponge holder, which may also be used for cotton wool, which he believes will overcome the difficulty encountered in cleansing the ordinary sponge holder, and also the further difficulty often met with of removing either the the sponge or cotton wool from the holder. The form of the holder is shown in the accompanying drawing. A thread attached to the sponge or swab is passed through the cup, drawn tight, and held in position by a turn round the catch near the handle. Any number of sponges or swabs can be used in turn on one holder, which Dr. Felkin believes will be of use in treatment of diseases of the throat, the abdomen, and in gynæcological work. The holders are made in various sizes by Messrs. Hilliard and Son, 7, Nicholson Street, Edinburgh.

EMBEDDED ELECTRIC LIGHT.

We have had submitted to us a set of instruments for examining the throat, rectum, vagina, etc., in which the illumination is obtained from small electric lamps of about four or five candle power embedded in the instrument. The apparatus has been designed by J. W. Daily. The current to each lamp is supplied by means of wires placed in channels cut in the handles, etc., and communicating with a small portable battery. The lamps being embedded in the metal bound cavity of the wall or jaw of the instruments, and covered by a carefully sealed transparent plate of mica, cannot be broken, and do not obstruct in any way the view in the examination of cavities, nor prevent the free use of instruments. The special advantage claimed for this adaptation of the electric light is security against breakage, in addition to brilliancy of illumination and steadiness and general convenience of use. The apparatus can be seen on application to Mr. T. H. Batten, of 3, Adelaide Place, E.C.; or to Mr. T. E. Harris, Throgmorton House, Copthall Avenue.

ANTINONNIN: A DISINFECTANT AND PARASITICIDE.

Antinonnin is the trade name for the potash salt of orthodinitro-cresol, one of the yellow cresol colours prepared by the Farben-Fabrik (Vormals, Bayer and Co.) at Elberfeld. It is claimed to be a powerful bactericide and a complete protection against the dry-rot fungus, mildew, etc., and as being available for both woodwork and masonry. Professors Harz and Von Miller have found it to be a powerful antiparasitic, especially effective against liparis monacha, the caterpillar destructive to trees, and most plant parasites. It is more active in a soap solution, and can be employed in quantities varying in proportion from 1 in 2,000 for plants to 1 in 100 for the prevention of dry rot. It has also been found most efficacious in preventing fungoid growths on the walls of breweries, distilleries, etc., and as a remedy in skin diseases caused by animal parasites. Antinonnin is a yellowish paste, somewhat readily soluble in water, forming a bright yellow solution, and in the proportion of 1 per cent. we have found an aqueous solution to be a powerful agent in preventing fungoid growth, although its use is somewhat restricted on account of the yellow stain imparted to everything impregnated with it. Antinonnin has the advantage of being inodorous and non-volatile, although like many other powerful bactericides it is poisonous. The English agent is R. Simon, Zulla Road, Nottingham.

A PARACENTESIS NEEDLE FOR USE WITH HYPODERMIC SYRINGE.

Dr. William R. Huggard, of Davos Platz, sends us the following description of a paracentesis needle, which he has now used for some years, and which has been made for him by Messrs. Arnold and Sons, London.

The instrument has one arm for a hypodermic syringe, and another arm to which india-rubber tubing can be attached; the central tube carries a fine needle. The advantage of the little contrivance is that a very small and not alarming instrument is used for the exploratory puncture, and that fluid, if found, can be removed at once. The instrument having

been carefully sterilised, the trocar in place, the stopcocks open, and the syringe filled with hot water, the water is driven through the instrument till only a drop or two remains in the syringe. The arm for the india-rubber tubing is now closed by the stopcock, the puncture made, the needle withdrawn, and the central stopcock closed. The couple of drops of warm water remaining in the syringe, if now pressed out, will sufficiently dilute any thick fluid that may be found to allow it to flow through the needle when the piston is withdrawn. If fluid is found, the india-rubber tubing connected with an exhaust bottle can be attached at once. Should the needle get blocked, the simplest way to remove the obstruction is by injecting a little warm water from the hypodermic syringe, which, of course, should have again been sterilised.

THE TREBLE SPRING TRUSS.

Dr. Heywood Smith (Harley Street, W.) writes to point out that the truss described on page 1242 of the British Medical Journal of November 16th appears to embody the same principle as the pelvi: belt designed by the late Dr. Protheroe Smith, the fixings being improved by doing away with screws. The method of hinging the springs and adjusting the front pads are, he thinks, the same in principle.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

IX.—DONEGAL WORKHOUSE INFIRMARY.

Our visit to the Donegal Workhouse was made in a downpour of rain, such as is common on the west coast, where the hills condense the rainclouds as the air comes laden with moisture from the Atlantic. The house stands on the line of march between Stranorlar and Ballyshannon. The Board has given discretionary power to the master to refuse relief to the tramps, and the relieving officer simply passes them on to the house for the master to deal with. The result of this plan is, so we were told by the master, that the tramps do not apply at the house. Having an introduction to the medical officer, Dr. Pope, we met him by appointment at the workhouse.

The House is a small one,

a fourth-class house, and was very empty at the time of our visit; 54 was the number of inmates all told, and of these 30 were on the medical relief book (28 in hospital), not including the lunatics, so that more than half the inmates are disabled paupers. We were not surprised to learn that it is sometimes necessary to obtain labour from outside, the master being empowered to hire when requisite. No ground is cultivated, with the exception of a few flower beds in front of the house.

The Lunatic Wards

on the male side were empty. The cells are used in this house, two females sleeping in one cell; there were two most sad cases in box beds, semi-idiotic semi-paralysed women, entirely helpless. The three patients who were up, epileptics, were seated on a bench against the wall of the corridor into which the cells opened; at one end is a protected fireplace, and at the other the door that opens on to the airing court. These patients are under the care of a pauper; they had an unwashed, untended appearance. The cells are dark and ill-ventilated, the corridor is merely a dreary passage giving access to the cells, yet this is all the accommodation provided for these unhappy creatures. Only last year the Inspectors of Lunacy commented in the severest manner on this disgraceful state of things. We quote from the report:[1]

"We are compelled to reiterate the opinion that the condition of the lunatic inmates is far from satisfactory. The most helpless are frequently found ill attended to, the only persons to look after them being to a large extent pauper inmates; the apartments allocated to their use are often dark, ill-ventilated, and badly furnished, whilst the means of securing personal cleanliness are very inadequate. . . . . Unfortunately in nearly all the Irish workhouses the inmates of the lunatic wards are found to be the most helpless imbeciles and dements, who, quite incapable of caring for themselves, unable to wash, feed, or dress themselves, and requiring the most constant and careful supervision, are left to the mercy of a pauper inmate, or, where a paid attendant is attached to the ward, to the care of an official usually ignorant and untrained, and very often negligent of his duty."

These strong words of an official qualified to speak are not too strong to represent the condition of the unhappy pauper lunatics at Donegal. The poor idiots made such an impression on us that we have spoken of them first, but we must not forget

The Sick,

who are in wards on the two floors of the hospital building. These wards, two on each side of the middle block, hold seven and eight beds respectively; in the lower a wooden screen acts as a draught protector between the beds and the door. The structure exhibits the usual characteristics of these primitive hospitals—the whitewashed walls, which are so wearying to the eyes; pitched roof with bare rafters, where the dust gathers and forms a soil for the germs of disease; small, ill-fitting windows on one side, faced by slit openings in the opposite wall, admitting the weather but not ventilating the ward; old fireplaces which waste fuel and are niggardly of heat; these are the conditions which surround

The Patients.

There was one bad case of paralysis—a woman with entire loss of power. She was in a box bed on straw, and we noted that the poor thing was in a most uncomfortable and insanitary condition. A young woman with synovitis was waiting for a leather splint; a man, who appeared to be in an advanced stage of phthisis, was seated by the fire; he had been a soldier, but had not served long enough to earn a pension. The other patients were chronic or old age cases. One case in especial roused our compassion: a respectable-looking woman, who had been in good service in London, was, by the Act of Settlement, returned with her child to face the horrors of an Irish workhouse. The infant was ruptured, and this fact detained her in the sick ward. The look of utter hopelessness in her face will not soon fade from our recollection.

The Beds

in the infirmary are almost all wire wove, with hair mattresses; easy chairs do not exist; we saw a wooden chair on which was what appeared to be an old car cushion, and there was of course the usual bench. The bedsteads are too close together, and there was no room for tables in the wards. As there are no day rooms the patients live all day in the wards, as well as sleep in them, and the cubic space was quite insufficient.

There is a Trained Nurse

in the hospital, but no night nurse; in each ward there is the pauper wardsman or woman, the only assistants that the nurse has. The nurse is also held responsible for the care of the lunatic class, whose quarters are in her division. She is sorely handicapped by the conditions of her work; she has no separate linen store, no water laid on, either hot or cold; the only means of heating water is in a kettle. The water comes from the river, and is pumped into tanks by the inmates. The fireplace in the infirmary kitchen is a wide-mouthed wasteful grate, which makes almost all cooking extremely difficult.

At Night

in the sick wards the vessels are left unemptied, and the patients have no help but such as they can render each other. It is therefore more than probable that the poor paralysed woman is left uncleansed all night. Both Dr. Pope and the nurse said that the atmosphere in these wards is very foul in the night. When we think of the fate of these unhappy sick, left all night without nursing of any kind, in the dark and fœtid ward, we cannot but condemn the system which allows so much preventable suffering. This is no sensational picture; its worst features can be verified by any inhabitant of Donegal for himself.

The Infirm Class

is a small one in this house; the men's dormitory was empty, the few men being engaged in the house; in the female ward there were thirteen beds, all filled. The narrow beds are used in both wings, with straw ticks and pillows. (We confess to a desire to condemn every Irish Board of Guardians to spend a night or two in the infirm ward of their own workhouse, the door being locked as usual on the outside, at 7 in the evening.) It is always a matter of surprise to us that these straw-filled ticks have found favour for so long with the authorities; they are neither economical nor suitable; the substitution of mattresses would soon be paid for in the lessened amount of the straw bill. The women were all in the dormitory, the dayroom not being in use. The ward was comfortless and dreary; a window at either end gave but a poor light and insufficient ventilation to the long, low-pitched room; an old fireplace, for either turf or coal, in the middle of the long wall, was the only means of heating the dormitory. The benches (the only furniture) gave no suggestion of rest or comfort; many of the inmates sat on the foot of the bed. A basin or towel for the whole ward is the sole means of cleanliness provided.

[1] Forty-third Report, July, 1894.

The nursery has been closed for some time; the confinements (about one a year) take place in a small ground-floor room in the infirmary.

THE DIETS

consist of potatoes five days in the week, and soup on the other two days, in the body of the house; in the infirmary, meat, milk, soup, and extras, as ordered by the doctor. Corn flour is the diet of the infants, so that it is as well that the nursery is empty—at all events till a more flesh-forming food is ordered for those under 2 years of age. The food is cooked in a kitchen fitted with three coppers, each having a separate furnace, a plan which is wasteful alike of fuel and labour. These kitchens are relics of famine days, when porridge or soup was cooked in gallons to feed the starving population. But this is half a century ago, and perhaps it might be well to remove them now to make way for something more suited to the requirements of the house. The laundry is of the same date, and has the same old-world aspect; no hot water is laid on; there is no mangle or other labour-saving appliances except a wringer, of which one roller is practically useless.

RECOMMENDATIONS.

We would call the attention of the Board to the words which we have quoted from the report of the Inspectors of Lunacy, and urge them to remove this disgrace as far as Donegal is concerned, by making the quarters of the idiots less cruelly unsuitable, and providing them with proper attendance. If it is right to retain this class in the workhouses at all, the guardians are bound to do all that is possible for their treatment. Further, we suggest the appointment of a trained night nurse for the wards, to remove the scandal of the present untended condition of the sick through the night. Lastly, it seems to us that a well-devised scheme of amalgamation would solve many of the difficulties which beset the guardians. We trust that this matter will soon receive the attention of the central authority, for the guardians require all the advice and assistance possible in this difficult task of bringing the houses up to date.

We are glad to see that the report on the Derry Workhouse Infirmary by the special commissioner of the BRITISH MEDICAL JOURNAL, appointed to investigate the condition of Irish Workhouses, is reprinted in full in the Irish Press. We feel greatly indebted to our contemporaries the daily press and the public press in Ireland, for the publicity which they are giving to these detailed reports and to the recommendations contained in them, and we earnestly hope that they will so influence public opinion and work upon the good feelings of the guardians, as to continue to bring about early and substantial improvements.

LITERARY NOTES.

MR. WILLIAM ANDREWS, of Hull, has nearly ready for publication a work entitled *The Doctors in History, Literature, and Folk Lore*. "Chaucer's Doctors of Physic," "The Doctors Shakespeare Knew," "Barber Surgeons," and "Body-Snatchers" are among the subjects treated of by Mr. Andrews.

THE first edition of the novel, *The Combe Park Tragedy*, by the daughter of Dr. Long Fox, the ex-President of the British Medical Association, was bought up on the first three days after publication. Miss Edith Long Fox is to be congratulated on its success. A second edition is in the press.

The *Archives of Pediatrics*, now edited by Dr. Floyd M. Crandall, adjunct Professor of Pediatrics in the New York Policlinic, will be enlarged with the first number of the New Year.

The *Revista de Ciencias Medicas* of Havana of September 20th contains a report by Professor Aristides Mestre of the first case of acromegaly observed in Cuba. The patient is a man, aged 53, a native of Spain.

The *Indépendance Médicale* is the name of a new medical journal which has recently appeared in Paris under the editorship of MM. Samuel Bernheim and Emile Laurent.

The *Revista Medico-Legal* is the name of a new periodical devoted to matters of medico-legal interest, the first number of which appeared at Bahia on September 1st. It is published under the auspices of the Society of Forensic Medicine of that city, and is edited by Professor Nina Rodrigues.

The *Archives des Sciences Médicales* is the title of a publication which is about to appear under the direction of Professor T. Jonnesco, of Bucharest, with the collaboration of Professors V. Babes and N. Kalendero, of Bucharest, and of a number of leading men in the profession throughout Europe, among whom may be mentioned Dr. Ferrier, Mr. V. Horsley, and Mr. Treves, of London; MM. Berger, Bouchard, Brouardel, Cornil, Le Dentu, Dieulafoy, Matthias Duval, Grancher, and Pozzi, of Paris; Professors Czerny (of Heidelberg), Mikulicz (of Breslau), Nothnagel (of Vienna), and Waldeyer (of Berlin); Professors Maragliano (of Genoa), and Ramon y Cajal (of Madrid), and others. The periodical, which is to be the organ of the Institutes of Anatomy and Surgery and Pathology and Bacteriology of Bucharest, will be published in French, and is intended to be international in character. The Roumanian Government has promised a subvention.

A selection from Billroth's correspondence has just been published (Hahn'sche Buchandlung, Hannover und Leipzig). The letters are interesting as showing the great surgeon as he was known to his intimates—a man of enthusiastic temperament, exquisite artistic sensibility, and the loftiest ideals.

Under the title *In My City Garden*, by "George Umber," Mr. Alexander Gardner will publish, towards the end of the present month, a volume of essays from the pen of Dr. Findlay, a well-known medical practitioner in Glasgow, which will be illustrated by his son, Mr. William Findlay.

We have received the first number of the *Archiv fur Verdauungs-Krankheiten*, a new quarterly periodical, dealing, as its title imports, with diseases of the digestive apparatus and with disturbances of metabolism generally. It is edited by Dr. J. Boas, of Berlin, and the names of Professors Leichtenstern (Cologne), von Mering (Halle), von Noorden (Frankfort), Penzoldt (Erlangen), and Riegel (Giessen), among others, appear as collaborators. As far as printing and paper go, it presents a creditable appearance, and its contents do not belie the promise of the title page. Messrs. Williams and Norgate are the publishers in this country.

The old-fashioned naturalist has almost died out, but Mr. W. J. C. Miller, B.A., the Registrar of the General Medical Council, remains to show us what were his delights. In a charming article in the November issue of *Nature Notes*, he has discussed the jackdaw and his habits, resenting somewhat the frivolous treatment which that bird has met with from most novelists and poets. While willing to admit that the jackdaw is jocular, Mr. Miller claims for him that in qualities of mind he excels all birds, as other birds excel him in melody. The paper is entitled The Home of the Jackdaws, and contains a description of a wonderful south coast bay frequented by jackdaws in large numbers, and by certain "wise" men who love a peaceful and quiet holiday.

In a recent number of the *Zeitschrift für Aegyptische Sprache* (Band 23) Georg Ebers propounds a solution of a problem which has long puzzled the learned. Old medical receipt-books, both English and German, contained, down to the very end of last century, the formulæ, if they may be so termed, of remedies which are found in ancient Egyptian papyri. The problem is, how did these prescriptions find their way from Egypt to Europe? Clearly not through the Greek writers, since their works contain nothing of the kind. Ebers suggests that they were handed down by the famous old school of Salerno. The teachers in that school are known to have been acquainted with Egyptian medicines through Coptic and Arabic translations. One of the most celebrated of them, Constantinus Africanus, had visited Egypt, and he "conveyed" a good deal of the medical lore which he learnt there into his own writings. Ebers gives a number of examples, showing how recipes for eye lotions, methods of treating prolapse of the womb, predicting the sex of an unborn child, etc., which appeared in old English and German books, could be traced back to Egyptian sources.

In the *Journal of Mental Science* for October, Dr. H. Kornfeld has an interesting little paper on the insanity of love as pourtrayed in the *Orlando Furioso* of Ariosto. No one, he holds, has better sung the madness engendered by love than the great Italian poet, who shows that love is the very opposite of hatred of life, that it is the best and highest of human feelings. The essential point in Ariosto's teaching is, we are told, contained in the question which he leaves to his readers to answer, "What is more expressive of madness than the undoing of self to ruin others?"

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 23RD, 1895.

THE LONDON CENSUS IN 1896.

All who are interested in the health and sanitary condition of London have cause for satisfaction in the fact that under the provisions of the London (Equalisation of Rates) Act of 1894 a census of the resident population of the administrative County of London will be taken at the end of March next. It will then be five years since the last national census was taken, and although the rate of increase of population in the metropolis, taken as a whole, has not in recent years showed any strongly-marked fluctuations, the changes in the movement of population in its several sanitary areas varies so widely that a census once in five years is urgently needed, in order to give that trustworthiness which is so essential to the value of local vital statistics. The specific object for which the census is to be taken is to ascertain the number of persons present within each parish on the census night, in order to enable the Registrar-General to estimate annually, with some approach to accuracy, the population of each parish during the last half of the intercensal period of the ten years 1891-1901. It is enacted that the census is to be taken under the provisions of the Census (England and Wales) Act of 1890, including its penal provisions, subject to such modifications as may be prescribed by the Local Government Board for the purposes of the Equalisation of Rates Act.

It is clear that while the letter of this Act only provides for ascertaining the number of the population in each parish, something more than a mere count of heads must be taken if adequate means are to be provided for securing an accurate result and for detecting inaccurate returns. Hence the importance of the decision, which will soon have to be made, as to the precise information to be required from the London householder in the census schedule to be used next March.

The London County Council, by whom the cost of the approaching census, to be certified by the Registrar-General, will have to be paid, are naturally anxious to enlarge the scope of the inquiry as widely as possible, and thus to secure the fullest possible statistical information concerning the present population of London. While, however, we are clearly of opinion that the intention of the Equalisation Act was that the census should be an essentially simple inquiry compared with the usual decennial census, we are in the fullest sympathy with the resolution passed at a recent meeting of the Council of the British Medical Association, which recommended as essential that the "name, sex, and age" of each person present in London on the census night should be recorded. It may probably be somewhat difficult to assert that the ages of the population are strictly essential for the precise object of the Act, but we should regard their omission as a deliberate waste of a golden opportunity for recording statistical information which is of the first importance from a sanitary and public health point of view.

We can scarcely conceive that the Local Government Board, when they prescribe the necessary modifications of the Census Act of 1890, and the precise form of the Householders' Schedule to be used in London in March next, will decline to insert an age column, without which the information to be collected will be bereft of its principal value for medical officers of health and sanitary authorities.

The London census next year is the first experiment in this country in the direction of a quinquennial census, which has long been the dream of medical officers of health and vital statisticians, and which has for a long series of years been steadily advocated in these columns. We shall therefore watch the experiment with great interest, which would, however, be seriously lessened should the inquiry neglect the question of age. If, however, the inquiry include the three essentials of "name, sex, and age," and should the expenses of the inquiry not be unduly increased by further additions, we shall look forward with confidence to this London census being the forerunner of a general quinquennial census in the United Kingdom. Such a census is seriously needed in large towns, and the object in view would be most easily promoted by a short Act, passed early next next session, enabling any local authority to require a census to be taken by the Registrar-General within the district under their control during the year 1896, on similar conditions to those which are to govern the London census, including the payment of the expenses of the census out of the local rates. An Act with optional powers of this description would prepare the way for the inclusion, in the decennial Census Act of 1900, of provisions for a general and simple quinquennial census in 1906.

THE SOLDIER'S BOOT.

In the report on the New Forest manœuvres by the Duke of Connaught it is stated that footsoreness was very prevalent among the infantry. There were 824 cases of blistered feet on the march to the Forest, 114 cases during the manœuvres, and 19 on the return march. The causes assigned are the defects of the regulation boot, and the want of pliability in the leather leggings. Perhaps too much is sometimes expected of a military boot. It must be cheap but durable. Made in a limited number of sizes, it must fit an almost infinite variety of feet. The young soldier—and most of our soldiers are very young—does not know the importance of carefully determining at first which of the thirty-two sizes (eight of length and four of breadth) in which the boots are made is nearest the shape of his feet, and sometimes he does not get much encouragement to do so, nor does he know that a creased or badly darned sock will surely cause a chafe. Distorted toes, corns, bunions, and ingrowing toenails, all of them the results of badly fitting boots and fruitful causes of footsoreness, do not receive the attention they deserve; while even such details as the cleanliness of the feet and socks are but too often neglected. Various

means have been used with more or less success to harden the feet, such as bathing in solutions of salt and alum, the application of ointment containing tannin, and various powders, a principal ingredient of which is generally salicylic acid, while soaping the feet or socks is recommended by some. There is not much to recommend the method in vogue in certain German regiments of using soft rags instead of socks, nor the French method of dispensing with them altogether.

In a normal foot which has not suffered from bad boots the great toe in standing or walking spreads slightly inwards, its inner border making an angle with the inner border of the foot, and leaving a gap between it and the second toe; the second toe is the longest; the joint of the great toe forms a distinct bulging both outwards and upwards as well as downwards; and a considerable part of the sole, corresponding to the arch of the foot, does not touch the ground in walking. Further, in walking, the chief movements of the foot take place at the ankle and tarso-metatarsal joints.

In the ammunition boot the inner border does not allow the great toe to spread sufficiently inwards, and in many cases presses too tightly over the joint. The longest part of the boot is in its centre, instead of being opposite the great and second toes, and the "waist," or that part corresponding to the arch of the foot, is thick and unyielding, allowing little movement at the tarso-metatarsal joint. Blisters and excoriations are particularly liable to occur on certain parts. Those on the sole can hardly be attributed to the shape of the boot, while those over the middle joints of the smaller toes are generally due to the boots being too short and the toes consequently fixed; but excoriations are also common at the inner and outer sides of the feet over the metatarsal bones, and are due to a defective seam joining the "side lining," probably a useless addition to the boot. Similar excoriations are caused a little further back by the seam joining the "quarters" or side pieces to the front. If this seam were vertical instead of oblique, it would be shorter and would press less on bony parts. At the same time the boot would be more durable, as the extremity of this seam is one of the first parts of the boot to give out. To avoid all sources of friction over the instep a boot which has a great deal to recommend it has been introduced into some European armies in which the lacing is rather to the outer side. A boot can be made in this way with the whole of the upper of one piece of leather, and only one short seam on the outer side. There is certainly a good deal to recommend this method.

Blisters are common on the heel from too much play being allowed, owing to the hard leather not adapting itself to the narrow part between the malleoli and the heel; if the quarters were made of thinner, softer leather this would be avoided, while more play would be given to the ankle-joint, which is too much restricted by the present boot; and nothing would be lost in durability, as these parts have not hard wear, and outlast the other parts. The stitching in two lines at the back of the heel to fix the stiffening is often a source of blisters.

The leather, from constant application of blacking, in time loses all the suppleness it may have possessed; but if appearance could be sacrificed to utility, apparently a great difficulty in all matters connected with soldier's clothing, and grease or dubbin used instead, while at the same time if thinner waists and lighter leather were used for the quarters, the boots would be sufficiently supple.

The weight, also, is excessive; a pair of the "winter issue," which are shod with nails, for a man of average size weigh 4½ lbs. Besides adding to the fatigue of the feet, since a second pair is carried in "marching order," 8½ lbs. in boots alone is a serious encumbrance. The French infantry at present have a very serviceable boot, weighing about half this. If the alterations in the leather for the quarters and waists were made, together with thinner iron tips and heels and fewer nails, an appreciable diminution in weight would be achieved.

While pointing out certain details in which the regulation boots might be improved, we do not wish to imply that they are altogether defective, for we are aware that they are not infrequently selected by officers as shooting boots in preference to others, nor that by introducing these improvements footsoreness would become a thing unknown: but an improved boot, in conjunction with care as to other points to which we have drawn attention, would materially lessen the number of cases which usually occur when a force starts on a march.

MEDICAL CERTIFICATES OF DEATHS FROM VIOLENCE.

At an inquest recently held at Lichfield respecting the death of the Rev. Prebendary Smith, which resulted from a fall downstairs, the deputy coroner is reported to have expressed regret that the medical practitioner who was in attendance during the last illness of the deceased was not "better up in the law" than to give a certificate in the case of a death resulting from an accident. We may be excused for expressing surprise that a deputy coroner should be unaware that under the provisions of the Births and Deaths Registration Act of 1874 a registered medical practitioner is bound to give a certificate, to the best of his knowledge and belief, of the cause of the death of any patient he may have attended during his or her last illness. If, therefore, in the case referred to, the medical certificate duly set out the fall downstairs as the primary cause of death, it is clear that the medical practitioner merely performed his statutory duty under the Registration Act in filling up and issuing the certificate, and the deputy coroner only showed his ignorance of the law in taking exception to such action. It is, however, equally clear that if the certificate gave the accident as the direct or indirect cause of death, the case should have been referred to the coroner previously to the registration of the death, and if the local registrar neglected so to report the death he committed a serious breach of his express regulations on the subject, which should be reported to the Registrar-General. There is no difference of opinion between coroners, the medical profession, and the Registrar-General as to the urgent desirability that all deaths resulting directly or indirectly from violence should be reported to the coroner before registration or burial. The law, however, as it now stands has not provided any satisfactory means by which this desirable course may be secured. It is clear that all such cases cannot automatically come to the knowledge of the

coroner, of his officer, or of the police, and it is equally clear that the coroner must depend upon the medical practitioner and upon the registrar for intimation of a considerable proportion of cases respecting which he has to decide whether it is necessary to hold an inquest. Co-operation between the medical practitioner and the registrar may, moreover, be said to be necessary in order to secure this desirable reference to the coroner. Unless, therefore, the form of violence contributing to the cause of death is set out in the medical certificate the registrar is unable to carry out his instruction to report all such cases to the coroner. On the other hand, in some cases—which should invariably be reported to the Registrar-General—the registrar may neglect his instructions on this subject. Under these circumstances, the medical practitioner will, in certain cases, be justified in hesitating which of two courses he should take with regard to giving a medical certificate relating to a death of which any form of accident or violence has been a contributing cause. If he gives a certificate in which the accident or violence is referred to as a contributing cause, he has fulfilled his statutory and moral duty to the public. If, on the other hand, he wishes to assure himself that the case is reported to the coroner, he will be fully justified in withholding his certificate until he hears that the case has been reported to the coroner, and that he has decided that an inquest is unnecessary, after which the medical practitioner would be bound to give such certificate as the case appears to require. There appears to us to be only one course of action on the part of medical practitioners in the class of cases now under consideration of which coroners would have a right to complain, that is, if a certificate is given which ignores or conceals the fact that any form of accident or violence has been a contributing cause of death. We are free to acknowledge that the wishes of the relatives of a deceased patient to avoid an inquest not infrequently furnish a strong incentive to such a course, which is, however, one that cannot be justified, and which would not only constitute a violation of the spirit, if not of the letter, of the Registration Act, but would reasonably expose the medical practitioner to unfavourable comment by the coroner and by the general public.

EDINBURGH AND LEITH.

At the meeting of the Leith Dean of Guild Court on November 18th the application of the Edinburgh Local Authority for power to erect a temporary hospital for infectious diseases again came up, and was again on most trivial pretence postponed for six days. These repeated delays are becoming a public scandal and a danger to the public health.

THE INDIAN GOVERNMENT AND DR. HAFFKINE.

A well-informed correspondent writes to us from India that our recent notice regarding M. Pasteur and Dr. Haffkine, published on October 5th, is likely to convey a wrong impression as to the relations of the Government of India in connection with Dr. Haffkine. From July 1st, 1893, to March 31st, 1895, the Government of India allowed him 15 rupees per diem, and first-class travelling allowance for himself and customary allowance for servants and baggage. The residents of Lucknow granted Dr. Haffkine 1,625 rupees, and the Maharajah of Patiala 1,000 rupees. Dr. Haffkine generally lived with medical officers, so that his personal expenses were not considerable. It is not at all intended to imply by this any disparagement of the disinterested and admirable labours of Dr. Haffkine, but, at the same time, it would not be right to let it be thought that the Government of India did not, to the extent of its ordinary powers, recognise the importance and value of his services.

"MEDICAL AID FREE WITH A POUND OF TEA."

Some time ago we described the odd scheme of a firm of grocers at Liverpool, who sought to attract and retain customers by promising to supply regular purchasers of their tea with medical treatment free of charge. We are glad to be able to state that we have now received written assurances, which have been published in our columns, from the three medical men whose names were advertised, stating that they have severed their connection with this curious new form of commercial enterprise. The connection in each case seems to have been of short duration, and the scheme—which was certainly calculated to lower the medical profession in the eyes of the public—has thus, through the publicity which we have given to the matter, been nipped in the bud.

A STATUE TO PASTEUR.

It has been decided to honour Pasteur in the district where his first experiments in vaccinating sheep stricken with anthrax were carried out. These experiments were made at Pouilly-le-Fort in 1881, and in grateful memory of the benefits which accrued to agriculture as the result of these scientific experiments a statue is to be erected to Pasteur at Melun, near Fontainebleau. A committee, consisting of members of the agricultural and veterinary societies of the Department of the Seine-et-Marne has been formed for the purpose of receiving subscriptions.

THE LATE DR. THOMAS KEITH.

At the first meeting for the present session of the Glasgow Obstetrical and Gynæcological Society a resolution was unanimously adopted expressing sincere regret at the loss which the Society and the profession had sustained by the death of Dr. Thomas Keith, an Honorary Fellow of the Society, and a vote of sympathy with Mrs. Keith and her family was passed. The resolution contained the following passages: "We record our high admiration for him as a man, and as a noble example of what a physician should be. The work he did has placed his name in the forefront of the medical profession, and the fact that much of it was accomplished in great physical pain adds to our admiration for the man whose skill in alleviating the sufferings of others was only equalled by the fortitude with which he bore his own."

INFLUENZA STATIONARY.

The information which has reached us since the publication of the results of our special inquiry last week is, on the whole, of a reassuring nature. In London the number of deaths attributed to influenza was 11 as compared with 10 in the preceding week, but the deaths referred to diseases of the respiratory organs showed a notable decline, and were 84 below the average. This decline is the most satisfactory evidence we have that influenza is not spreading, at least with any rapidity, in the metropolis, since were it doing so its well-known effect in increasing the death-rate from these diseases would have been felt before now. While we may express the hope that the absence of any rapid extension of the disease is an indication of its early disappearance, we must confess to feeling no very rooted confidence that this is the true interpretation of the facts. The latest returns report 4 deaths in Islington, 2 in Mile End Old Town, and 1 each in Kensington, Westminster, Camberwell, Lee, and Chorlton. The earliest of the recent epidemics in London probably began in much the same way by scattered cases in various metropolitan districts during October and November. Moreover, we

hear of numerous cases which, though not always called influenza, are yet suspiciously like our old enemy, in many parts of the West End. In Bristol, as we gather from a communication obligingly sent to us by Dr. Davies, the medical officer of health, matters are very much the same: cases of undoubted influenza, in which the catarrhal symptoms predominate over the nervous, have been treated in some districts, but there are no indications of extensive prevalence. London is at present the key to the situation, for, as has been mentioned by several medical officers of health to large towns in their recent communications to us, past experience has shown that, once the epidemic really lays hold of London, its extension to the provincial centres of population is only a matter of a short time—on the average about a fortnight.

A MEDICAL EXPLORER.

The medical profession has yielded several explorers. Their names are enrolled among those who have helped to rescue Central Africa from barbarism. Emin Pasha and Dr. Parke will not soon be forgotten. Among the feats which had hitherto baffled the efforts of the most intrepid travellers was the exploration of Lake Rudolf. Thomson and Gregory both tried to reach the lake from Masailand, but were defeated in their endeavours by the hostility of the native tribes and the dangers of the climate. A young American medical man, Dr. Donaldson Smith, has, however, succeeded in reaching Lake Rudolf from the north through Somaliland. He is thus the first white man who has visited this *terra incognita*, and geographers are looking forward with interest to the publication of his records and diaries. Dr. Smith was in Somaliland on a sporting expedition, and hearing that no white man had ever penetrated to Lake Rudolf from the north he determined to make the attempt. He came to England, and made preparations for this serious and dangerous expedition. He left London last May, and took with him Mr. Gillett, a taxidermist, and Mr. E. Dodson. The former was obliged to return home. It has always been believed that Lake Rudolf lay in the midst of a fertile country, rich in ivory, but peopled by implacable and hostile tribes. We congratulate our medical colleague on being the first to bring light into this dark continent.

SUGGESTED REORGANISATION OF THE INDIAN MEDICAL SERVICE.

Amongst the mass of correspondence which we have received on the subject of the reorganisation of the medical services recently proposed by Mr. Ernest Hart, the following letter, which comes from an eminent P.M.O., is one of the most succinct. We have a great number of others of similar effect, but this, perhaps, puts the case as shortly and clearly as could be desired: "In acknowledging the receipt of a copy of your address on the Needs of India and in compliance with your circular request for comment, etc., I feel myself bound to say that the thanks of every unprejudiced member of the medical profession in India are due to you for the fearless way in which you have expressed what must be the ideas running in the minds of all. You seem to have grasped the subject in a manner truly astonishing, and you appear to be quite aware of the absurdity of the *raison d'être* for the continued existence of the civil medical department put forward by its late head, namely, that it serves as a reserve for the army in time of trouble. Was ever such a futile protest made to prop up a falling institution? To supply the wants of a single division mobilised in Bengal Indian medical officers had to be called from civil stations and from Madras and Bombay, and the leave of medical officers stopped all over the country. This was for a single division for Chitral. Now, supposing an army corps was mobilised, say, to watch the frontier, all the medical schools and colleges must close their doors, and the gaols and civil stations be left without medical aid, or handed over to the few native hospital assistants who could be spared from military service. In fact, the total dislocation of the civil medical service, such as it is, of the country must follow if military operations were prolonged. What I wish to insist on is that the present number of men who are told off for military duty is insufficient to supply the wants of native regiments alone, and that the calling out of the so-called reserve—that is, the portion of the military medical service lent for civil duties—for the purposes of field and base hospitals would utterly paralyse the medical service of the country. The remedy you suggest is the only possible one—namely, the creation of a highly paid civil medical service. This might be recruited from the present Indian Medical Service by calling for volunteers, those preferring it being transferred to the medical staff, which would then undertake the military services of the country. To advocate such an upsetting of vested interests and fat sinecures you must be prepared for all the abuse that their holders can heap on your head, but if you persevere you must succeed. The present position is utterly untenable. Medical men who have served a lifetime in civil duties are suddenly pitchforked into principal medical officerships, with the duties of which they are utterly unacquainted, with the result that they depend entirely on their native clerks, whose long service in the district office makes them in ordinary routine matters fairly capable advisers."

THE SICK POOR IN IRISH WORKHOUSES: DONEGAL.

In commenting on the deplorable condition of the lunatic class in the Donegal Workhouse, our Commissioner quotes the opinion of the Lunacy Commissioners (as expressed in their report of July, 1894) on the treatment of these most unhappy patients throughout the workhouses of Ireland. Unfortunately, it would seem that each Board of Guardians has been content to assume that the general denunciation of sins of omission and commission in this respect applied, as in the case of pulpit condemnations, to their neighbours only, and had no reference to themselves. Our representative, however, brings home the accusation of inhumanity and neglect in this case by a plain statement of facts, almost inconceivable to those who do not know what horrors a bad system, ignorance, and poverty may conjointly produce in the administration of our Poor Law. At Donegal the old cells are in use, two patients being in each cell: two women, semi-idiotic, semi-paralysed, and entirely helpless, lay in box beds on straw, in the dark unventilated cell; the three epileptics who were up had no other resting place than a bench in the corridor, a mere passage giving access to the cells; they were all in charge of a pauper. They looked unwashed and untended, as of course they were, in any true sense of the words. Surely the Lunacy Commissioners have power to enforce their mandates and put an end to this scandalous state of affairs. We hope that some scheme of amalgamating the unions will before long remove the poor idiots from the control of the local guardians to some central asylum where the helpless will be nursed, and all grades of mental disease suitably treated. The present condition of these poor wretches is a disgrace to our boasted civilisation.

"KISSING THE BOOK."

It appears to be exceedingly difficult to make the minor judges obey the law. Over and over again in these columns we have had occasion to refer to the flagrant illegalities committed by magistrates, coroners, and county court judges in not merely refusing to allow witnesses the right to take the oath in the new form, but in browbeating and bullying those who make that exceedingly reasonable claim. The last incident reported in the daily press is a particularly bad case. It is stated that at the Whitechapel County Court a few days ago a witness, who was himself Scotch, strongly objected to "kiss the Book" on the ground that it had been kissed by hundreds of people that morning, and that some of them had probably been suffering from disease. As our readers

are aware, the witness has an absolute right by statute to take this ground, and he was entitled to take the oath without further discussion according to what was originally the Scottish form, that is, by holding up his right hand without kissing the Book at all. One would have supposed that the county court judge, who was Judge Bacon, would have known this very simple point of law, especially as the late Home Secretary, in consequence of numerous complaints, addressed an official circular to all judicial officers specially calling their attention to the Act. It is reported, however, that what happened at Whitechapel was that the Scotch gentleman was first of all bullied by the usher, who told him "he must kiss the Book," and then reprimanded by the judge, who singularly enough told him he ought to have asked to have the Book opened, and finally compelled him to kiss it in that fashion, although the witness with perfect truth remarked that that "did not make it much better." We should really like to know what excuse is to be made for County Court judges, and even judges of the High Court, who persist in this childish disregard of what is now a well-known matter of elementary practice; and we sincerely hope that some of our readers will absolutely refuse to kiss one of these dirty and infectious Court Testaments, and will tell the judge to his face that he ought to know the Act of Parliament and to obey it.

TENURE OF POOR-LAW APPOINTMENTS IN SCOTLAND.

A CORRESPONDENT signing himself "Rusticus" sends us a striking instance of the high handed and inconsiderate manner in which parish councils in Scotland too often treat their parochial medical officers. He states that he has held the appointment of medical officer to a certain parish for more than a quarter of a century, and has never incurred censure. Recently, without it would seem any warning or reason assigned, he received notice that the parish council had by formal resolution determined that his appointment should end next May, and that advertisements should be issued for a medical officer or officers for the whole or two divisions of the parish before the meeting of the parish council next February. There can be no doubt that the parish council has the legal power, possessed previously by the parochial board, of giving a parochial medical officer in Scotland notice to terminate his appointment without assigning a reason. Parochial medical officers in Scotland, unlike their brethren in England, have no fixity of tenure. We last year pressingly suggested that they should organise themselves with a view to securing a remedy for this unfortunate condition of affairs, and offered to render any assistance we could in the the matter, but no attempt was made to adopt the suggestion.

THE "DAILY CHRONICLE" AND THE PRISONS.

IN the BRITISH MEDICAL JOURNAL of November 2nd exception was taken to a statement made in the *Daily Chronicle* to the effect that it was a "solemn finding" of the Prisons Committee that insanity was "produced in prisons by the very low and distasteful dietary to which habitual petty offenders are almost continually subjected." Our contemporary, in replying to our observations, quotes the passage in the report on which reliance is placed. It is to be found on p. 35 in connection with No. diet:

> As a considerable number of prisoners are sentenced for a week or less, and after discharge are repeatedly readmitted at short intervals, this very low and distasteful dietary becomes in their case practically continuous. As it is among such prisoners that cases of mental instability and unsoundness are most frequently found, we feel inclined to endorse the view expressed by the medical officer of Holloway Prison that this part of the dietary should be reconsidered.

The *Daily Chronicle* is illogical enough to twist this into a "solemn finding" that prison diet produces insanity. The petty offenders—for the most part chronic inebriates—who come under this scale of diet, and who are constantly being reconvicted, are not in the nature of things "level headed" people all round; and we entirely agree with the Committee in their opinion, implied in the recommendation we have quoted, that a continued low diet is not suitable for those who are either mentally or physically weak, and that the risk involved in so treating them should be minimised as far as possible. It must be borne in mind, however, that medical officers have ample powers given them for dealing with all such cases and to order whatever diet they think necessary. A special standing order, No. 142, was in fact issued by the Commissioners in February, 1886, on this subject, and it directs that cases of this class should be brought under the notice of medical officers with a view to an increase of the ordinary diet. The steady and continuous decline which has taken place in the death-rate of the prisons, from 11 per 1,000—at which it stood for several years before 1878, when the local prisons were handed over to the Commissioners—to 7.6 per 1,000—at which it stands at the present time—furnishes conclusive evidence of the way in which the work of the medical department has been conducted. Facts like these are, from a medical point of view, worth bushels of criticism founded on *a priori* theories as to the effects of imprisonment in lowering either the mental or physical health of the ordinary inmates of Her Majesty's prisons.

THE "NAUHEIM TREATMENT" AT BATH.

ARTIFICIAL "Thermalsoolbäder," we are informed, are now in use at Bath. By the addition of carbonic acid gas the "Sprudel bath" at Nauheim can be imitated. The Schott system of exercises can also be employed under medical direction. Thus the whole "Nauheim method" of treatment in cardiac affections has been introduced at Bath, as it has been at Buxton and at Llangammarch Wells in Central Wales. In the case of spas which possess waters of feeble mineralisation such as Bath, it is specially desirable in many cases that the indifferent thermal treatment should be supplemented by the employment of energetic hydrotherapeutic procedures, and this the authorities at Bath have already acknowledged by the introduction of the "douche-massage," as employed at Aix-les-Bains. A writer in a recent issue of the *Bath Chronicle* speaks of "Bath salts" under the influence of the carbonic acid gas being possibly "absorbed into the blood by cutaneous action." Regarding this, we believe that the theory of a therapeutic effect by absorption through the skin of salts from mineral water baths has been given up by most authorities.

ASHANTI EXPEDITION: THE WEAPONS SELECTED.

THE decision of the War Office to arm the men of the Ashanti expedition specially with the Martini-Henry carbine has been somewhat adversely criticised in certain military circles, and by some seized upon as an indication that the authorities are not quite confident of the power of the Lee-Metford rifle to stop a rush of fanatical natives. We are disposed to think that the War Office has been well advised in this matter, as the circumstances under which the expedition will have to fight—if they have to fight at all—are such that the value of the Lee-Metford rifle would be largely discounted. Much of the district through which the force will have to pass is a thick scrub, having only winding footpaths through it. Presuming the scrub and bush to be held by hostile natives, the opportunities for an aimed fire with weapons of high velocity and low trajectory will be few. On the other hand, the use of weapons loaded with slugs and missiles of that kind is likely to be of the greatest value. For obvious reasons, the War Office is adverse to permitting the Lee-Metford rifle or carbine to be used for ammunition of this nature; while the short barrel of the Martini-Henry carbine, carrying a long bayonet, will be of material advantage in the kind of country through which the expedition must operate. Another practical point is this. The expedition is really a mixed force of European and native troops. These latter are still armed with Martini-Henry rifles, and the

issue of carbines of the same type to both classes will remove the need for a supply of two species of ammunition—a circumstance always to be deprecated in military undertakings. Any doubt as to the efficiency of the Lee-Metford rifle or carbine to stop a rush of natives has not, we believe, actuated the War Office at all in their decision; the fact being simply that, under all the circumstances of the case, the Martini-Henry carbine is the more suitable weapon. We note with satisfaction that the non-commissioned officers of the bearer company are to be armed with revolvers and the men with the same carbine as that issued to the men of the rest of the force. Though not constituting an offensive element in the expedition, it is clearly a matter of common sense that the men of the Medical Staff Corps should be armed for defence against attack.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Council of the Royal Medical and Chirurgical Society have arranged to hold four special discussions during the course of the present session. They have been encouraged to persevere with this innovation, introduced last session, by the success of the discussion which took place in March last on the Affections of the Nervous System in the Early (Secondary) Stages of Syphilis. It brought out some really valuable contributions to the knowledge of a somewhat obscure subject, as was shown in the reports published in this Journal at the time. The subject of the next discussion, which will commence at the meeting of the Society on Tuesday next, will be the Possibilities as to the Latency of Parasitic Germs in Animal Tissues in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, and other Diseases. The President, Mr. Jonathan Hutchinson, in opening the discussion, will seek to define its scope and aim. The general experimental evidence as to the latency of micro-organisms in the bodies of men and animals will be dealt with by Dr. Washbourn, and Dr. J. Kingston Fowler will discuss the evidence as to the possibility of the virus of tuberculosis remaining latent for long periods. Dr. Phineas Abraham will deal with leprosy from a similar point of view, and Mr. J. Ernest Lane will discuss the latency period of incubation and recurrent activity of the poison of syphilis.

THE PRICE OF POPULAR GOVERNMENT.

It is part of the price paid for popular government that its machinery may be diverted from its legitimate use into a means of stultifying public opinion. It is within the power of a recalcitant minority, by packing a meeting with members who have a vote but through indifference have not followed the progress of a discussion, to overturn the deliberate resolution of men and women who have devoted time and thought to the solution of a problem. This has happened at Rugby. The Board had been for months considering the question of how to deal with the sick in the workhouse, and had at last decided to build a new infirmary; the plans had been drawn and had received the sanction of the Local Government Board. At the meeting of the Board, held on November 11th, the whole of this business was upset by the reopening of the question and an adverse vote recorded; as we read "that several of the guardians left the room immediately after the amendment had been carried," we conclude that certain members had made use of some wire-pulling. At any rate, it is most unfortunate that the present inconvenient and crowded infirmary is to remain. It has been patched and added to, but grave defects still exist, such as narrow staircases, up or down which it is a matter of extreme difficulty to carry the living or the dead; wards artistically decorated by a philanthropic lady but low-pitched and small, lacking dayrooms and without any of those accessories to nursing which are now considered necessary; sanitary arrangements out of date and inconvenient. We understand that it is now proposed to lengthen the infirmary wards; this means increasing the length of wards already too narrow without adding to the height, leaving the narrow staircases, which are a source of danger in case of fire, leaving the present quarters for the nurse, which do not admit of extension in the event of the necessary addition to the nursing staff, and not altering the defects in the bath and lavatory offices. When will guardians learn that money spent on patching is the most unsatisfactory of all expenditure, and when will they see that the perpetual referring back of plans to an architect, together with the incidental expenses, is a waste of public money, time and temper?

BACTERIA IN ICE.

The dangers incident to the consumption of ice obtained from polluted sources, as lakes or ponds receiving sewage, have been much insisted on; and not only have actual instances of the communication of enteric fever in this manner been quoted, but the bacteriological examination of different samples of melted ice have been adduced to show that the process of freezing has no influence on the number or vitality of the microbes. Ice water, for example, from the Spree, has been found to contain 1,700 to the c.cm., and from the Lake of Geneva 210, while melted hailstones yielded 72. But the recent experiments of Professor Christomanor, of Athens, go some way towards justifying the old and popular belief in the purifying action of congelation, which, as he shows, effects a partial separation of all impurities, concentrating them in the inner portion of the mass. Examining blocks of artificial ice from a factory supplied by a well, and others of water from the aqueduct of Hadrian, he observed in all a central core, forming about a fourth part of the entire volume, and, in its whitish, dull, somewhat granular appearance contrasting strongly with the perfect and colourless transparency of the surrounding ice. While the original water from the aqueduct contained 30 milligrammes of "organic matter" [solids lost in ignition?] in the litre, that from the clear ice showed only 2.8, while the turbid central portion gave 105.5. So with the water from the well, the 64 milligrammes in which were divided in the ice into 5.5 and 202 milligrammes per litre respectively. It is remarkable that, though the one water was charged with organic or presumably organic, impurities, to the extent of more than twice as much as the other, the relative proportions in which these were distributed in the ice were practically identical, being respectively as 9.3 and 351.6, and 8.6 and 311.3 to 100 parts, or roughly, $\frac{1}{37}$ of, and 3 to 3½ times the impurity of the water.

GLASGOW UNIVERSITY MEDICAL DEPARTMENT FOR WOMEN.

The women medical students of Queen Margaret College, now the women's department of the University, enter this week into possession of their new anatomical and histological laboratories. Queen Margaret College is situated in its own grounds, adjoining the Botanic Gardens, at a short distance from the University. The new anatomical building has been erected apart from the major college building, but within the grounds. It consists of a dissecting room, 48 feet by 28, lighted from the roof. A dado of white tiles runs in the walls, and above it a black board all round the room. Above the black board the wall is of adamant plaster. The room is provided with every convenience in the shape of wash basins, sinks, lifts, etc. There is a museum 33 feet long, 24 broad, and 38 high, provided with a gallery. The theatre is 25 feet square, the seats rising rapidly and in a semicircular fashion from the well, the windows being so arranged that the light is focussed on to the lecturer's table, and the board and wall behind. The theatre is seated for 100. Upstairs is a room 20 feet square, arranged for the meetings of the histology class. Besides these is a private laboratory for the lecturer, fitted with every convenience for microscopical work, a similar apartment upstairs for private students, cloak room, lavatory accommodation, etc., for the students, opening from the entrance hall, and in the base-

ment workshop and preparation rooms, furnace room, and rooms for the heating apparatus. The whole building was designed somewhat after the Oxford model, and is characterised by the simplicity, but rarity, and artistic quality of the detail. The cost of the building has been defrayed by the Bellahouston Trust, who have been satisfied that the progress of the medical school justified the expenditure. And the justification seems ample, for it was only in 1889 that this medical department for women was organised. In that year the students numbered 13. Now, at the beginning of the sixth year, the attendance is 67, while the total number of students in the college is 232. Of the ladies who have graduated in medicine and surgery, 2 are in practice in Glasgow, 5 are engaged in foreign mission work in India, 1 is in Egypt, and 2 are ready to proceed to China.

MEDICAL WOMEN AND THE LONDON COLLEGES.

The resolution adopted by the Council of the Royal College of Surgeons at its last meeting marks a distinct stage in the agitation in favour of the admission of women to the examinations of the Royal Colleges of Physicians and Surgeons in London—that is to say to the Conjoint Board in England. The Council of the College of Surgeons has now formally declared that it is in favour of granting the petition of the officers and teachers of the London School of Medicine for Women for the admission of women to these examinations. The Council, however, has not seen its way to give effect to this opinion in view of the opinion expressed by the College of Physicians, and adverse vote of the meeting of the Fellows and Members of the Royal College of Surgeons adopted at the annual meeting on November 7th.[1] The majority then was 10 in a meeting of over 100, and the majority at the College of Physicians was, it may be remembered, much the same. We may therefore anticipate that a solution of this difficulty in a sense favourable to the demands of women will be reached before many years are past, and that not improbably the general revision of the arrangements for medical examinations in London which must attend the creation of a teaching university for London will afford an occasion for recognising their claims.

DEGREES FOR LONDON MEDICAL STUDENTS.

The report of the important meeting of the teachers of the London medical schools, held on November 20th, which will be found in another column, will be read with much interest. The meeting was unanimous in resolving to ask the Government to introduce a Bill similar to that brought before the House of Lords by Lord Playfair last May, but with an added clause giving power to institutions or persons affected by any proposal made by the Statutory Commission to appeal to the Privy Council. Backed up by this unanimous expression of opinion, the deputation which it is proposed to send to the Lord President of the Council is assured of a favourable hearing. The Bill proposed to appoint a Statutory Commission to carry out the necessary adjustments to ensure that justice should be done to all interests, and it is confidently expected that with the reservation of an appeal to the Privy Council much of the opposition threatened last year will lose its force, and that the Duke of Devonshire will see his way to induce the Government to give facilities for the passage of the Bill at an early date.

THE RETIREMENT OF MR. LAKEMAN.

We have to announce the retirement of Mr. J. B. Lakeman, Her Majesty's Superintending Inspector of Factories and Workshops, with much regret, on account of the very active and useful life of nearly half a century spent in the service of the State. In 1881-2 Mr. Lakeman undertook the arduous work of visiting the London retail bakeries, in which gross evils were found, and his reports on them were largely printed in the press. The upshot of the agitation was the passing of a new Act in 1883, giving the sanitative condition of all retail bakehouses over to medical officers of health, whilst the other portions of the Act remained in the hands of Her Majesty's Inspectors. One of the gravest tasks undertaken by him was an endeavour to grapple with the growing evil of the sweating system in the clothing and boot and shoe trades. He gave evidence before several Commissions, notably the Sweating Committee, wherein he laid all his experiences of the various aspects of those trades before its members upon the insanitation, overwork and deprivation of time for meals, and the hardships inflicted upon the females employed in them, his statistical report of 1887 being an exposure of the sad evils appertaining to these trades. He contributed articles to the *Sanitary Record* in which the history of the sweating system was plainly stated. He then took charge under the Act of 1891 of all the workshops in London as the administrator of the law and director of a staff of officers appointed to serve under him. Mr. Lakeman's retirement will be a loss to the public.

THE PROPOSED NEW HOSPITAL NEAR DUBLIN.

At a conjoint meeting of the Sections of Medicine and State Medicine of the Royal Academy of Medicine in Ireland, held on Friday, November 15th, the subject of the proposed hospital for infectious diseases was under consideration. Dr. Grimshaw, President of the Royal College of Physicians, presided. Dr. J. W. Moore read a paper entirely hostile to the proposal, and Sir Charles Cameron, superintendent officer of health, followed in support of the scheme. A long discussion followed, in which the President of the Academy, Dr. James Little; Sir Thornley Stoker, President of the Royal College of Surgeons; Dr. W. G. Smith, Dr. C. F. Moore, Mr. Thomson, Vice-President of the Royal College of Surgeons; Mr. Tobin, Dr. Parsons, Dr. Craig, Dr. Falkiner, and other took part. The speakers strongly opposed the erection of the hospital for general infectious diseases, but they were generally in favour of a hospital for epidemic small-pox or cholera, and of convalescent homes. Sir C. Cameron, in his reply, said he would advise the abandonment of the larger scheme, and would only proceed with the suggestions that had received approval from the meeting.

INFECTED CABS.

A rather curious case, illustrating the divided responsibility which exists as to the measures necessary for the prevention of the spread of infection, came before Mr. Sheil at the Westminster Police-court on November 18th. It appears that on November 9th Dr. J. J. Marsh, Honorary Physician to the Chelsea, Brompton, and Belgrave Dispensary, saw a case of diphtheria in a child at the dispensary house in Sloane Square. He told the mother to take the child home, and, on her way, to leave the notification certificate at the Chelsea Town Hall. At her request he allowed the dispensary porter to call her a cab. At the town hall the sanitary inspector took the number of the cab, and told the cabman to drive the patient and mother home, and return. On doing so the cabman was told that the child was suffering from diphtheria, and that his cab must be disinfected. Owing to the time this process took he incurred a loss which he estimated at £1. The sanitary authority refused to compensate him, and he sued Dr. Marsh. The magistrate said that he was satisfied that Dr. Marsh was not liable. Having obtained a decision on that question of principle, Dr. Marsh offered to compensate the cabman, but Mr. Sheil intervened, and said that he would cause inquiries to be made, as the case might be one for the Court to relieve. Everyone will feel that it is a hard case for the cabman, and will not withhold from Dr. Marsh his meed of sympathy. At the same time it seems hardly right that the cabman should be compensated out of funds subscribed for charitable purposes. In equity, if not in law, the charge ought to fall upon the sanitary rate. Similar difficulties, which used to be of somewhat common

[1] British Medical Journal, November 9th, p. 1179.

occurrence, have been met to a large extent by an arrangement between the Metropolitan Asylums Board and most of the institutions which treat out-patients in London. Under this the Board undertakes, on receipt of a message by telegraph or telephone, to send an ambulance to remove a patient suffering from any of the infectious diseases treated in its hospitals. By this shortening of procedure not only is a great deal of time saved, but all those troublesome questions which must arise when the infected person is taken home by friends are avoided. The advantage to the patient, also, is obvious, and the general extension of this plan to all the public medical institutions treating out-patients is much to be desired.

SHEFFIELD AND THE VICTORIA UNIVERSITY.

An effort is being made to obtain the admission of Firth College, Sheffield, as a college of the Victoria University. An application was laid before the Court of the University on November 14th, and from the favourable manner in which the application was received there is little question that, provided the needful requirements can be complied with, Sheffield will soon enjoy the advantages of a University college. Associated with Firth College in their application are the Medical School and the Technical School, and it is suggested that the three institutions should be merged into one under the name of the Sheffield University College. The application for incorporation with the Victoria University was referred to the Council of the University for consideration, and afterwards it will again come before the Court to decide as to the admission of Firth College. There has been for some time great activity in the work of Firth College, and under the able guidance of the Principal, Professor Hicks, F.R.S., its usefulness and reputation have been greatly enhanced. The Medical School, established as long ago as 1828, has been keeping itself well abreast of the times, and particularly in the anatomical and physiological departments is the increased energy conspicuous. The Technical School is also doing good work in an essentially industrial centre. Events, therefore, have been making for the step which is now contemplated.

CLOTHES AND COLD-CATCHING.

Dr. Cleveland, in a paper read at a recent meeting of the North London District of the Metropolitan Counties Branch, gave some interesting hints as to the cold-catching and its avoidance. After referring to the damage which may be caused to internal organs—weak, perhaps, owing to previous disease or a delicate constitution by the congestion due to the action of cold on the surface—he went on to refer to the theory propounded many years ago by Sir Henry Holland in the following words: "It is .... a question here whether variations of atmospheric temperature may not induce a state of body rendering it more liable to receive specific infections however generated by agents without." This view, as Sir William Priestley, who presided at the meeting, observed, has found support in the observations of Pasteur on the effect of lowering their temperature in rendering fowls liable to contract anthrax. The hypothesis, Dr. Cleveland went on to point out, suggests the desirability of specially protecting the body by warm clothing, exercise short of fatigue, and a diet perhaps more generous than usual during an epidemic of influenza such as that which appears now to be threatening London. He pointed to the great difference between the warmth of day and evening garments as worn, not only by women but by men, as a source of danger; and, in the case of the sterner sex, to the peculiar perversity of the tailor, who will make a waistcoat with a front of woollen stuff or even of fur, and a back of cotton material. Another piece of practical wisdom in the paper was a strong condemnation of the false pride which causes old and delicate people to go to bed with cold feet, and remain awake in consequence half the night, rather than confess to the comfort of a hot-water bottle.

THE HUXLEY MEMORIAL.

The first meeting of the General Committee of the Huxley Memorial will be held on Wednesday, November 27th, at 4 P.M., in the Museum of Practical Geology, Jermyn Street, his Grace the Duke of Devonshire, Lord President of the Council, in the chair. Resolutions with respect to the form of the memorial will be submitted to the meeting.

THE REGIUS PROFESSORSHIP OF SURGERY AT DUBLIN.

As we announced last week, the Board of Trinity College, Dublin, met on Saturday, 16th November, and proceeded to consider the nomination by the Academic Council of Dr. Ball to the office of Regius Professor of Surgery, in succession to the late Sir George Porter. At the previous meeting four voted for the vetoing of the nomination and four in support of it; but on Saturday last the voting was five to three in support of the nomination, one of the members having changed sides. Dr. Ball was therefore formally appointed to the office.

DIPHTHERIA IN LONDON.

Although the mortality from diphtheria showed a slight decline in London last week, the number of deaths attributed to this disease continues to be excessively high. The fatal cases, which had been 61, 72, and 75 in the three preceding weeks, declined again to 61 during the week ending Saturday last, November 16th. During the past five weeks the deaths from diphtheria in the metropolis have averaged 69, a higher number than in any similar period since the end of 1893. The 61 deaths last week were all of young persons under 20 years of age, and included 44 of children under 5 years of age, and 17 of young persons aged between 5 and 20 years. After distributing the fatal cases that occurred in the Metropolitan Asylums Hospitals and other public institutions to the sanitary areas in which the patients had previously resided, it appears that 4 cases belonged to Kensington, 3 to Chelsea, 7 to St. Pancras, 7 to Mile End Old Town, 7 to Camberwell, and 4 to Greenwich. There were 678 diphtheria patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, and 104 new cases were admitted during the week.

INFECTIOUS "PNEUMONIA."

In reporting on an epidemic of diphtheria at Flint Dr. Reece, one of the medical inspectors of the Local Government Board, makes mention of an interesting outbreak of a pneumonic character, to which his attention had been directed. The disease made its appearance in the town while the population was suffering severely from privation and want, and while the town was undergoing a visitation of influenza. All the signs of typical pneumonia were present in the cases, the temperature rapidly rising to and remaining at 104° or 105° F. When death took place it occurred generally in the first four days of illness. The first three cases all occurred in one house. A young man, his mother (who nursed him), and an old man were attacked at short intervals of time, and all died. There were in all some 35 attacks heard of, and as many as 20 deaths recorded as due to pneumonia from January to July 9th last. They were widely scattered for the most part, having little or no relation with each other, though certain of them occurred within a small radius, and in families, giving reason to suppose that the malady had infective properties. Local opinion was opposed to the idea of its being typhus fever. Several deaths were put down to pneumonia as a sequela to influenza. Omitting cases of a doubtful nature, the ages of the fatal attacks averaged 41 years, and of the non-fatal cases about 34 years. One medical man, who was practising during the typhus epidemic in Flint in 1887, declared that the clinical features of the "pneumonia" were unlike those of typhus fever.

DEGREES FOR LONDON MEDICAL STUDENTS.

Meeting of London Teachers.

A general meeting of the teachers in the medical schools of London was held at Examination Hall, Victoria Embankment, on Wednesday afternoon, to consider a resolution pressing the Government to appoint a Statutory Commission to deal with the recommendations of the Gresham University Commissioners. The hall was well filled. Dr. Frederick Taylor presided over the meeting.

In his introductory remarks, the Chairman said that the meeting was called with the object of furthering the establishment of a university, by modifying the constitution of the existing London University—such as would meet the requirements of those who demand for teachers a prominent share in the management of the University, and of those, like themselves, teachers in the London medical schools, who were anxious that the medical student in London should have easier access to a medical degree than he had at present. The history of the exertions made in that direction went back at least eleven years, when, in 1884, the Association for Promoting a Teaching University in London was formed. No action was taken, however, until about three years later, when, in 1887, the two Royal Colleges, the Royal College of Physicians and the Royal College of Surgeons, petitioned Her Majesty in Council that they might have the power of granting degrees in medicine and surgery, and drafted a charter with that object. The teachers in the medical schools had supported that object by presenting to the Royal Colleges a document, signed by over 200 teachers, to the effect that they "earnestly hoped that the Royal Colleges will use their best endeavours to obtain the powers of granting a degree in medicine. If this power be obtained, it will offer to students of the metropolitan schools an advantage already possessed by students of most of the educational colleges in the country." Simultaneously with that move on the part of the Royal Colleges, the Association for Promoting a Teaching University in London petitioned for a charter enabling them or others to found such a university. At the same time, University and King's Colleges presented a scheme for an Albert University, founded very much on the lines of the Association. The result of the petitions was the appointment of a Commission to make a full inquiry into the whole subject. In their report issued to Parliament on May 30th, 1889, the Commissioners expressed their opinion that the case for a teaching university was made out, and that the demand for a medical degree on the part of the London student was a just one. They did not support the plea of the Royal Colleges for power to grant a degree, but recommended that a reasonable time should be allowed to the Senate and Convocation of the University of London to consider whether they would apply for a new charter to attain the end desired. Should they do that the Commissioners would recommend that the request of University and King's Colleges should not be granted. The University of London made various attempts to modify its constitution in order to meet the case, but failed to carry out the recommendation of the Royal Commission; and the promoters of the Albert University maintained that their scheme held the field. But there was opposition in other quarters, namely, the provinces, and coming forward at a time when the Government of the day was in its last year of office, the draft charter of the Albert University, under the name of the Gresham University Scheme, was referred to another Royal Commission in April, 1892. That Commission was presided over by Lord Cowper, and was larger and more representive than the former. A large number of sittings was held during the summer and autumn of 1892, and the Commissioners' report was issued in January, 1894, recommending: (1) That there should be only one university in London; (2) that the existing University should be reconstructed to meet the desired object; and (3) that the changes recommended should be effected, not by charter, but by the appointment of a Commission with statutory powers to settle arrangements in accordance with the Commissioners' recommendations. The first recommendation implied the principle that the functions of examining and teaching could be adequately fulfilled by one university, and from that principle only two out of the thirteen Commissioners dissented. As yet, however, no such Commission with statutory powers had been appointed. In the meanwhile the position of the London University had undergone a change. At the meeting of the Convocation in January, 1894, a resolution was agreed to, arranging for a consultative meeting of the Senate and Convocation with reference to the course it should adopt. At the meeting in May Convocation nominated an Annual Committee, consisting almost entirely of members favourable to the modification of the London University in the way desired. In January last a motion to the effect that one university alone was desirable in London was carried by 206 to 175; and in May a motion to rescind that and accompanying resolutions was rejected by 240 to 119, or 2 to 1. In the meanwhile steps were being taken by other bodies interested in the proposed new University; and on January 22nd, 1895, the then Prime Minister, Lord Rosebery, received a deputation consisting of delegates from those various bodies, and on hearing, later in the same day, the case for the opposition presented by themselves, stated that the convictions of the Government rather pointed in the direction of the appointment of a Statutory Commission for framing such a scheme. On May 9th a Bill was introduced in the House of Lords by Lord Playfair for the Government, intituled, "An Act to make further provision with respect to the University of London." That Act arranged for the appointment of Commissioners "to make statutes or ordinances for the University of London in general accordance with the scheme of the report..... but subject to any modifications which may appear to them expedient after considering any representations made to them by the Senate or Convocation of the University of London, or by any other body or persons affected." It was further provided that all such statutes or ordinances should be laid forthwith before both Houses, to come into effect forty days after being so laid before Parliament. He (Dr. Taylor) had now, he thought, brought the history of the movement to the point at which he might hand over to the mover the resolution. It was within the memory of all that in the end of June Lord Rosebery's Government resigned, and Lord Playfair's Bill never became law. What was before them now was to urge the present Government to take steps similar to those which the late Government had already initiated. Finally, he wished to impress upon those present at the meeting, first, that that meeting of the teachers in the London medical schools had been arranged for by the delegates representing those medical schools for the purpose of promoting the formation of a teaching university by suitable modifications in the existing University of London, so that one university should be all that was required; secondly, that that university should be constituted by a Statutory Commission; and, thirdly, that there should be a right of appeal to the Privy Council previous to the statutes and ordinances being approved by Parliament.

Dr. Norman Moore then moved:

That the Government be requested to introduce at an early date a Bill similar to Lord Playfair's London University Commission Bill, 1895, appointing a Statutory Commission to carry out the recommendations of Lord Cowper's Commission; but with an added clause giving (in accordance with precedent Acts of similar tenour) to all institutions or persons directly affected by any Statute or Ordinance proposed by the Statutory Commission a right of appeal to the Privy Council for the disallowance or alteration thereof, previous to such Ordinance being laid before Parliament for confirmation.

He said that having attended meetings upon the matter since the spring of 1884 he could confirm from personal knowledge all the details which the Chairman had given except some of those referring to what had taken place within the walls of the University of London. First of all he would speak of the difference in the wording of the resolution on the card of invitation sent out and that on the printed form, as he had moved it, the words "deal with" being inserted in the one and "carry out" in the other. The wish to change these seemed to be based upon some want of consideration of the nature of a Statutory Commission. Most things which had to be settled by Parliament came before Parliament in all their details. A Statutory Commission was an exception to the rule; it proposed to deal with people's prospects and with their property without laying down the precise ways in which

their prospects or their property should be dealt with. It seemed, therefore, that when a Statutory Commission of that kind was formed, it was highly important that there should be some limits to its powers in dealing with the subject. Therefore he was strongly in favour of that form of resolution which he had moved which would enable the Statutory Commission to carry out the principles of the report of Lord Cowper's Commission, but would not allow that Commission completely to metamorphose the report, and give them something of which they had not yet heard. He supposed that everyone was acquainted with the details of the report of that Commission, and the very simple question before them was, Were they content with it? They had been endeavouring to do something in that way for eleven years; was the point which the subject had reached one that was satisfactory to them? If it were they must go on; if it were not they ought to declare that it was unsatisfactory, and that something else should be done. On former occasions it had been frequently said that what they wanted was some way of giving a cheap and easily-obtained degree. Such a suggestion could only have been made by someone who lived within a little narrow circle, some town or association where people kept before them the getting of a degree as the sole end of university life. Such an idea could never have come into the head of any one who was acquainted with two things—first of all with the teachers of London assembled at that place, and secondly with even the elements of University education. The object of a man in going to a university was not merely to get a degree, although of course he was unwilling to leave the university without obtaining one. But his object in going there was to get the highest kind of education in one particular direction, and the degree was merely a piece of evidence that that object had been attained. Out of certainly 300 meetings or more which he had attended he had never been present at one in which an impartial observer would have said that their general aim and wish was merely to obtain an easily earned degree for their students. In other places teachers had great powers of managing their own universities—it was so in the Universities of Oxford and Cambridge, and nearly all those in Germany; in other words, the direction of the higher kind of education was in the hands of those people who gave the education, and not of some outside person They felt that the teachers of London—he was speaking only of medicine, but no doubt it was the same in other subjects—had scarcely any influence in arranging the curriculum, and in deciding what was best for the students to know. It had been said that if the teachers had that power they would use it meanly in order to increase their incomes by inducing students to come to London. Was that a fact? Was that a just accusation to bring against any body of learned persons engaged in promoting the study of the vast series of subjects which were included under the subject of medicine? He maintained that it was not. Would the report of the Commission if carried out give them what they wanted? They wanted a sound university, one which would bring all the teachers, and no doubt to some extent all the students, together, and would provide that stimulus to work which everybody who had ever lived in a university knew was obtained in that way. Let them look back on their own university career and see what they had gained by it. It was an advantage to attend the lectures of celebrated people, and not a less advantage—in some cases even more advantageous—to associate with fellow students who were anxious to do all they could in their subject and with people who were learned in it, although they were not actually one's own immediate teachers at that time. Would the report produce that kind of university? In other words, would it give them the honourable advantage which they sought, and which they thought they had a right to claim? The governing bodies of the university as proposed in the report were the Senate, the Academic Council, the Faculties, the Boards of Studies, and the Convocation. Now, the Senate consisted of 66 members—about one-sixth of those would necessarily be people acquainted with teaching medicine. The Senate was the highest authority of the University; it was the court of ultimate appeal, the supreme governing body of the University, the representative of the University, in all its corporate relations. The Academic Council, according to the report, consisted of fifteen members, and a fifth at least of those would be teachers of medicine. That Council was the body which would arrange the curriculum—all courses of studies—and would lay down regulations for examinations. Remembering how small a body it was he thought they might say that medicine, though not in any way over-represented, had a representation which would enable its voice to be heard in all its own affairs. One must take bodies like that by the working of similar bodies in other places, such as the Council and Senate of the University of Cambridge. In such bodies it was not found that the professor of divinity was anxious that anatomy should be left out of the examinations. Therefore in such a council, so long as they were represented by competent men, it was their voices, which would have weight, and not mere voting power. Then the Faculty of Medicine was being represented there by an experiment. That was the Faculty of Medicine—they were the people who would be concerned in all the proceedings of the Faculty of Medicine. They would elect the very members of whom he had been speaking on to the Academic Council: they would appoint the Boards of Studies, three-fourths of them, and in many cases the whole; that was to say, it was highly probable that where an efficient Board of Studies was constituted by that three-quarters, there would be no further addition to it. They would also have the power of discussing and representing to the Academic Councils any views upon teaching and examination, and all the subjects relating to their Faculty. The Board of Studies was a body which met frequently, and gave advice to the Academic Council on all sorts of points which arose. The Boards of Studies would be very much like what were known as the Boards of Studies of the University of Cambridge, where sometimes very important points were discussed, and were afterwards represented to the Council. Finally there was the Convocation. Convocation was essential in all universities—some general assembly to bring the university all together at some time or other. That Convocation would have the power of electing the Chancellor and certain members who would represent it upon the Senate, the supreme governing body of the University. Would that increase the advantages to the students of education in London? He believed that it would, and they ought to ask to have the Statutory Commission appointed and have the matter settled. It was provided that there should be an appeal to the Privy Council. That was to avoid the possibility of injustice being done by so powerful a body as the Statutory Commission, and he strongly approved of it. He would say nothing about the objections to the scheme, because there was no end to answering such objections, nor to the misconstructions which were put forward. One of the most prominent men in this country had actually fought a duel on account of the results supposed to be likely to follow from the foundation of King's College. He gave that as an example of the extravagance to which objections might go. The sympathies of every town in which there was a university—Manchester, Liverpool, Leeds—all the Scotch universities and Oxford and Cambridge, ought to be with them in trying to found that university; and he thought they ought strongly to resolve to obtain the appointment of the Commission mentioned in the resolution.

Mr. Frederick Treves, in seconding the resolution, said that by no means an unreasonable question was, What was the origin of the movement, under what mysterious pressure had the agitation been moving? The motive was no other than that which had revolutionised education within the last fifty years in this country—no other than the expression of that very movement which had insisted upon the removal of all tests, all restrictions, and all limitations in education of all kinds, which had made it essential that all the advantages of education should be thrown open to the greatest possible number, and that should be done with limitation of no kind. The discussion had been very much hampered by the introduction of the average man. They wanted a degree for the average man; and the average man, although he had been been spoken of with a certain amount of contempt, was a person of some considerable importance—certainly numerically of the very greatest importance. The answer was

that if a student in London wished to take a medical degree there was the University of London, but the University of London was hardly fitted for the average man. The work done by that University could not be spoken of too highly; its degrees were great distinctions and amongst its ranks were some of the most distinguished men in the medical profession, but he did not think it could be said that it had a degree for the average man. The answer to that was: "We are not concerned with the average man; our wish is to develop the very highest flights of education; we are concerned, not with the average man, but with the distinguished and exceptional man." He believed that was one of the most fatal arguments, because the greatness of any university depended upon the fact that it appealed to the average man. There was no university in this country or the Continent of which it could not be said that its greatness depended upon the wideness of its application and the fact that it appealed to an enormous number, and not simply that it appealed to a few, and the London University would occupy a very much greater position if it appealed to the somewhat abused average man. As a matter of fact the average man met with little encouragement in London. The London University degree must be regarded as an onerous one. The argument that the proposed university was intended to undersell existing universities was a despicable one. It was said that there was a certain amount of jealousy of the success of provincial universities in Scotland. Those who were concerned in the present movement could not say too much in praise of the provincial universities, but they were naturally distressed that their students should actually remove from London. It did seem a deplorable thing that every year a large number of men were induced to cease to be educated in London for no other reason than that they were not provided with such facilities as they required. They wished to do what they could to provide for the necessities of their own men, and not be met with the sorry sight of students by hundreds leaving London to seek that which they could not obtain there. If the scheme were carried out the University would weld together all the multitudinous interests concerned in the medical education of London; all the little difficulties between this school and that would be lost in the one great scheme.

Dr. Isambard Owen supported the resolution. He said he could not help expressing regret that the words "to carry out" should have been retained, and the words "to deal with" should not have been restored to the text of the resolution. He and those who thought with him regarded the scheme of the Gresham Commissioners as offering a fair opportunity for a settlement of the University of London question upon a satisfactory basis; but they did not regard that scheme as altogether free from flaws, and in particular they were of opinion that there were certain details which, if carried out precisely as the Gresham Commissioners had laid down, would be disastrous to the interests of medical education. Their desire was that the Statutory Commission appointed by the Government should be appointed not merely to carry out the scheme, but should also have power to take fresh evidence upon that scheme, and to revise such portions of it as they should think necessary.

Professor William Ramsay, F.R.S., pointed out that the phrase "appointing a Statutory Commission" was similar to Lord Playfair's London University Commission Bill. He thought everybody agreed with the views Dr. Owen had expressed, and would not wish to see certain modifications inserted.

Dr. P. H. Pye Smith, F.R.S., also agreed with Dr. Owen. He thought it was most important that the resolution should be unanimously supported. The present scheme had several points in it which might be amended, but that was not the question before them, and they were not so foolish as to think that in that assembly they could amend an elaborate scheme of that sort. The question before them was whether the scheme of the Royal Commission was on the whole a good one—whether they would rather have that than nothing at all.

Professor Cunnow (of King's College) also supported the resolution.

Dr. A. D. Waller said it seemed to him that they must all be unanimous in the desire for a university, but what particular kind of university they were to have would lie, no doubt, with the Statutory Commission. He greatly desired to see the reintroduction of Lord Playfair's Bill, with the addition of the guarding clause.

The Chairman then put the resolution to the meeting, and it was carried unanimously, amidst cheering.

Dr. J. F. Payne then moved:

That all teachers be asked to sign the preceding resolution, as "approved" or "not approved;" and that the Chairman be requested to forward a copy of the resolution, with the signatures obtained, to the Lord President of the Council, and other copies of the resolution to the Prime Minister and the President of the Council of Education.

This was seconded by Mr. Pickering Pick, and unanimously adopted.

On the motion of Dr. Mitchell Bruce, seconded by Mr. Bland Sutton, the following resolution was assented to:

That the appointed delegates of the Medical Schools of London be requested to attend, with the representatives of other institutions concerned, a deputation to the Lord President of the Council, and to convey to him the wishes of this meeting as expressed in the first resolution.

A vote of thanks to the Committee of Management of the Conjoint Board for England for permitting the use of the theatre for holding the meeting was then passed, and the proceedings closed with a vote of thanks to the Chairman.

LEGISLATION FOR HABITUAL DRUNKARDS.

Deputation to the Home Secretary.

Sir Matthew White Ridley, Home Secretary, on Friday, November 15th, received a deputation on the above-mentioned subject, consisting of Cardinal Vaughan, the Rev. Canon Duckworth (representing the Homes for Inebriates Association), Dr. Norman Kerr (Society for the Study of Inebriety), Sir W. Charley, Q.C., Dr. Danford Thomas (coroner), Mr. F. Fowke (British Medical Association), and Mr. C. J. Maddison (Reformatory and Refuge Union). The Duke of Westminster, Sir Richard Quain (President of the General Medical Council), Sir William Broadbent, Dr. Long Fox (ex-President of the British Medical Association), also Messrs. Lees Knowles, M.P., W. Johnston, M.P., and Edmund Boulnois, M.P., wrote regretting their unavoidable absence and approving of the objects of the deputation.

Dr. Norman Kerr said that habitual drunkards, with the increasing proportion of diseased inebriates, especially females, constituted a menace to public order. Regarding police-court inebriate offenders, it was now generally agreed that the existing procedure was a miserable failure, and neither deterred nor reformed. There was a physical as well as a moral aspect of inebriety, and curative treatment had been recommended by six State reports. As to non-criminal habitual drunkards, the existing Acts of Parliament required amendment in the direction of facilitating the entrance of patients into homes for inebriates by rendering a declaration before one justice or a statutory commission sufficient instead of the declaration having to be made before two justices. Persons addicted to any narcotic, such as opium, morphine, chloral, or cocaine, should be included in the definition of habitual drunkard. There were few homes for poor inebriate women, and none at all for poor inebriate men. Provision ought to be made for habitual inebriates who could not afford to pay. It would not be a new departure in English jurisprudence to subject to compulsory seclusion inebriates who had not broken the law, as the existing system provided for the compulsory treatment of insanity, of which disease inebriety was practically a form. An effective measure would be incomplete unless it gave power for the curative detention of non-criminal habitual drunkards in retreats, and provision could be made guarding against any possible abuse of such power by the interposition of a judicial authority.

Cardinal Vaughan agreed that further power was required to commit habitual drunkards to homes, treatment in which had effected some 8 or 9 per cent. of cures.

The Rev. Canon Duckworth remarked that the legislation proposed by Dr. Kerr would not be in advance of public opinion, and that those for whom he spoke were as zealous

as anyone for the liberty of the subject, but failed to see why the liberty of the inveterate sot should be more respected than the welfare of his family and himself.

Sir W. Charley, Q.C., suggested the restoration of the compulsory clauses of the Bill of 1877. The percentage of cures affected in homes was more like 30 than the 8 or 9 that had been mentioned. Where was the "liberty of the subject" in such a case as that of Jane Cakebread, who had been committed nearly 300 times? Magistrates ought to have the option of sending such cases to homes instead of the prisons.

Dr. Danford Thomas said he was there to plead on behalf of the poor for the suggested amendments. During his twenty years' experience as coroner, he had daily held an inquiry into death due directly or indirectly to drunkenness. It was no more interference with liberty to send inebriates to be treated in homes than to send cases of infectious disease to hospitals, and the money that the public now had to pay for drunkards in prisons, workhouses, etc., would meet the expense of their curative treatment.

Mr. C. J. Maddison concurred, remarking that when industrial schools were proposed objection had been raised on the ground of expense, but experience had proved that what they cost the country in one way was saved in another, and that would also be the result of providing the proposed homes for inebriates.

The Home Secretary replied that it did not require such an influential deputation to convince him of the importance of the question. The difficulty of dealing with the non-criminal habitual drunkard was very great, but he could not ignore the reports of the committees to which reference had been made, and it would be of the greatest importance if he could strengthen the homes while at the same time guarding the liberty of the subject. To cure the criminal inebriates (some 6,000 females of that class were at present imprisoned) would be a saving to the country. Something ought to be done, and parts of the Bill of his predecessor in office might serve as a basis for tentative legislation.

Dr. Norman Kerr, having expressed the thanks of the deputation, the proceedings terminated.

REMUNERATION OF MEDICAL WITNESSES.

In last week's issue a letter appeared in our columns from Messrs. Lowndes, of Liverpool, and Hopkins, of Bath, joint Secretaries of the Police Surgeons Association, asking police surgeons to become members. The objects of the Association may be briefly stated: To protect the interests of police surgeons generally: to endeavour to get an increased scale of fees granted for giving evidence in courts of law as well as coroners' courts. With these objects in view the Association early in the year waited upon the Home Secretary and pointed out to him how inadequately medical men were remunerated for their service as witnesses, especially if residing any distance from the assize town, the present "liberal" pay being £1 1s. a day, second-class fare, 2s. 6d. a night, and in some districts not even that. Further, medical witnesses receive nothing extra if called upon to give expert evidence in more than one case during the day, which frequently happens—in fact, only this week one of the secretaries had to give evidence in 4 or 5 cases the same day, and, of course, only received the usual £1 1s. The Association, therefore, particularly wish to point out that this question does not affect them alone, but every qualified practitioner in the kingdom, as being liable at any time to be called upon to give evidence, whether he is living in the assize town or not. The remedy suggested by the Home Secretary was that police surgeons should apply for extra remuneration from those bodies who appointed them. Supposing such applications were favourably received, which is more than doubtful, it would not affect those witnesses who are not police surgeons, and of these, of course, there are a very large number.

Letters have occasionally appeared in our columns upon the above subject complaining of the scale of fees allowed, which were formulated about forty years ago. The subject has also been brought under the notice of the Parliamentary Bills Committee of the Association. We therefore think the Association worthy of support, especially as it affects the whole body of practitioners.

We understand that another deputation will wait upon the Home Secretary in the early spring. The President of the Association, Sir H. D. Littlejohn, has warmly taken the matter up, and with his valuable assistance it is hoped that a reconsideration of the scale of fees may be obtained.

THE MEDICAL PRELIMINARY EXAMINATION AT THE SCOTTISH UNIVERSITIES.

The Joint Board of Examiners of the Scottish Universities have just issued the statistics of passes and failures in the recent preliminary examination in Arts and Science and in Medicine of the four Scottish Universities. Detailed tables are given of the passes, etc., in the various subjects at each University. The following are the more important:

University.	Total Number of Candidates.		
	Entered.	Failed.	Passed.
1. University of St. Andrews	7	3	4
2. ,, ,, Glasgow.....	92	51	41
3. ,, ,, Aberdeen	23	12	14
4. ,, ,, Edinburgh	128	56	72

Arts and Science.

The following table shows what percentage the number of failures is of the number of candidates in the three subjects in which passes are allowed on more standards than one in the several Universities, and in the four Universities taken together:

Subject.	St. Andrews.	Glasgow.	Aberdeen.	Edinburgh	The four Universities.
Intermediate and Higher Mathematics...	50.00	51.59	28.00	38.18	42.54
Higher Latin ...	34.05	17.21	12.00	24.76	21.25
Higher Greek ...	13.59	15.48	12.25	7.50	12.92

The following table shows what percentage the number of passes is of the number of candidates entered for four subjects in the several Universities, and in the four Universities taken together:

—	St. Andrews.	Glasgow.	Aberdeen.	Edinburgh	The four Universities.
Percentage of [illegible]	57.14	42.11	52.00	50.41	47.47

The last time the Joint Board of Examiners issued such statistics we were flooded with a series of ill-informed letters and paragraphs in which it was sought to prove that this and that university or university town stood highest or lowest in matters educational. It may be as well, therefore, to point out that any inferences from these statistics as they now stand are of necessity entirely fallacious, and for this reason: A great many of the best students at Edinburgh and Glasgow never appear for the Preliminary Examination at all. They qualify themselves by taking the "leaving certificate," and very often they take the higher grade-leaving certificates, which means a much more severe examination than the "Preliminary."

It is a fact that most of those who gain bursaries at Edinburgh are candidates who have thus never entered for the ordinary preliminary. The proportion of candidates who take the leaving certificate in place of the preliminary is very much higher at Edinburgh and Glasgow than at St. Andrews and Aberdeen.

Then again a great deal of misconception exists as to the mode of the preliminary examination. The facts are these. The papers are drawn up by the Joint Board of Examiners. The examinations are held simultaneously in the four Universities. The papers at each centre are examined by a set of examiners at that centre. But after this has been done, and this is the important point, there is a meeting of the Joint Board lasting one, two, or even three days, at which all papers in all subjects which come near the border line of pass or fail, say from 42 to 58 or thereabout, are taken up *seriatim* and are valued marked on by the whole body of examiners. Thus it comes about that there is as nearly as can be a uniformity of standard for the four Universities, and therefore, the statements that the examiners here or there are more lenient than the examiners elsewhere are quite worthless.

As an illustration of how the leaving certificate examination modifies these statistics, one instance may be taken. The percentage number of passes in French stands in these tables thus:

St. Andrews...	58.33
Glasgow	25.00
Aberdeen	55.00
Edinburgh	20.69
And in the four Universities taken together ...	32.48

Judged from this table, Edinburgh and Glasgow occupy a melancholy position. But French is one of the favourite subjects in the leaving certificate, and, were the statistics of the latter placed along with those of the Preliminary, the two younger Universities more than win their spurs.

THE "INDEX MEDICUS."

From the last circular issued by Dr. Billings and Dr. Fletcher there seems every prospect that the plan for continuing the *Index Medicus* will be successful. The final decision is to be sent to subscribers by December 1st next.

The points on which the editors now wish to have the opinion of subscribers are: (1) Shall the new series begin with January, 1896? or (2) Shall it begin with May 1st, 1895, thus taking up the work from the date at which the former publication stopped? If the latter plan be recommended and adopted, it is thought that the back material might be got together and issued in one part about March, 1896; in this case subscriptions would run from May 1st to April 30th in each year. If the former plan be decided upon subscriptions will run from January 1st to December, 1896. Inasmuch as all the published volumes go with the year, it seems that to continue this plan will be more satisfactory than starting a series which will run across the years. At any rate it is sincerely to be hoped that now we are so near to getting the continuation of the *Index*, it will not fall through for want of the few subscriptions needed to place the work on a sound financial basis.

PORTSMOUTH MEDICAL UNION AND THE CLUBS.

The battle of the clubs is still in progress in Portsmouth, and we are glad to know that the resident members of the profession are still firm and united. The election of medical officers to one of the largest lodges in the town will take place in a few days, and it is a matter of great regret that there are already four outside candidates in addition to the present medical officer, who is seeking re-election on the old terms, namely 4s. per annum for members of all ages. During the last few days several medical men have visited Portsmouth for the purpose of applying for the appointment, but they honourably retired directly the cause of the vacancy was explained to them, and we sincerely hope that their example will be followed by all the other candidates before the day of election. The resident members of the profession have joined hands for the purpose of preventing fresh burdens being added to the duties of lodge surgeons, for which the remuneration is already poor and inadequate; and the conflict therefore must be regarded as no mere local agitation, for the issue will probably have far reaching results, and may touch the interests of thousands of the general practitioners in all parts of the country. We sincerely hope that the outside candidates will be led to see the unenviable position they are seeking to occupy, and that the only straightforward course now open to them is to retire from the conflict at once, and in this way help their professional brethren to obtain a complete victory over the retrograde and unjust scheme with which they are threatened. We shall await the result of this conflict with the greatest interest, for success will exhibit the power of professional union, and will exercise upon other lodges a wholesome influence by checking future attempts to add unfairly to the labour, and at the same time reduce the remuneration, of their medical officers.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A meeting of the Committee of the Association of Fellows of the Royal College of Surgeons of England, was held on November 13th, 1895; Mr. Timothy Holmes, in the unavoidable absence of Mr. George Pollock, in the chair. The minutes of the last meeting having been read and confirmed,

Mr. Percy Dunn (Honorary Secretary) reported that as it had been found impossible to summon the members for the annual meeting as arranged at the previous meeting of the Committee, it had become necessary to fix a later date for that purpose, as well as for the preparation of the agenda to be submitted to the meeting.

After some discussion it was agreed that a meeting of the Committee should be called for December 4th, and that the annual meeting be definitely fixed for December 11th, 1895.

A letter was then read from Major-General Graham, Secretary of the Civil Rights Defence Committee, asking the Association to appoint a representative to act upon his Committee, and requesting the Committee of the Association to receive a deputation from the Civil Rights Defence Committee.

A letter was also read from Mr. R. B. Anderson in support of the above application from Major-General Graham, and containing a short statement of the main facts of his case.

A resolution was unanimously passed agreeing to receive the proposed deputation, and the Honorary Secretary was instructed to write to Major-General Graham to this effect, and at the same time to state that the Committee would be prepared to receive the deputation at 25, Grosvenor Street, W., at 5.30 P.M., on December 4th.

Mr. Anderson having expressed a desire to join the Association, he was duly proposed, seconded, and unanimously elected a member thereof.

After some discussion upon this case the following resolution was agreed to:

That the Committee of the Association of Fellows beg to express their warm appreciation of the action taken by the Council of the College of Surgeons, as representing the College, in the matter of Mr. Anderson's attempt to vindicate his legal rights as a Fellow of the College. They sympathise entirely with Mr. Anderson, and intend to bring his case before the Association with a view to appoint a delegate to act upon their behalf on the Civil Rights Defence Committee.

The Honorary Secretary was directed to forward a copy of this resolution to the Secretary of the College for presentation to the Council at their next meeting.

With reference to the appointment of a representative upon the Civil Rights Defence Committee, it was decided that as this was a new departure it would be advisable to defer its consideration until the annual meeting.

It will be remembered that last June Mr. T. R. Allinson was summoned at the Marylebone Police Court for using the description of L.R.C.P. and the title of Licentiate in Medicine, his name having been erased from the *Medical Register* in May, 1892. The magistrate inflicted a fine of £20 and £10 10s. costs. An appeal was entered, but we are informed that it is not being proceeded with. The case was regarded as a test case, and may be of much importance as a precedent.

THE EDUCATION OF THE STUDENT IN PRACTICAL MIDWIFERY.

By ROBERT REID RENTOUL, M.D.

That the education of the student in practical midwifery is sadly neglected, when we consider the attention which he is compelled to give medicine and surgery, few practical persons will dispute. The fact, however, that in his future practice this student will be brought into much closer relation with midwifery and diseases of infants, should induce the medical authorities to look much more closely into this question; one which so intimately bears upon the lives and health of women and infants.

Sir W. Priestley, in the British Medical Journal of August 3rd, 1895, p. 284, is reported as having said, when speaking of puerperal mortality: "While the great advance has been made, however, in hospital institutions, I regret to say that progress of a like kind in our curat taken place in private practice. The later researches of [illegible]xall have made it clear that there is a large preventable mortality among puerperal patients attended at their own homes, and if this continues it may become a standing reproach to us that women delivered in lying-in hospitals are actually safer than those confined in their own homes, which at one time was quite the reverse."

Granted that the above statement is so correct as to justify its publicity before the annual meeting of our Association, it must follow that when the chief medical authority in the British Empire recommends that students be admitted to their qualifying medical examination after having personally conducted only three confinements, something is sadly out of joint.

It is more than a pity that the traditional hatred which some Fellows of the Colleges bear to the practice of midwifery should still linger among some of those on our General Medical Council. Unfortunately the lives of thousands of mothers and infants have been sacrificed to this unmeaning hatred. In 1733 the Fellows of the Irish College of Physicians ordered that no one practising midwifery should be granted their diploma. Consequently they made themselves a laughing stock by refusing it to Sir Fielding Ould. Why did these Fellows think it degrading for a medical practitioner to practise midwifery? In 1765 the Fellows of the Edinburgh College of Physicians, ruled that no one could be admitted a Fellow whose "common business it is to practise midwifery;" and, further, that if any Fellow practised any of these "low acts" he was to be degraded. In 1811 the Fellows of the London College of Physicians actually went to such bitter extremes as to order that no practitioner should be made a Fellow if he practised midwifery. In 1843 the Fellows of the College of Surgeons of England also took this down-grade track, and ordered that no Fellow would be admitted to the Council of the College if he practised midwifery. On May 2nd, 1827, the London College of Physicians, in an official document to the Secretary of State to the Home Department, when speaking of midwifery, characterised it as "an art foreign to the habits of gentlemen of enlarged academic education"! It is little wonder, then, that when these self-styled leaders of a humane calling acted in this careless manner the death-rate in childbirth was enormous. In 1783 the Fellows of the London College recognised partly their gross blunder, and began to grant their single diploma in midwifery; while in 1858 the College of Surgeons of England began to grant its single diploma in midwifery, and to those who had neither a medical nor a surgical qualification. Strange to say, those who had only this diploma of the Royal College of Surgeons of England were permitted, by the Medical Act, 1858, and up to 1886, to have their names registered in our *Medical Register*.

Fortunately in 1886 a fresh move was made, with the view of placing midwifery upon the same high level as medicine and surgery; from that year it was enacted by the Medical Act that on and after 1887 no one could have his name placed upon the *Medical Register* unless he had passed a qualifying examination in the three subjects of Midwifery, Medicine, and Surgery. This enactment, which has done away with the singly-qualified practitioner, was forestalled by the English Local Government Board in 1859, and by the Irish Board in 1862, when they ordered that all candidates applying for the post of Poor-law medical officer must be doubly qualified—that is, in both medicine and surgery.

Many of us complain that the General Medical Council has for so far failed to carry out the true meaning of the Medical Act, 1886, because it fails in reality to place midwifery on the same level as medicine and surgery. It can be readily seen, by looking into the certificates required by the various examining bodies, that these are far more exacting in the case of the study of medicine or surgery by the student during his five years than they are in the case of midwifery. Section 3 of the Medical Act, 1886, enacts that "the standard of proficiency required from candidates at the said qualifying examinations shall be such as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery." There is nothing in this enactment which would lead any person to believe that the study by the student, and his examination in midwifery are to receive much less attention from the medical authorities than does medicine. For instance, the student who wishes to enter for the M.B. Durham University must, as regards his study of medicine, show (*a*) attendance upon lectures on medicine, 12 months; (*b*) clinical medical lectures, 12 months; (*c*) medical hospital practice, 18 months; (*d*) medical clinical clerkship, 6 months; and (*e*) *post-mortem* demonstrations, 24 months. But as regards the study of midwifery, he has only to show (*a*) lectures on midwifery and diseases of women and of children, 6 months; (*b*) clinical obstetrics, 3 months; and (*c*) 20 cases of labour.

A study of the mortality statistics of childbirth will not justify our General Medical Council in ignoring the vast importance of a proper training of the student in practical midwifery. Even "natural labours" are no trivial occurrences. In 1893, in England and Wales, of a total deaths of 589,958 persons, 5,950 were women who died from puerperal fever and the other accidents of childbirth, that is, at least 1 death in every 95 of the total deaths was that of a woman in childbirth. From 1871 to 1893 no fewer than 48,374 mothers died from puerperal fever, and 50,211 from the accidents of childbed in England and Wales. This is a shameful state of affairs. But how much higher would these statistics be if they were correct records? The Registrar-General has expressed constantly his regrets as to the untrustworthiness of the puerperal mortality returns, while McClintock has said that "one-fourth is not too much to allow for deaths omitted in the registration returns of deaths in childbed."

As regards particular confinements, Duncan has shown that 1 in every 15 women in her first confinement dies. Thus the maternal mortality is actually much higher than that following major surgical operations. Yet the General Medical Council seems to refuse to recognise the practical bearing of these fearful statistics. In the same way the death-rate from puerperal fever is very high, and partly because the student has to work up his knowledge in "midwifery, diseases of women and of infants" in six months. If any support were required for my contention that the General Medical Council should see its way to seriously study this vital question, a perusal of the sick rate of maternity and of the heavy infant death-rate after midwifery operations will give due support.

For some time past a few earnest men have tried to rectify this lamentable state of affairs. When Dr. Glover brought the subject before the General Medical Council in 1891, Dr. Athill said: "I experience a feeling akin to shame at having to second so obvious and so necessary an improvement in the training of the student." Dr. Kidd said that "the requirements were woefully inadequate." The requirement is, that the student must have conducted personally only three cases of labour before being admitted to his final medical examination. Dr. Haughton said: "The previous discussion ended in a miserable fiasco—a fiasco which made him positively ashamed of the General Medical Council." Sir W. Foster said that "the regulations of the Council in respect of midwifery were the subject of scoff and satire"; while Mr. Wheelhouse said he "regarded it as little short of a reproach to the Council, that it should be said that to regard three cases

as sufficient instruction for a candidate in obstetrics," and "that obstetrics were better taught forty years ago than at present." These remarks, made by members of the General Medical Council, will surely make it reverse its vote on Dr. Glover's motion of 1891, when he was beaten only by 12 votes to 10. When Dr. Murdoch Cameron says: "A chapter of horrors might be written upon mismanagement of labour, and in which only the mystic letters appended to the operators' names protected them from prosecution. If such men bungled their surgical cases in the same way they would soon find themselves in a court for malpraxis," surely his words should be attended to. And when Dr. A. J. H. Barbour, acting as Inspector of Midwifery examinations, under the appointment of the General Medical Council, in 1888, reported: "In concluding this general commentary, I desire to state my opinion that none of the examinations come up in all points to such standard of proficiency as appears attainable by the methods here indicated," it is time that the General Medical Council and the medical examining bodies had taken action. The facts also that some of the examining bodies accept certificates of attendance from students who have "been present" at confinements, under the teaching and instruction of a midwife; while the number of rejections of students at their midwifery examinations all point conclusively that the requirements of the General Medical Council bearing upon the so called education of the student in midwifery, are bearing a sad result.

If the examinations themselves of students in midwifery could have some educational value, one would not be inclined to pay so much attention to the previous clinical instruction. In this country, however, the qualifying examinations comprise only a number of paper questions and an oral examination. Abroad it is very different. In Germany, the student for his final examination must conduct, on his own responsibility a confinement before the examiner, and send in a written report the day after. For the next seven days he must visit the woman twice daily; and, if the patient die, he must make a *post-mortem* examination and send in a report. If such a plan were followed in this country, there would be a steady fall in maternal deaths after confinement.

In the BRITISH MEDICAL JOURNAL of September 28th, I give a table, showing the requirements of the different examining bodies as regards the study of midwifery, and also the motion moved and seconded by Drs. Glover and Atthill. I hope that when this motion comes up again, it will be made more definite; that it will recommend that the student must himself "personally conduct" at least thirty labours; that he must do so under the "direct supervision" of a registered medical practitioner, and not by himself or with a midwife; and that the name and address of the patient, the date of the confinement, and the name of the supervising practitioner be entered upon his certificate of attendance. If this course be followed, then there will be a lessening in the number of fraudulent certificates, while the General Medical Council will have done its duty to the public, and especially to pregnant women and to infants.

ASSOCIATION INTELLIGENCE.

ELECTION OF MEMBERS.

ANY qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—The second ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Wednesday evening, November 27th, at 7.30. Dr. Carey Coombs, President. The following communications are expected: Dr. Geo. [illegible] 1. Perforation of Appendix in Enteric Fever. 2. Perityphlitis: Partial Excision. Dr. J. Michell Clarke: 1. Sequel to Case of Trephining to relieve Symptoms of Cerebral Tumour. 2. Case of Birth Palsy, in which an Operation was performed. Mr. C. Gaine: On some Forms of [illegible], arising from the Retention of Diseased Teeth and Stumps, which are not amenable to Conservative Treatment. Mr. Basil Trevelyan: A Brief Clinical Comparison of Young and Old Primiparæ. Mr. T. G. Stock: [illegible] of Scapula, with specimen.—W. M. BEAUMONT (Bath), J. MICHELL CLARKE (Bristol), Honorary Secretaries.

SOUTH EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held at the Hospital, Hastings, on Thursday, November 28th, at 3.30 P.M., Dr. Allen (President of South-Eastern Branch) in the chair. Dinner at 5.30 at the Grand Hotel. Charge, 6s.; exclusive of wine. Professor Corfield (London) will give an address on The Water Supply of Towns. Mr. Papillon and Dr. Redmayne will show [illegible] Cases. Dr. Wills will read notes of a Case of Graves's Disease treated with Suprarenal Tabloids. Mr. [illegible] will speak on the Connection between Disease of and Operations upon the Female Pelvic Viscera and Effusion into the Pleura.—J. W. BATTERHAM, Honorary Secretary, Bank House, Grand Parade, St Leonard's.

STAFFORDSHIRE BRANCH.—The first general meeting of the session will be held at the North Stafford Hotel, Stoke-on-Trent, on Thursday, November 28th. The president, Dr. Geo. Reid, will take the chair at 2.15 P.M. Agenda: Exhibition of Pathological Specimens, Living Cases, New Instruments, etc. Papers:—Dr. McAldowie: Pseudo-Bulbar Paralysis. Dr. Hatton: Notes on a case of Nephro-lithotomy. Mr. [illegible]: The treatment of Stricture of the Œsophagus by means of [illegible]. Mr. A. V. Griffiths: A case of Inversion of the Uterus. There will be a dinner (5s., exclusive of wine) at 6 P.M., after the meeting.—F. MILNES BLUMER, Honorary Secretary, Stafford.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

THE autumn meeting of this Branch was held at Forres on October 23rd. In the absence of the President, Dr. CHARLES ADAM, of Elgin, presided.

Communication.—A paper was read by Dr. GEDDES, of Nairn, on Reflex Vomiting, illustrated by two cases of mitral stenosis, in which the only symptom was persistent vomiting, and which were both treated by diffusive stimulants with the best results. Dr. Geddes suggested that the cause of vomiting was due to congestion of the brain, either as acting by pressure on the brain directly, or through the general circulation, and in either case setting in action the vomiting centre. The paper was discussed by Dr. [illegible], Dr. DUGUID, Dr. KERR, Dr. DE WATTEVILLE, and the CHAIRMAN, and Dr. Geddes was thanked for his paper.

Medical Clubs.—Dr. MUNRO MOIR, of Inverness, read a report by the Subcommittee appointed at last meeting to consider the question of medical club abuses. The Subcommittee had sent out 160 circulars requesting answers to certain queries, but had received only 54 replies. These replies were analysed, and the report went on to state that "the Committee regret that a great number of their professional brethren have not answered the circular. As it is only by unanimity that the present cheap system of club practice can be done away with, they shall hope that a greater interest in this matter will be evinced by the profession. At present only Cork, Portsmouth, and Inverness have made a decided stand. All must be aware of the gallant fight our brethren in Cork have made in their endeavour to bring matters to a more satisfactory basis. They found that the medical clubs in Cork were much abused, and many members in receipt of comfortable incomes joined these societies, and though well able to pay as private patients took advantage of their club membership, and received medical attendance for a few shillings a year. The Committee consider that the only means of solving this difficulty is by organisation, and to obtain this we must be unanimous. We, as members of the British Medical Association, look to the Council of the Association for help—pecuniary assistance if necessary. Then the different Branches should take the matter up. The Committee make the following suggestions: The minimum fee per head

should be 5s., but this not to include medicines. No family branch of any society to be encouraged or countenanced. A medical examination to be made of every candidate for admission to a society, and a fee of not less than 2s. 6d. to be paid. No married member earning over £2 per week to be eligible for membership, and no unmarried member earning more than 30s. to be eligible." The report was approved of, and the whole question was again remitted to the Committee to prosecute combined action among all professional men in the North of Scotland.

Dinner.—The members afterwards dined together, having previously had an excursion along the banks of the River Findhorn, then in great beauty.

HALIFAX, NOVA SCOTIA, BRANCH.

A LARGELY attended meeting of this Branch was held on Thursday, October 17th, at Halifax, Dr. THOMAS TRENAMAN in the chair.

New Member.—W. H. Hattie, M.D., C.M., was elected a member of the Branch and of the Association.

Antitoxin Treatment of Diphtheria.—DRS. CAMPBELL and CHISHOLME reported cases of diphtheria treated by antitoxic serum.—A prolonged and interesting discussion followed, in which the following took part: Surgeon-Colonel O'DWYER, DRS. FARRELL, BLACK, ALMON, REID, MCMILLAN (of Pictou), CARLETON JONES, and others.

GRAHAMSTOWN AND EASTERN PROVINCE BRANCH.

THE usual bimonthly meeting was held in the Bacteriological Institute, Grahamstown, on August 20th; Dr. W. ATHERSTONE in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Communications.—Dr. SAUNDERS read a paper on a case of Anæmia due to Ankylostoma Duodenale. Dr. EDINGTON suggested the possibility of its being connected with the sleeping disease of the Congo natives. During discussion it was noted that the patient under discussion had visited the Zambesi.—Dr. EDINGTON read a paper on the Etiology and Pathology of Horse Sickness, and illustrated the same by naked-eye and microscopic specimens.

Vote of Thanks.—The usual vote of thanks was recorded to the Chairman.

SPECIAL CORRESPONDENCE.

PARIS.

Hospital Districts.—The "Alcoholism" Question.

THE Municipal Council continues its debates on the new regulation, according to which Paris has been divided into districts, and the out-patient department placed under the charge of young medical men and a special staff of dressers, both of whom receive salaries. The new system has already had some undesirable results. A patient sent from Larboisière Hospital to the Charité Hospital died on the way. A female patient, with a dislocated shoulder, remained three days without medical help. Another sufferer was refused admission, notwithstanding a free use of the telephone, because she lived on a river boat that was not stationary. Another case of refusal is chronicled because the patient slept at night asylums. An unfortunate woman who suffered from serious intestinal ulceration was on the point of being sent to M. Peyron at the Assistance Publique to ask his permission to be treated at the St. Louis Hospital. These cases are authentic, and are published under the responsibility of Dr. Marchand, Surgeon to the St. Louis Hospital. Dr. Hartmann, of the Bichat Hospital, cites the following case as one among many. A woman with a baby in her arms applied for admission at the Bichat Hospital, the hospital of her district. She was not admitted because there was not a *crèche* at that hospital. She was told to go to the Hôtel Dieu. With difficulty she reached that hospital; when there she was asked her name and address, and told to return the next morning at 8.30, which she did only to be told to go back to Bichat, the hospital of her district. The patient objected that there was no *crèche*, and that she had already been sent from the Bichat Hospital to the Hôtel Dieu. "Never mind, go back," was the reply. The poor mother consequently set out to pay a second visit to Bichat Hospital, scarcely able to walk, carrying her baby in the pouring rain. She arrived there five minutes too late. The consultation was over. The unfortunate woman, thoroughly exhausted, fell fainting on the pavement. Dr. Hartmann arrived at the hospital at the moment. Seeing a crowd, he asked the reason. On being informed, he advised those present to sign a petition asking the municipal councillors to revise the new regulation concerning the admission of hospital patients. The suggestion was adopted, and the petition has 400 signatures. Dr. Hartman proposes that a district hospital shall be obliged to admit the patients of its district, but that they have the power to go elsewhere if they wish. The division of Paris into hospital districts obliges the sick poor to be provided with documents establishing their identity. This troublesome formality wastes time and costs money. Functionaries of the Assistance Publique stop them at the doors of the hospital in order to examine these papers. If no tender-hearted official be present to recognise that their case is urgent, they are mercilessly sent to their district hospital, perhaps to find it full; or, the consultation over, to be told to come back the next day. A number of hospital surgeons and physicians have been interviewed concerning the new regulation for the out-patient department. Their opinions can be summarised as follows: Apart from the annoyance and humiliation inflicted on officers of long standing hitherto considered to be masters in their wards, observance of the new regulation incurs a considerable expense. Previously the out-patient department was no extra expense to the Assistance Publique. The salary of the assistant surgeon or physician is £164 per annum. The *chefs de service* was and is paid £80, added to which a fresh subordinate official is taken in each hospital, who is lodged, fed, and paid £16 a year. It is this subordinate official who, when the consultations are not going on, decides if the patients who apply for admission are to be admitted or not. A policeman is also paid to be present at the door of the consultation room: thus the increased expense of each hospital amounts to £120. The debates going on at the Municipal Council meetings clearly show that the present regulations will be considerably modified.

M. Siegfried, member of the Chamber of Deputies, and formerly Minister of Commerce, is taking an active part in the struggle against alcoholism. At a meeting held at the rooms of the Société Savantes he described his plan of action, which is the same as he adopted in 1889 with success in the question of working men's dwellings. He will lay before the Chamber a proposition signed by many other deputies, that a law controlling wine shops and the sale of intoxicating liquors should be enacted. In a lecture he delivered in the female alcoholic section of the Villejuif Asylum, he explained the dangerous action of alcoholic drinks; the "liqueur des dames," made from kernels, supposed to be innocent, is extremely dangerous: Dr. Laborde nearly lost his life whilst making experiments with it. M. le Conseiller Rau proposes that cases of drunkenness should be considered as offences, and be judged at the *tribunaux correctionnelles*, which have the power of inflicting only slight punishments; repeated drunkenness could be more severely punished. Drunkenness, M. Rau considers, should be regarded as a reason for rendering punishment more severe in cases of bodily injuries and homicide. Furthermore, a law obliging drunkards to be kept under observance in special asylums after their liberation is claimed by M. Rau; such a law is already in force as regards vagrants.

BERLIN.

The Law as to Secret Remedies in Prussia.—Medical Men and Military Service.—A New Policlinic.—Decoration of Professor Loeffler.

IT is a general saying that secret remedies ("*Geheim-mittel*") are forbidden in Prussia. But as a matter of fact no law on the subject exists. Police regulations forbidding the sale and advertisement of "*Geheim-mittel*" have been issued at different times in the different provinces of the kingdom, but the nature of a secret remedy has never been defined and legally fixed. Thus, for instance, the editor of a most

respectable Berlin paper, the *National Zeitung*, was sued by the police a short time ago because he had allowed an advertisement to appear in which a tea—the ingredients of which were enumerated—was recommended. The editor insisted on a legal decision, and of course the judge decided in his favour. This case is by no means an isolated one, and there is no present prospect that the confusion of ideas on the subject will be cleared up, for the newest regulation published by the Police President of Berlin for the province of Brandenburg (which includes Berlin) says: "The public advertisement of secret remedies, which are intended to prevent or cure human diseases, is forbidden," without giving any information as to what is a secret remedy and what is not.

In the German army doctors of medicine, though they serve a full year like all other "Einjährig-Freiwillige," are only kept under arms for six months, and do assistant medical work in their second half-year. The army authorities have lately decided to again call in doctors for a short period of service, in the years following their dismissal from active service. Every year 200 assistant doctors (*Assistenz-aerzte*) of the first class are to be called in for a period of 28 days, and 500 "*Unteraerzte*"—a lower grade in the military medical scale—for a period of 42 days. This announcement has caused no little excitement; young doctors, who find it difficult enough to build up a practice even when constantly on the spot, are anxiously asking themselves whether it will not fade away altogether if they are obliged to leave their patients for four, or even six, weeks at a time.

A new surgical policlinic, in connection with the Berlin University, will be opened very shortly. Professor König, the successor of Bardeleben, is to be its head, and his assistant, Professor Hildebrand, who follows him to Berlin from Göttingen, its chief surgeon.

Professor Loeffler, of Greifswald, the discoverer of the diphtheria bacillus, has received from the French Government the officer's cross of the Legion of Honour.

ROME.

The Anti-Anthrax Serum.—The Policlinico.

Dr. Sclavo, the chief of the bacteriological laboratory of the Direction of Health, has published an important preliminary note on the Preparation of Anti-Anthrax Serum. He has made experiments to ascertain whether the serum of animals distinctly receptive to anthrax, but rendered immune against it, would have preventive and therapeutic properties. He selected the sheep as the producer of the serum, and tested the new qualities acquired by the serum in the rabbit. In March, 1895, he undertook the immunisation of a sheep, commencing the treatment with two Pasteur vaccines, and gradually increasing the degree of immunity, injecting subcutaneously increasing quantities of a most virulent anthrax bacillus. On September 12th the sheep bore, with a slight increase of temperature, the injection of all the anthrax material developed in seven cultures made in agar. Six days after he obtained, by bleeding from the carotid artery, the serum which served for the experiments on the rabbit. In June he injected 1 c.cm. of anthrax culture in broth into a female lamb. In spite of the strong dose of the culture employed—certainly more active than the two Pasteur vaccines—the animal survived, presenting marked reaction at the place of injection. The lamb, in consequence of the treatment, acquired an immunity against anthrax, which would gradually increase with increasing doses of most virulent anthrax culture. The results obtained with the sheep's serum may be thus summarised: In a dose of 2 c.cm. it preserves from death rabbits (weighing from 1 to 2 kilo.) which received, from 12 to 24 hours afterwards, 1 c.cm. of anthrax culture. This quantity of culture, much superior to the minimum lethal dose, killed in about 48 hours the control rabbits. With 5 c.cm. of serum he saved rabbits by injecting simultaneously the serum and the anthrax culture. The therapeutic results obtained with serum injected 6, 12, 18, and 24 hours after the above dose of culture were also remarkable. In an experiment with 6 rabbits, 2, which had received, after 18 hours, respectively 5 and 10 c.cm. of serum, died in 5 and 6 days; the 2 rabbits which had the same quantity of serum after 12 hours, and a third in which were injected 10 c.cm. of serum after 6 hours, still lived. A rabbit treated with 5 c.cm. of serum, likewise after 6 hours, died on the ninth day; but the necropsy showed numerous cysticerci in the peritoneal cavity and extensive coccidiosis of the liver. An attempt was made to treat a rabbit after 24 hours from the injection of the anthrax germs, but the animal succumbed to the disease at the end of 8 days from the inoculation. In the various experiments the serum was always injected under the skin of the back, whilst the anthrax bacillus was introduced into the subcutaneous tissue of the abdomen. The lamb's serum also possesses preventive and therapeutic properties, but much inferior in degree. From the results obtained, Dr. Sclavo believes that there is ground for hope that anthrax both in man and in domestic animals may be combated by serum-therapy.

There appears to be some grounds for the hope that the Policlinico will be completed within a measurable time, as it is stated that the Minister of the Home Office has nominated a Commission under the presidency of Senator Professor Durante to draw up a project in relation to its completion.

BRISTOL.

Medical Library.—Floods.—The Anniversary Dinners.—Prosecution under the Medical Act.

The medical library of University College contains over 14,000 volumes. According to the annual report of the Honorary Librarian (Mr. L. M. Griffiths), read at the opening meeting of the Medico-Chirurgical Society, the library, properly speaking, is composed of four libraries, amalgamated in order to centralise the books and to avoid the unnecessary multiplication of modern textbooks that would otherwise occur. The books from each library are labelled differently, so that should the necessity occur at any time for dissolving the association, they could be returned to their owners. The initial step was taken in 1891, when the Society started a library of its own, and the collection was rapidly augmented by large presents of books from members and others, especially the British Medical Association, and by purchases made from donations of money. For two and a-half years a room was rented at the Literary and Philosophic Club, but as further space was required in consequence of the rapid growth of the library it was agreed by a vote of the Society to combine with the Faculty of Medicine and house the books in the new Medical Department of University College, opened in 1892. Medical libraries also existed at the infirmary and hospital, and in 1894 both of these were added, making an addition of over 5,000 volumes. This combination of books, though it has resulted in the possession of several duplicate copies of some works, has made a most valuable collection of books. In the June number of the *Bristol Medico-Chirurgical Journal* a list of periodicals required to complete certain imperfect series was inserted, and it is hoped that in time the numerous serious gaps may be filled up. A large number of current periodicals—over 150 in number—are laid on the table in the library.

Owing to the heavy rainfall on November 5th a repetition of the floods of a year ago has happened. Over what is at ordinary times a small stream a culvert was built some years ago, but for some unknown reason the centre was made about three times as narrow as the entrance with the inevitable result that the flow of water is kept back and the culvert bursts. Several houses were flooded to the depth of some feet, and much destruction was done to garden walls.

The Colston celebrations took place on November 12th with the usual services, dinners, and speeches. The only unusual circumstance was the unveiling of the statue of the great Bristol philanthropist by the mayor. Of the three Societies, the only one which has any direct connection with medical work is the non-political one, the Benevolent, which last year gave 10s. to 1,076 lying-in married women, besides annuities of £13 to 36 persons. The President of this Society was Mr. J. Hancock Wathen, M.R.C.S. Eng., L.R.C.P. Edin., who announced that his collection amounted to about £320—no inconsiderable sum when it is remembered that all requests for contributions have to be made between November 1st and November 13th. The total sum collected by the three Societies was nearly £5 000.

On November 13th, at the Bristol Police Court, William Francis Jackson, of Meridian Place, Clifton, was summoned

for that he, not being a duly-qualified medical practitioner, had been practising and pretending to be a surgeon. There was another summons against him for pretending to be a doctor of medicine. Mr. S. L. Usher appeared to prosecute for the Medical Defence Union, and Mr. J. Nichols was for the defendant. Mr. Nichols stated that the summons had only been served on the previous night, and that he had only been instructed that morning. The case was adjourned.

CORRESPONDENCE.

THE BATTLE OF THE CLUBS.

SIR,—Our "battle with the clubs" here has reached this stage—that there are four outside competitors against the present holder. No local man is contesting against the present holder. There have been other candidates, but they have been induced to withdraw. The outside men are—Dr. Steel, Ashby-de la Zouche; Dr. Todd, Tabley Road, Holloway; Dr. Paul, West Cowes; Dr. Davidson, Spennymoor, Durham. The present holder refuses to take infants and girl juveniles under 4s. per annum.

May we ask your assistance in appealing in the columns of the BRITISH MEDICAL JOURNAL to these men, urging them to withdraw? I may perhaps add that the outside men have tendered for the infants and other juveniles at 2s. 6d., 2s., and 1s. 6d. per annum. There is absolutely nothing personal against the present holder. This battle was brought on by the lodge in question requiring of him to attend infants from 3 months and juveniles of both sexes to 15 years for 2s. 6d. per annum.

The local profession is united to a man. If we can only win this fight, there are many other reforms open to us with every chance of success.—I am, etc.,

T. FREDERICK PEARSE,
Honorary Secretary Portsmouth Medical Society.

Portsmouth, Nov. 17th.

*** We would strongly support this appeal from Portsmouth. As Byron apostrophised the Greeks: "Who would be free, themselves must strike the blow." Appeals to the General Medical Council, to the Council of the British Medical Association, or to any other central council to stop the existing systematic encroachments on the independence of the medical profession must be useless as long as members of that profession are to be found false to their own interests, false to the interests of the profession to which they belong, ready to accept terms utterly inadequate, we do not say to remunerate the services rendered, but to keep the body and soul of the club's servant together. The members of the Branches are in a good position to take local initiative.

THE ADMISSION OF WOMEN TO THE EXAMINATIONS OF THE CONJOINT BOARD.

SIR,—The issue upon which the recent decision of the Royal College of Physicians regarding the admission of women to its licence was arrived at was scarcely based upon the consideration of the rights and duties of the College. The question was not, whether women might be admitted to the profession of medicine, but whether the College should or should not determine whether female candidates were properly qualified for practice. The former question, whatever we may have thought about it thirty years ago, has long been settled in the affirmative by the formation of women's hospitals and schools and by the means afforded them of obtaining qualifications to practise from various corporate bodies in the United Kingdom.

As regards the second question, I venture to submit that the College, claiming to be the highest arbiter of medical knowledge and medical ethics in the profession, abrogates its legitimate functions by refusing to allow anyone, male or female, to subject themselves to the ordeal of the examinations, which are sufficiently severe in theory and in practice to offer ample guarantees against the passing of unworthy candidates.

This is in no sense a question of gallantry. If women cannot pass our examinations they must be content to hold only what they perhaps estimate less highly as a diploma for practice. If the College of Physicians yields gracefully to the aspirations of some women and acknowledges established facts they will, in my humble opinion, increase their influence and in no way derogate from their high and legitimate position

I trust that those who differ from me in this matter will give me credit that what I have written is prompted solely by the affection I bear to my profession and the grand old College of Physicians.—I am, etc.,

EDWARD H. SIEVEKING,
Twice Senior Censor, R.C.P.

Manchester Square, W., Nov. 14th.

THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—May I ask you to be kind enough to allow me to add the following to the list of contributions to the British Medical Benevolent Fund?

	£	s.	d.		£	s.	d.
Dr. Ryding Mosse	0	10	6	Dr. Ogier Wood	0	10	6
Dr. Conuel	1	0	0	Dr. Finlayson	10	0	0
Dr. Satchell	2	0	0	Dr. Luff	1	1	0
Dr. Puffin	5	5	0	Sir James Paget	10	10	0
Mr. Butlin	2	0	0	Surgeon-Major Gardner ...	5	5	0
Mr. C. A. Aiken	2	12	6	C. G. E.	0	10	6

I am, etc.,

W. H. BROADBENT.

Brook Street, W., Nov. 20th.

THE SANITARY CONDITION OF WINDSOR.

SIR,—Permit me to reply *seriatim* to the strictures of Mr. B. Denton upon the sanitary condition of Windsor.

1. And, first, I would like to say that the extracts which he gives from Dr. H. Airey's report of 1886 convey an unfair impression of its general tenour. For the report was considered by the then President of the Local Government Board to be in effect favourable to the sanitary administration of the borough.

2. The absence of public baths in a small town such as Windsor is not remarkable.

3. The statement that no hospital for infectious diseases has been built is not strictly true, for Windsor is provided with a small-pox hospital, which has been found to be very convenient and satisfactory. Several attempts have been made to find a suitable site for a fever hospital also, but without success. Windsor is hemmed in between the river and the Great Park, and the difficulty of finding an unobjectionable site for a sanatorium is unusually great.

4. Private slaughterhouses do exist in the town, but, as Mr. Denton ought to know, the district council has no power to remove them.

5. It is not true that the condition of the streets and roads is bad; on the contrary, they are generally excellent and well kept. The county surveyor has, indeed, recently reported the main streets and roads to be in satisfactory order. Possibly Mr. Denton observed two or three new roads which are unfinished, and have not yet been taken possession of by the authority.

6. The absence of a good riverside road has nothing to do with the sanitary condition of the town. Whether it would pay to construct such a road is the concern of the ratepayers alone.

7. Mr. Bailey Denton's surmise that "few of the houses of the better class would stand a sanitary test" is unsupported by any evidence. As a matter of fact every one of them has been inspected by our excellent sanitary inspector, and the drains of very many have been recently reconstructed; and the newer houses have been built subject to by-laws of exceptional stringency.

8. The "ditch" to which your Commissioner alludes is a watercourse which has not, at least for many years, been a nuisance. It is on Crown property, and the district council has neither the right nor the power to cover it over.

9. The courts mentioned by Mr. Denton have nearly all been much improved since Dr. Airey's visit. Haines Court, for instance, was opened out some years ago, and now contains only two cottages, clean and well kept, each having its watercloset. Your Commissioner's comment on Garden

Court is also quite inaccurate. Several of the old courts are cramped for space, but I have not been able to satisfy myself that I should be justified in condemning them as "dangerous to health so as to be unfit for habitation." They are generally well looked after, and overcrowding is rare. One court only was at the time of Mr. B. Denton's visit in a bad condition; in that case notices had been served upon the owner, and the work of amendment had, I believe, been already begun.

10. Windsor Town Council has no control over the course of the river, and is not responsible for the occurrence of occasional floods; nor can it prevent houses from being built on the low ground. But it has enacted a by-law, which was, I believe, without precedent, that new houses must be raised above the level of the highest known flood.

11. There are no "slum areas" capable of being a danger to the health of the borough; and I must, in spite of Mr. Bailey Denton's demur, be allowed to point to statistics as a proof that the town is a very healthy one; for the general death-rate for ten years (16.8), the infantine mortality (112), the zymotic death rate (1.3), and especially the death-rates of scarlet fever, typhoid fever, and diphtheria, are all notably low. In calculating the general death-rate I have always made the due correction for the age distribution of the population. Why should you stigmatise my figures as "crude;" what "cooking" do they require?—I am, etc.,

EDWARD CASEY, M.D.Lond.,
Windsor, Nov. 17th. Medical Officer of Health.

THE SCHOTT TREATMENT OF HEART DISEASE.

SIR,—Like Dr. Poore, I too was greatly struck by the reports of the enormous diminution of the area of dulness which followed a few minutes' immersion in a bath, or an equally short time occupied by the so called Schott movements. So impossible did I think that this diminution of area dulness could be dependent on simple cardiac contraction that I went to Nauheim with the object of investigating this point, thinking that some error underlay the observation. My inquiry, extending over some days, was undertaken in a scientific and sceptical spirit, and resulted in my making the following observations, which to a great extent apply to Dr Poore's very natural objections.

1. The diminution of cardiac dulness can be observed equally after the bath as after the therapeutic exercises.

2. The body was wholly immersed in the bath, so that the pressure of water must have been nearly equal over both chest and abdomen, and as the percussion observations were made after the bath, and the contracted area of dulness remained for a longer time (one, two, and three hours or more), the effect of a pressure of water on the abdomen is excluded.

3. By careful percussion of the lungs at the upper as well as the lower margins after baths and exercises I found no evidence of a special dilatation of the lungs, although it was in this direction that I naturally sought explanations of the phenomena observed.

4. When there is any remarkable diminution in the area of cardiac dulness, percussion shows that the diaphragm goes up proportionately to this diminution, which would not be the case if lung expansion was the cause of the diminished dulness. I made careful tracings of these conditions quite independently of Dr. Schott, and took the greatest care that they should be accurate.

5. A distended lung from increased thoracic expansion would move the apex beat downwards and outwards relatively to the ribs, enlarged abdominal organs upwards and outwards, but in cases after the baths and exercises, I found that the change took place (when the apex beat could be clearly defined) upwards and inwards.

Many excellent physicians have borne testimony to remarkable results from this treatment, and the public is now so much alive to it that I cordially agree with Dr. Poore that the whole subject stands in need of more careful consideration; indeed, I think it is now a duty imposed upon all of us not to accept present statements, but to give the subject every consideration, and so prevent a great possible good falling into the hands of unscrupulous and uninformed pretenders.—I am, etc.,

Upper Brook Street, W. ROBERT L. BOWLES.

SIR,—I have been much interested in the paper of Dr. Saundby and the letter of Dr. Poore on this subject; but, whilst being much struck with the calculation and remarks of Dr. Poore in relation to the reduction of the area of cardiac dulness following the baths and exercises advised by Dr. Schott, I should be glad to hear from Dr. Poore some explanation of the migration of the apex beat towards the middle line which undoubtedly takes place in some, if not all, cases of dilatation of the heart after both baths and exercises.

It is quite conceivable that the expanded lung may overlap the heart, and so reduce the area of dulness, but not so clear that this, or any other cause except actual reduction in the size of the heart, can move the apex beat from half an inch to one inch towards the middle line.

I am not prepared to assert that this is in any degree permanent, but am quite certain that the change does take place, and also that the pulse rate is reduced in frequency.—I am, etc.,

Weston-super-Mare, Nov. 12th. D. BRADLEY.

SIR,—Dr. Robert Saundby's exposition of the *rationale* of the Nauheim treatment, though more in accordance with facts than any yet given, is yet, I venture to think, incomplete. Resisted movements benefit, I believe, by stimulating the heart and respiratory movements at the same time that they prevent the blood passing too rapidly into the systemic veins. The movements in question are performed, be it noted, while standing, when numerous muscles are already tonically contracted, and when a resisted movement is made not only are the muscles specially engaged in it tonically contracted, but there is an increased contraction of numerous others in order to preserve the equilibrium; in short the whole, or almost the whole, muscular system is thrown into a state of considerable tonic contraction.

Let us see what effect this has on the circulation. A large quantity of blood is attracted to the muscles; less, therefore, passes into the splanchnic system, and the splanchnic veins being moreover compressed by the contracted abdominal muscles, less blood flows from them into the lower cava. At the same time the outflow of blood from the muscles, in consequence of their veins being continuously compressed, is low. The inferior cava being likewise compressed, it follows that the total escape of blood into the systemic veins is low. Meanwhile the heart and respiratory movements, stimulated as they always are by muscular activity, are busy pumping and aspirating the excess of blood contained in the systemic veins and lungs into the systemic arteries, which become in consequence fuller and tenser, and continue to do so until the resisted movement ceases. The resistance to the arterial outflow being now diminished, there is a rush of blood from the distended arteries through the capillaries, and although the venous system tends to refill, much has been achieved, for the right heart has had an opportunity of shrinking and approaching its normal condition, and the accelerated capillary circulation has contributed to normal nutrition.

The good effects of the bath treatment may be explained on similar lines; but I have already exceeded my space, and as I have exhaustively treated of the dynamics of the circulation in relation to heart disease in a work shortly to be published, I need say no more on the subject here.—I am, etc.,

Devonshire Street, W., Nov. 17th. HARRY CAMPBELL.

DIPHTHERIA ANTITOXIN AS A CULTURE MEDIUM FOR THE DIPHTHERIA BACILLUS.

SIR,—Your correspondent, W. A. Hollis, in reality proposes to Dr. Semple and myself the following dilemma: either (1) the injections of anti-diphtheritic serum may be useless, and, if so, the antitoxic serum may be a good cultivation material for the diphtheria bacillus, or (2) the injections of anti-diphtheritic serum are useful, and then it must follow on *a priori* principles that the diphtheria bacillus will not grow on antitoxic serum.

The only way of dealing with such an argument is to show that there is another possible alternative which we have no *a priori* reasons for rejecting. The alternative in question is that the injections of antitoxic serum may be useful, even though the antitoxic serum possesses no bactericidal power whatever. Now, since this is a proposition which probably

every bacteriologist is concerned to maintain, it may be well to show that its acceptance does not involve us in any contradictions. The matter will probably become perfectly clear to the reader if he will consider and compare the two following series of propositions: (1) Alcohol is produced by the yeast plant. The absorption of that alcohol into the system constitutes an "alcohol intoxication." Certain drugs, such as opium or bromide of potassium, do to some extent neutralise the effects of that "alcohol intoxication." A sugar solution constitutes an excellent culture medium for the yeast plant. (2) Diphtheria toxin is produced by the diphtheritic bacillus. Absorption of diphtheria toxin into the system constitutes the "diphtheria intoxication." Diphtheria antitoxins neutralise the effects of that "diphtheria intoxication." Serum is a good cultivation medium for the diphtheria bacillus.

Now, we are evidently no more entitled to infer *a priori* from the one series of facts that the presence of "antitoxins" in the serum would render it a bad culture medium for the diphtheria bacillus than we are entitled to infer *a priori* from the other series of facts, that the presence of opium or bromide of potassium in a sugar solution would render that sugar solution a bad culture medium for the yeast plant. In both cases the question is simply a question for experiment.—I am, etc.,

Netley, Nov. 13th. A. E. WRIGHT.

DIPHTHERIA ANTITOXIC SERUM IN LONDON.

SIR,—Your note calling for statistical information of the treatment of diphtheria by serum in the Metropolitan Asylums Board Hospitals is not uttered any too soon. The ratepayers were promised the information after a six months' trial, and it is now going on for twelve.

It appears necessary to urge that these statistical reports should be not conjoint, but that that of each medical superintendent should be kept separate, as have been all those of former years.

There is already a difference of mortality under former treatment of something like 14 per cent. in the six hospitals which treat diphtheria under the Board, and it is possible that there may be an equal difference in the results under serum treatment. However desirable, therefore, it might be to group the figures, it would be obviously unfair not to give opportunity of studying the statistics of each hospital on a separate and individual basis.

There is one point further. In a leader which appeared in the BRITISH MEDICAL JOURNAL of August 24th, 1895, you admitted the justice of one of the contentions raised against full acceptance of the treatment as at present pursued—namely, "the want of uniformity in the strength of antitoxin serum sent out by different firms." It would in these circumstances be desirable that the first series of statistics should be confined to those cases treated by the serum supplied from the Institute of Preventive Medicine, the only source, I believe, up to a recent date; and not to mix up with them those that are, as now, injected with the serum provided by the laboratory of the Royal College of Physicians and Surgeons.—I am, etc.,

Mansfield Street, W., Nov. 16th. LENNOX BROWNE.

THE PROPOSED GENERAL HOSPITAL FOR CAMBERWELL.

SIR,—A scheme is on foot to build a new general hospital for South London in Camberwell. The promoters are perfect strangers to Camberwell, and are endeavouring to secure a site in Coldharbour Lane from the County Council. A meeting was held last June at the Camberwell Vestry Hall, to which only the clergy were invited. The members of the vestry who happened to be present strongly objected to the scheme. The meeting was adjourned, and another has not since been held.

We, the undersigned medical officers of the Camberwell Provident Dispensary, consider a new general hospital in Camberwell is unnecessary for the following reasons:

1. That Camberwell is only a sleeping ground for the City workers, and no industrial manufactories are in the district.

2. That Guy's and St. Thomas's Hospitals are within easy reach, and that both have a considerable number of empty beds due to want of funds.

3. That the provident dispensary to which we are attached, being in close proximity to the proposed site, is able to administer to the wants of the sick. It is one of the largest provident dispensaries in England, having about 14,000 benefited members, who are seen at the dispensary or attended at their homes by us. It is also one of the oldest, having been over thirty-three years in existence.

4. That the parish of Camberwell has recently expended a large sum on a new infirmary.

5. That the funds of existing hospitals being quite inadequate to keep open the whole of their wards, it would be much better to raise money for their assistance before building another hospital.—We are, etc.,

NORMAN B. ELLIOT.	C. PINEL GALLIE.
W. BRAMLEY TAYLOR.	FREDERICK NORMAN.
A. BRENCHLEY.	WALTER A. ATKINSON.
F. HORTON VILLANUEVA.	CAMPBELL BOYD.
HENRY B. SHILLINGFORD.	

November 19th.

NEW METHOD OF CLEANING AND DEODORISING CATHETERS.

SIR,—I have read Mr. Mansell Moullin's letter with much interest, and I am glad to learn that he has tested my method of cleaning and deodorising catheters, which appeared in the BRITISH MEDICAL JOURNAL of January 19th, 1895. At the Royal Portsmouth Hospital this process has now been in operation for the past twelve months, with excellent results. We have not purchased a new boiler, but have utilised the long-discarded steam spray. Messrs. Maw, Son, and Thompson have, at my suggestion, attached to it three tapering tubes fitted with stopcocks, and capable of holding four catheters of different sizes. I shall be very happy to send further details concerning the contrivance to any hospital or surgical institution.

I again desire to accentuate the importance of manufacturing all catheters with solid points, terminating in flat surfaces within the tubes, just above the first perforation, for instruments with hollow ends can never be completely deodorised. Gum, elastic, and vulcanite catheters can be very conveniently made in this way with tapering and bulbous ends.

I am glad that Mr. Mansell Moullin has referred to the necessity of manufacturing soft catheters with perfectly smooth internal surfaces. I have used soft instruments of this description for many years, but unfortunately a large number are still made with rough and ragged interiors, to which urinary products and oily matter obstinately adhere, and it is, therefore, practically impossible to deodorise and keep them clean.—I am, etc.,

Nov. 19th. J. WARD COUSINS, Senior Surgeon to the Royal Portsmouth Hospital.

DIRECT REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

SIR,—Agreeing most fully with the general drift of your leading article on this subject, I should be glad if you would allow me to point out that several of us who served with the late Dr. Waters, of Chester, on the Medical Reform Committee, foresaw even then that the addition of five representative members to a Council made up so largely of corporation delegates was quite inadequate, and that the result would probably be what it has since turned out, to render them more or less impotent for good in the face of such a corporate majority.

I must confess that I am still of the same opinion with regard to the proposed addition of seven more direct representatives, and though, of course, in the unlikely event of the corporate delegates reversing their former decisions, such an addition might be accepted on the principle that half a loaf is better than no bread, it is quite certain, I think, that our representatives would still be outvoted on any question on which corporate interests might be supposed to clash with those of the profession generally. Hence it seems to me that if we have to go to Parliament, as we probably shall have, our demand should be for at least one half the Council to consist of direct representatives, the remainder being made up of Crown nominees and representatives of the licensing bodies. With regard to these latter the question should also be raised as to whether they ought not to be elected by the whole corporation rather than by a small governing body.

I venture to suggest to the Council of our Association that

the appointment of a small committee of, say six, to consider this subject is very desirable, and that if they could secure the services of Sir Walter Foster as chairman of such committee, it would be a great gain to the Association?—I am, etc.,

H. Nelson Hardy.

Dulwich, S.E., Nov. 20th.

WELL-TO-DO PATIENTS IN RATE-SUPPORTED HOSPITALS AND THE PUBLIC.

Sir,—No one can find fault with Mr. Osborn's remarks in the British Medical Journal of November 9th, but he omits to mention that the cause of abuse is, in a great measure, due to the action of medical men themselves. So many practitioners are so nervous and frightened over an infectious case—and, of course, the friends become so also—with the result that the first and only thought is the quickest method of getting the unfortunate patient out of the house, and so prevent the neighbours from knowing anything about the matter. The ambulance is sent for, and the medical man sees the last of what ought to have brought grist to the mill.—I am, etc.,

London, Nov. 14th. Edward Carnall.

OBITUARY.

RICHARD ROSS, M.D.,

Physician to the Belfast Royal Hospital.

The most profound regret was felt in Belfast on Wednesday, November 13th, when it became known that Dr. Richard Ross had expired that morning. He had been in full work until about a week before his decease, and it was not generally known that his illness was of a serious nature. The cause of death was angina pectoris. Dr. Ross was a native of co. Monaghan, and received his professional education chiefly in Dublin. He took the L.M. of the Coombe Hospital so far back as 1847, and in the following year he became a Licentiate of the Royal College of Surgeons of Ireland. He was admitted to the M.D. of St. Andrews in 1850.

Shortly after obtaining his qualifications he undertook some work in the west of Ireland in connection with the prevailing cholera epidemic; but in 1850 he settled in Belfast, and soon came to the front. He was one of the first Poor-law medical officers appointed for the town of Belfast on the introduction of the Poor-law system into Ireland, and he continued to discharge the duties of this position until 1875, when he was elected one of the Visiting Physicians to the Belfast Royal Hospital, a post he held at the time of his death. He was Consulting Physician to the Belfast Hospital for Cutaneous Diseases and to the Belfast Consumption Hospital. He was an ex-President of the Ulster Medical Society. His private practice was extensive, and included many of the leading families of Belfast and neighbourhood.

We are indebted to a correspondent in Belfast for the following estimate of Dr. Ross's character: "It is difficult for one who was his colleague and intimate personal friend to speak of Dr. Ross as a physician and a man without either on the one hand failing to do justice to a rare personality, or on the other hand using language that may seem extravagant to those to whom the subject of this brief obituary was unknown. Dr. Ross was one of the purest, kindest, most unselfish, and most faithful men who have ever adorned the profession of medicine. His nature had no flaw of meanness or pettiness. He was absolutely devoid of jealousy or greed or unworthy ambition. He lived for his profession and his patients and he received in return an enthusiastic affection and a profound esteem such as few men have ever evoked. No word of bitterness or censure or discontent or repining ever passed his lips. His presence brought help and comfort and benediction wherever he went. If ever man 'wore the white flower of a blameless life' it was Richard Ross. Indefatigable in labours, unwearied in well doing, careless of self, prodigal of professional aid, of wise counsel, and of kind sympathy, he has gone to his rest amidst the deepest and most unaffected mourning. The tears of the poor are, perhaps, his best epitaph. His death leaves a sad blank in the busy life of Belfast, but his memory will long be affectionately cherished in many a home and many a heart."

Dr. Albert Brunskill, of Liverpool, whose death at the early age of 31 we regret to have to record, was a prizeman of Trinity College, Dublin, where he graduated with honours. After serving the office of Resident Pupil in Sir Patrick Dun's Hospital he came to Liverpool in August, 1895, and undertook temporary duty at the North Dispensary, where his cousin, Dr. R. R. Brunskill, is head Surgeon. Subsequently he acted as *locum tenens* in two of the Liverpool hospitals, that at Parkhill and that in Netherfield Road. Shortly after entering on residence in the latter institution he contracted typhoid fever, of which he died. The remains were removed to Dublin, and there was a large attendance of professional friends at the graveside.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. James E. Garretson, a well-known surgeon, author of a treatise on Oral Surgery, and Dean of the Philadelphia Medical College, aged 67; and Professor Hermann Seidel, Chief of the Surgical Section of the Brunswick Hospital, and for a long time assistant to Volkmann at Halle, aged 41.

NAVAL AND MILITARY MEDICAL SERVICES.

THE ASHANTI EXPEDITION.

Eighty-five warrant officers, non-commissioned officers, and men of the Medical Staff Corps have joined the Depôt Medical Staff Corps at Aldershot to form a provisional company for active service in Ashanti. This company will be under the command of Surgeon-Major Wolseley, with Surgeon-Captain O'Callaghan as company officer, and Lieutenant and Quartermaster Lines as quartermaster. Orders have been received to arm this company, the warrant officers and non-commissioned officers with the revolver, and the rank and file with the Martini-Henri carbine. An advance party leaves England on November 23rd.

Further medical arrangements provide for the nursing of sick. Mrs. T. A. Gray, Acting Superintendent of Nurses, and a dame of the Royal Red Cross, has been ordered to embark. She will be accompanied by nursing sisters for work in hospitals.

Large stores of medical comforts are to be accumulated at Accra, which will be a base. The provision of means of transporting sick and wounded from the moving columns down the country to the hospitals by hand litters or stretchers has also received attention.

The medical arrangements, both in *personnel* and *matériel*, are likely to be amply sufficient, seeing that both the Commander-in-Chief and the Director-General of the Medical Department have personal experience of active service on the West Coast.

THE NAVY.

Staff-Surgeon Alfred Patterson has been promoted to be Fleet-Surgeon, October 26th. He was appointed Surgeon, March 31st, 1875, and Staff-Surgeon twelve years thereafter.

Fleet-Surgeon George Kell has been placed on the retired list from November 14th, at his own request, with the honorary rank of Deputy-Inspector-General. He entered as Surgeon, March 5th, 1867; became Staff-Surgeon, September 4th, 1877, and Fleet-Surgeon, June 30th, 1885.

Surgeon John Duncan Manuel died at the Royal Naval Hospital, Portland, on November 13th, at the age of 34.

The following appointments have been made at the Admiralty: Ernest E. Bray, Staff-surgeon, to the Pembroke, November 23rd; Johnston E. Acheson, Surgeon, to the Cape of Good Hope Hospital, November 23rd; Francis H. A. Clayton, Surgeon, to the St. George, November 26th; Percy H. Bayden, Surgeon, to the Forte, November 25th.

NAVAL MEDICAL SERVICE.

The undermentioned gentlemen, who competed on November 4th and following days at Examination Hall, Victoria Embankment, for appointment as Surgeon in the Royal Navy, have been granted commissions:

	Marks.		Marks.
C. H. J. Robinson	2,664	H. H. Gill, M.B.	2,369
H. Huskisson, M.B.	2,579	W. D. Adams, M.A., M.B. ...	2,344
E. S. Tuck	2,543	W. R. Trythall	2,339
H. G. T. Major	2,529	E. G. E. O'Leary	2,199
M. P. Jones	2,372	J. C. Rowan, M.B.	2,195
A. W. B. Livesay, M.B.... ...	2,344	R. A. Ross, M.B.	2,043

INDIAN MEDICAL SERVICE.

Brigade-Surgeon Lieutenant-Colonel C. Bute Brown, M.D., Bengal Establishment, is granted the temporary rank of Surgeon-Colonel from September 27th, while officiating as Inspector-General of Civil Hospitals, North-West Provinces and Oudh.

Brigade-Surgeon Lieutenant-Colonel F. A. Smith, Bengal Establishment, has retired from the service, October 26th. His first appointment dates from October 1st, 1869; and Brigade-Surgeon Lieutenant-Colonel

from January 12th, 1864. He was with the Burmese expedition in 1866-67, and has the Provincial medal with two clasps.

Surgeon-Captain F. E. SWINTON is appointed Personal Assistant to the Principal Medical Officer Bombay command.

ARMY MEDICAL STAFF.

Surgeon-Colonel J. R. HAMILTON, M.D., is promoted to be Surgeon-Major-General, vice R. Lowe, retired, October 3rd. Surgeon-Major-General Hamilton entered the Service as Assistant-Surgeon, January 13th, 1860; became Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1881; Brigade-Surgeon, March 30th, 1886; and Surgeon-Colonel, November 30th, 1891. He served in the Soudan campaign in 1885 as Field-Director of the Lines of Communication under Brigadier-General Ewart, and was present at the destruction of Tamai (medal with clasp, and Khedive's Star); and during the expedition to Burma in 1887 in medical charge of the hospital ship *Tenasserim*. Surgeon-Major-General Hamilton has been appointed Principal Medical Officer at Devonport, in place of Surgeon-Colonel J. H. Hughes, M.D., transferred to Chester.

Brigade-Surgeon-Lieutenant-Colonel JOHN MATURIN, F.R.C.S.I., is promoted to be Surgeon-Colonel, vice J. R. Hamilton, M.D., October 3rd. Surgeon-Colonel Maturin's previous commissions are dated as follows: Assistant-Surgeon, September 20th, 1865; Surgeon, March 1st, 1875; Surgeon-Major, September 20th, 1880; and Brigade-Surgeon-Lieutenant-Colonel, September 11th, 1890. He was in the Ashanti war in 1873-74, receiving the medal.

Brigade-Surgeon-Lieutenant-Colonel CHARLES WHITE is placed on retired pay, November 7th. His commissions are thus dated: Assistant-Surgeon, March 31st, 1863; Surgeon, March 1st, 1875; Surgeon-Major, March 31st, 1877; and Brigade-Surgeon-Lieutenant-Colonel, September 18th, 1881.

Surgeon-Lieutenant-Colonel G. D. LEAKE is promoted to be Brigade-Surgeon-Lieutenant-Colonel, *vice* J. Maturin, October 3rd. Brigade-Surgeon-Lieutenant-Colonel Leake dates as Assistant-Surgeon from April 1st, 1871; as Surgeon from March 1st, 1875; as Surgeon-Major from April 1st, 1883; and as Surgeon-Lieutenant-Colonel from April 1st, 1891. He was in the Zulu war in 1879 (medal), and with the Burmese expedition in 1885-87 (medal with clasp).

Surgeon-Lieutenant-Colonel J. R. GABBETT is promoted to be Brigade-Surgeon-Lieutenant-Colonel, *vice* H. W. A. Macklinnon, D.S.O., retired, October 26th. Brigade-Surgeon-Lieutenant-Colonel Gabbett's previous commissions are contemporaneous with those of Brigade-Surgeon-Lieutenant-Colonel Leake.

Surgeon-Colonel T. MAUNSELL is directed to officiate as Principal Medical Officer, Bengal Command, *vice* Surgeon-Major-General T. Walsh, who has been granted leave.

ARMY MEDICAL RESERVE.

THE Christian name of Surgeon-Captain STEWARTSON CLARKE, M.D., is as now described, and not as stated in the *Gazette* of November 1st.

THE YEOMANRY AND RIFLE VOLUNTEERS.

SURGEON-CAPTAIN G. R. T. PHILLIPS, Pembroke Yeomanry, is promoted to be Surgeon-Major, November 20th.

Mr. GRORGE MARTIN is appointed Surgeon-Lieutenant in the 1st Cumberland Artillery, November 20th.

The Christian name of Surgeon Captain TODD, 1st Durham Artillery (Western Division Royal Artillery), is DAVID, and not as stated in previous Gazette.

Surgeon-Lieutenant W. VERNON, 1st Volunteer Battalion the Suffolk Regiment, has resigned his commission, November 20th.

Mr. THOMAS EDWARD LLOYD is appointed Surgeon-Lieutenant in the 4th Volunteer Battalion the South Wales Borderers, November 20th.

Surgeon-Captain J. MARTIN, 2nd Volunteer Battalion the Duke of Wellington's West Riding Regiment, has resigned his commission, November 20th.

The Christian names of Surgeon-Lieutenant WARWICK, 1st Tower Hamlets Rifles, are FRANCIS JAMES LEWIS, and not as stated in a previous Gazette.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

LIEUTENANT-GENERAL G. H. MONCRIEFF will present the prizes of the school at 7.30 P.M., at the Banqueting Hall, Crosby Hall, E.C., on Saturday, December 7th. Among those who have accepted the invitation of the staff to be present are Brigadier-General W. H. Gatacre, D.S.O., recently commanding the third brigade of the Chitral Expeditionary Force; Captain Sir Alfred Jephson, R.N., Secretary-General of the Order of St. John of Jerusalem; and Colonel Sir Herbert Perrott, Secretary of the Order. Past and present members of the school can obtain tickets for the distribution and concert by making early application to Mr. C. J. Downer, Fairfield, Willesden Park, N.W.

SECRETARY TO P.M.O., INDIA.

SURGEON-MAJOR SHEARER, 27th Punjab Infantry, has been selected as secretary during the absence of Surgeon-Major Beatson on furlough. Surgeon-Major Shearer has seen much service in Afghanistan, Egypt, and Burmah.

INSPECTION BY P.M.O., INDIA.

SURGEON-MAJOR-GENERAL A. A. GORE, P.M.O. in India, is now on a long tour of inspection throughout India. He left Simla on November 7th, and on his inspection tour in Calcutta on January 2nd, 1896. He will visit all the principal stations in the three Presidential Army Corps Commands.

AMALGAMATION OF INDIAN MEDICAL SERVICE.

THE Secretary of State for India has sanctioned the amalgamation of the three (Bengal, Madras, and Bombay) branches of the Indian Medical Service into one service under the administrative control of the Government of India, and has also accepted a proposal that the Surgeon-General with the Government of India should be the head of the amalgamated service under the designation of Director-General of the Indian Medical Service. The amalgamation, however, will take place on much the same plan as was adopted when the Commissariat and Transport Departments of the three presidencies were amalgamated in 1880, that is to say, the officers at present in the Service will continue to be borne on three separate lists, so as to avoid all cause for dissatisfaction or complaint on their part with regard to their eligibility for certain appointments and for promotion to the administrative grades of their own presidency; but the future members will be borne on one list, and will be available for employment in any part of India. It now remains for the Indian Government to fix a prospective date from which all appointments will be made on one general list.

The amalgamation was, it is generally rumoured, suggested by the late Surgeon-General with the Government of India on the ground that by it the department might be reduced. The Government will certainly not fail to take advantage of the Surgeon-General's suggestion, so that reduction may be safely calculated on.

P.M.O. NORTH-EASTERN DISTRICT.

SURGEON-COLONEL W. D. WILSON, on return from India, tour expired, proceeds to York (headquarters) as P.M.O. succeeding Surgeon-Colonel Masham, proceeded to the Cape *vice* Surgeon-Major-General Hamilton.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL ADVERTISING.

OUR readers will remember that we commented recently upon an advertisement which had appeared in various London newspapers, in which a "West-End Physician" offered his services at reduced fees to the public. We have made inquiries into the matter through the Medical Defence Union, and we regret to state that, contrary to our anticipation, the advertiser was a duly qualified medical man. We are glad, however, to be able to report that the advertisements will not appear again, and that the gross offence against medical ethics will not be repeated. The advertiser has expressed his sincere contrition and will "sin no more."

CORONERS' JURIES.

THE efforts to obtain the amendment of the law relating to coroners' inquests still proceed, but meanwhile some practicable suggestions have been formulated by the Public Control Committee of the London Council which should do a little to render the service of jurors less irksome and arduous. The London coroners are now requested to arrange as far as is practicable for the summoning of jurors strictly by *rota*, to reduce as far as possible the number of jurors summoned for each inquest, and to arrange that where a juror complains and can show that he has been summoned more than once in two years, he shall be exempted from subsequent service for three years.

SPECIALISTS AND ETIQUETTE.

WYKEHAMIST writes: A patient under my care for many years for rheumatism, having developed an attack of psoriasis, desired to consult a specialist in skin disease. I accordingly sent her with my card to Mr. A., who is on the senior staff of the nearest skin hospital. He upon discovering her rheumatic and cardiac ailments, without any reference to me, took her to a neighbouring physician, to whom he represents the case as his own. I heard of this quite by accident, and on applying to the physician for an explanation he told me that he had no knowledge of me in connection with the case, but supposed that the lady had been under the care of Mr. A. during the whole of her history. As I have never met Mr. A. I have not written to him, but prefer to ask your opinion.

"." When sending a patient to a consultant for a second opinion it is better, especially when the practitioners are personally unacquainted, that the general practitioner should write a note instead of merely handing to the patient his address card as a medium of introduction, as in the above case. In reference to this a doubt arises in our mind as to whether it was *de facto* presented to A., a very material point, on which depends the ethical correctness of his (A.'s) procedure. Assuming, however, that he duly received it, his action in taking the lady to a neighbouring physician was reprehensible, and contrary to traditional and modern consultative practice. Our correspondent should have addressed to him, and not to the physician specially referred to, a courteous letter of remonstrance.

MEDICAL ETIQUETTE.

H. M. R.—A dispassionate review of our correspondent's letter and Dr. W.'s courteously suggestive note, inclines us to the opinion that, although the latter should have acted in accordance with the principle laid down in the rule appended before visiting the patient referred to, he unwittingly omitted to do so either from a more or less inexcusable ignorance thereof, or inadvertence arising from the stress and worry of an extensive general practice, and not from intentional disregard of the rule. Be that as it may, "H. M. R." would in our opinion, have acted wisely in acknowledging Dr. W.'s friendly explanatory letter, and soliciting his attention to the rule in question: "When, moreover (an oft-recurring incident), an employer or other person becomes anxious and apprehensive in regard to the illness of an employee, or in the case of an impending action for damages, and the like, and for his personal

satisfaction requests his own family or other doctor to visit the patient and report to him thereon, it is the duty of the deputed practitioner to point out to the employer or other interested party their respective ethical obligations in the matter; and, prior to making such visit, to consult and learn the opinion of the medical attendant in the case, otherwise he will commit a grave breach of professional etiquette, and entail upon himself a just rebuke." [illegible], chap. ii, sec. 6, rule 10.

CHANGE OF ADDRESS.

F. [illegible].—When impracticable to notify personally the change of residence, the most effective and unexceptionable mode is to transmit an autograph note, or a well-executed facsimile thereof, on notepaper to [illegible] patients, or to enclose an ordinary address card, with "Change of Address" inserted at the top, the old address in the lower right corner being defaced by a black line, and the new one engraved in the left hand corner, or vice versa.

A KNOTTY POINT.

F. W. L. writes: A. and B. are two general practitioners living in the same town. A. sees one of B.'s patients in consultation with B. The patient is a retired coastguardsman, B. being the coastguard doctor for the district. A few weeks later a daughter of the patient calls on A. and wishes him to attend her, telling him that, with the exception of a married sister, the father is the only member of the family who has been attended by B. A. declines on the ground that he was introduced to the family as a consultant, but promises to state a case for the Editor of the BRITISH MEDICAL JOURNAL, and to be guided by the opinion he expresses.

*** In view of the alleged fact that B. is not regarded as the family medical attendant of the retired coastguardsman, we incline to the opinion that A., under the circumstances related, would be fairly justified in assuming charge of the would-be patient in question. At the same time, we think that, as a reasonable judicious mark of courtesy, he would act advisedly and in the true ethical spirit by calling upon B., and solicit an expression of his views and wishes on the point.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

ELECTORS OF PROFESSORSHIPS.—The vacancies on the Board of Electors to the chairs of Human Anatomy, and Zoology and Comparative Anatomy, caused by the death of Professor Huxley, have been filled respectively by the appointment of Sir William Turner, F.R.S., Professor of Anatomy in the University of Edinburgh, and of Lord Walsingham, F.R.S., High Steward of the University of Cambridge.

UNIVERSITY OF LONDON.

M.B. EXAMINATION PASS LIST.—*First Division.*—B. L. Abrahams, B.Sc., University College; H. L. Barnard, London Hospital; V. J. Blake, University College; A. W. [illegible], Owens College and Manchester Royal Infirmary; S. A. [illegible], Westminster Hospital; A. R. Cook, B.Sc., Cambridge University and St. Bartholomew's Hospital; J. H. Cook, University College; F. G. Crookshank, University College; Rosina Clara Despard, London School of Medicine for Women; A. Dimsey, University College; L. E. V. Every-Clayton, Guy's and London Fever Hospitals; S. Gillies, St. Bartholomew's Hospital; W. S. Handley, Guy's Hospital; R. Hopton, Yorkshire College; E. Playfair, King's College; W. T. G. Pugh, Middlesex Hospital; A. J. [illegible], B.Sc., University College; A. Salter, Guy's Hospital; H. B. Shaw, University College; G. H. Sowry, St. Bartholomew's Hospital; T. M. Thomas, Guy's Hospital; and H. J. [illegible], St. Bartholomew's Hospital.

Second Division.—E. B. Allan, University College; J. A. Belcher, University College; F. L. [illegible], University College; J. H. Bodman, University College Bristol and St. Bartholomew's Hospital; J. S. Brown, University College; F. K. [illegible], B.A., University College; F. B. Carter, University College; J. J. Coleman, Guy's Hospital; F. J. [illegible], University College; G. A. Crace-Calvert, St. Bartholomew's Hospital; C. S. De Segundo, St. Bartholomew's Hospital; Adela Isabella De Steiger, London School of Medicine and Royal Free Hospital; F. W. [illegible], St. Bartholomew's Hospital; G. L. Eastes, B.Sc., Guy's Hospital; P. J. Edmunds, B.Sc., University College; H. P. [illegible], Guy's Hospital; A. P. Gibbons, London Hospital; A. C. [illegible], St. Bartholomew's Hospital; F. P. H. Hardenberg, Guy's Hospital; R. S. Hardman, Owens College and Manchester Royal Infirmary; C. J. Harnett, Guy's Hospital; F. G. Haslett, Guy's Hospital; J. Horan, Guy's Hospital; Charlotte Elizabeth Hull, London School of Medicine and Royal Free Hospital; A. Hubbard, University College; T. H. Hunt, Owens and Yorkshire Colleges; A. W. Jenkins, University College; W. H. Jewell, Guy's Hospital; R. H. [illegible], St. Thomas's Hospital; H. C. [illegible], London Hospital; R. Knight, Owens College and Manchester Royal Infirmary; E. [illegible], St. Thomas's Hospital; T. G. [illegible], B.Sc., St. Thomas's Hospital; J. P. [illegible], St. Bartholomew's Hospital; M. G. Pearson, B.Sc., St. Bartholomew's Hospital; H. [illegible], University College; W. R. [illegible], University College; [illegible], Mason College; J. C. [illegible], St. Mary's Hospital; [illegible], St. Bartholomew's Hospital; J. C. [illegible], London Hospital; Florence Ada Stoney, London School of Medicine for Women; Margaret Marion [illegible], London School of Medicine and Royal Free Hospital; P. N. Vellacott, Guy's Hospital; M. Wilks, University College.

UNIVERSITY OF GLASGOW.

AT the November graduation in Glasgow University there were ten graduates in the higher degree in Medicine, three with commendation, and seven the ordinary degree of M.D. There were also twenty-four graduating M.B., C.M., and one Doctor of Science.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen passed the First Professional Examination in Anatomy and Physiology for the Diploma of Fellow at a meeting of the Board of Examiners on Thursday, November [illegible]:

C. J. Heaton, L.R.C.P.Lond., M.R.C.S.Eng., of St. George's Hospital; C. Ryall, L.R.C.P.Lond., M.R.C.S.Eng., of Westminster Hospital and King's College, London; R. T. FitzHugh and A. J. Cleveland, of Guy's Hospital; A. G. Wilson and G. Hutcheson, of London Hospital; A. W. [illegible], of St. Bartholomew's Hospital; S. H. [illegible], of Charing Cross and St. Bartholomew's Hospital.

Eight gentlemen were referred for six months.

CONJOINT BOARD IN SCOTLAND.

THE quarterly examinations for the triple qualification of the Royal College of Physicians, Edinburgh, the Royal College of Surgeons, Edinburgh, and the Faculty of Physicians and Surgeons, Glasgow, took place in Edinburgh during October, with the following results:

First Examination.—*Four Years' Course.*—Of [illegible] candidates the following 12 passed: R. R. [illegible], J. [illegible], P. Wilson, T. H. O'Reilly, J. Farmer, E. R. S. Hale, W. C. Brown, J. J. [illegible] (with distinction), Ellen Maud Wood, and J. Carruthers. Three candidates entered for divisions, and two passed. *Five Years' Course.*—Of 21 candidates the following 16 passed: A. B. Timms, J. Fulton, F. Hannah, M. King, W. A. Pitt, O. Green (with distinction), E. F. Cox, W. J. O'Sullivan, G. B. M'Kendrick, T. M. O'Driscoll, A. D. Cameron, J. E. Kerr, Mary Jane D'Vaz, J. A. Scotland, W. [illegible], and W. H. Wharton. Fifteen candidates entered for divisions, and 11 passed.

Second Examination.—*Four Years' Course.*—Of 34 candidates the following 23 passed: J. J. [illegible], M. F. [illegible], R. H. [illegible], J. S. P. Robertson, W. [illegible], J. C. [illegible], O. L. Appleton, S. H. Smith, W. M. Harry, F. J. F. O'Sullivan, P. J. H. Mulholland, T. J. Enright, W. Campbell, T. Donovan, H. T. Wright, R. E. Russell, A. B. Hood, C. E. Proctor, D. Riordan, J. J. S. Healy, M. F. H. Gamble, C. H. Harris, E. Frost, M. G. Wilkins, and H. W. J. J. G. Cattell. Eleven candidates entered for divisions, and 7 passed. *Five Years' Course.*—Of 8 candidates the following 5 passed: W. Hibbert, W. J. Morgan, D. Heron, G. Potts, and Harriette Frances Bailey.

Third Examination.—*Four Years' Course.*—Of [illegible] candidates the following 4 passed: J. G. Murray, E. C. [illegible], Georgina Catherine [illegible], and Mary Ariel Stewart. Five candidates entered for divisions, and 4 passed.

Final Examination.—Of 132 candidates the following 63 passed and were admitted L.R.C.P.&S.E. and L.F.P.&S.G.: C. A. Francois, J. B. Chadwick, P. Bayley, W. D. Shunker, A. F. Thomas, Mary Harmar, C. H. B. Adams, Mary Helen Cruickshank, J. Young, J. C. Glen, J. R. Shotton, S. F. Blakely, N. Pinto, F. W. Martin, T. Gallacher, J. Barry, G. R. Leighton, J. L. S. Sherlock, W. O. R. Lofthouse, Annie Caroline Smith, Josephine Cunin, W. H. Dixon, R. J. Black, A. A. Bartholomew, D. A. Porter, P. Wykesmith, W. G. J. Graham, E. H. Swan, J. Matson, A. G. Kewley, W. Hamilton, D. J. Dubig, V. N. Chitale, A. Lees, D. de W. Quay, H. S. O'Conor, J. H. Abrahams, J. Hartley, F. R. B. Quinn, R. Irvine, T. B. Howson, A. MacGregor, G. Fowler, F. [illegible], Rose Turner, Gertrude Keith, G. C. Henry, J. [illegible], E. A. [illegible], W. R. Forbes, W. J. Sturges-Davis, K. E. Master, H. M'[illegible], J. G. Mylan, G. O'Toole, M. Kochmann (with honours), H. M. Pereira, J. O'Sullivan, Isabella Hardie Curr, Margaret Ferona [illegible], M. Luby, J. F. [illegible], R. J. Erskine, E. H. [illegible], L. [illegible] Saldanha, T. J. Perkins, J. V. Pratt, and G. Mason. Twenty-two candidates entered for divisions, and 5 passed.

CONJOINT BOARD IN IRELAND OF THE ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following gentlemen have passed the examination for the Conjoint Diploma in State Medicine:

E. G. Annis, M.R.C.S.Eng.; G. W. Dawson, L.R.C.P.and S.I.; W. J. Greer, F.R.C.S.I.; J. J. G. Murray, L.R.C.P.and S.Edin.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, [illegible] births and [illegible] deaths were registered during the week ending Saturday last, November 16th. The annual rate of mortality in these towns, which had increased from 19.1 to 24.1 per 1,000 in the four preceding weeks, declined again to 19.1 last week. The rates in the several towns ranged from 10.0 in Huddersfield, 12.2 in Brighton, and 13.0 in Derby to 26.5 in Bolton, 26.8 in Liverpool, and 31.4 in Blackburn. In the thirty-two provincial towns the mean death-rate was 19.9 per 1,000, and was 2.0 above the rate recorded in London, which was 17.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.6 per 1,000; in London the rate was equal to 2.8 per 1,000, while it averaged 2.5 in the thirty-two provincial towns, and was highest in Liverpool, Salford, Blackburn, and Wolverhampton. Measles caused a death-rate of 2.5 in Salford, 4.7 in Oldham, and 2.0 in Blackburn; scarlet fever of 1.1 in Gateshead; whooping-cough of 1.3 in Newcastle-upon-Tyne and 1.5 in Wolverhampton; and "fever" of 1.3 in Salford, 1.5 in Oldham, 1.4 in Burnley, and 1.9

in Sunderland. The 107 deaths from diphtheria in the thirty-three towns included 61 in London, 8 in West Ham, 5 each in Wolverhampton, Birmingham, and Liverpool, and 4 each in Manchester, Salford, and Newcastle-upon-Tyne. One fatal case of small-pox was registered in West Ham, but not one in London or in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital, which had been 111, [illegible] and [illegible] at the end of the three preceding weeks, had risen again to 86 on Saturday last, November 16th; 23 new cases were admitted during the week, against 12, 20, and 14 in the three preceding weeks. There were 2,815 scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, against 2,833, 2,841 and 2,817 at the end of the three preceding weeks; [illegible] new cases were admitted during the week, against [illegible], 215, and 249 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, November 16th, 821 births and [illegible] deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 18.9 to 21.4 per 1,000 in the three preceding weeks, declined again to 18.5 last week, and was 0.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.2 in Leith to 24.8 in Greenock. The zymotic death-rates in these towns averaged 1.4 per 1,000, the highest rates being recorded in Greenock and Perth. The [illegible] deaths registered in Glasgow included 1 from small-pox, 14 from whooping-cough, 3 from scarlet fever, and 7 from diphtheria. Three fatal cases of scarlet fever were recorded in Edinburgh.

MEASLES v. SMALL-POX, FEVER INTERVENING.

A CASE of no small obscurity, and, as far as we can make out, one of no small importance, has been decided by Sheriff Guthrie at Glasgow. The obscurity is in the reports from the *North British Daily Mail* and other papers which have reached us, and which agree in most points, including the omission of certain details essential to any clear understanding of the case. The published particulars were reported in the BRITISH MEDICAL JOURNAL of November 16th, p. 1267, and amount to this: That a patient under treatment by one medical man for measles was reported to the sanitary authority by another medical man (not called in to attend him) as suffering from small-pox, and thereupon removed in "the small-pox and fever van" to a small-pox hospital, and subsequently developed "fever." There ought to be no such thing as a small-pox and fever van, but this implied reflection upon the authorities is perhaps due to a flight of imagination on the part of the reporter. A letter from the "defender" (Dr. Stewart) to the *Glasgow Daily Record* clears up much of the mystery which had been imported into the case. It seems that Dr. Stewart was called in after the retirement of the practitioner first in attendance. He diagnosed typhus, and wrote to the acting medical officer of health, who took the view that it was malignant small-pox, and had the patient removed to the hospital. The next day the diagnosis of typhus was confirmed and the patient was placed in the fever ward. This explanation seems to exonerate the ambulance and supplies abundant reason for the dismissal of the action, but how the patient of many diagnoses came to be so ill-advised as to commence proceedings against Dr. Stewart remains to be explained.

A MEDICAL OFFICER OF HEALTH FOR CHESHIRE.

AT the last quarterly meeting of the Cheshire County Council it was resolved, after some discussion, to appoint Dr. Vacher, of Birkenhead, medical officer of health for the county at a salary of £600 per annum. Dr. Godson, in opposing the motion, said there was no necessity to make the appointment, as the work of medical officer was already efficiently performed by the district medical officers, and that an appointment like that suggested would tend to cause friction between the local and the central medical authorities. He did not think the council should assume an air of superiority towards the district authorities, or sanction what seemed like a proposition to authorise an official to go all over the district, rummage about, and make a disturbance wherever he could. In the end the resolution was adopted by 35 to 20.

AËRIAL DISSEMINATION OF SMALL-POX.

J. R. T.—The subject of hospital spread small-pox is very fully treated by Mr. W. H. Power, of the medical department of the Local Government Board, in the report on the *Use and Influence of Hospitals for Infectious Diseases* issued from that department in 1882, and since reprinted. The hospital dealt with was the Western Hospital of the Metropolitan Asylums Board at Fulham; the story was carried on in the annual reports of the medical officer for 1884 and 1885. As regards the metropolis generally, three years later the same writer presented a summary statement of much interest. Dr. Priestley made a valuable report to the Town Council of Leicester in regard to the year [illegible]; and Dr. Niven has written papers of interest on the subject in recent years, and reference might be made to those gentlemen at Lambeth and Manchester respectively, where they are now health officers. Another official report bearing on the matter is that by Dr. Bruce Low, issued by the Local Government Board, on small pox at and near Hastings, and procurable, we believe, from Messrs. Eyre and Spottiswoode, East Harding Street, London.

INDIA AND THE COLONIES.

MAURITIUS.

QUARANTINE.—It is not creditable to our character for intelligence and consistency, or calculated to inspire other people with a belief in our sincerity, that quarantine of the crudest and most antiquated type should be still maintained in Crown Colonies, the administration of which is controlled by the Home Government, and which do not enjoy the legislative independence of our American and Australian dependencies. We have often had occasion to comment on the detention of cholera-smitten vessels in the stagnant, land-locked harbour of Malta, moored close along shore, and discharging the excretions of the sick into the foul water of the port, and we now have before us a letter from a surgeon in the British India Steam Navigation Company exposing the stupidity and abuses of the system as carried out in Mauritius, which, though possessing some semblance of local government, is none the less a Crown colony. The medical officer is, he says, not allowed to inspect a ship until the Board of Health have met and decided on the course of action. Meanwhile no communication with the shore is permitted, and several days may elapse before even medical aid can be obtained. On one occasion a man died in port without having been seen by a medical man, though there was no infectious disease on board; and on another a seaman with a fractured skull remained twelve hours without medical aid. The inconsistency and want of uniformity in the treatment of vessels arriving from cholera-infected ports in India and elsewhere, though no cases may have occurred during the three weeks' voyage, is suggestive of corruption of some kind, and it is but a natural result of the system that, with a view of evading the regulations, fraudulent concealment of actual disease should be sometimes practised by the captains. Thus about four years ago the concealment of a case of small-pox led to an epidemic in the island, which entailed a heavy expense on the community. The health of the colony is not good, but the deaths exceed the births, the death rate of the towns varies from 40 to 70 per 1,000, 33 per cent. of the deaths being those of children under 5, and that of St. Louis, the capital, with 62,000 inhabitants, has, during the last six years averaged [illegible] per 1,000, as against 26 per 1,000 for the same period in Calcutta with its population of little under a million, though its site and surroundings are by no means so favourable by Nature. Nor is this high mortality confined to the denser populations of the town, for the death rate of the entire island is generally over 40 per 1,000, a figure probably unapproached by that of any similar civilised and European or semi-European people.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE SIXTH ANNUAL REPORT OF THE ASYLUMS COMMITTEE OF THE LONDON COUNTY COUNCIL.

THE general work of the year at the five large institutions under the control of the Council has been efficiently carried out unmarked by any event of importance, but the steady increase of insane persons in the county area still continues, so that the number at the end of the year was 18,541 lunatics chargeable to parishes and unions within the county, as compared with 18,041 at the end of the previous year, showing an increase of exactly 500. Taking the result of the five years' work 1890 to 1895, the Committee think this rate of increase indicates the correctness of their estimate given in their last report, and that without some permanent change occurs in the conditions which have prevailed since 1890, this estimated number must now, at the ascertained rate of progression, be taken to stand at an increase of about 600 lunatics per annum.

Although one huge asylum after another has been provided, and a sixth one will be immediately commenced at a cost of £350,000 (exclusive of site and equipment) on January 1st of this year, there was a deficit of beds amounting to 1,317, after allowing for the 600 beds at Barming Heath held by agreement, so that the population of the new asylum is practically already provided, and if the County Council hope to bring their accommodation up to a level with their requirements they will not only have to erect two asylums instead of the one they contemplate, but have a third one well in hand before the first two are completed. This would entail an expenditure of one million sterling, exclusive of the cost of sites and equipment, a truly formidable programme. The Committee fully recognise the gravity of the question; they say in their report: "The deficiency of accommodation is still a most serious question; every bed is occupied, and the only vacancies available are those caused by deaths or discharges." There are 1,106 patients boarded out in different asylums throughout the county, for whom the ratepayers are paying at the rate of 12s. 6d. to 14s. per head per week, while the cost of maintenance in the asylums belonging to the county is 10s.

The boarding-out of insane persons from their homes and friends inflicts great hardships upon them, and nothing short of the gravest necessity should justify it. Yet contracts are contemplated for the reception of patients as far off as Dorchester and Plymouth. The seriousness of the position is enhanced by the fact that there is little hope of materially increasing the number of patients boarded out in consequence of lack of room throughout the country. The appointment of a pathologist was stated to be under consideration when the report was published. Happily, the appointment has since been made, and the Committee have been fortunate in securing the services of Dr. F. W. Mott, whose work in neuropathology is so well known.

Facilities have been afforded for the clinical teaching of mental diseases, and several of the London hospital medical schools have taken advantage of the offer of the Committee.

The total number of cases under treatment during the year was 13,176; 3,122 were admitted and 2,813 were discharged or died. The percentage of recoveries calculated upon the number admitted was 42.09, and the death-rate calculated upon the average number resident was [illegible] per cent.

There is an important point to be observed in connection with the recovery rate, and it is this: Under the London County Council there are five of the largest hospitals for the insane in the kingdom, and that for the last ten years the recovery rate in these asylums, including transfers, has been over [illegible] per cent., calculated on the admissions; and during the last year, excluding transfers, it was 44.51 per cent., a result which compares very favourably with other and smaller institutions.

MEDICAL MAGISTRATE.—Dr. Arthur Flint, of Westgate-on-Sea, J.P. for the Cinque Ports, has been placed on the Commission of the Peace for the County of Kent on the nomination of Earl Stanhope, Lord Lieutenant.

MEDICAL NEWS.

The treasurer of Guy's Hospital has received a cheque for £1,000 from Mr. A. L. Cohen for the endowment of a bed in memory of his late son, H. A. Cohen.

The annual dinner of the Harveian Society of London will be held at the Café Monico on Thursday, November 28th, the president, Sir John Williams, Bart., in the chair.

Mr. William McVean of Brixton, who died on September 29th, has bequeathed £500 to the Evelina Hospital for Sick Children, Southwark Bridge Road.

Scarlet Fever in Edinburgh.—It was reported at the meeting of the Edinburgh Town Council on November 19th that there were on that day 449 patients in the City Hospital, of which 104 were adults, and 345 children. Of these there were 384 cases of scarlet fever, and 39 of typhoid fever. Yet it is maintained by some that there is no epidemic of scarlet fever in Edinburgh.

The Committee of the Conjoint Laboratories of the Royal Colleges of Physicians and Surgeons in London have made a grant of £100 out of the Goldsmiths' Company's grant to Dr. Cartwright Wood for investigations as to improved means of treating horses with a view to obtaining diphtheria antitoxic serum in a shorter time than is possible by the methods hitherto in use.

The Metric System.—In replying to a deputation representing Chambers of Commerce, which waited on him on November 20th, Mr. Balfour, the First Lord of the Treasury, assented to the propositions that the metrical system of weights and measures should be legalised for all purposes, and that it should be taught in elementary schools, but expressed the opinion that it would be impracticable to attempt to render it, within the suggested period of two years, the only legal system.

The Medico-Psychological Association of Great Britain and Ireland will hold an examination for its certificate in Psychological Medicine in London, Edinburgh, Glasgow, Aberdeen, and Dublin on Thursday, December 19th. Intending candidates are required to give fourteen days' notice to the Registrar, Dr. Spence, Burntwood Asylum, Lichfield, from whom further information can be obtained. Essays for the bronze medal and prize given by the Association must be received not later than May 30th, 1896.

The Cholera.—The *Times* correspondent in St. Petersburg telegraphed on November 18th that the *Official Gazette* of that date states that cholera has reappeared in St. Petersburg. It refers to isolated cases with all the symptoms of cholera. Besides 27 seizures and 12 deaths down to November 6th, there have since been 38 more cases, of which 19 have proved fatal.—Up to November 16th the total number of deaths from cholera in Egypt were 795 and 620 deaths. All these, however, were confined to the district of Damietta and Lake Menzaleh. The health in all the big towns, such as Alexandria, Cairo, and Tantah, is reported to be excellent.

City of Dublin Hospital.—For the vacancy created by the retirement of Dr. H. Fitzgibbon from the surgeoncy of this hospital there are several candidates—namely, Mr. F. Nixon, surgeon to the Mercer's Hospital; Mr. J. D. Pratt, surgeon to Jervis Street Hospital; Dr. Boyce; Mr. Jameson Johnson, assistant surgeon to the Richmond Hospital; Mr. Gordon, assistant surgeon to the Adelaide Hospital; and Mr. W. J. Thompson, demonstrator of anatomy in the College of Surgeons. Dr. C. R. Ball was also a candidate, but since his election as Regius Professor of Surgery in the University of Dublin he has withdrawn his name.

Edinburgh Royal Medical Society.—The following gentlemen have been elected office bearers: *Presidents:* J. E. Bowes, M.B., C.M.; W. M. Taylor, M.B.; C. M. Kenneth Maclean, M.B., C.M. *Secretaries:* J. Brunton Blaikie, Scott Carmichael, M.B., C.M. *Chairman of Finance Committee:* Edwin Bramwell. *Curator of Library:* Harry Fowler. *Curator of Museum:* T. Anderson. *Chairman of Public Business Committee:* W. T. Ritchie. *Editor of Transactions:* W. A. G. Alexander, M.B., C.M. *Treasurer:* J. R. Young. *Sublibrarian:* A. P. Ormiston.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer; unmarried. Salary, £100 per annum, with board and apartments in the hospital. Applications to Frederick W. Dingle, Registrar and Secretary, before November 30th.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, with board, washing, lodging, etc. Applications to Norman A. [illegible], Secretary, Infirmary Offices, 17, Richmond Terrace, Blackburn, by November 25th.

BRADFORD INFIRMARY.—Dispensary Surgeon; doubly qualified; unmarried. Salary, £100 per annum, with board and residence. Applications, endorsed "Dispensary Surgeon," to William Maw, Secretary, by November 25th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 29A, Gray's Inn Road, W.C.—House-Surgeon. Rooms, coals, and light. Applications to the Secretary by December 16th.

CITY OF LIVERPOOL.—Assistant to the Medical Officer of Health, fully qualified, graduate of a British University, and possess diploma in Sanitary Science or Public Health. Salary, £350 per annum, subject to a contribution of £3 per cent. to the Corporation Superannuation Fund. Not more than 35 years of age. Applications endorsed "Assistant to the Medical Officer of Health" to be posted to the Town Clerk, Municipal Offices, Liverpool, to be delivered by November 30th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Appointment for six months. Board and Residence provided and salary at the rate of £50 per annum. Applications to the Secretary by December 12th.

COUNTY BOROUGH OF BOLTON.—Medical Officer and Public Analyst, doubly qualified. Salary, £450 per annum. Applications to E. C. Hinnell, Town Clerk, Town Hall, Bolton, by December 6th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon; must be duly qualified to practise medicine and surgery, and be conversant with the Welsh language. Salary, £50 per annum, with board, residence, and washing. Applications and testimonials to W. Vaughan Jones, Secretary, by December 2nd.

ENNIS DISTRICT LUNATIC ASYLUM.—Assistant Medical Officer, doubly qualified, unmarried, and not more than 28 years of age. Salary, £100 per annum, with furnished apartments, rations, washing, fuel, light, and attendance. Applications to Dr. Golston, Resident Medical Superintendent, by December 10th.

GENERAL HOSPITAL, Birmingham.—Assistant House-Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House Governor, by November 30th.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeon; doubly qualified. Salary, £100 per annum, with board, residence, and washing. The Assistant House-Surgeon is a candidate for the post, and, if elected, the office of Assistant House-Surgeon will be vacant. Candidates must be doubly qualified. Board, residence, and washing provided. Applications to the Secretary by November 30th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary £50 per annum, with apartments and board. Applications to William George Black, Secretary, 83, West Regent Street, Glasgow, by December 10th.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Resident Medical Officer. Salary, £50 per annum, with board, lodging, and washing. Applications to W. Holt, Secretary Superintendent, by November 30th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—House-Surgeon to out-patients; duly qualified. Appointment for six months but eligible for a second term. Salary, £ guineas. Applications to the Secretary by December 3rd.

HOSPITAL FOR WOMEN, Soho Square.—Assistant House Physician; non resident (appointment for three months) and Assistant Physician. Applications to the Secretary by November 30th.

KING'S COLLEGE, London.—Gresham Professorship. Applications from King's College Hospital only to Walter Smith, Secretary, by November 30th.

LEICESTER INFIRMARY.—Honorary Ophthalmic Surgeon (temporary). Applications to the Secretary, 34, Friar Lane, Leicester, by November 25th.

LONDON HOSPITAL, Whitechapel, E.—Dental Surgeon. Applications to the Governor by November 30th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer, doubly qualified. £40 yearly, and board, washing, and residence provided. Applications to A. W. Bridger, Secretary, by December 6th.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer at the Monsall Fever Hospital; unmarried. Appointment for twelve months. Salary, £100 per annum, with board and residence. Applications to the Chairman of the Board, Royal Infirmary, Manchester, by November 30th.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon, unmarried, doubly qualified. Salary, £50 per annum, with board, residence, and washing. Applications to J. G. Jordan, Honorary Secretary, by [illegible] 3rd.

NEW HOSPITAL FOR WOMEN, 141, Euston Road.—Two Qualified Medical Women as House Surgeons. Applications to Margaret M. Ingalee, Secretary, by November 27th.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—House Physician; doubly qualified. Appointment for six months; at the expiration of this term he will be required if eligible, to serve as House Surgeon for a further period of six months.

[illegible] as House-Physician at the rate of £60, and as House-Surgeon at the rate of £80 per annum. Junior House-Physician for six months, [illegible] Applications to the Secretary, 27, Clement's Lane, E.C., by December 9th.

ROYAL EARL'S HOSPITAL, [illegible] House-Surgeon and House-Physician, at the rate of £80 per annum, with board, lodging, and washing. Also Assistant Medical Officer, with board, lodging, and washing provided, but not salary. Appointments for six months. Applications to the Secretary before December 9th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand, W.C.—Clinical Assistants. Applications to T. Beattie Campbell, Secretary, by November 30th.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King Street, Regent Street, W. [illegible] per annum, with furnished apartments, coals, and lighting; also Physician. Applications to the Secretary, St. Leger Bunnett, by December 4th.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Appointment for six months. Salary, £50 per annum, with board and lodging. Stimulants and washing not provided. Applications to the Honorary Secretary by November 30th.

SWANSEA GENERAL HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, residence, washing, and attendance. Applications to Jno. W. Morris, secretary, 9, Castle Street, Swansea, by December [illegible]

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser; registered and unmarried. Salary, £105 per annum, with lodgings, attendance fire, and lights. Applications to Arthur Fisher, Honorary Secretary, by November [illegible]

VICTORIA UNIVERSITY, Manchester.—External Examiner in Pharmacology and Therapeutics and in Surgery. Appointment for three years. Applications to Alfred T. Bentley, Registrar, by November [illegible]

WARNEFORD HOSPITAL, Leamington.—House-Surgeon. Salary, £100, with board, lodging, and washing. Appointment for six months subject to re-election. Applications to the Secretary before December [illegible]

WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho, W.—Honorary Surgeon. Applications to the Secretary by November [illegible]

MEDICAL APPOINTMENTS.

ABRAHAM, Phineas S., M.A., M.D., B.Sc., F.R.C.S.I., appointed Assistant Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

ADAMS, F. E., M.D.R.U.I., D.P.H.Camb., appointed Medical Officer of Health to the Hereford County Council.

BARRON, George Walter, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to the Kalgoorlie (Hannan's) Hospital, West Australia.

BROSTER, Arthur E., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer to the Small-pox Hospital of the Wirksworth District Council.

CARLYON, F. H., M.B. C.M.Edin., appointed Medical Officer to the Royal Cornwall Infirmary, Truro.

CLARKE, T. H. M., B.A., M.B., B.Ch., B.A.O.Dub.Univ., appointed Senior Resident Surgeon to the Jervis Street Hospital, Dublin.

DAVIES, Albert Barnes, M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Surgeon to the Stroud General Hospital.

DUNCAN, Robert Bruce, M.D., B.S.B.Hy.Dunelm, appointed Medical Officer for the Bradninch District of the Tiverton Union.

HADDWICKE, E. W., B.A.Camb., M.B., B.C., appointed Medical Officer of Health to the Quarry Bank Urban District Council.

HARDY, C. M., M.B.Durh., B.S., appointed Medical Officer of Health for the Darlington Rural Sanitary District.

HARRIS, H., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer for the Bacup District of the Haslingden Union.

KEMP, Benjamin, M.R.C.S.Eng. L.S.A., reappointed Medical Officer of Health to the Horbury Urban District Council.

LITTLE, E. G. Gordon, M.D.Lond., B.A.CapeUniv., M.R.C.P.Lond., M.R.C.S.Eng., appointed Assistant Physician to the East London Hospital for Children, Shadwell.

MCGACHEN, F. W. D., L.F.P.S.Glasg., L.S.A., D.P.H.Eng., appointed Medical Officer for the Markyate District of the Luton Union.

MACKINTOSH, O. J., M.B., C.M.Edin., appointed Medical Officer and Public Vaccinator for the Parish of Portpatrick.

MELLERSH, W. Francis, L.D.S.R.C.S.Eng., appointed Honorary Dental Surgeon to the Thames Ditton Cottage Hospital.

MATTHEWS Mr. T. G., appointed Medical Officer for the Sixth District of the Mansfield Union, *vice* W. A. Stamford.

MOORE, T., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Hazelgrove, etc., District of the Stockport Rural District Council.

NUTTING, E. S., M.B., C.M.Edin., appointed Medical Officer of Health to the Warsop Urban District Council.

PACKER, Harry D., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Resident Medical Officer to the East Riding Lunatic Asylum, Beverley, Yorks.

ROWAN, John, M.B., C.M., appointed Assistant Ophthalmic Surgeon to the Glasgow Ophthalmic Institution, Glasgow Royal Infirmary.

SHARP, E., M.R.C.S.Eng., L.S.A., appointed Pharmacy Committing Medical Officer to the Royal Cornwall Infirmary, Truro.

SHARP, Hugh C., B.A., M.B.Camb., appointed Honorary Medical Officer to the Royal Cornwall Infirmary, Truro.

SPENCER, Edward, M.B., Ch.B.Vict., L.S.A., appointed Resident Medical Officer to the Colonial Hospital, Perth, Western Australia, *vice* William Elgee, resigned.

THOMAS, Mr. D., appointed Medical Officer of Health to the Ystradgynlais Rural District Council.

THOMPSON, E. M., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Second District of the Parish of St. Georges-in-the-East.

TINDALL, Alex. M., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the No. 3 District of the Market Harborough Union.

TUXFORD, Arthur, M.D., appointed Medical Officer of Health to the Bootle Town Council, the Port Sanitary Authority thereof, and the Bootle Rural District, *vice* Mr. W. Clegg, resigned.

WATSON, J. K., M.B., C.M.Edin., appointed House-Surgeon to the Essex and Colchester Hospital.

LANGDOWN, G. H., M.R.C.S., L.R.C.P., appointed Assistant House-Physician to King's College Hospital.

BUNBURY, H. A., M.R.C.S., L.R.C.P., appointed House-Accoucheur to King's College Hospital.

PLAYFAIR, E., M.B.Lond., M.R.C.S., L.R.C.P., appointed Assistant House-Accoucheur to King's College Hospital.

BODEN, J. S., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

TROUP, J. McD., M.A., L.S.A., appointed House-Surgeon to King's College Hospital.

THIRD, P. C. E., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

DIARY FOR NEXT WEEK.

MONDAY.

LONDON POST-GRADUATE COURSE, London Throat Hospital, Great Portland Street, 8 P.M.—Dr. Edward Woakes: Tinnitus and Vertigo.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Edmund Owen: The Operative Treatment of Cleft Palate. Dr. C. E. Beevor: The Distribution of Motor and Sensory Symptoms after Injury to the Brachial Plexus.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 2 P.M.—Dr. Craig: Insanity with Cardiac Disease, Phthisis, Gout, etc.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, etc. In which Mr. Jonathan Hutchinson, Dr. Washbourn, Dr. J. Kingston Fowler, Dr. Phineas Abraham, and Mr. J. Ernest Lane will take part.

WEDNESDAY.

HOSPITAL FOR CONSUMPTION, Brompton, 4 P.M.—Dr. J. Mitchell Bruce: On Asthma.

WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Mr. Cheatle: Surgical Cases (Post-Graduate Course).

HUNTERIAN SOCIETY, 8.30 P.M.—Dr. G. E. Herman: Vaginismus and Allied Affections. Dr. Arnold Chaplin: The Effect of Physiological Rest upon the Lung in Phthisis.

THURSDAY.

LONDON POST-GRADUATE COURSE, Hospital for the Paralysed and Epileptic, Queen Square, 2 P.M.—Mr. Victor Horsley: Surgery of the Nervous System. Hospital for Sick Children, Great Ormond Street, 3.30 P.M.—The Surgical Registrar: Pathological Demonstration. Central London Sick Asylum, Cleveland Street, 5.30 P.M.—Mr. John Hopkins: Cases in the Wards.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, 3 to 5 P.M.—Professor Crookshank: Lecture; Tetanus, Rabies, and Cholera. Practical Work: Examination of Comma Bacilli, Chemical, and other Tests.

SATURDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital, 11 A.M.—Dr. Craig: Lunacy Law.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

SANKEY.—On November 16th, at Boreatton Park, Baschurch, the wife of E. H. O. Sankey, M.A., M.B., B.C., of a daughter.

WIGAN.—November 18th, at Portishead, Somerset, the wife of Charles A. Wigan, M.D., of a daughter.

MARRIAGES.

MUDD—PRICE JONES—On November 18th, at St. Mark's, Surbiton, by the Ven. Archdeacon Burney Barrington, William Mudd, M.B., Ewell, Surrey, son of Barrington Richard Mudd, M.R.C.S., late of Storrington, Sussex, to Evelyn, daughter of the late Wm. Price-Jones, M.D., of Surbiton, and of Mrs. Price Jones, Farleigh House, Kingston-on-Thames.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with duplicate copies.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A. M. asks where he can find an account of the eosin test applied to the blood corpuscles in pernicious anæmia.

E. B. W. desires to hear of an institution into which a paralytic middle-aged man willing to pay 10s. a week could be taken.

C. R. L. writes: I should be glad to know of any treatment which will prevent a lady's hair coming out on brushing.

F. W. J. asks (1) For information as to the effect, chemical and physiological, on milk of boiling it. (2) For the latest information on the climatic and sanitary conditions of the Canary Islands.

MUTUAL asks what is generally accepted as constituting (1) an open surgery; (2) a dispensary and dispensary practice (not provident); (3) a club practice; (4) surgeon's retail.

DR. J. M. [illegible] (Foulby, Yorkshire) would be glad to hear of an institution where a female patient suffering from slight melancholia and [illegible] could be received for treatment (including the [illegible] treatment), the patient paying 10s. or 12s. a week.

C. S. asks if there is any home or institution where a boy 12 years old, suffering from [illegible] incontinence of urine and fæces, would be received. Mentally he appears in no way deficient, but on account of his infirmity he has received no education whatever. His parents are poor working people with a large family, and could not afford to pay.

ENQUIRER asks for advice in the treatment of a case of cancer of the liver in a man aged 40. There is considerable jaundice, accompanied by a very dry skin, with acute and persistent itching. Alkaline baths, mercury, [illegible], aconite, euonymin, acids, alkalies, and the usual hepatic remedies have been tried, but with no result. The urine contains bile [illegible], and is very dark, while the fæces are very pale and clayey in appearance.

PNEUMATIC TYRES FOR CARRIAGES.

H. E. T. (Bradford) asks: Will any medical man who has used, or is using, the Dunlop pneumatic tyres on his carriage kindly state his experience of them? Are they found to be better in every way than the solid rubber?

"INFLUENZA."

M. I. asks for advice as to the treatment of two patients (male and female) who had influenza with bronchitis last winter; one entirely lost the cough during the summer, the other (female) was slightly troubled all summer. Both lately are very much worse, expectorating freely; cough very much worse during the night. The lungs are not affected, but both patients declare the expectoration to come from the chest.

FROZEN MEAT.

MEDICAL SUPERINTENDENT writes: We are now having a trial of New Zealand mutton instead of English. Could you inform me whether any experiments have been made with a view of determining their relative nutritive values?

*** We are not aware of any difference. Such as may exist probably depend largely upon variations in the amount of moisture and fat, that is supposing that the samples are otherwise in perfect condition.

CYCLE SADDLES.

PERPLEXED asks for an explanation of the persistence of the symptoms in the following case. A gentleman weighing 11 stone, proposing to learn to ride, took a trip of [illegible] half an hour on a tricycle, and although having no sort of mishap, has ever since (now a couple of [illegible]) experienced unpleasant sensations radiating as from the anus. He has nothing whatever to do with bowel, bladder, prostate, or urethra. He noticed the saddle "gave" rather, and experienced slight discomfort during the final ten minutes. Manipulation causes no discomfort.

ANSWERS.

J. H. J. should consult his usual medical attendant.

M. O. H. might perhaps with advantage communicate with Professor [illegible].

A. T. L.—The procedures of this person are, we understand, engaging the attention of the legal advisers of the General Medical Council at the present time.

DR. P. B. BURROUGHS (Weston-super-Mare) writes: The towel referred to by "M. D." is made by J. and J. Cash, of Coventry, who have agents in nearly all towns. Its price is about 3s. 3d.

DR. D. H. FORTY (Wotton-under-Edge) writes: I think your correspondent "Neurosis," in the BRITISH MEDICAL JOURNAL of November [illegible], would find the home he desires for his case of paralysis agitans at "The Cottage Hospital and Convalescent Home" in this place.

DR. CHARLES VOKES ([illegible]) writes, in reply to "M. B. Aberdeen," in the BRITISH MEDICAL JOURNAL of November 16th, p. 1273, that in a patient who came under his treatment [illegible] condition, which had existed from the birth of her [illegible] 11 years old, the perineum [illegible] was operated on by the new method, and the patient has since been free from diarrhœa.

H. A. H.—We believe that the regulations of the General Medical Council with regard to the addresses on the *Register* of officers of the Army Medical Staff, Indian Medical Service, and Royal Navy, have not been altered. It is probable that the Council of the British Medical Association will make representations to the General Medical Council on this matter. We believe that all that is at present required is that some address should be given to which letters may be sent, with a certainty that they will reach the officer registered.

W. H. F. Y.—From correspondence which reaches us almost weekly, it appears to be clear that there are harpies who watch the [illegible] of the newspapers, and immediately send [illegible] or special appliances for, as the usual form runs, "preventing large families." The specimen of which a copy is enclosed is a very objectionable example, more particularly in the suggested concealment from the husband. The suppression of this nefarious trade is a matter of police, and we would be disposed to advise our correspondent to lay the facts, and any similar instances which come to his knowledge, before the Assistant Commissioner of Police, Scotland Yard.

DR. AINSLEY.—The average duration of life is undoubtedly longer now than it was fifty years ago among the general population of England and Wales; this was shown by the life tables published at intervals during that period. No statistics are available by which an estimate could be framed as to the [illegible] years ago. The statement of the actuary, quoted by [illegible], probably refers to the insured population only; it is not [illegible] the insured the duration of life is not so long now as [illegible] of "lives" accepted have [illegible] during the past fifty years.

REPORT OF THE ROYAL COMMISSION ON VACCINATION.

We forwarded a correspondent's letter asking when this report may be expected, to Sir James Paget, who writes: "I cannot say more in answer to the question than that the report is in course of preparation, but needs, in every part, very careful and deliberate consideration."

NAIL-BITING.

G. H. writes: With reference to "nail-biting," some years ago, I cured a young man by making him constantly have a quill toothpick to chew instead of his nails.

ARGUMENTS IN FAVOUR OF VIVISECTION.

H. O'N.—We have referred our correspondent's communication to Mr. Stephen Paget, the Secretary of the Association for the Advancement of Medicine by Research, who will give our correspondent full particulars.

CLIMATE AND CANCER.

DR. HERBERT SNOW (London) writes: In the BRITISH MEDICAL JOURNAL of November 9th Dr. Percy Newell asks where he can obtain information as to the influence of climate on cancer. The most up-to-date reference I can give him is Dr. [illegible] work on *Geographical Pathology.* [illegible]

REMUNERATION OF ASSISTANTS.

F. A. H. G. might [illegible] expect an addition to his ordinary salary, [illegible] in addition to it. It [illegible] increase of work for which remuneration could [illegible] from the un-

available [illegible] of the principal, and at such a time it is not commendable for an assistant to try to make the utmost out of an employer's misfortune. [illegible], rather than pay an assistant large fees in addition to his salary, a principal would prefer to engage a locum tenens to carry on his practice in conjunction with him. The above is what appears to be consonant with the ethics of the case, but it must not be forgotten that, from a legal point of view, our correspondent's position may be very different. When his principal became disabled, it was open for him at once to vary the terms of his contract; as he did not take it to do so, the law might decide he has no claim for increased remuneration at all. A solicitor is the only person to advise him here.

PROVIDENT DISPENSARIES.

ETHICS.—(1) Most provident dispensaries are compelled to formulate rules according to local requirements, but the secretary of the Medical Provident Dispensary Association (Mr. C. H. Warren, 5, Lamb's Conduit Street, W.C.), would doubtless furnish a copy of their rules, which might be of assistance. (2) It can not be said there is anything objectionable from a professional point of view in being connected with a properly conducted provident dispensary, but our correspondent would do well to consider the matter carefully before embarking on any undertaking of this character. Such an institution, unless carefully constituted and supervised, might lower the rates and at the same time be productive of much harm to his private practice. In some localities, owing to widespread poverty of the population, institutions of this kind may be desirable, but where the public are able to pay even modest fees as private patients it is far better for the practitioner to treat them as such rather than as members of a provident dispensary, for the fees received from the best of the latter are low. Where, too, a practitioner becomes medical officer to a provident dispensary it commonly happens that many of his old patients are at once induced by considerations of cheapness to join, and he is a loser to the extent they would have paid in excess annually as private patients.

RESTRICTIVE REGULATIONS OF THE ROYAL COLLEGE OF PHYSICIANS.

MR. D. HOOPER, B.A., M.B., M.R.C.P.Lond., Physician to the Surrey Dispensary (Trinity Square, S.E.), writes: If "Ethics" will refer to the *Medical Directory*, p. [illegible], on the "Recovery of Fees," he will find that Fellows only are not entitled to sue; Members may and do sue, and I have myself recovered fees in the county court. In the Charter, By-laws, and Regulations of the Royal College of Physicians of London, 1893, p. [illegible], Chapter xxvi, on "the duties and conduct of Fellows, Members, and Licentiates," By-law 170 says "no Fellow the College shall be entitled to sue for professional aid rendered by him," but there is no such by-law as to Members. By-law 176 says "no Fellow or Member of the College shall be engaged in trade or dispense medicines," and "Ethics" wants to know the grounds or reasons for this by-law. I suspect it was made to prevent consultants from interfering with the business and profits of the general practitioners (surgeons and apothecaries), who consulted them, and who at one time always supplied their patients with medicines, and derived their income from so doing. The objection that this by-law "debars the poor in rural districts from being attended by Members of the College," seems to me frivolous; the poor would never call in a Member—they could not pay his fees, but they could have his services free in hospitals or dispensaries, and, as a rule, they would consult a Licentiate of the College. Allow me here to refer to By-law 177 ("Title not to be Assumed"), which seems to me to settle the question so long and so often discussed in your columns as to the M.D. and the title of "Dr." By-law 177 says "no Fellow, Member, Extra-licentiate, or Licentiate of the College shall assume the title of 'Dr.,' or append to his name the title of Doctor of Medicine, or the letters M.D., or any other letters indicating that he is a graduate of a University unless he has obtained a degree entitling him to do so."

NOTES, LETTERS, Etc.

CORRECTION.—We are glad to find that Mr. W. R. Ancrum, of St. Leonard's Court, near Gloucester, whose death was reported in the BRITISH MEDICAL JOURNAL of November 16th, is still alive and in good health, although he has resigned his public offices and retired from active business.

DR. O. H. GARLAND (Leith) writes: In the BRITISH MEDICAL JOURNAL of November 9th Dr. Johnston furnishes you with a short note of "A Fatal Case of Cocaine Poisoning," and concludes with the assertion: "There was no *post-mortem* examination." Had Dr. Johnston made a little fuller inquiry he would have found this statement to be incorrect. As a matter of fact, I was instructed by the Crown authorities to perform the necropsy, the full particulars of which are recorded in the *Lancet* of November 2nd.

"THEY KNOW NOT THE MANNER OF THE GOD OF THE LAND."

SURGEON-LIEUTENANT-COLONEL N. C. CHESTER (Cairo) writes: Surgeon-Colonel [illegible], in his letter published in the BRITISH MEDICAL JOURNAL of October 19th, asks me to specify the "factors" re causation of enteric fever to which I alluded in my previous communication. I beg to refer him to an article written by me, published in the *Lancet* on August [illegible] last.

THE D.P.H. (SCOTTISH CONJOINT BOARD).

DR. T. HARVEY THOMSON (Campbeltown, N.B.) writes: In the BRITISH MEDICAL JOURNAL of November 9th I notice, in a letter referring to the above diploma signed by "A Candidate," a statement—given as a fact—that "a very full and complete course of special study in one of the Edinburgh laboratories is absolutely essential for success," and that "no one who is in practice should attempt it unless he can have at least six months for special study"—this presumably meaning in a recognised laboratory.

As one who took this diploma in May last, I am in a position to say that this picture is too dark and gloomy, and it may be encouraging to prospective candidates to have my experience in the matter. Without any help whatever I equipped a home-made laboratory, and in the spare moments of a somewhat busy practice worked up the subject solely with the aid of the books recommended. I then went up to Edinburgh and passed both examinations, proving that laboratory work in Edinburgh or elsewhere is not "absolutely essential for success," and that the examination in question may be successfully attempted by one in practice.

With "A Candidate's" statement as to the searching nature of the examination I thoroughly concur. In the examinations held in May last only two out of eight passed, the other successful candidate besides myself belonging to the Army Medical Staff, and having had, therefore, the advantage of laboratory work at Netley.

This year's record appears to have been even worse, not one of ten candidates apparently having been awarded the diploma; but, while the examination is an extensive and searching one, this but renders the diploma all the more valuable, and does not place it beyond the reach of those in private practice, as the conclusions come to by "A Candidate" would lead us to suppose.

REMUNERATION OF CIVILIAN MEDICAL PRACTITIONERS IN CHARGE OF TROOPS.

J. W. M. writes: In answer to "Civil Surgeon in Charge of Troops," whose letter appears in the BRITISH MEDICAL JOURNAL of November 9th, 1895, p. 1211, I would ask him, Why does he take the appointment? On his own showing, the work is laborious and responsible out of all proper proportion to the rate of pay. So long as Government can get men to take such appointments at present rates, it is useless to expect them to pay more.

A BULLOCK IN A PILLBOX.

DR. GEORGE PLUMB, of the University of Chicago, has given utterance to the belief that the days of cooking and dining are drawing to a close. Soon, he declares, we shall be able to live on concentrated food tablets, which, with hot water, will be sufficient to maintain life. He affirms that the essence of 1,200 lbs. of beef can be contained in an ordinary pillbox, and that a man may ration himself for several days by carrying a case weighing but 8 ounces, and which contains 3 tablets of concentrated soup, which is equal to 3 quarts; 4 tablets of beef, equal to 8 lbs.; 1 tablet of milk, equal to 1 pint; 2 tablets of wheaten grits, equal to 2 lbs.; and 1 tablet of egg food, equal to 12 eggs. It is not surprising that this prophecy of life lived on concentrated foods should emanate from Chicago, where on one hand beef and pork are annually packed by the million, where, on the other, a money-pursuing population have scarcely time to eat, and where but very few have learnt the art of dining. Pepsin and beef pills are the natural outcome.

SUBACUTE RHEUMATISM CURED BY BINIODIDE OF MERCURY.

DR. C. R. ILLINGWORTH (London) writes: A lady who had suffered six years ago from rheumatic mitral valvular disease for three years, and had been cured by blisters and iodide of sodium, consulted me for subacute rheumatism of the right hand and fingers. The sheath of the palmar tendons was swollen up both above and below the wrist, and all the joints were swollen and very painful. I prescribed as follows: ℞ Sol. hydrarg. bichlorid. (1 to 1,000) ʒvj, sod. salicyl. ʒiss, sod. glyc. liquid. ʒss, aq. ad ℥vj ℥ss secundis horis, and I applied soap and belladonna liniment locally. In 24 hours all the swelling, tenderness, and pain had disappeared. The mercurial group have the following actions on the economy: A derivative one, congesting internal organs and relieving peripheral ones, thus aiding in the cure of bronchitis and pneumonia, croup, and pleurisy, and exerting a marked influence on the course of all periphero-central disorders like meningitis, a congestion likewise relieving inflammations of peripheral organs, such as the skin and the joints, and finally a bactericidal one. This case was a periphero-central disorder. The cure of acute rheumatism by biniodide is quite as marked, but not I consider because, as some think, it is a germ disease.

LICENTIATES AND THE TITLE OF "DR."

DR. J. W. EASTWOOD (Dinsdale Park, near Darlington) writes: Some years ago I had occasion to write to the Edinburgh College of Physicians about the title of "Dr.," and I received the following reply:

(Copy.)

Royal College of Physicians, Edinburgh, Feb. 20, 1882.

Dear Sir,—In reply to your letter I have to say that this College has never encouraged its licentiates to assume the title of "Dr.," as they believe that title legally to belong only to those who hold the degree of M.D. from a university.—Yours faithfully,

J. W. Eastwood, Esq., M.D., etc. JOHN WYLLIE.

LIVERPOOL VICTORIA LEGAL FRIENDLY SOCIETY.

A NORTHAMPTON correspondent writes enclosing us a written offer made by an agent of the above Society to a local practitioner. The Society takes adults and children at the rates of one penny and a halfpenny per week respectively, and allows its medical officers 80 per cent. of all money collected. By way of encouragement its agent informs the above practitioner the last quarterly dayment to one of its medical staff was a cheque for 17s. 6d. It is satisfactory to find from a medical point of view that the success of this Society in Northampton is but moderate.

INFLUENZA *versus* PUBLISHING.

THE influenza fiend has found a new happy hunting ground of mischief in South Africa, and seems to be producing there the havoc so well known here. The influenza was last winter sometimes privately pleaded to irate contributors as an excuse for editorial shortcomings, but the *Port Elizabeth Telegraph* has gone a step further, and brought out its issue of October [illegible] with the following public announcement: "Owing to the havoc which influenza has played amongst the staff of this paper we have to crave the indulgence of our readers." A printer's devil may do wonders in the black art, but an incapacitated editor has not yet been able to hypnotise men into that state in which he can fulfil the duties of the editor. The dilemma of the *Port Elizabeth Telegraph* may be recommended to Du Maurier as one by which his imagination might find a way.

THE GRANT COLLEGE MEDICAL SOCIETY, BOMBAY.

A WELL-INFORMED correspondent writes: This Society includes in its roll of [illegible] members the [illegible] of the indigenous medical men of Bombay. These are the men who aspire to become professors and hospital physicians and surgeons and who are agitating and organising[1] with a view to displacing promptly and unceremoniously those members of the Indian Medical Service who are at present employed in performing civil medical and sanitary work in India and getting themselves installed in their place. The *Transactions* of the Society for the year [illegible] are therefore an interesting subject of study, as they offer the best possible means of gauging the scientific and professional capacity of this class and ascertaining what they are doing for the advancement of medical science and art. The Society held ten ordinary meetings during the year. In addition to these four special meetings of the medical profession were held under the auspices of the Society for the purpose of discussing the subjects of Pasteurism and bacteriology.

Both ordinary and special meetings were well attended, and this fact attests the desire which evidently holds strong influence over the medical men of Bombay to keep themselves conversant with the rapid advances which medical science is making in these days. This is most creditable and praiseworthy; but on taking stock of the proceedings of these meetings the result is disappointing. The discussions at the ordinary meetings were mostly clinical, two of them being devoted to the subject of piles. They were diffuse, vague, and inconclusive, sometimes petty and childish. They indicate want of originality, insight, and grasp, and after careful perusal of them we have been unable to detect any clear accession to medical knowledge or useful contribution to medical practice. The agenda of the special meetings were not above the level of a medical students' debating society. There was plenty of talk and confused argument, but no evidence of research, and at the end the question remained exactly where it was at the beginning, the dominant feeling apparently being that because Pasteur's work was not final or infallible it was a waste of money to establish institutions in India for the purpose of testing or extending it. This debate on Pasteurism was of the same character as the similar discussion on fever which took place in [illegible]—verbose, superficial, and utterly unproductive. The proceedings in both cases are best described by the old Scotch proverb: "Muckle cry an' mickle 'oo, as the deil said when he clippit his soo."

THE TITLE OF PHYSICIAN.

L.F.P.S.G. writes: The letter in your issue of November 9th concerning the above is one more reminder of a question which still troubles the minds of licentiates who unfortunately find all doors barring their entrance to a M.D. degree shut as closely as ever. May I ask the writer: Would it not be better for the British Medical Association to get Colonial qualifications recognised as additional titles on the *Register*, and thus give practitioners the right to be called Doctors? Is it fair that Canadian degrees in medicine are not registrable as additional titles?

THE DACTYLOTRIPTER.

A CORRESPONDENT writes from Switzerland: A recent invention by a Swiss physician will do much to render life easier for his fellow countrymen. The invention is described in the *Geschäfts Berichte*, issued by C. Fr. Hausmann, of St. Gallen, and it has already been patented in most countries. The object of the instrument, which is called the *Zehenreiniger* ("toe cleaner"), or dactylotripter, in the words of the learned inventor, Dr. Volland, of Davos Dorf, is "to thoroughly clean the spaces between the toes of the there-with-special predilection collecting and readily evil smelling becoming-dirt." After describing the special difficulty in getting to the bottom of the spaces between the third and fifth toes, the inventor goes on to say: "Many mothers and nurses have certainly had experience of this difficulty in the care of children. They have much trouble in making the little feet really quite clean, for it is altogether too troublesome to press to the bottom of the spaces between the toes...... No one to whom the careful cleanliness of the feet is a necessity will be able to do without the dactylotripter on his toilet table so soon as he has once learned the convenience of the instrument...... The employment of the instrument is very simple. It can be used in the standing or sitting position. You lift the foot to be cleaned across the knee of the other leg, and, with the hand opposite the foot to be cleaned, you place the toe cleaner, previously dipped in water or soap and water, between the individual toes as far as the bottom of the interspaces, and then move it to and fro several times in a sawlike manner. If you then bend the great toe towards the sole and stretch the other toes toward the back of the foot, you can easily reach also the likewise not easily accessible folds under the toes from the second to the fifth, and clean them too in the same pleasant way. For final drying a second toe cleaner may be employed in like fashion. The dactylotripter is patented in most countries. It is manufactured by C. Fr. Hausmann, of St. Gallen. Supplementary strips of cloth are supplied to replace the original strip when worn out. Price 2 francs." This instrument, our correspondent thinks, will lessen the number of those heroic Germans who can say, "I take a bath every six months whether I require it or not."

TEA CIGARETTES.

A WEST END PHYSICIAN has given to [illegible] *Journal* the following statement regarding a craze for tea cigarettes: "Quite a new and most reprehensible vice," he says, "is becoming fashionable—namely, a craze for smoking green tea in the form of cigarettes. Though adopted by some fair ladies merely as a pastime, not a few of its votaries, strange to say, are women of high education and mental attainments. Among my patients, suffering from extreme nervousness and insomnia, is a young lady highly distinguished at Girton; and I am treating a lady novelist whose books are widely read, and who habitually smoked twenty or thirty cigarettes nightly over writing for their stimulating effect. The practice is increasing among ladies. At the house of a well-known lady where I visit green tea cigarettes are invariably handed round after dinner, and I know three actresses of celebrity who give 'tea-smoking' parties twice a week, and a coterie of literary ladies in Kensington have formed a small club for the same baleful indulgence. One lady patient of mine, to break off the habit, on which she had expended nearly £1 a week, has lately voluntarily placed herself under private restraint. To conceal her hobby from her husband she used an artfully contrived silver cigarette case; it resembled a bunch of keys, each key containing one cigarette. So much is the habit spreading that certain tobacconists are beginning to make and stock these 'tea' cigarettes."

THE LANCHESTER CASE.

THE following is published as the text of the opinion given in this case by Mr. H. H. Asquith, Q.C., M.P., and Mr. Corrie Grant: (1) We are of opinion that Miss Lanchester cannot bring an action for false imprisonment against her father or her brothers, or against Dr. Blandford, with any reasonable prospect of success. Persons who put the machinery of the Lunacy Law in motion are protected against any civil or criminal proceedings if they act in good faith and with reasonable care ([illegible] and [illegible] Victoria, c. 5, sec. [illegible]). In the case of the relatives there is no evidence of want of good faith, while the fact that they consulted a specialist in mental diseases, such as Dr. Blandford is known to be, is direct proof that they did act with reasonable care. In the case of Dr. Blandford, his certificate itself, frankly setting forth facts which are not irreconcilable with sanity, is some evidence of good faith; his inquiries elicited the facts to which he certifies, and those facts are admittedly true. It may be that he was wrong in his deductions from those facts. If so, he committed an error of judgment, but an error of judgment is not actionable unless it proceeds from a want of reasonable care and skill, of which we see no sufficient evidence. (2) In an action for libel against Dr. Blandford, Miss Lanchester would have to prove that the certificate, which is clearly a privileged document, was false in fact—an allegation in which she would fail. (3) Proceedings by Mrs. Gray against Henry Vaughan Lanchester for assault would not raise the question of the legality of Miss Lanchester's seizure and detention. To such proceedings he would answer successfully that he was acting under the authority of the urgency order, that Mrs. Gray interfered to prevent the removal of his sister, and that he used no more force than was necessary to carry out this purpose.

IMMUNITY FROM THE EFFECTS OF SNAKE VENOM.

DR. H. J. LLOYD (Barmouth) writes: I was interested in reading Mr. Harry Bawa's communication with regard to the above question published in the BRITISH MEDICAL JOURNAL on November 9th. Two years ago last summer a boy, 12 years old, was brought to me suffering from a bite from a common adder or viper, which measured [illegible] inches in length, with a flat head and brown in colour. Whilst playing with it in a field the snake suddenly sprang at his wrist and stung him; in about twenty minutes the boy was collapsed, and diarrhoea set in. He had to be carried for about two miles down a mountainous road, and when he reached here he was foaming at the mouth and vomited something like mucus. I gave him some stimulants, when he gradually improved; I then administered some soothing applications to his wrist, as it became very painful and inflammation extended up to the shoulder; this necessitated keeping him in bed for over a week. After the inflammation abated his arm was stiff for a long time. He was a strong boy or the consequences would have been more serious. Could the act of teasing the creature have made the sting more venomous, as the boy was preventing the viper from escaping?

A SELF-THREADING SHUTTLE.

MR. JOSEPH HARRISON, L.R.C.P.&S.Edin. (Bradford), writes: I wish to draw attention of all persons connected with textile weaving to a self-threading shuttle, which has been introduced into this country by Mr. C. H. Holdsworth, of Bradford. I do so on sanitary grounds, because it will prevent the sucking of the weft through the eyehole of the present constructed shuttle. If adopted it will prevent any diseases from being communicated from one person to another by means of the mouth as may happen at present. The simplicity and effectiveness of the shuttle are marvellous. It is a device which should be universally adopted in all textile manufactures throughout the world. I am confident from practical experience among textile employees that a great amount of suffering would be prevented by its use. Just imagine a weaver suffering from some mouth disease (syphilis, for example) sucking the thread through the eyehole as at present, and then that same shuttle is used by another weaver and sucked in the same way. It is no stretch of the imagination to see how such disease may be communicated by this method of sucking. Again, there are bits of fluff or fly inhaled in this way, and thus pulmonary diseases may be generated. All these evils would be prevented by the adoption of this self-threading shuttle, and I can most sincerely recommend it to all interested in the health of all textile employees who have to use shuttles.

COWDUNG POULTICES.

THE publication, some months ago, of a short note from a correspondent describing the use of cowdung as a poultice, has brought us a large number of communications and others continue to reach us, showing that this curious practice is still pretty extensively followed in various parts of the world. Thus Dr. W. [illegible] writes from Johannesburg that he has known of its use in South Africa, America, Germany, Austria, France, and Italy. He has also known the dung of various animals administered internally for diphtheria and the exanthemata.

It is generally known that excreta were very widely used by the older physicians, and prescriptions containing them are to be found in numberless old works. Dr. Trafford Mitchell [illegible], points out that in the *Poor Man's Physician*, published in Edinburgh at the beginning of the last century, Sir John [illegible], then the leading physician in Scotland, recommended cowdung poultices in cholic, and a poultice made by boiling down a man's, woman's, goat's, or hen's dung in vervaine. Sometimes the poultice was made by mixing the dung with other ingredients, as for instance, horsedung with vinegar and fresh butter, recommended for swelled testicles in the same volume. Again he instances the recommendation of Dr. Archibald

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[1] Vide the BRITISH MEDICAL JOURNAL of October 26th, p. 10[illegible].

[illegible] to use a poultice to the throat (in [illegible] [illegible]ed almost indefinitely, but enough has probably [illegible] curious and nasty subject.

IRON COMFITS.

Dr. F. P. Atkinson ([illegible]) writes [illegible] Cognet's iron comfits described in the British Medical Journal of November 2nd, p 1111, that he found them of great value in a serious case of vomiting and gastric pain in a woman in whom many other lines of [illegible].

THE 'ORSPITAL.

During the hearing of a summons at Greenwich a witness stated that she had been compelled to go to the "'orspital." Her method of pronouncing this word [illegible] "I [illegible] why it is that you people always say ''orspital.' It is not ''orspital,' but 'hospital,' h o s p i t a l," repeated the magistrate, slowly spelling the word. "Yes, your honour," replied the witness, "'orspital—that's 'xactly what I say."

A CENTENARIAN.

A [illegible] [illegible] grand children, [illegible] great grandchildren and [illegible] great-great grandchildren.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) Mr. W. Anderson, London; Messrs. Arnold and Co., London; Mr. W. C. Aslward, Tunbridge Wells; Mr. J. H. Anerum, Gloucester; A M.D. and M.R.C.P.; Antiquack; Asterisk. (B) J. W. Batterham, M.B., St. Leonard's-on-Sea; Dr. R. Bowles, Folkestone; Dr. S. Barwise, Derby; Mr. W. L'H. Blenkarne, Leicester; Sir W. H. Broadbent, London; Mr. A. E. Barker, London; Mr. F. F. Burghard, London; Dr. J. W. Ballantyne, Edinburgh; E. Bailey, M.B., Oban; Mr. J. Berry, London; Mr. G. E. Bellew, Wollaston; Mr. H. J. Buck, London; Mr. P. T. B. Beale, London; Mr. B. P. Burroughs, Weston-super-Mare; Mr. W. M. Beau[illegible], Bath; Mr. R. Brander, Ipswich; Mr. J. P. Bush, Clifton; Dr. P. [illegible], Nottingham; Messrs. J. Baker and Son, Clifton; Dr. J. E. Brandt, Nice. (C) Dr. C. C. Claremont, Bournemouth; Mr. E. Carnall, London; C. R. L.; Mr. E. Caudwell, Woodstock; Dr. H. Campbell, London; Mr. E. Casey, Windsor; Mr. E. H. Cartwright, London. (D) Dr. R. B. Duncan, Bradninch; Mr. A. B. Davies, Stroud; Sir Dyce Duckworth, London; Mr. W. Duncan, St. Heliers, Jersey; Mr. W. G. [illegible], [illegible]; Mr. P. Dunn, London; Dubito; D.S Sc.; Mr. G. [illegible], [illegible] Spa; Mr. H. D. Dwyer, London. (E) Dr. J. W. Eastwood, Darlington; Enquirer. (F) Mr. G. P. Field, London; Mr D. H. Forty, Wotton-under-Edge; Dr. A. Flint, Westgate-on-Sea. (G) G. F.; Mr. G. H. Grimoldby, Grimsby; Mr. S. H. R. van de Groot, Cape Coast Castle; Professor Guye, Amsterdam; General Practitioner; G. H.; Mr. F. F. Glanville, London; Mr. G. H. Grace, Bristol; Dr. J. Galloway, London; Dr. P. Giles, Dresden; Mr. F. J. Gordge, Bristol; Mr. T. W. H. Garstang, Knutsford. (H) Mr. F. J. Hook, Lowestoft; Dr. W. M. Hamilton, Patricroft; Dr. J. Hawthorne, Banbridge; Mr. D. Harrisson, Liverpool; D. J. Hamilton, M.B., Aberdeen; Sir George M. Humphry, Cambridge; Dr. C. T. Harford-Battersby, London; D. Hooper, M.B., London; Mr. S. Harpman, London; Mr. H. C. Hopkins, Bath; Dr. Handfield-Jones, London. (I) Dr. J. Irving, Leytonstone; Influenza; Miss Imroy, London. (J) J. M. H.; Dr. W. A. Jamieson, Edinburgh; Mr. J. H. James, Blaenavon; Mr. J. B. James, London; J. W. T. (K) Messrs. Klesow and Co., London; Dr. T. N. Kelynack, [illegible]; K. (L) Mr. F. W. Lowndes, Liverpool; Mr. A. Lord, [illegible]; Mr. E. G. Lumsden, Wolverhampton; Mrs. R. Longmore, London; Mr. T. Laffan, Cashel; Mrs. Lucas, Brading; Dr. H. J. Lloyd, Barmouth; Dr. H. F. Lawrence, Dunlavin; Dr. E. G. Little, London; Lex. (M) Medical Journalist; Miner; Mr. V. Moxey, London; Member of the B.M.A.; Mr. W. F. Mellersh, Surbiton; Mr. F. Marsh, Birmingham; Mr. A. Maude, Westerham; Mixed; Mr. D. P. Menzies, Glasgow; M.R.C.S. and L.S.A.; M.O.H.; Mr. A. K. MacBride, Perth; Member; Mr. J. Marshall, Blandford; Mr. J. MacMunn, London; Dr. G. Mackay, Edinburgh; R. J. Mackintosh, M.B., Port Patrick. (N) Mr. P. Newell, Crowborough; Dr. H. O'Neill, Belfast. (P) Dr. T. F. Pearse, Portsmouth; Dr. M. Parham, Brecon; Mr. H. Peck, Ormskirk; Perinaeum; Mr. C. H. Parry, Docking; Perplexed; Mr. M. D. Packer, London; Mr. G. Pim, Dublin. (R) J. Rowan, M.B., Glasgow; R. M.; Mr. B. Robinson, Morpeth; R. H. F. R.; Dr. W. B. Ransom, Nottingham; Registered Medical Practitioner; Mr. J. J. A. Raye, Banbury; Miss A. Ravenhill, London; Dr. B. Rogers, Clifton; Dr. N. Raw, Dundee; W. Rose, M.B., London; R. H. S., M.B.; R. W.; W. Russell, M.B., Liverpool. (S) Dr. J. M. Smith, Dundonald; Dr. Stewart, Clifton; Mr. C. A. Sturrock, Dunfermline; Sir E. H. Sieveking, London; Mr. C. S. Sherrington, Liverpool; Dr. W. J. Simpson, Calcutta; W. G. Scott, M.B., Newton Abbot; Dr. H. Snow, London; Mr. C. H. Shears, Liverpool; Messrs. Street and Co., London; Dr. J. Stewart, Glasgow; Dr. J. B. [illegible], [illegible]; Dr. J. Swain, Clifton; Miss F. Stacpoole, London; Dr. H. Smith, London; Senex; G. Shields, M.B., Stamford. (T) T. H. M. C.; Mr. H. Taylor, Guildford; Mr. A. G. Tait, Sidcup; Mr. C. Turner, Blaydon-on-Tyne; Dr. A. Tuxford, Boston; Dr. F. S. Toogood, London; Dr. W. S. Tebb, Bournemouth. (V) Ve[illegible]; Mr. C. Vokes, Birmingham. (W) Mr. W. Williams, Portmad[illegible]; Mr. N. Wood, London; D. Williamson, M.B., Scarborough; Dr. F. Weber, London; Mr. C. J. Worts, Fordham; E. B. Waggett, M.B., London; Mr. J. G. Weir, London. (Y) Mr. W. H. F. Young, London; etc.

BOOKS, ETC., RECEIVED.

School Gymnastics on the Swedish System. By A. Broman. London: John Bale and Sons. 1895. 3s. 6d.

Invalid Feeding; with Hints on Diet in various states of Ill-Health. By Florence Stacpoole. London: Walter Scott. 6d.

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AN ADDRESS
ON
THE STUDY OF ANATOMY.

Delivered at the Opening of the Section of Anatomy and Histology at the Annual Meeting of the British Medical Association in London, July-August, 1895.

By HENRY MORRIS, F.R.C.S.,
President of the Section.

GENTLEMEN,—It is my first and very pleasant duty to offer a hearty welcome to the members and visitors of the Association attending the Section of Anatomy.

I do this on my own behalf, and on behalf of the executive by whose favour I have been placed in the position of President. Let me next make a few personal remarks, and say that, whilst I highly appreciate the honour which has been done me by being elected President, it was only with great diffidence, and after conferring with the President of the Branch and one or two active officers of the Association that I accepted. As a practising surgeon I felt much hesitation in accepting the office which I thought would be more suitably and, I am very certain, would be much more ably filled by a Professor of Anatomy.

I felt this the more because this is the first time that a separate Section has been made for anatomy at any of the meetings of the Association.

Since the Section of Physiology was instituted in 1867, anatomy has a few times been included under it; and in 1882 Sir G. M. Humphry, who had presided over the Section of Physiology in 1873, again occupied the Presidential Chair on the first occasion that anatomy and physiology were combined. This inclusion of anatomy under the Physiological Section once begun, was continued in four out of the five years since, in which there has been a Section of Physiology, namely—in 1883, 1888, 1890, and 1893. In 1884 anatomy was again excluded.

This year it is honoured by a place alone, and I have no doubt that the excellence of the work accomplished will fully justify the opportunity afforded.

It must be conceded that anatomy is worthy of having, and at a meeting in a great centre like the present ought to have, a Section devoted to it; and the Council of the Association, by the present arrangement, have shown themselves alive to the importance, to the rapidly growing importance, of anatomy at the present time.

It is not so many years since the student was led to regard human anatomy as a finite and well nigh exhausted science. It was held that the great impulse which had been given to it in the sixteenth century, and the assiduity with which it had been studied during the last four centuries, had left little or nothing to be discovered. A little retrospect, however, soon convinces one that in reality there has never been a period when there was the least prospect of a limit being found to the anatomical horizon; that on all occasions when its bounds seemed to be approached, some vista of things unknown loomed in the shadow, and required to be investigated and described.

The descriptive anatomy which had been worked out from dissections, and taught by Vesalius and Eustachius, by Albinus, and even in later days by Hunter, is but a small part of the vast science as it is known and studied now, and which includes histology, embryology, and morphology.

Instead of being a limited and completed subject, anatomy in this wide sense is comprehensive enough to occupy much of the daily life of many different sets of workers; and even human descriptive anatomy, owing to the largely-extended range of surgical possibilities and triumphs, has been revised, corrected, and elaborated, with the result that many of the old time-honoured descriptions have been found to be either incomplete or actually erroneous.

Attention, too, has of late years been directed to important modifications which occur in structures owing, on the one hand, to excessive or specialised use, and on the other hand to want of use. We have become alive also to the deficiency of our knowledge of the anatomy of infancy and childhood; and we see now how desirable it is that this important branch should be fully worked out and recorded, if only with the view to improvement in the treatment of children's diseases, in infant feeding, and in the early physical and mental training of childhood.

The anatomy of the brain and nervous system has been almost rewritten within the last eight or ten years, and fresh advances in it are still being rapidly made.

Though much light has been of late thrown on some of the structures and relations of structures in the human body by the study of comparative anatomy and embryology, it is pretty certain that there is very much more to be discovered in this direction by further similar researches.

Is it not probable that some intelligible explanation will be found for many of the countless variations of all kinds which occur in man, and which we at present are prone to regard as defects in a completed and perfected mechanism, or as mere abnormalities in a definite conformation?

May we not look in the near future for some classification and arrangement of the infinite details of human anatomy, details which have been accumulated, like grain in a bushel measure, without a question as to what they mean? Is it not reasonable to think that there are laws which regulate and correlate these details, and which the further study of histology and morphology will sooner or later disclose to us?

We know, for example, that the arterial system is developed from a network of connective tissue cells, and that its branches grow from the periphery to the centre of the body, and we see in this a reason why vessels follow the connective tissue septa, why they enter organs at their sulci and fissures, why they run between their lobes and lobules, and why so-called abnormalities of blood vessels accompany the departure of other structures from their usual arrangement in the body. Shall we not some day know more as to what it is which governs the shape and size and movements of the joints; the disposition of the fasciculæ of muscles; their nerve supply; and the relations of the great muscular planes?

Whilst descriptive anatomy is the foundation of brain and orthopædic surgery, of the surgery of the arteries and of the abdomen; and whilst morphology has built up a new classification of, and a fresh interest in, the whole subject of tumours; embryology and developmental anatomy have greatly helped in elucidating many difficult and previously unexplained subjects in pathology. By their aid we have been taught the origin of median cervical fistulæ; of tubulocysts and dermoids of the tongue, and of dermoids in the skull owing to the mode of development of the dura mater and of the pituitary gland in relation to the skin. By the same means, too, we have learnt the mode of occurrence of such congenital malformations as hypospadias, epispadias, imperforate anus, congenital occlusion of the pharynx, and many others.

So likewise it is certain that as morphology comes to be more and more pursued it will be found to yield more and more information about disease; and that in this connection the minute and accurate observation of variations in form and texture will take rank with, if not in front of, the chemical analysis of solids and fluids of the body, and the new science of bacteriology, which, indeed, is itself a branch of morphology.

It is impossible to foretell the extent of knowledge which may be gained by this study, and I should no doubt be accused of speaking in folly or in irony if I were to predict that the time will come when, by a morphological examination of the placenta, not only much of the tissue condition of the parents at the time of impregnation and conception would be ascertainable, but that the physical, mental, and moral attributes of the offspring will be foretold; so that it will be possible, in anticipation, to classify him with the athlete or the cripple, the genius or the idiot, the total abstainer or the inebriate. Yet things quite as improbable have happened.

I have thus referred to some of the pathological and clinical advances which surgery owes to anatomy; and to the importance of that modern branch of anatomy—morphology—as a means of elucidating changed and diseased action; but I would not be supposed to entertain the opinion that it is from that point of view alone that anatomical knowledge should be pursued.

New facts should, of course, be recorded for their own sake, whether they appear to be of any practical value, or to explain any interesting hypothesis or not, for one never knows how soon a fact which apparently stands alone may turn out to be a link in the chain of evidence which is required to prove a special or general law.

As a means of cultivating the power of observation, and stimulating and exercising the reflecting and reasoning faculties, the study of anatomy is of high value; and it is engrossing enough to occupy the greater part of the intellectual activity of many powerful minds. It is owing to this very scope and depth of the subject that the transcendental anatomist is sometimes led to express impatience, even if not contempt, that anatomy is still commonly taught in medical schools pretty much as it was a century ago. The pure anatomist feels somewhat outraged that his science should be treated as though it were simply subservient to the requirements of the operating surgeon, and the practising physician.

He objects, and very properly, to the custom of allotting to the physiologist, under the heading of "the physiology of movement," the teaching of the actions of muscles, which after all are necessarily dependent upon their origins and insertions and nerve supply. He resents as an injustice the proposal that teratology, if it came to be taught in medical schools, should be entrusted, as it probably would be, to the obstetrician, and that thereby a purely morphological subject would be divorced from its natural and immediate connection with anatomy. He would have all medical students taught the highest anatomy in the early period of their curriculum; and is not content with an eminently practical course of human anatomy, even when aided by explanations and illustrations from comparative anatomy and embryology.

May I be allowed to take this opportunity of expressing my opinion, based on several years of teaching and examining, that there is not time enough for the student thus to study anatomy; at any rate, not until he shall have been afforded some relief from his present long course of dissecting, as we shall, I believe, presently hear Professor Anderson advocating he should be. By all means let us open his mind to the depth and width of the science, pointing out its many-sidedness to him; but the study in its fulness must come later on in his career, if it comes at all.

The amount of knowledge the student has to acquire in order to gain a diploma is at the present time simply enormous, and I am entirely in accord with Huxley's remark that "whoever adds one tittle that is unnecessary to medical education is guilty of a very grave offence"—an offence, by the way, which I hope I am wrong in thinking there seems to be in some quarters a tendency to commit.

Whilst thankfully acknowledging the indebtedness of surgery to anatomy, and the invaluable aid morphology is rendering to the study of the etiology and treatment of disease, may I also point out that on the other hand, anatomy has received something in return from surgery? Has not topographical anatomy of late been studied with increased zeal in consequence of the expansion of the surgeon's art, and with this result, that many imperfections and errors have been expunged and many additions made by practical surgeons? Nor do I think that this branch of the subject requires a less well-trained mind, or a less acute power of observation than developmental, teleological, or comparative anatomy.

I hope I shall not be considered to have taken undue advantage of my office by thus briefly and very inadequately enumerating some of the lines of intercommunication, and some of the points of sympathetic contact between anatomy and surgery and pathology; and of thereby offering some arguments in justification of a separate section for anatomy at the meetings of the British Medical Association.

The Anatomy of the Genito-Urinary Organs in the Boar and in the Pig, with Remarks on the Effects of Castration.[1]

Dr. Joseph Griffiths (Cambridge) read the following paper on this subject: The prostate is very large and bilobed, and lies on the sides and behind the urethra. Each lobe is composed of numerous small glandular lobules, held together by loose areolar connective tissue, which in the form of a thin sheet surrounds, and thus binds together, the different lobules making up each lobe; and the gland is soft and granular. Its ducts pass into the hinder or dorsal wall of the urethra. It is composed mainly of vesicles, some of which are quite small and hardly visible to the naked eye, others being large and ¼ inch in diameter; and they are filled with a thin, slightly turbid mucous secretion. Each vesicle is lined by a single layer of cubical or subcolumnar epithelial cells. The vesicles are embedded in a thin layer of tissue, mainly composed of unstriped muscular fibres, and traversed by blood vessels, lymphatics, and nerves. Cowper's glands also are very large, each measuring four and a-half inches in length, and at the lower and larger end one and a quarter inches in thickness. They are firm, elongated, three-sided pyramids, lying one on either side of the urethra, and having over the hinder part of their outer surface, and all over the dorsal or posterior surface, a sheet of reddish-striped muscle with the fibres running from behind outwards and forwards on to the dorsum. In the middle of each is a large dilated branching duct into which the smaller ones open. The smaller ducts commence in the glandular substance proper, which is subdivided by thin fibrous partitions into small compartments. The main duct narrows as it passes out at the posterior extremity of the gland, rendering it probable that the main duct, and also the smaller ducts, act as reservoirs for collecting and retaining the secretion of the gland, which is thick and viscid. The ultimate gland lobules are composed of numerous small vesicles lined by a single layer of columnar cells lying on a basement membrane, which consists of a single layer of flattened connective tissue cells. The columnar cells have small nuclei near their attached ends, and their protoplasm is clear and almost transparent. The vesicles are separated from one another by the minimum amount of connective tissues, without unstriped muscle fibres in it. Cowper's gland thus differs from the prostate in having no unstriped muscle in its substance, and in having a thick sheet of striped muscle partially covering the gland on its outer surface, which serves the purpose of expressing its secretion. The sheet of striped muscle around the intrapelvic part of the genital portion of the urethra is thick, of red colour, and well formed. The muscular fibres are of full size, and they present the usual structure of normal striped muscular fibres. In a full-grown pig, which when a few days old was deprived of the testes, the condition of the parts presents a striking contrast. The prostate is represented by two small, flat, bean-like masses, which are firm, and composed of small compact lobules held together by means of loose areolar tissues. Each lobe is one inch long, and one-third to one-fourth of an inch broad. Each lobule is composed of a number of tubules with thick walls, consisting in the main of fibrous connective tissue with a few unstriped muscular fibres, and lined by a single layer of subcolumnar cells. In many of the tubules there is a small lumen, but in others the interior is filled with cells. The tubules in a lobule are connected together by somewhat dense fibrous connective tissue, though the lobules themselves are connected only by a small amount of loose areolar connective tissue. Cowper's glands are small elongated pyramids. They measure 2 inches in length and one-fourth of an inch in thickness at the lower and larger end. The striped muscles on their outer surfaces is correspondingly small. They are mainly composed of ducts, which are filled with a mucous secretion. The peripheral part of the gland is composed of numerous closely-packed vesicles, which have hardly any lumen, and are lined by a single layer of subcolumnar cells, with clear protoplasm. The sheath of striped muscle around the intrapelvic portion of the urethra is thin and fibrous, and the muscular substance is pale. The individual muscular fibres are of small size, and about half the size of those in the same muscle in the boar. The contrast between the accessory sexual glands in the boar, and the same glands in a pig castrated when young, clearly shows that the testes exert an all-important influence upon the growth and development of the accessory sexual glands, and that the full development of the striped muscle around the urethra is dependent upon the existence and full development of the testes.

[1] Read in the Section of Anatomy and Histology at the Annual Meeting of the British Medical Association held in London, July-August, 1895

THE DEVELOPMENT AND STRUCTURE OF THE PLACENTA.

Professor A. H. YOUNG (Manchester) introduced a discussion on this subject. He said: Our knowledge of the development and structure of most of the organs of the body is fairly full and accurate; this is mainly due to the greatly improved methods of preparing tissues for examination which have been so recently introduced and adopted, and to the more careful and extended observations which have naturally resulted. Unfortunately we cannot claim any such exact knowledge either of the development and structure of the placenta or of its functions and the part it plays in health and disease. There has been no dearth of observations on these points; indeed, few organs have been so much studied; but the contradictory nature of the results obtained, as well as the singularly clashing hypotheses which have been formulated by different observers, make it practically impossible to arrive at any definite conclusions regarding the essential features of its formation and structure. The general function of the placenta is undoubtedly the nutrition of the fœtus. We no longer believe, as Fabricius, Haller, and Flourens did, that nutrition of the fœtus is maintained by the direct passage of blood from the mother, the placenta acting merely as a blood conduit. This hypothesis was long ago completely disproved by Monro, William Hunter, and Bischoff. It is possible that nutriment may be transmitted to the fœtus by the placenta in one or more of the following ways: (1) The fœtal part of the organ may absorb secretions poured out by uterine glands or crypts; (2) fœtal tissues may destroy and absorb maternal structures; (3) interchanges may take place between maternal and fœtal blood, either (*a*) as the result of an active process of secretion or (*b*) by diffusion. That uterine secretions may suffice for the support of the ovum during a considerable period of its development is shown by Selenka's observations upon marsupials. In them there is no true placental formation, and the growth of fœtal tissues must be dependent upon the absorption of uterine fluids; it appears certain also, from the observations of Turner, Bonnet, Tafani, and others, that nutriment is derived from a similar source in ruminants, but it is doubtful whether even in ruminants this occurs in the placental areas themselves, and there is no doubt that in rodents (Selenka, Duval), insectivora (Hubrecht), and in cheiroptera (Frommel, Selenka) such a mode of nutrition is excluded by the early disappearance of uterine glands in the superficial parts of the placental area. In carnivora, primates, and man the amount of nutriment derived from glandular secretion can scarcely be estimated; indeed, no positive opinion can be formed until the relationship between the fœtal villi and the uterine glands is more definitely ascertained and determined. It seems very probable that the maternal tissues are utilised for nutrition, for degenerated uterine epithelium disappears, and there is no evidence that it is removed by the maternal cells, or that it is absorbed by maternal vessels, whilst, on the other hand, portions of maternal detritus, for example, blood corpuscles and blood crystals, have been observed in the cells of the fœtal villi, presumably being used for nutrition, since it is scarcely probable that they would be taken into the fœtal tissues for any other purpose. The close relationship which exists in the placenta between maternal and fœtal blood at once suggests that interchanges, both nutritive and respiratory, may take place, and our views as to whether this is the result of an active process of secretion or whether it is due simply to diffusion must be influenced largely by our knowledge of the structure of the organ. Those observers who maintain that layers of epithelium intervene between the uterine blood vessels and those of the chorionic villi believe that the process of transmission of food from mother to fœtus is rather due to an act of secretion than to one of diffusion, but if it can be shown that both maternal and fœtal epithelium disappear, then the theory that the nutrition of the fœtus is due to a process of secretion depending on these cells must disappear also, whilst it becomes evident that under such conditions interchanges might readily take place by diffusion. In the placenta of the rabbit Duval has shown that there is complete disappearance of both fœtal and maternal epithelium as intervening structures between the maternal and fœtal blood, and that the fœtal capillaries, whose walls are formed by a single layer of flat endothelial cells, project freely into spaces containing maternal blood by which they are bathed, whilst the gases necessary for the metabolic phenomena which are known to occur in the fœtal tissues can scarcely be imported from any other source than the maternal blood nor by any other process than diffusion. It must, however, be admitted that in most mammals the relationship of fœtal and maternal blood is by no means so intimate as in the rabbit. That there should be differences of opinion as to details of function is obvious when the numerous accounts of the development and structure of the placenta are studied, for it is with respect to the details of formation that the statements of observers are so irreconcilably opposed. Upon two points alone is there general agreement: one is the dual nature of the organ, which it is admitted consists of fœtal and maternal elements; and the other is the villous character of the fœtal portion. As to the relative proportions of the fœtal and maternal parts, or the precise relationship which exists between them, or the exact nature of their constituent elements, there is no such agreement. We are assured by some investigators that the fœtal villi pass into the mouths of uterine glands; by others that they do not enter the glands, but project into newly formed crypts; and by others, again, that they avoid both glands and crypts, and either fuse with or penetrate the uterine mucosa in the interglandular areas; finally it is said that the fœtal villi pass into newly formed spaces of glandular nature, but which are lined with modified connective tissue cells. It is still a matter of dispute whether one or two layers of epithelium separate the maternal and fœtal blood vessels, and if one layer only, whether it is fœtal or maternal, and if two layers, whether both layers are fœtal, or whether one is fœtal and the other is maternal. Duval's observations on the placenta of rodents shows that in some cases at least there is not even a single layer of epithelium, and nothing intervenes between the two blood streams but a layer of fœtal endothelium. It has long been known that in the human placenta and in the ape's placenta, the fœtal villi are surrounded by intervillous spaces, and it is generally, though not universally admitted that the spaces contain maternal blood, but observers are by no means agreed as to the nature of these spaces. In the opinion of Turner, Ercolani, Weber, Reid, and Waldeyer they are dilated capillaries or veins, with intact endothelial walls, which are merely invaginated by the foliaceous villi; Leopold and Virchow think that the villi perforate the endothelium and are bathed in maternal blood. Koelliker, Langhans, and Heinz look upon the spaces as extravascular; according to Koelliker, they are bounded in the greater part of their extent by epiblastic cells of the fœtal villi, a view strongly supported by Minot's observations, and which has recently been confirmed by Berry Hart and Gulland. It is also generally admitted that whatever the final arrangement may be it is preceded by a stage in which the chorion of the ovum is applied against, but is not attached to, the epithelium of the uterus, and that at a later period either the maternal or fœtal epithelium disappears. It has recently been suggested, however, that the human ovum is not implanted on an epithelial surface, but becomes attached to a raw area, produced by extrusion of the surface layers, where it becomes gradually imbedded as the decidua is formed, in which case there is no "decidua reflexa"—this being replaced by the last formed part of the "decidua serotina." If this could be accepted there would be no trouble in explaining the absence of maternal epithelium in the intervillous areas, but placental formation in the lower mammals is entirely opposed to such a mode of attachment, and human uteri containing ova in situ have not been observed at a stage when one might reasonably expect that the maternal epithelium was still present. Obviously then our knowledge of the development and structural details of the placenta is not very definite or precise. We recognise its dual character and the intimate relationship of its constituent parts; we know that one or more layers of tissue intervene between fœtal and maternal blood, but we cannot say precisely what the relationship of fœtal and maternal portions is, and we are equally uncertain of the origin of the layer or layers which lie between the two blood streams. That such should be the unsatisfactory result of much good work carried out by most able investigators, is, I think,

entirely attributable to the fact that until recently few, if any, of the observations have been sufficiently comprehensive. In many cases a few specimens only of uncertain or unknown stages of development have been examined. No individual point has been fully worked out from beginning to end and from stage to stage in any one mammal, and yet nothing short of such a comprehensive investigation can be accepted as a reliable basis for general conclusions. If we are to hope for a sound knowledge of placental formation and structure, we must have careful and complete observations on a consecutive series of stages, from the period just preceding the fixation of the ovum to the period when all the details of the adult organ are completed. Observations of this nature have been made by Hubrecht and Strahl upon insectivora, by Frommel and Gobre upon cheiroptera, by Minot, Duval, Strahl, and Robinson upon rodents, and by the last three as well as by Heinricius and Lusebrinck on carnivora. It is evident that our knowledge of the human placenta must necessarily be incomplete. No one, so far as I know, has yet obtained anything like a satisfactory series of stages of human placental development, and our views concerning it must to no small extent be based upon a comparison with conditions satisfactorily established at certain periods in lower mammals. One of the most striking features in placental development is the important part played by the fœtal tissues, the fœtal epiblast in particular, and this is the more noticeable as it is opposed to the views hitherto almost universally held. It is true that in the early stages the uterine mucosa increases in thickness, its glands become enlarged and more tortuous, the interglandular substance proliferates, and foldings of its surface may produce crypts. The glands and newly formed crypts, so well marked in the carnivora, play but a secondary part in the further stages, they merely dilate and their epithelial lining degenerates and disappears, serving apparently as pabulum for the fœtal tissues. The secondary importance of the glands of the mucosa is emphasised by their fate in the placental areas in rodentia, insectivora, and cheiroptera, in which they undergo little or no increase, and in the later stages are entirely occluded (from the fœtal tissues) by cell elements apparently derived from connective tissue or by endothelial cells. The most important maternal structures are the capillaries; these proliferate and dilate and form a more or less well marked superficial layer immediately subjacent to the surface of the ovum. The fœtal part of the placenta, on the other hand, is energetic and aggressive. Its epiblast proliferates and becomes greatly thickened, and apparently destroys and absorbs the maternal epithelium, though Strahl and Lusebrinck assert that the maternal epithelium persists, though in a changed form, and continues to intervene between the epiblastic cells of the chorion and the deeper maternal tissues. The epiblast next invades the modified uterine mucosa, either, as in the carnivora, entering but apparently not passing beyond the mouths of glands and crypts in the form of hollow villous projections which soon become filled with fœtal mesoblastic elements, or as solid sprouts of epiblastic cells which penetrate the uterine decidua and insinuate themselves between the maternal capillaries. The process of invasion is carried to its greatest extent in rodents; in the rabbit, for example, the epiblastic cells surround the maternal capillaries, destroying and replacing their endothelial walls so that the maternal blood then circulates in spaces surrounded by fœtal epiblast. By the outgrowth of the allantois the allantoic vessels reach the deep surface of the thickened placental epiblast, penetrate it, and thus bring the maternal and fœtal blood streams into close proximity. At this stage the two blood streams are separated by fœtal elements alone, namely, fœtal epiblast and the endothelial walls of fœtal vessels. At a later period still the epiblast disappears, the fœtal vessels lie naked in the maternal blood, and nothing intervenes between the two blood streams except fœtal endothelium. In short, the thickened placental epiblast is tunnelled by great blood spaces, which communicate with maternal blood vessels, and into which the fœtal blood vessels freely project, uncovered by any epithelial investment. A modification of the process occurs in the rat and mouse, but the main features are essentially the same. In carnivora the epiblastic invasion is less marked, at least in the early stages, and it never goes so far as to destroy the endothelial walls of maternal blood vessels. It remains for a time comparatively superficial, and there is coincident proliferation of the vascular layer of the decidua. The intermixed fœtal epiblast and maternal capillaries, both in rodents and carnivora, constitute a layer which Duval has termed the "angio plasmoidal" layer, and it is to this that the greater part of the increasing thickness of the placenta is due. To summarise: the structures which intervene in the placenta between the fœtal and maternal blood streams are not the same in different groups of mammals. Confining our attention to the two groups which have been most thoroughly investigated we see that in the carnivora the fœtal blood is separated from the maternal by three layers: 1. The endothelium of the maternal vessels. 2. A layer of fœtal epiblast which generally contains two rows of nuclei, and is not divided into cell areas, but is of the nature of a plasmodium. 3. The endothelium of the fœtal vessels. In rodents, however, according to Duval's observations, there may be only a single intervening layer separating the two blood streams, and that is the endothelium of the fœtal vessels. We thus arrive at the following conclusions concerning placental development and structure: 1. Fœtal tissues play a most important part in placental development, they invade, destroy, and devour maternal substance. 2. The maternal tissues pass through three phrases; they exhibit a remarkable activity before the fixation of the ovum, this is succeeded by what may be looked upon as an irritative proliferation due to the invasion of fœtal epiblast, and finally they disappear in great part coincidently with the epiblastic advance. 3. The relationship between the fœtal and maternal blood streams may be much more intimate than has usually been believed; and in any case the intervening structures are chiefly fœtal. 4. The uterine glands and crypts play a comparatively unimportant part in the placental area; they are not penetrated to any great extent by fœtal villi, but their epithelium degenerates and disappears, and is utilised as fœtal pabulum, except at their terminal extremities, where it remains almost unchanged to serve for the regeneration of the surface after parturition. These general facts, which have been established by observations on lower mammals, enable us to form a fairly definite conclusion regarding the layer of epithelium which forms one of the intervening strata between the two blood streams in the human placenta, and there can no longer be any doubt of its fœtal origin; it is certainly fœtal epiblast. Unfortunately comparative observations do not enable us to decide between the conflicting statements regarding the number of the other intervening layers. There is no doubt that the endothelial walls of the fœtal vessels persist, but although it is very probable that the maternal endothelium is absent, yet this has not been proved. It appears certain that two layers separate the maternal from the fœtal blood—namely, fœtal endothelium and fœtal epiblast, the latter consisting of two strata in the early stages, but of one only in the later periods, and it is possible that a third layer—the maternal endothelium, may also be present. We cannot deny that this may be the case, for we know that a similar arrangement is present in the carnivora, nor can we assert that it is impossible that two strata only separate the two blood streams, since it has been shown that such a condition is present for a considerable period in rodents. We must therefore be content to wait until more complete investigations have been made. No description of the structure of the placenta can be considered complete without some reference to its relation to the allantois and to the hypoblast of the fœtus. This subject has received but little consideration. It is known that in many mammals the allantois consists of a diverticulum from the alimentary canal covered with vascular mesoblast. It grows from the posterior end of the body of the embryo, and after a time unites with the chorion, to which it conveys the allantoic vessels. It gradually spreads out on the inner surface of the placental area, and thus its hypoblastic lining lies on the fœtal surface of the placenta. The hypoblastic cells, which usually become flattened, do not apparently play any very active part. The allantois has usually been regarded as an enlarged urinary vesicle, modified for respiratory and nutritive purposes, and as these functions are presumably fulfilled by the vessels, but little attention

has been paid to the hypoblastic lining, a circumstance which at first sight appears to be justified by the fact that in some mammals the hypoblastic diverticulum is absent, and the allantois consists only of mesoblast. It has been shown, however, that in some rodents in which this condition is well marked the absence of the hypoblast-lined cavity in the allantois is compensated for by the projection of diverticula from the wall of the yolk sac into the placenta, and in this manner the fœtal hypoblast enters the placental region. It appears, therefore, to be a matter of some importance that not only the fœtal epiblast and mesoblast should gain a close relationship with the maternal blood, but that the fœtal hypoblast should also participate in the intimacy, but the object of this arrangement has yet to be discovered. In the meanwhile it is evident that there are many points relating to the development and structure of the placenta which may well be discussed both by the embryologist and the histologist, and beyond this, also, by the pathologist and the gynecologist, who will find in the developmental history of the placenta the keynote to many obscure problems of uterine and placental disease. One cannot, for example, fail to observe the remarkable similarity between the early stages of placental formation and those seen in the development of malignant epithelial tumours. In both there is epithelial proliferation followed by epithelial invasion and accompanied by irritative phenomena in surrounding tissues. During placental formation the maternal tissues are invaded by fœtal epiblastic cells, much in the same way that the subepithelial stratum of skin or mucous membrane is encroached upon by proliferating epithelium in cancer formation, and it would not seem impossible that normal placental epithelial changes might, under certain circumstances, lead to true carcinoma. There can be little doubt that the fœtal epiblast grows at the expense of the maternal tissues, and there seems no reason why any portions left behind on the separation of the placenta should not continue to grow, and, invading still further the uterine mucosa, assume all the characteristics of a definite tumour growth. I venture to draw attention to this point in a paper read before the North of England Gynecological Society some three or four years ago, and I then referred to the most interesting case recorded by Dr. H. Meyer, of an epitheliomatous growth which followed the removal of a hydatiform mole. The epitheliomatous character of the new growth was clear, and the resemblance of the invading columnar processes to chorionic villi, as previously pointed out by Professor Klebs, was apparently fully recognised, but nevertheless Dr. Meyer suggests that the epithelial element was probably of maternal origin and that into it chorionic villi had protruded. This, however, does not seem a probable sequence of events, whilst the changes which are known to take place in the development of the placenta gives strong support to the view that the epithelial element was in all probability fœtal. This again is emphasised by a similar case described by Fraenkel as "carcinoma developing from the chorionic villi." This case was one of malignant disease of the corpus uteri following the removal of a vesicular mole. "The growth had a papillary form, invaded the deeper tissues, and gave rise to metastases. Microscopically it was shown to have originated from the remnants of chorionic villi left after removal of the mole, since the structure of the uterine glands was still recognisable, and its histological appearance was quite different from that of cancer of the corporeal endometrium." That uterine tumours may originate from placental relics is fully recognised by Hartmann and Toupet in their valuable memoir on the "Later Evils following Retention of Placental Relics." Amongst the most interesting of these growths is the malignant deciduoma, a tumour apparently regarded as of sarcomatous nature, to express which Sänger suggested the name of "sarcoma deciduo-cellulare," whilst Hartmann and Toupet designate it as a chorion cell sarcoma. From the excellent description given by Dr. Williams at the Johns Hopkins Hospital Medical Society in November, 1894, of the fourteenth case of deciduoma malignum recorded up to that time, it does not seem by any means so certain that these tumours are invariably of the sarcomatous nature they are supposed to be. The cells at first sight are said to "closely resemble epithelial cells," but from their similarity to the cells of the decidua they are regarded as identical with them, and the entire growth is looked upon as "a sarcoma arising from the decidua." Dr. Eden, in a preliminary communication on the development and normal structure of the placenta, states that the large decidual cells are really epiblastic cells, and if this is so the sarcomatous character of the tumour becomes more than doubtful. Clearly the study of abnormal conditions occurring in connection with placental formation should be based upon accurate observations on the development and structure of the normal placenta. With a fuller knowledge of the structure of the placenta and of the exact relationship of the fœtal and maternal blood streams, we shall understand better the important question of the transmission of disease between mother and fœtus. In short, a wide field for experimental observations will be open, and it is by such observations alone that we can hope to obtain satisfactory results.

The PRESIDENT congratulated Professor Young on his very valuable paper, and suggested that investigations should be directed to the occurrence of cancer at different periods of gestation, as he thought that this might help in the elucidation of the pathology of cancer.

Mr. ROBINSON emphasised the fact that no accurate conclusions could be drawn concerning the development of the placenta, unless a complete series of sections and specimens were examined. Many older observers had been led astray by examining incomplete series of specimens, and on this account he recommended that no definite conclusions should be drawn from the examination of a single specimen.

Mr. C. B. LOCKWOOD said that he had prepared and examined many examples of developing mice and rabbits, and in mice he had seen similar appearances to those described by Professor Young, but owing to the incompleteness of the series he had not been able to interpret all the things which were seen. In an examination of a very early human embryo he had observed many resemblances in the development of the placenta between it and that of the rabbit.

Professor CUNNINGHAM agreed with the conclusions of Professor Young, and said that the School of Anatomy of Owens College had been especially associated with work which had been done in the elucidation of the development of the placenta.

THE TOPOGRAPHICAL ANATOMY OF THE ABDOMEN.

PROFESSOR A. THOMSON (Oxford), after a few preliminary remarks, in which the work done by Professors W. Anderson and D. J. Cunningham was referred to, went on to criticise the generally-accepted system as described in *Quain*. He took exception to it on the following grounds: To only two of the nine regions described do the descriptive terms correctly apply, namely, the umbilical and hypogastric areas. The hypochondriac regions are in no sense strictly hypochondriac. The epigastric region includes considerable portions of both hypochondriacs. The term lumbar region as applied to the flanks is a misnomer, and the iliac regions are misleading, as they do not include the whole of the iliac fossæ. In view of these facts Professor Thomson urged that it would be well to discard such misleading terms where necessary and see if some scheme could not be devised so as to modify the delineating lines and bring them into harmony with as much of the existing nomenclature as it is advisable to retain. As essentials to any satisfactory system Professor Thomson laid stress on the following points: The delineating lines should pass through fixed points. These fixed points should be readily accessible without undue exposure and disturbance of the patient in bed. The lines should be straight and not curved. After a further discussion of the existing symptoms, Professor Thomson held that that which presented most advantages and entailed the least alteration in the present nomenclature was one in which the surface of the abdomen was mapped out as follows: The following fixed points were taken: (1) the centre of the articulation between the lower end of the sternum and the ensiform cartilage; (2) the anterior superior iliac spines; (3) the most dependent part of the tenth costal arch; and (4) the symphysis pubis. Of this, No. 3 was open to most objection, but it seemed hard to find a substitute. As Professor Cunningham had pointed out, the lower costal margin is liable to very great individual variation, and hence

far from satisfactory. Failing a better, however, it was determined to adopt it. The delimiting lines, as represented in the accompanying cut, were marked in as follows: Two horizontal lines were carried across the surface of the abdomen, one on a level with the most dependent part of the tenth costal arch. This line was called the subcostal line. Another, called the interspinous line, connected the two anterior superior spines of the ilium. Lines were drawn from the centre of the xiphisternal articulation to the anterior superior iliac spines on either side. These were called the ilio sternal lines. In this way a triangle was constructed, the base of which corresponded to the interspinous line, whilst the sides were

formed by the ilio sternal lines. It was pointed out that the part of this which lay above the level of the subcostal line corresponded with fair accuracy to the region between the converging costal margins. Further, Professor Thomson emphasised the necessity of recognising the practical advantages of the middle line reaching from the xiphisternal articulation to the symphysis pubis. Though universally employed in clinical work, this line has never been made use of in any of the British systems of delineation so far as he was aware. Such a line subdivides the triangle above described, and further halves the region which lies below the interspinous line. By such an arrangement of delimiting lines, the surface area of the abdomen is marked off into ten regions, to which it seems advisable to apply the terms:

Regio hypochondriaca dextra.	Regio epigastrica dextra.	Regio epigastrica sinistra.	Regio hypochondriaca sinistra.
Regio abdominis lateralis dextra.	Regio umbilicalis dextra.	Regio umbilicalis sinistra.	Regio abdominis lateralis sinistra.
	Regio inguinalis dextra.	Regio inguinalis sinistra.	

As will be seen, the term lumbar region is discarded, and the terms inguinal regions are substituted for the iliac fossæ. In regard to the latter, Professor Thomson pointed out that this was rather a gain, for the iliac fossa is in reality traversed by the interspinous and iliosternal lines, and thus greater accuracy may be attained in locating a tumour in this region, as its extent may with precision be measured along these respective lines. It was claimed as an advantage that with little difficulty lines in correspondence with the foregoing could be easily marked off on the back of the trunk. Thus the middle line of the back, on a level with the inferior angles of the scapulæ when the arms are by the sides, corresponds fairly accurately to the centre of the xiphisternal articulation. The position of the anterior superior iliac spines can be determined in the following way. A line is drawn across the root of the back a finger's breadth below the level of the posterior superior iliac spines. The middle third of this line corresponds to the interval between the two posterior superior iliac spines, and the extremes of its outer thirds overlie the spot on the back of the body, which agrees with the position and level of the anterior superior spines. Having ascertained these points there is no difficulty in mapping in the lines and regions in agreement with these in the anterior surface of the abdomen. Professor Thomson then proceeded to demonstrate by a series of lantern slides the relation of the delimiting lines and planes to the abdominal viscera; the iliosternal lines in particular, appearing to possess many advantages as aids to the localisation of certain of the abdominal viscera. The system proposed by the German Committee of Nomenclature was next discussed, and exception was taken to certain features of it, stress being laid on the fact that some of the delimiting lines were curved, and that there was want of precision in regard to certain of the fixed points.

Mr. Makins thought that the outer border of the rectus abdominis muscle was a most useful line as a surgical guide.

Professor Anderson agreed with the preliminary remarks, and said that the system suggested most nearly approached a natural system, but an objection to its adoption was the multiplicity of the different methods which are made use of at the present time. If the majority of anatomists would adopt the suggested method, it might with advantage be made use of. He said that the examiners of the College of Surgeons had ceased to ask questions on the regions of the abdomen on account of the different ways in which ordinary textbooks describe them. He thought that the topography of the pelvis ought to be included in that of the abdomen.

Professor Thane said that Professor Thomson had thrown much light upon the nomenclature of the topography of the abdomen. He agreed with Professor Thomson's objections to the correctness of the names of regions, but added objections to the use of the names of the umbilical and hypogastric regions. He also objected as a rule to the use of oblique lines in the demarcation of abdominal regions, but thought that Professor Thomson had made out a very strong case for oblique lines. The inclination of the pelvis varied in the recumbent, sitting, and standing postures, and on this account the lines would not be invariable in position.

Mr. Wilberforce Smith thought that the lower end of the sternum was too variable a point to be made use of as a fixed point.

Mr. C. B. Lockwood said that it would be a very long time before the abdomen would be satisfactorily mapped out for physicians, surgeons, and anatomists. He deprecated the use of artificial lines, and recommended the adoption of natural lines such as the linea semilunaris. He advocated the retention of the term umbilical region, and thought that the term flank was more useful and preferable to lateral abdominal. He also thought that it would be very unsatisfactory for teaching purposes, and objected to reliance being placed upon being able to feel the posterior superior iliac spine. He advised the use of surface centres, such as McBurney's point.

Mr. James Black thought that the lines and planes which had been proposed by Professor Thomson were very valuable, and ought to be adopted.

Professor Thomson, in reply, said that he thought that it was easy to feel the posterior superior spine, since it could always be seen and the finger placed upon it. He did not think that the lower end of the sternum varied in position sufficiently to encourage its disuse.

The African Liquor Traffic.—The breakfast given by the Duke and Duchess of Westminster at Grosvenor House a day or two ago is an evidence of the extraordinary interest taken in the efforts of the three African chiefs to preserve their peoples from the decimating influence of the liquor traffic. Khama appealed to the justice of England to secure that no violation of the existing prohibition of the traffic in intoxicants be rendered possible by any Governmental changes. The Bishop of London strongly supported the chief's eloquent appeal, and the efforts of the Native Races and Liquor Traffic Committee. In this praiseworthy effort we are glad to note that members of the medical profession are taking an active part, The editor of *Niger and Joruba Notes*, Dr. Harford-Battersby, is endeavouring to promote international concerted action, a harmonious compact which is essential to a successful issue, seeing that so many Powers are increasing their African possessions, and extending their commercial operations over that continent.

A DISCUSSION ON THE PATHOLOGY AND TREATMENT OF PRURITUS.[1]

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In opening a discussion on the pathology and treatment of pruritus, one cannot help being impressed with the magnitude of the subject, for there are few diseases of the skin in which pruritus is not more or less present at some period of their course, and often as a leading factor in the distress which they occasion.

It is difficult to say with certainty what portions of the nervous apparatus of the skin are specially concerned with the sensation of itching, but it is highly probable that the following are mainly responsible:

1. As is well known, in some situations single nerve fibres pass up to the under surface of the epidermis, lose their medullary sheaths, and then the axis cylinder divides into extremely delicate filaments which lose themselves among the cells of the epidermis, or come into contact with cells having branching processes (the cells of Langerhans). These free nerve terminations in the epidermis endow it with a certain amount of sensitiveness, and their irritation probably gives rise to pruritus.

2. In the deeper layers of the epidermis, or in the true skin close to it, small groups of cells are found connected with nerve filaments. These cells may be regarded as simple tactile cells. Two or three such cells often form a group, taking the form of a small cup, or like a wineglass with the bottom broken off, the nerve ending in the stem of the glass, or like a small toadstool. These tactile cells are undoubtedly related to nerve endings, and when irritated they are likely to induce itching.

3. The bulbs of many hairs are related to nerve endings. Fine medullated nerve fibres form a network in the outer coat of the hair follicle, and they then lose the white substance of Schwann, and run more in a longitudinal direction parallel to the hair. They then penetrate the wall of the follicle, and end in the inner layer of the sheath of the hair. McKendrick regards each hair as more or less of a tactile organ. May not irritation of these sometimes cause pruritus, more especially when it is borne in mind that each hair has around the neck of the follicle some erectile tissue and bands of elastic and muscular tissue? When the spaces in the erectile tissue are full of blood, each hair projects from the centre of an elastic cushion, thus giving rise, doubtless, to great sensitiveness of the surface.

That the sensation of itching is due to the irritation of the nervous filaments in the epidermis rather than in the deeper parts is probable for various reasons. For instance, if the finger is applied to a tender part of the skin—such as the cheek—one is conscious of a sense of pressure; but if the part is touched very gently there is no pressure sense, but a feeling of itching leading to a desire to rub or scratch the part. Again, as has been remarked by Bronson, the itching in connection with the healing of wounds is not due to the granulating process, because there is no itching until the part begins to "skin over;" and, finally, the essentially pruriginous affections are those associated with decided trophic changes in the epidermis.

My colleague Professor McKendrick, with whom I discussed this question of itching, says, amongst other things: "I would be inclined to regard itching as a special kind of sensation—a modification of touch caused by extremely minute variations of pressure, but quite *sui generis*. In support of this view, I can produce artificial itching that is almost unbearable. Attach a bristle to the prong of a tuning fork vibrating from 400 to 800 vibrations per second, and let the end of the bristle touch the lip while the fork vibrates. An intense sensation of itching is felt that will make a man jump back and rub his lip. This is caused by rapid and delicate variations of pressure. The effect is not so striking when the bristle touches the skin, because the variations of pressure may not be fast enough, or they may not have sufficient force."

But why, it may be asked, is pruritus such a prominent feature in some diseases of the skin, such as eczema and dermatitis herpetiformis, and generally absent in others in which we might naturally expect it to be present, as in the strumous affections of the skin? Perhaps it may be on the same principle as that which underlies the symptoms of pleurisy. If that disease occurs in a previously healthy and vigorous subject, it is generally acute and accompanied by much pain, but if it occurs in broken-down or tuberculous subjects, it is apt to be chronic, painless, insidious, and latent. But even if the analogy were complete, we are not much nearer a satisfactory explanation of the difficulty.

And how is it that itching is common in connection with the later and almost invariably absent in connection with the earlier manifestations of syphilis. It may be said that the general diminution of sensation which has been alleged by Fournier and others to attend the secondary symptoms of syphilis may account for the difference, but this only takes us a step further back without solving the problem. These are points to which, it appears to me, the attention of the Section may be directed with advantage.

In the remarks which follow reference is made exclusively to that form of itching to which the term pruritus is usually restricted—that is, where itching is the only cutaneous symptom, apart from the lesions produced by scratching, and which I am in the habit of calling pruriginoid eruptions. This, as Malcolm Morris observes, is a sensory neurosis caused by some disorder of the related nerves, independently of any source of irritation of the surface. Bronson has further elaborated this definition by stating that the disturbance is of the nature of a dysæsthesia, due to accumulated or obstructed nerve excitation with imperfect conduction of the generated force into correlated forms of nervous energy, while the scratching relieves itching by directing the excitation into freer channels of sensation. This view may not be generally accepted in its entirety, but at all events there can be no question that pruritus is the result of a direct, or perhaps sometimes of a reflex, disturbance of the cutaneous nervous filaments, and referable to the nerve centres.

It would be out of place before such an audience to deal exhaustively with the etiology of this distressing complaint, but a few of the more prominent causes may be referred to as types, especially as it is usually by attention to the general health that relief is to be expected.

The pruritus of advancing years is supposed by many to be due to "the structural changes to which the tissue of the skin, as well as that of most other organs, is subject,"[2] but a more potent cause is probably to be found in the sedentary habits and decline in the functional activity of the organs and tissues of the body of old people, with, as a consequence, impairment of nutrition and the circulation of impure and therefore irritating blood. The itching which often accompanies jaundice is doubtless due in great measure to the presence of the bile acids in the blood, but the fact that many cases of intense jaundice are free from it, while more moderate degrees of it are the source of severe pruritus, is not so easily explained, although it may be accounted for perhaps by the greater sensitiveness of the nervous apparatus of some persons or by slight differences in the composition of the bile which renders it more irritating in some cases.

Functional and organic diseases of the genito-urinary organs and pregnancy are well-known etiological factors in its production, while the gouty diathesis and derangements of the digestive organs are probably amongst the most frequent of all causes. In the latter case it is supposed by many that the irritation of the skin is of a reflex nature, although it may be contended with much greater show of reason that the products of imperfect digestion are direct irritants of the cutaneous nervous filaments.

It is now many years since a perusal of the classical lectures of Trousseau made me familiar with the connection subsisting between pruritus and diabetes mellitus. "When you are consulted," he wrote, "by women who are becoming elderly, for intense itching in and around the vulva, when, on examining the parts, you find there is eczema, and learn that it has come on irrespective of the menstrual periods, or of any leucorrhœal discharge, and that the pain it occasions is so great as to prevent sleep, the probable existence of gly-

[1] In the Section of Dermatology at the Annual Meeting of the British Medical Association held in London, July-August, 1895.

[2] *On Diseases of the Skin*, by Fox-Tilbury Fox, M.D., and Malcolm Morris, M.D. New Sydenham Society. Vol. v, p. 888.

cosuria will suggest itself."[3] This connection, though well established, is often unrecognised, because the relationship of the two is not so universally known as it ought to be, and because, in my experience at least, the pruritus often occurs in those who present few, if any, of the typical symptoms of diabetes; indeed it frequently happens that diabetes is not suspected until the onset of pruritus leads to an examination of the urine. This is well illustrated by one of my earlier experiences in 1876. I was requested by a professional friend to see with him a lady about 50 years of age on account of an intolerable itching between the labia, of long standing, accompanied by stinging and darting pain which prevented sleep, and made her life miserable. She was a healthy-looking, well-nourished woman, the skin was soft, the tongue clean, the appetite moderate, and she made no complaint of thirst. But, on testing the urine, it was found to have a specific gravity of 1,035, and to contain sugar in abundance. In this class of cases the pruritus is favoured by the lowered tone of the system induced by the diabetes, while the exciting cause, according to some, is the irritation of the saccharine urine, while others are of opinion that the cutaneous nerve endings are irritated by the saccharine impregnation of the blood.

Another form of pruritus of some interest is that which attacks some persons in cold climates during cold weather in autumn, winter, and spring, and which is apt to be an annual visitor, which Duhring has made us familiar with under the name pruritus hiemalis. According to Diakonoff[4] it consists primarily in an abnormal irritation of the cutaneous sensory nerves, which, in a reflex way, brings about a localised paralytic dilatation of the cutaneous capillaries, with a subsequent disturbance in the nutrition of the sensory nerves.

Finally the disease may be mental rather than physical. This is well illustrated by the case of a lady who consulted me on account of what she described as an intolerable irritation of the skin, which deprived her in great measure of sleep and made her life a burden to her. Two years before this she visited a deaf friend, who used a speaking trumpet. She put her mouth close to the mouthpiece of the trumpet, and from that moment she began to experience the abiding irritation for which she sought my advice. I never saw her again, but it is not improbable that her case ended in insanity.

Not infrequently the cause of the pruritus is involved in mystery, or that which produced it has passed away, while the irritation continues, owing to the cutaneous nerve filaments having, so to speak, contracted a bad habit.

It will be gathered, then, from what has been said, that, without denying the influence of reflex irritation in the production of this disorder in some cases, I am of opinion that most are dependent upon direct irritation of the nerve terminations in the epidermis.

Before entering upon the treatment of pruritus we must take care to satisfy ourselves of the accuracy of our diagnosis, so as to exclude that numerous class of cases in which the itching is but a symptom of other disorders, such as urticaria, phthiriasis, and scabies. Having done so, we must, in the next place, make a thorough examination of the patient, in the light of the etiological factors, which have just been touched upon, and endeavour to correct any derangement of the general health which may be present. But sometimes we are unable to find any satisfactory explanation of the phenomenon, or the cause may be incapable of removal, or it may be got rid of, and yet the pruritus persists, in which case it must be treated empirically.

It is unnecessary to dwell upon the local treatment, for, although temporary relief may be afforded by the use of the many well-known antipruritic—especially spirituous—lotions and ointments and sedative applications, they have too often little permanent influence upon the disorder, except of course in those cases which are dependent upon some local cause—such as haemorrhoids, ascarides, stricture of the urethra, etc.—and which must be got rid of.

In some cases, especially if there is any suspicion of nervous or nutritive debility, nerve tonics—such as phosphorus, arsenic, or strychnine, alone or in combination—may be tried, the last two preferably by subcutaneous injection. Dr. Bulkley, of New York, speaks highly of tincture of gelseminum in doses of 10 minims, repeated in the same or in a larger dose, every half hour, or until a drachm is taken within two hours; and of tincture of cannabis in doses of 10 to 30 minims thrice daily after food, and well diluted; while Hebra recommended the internal administration of carbolic acid, to the extent of 10 to 16 grains daily.

For my own part, the best results have been obtained by the administration of atropine, or one of the coal tar derivatives, and by the use of electricity. Atropine is best given subcutaneously, beginning with $\frac{1}{100}$ grain at night, the dose being cautiously increased so long as the physiological effects of the drug are not pronounced, and so long as the pruritus is not completely subdued. Of the coal tar derivatives, antipyrin and phenacetin are specially to be recommended, particularly the former, the initial dose being 10 grains. But here, again, the dose must be steadily increased, and it is surprising what large doses may be not only tolerated, but taken with advantage, as I have shown with regard to antipyrin in connection with a somewhat allied disorder—chorea.[5]

One of these remedies may be often combined with great advantage with electricity, or the latter may be used alone. It may be employed in various ways, either in the shape of the electric bath or by the application of the continuous current of electricity of moderate strength for ten minutes night and morning, and when the itching is troublesome, one sponge (the positive pole) being applied to the top, and the other to the bottom, of the spine.

Treatment carried out upon the lines which have been indicated is calculated to yield excellent results in a large proportion of the cases; at all events, in my own experience, it has usually proved successful.

II.—H. A. G. Brooke, B.A., M.B.Lond.,

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PRURITUS IN ITS RELATION TO DISEASES OF THE SKIN.

To attempt to give anything like a complete account of so large a subject as that of pruritus in the short space at my disposal would be an impossible task, for the affection to which the term is applied occurs in so many and such various ways, and is often so mysterious and insidious in its origin, that any attempt to make a thorough investigation of the subject would pass far beyond the limits of a brief address. In order, therefore, to narrow the field, I would wish to make a general grouping of the various manifestations of pruritus as they are most commonly observed, and thus try to gain an insight into its etiological factors and some basis for a rational line of treatment for each individual case, often a difficult, but always an indispensable preliminary task.

And first, with regard to the term pruritus. It is generally understood to denote all forms of itching, whatever their origin, and in that sense I shall make use of it here, although I am fully cognisant that in most works on dermatology the term pruritus, or pruritus cutaneus, is reserved for those cases in which the itching is the only or, at any rate, the primary symptom. The old term prurigo has now become so closely associated with the special affection to which Hebra applied it that its use is almost equivocal in any other sense. Besnier and Brocq have rightly objected to this limitation of its meaning, for the prurigo of Hebra is, although a well-characterised disease, not an isolated pathological entity, but simply the exaggerated expression of a whole group of allied affections which we shall have to consider more in detail later on. They apply the term prurigo to those forms of pruritus which are followed by the development of secondary lesions of the skin due to scratching, such as wheals, papules, and eczematous manifestations. The distinction is a useful one, since there are some forms of essential pruritus which are neither accompanied nor followed by the development of any secondary lesions, and it would tend greatly to clear away a confusion of long standing if it were definitely agreed that the terms pruritus and prurigo, when used without any

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[3] *Lectures on Clinical Medicine*, by A. Trousseau, New Syd. Soc., Vol. III, p. 503.

[4] *Philadelphia Med. Times*, January 19th, 1874.

[5] On the Use of Antipyrin in Large Doses, British Medical Journal, December 1st, 1894, p. 1227.

adjectival qualification, no more serve to distinguish any one separate disease than do such terms as lichen and erythema.

The intensity of the itching sensation varies, as we know, enormously. It may be simply momentary, sometimes a mere local titillation which hardly requires relief, at other times coming on severely in fits which compel some spontaneous attempt at relief, and in some few cases it is actually continuous and without any remission. At its worst the sensation comes in paroxysms of such intensity that the patient, losing all self-control, tears and scratches, with almost maniacal fury, until he has diverted the irritation into actual pain.

Bronson, of New York, in some excellent and very thoughtful articles, has sought to explain the phenomena of ordinary itching by considering them as perversions of the sense of touch, and the more violent outbreaks by comparing them with the physiological evolution of the sexual orgasm. In his opinion the sensation of itching is a dysæsthesia of the nerves of the sense of touch. These nerves are probably those which Pfitzner and Unna have shown to penetrate among the lower epithelial layers of cells; for without epithelium, as we see on the surface of a wound, there is no itching; it begins as the epithelium is being restored. Itching, according to Bronson, is a distortion of the sense of touch, as the sexual feeling is a modification of the sense of touch; and the one may be excited abnormally by friction, as the other is normally, until a crisis of sensual excitement is produced. In the one case the feeling is limited to a specially modified part of the cuticle; in the other it is spread over the whole surface indiscriminately. The friction which is instinctively resorted to when the itching commences is continued until the pleasant sensation is exhausted, or until scratching has produced the pain which is antithetic to every pruritus. It is the conversion of a vague weakly form of nerve action into one of the more ordinary types, either of pain or exhaustion.

This paræsthesia or dysæsthesia of the cutaneous nerves may originate either in the over-excitability or in the debility of the nerve action; but our knowledge of the physiology of the methods of nerve action is too limited as yet to allow us to explain why certain individuals are attacked with pruritus while others, under apparently the same conditions, remain free. Nor is the problem simplified by observing the very varied nature of the causes which may give rise to pruritic irritation. For example, the tickling sensation which we all feel when a fly walks over our skin may be imitated either by the action of a poison circulating in the blood, by a purely mental suggestion, or by commencing nerve degeneration, by some modifications in the structure of the skin such as are found in purely local disease, or even in the physiological process of the healing of surface wounds.

Interesting and suggestive as speculations on the essential nature of pruritus may be, it is of more practical importance to us here to study the various conditions under which the sensation of pruritus may be found; for it is hardly necessary to repeat that, without having some clue as to what constitutes the exciting agent in each particular case, our treatment would inevitably resolve itself into little more than the treatment of symptoms.

With the intention of rendering this preliminary investigation somewhat easier, I have attempted to draw up a simple scheme of the different conditions which give rise to the sensation of itching. It is not an ideal classification, because there is some overlapping of its divisions; but this is a fault common to all dermatological schemata, in which no constant basis of classification can be upheld, the principle of division being partly utilitarian, partly anatomical, partly pathological, according as our knowledge or convenience prevails.

In the first place, we may make a broad division of the different cases of pruritus into those which are brought about by the action of external causes and those which owe their origin to purely internal conditions, either of the body or of the skin itself. Some of the divisions seem to be quite clear and distinct, but others, probably the majority, to belong to both classes, the preponderance lying in one more than in the other.

In the *internal group* are included (1) those cases of pruritus which have a neurotic origin, and these may be subdivided into two subgroups, according as (*a*) the primary excitant of the itching is purely nervous or (*b*) is secondary to the irritation arising from neurotic skin affections or is due to reflex nerve irritation from other causes. (*a*) First among the purely nervous affections we meet with the class of pruriginous diseases which have been so laboriously studied by the French dermatologists, especially Brocq, Besnier, Vidal and Leloir, in which the pruritus is essentially the primary disease. I will not attempt any critical examination of the views of these authors as to the *névrodermites*, the diseases which they regard as being of purely neurotic origin, but I am far from agreeing with all the statements and deductions made by several of them. Brocq, for instance, excellent clinician as he is, in some of his articles on this subject details cases of supposed primary pruriginous neurodermatitis which seem to me, from his descriptions, to be distinct examples of primary epidermic diseases (such as seborrhea) in which the lesions, although symmetrical, had only become so secondarily; and others we should consider to be due to hæmatic irritants rather than to purely nervous conditions. Hie and Jacquet have, however, certainly done great service by demonstrating that a primary pruritus may bring about, through the action of the constant scratching to which it gives rise, that more or less indurated, papular, brown or bistrous-coloured condition of the skin to which he has applied the term "lichenification." This form of lesion, even when secondary to the pure nervous pruritus, has hitherto been regarded as a chronic eczema or lichen, and looked upon as a local distinct disease rather than a mere secondary symptom of the general nerve irritability to which it owes its origin. All the forms of primary nerve pruritus do not lead to the development of this lichenification. In some the skin does not seem disposed at all, or only very slightly, to undergo this change, even when under the influence of constant scratching. There are some of these forms, of which senile pruritus is the best known, in which such secondary lesions are characteristically absent. They have been long designated as "pruritus sine prurigine," a pruritus unattended by any manifest alterations of the skin either primary or secondary. They are by no means necessarily confined to the aged, nor are they always continuous in action nor spread over the whole body. They may occur in young people, as in a case reported by Rona, of a child of 6 years old, in which the pruritus had come on at the age of 2, after an intestinal catarrh, and continued unintermittently for four years without provoking the development of any skin lesions whatever. Or they may be confined to circumscribed areas such as the face, hands, tongue, anus, or genitals. Of these local varieties of purely neurotic pruritus those of the anus and of the genitals are best known, owing to their disastrous effect on the patient, and to the, at times, almost insuperable difficulty in coping with them. But cases are put under this heading which, though undoubtedly of nervous origin, cannot rightly be considered as belonging to this class. I do not refer to the great majority of the cases of anogenital pruritus, which are, in my opinion, of primary external origin (and very generally due to seborrhœic infection), and of which the appropriate local applications form the most essential part of the treatment, but I am speaking of those cases in which the skin, though to all appearances normal, is found to present one or more hyperæsthetic points from which the itching sensation radiates whenever they are irritated by change of temperature, alteration of blood pressure, or by the presence of certain toxic substances in the blood, produced either in the body, or derived from food stuffs. Such cases differ from the truly neurotic pruritus, in that the destruction of one or two hyperæsthetic points, for example, with the galvano-cautery, will put an end to the whole of the symptoms, whereas in the latter the total removal of the entire nerve apparatus may be necessary in order to finally remove the itching. It is in the class of cases which the itching is accompanied by the development of papular eruptions that I think Brocq's classification most open to dispute. To these affections he gives the name of "primitive lichenifications" and asserts that in France they are exceedingly common. There is no doubt, not only that itching may precede the development of actual lesions of the skin, but that the sequence may occur in highly nervous people, or as the result apparently of nervous shock and over-

strain; but it is not justifiable to quote cases, as he has done, as examples of primary neurotic pruriginous disease unless the pruritus is known to have preceded the lesions, and that these are such as are not liable to be confused with the lesions of local diseases, like seborrhœa, and removable by anti-parasitic remedies. The point is one of importance from a practical view, for the prognosis and the whole course of treatment may depend on the fact as to whether the local lesions are the cause of the itching, or the nervous irritation is responsible for the development of the itching and the consequent development of lesions by scratching.

Into this class come other affections in which the itching precedes the outbreak of any eruption, some eczemas, and those forms of "acute lichen simplex" which Vidal and Brocq have regarded as urticarial in character, but which are more generally, and perhaps rightly, included under the heading of papular eczema. The prurigo of Hebra, which shows the close connection existing between the primary neurotic pruritus and the later development of urticarial, papular, and eczematous lesions is the most comprehensive and clearly individualised member of the family. Besnier has grouped under the generic heading of "diathetic prurigo" a whole family of these chronic, polymorphic, pruriginous dermatites, which recur in successive crops and take on a predominantly eczemato-lichenoid character. "Their first and always prevailing symptom," he says, "is pruritus, pruritus which remits, exacerbates, comes on in nocturnal paroxysms, and has regular seasons of remission and exacerbation. Very commonly it appears in early infancy or youth, it may be later, but it commences always in an insidious and masked form. An absolutely fundamental characteristic is that none of the lesions which accompany it, or which it provokes, are specific in character. In the early stage they may be any one of the numerous varieties of infantile erythemas, urticarias, or pseudo-lichens, or some form of lichenisation or eczematisation of the skin. Later, when the disease has become established, some of these forms of lesion may be at times observed, but they will be especially the lichenisations in the form of papules, or in patches, or covering large surfaces, and at the moment of the paroxysms it will be eczematisation under the most varied forms of eczema figuratum, diffusum, impetiginosum, etc. It is a veritable itching diathesis with multiform lesions, none of which by themselves serve to designate the disease; it is a prurigo in the true sense of the word, a diathetic prurigo." In many of these cases the morbid action may leave the skin, momentarily or finally, to localise itself in the viscera, setting up there either emphysema or bronchial asthma, or hay fever, or—though less frequently—gastro-intestinal troubles. When once this itching diathesis is established treatment is, in Besnier's opinion, of little avail; "it may become extenuated or extinguished, it may cure itself or exhaust itself, but we can never say that we have cured it."

Instances of this affection, with its alternations or simultaneous attacks of itching and scratching and of pulmonary or abdominal disorder, are familiar to us all; but I think that most of us would be loth to subscribe to Besnier's pessimistic prognosis, for in my experience much can be done under favourable external conditions to relieve and even to rid these sufferers of their grievous burden. The main point, however, is the recognition of a pruriginous diathesis—for want of a better word—which sometimes finds its outlet in the epidermic nerves, where it causes incessant itching and subsequent alterations in the skin, with possible metastases in the internal organs. The condition may be hereditary, and may even show distinct signs of atavism.

In this group of neurotic itching disease must also be included the pruriginous eruptions of papular or vesicular pemphigoid form, which were associated together by Tilbury Fox under the name of "hydroa herpetiforme" and by Duhring as "dermatitis herpetiformis." Their symmetrical character and the fact that they may be ushered in by attacks of violent itching show that the nervous system is intensely implicated; but the manner in which—like the eruptions of erythema multiforme—the outbreaks may be brought on by the ingestion of certain articles of diet, by constipation, or dyspepsia, proves that their origin is not always exclusively nervous.

Purely neurotic urticaria is a well recognised affection, and numerous instances are known in which a mere thought is sufficient to precipitate an outbreak of wheals with the accompanying intense pruritus.

Itching is also a premonitory symptom of some of the severer diseases of the nervous system, and Leloir has catalogued several of these symptomatic prurigos under the title "dermatonévroses indicatrices." They are not, I am told by neurologists, very common as prodromina.

Lastly we have to place under this heading those cases which Crocker has well spoken of as "pruritus mentis." Those who are afflicted with this complaint devote their whole time to scratching; they are possessed with the idea that they are suffering from the ravages of insects, or that grains of sand or what not are lying under their skin, and the constant irritation which this thought alone produces is so great that they can think of nothing else and talk of nothing else, and they do nothing else but scratch. No amount of reasoning, and naturally no amount of treatment, is of any avail. I have tried the effect of hypnotic suggestion on one such patient, but without the slightest beneficial result. The condition is really one of monomania, and constitutes a very hopeless form of insanity.

The purely nervous reflex form of itching occurs from time to time in everyone. Even when we are perfectly free from any lesions of the skin, a slight itching may be noticed in one part of the body which is almost immediately followed by a similar sensation in some one or more spots, often far removed from each other. The exciting cause is not easy to determine, for the sensation is mostly only momentary; it may possibly be merely some passing local irritation. Under any conditions it does not amount to a pathological state, and is only interesting as showing over what extensive surfaces a minute and purely local pruritus may be reflected.

(*b*) The cases of secondary neurotic pruritus may be conveniently divided into two classes, according as they are connected with disease of other organs than the skin, or are the result of some abnormal irritation of a mechanical or physical character. In the first group come those instances of more or less general itching which accompany or foreshadow the development of serious gastric or intestinal disease, such as carcinoma, or of various morbid states of the uterus. It might readily be supposed that in both these instances, the pruritus betokened some form of systemic poisoning, but the occurrence of similar itching in normal pregnancy and during normal menstruation, show the possibility of a purely reflex nervous origin. Some of the women whom I have seen suffering from herpes gestationis or post gestationem, notoriously a very pruritic disease, have been otherwise in perfectly good health, and all have given birth to healthy children.

The presence of tapeworms in the bowels may give rise by mechanical irritation to the most intense general pruritus, which ceases at once when they are removed. Some foods apparently act in the same way; oatmeal porridge, for example, will cause great irritation of the skin in certain people if prepared by the ordinary quick method, but is quite innocuous if boiled until all the gritty particles have disappeared. The reflected itching at the end of the penis in the case of stone in the bladder, and to the nose when ascarides are present in the rectum, are very familiar instances of the same character.

Itching from the action of cold or heat upon the skin probably comes under this same heading, since it is by no means absolutely necessary that the change of temperature should act directly upon the part attacked. Thus pruritus hiemalis, which by preference affects the thigh, sometimes begins to make itself felt before the patients have left their beds in the morning. Two very observant men have assured me that they could detect the early frosts of winter before leaving their beds or raising the blinds, by the peculiar irritability of their skins. As another variety of direct reflex from cold I may cite the case of an apparently healthy girl who invariably suffers from urticaria if she wets her face with cold water, and the itching and wheals are not always confined to the face, but extend from there over a large area of the body.

2. A very distinct, and in the minor degrees of development very frequent, class of cases are those in which pruritus is brought on by the irritation of toxic substances which have

been produced in the body, and have been disseminated by the blood current. The most familiar instances are presented by the itching found in connection with diabetes, gout, rheumatism, kidney disease, and jaundice. It is usually slight, and not confined to any particular part of the body, but we meet with cases in which it is general, others in which it is quite local, and in some it is very persistent. In icterus the itching may precede the deposition of bile pigment in the skin, and is not therefore, as has been asserted, due to the deposit and direct irritation of the bile products themselves. Pruritus ani is sometimes connected with gout, and I have seen more than one case of extensive itching at once and completely removed by the onset of acute podagra. General itching of a not very pronounced character is one of the many symptoms of the sluggish action of the liver, which Murchison named lithæmia. The pruritus which accompanies constipation and faulty digestion, and is sometimes of an urticarial character, is probably of the same nature, and due to the absorption of toxins, the products of imperfect metabolism and of fermentative processes in the intestinal canal. Slight cases of this kind are familiar to the laity, by whom they are attributed to "overheating of the blood," and are often quite effectually treated by some household laxatives, cholagogues and alkaline diuretics, with a lowered diet.

The urticarial pruritus of infants and children is, I am convinced, very frequently associated with the presence of rachitis and the malassimilation of food which accompanies it, due, apparently, to dilatation of the stomach. Antirachitic treatment will certainly often relieve in such cases when all the internal empirical remedies fail.

These toxic states of the blood often cause the exaggeration of itching which has been originally excited by a local disease of the skin, and their treatment is an important item in the treatment of the local trouble. Besnier thinks that many cases of senile itching, in where there are no local lesions and which would therefore be regarded as examples of pruritus senilis, are due to defective kidney action rather than to defective action or degeneration of the nerves, and incompetent action of the heart may be an assisting factor, if it is not the primary cause, of much itching in old people.

3. In all these instances the occurrence of itching is due to some idiosyncrasy on the part of the individual sufferer, for it only occurs in a small percentage of those who are affected. This is also true of the itching which is caused by certain foods and drugs. Many patients complain of an irritability of the skin which they have found by experience to follow on the indulgence in some special articles of food. The urticarial itching which results from the ingestion of shellfish is the most familiar example; but others complain of vague itchiness after eating cheese, or drinking tea or coffee, or alcohol, and it is always advisable to investigate the existence of such peculiarities, or to remember the possibility of their presence, in dealing with cases of pruritus of unknown origin. Some drugs give rise to itching when introduced into the system; it is not an infrequent effect of opium, and also occasionally results from the action of belladonna, mercury, and iodoform. When an erythematous eruption accompanies or precedes the onset, the action of the drug is probably directed on to the nerve centres supplying the affected areas, but where no eruption is discoverable it may be due to the circulation of the poison in the blood and its direct action on the terminal nerves of the skin.

4. The influence of increased blood pressure in causing itching is seemingly due to the mechanical pressure on the nerves, for the itching of hæmorrhoids, when uncomplicated, disappears as soon as the pressure is removed. The pruritus of pregnancy, when localised to the ano-genital region, is probably due in like manner to the engorgement of the pelvic plexuses of veins.

5. The skin of otherwise healthy people is, at times, disposed to itch annoyingly on account of its abnormal lack of lubrication. Of this circumstance two explanations have been offered, namely, that it is caused by the formation of minute fissures in the outer epidermis, and partial exposure of the epithelial nerve endings, or that it is owing to the stoppage of the emunctory functions of the skin, and consequent irritation by the uneliminated waste products from the blood. The enormous relief which is afforded by the action of sudorifics, such as jaborandi, vapour baths, and impermeable dressings might be explained by either supposition; but the localised itching in xerodermic patches would point rather to the partial exposure of the nerves as being the more important factor, and those who sweat very slightly complain, as a rule, of the annoyance of the burning rather than of the itching of the dry skin. Indeed, in opposition to the view so dear to the general public, the eliminative function of the skin seems to be replaced very perfectly by the normal kidney, and it is only in such conditions as uræmia and senile atrophy that we find the incapability of elimination by the kidney causing irritability in the external organ.

The various *external causes* which provoke the sensation of itching may be roughly divided into three headings, namely, local skin diseases, epizoic parasites, and irritants of a physical or chemical nature; but, except in regard to the latter division, it is often difficult to make an absolute distinction between their method of action.

In the consideration of this group the question at once arises, and a very important question from a therapeutic point of view, to what extent certain diseases of which itching is a prominent symptom are local in origin, and what extent they, and therefore the itching, are due to general systemic causes. In ichthyotic skins the mode of origin of the pruritus is obvious, for the patient may be in perfect health, and the skin free from every sign of inflammation, and under the action of a simple emollient, which restores sufficient of its elasticity to prevent it from cracking, the itching may completely disappear. But the case is quite different with such affections as lichen planus, papular seborrhœa, psoriasis, and some of the acute eczematous eruptions, which may come on suddenly in patients who are in otherwise good health, and which are usually accompanied by an amount of itching which is proportional to the amount of inflammation which they develop, and to the rapidity of their extension.

In common with many others I do not regard eczema as a disease *per se*, but as a pathological process which is capable of being brought about by many causes, and I think it will be hardly disputed that a considerable number of cases of even acute general attacks of eczema are of parasitic origin. The predisposing cause of their rapid extension is often some failure of health, most frequently nerve prostration, which induces an excessive irritability of nerve sensation and instability of the tonic spasm of vasomotor nerves, with a corresponding liability to rapid flushing of the inflamed areas of skin. In other cases, however, this neurasthenic condition is gradually induced in previously healthy people by the continued irritation—it may be of only one or two eczematous areas—and the loss of rest which results from the constantly-recurring itching and consequent scratching to which they give rise. It is possible that in such cases we have the analogy of what happens in affections of undoubtedly local origin. In scabies, for example, the itching spreads far outside the area occupied by the acarus itself. Experiments have been made by inserting a female insect into the skin, and covering it tightly with a watchglass so as to prevent its migration, and it has been found that after it had established itself, an intense spasmodic itching developed in parts of the body quite remote from the burrow, and due apparently to the absorption of some substance secreted by the insect. But the irritating substance need not necessarily be of organic nature, for Neisser records a case which from its severity will serve as an example of a well-recognised class—of a medical man who suffered from sudden attacks of apparently typical acute general eczema with excessive itching. It was regarded by all his colleagues as being distinctly constitutional, and was treated as such without success until he himself found accidentally that he could precipitate an outbreak at any time by the application of the smallest quantity of iodoform to the skin. It is now well known that some people have an idiosyncrasy with regard to certain plants of the primula family; a mere touch of the skin during the summer months against the leaves of the plant suffices to produce an intensely irritable papular erythematous eruption which has the same peculiarity as that of iodoform, that it is auto-inoculable on to other parts of the body by contact or by scratching. It tends in some of the victims to become eczematous in character, and some very marked cases of acute symmetrical

eczema I have traced back to the action of a mere casual touch on the leaves of a plant of this order.

This mode of spreading of acute eruptions, and especially pruritic eruptions, from a single focus of known external origin, cannot but suggest that the violent extension of some eczemas of parasitic origin, or of eczemas which have become parasitic, as judged by the gyrate or polycyclic outlines of the patches, may be due to the absorption and diffusion of some substances produced by the parasites under conditions of body analogous to those which give rise to the acquired idiosyncrasy for iodoform or primula poisoning. What these conditions are it is often impossible to decide, but the suspicion of the existence of a focus or foci on the skin from which irritating material is being diffused, is a valuable working hypothesis which may prevent a general eczematous attack from being regarded and treated as purely systemic in character, whilst the true source of the irritation is allowed to spread. It certainly also suggests one explanation of the extraordinary fact that so large number of the antipruritic remedies are of the disinfectant and bactericide class.

The purely fungoid diseases of the skin, such as tinea trichophyton and pityriasis versicolor rarely cause much itching. The latter, however, may do so exceptionally. I remember the case of an old medical man who had suffered from such intense and increasing pruritus for two years that his mental condition was becoming affected. I found a well-marked but not excessive infiltration of the cuticle with microsporon furfur, and when this was removed he was, within a fortnight, completely freed from every unpleasant sensation.

The action of the epizoic parasites in producing itching needs no more than a mention; some of them, such as the pulex, cimex, and mosquito irritate by the injection of secretions; others, as the lice, seemingly by simply biting or crawling on the skin, while the acarus scabiei probably acts in both ways. One curious feature about the bites and stings of these insects is the extraordinary amount of tolerance which may be established in those who have become habituated to their attacks. The skin may be found thickly covered with fleabites, for example, without showing any signs of scratching, and the patients deny the occurrence of any itching sensations.

Of the physical causes which induce itching by their direct action on the skin, none is more familiar than the influence of sudden changes of temperature. Many pruriginous skin affections are incited to activity by sudden exposure to cold, and hypersensitive, though otherwise seemingly normal, skins are inclined to slight itchiness when the clothes are quickly removed. The removal of the pressure of the clothes has undoubtedly some influence in increasing the sensation, but it is not so apt to occur if the skin is cool at the time of removal, and it can hardly be the difference of pressure which causes pruritic affections of the anus to activity immediately after undressing. It appears to be rapid alterations in the blood pressure induced by these quick changes of temperature which are the chief excitants of the itching, for it is almost always confined at first to parts which are in a condition of more or less inflammation, acute or chronic, and which are, therefore, unable to accommodate themselves to the alteration of pressure. The power of very hot water to allay pruritus may perhaps be explained by its action in overcoming this impediment and reducing the increased blood tension. Variations in the position of the body seem distinctly to affect the amount of pruritus, for patients will often complain—especially those who are suffering from the acuter inflammatory forms of pruritic disease—that the itching and burning will increase during the daytime, when they are in ordinary dress, if they assume the recumbent position, and I hardly see how this fact is explicable except on the assumption that the change of position increases the blood pressure.

Except indirectly, through the intermediation of some lesion, such as dermatitis, perniones, sudaminous and miliarial rashes, heat and cold rarely produce itching by their direct local action on the skin. Pruritus hiemalis and P. æstivalis I have regarded as being caused by reflex nerve action—a view which is further supported by the symmetrical angioneurotic character of the lesions which often accompany them.

The actinic rays of the sun act, so far as the production of pruritus is concerned, with great power on some individuals, but always indirectly through the lesions which they produce. The affections of the "summer prurigo" class, which are directly due to the action of light, are intensely pruriginous, and lead in time, by the incessant scratching, to a degree of lichenification and excematisation of the hands and face, which closely resembles one of the elephantiasic forms of chronic eczema. Even a diffused daylight is sufficient to excite, in some people, an intense urticarial pruritus on the exposed surfaces. One of the worst cases which I have seen was that of a lady whose hand and forearm, which she bared to show me, were covered thickly in two minutes with small intensely irritable urticarial wheals.

Of the action of drugs and plant poisons we have spoken already. They excite irritation externally either by applying their poison at the ends of sharp-pointed hairs, as in the primula and nettle, or, more indirectly, by gradual penetration to the nerve terminals. The lesions which accompany them are very seldom sufficiently characteristic to be pathognomonic, and the diagnosis has often to be deduced from a number of inquiries as to the occupations and pursuits of the patients. This is all the more necessary as the pruritus which is caused in this way is often of great severity, and increases in degree if the contact with the offending agent is continued.

The simple irritability of skin produced by rough underclothing, though unimportant pathologically, is of great importance from a therapeutic point of view, and the substitution of silk for coarse flannel often makes all the difference between comfort and discomfort to those whose skins are naturally sensitive and irritable, or who have become so through the presence of some pruritic affection. The irritation is caused obviously by the tickling of the skin by the ends of coarse woollen hairs. What can be done by a purely mechanical irritation of this kind is best seen in the intolerable itching which results from the application to the skin of the fine dried spicular hairs of a leguminous plant, which are known as cow-hage, or cow-itch.

I am not going to attempt now to enter into any details as to the treatment of pruritus. That has been done already by my predecessor, and will no doubt be taken up by the members present. My object has been to try to make a rapid survey of the various conditions in which pruritus may occur, so as to aid in the recognition of its cause in individual instances. The pruritus is, it is true, in the great majority of patients, merely a symptom of disease, but it is generally the symptom from which they are most desirous of being relieved, and it is often the annoyance of the pruritus rather than the disease itself which urges them to seek our help.

III.—A. S. Myrtle, M.D.Edin., etc.,
Harrogate.

Dr. Myrtle insisted on the difficulties of treatment in cases of pruritus. In vulvar and anal cases he had found the free use of potassa fusa, gr. xv-xl ad ℥j, most valuable.

IV.—Henry Waldo, M.D. Aberd., M.R.C.P.Lond.,
Physician to the Bristol Royal Infirmary.

Dr. Waldo pointed out that a plan of treatment suggested by the President of the Section some years ago had not been mentioned, namely, counter-irritation of the vasomotor centres by means of the mustard leaf applied over the spinal cord. He had found this mode of treatment most successful in some troublesome cases. With regard to osteo-arthritic pruritus, salicylate of soda was useful, alone or combined with arsenic.

V.—G. G. Stopford Taylor, M.D.Durh.,
Hon. Surgeon, Liverpool Hospital for Cancer and Skin Disease.

Dr. Stopford Taylor said that constitutional remedies as a rule were not of much use, although gouty, rheumatic or dyspeptic symptoms must always be attended to. Pruritus hiemalis was best relieved by exercise and soothing applications, such as ointments of glycerine, of lead, etc., and cotton or silk underclothing. The daily bath should be interdicted. For pruritus ani and scroti the application of spirituous remedies and the separation of opposing surfaces of skin were

indispensable. Baths of weak solutions of liq. carbonis deterg. were also most grateful to the patient. He had seen many cases occur in those who engaged in polo and cycling.

VI.—F. H. Barendt, M.D.Lond., F.R.C.S.Eng., Liverpool.

Dr. Barendt considered that local applications were most important, especially in those cases where pruritus alone was present, and there was no skin lesion that could explain it. He extolled the application of blisters over the spinal region which supplied the pruritic area. After having tried several local remedies—resorcin, menthol, salicylic acid in ointment and paste form—he had obtained great relief by thoroughly rubbing into the affected area hot olive oil containing 2 per cent. of carbolic oil, for five minutes night and morning.

VII.—Elizabeth Garrett Anderson, M.D.Paris, Physician, New Hospital for Women, London.

Mrs. Garrett Anderson said that in treating neurotic pruritus in women, and men leading feminine lives, she had found that an increase in the quantity of food which suited the patient gave good results. Rest, especially before meals, was important. Bathing was ill-borne in these cases. She also recommended complete silk underclothing. Cod-liver oil should be added to the food if necessary.

Professor McCall Anderson's Reply.

In his reply, Dr. McCall Anderson said that the treatment of the cause was the important point, but he did not undervalue local treatment. He considered that the good influence of Harrogate, for example, was not due to the baths, but to the diet, and also to the healthiness of the surroundings. He agreed with Mrs. Anderson's remarks as to the importance of keeping up the nutrition.

AFFECTIONS OF THE SKIN OCCURRING IN THE COURSE OF BRIGHT'S DISEASE.[1]

By P. H. PYE-SMITH, M.D., F.R.S., Physician to Guy's Hospital.

The only cutaneous disorder hitherto generally recognised as occurring in Bright's disease is the erythema leve of Willan. His original description in 1808[2] was followed by Bateman and subsequent writers. He notices its uniformly smooth and shiny surface, the red patches becoming confluent, and its association with anasarca. He describes it, however, as occurring both in young and old patients, particularly in those who are intemperate, and as not always accompanied by dropsy. He also observes that the apparently slight inflammation may end in local gangrene.

Erythema leve is a superficial dermatitis which owes its characteristic smooth, shiny appearance to the fact that it appears on surfaces made thin by dropsy. It may be the result of local irritation from pressure, and the term has been applied to the first stage of a bedsore. But as it appears on the dropsical limbs there is no evidence of external irritation in its locality or spread, and it is seldom seen in the anasarca of cardiac or hepatic disease. It is also quite distinct from the local recurrent erythematous or erysipelatous dermatitis which leads to elephantiasis of the legs. So restricted, the term may still be used to describe the inflammatory blush which sometimes appears on the legs and thighs swollen by renal dropsy. In its pathology it should, however, be separated from other forms of true erythema—E. multiforme, E. iris, E. bullosum, E. nodosum, and urticaria—and regarded as a dermatitis readily excited on a dropsical skin, just as pleurisy, inflammatory œdema of the lungs, and sometimes inflammation of the pericardium, the larynx, or the peritoneum are observed in Bright's disease. There are, however, other forms of dermatitis which not infrequently occur in the course of chronic Bright's disease:

1. There is a bright red diffused rash which appears chiefly on the trunk, less extensively on the neck, arms, and thighs, and very seldom on the face, hands, or feet. It is distinguished from the somewhat similar rash produced by natural or artificial diaphoresis, by its locality, by the absence of sudamina, and by its appearing when no hot air baths, or other means have been used to produce sweating, and when the skin is harsh and dry. It does not, as a rule, either itch or smart, and only lasts a few days. I have most often seen this rash in cases of chronic tubal nephritis.

2. There is a papular eruption with large discrete rather dark red pimples seated on a dry, rough, and sometimes scaly surface. This I have more often seen on the outer side of the thighs and legs, the shoulders and extensor surface of the forearms, but it also may affect the loins and the abdomen. I have never seen it on the face or on the hands and feet.

3. Apart from the mere coincidence of eczema with Bright's disease, there may be observed in some cases a moist dermatitis resembling eczema in its respect, but occupying the arms or the legs, without affecting the flexures of the joints, the face or the ears, without the irritation commonly present, and without having previously appeared.

4. On two occasions I have seen a very extensive and profuse dermatitis closely resembling the universal exfoliative dermatitis of Wilson, very red, very scaly, occupying the scalp, palms, soles, and genitals, as well as the trunk, face, and limbs. It has come on after the symptoms of Bright's disease have appeared, in cases of chronic interstitial nephritis, with little dropsy, and cardio-vascular changes already apparent.

Different as these forms of dermatitis are in their anatomy, they have certain common characters apart from their occurring in patients suffering from Bright's disease. They are superficial, and leave no trace behind when they disappear or after death. They run an acute or subacute, not a chronic, course, and seldom recur after they have disappeared. They are never pustular. They are occasionally purpuric, but this is rare, offering a contrast with the hæmorrhagic erythema of rheumatism and erythema nodosum. The subjective symptoms are usually slight. With respect to prognosis, they usually occur in the later stages of the renal disease, and therefore may be not infrequently present at the time of death. But they often disappear long before this, and their appearance does not coincide with any special aggravation of the other symptoms. As to their pathology, I am not inclined to connect them with uræmia except by a natural coincidence, for we constantly see this condition in its most characteristic and fatal form without any cutaneous eruption, and each of the forms of dermatitis I have described has been seen where there were no other symptoms of uræmia. Rather, I think, should these inflammations of the skin be associated pathologically with the retinitis, the serous inflammations, and the pulmonary œdema to which patients with Bright's disease are liable. With respect to the form of renal disease with which they are associated, I do not remember seeing any of them in the acute cases of nephritis with dropsy, either in children or adults; nor in cases of lardaceous disease of the kidneys. They have either occurred in the later stages of chronic tubal nephritis, or at any stage in the course of chronic granular degeneration with shrinking of the renal cortex.

The treatment I have found useful when local discomfort has called for it has been entirely external, and the vehicle an ointment rather than a lotion. Carbonate of lead, oxide of zinc, calamine or bismuth, have appeared to be the most useful applications, and sometimes inunction with olive oil or vaseline has been more efficient than any more active treatment.

In conclusion, I would remark that none of these affections (except erythema leve) are common, and my chief object in drawing attention to the subject is to elicit the experience of those who, I doubt not, will be able to fill up and perhaps to correct these imperfect outlines.

I must, however, particularly refer to a valuable paper by Dr. Le Cronier Lancaster, which was read before the Clinical Society.[3] It had escaped my notice until the above account had been drawn up, and I have not modified any of the statements which differ from those made by Dr. Lancaster, because

[1] Read in the Section of [illegible] at the Annual Meeting of the British Medical Association held in London, July August, 1895.

[2] *Cutaneous Diseases*, vol. i. p. 418.

[3] *Transactions*, vol. xiv, p. 69, 1881.

by comparing our individual experience we shall best arrive at just clinical and pathological conclusions.

Dr. Radcliffe Crocker, President of the Section, insisted on the importance of drawing attention to forms of dermatitis due to disease of the internal organs. In his experience he differed from Dr. Pye-Smith as to prognosis, which was gloomy in advanced cases of Bright's disease. He agreed with Dr. Le Cronier Lancaster.

Dr. Savill (London), referring to the exfoliative skin diseases mentioned by Dr. Pye-Smith, said that his subsequent experience of the epidemic skin disease led him to believe that renal disease formed a predisposition to contract the former. Out of five or six cases of such complication which he had seen, all were fatal. He regarded it as a very serious sign.

Dr. Bradbury (Cambridge) had seen several cases of skin diseases occurring towards the end of morbus Brightii. He had observed erythemata, and one case was markedly urticarial. In cases of interstitial nephritis he thought the element gout, *plus* poisonous matter retained in the blood through imperfect elimination by the kidneys, might be a factor. He admitted this did not explain all cases, especially those of chronic tubal nephritis. He was of opinion that the prognosis in these cases was unfavourable—that the end was not far distant.

Dr. Waldo (Clifton) asked Dr. Pye-Smith whether he had often noticed that the serum after blistering cases of chronic Bright's disease was hæmorrhagic.

Dr. Grange had noticed urticaria.

In his reply, Dr. Pye-Smith did not think there was any evidence of uræmic origin; he had never seen skin affections in very bad cases of Bright's disease. Eruptions did not give him that grave augury as to prognosis which had been mentioned by other speakers. He had never noticed urticaria as seen by Dr. Grange. He was extremely sceptical as to the influence of gout. In reply to Dr. Waldo, he had had no experience of blistering leading to hæmorrhagic serum; in this respect he would point out that in Bright's disease one should never give opium or mercury, or apply a blister.

ON THE GUINEA-WORM.

By PATRICK MANSON, M.D.Aberd., F.R.C.P.Lond., etc.,
Physician to the Seamen's Hospital, Greenwich.

When mature this singular integumental parasite—dracunculus medinensis or guinea-worm, of which the female form alone is known, attains an enormous length—2, 3, or 4 feet. Though long, she is very slender, having a diameter of about the tenth of an inch. Her anatomy is very simple; practically she may be described as a musculo-cutaneous tube, enclosing an exceedingly delicate uterus, which, packed with millions of coiled up, long-tailed embryos, extends from mouth to tail. The head of the adult worm is rounded off, and is provided with a punctiform mouth and a crown of minute papillæ; the tail end is furnished with a sort of hook which possibly functions as a holdfast. The alimentary canal is a minute tube compressed and thrust to one side by the uterus. Vagina and anus are wanting—at all events they have not been seen; probably they are obliterated by the pressure of the enormous uterus.

When the embryos in her uterus attain a certain degree of maturity, the worm travels slowly through the connective tissues of her host, proceeding almost invariably in a downward direction towards the lower extremities. She generally gets as far as the ankle or foot. Arrived there she drills a minute hole in the derma, the superjacent epidermis being raised up as a bleb. In a day or two the bleb bursts or is broken, disclosing a superficial ulcer with the little hole, leading to, or, more rarely, occupied by, the head of the parasite, at its centre.

The prevailing idea is that the worm now creeps out, or is pulled out, and that her body, being cast away, decomposes, and so liberates the embryos. Another idea is that the worm breaking down in the tissues, her young escapes in the purulent discharge which the irritation of her presence excites. It can easily be shown, however, that neither of these views is correct. The worm gives rise to no purulent discharge so long as she is alive; nor, left alone, does she quit the body until she has first got rid of her young. This can be shown by the following experiment:

Squeeze a little cold water from a sponge so that the stream shall fall on the sound skin within an inch or two of a guinea-worm ulcer; at the same time watch the little hole alluded to at the centre of the ulcer. In a few seconds a droplet of a whitish fluid will be seen to well up in the little hole, or a delicate tube will be protruded from it for an inch or more, and then suddenly rupture. Collect a little of the fluid that has welled up from the hole or escaped from the ruptured tube, and place it under the microscope. It will be seen to contain hundreds of coiled-up, apparently dead, embryo guinea-worms. Instil a little water below the cover-glass and watch. In a few minutes the embryos seem to wake up, stretch themselves, move, and in a very short time they are swimming about vigorously. Manifestly they are in their proper element—water.

The explanation of these facts, which I have frequently witnessed and shown to others, is this. The parent guinea-worm instinctively makes her way to the foot or ankle because her young are most likely to get to water in that situation. In guinea-worm countries the natives wear neither shoes nor stockings, and their feet especially are frequently in puddles of water. In some strange way the guinea-worm recognises this fact, and also recognises when the foot of her host is actually in contact with the water. So she makes her way to the foot or ankle, and at the right moment, when the foot touches water, expels her young just as when we experimentally douche the limb she is lying in. I find she takes about a fortnight to empty her uterus in such intermittent efforts at parturition. When all her young have been expelled she begins to come out herself, and can then be more or less readily withdrawn, or she may break down and excite suppuration. I may mention that as the parasite has no vagina she gets rid of her young through her mouth; the contractions of the musculo-cutaneous wall, in response to the stimulus of water applied to the skin of her host, cause the uterus to prolapse through the mouth and burst. An inch or two of uterus prolapses each time the stimulus is applied; becoming very tense under the sustained contractions of the body of the worm, it ruptures and shrivels up and so on until the entire organ is in time expelled.

The object of all these curious arrangements is to give the guinea-worm embryo the best possible chance to get at its intermediate host—a fresh water crustacean, cyclops quadricornis. Fedschenko, now a good many years ago, discovered that cyclops was the intermediate host of the dracunculus, and convinced Leuckart and other helminthologists of this. But, so far as I know, his experiments had not been confirmed or repeated until last year. Having a case of guinea-worm under my care at the Seamen's Hospital, I bethought me of testing Fedschenko's statements, and also of seeing if the guinea-worm could be raised in England. I procured a large supply of embryos by the douching process I have described, and placed them in watch glasses and little bottles, together with a number of cyclops collected from ponds in the neighbourhood of London. They were placed together one evening. On the following morning, on looking at my cyclops with the microscope, I found that nearly every one of them had some ten or twenty guinea-worm embryos coiled up and wriggling about in their body cavities. The parasite had penetrated the armour of the cyclops by attacking it between the joints of the ventral plates; it does not get to the body cavity through the alimentary canal after being swallowed. I kept the cyclops alive for many weeks, and watched the slow metamorphosis of the incarcerated embryos. I repeated the experiment with the same success this year, as the preparations (for most of which I am indebted to Mr. Rousselet) and Mr. Andrew Pringle's very telling photographs show.

In this last set of experiments the parasites and the crustaceans were placed together on May 10th. I dissected, or rather crushed, a few cyclops from time to time, and so could follow the metamorphosis step by step. I found that soon after it enters cyclops the young guinea-worm changes its shape. When a free swimming animal the little embryos body is flattened from side to side, something like a very

[1] Read in the Section of Dermatology at the Annual Meeting of the British Medical Association held in London, July-August, 1895.

much elongated flounder. Soon after its entry into cyclops this flattened body becomes cylindrical. The embryo then, after a very variable time, casts its transversely-striated skin, and, along with this skin, gets rid of its long slender swimming tail, a short, conically-shaped, pointed tail, sometimes a mere rounded stump, taking its place. Apparently Fedschenko overlooked the cylindrification of the embryo and the formation of this conical tail. Later the parasite moults at least once again, the short conical tail giving place to a sort of tripartite caudal arrangement, something like a minute three-toothed trephine. Simultaneously with the changes described the young worm increases in size, its alimentary canal undergoing considerable development and becoming filled posteriorly with a brown granular material.

It is to be presumed that when this metamorphosis is completed the parasite is ready for transference to a human host by being swallowed in drinking water and while still in cyclops, and that under favourable circumstances it would attain maturity after boring its way into the connective tissues of its new human host.

I saw the metamorphosed guinea-worms alive and moving about in cyclops on July 19th, that is seventy days after their introduction. Fedschenko found that in the warmer climate of Turkestan thirty-five days sufficed for the metamorphosis. It takes longer in England therefore.

These are interesting biological facts. At the same time, they have one or two obvious practical bearings on the prevention and treatment of guinea-worm disease. First they show how desirable it is to abstain from unfiltered or unboiled drinking water in guinea-worm countries. They also indicate that it is wrong to commence winding out a guinea-worm before she has expelled all her young, premature attempts at winding out being unphysiological, and sure, or nearly so, to end in rupture of the worm and the extravasation of myriads of young into the tissues, with consequent cellulitis and extensive sloughing. Though I unhesitatingly condemn premature attempts at winding out, I am inclined to think that the recently-recommended treatment of guinea-worm by local injections of weak perchloride of mercury solution, with the view of killing the worm and procuring her absorption under aseptic conditions, is worth a trial.

Dr. HARRISON (Clifton) asked Dr. Manson whether it were possible for a mass of guinea-worms to get encysted in the pleural cavity of a rhea, or American ostrich, as he had found a large cyst containing thirty or forty worms certainly closely resembling guinea worms in that animal about two years ago.

Dr. MANSON said, in reply, that in dogs and many other animals various forms of filaria and other worms had been met with in the pulmonary vessels. The guinea-worm was known to occur in very many of the lower animals—dogs, horses, etc.—but he was not certain whether it had been found in the lungs.

A DISCUSSION ON DIET IN THE ETIOLOGY AND TREATMENT OF DISEASES OF THE SKIN.[1]

I.—W. ALLAN JAMIESON, M.D., F.R.C.P.Edin.,
Physician for Diseases of the Skin, Edinburgh Royal Infirmary, etc.

IT appears to me that the object to be attained by discussions on particular and selected subjects at such a meeting as this is to elicit from those present facts which have come under their own observation bearing on the question to be considered. It is in this way, and in this way only, that the sum of our information can be by such means augmented. To pave the way to this end the member appointed to open the debate ought to lay down shortly the state of our knowledge on the matter at issue, and so to suggest to the minds of his audience lacunæ which one or other may be in a position more or less completely to fill up. Looked at in this light the topic with which we have to deal at present is: Diet in the Etiology and Treatment of Diseases of the Skin. It thus divides itself quite naturally into two heads intimately related to each other.

[1] In the Section of Dermatology at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

First, then, with respect to the influence of food, taking the word in its widest sense, in causing or maintaining cutaneous disorders. There are at the outset certain limitations which narrow our field of observation. One of these is the relative frequency with which the ailment occurs. It is evident that in the case of uncommon complaints their very rarity acts as a barrier to exact inquiry. It is not possible to collect a sufficient number of instances to enable us to arrive at any definite conclusions on a matter which is in itself one of great difficulty. Again, many parasitic diseases are so far local disorders that the effect of diet in modifying the soil may be inconsiderable. There are diseases, too, of a chronic nature, such as scleroderma or fibroma, with respect to which we possess so far no available information; or acute maladies, as herpes zoster or erythema iris, in which there is hardly any opportunity afforded for due estimation. There remain, however, after eliminating those not yet accessible, some with regard to which it may be possible to reach something positive. Such are, of the affections met with in this country, eczema, assuming this to mean broadly a catarrhal process, hyperidrosis, acne, dermatitis herpetiformis, lichen, lupus, epithelioma, and sarcoma. Unfortunately the data at disposal, even bearing on these diseases, are meagre, and to a considerable extent unreliable. We must reject in large measure the statements volunteered by our patients, though we thereby get much information. The former are vitiated by preconceived impressions, or are based on ill-founded deductions; the latter are necessarily imperfect. The patient in nearly all cases ascribes an immediate effect to his diet, though it may be obvious on the least reflection that the action, if exerted at all, must be remote. It is very perplexing, too, to allot the proper share to the individual constituents of a mixed dietary, in which there is no one largely preponderating and constant element, or any essential component markedly defective. The environment, too, of the individual has a relation to digestion which is in many instances beyond the power of our appraisement. The habits of the man as to regularity of ingestion or the reverse, come extensively into play in promoting or interfering with nutrition, and these may be unknown to or concealed from us.

Some articles of food act in producing cutaneous disorders in an immediate manner by the exertion of what may be termed a toxic or dynamic influence. Of this result urticaria is perhaps the best example, but here idiosyncrasy comes into operation, since no one ingredient is capable of evoking wheals in all persons, or at all times even in the same person. Once initiated, however, the morbid tendency is apt to persist long after the original exciting cause must have ceased to be efficient. In such cases some ferment may cling to the intestinal walls, and continue for an indefinite period to exert its action on the products of digestion as they descend. This forms a link in the chain connecting this class with the next, in which the instrumentality of diet is a remote one. Much more frequently the influence of diet in provoking skin disease is to be attributed to slow and long-continued malassimilation. It is thus rather predisposing, the determining cause coming from without or depending on some accidental circumstance. An appropriate illustration of this is afforded by pellagra, in which, while diseased maize is the agent which morbidly disturbs the system, it is the sun's rays which light up the erythema, the integumentary manifestation. Viewed in this way it is not so improbable that some as yet undiscovered dietetic error may sow the seed which eventually under the solar beams ripens into xeroderma pigmentosum or hydroa vacciniforme.

When we endeavour to accuse special articles of food or drink of possessing this remote power of occasioning cutaneous disturbance, there are but few to which we can positively bring home the charge. Alcohol abused tends to produce a degree of over-ready penetrability of the tissues, shown on the one hand, so far as the integumentary system is concerned, by the clammy moist hand of the habitual toper: but it can also, on the other, occasion undue and permanent dilatation of the blood vessels of the face and give rise to rosacea and a coarse greasy skin. Since this does not supervene in the case of all who are prone to this form of indulgence we must in many instances invoke some exciting factor. Of these exposure to all weathers is certainly one, but confinement in

close, ill-ventilated rooms and continued stooping are others. Tea, when similarly partaken of too freely, too strong or too hot, may, as Mr. Hutchinson has observed, give rise to cold hands and feet, combined probably with some chronic subacute gastro-intestinal catarrh. It does induce, mostly when associated with an otherwise insufficiently nutritious dietary, a shrinkage and withering of the exposed portions of the integument, with a loss of its natural transparency at too early an epoch in life. I am unable from my own observation to confirm Dr. White's statement[2] "that at certain seasons acute eczema is produced in some persons by eating fruit containing abundant acid." He has noticed this during the strawberry season, and again later at the period when pears and grapes ripen. The difference in climate between that of Scotland and Boston may account in part for this discrepancy; wild strawberries, too, have a more toxic effect than the cultivated variety; and, besides, fruit of any kind, gooseberries, perhaps, excepted, is never partaken of with us to the extent it is in the United States.

The persistent omission of fresh green vegetables, of salads, or of ripe fruits in their season from the dietary leads to a weakening and loosening of the tissues, with alteration of the blood vessels and of the constitution of the blood itself, followed by the occurrence of hæmorrhages into the skin, and an etiolated condition of the integument which in its highest development we call scurvy. This may, however, manifest itself as milder types, as some forms of purpura in children or infants. In the latter the milk of the mother is probably, owing to her faulty habits as to diet, deficient in such salts, the absence of which is held to be the ultimate cause of some forms of extravasation into the skin. It is singular how long the system may hold out against such inadequacy in due materials. A man, aged 47, had for three years lived on a diet from which milk, green vegetables, and fruit had been entirely excluded, yet it was not until two months before his admission into my wards on May 1st, 1895, that he had begun to experience the first symptoms of scurvy.

Though in January and February the cold had been unprecedented, and this may have acted as a determining cause of the outbreak in his case, he was unwilling to accept such an explanation, and indeed we failed to account positively for the onset. Once started the symptoms became pretty rapidly ingravescent. Not a few cases of eczema of the legs are intensified, probably some are directly due to this scorbutic diathesis. Given a small abrasion on the skin, or merely a varicose condition of the limb, the blood stasis consequent on these is apt to be further complicated by hæmorrhage into the integument, often masked by the inflammation, and interrogation elicits the fact that the diet for a long period of time has been one into the composition of which green vegetables seldom or never enter. If the individual lives in the country, or is much out of doors, the exposed parts of the body, as the face and hands, may indicate no suspicion of anæmia, and the person himself may declare his health perfect. Dr. Burney Yeo[3] holds that eczema is prone to appear amongst boys at school who are kept on a too exclusively meat diet, without having a corresponding proportion of fresh green vegetables. The taste for these is apt to be lacking, possibly fostered by the unattractive manner in which they are served. Since my attention has been directed to this point, it has surprised me in how many instances of eczema, not of the classic seborrhœic type, the diet has proved on inquiry to be defective in this particular.

While eczema occurs in the ruddy and robust in appearance, as well as in the anæmic and ill-nourished, we can often discover a contributory cause in some dietetic error. The observation of Tilbury Fox[4] that eczematous subjects are, as a rule thin, pale, and with evidence of malnutrition, with irritable and dry skins, and little, often no, subcutaneous fat, is borne out by subsequent research. In the case of children particularly, but also in adults, the source of the fat with which in the main their tissues is impregnated, is of importance. That elaborated from sugar and starches is much less permanent than that derived from such ingredients as oatmeal—a cereal rich in natural fat—from milk of good quality, from butter, or from the assimilation of that in the flesh of animals which have been reared on hay or grass. The softer fat disappears more readily under the exigencies of their existence, in human beings, and renders those only, or mainly so fortified, more prone to eczema, especially if of strumous habit. In some fat is a "constitutional tissue," in others it is merely a reserve, a provision to be consumed at the first demands of the system. Still further, as bearing on eczema specially, very thin persons bear cold badly.[5] Yet it must be confessed that even after careful cross-examination, it will be found difficult, in many cases, to fix on any one alimentary substance which can be exclusively blamed as predisposing to eczema.

Too limited an amount of water imbibed to enable the kidneys to carry out their function satisfactorily promotes the gouty tendency which underlies some forms of eczema, notably the dry variety affecting the palms. In these cases enough fluid possibly is taken with meals, but not a sufficiency in the interval, when, the stomach being empty, it can be rapidly absorbed, dilute the blood, and flush the renal tubules. In numerous cases the meals are too much crowded together, and so an early dinner encroaches on an incompletely digested breakfast, or an ample tea follows too closely on a fairly substantial midday repast. In other instances, too long a space has been allowed to intervene, no, or but very scanty, nutriment having been partaken of between an early breakfast and a late dinner, in the case, too, of persons who use their brains more than their muscles. Indeed, in a large number of cases of eczema occurring among the middle classes of society, the fault has appeared to me to lie more in the defective arrangement as to time than in the composition of the meals themselves. In infancy, childhood, and during school life, however, unsuitability of food rather than insufficiency in amount tends to induce eczema. Hurry in taking breakfast, to avoid being late, tells very injuriously in the case of children who attend day schools.

All these latter factors, irregularity and haste in particular, bear a part in the production of alopecia areata, a disease which is becoming alarmingly prevalent. The neurotic theory of its causation seems to me the most plausible, as it is the one best supported by clinical evidence. Dietetic errors which lower the vitality of the system of trophic nerves, are at least among the influences which favour the occurrence of this morbid atrophy of the hair.

While we cannot impugn any special article of diet as being the cause of psoriasis, yet alcohol intemperately used by those affected with it intensifies and aggravates its symptoms. The disease in such circumstances invades extensive areas with very great rapidity. The scales become dark-coloured and thick, the integument becomes involved in all its layers, and proneness to degenerate into exfoliative dermatitis is exhibited.

Dermatitis herpetiformis is possibly dominated, if not actually induced, by diet. We may infer this from the fact that in those liable to it the symptoms are always aggravated by the administration of iodide of potassium, and attacks have even been occasioned in individuals not previously affected by the exhibition of that drug. Further, in an instance reported to me by Dr. Muirhead, the outbreaks were slight or did not occur when the patient was fed on vegetable food and meat withheld; so soon as flesh was given the eruption appeared, to cease again on its withdrawal. As has been suggested as to urticaria, some toxic fermentation may be, if not an originating at least a maintaining cause.

The subject of diet in the causation of lichen planus has not been investigated, but many of those who suffer from it verge on the condition termed neurasthenia. They have been worried, overworked, or are more or less liable to indigestion or neuralgia. Though food may not be directly blamable, yet there is often distinct evidence of malnutrition, in the shape of some degree of wasting with constipation, and the feeding may be to a considerable extent at fault. It is true at the same time that cases also occur in fat women over 40 or 45, but obesity to some degree is at that age physiological, and partly irrespective of diet.

Boils are undoubtedly due indirectly to diet, though a local irritation may serve to determine the locality affected.

[2] *Journal of Cutan. and Genito-Urin. Dis.*, 1887, p. 419.
[3] *Food in Health and Disease*, 1895, p. 230.
[4] *Skin Diseases*, Third Edition, 1878, p. 174.
[5] Lagrange, *Physiology of Bodily Exercise*, 1889, p. 195.
[6] Lauder Brunton, *Disorders of Digestion*, 1886, p. 130.

In numerous cases we can trace the effect of food, as is seen in the sudden alteration from a full and mixed dietary to a restricted and defined one in the process of training; or from a simple, perhaps a monotonous and possibly ill-chosen one, to a richer, more substantial and varied, as in domestic servants coming from home—in the country it may be, or from a crowded street in town—to a first "place."

Acne in girls, and to some extent in youths also, is very often the result of injudicious dietary. There is a belief prevalent among women—from which the proprietors of boarding-schools are far from being exempt—that girls do not require to be well fed, do not need as ample a supply of nutriment as do boys. Hence at home girls are too often allowed, if not even encouraged, to eat sparingly, while at many of these establishments, both in this country and more so abroad, the food is apt to be insufficient, unsuitable, or unattractive. This occurs, too, at a time when development is exceedingly rapid, when to the mental work frequently unwisely imposed there is the added strain of the advent of puberty; hence, not only is the system in general disturbed and anæmia produced, but complementary nutrition is disordered at the same time, and comedones, acne, and seborrhœa appear.

In lupus, as in other forms of tuberculous disease, the habitual elimination of fat from the dietary or the too limited employment of oily materials in the food of the young has a powerful predisposing or maintaining effect. Those affected with extensive lupus not infrequently admit a distaste to fat.

Allowing for greater skill and care in diagnosis, there can be little question that a marked increase in the prevalence of some forms of cancerous disease has taken place during the last half-century. "Epithelioma," observes Mr. Christopher Heath,[1] "I am quite prepared to say, has increased very largely during the last twenty years." And it is with epithelioma that we have chiefly to do. As to sarcoma less can be said with certainty. Although in the past fifty years there has been a vast improvement in comfort, while there has been an augmented expenditure of vital energy, a lengthening of the average of life with a larger amount of waste, both of which may have an influence, there are two notable alterations in dietary which have occurred within this same period. One is the growth in the consumption of butcher's meat, the other the remarkable rise in the employment of tea at all ages and in all classes as a beverage. "It has been suggested," says Dr. Burney Yeo, "that, amongst other evils attending an animal dietary, one is that it favours the tendency, where it exists, to the development of cancer." Cancerous affections are, however, prevalent among persons who have never had the opportunity of indulging freely in animal food. It is far otherwise with respect to tea, and I hold strongly the opinion that the abuse of tea, or indeed its use at all during the period of growth, has much to do with the increase of cancer.

The second part of the subject under discussion—Diet in the Treatment of Diseases of the Skin—though one on which a good deal might be said, for it is, in a measure, in our own control, need not very long delay me, since it follows in the main as a corollary from the facts elicited as to causation. The truth is, the dietary necessary in cutaneous diseases is that which is called for by the exigencies of the case immediately under our care, personal idiosyncrasy being always allowed for when ascertained to exist. It is abundantly clear from what has preceded that neither green vegetables nor fruits in their season should be wholly excluded; that animal food should be moderate in amount, and duly selected as to digestibility; and that hydrocarbons in as fine a state of subdivision as possible, and in fresh condition, must form a part. There are some particulars, however, relating to the mode in which these kinds of food ought to be taken which need mention. Thus, vegetable broth is an objectionable way of giving green food. The pieces contained in it are too often hard from insufficient boiling, and, being at the same time small, are swallowed whole, and so escape proper mastication. Potatoes, also, unless carefully boiled in their jackets so as to be perfectly mealy in consistence, roasted, or mashed, are not advisable. Only when thoroughly boiled porridge is proved to disagree should it be eliminated from the category of breakfast dishes. It is essential that the diet should contain not merely nutritious, but also waste, material. The tendency at the present day is to concentrate nutriment, to ply the system with the most easily assimilable substances offered in the form which is held at the same time to be the most digestible. But to enable the absorbing vessels to exercise selection, this must be diluted with a sufficiency of redundant or waste material, which by its bulk opposes resistance to the muscular contraction of the stomach and intestines, thus maintaining their peristaltic efficiency, and obviating constipation. In the diet of adolescents suffering from skin diseases who are at all anæmic, special care is to be exercised that the supply of animal food is ample, for this "contains the maximum of iron, and the material necessary for red corpuscle making."[2] An important point is to avoid too many mixtures at any one meal. Our efforts must be directed to correct whatever has been found to be defective or erroneous in quantity, quality, or time of taking meals. While alcohol should be avoided in rosacea or acute eczema, the maxim which guides us in general as to its advisability or otherwise holds good in cutaneous diseases. "If the meal is relished as much, and digested as completely, without as with a moderate allowance of alcohol, it is superfluous."

In conclusion, one must bear in mind that however careful a scheme of diet may be constructed and laid down by the physician, and its expediency accepted by the patient, he is dependent on his wife or housekeeper, in the first place, on his cook in the second, for the regulations being strictly adhered to. As these persons have not the same direct interest in their due fulfilment as the sufferer himself, and very probably regard some of them as of the nature of fads, they are apt in the long run to be but inefficiently and perfunctorily carried out, even in cases where the circumstances are otherwise favourable. Hence all directions should be as plain and simple as possible.

[1] *International Clinics*, vol. iv, third series, 1895, p. 188.

II.—Walter G. Smith, M.D.,

President of the Royal College of Physicians of Ireland; Physician to Sir Patrick Dun's Hospital.

Dr. Allan Jamieson in his careful paper has dealt fully with the kinds of food which appear to have a tendency to induce individual skin diseases, and with the forms of cutaneous disease which may be considered to be influenced or caused by particular dietary or by special elements in our food, and he has given us useful hints upon treatment.

The few remarks which I shall offer to you may be taken as complementary to his. I propose to dwell rather upon the limitations of our knowledge and the imperfection of our data, in the hope that clearer views may emerge from our discussion.

Let me, in the first instance, ask, Have we any certain or exact scientific knowledge of the influence of diet in the causation of diseases of the skin? The belief in the potency of this influence is universal with the laity, and widely acknowledged by the profession generally. But the practice of physicians is partly traditional and is, unfortunately, not always based upon real conviction or sound knowledge, and many circumstances conspire to tempt them to give formal advice which rests upon a slender foundation. The present opportunity seems a suitable time to re-examine the groundwork of our belief, and it may fairly be expected that the discussion to follow will result in a better definition of our position as medical advisers upon dietetics towards our clients—the public.

I start with the two propositions that the real influence of diet in the causation of skin diseases is a small one, much less than it is credited with, and that our substantial knowledge of the subject is very limited. Fundamentally the action of food and of drugs is to be explained upon similar general principles. But great as are the difficulties of forming a correct judgment of the mode of action of a drug, still greater are the complexities which surround questions of dietetics in the causation of cutaneous affections. We are always and in all places confronted with the problem of the idiosyncrasy of the individual, which is a real and perplexing difficulty, and should make us more cautious in formulating cut and dry rules for the guidance of our patients' stomachs.

In very many cases an intelligent and temperate patient

[2] Burney Yeo, *op. cit.*, p. 38.

knowe, or ought to know, better than his doctor what suits him and what aggravates his complaint; and I heartily endorse Sir W. Roberts's simple and sensible rule of conduct, namely: "It may be regarded as certain that any food or foods unnecessary, the use of which is followed by a sense of discomfort, is not beneficial to that individual."[9] And conversely, as Pye Smith puts it: "What most people eat is for most people wholesome, and what a natural appetite finds appetising seldom disagrees."

The tendency of modern inquiries has been largely towards the more exact determination of etiological factors. Hence we have been gradually led to minimise, laying stress upon vague and indefinite conceptions such as diathesis and the like, and of these vague causes diet is, I think, one so far as the skin is concerned. Moreover, the rise and progress of bacteriology has profoundly modified our notions of the cause of many diseases of the skin and influenced our treatment. I need only allude to the pathology of boils, carbuncles, and acute suppuration generally.

Although it is by no means proven that eczema, and even less psoriasis, are parasitic diseases, still the mere ventilation of such a possible cause for these affections tends to throw into the background loose speculations and traditional surmisings as to the effect of dietetic causes in originating diseases of the skin.

We may picture to ourselves four modes or ways at least in which diet may possibly influence the skin:

1. Through the general nutrition of the body. Nutrition is influenced in a very subtle manner by the quality of the food (Roberts), and insufficient or improper food lowers the tone of all the tissues, skin included. Under such conditions we meet with scorbutic and purpuric affections. Destructive and pyogenic microbes find a more suitable soil whereon to fasten, and hence a greater liability to pustular and gangrenous developments. The fungus of "thrush" lies in wait for debilitated constitutions, and favus is more common among the neglected and ill fed poor.

2. By acting as a reflex stimulus from the gastro-intestinal tract. This is doubtless the most common mode. The physiological relationship between the skin and the digestive mucous membrane is incontestable, and proofs are abundant. Over-eating, on the one hand, and on the other the use of unsuitable, indigestible, or irritating articles of diet are frequently followed by either neurotic or vasomotor disturbance in the skin—for example, urticaria. The skin affections producible in this way are all transitory, and disappear spontaneously, as a rule, when the causes cease to act. Many people eat far too much, and overload their digestive capacity. And some of them would pay a worse penalty than they do were it not for the dinner pill, the morning saline, or the occasional visit to Carlsbad. Three practical considerations flow from these thoughts, namely: (*a*) The utility of purgatives in such cases; (*b*) the importance of good cooking in avoiding or overcoming dietetic irritation; (*c*) the due regulation of the diet as to quality and kind.

3. By absorption into the blood of irritating substances or of products of chemical change, which indirectly affect the skin. In this direction we may look for explanation, in part at least, of the occasional injurious effects of tinned and preserved foods. Pathogenic bacteria may undoubtedly enter the body with articles of diet. We are all familiar by daily observation with the hyperæmia of the skin which ensues upon full doses of alcohol.

4. The skin may suffer in virtue of being one of the channels or avenues of elimination. Certain drug eruptions arising from volatile oils or oleo-resins—for example, copaiba, cubebs, and turpentine—are perhaps explicable upon this hypothesis. And upon similar grounds we caution our patients against the use of highly seasoned foods and spices (that is, volatile oils) in erythematous and acute inflammatory affections of the skin.

To turn now to another aspect of the question, namely, diseases of the skin in relation to diet. We can at once make three groups: (1) Cutaneous diseases liable to originate in, or acknowledged by common consent to be materially influenced by, diet. (2) Cutaneous diseases possibly, but not proven to be, influenced by diet. (3) Cutaneous diseases certainly not affected by diet, for example, herpes, pemphigus, lichen ruber, ichthyosis, ringworm, etc.

In Class 1 we may instance: (*a*) Erythema—certain forms of; (*b*) urticaria; (*c*) pruritus; (*d*) acne rosacea; (*e*) acne vulgaris—perhaps. Bulkley states that in some persons crops of acne follow the free use of buckwheat;[10] and Pye-Smith affirms that in some patients a fresh outbreak of follicular inflammation can be produced at will by eating "crystallised" fruits, strawberry jam, or orange marmalade.[11]

In Class 2 may be placed psoriasis, most cases of eczema, and of acne vulgaris. Eczema in children is very frequently attributed to dietetic influences, such as too free use of sugar or even of milk. But, for my part, I quite concur with Dr. Cheadle in never having been able to satisfy myself that eczema is a diet disease.[12] Many infants attacked with severe eczema are of a ruddy colour, have a good appetite, and with all the appearance of excellent health.

It is the present habit to ascribe many skin diseases to gout, and we hear every day of "gouty eczema," "gouty psoriasis," and the like, and various queer nondescript ailments are shunted off the main line to a gout siding. Patients ask for and expect to get from us minute directions about their culinary arrangements, yet few English practitioners conversant with diseases of the skin would go so far as Brocq in saying that the regulation of the diet is the most efficacious internal treatment for eczematous patients. The hypothesis of leprosy having been transmitted by food of any kind, in particular by fish, has not been established by further examination. Boils are often ascribed to errors or deficiencies in diet. With our present knowledge of the pathogeny of boils, it is to my mind incredible how a crop of boils, as is stated on good authority, can arise through mere change of diet, for example, a surplus of animal food. In England the consumption of meat is 136 lbs. per head per annum, in France it is only 46 lbs. per head per annum. Are boils so much more common in England? Eczema affects the sexes almost equally, although men probably eat two thirds of the total meat and drink probably three-fourths of the total alcohol consumed in the United Kingdom.

If we direct our thoughts to determine what special articles in our dietary may be held responsible for harming the skin we have not a long list, as will be gathered from the preceding remarks. Coffee, tea, perhaps; highly spiced foods, excessive use of hard salted meat, shellfish, abuse of alcohol, and foods, such as starch and other carbohydrates, which may lead to production of excess of acids (acetic, lactic, butyric) in the intestines. A widespread and deeply-rooted custom is the strict prohibition of salted food in diseases of the skin. For many years I have ignored this dictum, and neither my patients nor myself have had reason to regret the liberty accorded to them. Chloride of sodium is a very harmless salt, and some people with weakly digestion or a jaded appetite will relish and easily digest a thin slice of ham when the stomach would revolt against other meat.

Does alcohol in moderation cause any skin affection? That it is apt to aggravate itching and increase an already existing congestion of the skin is quite true. Most of the Asiatic populations, with the exception of the Japanese and the Indian Parsees, drink no alcohol. Yet I do not know that this experiment, on the large scale, indicates any advantage to those races *quoad* the skin.

I cannot but believe that the ill-effects of alcohol, and I may add of tobacco, are exaggerated by their extreme opponents, at any rate, as regards the skin. Plenck, quoted by Bulkley, remarks of acne: "Plures curavi suadendo ut vinum bibere incipiant."

Lastly, a word as to the practical outcome of all this. How are we to intelligently answer the questions so often addressed to every one of us by our clients? "What shall I eat? What shall I drink?" In cases such as diabetes, gastric ulcer, and enteric fever there is a tolerable degree of unanimity in our answers. But what about the slighter ailments and indispositions which constitute the bulk of our practice?

A large number of our patients with affections of the skin are not obviously out of health, and are well able for their

[9] *Dietetics*, p. 106.

[10] *Eczema*, 2nd edit., p. 291.

[11] *Brit. Journ. of Dermat.*, July, 1895.

[12] Cheadle, *Artificial Feeding of Infants*, p. 161.

day's work in the world. Yet these persons are apt to ponder over their health, put us through a catechism as to their diet, almost constrain us to go beyond our knowledge, and even glory in the dietetic chains which are fastened around them by their medical advisers. Unluckily it sometimes happens that one practitioner's rules flatly contradict those of his neighbour, and so a shrewd patient is liable to arrive at the unpleasant conclusion that, as Sir W. Roberts puts it, our notions on dietetics are little better than a farrago of whims and fancies.

We are too formal in our rules, and impose unnecessary and unmeaning restrictions. We prescribe diet by printed forms, making no allowance for idiosyncrasies, and giving even our educated patients little or no latitude or opportunity for exercising their own sense of what is good and what is bad for them. In my judgment the main precept we need enjoin as a golden rule upon our patients suffering from diseases of the skin is moderation and temperance in all matters of eating and drinking, especially as regards alcohol. And we should seek to train the public to observe for themselves whether such and such an item of diet really agrees with them or not.

With all this borne in mind there is plenty of room for judicious advice tempered with common sense, and a hint or a suggestion is often better, although less showy, than the imposition of conventional rules. This latter course is, no doubt, sometimes requisite with the hypochondriac, the sensualist, or the careless, who will not listen to, or are incapable of understanding, the still small voice of healthy instincts and of personal experience.

To sum up in a few words:

1. Very few skin diseases are directly traceable to dietetic causes, but improper diet may aggravate existing eruptions. Idiosyncrasy must be largely allowed for.

2. The diseases that may so arise are of a transitory character, and mostly belong to the class of erythemata.

3. Diet has very little influence in promoting the cure of cutaneous eruptions. The results are far behind popular expectations, even in such cases as acne rosacea, where we are led to hope for much.

4. Avoidance of alcohol, regulation of the bowels, and the cure of anæmia are of infinitely greater importance than special dieting in the management of diseases of the skin.

Dr. Radcliffe Crocker, the President of the Section, agreed most fully with Dr. Smith's views, but he admitted that in practice it was not wise to go in the face of the prejudices of patients in the matter of diet. Salt in moderation had no effect, either in producing or modifying skin diseases. He considered, however, that undigested starch and sugar were apt to disagree in and aggravate cases of urticaria and eczema. As regards alcohol, he thought there was much difference in the exact form of alcohol taken, the fully fermented forms being the least harmful. In the treatment of furuncles careful local antiseptic measures were far more useful than directions as to diet. Dr. Crocker concluded his remarks by insisting on the importance of the cook.

Dr. A. J. Harrison (Bristol) considered that fruit disagreed with children more frequently than anything else. He did not think that food had anything to do with boils. In his opinion there were patients wholly unable to take certain alcoholic preparations, and he instanced champagne as capable of always disagreeing with the same individual.

Dr. A. S. Myrtle (Harrogate) agreed with Dr. Smith. He had ceased to impose strict dietary rules in cases of chronic skin disease, and he was convinced that a patient's own taste in food might as a rule be safely followed. Dr. Myrtle had been greatly struck by the good effects of a change of diet on leprosy in Norway. He considered that well-matured spirit was wholesome in moderation. He thought he had traced gout to excessive tea drinking in some cases.

Dr. George Thin thought the frequent recommendation of whisky by medical men was becoming a great evil. He doubted the alleged prejudicial effects of tea drinking on the skin, since they were not obvious in those countries where tea drinking was very much more prevalent than in England, such as China and Japan. Nor was the method of preparing the beverage of so much importance as was thought. Strict diet rules, in his own experience, had been productive of much discomfort and sometimes injury in the case of patients suffering from skin diseases. With regard to alopecia areata, he had usually found the condition in strong young adults; it was more probably due to contagion.

Dr. Morgan Dockrell insisted on the absurdity of the dictum that diet had scarcely any effect on most forms of cutaneous disease. He did not agree with Dr. Smith's views. He considered that diet was an important factor in eczema, acne, etc., and also in tuberculosis of the skin. Lupus was rare among the Jews, owing to the care taken to exclude tuberculous meat, which was probably sold to poor Christians. He was in the habit of excluding meat from the diet of lupus patients. He considered alopecia areata was related to diet.

Professor McCall Anderson (Glasgow) agreed with what his friend Dr. Jamieson had stated. He held that it was not wise to take the patient's taste as a guide to diet. In Scotland there was a great abuse of tea drinking, which acted very injuriously. China tea was much more wholesome than Indian or Ceylon tea. He alluded to the importance of the teeth. Their proper care was as important as regulating the diet.

Dr. T. D. Savill agreed with the last speaker with regard to tea. He wished to emphasise the importance of alcohol in the etiology and treatment of skin diseases. He alluded to Anstie's interesting experiments on the vasomotor effects of alcohol. In his experience the omission of this article from the dietary had frequently cured skin diseases, even of very long duration.

Dr. Buchanan said that in cases of prurigo, pruritus, eczema, etc., in which itching was the prominent symptom, he had found that an exclusively vegetable diet for four or six months greatly alleviated the sufferings of the patients and materially aided in their recovery.

Dr. G. G. Stopford Taylor (Liverpool) was astonished at the extraordinary difference of opinion that existed. Lupus patients should always receive a most generous diet, as the vast majority of cases came from the poor and half-starved ranks of life. The diet of eczema should be conducted on common-sense principles. Alcohol should be avoided.

Dr. Allan Jamieson, in reply, said he thought that boils were undoubtedly sometimes caused by sudden changes of diet, but it was merely in the inception of such that the diet had an influence; their further extension was due to auto-infection. The bad effects of tea on the skin were partly due to its substitution for nutritious food. As regards alopecia areata he thought, whatever might be its exact pathology, that bad feeding, including hurry in taking meals, was of considerable importance in its production.

Dr. Walter Smith also made a few remarks, and the discussion closed.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

SEVERE CASE OF CHICKEN-POX.

On June 22nd a child, M. H., aged 4, was admitted into hospital, the notification being scarlatina. The child presented a well-marked eruption, sore throat, temperature 104°. The rash gradually disappeared. On the fifth day after admission (June 27th) there was a sudden rise of temperature to 105°, followed by a most copious varicella rash all over body, head, scalp, palms of hands, and soles of feet. So close were the vesicles together that a pin point could not be placed anywhere between them. The only part free from eruption was the four large vaccination marks on the left arm. The case presented many appearances of variola, but each cell was unilocular, and collapsed entirely on puncturing. None of the cells had the central depression or umbilication, although many of them were broad and flattened, and had a red areola. The contents of the vesicles, at first clear, became turbid, and on the fifth day (July 2nd) dried up into brown scabs and fell off. Vesicles appeared also on the inside of the

mouth and soft palate. After the spots fell off, especially on the nose and face, many pits were left.

This case was unlike chicken-pox in this respect—the rash came out all at once and not in crops; the shape of the vesicles, and the pitting after falling off of the scabs. The proof that it was not small-pox was the age of the child (4 years), the efficiency of the vaccination (four large marks), and the absence from the district of other cases of small-pox. Another peculiarity of the case was the evidence that the chicken-pox virus must have been in the child's system prior to the scarlatina, the symptoms of the latter disease being so well developed when the child was admitted; and the hospital had had no case of varicella previous to the admission of this child. The child was isolated at once on the appearance of the varicella rash, yet every other inmate of the ward has since had an attack of genuine varicella.

The case was seen by several leading medical men of the district, and the diagnosis of chicken-pox agreed upon by all.

C. H. Phillips, M.D.,
Medical Superintendent of Infectious Hospital, Bucknal.

A CASE OF SPINA BIFIDA OCCURRING IN THE CERVICAL REGION.

The unusual occurrence of spina bifida in the cervical region may be of interest to some of your readers, and so form an excuse for my encroaching on your valuable time and space.

On June 19th, 1895, I attended Mrs. B. in her first confinement, when she was delivered of a full-timed female child, the labour being normal. At the birth of the child I noticed on the back of the neck a tumour which was about the size of a tangerine orange, slightly constricted at its base and depressed at its summit; the skin covering the tumour was normal, and plentifully covered with hair at the base, but became thinner as it spread over its surface, and at the apex was thin, glistening, and bluish-white in colour, and much wrinkled; the tumour could be emptied of its contents by pressure. The child died twelve hours after its birth. During its short period of life it had (the nurse informed me) several fits, the characteristics of which I am unable to describe, as I did not happen to be present at any of the attacks. I had the opportunity of making a *post-mortem* examination, and found the following conditions: The tumour communicated with the interior of the skull by passing through the foramen magnum and an opening in the neural arch of the atlas. The foramen magnum did not appear to be unusually dilated, the neural arches and formation of all the other cervical vertebræ being normal, neither was there any abnormality of the occipital bone, the torcular Herophili and the sinuses being complete. Spina bifida of the lumbo-sacral region is fairly common, but becomes rarer the higher the situation. In the Museum of the Royal College of Surgeons, amongst the specimens of the malformations, there is a specimen of a ligatured spina bifida occurring at the sixth and seventh cervical vertebræ, but I can find no record of a case occurring above this position, except accompanied by hydrocephalus or considerable malformation of the skull. In this case there was no other abnormality in the skull or elsewhere.

Robert Edwards, M.R.C.S., L.R.C.P.
Brunswick Square, W.C.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

AN UNUSUAL CASE OF ACUTE INTESTINAL OBSTRUCTION IN AN INFANT.

(By D'Arcy Power, M.B., F.R.C.S.Eng., Surgeon to the Hospital.)

[From Notes furnished by Dr. Chaning Pearce, House Surgeon.]

T. L. B., aged 8 months, a badly fed child, had been ailing for some time with bronchitis. He was comparatively well on April 6th, but his mother noticed that his mouth was full of small white ulcers. He had a green motion on April 7th, about 7 o'clock in the morning. He began to vomit about 11 o'clock, and at 5.45 P.M. he passed a large motion of altered blood, containing small gelatinous masses. He was admitted into the hospital at 6.30 P.M. It was noticed at this time that he was drowsy, and occasionally drew up his legs and cried out as if in pain. His abdomen was soft, flaccid, and free from tenderness, whilst no tumour could be detected either by palpation through the abdominal walls or *per rectum*. At 11 P.M. there was much retching, and the belly was tender, especially upon the right side, where pressure caused increased retching. A cylindrical mass could be seen and felt in the right hypochondrium. It lay transversely, but did not pass beyond the middle line. There was a slight discharge of blood *per rectum*. I was summoned, and an hour and a-half later, or 18½ hours after the initial symptom, laparotomy was performed, inflation having proved useless. The intussusception was of the rare ileo-colic variety, in which the ileum slips through the ileo-cæcal valve and enters the colon unaccompanied by the cæcum, the apex of the intussusception being formed by the reflexion of the ileum upon itself. It could not be reduced *in situ*, the proper method, and the tumour had to be brought out of the wound. Reduction was then easy, and when it had been completed the thickened ileo-cæcal valve was distinctly felt. The wound was closed with deep sutures, and the child bore the operation well. It was fed from 5 A.M. with an ounce of peptonised milk every two hours. It passed a moderately good day after the operation. Its abdomen was flaccid, there was no vomiting, but its bowels were not open. The child had two motions on April 10th, the night but one after the operation. The first of these was of a reddish-brown colour, the second of a natural yellow colour. The food was well taken during this day, the child appeared to be comfortable, and the temperature fell to normal. It had two more motions during the day, both natural. At 8 P.M.—forty-five hours after the laparotomy—the child again began to vomit a brownish fluid. He refused his food, became drowsy, and was cold. He was in a condition of collapse by 11.30 P.M. His abdomen was then supple, but fuller than it had been during the day. The wound was perfectly aseptic. No tumour could be felt through the abdominal walls, but three lines of small intestine could be seen in the left hypochondrium. The child vomited all the following day, though it was not fed by the mouth. His bowels were open twice. The abdomen became more full, but it was not tender. There was retention of urine. The vomiting continued throughout April 12th, and there was one large and normal motion. The abdomen was still more full, but—as on the previous day—it was supple, and there was no tenderness. The coils of intestine were distinctly visible through the abdominal walls, though they were not moving so freely as on the previous day. Matters went from bad to worse, and at 4 P.M. on April 13th the abdominal wound was gaping widely, and the gut had become prolapsed. Dr. Pearce replaced it under an anæsthetic, and closed the wound with sutures. The child died on the following day.

The necropsy showed that the small intestines were distended with flatus to within 12 inches of the ileo-cæcal valve. The distension suddenly stopped at this point, although there was no visible cause for its arrest, either outside or within the intestine or abdomen. The colon, like the lower part of the ileum, was collapsed. The thickened ileo-cæcal valve projected for a short distance into the cæcum. The valve and the mucous membrane for about two inches beyond it were congested, but there was no intussusception and no signs of peritonitis.

Microscopical examination of a portion of the invaginated ileum showed a slight extravasation of blood into the whole circumference of the submucous coat. The glands, the adenoid tissue, the circular muscular coat and the serous coat appeared to be healthy in every respect. The individual fibres of the longitudinal muscular coat stained less deeply than they should do, and in many cases appeared to have undergone some degenerative change, for they were unduly granular and they were more highly refracting than usual. I hesitate to say that they had undergone fatty degeneration, as it is well known that similar changes are not unusual in the muscles of children. The extravasation of blood in the dilated part of the intestine immediately above the point of

constriction was slight but it was distinctly visible between the serous and the muscular coat. The layer of external longitudinal muscle presented changes similar to those described above as occurring in the invaginated portion of the gut. The other coats of the dilated intestine were normal.

REMARKS BY MR. D'ARCY POWER.—The case is an instructive one, for it shows that the symptoms of obstruction may reappear and even progress to a fatal issue, although an intussusception in a young child has been completely reduced. The operation in this case was not a difficult one; no undue force was used; the intestine was not injured; there was no peritonitis, and the wound showed every disposition to heal kindly. The digestion of the food and the normal motions for two days after the operation showed that the intestine was capable of carrying out its physiological functions. Yet, in spite of this, symptoms of intestinal obstruction again set in, after an interval of nearly forty-eight hours. The complete absence of any cause for the second series of obstructive symptoms leads one to refer the case to that indefinite class known as paralytic ileus. It is rare in children, but is not unusual in adults after abdominal section, and it occurs quite apart from any inflammation of the peritoneum. It is well treated by laxatives; and I regret that, as I was away for my Easter holiday when the symptoms arose, I had no opportunity of trying their effect in this case. The interest of the case centres in the light which it throws upon the vexed question of the etiology of intussusception. The child's intestine was clearly liable to paralysis, hence the original attack of intussusception. The invagination being cured, a fresh paralysis occurred, which involved the intestinal wall until it reached the neighbourhood of the irritation caused by the reduced intussusception. Here tonic contraction of the inflamed bowel occurred and symptoms of acute intestinal obstruction were again produced.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

JONATHAN HUTCHINSON, F.R.S., President, in the Chair.

Tuesday, November 26th, 1895.

THE POSSIBILITIES AS TO THE LATENCY OF PARASITIC GERMS OR SPECIFIC POISONS IN ANIMAL TISSUES, AS IN HYDROPHOBIA, ERYSIPELAS, SYPHILIS, LEPROSY, RINGWORM, TUBERCULOSIS, ETC.

THE PRESIDENT, in introducing a discussion on this subject, said that the brilliant results of experimental pathology had greatly widened our views as to the part played by micro-organisms in the etiology of disease. Generally speaking, the introduction of microbes into the host preceded by a short interval the development of specific symptoms, but in a number of instances this interval was greatly increased. The term latency applied only to periods during which no vital activity on the part of the micro-organism was going on, and did not include incubation, still less the period of prodromal symptoms. He then illustrated what was meant by latency by the example of a field in which the seeds of poppies had remained absolutely quiescent for eight years and had then grown. What evidence was there that micro-organisms could retain their vitality in a state of such absolute quiescence, and if so, what were the limits of such latency and what were the conditions governing and determining this phenomenon? The subject of latency had an important bearing on the subject of infection. What appeared to be a fresh infection from without, might in reality be due to latent micro-organisms becoming active. If the micro-organisms of tuberculosis and of erysipelas could be shown to remain latent for long periods, and to be transmitted from parent to offspring, much light would be thrown on the subject of infection generally, and especially on vaccination. Thus what was generally explained as being due to a dirty lancet or to accidental infection of the vaccination wound might in reality be explained by the theory of latency. Occasionally in hydrophobia the interval between inoculation and the development of symptoms was as long as eighteen months; the period of incubation was probably always the same, but the germs remained latent before incubation began. In considering the difficult problems of latency in syphilis, it was necessary to distinguish between true and apparent latency. There were probably many children born with specific taint and individuals primarily infected who never showed any further symptoms; this was apparent latency, for in them the blood was infected, and there was a liability to tertiary lesions. If after the primary infection the secondary symptoms were delayed for two or three years this would exemplify true latency, but it was doubtful if such cases occurred. In leprosy many years might intervene between the patient leaving the country where the disease was endemic and the development of the disease. In tuberculosis much might be learnt from the study of latency as seen in disease of the skin. In the earliest stage tuberculosis of the skin might become generalised, but after this period, lasting perhaps a year, the disease became local, the bacilli were not latent but were still locally infective. This was just the reverse of cancer, where the disease at first local subsequently became generalised. But lupus apparently cured might after an interval of thirty or forty years recur close to the original lesion; this appeared to be more probably due to latent germs than to reinfection. With regard to erysipelas the incubation period of the streptococcus was short, only a few hours, and there was no evidence that this period was increased in first attacks, but it was possible that the micro-organism when once introduced remained in the tissues latent, and that at any time injury or other cause might awaken it to activity. In elephantiasis the recurrent attacks might be similarly explained. In ringworm and alopecia areata some cases of recurrence of the disease suggested the existence of latency in pathogenetic fungi.

THE BACTERIOLOGY OF LATENCY.

Dr. WASHBOURN said that two points in the life-history of bacteria were of interest in connection with latency. The mode of growth of certain bacteria in broth was analogous to the varying incubation period in specific diseases; under favourable conditions growth occurred at once and rapidly reached its maximum, but with the reverse conditions the growth was deferred. The next point was in reference to the resistant forms assumed by bacteria under unfavourable conditions. Spores were well-known examples, but even sporeless bacteria were capable of producing resistant forms. As an example he quoted the pneumococcus. Probably bacteria, when latent in the body existed in this phase of their development. He believed some of the clubbed shapes assumed by the diphtheria bacillus represented resistant forms. The pathogenic bacteria protected themselves against the bactericidal influences of the body by means of their toxins. Saprophytic bacteria were devoid of this means of defence, and were easily destroyed when introduced into the body. The experiments of Wyssokowitch were quoted. Saprophytic bacteria injected into the veins of animals at once disappeared from the blood and accumulated in the organs, and in twenty-four hours were completely destroyed. The resistant spores of the hay bacillus, however, remained alive in the organs as long as seventy-eight days after inoculation. The difference between "toxic" and "septic" diseases was described. In toxic diseases the chief aim of the body was to protect itself against the action of the toxins, while in septic diseases the object was to destroy or hinder the growth of the bacteria. Both factors were present in all cases of immunity, whether natural or acquired, but either might be the principal mode of defence in either type of disease. The tissues of the fowl were poison proof to the tetanus toxin, and hence the bacilli were destroyed like simple saprophytes. In animals immunised to diphtheria and tetanus the antitoxic substances developed in the fluids of the body annulled the effects of the toxins, but had no influence over the growth of the bacteria. It was for this reason that diphtheria bacilli could remain latent in the throats of healthy individuals without producing harm. The body was poison proof, but the bactericidal properties were not sufficient to destroy the bacteria. Sometimes, especially in animals immunised to septic diseases, the bactericidal properties were much increased without a corresponding increase in the antitoxic properties. He quoted the example of hog cholera. Pathogenic bacteria, when introduced into the tissues of immune animals, were sometimes rapidly

destroyed, the pneumococcus in forty-eight to sixty hours in the experiments of Emmerich. But as a rule destruction was more tardy. A number of instances were given. Trapeznikoff found living anthrax spores in the tissues of a frog 100 days after inoculation, and Welch found living typhoid bacilli in the gall bladder of a rabbit four months after intravenous inoculation. Latent bacteria were either englobed in cells or prevented by a barrier of cells from gaining access to the rest of the body. An attempt to shut off the bacteria from the circulation was made even in the case of highly susceptible animals, as in the experiments of Werigo. In relapsing fever the spirilla were shut up in the cells of the spleen during the apyrexial stage. The reason why latent bacteria were often missed by microscopical examination might be because they were converted into forms which are not easily recognised. The transformation of cholera vibrios into oval-shaped bodies in Pfeiffer's experiments was quoted as an example. The return of activity of latent bacteria was discussed, and the investigation of Trapeznikoff and of Baumgarten mentioned; also the effect of tuberculin and mallein in awakening into activity latent tubercle and glanders. The author mentioned his own experience with latent forms of rabbit septicæmia, which were brought into activity by inoculation with other bacteria. The bacteriological evidence of latency of germs in the human body was then discussed and a number of examples given. Diphtheritic bacilli, pneumococci, streptococci, gonococci, and tubercle bacilli had been found on the mucous membranes of healthy individuals without producing any ill effects. Babes had reported a case of acute glanders, probably contracted six years previously; Schnitzler one in which the S. aureus had apparently remained latent in a bone for over thirty five years. Some of the cases were possibly due to a reinfection, but this interpretation was excluded in cases where living typhoid bacilli had been found in osteomylitic foci long after recovery from an attack of typhoid fever. Several instances were quoted, of which the most notable were those of Sulian and Burchke. In the one case six years and in the other seven years after an attack of typhoid fever living bacilli were found in bone abscesses.

Latency of Tuberculosis.

Dr. J. Kingston Fowler said that he had been asked to state as concisely as possible the pathological and clinical evidence for the belief that it was possible for the specific poison of tuberculosis to remain latent in animal tissues. The general argument adopted was as follows: (1) That the disease, having been arrested, might after a period of quiescence again become active, and that reinfection took place from within. (2) That tuberculosis might be produced by the inoculation of an animal with material taken *post mortem* from an old tuberculous lesion. (3) That the virus of the disease might pass directly from the parent to the offspring, and that in the tissues of the child it might reproduce the disease. The facts stated were chiefly drawn from cases of pulmonary tuberculosis. Reference was made to the frequent discovery of obsolete tuberculous lesions at the apices of the lungs, and to his published work on *Arrested Pulmonary Tuberculosis*. If recrudescence of the disease coincided with changes in the old lesions and recent miliary granulations were first formed around them and spread thence through the lungs the inference was that the reinfection had started from within. This would be confirmed if it should appear that the individual was in apparently perfect health until the occurrence of some symptoms pointing to the prevalence of an old lesion, for example, hæmoptysis. A case fulfilling these conditions was described. A gentleman, aged 53, had, when a boy of 13, an illness said to have been consumption. With the exception of an attack of pleurisy he had subsequently enjoyed good health. He was of good muscular development, of healthy appearance, and generally regarded as a strong man. In February, 1888, whilst in his usual health, he had an attack of hæmoptysis. A few days later some fine crackling *râles* were audible at the left apex. Death occurred in twenty-eight days from acute tuberculosis of the lungs. On *post mortem* examination a sharply-defined, yellow, caseous mass, the size of an olive, was found at the left apex. Its capsule had broken down at one spot, and had established a communication between the caseous mass and a bronchus; elsewhere it was intact, firm, and fibrous. Half the mass had disappeared, leaving a small ragged cavity. Recent miliary tubercle was present throughout the left upper and lower lobes, and also in the right lower lobe. A precisely similar caseous mass was found at the right apex. It was intact and firmly encapsuled. The inference from the history was that the virus of the disease had lain dormant in the caseous mass for forty years. A case of acute tuberculous pericarditis was described in which the pericardium alone showed recent tubercle, but at the apices of the lungs old obsolete tubercle was found *post mortem*, also a calcareous bronchial gland. Tubercle bacilli were found in the pericardial lesion. The period of latency was believed to have been four years, but the case was cited to prove that obsolete lesions are capable of setting up acute tuberculosis. Attention was called to the extreme rarity of acute tuberculous pericarditis apart from general acute tuberculosis, and to the great improbability of primary infection of the pericardium from without. Dr. Sidney Martin's report to the Royal Commission on Tuberculosis was referred to, and a case was described in which inoculation of a guinea-pig with caseo-calcareous material, probably about 200 days old, had been followed by acute tuberculosis; also to some experiments by the same observer, in which inoculation with matter from old pulmonary lesions, found in the bodies of two patients dying from cancer, had not been followed by tuberculosis. Attention was directed to the importance of the dose in experimental inoculation and in infection of the human subject. The researches of Landouzy and Martin were referred to as proving that general tuberculosis may be produced by the inoculation of material from a fœtus, the mother being tuberculous when no obvious signs of tubercle were present in the body of the child. Straus had repeated these experiments, but without success. The theory of Baumgarten was referred to. He believed that direct transmission of the virus from parent to offspring was followed by latency in the child, and that this was the common mode of infection. that the influence of inhalation had been much exaggerated; that lesions in the fœtus are absent because the number of bacilli was small; that the virus might remain dormant for long periods in the lymphatic glands and in the medulla of bones; that the tissues of the fœtus possessed a special resisting power owing to the activity of cell growth. The evidence in favour of the possibility of the transmission from mother to offspring through the placenta was stated, and four cases described by Birch-Hirschfeld, Schmorl, and Kockel were narrated. In all, the cases tubercle bacilli were found in the fœtal placental villi, and in one in the liver of the fœtus and in a lymphatic gland near to it. Three cases of mixed infection of tubercle and syphilis in infants reported by Hochsinger were referred to, and the evidence was given at length. The parents were both syphilitic and tuberculous. In all the cases there were well marked signs of constitutional syphilis, including an eruption on the nates and snuffles. In all, the diagnosis was visceral syphilis, and the patients were shown as such at the Vienna Dermatological Society. In all, the internal lesions were found *post mortem* to be tuberculous, and not syphilitic. Tubercle bacilli were present. The reasons were stated for the belief that in these cases the infection was through the placenta and not from without. The opinion was expressed that the evidence in favour of the possibility of a tuberculous mother infecting her child was convincing, but no support was given to Baumgarten's view that this is a common mode of infection, and certainly not the most common. The evidence in favour of the possibility of a prolonged period of latency in the child after infection from the mother was considered to be at present defective, but the opinion was expressed that in the future this would be shown to be of more frequent occurrence than was at present believed. Reference was made to the further development of Baumgarten's theory, namely, that the virus might lie latent for several successive generations, and that a child might have been infected by a tuberculous grandmother, the mother having been free from the disease. Mention was made of the *pébrine* disease in silkworms and the inoculation experiments of Maffucci on impregnated hen's eggs, which were considered to give support to this view. The opinion was expressed that it need not be seriously con-

sidered until it had been first proved that the direct transmission of the disease from mother to offspring was an event of common occurrence, and that in such a case it was possible for the virus to lie latent for a long period in the body of the child. The shortest period of latency of the virus could hardly be determined by clinical and pathological evidence. In the inoculation experiments of Dr. Sidney Martin with milk from tuberculous cows the shortest time in which a lesion was produced in which tubercle bacilli could be recognised was nine days, and the shortest period in which general acute tuberculosis occurred was fourteen days. The conditions of the tissues and blood serum which determined latency were referred to, but it was pointed out that at present no definite statements could be made. Arrest and latency were not the same thing. The latter implied a dormant condition of a living virus. With arrest the virus might be dead. Arrest in the condition of fibrosis was the most favourable for permanence. Caseous lesions might break down if the capsule was destroyed. The resisting power of the individual depended upon the vitality of the blood. The original infection might have been an accident due to exposure to the virus whilst the vitality of the blood was low. The importance of maintaining the general health after arrest of the disease was referred to. In some cases reinfection might be due to some local change of the nature of an accident. Regret was expressed that in dealing with the latter part of the subject it had been necessary to use terms which were lacking in precision, and the hope was expressed that the discussion might elicit facts which would increase our knowledge of the conditions which determine arrest and latency.

The discussion was adjourned.

CLINICAL SOCIETY OF LONDON.

THOMAS BUZZARD, M.D., F.R.C.P., President, in the Chair.

Friday, November 22nd, 1895.

CLINICAL EVENING.

RHEUMATOID ARTHRITIS.

DR. HARRY CAMPBELL exhibited a woman, aged 67, with the lesions of rheumatoid arthritis limited to the elbow-joints, though there was grating in the wrist and temporo-maxillary joints. The affection was of three years' duration. The ends of the bones were enlarged, and there was swelling of the adjoining soft parts. Upon puncture no fluid was discovered.

MENINGOCELE.

Dr. HINGSTON FOX showed a female infant, aged 1 year, who had at the age of 3 months a small round tumour at the centre of the anterior fontanelle, first noticed six weeks after birth. The cranium was well formed. There was no history of injury. The tumour had grown, and now measured ¾ inch across and 1½ inch in height. It neither pulsated, nor was reducible, nor varied with the respiratory movements, nor was tender. The optic discs were normal. The child was intelligent, walked a little, and had four teeth.

MALFORMATION OF EXTERNAL GENITALS.

Mr. J. H. MORGAN showed an infant, aged 18 months, who presented the following abnormalities of the external genitals. On each side there was a large and well-formed mass of scrotal tissue containing well-formed testes with spermatic cord and vas deferens. These were separated from each other at their upper extremity by two well-formed penes, which measured about three-quarters of an inch in length, the left being rather longer than the right. In each the frenum was absent, and the corona was but slightly marked. There was no urinary meatus in either. Each was attached to the ramus on either side, the pubic rami and symphysis being apparently normal. Below the root of these two organs was another prominent mass of tissue about three-quarters of an inch in length, consisting of a pouch of skin and subcutaneous tissue, in the centre of which was a firm and more fibrous body, which was attached immediately below the two penes, lying midway between the two scrotal prominences, there being a deep sulcus on each side between it and these. Posteriorly to this finger-like process was a mass of skin and subcutaneous tissue covered by epithelium resembling that of skin, except upon its posterior surface, where it was more like mucous membrane. This projected forward about half an inch, and looked like a small mamma, on which was a prominent bluish nipple. The left part of it was a small pedunculated body which stuck out like a small pea, and was attached to the finger-like body. Below this, lying in the middle of the perineum and in front of the anus, was a prominent mass of mucous membrane measuring about 1½ inch from before back, and 2¾ from side to side. This was very red and vascular, and protruded when the child cried. Along its right attachment was a slit about half an inch long which admitted a probe into a long narrow cavity passing vertically upwards for about 2 inches, in which the probe could not be moved laterally. This was evidently the mucous membrane of the bladder, as the urine drained from this surface when the child was at rest, and was driven in jets when it cried from the orifices of the ureters, which could then be seen. Behind this protruding mucous membrane lay the anus, which easily admitted the little finger, but no abnormality could be detected in the rectum. The child presented no other abnormality except that at the upper part of the lobule of each ear there was a small fibrous prominence. Nothing abnormal could be discovered on auscultation of the heart, but the limbs became much cyanosed when the child cried.

CHARCOT'S DISEASE OF JOINTS.

The PRESIDENT showed a woman, aged 38, with symptoms of tabes dorsalis. Twenty months ago the right foot became severely swollen, without pain. The mobility of the tarsal joint was interfered with, and the joint contained fluid. Six months ago the whole left lower extremity became enormously swollen after unwonted exercise, again without pain. At present the left knee was greatly enlarged, and its ligaments were lax. It was probably an early stage of Charcot's disease, and of the class described by Charcot as benign.

Dr. SANSOM said that here there was absence of pain; he asked if the President had seen any cases that more closely resembled rheumatoid arthritis, being accompanied by much pain.

The PRESIDENT could call to mind one or two cases in which there was some pain, but none with much pain.

MYOSITIS OSSIFICANS.

Mr. S. PAGET showed a child, aged 5, without first phalanges in its great toes, the ungual phalanges articulating with the dorsal surface of the metatarsal bones. The thumbs were normal. The pectoral muscles were ossified at their insertions, the latissimi dorsi and the sterno-mastoids were also partly ossified. A lymphatic vessel in the axilla was ossified for 3 inches. There was an ossified node on one rib, and one at the centre of the forehead, the latter produced, perhaps, by falls. There was no history of like disease, or of any rheumatic or gouty affection in the family.

TWO CASES OF DEFICIENCY OF TIBIÆ.

Mr. CLUTTON showed a boy, aged 15, who had no tibia, the fibula being the only bone in each leg. The foot had only three toes articulated at right angles with the fibula. There was unusual development of the condyles of the femur which were usually pointed in the absence of the tibia. The patella was well formed. Both hands were bifid, two fingers were absent from each hand, and the metacarpal bones on each side of the cleft were fused together. The boy was able to separate the digits to an abnormal degree. Mr. Clutton also passed round a photograph of similar deformity in another boy, who also had deficiency of fingers. The other patient he showed was a girl, aged 8, whose feet were at right angles with the fibula. The patella was small. One foot had four and the other five toes. She could get about with great facility, either by a sort of amble or by short jumps.

LIGATURE OF FEMORAL ARTERY AND VEIN FOR SECONDARY HÆMORRHAGE.

Mr. C. S. WALLACE showed a man, aged 29, who had fallen a distance of 20 feet on to railings, and had driven an iron spike 6 or 7 inches long into the inner side of his thigh, where, having broken off, it remained compressing the femoral artery and vein, though the femur was not broken. The removal of the mass left a huge cavity, with the artery and vein running in front of it. The wound became septic, and

five days subsequently the artery gave way. It was ligatured above and below, and 3 inches of it were removed. The vein also gave way, and was ligatured in two places, and the vessel between was removed. The man had made a perfect recovery, and pulsation in both the anterior and posterior tibials could now be felt.

Mr. MAKINS said that a large part of the man's trousers was driven into the wound with the iron spike; the wound was therefore septic, and the case was something more than ligature of the artery and vein alone, and it was very encouraging.

Mr. THOMAS SMITH said that not many years ago a thigh with such a severe wound would always have been amputated; that was the rule. It was astounding what might sometimes be done in the removal of vessels. He had lately taken away the superficial femoral artery and vein, and the profunda vessels (artery and vein), in the removal of a tumour, and two months afterwards the circulation in the foot had been re-established, and the man had returned to his work.

MODIFIED INCISION FOR REMOVAL OF THE VERMIFORM APPENDIX.

Mr. BATTLE showed a patient, aged 18, on whom he had operated for recurrent appendicitis. He had modified the usual incision in order to prevent the subsequent formation of a hernia, which was so frequent a sequel of this operation. He made the incision 1½ inch to the inside of the linea semilunaris, and divided the aponeurosis of the external oblique with the sheath of the rectus. The rectus muscle was then drawn to the inner side, and the posterior layer of the sheath and transversalis fascia exposed, the inner incision not corresponding to the external. The peritoneum was then divided. He was able to get at the appendix very well through this incision, and the result appeared to him to justify the slightly longer time it took. The layers were sutured from behind forwards, and as the rectus was allowed to return to its place, it thus interposed between the internal and external wounds in the abdomen. The procedure seemed, he thought, to hold out better hope of avoiding subsequent hernia.

Mr. CLUTTON said it mattered very little where the incision was made provided (1) it was not in the line of fibrous aponeuroses, but went through the muscular layers, and (2) that the line of union was made by stitching together the two sides of each layer incised, namely, peritoneum, fibre, muscle, and skin, and never to adjoining layers. He had now for two years past seen no hernia follow these operations, though he had watched for it carefully in many cases. An American operator advised that the muscular structures should be divided in their length, so as to be as little damaged as possible.

Mr. BARKER always now made the incision through the muscles, and never of recent years had seen a subsequent hernia. It was also important that the cut should be as small as possible, as well as through muscle, and that the surgeon should get to the appendix by the most direct route, wherever that might be.

Mr. BATTLE, in reply, said that this incision did absolutely prevent hernia. He had seen in several cases the formation of hernia after the usual operation, though the patients were perhaps unaware of it.

LIGATURE OF BOTH EXTERNAL ILIAC ARTERIES BY THE TRANSPERITONEAL METHOD.

Mr. MAKINS showed a man, aged 34, who came to him three years ago with a large ilio-femoral aneurysm. As he could not be sure of being able to ligature the external iliac artery, he made his incision through the semilunar line, not exclusively through fibrous tissue, and managed to ligature the external iliac artery. The patient was up and about by the forty-seventh day. Within three months he came back complaining of pain in the groin on the opposite side, where there was a pulsating swelling not so large as the previous one. He took it to be due to gummatous arteritis, and repeated the operation. This time he recovered much more rapidly than on the first occasion, the collateral circulation being established more promptly. This he attributed to the ligature of the other external iliac artery having dilated the vessels to some extent. He mentioned that at the first operation he had tied the epigastric artery because it led directly into the sac. The patient had worn a belt ever since and had no hernia, though he was a carpenter and worked hard.

Mr. THOMAS SMITH asked the author which operation, if he were quite free to choose, he would adopt for ligature of the external iliac vessel.

Mr. MAKINS, in reply, said the operation through the peritoneum was the easier; but if quite certain he could get at the artery without wounding the peritoneum he would prefer the other method. He was not sure of being able thus to ligature the artery in the first instance, and later, as the patient had previously done very well, he repeated his first procedure.

PRECOCIOUS PUBERTY.

Dr. HARRY CAMPBELL showed a lad, aged 14, who had been under observation for upwards of ten years. When he was only 15 months old his mother noticed that hair was beginning to grow upon the pubes, and that the external genitals were abnormally large. At 2 years of age they were fully developed, and had not materially altered during the last ten years. He had from the 4th to the 7th year manifested great sexual excitement, and had frequent discharges of seminal fluid, but Dr. Campbell had never been able to satisfy himself of the presence of spermatozoa. Since then the sexual excitement had been less, probably in consequence of large doses of bromide. The boy's muscular development was remarkable, in fact, he had the thigh and trunk muscles of a man of 25 or 30. He had been in the habit of being shaved for some years past. His education was defective, because no school would ever take him in.

HARELIP, CLEFT PALATE, ETC.

Mr. MORGAN showed a child, aged 3½ years, with well-marked harelip and cleft palate, together with defective development of the left side of the face, and abnormal formation of the left external ear, on which was an auricular appendage. In addition, he presented a curious band of skin on the left side, in which no muscle could be felt. On the opposite side the trapezius was hypertrophied, and there was a large mass of bone, probably representing a rotated cervical vertebra. The author had endeavoured to unite the palate, but had been obliged to desist by the hæmorrhage. The patient was not a bleeder. The soft palate had united well; and Mr. Morgan was about to try to unite the cleft in the lip.

MEDICAL SOCIETY OF LONDON.

Monday, November 25th, 1895.

Sir J. CRICHTON BROWNE, M.D., F.R.S., President, in the Chair.

THE OPERATIVE TREATMENT OF CLEFT PALATE.

Mr. EDMUND OWEN briefly reported the cases of five children on whom he had operated for cleft palate in the spring and summer of this year. The operations had been performed in the St. Helena Home, St. John's Wood, which had the great advantage of being surrounded by a garden into which the children were got almost directly after the operation. His opinion was that cases of this sort did much better in private than in hospital practice, probably because they enjoyed the great advantage of fresh air. He advocated early operation in all cases that were physically fit for it, and he emphasised the importance of having carious teeth, adenoids, and enlarged tonsils cleared out before operation was undertaken. In one of the cases reported a cleft of the soft and of the back of the hard palate was successfully operated on in an infant of 8 months. In another child of 2 years, with a complete cleft which extended through the left intermaxillary bone, operation also proved entirely successful. In another of the cases, a girl aged 6½ years, with a cleft which at the back of the hard palate measured ¼ inch wide, only a partial success was obtained. In the remaining cases, however, the clefts were entirely obliterated. Mr. Owen deprecated the use of a nasal tube for feeding cases after operation, and stated that he preferred beef jelly to milk for the first few days, as it slipped down easily, and did not form hard clots in the stomach which was likely to be irritable

after the prolonged operation under chloroform. All his operations had been done under chloroform, which had been administered by Mr. Davis, partly by a mask and partly by a Junker apparatus. The children were laid on their backs, with the head extended and hanging down over the end of the table. Mr. Owen was strongly of opinion that operations for cleft palate should be performed by preference in the spring and summer, as the light was good, there were no fogs or cold east winds, and no catarrhs or cough, and, moreover, the children could be kept out in the fresh air from the moment that that they had recovered from the shock of the operation. He passed round a water-colour drawing of the pharynx of the girl with the ½-inch cleft (made by Mr. A. W. Sanders, of St. Mary's Hospital), which showed an enlarged Luschka's tonsil and a crop of post-nasal adenoids. These growths he had cleared away before attempting to close the palate.

Mr. John H. Morgan said his experience of operating on very young subjects had not been altogether satisfactory, and he did not think the operation could advantageously be undertaken before the expiration of the twenty-fourth month. He added that a child could not have contracted any marked imperfection of speech before 2 years of age, and, moreover, with careful training such defective speech might be prevented for much longer. He agreed that operations in private practice were more successful than those done in hospitals.

Mr. Clutton said the question as to the age at which patients could be operated upon had less to do with the fact of the cleft involving both the hard and soft palate than with the height of the palate and the thickness of the tissues. In an arched palate the flaps could be brought into position without undue tension, but it was quite otherwise in cases in which the palate was horizontal. He himself had operated on several children under 12 months, and he made a point of doing it under 2 years. The voice improved even when the operation was delayed until 25 or 26 years of age, as in two cases of his own; but that, of course, would depend greatly on the antero-posterior diameter of the palate, which might be too short to catch the vibrations. He did not approve of silver wire sutures, he himself using fishgut and horsehair. He had never had any trouble with the tongue, and did not consider that any precautions were necessary in this direction. He insisted on the necessity of making special incisions for the purpose of ensuring an absence of tension. He was very careful to remove the stitches, often giving an anæsthetic for the purpose.

Mr. D'Arcy Power said he had operated by the flap method during the preceding week, and there was disquieting tension on the stitches.

Mr. Davies-Colley said he preferred 14 months of age for the operation. His flap method rendered it almost absolutely sure that reunion of the hard palate would take place. He had been less successful in procuring union of the soft, as well as of the hard, palate at the same time. In two recent cases he had succeeded in obtaining complete union of the hard with partial but incomplete union of the soft palate. A third case had proved a failure. He insisted on the fact that he did not exclusively employ the flap method, but in young children he thought it was much more certain. In conclusion, he insisted on the desirability of early operation in these cases, not only to avoid defects of speech, but also to prevent the deformity of the face which otherwise resulted.

Mr. W. Arbuthnot Lane insisted on the importance of having plenty of room to work in, to obtain which he himself would not hesitate to divide the united lip if necessary.

Mr. Walsham advised leaving the paring of the edges until the end of the operation, and free lateral incision in order to prevent tension.

Mr. Kellock observed that it was well to leave the children in hospital at least a week in order for them to become accustomed to their surroundings, and he insisted on the necessity of a close search for other abnormalities prior to operation. He disadvised rectal feeding.

The Distribution of Motor and Sensory Symptoms after Injury to the Brachial Plexus.

Dr. Bennor described two cases of injury to the roots of the brachial plexus. In the first case a man, aged 25, was caught by the right hand in the strap of a gas engine, and thrown off his feet on to his back, two years ago, and was paralysed directly after in all the muscles of his right arm excepting the small muscles of the hand and the flexors of the thumb and fingers—and when seen three months later he had lost some power in the latissimus dorsi, serratus magnus and pectoralis major—and lost sensation along the outer surface of the arm and forearm, extending from the shoulder to the hand, and involving the thumb, including the thenar eminence and the posterior surface of the index and its metacarpal bone. In the other case a man, aged 40, was last June pitched off a hay cart on to his right shoulder and side of head, and experienced violent pain and lost power in the right upper limb in all the muscles except the small hand muscles, and the flexors and extensors of wrist, with anæsthesia along the outer surface of the limb, but less extensive than the former case, and not involving the index finger. The lesion was considered to be in the cervical roots of the brachial plexus. The muscles affected when compared with the lists of other authors of the cervical roots, were such as would be caused by a lesion of the fifth, sixth, and seventh cervical in the first case, and of the fifth and sixth cervical in the second case, and these roots were considered to have been damaged. The prognosis was considered to be much better for lesions of the roots than of the cord, so that treatment could be persevered with in the former, with a hope of recovery even two years after the injury. The distribution of the muscles supplied by a root of the brachial plexus was considered to be of an anatomical and not a physiological nature.

BRITISH GYNÆCOLOGICAL SOCIETY.

Clement Godson, M.D., President, in the Chair.

Thursday, November 14th, 1895.

A Very Large Ovarian Tumour Successfully Removed.

Mr. Skene Keith showed a tumour, weighing over 100 lbs., successfully removed from a patient aged 55. The tumour was first noticed eleven years ago; for some time it appeared so like a fibroid tumour that seven different physicians in London, consulted during the first few years, pronounced it to be fibroid, and advised that no operation should be done. Lately it had grown much, and Mr. Keith saw her. She was then confined to bed, and could only lie on her back. Owing to the size of the abdomen she could not raise her thighs, and no vaginal examination was possible. Her general condition was not very good, and the pulse was intermittent. He therefore first tapped the tumour, drawing off over 75 lbs. weight of fluid. Ovariotomy was performed a few days later. For a week after operation there was considerable shock, and the cardiac condition was so bad that she required digitalin in $\frac{1}{60}$ gr. doses every two hours for the whole of that time. It was now six weeks since the operation, and the patient was doing well.

The President observed that the weight of the tumour was equivalent to fourteen babies at term.

Dr. Leith Napier and Mr. Gronon Keith also spoke.

Specimens.

Dr. Heywood Smith showed a specimen of Ectopic Gestation at four months. The patient, aged 38, had four children, the youngest six years and a half before. The history was that of a miscarriage, and when seen by Dr. Heywood Smith there was a tumour nearly filling the pelvis. Abdominal section was performed and the gravid tube and fœtus removed. The patient made a good recovery. Dr. F. W. Eden, who had examined the specimen, reported that the placenta was enormously enlarged by hæmorrhage into its substance. There was a curious adhesion of the head of the fœtus to the amnion.—Dr. Leith Napier showed a Uterus with [illegible] Endometritis becoming sarcomatous removed by vaginal hysterectomy.

A Case of Porro's Operation for Labour complicated by Uterine Fibroma.

Dr. Mitchell (Nottingham) read this paper for Dr. Gordon Elder (Nottingham), who was unable to be present. The

patient was a primipara, aged 35 years, and the fibroid had not been observed till labour set in. The tumour occupied the pelvis, jamming the lower segment of the uterus against and above the symphysis pubis. An attempt to elevate the obstruction was quickly found to be useless, and Porro's operation was performed the same afternoon. The child was delivered alive. The stump of the uterus was treated in the ordinary extraperitoneal fashion and a drainage tube inserted. The patient made a good recovery. Inquiry showed that there had not previously been any suspicion of pelvic mischief; hence it was probable that the changes brought about by pregnancy had so stimulated the growth of the tumour as to bring about the grave evil which rendered the above operation necessary.

The PRESIDENT observed that less was heard latterly about Porro's operation because of the success of Cæsarean section, especially in the hands of some well-known operators. He performed what he believed to be the first successful Porro's operation in this country; nevertheless, he would now choose to do the Cæsarean section if the nature of the case allowed it. Although fibroids took on increased growth during pregnancy, it was possible for one to attain a considerable size without being discovered. Thus it had more than once occurred to him to find one for the first time when he put his hand on the abdomen after labour to feel whether the uterus was contracted.

Dr. CRICHTON (Twickenham) said he remembered a case in which he turned a child, and then found a fibroid the size of a fist which had not been observed before. It apparently disappeared during involution, for in a subsequent pregnancy it could not be found.

Drs. MACNAUGHTON JONES, HEYWOOD SMITH, and LEITH NAPIER also spoke.

UNUSUAL COMPLICATIONS IN TWO CASES OF REMOVAL OF THE OVARIES AND FALLOPIAN TUBES.

Mr. SKENE KEITH read this paper. The first case was one of a patient, aged 32, suffering from chronic disease of the appendages, which had greatly reacted on the general health. At the operation, when the right ovary had been freed of adhesions and removed, it was found that there was a distinctly localised, irregular swelling, as large as a hen's egg, behind the head of the colon. His hope was that it was inflammatory; his fear that it was sarcomatous. Six months later there was no swelling to be felt on examination, but there was a little tenderness. This also had disappeared two months later. The second patient was aged 35. Three years ago, after an abortion, she had "inflammation in every organ of her body," as she expressed it. Pain in the right side caused her to walk as if lame; an unusual symptom was that as soon as she took food she invariably and immediately felt nauseated. The right-sided pain occupied two distinct areas, the one in the usual position of a pain caused by disease of the ovary, the other in that caused by disease of the appendix. At the operation the appendix, though healthy, was closely involved in a mass of adhesions round the enlarged ovary and tube of the right side. The feeling of nausea disappeared at once, and six months later the patient was in perfect health.

GLYCOSURIA COMPLICATING AN OVARIAN TUMOUR AND OVARIOTOMY.

This paper, by Dr. J. HALLIDAY CROOM, was read, in his absence, by the SECRETARY. The patient was 53 years of age, and had noticed an abdominal tumour for five months. Being excessively corpulent the early growth was probably masked. When she presented herself at the Royal Infirmary, Edinburgh, her appearance was extraordinary. Her height was 5 feet 4½ inches; her weight, without clothes, a little over 17 stone; and the girth of the abdomen 60 inches. Her complexion was pale, lips cyanosed, with a distinct growth of hair on the upper lip and chin. The urine was not increased in quantity; its specific gravity was 1047, and it contained blood, a little albumen, and much sugar. Urea normal or diminished. All other signs and symptoms of diabetes were absent. It was regarded as a case of glycosuria, probably caused by the tumour. Codeine and morphine had no effect on the amount of sugar. Laparotomy was performed as the growth was increasing and the dyspnœa urgent. There was found a colloid tumour implicating each ovary; the two together weighed 56½ pounds. The sugar remained practically unaltered after the operation for eleven days. At the end of this time a course of morphine was resumed, which had an immediate effect in reducing the quantity. After ten days the morphine was stopped, and the diet rigidly restricted. For a fortnight no difference was observed; then there was a rapid diminution. Ten days later she was sent home, the urine containing a mere trace of sugar. Two months later a specimen was examined and found to be quite free.

The etiology of the glycosuria was then discussed.

Dr. MACNAUGHTON JONES considered pressure on the portal vein a likely cause of the glycosuria. He thought the hepatic a more likely explanation than the pancreatic, though both might coexist.

Dr. LEITH NAPIER suggested that there were two classes of causes of glycosuria—the mechanical and the nervous. Disturbance in these factors caused variations in metabolism. Morphine and its allies answered well in diabetes, but in glycosuria the group of the bromides was much more efficacious.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Thursday, November 14th, 1895.

J. DRUMMOND, M.D., President, in the Chair.

TREPHINING FOR JACKSONIAN EPILEPSY.

Mr. A. E. MORISON showed a patient who had been trephined for Jacksonian epilepsy. A sailor, aged 31, in September, 1893, without previous illness or warning lost the power in his arm up to the shoulder, and felt some weakness in his leg. Ten days later vomiting commenced, and three weeks later he had severe headache and fits. The fits began in the right toe with a gripping feeling, and spread up the leg. Then the arm became affected, and finally the head and neck. The aura was followed by clonic spasms in the same parts. He was first seen in January, 1895, and the following conditions found: He had headache, but not constant. It came on before the fits, and lasted six or seven days after. The pain in the head was over the fissure of Rolando, and tapping aggravated it. His speech was unimpaired; memory slightly defective. His vision was impaired, and he had well-marked double optic neuritis. His arm and leg were feeble; he had scarcely any grip with his hand, and could only walk with difficulty on account of weakness of the leg. There were scattered anæsthetic areas in the arm and leg. The reflexes were exaggerated on the right side. He had previously been trephined without benefit. The operation was performed on January 16th, 1895. The trephine was first applied between the arm and leg centres, and there the brain pulsated. Another disc of bone was removed over the arm and face centres. Here the bone was firmly adherent to the dura mater, and there was no pulsation. Around this spot the bone was chiselled away till a pulsating ring surrounded the non-pulsatile portion. The dura was then opened, when the arachnoid, distended by fluid, bulged. This was incised and about 2 ounces of clear fluid escaped. A finger introduced into the cavity found this closed on every side. An encysted subarachnoid collection had been opened and emptied. The wound was entirely closed without drainage. Recovery was uneventful. Fits and optic neuritis had disappeared; vision was so little impaired that he could read ordinary print. His hand had recovered its grip; he could walk well with only a slight halt, and could earn his own living. In connection with this case Mr. A. E. Morison showed on the skull a simple and satisfactory method of mapping out the fissure of Rolando, which he had worked out. The first point to fix was the upper end of the fissure, half an inch behind the centre of a line drawn from the glabellum to the occipital protuberance. This point formed the apex of an isosceles triangle, the first side of which lay in the middle line, and the second ran downwards and forwards, and each measured 3¼ inch, the base 4½ inches. It was demonstrated that this method, quickly and easily applied, led to the same result as more complicated and difficult measurements.

Wiring of the Patella in a Myxœdematous Patient.

Dr. Gowans showed a patient suffering from myxœdema whose patella had been wired for recent fracture. The patient had been exhibited at this Society many years ago as a rare though well marked case occurring in a man. He had undergone at intervals irregular treatment by thyroid feeding, with improvement, though the evidences of myxœdema were still distinct. In walking along the street he fell violently on his knee, and sustained a simple fracture of the patella. There was great swelling from effusion of blood and fluid in the knee-joint, and the fragments were separated 3 inches. Six days after his accident the patella was wired through a vertical incision, and no drainage was employed. The result could be seen to be quite perfect. Dr. Gowans expressed an opinion that operative treatment should be the rule in fractured patella.

Removal of a Hæmorrhagic Ovarian Cyst.

Dr. Gowans showed a woman, aged 28, who came to him with a painful tumour connected with the uterus and fixed in the left fornix. On removing it and finding bloody contents he at first thought of extrauterine pregnancy, but a careful examination showed that the thickened tube was not involved in the swelling, which was an ovarian cyst filled with blood.

Ectopic Gestation.

Dr. Gowans showed a married woman, aged 27, and the mother of three children, the last born three years before her illness. Menstruation ceased in March, 1895. Early in May, after severe cramping pains, she had vaginal hæmorrhage. She considered herself pregnant. From that time there was more or less hæmorrhagic discharge. On May 25th she had a bad attack, fainted, and became collapsed. On May 28th Dr. Gowans saw her, and found a tumour in the middle line in front of the lower abdomen. On vaginal examination a large fluctuating painful mass was found in Douglas's pouch. The os was soft and open. The patient was so ill that no operation could be undertaken then. She afterwards rallied somewhat, but, though in desperate plight, was submitted to operation in the first week of June. The abdomen was quickly opened and emptied of blood and clot, in which floated a three months' fœtus. The sac was drawn out and cut off, and the cavity left plugged with gauze and drained by a tube. The tube was removed in forty-eight, and the gauze in seventy-two, hours. The patient, though very ill for a few days, is now in perfect health. In connection with this case, Dr. Gowans exhibited another specimen of extrauterine fœtus with its sac which he had removed by operation, and commented upon the very great importance of diagnosis in this class of case.

Cases of Extensive Operations on the Genitals.

Mr. Page showed the following cases: (1) A man who had been brought before the Society a month before with Epithelioma of the Penis, Scrotum, and Inguinal Glands, and now produced him after operation. The inguinal glands on both sides, the penis, scrotum, and testicles had all been removed, and the wound was almost healed. The man's existence had, at least for the time, been made tolerable. (2) A girl of 6, convalescent, and a Solid Ovarian Tumour weighing 9½ lbs. which had been removed from her abdomen. Microscopically the tumour was fibro-sarcoma. So far as could be ascertained by Mr. Page this was the youngest child who had recovered after removal of a sarcomatous ovary.

Radical Cure of Inguinal Hernia.

Dr. Hume showed an interesting collection of cases, not selected because of their success, but to bear out his statements. He had written to twenty-six patients operated on in his ward, and asked them (1) if there were any recurrence, (2) if they wore a truss, and (3) if they would come to-night. Of the twenty-six patients nineteen replied; of these, eight were cases operated on by Halsted's method. There were four recurrences; two were done by Macewen's method, one recurred. Nine were done by the ordinary operation (removal of sac and stitching canal and pillars of ring); all were cures, but two wore a truss. Dr. Hume then described the different methods, detailing his objections to each, and pointed out his conclusions—namely, that failures arose chiefly from the stump of the sac being left to occupy the internal ring, and that the most important item was to close satisfactorily the internal ring.

Phelps's Operation for Severe Club Foot.

Mr. Black showed a boy, 6 years of age, with photographs of his foot before operation. The patient now walked well without deformity, and the photographs, taken before operation, showed a high degree of talipes equinus varus.

CLINICAL SOCIETY OF MANCHESTER.

A. Wahltuch, M.D., President, in the Chair.

Tuesday, November 19th, 1895.

President's Address.

The President delivered a short opening address, pointing out the advantages to be derived from the Society, the steady increase in the number of its members, and from the published annual reports enumerating the cases of interest which had been brought before the Society in past years.

Hysterectomy for Uterine Fibroid.

Dr. Lloyd Roberts showed a specimen of a fibroid tumour of the uterus, weighing 3½ pounds, removed by abdominal hysterectomy from a woman aged 22. Menstruation had been normal. The tumour was composed of two almost spherical masses, the larger of which represented the body of the uterus and was fixed in the cavity of the pelvis, the smaller an outgrowth extending into the right broad ligament, reaching as high as the umbilicus, somewhat movable and in consistency it felt like a tense cyst. For three weeks before operation the patient had been suffering from retention of urine which required catheterisation. Abdominal hysterectomy was performed on August 7th, 1895. The right broad ligament was tied at its base—that is, below the smaller swelling which had distended the mesosalpinx. The cervix uteri was small, forming the pedicle. The raw surfaces of the pedicle were covered in by peritoneum, silk sutures being used. The uterine stump was returned into the pelvis and a drainage tube inserted. The patient was discharged from St. Mary's Hospital on September 21st, 1895. Dr. Roberts drew attention to the following points: (1) The apparently cystic nature of the upper swelling; (2) the normal menstrual history; and (3) the youthful age of the patient.

Cancrum Oris.

Dr. Hutton exhibited a large sequestrum removed from a girl, aged 4, who had suffered from cancrum oris. The sequestrum included practically the whole of the dental process of the left superior maxilla, with part of the dental facial processes. The disease arose during convalescence from an attack of measles complicated with pneumonia. The child was also shown.

Miscellaneous.

Dr. Hill Griffith showed and briefly commented upon the following: (1) A middle-aged woman with Sympathetic Disease, following five weeks after rupture of the sclerotic at the ciliary region, with subconjunctival dislocation of the lens. Enucleation had been urged, but declined. (2) Large recent Rupture of Eyeball, in which enucleation was to be done. (3) Two cases of advanced and rapidly progressive Exophthalmic Goitre in young men.

PATHOLOGICAL SOCIETY OF MANCHESTER.

H. R. Hutton, M.A., M.B., President, in the Chair.

Wednesday, November 13th, 1895.

Congenital Heart Disease.

The President showed the heart from a case of congenital heart disease in a child 6 months old. The malformations consisted of: (1) Patency of the foramen ovale and ductus arteriosus; (2) incomplete formation of the septum between the ventricles; (3) dilatation of the aorta, from which vessel it was probable the pulmonary arteries arose; (4) thickening and small vegetations about the tricuspid orifice (fœtal endocarditis).

Glioma of the Pons.

The President also showed the brain and microscopic

sections from a case of glioma of the right side of the pons (pressing on the medulla) occurring in a girl, aged 14. The symptoms had been observed for only eleven weeks, and consisted of right internal strabismus, optic neuritis (latterly), loss of power of co-ordination, and slight varying rigidity of the limbs.

Orbital Tumour.

Mr. Edward Roberts and Dr. J. Gray Clegg showed a tumour removed from the orbit of a girl, aged 15. The tumour, of the size of a nutmeg, was situated under the angle of the orbit, was enclosed in a firm capsule, and was easily removed. Its structure was that of a spindle-celled sarcoma, with large lymph spaces running through it.

Miscellaneous.

Dr. Williamson showed (for Dr. Dreschfeld) preparations from a case of Acromegaly, and also exhibited a patient suffering from the disease.—Dr. Kelynack showed specimens from a case of Intestinal Obstruction, due to Distension of a Cancerous Gall Bladder.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

A. H. Carter, M.D., F.R.C.P., President, in the Chair.

Thursday, November 14th, 1895.

Enlargement of the Liver.

Dr. Foxwell read a paper on this subject. He said the chief causes of enlarged liver were alcohol, cardiac debility (for example, after influenza), valvular disease, bronchitis and emphysema, phthisis, syphilis, gout, diabetes, gall stones, specific fevers, abdominal catarrh, leucocythæmia. The methods of detecting this morbid change, and the efficiency of these, were referred to. The frequency of the condition and the varieties of its morbid anatomy were mentioned. The condition of the spleen, with especial reference to those cases where it was notably increased in size, was described. Finally, therapeutic suggestions were made.

The paper was discussed by the President and Drs. Eccardis and Douglas.

Dr. Foxwell replied.

Blood Cyst in the Abdomen, probably of Traumatic Origin.

Mr. Barling read a paper on this subject. He related three cases: 1. Blood cyst over right kidney appearing eighteen months after an injury (this contained 0.5 urea). 2. Blood cyst (? mesenteric) noticed some months after an injury (it contained neither urea nor proteolytic ferment). 3. Blood cyst containing a proteolytic and starch-converting ferment, and probably connected with the pancreas. The use of the term "pancreatic cyst," and their locality and origin was briefly discussed; the fate of these blood cysts if left untreated was pointed out; the treatment to be adopted—incision and stitching the opened cyst to the abdominal incision—was described; and the disadvantages of aspiration, of injection, and of enucleation were referred to.

Dr. Malet read a note of one similar case.

The papers were discussed by Mr. March (who related a case), Mr. Lerdham Green, and Dr. [illegible].

Mr. Barling replied.

Complete Abdominal Extirpation of the Uterus and Appendages.

Mr. John W. Taylor showed a large myoma of the uterus, which he had removed three months previously by the operation of complete abdominal extirpation of the uterus and its appendages. This operation afforded a thorough and successful method of dealing with a case in which the older surgical methods were inapplicable. The pelvis was blocked by the tumour; and when this was the case, simple removal of the appendages was often unsatisfactory, and the clamp operation was inadmissible. The patient, who had suffered from severe attacks of hæmorrhage before the operation was done, had made a good recovery, and was shown.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Surgery.

Sir W. Thornley Stoker, F.R.C.S.I., President, in the Chair.

Friday, November 8th, 1895.

Colotomy.

Mr. Wheeler read a communication upon colotomy, in which he reviewed the numerous conditions requiring the operation of colotomy. He strongly recommended it prior to excision of the rectum for cancerous disease in cases where the subject of the contemplated operation was suffering from much rectal irritation, diarrhœa, pain, and consequent nervous exhaustion, in order that the irritated bowel might get rest and also improve the constitutional powers. He referred to the selection of the operation being sometimes optional with the operator, and considered anterior colotomy preferable and safer, although not excluding the lumbar operation, which had its own place in surgery. Reference was made to the frequency of the peritoneum surrounding the entire gut, and, in consequence, one of the advantages claimed for the lumbar operation could not always be upheld. He recommended the parietal peritoneum to be sutured to the wound, and a needle armed with a suture passed through the mesentery, and then carried through the parietal peritoneum on each side; the gut having previously been drawn through the wound, he sutured back the mesentery at the distal side of the gut to the parietal peritoneum sufficiently to prevent procidentia, which plan was much preferable to drawing the intestine in quantity outside the abdomen and ultimately cutting it off, a procedure sometimes inadmissible. When there was a short mesentery, in addition to the above he passed a sterilised bougie through the mesentery below the suture, and allowed it to rest across the wound external to the abdomen; this helped in the formation of a more perfect spur, so essential for the after-comfort of the patient. He deprecated the division of the gut and suturing the lower end and then dropping it into the abdomen, enumerating the disadvantages and dangers. He recorded cases only of which he had authentic notes and histories; amongst the number there was one transverse colotomy for obstruction at the splenic flexure of the colon ascertained by an exploratory incision, believed at the time to be malignant, the patient now being alive and well, nearly three years after the operation. He also described a left inguinal colotomy for cancerous prostatic disease causing obstruction; the patient died thirteen months after the operation. The other colotomies related were for congenital deformity, malignant tumour, cancer of the rectum, and acute obstruction.

Lumbar Colotomy.

Mr. Henry Gray Croly read a paper on left lumbar colotomy, and stated that he had, during the past twelve years, performed that operation eighteen times. With one exception, the operations were performed for cancer of the rectum, and the cases were unsuited for excision; no death occurred from the operation. Two of the patients (notwithstanding careful antiseptic precautions) were attacked with erysipelatous inflammation and septic or erysipelatous pneumonia, but recovered. In each case great relief was afforded to the sufferers. The patients lived from a few months to over two years; one man worked for nearly two years after the operation as a Corporation labourer. All the patients got fat and expressed themselves gratefully for the relief afforded to their sufferings. Mr. Croly said he did not intend to compare the lumbar operation with the now more fashionable inguinal operation, but thought it his duty to place on record brief notes of the cases. He described his method of operation and after-treatment, and claimed for lumbar colotomy its extraperitoneal advantage, and he considered the position of the artificial anus in the loin less disgusting to the patient than the inguinal.

The President expressed surprise that lumbar colotomy should be advocated at the present time. Mr. Bryant's name had been brought forward as supporting it. He did not agree with Mr. Bryant's views with regard to lumbar colotomy. Mr. Wheeler sutured the peritoneum to the skin. He found that a much better anus was formed if this

was not done, but the bowel was allowed to join the muscular and fibrous coat as well. He thought that in some cases the gut might be cut across, and so any chance of fæcal matter passing into the distal part prevented.

Sir William Stokes said the more experience he had of lumbar colotomy the more highly did he think of it. Still, he did not think ill of the anterior operation. Through Mr. Croly's courtesy he had seen some of his operations, and the photographs well represented the excellent results obtained.

Dr. Fitzgibbon spoke from personal observation of the invariable relief from pain and the prolongation of life which followed lumbar colotomy.

Mr. Kendal Franks said that, with regard to the advantage of dependent drainage in lumbar colotomy, mentioned by Sir William Stokes, he did not see why a patient operated on by the inguinal method should not be turned on his side. One of the great reasons why inguinal colotomy had met with so much favour was the greater ease with which the sigmoid flexure could be found compared with the finding of the descending colon in the lumbar operation; also, it was not always easy to know what piece of intestine presented in lumbar colotomy. The extended use of excision of the rectum, especially by the trans sacral method, was gradually turning colotomy out of the field, so that colotomy, he believed, would soon become a very exceptional procedure.

Mr. M'Ardle agreed with the President's views with regard to lumbar colotomy. If the anterior operation was carried out fairly high up, where the bowel was readiest of access, there should be no danger.

Mr. Wheelhouse, replying, said that in his opinion the anterior operation was preferable and safer, but that in some cases the lumbar operation should be done. He thought cutting the gut and returning it into the abdomen was bad surgery, as the superior end might have been sutured instead of the inferior, and symptoms of strangulation might follow from fæces remaining in the distal portion, or the foreign body might ulcerate through. He had found that suturing the mesentery at the distal end kept the prolapse in abeyance. He did not think a catheter under the bowel formed as good a spur as suturing the peritoneum.

Mr. Croly said he believed the mortality was greater in inguinal than in lumbar colotomy. He thought that the lumbar colotomy should not be shirked because it was a more difficult operation.

North London Medical and Chirurgical Society.—At a meeting on November 14th, Mr. Charles King in the chair, Mr. G. Mowbray White showed three cases of Fracture of Bones, showing points of interest. The first was an Ununited Fracture of the Humerus in a woman 47 years of age, in whose history no evidence of syphilis was ascertained. On account of failure to obtain union in the first instance, the ends of the bone were fastened together with ivory pegs. After a considerable period of immobilisation, union had not resulted, and the portions of ivory in the tissues had become absorbed. Then the ends of the bone were secured by short rods of nickel. As bony union still failed to occur, the ends of the fragments were exposed, and portions of fresh rabbit's bone were placed within the periosteum. Union still failed to be brought about, and the speaker said that he seemed to have arrived at the end of the justifiable methods of treatment. The President, Mr. Caswell, and Dr. Galloway discussed the case, and all concurred in the opinion that syphilis might possibly have something to do with the failure of union. Mr. White also showed two cases of Fractured Patella, the one treated by means of a back splint, and approximation of the fragments by knee-caps and bandaging; the other treated by means of wiring the fragments. The superiority of the latter method was readily appreciated, both in the character of the result obtained, and in the great shortening of the period of convalescence.—Dr. E. C. Beale showed a young girl of about 12 years of age, who had suffered from attacks of Gastro-enteritis. The stools showed numerous flecks of hæmorrhage, and at the same time the child had suffered from attacks of purpura. At present she was in a period of quiescence so far as the gastro-enteritis was concerned, but the purpura was still, to some extent, visible; the skin showed numerous papules on the sites of the original purpuric spots. The speaker felt inclined to ascribe all these symptoms to poisoning by faulty ingesta, and that the enteritis was in this case an inflammation of the mucus follicles, as evidenced by the numerous minute hæmorrhages present throughout the stools.—Dr. James Galloway showed a patient suffering from Chronic Phthisis, who had for five years been the subject of a curious variety of Lichen Planus. The eruption, mainly on the extremities, was of the circinate variety, and in many respects resembled some of the later superficial syphilides. This patient had been treated for nearly ten months with guaiacol, in the form of the carbonate, and also as a solution of the pure product. The tuberculosis had passed into a quiescent condition, and the skin eruption was better than it had been during the past five years. Cases of Embolism of the Arteria Centralis Retinæ associated with Albuminuric Retinitis, and a case of almost complete Optic Atrophy following a blow on the head were also demonstrated.

Laryngological Society of London.—At a meeting on November 13th, Dr. Semon, President, in the chair, the President showed a microscopical section of a true Myxoma, which he had removed from the larynx.—Dr. J. B. Ball showed a clerk aged 35, who had suffered from Weakness and Loss of Voice for four months. The left cord was fixed in the position of complete paralysis. He had had syphilis.—Dr. Hall mentioned a case of Complete Paralysis which had preceded signs of Aneurysm some twelve months. Dr. Bronner suggested a central origin. The President remarked that tabes should be borne in mind, and the reflexes examined.—Mr. Bowlby showed a lad, aged 18, with Stenosis of the Larynx following Typhoid Ulceration. The left vocal cord was fixed, notwithstanding repeated attempts to dilate the larynx, the patient could not do without the tube. Dr. Scanes Spicer, Dr. Dundas Grant, Mr. C. Symonds, and the President joined in the discussion. Mr. Bowlby, in reply, stated that he would lay before the lad the risk to the voice from thyrotomy, and let him decide. Mr. Bowlby also brought forward a case for diagnosis.—Dr. A. Bronner showed a microscopical specimen of Hæmorrhagic Myxoma of the Lingual Tonsil.—Dr. Wm. Hill showed a case in which there was a Regeneration of Tissue along the Inferior Turbinate Crest after Turbinotomy.—Dr. Kanthack showed pathological specimens of Typhoid Ulceration of the Larynx, Diffuse Papillomatous Hypertrophy of the Mucous Membrane of the Larynx, Empyema of the Maxillary Antrum.—Dr. Percy Kidd showed a woman, aged 24, with Pachydermia of the Interarytenoid Fold. She had suffered from hoarseness for seven or eight years. Examination showed swelling of the interarytenoid fold, irregular and divided into two parts by a furrow.—Mr. Butlin suggested tubercle and the use of the galvano-cautery. Mr. C. Symonds thought it was tubercle, and would use the curette and lactic acid. Dr. Bronner and Dr. Tilley thought the only way to improve the voice was to remove a portion of the growth. The President did not look upon it as tuberculous. Dr. S. Spicer looked upon these cases as simple inflammatory thickening. Dr. Kidd, in reply, did not think the case tuberculous. He considered that these cases were localised overgrowth of tissue. Dr. Kidd also showed a specimen of Syphilitic Ulceration of Trachea with stenosis of both main bronchi.—Dr. Edward Law showed a patient, aged 10, with Lupus of the Pharynx and Larynx. Examination showed much infiltration of the soft palate and pillars of the fauces, epiglottis greatly thickened, and nodular tip destroyed by ulceration. The aryepiglottic folds and ventricular bands were œdematous and swollen. The treatment would be scraping, the application of lactic acid, and the internal administration of arsenic. Dr. Law also showed a case of Nasal Obstruction from septal deflection to the left side, with ridge like projection of bone, bony enlargement of the right middle turbinate, adenoid growths, polypoid hypertrophies of the posterior extremities of the turbinates. Dr. Tilley, Dr. Grant, and Dr. Hill suggested the use of Jones's turbinatome for the removal of the turbinates.—Dr. Scanes Spicer showed a man, aged 34, with a suspicious growth on the left Vocal Cord.—Mr. W. R. H. Stewart showed a case of Malignant Disease of the upper part of the Œsophagus in

a girl aged 23. Mr. Butlin had recently seen a case in a girl aged 24.—Mr. Stabb showed a boy with an Enlarged Thyroid, which almost blocked the lumen of the pharynx.—Dr. Clifford Beale brought forward a case for diagnosis.—Dr. Dundas Grant showed a case of Disease of Wharton's Duct and Submaxillary Gland.

Society of Medical Officers of Health.—At a meeting on November 21st, 1895, Mr. Vacher, President, in the chair, Dr. Newsholme opened a discussion on a National System of Registration of Sickness. He observed that the value of notification of infectious diseases consisted, not in the mere tabulation of cases, but in the impulse it had given to the provision of hospitals, disinfecting stations, etc. To compare the mortality from these diseases in a town before and after the adoption of the Act, or in those in which they were and were not notified without taking all other conditions into account, was most misleading, while such short periods of observation as four years might be made to include two epidemic years in one term and none in another. Such a knowledge of the causes of a disease as was necessary for its prevention could be acquired only by notification of all cases, and there were preventable diseases other than the infectious. Of these, tuberculosis was the most important, causing a greater mortality than several of the infectious diseases put together, and its extinction was as possible as that of leprosy. Acute rheumatism, pneumonia, and others appeared from their greater prevalence in certain localities and occupations to be more or less preventable. Industrial diseases, as lead and arsenic poisoning and anthrax, should be notified to the medical officer of health, not to the chief factory inspector as required by Section 29 of the last Factory Act, and the preliminary inquiry as to whether the disease was contracted in the factory implied in the words of the clause should devolve on the medical officer of health rather than on the surgeon to the works. Compulsory notification of preventable diseases, infectious and other, had for a number of years worked successfully in Germany and Scandinavia. The Statistical Yearbook of Berlin was a mine of information, with which our Registrar-General's reports could not be compared. But in England it was impossible to obtain any extension of the system unless immediate benefits could be assured, on account of the additional expenditure, while gratuitous notification would be resisted by medical men unless they could have in exchange the legal protection from irregular practitioners enjoyed by their brethren abroad. Returns might, however, be required with little cost or trouble from all Poor-law surgeons, asylums, prisons, workhouses, schools, hospitals, etc., supported wholly or in part by imperial or local taxation or by voluntary contributions, and from friendly and benefit societies, together with the number and ages of the members or inmates. The paper was discussed by the President, Dr. Woodforde Lovett, Dr. Yarrow, Dr. Field, Dr. Sykes, Dr. Legge, and Dr. Willoughby.

Sheffield Medico-Chirurgical Society.—At a meeting on November 21st, Dr. Porter, President, in the chair, Mr. Snell introduced a woman, aged 61, with a Malignant Tumour, probably epithelioma, involving the outer half of the left upper eyelid. It appeared to have commenced two years previously.—Dr. T. H. Morton read notes of a doubtful case of Cancer of the Bowel. There was a slimy bloody discharge, in which spheroidal cells were revealed by microscopical examination. Dr. Morton also exhibited Bones which had been successfully amputated by his Serrated Pliers.—Dr. Burgess showed a Tumour of the Left Optic Thalamus. There was paralysis of the right arm and right side of the knee but not of the right leg, and there was no hemianæsthesia.—Dr. Clapham showed a large Ulcer of the Stomach, which caused inflammation over the under surface of the liver, extending to the transverse colon, two months before death from hæmorrhage. An open artery of considerable calibre was conspicuous in the base of the ulcer.—Mr. Cuff demonstrated Microscopic Specimens.—Dr. Kerling gave the details of a case of Ovariotomy for the removal of a suppurating fibroid tumour of the ovary. Rapid recovery took place. The tumour appeared, from microscopical sections by Dr. Wilkinson, to be simply fibrous, with a ragged cavity at the top from which a pint and a-half of pus was removed at the operation.—Dr. Hunt read a paper on the Treatment of Heart Disease. He related cases in which he had tried baths to strengthen the heart and reduce its velocity. He was persuaded that the use of a bath colder than the temperature of the body produced a stronger and slower pulse. The good effects of rest and certain cardiac tonics were referred to. In conclusion, Dr. Hunt drew attention to the excellent results he had obtained by the use of nitrates under conditions of high tension.—The President, Mr. Pye Smith, Mr. Arthur Jackson, Dr. Samson Matthews, Mr. Knight, Mr. Makkig Jones, and Mr. Richard Favell took part in the discussions.

Nottingham Medico Chirurgical Society.—At a meeting on November 20th, Dr. Mutch (President) in the chair, Mr. Chicken read a paper entitled Enterotomy and Enterectomy. He advocated making abdominal incisions as far as possible through muscular substance, as the usual incision in the linea alba left a weak scar, which conduced to ventral hernia. The first step in looking for the site of intestinal mischief should be to examine the cæcum. If no local inflammatory mischief were found the state of distension or otherwise of the cæcum was a guide as to whether the obstruction was below or above that viscus. The best method of finding the colon when the operation of colotomy was being performed was discussed, and the necessity of leaving a good "spur" insisted on. Mr. Chicken described the method of uniting divided bowel by means of Murphy's button, which was considered more satisfactory than tedious suturing. By means of Cripps's method it was possible to remove the whole rectum as high as the promontory of the sacrum. It was important to operate early in cases of cancer before the surrounding tissues were infiltrated. The treatment applicable to rectal prolapse and occlusion respectively was discussed. Dr. Michie thought that when pain was localised near the umbilicus or somewhat higher it indicated obstruction of the small intestine, while fixed pain elsewhere indicated obstruction of the large intestine and its seat. The amount of fluid which could be injected *per anum* would sometimes indicate the position of the obstruction. Messrs. Gray, Hunter, and Anderson also discussed the subject.—Dr. Michie showed a portion of Large Intestine from the Splenic Flexure, affected by Carcinoma, which he had excised from a patient who had had complete obstruction for twelve days. As a preliminary to the radical operation, an opening had been made into the ascending colon.

Oxford Medical Society.—At a meeting on November 8th, 1895, Professor Thomson in the chair, Dr. Wilson showed a case of Progressive Muscular Atrophy in a woman, aged 30, which came on after an acute tonsillitis, and was at first thought to be of the nature of diphtheritic paralysis. The pathology of the disease was discussed.—Dr. Brooks exhibited a female patient suffering from Anæmia, whose condition had markedly improved after treatment with bone marrow extract, iron and arsenic having previously failed.—Mr. H. P. Symonds showed (1) a man, aged 50, suffering from Obstruction of both Ureters. A condition of hydronephrosis existed on both sides, and had been treated by incision and drainage. The various causes of double hydronephrosis were discussed and suggestions made as to treatment. (2) A case of Epithelioma of the Penis; (3) a severe case of Rickets.—Dr. Stark read the notes of a case of Double Pneumonia and Double Empyema in a young man, aged 20, who had made a very complete recovery as the result of incision and drainage on both sides.—Dr. Neil read notes of a case of Alcoholic Neuritis with Prominent Mental Symptoms. The patient, a middle-aged widow, developed drinking habits from the medical prescription of alcohol for neuralgia. After some years insidious symptoms began to appear, which were suddenly developed in an acute form by the shock of a severe fall. There was anæsthesia of the feet and hands, tenderness of certain muscles of the legs and arms, and slight muscular atrophy. There was inco-ordination of the muscles of the upper and lower limbs and of speech. There were hallucinations of all the senses, and delusional beliefs connected with the hallucinations. The memory was a wreck, and there was a good deal of emotional agitation. The supply of alcohol was cut

off. Attention was given to alimentation, small doses of liq. strychninæ were ordered, and ½ drachm of liq. morphinæ at night. In six months the symptoms had disappeared, except a trace of numbness in the hands and a considerable weakness of memory. This last would probably be permanent in some degree. The points of interest in the case were: the formation of drinking habits from a medical prescription, the apparently small quantity required to cause the disease, the onset of acute symptoms after a severe fall, and the predominance of mental derangement.—The following have been elected office-bearers for 1895-96: *President:* Professor Burdon Sanderson. *Vice-Presidents:* Mr. H. F. Symonds; Professor Thomson. *Secretary and Treasurer:* Dr. Collier. *Council:* Dr. Pembrey, Dr. Ritchie, Dr. Whitelocke, Dr. Neil, Dr. Turrell, Dr. Wilson.

Bristol Medico-Chirurgical Society.—The second meeting of the session was held in University College, Bristol, on November 13th, Mr. A. W. Prichard in the chair.—Mr. Morton showed a patient with a Cyst of the Antrum, and a patient with Sarcoma of the Superior Maxillary Bone, undergoing treatment by injections of erysipelas toxin.—Dr. Mitchell Clarke read a paper on Huntington's Chorea and Senile Chorea, with exhibition of a case of the former affection.—Dr. F. H. Edgeworth showed a series of Lantern Slides in connection with cases of Exophthalmic Goitre.

Infirmary Medical Superintendents' Society.—The November meeting of this Society was held on November 16th at Lewisham Infirmary, Mr. J. R. Lunn (President) in the chair.—Dr. Toogood, Medical Superintendent of Lewisham Infirmary, exhibited the following cases: Ununited Fracture of Femur cured by operation, Traumatic Gangrene of Foot, Multiple Perineal Fistula cured by external urethrotomy, Symmetrical Paralyses produced by lead poisoning, Acute Conjunctivitis produced by malingering, Pelvic Sarcoma, Exophthalmic Goitre, Malignant Myopia, Tuberculous Synovitis following acute rheumatism, Malignant Tumour of Kidney, Large Calcified Fibroma of Uterus.—A vote of thanks to Dr. Toogood for his interesting series of cases concluded the proceedings.

Nottingham Medico-Chirurgical Society.—At a meeting of this Society on October 30th, the inaugural address for the session 1895-6 was delivered by Dr. G. Vivian Poore, who took as his subject the Soil in its Relation to Disease and Sanitation. The origin, constitution, and properties of the soil were fully dealt with. Some of the disease germs present in the soil were alluded to, and also its power of assimilating dead organic matter, and rendering pathogenic bacteria harmless. Conditions of drought and moisture were considered, and their relation to disease, and the evil consequences likely to result from allowing large tracts of land to go out of cultivation, were commented on.—A cordial vote of thanks was passed on the motion of Dr. Handford, seconded by Dr. Lamb.

Glasgow Obstetrical and Gynæcological Society.—At the first meeting of the session, held in the Faculty Hall on October 23rd, the following office-bearers were elected: *Honorary President:* Sir John Williams, Bart. (London). *President:* G. A. Turner, M.D. *Senior Vice-President:* Malcolm Black, M.D. *Junior Vice President:* J. Nigel Stark, M.B.; *Treasurer:* Alex. Miller, L.R.C.P.&S. *Secretary:* Robert Jardine, M.D. *Reporting Secretary:* A. W. Russell, M.A., M.B. *Pathologist:* John Lindsay, M.B. *Members of Council:* Drs. J. K. Kelly, Wm. Cullen, A. R. Gunn, J. W. Jenkins, H. C. Reid, J. M. Munro Kerr.—The President made further reference to the occurrence of tetanus neonatorum in the island of St. Kilda, and reported that antiseptic precautions are now being observed in the treatment of the umbilical cord, and the two children born in the island since he read his paper last year[1] had escaped an attack, and are still living.—Professor Murdoch Cameron described a successful case of Extirpation of the Uterus for Myomata complicated with Pregnancy, and Dr. Malcolm Black showed an Anencephalic Fœtus.

[1] *Glasgow Medical Journal*, March, 1895.

REVIEWS.

The Guide to South Africa for the use of Tourists, Sportsmen, Invalids, and Settlers. Edited annually by A. Samler Brown and G. Gordon Brown. London: Sampson Low, Marston and Co. 1895. (Cr. 8vo, pp. 396. 2s. 6d.)

"Guide to South Africa" seems an exclusive and ambitious title, but a cursory glance of this annual volume convinces the reader that almost anything which any visitor or emigrant is likely to want to know is to be found within its modest compass. It is furnished with some excellent maps of all sections of the colony. The subject of climate is fully dealt with, and it is stated on the authority of Dr. Symes Thompson that many persons occupying high positions of trust could not on account of health have fulfilled the duties had the climate been a trying one.

Buluwayo, the newest of the colonised districts affected by the English, is graphically described. It is said to be 3,800 feet above sea level. As showing the speed with which civilisation advances in the northern district, which is the centre of an enormous agricultural area, we learn that while numerous claims have been pegged out at various points, telegraphic communication is established with Charles, Salisbury, and other distant towns, a hospital is about to be built as a memorial to Major Wilson and those who fell with him at the Shangani River on December 4th, 1893. There is a racecourse, an athletic club, cricket and tennis grounds. The sanitary needs of the new district are not forgotten, and reservoirs and filter beds to hold about 45,000,000 gallons are being constructed a mile from the town. There will be a fall of over 100 feet, and it is proposed to use the water as a means of generating electricity.

On the all-important subject of health the *Guide* is discursive, and quotes various doctors on the advantages of a voyage to the Cape. The climates of all the different sections of South Africa are dealt with in detail, and a warning is given that Johannesberg is not, as has been supposed, a desirable resort for sufferers from pulmonary complaints, although it is generally healthy.

The Brewing of Non-excisable Beers. By J. Pocock. Bangor: Nixon and Jarvis. 1895. (Cr. 8vo, pp. 62. 2s. 6d.)

One consequence of the spread of temperance principles has been a great demand for beverages as substitutes for beer, and, while ginger beer had the reputation of being innocent of alcohol, it has within recent years been promoted from the position of being the drink of schoolboys and girls to that of an article of much more general consumption. Ginger beer has also been the starting point from which the manufacture of a number of similar beverages has developed, their chief difference from ginger beer consisting in the use of hops or some other flavouring material in place of ginger. The fact that these beverages were made by a process of fermentation does not appear to have interfered with their popularity with abstainers, and it was not until the trade in them had acquired considerable proportions that the discovery was made that these supposed non-alcoholic beverages contained 3 or 4 per cent. of proof spirit, and sometimes nearly as much alcohol as ordinary Burton beer.

As beverages of that character would come within the scope of the excise law, it became necessary to fix a limit to the amount of alcohol admissible in a beverage without being chargeable with beer duty. In the manufacture of such beverages it was therefore necessary to bear this in mind and to avoid the production of too large an amount of spirit. Mr. Pocock's little book is intended to serve as a guide in this respect. It gives an easily intelligible exposition of the principles upon which the manufacture of beverages by fermentation depend, with descriptions of the nature and action of yeast and other ferments, and of the preservatives which may be employed to counteract the liability of weak alcoholic liquors to acidify or otherwise deteriorate when kept. The book bears throughout evidence that the author

has a sound practical acquaintance with brewing, and his directions are given in simple language which will make them especially acceptable and useful.

NOTES ON BOOKS.

Analytical Key to the Natural Orders of Flowering Plants. By FRANZ THONNER. (London: Swan Sonnenschein and Co. 1895. Cr. 8vo, pp. 152. 2s.).—The author of this evidently carefully compiled key assumes that there is a deficiency in "exotic floras" of means for arriving at the natural order of a plant, which, as he very truly remarks, is the first stage in determining its name and affinities. Any person finding himself in this position might derive some assistance from this key; but it can only be used by a person well acquainted with the rudiments of botany, and it cannot be described as a guide to the natural orders of plants of exceptional and anomalous floral structure.

Klinische Vorlesungen über Syphilis. [Clinical Lectures on Syphilis.] Von Dr. E. von DÜRING. (Hamburg and Leipzig: Leopold Voss. 1895. Royal 8vo, pp. 336. M.6.)—This book is a German edition of a series of clinical lectures which were delivered by the author, in the French language, as Professor of Dermatology and Syphilis in the Imperial Medical School of Constantinople. The author explains that his work is not to be considered a textbook in the strict sense of the word, but whoever reads it will find that in the twenty-two lectures of which it is made up the various phenomena of syphilis as well as its treatment are clearly, and for the most part adequately, dealt with. We have no doubt the book will be highly appreciated by many others than those before whom the lectures were delivered. As the book is a German one it ought not to escape notice that there are headlines to the pages, and that it possesses both an index and a table of contents.

La Syphilis des Centres Nerveux [Syphilis of the Nervous Centres]. Par le Dr. HENRY LAMY. (Paris: G. Masson and Gauthier-Villars et Fils. Cr. 8vo, pp. 204. Fr. 2.50.).—This is one of the volumes of the biological section of the very large series bearing the title of *Encyclopédie scientifique des Aide-Mémoire*, published under the direction of M. Léauté. The book opens with some general remarks on syphilitic nervous affections, and the author then considers in detail the several ways in which the brain, its membranes, and its blood vessels are liable to be attacked. The spinal cord and its coverings are next treated in a similar manner. Then follow chapters on the cerebro-spinal complications of inherited syphilis and on etiology, the final portion of the book being devoted to treatment, on which last subject, however, Dr. Lamy has nothing new to propound. On the whole the book may be recommended as containing a clear and accurate summary of the present state of knowledge respecting syphilis of the nervous centres. But while the writings of French and German authors receive due recognition, the same remark does not apply to the work of English writers. There is no indication, for example, that the author is aware of the important work done by Hughlings Jackson in this field, and the names of Gowers and Buzzard are not even mentioned.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

PHARMACEUTICAL SPECIALITIES.

WE have received from Messrs. F. Newbery and Sons, King Edward Street, Newgate Street, E.C., a number of samples of coated pills and other pharmaceutical preparations manufactured by W. R. Warner and Co., Philadelphia. We specially note the elegant appearance and finish of the parvules, which are very small sugar-coated pills designed for the administration of remedies in small doses for frequent repetition. For the ready preparation of what may be called lithia water, the effervescent lithia tablets are convenient. Each tablet contains 3 grains of citrate of lithium, and when placed in water it dissolves with brisk effervescence. Ingluvin is made in the form of a compressed tablet, which readily disintegrates in water. This substance is obtained from the gizzard of the domestic chicken, and is stated to possess the property of arresting certain kinds of vomiting—notably the vomiting of pregnancy. The specimens of coated pills can be commended for their excellence of finish and solubility.

THE "INDEX MEDICUS."

MR. G. S. DAVIS has just issued a list of all the subscribers to the *Index Medicus*. As the continuation of the *Index* is a matter of such vital importance to those persons who are engaged in professional literary work, it is not very creditable to British medicine and surgery to find only four copies subscribed for throughout the United Kingdom. The four subscribers are the Royal College of Surgeons of England, the British Medical Association, the Bristol Medical Library, and Mr. Young J. Pentland, of Edinburgh. There must be surely many institutions and individuals who would rather pay 25 dols. a year than be without this invaluable aid to literary work.

"THE BATTLE OF THE CLUBS."

A LOCAL SUCCESS.

WE are glad to announce that the result of the first engagement at Portsmouth has been a victory. The circumstances were fully stated last week. The medical man who held the appointment which was contested by outside men had refused to accept the new terms offered by the lodge, which were to attend infants from 3 months and juveniles of both sexes 15 years for 2s. 6d. a year. The outside competitors offered to accept 2s. 6d., 2s., and even 1s. 6d. a year, while the holder, Dr. Lord, refused to accept less than 4s. The election has resulted in the triumphant re-election of Dr. Lord, the figures being: Dr. Lord, 168; Steel, 65; Paul, 31; Todd, 11. The members of the lodge are to be congratulated on the good sense which they have thus displayed in recognising that valuable services deserve reasonable pecuniary recognition.

It is much to be regretted that the outside candidates did not take to heart the advice tendered to them, and act loyally to the profession by retiring from the contest when its true object and nature was explained to them. As it is, they have been thoroughly defeated in their attempt to undersell the profession and oust the present holder of the club office.

The Portsmouth Medical Union is to be warmly congratulated on this important victory, which will undoubtedly have a most encouraging effect on those who in many parts of the country are engaged in resisting the unreasonable and growing exactions of the clubs; *it should be taken to heart by all our Branches.*

At a meeting of the Folkestone Medical Society held on November 20th a paper was read by Dr. F. Eastes on the Battle of the Clubs. Clubs had been organised in Folkestone by lay committees which paid their medical officer a meagre salary while they themselves absorbed the profit. The medical man was thus "sweated." Moreover the number of visits which the medical officer was required to pay during the day was too large to be compatible with careful diagnosis or efficient treatment. Dr. F. Eastes read the rules of the Eastbourne and Bexhill Medical Societies, which were drawn up with a view of excluding such medical men as countenanced the above form of club. He further insisted on the necessity of a wage-limit, and of adequate yearly payment for attendance on the women and children.

An animated discussion ensued, but as the meeting was not fully representative of all sections of the Folkestone Medical Society no formal resolution was passed. The subject was adjourned till December 4th, when it is intended to take decisive action.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, NOVEMBER 30TH, 1895.

THE GENERAL MEDICAL COUNCIL.

The fifty-ninth session of the General Medical Council was opened on Tuesday, as is customary, with an address from the President. The address began with apology and ended with eulogy. The apology took the form of an explanation of the unforeseen circumstances which prevented the new Council Chamber being ready for the meeting, and necessitated the use of the library of the Royal College of Physicians, which the College had courteously granted to the Council. The eulogy was quoted from the recent address of the Lord Chief Justice on legal education, which paid a well-deserved compliment to the Council for its efforts in improving medical education. We hardly agree with Lord Russell's description of the Council as "broadly representative in its character," and we think a closer knowledge might have resulted in a widely different expression. However, the quotation supplied the genial President with a good finish to an address, which left no doubt on the minds of his hearers as to his attitude on the question of direct representation.

After some preliminary and formal business, the resolution of the British Medical Association on this subject was reached by means of a motion, asking for the appointment of a Committee to consider the resolution and report to this session of the Council. We gathered that if such a motion had not been made, the communication of the Council of the Association would not have come before the Council at all. This was prevented by the action taken, but the result of the division was decisive, for only 7 voted for, while 21 voted against, the appointment of the Committee. In face of this resolve of the Council, the duty of the Association is clear. The expressed wish of the members, supported by the Council of the Association representing all its Branches, and speaking in the name of a majority of the profession, must be obeyed, and at its next meeting the Association Council must take steps to introduce a Bill into Parliament to increase the number of direct representatives. The other communication forwarded by the Secretary of the Association, respecting instruction in practical midwifery, was passed over on a technical objection, and then the proceedings were threatened with a collapse. This tendency is often observable on the first day of the Council's session, and is due, we think, to a want of careful preparation of the business. It is sometimes useful to have a short first sitting, in order to set the Committees to work; but we think it a matter of regret, that the four hours on which the Council sits on each day should not be fully utilised on its own proper duties. The relations of the disciplinary powers of the medical authorities and of the Council, however, raised a short debate, and the Executive Committee were ordered to report on the subject at the next meeting. Whatever makes the discipline of the profession more effective, whether it comes through the qualifying bodies or through the Council, will be useful and popular, and we wish the Executive Committee the fullest success.

The case of Mr. Robert Masters Theobald occupied the rest of the sitting, and at its conclusion the Council decided not to restore his name to the *Register*. This is the first instance in which the Council have heard an application for a reconsideration and reversal of a decision. We are doubtful of the wisdom of the precedent thus created. It is one that must be very jealously watched. The second day's sitting was occupied with a prolonged consideration of the position of the Apothecaries' Hall of Dublin. The Council had declared the examination of the Conjoint Board of the Hall and the Royal College of Surgeons of Ireland insufficient in the subject of medicine, and had reported the same to the Privy Council. That Conjoint Board has now ceased to exist, but it seems the rights of students, who have entered for its examinations before July last, have to be protected. It will, therefore, be necessary to keep up a kind of liquidating authority to act as a Conjoint Board for some years. Moreover, before the session closes, the Apothecaries' Hall of Dublin will seek to be established as an independent examining Board by the aid of examiners nominated by the Council. Truly there seems little or no chance of ever lessening the number of portals into the profession under the present Medical Acts. In these proceedings we have the strongest arguments to encourage the Association in pressing for an amending Bill.

REVISED REGULATIONS FOR THE CONJOINT DIPLOMA.

We publish on page 1385 the text of the revised regulations of the examinations for the Conjoint Diploma of the Royal College of Physicians of London and of the Royal College of Surgeons of England. It may be a matter of surprise to some that it should have already become necessary to revise a scheme so recently issued that some of its provisions have never yet come into full operation. It has, however, for some time past been abundantly evident to those who are engaged in actual teaching work in the London schools that certain alterations were imperatively called for, unless the curriculum was to be considerably extended for most students beyond the limit of five years prescribed as sufficient by the General Medical Council. It is also noteworthy that other examining bodies, and in particular the Universities of Cambridge and London, did not follow the lead of the Conjoint Board in instituting an additional examination during the last period of the curriculum. This divergence of requirement rendered it difficult for a London student to combine the course of study for the degree of his University with that for the licence of the Conjoint Board; and what practically amounted to an additional discouragement was thus placed in the way of the student of medicine in the metropolis.

A careful consideration of the regulations as now revised convinces us that the alterations are such as tend in the direction of improving the curriculum, and of raising the standard of medical education, by leaving the schools and individual students a greater liberty of choice in the methods of clinical study without relaxing the safeguards imposed by examinational tests. The omission of elementary anatomy from the First Examination brings the conjoint curriculum almost completely into accord with the requirements of the above-named Universities, and disposes of a subject, the utility of an examination in which at this period of study has been widely doubted. Advantage has been taken of the opportunity afforded by revision to prescribe "that no candidate be rejected for a period of longer than three months, except upon the special resolution of the examiners." It seems to us that this particular regulation is open to more adverse criticism than the rest of the revisers' work. It may readily tend to increase the practice, already too prevalent amongst students, of presenting themselves before the examiners whilst ill-prepared, and of trusting to the uncertainty inseparable from examinations to obtain unmerited success. Probably the period of rejection should, as a rule, be not shorter than six months, and the briefer period of three months, though no doubt popular with a certain class of students, is less appreciated by those parents who have to pay fees for their sons' readmission to examination.

Objection has been raised to the facilities afforded by the new scheme for candidates to pass in midwifery a year earlier than in medicine and surgery. As a matter of fact, it is almost certain that the arrangements of the schools will be such as to make it convenient to the student to pass in all three final subjects at about the same date, and little advantage will probably be taken of the possibility of separating midwifery from the other great branches of professional training. General approval will, no doubt, be extended to the greater prominence given in the new regulations to the clinical part of the Final Examination.

THE SANITARY INSPECTOR AND HIS VICTIMS.

An article in the *Building News*, on the Defects of Modern House Arrangements, deals in feeling terms with the woes of the owner of house property. It is the fault of the dry season and of the apprehension concerning sanitary defects which prevails at such a time, the writer tells us, and he is led to prognosticate the following serious results: "The machinery of the Local Government Board is set in motion, a fussy local board or vestry busies itself, and the least hint or suspicion of something wrong arouses the meddlesome action of the sanitary inspector." And then, alas, woe heaped upon woe, there is the Notification Act, which requires that the medical practitioner shall "make notification of any case of a questionable character among his patients." In any event the inevitable consequence follows. "A sanitary inspector makes his appearance on the scene; he examines the drains and their house connections, the water supply, etc. He applies the 'smoke test' to the drains, and discovers a leakage that has been going on, perhaps, for years, and forthwith condemns the whole system. Both landlord and tenant are pounced down upon with merciless severity, as if other houses were not in an infinitely worse condition, and had been allowed to remain so for years, without any serious consequence." It might, perhaps, here be urged that a bird in the hand is worth two in the bush, and that having discovered a defect the best plan is to remedy it; moreover, the assumption that no serious consequence has resulted from infinitely worse conditions than those which obtain in a leaky drainage system is one that cannot be lightly adopted. But to return to the wrongs of the house-property owner: bad as the beginning has been, still worse remains behind. "The Public Health Act (1875) was enacted to compel property owners and others to provide sanitary dwellings, amongst other things; it was to make people sanitary who otherwise would not be. Further instalments of the law, like the Public Health (London) Act, 1891, have made it still more arbitrary and indiscriminating in its operation, so that those who have good fittings, though out of date, are treated similarly to those whose whose sanitary arrangements are of the worst order."

After this expression of feeling, and having dismissed the Public Health (London) Act, 1891, the article becomes more rational. We are told that the health of our houses does not entirely depend upon their drainage arrangements, and are urged to be mindful of the importance of cutting off ground air and moisture from the building, of providing a space beneath the floor boards and properly ventilating the same, and of so planning and constructing houses that the air in them may be changed continuously in summer and winter during every atmospheric condition. All this, undoubtedly, has an importance which sanitary officers are not likely to overlook, although they do insist upon the reconstruction of faulty systems of drainage. If a moral is to be drawn from the article on Defects of Modern House Arrangements, it surely is that we want an extension rather than a limitation of the present system. House-to-house inspection would ensure the remedy of the leaky drain before, instead of after, the occurrence of the case of infectious disease, and perhaps under such a system of house-to-house inspection the sanitary inspector would have an opportunity of detecting the "infinitely worse conditions" which the writer of the article in the *Building News* refers to. If the first section of the Public Health (London) Act, 1891, were fully carried into execution, and sanitary authorities made inspection of all premises in their districts, their action would at least be free from the reproach of dealing with the less evil while the greater was allowed to remain unremedied.

It is proposed by the Administrative Council of the Pasteur Institute to make an international appeal for subscriptions towards the erection of a monument to Pasteur.

We are informed that the complete report, with the statistics of the treatment by antitoxin in the hospitals of the Metropolitan Asylums Board, will be published when a period of twelve months from the introduction of the treatment in these hospitals has expired.

The Harveian Lectures, before the Harveian Society of London, on the Heart in its Relation to Pregnancy, Parturition, and the Puerperal State, will be delivered by Dr. M. Handfield-Jones on the evenings of December 5th, 12th, and 19th, at 8.30 P.M., at the Stafford Rooms, Tichborne Street, Edgware Road.

A CREMATORIUM and a chapel were formally opened on Wednesday, November 27th, at Glasgow. The building, which has cost about £3,000, consists of two floors or levels, the chapel on the high level, the incinerating chamber and attendant's rooms on the basement. The Rev. Dr. Donald MacLeod dedicated the building in the presence of about 500 persons, and Sir Charles Cameron, Sir Henry Littlejohn, and other representative persons addressed the meeting.

INFLUENZA IN LONDON.

THE deaths from influenza in London showed a slight further increase last week, being 15 against 4, 7, 10, and 11 in the four preceding weeks. Of these 15 deaths 7 occurred in North London—1 in Marylebone, 2 in Hackney, and 4 in Hampstead registration districts. The remaining cases occurred singly all over London. The mortality from diseases of the respiratory organs in London showed a further decline (being 327), and were 119 below the average.

CYCLING VERSUS MORPHINE.

IN Chicago—that city of hurrying men and restless women—there were, so a popular preacher said not long ago, no fewer than 35,000 persons who habitually took hypodermic injections of morphine to save themselves from the pains and terrors of neuralgia, insomnia, nervousness, etc. Cycling has become the rage in Chicago as elsewhere, and the morphine takers have discovered that a long spin in the fresh air on a cycle induces sweet sleep better than their favourite drug. The result is said to be that the number of those in Chicago who take hypodermic injections of morphine is diminishing. Exercise and fresh air are known to all doctors to be the cure for half the ills flesh—and especially nervous overwrought city-bred flesh—is heir to.

THE POLICE AND THE PUBLIC.

IN a recent case at the South-Western Police-court, Mr. Cluer, the presiding magistrate, having inquired why a doctor was not sent for at the request of the accused, who positively denied being drunk, was told by the sergeant that the reason was because the men were unmistakably drunk. Mr. Cluer, however, pointed out that in some persons drink produces illness, and that as a doctor is called at the expense of those who wish for him, the police had no right to keep people suffering for four or five hours when a doctor might relieve them. This is not only sound common sense, but is, we believe, in full accordance with the distinct instructions issued by the Commissioner of Police on the subject, which it would be well if all subordinate officers would take care fully to obey.

DAMP HANSOMS.

THE hansom cab is perhaps the most convenient hackney carriage in the world. It is light and handy to drive, reasonably safe, and to the trained Londoner not too difficult to enter. But it has one serious drawback, of which we are reminded every returning winter. This is that the seat is very liable to get damp in wet weather. A mile or two sitting on the soaked cushions may easily result in rheumatism, sciatica, or a general chill ending in a more or less serious illness. The hansom cabman is very amenable to public opinion, and if the public generally were to take to examining the state of the cushions before engaging the cabs, it is probable that means would be found to keep them dry. Even as it is the men take a good deal of pains, but are not too well seconded by their "fares," who are very disposed to leave the doors open on getting out, whereas a moment's care will shut them. The new cabs, in which the doors can be shut by the driver, are a step in the right direction, but the difficulty of the window remains. The "fare" does not generally welcome the invitation to "have the glass down," and with a single occupant the cushions may get very wet in a short drive. Some time ago a few cabs were to be seen in which the front was glazed in such a way that the occupant could shut the windows without running imminent risk of semi-suffocation, but for some reason or other they do not seem to have found favour either with the cab proprietors, who found them more expensive, or with the public, who in all such matters are extremely conservative. The window is the crux of the difficulty, but if public attention is called to the matter it ought not to be beyond the range of inventive ingenuity to find a remedy. Perhaps if the Society of Arts were to take the matter up and offer a prize for a really simple and practical pattern of window for hansom cabs, we might before next winter be able to drive *cito, jucunde, et—tuto.*

LIONS AND LAVENDER WATER.

A WIDELY SPREAD statement has been brought under our notice to the effect that though music has no charm for the lion and tiger, it has been discovered by a naturalist who has been conducting experiments in the Zoological Gardens that these animals are powerfully affected by the smell of lavender water; under its influence they become as docile as lambs. We have communicated with Mr. A. D. Bartlett, the superintendent of the Zoological Society's Gardens, on the subject generally, who writes us: "I am frequently amused by the funny notions and sometimes silly ideas of persons who talk and write about animals. The strange fads and mistakes they circulate are very curious; one of the fads is music, another perfumes. Now most animals have ears and nostrils, and use them, and doubtless are pleased or displeased with certain sounds or perfumes; for instance, all the cat family appear pleased with various perfumes, such as valerian, musk, lavender, and many others; it does not appear to me that there is anything very extraordinary in this. With reference to music, I live in fear that someone should state that our animals were charmed by the sound of the Jew's harp, or, worse still, the bagpipes, and that some kind friend might provide the keepers with a stock of these musical instruments to play in their leisure hours."

LEGISLATION FOR INEBRIATES: GOVERNMENT BILL.

AT a meeting of the Council of the Reformatory and Refuge Union and Prisoners' Aid Committee, held recently, Sir William Vincent, Bart., in the chair, a resolution was agreed to asking the Home Secretary to reintroduce the Inebriates Bill of the late Government, which was drawn on the recommendations of the Departmental Committees for England and Scotland, with such alterations as the present Cabinet might consider desirable.

THE HEADGEAR.

DR. BAMPTON (Ilkley) in a paper read before the local Medico-Chirurgical Society, observed that it seems probable that the most fruitful exciting cause of cold in the head is the chilling effect of the absurd headgear that men affect in a bleak winter. Where is the sense in wearing the same head covering whether the temperature is at zero or whether it is 70° F. in the shade? Nothing is more unsuitable for the purposes of warmth than a silk hat with a leather lining. We pride ourselves upon our civilisation, and yet an Esquimaux is in advance of us in the matter of winter head covering. Most of us have realised that it is folly not to keep our feet warm and dry by means of warmly-lined boots and rubber snow shoes. But few act upon the elementary principle of personal hygiene, that the head is also an extremity to be kept warm. Ladies and the working classes are not suffering so much at present for the reason, probably, that they wear something warmer than silk or felt hats. It is the professional and official classes who are at first mostly attacked, and thus become foci of infection. As men insist on clinging to their patent of respectability—the silk hat—it is to be wished that it was more generally known that a felt lining adds considerably to

the warmth of the head. By the substitution of this simple and inexpensive material for the usual leather, neuritis of rheumatic origin may be cured or prevented. It seems probable that persons who have once had influenza badly carry about with them for a long period the germs of the disease lying dormant, ready to spring into activity at the first chill taken. A similar fate befalls a patient who has lived in a malarial district. It is a recrudescence, not a fresh attack. Cold is the spark that ignites the magazine, the one element lacking to produce an explosion. How long infection lasts is uncertain; probably as long as there is cough or naso-pharyngeal catarrh. Patients are loth to be convinced that disinfection is necessary, nor will they submit to prolonged isolation, nor, in fact, to any isolation at all. Yet the public call out for the medical profession to do some great thing, and will not observe the elementary precautions themselves of avoiding chill, infected persons, or infected houses.

THE EDINBURGH HOSPITAL AT LEITH.

It will be remembered that the application of the Edinburgh Local Authority to the Leith Dean of Guild Court for permission to erect a temporary hospital for infectious diseases at Quarryholes on ground under the surveillance of the Town Council of Leith was somewhat summarily hustled out of Court; also that the matter came before the Court of Session, who administered a rebuke to Leith, and ordered the Dean of Guild Court to proceed in due legal form. Not content with this, Leith petitioned the Local Government Board not to sanction the erection of such a temporary hospital as was desired by the Edinburgh Corporation. Again Leith has been snubbed. The Board has now given official sanction to the plans and also to the site proposed, and, on the suggestion of Edinburgh, has in the meantime limited the period during which the hospital may be used to three years. The buildings will be of a temporary nature, and are to be constructed at the instance of the Local Government Board in case of an outbreak of cholera or other overwhelming epidemic.

HOME OFFICE INDUSTRIAL COMMITTEES.

A few weeks ago we announced in the BRITISH MEDICAL JOURNAL that the Home Secretary had appointed a Committee to inquire into the effects of certain dangerous trades upon the health of people engaged in various industries. Another Committee, with a similar object in view, has recently been appointed to inquire into wool sorting, bone and hair factories, brush making, the work of furriers and tanners (employments in which anthrax occurs), flock making, feather cleaning, etc. This Committee, which is composed of Colonel Meade-King, Her Majesty's Superintending Inspector of Factories, as chairman; Dr. Whitelegge, Medical Officer of Health for West Yorkshire; Mr. Whitby, a representative of the employers; Mr. Hutton, as representing the workers; and Mr. W. A. Beaumont, Her Majesty's Inspector of Factories, Bradford, as secretary, has already commenced its sittings in Leeds. Information as to the dangers to health or to life and limb to which workers in the various industries are exposed is invited from all persons interested in this question, and should be sent to Mr. Beaumont, of Bradford, as mentioned above; or if belonging to the other Dangerous Trades Committee, to Captain Hamilton Smith, Her Majesty's Inspector of Factories, Sheffield. It may seem strange to many people that Committees of such a character should be required in an age wherein so much has been accomplished for the public health, but the fact remains that there are still several industries that lie under considerable suspicion. There is no wish on the part of the Government to be unnecessarily meddlesome, or by placing undue restrictions to prevent the full development of our industrial resources, but it is most desirable that the health of operatives should not be seriously prejudiced by the work in which they are engaged. Metallic dust and the inhalation of obnoxious vapours in some of our factories, and the handling of skins and hair which have come to this country from foreign markets, are responsible for an increase in our death-rate. Any investigation, therefore, into the operation of these upon individual life, and any means that may be suggested as to how these dangers may be minimised, is sure to be welcomed not less by medical men than by the captains of our industries.

AN IRISH DISPENSARY DOCTOR'S DEATH.

One night last week, Dr. Kisby, of Raferagh Dispensary, Carrickmacross, was aroused from his sleep to attend a poor patient in his district. Rising from bed, he immediately set out to render what help he could. The house was about two miles away, the night was stormy and dark. He never reached the patient; and on a search being made the following morning he was found lying at the bottom of a deep pit, with his skull fractured. He was quite dead. Dr. Kisby had taken a short cut across the fields, and in the darkness had fallen into the excavation. He was greatly respected in his district, and his life was sacrificed in the discharge of duty.

THE HEALTH OF THE POPE.

Our correspondent in Rome writes: In consequence of the somewhat sudden fall in the thermometer which has taken place within the last week, the Pope was taken ill with a slight cold and hoarseness on the evening of November 22nd. The Holy Father, like most Italians, objects to any form of artificial warming of his rooms, and being of a very spare habit of body he is naturally susceptible to changes of temperature. Professor Lapponi has deemed it desirable, on account of his venerable patient's hoarseness, to advise the postponement of the private Consistory which was to have been held to-day (November 25th). The Pope has for once consented to this, though he is not always a very obedient patient in this direction. No one can doubt the wisdom of Dr. Lapponi's advice, as at the private Consistories—much more than at the public ones—the Holy Father has to read out the names of all the new bishops, as well as to address individually all the cardinals present. On inquiring at the Vatican this morning, I learn on the best authority that the Venerable Pontiff is much better, and that the private Consistory will be held on Friday next, and the public one on the following Monday.

CREMATION AND CRIME.

In an article on the advantages presented by cremation from a sanitary and economic point of view, and the progress that the practice is making in the several countries of Europe, the editor of *Gesundheit* offers some pertinent remarks on the forensic objections so generally urged against it as precluding the possibility of exhumation in cases where a suspicion of foul play is raised subsequent to the funeral. Murder may be, he says, by violence or by poison. The former may be recognised by the simple inspection of the body after death by any competent medical man, but no external examination can determine the mere fact of death having been caused by poison. It is only the actual presence of the poison in the body that can be used as evidence, and poisons may be either organic or inorganic. The minute quantities of the former needed to cause death, and the delicacy of the tests required, render their detection at all times difficult and uncertain. Indeed, the evidence of analysis can rarely be available for conviction unless as confirming suspicions raised by the symptoms observed during illness, when neither interment nor cremation would be permitted until the question was solved, while the instability of these substances and their liability to share in the decomposition of the corpse make it practically impossible to discover and isolate them when putrefaction has set in. We are not aware of a single instance in which this has been done as the result of an exhumation. It is different with inorganic poisons, but the symptoms of death from mineral acids and corrosive poisons

could not be overlooked during life, and arsenic, copper, and lead, as well as other metals foreign to the tissues might, if need were, be identified in the ash; but the fact is that in all countries where cremation is regularly practised special precautions are enjoined. In Italy, for example, while an ordinary certificate of death is accepted for interments, a more stringent form, having the character and under the sanctions of a sworn declaration that the medical attendant has observed the course of the illness, and has no doubt as to the diagnosis, is required for cremation. Should he feel the least hesitation in signing this a *post-mortem* examination and an analysis of the viscera have to be made by an official expert. These precautions have actually led to the discovery of accidental poisoning by copper in coloured sweets in the case of a child which had, in the first instance, been certified by the medical man to have died of enteritis or diarrhœa, and, further, to the tracing and seizure of the stock of adulterated confectionery. The real question, indeed, is whether interment without *post-mortem* examination, or cremation with the strictest pathological and toxicological inquiry, is the best calculated to secure the detection of poisoning. There can be no doubt that the existing practice of burial on the evidence of certificates by the registrar, given on the mere statement of the friends, perhaps the guilty parties, is open to grave abuse, and that if we cannot have necropsies in every case, the nature of which is not self-evident, the multiplication of these, by the extension of cremation, would tend to the prevention *pro tanto* of foul play.

DIPHTHERIA IN LONDON.

The mortality from diphtheria in London showed an increase last week, the number of deaths attributed to this disease being 69, against 72, 75, and 61 in the three preceding weeks; this number exceeded by 27 the average for the corresponding week of the ten preceding years. During the past six weeks the deaths from diphtheria in London have averaged 69. Of the 69 fatal cases recorded last week, 46 were of children under five years of age, and 21 of persons aged between five and twenty years, while only 2 were of persons aged upwards of twenty years. After distributing the deaths that occurred in the Metropolitan Asylums Hospitals and other public institutions to the sanitary areas in which the patients had previously resided, it appears that 4 cases belonged to Paddington, 5 to Kensington, 6 to St. Pancras, 9 to Poplar, 4 to Battersea, and 5 to Greenwich sanitary areas. There were 688 cases of diphtheria under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, and 203 new cases were admitted during the week.

A HEAD CASE.

One of those cases which so often bring trouble to house-surgeons occurred at Dublin the other day. A man, who had taken some drink, fell down the stairs of a music hall, and was conveyed to Jervis Street Hospital by a policeman. The house-surgeon made an examination, could find no injury, and declared the man to be under the influence of drink; and he was accordingly taken to the police station. Here he was locked up in a cell. He was noisy, challenged a fellow prisoner to fight, and generally was quite a lively person for some hours. Then he became quiet, and later on the police noticed that he was breathing heavily and was quite unconscious. He was at once conveyed to Mercer's Hospital, but he was there found to be dead. The *post-mortem* examination showed a large extravasation of blood on the brain, and generally diseased organs. The coroner's jury declared that no one was to blame. We refer to the case to accentuate the importance of its lesson to young resident medical officers. They have to bear great responsibility, and the reputation of the hospital is in their hands. Of course it would be impossible to turn a ward into a place for receiving all drunken persons who had met with some apparently trifling accident. But cases of this kind, in which the patients are probably suffering from chronic alcoholism as well, ought to be examined with the most scrupulous care, and generally regarded with some suspicion. With diseased organs and diseased arteries these people are particularly likely to suffer much from slight violence, and it is always better to give a bed to a case of alcoholism, and to have the diagnosis verified in the morning, than to send it away quickly to discover that death has decided all doubts. Cases of this kind ought to have the effect of inducing the governors of all general hospitals to provide a special ward for the reception of doubtful cases of injury in which alcoholic symptoms are prominent. So long as this precaution is neglected, the governing bodies must bear the major part of the blame of such unfortunate occurrences as that here related.

THE HUXLEY MEMORIAL.

The first meeting of the General Committee formed for the purpose of establishing some memorial to the late Professor Huxley took place on November 27th at the Museum of Practical Geology, Jermyn Street. The Duke of Devonshire presided, and, in opening the proceedings, sketched the official connection of Professor Huxley with the Science and Art Department, and described the great public services he had rendered in that connection. Lord Kelvin, in moving that it was desirable to establish a memorial to the late Right Hon. T. H. Huxley, dwelt on the late Professor's devotion to the work of original investigation and his achievements in comparative anatomy, biology, geology, and palæontology. Mr. Arthur Balfour, who seconded the resolution, said Professor Huxley, as a man of letters and a man of science, surely deserved from his fellow countrymen some permanent memorial. In the critical period of scientific history which followed the publication of *The Origin of Species* he did more than any other man to stimulate public interest in the subject and to bring into line all the younger scientific thinkers of the day. Lord Playfair supported the resolution, which was unanimously carried. Sir Joseph Hooker moved a resolution that the memorial take the form of a statue, to be placed in the Museum of Natural History, and a medal in connection of the Royal College of Science, the surplus to be devoted to the furtherance of biological science. Mr. Leslie Stephen seconded the resolution, which was carried, and an Executive Committee was appointed.

THE MISSING LINK.

On November 22nd, Dr. Dubois from Holland delivered an address on "Pithecanthropus Erectus: a Transitional Form between Man and the Apes," in the new buildings of the University of Edinburgh. Professor Sir William Turner, on whose invitation Dr. Dubois came to Edinburgh, presided, and introduced the lecturer. By order of the Dutch Indian Government Dr. Dubois conducted from 1890 to 1895 explorations in Java for a fossil vertebrate fauna, of which some remains had already been discovered many years ago by various investigators. These vertebrate remains, which were found abundantly at Trinil, on the southern slope of a range of low hills, the Kendeng, were contained in beds of cemented volcanic tuffs, consisting of clay, sand, and lapilli-stone, of fluviatile origin. The whole formation of the strata reached a maximum thickness of 30 metres, cut up to a depth of 12 to 15 metres by the channel of the river Solo. The strata in question rest on beds of marine marl, sand, and limestone, and are of the Pliocene age, as Professor Martin has determined. In August, 1891, Dr. Dubois, working in these strata, came upon a large number of fossil remains of various vertebrate types, and among them the bones and teeth of a great man-like mammal, to which he had given the name of "Pithecanthropus Erectus," because he considered it a link of con-

nection between man and the apes. A year ago he published a provisional description of these remains, and the criticisms since then had shown much divergence of opinion. Only in regard to the femur was there anything approaching unanimity of opinion, and it is regarded as human. Virchow alone has suggested that it might have belonged to an ape. For normal human proportions the cranial capacity was too small for the femur; but microcephalic skulls of the atavistic class can be relatively smaller, while the height of the body is more than that of pithecanthropus, as computed from the length of the femur. The skullcap had given rise to very great divergence of opinion, some taking it to be that of an ape, others, including Professor Cunningham, regarding it as undoubtedly human. Dr. Dubois entered into details of measurement, etc., that seemed to prove that the skull was more human than ape. He then referred to the molar tooth in some detail. All the facts and circumstances seem to Dr. Dubois to afford evidence of a form intermediate between man and the anthropoid apes. He believed the form to be a transitional one, and in the direct genealogy of man. Some discussion followed, in which Professor Cossar Ewart, Sir William Turner, and others took part. Dr. Dubois delivered an address on the same subject to the Anthropological Society in London on November 25th.

THE ROYAL PHYSICAL SOCIETY OF EDINBURGH.

At the first meeting of this Society, held on November 20th, Emeritus Professor Struthers, M.D., LL.D., in the chair, Dr. William Russell, the retiring President, delivered the opening address, his subject being the Light Thrown on some Biological Processes by the Investigation of Disease. He discussed the functions of the ductless glands as illustrated by the thyroid, whose functions had been discovered as a result of diseased conditions. Cretinism and myxœdema and their relation to the thyroid and to blood serum were referred to. He discussed the nature of immunity and some of the methods by which it was attained. This immunity appeared to enter into every tissue, and might even be transmitted. The whole subject was full of endless ramifications and possibilities, many of which could not yet be discussed scientifically.

CHOLERA IN ST. PETERSBURG.

Our St. Petersburg Correspondent writes: It is officially announced that cases resembling cholera began to appear in St. Petersburg as long ago as October 10th (22nd). Between the 10th (22nd) and 26th (November 6th) there occurred in all 27 such cases, 12 of which ended fatally. The daily bulletins, which had become so familiar during the last three years, are again being published in the papers by the municipal authorities. In these the cases are still described as "resembling cholera," but I am informed that in some, at least, the cholera bacillus has been found. Between October 26th (November 7th) and October 31st (November 12th), both days inclusive, 21 cases were reported, with 12 deaths, and between November 1st (November 13th) and November 9th (November 21st), both inclusive, 43 cases were reported, with 21 deaths. There have, therefore, been altogether 91 cases, with 45 deaths; and at the present moment 28 cases remain under treatment.

SIR WILLIAM MACGREGOR, M.D., K.C.M.G.

Sir William MacGregor, Lieutenant-Governor of New Guinea, who recently had a narrow escape of being murdered while paying a visit to a friendly tribe, is a member of the medical profession. He took the degree of M.B. in the University of Aberdeen in 1872, and that of M.D. in 1874. He was appointed chief medical officer of Fiji, afterwards becoming Deputy Administrator of that colony, and some years later Lieutenant-Governor of British New Guinea, where he has earned a very high reputation as an able and successful administrator. The example of Sir William MacGregor, taken in conjunction with those of Sir George Robertson, Sir John Kirk, Sir Rutherford Alcock, and Dr. L. S. Jameson of Mashonaland, would seem to prove that a medical training is one of the best possible preparations for the government of new countries, particularly when natives have to be conciliated. Scientific medicine is the most powerful of all civilising agencies, and the knowledge of human nature which the study of it gives, together with the living conviction which it engenders that the foundation of good government is to keep the people healthy, help to make a medical man who is otherwise qualified to be a leader of men the best possible ruler of countries in the transition state from barbarism to civilisation.

CONVOCATION AND THE NEW UNIVERSITY FOR LONDON SCHEME.

A meeting of members of Convocation of the University of London was held on November 25th to consider what steps should be taken in view of the effort which is being made to secure the support of the Government for Lord Playfair's Bill, which is intended to give effect to the report of Lord Cowper's Commission, and override the existing rights of Convocation. In the discussion which took place it was stated that at a deputation to the Duke of Devonshire and Lord Salisbury, on June 13th last, the suggestion was made that should the Bill be introduced in the Lords an amending clause should be proposed which would insist on the scheme, when arranged, being submitted to Convocation for approval in the manner prescribed for senatorial elections. It was understood that the Duke of Devonshire and Lord Salisbury approved of such a clause. Sir John Lubbock has similarly pledged himself in his electoral address of July 1st of this year, that unless such clause were inserted he would oppose the Bill in the House of Commons. Those present felt they had a right to assume that under these circumstances the Unionist Government would not be likely to support the Bill without alteration.

MATERNAL SUCKLING.

The Tsaritsa is to be congratulated upon having both the determination and the ability to dispense with the services of wet nurses, and to undertake herself the duty of nourishing her infant daughter. It is said that she is the first Empress of Russia who has ever done so. Fashion is responsible for so much in all that pertains to woman that this event may possibly be life-saving to many infants yet unborn. It no doubt is true that the habits of modern life do unfit a certain number of women for the proper fulfilment of their maternal duties, but there is much reason to believe that the neglect of their infants, which is so common nowadays, is far more often due to fashion than to any real inability to afford them a proper supply of nourishment, and anything which will set the fashion in the direction of more natural methods in the rearing of infants will be of much service in checking the spread of many forms of infantile degeneration.

THE SECRET OF CENTENARIANISM.

A "chiel" from *Tit-Bits* has been with Sir Benjamin Ward Richardson, "takin' notes" of his opinions on things in general, which he has printed for the edification of the readers of that educational periodical. The eminent physician fought all his scientific battles o'er again, and confided to his appreciative listener many interesting details as to his professional career. With these we have no concern at present. On one point, however, as to which the interviewer was particularly eager to hear the deliverance of the oracle, the reader will doubtless to some extent share his curiosity. Sir Benjamin gave it as his "fixed opinion that every man, and every woman for that matter, should attain the age of 100." He proceeded to show how this was to be

done. First of all, as we gather, the would-be centenarian must have "light hazel eyes, light brown hair, complexion inclined to be florid, lips and eyelids of a good natural red—never pale, and rarely of a bluish tint." Then he must never smoke and never drink—the prohibition is absolute, but we presume the restriction applies only to alcoholic liquors; further, he should eat very little meat. He should work as little as possible by artificial light; in fact, one of Sir Benjamin's most widely quoted sayings, we are told, is: "Make the sun your fellow workman." If, by the way, this rule is strictly adhered to in this country, few people are likely to die of overwork. What the colour of the eye may have to do with longevity does not seem to have been revealed to the interviewer. An American authority professes to be able to diagnose a predisposition to centenarianism by the length and breadth of the head; he says nothing as to its thickness, which yet may help to make a man's days long in the land. As to the rigid abstinence from tobacco and alcohol enjoined by Sir Benjamin Ward Richardson on all candidates for the long distance race of life, it has almost as slight a basis of fact as the importance he attaches to the colour of the eyes. Immoderate drinking of whisky, like immoderate drinking of tea, or for that matter immoderate eating of bread, will shorten life; but what evidence is available on the subject seems to show that a strictly temperate use of alcohol tends to prolong life, for the excellent reason that it assists digestion, and thereby promotes health. The most trustworthy statistics on this subject are those of Sir George Humphry. Of 45 cases of centenarians collected by him only 12 were total abstainers, while 30 were moderate drinkers, and 3 were heavy drinkers. Of 689 persons between 80 and 100 years of age in Sir George Humphry's tables only a fraction over 12 per cent. were abstainers, while nearly 9 per cent. were heavy drinkers. The abstainers would appear from these figures to have only a slight advantage in point of longevity over the non-abstainers. The real secret of centenarianism is well expressed by Sir George Humphry when he says: "The prime requisite is the faculty of age in the blood by inheritance." In other words, if you wish to live a hundred years you must, as Oliver Wendell Holmes said of another matter, begin by going back two or three hundred years, and securing for yourself a sound and long-lived ancestry.

THE SALVATION ARMY SHELTER.

On November 21st the hearing of the summons against the "captain" of this shelter for overcrowding was again resumed at the Southwark Police Court, and the case was concluded. It was contended by the prosecution that the cubical air space of the shelter was only sufficient for the accommodation of 400 persons, while on the other hand witnesses were called for the defence who stated that 800 or even more persons could be accommodated without injury to health. One of these witnesses, who stated that the building would fairly accommodate more than 800 persons, observed that 12½ square feet of floor space and a cubic space of 100 feet was sufficient in that place, but would not be sufficient everywhere. This witness added that if the London County Council required 36 square feet and 300 cubic feet in common lodging-houses no doubt there was good reason for it, but in this shelter less was sufficient because of the great attention which was paid to cleanliness and ventilation. The magistrate, Mr. Slade, said he was satisfied the shelter had been overcrowded, the lowest of the numbers admitted during July and up to August 5th, when the summons was issued, being 743, a number which would overcrowd the shelter so as to be injurious to health. In order to save time and expense Mr. Slade added that personally he would not be prepared to convict for overcrowding at this shelter if the number of 550 were not exceeded; an order would be made to prohibit the recurrence of the nuisance, with 4s. costs. The magistrate's decison is an important one, and although he was dealing only with a particular case, his standard will no doubt be quoted in the future in connection with the fixing of a limit to the degree of crowding which is to be permitted in other instances. The standard does not seem to be a high one, but it is a great gain to have reduced the crowding to the extent implied by the magistrate's decision. The Vestry of St. George the Martyr and their medical officer of health, Dr. Waldo, have done good service in calling attention to the condition of the shelter, and in showing the need of regulating the extent of crowding which is to be permitted in such places.

AN IMPORTANT DECISION.

It will be remembered that a case was heard in Dublin some months ago in which an action was taken against Dr. David Hadden for having improperly declared that an employee of the plaintiff Mason was suffering from small-pox, when she was not so suffering from that disease. The plaintiff obtained £100 damages, and the defendant on November 26th applied to the Court of Exchequer to set aside the verdict on the grounds of misdirection and of non-direction by Mr. Justice Murphy, who heard the case, in refusing to direct a verdict for defendant, and because no evidence was given of negligence or want of skill on the part of the defendant proper to be submitted to the jury. The Lord Chief Baron, in delivering judgment, said that there was nothing in the entire case to be found which could legitimately have been left to the jury as evidence to displace the affirmative evidence of Dr. Day, that at the time he saw the patient small-pox might reasonably be diagnosed. It followed that there was no evidence to support the plaintiff's case. The verdict must be changed, and there must be judgment for the defendant with costs. Mr. Justice Anderson concurred.

SEA WATER FOR LONDON.

The next session of Parliament will, we are informed, have before it a scheme for providing a supply of sea water for London and certain places on the route. The intention is to take in the water from the sea opposite Lancing, where all the pumping machinery will be situated. It will be pumped thence to a large reservoir in an elevated position at Steyning, whence it will flow by gravitation to another reservoir at Epsom. From this reservoir it will be distributed over London, the parts to be first supplied being the West-end and central portions. It is stated that local authorities will be supplied with sea water for flushing sewers, watering streets, and other public uses, such as swimming baths, and that sea water baths will be supplied to hotels, hospitals, schools, etc. We hardly need point out that the success of such a scheme is likely to depend on the price at which the sea water can be supplied. As to any relief to present sources of water supply by using sea water for public purposes, it should be mentioned that the quantity proposed to be provided is stated to be only 10,000,000 gallons per day, while the average daily supply of water to London amounted in 1893 to over 190,000,000 gallons.

MEDICAL CERTIFICATES AND THE SCHOOL BOARD.

Mr. Sharp, the Chairman of the School Accommodation and Attendance Committee of the London School Board, has published a letter in explanation of the action of the School Board in appointing medical officers to supervise the medical certificates, or, in the words of the resolution of the Board, "to examine cases in which the medical certificate produced is considered by the divisional superintendent to be doubtful." The matter has a far wider bearing than Mr. Sharp seems to imagine. It involves first the great question in medical ethics as to the propriety of any medical man visiting, investigating, and reporting upon a patient who may be under the care of another doctor. In regard to this side

of the question we cannot expect Mr. Sharp to have any sympathy, or indeed, any knowledge; he will probably dismiss it as a matter of "medical etiquette"; but, nevertheless, it is certain that the feeling in the profession is so strong on the point that few will ever be likely to undertake so thankless an office. But besides this there arises the whole question, Why should medical men go to the trouble and undertake the responsibility of giving these certificates if they are not to be accepted as excusing the children from attendance at school? If the medical certificate is not to save the parent from further trouble, there seems no reason for giving it. The resolution of the Board "That the names of the doctors selected shall be forwarded to the magistrates having jurisdiction in the division" seems to be extremely ill judged. The obvious intention of this resolution is to suggest to the magistrate that the evidence of these gentlemen is to be accepted with some special consideration. It is to be hoped that most magistrates will recognise that the evidence of official witnesses must be carefully scrutinised.

FREE DISINFECTION.

Without underrating the value and necessity of a Government audit of the accounts of local sanitary authorities, it is possible to entertain much doubt as to the value of the criticism upon items of sanitary expenditure in which some auditors are in the habit of indulging. As an instance in point, Dr. Barwise, in his annual report as county health officer for Derbyshire, calls attention to the objections raised by the auditor in more than one district to the outlay incurred by the gratuitous distribution of disinfectants to infected households. This is surely a matter of which the local authorities, under the advice of their medical officer of health, and not the auditor, are the best judges. His objection can only mean that the disinfectants should be of a cheaper kind, or distributed in less quantity, or to fewer households, or not at all. Dr. Barwise supplies several excellent and obvious reasons for leaving these questions to the discretion of the proper authorities, and for encouraging, rather than hampering, their efforts in the direction of disinfection. The object of giving the disinfectants, he says, is to protect the public rather than the household, and the ratepayers, if so disposed, may reasonably claim to be allowed to take care of their own safety at their own cost. If the matter is left to the householder, his choice may fall upon useless disinfectants, or no disinfectants at all. If it be said that the free supply should be limited to the very poor, there is no machinery, no officer whose duty it is to make the financial inquiries upon which this invidious distinction could be based. This is plain common sense, with an application to other details than those of disinfection, and we hope that the one department of the Local Government Board to which the country looks for light and guidance in the prevention of infectious diseases will take note of it.

A LINK BETWEEN HOSPITAL AND PRIVATE PRACTICE.

An inquiry has been instituted by the secretary of a special hospital in London as to the practice current at other hospitals in regard to supplying the names and addresses of members of the medical staff to applicants desirous of privately consulting one or other of them. Information was received from 95 institutions; at 79 of these, including Charing Cross, University College, St. George's, London, King's College, Guy's, and Middlesex, in London, the custom seems to be to furnish a complete list of the staff in their order of seniority. The St. John's Hospital for Skin Diseases not only does this, but adds in red ink the time at which the members of the staff state that they attend at their private residences. At the other 16 institutions various plans are adopted; 6 of these merely refer the applicants to the *Directory*, a plan which of all others seems to be the simplest and least compromising. Doubtless at some of the special hospitals this method of notoriety, *viâ* the hall porter, may be productive of guineas, and just to that extent is to be reprobated, but we should imagine that at the large general hospitals such a mode of introduction is extremely uncommon. In any case we would appeal to the members of the staffs of the great hospitals, who have doubtless not given thought to the matter, to take care that such a system of introduction is put an end to. It will be obvious that the publication of the results of this inquiry by a particular special hospital can only have been for the purpose of showing that the proceedings there current were somewhat similar to those in operation at other and much more important institutions, and of thus obtaining some countenance for its own doings. It seems to us a degrading thing that any member of the staff of a great hospital should be driven by the custom of the place so to place himself in the hands of the porter; it is a plan which is open to very serious objection on the part of the general practitioner; and on the very lowest ground, especially seeing how the example is being exploited, it may fairly be suggested that *le jeu ne vaut pas la chandelle*.

THE PORTSMOUTH MEDICAL UNION AND THE CLUBS.

We are glad that a complete victory has been gained by the Portsmouth Medical Union, and that Dr. Frederick Lord, who has held the post of lodge surgeon for the last twenty years, has been re-elected by a very large majority. It must be a matter of satisfaction to him that he has received the united and cordial support of the medical practitioners residing in this large centre, and it clearly indicates the esteem in which he is held by his professional brethren. We desire heartily to congratulate all who have taken part in the battle, which has been fought and won by united and honourable effort. Practitioners holding lodge appointments are frequently exposed to similar unjust treatment, involving a reduction of salary in combination with increase of professional duty, and surely this triumph at Portsmouth ought to stimulate them to defend themselves, and to stand firmly shoulder to shoulder in the hour of trial. Many devices for developing new systems of medical defence have lately been freely discussed, but in conflicts of this kind it would be useless to appeal for help to any central organisation. Practitioners in every locality must look to themselves to develop an efficient system of united action, ready to cope with all such emergencies. The Branches of our great Association scattered throughout the country should form the Medical Unions of the future, and become the instruments for sustaining the rights as well as the honour of the medical profession.

SANITATION IN JAPAN.

Dr. Eldridge states that during the late epidemic there were 1,382 cases of cholera in Japan itself, representing, probably, the invasion of at least a hundred different localities, and yet, with the exception of certain of the military ports at which the imported cases were first received and where it has been most successfully handled and restricted, the disease has in every instance been stamped out with the occurrence of the first half dozen cases. Considering that thousands of troops and coolies are now returning to their homes the work accomplished this year by the Japanese in controlling and limiting the spread of cholera is not only marvellous but, he thinks, unprecedented. Until within a few years the introduction of even a single case of cholera practically ensured a widespread epidemic. The sanitary system of Japan dates from 1877 only, and its officers have had to be educated and trained *ab initio*. As a matter of fact the Government has had so far during the present emergency no advice or assistance whatever from foreign experts.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1895.

Tuesday, November 26th.

Sir RICHARD QUAIN, Bart., in the Chair.

THE Winter Session of the General Medical Council took place at the Royal College of Physicians. This is the fifty-ninth session of this Council.

THE PRESIDENT'S ADDRESS.

The PRESIDENT opened the proceedings with the following address:

GENTLEMEN,—In formally opening this, the fifty-ninth session of our Council, I have to express great regret and disappointment that the Council has been prevented from meeting in its own chamber, and that it may thereby be put to inconvenience. We are, however, very much indebted to the Royal College of Physicians of London for the readiness and courtesy with which they have afforded us the use of their library, as they have done on many previous occasions. I am desirous of fully informing the Council as to the difficulties with which we have been met. The freehold of our premises had been purchased, the designs for the new building had been approved of; Mr. Porter, the architect, had entered into negotiations with the owners of the adjoining premises for the purpose of arranging as to the contemplated alterations in the building, and, as far as was known, with satisfactory results. The contract having been signed, the building proceedings had progressed, the chief surveyor of the Office of Works had inspected the premises, and stated his readiness to report that the building would not interfere with their tenant of 16, Hanover Square. It was found, however, on a copy of the sub-lease to Mr. Rogers, the tenant of the house in Hanover Square, being forwarded them from the Office of Works, that besides the usual conditions safeguarding the rights and privileges of Mr. Rogers, there was an exceptional clause in this sub-lease which provided that the Office of Works must not "increase or permit to be increased the height of the building situate at the rear of the messuage and tenement and premises hereby demised and now occupied by the Council of Medical Education ..... without the consent in writing of the said Joseph Rogers." Under this clause Mr. Rogers made certain representations to the Office of Works as to the increased height of the building, whereupon on September 18th, 1895, the secretary of the Office of Works communicated to me, for the information of the Council, that "in these circumstances the Board's solicitor advises them that they are not in a position to consent to the proposed alterations unless the Council can come to some arrangement with Mr. Rogers." Placed in this position, a communication was opened with Mr. Rogers and his representative, who made a most unreasonable pecuniary claim for so-called compensation, a demand which could not possibly be acceded to. Much time, involving great anxiety, has been devoted to the subject, with the result of preventing the continuance of the building, and its arriving, as it would otherwise have done, at completion long ere this. As a result, however, of the negotiations the plans have now been modified, and have been so far approved by the First Commissioner of Works, but these modified plans would leave the Council Room roof at a lower elevation than would be architecturally acceptable, and would leave the arrangements for the accommodation of strangers inconvenient. When finished, however, as we anticipate our chamber will shortly be, the members of the Council will, I hope, have every reason to be satisfied with the accommodation which we shall be able to provide for them. They will find that the warming and ventilation have been carefully attended to, and that the drainage, which was found to be most defective, has been effectually remedied. This has been done by connecting the house drain with the main sewer in Oxford Street at a depth of 58 feet. The Council is greatly indebted to Dr. Thorne Thorne and Mr. Teale, our fellow members, for the trouble they have taken in reference to these particular subjects. Having thus informed the Council as to the subject of the building, I do not propose to occupy your time by any lengthened observations, for I entirely agree with an opinion expressed to me by several members of the Council that the present session should be devoted to the consideration only of matters of pressing necessity, and that other business, important but less urgent, might be postponed to the May session. The report of the Examination Committee on the Reports of the Visitor and Inspector on the Final Examinations considered as a whole, together with the recommendations of the Committee, is ready, and may be considered now or postponed, as the Council may think fit. A report is being prepared by the Public Health Committee on the examinations in that subject by some of the bodies, but there still remain two to be inspected. A report will also be presented on one out of the four examinations for licences in dentistry, but the Dental Education and Examination Committee will postpone their report thereon till the inspection of the other bodies is completed. I have pleasure in informing the Council that considerable progress has been made in the preparation of the new edition of the *British Pharmacopœia*. The members of the Pharmacopœia Committee met on three days in July—24th, 25th, and 26th—and on two during the current month—22nd and 23rd. The several valuable suggestions made by the medical authorities in this country have been carefully considered, including points of construction in the *Pharmacopœia*, alterations in the various classes of preparations, as well as in many individual preparations. The whole of the large number of suggested additions and omissions have been considered. The suggestions of the Indian and other colonial authorities have also, so far as possible at present, been dealt with. A committee of the Pharmaceutical Society has aided, and is aiding, the Council in the production of the work. The Editor reports satisfactory progress in all its sections, some portions of the work having been already set in type, printed, and placed before the Pharmacopœia Committee. The co-operation of referees, as stated in the report of the Committee in June last, has been invited and cordially rendered. In Pharmacology, Dr. Lauder Brunton, Professor Fraser, and Dr. Walter Smith are prepared to render their assistance; in chemistry, Dr. Thorpe, with Professors Tilden and Emerson Reynolds; in botany, Mr. Thiselton-Dyer and Mr. Holmes. We may thus anticipate that though the period for the production of the *Pharmacopœia* may be somewhat postponed, the delay will be compensated for by satisfactory results. I have caused to be printed, for the convenience of the Council, in a separate form important documents in connection with the Conjoint Board of the Royal College of Surgeons and the Apothecaries' Hall of Ireland, which include the representation made by the Council to the Privy Council on the subject of deficiencies in the examinations of this Board, together with the observations on the subject addressed to the Privy Council by the College and the Hall; also a letter from the Lord President of the Council, in which his Grace points out that, the Conjoint Board having ceased to exist, it was unnecessary to take further action in the matter. A further communication to the Privy Council, from the Secretary of the late Board, has indicated the apparent necessity for a continuation of the proceedings of the Board for the examination of candidates who might, by their previous arrangements, have a claim to be examined. The opinion of the legal advisers of the Council will be submitted, together with the documents. It will be seen also that the Apothecaries' Hall of Ireland, regarding the Conjoint Board as having ceased to exist, makes an application to the Council for the appointment of assistant examiners in surgery in accordance with the provisions of Clauses 3 to 5 of the Medical Act (1886). In reference to the subject of penal cases, which happily on this occasion are but few—indeed, there would seem to be but one case which can be brought before the Council during the present session—I may mention that there has been, in the opinion of the Penal Cases Committee and the solicitor, no well established case of "covering," of which there have usually been several, and I trust I am not premature in congratulating the Council on its action, by which there is every prospect that this

obnoxious system is being steadily put an end to. There are two cases of practitioners on whom, in accordance with the option provided by the Standing Orders, the Council did not, on hearing their cases in November, 1894, and May, 1895, respectively, proceed to pass judgment, thus affording them an opportunity of satisfying the Council that the conduct complained of had been discontinued, and of this they submit evidence to the Council. The Council should be informed that the Solicitor has prosecuted Mr. Allinson for the continued use of a medical title of which he had been deprived. The case was heard by the magistrate at the Marylebone Police Court on June 25th, 1895, and Mr. Allinson was fined £20 and £10 10s. costs, or in default of distress a month's imprisonment. His counsel asked for a "case," which was granted by the magistrate; but I am informed that the defence has not accepted the "case" as stated, and will not proceed further in the matter. The prosecution of a similar case in Leeds has been postponed until the final decision in the case of Mr. Allinson. It will now be proceeded with. The consent of the Council will be asked for the prosecution of a person to whom the Council's attention is drawn by the Royal College of Physicians of London. The case is one in which an individual, not being registered, assumes a professional title, is engaged in the treatment of diseases, and circulates indecent publications. Communications, which will be found in the programme of business, have been addressed to the Council on matters in which the constitution and functions of the Council are concerned. It seems to me that, in my capacity as President, it is my duty to notice, however briefly, some of the suggestions which not for the first time have been made in regard to these subjects. For instance, it is suggested that an increased number of direct representatives of the medical profession should be elected on the Council, and that certain functions, in which such direct representatives would have a special interest, might then be assigned to, or undertaken by, the Council. With reference to the functions of the Council, we must remark that this Council is the creation of the Crown, acting on the advice and with the consent of both Houses of Parliament, as expressed in the Medical Acts, and created primarily in the interests of the public to secure for that public competent professional aid. As I have just said, the protection of the interests of the public is the first duty assigned to the Council, as instanced by the means taken to secure the efficient education and competent skill of the members of the medical profession. This is accomplished by improvements in the course of study and in the prolonged curriculum. It is not possible, nor is it necessary here, to enter into details as to the methods by which this has been effected. Much has been already done, and it is thus, by further improving the standard of education and exercising the powers which the Council possesses of removing unworthy members from the ranks of the profession, that our status will be elevated and the real interests of our members secured. The Council has had assigned to it the duty of forming an accurate *Register* of competent practitioners; and to keep that *Register* free from all unworthy elements. The Council has also the duty of preparing and publishing the *British Pharmacopœia*. There are many very estimable persons who would call on the Council to undertake other duties, such, for example, as taking cognisance of matters of professional etiquette and improper conduct and action, whether in the relations of the profession to the public or among members of the profession itself, and without question, many of these grievances may be deserving of investigation and censure. The duty of investigating the subjects to which I refer should come under the notice of the licensing authorities which have conferred the licence to practise on the individual complained of. Several of these bodies can and do exercise these controlling powers, and what some do all should be induced to do. By this action on the part of the medical authorities, by putting in force their by-laws and regulations, many of the grievances which our profession justly complain of might be remedied. The duties of the Council are of a far higher and a more important character, which promise every year to become of yet greater public importance, and I am satisfied that were the Council to interfere in these matters of ethical detail it would but lose its authoritative influence with the Government and would give only doubtful satisfaction to the public. In reference to the constitution of the Council argument in favour of the election of additional direct representatives is deduced from the practice of, amongst other bodies, the Incorporated Law Society. Now, it must be observed that this Society, which is very similar in its constitution to the British Medical Association, though chartered, is a purely voluntary association, comprising amongst its members only a portion of the qualified practising solicitors. They each subscribe 1 guinea per annum. This body can and does institute inquiries into the conduct of members of the profession against whom complaint has been made by any member of the public. If the Council of the Society is satisfied that a case is made out, they appear in support of it before a Common Law judge, who gives a decision upon it. This system contrasts very much in favour of our Council, which is itself empowered to investigate charges made against delinquent members of the profession, and itself to pass upon them a judgment from which there is no appeal. It is said in favour of the election of additional direct representatives, that the medical practitioners, who contribute by their registration fees to maintain the Council, should have a larger share in its constitution. Again, a comparison may be made with the profession of solicitors. Solicitors pay large apprenticeship fees, and they have to render prolonged unpaid service to the solicitors to whom they are articled, they pay fees for education and examination, and, before being admitted to practise, they are required to pay stamp duties to the Inland Revenue authorities amounting to £110. They also pay annual fees for a licence to practise in London of 9 guineas each, and for the privilege of practising in the country of 6 guineas each. Observe, that over the expenditure of these contributions they have no control whatever. The facts just mentioned clearly indicate that members of the medical profession, who pay only one inclusive fee for life of £5 for technical admission to the *Medical Register*, should not be discontented with their position as compared with that of the legal profession, so far as the payment of fees and the control of the expenditure are concerned. According to my experience, an increase in the number of members of the Council, which is not a legislative but a deliberative and administrative body, would only tend to embarrass and delay its proceedings. The members of the Council are elected and appointed under the most varied representative conditions, but they all tend to secure the high character and ability of its members with a result which cannot be denied. Before concluding these observations I am tempted to quote from a recent address by the Lord Chief Justice of England on the subject of the improvement of legal education—an observation which has special reference to the work and constitution of our Council. His lordship says: "Compare our legal system with the elaborate care and training in the medical and surgical schools. As has recently been well said by Sir Edwin Arnold, the labours of educational preparation for these professions grow year by year harder and harder—and so they ought. To be up to the high-water mark of proficiency a young doctor must to-day be a chemist, physiologist, botanist, mechanician, and many things besides. Indeed, the history of medical education in recent years, from the time when the College of Physicians and the College of Surgeons commanded the principal avenues to the profession to the changes wrought by the legislation of 1858 and 1886, affords an instructive example of the improvements that may be effected under a body such as the General Medical Council, clothed with public responsibility, and broadly representative in its character." No more striking testimony could be borne to the constitution and position of our Council than the observation of Lord Russell, a most eminent judge and a Liberal beyond question, a man of great experience, great wisdom, most prudent and careful in all his utterances. With such an authoritative expression of opinion I am content to bring my observations to a close.

On the motion of Mr. Wheelhouse, seconded by Sir Walter Foster, a vote of thanks was accorded to the President for his address.

Results of Examinations for the Services.

Tables were received showing results of competitions for commissions in the naval medical service, held on November 4th, 1895; for commissions in the medical staff of the army,

held on August 2nd, 1895; and for commissions in the Indian Medical Service, held in February and August, 1895.

On the motion of Dr. HERON WATSON, seconded by Dr. MCVAIL, the tables were ordered to be placed on the minutes, and a vote of thanks was passed to the heads of the departments.

REPORT OF PUBLIC HEALTH COMMITTEE.

Dr. THORNE THORNE stated that in the early part of the day the following resolution had been unanimously passed:

That the Chairman be requested to represent to the President that in the opinion of the Public Health Committee the consideration of their report, the paragraph relating to which has been struck out of the provisional programme, is a matter of urgency, and that the consideration of the subject should be proceeded with during the present session.

It would be within the recollection of the Council that the matter of the public health reports was to come forward at the last meeting of the Council, but owing to the fact that a new Committee was formed, the matter was delayed for six months. Now it appeared there was to be a further delay of six months, and the Public Health Committee thought that was very unfortunate, as that delay would cause their report practically to pass into oblivion. He moved:

That the question of the consideration of the report of the Public Health Committee be taken into consideration during the present session.

Sir WM. TURNER thought that Dr. Thorne Thorne was under a slight misapprehension as to the signification of the programme of business before them, which was not a complete programme. It was within the power of Dr. Thorne Thorne to hand in to the Business Committee a motion for business on some future day.

Dr. THORNE THORNE said that the paragraph had been deliberately struck out, and he therefore assumed that it had not been considered a matter which ought to be brought forward.

The REGISTRAR said that he had merely arranged the programme of business provisionally.

The PRESIDENT said that if Dr. Thorne Thorne would give an intimation to the Business Committee they would place the matter on the agenda, if that were the wish of the Council.

This was agreed to.

CASE OF THOMAS RICHARDS.

The Council then proceeded to the adjourned consideration of the case of Thomas Richards, registered as Mem. R. Coll. Surg. Eng. 1886, Lic. R. Coll. Phys. Lond. 1888, who was summoned to appear before the Council on November 30th, 1894, to answer the following charge, as formulated by the Council's solicitor:

That, being a registered medical practitioner, he acts as cover to an unqualified person named Hugh Owen, and permits and enables him, under cover of his (Richards's) name, qualification, and presence, to attend and administer medical treatment to patients, and to carry on a medical practice, as if he were a duly qualified practitioner, the medical practice being carried on at Llanhilleth, in the county of Monmouth.

The REGISTRAR stated that having received a statutory declaration from Mr. Richards the Executive Committee were of opinion that he might be excused attendance as he resided in Wales.

On the motion of Sir WALTER FOSTER, seconded by Dr. MACALISTER, it was agreed that Mr. Richards's name be not removed from the *Register*.

THE EXAMINATION IN ARTS OF THE APOTHECARIES' SOCIETY.

Mr. BRUDENELL CARTER said that very shortly after the termination of the last session of the Council he had received a letter from the Society of Apothecaries of London as follows: "June 11th, 1895. Dear Mr. Carter,—Referring to the correspondence which passed between the Society and the General Medical Council in May, 1893, in reference to the discontinuance of the examination in Arts held by the Society, and at which time the Society saw no reason for taking such a step, I have to inform you that the Court of Assistants passed a resolution on the 5th ult. deciding to discontinue the examination in question as from the end of the current year. I shall be obliged if you will in due course, as representative of the Society, communicate that decision to the General Medical Council." He moved:

That the Master's letter be received and entered on the minutes.

Dr. MACALISTER seconded the motion, which was agreed to.

DIRECT REPRESENTATION OF THE PROFESSION.

Sir WALTER FOSTER then moved:

That a committee be appointed to consider the resolution of the British Medical Association respecting the increase of the direct representation of the profession on the General Medical Council, as printed in the minutes of the Executive Committee, and to report thereon to the Council at this session.

He said that the President, in his valuable address, had already touched upon the subject, and he did not intend to argue with reference to the principle connected with which the resolution was framed. He should not have thought it necessary to put the resolution upon the paper, if the resolution of the British Medical Association had been printed on the agenda. But as that resolution had been passed by a large Association, comprising the majority of the members of the medical profession, at the largest meeting it had ever held, namely, the meeting in London this year, it was desirable as a matter of courtesy that the Council should have an opportunity of expressing by means of a committee its opinion with reference to the proposal contained in the resolution. It was not desirable that a resolution of that kind, representing the opinion of so many members of the profession, as well as that of the Council of the British Medical Association, should be passed over without any consideration whatever. That Council had given the General Medical Council an opportunity of drawing up a statement that might induce the Association to modify its action with reference to the resolution or to take steps somewhat different from those suggested by the resolution; at all events, it gave them the opportunity of asking the Council of the British Medical Association to take one direction or the other in carrying out the resolution of the annual meeting. As it stood at present, that Council was pledged more or less to proceed with the resolution and to embody such of its proposals as it thought fit in a Bill before Parliament. He would be sorry to see any conflict between the General Medical Council and the British Medical Association in the arena of Parliament, and as the medical profession felt very strongly on the point, there being a growing feeling that something should be done, not to convert that Council into a body entirely to protect medical interests, but rather to develop the body, and give the general profession a little more confidence in its action, which he felt was a legitimate desire, he thought that a Committee should be appointed to draw up a reply. That would be the most wise, and at the same time the most courteous, procedure they could adopt, and it was purely with that desire that he moved the resolution.

Mr. WHEELHOUSE, in seconding the motion, said he had himself seen how extremely strong was the feeling that the profession was not sufficiently represented on the Council. The question had been put before the Council on more than one occasion, and each time it had been met with an adverse vote; and now, seeing that the profession would not rest satisfied under that adverse vote, and seeing that the Council did not see its way to recommend the Privy Council to increase the amount of the representation, he thought with Sir Walter Foster that the appointment of a committee to go carefully and deliberately into the question, and to lay before the Council the result of its deliberations, and then ask it to come to a definite conclusion, was the best course that could be adopted.

Dr. MACALISTER hoped that the Committee would not be appointed, for the reason that the resolution was a pistol held at the head of the Council. It recited that the Council had on several occasions been asked to make a representation to the Privy Council asking to be empowered to elect direct representatives, and then it asked them to proceed to Parliament with a Bill to compel them to do so. There was no communication to the General Medical Council, no request that they should consider the subject in an abstract way, but they were asked to appoint a Committee to consider what he had called the threat, that was, to examine the pistol and see whether it was loaded or not. Nothing could be more unjustified than for the Council to do anything of the kind. If the British Medical Association, at the meeting to which Sir Walter Foster had referred, had asked the

Council to consider the question, then he admitted it would be most courteous and dignified that they should do so; but as it was, the only answer they could possibly give was, Let them go to Parliament.

Mr. BRUDENELL CARTER said that it was a wholly new doctrine that the Council owed any duties or responsibility to the British Medical Association.

Dr. GLOVER was sorry to hear the last two speakers. So far from the shape of the resolution disposing him to vote against it, it disposed him to vote for it. It was a very temperate resolution. Mr. Carter's remark that the Council owed nothing to the British Medical Association was a very unfortunate one.

Mr. CARTER: I said "owes no responsibility."

Dr. GLOVER thought it was not very good for a body like that to speak so with reference to the British Medical Association, which included the majority of the profession which they (the General Medical Council) were supposed to represent, and he very much regretted the remark.

Sir WALTER FOSTER's motion was then put to the Council and lost, 7 voting for and 21 against.

THE EDUCATION OF THE STUDENT IN PRACTICAL MIDWIFERY.

The following notice of motion by Dr. GLOVER was next considered:

That the Medical Council, having before it the petition of the British Medical Association at its late annual meeting on the inadequacy of the recommendation of the General Medical Council with regard to instruction in practical midwifery, which petition is printed in the minutes of the Executive Committee, November 26th, 1895, resolves, that in the judgment of the Council no medical authority should require less from candidates for its qualification than attendance on thirty cases of labour under the supervision of a registered medical practitioner, or three months' attendance on the practice of a lying-in hospital or maternity charity under the same supervision.

Dr. MCVAIL thought the matter had better come up when they received the recommendations from the Examination Committee.

Dr. GLOVER: I propose that it be received and entered on the minutes.

Mr. WHEELHOUSE seconded the motion.

Dr. MACALISTER thought it should not go on the minutes, as it was already on the minutes of the Executive Committee. At a large meeting of the British Medical Association, at which he was present, that resolution was carried instructing the Council of that body to prepare a petition and send it to the General Medical Council. The Council had not prepared a petition, but had handed the Council the resolution without giving their opinion on the matter, and the only conclusion they could come to was that the Council, having been instructed by the general meeting to prepare a petition, desired not to do so, and had handed the Council the resolution to do what they liked with. It seemed to him they had nothing to consider and nothing to put on the minutes, and that until the Council of the British Medical Association had presented a petition their hands must be held.

Sir WALTER FOSTER said he was quite prepared to go on with the matter now, but there had been an omission somewhere with reference to the petition, and until that omission was repaired they could not say they had got the petition before them.

Mr. TEALE thought the matter should not now be discussed; it had come up on that particular occasion before the British Medical Association in reference to another question which they were raising at the same time.

Sir WM. TURNER asked Dr. Glover whether, after the expressions of opinion which had been given, he would not withdraw his motion.

Dr. GLOVER thought the objection was a technical one, but as bringing the subject forward at the time appeared to prejudice its calm consideration he would give way and withdraw his motion.

This the Council agreed to.

ERASURE OF NAMES FROM THE "REGISTER."

Dr. GLOVER, in accordance with notice, asked whether the President of the General Medical Council had heard finally from the Registrar-General since his promise to consider the forwarding to the local registrars a notice of the erasure of any name from the *Medical Register*.

The REGISTRAR said that on June 21st the Registrar-General had written stating he would consider the matter, and no further communication had been received. He had tried to estimate the cost, and thought it would not be more than £360 including postage.

Sir WALTER FOSTER said that at the time he had been a member of the late Government and had endeavoured to get the matter dealt with. The cost was then estimated at £600, and he had had no opportunity of submitting any amended estimate to the Treasury owing to the resignation of Lord Rosebery. The best course now would be to write letters to the Treasury urging the request, and pointing out that the cost would not be £600, but probably about half that amount.

Dr. GLOVER proposed that the President be requested to communicate further with the Registrar-General, with a view to securing that local registrars be informed of the erasure of any name from the *Medical Register*.

Sir WALTER FOSTER seconded the motion, which was agreed to.

DISCIPLINARY FUNCTIONS OF QUALIFYING MEDICAL AUTHORITIES.

Dr. GLOVER then moved:

That it be an instruction to the Executive Committee to revert to the consideration of the subject of the disciplinary functions of the qualifying medical authorities and of the General Medical Council, and to report to the Council at its next meeting on the best means of further defining and confirming these functions and bringing them into harmonious and efficient co-operation.

He thought the matter was one which deserved the serious consideration of the Council.

Dr. THORNE THORNE seconded the motion.

The resolution was carried *nem. con.*

THE CASE OF ROBERT MASTERS THEOBALD.

The Council considered, *in camerâ*, the application of Robert Masters Theobald for a rehearing of his case. Mr. Theobald's name was removed from the *Medical Register* on December 3rd, 1894, for having, in the opinion of the Council, committed the offence of publishing and circulating a book named *Electro-Homœopathic Medicine*, containing a description and recommendation of the so-called electro-homœopathic cures and medicines of Count Mattei, and in which it was suggested by Mr. Theobald to persons suffering from disease that they should adopt the so-called cures and medicines.

On the readmission of strangers, the Council's solicitor, Mr. MUIR MACKENZIE, informed Mr. Theobald that the Council had considered his application, and that they declined to declare the proceedings in the previous case null and void, to restore his name to the *Register*, or to rehear the case.

Mr. THEOBALD asked whether there was any method by which he could have his name restored to the *Register*.

Mr. MACKENZIE said that he could only do so by complying with the Standing Orders of the Council.

Mr. THEOBALD submitted that he had fulfilled the conditions by signing an application for the restoration of his name, and by filling up the necessary forms attested by a Justice of the Peace.

Mr. MACKENZIE said that it was a condition, both under the Standing Orders of the Council and under the Act, that before he could have his name placed on the *Register* he must show that he was in possession of the necessary diploma, and at the present time he was not possessed of any diploma entitling him to registration.

Mr. THEOBALD said that the decision of the Council was illegal, inaccurate, and altogether wrong. He submitted that the Council had power to restore his name to the *Register* whether he was in possession of a diploma or not, and that he had very strong and valid arguments in support of that view. Was it the opinion of the Council that it was a condition precedent to his name being restored to the *Medical Register* that he should obtain his restoration as a Member of the Royal College of Surgeons?

Mr. MACKENZIE said that that was so.

Mr. THEOBALD said that that being the case, he would ask the Council to furnish him with a recommendation to the Royal College of Surgeons to the effect that he was entitled to the restoration of his diploma, for unless he had such a recommendation it would be useless to make any application to that body.

The PRESIDENT said that it was not in the power of the Council to make any such recommendation.

Mr. THEOBALD asked whether he had a right to appeal to the Council against the decision of the Royal College of Surgeons.

The PRESIDENT said that he had no such power.

Mr. THEOBALD again protested that it was in the power of the Council to restore his name to the *Register*, and that they were acting illegally in not doing so.

The Council then adjourned.

Wednesday, November 27th.

Sir RICHARD QUAIN, Bart., in the Chair.

CONJOINT EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF IRELAND AND THE APOTHECARIES' HALL OF DUBLIN.

Mr. WHEELHOUSE asked permission to make a correction to the speech which he had addressed to the Council on June 6th last, in which he was unfortunately led to make a statement which he had since understood was incorrect. In moving the adoption of the report of the Royal College of Surgeons of Ireland and the Apothecaries' Hall of Dublin he had stated that he had visited the last two examinations of the Board and had found that great improvement had been made, and that the third examination was more perfect than the first. "Efforts have been made to improve it; with the exception of medicine they were tolerably satisfied with the examination. The examination was well conducted, but the candidate to whom they took exception, although well versed in theory, knew nothing about practice." So far he thought nobody could take any objection whatever to that description of the examination, but then unfortunately he went on to add, "and he was now passed as a qualified man." It had been brought to his knowledge that that was an entirely incorrect statement, that that gentleman was not passed as a qualified man, that he was not a qualified man at this moment, and that he was not qualified because, though he had passed in medicine as described in the report, he had been already stopped at his examination previously in pathology and also in surgery. It was said that by what he then stated he had greatly and seriously prejudiced the minds of the Council in their consideration of the Irish question. If he had done so, he could only entreat the Council to dismiss all that he had said concerning the candidate's being a qualified man out of their minds, and simply to look at the report as it stood. He had been led into the mistake by the fact that he saw the candidate examined at a Final Examination. He thought a Final Examination meant the last, and that when a man had passed it he would be qualified, but he had forgotten that in that Final Examination, or as part of it, the candidate had been examined in pathology, and stopped at that point. It was also said that besides having prejudiced the mind of that Council as against the Committee of Management at that examination, he had also prejudiced the minds of the Privy Council. He could not think that that was so, because he imagined that the Privy Council would have the report before it, and would judge of the question purely upon the merits of that. He could not fancy that any few words he might have spoken to the Council would ever reach the Privy Council at all. He offered an apology to the combined examiners of the College of Surgeons, Ireland, and the Apothecaries' Hall, Ireland, for the mistake which he had made.

The PRESIDENT: Do you desire that that should appear in the minutes?

Mr. WHEELHOUSE: I leave that entirely to the Council.

Sir WILLIAM TURNER said that it was only fair that it should be stated that Mr. Wheelhouse admitted that he had made a mistake and explained how it had arisen.

The PRESIDENT: That would be quite enough.

Sir PHILIP SMYLY asked to be allowed to make a few remarks upon the general question, as to what effect the mistake had had upon the report sent to the Privy Council; but after some little discussion

The PRESIDENT said it had been decided that the Council should send a report to the Privy Council, which the Privy Council had received and acted upon, and they could not go back upon that; it was quite impossible. The President then asked the Council if they wished to hear Sir Philip Smyly, upon which there was no voting.

The PRESIDENT: There is no voting upon it, and I must therefore ask you to stop.

Sir PHILIP SMYLY asked if it should be noted that his statement was not heard. He thought that should be done. He moved that Mr. Wheelhouse's explanation of the mistake made by him in his speech to the Council be entered on the minutes.

The PRESIDENT said it had already been arranged that that should be done.

Sir PHILIP SMYLY: Not by the Council, sir. I want to speak upon it, and to show you that we ought not to have been reported to the Privy Council; and that it was due to the mistake made by Mr. Wheelhouse that we were so reported.

The PRESIDENT: Where is the Chairman of the Examination Committee?

Sir DYCE DUCKWORTH: That little *lapsus* which Mr. Wheelhouse made was a perfectly microscopic affair, which has been made to assume a large mass now. It is grotesque.

The PRESIDENT said that the following resolution was the one which empowered the Council to send to the Privy Council:

> That it appears to the Council that the standard of efficiency in the subject of medicine required from the candidates at the qualifying examination held by the Conjoint Board of the Royal College of Surgeons, Ireland, and the Apothecaries' Hall, Dublin, after four special inspections, has been found insufficient.

That was a general condemnation.

Sir PHILIP SMYLY said that was what he objected to—It was not a general condemnation; the last report was on the single question that the man was given a pass mark in clinical medicine—a very small item indeed—and it was distinctly upon that that the vote was taken.

The PRESIDENT said that if Sir Philip Smyly would give notice that he would move that the Council should rescind the resolution that was passed on that occasion, and that that be communicated to the Privy Council, they could understand it, but really to go back debating what they had already decided on, and what the Privy Council had decided, was quite out of order, and he must appeal to him not to go on.

The Council then proceeded to consider a communication from the Privy Council as to the continuation of the examination by the Conjoint Board of Surgeons and Apothecaries' Hall, Ireland, of candidates who may claim to be examined as having been previously engaged in preparing for examination and already passed part of it.

The REGISTRAR said that there was no notice of motion on the programme in reference to that, and if there was nothing further to be said they must pass on to the next matter.

The PRESIDENT said he desired to point out to the Council that they were asked to inform the Privy Council of the action they proposed to take upon that subject. There was no question whatever that legally and in every other sense the Conjoint Board in Dublin was at an end. If it had ceased to exist it could not go on for any purpose whatever; they could not qualify it saying that it should continue to exist for examining candidates who had a claim upon them. The simple course would be for the College of Surgeons to intimate that they intended to withdraw, but would not do so until those people had been examined, and therefore the position they would be in now would be to withdraw their resignation from the Conjoint Board, and to say that the Board should continue to examine candidates who had any claim to be examined for a certain number of years. Otherwise they might go on for the next fifty years if the candidates came up and kept the Board going. The Council would probably approve of the College of Surgeons withdrawing their resignation, and allowing the Board to go on as it was, for say four or five years, no candidates being admitted, except those who had a special claim for examination, and that at every examination an inspector from the General Medical Council should be present. That would

probably be the reply to send to the Privy Council, and if the Council would direct the President to make a communication to that effect, that would settle the matter.

Sir PHILIP SMYLY said he thought it would be found that in the notice sent to the Apothecaries' Hall it was distinctly stated that the interests of those candidates who had entered would be taken care of. As to recombining with the Apothecaries' Hall, he did not think his colleagues would do that. The report to the Privy Council had nothing whatever to do with their separating from the Apothecaries' Company; they had given notice of that considerably before there was any report to the Privy Council at all. The number of candidates who had claims was possibly sixty, but practically he thought he was right in saying that there would not be more than twenty or thirty.

Sir WILLIAM TURNER said that the first point which they had to consider was how long the conjoint examinations were likely to be continued, and the second was whether they were prepared to offer any explanations upon the letters submitted to the Lord President by the Royal College of Surgeons, Ireland, and Apothecaries' Hall, Dublin, which were forwarded to the General Medical Council on August 10th last.

Sir PHILIP SMYLY said he had not been authorised to give an opinion by his Council, and thought that the limit of time should be fixed by the Council's legal adviser.

Dr. MACALISTER said that any claim for examination on the part of the candidates would be against the Conjoint Board, not against the College of Surgeons. If the Conjoint Board said: "We cease to exist for all purposes," there was no body for a candidate to bring an action against. As a matter of fact, however, they had not said they ceased to exist for all purposes.

Dr. CHARLES MOORE said that he had a letter from the governor stating he was to be guided by the Council in regard to those outstanding men; 159 men had offered themselves for examination in the last six years, out of them 97 passed completely, and there remained 62, of whom 6 had already gone to other bodies, leaving 56, and, as there were only 56 men to pass, six years would be ample time. He had the authority of his Council to leave it to the President to fix the time.

Dr. MACALISTER proposed:

That the Conjoint Board in Ireland of the Royal College of Surgeons and the Apothecaries' Hall be requested to furnish the Council with a list of the names of the candidates, with the dates of their admission, who have already passed some of the examinations of that Board, but had not, on July 1st, 1895, completed the series of examinations required for the Board's qualification.

Sir WILLIAM TURNER seconded the motion, which was agreed to.

Dr. MACALISTER then moved, and Sir WILLIAM TURNER seconded:

That the President of the Council be requested to inform the Lord President of the Privy Council that the Council are legally advised that the Conjoint Board of the Royal College of Surgeons of Ireland and the Apothecaries' Hall, Dublin, has not yet ceased to exist so far as regards students who have entered for the examinations of the Board before July 1st, 1896; that it appears to the Council that all existing claims for admission to the examinations of the Conjoint Board should be exhausted within six years from the present date. That the Council understands that the two bodies constituting the Conjoint Board are prepared to carry out the arrangements necessary for meeting these claims for examination, of which there are probably about sixty.

This was agreed to.

Sir WILLIAM TURNER said that, having now disposed of the first question raised in the Lord President's letter, they must now look at the second question: "The Lord President desires to be informed whether the General Medical Council have any observations to offer on the explanations submitted to his Grace by the Royal College of Surgeons and the Apothecaries' Hall, Dublin, which were forwarded to you in my letter of August 10th last." He would ask the Registrar to read the reasons given by Mr. Woods to show that the Conjoint Board had not merited condemnation, and the reasons given by Mr. Tichborne to a similar effect.

The REGISTRAR: The reasons given by Mr. Woods are these: "The Council confidently hopes that it has not merited this condemnation, for these reasons: That the report had not been seen by the Council at all when the General Medical Council passed judgment; that the Council of the College was entitled to have time for the consideration of the report and the preparation of a reply, and that no time was given for these purposes; that the report on the subject of medicine is based upon a difference of opinion between the examiners and the visitor and the inspector, and the Council points out that the examiners were entirely competent and experienced; that the judgment of the General Medical Council was influenced by emphatic statements which have been shown to be absolutely without foundation; that the union known as the conjoint scheme of the Royal College of Surgeons in Ireland and the Apothecaries' Hall, Ireland, has ceased to exist, and that when the General Medical Council reported the examination to the Lords of the Privy Council as insufficient, it knew that the scheme was within a few days of terminating." Mr. Tichborne had written as follows: "The Hall, therefore, submit that any imperfection in the conduct of the examinations has been due to causes which can be remedied, and to difficulties which can be overcome. That their undertaking to maintain a sufficient standard of medical examination should be accepted, and assistant surgical examiners be appointed by the General Medical Council. That nothing has been done by the Hall meriting disfranchisement. In several respects the examinations have been commended, and the only point of unfavourable comment in the last report of the visitor and inspector has arisen from what seems to be an error. If there is anything in the case on behalf of the Apothecaries' Hall as embodied in this letter, and the accompanying Appendices 1 and 2, which does not clearly afford a complete answer to the representation made by the General Medical Council to the Privy Council, the Hall would ask your Grace's permission to be heard by counsel on their behalf before the Privy Council."

The PRESIDENT said that Sir Philip Smyly might now make any statement he wished.

Sir PHILIP SMYLY said that the College of Surgeons had always supplied good examiners, and on the last two reports the examination in medicine was declared satisfactory, and only insufficient upon the question of marking. The statement that the College of Surgeons had not time to consider the report was absolutely true. The Examination Committee was sitting at the time the report was first handed to them; it was not sent to the two bodies to be considered, and the report was considered so favourable that Dr. Moore and he sent a wire to the Conjoint Board to accept the report of the visitor, as it was most favourable. They never thought that the fact of the marking would have the effect of causing the examination to be reported as insufficient, even if as was supposed from the statement of Mr. Wheelhouse the candidate had been passed. The visitor and inspector said: "For this reason, although we have no fault to find with the actual examination itself, the fact that a candidate was passed who exhibited gross ignorance of clinical medicine compels us to report that in medicine the examination was not sufficient. In other subjects we report that the Final Examination was sufficient." It was also stated that the examination itself itself was in every respect a most satisfactory one, and the marks awarded were strictly equitable. Under those circumstances, he thought that Dr. Charles Moore and he were justified in believing that the report of the Examination Committee would have been favourable. Their contention was that the adverse vote taken in the General Medical Council was taken upon an erroneous statement. Mr. Wheelhouse had explained that there was no foundation for the statement which he had made.

Mr. WHEELHOUSE said he had explained that there was no reason for his saying that the men had passed into the profession, but Dr. Duffey and he adhered entirely to the word "passed" as referring to the clinical examination, and he had nothing to say whatever with reference to that.

Sir PHILIP SMYLY said the statement that the men had passed into the profession was quite sufficient to mislead the other members of the Council. In the legal notice to the Apothecaries' Hall it was distinctly stated that the interests of those who had entered up to the dissolution of the body were to be taken care of.

Sir DYCE DUCKWORTH said that the report was founded upon four inspections, not on one inspection.

Dr. MacAlister moved, and Sir William Turner seconded:

That the President of the Council be requested to inform the Lord President of the Privy Council in reply to the communications of the Royal College of Surgeons, Ireland, and Apothecaries' Hall, Dublin, first, that the opinion of the General Medical Council as to the standard of proficiency in medicine required by the Conjoint Board was based on the results, not of one inspection only, but of four special inspections and visitations; that the remarks made in the communications referred to have been considered by the Council, but they see therein no reason to alter their opinion as to the standard in question.

Dr. Charles Moore said he wished to point out that the Apothecaries' body had suffered under peculiar difficulties in obtaining examiners in medicine. At last they had brought a gentleman 200 miles to examine, and he held that the last two examinations of that gentleman and by his colleague, a professor of the Royal College of Surgeons, had been pronounced sufficient in every respect except in one point about which they had heard. He would move as an amendment:

That the printed reports of the General Medical Council do not justify a condemnation of the Conjoint Body of the Royal College of Surgeons and the Apothecaries' Hall inasmuch as several other bodies had been pronounced insufficient in most important particulars but have not been condemned.

Sir Philip Smyly seconded the motion, which was lost, two only voting for it.

Dr. MacAlister's proposition was then carried.

On the motion of Dr. MacAlister, seconded by Mr. Teale, it was agreed:

That the Lord President be further informed that if and so long as the Conjoint Board's examinations continue to be deemed by the Privy Council to be qualifying examinations under the Medical Act, the Medical Council is unable to secure the maintenance of the standard of proficiency, otherwise than by repeated inspection and visitation of the Board's examinations.

Dr. Heron Watson proposed that a deputation be sent to the Lord President.

Sir Dyce Duckworth seconded the proposition, which was put to the Council and lost.

Assistant Examiners in Surgery for Apothecaries' Hall, Ireland.

The Council then proceeded to the consideration of the following application from the Apothecaries' Hall of Ireland for the appointment of assistant examiners in surgery:—"Dear Sir,—I am directed by the Governor and Court of the Apothecaries' Hall, Ireland, to petition the Council to appoint two examiners in surgery, under the provision of the Medical Act, 1886, as their conjunction with the Royal College of Surgeons, Ireland, has ceased in July, 1895. If permission is granted, the Court herewith submit two names for the approval of the Council, or will receive two names from the Council if so directed. I am requested to ask you to place the above before the Council at ensuing meeting. The Governor and Court beg to submit to the General Medical Council the following names as suitable examiners in surgery, and they have intimated their willingness to act—Francis T. Houston, M.D.R.U.I., F.R.C.S., and M.R.C.S., Surgeon to Adelaide Hospital; F. Conway Dwyer, M.B., Bac.Surg.T.C.D., Surgeon to Jervis Street Hospital.—Faithfully yours, Robert Montgomery, M.R.C.S., Secretary."

Dr. Batty Tuke said that they had no evidence that the Apothecaries' Hall had fulfilled the requirements of the Medical Act of last, which stated that they should exhaust all the means in their power to join with another body before applying for the appointment of examiners; and he wished to know whether the request was in order.

Dr. MacAlister said that as they had now agreed that the Conjoint Board was not extinct and would go on for some years, it was impossible for them under the law to appoint examiners to the Apothecaries' Hall separately. By the statute they were barred from making the application.

Dr. Glover proposed that the opinion of the legal adviser be taken on the matter.

Sir William Turner thought it would be satisfactory if Dr. Moore could state whether the Apothecaries' Hall had exhausted all means.

Dr. Charles Moore said that they had applied to the College of Physicians and the University of Dublin with regard to combination, and had been refused.

Sir William Turner thought they ought to have a written statement to that effect from the Apothecaries' Hall.

Dr. Charles Moore said he would wire that evening, and would probably get an answer on Thursday morning.

Mr. Brudenell Carter thought that the verbal information given to them by one of their colleagues was sufficient.

The President: Those who are of opinion that the Apothecaries' Hall has used its best endeavours to obtain combination, on the report of Dr. Moore, please signify the same.

Agreed to.

Dr. MacAlister moved, and Dr. Glover seconded:

That Mr. Muir Mackenzie be asked to advise the Council whether, under Section 6 of the Medical Act, or other legal provision, the Council has power to appoint additional examiners in surgery for the Apothecaries' Hall in respect of students entering after July 1st, 1895.

This was agreed to.

Sir William Turner said that, as the matter would be adjourned till Friday, a statement might be asked for from the Apothecaries' Hall, to the effect that all means of endeavouring to combine with another body had been exhausted.

Alterations in the "Medical Register."

Dr. Heron Watson moved and Sir William Turner seconded the following motion:

That the Council direct that the changes made by the Registrar in the *General Register*, whether as respects the addition or removal of names or the alteration of names or residences, be communicated twice in every month to the branch registrars in Scotland and in Ireland, and that a like intercommunication of alterations in Scotch and Irish registers be communicated to the Irish and Scotch registrars respectively, with a view to such alterations being entered by them in an interleaved copy of the printed *Medical Register* supplied to the branch registrars when such *Register* is annually made.

Case of J. C. Lindop.

The Council then proceeded to the case of John Crump Lindop (registered as Mem. R. Coll. Surg. Eng., 1862; Lic. Soc. Apoth. Lond., 1863), who was summoned to appear before the Council on June 1st, 1895, to answer the following charge, as formulated by the Council's Solicitor, on the complaint of the Medical Defence Union: "That during the months between December, 1894, and April, 1895, inclusive, or some part of such period, he acted as cover to an unqualified person named Wadlow, residing and carrying on medical practice at Oundle Villa, Peterborough, and by so acting as cover to him, and by his presence and the aid of his professional qualifications, enabled the said unqualified person to carry on medical practice, and attend and administer medical aid and medicines to patients, and recover charges therefor as if he had been duly qualified."

It was stated that Lindop was summoned on May 6th, 1895. The summons was sent in a registered letter, which was returned by the Dead Letter Office about May 14th, 1895.

Mr. Brudenell Carter thought that the legal advisers should be asked to bring the documents to-morrow, when they would be able to tell the Council whether there was sufficient ground on which Lindop could be taken off the *Register*.

This was agreed to.

The Council then adjourned.

Thursday, November 28th.

Sir Richard Quain, Bart., in the Chair.

Case of George Francis McCarthy.

The Council proceeded to the adjourned consideration of the case of George Francis McCarthy, who was summoned before the Council on June 1st last for having acted as cover to an unqualified person named Francis Morley Coppin. At that session the Council passed a resolution that in their opinion he (George Francis McCarthy) had committed the alleged offence, but adjourned the further consideration of the case to the present session. The Council had now received a testimonial from Mr. F. W. Brookes, M.R.C.S., L.S.A., stating that, during the last six months, Mr. McCarthy had con-

ducted his practice entirely by himself, and with every regard to professional etiquette. Mr. McCarthy appeared in person and gave an assurance that he would not in future employ any unqualified assistant in his practice. The Council deliberated *in camerâ*, and on the readmission of strangers the President informed Mr. McCarthy that the Council had taken a merciful view of his case, and that in view of his statement that he would not employ an unqualified assistant in future, and the commendatory testimonial from Mr. Brookes, they had decided not to remove his name from the *Register*.

THE APPLICATION FROM THE APOTHECARIES' HALL OF IRELAND.

The PRESIDENT read a communication from Dr. Moore, stating that the Apothecaries' Hall of Ireland had used their best endeavours to obtain a Conjoint Board of the Apothecaries' Hall and the Universities in Ireland, but that they had failed to do so. The letter was entered on the minutes.

REPORT OF THE EXAMINATION COMMITTEE.

On the motion of Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, the Council went into Committee to consider the report of the Examination Committee embodying specific recommendations as to the Final Examinations in Medicine, Surgery, and Midwifery. The first recommendation, moved by Sir DYCE DUCKWORTH, and seconded by Mr. BRYANT, was:

That fixed intervals of time between the several examinations should be maintained, and that two academic years should intervene between the date of passing the last examination in Anatomy and Physiology and that of admission to the Final Examination in Medicine, Surgery, and Midwifery.

Dr. MACALISTER moved the following amendment, which was seconded by Dr. BRUCE:

That before any student is admitted to the Final Professional Examination he shall be required to present evidence of at least two years' clinical study subsequent to the passing of his examination in anatomy and physiology.

The amendment, on being put, was declared to be lost, and Sir Dyce Duckworth's resolution was agreed to.

The next recommendation, proposed by Sir DYCE DUCKWORTH, and seconded by Mr. BRYANT, was:

That the extreme subdivision of examinations, and particularly of the Final, as now permitted by some Boards, should not be sanctioned.

Dr. MCVAIL moved, and Dr. CAMERON seconded, the following amendment:

That in the Final Examinations the subjects of Medicine, Surgery, and Midwifery shall all be passed at the same time.

The amendment, on being put, was lost, and the original motion carried.

[*The remainder of the report will be published next week.*]

LITERARY NOTES.

IN a recent number of the *New Orleans Medical and Surgical Journal* Mrs. H. M. Plunkett gives an interesting account of the earliest attempts to check the ravages of small-pox in America. In 1721 a fearful epidemic of small-pox visited Boston. Shortly before this the news of inoculation having been brought from Turkey to England by Lady Mary Wortley Montagu had crossed the Atlantic, and Cotton Mather, who was himself an example of what he calls the "angelical conjunction" of clergyman and medical practitioner, was much interested in the matter. It would appear, however, that he had already heard of inoculation for small-pox from another source, for he says:

I was first informed of this wonderful practice by a Garamantee servant of my own, long before I knew that any Europeans or Asiaticks had the least acquaintance with it, and some years before I was enriched with the communications of the learned foreigners, whose accounts I found agreeing with what I received of my servant, when he showed me the scar of the wound made for the operation, and said that no person ever died of small-pox in their country that had the courage to use it. I have since met a number of these Africkans, who all agree in one story: "that in their country grandy many dy of small-pox. But now they learn this way. People take the juice of small-pox and cutty skin and put in a drop. Then by 'nd by a little sicky cucky, then very few little things like small pox, and nobody dy of it, and nobody have small-pox any more." This in Africa, where the poor creatures die of small-pox like rotten sheep, a merciful God has taught them an infallible preservative. 'Tis a common practice, and attended with constant success.

Mather got together the doctors of Boston, then six in number, at a time when prayers were being asked for in the churches for persons smitten with small-pox at the rate of a hundred a day, and recommended them to try inoculation. Only one of them, however, followed the advice. This was Zabdiel Boylston, who, on June 27th, 1721, inoculated his only son. Afterwards, in the course of the epidemic, 280 were inoculated, of whom 6 (less than 3 per cent.) died, while the mortality among those who took the disease in the natural way was between 14 and 15 per cent. Dr. Boylston was mobbed, and Cotton Mather himself had a hand-grenade thrown in at him through his window. In spite of popular prejudice, however, many New England preachers were enlightened and courageous enough to advocate the practice in the pulpit. Vaccination was introduced into America in 1800, and in July of that year Dr. Benjamin Waterhouse of Cambridge, Massachusetts, submitted four of his children to the new process.

The *International Medical Magazine* for October contains an article on "Medicine and Surgery among the Australian Aborigines" by Dr. J. Steele Robertson, Secretary of the Medical School of the University of Melbourne. The aborigines appear to owe the introduction of most of the fatal diseases which are steadily wiping them out of the scheme of creation to the white man. Small-pox was introduced in 1789 by an English ship. Syphilis spread rapidly owing to the white convicts' lust and the accommodating habits of the natives. The degenerate aborigines who wear clothes fall an easy prey to chest diseases. The therapeutics of the native doctors consist chiefly in dances, incantations, and sleight of hand, by which the practitioner pretends to extract stones, chips of wood, bits of bone, etc., and triumphantly displays them as the cause of the trouble. Among these poor aborigines, however, as among more civilised people, faith often makes sick folk whole. Dr. Robertson thinks it strange that a native medicine man, though knowing himself to be a humbug, will yet call in a professional brother when he is himself ill. But have not scientifically-trained doctors—yea, even leaders in medical Israel—been known to turn in despair to quackery when all else had failed? The doctor, whether savage or civilised, is after all human, particularly when his own person is in question. Dr. Robertson gives some interesting details as to native therapeutics. Of surgery, beyond the use of ligatures, splints, the lancet, and the cautery, they know practically nothing.

In the *Journal of the American Medical Association*, vol. 24, p. 577, Major and Surgeon Charles Smart, of the United States Army, published an interesting article on the Army Medical Museum. The Museum came into existence during the Civil War; in response to a circular a large amount of material illustrative of gunshot fractures and of camp diseases was accumulated and sent to Washington. This material was arranged by Surgeon J. H. Brinton, and the Museum was opened in Ford's theatre in 1867. At this time the Museum and Library received official recognition from Congress by the authorisation of certain expenditures in their behalf among the miscellaneous expenses of the Medical Department. Major Smart speaks of the great need of a good illustrated catalogue of the Museum; although the Surgeon-General has more than once urged the necessity of this, his efforts have been unsuccessful. The Museum was housed in Ford's theatre for over twenty years. In this old building the danger from fire was so great that the President of the United States embodied a recommendation for a fireproof building in his message to Congress. In March, 1885, an appropriation of 200,000 dollars was approved for a fireproof building, but as the original plans were based on an estimate of 250,000 dollars many changes had to be made involving a reduction in size and the omission of ornamentation. The new building in the Smithsonian grounds was opened in February, 1888. In June, 1894, the Museum contained 32,269 specimens; of these, 12,249 were pathological, 4,376 illustrated human anatomy, 1,717 comparative anatomy, 12,033 microscopy, and 1,894 were classed as miscellaneous.

Dr. George S. Keith's book, *A Plea for a Simpler Life*, which was first published by Messrs. A. and C. Black in the middle of September, is now in its third edition.

ROYAL COLLEGE OF PHYSICIANS.

New Regulations for the Examinations of the Conjoint Board.

An extraordinary Comitia of the College was held on November 22nd, Sir J. Russell Reynolds, Bart., President, in the chair.

The President announced that Dr. J. F. Payne had been appointed to deliver the next Harveian Oration, and he also made known to the College that a meeting had been held at the University of London on the previous day, under the presidency of Sir James Paget, of the delegates from the medical schools and other bodies interested, respecting the deputation to the Government to ask them to appoint a Statutory Commission to carry out the scheme for the new University.

The College seal was set to the deed relating to the Weber-Parkes Prize Trust.

A communication was received from the Royal College of Surgeons relating to recent proceedings of the Council of that body, and more particularly to the reply sent to the memorial of the teachers of the London School of Medicine for Women.

A letter was received from Sir Arthur Watson, Bart., Q.C., who had been one of the standing counsel to the College since 1873, announcing that he had retired from practice, and could therefore no longer serve the College in an official capacity, and expressing his thanks for the courtesy and consideration he had always received from the College.

The resignation was accepted with great regret, and thanks were accorded for his long services.

On the motion of Dr. J. K. Fowler, seconded by Dr. Vivian Poore, it was resolved:

That leave be given to the Fellows Club to continue to hold their dinners in the College.

The report on the arrangements of the examinations under the regulations of the five years' curriculum was then taken into consideration, the Registrar giving a brief but lucid statement of the circumstances in which the need for fresh legislation on this subject had arisen.

Dr. Griffith objected to the permission given to a candidate to go up for his examination in midwifery at the end of his fourth year; this was a very special subject, and men could only learn it after they had studied medicine and surgery. He noticed that amongst the delegates who had prepared these resolutions there was no representative of midwifery.

Dr. Liveing pointed out that there had been no representative of that subject amongst the delegates because there had been no intention of altering the scheme in so far as it related to midwifery, and as a matter of fact no change had been made in that respect.

Dr. Cursow approved of the elimination of the examination in elementary anatomy, but said that the effect of this would be to cut off the first year of medical study in many instances, as the boy would be able to be registered and pass in the remaining subjects from his school. He objected to the separate paper on pharmacology, and moved an amendment cutting out this subject from the final examination and including it in the examination on medicine.

This was not seconded.

Dr. Payne thought it would be exceedingly difficult to limit the examination to pharmacology, and that it would be much better to include therapeutics with it. He also thought that the subject of pathology deserved more attention; only ten minutes of *viva voce* were allotted to practical pathology both for the recognition of naked eye and microscopical specimens, which he thought was not fair to candidates.

Dr. Fowler did not consider that pharmacology ought to be put on a level with the other great subjects and made an integral part of the examination, especially as it afforded another opportunity at which a man might be rejected. He should much have preferred to see the subject included in the papers on medicine, which might be extended to six questions each, but it was so important to pass the report that he would not move any amendment. He hoped the schedule would be leniently interpreted by examiners.

Dr. S. West said he would be pleased to see the subject of pharmacology eliminated, but he would accept it rather than let the scheme fall through or be delayed, for as a whole it had very decided merits; an undue proportion was being given to this subject, and there seemed to him to be an entire loss of perspective in this matter. The schedule, too, was a dangerous one, for the chief use of a schedule was to act as a check and restraint upon examiners, and this it would not do.

Dr. Owen considered that it was a most important thing that pharmacology should be retained as the subject of a separate paper, and he protested against eliminating it at a small meeting of the College, and when not one teacher of the subject was present. It was of the utmost importance that a man when he got into practice should have some intelligent idea of the treatment of disease, and this hitherto he often lacked.

Dr. Ewart entirely agreed with Dr. Owen in his defence of pharmacology, and then protested against the appalling ignorance displayed by candidates in the matter of writing prescriptions, which he said was due to the abandonment of Greek, the natural language of the profession, as a compulsory subject, and he hoped that some steps would be taken to remedy the defect.

Dr. Griffith then moved an amendment, the effect of which was that a man could not be examined in midwifery until the end of his fifth year; this was subsequently seconded by Dr. Playfair.

Dr. Liveing said that there had always been a paper on materia medica, and he believed that the new paper would be very similar, though under a different name.

Dr. Poore, as one of the delegates who had drawn up the report, said that they had left the schedules untouched, and had also left the question of the examination in midwifery exactly as it was settled by the College three years previously.

Dr. Cayley observed that if they put the examination in midwifery at the end of the fifth year, it was practically adding six months to the curriculum, as students always took the subjects up separately.

Dr. Church, premising that he did not know exactly what was meant by pharmacology, expressed the opinion that the best plan would be to accept the report, but at the same time to communicate to the College of Surgeons an expression of opinion that it was desirable that the subject should be included under medicine, and he moved an ameadment to that effect.

After some remarks from Drs. Coupland, Champneys, Taylor, and several who had already spoken,

Sir W. Broadbent said that they ought not to discuss details, and they would be running a great risk if they did anything other than adopt the report and let it be tried.

Dr. Church's amendment was then put and carried.

Dr. Griffith's amendment, after some observations by Drs. Payne, Horrocks, and Taylor, was put and lost.

Dr. Church's amendment was then put as a substantive motion, and agreed to.

Dr. Champneys then moved the following resolution, of which he had given notice:

That a committee be appointed to prescribe the proper conduct of a practitioner when brought into relation with a case of acknowledged or suspected criminal abortion, with power to take legal advice.

This was seconded by Dr. Phillips.

A suggestion of Dr. Watt Black's to substitute "define in a legal sense" for the word "prescribe" having been accepted, and after some comments had been made by Drs. Lee and Playfair, the motion was agreed to, and a committee appointed, consisting of the Censors, Dr. Champneys, Sir John Williams, and Dr. Watt Black.

The following is the text of the new regulations referred to above, and contained in a report, dated November 11th, 1895, of the delegates appointed by the two Royal Colleges to consider the arrangements of the examinations under the regulations of the five years' curriculum.

1. That the Third and Final Examinations in Medicine and Surgery be replaced by a single Final Examination in each subject at the end of the fifth year of study, the examination taking practically the same form as at present, but with increased time for the clinical part of the examination. (The

Examination in Medicine and Surgery may be taken separately as at present).

2. That the time of the clinical part of the examination in each subject be extended to thirty minutes.

3. That an interval of two years, as under the four years' curriculum, be required between the Anatomical and Physiological Examination and the Final Examination.

4. That the Examination in Midwifery may be passed at any time after the completion of the fourth year of professional study, provided one year has elapsed since passing the Anatomical and Physiological Examination.

5. That the Examination in Pharmacology may be passed at any time after the completion of the fourth year of professional study, provided the Anatomical and Physiological Examination has been passed.

6. That the Examination in Practical Pharmacy may be passed at any time after registration as a medical student.

7. That no candidate be rejected for a longer period than three months except upon the special resolution of the examiners.

8. That the subject of elementary anatomy be eliminated from the First Examination.

The report recommended further that the remuneration of the Examiners in Medicine and Surgery should be the same as at present, and made certain suggestions as to the apportionment of expenses between the two Colleges.

REVISED SCHEME

The following is the Scheme of the Final Examination submitted by the delegates as embodying the foregoing recommendations, namely:

FINAL EXAMINATION.

The Final Examination shall consist of four parts, namely:

I. Medicine, including Medical Anatomy, Pathology, and Therapeutics. Questions will also be set in Forensic Medicine and Public Health.

II. Surgery, including Surgical Anatomy and Pathology.

III. Midwifery and Diseases of Women.

IV. Pharmacology.

Candidates will be admissible to Parts I and II on producing evidence of having completed the curriculum of professional study, provided not less than two winter and two summer sessions have elapsed since passing in Anatomy and Physiology at the Second Examination.

Candidates will be admissible to Part III on the completion of four winter and four summer sessions of professional study, on production of the required certificates, provided not less than one winter and one summer session have elapsed since the passing in Anatomy and Physiology at the Second Examination.

Candidates will be admissible to Part IV on the completion of four winter and four summer sessions of professional study, on production of the required certificates, provided they have passed in Anatomy and Physiology at the Second Examination.

I. MEDICINE.

1. There will be two papers, of five questions each, on the Principles and Practice of Medicine, including Medical Anatomy, Pathology, Therapeutics, Forensic Medicine, and Public Health.
2. Three hours will be allowed for each paper.
3. There will be a Clinical Examination on Patients of thirty minutes' duration, divided between two examiners; after which each candidate will be required to prescribe in writing for a given case or disease, and for this a quarter of an hour will be allowed.
4. The viva voce and practical Examination in Medicine will be the same as at present, and will last twenty minutes.

II. SURGERY.

1. There will be one paper of six questions on the Principles and Practice of Surgery, including Surgical Anatomy and Pathology.
2. Three hours will be allowed for this paper.
3. There will be a Clinical Examination on Patients of thirty minutes' duration, divided between two examiners.
4. The viva voce Examination will consist of three parts:
   (a) Surgical Anatomy, Operations, and apparatus of fifteen minutes' duration.
   (b) and (c) Principles and Practice of Surgery, including Pathology, each of ten minutes' duration.
5. Candidates will be required to examine microscopical specimens.

III. MIDWIFERY AND DISEASES OF WOMEN.

1. There will be one paper of six questions.
2. Three hours will be allowed for this paper.
3. There will be a viva voce Examination of twenty minutes' duration, divided between two examiners.

This arrangement involves no alteration in the present form of the examination.

IV. PHARMACOLOGY.

1. There will be one paper of six questions.
2. Three hours will be allowed for this paper.
3. There will be no viva voce Examination.

AMONG the new buildings of the University of Minnesota, which are now nearly completed, are medical laboratories estimated to cost 40,000 dollars (£8,000).

THE CARE OF EPILEPTICS.

THE new home (the Passmore Edwards House) which has recently been erected in connection with the colony of the National Society for the Employment of Epileptics was opened on November 26th by the Duke of Devonshire.

This colony has for some time back been established at Chalfont St. Peter, a village in South Bucks, on a farm given by Mr. Passmore Edwards, and there it is proposed gradually to extend operations, and erect other homes for women and also for children as means allow. The progress already made in the condition of the little group of colonists is stated to be most encouraging, as in fact there is every reason to believe that it will continue to be, for it supplies the epileptic with that which, under ordinary conditions, it is most difficult to find for him—namely, healthy and continuous occupation together with proper care whenever his malady may attack him.

The DUKE OF DEVONSHIRE, in formally declaring the home open, drew attention to the large number and the pitiable condition of the epileptics in this country. It was estimated that they amounted to between 30,000 and 40,000, a number double as large as that of the blind, and four times as large as that of the deaf and dumb. That some idea might be obtained of the lamentable condition to which persons suffering from epilepsy were reduced, he pointed out the great frequency with which they drifted into the workhouse or the union infirmary, not from any fault of their own, but in consequence of the incapacity resulting from their complaint. It was the peculiar misfortune of those who suffered from this affliction to be debarred by the nature of their malady from those modes of life which were most remedial to their condition, from regular occupation and the enjoyment of social and congenial intercourse. All physicians agreed that under proper supervision and favourable conditions there was nothing in this infirmity which need debar those who suffered from it from active and useful occupation. The utility of occupation and employment as a means of treatment had been well established at a similar colony which had been in operation in Germany for the past twenty-six years, where a large number of epileptics were engaged in the active and effective cultivation of a farm of 400 acres, and the same thing had also been shown in England. It was owing to the munificent gift of Mr. Passmore Edwards that the Society had been able to obtain this farm, which was to be the scene of the future colony, and it was largely owing to his assistance that the home which they opened that afternoon had been built, and he could only express the hope that the splendid example set by Mr. Passmore Edwards might be followed by others.

THE RETIREMENT OF PROFESSORS IN THE SCOTTISH UNIVERSITIES.

IN the report of the Treasury Committee on the question of the desirability of a fixed age for the compulsory retirement of professors serving under the Crown, which appeared at page 801 of the BRITISH MEDICAL JOURNAL for September 28th, there were two sentences of reference to the Scottish universities. In view of the development of opinion it may not be amiss to allude further to the subject.

In Edinburgh and in Glasgow (not merely in Edinburgh as the report stated) extramural teaching practically meets the difficulty. The extramural school of Edinburgh is manned by a large staff of able and accomplished investigators, many of them also excellent teachers. When a professor lags behind the times, or from any cause becomes inefficient, his class diminishes in size, and the best students go to the extramural teacher or teachers in that subject. Until a year ago, when the new arrangement was made by the Universities Commissioners, the loss of students meant diminution of income. That indeed was the only valid argument in favour of professors directly receiving fees from their students. It was of necessity a powerful incentive to work. Then, again, it often happens that teachers in the extramural school are also additional examiners for degrees in medicine. At the present moment, for example, eight of the additional examiners at Edinburgh lecture in their respective subjects

outside the university. The professor and the examiner are thus brought into a kind of friendly rivalry, which tends to fresher and more vigorous work, inasmuch as the extra-mural teacher if he be also an examiner, attracts a larger audience of university students.

In the Faculty of Medicine of the University of Edinburgh three of the professors are appointed by the Crown, the principal and the other nine professors by the Curators of Patronage (a body composed of seven members, four elected by the Town Council and three by the University Court); all hold office *ad vitam aut culpam*. The principal or professors can only demit office if they be certified medically to be no longer able for the duties of their offices. It has rarely happened that a professor has, either from age or other incapacity, continued to hold his chair when he was unable fitly to do his work, and it has been even more rarely necessary to superannuate a professor because of diminished efficiency through age. Still without doubt it would be a vast improvement on the *ad vitam aut culpam* condition of appointment if a professor could, if he so wished, retire from his chair with full pension rights, say, at the age of 60 or 65, as is suggested in the Parliamentary Report on which we have based our present remarks. Good reason for retirement must be forthcoming, but the University Court might be trusted to narrowly scrutinise this.

Finally it must be admitted that the medical faculty in the various Scottish universities would have been strengthened by the appointment, as in the German universities, of active young "extraordinary professors," who, though not on the ordinary staff of the colleges, would have given competing lectures within their walls. It was indeed expected in some quarters that the Universities Commissioners would have promulgated some such scheme, but in this as in several other matters those who are zealous for the medical prestige and progress of our universities, have thus far been doomed to disappointment.

Thus far, because the Commissioners have applied for and are likely to get a further lease of life for a year from January 1st next, and there will still be time and opportunity to tackle the question of medical education in a statesmanlike way.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

DUNDEE AND DISTRICT BRANCH.—A meeting of this Branch will be held in the Academy Rooms, University College, Dundee, on Saturday, December 7th, at 4 P.M., to consider (1) what action, if any, the Branch should take in the matter of medical clubs, etc.; (2) the giving of certificates for unregistered dentists.—R. C. Foster, M.D., Annfield House, Dundee.

METROPOLITAN COUNTIES BRANCH (SOUTH LONDON DISTRICT).—The next meeting will be held on Tuesday, December 10th, at 3.30 P.M. at the Lambeth Infirmary, Kennington. Clinical cases will be demonstrated on by Dr. Guiney, Medical Superintendent. All practitioners, whether members of the Association or not, will be heartily welcomed.—H. Burham Bowman, Honorary Secretary, 1, Upper Wimpole street, W.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE second ordinary meeting of this Branch was held at the Medical Institute on November 14th; Dr. CARTER, President, in the chair. Forty-three members were present.

New Member.—E. P. Satchell, M.B., B.S.Durh., already a member of the Association, was elected a member of the Branch.

Proposed Ethical Committee.—The Council reported that the question of the formation of an Ethical Committee was under consideration, and the minute relative to the same was confirmed.

[A report of the scientific part of the proceedings will be found at p. 1364.]

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE autumn meeting of this Branch was held, through the kindness of Dr. Pringle, at the County Asylum, Bridgend, on November 19th. The President (Mr. J. Griffith Lock, of Tenby) having met with an accident, Dr. RADWOOD (President-elect) occupied the chair. There were over thirty members present.

New Members.—The following were elected: Messrs. T. M. Jones Powell, M.B., Swansea; J. J. E. Biggs (Cardiff); F. P. S. Cresswell, M.B., B.S., F.R.C.S., Cardiff; and John Marshall, M.B., C.M., Bridgend.

Vote of Sympathy.—A resolution expressive of sympathy with the President was passed.

Proposed Alteration of Rules.—Mr. E. T. COLLINS (Cardiff) moved the adoption of certain alterations in the rules of the Branch, of which he had given notice. A discussion followed, and in the end the proposed alterations were rejected.

Abuse of Medical Charities.—Mr. GARRETT HORDER (Cardiff) read a report drawn up by a Subcommittee appointed to consider the abuse of medical charities in Cardiff. The report was discussed and a vote of thanks accorded. The reports from the Swansea and Newport Subcommittees were not presented.

Communications.—E. LE CRONIER LANCASTER, M.B. (Swansea), showed Microscopic Slides of the Parasite of Quotidian Ague.—Dr. SHERN (Cardiff) showed (1) Large Dense Osteo-sarcoma involving Lower End of Right Femur, for which amputation had been done in upper third; (2) Papilloma or "Villous Tumour" of Rectum, size of an orange, removed from a male patient, aged 60.—Many papers and specimens were, owing to want of time, reserved for the next meeting.

Visit to Asylum.—The members were shown over the asylum by Dr. Pringle and his assistant medical officers, and a cordial vote of thanks was passed by the meeting.

Dinner.—The dinner at the Wyndham Hotel, Bridgend, in the evening was attended by nearly thirty members and friends.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

A MEETING of this District was held at Walthamstow on November 21st, Dr. DALY, Vice-President of the District, in the chair. Fourteen members and five visitors were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Communication.—Mr. BOWLBY read a paper on Diseases of the Throat and Nose in Childhood. He dealt with discharges from the nose, foreign bodies in the nose, atrophic rhinitis, enlarged turbinate bodies, adenoids and hypertrophied tonsils, with the causes, symptoms, and appropriate treatment in each case. In the discussion which followed, the CHAIRMAN, Drs. SHADWELL, WALKER, WARNER, and the HONORARY SECRETARY took part.

Vote of Thanks.—At the close of the meeting a hearty vote of thanks to Mr. Bowlby for his instructive and interesting paper was carried unanimously.

SPECIAL CORRESPONDENCE.

PARIS.

The District System of Hospital Organisation.—Sanitation in Match Factories.—A Female Medical Practitioner at Montreuil.—Professor Tillaux.—Foreign Students in Paris.—General News.

DR. A. BROCA, son of the celebrated surgeon of that name, has publicly expressed his opinion that the hospital outdoor department requires reform. The Municipal Council ridicules the argument of the hospital physicians and surgeons that it is inhuman not to allow the poor to choose their own medical adviser. M. Dubois asks if they were able to do so under the old *régime*, when they went to the out-patient department, and were seen by an ordinary student, or sent from one hospital to another. The *Progrès Médical* endorses this view, and medical students, if they had a voice in the matter, could do so likewise. The *circonscriptions hospitalières* will probably be maintained with some modifications. M. Peyron stated at the last meeting of the Municipal Council that he is willing to make all the improvements experience may show to be necessary.

The Minister of Finance has visited the Pantin and Aubervilliers lucifer match factories, and has conscientiously inspected the different workshops. He is said to have declared that they are hotbeds of infection into which he would not put prisoners sentenced to penal servitude. He afterwards received the Federal Council of the lucifer match hands. There was no question of increased wages; the conditions in which the hands work were solely considered. A yearly allowance of three blue linen suits was asked for for factory use; lifts and cranes for lifting and removing heavy weights, and better sanitation were also demanded. The Minister promised to carry out these reforms and to suppress the use of white phosphorus, and to have it replaced by amorphous phosphorus and other chemical products if they are recognised to be suitable. May his ministerial life be long enough for him to allow him to give effect to his good intentions!

The medical men at Montreuil-sous-Bois have refused to see out-patients at the dispensary recently organised there by the Mayor, because Mme. Bertillon, an M.D. of Paris, was asked to join the staff of the dispensary. M. Garaud, the senior of the Montreuil practitioners, has been interviewed, and states that the medical men in question give their services without fee, and that they are at a loss to understand why the communal budget should be charged with an expenditure of £60 to remunerate Mme. Bertillon for her dispensary consultation.

The banquet given in honour of Professor Tillaux on the occasion of his nomination to be a Knight of the Legion of Honour was an agreeable contrast to the usual run of festivities of this kind. Professor Tillaux was for twenty-five years Lecturer on Anatomy at Clamart. This fundamental part of medical teaching was entirely neglected at the Medical Faculty; Professor Tillaux, without any substantial remuneration, and contenting himself with the grateful appreciation of his pupils, positively inaugurated a new era in the teaching of anatomy. Before attaining the position of Clinical Professor, which was delayed by the opposition of a small but powerful clique, Professor Tillaux had done the work of half a dozen ordinary professors. He is now recognised as one of the best teachers of clinical surgery in Paris.

The statements recently made in some English daily papers that foreign students are allowed to pass their examinations in the Paris faculties with the help of interpreters is entirely incorrect. There is, however, among all students a feeling that their foreign comrades are more tenderly treated than themselves, and they explain the indulgence of their examiners by their indifference whether the foreign students are well versed in the subject of their studies or not because they will go elsewhere to practise their profession.

A fire broke out at the Pau Hospital; fortunately the patients were able to be removed. An entire storey of the new part of the building has been destroyed.

Mme. Juliette Dodu, Chevalier de la Légion d'Honneur, offers to the Paris Academy of Sciences the library of her late godfather, Baron Larrey, likewise his portrait painted by Gigoux.

VIENNA.

The General Hospital.—Professor Albert and the Medical Education of Women.—General Paralysis and Syphilis.—The Viennese Medical Chamber.

This year's session finds the large old hospital in no better state, though last year various projects arose for enlarging the clinics or transferring them to new and spacious buildings to be erected and well fitted with all the apparatus of modern medical science so conspicuous by its absence in the old house. The most promising proposal was the project of Professor Max Gruber to use the vast area of the lunatic asylum (which was to be transferred to some remoter part of the environs) for the building of new clinical institutes; it failed, as did most of the others, owing to financial difficulties. Public interest in Vienna is given up to political agitation, and the faculty is perhaps as far as ever from obtaining an adequate home. In Professor Schauta's gynæcological clinic some urgent improvements have been made.

Great sensation has been caused by Professor Albert's recent essay on Women and the Study of Medicine. Not only in the columns of the lay press but in general conversation and at numerous meetings held to discuss it, the question is debated over and over again. Especially the fair writers and speakers are thundering most alarmingly against the learned critic of their sex, and the eminent surgeon, who desired for women in general the liberty to study medicine, seems to have gained far more rebuke than fame. He is said, however, to be preparing another extensive work on the same subject, in which he will come down upon his adversaries with heavier statistical and philosophical arguments.

In a paper read at the last meeting of the "Psychiatric Club" in Prague Dr. Hirschl, one of Krafft-Ebing's assistants, argues that paralysis of the insane is a manifestation of the third stage of syphilis. In the reports of 250 cases he finds the other etiological factors hitherto accepted wholly insignificant; on the contrary, syphilis had preceded in a larger percentage of cases than even in patients attending Professor Lang's clinic suffering from gummatous processes in different parts of the body. As to the inefficaciousness of antisyphilitic treatment, Dr. Hirschl points out gummata can only be replaced by cicatricial tissue. A man with post-gummatous scars on his arm may still be looked at as generally healthy; defects in his brain cortex, though filled up by connective tissue, make him paralytic in a remission. Hirschl sees nothing in microscopical changes that could not be taken as an effect of syphilis, the whole affection being, then, one of encephalitis syphilitica, ending in atrophia cerebro-syphilitica.

The new institution of "medical chambers" does not as yet enjoy the general interest and sympathy to which an official Board destined for the regulation and preservation of the profession's interests should seem to be entitled. Not much of real good has yet been done by these chambers, and many, noting the unsuccessful schemes of the chamber, feel keenly at the same time the hardship of the tribute it lays on them, and resent both.

FLORENCE.

An Early Physiological Institute.—Cremation in Florence.—General News.

The academical year of the Florence University was opened on November 4th with an inaugural address by Signor Giulio Fano, Professor of Physiology, who reminded his audience that a school of biological research had been inaugurated by Cardinal Leopold dei Medici in 1657 under the name of "Accademia del Cimento" (experiment). Its members were chiefly engaged in physical research work, and their motto—"*Provare e riprovare*" (to test and test again)—is still retained by the Florence School of Physiology. After ten years of active work, this institution was suppressed in deference to ecclesiastical scruples.

On November 10th, the body of Baron Philip de Lopes Netto, ex-Minister of Brazil, was cremated. The ashes were consigned with the required formalities to the Marchese Luigi Nicolini, President of the Society for the Cremation of Bodies in Florence. This Society is one of fifty-two similar associations at the present time existing in Italy. It was incorporated by statute in the year 1882. The first cremation was conducted in April, 1885, and altogether the Society has cremated 214 bodies. The number of cremations performed during the last corporate year amounted to 31. The Society, which is non-sectarian, consists at present of 547 members, including the customary officers. The sum of 50 lire (francs), payable either in one sum or by monthly instalments of 5 lire, entitles the subscriber to the privileges of membership; to attend and vote at all general meetings of the Society; and in case of death the members are entitled to cremation free of all charge other than the regular taxes and municipal charges. This renders cremation more economical than ordinary burial. Membership is strictly personal, and its privileges are not transferable.

By a recent decree of the Legislature, Drs. Gabbi and Morianelli, late assistants of Professors Grocco and Pellizzari respectively, have been appointed to professorial chairs, the one at the University of Messina, the other at that of Modena. The appointment of the two young professors was the occasion of a banquet given by their colleagues of the Florence University to commemorate the event.

Professor De Renzi, of Naples, has announced the production in his laboratory of an antipneumonic lymph. The results of the experiment are described as highly promising.

CORRESPONDENCE.

THE BATTLE OF THE CLUBS.

SIR,—The Kidderminster and District Medical Society have appointed a small committee to inquire into the abuses of medical aid associations and clubs, which exist and flourish in this district, to the great injury of the medical practitioners. I should be very much obliged for any information from other medical societies as to any action that may have been taken with regard to the above question, with result up to the present time, and also as to the rules framed for the guidance of their members in the matter of dealing with medical aid associations and clubs. Our great difficulty here is that if we attempt to deal with the large friendly societies they will go over in a body to the two medical aid associations which are formed here, and so strengthen them. These medical aid associations have already, to a great extent, been boycotted (the officers included), though Birmingham and Worcester consultants continue to meet the medical officers and thereby to a certain degree countenance and help the associations.—I am, etc.,

W. MOORE,
President of the Kidderminster and District Medical Society.

Stourport, Nov. 25th.

SIR,—Ever since the dispute between the medical men and clubs in Cork I have followed the matter very carefully. The general opinion expressed is, that the profession have it in their own hands to stop the abuse by combination, but I do not think that the profession ever will combine under existing circumstances.

I have a practice in an agricultural and mining district; my income is between £700 and £800 a year, of which I am paid by clubs £350, midwifery and vaccination £100, about £100 by families of colliers who prefer to pay me privately instead of going into the village sick club; the remainder I am paid by farmers, shopkeepers, etc. There is another medical man who is paid by the colliery class one way and another about £250 a year, which makes say £600 paid every year to myself and another from the colliery and labouring class by clubs, for confinements, etc., by club members. Now, were a medical aid society started here, and a salary of £500 a year offered, with midwifery fees, how many applicants would there be for the appointment? Who could blame the scores of assistants applying? Would they not be very much better off making £500 a year among the same class of people than being paid £150 by another practitioner?

I think, however, with time and money, we could deliver ourselves. My suggestion is that every practitioner should subscribe to a fund, appoint a secretary, whose business would be to see every doctor in the country, form certain rules, in no way harsh to the poorer class, but such as must secure a fair payment from clubs; then, when we had agreed on what we considered just, to bring pressure on the influential men in the different towns, who would in their turn bring pressure on the proper authorities to make it infamous practice for any man to work for less than the minimum amount agreed upon.

I consider it would take an income of £2,000 a year for five or six years to bring such a scheme to a successful conclusion, but feel confident such an amount could easily be raised. It would be for the benefit of all medical men to have a minimum fixed by law, and it would not make it any more difficult for a man to start practice than before, but would prevent him from underselling every man in his neighbourhood.

I am quite willing to pay an annual subscription for such a purpose if the idea is taken up, but I certainly will not do anything individually to lose the practice I have now.—I am, etc.,

CLUB DOCTOR.

November 25th.

INVITATION FOR TENDERS WITHDRAWN.

SIR,—My attention having been drawn to a paragraph in the BRITISH MEDICAL JOURNAL adversely criticising my circular to the medical profession in Blackpool, I beg to withdraw my offer for tenders, and to express my regret that I have unknowingly asked medical gentlemen to do something which might be deemed to be departing from the honourable traditions of the profession. At some convenient time I will ask a gentleman to take the post of visiting physician to the Hydropathic.—I am, etc.,

SAMUEL HORROCKS.

Blackpool, Nov. 22nd.

THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—I am happy to say that we have been able to make grants amounting to £161 at the meeting of the Committee to-day, and I have still to acknowledge with very grateful thanks the following donations:

	£	s.	d.		£	s.	d.
Mr. Edmund Owen... ...	2	2	0	Mr. Brook	0	10	6
Dr. Travers	5	5	0	Mr. Wilfred Thomas ...	0	10	6
Mr. John King (per Dr. Travers)	50	0	0				

I am, etc.,

W. H. BROADBENT.

Brook Street, W., Nov. 26th.

THE GUILD OF ST. LUKE.

SIR,—November 30th, St. Andrew's Day, is set apart for "special intercession for missions." May I, as Provost of the Guild of St. Luke, draw attention to the demand now existing for medical missionaries? Of these about sixty are employed by the Church of England Missionary Societies, of whom a third are our associates. Several colonial bishops, also members of the Guild, are urgently needing helpers. The Bishop of Bloemfontein, himself a Fellow of the Royal College of Physicians, is now acting for a medical missionary; so is the Archdeacon of Mashonaland. The Universities' Mission to Central Africa, and the Chota-Nagpur Mission in India also crave help.

The salaries offered vary from £100 to £300 a year. The stations in which they are needed are not always unhealthy, although the demand is naturally greater where disease is most rife. The call "to heal the sick" is as incumbent upon us as to "preach the Gospel" throughout the world. May we not hope that volunteers will come forward for this work?

Men possessing knowledge of medical sanitation and tropical hygiene are specially needed. If our missionary societies could secure the services of one imbued with the spirit and the knowledge of Edmund Parkes, who would see that the mission stations were free from every removable source of danger, and who would select sites for new stations and arrange hospital accommodation for sick natives and convalescent missionaries, many valuable lives annually sacrificed would be preserved.

His Grace the Archbishop of Canterbury has promised to preach for the Guild next year. Every loyal Churchman in the profession should be stirred to do what in him lies to promote the good cause we have at heart.—I am, etc.,

E. SYMES THOMPSON, M.D., F.R.C.P.,
Provost of the Guild of St. Luke.

Cavendish Square, W., Nov. 28th.

VACCINATION WITH STORED LYMPH.

SIR,—I have no doubt that many of your readers, like myself, have often found vaccine lymph stored in capillary tubes to fail in its effect. I believe the reason of such failure to be this—that when very fine tubes are used and are well filled the heat employed in sealing the ends is conducted along the tubes, and so sterilises the lymph wholly or in part. Whereas, if the tubes were of larger bore and stouter, and contained less lymph, the sealing might be effected without injury to their contents.

As an illustration of the above, I lately obtained two tubes of humanised lymph from the Local Government Board, with which I vaccinated nine children. Half the punctures totally failed, so that I had to vaccinate some of them again; and I attribute it to the fineness of the tubes and to their being filled nearly to the ends.

As lymph so stored must often lead to similar results, we can understand the Board's rooted dislike to anything but arm-to-arm vaccination. At the same time the failure of

stored lymph may often be set down to the defective method of storage adopted by the Department rather than to the system itself.—I am, etc.,

Guildford, Nov. 18th. HENRY TAYLOR.

*** It may be doubted whether the object desired could be secured by the use of lymph tubes of larger bore and thicker glass than those now and for some time adopted by the Local Government Board. The sealing by heat—now such a simple matter, and effected without the destruction of the tube—would be more difficult if larger and thicker tubes were used. It is unnecessary, in the majority of instances, to vaccinate so many as nine children with stored lymph, since the lymph sent out in a stored condition by the Local Government Board is intended only for the one purpose of starting a series of cases which shall enable vaccinators to continue from them a constant supply of human lymph from arm to arm, and thus obviate the many objections to any but absolutely fresh lymph. If human stored lymph be deemed unsatisfactory as a means of starting a series of arm-to-arm vaccinations, there is the alternative of stored calf lymph on points; but, whilst the objection of tubes is set aside in this case, we doubt whether the risk of failure is not greater. After all the amount of failure of stored lymph in the hands of a skilful vaccinator, such as our correspondent is, will not be large, and the arm of a selected vaccinifer having been successfully operated upon, the need for resort to stored lymph will not be great.

DIPHTHERIA ANTITOXIN AS A CULTURE MEDIUM FOR THE DIPHTHERIA BACILLUS.

SIR,—In the correspondence on this subject which has already appeared in the columns of the BRITISH MEDICAL JOURNAL some of the writers undoubtedly think that I am opposed to the antitoxin treatment of diphtheria. I can assure them that is not the case. Professor Wright, I am sorry to find, assumes from my letter of November 9th that I wished to impale Dr. Semple and himself upon the horns of a dilemma. If he refers to the paragraph in question he will perceive that the so-called dilemma is a personal one, and refers only to myself. However that may be, Dr. Wright readily extricates himself to his own satisfaction, and in so doing propounds a series of dual propositions, which are here reproduced in parallel columns:

1. Alcohol is produced by the yeast plant.	1. Diphtheria toxin is produced by the diphtheria bacillus.
2. The absorption of alcohol into the system constitutes "alcoholic intoxication."	2. The absorption of diphtheria toxin into the system constitutes "diphtheria intoxication."
3. Certain drugs, such as opium or bromide of potassium, do to some extent neutralise the effects of that alcoholic intoxication.	3. Diphtheria antitoxins neutralise the effects of that diphtheria toxin.
4. *Sugar solution* constitutes an excellent culture medium for the yeast plant.	4. *Serum* is a good culture medium for the diphtheria bacillus.

Now, it is easy to follow the chain of reasoning through the first three propositions in each column, although some of the included statements may be questionable; but at the end of each of the third paragraphs the proverbial red herring is drawn across the scent by making two trite observations which no one is likely to dispute. If, in the fourth propositions, instead of the words in italics, "a solution of opium" and "diphtheria antitoxin" were respectively substituted, the context would be more logical if less convincing.

Another of your correspondents, whilst fully confirming Dr. Wright's experiment, suggests that the heat required to coagulate the antitoxin destroys its bactericidal properties. If that is so, diphtheria bacilli ought to die when floated on fresh antitoxin and kept at a body temperature. On the contrary, I am afraid that the microbes would not only survive this treatment but thrive upon it. However, this is a question which a simple experiment would at once settle.

Yet another gentleman considers that we must look to Metchnikoff's theory for the true explanation of the action of antitoxin; that this product when introduced into the body stimulates "the living phagocytic cells." Now, if this explains the remedial process, antitoxin must act either as a general stimulant or as a special stimulant. If it acts as a general stimulant to the phagocytes throughout the body, I cannot see in what way diphtheria antitoxin differs in its action from half a score of other remedies, such as quinine or iron, which have at various times been credited with similar qualities. If, on the other hand, it is a special stimulant, and prompts these little bodies to devour only Klebs Loeffler bacilli and their antitoxins, many will consider that we are asked to mentally assimilate not only Metchnikoff's theory, but "rudis indigestaque moles" besides.—I am, etc.,

Brighton, Nov. 25th. W. AINSLIE HOLLIS.

THE GENERAL MEDICAL COUNCIL AND DIRECT REPRESENTATION.

SIR,—In these days of direct representation it is difficult to understand why we should be satisfied with the method of election of the members of the General Medical Council. Since it will be necessary to go to Parliament on the subject, it seems to me that we had better take the bull by the horns and endeavour to get direct representation *in toto*. If it is necessary that each qualifying body should send a representative, by all manner of means let it do so, but let these representatives be elected by the votes of the graduates or members of the different bodies. In this way each corporation would be represented, and yet the Council would be elected by us, who find all the funds. This seems to be the only satisfactory way of settling the question once for all.—I am, etc.,

Banbury, Nov. 25th. JAMES GRIFFIN, M.R.C.S., L.S.A.

THE ADMISSION OF WOMEN TO THE EXAMINATIONS OF THE CONJOINT BOARD.

SIR,—I fear that Sir Joseph Fayrer's statement in the course of the debate at the Royal College of Physicians on the admission of women to the Licentiateship, that "he had never known any instance where in a case of serious illness any difficulty had been placed in the way of a physician or surgeon entering a harem, and if he found it necessary the patient was always uncovered," may, quite unintentionally, give too favourable an impression of the degree to which Indian women have access to skilled medical advice. His experience is just what we should expect. The English doctor hears only of such women as are permitted or will consent to see him; of the many who by strong social custom are prevented from seeing him or any other male physician or surgeon he does not hear. Probably more Indian women are treated by medical men at the present day than was the case twenty years ago. But as a qualified medical woman who has had five years' practice in India I can say that two years ago it was an every-day occurrence in Calcutta to call in a medical man to diagnose and treat the illness of a patient whom he either did not see at all, or on whom he was not permitted to carry out a physical examination. At the present day it is very much the custom to call in a medical woman at the same time in consultation, who is free to see and examine the patient. Formerly the doctor had the assistance of a midwife, trained or untrained, upon whose information his diagnosis had mainly to rest.—I am, etc.,

November 23rd. MEDICA.

FEMALE MEMBERSHIP OF CLUBS.

SIR,—Various country newspapers containing reports of meetings of friendly societies mention the intention (carried into effect by the Foresters in at least one town) to admit women as members. I suppose the medical profession, as ratepayers and philanthropists, will welcome and support any movement to increase the wellbeing and thriftiness of our working classes, but when their women co-operate, and wish to obtain medical, gynæcological, and surgical attendance, and medicines from our already far-too-much-impressed-on profession for a very few shillings a year each, it behoves us also to co-operate, and strenuously decline to be "exploited" any more than we have already weakly permitted ourselves to be by the men (many of whom do not belong to the working class and can well afford moderate fees) and boys by our

lamentable want of union and *esprit de corps*. If medical practitioners would "strike" by resisting these attempts to lessen their professional position and incomes, and copy the excellent examples set by their brethren of Cork, Portsmouth, and Malvern they would win. The public cannot do without our aid; why should we, practically, give it? Why should we foolishly impoverish ourselves and our families and receive no thanks but contempt by consenting to most inadequate acknowledgment of our services? Truly the prospects of our young practitioners are most deplorable and regrettable unless we improve our position, as it is in our power to do.—I am, etc.,

November 23rd. A STRUGGLING PRACTITIONER.

INFLUENZA: WANTED A DEFINITION.

SIR,—The following definition represents fairly accurately the way in which the term influenza is at present applied: "Influenza is a name given to every case of illness in any district in which the newspapers say that influenza is prevalent."

Among medical men there are at least two diseases—diseases as different as scarlatina and measles—classed under the head of influenza:

1. Russian influenza, which became epidemic in 1889-90, characterised by sudden invasion, often rigors, high temperature, great pains in the back, limbs, and head, and no catarrhal symptoms; it affects chiefly adults, convalescence being marked by subnormal temperature and great prostration, its chief complication, when one occurs, being lobar pneumonia.

2. Catarrh; invasion not so sudden, temperature not high to start with, catarrhal symptoms (running at the nose, cough, etc.) being present from the very first—complication, broncho-pneumonia.

We have always had one or two cases a year of No. 1, called by the common people a "thorough cold," but until 1889 they did not appear to be infectious, and now when we have cases in country practice it is almost impossible to trace the sources of infection, and the cases do not appear to breed other cases like them.

No. 2 has always been prevalent, and always looked upon as infectious. There is an old saying, "If the cat has a cold it runs through the house." But since No. 1 has been prevalent, the cases of No. 2 are followed by more depression than formerly.

Bacteriologists do not appear to have helped us much in our study of influenza, for Koch's four postulates have not yet been satisfied as far as I can learn from studying the BRITISH MEDICAL JOURNAL, but the tubercle bacillus has taught us that the soil and environment are as important factors in the production of phthisis as the seed itself, and one of the old theories of influenza is possibly true—that influenza is not a specific disease, but is a climatic influence producing an intensification of the toxic power of some microbes which are commonly and universally present.—I am, etc.,

Shrewsbury, Nov. 22nd. GEORGE EBRY, M.B.Lond.

ANTISEPTICS IN FOODS.

SIR,—In the BRITISH MEDICAL JOURNAL of November 16th there is under the heading "Antiseptics in Foods" an editorial note suggesting that the recent prosecution for selling orange wine containing salicylic acid raises a question as to the propriety of preserving foods by antiseptics.

Without disputing the opinion there expressed that this question is a matter for discussion, I wish to protest against some of the statements put forward as showing that the use of salicylic acid for the preservation of articles of food is injurious to health. There is, in the first place, no foundation for the statement that "salicylic acid is a poison;" and, secondly, the cases referred to, in which it is alleged that salicylic acid has produced injury, are altogether different from the case of the orange wine in question, the quantity administered in those cases having been from 135 to 2,000 times as much as the quantity of salicylic acid that would be taken in a glass of the orange wine, that being, moreover, only one-fiftieth part of the average medicinal dose.

Conclusions drawn from such cases, and from the unwarranted assumption that salicylic acid is poisonous, cannot be of any value in regard to the use of salicylic acid in minute proportion for the preservation of articles of food, though they might tend to prejudice the settlement of the real questions at issue in the case still pending—namely, whether the small proportion of salicylic acid used for the purpose of preservation is, or is not, injurious to health, and whether the sale of such an article is to be regarded as an infringement of Section 6 of Food and Drugs Act, or as one of the exempted cases therein provided for.—I am, etc.,

Fenchurch Avenue, E.C., Nov. 25th. BENJ. H. PAUL.

THE MARCHING POWERS OF OUR SOLDIERS.

SIR,—How Surgeon-Major F. P. Nichols, A.M.S., can possibly describe the ammunition boot, price 9s. 2d., which has been served out to the line and the militia as an excellent boot is beyond me. The waist of this boot is almost as stiff and unbending as a bar of iron. It has a clump sole; the inner edge is carved, so that it makes the scaphoid bone protrude, and cruelly lames the men. As to drying these boots in one night in camp, I can only say that it takes a valet two days to dry a pair of wet shooting boots. Dressing the boots with an oil brush with a mixture of neats' foot oil and castor-oil is far the most expeditious way of softening the leather.

As the Adjutant-General is said to approve the pattern of this boot, I hope public opinion, and the medical profession in particular, will continue to point out to this officer the unfortunate selection he has made.

For the benefit of the Aldershot staff I may point out that the waist and tread are hardly synonymous terms. The clump sole is the tread, and this crimps the foot.—I am, etc.,

W. H. ALLSOPP,
Pall Mall, S.W., Nov. 23rd. Lieutenant-Colonel.

THE CLEANING AND DEODORISATION OF CATHETERS.

SIR,—"There is nothing new under the sun." In the *Lancet* in 1883 I described a catheter made for me by Messrs. Young, of Edinburgh, with a solid end beyond the eye, and carefully bevelled off opposite the eye. These were of silver; and the next year Messrs. Maw, Son, and Thompson made for me silk web catheters of similar construction. These they now sell, and I believe my name is appended to them.

On this ground I venture to take slight exception to the letter of Dr. J. Ward Cousins, in which he says: "I again desire to accentuate the importance of manufacturing all catheters with solid points." He has invented so many useful surgical instruments that he can well afford to leave me in possession of this one little source of satisfaction.—I am, etc.,

A. OGIER WARD.
Tottenham, Nov. 26th.

THE SCHOTT TREATMENT OF HEART DISEASE.

SIR,—During last summer I spent nearly five weeks at Nauheim Bad, and I had almost daily opportunities of seeing the Schott treatment carried out. Unfortunately there is no hospital at Nauheim, and the treatment must be watched in private patients. We all know how much this increases the difficulty of careful study and investigation. Nevertheless, thanks to Dr. Schott and Professor Heineman, I was able to follow several cases rather closely, and I left Nauheim convinced that the value of the treatment was beyond all controversy.

As to the duration of the cure or improvement I heard of many instances in which it had lasted several years, and since my return to England I have seen two cases of dilatation, one without and one with valvular mischief, and both have maintained their improvement from July or August to the present time.

While fully endorsing what has been said of the good results of the treatment, I am not sure I should like to accept any of the explanations yet given, and I think many important questions present themselves for solution by the physiologist and pathologist. In the meantime clinical facts far outweigh either objections or explanations, and while the whole profession is indebted to Dr. Schott for discovering the value of the treatment, that of England is scarcely less indebted to Dr. Beely Thorne for making it known here.

In some of the cases I saw at Nauheim the diminution of

the dilated heart was so marked that it was difficult to believe it. Probably, however, the real diminution is less than the apparent. A transverse section of the thorax would show both heart and chest wall of circular outline, hence lines drawn from the side limits of the area of cardiac dulness towards the heart would tend to approximate, just as would lines drawn from the tire of a wheel to the hub, although, of course, to a far greater extent than in the case of the heart. This fact would explain something. It has, however, very little bearing on the diminution of the top limit of dulness, but then this diminution is never, so far as my experience goes, so great as the transverse, nor is the vertical outline of the chest wall so circular as that of the transverse outline.—I am, etc.,

RICHARD GREENE.

Northampton, Nov. 23rd.

THE PROPOSED GENERAL HOSPITAL FOR CAMBERWELL.

SIR,—The letter which appeared in the BRITISH MEDICAL JOURNAL of November 23rd under the above heading, signed by nine medical gentleman attached to the provident dispensary in Camberwell, having come under my notice, I beg you will kindly allow me a small portion of your valuable space to reply to it.

I will preface my remarks by saying that the proposed general hospital is not designed for Camberwell alone, but for South London. It will, I think, be a matter of deep regret to all who have read the letter I am referring to that these gentlemen should combine in the invidious task of opposing a philanthropic scheme for the alleviation of the suffering and misery of large numbers of their poorer fellow-citizens. That they should support their opposition by a series of misstatements detracts moreover from the significance of their openly avowed hostility to the establishment of a new general hospital for South London.

The meeting held in Camberwell Vestry Hall, to which they so slightingly allude, was a public meeting duly convened by public placards—I enclose one that you, Sir, may see it—and at that meeting, at which several members of the vestry were present, the following resolution was carried unanimously:

> That having regard to the grievous want of a general hospital for South London, this meeting of residents in and about Camberwell is of opinion that early steps should be taken to establish such an institution.[1]

The nine medical gentlemen who protest against the establishment of a general hospital are, of course, perfectly entitled to their opinion. That it is of sufficient weight to influence the public is, however, quite another matter; and against their opinion I would put the somewhat weightier and more valuable opinion of the Select Committee of the House of Lords, which was appointed "to consider the evidence taken during the sessions of 1890 and 1891 with regard to the hospitals and provident and other public dispensaries and charitable institutions within the metropolitan area." That Committee, with a full knowledge of the medical wants of South London, and aware also of the existence and work of the provident dispensary to which these nine medical gentlemen belong, reported to the House of Lords as follows:

"The Committee would strongly advise that more hospital accommodation should be provided South of the Thames, and were it possible to find the site, and were philanthropic endeavours to be made for further accommodation for the sick in London, a large general hospital (say) in the densely populated district of Camberwell would no doubt be of extreme value . . .

"The Committee are convinced that more hospital accommodation is required South of the Thames."

I venture to think that the general public will attach very much greater weight to those strongly-expressed opinions of the Select Committee of the House of Lords, formed after a long and most searching inquiry, than it will to the opinion of the nine medical gentlemen who have availed themselves of the publicity afforded by your columns to publicly oppose the movement for the establishment of such a widely beneficent institution as a general hospital.—I am, etc.,

Cornwall Gardens, S.W., Nov. 25th. HENRY JEPHSON.

[1] See report in the *South London Press* of June 22nd, 1895.

OBITUARY.

DR. HENRY COUTAGNE, of Lyons, who has died at the age of 49, was distinguished both in medicine and in music. In his childhood he was hailed as a musical prodigy, and at the age of 8 he was already much in request as a pianist at amateur concerts. He studied medicine at Lyons, and took his degree in Paris in 1871. When the Lyons School was transformed into a Medical Faculty, Coutagne was appointed lecturer on forensic medicine, and he held an official position in connection with the law courts as a medico-legal expert. He translated Taylor's great work, and afterwards published a work of his own on forensic medicine, besides contributing largely to the *Archives d'Anthropologie Criminelle* and the *Lyon Médical*. He found time, also, to indulge his passion for music, and he earned a considerable reputation as a composer. He embodied the impressions of a trip to Denmark, Sweden, and Norway in his *Voyage aux Pays Scandinaves*, and he was also the author of an interesting book entitled *Les Anciens Luthiers de Lyon*.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are: Professor W. N. Popoff, Lecturer on Physiology in the University of Dorpat; and Dr. Manuel Bertis, sometime Professor of Pathology in the Medical Faculty of San Salvador.

SURGEON-MAJOR GEORGE EDWARD DOBSON died on November 26th. He was the eldest son of the late Mr. Parke Dobson, of Killinagh, co. Westmeath. He was educated at Trinity College, Dublin, where he graduated B.A. in 1866, M.B. and M.Ch. in 1867, and M.A. in 1875. He was First Senior Moderator and First Gold Medallist in Experimental and Natural Science, Classical Honourman and Stearnes Exhibitioner, and a Member of the Senate of the University of Dublin. He entered the Army in 1868, retiring in 1888 with the rank of Surgeon-Major. His *Essay on the Diagnosis and Pathology of the Injuries and Diseases of the Shoulder-Joint* was awarded the gold medal of the Dublin Pathological Society in 1867. He also wrote *Medical Hints to Travellers*, published by the Royal Geographical Society, which reached a sixth edition in 1889. He was F.R.S., F.L.S., F.Z.S., and a Corresponding Member of the Academy of Natural Sciences of Philadelphia and of the Biological Society of Washington.

NAVAL AND MILITARY MEDICAL SERVICES.

THE EXAMINATIONS FOR THE MEDICAL SERVICES: SUCCESSES AND FAILURES.

IT appears from the table furnished to the General Medical Council that at the examination last August for commissions in the Army Medical Staff 23 candidates offered themselves for the 13 appointments; 10 only obtained the qualifying aggregate of marks, though 4 others "qualified, but their total marks did not reach the aggregate required." Of the 9 candidates rejected, 3 failed in all the subjects of examination, 1 in medicine only, 1 in surgery only, 2 in chemistry and pharmacy only, 1 in medicine and chemistry and pharmacy, 1 in anatomy and physiology and chemistry and pharmacy. At the examination for the medical department of the Royal Navy there were 22 candidates and 12 commissions were given, but 17 candidates altogether were found qualified; 3 of the unsuccessful candidates failed in four subjects, and the remaining 2 candidates in three.

At the examination for commissions in the Indian Medical Service in February, 1895, there were 33 competitors for 18 vacancies; 24 qualified altogether, and 9 were rejected. Of these 9, no fewer than 7 failed in medicine (3 of them in that subject only). In the examination for the same service held in August, 1895, there were 37 candidates for 18 vacancies; 22 qualified altogether, 11 failed to obtain half the compulsory marks, and 4 failed in one or more subjects.

It will be seen that the subject of examination in which there was the largest number of failures was chemistry and pharmacy (18), medicine comes next (14), anatomy and physiology next (9), and that the subject in which there was the smallest number of rejections was surgery (8). The same candidate may, of course, appear under more than one qualifying body. Thus 3 of the successful candidates from the Apothecaries' Society had other qualifications.

For the Indian Medical Service there were 10 candidates who were declared qualified, but for whom there were no vacancies.

The subjoined table has been compiled from these returns.

—	No. of Candidates.	Successful or Qualified.		Failed to Get Half Marks	Failures in Medicine.	Failures in Surgery.	Failures in Anatomy & Physiology.	Failures in Chemistry & Pharmacy.
		No.	Per cent					
Conjoint Board in England	46	37	80.4	5	2	—	—	4
Conjoint Board in Scotland	13	5	[illegible]	2	3	2	3	5
Conjoint Board in Ireland (R.C.P. and R.C.S.)	10	4	40.0	5	3	4	4	4
L.S.A. Lond.	9	7	77.7	—	1	—	1	2
University of Cambridg ...	1	1	100.0	—	—	—	—	—
" Durham ...	3	2	66.6	—	1	—	—	—
" London ...	3	3	100.0	—	—	—	—	—
Victoria University ...	4	3	75.0	1	—	—	—	—
University of Edinburgh ...	23	14	60.8	7	2	1	1	1
" Glasgow ...	2	2	100.0	—	—	—	—	—
" Aberdeen ...	3	2	66.6	1	—	—	—	—
" Dublin ...	4	4	100.0	—	—	—	—	—
Royal University, Ireland ...	5	3	60.0	—	2	1	1	2

SURGEON-MAJOR-GENERALS.

We understand that principal medical officers of this rank will now be definitely appointed to stations for at least three years. This is considered to be a step in the right direction, and will do much to remove the complaints of the military authorities as to the constant movement of principal medical officers. As officers on promotion will take up the duties of the station where the vacancy occurs, the consequence will be that some surgeon-major generals will have all their service in the rank at home and others abroad. The new system does not extend to principal medical officers of the rank of surgeon-colonel.

THE NAVY.

Surgeon-Colonel M. E. P. Tindall has been placed on the Retired List, receiving a gratuity in lieu of retired pay, October 25th. He was appointed Surgeon, February 11th, 1881.

The following qualified candidates have been appointed Surgeons, November 19th: Charles H. J. Robinson, Harold Huskisson, M.B., Ernest S. Tuck, Harold G. T. Major, Murray P. Jones, Arthur W. B. Livesay, M.B., Herbert H. Gill, M.B., William D. Adams, M.A., M.B., William R. Trythall, John C. Rowan, M.B., Richard A. Ross, M.B., Michael J. Smith, B.A., M.B.

The following appointments have been made at the Admiralty:—John Dowson, Surgeon to the *Basilisk*, December 10th; William G. Stott, M.A., M.B., Surgeon to the *Victory*, additional, for the *Duke of Wellington*, December [illegible].

Erratum.—In the British Medical Journal of November 23rd we gave the first commission of Deputy-Inspector-General Kell as bearing date March 8th, 1867. We are asked to say that it should have been July 1st, 1864.

ARMY MEDICAL STAFF.

Surgeon-Major-General C. D. Madden, retired pay, is appointed Honorary Surgeon to the Queen, vice Surgeon-General Sir T. Crawford, M.D., F.R.C.S.I., K.C.B., retired pay, deceased. Surgeon-Major-General Madden entered the service as Assistant-Surgeon, December 14th, 1854, and became Surgeon-Major-General, May [illegible], 18[illegible]. He went on retired pay, August 1st, 18[illegible]. He served from January [illegible] to May [illegible], 1855, in the Crimea and before Sebastopol (medal with clasp and Turkish medal), with the 63rd Light Infantry in the Saugor Field Division from December 24th, 1857, and in the Field Division under General Whitlock in the latter part of 1858 (medal); and as Surgeon of the 4th King's Own throughout the Abyssinian campaign, being present as Field Surgeon of the 1st Brigade at the action of Arogee and capture of Magdala, mentioned in despatches, and promoted Surgeon-Major "for valuable services rendered during the campaign" (medal).

Surgeon-General H. T. Reade, V.C., C.B., retired pay, is also appointed Honorary Surgeon to the Queen, vice Sir T. Longmore, Knt., F.R.C.S., C.B., retired pay, deceased. Surgeon-General Reade entered the army in 1850, and retired therefrom on the last day of 18[illegible]. He served in medical charge of the 61st Regiment at the siege of Delhi from July 1st, 1857, to the final capture of the city on September 20th; was present at the repulse of the sorties of July 9th, [illegible], 18th, and 23rd, accompanied the regiment at the assault of the city on September 14th, and subsequently with a small party of the 61st repulsed an attack of about [illegible] on some wounded men, whose lives were thereby saved; on September 16th he was one of the first up the breach at the storming of the magazine, and with a sergeant spiked a gun—mentioned in despatches, and recommended for promotion for "unwearied exertions and gallant conduct in the field" during the siege and assault of Delhi (medal, with clasp, and Victoria Cross).

Surgeon-Lieutenant-Colonel M. D. O'Connell, M.D., is promoted to be Brigade-Surgeon, vice C. White, placed on retired pay. Appointed Assistant-Surgeon April 1st, 1871. Brigade-Surgeon-Lieutenant-Colonel O'Connell became Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1883; and Surgeon-Lieutenant-Colonel, April 1st, 1891. He served in the Soudan campaign in 1885, and has the medal with clasp and the Khedive's bronze star.

Surgeon-Major and Honorary Deputy Inspector-General R. Dommerchetti, M.D., is appointed Honorary Physician to the Queen, vice Surgeon-General J. Irvine, deceased. Deputy Inspector-General Dommerchetti dates as Assistant-Surgeon from April 3rd, 18[illegible], and as Honorary Deputy-Inspector-General from April [illegible], when he retired on half pay. He was on the Staff of General Havelock on his first taking the field in 1857, and was present in the actions of Futtehpore, Aong, Pandoo Nuddee, Cawnpore, Busseerutgunge, Bithoor, and Alumbagh, also the defence of the Alumbagh (thanked by the President of the Council of India). He was also with the 78th Regiment before Lucknow under General Outram in two attacks upon his position (medal with clasp).

Surgeon-General J. O'Nial, C.B., retired pay, and Surgeon-Major-General J. Warren, have been awarded good service rewards. Quartermasters L. Gorman and E. Enright, both on retired pay, have received similar rewards.

INDIAN MEDICAL SERVICE.

Brigade-Surgeon-Lieutenant-Colonel S. O'B. Banks, Bombay Establishment, is promoted to be Surgeon-Colonel, September [illegible]. He was appointed Assistant-Surgeon, March [illegible], 18[illegible], and became Brigade-Surgeon-Lieutenant-Colonel, February [illegible]. He was in the Abyssinian war in 1867-68, and was at the capture of Magdala, receiving the medal.

Surgeon-Lieutenant-Colonel E. B. [illegible], Bengal Establishment, has retired from the service, which he entered as Assistant-Surgeon, October 1st, 18[illegible], becoming Surgeon-Lieutenant-Colonel twenty years thereafter.

The retirement is also announced of Surgeon-Major A. S. Faulkner, Bombay Establishment, from January 1st, 18[illegible]. His commission as Assistant-Surgeon dated from September [illegible], and that of Surgeon-Major twelve years later. He was in the Afghan war in 1879-80 with the Southern Afghanistan Field Force, receiving the medal.

Brigade-Surgeon-Lieutenant-Colonel C. W. [illegible], Bengal Establishment, is appointed Principal Medical Officer to the Malakand Brigade, which forms part of the force remaining in Chitral.

Surgeon-Colonel Thomas Maunsell, the late P.M.O. of Chitral, who is at present officiating as Surgeon-General of the Bengal Army, has, we are informed, been selected for promotion to the rank of Surgeon-Major-General, and will proceed to Malta, where he will relieve Surgeon-Major-General Inkson.

THE LESSONS OF THE MADAGASCAR EXPEDITION.

The interesting letters from the special correspondent of the *Times*, which have from time to time appeared, afford lessons on the needs of campaigning in malarious climates. To the army medical officer the remarks dealing with the influence that youth and immaturity exercise on general health in active campaigning and the results of inattention to sanitary matters are of especial interest. The French losses in actual fighting in the whole campaign are set down at about some twenty killed and a hundred wounded, while the work which had to be done by the soldiers, many of them young, in constructing roads across pestiferous lowlands under a tropical sun has cost the French in deaths quite [illegible] men. Surely here comes in a case for inquiry. Let us take, for example, the case of one corps. The men of the [illegible] Regiment, far too young ([illegible] years of age) to endure the privations of a campaign in a climate such as that of Madagascar, were carrying 60 pounds of baggage and accoutrements under the burning sun, and thus laden were set to construct a broad waggon road across the malarious lowlands from the coast to Andriba. Well may it be asked why carriers and mules were not employed and the soldier thus spared sickness and death occasioned by exposure and enforced delay in swampy regions! We are told that these soldiers, "though prostrated with fever and dysentery, had to toil with pick and shovel on that pestilential road; they could scarcely stagger under their heavy packs, and before they reached Andriba upwards of [illegible] per cent. of their number were dead and [illegible] per cent. were on the sick list." It is indeed a high commendation of the French soldier to have it said that even under such conditions and with all this suffering the spirit of the men was remarkably good, and that there was little grumbling and discontent. Their patient endurance is described as "beyond praise," more especially when, owing to these casualties, they never had the excitement of real fighting.

That the rate of mortality among the white troops was excessive cannot be disputed. Although the flying column that marched from Andriba was composed of picked men who had not suffered so much as the others from fever and dysentery, nevertheless a large proportion entered the capital in a [illegible] condition. In short, in the words of the special correspondent of the *Times*, "many of these could scarcely crawl along; some lay down in the streets to die; and pitiable spectacles were often to be seen."

It is no matter of surprise to learn that the troops, utterly worn out on their arrival at the capital, "neglected the most ordinary hygienic precautions, and that the city (Antananarivo) in parts was in a filthy

state." It is stated that some of the men for the first few days drew their drinking water from a stagnant pool in Andahalo which is poisoned with sewage, and only used by the poorest inhabitants for washing purposes only. That with the oncoming summer, a serious epidemic is extremely likely to break out in Antananarivo goes without saying.

Again at Tamatave, as elsewhere in Madagascar, the mortality among the troops—more especially among the [illegible] of the [illegible] Regiment—was high, and the military burial parties were "alarmingly frequent" when the strength of the garrison is considered. Emaciation and anaemia were marked, for Madagascar fever, the French surgeons noted, induces malarial cachexia in a far shorter time than any other tropical fever, accompanied as this cachexia is reported to be, with great mental depression, it is easily comprehended that "a remarkable number of the sick soldiers committed suicide."

At Mojanga the hospitals were full of invalided troops sent back from Mevatanana and Andriba. These sick and invalided troops were sent home in batches once a month only by Messagerie steamers. Those left behind were disheartened at the prospect of waiting so long as a month before receiving the only chance of recovery, a voyage and change of air, and, losing heart, [illegible]

The Special Correspondent ends his last letter on the steamer *Yangtse*, which called at all the French stations in Madagascar, and pronounces it "a melancholy voyage." He says: "We embarked about 300 invalided officers and soldiers at Tamatave and Mojanga. Most of the men to a great extent recovered their health and spirits at sea, but the death-rate from fever and dysentery was very high; we sometimes lost several men in a day." The worst cases were sent on shore at Zanzibar, where there is an excellent hospital.

The Military Medical Service and the sanitary arrangements on board the steamer were bad. The orlop deck, where most of the sick lay, was offensive in smell, and probably overcrowded. Fortunately, cool weather was experienced in the Red Sea, or the death rate might have been much higher.

No wonder a profound impression was made on the people at Marseilles when they saw successive batches of what the *Times* correspondent terms "human wrecks" landed in their port.

The foregoing is sad reading, and we are irresistibly led to ask, Who should be held responsible? The Commanding-General (Duchesne) has from all accounts creditably conducted a difficult campaign, and the good behaviour of the troops is commendable.

SURGEON-MAJOR-GENERAL HAMILTON.

THE promotion of this distinguished officer, which was announced in the BRITISH MEDICAL JOURNAL of November 23rd, appears from the references to it made by the military papers to give general satisfaction in the service; it is equally satisfactory to the medical profession. Surgeon-Major General J. B. Hamilton has served Her Majesty for some thirty-six years, nearly twenty seven of which have been spent abroad, mostly in the tropics. He is a graduate both in Arts and in Medicine of the University of Dublin and a Member of the Royal College of Surgeons of England. Entering the army a few weeks after taking his degree, he was sent to the West Indies, and after a tour there to India, where he has served almost continuously since [illegible]. Throughout his service Surgeon-Major-General Hamilton has done his duty with a singleness of purpose which would have satisfied the Iron Duke himself. In conjunction with Surgeon-Major Evatt he worked hard to get the "rum ration" abolished, and was instrumental in bringing about the establishment of the canteen system now in force. He has written largely and effectively on subjects connected with the health and well being of the soldier. He is the author of a monograph on enteric fever, which was very favourably reviewed in these columns, and numerous articles from his pen have been published in the BRITISH MEDICAL JOURNAL and the *Indian Medical Gazette*, "Cholera," "The Milk Supply for the Troops," "Nursing in Indian Military Hospitals," "Acute Hepatic Abscess" (in which he condemned the use of the aspirator and advocated incision and drainage), being among the subjects dealt with by him.

Surgeon-Major-General Hamilton has always been popular with his subordinates, and his zeal and ability have been greatly appreciated by the general officers under whom he has served.

THE ASHANTI EXPEDITION.

THE medical arrangements for the Ashanti expedition are now almost complete, and, as has been stated, Surgeon-Colonel Taylor will act as the principal officer in this department. In addition to having seen varied service in Canada, India, and Burmah, Surgeon-Colonel Taylor has only recently returned from the seat of war in the East, having been attached to the Japanese army acting against Port Arthur. He will leave Liverpool on Saturday, November 30th, accompanied by five other officers of the Army Medical Staff Corps, for the purpose of setting hospital matters in order. Besides the ordinary field hospitals on shore there will be established a base hospital at Cape Coast Castle, whilst serious cases will eventually be transferred to the hospital ship, which will be some two miles off the coast. This vessel, the *Coromandel*, of the Peninsular and Oriental Company's fleet, is at present being rapidly equipped under the superintendence of the Director of Transports and an officer of the Army Medical Department. She is fitted with the electric light, and will be supplied with refrigerators and double awnings, with the object of minimising the effects of the tropical sun. Iron cots and bedding will be sent from Woolwich Arsenal for the accommodation of [illegible] officers and [illegible] men who may be sick and wounded, together with 40 officers and [illegible] men, convalescent or in health.

Special attention is being paid to light, ventilation, and water. The *Coromandel* will sail from the Royal Albert Docks on December 6th. The vessel is being fitted up by the War Department, and not by the Admiralty, the stores being those supplied to army hospitals, and differing from those provided for the navy hospitals. She will take out [illegible] tons of medical and hospital stores from Woolwich. The ship has been chartered by Government till February [illegible]. Brigade-Surgeon Lieutenant-Colonel Townsend has been appointed to the medical charge, the other officers detailed being Surgeon-Majors Dodd and Porter and Lieutenant and Quartermaster Lines. Three sisters of the Army Nursing Service will also form a portion of the complement of the hospital establishment—namely, Sisters Gray, McCurdy, and Potts, and a proportionate number of non-commissioned officers and men of the Medical Staff Corps will be embarked as sick attendants. Everything that modern science and experience can contribute towards the efficiency of the hospital in the *Coromandel* will be brought into use. In addition to those already named, the following officers of the Army Medical Staff Corps have been detailed for the expedition: Surgeon-Lieutenant Colonel Blennerhasset, Surgeon-Majors [illegible], Wolseley, Wilson, Beatty, Bartlett, and Hickman; Surgeon-Captains Beevor (Scots Guards), O'Callaghan, Josling, Eckersley, Corcoran, Burke, Wilson, and Maher; and Surgeon-Lieutenant Spencer. Several of the foregoing officers have already had considerable experience on the West Coast of Africa.

REGIMENTAL STRETCHER BEARERS AND FIRST AID TO THE WOUNDED.

BRIGADE-SURGEON-LIEUTENANT COLONEL PETER GILES (Welsh Border Brigade Bearer Company) writes: In answer to "Inquirer," the following is the regulation in the German army: There are four classes, equivalent in the English army to: (1) Sanitat = M.O.; (2) Lazareth = M.S.C.; (3) Krankentraeger = regimental stretcher bearers; (4) Hulfen-Krankentrager = extra regimental stretcher bearers, embodied only in war.

Nos. 1 and 2 are departmental. No. 3 wear the uniform of their corps, with distinctive collar and facings, and are armed with side arms and revolvers. No. 4 are only for war service; wear their corps uniform, with a red band on their left arm, worn only during an action, and are not protected by the Geneva Convention. Nos. 3 and 4 have fourteen days' instruction each year, and are four per company, raised from men serving with the colours and in the reserve from the infantry, Jager and Schutzen.

Each regiment has 3 M.O.'s, or Sanitat. Each company, troop, and battery has 1 Lazareth or M.S.C. attached to it. In war each division has a Sanitat detachment (M.O., A M.S.C.) under a commandant and lieutenant consisting of 250 men, 45 horses, 12 waggons. Each army corps has 12 Feld Lazareth, or hospitals, each for 200 sick. There is no brigade medical unit, but in cases where brigades act independently the Divisional Sanitats detachment is split up. In war the Hulfkrankentragen, 4 per company, distinguished by a red band on the left arm but not protected by the Geneva convention, succour the wounded, and bring them on stretchers to the Kuppenverbandplatz, where the regimental M.O.'s (Sanitat) are collected, protected by the Geneva Convention; the Krankentraeger carry the wounded thence to the Hauptwerbandplatz, where the Sanitat (M.S.C.) detachment of the division is; then the wounded are taken in wagons to the Feld Lazareth, or field hospitals, of the army corps.

It will be by this clearly understood that the first line of assistance is not protected by the Geneva Cross, and are said, though double the number of those allowed by English regulations, to be admittedly far too little.

MEDICO-LEGAL AND MEDICO-ETHICAL.

SALE OF PRACTICES.

WE have received a communication from a gentleman in the north of England to the effect that recently, wishing to dispose of a small practice, he communicated with agents, and that as a result a certain doctor visited him, inspected his books, and made inquiries as to the nature of the practice. Our correspondent states that subsequently this same doctor canvassed the village to form a club, took a house, and commenced practise on his own account. Our correspondent adds that this case ought to be a warning to others to make careful inquiries as to the antecedents of persons who may apply to purchase practices. We trust that our correspondent is under some misapprehension, as such a course of conduct in a member of an honourable profession is almost incredible.

IN the case of Fisher *v.* Foy, a Dublin surgeon, for *crim con.* an application was made to the Court of Queen's Bench last week by the defendant to order plaintiff to give particulars of the alleged acts within one week, and the Court made the necessary rule. We are glad to notice that the plaintiff has since written to say that he wholly discontinues the action.

A CARD.

A CORRESPONDENT sends a specimen of a card which, he states, was given recently to one of his patients. The following is the wording of this card:

144, Brecknock Road, N.
With a view of meeting the requirements of a class of persons who are unable to meet the usual charges for Medical Attendance,
DR. MACANN
is prepared to attend Patients either at the above address or at their own homes at the following reduced scale of charges.
CONSULTATION AND MEDICINE, 1s.
Hours—Mornings before 11 o'clock.
Evenings after 7 o'clock (Except Wednesday evenings) at
144, Brecknock Road.
Visits and Medicine at Patients' own homes at any hour, 1s. 6d.
Midwifery, £1 1s. Vaccination, 2s. 6d.

⁎ It must be concluded, from the number of advertisements of this kind which reach us in the course of the year, that this mode of making their existence and their terms known to the public is thought by a certain number of practitioners, not very heedful of the honourable traditions of the profession, to conduce to their advancement in practice. That this is a mistake they will find out sooner or later, but in the mean-

while much injury is being done to the public estimation in which the medical profession has been held. The publicity which we are able to give to such advertisements by reproducing them in these columns has, no doubt, a deterrent effect in the case of those who have not finally determined to sacrifice the good opinion of their fellows, but we look upon it as the duty of all the medical corporations and universities to make and enforce by-laws dealing specifically with the practice of advertisement by members of these bodies. If such advertisers be members of the British Medical Association, which we are glad to think is not often the case, the advertisements should be brought under the notice of the Council of the Branch.

"THE WRONG COMPLAINT."

ENQUIRY writes: A. is attending a patient B., who is dissatisfied with A.'s treatment and calls in C., who tells B. that he has been treated for the wrong complaint by A., but does not communicate in any way with the latter. Would it not have been more in accordance with professional ethics and the promotion of neighbourly feeling to do so?

*** The alleged conduct of C. in relation to A. is not only the reverse of neighbourly action, but in direct contravention of the following rule: "When a practitioner is called into, or consulted by a patient who has recently been, or still may be, under the care of another for the same illness, he should on no account interfere in the case, except in an emergency: having provided for which he should request a consultation with the gentleman in previous attendance, and decline further direction of the case except in consultation with him. If, however, the latter refuse this, or has relinquished the case, or if the patient insist on dispensing with his services, and a communication to that effect be made to him, the practitioner last consulted will be justified in taking charge of the case; ere assuming which, however, he should satisfy himself that such intimation has been given by the patient or family. Under such circumstances no unjust or illiberal insinuations should be thrown out in reference to the conduct or practice previously pursued," etc.—*M. E. Code*, chap. ii, sect. 5, rule 9.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THE VICE-CHANCELLOR.—We are glad to learn that Mr. Charles Smith is recovering from the effects of his bicycle accident; but as he is advised on grounds of health to undertake no business during the remainder of the term, he has nominated the Provost of King's College and the Master of St. John's College as Deputy Vice-Chancellors.

LECTURES IN MEDICINE.—The Regius Professor of Physic (Dr. Allbutt) proposes to lecture on medicine, in reference to cases under the care of the physicians in the hospital, during the ensuing Lent Term. He desires that the names of students or graduates desiring to attend may be sent to him this term.

UNIVERSITY OF EDINBURGH.

AT a meeting of the University Court on Monday, November 18th, it was intimated that Dr. Heron Watson had been re-elected and Dr. Joseph Bell elected by the General Council as assessors in the University Court.

Mr. D. A. Welsh, M.B., was appointed one of the clinical medicine tutors in room of Dr. Tillie, resigned.

UNIVERSITY OF DUBLIN ELECTION.

WE are informed that Mr. Lecky's London Committee sits daily at Mr. Macrory's chambers, 7, Fig Tree Court, Temple, and will be glad to give information to medical men in England who have votes for Trinity College, Dublin.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Members of the College, namely:

Abbott, J. E., L.R.C.P.Lond.
Ash, F. R., L.R.C.P.Lond.
Ashwin, R. H., L.R.C.P.Lond.
[illegible], E. D., L.R.C.P.Lond.
[illegible], T. A., L.R.C.P.Lond.
[illegible], A. H., L.R.C.P.Lond.
[illegible], G. C., L.R.C.P.Lond.
Bell, T. D., L.R.C.P.Lond.
Bernstein, M. M., L.R.C.P.Lond.
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[illegible], W. I., M.D.[illegible]
Brown, R. C., L.R.C.P.Lond.
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Campbell, A. J., L.R.C.P.Lond.
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Clark, R. F., L.R.C.P.Lond.
Connell, A. M., L.R.C.P.Lond.
Cooke, A., L.R.C.P.Lond.
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Evans, E. L., L.R.C.P.Lond.
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Fraser, W. D., L.R.C.P.Lond.
Ganner, J., L.R.C.P.Lond.
George, G. F. S., L.R.C.P.Lond.
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Gilmour, R. W., L.R.C.P.Lond.
Green, C. F., L.R.C.P.Lond.
Hardcastle, W., L.R.C.P.Lond.
Hardy, F. H., L.R.C.P.Lond.
Harris, S. [illegible], L.R.C.P.Lond.
Hartley, T. S., L.R.C.P.Lond.
Hay, J., L.R.C.P.Lond.
Haydon, G. A. T., L.R.C.P.Lond.
Hearnden, H., L.R.C.P.Lond.
Heptinstall, R. H., L.R.C.P.Lond.
Hewetson, H., L.R.C.P.Lond.
Hill, E. G., L.R.C.P.Lond.
Holme, C. W., L.R.C.P.Lond.
Hora, J., L.R.C.P.Lond.
Hubert, W. A., L.R.C.P.Lond.
Huckle, A. H. H., L.R.C.P.Lond.
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Jones, E. F., L.R.C.P.Lond.
Joyce, R. D., L.R.C.P.Lond.
Kent, P. W., L.R.C.P.Lond.
Lambe, T., L.R.C.P.Lond.
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Leon, J. T., L.R.C.P.Lond.
Lermitte, E. A., L.R.C.P.Lond.
Lincoln, C. H. S., L.R.C.P.Lond.
Loud, F., L.R.C.P.Lond.
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Mackenzie, A., L.R.C.P.Lond.
Macmillan, N. H., L.R.C.P.Lond.
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Manby, W. E., L.R.C.P.Lond.
Marshall, G. S. S., L.R.C.P.Lond.
Martineau, A. J., L.R.C.P.Lond.
Mayne, B. J., L.R.C.P.Lond.
Miller, G., L.R.C.P.Lond.
Muggleton, F. C. H., L.R.C.P.Lond.
Murray, J. H., L.R.C.P.Lond.
Myrtle, [illegible] Y., L.R.C.P.Lond.
Nott, [illegible] W., L.R.C.P.Lond.
Nuthall, A. W., L.R.C.P.Lond.
Ormerod, F. W., L.R.C.P.Lond.
O'Sullivan, [illegible], L.R.C.P.Lond.
[illegible], J. [illegible], L.R.C.P.Lond.
Penny, W. H., L.R.C.P.Lond.
Pepper, H. W., L.R.C.P.Lond.
Perkins, G., L.R.C.P.Lond.
Perry, W. D., L.R.C.P.Lond.
Pritchard, H. W., L.R.C.P.Lond.
Ransome, A. C., L.R.C.P.Lond.
[illegible], W. F., L.R.C.P.Lond.
Rees, D. C., L.R.C.P.Lond.
Rogers, A. A., L.R.C.P.Lond.
[illegible], C., L.R.C.P.Lond.
Savin, L., L.R.C.P.Lond.
Sears, A. E., L.R.C.P.Lond.
Shelley, P. W. G., L.R.C.P.Lond.
Shepheard, H., L.R.C.P.Lond.
[illegible], S. E., L.R.C.P.Lond.
Simpson, C. B., L.R.C.P.Lond.
Smith, F. A., L.R.C.P.Lond.
Sparrow, G. B., L.R.C.P.Lond.
Stamper, G. C., L.S.A.Lond.
Stonehouse, H., L.R.C.P.Lond.
Stuart, W. L., L.R.C.P.Lond.
Thornton, F. B., L.R.C.P.Lond.
Trotter, R. H., L.R.C.P.Lond.
Tyson, W., L.R.C.P.Lond.
Wakefield, G. F., L.R.C.P.Lond.
Watson, F. J., L.R.C.P.Lond.
White, A. N., L.R.C.P.Lond.
Williams, F. D'A. M., L.R.C.P.Lond.
[illegible], W. S., L.R.C.P.Lond.
Wilson, H. B., L.R.C.P.Lond.
Wollenden, H. C., L.R.C.P.Lond.
Wood, R. M., L.R.C.P.Lond.
Worthington, J. V., L.R.C.P.Lond.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

FELLOWSHIP EXAMINATION.—The following gentlemen having passed the necessary examination, have been admitted Fellows of the College: Mr. Thomas Eagleson Gordon and Mr. George [illegible]. The following gentlemen passed the primary part of the examination: Mr. Patrick Joseph Fagan and Mr. David Alexander M'Curdy.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, November, 1895.—The following candidates passed in:

Surgery.—F. R. Baker, London Hospital; G. P. Y. Hulbert, Birmingham; P. G. Lodge, Leeds and St. Thomas's Hospital; D. Pettigrew, Glasgow and Sheffield; W. O. Piper, Westminster Hospital; E. A. B. Poole, Birmingham; E. H. Tipper, Guy's Hospital; J. R. Wall, St. Mary's Hospital; J. Watts, Manchester; H. C. [illegible], St. Bartholomew's Hospital; J. [illegible], St. Mary's Hospital.

Medicine, Forensic Medicine, and Midwifery.—W. [illegible], Charing Cross Hospital; E. G. Frederick, King's College; R. B. Jones, Liverpool; J. A. K. Renshaw, Cambridge and Manchester.

Medicine and Forensic Medicine.—F. F. [illegible], London Hospital; C. W. Moorshead, Guy's Hospital; E. H. Tipper, Guy's Hospital.

Medicine and Midwifery.—F. R. Baker, London Hospital.

Medicine.—W. H. Reed, Bombay and King's College.

Midwifery.—R. P. H. Whitmarsh, St. Thomas's Hospital; J. G. Owen, Charing Cross Hospital.

To Messrs. Hulbert, Lodge, Moorshead, Pettigrew, Poole, Reed, Renshaw, Tipper, Watts, and Whitmarsh was granted the diploma of the Society.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

TYPHOID AT PHILLACK.

THE action of the Phillack Urban District Council in censuring the owners of a grain store, as having by the storage of decomposing grain caused a prevalence of typhoid fever, would be amusing if it had not its serious aspect. Nuisance, indeed, may have been caused by the decomposing material in question, but there is evidence of a polluted drinking water in the neighbourhood of the fever prevalence, and the fact that analysis had pronounced the water to be unfit for drinking purposes. The report of the local health officer shows that the attention of the Local Government Board has been called to the occurrence, and that they are sending down one of their inspectors to investigate the matter, a step hardly likely to have been resolved upon if the storage of some wheat had been in question. The Council having deemed it unnecessary to have the implicated water analysed, one of their number has had it done privately, both in dry weather and after rain. There is no compulsory notification.

Eight cases have been heard of, with one death; but other other cases may be unreported. The health officer speaks of his inspection previous to the advent of the Government inspector having revealed a state of things that would have surprised his Council had they been with him in his round. The question that occurs to us is whether the Council would not have been nearer the mark if they had censured themselves, and passed a resolution to at once remedy the evils to which their medical adviser so strongly points.

HEALTH OF ENGLISH TOWNS

In thirty-three of the largest English towns, including London, 4,331 births and 3,562 deaths were registered during the week ending Saturday last, November 23rd. The annual rate of mortality in these towns, which had been 22.1 and 19.1 per 1,000 in the two preceding weeks, further declined to 19.0 last week. The rates in the several towns ranged from 12.6 in Brighton, 13.1 in Norwich, and 13.2 in Croydon to 27.2 in Liverpool, 27.3 in Salford, and 32.8 in Blackburn. In the thirty-two provincial towns the mean death-rate was 20.0 per 1,000, and exceeded by 2.3 the rate recorded in London, which was 17.7 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.7 per 1,000, in London the rate was equal to 3.0 per 1,000, while it averaged 2.5 in the thirty-two provincial towns, and was highest in Wolverhampton, Burnley, Salford, and Blackburn. Measles caused a death-rate of 2.5 in Salford, 2.6 in Burnley, 3.6 in Wolverhampton and in Oldham, and 9.4 in Blackburn; scarlet fever of 1.0 in Birkenhead; and "fever" of 1.0 in Salford and 1.1 in Sunderland. The 111 deaths from diphtheria in the thirty-three towns included 69 in London, 8 in Birmingham, 6 in West Ham, and 4 in Salford. One fatal case of small-pox was registered in West Ham, but not one in London or in any other of the thirty-three large towns. The number of small-pox patients in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital, which had been 106, 78, and 88 at the end of the three preceding weeks, had further increased to 89 on Saturday last, November 23rd; 20 new cases were admitted during the week, against 29, 14, and 23 in the three preceding weeks. There were 2,467 scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, against 2,431, 2,547, and 2,548 at the end of the three preceding weeks; 256 new cases were admitted during the week, against 215, 249, and 268 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, November 23rd, 812 births and 521 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.4 and 18.5 per 1,000 in the two preceding weeks, further declined to 18.1 last week, and was 0.9 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.5 in Leith to 23.3 in Aberdeen. The zymotic death-rates in these towns averaged 1.7 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 246 deaths registered in Glasgow included 7 from scarlet fever, 6 from whooping-cough, and 5 from "fever." Three fatal cases of scarlet fever were recorded in Aberdeen.

FRACTURES OF CLAVICLE IN POOR-LAW PRACTICE.

Inquirer writes to ask whether fractures of the clavicle can be regarded as fractures of the arm, and so entitled to be charged for as extras.

**** It has been ruled that a fracture of the clavicle does not come within the regulation which allows fractures of the arm to be charged for as extras.

PUERPERAL FEVER OR SEPTICÆMIA.

Dubito asks whether he ought to notify as puerperal fever a case of septicæmia supervening on the third day after an abortion at the third month.

**** Without attempting to supply a definition of puerperal fever for the purposes of the Notification Act, we think that it is usual and proper to notify in such a case.

NOTIFICATION QUESTIONS.

Mr. Walter Chas. Aylward (Tunbridge Wells) asks for an opinion on the following case: A patient who lives near the border of two adjoining sanitary districts is attacked by scarlet fever while living in District 1, and the case is duly notified to A, the medical officer of health for that district. For the purpose of isolation the patient is removed to a cottage in District 2. Ought the case to be notified to B, the medical officer of health for District 2?

**** The case ought to be notified to B, unless the circumstances are such that the cottage in District 2 can be regarded as "a hospital in which persons suffering from an infectious disease are received."

Mr. A. Maude (Wrexham) asks: Is it necessary under the Infectious Diseases Notification Act for a practitioner called in consultation with another to report the case simultaneously with the other practitioner?

**** According to the letter of the Act it is necessary for both to notify.

SCARLET FEVER IN EDINBURGH.

The number of cases of scarlet fever in Edinburgh is again on the increase, nineteen fresh cases having been reported last week. Unfortunately, too, some cases of a malignant type have appeared. Hitherto the cases have been mostly mild.

MEDICAL NEWS.

The eighth annual *conversazione* of the Royal British Nurses' Association will be held at the Institute of Painters in Oil Colours, Piccadilly, W., on Monday, December 9th, at 8.30 P.M.

Two new convalescent houses, one for males and the other for females, which have been added to the Perth County Lunatic Asylum at Murthly, were formally opened on November 2nd by Lord Balvaird. The new structures will accommodate forty-eight patients and four nurses.

The Bishop of Stepney will take the chair at a public meeting to be held at Cadogan House, 162, Sloane Street, on December 4th, at 3 P.M., to discuss the means which may be taken to encourage voice training as a branch of national education in accordance with the memorial of the British Medical Association of November, 1893.

Prosecution under the Medical Act.—The hearing of the case against an alleged unqualified practitioner, to which reference was made by our Bristol correspondent last week (p. 1323), was resumed on November 21st, and, as we learn from the report in the *Western Press*, again adjourned, a warrant for the arrest of the defendant being ordered.

Westminster Hospital Medical School.—On Tuesday, November 19th, the students' annual dinner was held at the Criterion Restaurant, under the presidency of Mr. Spencer, the dean of the school. A large company were present, and, besides past and present students, many of the hospital staff attended, including Dr. de Havilland Hall, Dr. Donkin, and Mr. Bond.

Royal British Nurses' Association.—The first sessional lecture of the season was given on Friday, November 22nd, at 8 P.M., at the offices, 17, Old Cavendish Street, W., by Louis H. Parkes, M.D., D.P.H., on The Importance of Breathing Fresh Air. The Chair was taken by E. A. Fardon, M.R.C.S., Medical Honorary Secretary. The lecture was well attended by members and friends.

A Munificent Gift to the University of Chicago.—Mr. John D. Rockefeller has recently given an additional sum of one million dollars and a further contingent contribution of two million dollars to the University of Chicago. These gifts make up the entire amount of the Chicago millionaire's gifts to the University to about 7,600,000 dollars (£1,520,000). This is probably the largest gift ever made by an individual for educational purposes.

Sir Charles Cameron, M.D., was presented at Glasgow on November 26th with his portrait, which bore an inscription indicating that it was given by a large circle of admirers representing all shades of political opinion, in recognition of his services to the public during his twenty-one years in Parliament. The Lord Provost made the presentation. A fountain in honour of Sir Charles Cameron will also be erected at Charing Cross, Glasgow.

The annual dinner of the past and present students of the National Dental Hospital and College, Great Portland Street, was held at the Holborn Restaurant on November 22nd, under the presidency of Sir Dyce Duckworth. The Chairman in proposing the toast of the evening—"Success to the National Dental Hospital and College"—said that he had within the last few days gone over the hospital, and he confessed that it was a revelation to him. The arrangements were in every way adapted to fulfil the purposes for which they were designed.

Mr. George Wight, M.B., C.M Edin., was at the Central Criminal Court convicted of manslaughter by negligence in the management of a confinement. Mr. Justice Wright, in passing sentence, said that the sentence would have been heavy if the maltreatment had been due to intoxication. He would pass a sentence of three months' imprisonment, but, having regard to the obvious consequences to the prisoner, and the absence of bad intentions, without hard labour. Further, he directed that, until the decision of the Secretary of State was known, the accused should be placed under the care of the medical officer of the prison.

RESTORATION OF THE APPARENTLY DROWNED.—Among the recent recipients of the medals presented by the Royal Humane Society for saving life were the Misses Amelia M. and Alice M. Bigsby, of Clifton House, Deptford, to whose exertions is due the fact that a would-be suicide mother and her child were restored after hope had been abandoned, the mother after three-quarters of an hour's treatment inculcated in instruction by the St. John Ambulance Association and the study of Dr. Sylvester's method of artificial respiration, and the child in one hour and a-quarter. The woman had jumped with her child into the Surrey Canal at Deptford, and after some time was brought ashore apparently lifeless. The Misses Bigsby, who had been apprised of the occurrence, hastened at once to the spot and had the bodies brought to their father's house, with the result that their prolonged efforts were crowned with success.

A PAPER on the need for a uniform curriculum for nurses was read at a recent meeting of the Matron's Council by Miss Stewart, Matron of St. Bartholomew's Hospital. Replies, including a very full expression of opinion from Miss Nightingale, received from matrons and others to questions bearing on the subject were considered in detail, and it was urged that registration of certificated nurses by the State was the only means of combating the evils due to the ease with which ignorant and unsuitable women of little or no training obtained employment as fully-trained nurses. A preliminary course of training and a preliminary examination would enable authorities better to discriminate among candidates, and would diminish the number of failures in the first year of training. The mode in which the three years of training should be spent, the establishment of a central board of examiners, the form of certificate to be granted, and the desirability of enforcing payment or an entrance fee, were also reviewed in the paper, and after some general discussion a resolution in favour of a uniform curriculum was adopted unanimously.

ROYAL SOCIETY OF EDINBURGH.—At the statutory annual meeting on November 25th the following members of Council were elected for the ensuing session:—*President:* The Right Hon. Lord Kelvin, F.R.S. *Vice-Presidents:* Professor Copeland, Astronomer Royal for Scotland; Professor James Geikie, LL.D., F.R.S.; the Hon. Lord Maclaren, LL.D.; the Rev. Professor Flint, D.D.; Professor J. G. McKendrick, M.D., LL.D., F.R.S.; and Professor Chrystal, LL.D. *General Secretary:* Professor P. G. Tait. *Secretaries to Ordinary Meetings:* Professor Crum Brown, F.R.S., and Mr. John Murray, LL.D. *Treasurer:* Mr. Philip R. D. Maclagan. *Curator of Library and Museum:* Mr. Alexander Buchan, M.A., LL.D. *Councillors:* Alexander Bruce, M.A., M.D., F.R.C.P.E.; Professor Frederick O. Bower, M.A., F.R.S.; Mr. A. Beatson Bell, advocate; Sir Arthur Mitchell, K.C.B., LL.D.; Professor T. R. Fraser, M.D.; Robert Munro, M.A.; M. D. Noel Paton, B.Sc., F.R.C.P.E.; C. G. Knott, D.Sc.; Sir W. Turner, M.B., F.R.S.; Sir Stair Agnew, K.C.B.; James Burgess, C.I.E., M.R.A.S.; and John S. Mackay, LL.D.

LONGTON HEARTS OF OAK MEDICAL AGENCY.—The *Newcastle Guardian* gives an account of the annual dinner of this Society, from which it would appear that both the members and their medical officers are contented with the present arrangements. Dr. W. J. Dawes, in replying to the toast of "The Doctors," is reported to have said that, as "he was working in a good cause, the amount of remuneration was secondary to that which he looked on as a great pleasure, namely, doing what he could to assist an agency of this kind, where men combined to assist one another." If the remuneration is a penny a week per member, and there is no wage limit, as we believe is the case in most of the medical agencies in connection with the Hearts of Oak Benefit Society, Dr. Dawes is not to be congratulated on his sentiments, as affecting the interests of his own profession. It may be right enough for working men to combine to assist one another, but it is not quite so easy to see why this should be at the expense of the medical profession. It is equally incumbent on the latter to combine for its own protection, and the common cause is not assisted by utterances such as this of Dr. Dawes, which tend to make the public think the profession are satisfied with the present rate of payment of benefit societies to their medical officers.

THE BELFAST MEDICAL STUDENTS' ASSOCIATION.—The first general meeting of this Association was held on Friday, November 15th, Dr. Donnan, the outgoing President, in the chair. Before proceeding with the business proper of the meeting the chairman alluded to the recent sad death of Dr. Ross, and suggested that the Secretary should be authorised to send, on behalf of the Association, a letter of sympathy to Mrs. Ross in her great misfortune. The suggestion was unanimously adopted. The Secretary's and Treasurer's reports were then read, and showed the Society to be in a satisfactory condition. The office-bearers for the ensuing session were then elected, Dr. Magowan being chosen President, and Dr. Drummond, Dr. Fullerton, Dr. Donnan Vice-Presidents; W. A. Rice, B.A., Hon. Secretary.

MEDICAL VACANCIES.

The following vacancies are announced:

BROMLEY UNION, Kent.—Medical Officer for the No. 3 District. Salary, £70 per annum, vaccination fees, and extras about £15. Applications to Robert Gordon Mullen, Clerk to the Guardians, 56, High Street, Bromley, Kent, by December 5th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 59a, Gray's Inn Road, W.C.—House Surgeon. Rooms, coals, and light. Applications to the Secretary by December 10th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician. Appointment for six months. Board and Residence provided and salary at the rate of £50 per annum. Applications to the secretary by December 10th.

COUNTY BOROUGH OF BOLTON.—Medical Officer and Public Analyst, doubly qualified. Salary, £400 per annum. Applications to E. G. Hinnell, Town Clerk, Town Hall, Bolton, by December 6th.

DENBIGHSHIRE INFIRMARY, Denbigh.—House-Surgeon; must be duly qualified to practise medicine and surgery, and be conversant with the Welsh language. Salary, £60 per annum, with board, residence, and washing. Applications and testimonials to W. Vaughan Jones, Secretary, by December 2nd.

ENNIS DISTRICT LUNATIC ASYLUM.—Assistant Medical Officer, doubly qualified, unmarried, and not more than 30 years of age. Salary, £100 per annum, with furnished apartments, rations, washing, fuel, light, and attendance. Applications to Dr. Gratton, Resident Medical Superintendent, by December 14th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary £60 per annum, with apartments and board. Applications to William George Black, Secretary, 88, West Regent Street, Glasgow, by December 10th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—House-Surgeon to out-patients; non-resident. Appointment for six months but eligible for a second term. Salary, 20 guineas. Applications to the Secretary by December 3rd.

LONDON COUNTY ASYLUM, Claybury, Woodford, Essex.—Lady Assistant Medical Officer; unmarried, doubly qualified. Salary, £100 per annum, increasing £5 yearly to £120, with board, lodging, and washing. Applications, on forms provided, to E. W. Partridge, Clerk to the Asylums Committee, London Asylums Committee's Office, 21, Whitehall Place, S.W., by December 3rd.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer, doubly qualified. No salary, but board, washing, and residence provided. Applications to A. W. Hodger, Secretary, by December 6th.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House-Surgeon, unmarried, doubly qualified. Salary, £60 per annum with board, residence, and washing. Applications to J. G. Jordan, Honorary Secretary, by December 2nd.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—House-Physician, doubly qualified. Appointment for six months; at the expiration of this term he will be required, if eligible, to serve as House-Surgeon for a further period of six months. Salary as House-Physician at the rate of £60, and as House-Surgeon at the rate of £50 per annum. Junior House-Physician for six months; doubly qualified. No salary, but board and lodging, including washing, provided. Applications to the Secretary, 23, Clement's Lane, E.C., by December 9th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch.—Ophthalmic Surgeon; must possess surgical qualification. Applications to the Secretary, 23, Clement's Lane, E.C., by December 9th.

NORFOLK AND NORWICH HOSPITAL.—House Physician and House-Surgeon; doubly qualified; unmarried, and under 30 years of age. Salary for each office, £60 per annum, with board, lodging, and washing. Applications to Poole Gabbett, Secretary, by December 10th.

ROYAL BERKS HOSPITAL, Reading.—House-Surgeon and House Physician. Salary in each case £60 per annum, with board, lodging, and washing. Also Assistant Medical Officer, with board, lodging, and washing provided, but not salary. Appointments for six months. Applications to the Secretary before December 4th.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 49, King Street, Regent Street, W.—Resident Medical Officer. Salary, £100 per annum, with furnished apartments, coals, and lighting; also Physician. Applications to the Secretary, 24, Lower Belgrave, by December 4th.

ST. MARK'S HOSPITAL, City Road, E.C.—House Surgeon; must possess a surgical qualification. Salary, £50 per annum, with board and lodging. Applications to the Secretary by December 9th.

SWANSEA GENERAL HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, residence, washing, and attendance. Applications to Jno. W. Morris, Secretary, 9, Castle Street, Swansea, by December 10th.

TILLERY COLLIERIES, Abertillery.—Surgeon; doubly qualified. Applications to William McNeil, New Houses, Mitre Street, Abertillery, Newport, Mon., by December 6th.

WARNEFORD HOSPITAL, Leamington.—House-Surgeon. Salary, £60, with board, lodging, and washing. Appointment for six months subject to re-election. Applications to the Secretary before December 14th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by December 16th.

YORK LUNATIC ASYLUM, Bootham, York.—Assistant Resident Medical Officer. Salary, £100 per annum, with board, washing, and attendance. Applications, addressed to the Committee, to be sent under cover to R. D. Hoyle, Secretary, by December 11th.

MEDICAL APPOINTMENTS.

AUDEN, Frank T., M.B., C.M.Edin., appointed District Surgeon for the Rustenburg District of the South African Republic, *vice* W. H. Haw, M.R.C.S., resigned.

BRAKENRIDGE, F. J., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

CARLYON, F. H., M.B., C.M.Edin., appointed Honorary Surgeon to the Royal Cornwall Infirmary; also appointed Divisional Surgeon to the Cornwall County Constabulary.

CONFORD, G. J., B.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital (extension).

CORNWALL, J. W., M.A., M.B., B.C.Cantab., appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital (extension).

CROUCH, H. C., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital (extension).

DAVIS, H. J., M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., appointed House-Surgeon to St. Thomas's Hospital (extension).

DAWNAY, A. H. P., L.R.C.P., M.R.C.S., appointed Junior Ophthalmic House-Surgeon to St. Thomas's Hospital.

DIXON, W. E., B.Sc.Lond., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

DYBALL, B., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

EASBY, William, M.D.Brux., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Peterborough Rural District, *vice* W. E. Paley, M.B.Durh.

EWING, Dr., appointed Medical Officer to the East and West Ardley District Council.

FARMER, Gabriel William Stahel, M.A., M.B., M.Ch.Oxon., F.R.C.S., Radcliffe Travelling Fellow, appointed Examiner in Human Anatomy at the University of Oxford, *vice* Professor A. Thomson.

FRAZER, W. D., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

GENGE, G. G., L.R.C.P., M.R.C.S., appointed Junior Obstetric House-Physician to St. Thomas's Hospital.

HALL, Frederick W., M.D. & M.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Assistant Physician to the Sydney Hospital, Sydney, N.S.W.

HARDY, C. M., M.B., B.S.Durh., appointed Medical Officer of Health to the Croft Rural District Council.

HARLUCK, Mr., appointed Deputy Medical Officer of the Kidderminster Union Workhouse.

HOME, A. L., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital (extension).

KELYNACK, T. N., M.D., M.R.C.P., reappointed Pathological Registrar to the Manchester Royal Infirmary.

KENT, P. W., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

KNOCKER, W. D., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

LAYTON, F. G., L.R.C.P., M.R.C.S., appointed Non-Resident House-Physician to St. Thomas's Hospital (extension).

MAYNING, Guy E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident House-Physician to the Sunderland Infirmary, *vice* Burdon Cox, M.B., resigned.

PRAIN, J. L., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital (extension).

RAINEY, William, L.R.C.P., L.R.C.S.Edin., appointed Registrar and Assistant Surgeon at the County Down Infirmary, *vice* J. Garner, L.R.C.P., L.R.C.S.Edin., resigned.

ROBERTSON, John A., M.D.Glasg., M.B., C.M., appointed Medical Officer of Health to the Stilton Rural District.

SAUNDERS, E. A., M.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed Senior Obstetric House-Physician to St. Thomas's Hospital.

SECCOMBE, T. J. A., M.A.Cantab., L.R.C.P., M.R.C.S., appointed Non-Resident House-Physician to St. Thomas's Hospital (extension).

STONE, W. G., M.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital (extension).

STROVER, H. C., L.S.A., L.A.H.Dub., appointed Medical Officer for the Tempsford District of the Biggleswade Union.

THOMSETT, W., L.R.C.P.&S.Edin., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

THORNTON, F. H., L.R.C.P., M.R.C.S., appointed Resident House-Physician to St. Thomas's Hospital.

THURSTON, E. O., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital (extension).

TOOMBS, H. G., L.R.C.P., M.R.C.S., appointed Senior Ophthalmic Surgeon to St. Thomas's Hospital.

WALLACE, A. R., B.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital (extension).

WILLIS, W. Morley, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Bristol Hospital for Sick Women and Children, *vice* Dr. W. Ledingham Christie, resigned.

DIARY FOR NEXT WEEK.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Mr. Adams: A New Form of Sterilizer and Incubator. Dr. Rolleston: 1. Adenoma of the Sebaceous Glands. 2. Dilatation of the Œsophagus. Mr. Hutchinson, jun.: 1. Gall Stone Impacted in Small Intestine. 2. The Formation of Intra-abdominal Bands. 3. Traumatic Separation of the Epiphysis of the Great Trochanter.

WEDNESDAY.

WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Dr. Seymour Taylor: Cardiac Affections in Children (Post-Graduate Course).

OBSTETRICAL SOCIETY OF LONDON, 8 P.M.—Specimens will be shown. Papers: Mr. J. Bland Sutton: On a Case of Tubo-uterine Pregnancy; Primary Intraperitoneal Rupture: Recovery. Dr. A. E. Giles: A Case of Uterus Didelphys, with remarks on the clinical importance of this malformation. Dr. Remfry: The Effects of Lactation on Menstruation and Impregnation.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 2 P.M.—Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION, Brompton, 4 P.M.—Dr. Hector Mackenzie: On Thoracic Aneurysm.

THURSDAY.

ROYAL COLLEGE OF SURGEONS, 5 P.M.—Mr. N. C. Macnamara: The Bradshaw Lecture on Infective and Tuberculous Osteitis as Causes of Arthritis, and the Importance of their Early Treatment.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. M. Handfield-Jones: First Harveian Lecture on the Heart in its Relation to Pregnancy, Parturition, and the Puerperal State.

FRIDAY.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, W., 8.30 P.M.—Clinical Evening: Dr. Taylor: 1. Mitral Disease. 2. Deformity of Pinna. Mr. Keetley: 1. Radical Cure of Hernia with Undescended Testicle. 2. Loss of Memory associated with Ovarian Tumour. Mr. Paget: 1. Resection of Elbow. 2. Fracture of Sacrum. Dr. Abraham: 1. Primary Chancre in a Child aged 18 Months. 2. Congenital Syphilis. Mr. Bidwell: Sclerosis of Superior Maxilla. Mr. Eccles: Multiple Exostoses.

WEST KENT MEDICO-CHIRURGICAL SOCIETY, Royal Kent Dispensary, Greenwich Road, 8.15 P.M.—Clinical meeting. Cases and Specimens by Drs. Horsehell, E. K. Brown, Morgan Dockrell, Ezard: Messrs. Johnson Smith, Poland, the President, and others.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 5s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

EVELYN.—On November 14th, at 24, Micklegate, York, the wife of W. A. Evelyn, M.D., of a daughter.

MARRIAGE.

PATERSON—AITCHISON.—On November 16th, at the British Consulate, Vienna, by the Rev. W. H. Hechler, Embassy Chaplain, James V. Paterson, M.A., M.B., C.M.Edin., to Susie, second daughter of the late John Robert Aitchison, India Office, London.

DEATHS.

BROMNER.—On November 25th, at Streatham, Canaan Lane, Edinburgh, Bruce Allan Bromner, M.D., L.R.C.S.Edin., late of Bombay, in his 76th year.

DELACHEROIS.—On November 16th, at West Malvern, Annie Delacherois, M.D., widow of N. Delacherois, Esq., J.P. (7th Dragoon Guards), of Ballywilliam, co. Down, and daughter of the late R. J. Tennant, Esq., D.L., Rush Park, Belfast, aged 57. Cremated at Woking, Friday, November 22nd.

HUNT.—On November 22nd, at Tramore, Christchurch, Hants, Godfrey Leicester, only son of H. Rochfort Hunt, M.P., aged 2½ years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

W. is anxious to know if any cause has been discovered for the rotting of wood in street pavements.

R.N. MEDICAL desires to hear of an institution where an imbecile female, aged 20, otherwise healthy, would be received whose parents can afford about £10 to £12 a year. Near Manchester preferred.

H. M. H. asks: What are the usual terms of contract for attending a large body of men constructing a railway? I am offered 1d. a day per man, less one-sixth for collection. I am supposed to supply all medicines and appliances for this.

H. D. asks for information of the value of Haines's golden specific in chronic alcoholism, and whether any analysis of it has ever been made.

*** We know nothing of the composition of this secret alleged remedy, which has been widely advertised for a long time. We have not heard of any analysis having been made.

COMMON SALT FOR RINGWORM.

G. writes: Mr. F. J. Reilly, in his interesting memorandum on the above treatment in the BRITISH MEDICAL JOURNAL of November 23rd, p. 1295, says that he has used it for the past seven years, but makes no mention of more than three cases. He does not state the strength of the solution, nor the mode of application. I presume he only used five applications in each case. Were either of the cases chronic?

ANSWERS.

O. R.—We can only advise our correspondent to consult a surgeon.

W. P., M.B., suggests terebene internally and as an inhalation.

W. P., M.B., in answer to Dr. J. M. Hermon, BRITISH MEDICAL JOURNAL, p. 1223, begs to refer him to the JOURNAL of 1894, vol. ii, p. 1089.

DR. W. GIFFORD NASH (30, St. Peter's, Bedford) offers to give "F. W. J." information as to Teneriffe, where he spent three months this year.

W. P., M.B., writes to draw the attention of "F. W. J.," who asked a question in the JOURNAL of November 23rd, p. 1239, to the BRITISH MEDICAL JOURNAL of 1894, vol. ii, p. 1414.

G. G. IRVING (Edinburgh).—Our correspondent might apply to Mr. Martindale, 10, New Cavendish Street, London, W., or to any leading chemist.

We think that our correspondent "F.R.C.S.Ed." was well advised in declining to give an anæsthetic to one of his patients who wished to have teeth extracted by an unregistered dentist.

W. P., M.B. writes, in reply to M.B. Aberd. in the BRITISH MEDICAL JOURNAL, November 16th, p. 1174, to suggest a thorough physical examination of the lower gut, so as to exclude stricture of the smallest extent. If present, dilatation should be adopted.

ECONIA.—The meetings of the General Medical Council are held as a rule in May and November, and each session lasts from a week to ten days. The Council publishes official minutes, and its proceedings are reported regularly in our columns, as on the present occasion.

D. L.—"Dermographic" is a term applied in connection with facititious urticaria. We have never heard of dermographic lupus, and it is impossible. A case is referred to in Allbutt's *System of Medicine*, last edition, in which a medical man, who was the subject of a sabre cut on the head, and was much occupied at the time with tuberculous sputum, developed lupus around the wound in the scalp within a few weeks. An interesting report bearing on the question, by Dr. Alfred Lingard, was published in the *Registrar-General's Annual Report of the Local Government Board Supplement, containing the Report of the Medical Officer for 1892*, p. 462. The report contains numerous references.

MINER.—We cannot prescribe in the BRITISH MEDICAL JOURNAL; nor is anything likely to cure this habit but the resolute and incessant exercise, at all costs, of the patient's own will. He must get good medical advice; probably he must also use means for securing his hands at night. He may find some hope in what Sir James Paget says in his *Clinical Lectures and Essays*: "I believe you may teach positively that masturbation does neither more nor less harm than sexual intercourse practised with the same frequency, in the same conditions of general health, age, and circumstance . . . . I have seen as numerous and as great evils consequent on excessive sexual intercourse as on masturbation. . . . . I wish that I could say something worse on so nasty a practice; an uncleanliness, a filthiness forbidden by God, an unmanliness despised by men."

REMOTE EFFECTS OF TURBINOTOMY.

MR. CARMALT JONES desires to explain that in his reply on the discussion of his paper at the Section of Otology reported in the BRITISH MEDICAL JOURNAL of November 23rd, p. 1290, he meant to convey that in some cases of children with ill-developed noses and the passages blocked with hypertrophied turbinates, he had seen the whole nose develop and grow larger after treatment had restored the function of the passages.

INFLUENZA.

DR. GORDON SHARP (Leeds) writes: I would recommend M. L. to try intralaryngeal injections of menthol (10 per cent.) in olive oil for his two influenza patients now suffering from troublesome night cough and free expectoration. By means of a laryngeal mirror and reflector and a Beehag's or Downie's syringe M. L. can, with care, inject a syringeful each night at bedtime, and so secure a night's rest for his patients, and thus do something to putting them on the highway towards recovery. The menthol solution lessens secretion and it has a most soothing effect.

A PARAGRAPH ADVERTISEMENT.

DR. G. D.—The person whose advertisement is referred to is not a registered medical practitioner, his name having been erased from the *Medical Register* some years since for "infamous conduct." His sole qualification, that of M.R.C.S., was also removed by the College authorities. He has been prosecuted for practising and using titles implying that he was registered, and convicted, but, having paid the penalty, continues his practice and assumption of medical titles as before. In any amended Medical Act imprisonment should be an added penalty in cases where the offence is continued after previous convictions. The paragraph referred to is an advertisement, and paid for, no doubt, handsomely. The newspaper press has a great deal to answer for by the insertion of such, but no amount of moral pressure we can exert, and have exerted, will check the scandal; it is unfortunately a matter of pounds, shillings, and pence.

DENTAL IRREGULARITIES.

A CORRESPONDENT sends us a handbill, or rather a portion of a handbill, issued by a chemist in the South of London. In it the chemist announces that he has made arrangements with "Mr. Stafford Allen, R.D.S., Dental Surgeon, to attend daily;" and states the "moderate prices" at which artificial teeth are provided, and the charges made for extracting, stopping, and scaling. Such arrangements are to be deprecated, and the circulation of such trade circulars is most derogatory.

ANOTHER CORRESPONDENT inquires whether any means can be adopted to prevent the practice of dentistry for gain by chemists and other unqualified persons, who put "Dental Surgeon" on their plates. To this we may reply that no person can legally call himself "Dentist" or "Dental Surgeon" or by any such title unless he be on the *Dental Register*, published by the General Medical Council. Persons who practised dentistry before the passing of the Act of 1878 were entitled to have their names registered in the *Dentists Register*, whether they possessed a dental qualification or not, but the use of the letters R.D.S. (Registered Dental Surgeon) appears to be calculated to mislead the unwary.

WE understand that cases in which it is alleged that the provisions of the Dentists Act have been violated will be investigated by the British Dental Association, with a view to action if information is given to the Secretary of that Association, 49, Leicester Square, W.C.

NOTES, LETTERS, Etc.

PRECOCIOUS MATERNITY.

IN the New York *Medical Record* of November 16th, Dr C. W. Graves, of Wytheville, Virginia, reports the case of a girl born on July 18th, 1895, who on September 16th, 1895, was delivered of a well-formed child, weighing 5 lbs. The ten year-old mother has menstruated regularly since she was 5 years old, but in development she is still a child. There is no enlargement of the breasts and no secretion of milk. The labour was short and easy, and two hours after delivery the girl wanted to get up and dress. She is now playing about as if nothing unusual had happened. Her baby, which only lived a week, was suckled by its grandmother, who had had a child a few months before.

JUNIOR HOSPITAL APPOINTMENTS AND LOCAL CANDIDATES.

A CORRESPONDENT has sent us an extract from the Whitehaven *News*, containing a report of the proceedings at a meeting of the governors of the Whitehaven and West Cumberland Infirmary, held for the election of a house-surgeon. The Medical Committee, from thirty-five candidates, sent up six names, arranged in order of merit, the two last names on the list being those of gentlemen whose relatives resided in the district. When the votes were taken the contest was seen to lie between the two local candidates, and one of these was elected. Our correspondent thinks that any but local men might have been spared the trouble

of applying. We gather, however, that the Medical Committee would have preferred that one of the non-resident candidates should have been appointed, on the ground that his qualifications for the post were higher. Under these circumstance we do not see how the applications of non-resident candidates could have been ruled out from the beginning. It is, no doubt, a hardship that young men should be put to the trouble and expense of becoming candidates when the appointment of a local candidate is a foregone conclusion, but this does not seem to have been the case in this instance. The Medical Committee were surely justified in supposing that the governors would take their advice on a point on which the committee were specially competent to form an opinion.

Church Catarrh.

Referring to a paragraph which recently appeared on this subject in the British Medical Journal, a correspondent in the *Standard* calls attention to the absence of a cloak room as one of the contributory causes of illness in those who attend places of worship. We merely drew attention to one matter pertaining to the church itself, and we by no means suggested that many other conditions might not work in the same direction. There can, we think, be little doubt that there are many evils connected with the too common practice of importing into the sacred edifice wet or snow-laden overshoes, capes, and mackintoshes, and even umbrellas, to exhale during the service a "pestiferous moisture in immediate proximity to the worshippers, and to render the general atmosphere additionally retentive of the morbific influence of a congress of animals," as described in the *Standard*. The art of making churches comfortable, and providing for their frequenters those luxuries which are taken for granted at all other places of public resort, except perhaps political meetings, is in a somewhat backward state, and in many such matters there is a good opening for reform. We have not yet heard it put forward that church going is regarded by church teachers as a matter of penance, and even if it were, it might be whispered that the artifice attributed to the monks of old of boiling the peas with which on days of pilgrimage their shoes were stuffed, is not unworthy of imitation, and that comfort even in well-doing is not to be despised.

Carbolic Acid in Pemphigus.

Dr. T. Churton (Leeds) writes: I should be glad to be allowed to correct two slight errors in the report of some remarks of mine at the Leeds and West Riding Medical Society on November 1st. (1) The blood from a patient with typhoid fever showed (not absence of, but) diminution in the number of leucocytes—a condition alleged to distinguish this from the other specific fevers. (2) I have looked in vain for four years—that is, since hearing Dr. Lancaster's paper at the Clinical Society—for any distinctive uræmic rash; and I related a case in which universal pemphigus did not follow but immediately preceded nephritis, the latter disease appearing after recovery from the pemphigus, and being attributed by the patient to chill consequent upon removal of lint, ointment, and bandages from the body generally. With the nephritis she had endocarditis and capillary bronchitis, but recovered in three or four weeks. The cure of the pemphigus after some weeks' duration was very rapid, as often happens; it followed saturation of the blood with carbolic acid applied in a lotion to ulcers on the legs. A recent but earlier and less severe case has also recovered with equal rapidity (two or three days) under the same treatment; but I have seen a sudden recovery when no carbolic acid has been known to be used.

Rabies and Cats.

An epidemic in Paris of "enraged cats," as the French call them, says the *Morning*, has called forth some interesting statements from Dr. Chatilon, of the antirabic staff at the Pasteur Institute in that city, where from 1,500 to 1,800 persons bitten by mad animals are treated annually. "Contrary to the popular belief," he says, "cats go mad frequently, and about 5 per cent. of the cases we treat are caused by bites inflicted by them. Horses and other domestic cattle are rarely subject to madness. The bites of cats which have gone mad are generally serious and difficult to treat, for two reasons. First, the teeth of the cat are fine and sharp, and the wounds they make are deep, introducing the virus into the system thoroughly. The dog, on the other hand, has larger, blunter teeth, which tear rather than penetrate. Cauterisation is excellent if done immediately in the case of a dog bite, but when the wound is caused by a cat's teeth it is impossible to cauterise more than the edges, while parts below the surface remain impregnated with the virus. In the second place, the dog bites at the hands or legs of the person he attacks, and not often at the face, while the cat almost always attacks the face first, for it can jump more easily and clings with its claws to the clothing. Bites in the face are much more dangerous, because of the proximity of the point of entrance of the virus to the nerve centres, it having a much shorter distance to traverse than if it entered the body through a wound upon the legs or arms. One thing that makes a cat much more dangerous when it goes mad is that it seems to become furious and attacks whatever it sees, while a dog frequently will crouch in a corner and seem to be subject to a sort of partial paralysis."

LETTERS, COMMUNICATIONS, Etc., have been received from:

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BOOKS, Etc., RECEIVED.

Temperance or Total Abstinence? By Frederick Baker, A.C.P. Birmingham; W. G. Moore and Co. 1d.

The Anatomy of the Human Head and Neck, graphically illustrated by means of superimposed plates. With descriptive text by Dr. Schmidt. English edition by William S. Furneaux. London: George Philip and Sons. 2s. 6d.

Transactions of the Clinical Society of London. Vol. 28. London: Longmans, Green, and Co. 1895.

"Bacteria in the Dairy," or the Pasteurisation of Milk. By E. J. McWeeney, M.A., M.D. London: The Belgravia Dairy Company.

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Die specielle Tuberculose der Knochen und Gelenk. I Das Kniegelenk. Bearbeitet von Dr. F. Koenig. Berlin: August Hirschwald. 1895. M. 5.

*** In forwarding books the publishers are requested to state the selling prices.

SOME RECENT OBSERVATIONS ON INFANT FEEDING.

By Sir WILLIAM O. PRIESTLEY, M.D., LL.D.,
Consulting Physician to King's College Hospital, London.

[The following fragment, read by desire of the East London and South Essex District of the Metropolitan Counties Branch, does not claim any originality. It was intended only to call attention to M. Budin's recent observations, and elicit discussion upon them.]

In the early summer of this year I paid a visit to Paris, mainly for the purpose of seeing my old friend, the celebrated M. Pasteur. He was then so feeble that I feared it was the last time I should see him alive, and he has since gone to his rest amid universal mourning.

While in the French capital I took the opportunity of inquiring what advances were being made in the departments of obstetrics and gynæcology, and I was particularly impressed by the admirable and original work respectively of M. Budin and M. Pozzi. I was especially interested in the clinic of M. Budin, where a series of investigations had been undertaken concerning the best way of feeding newborn infants. It is on these investigations I propose to say a few words in the present paper.

A large proportion of medical men in general practice, as well as obstetric physicians, have constantly to consider and give advice on the management of newborn children, and it is a subject which so nearly touches the affections and interests of so many households, that any fresh contribution, placing it on a scientific and successful basis, must necessarily be welcomed by all of us.

In truth, the well-being of infants is so important not only in a domestic sense, but in its relation to the State, that it may well engage the best faculties of the medical man, and not to be left, as it too frequently is, to the bungling mismanagement of ignorant and opiniated nurses.

We are all aware that the mortality of children during the first year of life is very large in all countries. In certain portions of France, not more than ten years ago, it amounted to more than 50 per cent.; at Lille in 1850, it actually amounted to 89 per cent. Even in Paris, no longer than ten years ago, it was found by Dr. Lede to be more than 27 per cent. In this country the percentage is apparently not quite so large, but the Registrar-General's reports show a large preventable mortality, and the question for medical men to solve is, how these deaths of young children are to be obviated.

When we look at the domestic surroundings of the poor, the bad sanitary conditions in which we live, and the ignorance from a scientific standpoint they show of the proper methods of feeding and rearing children, we cease to wonder that so many children die in infancy; we rather wonder that so many survive. Unfortunately, of those who live, many, as the result of mismanagement in the early months of life, emerge from infancy enfeebled and stunted in growth; eventually, if they live long enough, they themselves become the parents of a degenerate race. But it is not among the poor only that newborn children are mismanaged; the children of the rich are commonly entrusted to the care of women nurses, imperfectly educated for the important duties they undertake. If they are quick enough, they generally contrive to pick up a little traditional lore from other nurses, whose sources of information are anything but scientific, and who make up for their lack of knowledge by self-assertion and deprecation of the interference of the doctor. The widest prevailing fallacy among these women is, that infant's food cannot be nutritious unless it is thick, and hence they feed infants soon after birth with various admixtures of farinaceous stuffs which the young stomach cannot assimilate.

All instructed medical men now know that some form of animal milk, without the admixture of any farinaceous material, is the most suitable food for children during the first months of life, but the difficulty hitherto has been to find with exactitude the best substitute for mother's milk, and to prevent misadventures when for any reason the child cannot be suckled by its own mother. The researches of M. Budin and of his assistant, M. Chavane,[1] have shown conclusively that one of the chief difficulties in the artificial feeding of infants is in keeping the milk of the cow or other animal free from contagion of bacilli which are always floating in the atmosphere, and which, when introduced into the digestive organs, produce green motions and diarrhœa. Milk of every kind is found to be an admirable medium for the cultivation of these microbes, and its exposure to the air for even a short time, more especially with a warm temperature, is sufficient to favour their very rapid development. The result of imbibing these organisms, even in small quantity, is that the child is seized with diarrhœa and vomiting, and these unchecked speedily exhaust vitality and extinguish life.

MM. Budin and Chavane start with the proposition which they cannot too strongly emphasise, that of all ways of feeding a newborn infant, that of suckling by the mother or by a healthy wet nurse is the safest and the best. The substitute of a wet nurse when the mother for any reason is unable to suckle her child is much more prevalent on the Continent than in Great Britain. Even in hospitals, when a woman cannot nurse, the State provides a wet nurse, and there seems to be no difficulty in providing an adequate supply of wet nurses. M. Budin has charge in his maternity hospital of a department in which all the premature babies born in certain parts of Paris are brought together. Here are dozens of small and imperfectly developed infants, some being kept in *couveuses*, or incubators, to maintain their bodily temperature, and all except those suffering from syphilis or other diseases are nourished from the breast. I saw several of these wet nurses suckling two diminutive babies at the same time, one at each breast. Those whose condition rendered it inexpedient to put them to the breast were fed either with human milk drawn previously from a woman, or on cows' or asses' milk specially prepared for the purpose. In Great Britain there is a certain prejudice, besides the difficulty and expense of providing a wet nurse, and feeding by hand is much more universal.

Most of us know something of the difficulties surrounding hand-feeding, of the small or more serious ailments which spring up in connection with it, and the constant need of prescriptions to combat these inconveniences. But all of us may not have appreciated the true causes of these inconveniences, nor understood that they represent but another link in that chain of microbic pathology which we owe primarily to the researches of the great man who was finally interred, with such well merited honour, at the Pasteur Institute, on November 25th. We have rather been disposed in past times to attribute the derangements of digestion to that indefinite change in the milk which we call "turning sour," or to the casein of cows' milk being too strong for the infantile stomach, and the necessity of further dilution with water. This idea has been strengthened by observing the masses of undigested curd passed in the evacuations. When some other food has been added to the milk, this perchance has been blamed for the derangement.

M. Budin's researches clearly indicate that next to mother's milk, the milk of some other animal, like that of the ass, the goat, or the cow, and this undiluted with water but properly sterilised, is absolutely the best. As the milk of the cow is the most readily available, this is used by M. Budin, and his experiments were made chiefly with cows' milk.

Since it was discovered that various zymotic diseases have been produced by drinking infected milk, various sanitary authorities have impressed upon us as a measure of precaution the necessity of always boiling milk for household purposes, and there can be no doubt that boiling is a very effective method of sterilising milk. But boiling milk has unfortunately the effect of giving it a disagreeable taste, and it seems besides to have the effect of so firmly coagulating the casein as to render it less easily digestible for the infantile stomach. The method of sterilising milk recommended by M. Budin is to allow it to remain in a bath of boiling water, a *bain marie*, as he calls it, for forty minutes. The apparatus he advises consists of a series of bottles, each capable of holding a child's meal, and furnished with indi-

rubber stoppers. These bottles are placed in a pan of water or water bath, which is kept boiling for the prescribed time. The covers or stoppers are so adapted that they allow vapour to escape during the heating process, but as the bottles cool they are drawn down into the opening by atmospheric pressure, and fit like suckers into the orifice, thus showing that they are air-tight. It is a notable fact, not generally known, that it requires a higher temperature to boil milk than water, and consequently milk can be immersed in boiling water for forty or more minutes, without being itself boiled. The temperature is, however, raised high enough to disinfect it of all the commoner germs of disease, while the flavour of boiled milk is not imparted to it; indeed, the taste is little altered from that of new milk. But the additional advantage gained is that the curd of the milk is separated into minute particles or flocculi and so softened that it does not form hard concretions in the digestive tube of the infant. It is much better adapted, therefore, for infant feeding, and is likely also to be of great use in the case of adults who have feeble digestion, or for other reasons find ordinary milk objectionable. M. Budin deprecates very much diluting milk with water or even barley water for infant feeding. He holds that it is much wiser, and more in the interests of the child, to give a smaller quantity of pure milk properly sterilised than a larger quantity diluted with water. In all the observations made in reference to this point he found that the greater quantity of fluid, necessitated by dilution, tended to derange digestion, while the normal and progressive increase of weight was not maintained. Always supposing that too large a quantity of sterilised milk was not given, and it was regulated in accordance with the age or needs of the child, there was no difficulty in the assimilation of the pure milk.

M. Budin insists that both in hospital and private practice the progressive wellbeing in the infant is best ascertained by weighing it. In his hospital the children are weighed every day, and their weight is registered, so that an increase or diminution is readily observed. He has constructed an ingenious table which serves as a register. In the first column are figures in grammes, the lowest ones at the bottom, with an ascending scale. The days and weeks are indicated along the top, and thus a curve may be traced with pen or pencil, as in temperature charts. Even under normal circumstances the weight of the child drops a little during the first week after birth, but after that time it ought steadily to advance. In the charts alluded to, whenever water was added to the milk there was always a little drop in the curve, showing that less nourishment had been absorbed, and a like drop was noticed if, perchance, the child had diarrhœa, or catarrh, or other infantile ailment, showing that nutrition was impaired. To make the sterilisation of milk effective, great care must be taken to exclude every source of infection from germs which may get access to the milk after the process is completed, either in the vessels themselves or in the apparatus used for feeding. Many of the misadventures were found to arise from lack of precaution in this respect. Sometimes the milk, after being duly sterilised, was again exposed for some time to the air before being used, and thus became again the medium for development of bacteria, more especially in a warm atmosphere. The Académie de Médecine in Paris does not think it beneath its dignity to express an opinion on babies' feeding-bottles, because it concerns a matter of vast importance to the community, and it has emphatically condemned all feeding-bottles with long and complicated tubes, because it is impossible to keep them clean and sterilised. Consequently they become the nidus for bacterial development, particularly at the joints. The simplest bottle, which can be scalded throughout is the best, but there may be great difficulty in persuading poor women to adopt them, because although a siphon bottle may be the means of poisoning her baby, yet she can put it beside the child in its cot and go about her other occupations, leaving it to absorb its nourishment automatically.

If pathogenic organisms can be prevented getting access to the digestive organs of young children, one of the most fertile sources of infantile diarrhœa would be removed and the mortality from this cause greatly lessened.

Sterilised milk seems in certain cases actually to be a remedy for infantile diarrhœa, for always supposing that a fresh supply of irritating organisms is not poured continuously into the digestive canal, Nature will eliminate the poison up to a certain amount, and then untainted milk is retained and becomes nutritious.

If M. Budin's deductions turn out to be correct—and he is a careful and earnest observer—the use of condensed milks may to a large extent be discarded; these have crept largely into use, and no doubt are very convenient in emergencies. They may seem to answer for a time, but in my experience they are very defective sources of nourishment, and should never be employed when fresh milk can be procured. Dr. Barlow, who has written so ably on infantile scurvy, believes that by the condensing process milk loses its antiscorbutic property, and so favours scurvy in children. This may possibly occur when milk is boiled, but the risk is minimised when it is simply sterilised and not boiled.

To sum up M. Budin's conclusions, therefore, one may say:

1. That he regards breast milk as absolutely the best and safest nourishment for an infant, and that when a mother cannot nurse her own child the best substitute is a good wet nurse.

2. When artificial feeding must be had recourse to, cows' or another animal's milk sterilised by the method alluded to is by far the best substitute, but even when milk has been sterilised it must be guarded by certain precautions, and the simplest feeding bottle is the best.

3. Sterilised milk is best given undiluted with water, the quantity given to vary with the age of the child and other circumstances.

This, I presume, implies that the child is in normal health. If any derangement of the digestive organs or other abnormal condition is present, dilution with barley water or other modification of food, may be required as well as medicines.

He objects to all farinaceous forms of food during the first year of life.

The method of sterilisation of milk as recommended by M. Budin is not new, and he does not claim any originality in this respect. Inexpensive apparatus for this purpose is to be found with many instrument makers. I learned quite lately that the calves used for vaccination at the National Vaccine Institution are now fed on sterilised milk to keep them healthy. It would certainly be a satire if we were not to adopt the same measures of safety for human beings which we provide for the lower animals. Sir Dyce Duckworth, who has just returned from America, tells me that a system is gradually making way there in which medical men habitually write prescriptions, expressing the exact amount of casein of cream and of sugar which milk is to contain in accordance with the age and condition of the infant. The milk is at the same time carefully sterilised. In Boston and New York especially laboratories have been established to make up these prescriptions. Sir Dyce has furnished me with a pamphlet by Professor Rotch of the Harvard University, in which all the details are set forth with great ingenuity and clearness.

This is bringing the science of feeding children to very exact proportions, but entails great trouble and possibly expense. Budin's and Chavane's method, if generally successful, can be more readily adopted for domestic use, as it is very simple and entails little expense. The more elaborate one may be reserved for special cases or until it is more generally available.

International Prizes in Bacteriology.—The Argentine Medical Club of Buenos Ayres has decided to honour the memory of Pasteur by offering prizes for bacteriological research. Competitors must submit original unpublished researches relative to some point of bacteriological *technique*, or to the bacteriology (etiology, diagnosis, prophylaxis, and treatment) of the infectious diseases of man or animals, or to the industrial applications of microbiology. Papers, specimens, preparations, cultures, and photographs must be sent before May 31st, 1897, to the President of the Argentine Medical Club, Calle Corientes, 2038, Buenos Ayres. Papers, which must be authenticated by a motto in the usual manner, may be written in Spanish or in French. The first prize will be a sum of £80, the second £40, the third a diploma of honour.

ON THE MANAGEMENT OF CASES DURING THE PERIOD IMMEDIATELY FOLLOWING OPERATION.[1]

By Sir THORNLEY STOKER, Hon. M.Ch.R.U.I.,

President, Royal College of Surgeons, Ireland; Surgeon to the Richmond Hospital and to Swift's Hospital; Fellow of the Royal University.

When I last had the honour of addressing you from this chair, I took occasion to apologise for speaking on a vulgar instead of an obscure or novel subject, and I am again disposed to use my opportunity to a like effect. I do not presume to address myself particularly to the more senior portion of my audience; but there are a large number of the younger members of the Academy present, and to them I venture to say something about a subject which exercised me much in my younger days, which does so still, and which is important because of its very commonness, and worthy of attention because it is sometimes overlooked.

I refer to the management of patients during that oftentime critical period between the performance of a surgical operation and the moment at which, the risks consequent on it having passed, the patient becomes free from immediate and non-particular danger. This is the period occupied by two conditions of depression common to any or all operations, and therefore to be considered by themselves, apart from special dangers proper to individual surgical procedures. They are (*a*) shock and (*b*) exhaustion consequent on vomiting.

They may not be present, or being present, may vary in duration from a few minutes to several days. Their intensity cannot be foretold; it may be but slight or may be grave even unto death, and nothing in the condition of the patient, the nature of disease, or the character of operation can afford any reliable evidence as to their possible severity. They may be serious in those who are vigorous, and unimportant in those who are weak; the very young and the aged may suffer from them but slightly and persons of middle life may be in peril; they may follow the most trivial operation and be absent from the most severe.

Those who have had experience in surgery know how often they meet surprises in the immediate consequences of operation. Sometimes the experience is the pleasant one of finding the treatment borne better than was expected; sometimes it is the sad one of danger following an operation when it was not looked for. The lesson we learn is never to neglect during and after operations every detail which can lessen danger by diminishing the chances of shock or exhaustion, and which can assist subsequent reaction.

The causes which tend to produce shock are numerous, and for the most part obscure. There are many states of enfeebled health, of particular debility, and of other recognised conditions which predispose to it. But there are unseen and often unexpected circumstances which may lend themselves to its production. Operative measures should, therefore, never be approached without the most careful general examination of the patient and the most thoughtful consideration of his physical position. It is impossible to formulate exact laws in this direction: these perceptions are largely matters of experience, and only time and clinical study can develop them. But from long observation we know that such considerations of the general state of a patient about to be submitted to operation are often overlooked or disregarded, and I suppose most of us have had bitter regret of our want of perception.

In addition to general matters concerning the patient there is one particular which is proper to the surgeon, and in which great error is common—I refer to the undue prolongation of operations. Two circumstances have, in our generation, lent themselves to this: one is the facility afforded by the use of anæsthetics; the other the extreme care, conservatism, and attention to detail, begotten by the introduction of antiseptic methods. There is no one circumstance which so tends to the production of shock and to the exhaustion produced by subsequent vomiting as prolonged anæsthesia. I have had this impressed on me by severe lessons, and I am satisfied that we should watch ourselves very closely in this direction, and sacrifice detail and conservative measures in instances where they demand the unsafe prolongation of anæsthesia. I can look back on cases where I regret the time spent on an operation; for instance, the only example of elected operation for the radical cure of hernia which has ever proved fatal in my practice was one in which, in my anxiety to conserve the testis in an extremely complicated rupture, I prolonged the dissection to such an extent as to produce shock from which the boy never rallied. I know now that had I removed the organ I could rapidly have concluded the treatment and saved the patient.

What I have said of the production of dangerous shock is largely true of exhaustion immediately following operation. Given the conditions, known and unknown, which predispose some patients to it more than others, prolonged anæsthesia, with its often attendant vomiting, is its most usual provocative. We will generally see post-operation vomiting proportionate in severity and persistence to the duration of anæsthesia.

So much for causes of shock and vomiting: what of the means of avoiding them, and of relieving them if they occur? It is a truism to say that prevention is better than cure, and it will be seen from what I have said that a due despatch in the performance of operations, and a consequent shortening of the period of anæsthesia is the most important direct measure to attend to. To an audience like this I need not elaborate this part of my subject; indeed, I could not if I would, for there are a hundred various conditions and circumstances which must guide us, and their knowledge and application are among the matters which make the difference between one surgeon and another, and which lend themselves to our successes or contribute to our failures. Shock and vomiting are so much due to the same causes, and so subject to the same remedial measures, that it is difficult to consider them apart. I have learned to rely on three agents only for the relief of shock: (1) Heat; (2) alcohol; and (3) morphine or opium. Concerning the first of these, we generally find that if the surface of the body can, by the use of hot applications, be brought to a wholesome warmth, the danger has been overcome. If to the use of hot water, contained in bottles, or, better still, in small india-rubber bags, we add rubefacient applications of mustard to the extremities, about the region of the solar plexus, or over the heart, we have a valuable armament for the inducement, not only of heat, but also for the production of a physiological stimulation.

If these measures fail, or response to them is too slow, alcohol must be resorted to. It should be given by the rectum, not only because vomiting may exist, or may be induced by the introduction of stimulants into the stomach, but also because when shock is present the stomach has little or no power of assimilation. The possible necessity for rectal stimulation and alimentation after operation is one of the reasons why the bowel should always be thoroughly cleared before any procedure, however slight, in which anæsthesia is to be employed.

Failing by these measures to induce reaction, opium or morphine has to be resorted to. If rapid effect is sought morphine is the most useful agent, and it is also that which best controls vomiting. But where there is no vomiting, and where the stimulating effect of the drug is our chief aim, opium itself is to be preferred; it must be given by the rectum. No rules can be laid down for the dosage in these cases, beyond the two points that are to be borne in mind: first, that opium is tolerated in large quantities by persons suffering from shock, very much as those bear it who have lost much blood; and, secondly, that it must be given intelligently, that is to say, given watchfully, dose following dose, until the due effect is produced. The value of morphine given hypodermically, or of opium administered by enema in all cases of depression due to shock, cannot be overstated. I can look back on lives lost after operation from shock and exhaustion, which greater clinical experience and more courageous use of morphine

[1] Address delivered at the opening of the Surgical Section of the Royal Academy of Medicine in Ireland for the session 1895-96.

or opium would now enable me to save. If it be sought to study the effect of opium as a stimulant, it cannot be better seen than by watching its effects in the shock and collapse following extensive burns. I have to thank the help afforded by modern nursing developments for much wholesome change of opinion in these matters. It has only been since the introduction of trained women to the bedside, with their watchful intelligence and careful skill, that I have learned properly to deal with cases after operation. That intuitive faculty, amounting to what used to be miscalled an "instinct," and which is the special property of women, finds its best expression in the study and management of difficulties like those I speak of.

Of the treatment of the usually more persistent condition of vomiting, with its attendant exhaustion, much need not be added to the limited list of measures employed in the treatment of shock. Warmth, rectal stimulation, and the hypodermic syringe again find their use. If to these I add rubefaction, or occasionally limited blistering over the stomach, I have enumerated all the means I find most excellent. The host of drugs recommended to check vomiting are, in my experience, worse than useless; they are not only ineffectual, but they add seriously to the gastric disturbance. One measure, introduced of late, we are trying in the Richmond Hospital. I mean the use, for some hours after operation, of a mask charged with vinegar. We are not yet in a position to speak definitely about this treatment, but it seems to give promise of success in cases where chloroform has been the anæsthetic. The *rationale* of its action is simple; the chloroform which is exhaled by the lungs is decomposed during expiration into chlorine and formic acid. The chlorine, by its irritation of the trachea and larynx, is probably the cause of vomiting, and being taken up by the acetic acid, is rendered harmless. But so far as present experience carries us, the hypodermic use of morphine is the cardinal remedy for the species of vomiting of which I speak. It must be used intelligently, fully, and fearlessly, and will exercise its effects both as a stimulant and as a gastric sedative far beyond those of any other remedy.

If it be conceded that it is useless to introduce stimulant or aliment into the stomach of a patient suffering from shock, it will be granted that it is not only useless but improper when vomiting is present; and here a previously cleaned rectum serves its owner well. Stimulants associated with such nutriments as can be readily absorbed should be periodically introduced. It is generally found that vomiting any more than shock does not persist with a warm surface, and therefore the three remedies I have indicated should be employed in the same sequence as in shock; first, heat; second, rectal stimulation and nourishment; and third, morphine.

The distressing symptom of thirst is one which gives great trouble. There is nothing I have learned to discredit more thoroughly for the relief of thirst than ice. It increases thirst both directly and by the induction of vomiting. The emesis it produces is due to the quantity of water the sucking of ice insidiously introduces into the stomach. Nothing should be put into the stomach in these cases, so that ice is not only useless, but hurtful. Thirst is best relieved by frequent rinsing of the mouth with hot water, and by the occasional introduction of two or three ounces of warm water into the rectum.

In what I have said I have avoided speaking of details and methods; I have remembered that, although some of us are younger and less experienced than others, all of us in this room are educated in the factors of surgical science, and I have therefore tried to be suggestive rather than didactic, and to avoid details except in so far as they were necessary to the elucidation of principles.

If I may reduce to formulæ the matters I have referred to, I would put them thus:

1. That the tendency to prolong operations must be carefully guarded against, as it is a grave cause of danger.
2. That in the treatment of shock and vomiting following operation we get no help from the stomach, and must rely on the rectum as its substitute.
3. That heat, alcohol, and opiates are our best remedies; and that the latter are well borne, and must be intelligently used to their full effect.
4. That drugs of the class ordinarily used to check vomiting are of little or no use in the cases under consideration.
5. That ice does not relieve thirst, and does harm by introducing water into the stomach and so provoking vomiting.

THE BRADSHAW LECTURE

ON

INFECTIVE AND TUBERCULOUS OSTEITIS

AS CAUSES OF ARTHRITIS IN CHILDHOOD, AND THE IMPORTANCE OF EARLY TREATMENT.

Delivered before the Royal College of Surgeons of England.

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I PROPOSE in this lecture to consider how it is that the extremities of the long bones entering into the formation of various joints are peculiarly liable during childhood to become the breeding ground of certain forms of micro-organisms, and so to be affected with osteitis, and then to inquire by what means we can best dislodge such parasites before they have destroyed the tissues among which they may have taken root. It will be necessary to confine my remarks to a typical example of acute and of chronic inflammation of bone produced by two well-defined microbes, and to illustrate the subject by reference to disease of the knee; this joint, being one of the largest and most superficial articulations of the body, affords us a favourable opportunity for determining the nature of any morbid action taking place in the bones entering into its formation.

The condyles of the femur at each step we take have to bear the weight of the body, which in like manner is supported on the upper surface of the head of the tibia, so that these opposing portions of bone are constantly subjected to considerable pressure and to concussion. This pressure, in consequence of the comparatively soft condition of the osseous tissue in childhood, is largely distributed throughout the trabecular tissue contained within the extremities of the bones which enter into the formation of the joint. The trabecular network within the extremities of the long bones is also subjected to traction, especially at the point of union between ligaments and tendons with the bones. So intimate is this union that in cases of violence tendons not infrequently tear away portions of the cancellous tissue as well as the compact outer layers of the bone into which they are inserted. It follows, therefore, that the trabeculæ contained in the extremities of these bones have to bear their share in the frequent wrenches and strains to which the joints of children are subjected; and it is within the meshes formed by the interlacing of these trabeculæ that the red marrow of the bone is contained; red, because it is full of blood, and among the other functions which it has to perform is that of manufacturing the red blood corpuscles. Beyond this the trabeculæ are lined with cells from which in childhood the growth of the epiphysis, and at the juxta-epiphysial line the increase in length of the shaft of the bone takes place, necessitating active and extremely complicated physiological changes in the organic matter through means of which growth is effected.

We may form some idea of the activity of the work going on within the bones entering into the formation of the knee-joint from its abundant supply of blood vessels; the four articular arteries, the azygos, and branches of the tibial and femoral vessels all send numerous offsets into the bones; in fact the condyles of the femur and head of the tibia are riddled with openings through which vessels pass into and leave the cancellous tissue. Within the bone the arteries break up into narrow vessels which open into a plexus of peculiarly wide venous capillaries, and these into veins which have to pass out of the bone through unyielding channels which perforate the dense external layers of the bone. The circulation of blood, therefore, through the thin-walled venous capillaries in the marrow of bone is much delayed, and it is in this sluggish stream of blood that the nucleated cells are converted into red blood corpuscles.

Within the cancellous tissue of the long bones we have therefore highly vascular delicate soft structures through which the circulation of blood is much impeded, and these tissues during childhood, as already explained, are peculiarly liable to contusion by external force. Beyond this the marrow contains numerous cells through means of which the growth and repair of the bone is effected. We are apt to overlook the important and extremely complex nature of the process of growth; it means a vast expenditure of physiological action, and an almost inconceivably complicated arrangement of the constituent elements of the organic matter engaged in the process. But the more complicated the machine, the less its stability, and consequently the greater the danger of its component parts being disarranged. And it is in organic matter which has been contused, or in which the constituent parts have otherwise been much disturbed, and its vitality thus lowered, that micro-organisms take root, and so we can comprehend why it is that the marrow of the cancellous tissue in the ends of the long bones during childhood are not infrequently the breeding ground of various forms of microbes.

The vulnerability of the tissues of young persons to the action of microbes is exemplified by the eruptive fevers from which they suffer; also by the susceptibility of European recruits to tropical influences on their arrival in India. As we advance in life the ends of the long bones become surrounded by layers of dense unyielding osseous tissue, which to a large extent preserves the soft structures contained within the cancellous tissue from injury; the process of growth has also been completed, and the tissues have become more stable; it follows therefore that acute infective or tuberculous osteitis seldom commences in the joints of persons who have passed the age of childhood.

It is hardly necessary to observe that the bones increase in length by the growth of osseous tissue at the juxta-epiphysial line, and that at this line in the growing bone the trabecular network is composed of temporary, that is of brittle, bone in which the venous radicles pass up to the epiphysial cartilage, and there form loops more like sinuses than ordinary veins. One or two arteries from the diaphysis pass through the cartilage into the epiphysis, but by far the greater part of the blood supply of the epiphysis is independent of that of the diaphysis; in fact, the shaft of one of the long bones may become necrosed and be removed, and yet the epiphysis may continue to live and grow. Muscular force is capable of causing the complete detachment of an epiphysis, and fractures not infrequently occur through this line. Short of such extensive injuries, ecchymosis and laceration of the fragile and rapidly growing structures at the juxta-epiphysial line must be of common occurrence in childhood.

The circumference of the epiphysial cartilage is prolonged into the deep layer of the periosteum of the diaphysis, and its cells produce the osteoblasts of that layer; the extremities, therefore, of the diaphysis in the growing bones of children are enclosed in a cup-like cavity of cartilage, and if acute inflammation should occur in the brittle tissues at the juxta-epiphysial line, the products of the inflammatory action must find an exit either through the trabecular network of the extremity of the diaphysis into the medullary canal, or between the deep layer of the periosteum and the outer surface of the bone. In either case the blood supply of the diaphysis is cut off, the periosteum being stripped from the bone, and the pressure of the inflammatory products against the unyielding trabeculæ and Haversian system prevents the circulation of blood through the shaft of the bone, and it consequently becomes necrosed; but the deep layer of the periosteum having been forced outwards with the surrounding vascular structures may continue to live and form a case of new bone around the necrosed diaphysis.

Professor Ollier, in the year 1881, published the results of some experiments he had made on the dead bodies of children which illustrate the point above referred to. He found that only slight force applied in certain directions was sufficient to injure, and often to lacerate the soft tissues at the juxta-epiphysial line. If the force was increased the injured structures could without difficulty be squeezed outwards beneath the deep layer of the periosteum, but not into the external soft tissues or round the epiphysis. Ollier also states that in the case of children who had died from tuberculosis or from septic poisoning the structures at the juxta-epiphysial line were peculiarly friable. Without doubt a young and healthy bone, like that of a branch of a living tree, is a very different thing from the same part after death; but among our poor, neglected, anæmic, London-bred children the tissues are often, as regards their vitality, not far removed from dead structures. We can readily conceive that the organic matter which forms the bodies of these children is less capable of resisting the attacks of micro-organisms than those of more robust and well-cared-for beings. One seems to realise this difference when before the days of Listerian surgery one saw the swarms of ants and flies which attacked in a climate like that of Calcutta the wounds of persons whose vital powers were at a low ebb. And so with micro-organisms; their opportunity is in structures which have been contused or their vitality depressed by some other cause; it is in organic matter of this kind that microbes take root.

Bacteriologists teach us that micro-organisms of a dangerous character may remain quiescent in our bodies; at any rate they can live there without exciting any active disturbance, for they seem to be under the control of constituted authorities which they evidently respect; but if these salutary forces are incapable of performing their functions, or, if the microbes alight on a soil composed of weak or injured tissues, they fix themselves on such matter and grow with amazing rapidity, and by means of the irritating chemical compounds they cause inflammation in the neighbouring tissues.

To illustrate this point we may again refer to the East: there at the end of the hot season we pass over a large expanse of land with no vestige of animal or vegetable life on its surface, the earth is bare, scorched and fissured in all directions, having for weeks been exposed to the uninterrupted heat of a tropical sun. Suddenly a storm bursts over the country and a deluge of rain falls; with its first drops the whole plain is alive with a multitude of insects and frogs, whose loud croaking fills the air; a mere shower of rain has been sufficient to bring a vast amount of dormant life, including the cholera and other bacilli, into active being. And so with the human body. I must have swallowed large quantities of water infected with the cholera bacillus during my service in Lower Bengal, but on one occasion only, and that from my own fault, they found my intestinal canal unprepared to resist their attack, and then they nearly killed me; the shower of rain had come for them and they took advantage of it. In like manner we can account for the action of unripe fruit or unwholesome food, saline purgatives, and so on, as predisposing causes of cholera; they prepare the surface of the intestines as a fit breeding ground for the cholera bacillus.

Clinical experience had convinced me some twenty years ago that cases of acute inflammation at the juxta-epiphysial line depended on causes such as those described, that is, to injured tissues which had fallen a prey to a specific microbe. These ideas have since been confirmed by experimental research, for Mr. A. H. Tubby has shown that among animals acute inflammation of the structures forming the juxta-epiphysial line may with certainty be produced if this part be mechanically injured, and then the staphylococcus pyogenes aureus is introduced into the circulation of the animal. The result of this treatment is an intense inflammation of the injured osseous tissues, which rapidly swarm with this microbe, leading to dangerous septic poisoning. In animals where similar injuries had been inflicted at the juxta-epiphysial line, but in which the staphylococci had not been introduced into the blood, no acute inflammation occurred in the damaged tissues or in any other part of the body.

And so if one of our weakly city-bred children—especially those who have lately passed through one of the eruptive fevers—happens to suffer from traumatism at the juxta-epiphysial line, say of the upper extremity of one of his tibiæ, and if at the same time the part becomes infected by the staphylococci pyogenes aureus—probably introduced into the circulation through some open sore—acute inflammation is excited in the injured bone, so acute and so dangerous that more than half these patients die within the course of a few days. Should the child outlive the onset of the disease, pus forms in the inflamed bone, and for reasons already given it burrows into the diaphysis and between the

deep layers of the periosteum and the bone, leading to necrosis of the shaft of the tibia. In the less severe cases the inflammatory action may be limited and produce a circumscribed and chronic abscess in the extremities of the bone, such as those first described by Sir B. Brodie. It is quite possible, when the juxta epiphysial line of the upper end of the tibia is involved, that pus may pass into the knee joint—a condition described and figured by Mr. Thomas Smith in his paper on this subject published in the *Bartholomew's Hospital Reports* for 1877; in these cases it is probable that the infective micro-organism from the juxta-epiphysial line finds its way along the walls of one of the vessels which pass from the diaphysis through the epiphysial cartilage, and so reach the joint. However this may be, the knee may become acutely inflamed, but is by no means necessarily involved in cases of acute infective osteitis.

If, therefore, we rightly comprehend the nature of this form of disease, its treatment would seem to be clearly indicated, for it is evident that we must endeavour to destroy the living organism which is at the root of the mischief. Incisions into the periosteum, however important they may be, do not reach the source of the disease; to do this we must open the bone at the juxta-epiphysial line and wash out the infected tissues with a germicide, subsequently maintaining free drainage from the interior of the inflamed bone outwards into antiseptic dressings. We do wrong to wait for pus to form in cases of this description, or in delaying opening the bone for an hour after we have diagnosed the nature of the disease; for the micro-organisms which are at the root of the mischief, as a rule, live and multiply with great rapidity in the part until within a short period they destroy the life of the individual they inhabit, or cause their own death in the suppuration they give rise to in the tissues. The question, therefore, as to when we should operate in cases of this description is answered by directing the bone to be opened immediately we have determined the nature of the disease; remembering that the operation is attended with no danger, but if delayed for a few hours it may be too late. In cases of strangulated hernia and in acute glaucoma we have come to recognise the fact, that so soon as the nature of the disease has been diagnosed we are bound to relieve the constriction in the one case, and the tension in the other; so in acute inflammation of the bone, having determined the nature of the disease, not mistaking it for acute rheumatism of the joint, a free opening should be made into the part, the bone must be opened, and the focus of the inflammatory action reached, if possible, before suppuration has taken place in the osseous tissue.

An Esmarch's band having been applied to the thigh in a case such as that we are considering, a free incision is made through the soft tissues down to the epiphysis and along the shaft of the bone so as to expose the juxta-epiphysial line. A trephine, about an inch in circumference, is then—with a light hand, so as not to splinter the bone—to be passed through the whole thickness of the tibia. Another incision is to be made through the soft tissues down to the point at which the trephine has perforated the bone, so that a passage is formed through the limb, including the small tunnel in the bone, from either end of which free drainage can take place outwards beyond the surface of the skin. The opening in the bone should be thoroughly and repeatedly washed out with mercurial solution, and then filled with iodoform, after which the limb, having been packed in antiseptic dressings, the elastic band may be removed from the thigh. As a rule neither drainage tubes nor sutures are required in these cases. The limb should be secured by an uninterrupted splint, so that the dressings may be changed without disturbing the parts operated on; in fact, the subsequent treatment of the case is very much that of a compound fracture. If pus has passed into the knee-joint it will be necessary to follow the treatment as regards the inflamed bone already described, and in addition to open the joint and wash it out with mercurial solution, treating it as we should do an acute abscess in any other part of the body.

The following case is an example of the results of the early treatment of acute juxta-epiphysial osteitis.

T. E. J., aged 7 months, was admitted into the Westminster Hospital under my care on May 9th. She was a delicate little being, and suffering from whooping-cough. Thirty-six hours before admission into hospital, there being no history of any injury to the part, the child's right leg became excessively painful and greatly swollen, the infant screaming violently the instant the limb was moved. The child was at once taken to the hospital, and Mr. De Santi, who first saw the case in the out-patient department, ordered her into my wards, and that I should be sent for. Some four hours after admission the child's temperature was 104°, her right leg from the knee to the ankle was of brawny hardness and exceedingly painful. An incision was at once made down to the bone at the juxta-epiphysial line of the upper end of the right tibia, and a tunnel made through the bone with a trephine; in fact, the patient was treated in precisely the manner already described. The child's temperature on the day following the operation had fallen to 100°, and the next day it was under that point. After three weeks the child was removed into the country, and two months subsequently, when I again saw her, all trace of the osteitis from which she had suffered had entirely disappeared, a result attributable to the fact of the diseased bone having been freely opened and washed out with mercurial solution and iodoform within forty-eight hours after the commencement of the disease.

TUBERCULOUS OSTEITIS.

Having described the conditions which render the marrow contained within the extremities of the long bones peculiarly liable to become the breeding ground of micro-organisms, it is unnecessary to enter further into the subject; the question we have to determine is, whether the chronic joint disease of childhood depends on tuberculosis of the marrow contained in the extremities of the bones entering into the formation of the affected joint. Unless we can satisfy our minds on this point, it seems almost impossible to arrive at any rational conclusions as to how we should best treat the early symptoms of such cases. The difficulty surrounding this question arises from the fact that pathological specimens of these joint affections in their early stages are seldom met with, and the osseous tissue is by no means an easy one in which to detect the presence of a few tubercle bacilli; moreover, in the early stages of these diseases of joints only a limited area of bone is involved, and within this area probably only a few bacilli exist.

During the past fifteen years, in the surgical wards of the Westminster Hospital, three children, while under treatment for the early stages of scrofulous joint disease, developed tuberculous meningitis, and died. In these three cases (one a knee, and the other two hip-joint disease) we had an opportunity of examining the condition of the affected joints at quite the commencement of the disease. In the knee-joint case, a spot of inflamed osseous tissue was found at the insertion of the tendon of the extensor muscle to the tubercle of the tibia; in this congested portion of bone tubercles were discovered. In the two cases of hip-joint disease, in inflamed spots of bone near the circumference of the neck of the femur, on the distal side of the epiphysial cartilage, distinct tubercles were found, and in these tubercles a few bacilli were detected. The ligaments, synovial membrane, and other joint structures, were very carefully examined, but no trace of tubercles was found in them. A somewhat extensive examination of specimens of chronic joint disease enables me to state that when the synovial or other joint structures are affected with tubercles, tuberculosis of the bone also exists; this remark applies to the more advanced stages of the disease, a subject upon which we cannot enter in this lecture.

My fellow student, Charles Price, as far back as the year 1865, from his own experience in excision of the knee-joint, arrived at the conclusion that disease met with in this articulation as a rule commenced in the ends of the bones. Volkmann was of opinion that strumous disease of joints commenced in the osseous tissue, and his opinion was to a great extent founded on his own observations of the early stages of joint disease. Ollier, and Gibney of New York, are of much the same opinion. Sayers has decided views as to the origin of those chronic joint cases in tuberculosis of the bones entering into the formation of the affected articulation. But we require further pathological evidence on the subject of tuberculosis of bone in the early stages of the joint disease of childhood. Such evidence as we have points to the presence of tuberculous osteitis as being the starting point of what are commonly called scrofulous joint diseases. Pathologists, as a rule, further agree in considering that the outer layers of the cancellous tissue of the bone are the most frequently affected in the early stages of tuberculous osteitis. This fact, as already mentioned, is due in all probability to the marrow in this part of the bone being injured from the action of the tendons or ligaments on the osseous structure into which

they are inserted. In the acetabulum the disease not infrequently begins in the attachment of the ligamentum teres to the innominate bone. In other cases, from the pressure to which the soft structures in the deep layers of the articular cartilages are exposed, they become crushed against the plate of bone upon which they rest, and so form a favourable soil for the growth of tubercles. Bearing on the pathological evidence in favour of tuberculous osteitis being at the root of the chronic joint disease of childhood, we cannot overlook the fact that of all the joints of the body the spine is most frequently affected, the diseased action commencing in the cancellous structure of the bone in these cases. The same remark applies to the head of the first metatarsal bone, the os calcis, and the astragalus. Lastly, in all advanced cases of the chronic joint disease of childhood there is ample evidence of tubercles in the affected structures.

When the tubercle bacilli have found a favourable resting place in one or other of the tissues of the medulla of bone, they speedily become surrounded with layers of cells which protect them from leucocytes or other blood scavengers. Within this nest of cells the microbe multiplies, and its offspring produce either isolated, or it may be disseminated, tuberculosis of the surrounding medulla, and in the course of time the synovial and other joint structures are invaded by tubercle bacilli. Before the disease has advanced to this stage, and when, as in many cases it is certainly confined to the bone, is the time the surgeon may with the greatest advantage attack it in the hope of destroying the microbe which has started the mischief going on within the joint.

We may, however, approach this subject from another point of view. Without doubt a large majority of the cases of chronic joint disease we meet with can be traced back to an injury of some kind; nevertheless, in children injuries to the joints are incapable of causing chronic joint disease such as that which is seen so frequently in general hospitals throughout Europe. This is an important point, because if it can be shown that injuries in themselves are not a sufficient cause to give rise to the disease we are considering, it follows that in such cases there must be something beyond the traumatism to account for this slow but most destructive form of inflammation. Surgeons practising in all parts of India tell us they seldom, if ever, meet with cases of scrofulous joint disease among native children in that country. These children, however, are subject to the same kind of accidents and injuries as Europeans; they are no better fed or housed than the corresponding classes in Europe, and yet practically they are free from these chronic joint affections which are so frequently seen in our hospitals, and which, from a pathological point of view, we have come to think depend on tuberculosis. In this way we are led to think that the tubercle bacillus is the something in addition to a traumatism which is necessary to produce chronic joint disease in childhood. But it may be argued, The tubercle bacillus exists in India; why should native children therefore escape tuberculosis of the joints? It is true this bacillus can live and thrive in India, but tuberculosis is certainly much less common in that country than it is in Europe; and we cannot overlook the fact that hereditary tendencies form an important element in a question of this kind. Beyond this, native children in India live day and night for the greater part of the year in the open air, and in much bright sunshine—conditions which, as we well know, exercise a vast influence on living organic matter; beyond this the native child has a cold bath every day. That sunlight, fresh air, and cleanliness have an important share in preserving living tissues from the inroads of certain forms of micro-organisms is apparent from the following, among other reasons. In the lower animals, such as monkeys, if left in their natural condition in tropical forests, we have no reason to suppose they suffer from tuberculosis; but if these same animals are confined in close sunless cages in our zoological gardens they die off in numbers from phthisis. Or, take another case, the children of our upper classes suffer little from chronic joint affections in comparison with their poorer brethren living in the dark dirty slums of our large cities. Physicians recognise the importance of fresh air and sunlight in the treatment of the early stages of phthisis and other tuberculous affections; with unquestionable advantage they order such persons an open-air life on board ship during the summer, and a residence in the pure atmosphere of the higher Alps in the winter. The early stages of tuberculous testicle and of other glands seem to be amenable to similar treatment.

From a study, therefore, of the biological relation of the marrow contained in the ends of the long bones, from its physiological functions, and from the teaching of pathology, we are led to believe, as a rule, that chronic or scrofulous diseases of joints are due to tuberculosis commencing within the cancellous tissue of the bones. Without question, such disease may and does begin at times in the deep layers of the articular cartilages; it may commence in the synovial or other soft structures surrounding a joint, but in the case of children we have no evidence to prove that such is the case, but rather the reverse.

Then comes the question, Can we fix on the site occupied by the tubercle bacillus in the early stages of joint disease? In cases of this kind there is always some tenderness over the whole of the joint; but if pressure is made with the tips of the fingers and thumb over the bones entering into the formation of the articulation, we come upon spots which are not only tender but which on pressure cause the child to cry out with pain. These painful spots are permanent; if we examine them to-morrow, or a week hence, there they are; and they indicate definite areas of tuberculous osteitis—the commencement of the disease—which at any moment may extend to the synovial or other tissues of the joint. Doubtless in instances of hip-joint disease in its early stages there is difficulty in ascertaining the precise position of tender areas of bone such as those referred to; the disease may commence in the acetabulum or beneath the articular cartilage of the head of the femur; but it most frequently begins in the neck of the bone, as in the two specimens already referred to, and it is because it begins in this locality and on the distal side of the epiphysial cartilage, that bacilli often extend down the shaft of the femur, and so, after excision of the head of the bone, the disease continues in the trochanteric portion and upper end of the femur.

In the early stages of tuberculous osteitis, as before stated, the symptoms are frequently referred to an accident or injury of some kind; the patient suffers from pain and stiffness of the articulation, and has difficulty in fully extending or flexing the joint without increasing the pain. On pressure over fixed points in the bones entering into the formation of the articulation, the pain is much augmented. These symptoms vary in intensity, but they persist for some weeks, and are increased if an effort is made to use the limb. Within a short period the patient's sleep is disturbed at nights by the spasmodic and painful movements of the limb. There may be little, if any, increase of the synovial fluid in the joint, but its temperature will be found higher than that of the sound limb.

The question then arises as to how we may best treat such a case, and this must depend upon the belief we hold as to the nature of the disease. If we believe, with many surgeons, that these chronic joint affections of childhood are in the majority of cases due to tuberculous osteitis, then it is certain we must direct our best efforts to destroy the tubercle bacillus which has found a breeding ground in the bones entering into the formation of the diseased joint. We had in India at one time a famous general who, with reference to a more substantial but hardly less dangerous form of being than we have to deal with, was wont to say: "When your enemies are in the open go straight at them, keep them moving; if entrenched go at them until you have turned them out of their position"—advice which we may with advantage apply to the case of the micro-organisms we are considering.

We are, however, bound to examine the opinion of surgeons who prefer less active measures in dealing with the early stages of tuberculous joint disease, and who hold that the best thing we can do in such cases is to lay the patient on his back in bed, with proper extension applied to the limb until the diseased joint can be flexed and extended without pain, and on pressure over the bones the patient no longer suffers from pain. Treatment of this kind always takes months, and may require two or three years before complete relief from pain is secured; even after so lengthened a period of treatment there can be no certainty that the

tubercle bacillus had ceased to exist in the previously diseased bone, and only waits a favourable opportunity to recommence its most destructive influence on the tissues. Beyond this we should hardly rest content with having nothing more in the way of treatment to recommend these patients than rest in bed for twelve months, and it may be two years and upwards, and that at the joyous period of childhood, a time when these little beings are overflowing with restless energy, and when constant motion seems almost necessary to a healthy development of body and mind. Nor can one help feeling, as in the case of the lower animals, that life under such unnatural conditions may predispose the individual to the attacks of various forms of micro-organisms. Further than this, surgeons in charge of our London and other hospitals throughout this country and the Continent have reason to believe that in many cases rest and extension are by no means all that could be desired in the class of cases that come under their care.

For instance, Mr. Howse, in his valuable paper published in *Guy's Hospital Reports* for 1892, has brought together the details of 130 cases of excision of the knee-joint in children treated by himself in Guy's and the Evelina Hospitals from the year 1879 to 1891. The cases are not brought down to a later date because, as Mr. Howse remarks, in a question of this kind it is all-important to ascertain the result of treatment some years after the patient has been "cured" according to our most misleading hospital nomenclature. One-half of the cases of excision of the knee joint operated on by Mr. Howse are stated to have been treated by rest, and many of them by extension for upwards of two years before excision of the joint was deemed necessary to save the limb or life of the patient. The other half of Mr. Howse's patients had been under similar treatment for less than two years, and yet their condition was such that this kind of treatment had to be given up and excision of the knee-joint performed. Do what we will in cases of chronic joint disease among the poorer classes of our larger cities, our efforts are in too many instances unsatisfactory, for many of these children suffer from the stain of hereditary disease which the hand of the surgeon cannot wipe away.

One of my former colleagues, Mr. R. Davy, was at one time rather fond of excising the bones entering into the formation of the knee-joint, both in the early and later stages of tuberculous disease. He was not at the time in the habit of employing antiseptics, and he adopted the open system of dressing wounds; no special care was taken to remove infected bone or other tissues. Nevertheless, most of these cases made admirable recoveries so far as the union of the diseased bones was concerned, and the cessation of the unhealthy action of the previously affected structures. There are, however, serious objections to excision of the knee-joint in children unless to save the limb or life of a patient, and under any circumstances this objection cannot be entertained as applicable to the early stages of the disease with which we are alone concerned at present. But one could not help feeling that the favourable results noticed in the cases referred to must have been largely due to the copious flow of blood which took place at the time and subsequently to the excision of the joint; the ends of the bones and surrounding tissues were thus flushed out and their embarrassed circulation relieved, so that the natural foes of the tubercle bacilli had an opportunity of going straight at their enemy. The subsequent free drainage through the open wound doubtless materially aided the salutary action going on within the tissues. By means of the trephine, however, we may not only secure free hæmorrhage from the interior of the bone, but also make a tunnel through it which will ensure continued and efficient drainage, and further allow the free introduction of a germicide into the affected tissues. All this may be done at an early stage of the disease without running the slightest risk of inflicting any serious injury on the bone or soft tissues provided strict antiseptic precautions are followed.

Having given the reason and method of operating on bones affected with acute infective osteitis, it is unnecessary to make any further observations on the subject, except that a precisely similar proceeding should be carried out in cases of tuberculous osteitis in its early stages; before we have reason to think that cæsation or caries of the bone has occurred. Spots in the tender bones should be exposed, and a trephine of about an inch circumference employed, so as to remove one or more small columns of inflamed bone from the affected joint. After such an operation, the limb should be securely fixed to a splint, so that the dressings can be removed without disturbing the part; at the same time extension must be employed, and kept up for six weeks or so, after which we may omit the extension during the day and employ massage. In another ten days the patient should be placed under an anæsthetic, and complete flexion and extension of the joint carefully made. From that time gentle passive motion of the joint and massage should be employed daily, and the child, if possible, removed to the country and allowed to walk about, taking at first only gentle exercise, the amount and kind being guided by the freedom or otherwise with which the patient experiences from pain.

From considerable experience in the use of the trephine in the early stages of tuberculous osteitis, I am able to state with confidence that it is possible in not a few cases to cut short disease of the knee and other joints; and to prevent it spreading to accessory tissues entering into the formation of the affected articulation. Treatment of this kind may, without question, be carried through without running any risk which may not be safely undertaken, of the alternative is either caries of the affected bones or rest for long months in bed. It seems that as in life, so in operative surgery, we too frequently begin at the wrong end; if the experience we gain as we grow in years had been at our command at the commencement of our career, it would have been better for some of us and for many of our patients. And so with surgery, all our knowledge and skill should be applied to preventing and cutting short disease in its early stages; it is then that operative surgery may achieve its greatest triumphs. In this belief I have endeavoured to explain what seem to be the correct principles, and to deduce therefrom the line of practice to be followed in cases of acute infective osteitis in its early stages, and the far more common and hardly less mischievous tuberculous disease of the extremities of the long bones in childhood.

REMARKS ON THE EDUCATION AND TRAINING OF GIRLS OF THE EASY CLASSES AT AND ABOUT THE PERIOD OF PUBERTY.[1]

By W. S. PLAYFAIR, M.D., LL.D.,

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In the few remarks I propose to make on my subject I do not, of course, aim at laying before you any novel matter. What I have to say is merely a little common-sense statement of general principles familiar to us all, but too often neglected. I have rather selected this subject as one which may possibly give rise to a discussion of interest, since it refers to matters constantly coming within the province of practitioners to whose charge the health of families is entrusted, and whose opinion on the questions raised may often be sought. We are all willing to admit, theoretically, that "prevention is better than cure"; practically we are apt to overlook prevention, and limit our efforts to cure. My object to-day is to insist on the endeavour at a peculiarly sensitive age in girls of so regulating their lives as to avoid sowing the seeds of mischief, which may, and often do, in future years develop into a disastrous crop.

What I think we ought especially to bear in mind is the highly sensitive nervous organisation of the human female, the development of the emotional element which distinguishes the woman from the man, and influences the character and progress of all kinds of disease in women, but much more especially diseases of the reproductive organs. Up to the time of puberty there is comparatively little difference between the sexes in health, in disease, or in any other condition. Conventionally they are separated, and different modes of education and training will soon make such difference as there is more marked, but boys and girls

[1] Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

will play together, work together, and so on, and are generally on a footing of perfect equality, there being little essential which distinguishes one sex from the other.

As soon, however, as the great function of menstruation is established, the sexual period of a woman's life begins, which must henceforth dominate her whole existence to a greater or less degree during the continuance of menstrual activity. The entire system now undergoes a marked change, the asexual child becomes a woman; her body shows the characteristic modifications fully described in all works on physiology and obstetrics, and with them are to be observed the not less important changes in character and in the general development of the nervous system which distinguish the woman from the girl. It is at this important time that the conduct of the health of the growing girl may influence for good or for evil the whole future of the woman. Judiciously managed, she may be so trained that she will be able to meet successfully the strain on the nervous system which she has so often to cope with in after-life, such as the duties of a wife and mother, or the struggle with domestic anxieties, worries, and sorrows which are rarely altogether absent from the lot of women. Injudiciously managed, as so many are at this important epoch, all these things which the strong-bodied and healthily minded woman may bear with no permanent bad results will tell terribly upon her. She will have no stamina, no power of resistance, and she may become the wretched broken-down invalid so often met with in the present day, especially in the upper ranks of life, in which the evil effects of unbalanced culture, and the bringing-up of girls like hothouse plants are so frequently seen.

These are my reasons for asking your attention to a few words on what should and should not be done in the education and training of girls before and after the establishment of puberty. This is all the more necessary since the higher education of women has taken such enormous strides of late years, so that it is now regularly recognised and is almost universal. Everywhere the so-called "high schools" for girls are to be met with, and the still more advanced colleges of the type of Girton and Newnham are increasing in number, and are full of students. The old-fashioned girls' boarding schools, with their perfunctory education and their elegant accomplishments, are driven out of the field, and a movement, which at first was scoffed and jeered at, has now gained the day.

Let me say at once that with limitations which are essential because of the question of sex, which cannot be got over, the movement is one which seems to me an enormous gain, and which I write of in no spirit of opposition. This statement is needful, since there is an unfortunate tendency on the part of many mistresses of high schools to listen to the warnings of medical men with incredulity, to accuse them of narrow-mindedness and opposition, which, as a matter of fact, the great majority of them are in no way guilty of. The recognition of and warning against possible evils are neither the one nor the other.

The one great fault which those who manage these educational establishments appear to commit is that they have started on the absolutely untenable theory that the sexual question is of secondary importance, that there is little if any real distinction between a girl between the ages of 14 and 20 and a boy of the same age.

I know of no large girl's school in which the absolute distinction which exists between boys and girls as regards the dominant menstrual function is systematically cared for and attended to. Indeed, the feeling of all schoolmistresses is distinctly antagonistic to such an admission. The contention is that there is no real difference between an adolescent male and female, that what is good for one is good for the other, and that such as there is is due to the evil customs of the past which have denied to women the ambitions and advantages open to men, and that this will disappear when a happier era is inaugurated. If this be so, how comes it that while every practical physician of experience has seen many cases of anæmia and chlorosis in girls, accompanied by amenorrhœa or menorrhagia, headaches, palpitations, emaciation, and all the familiar accompaniments of breakdown, an analogous condition in a schoolboy is so rare that it may well be doubted if it is ever seen at all? It is certainly not necessarily from work. The successes of women in the schools have been so striking and numerous that their capacity for intellectual work cannot be doubted for a moment. One chief reason probably is that the male's work is safeguarded by an amount of physical exertion in the way of sports, which tends to keep him in health. It is true that in a few girls' schools attention has of late been paid to this point, but it is in a perfunctory sort of way at the best. There may be a gymnasium or some form of game, but while at a boys' school cricket and football are compulsory, to say nothing of the natural disposition of a boy to athletic pursuits, at a girl's it is merely optional, and if a pupil tending to ill-health avoids exercise little or no attention is paid to it.

As an evidence of this within the past week, I have been consulted in the case of two young ladies, aged respectively 11 and 16. One was chlorotic, and her menstruation had ceased for a year. On taking her time table at a well-known high school, I found she had 7½ hours of work, an amount not in itself, perhaps, excessive in a healthy girl. From 2.30 to 4 there were no lessons, and, if the weather permitted, she might if she liked take a walk, but it was not insisted on, and being naturally languid and listless, as all such cases are, she rarely did so. There was no other opportunity for exercise at all.

The other suffered from pronounced menorrhagia, anæmia, and debility. Her time table also was seven to eight hours, and she "occasionally took a walk."

In neither of these cases had the school authorities ever inquired into the state of an all-important bodily function which in both was very markedly aberrant, and yet, considering the paramount importance of such symptoms of impaired health in girls of these ages, it might fairly be held to have been part of the duty of those in authority in such schools to make the necessary inquiries which might have led to some alteration in the course of study or in her general mode of life.

While it is questionable whether in boys' schools the attention given to exercise and athletics may not be excessive, in girls' schools it is, on the other hand, not nearly sufficient. And yet this is a fault which might very easily be remedied. It would not be difficult to make games compulsory as they are in public schools for boys, and there are some which are admirably adapted for women, as, for example, golf, or rowing when it is feasible, or it may be by cycling. Each of these exercises the muscles generally, without those spasmodic efforts required in cricket, football, or even lawn tennis, which are, perhaps, too violent for girls. The results when well and freely used must be well known to all who have a knowledge of what a thoroughly healthy English girl may be. No better description of this could be given than that contained in a leading article in the *Spectator* on what the writer calls "the lawn tennis girl."

> Sensible people have long ago agreed to accept this new type of womanhood as distinctly admirable. She has made her influence felt everywhere, both in real life and fiction. In real life we meet her in every country house, in every foreign hotel, and in almost every London square. And everywhere we look her we make upon an excellent example of the healthy, well-developed, and unsentimental girl: the girl who does not think it necessary to devote herself to the study of her own emotions, and who finds in active physical exercise an antidote to the morbid fancies which are too apt to creep into the minds of the idle and self-indulgent.

This is an excellent description of a type we are all familiar with, and which, it is needless to say, we all admire. If high class educational establishments could succeed in turning out girls of this kind in larger numbers than they do at present they would do more towards lessening the number of neurotic women that the medical profession has to deal with than the medical profession can possibly do by any exercise of its own art.

One other regulation in girl's schools I should like to see made compulsory, and that is that no form of corset should be worn. The evils of these have so often been pointed out that it is needless to dwell on them in such a paper as this. Possibly in adult women the exigencies of dress and of custom make it hopeless to expect that more rational forms should be adopted, and it may even be that in child-bearing women they have certain uses. In adolescent girls, however, who are still *in statu pupillari*, nothing can be said in their favour, and it would be very easy for schoolmistresses to issue a sumptuary law prohibiting their use altogether.

It is an obvious corollary from what has been said that it is

the bounden duty of mistress, parent, and doctor at once to insist on the cessation of all severe study as soon as any of the physical signs of illness have shown themselves, such as it is impossible to be mistaken in, as, for example, chlorosis, amenorrhœa, or menorrhagia, wasting, complete loss of appetite, and the like, and yet this is not generally done. Quite recently I was consulted by a medical man, whose daughter was a pupil at one of the principal and best known colleges for girls. Her menstruation had ceased for a year, and she had lost over a stone in weight. On this account her father, as I think very properly, removed her, on which the head mistress remonstrated, and wrote saying that they considered the menstrual function was not of consequence, and that when it was in abeyance for a time it came all right afterwards, when the girls left school. Any theory more unphysiological and more likely to lead to subsequent shattered health in girls it would be difficult to imagine.

It is not work which, in my judgment, hurts, but the perseverance in work after Nature has hung out its danger signals, work in an unhealthy body; the attempt, in fact, to fight Nature. Then, indeed, the careless, prejudiced, or unwise mistress or parent may well find that "over-pressure," the very existence of which so many deny, is a stern reality, which may shatter the whole future of the girl.

ON SOME SUPERFICIAL AFFECTIONS OF THE RED PORTION OF THE LIPS.

[WITH A COLOURED PLATE.]

BY W. ALLAN JAMIESON, M.D., F.R.C.P.E.,
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IT is somewhat singular that disorders of the vermilion portion of the lips receive in general but scant notice in most works on dermatology. Some of these are not rare, while all are both annoying to the patient, and troublesome either by their obstinate tendency to recur, or by their intractability to treatment.

The best known of these is the common herpes labialis, so often met with in association with an ordinary catarrhal attack, or in some febrile conditions with the subsidence of the pyrexial symptoms, but occurring, also, quite independently of any such state. The patient, who is either quite young or at least under middle life, finds, rather suddenly, part of his lip swollen, perhaps hot and painful. The upper is more frequently attacked than the lower, and the same situation is prone to be implicated in successive seizures. On examination there may be only very slight redness, but if so there soon appear one or more groups of small vesicles seated on a swollen and reddened patch. These, if undisturbed, dry up in course of from three to six days into a brownish crust, or if disturbed too early, a weeping surface remains, to heal more slowly, and to occasion a thicker crust.

Should the weather be frosty, or a chill wind prevail, the lip is apt to become dry and chapped, as a result of the continual and involuntary moistening with saliva by the tongue, to replace the arrested secretion of the labial glands interrupted by the inflammation. In some districts infection from kissing is popularly blamed as a cause, possibly rightly in some instances. However this may be, the proclivity once induced, the ailment is liable to reappear at irregular and often inconvenient times. In both sexes it, like its congener herpes progenitalis, grows rarer as years advance, to cease finally at or soon after forty.

In treatment the administration of arsenic in small doses seems to control to some extent the repetition of the process, while locally painting the erythema or vesicles, as soon as they appear, with a film of flexible collodion, checks the further progress and expedites the cure. In those of the male sex the protection of the beard and moustache when worn is a valuable prophylactic.

Another and more troublesome affection of the lips is the formation of a small though deep and painful fissure in the centre of the lower lip, where the two halves from which it is developed become fused into one; or at the angles of the mouth, or, but less commonly, in the upper lip, on either side of the central portion of the three parts, from the coalescence of which it is formed. Those in the centre of the lower lip and in the upper are seen usually in women, and the cause is, at least sometimes, the bad habit of biting and dragging the thread before passing it through the eye of the needle. Those at the angles of the mouth occasionally own a syphilitic origin. They are often accompanied by a sort of intertrigo, the surface in their neighbourhood is soddened, and may even pour forth a degree of purulent secretion. The treatment of the fissures in the centre of the lip consists in scraping the whole surface carefully but thoroughly with a fine curette; then when the bleeding has ceased, having approximated the edges by pressure, a film of salicylic wool is placed on, and secured in place by painting over with flexible collodion. Great care must be enjoined to avoid stretching the part till firm union has been secured. Thus a very small spoon should be used, the morsels introduced into the mouth must be restricted in size, while fluids ought to be imbibed through a feeding cup. Those at the angles of the mouth, if antisyphilitic remedies are not called for, can usually be cured by cleanliness and the employment of an antiseptic ointment, such as 10 grains of salicylic acid in 1 ounce of cold cream.

Eczema limited to the exposed portions of the lips is comparatively rare. The best account is that given by Besnier and Doyon.[1] In one of the few instances which have come under my notice, the patient was a girl, aged 6, sent to me by my friend Dr. Underhill, in the end of October, 1893. The eruption tended to recur every winter. There was a thinly-crusted patch on the left side of the lower lip. The child was at the time somewhat pale. Another was a young lady, anæmic, though with some colour in her cheeks. She lived in the country and had a good appetite, but the bowels were constipated, and the periods were irregular. She had suffered for seven years from the complaint. Both lips were covered with thick yellowish crusts. The lips themselves were swollen, and felt painful when she was in a warm room, and were extremely tender to contact with any hot substance or fluid. At times there was considerable suppuration, and the lips became so stiff as to be nearly immovable. In both cases cure, apparently permanent, was accomplished by softening and removing the crusts by aid of boric starch poultices applied cold. Strips of Unna's zinc ichthyol salve muslin were closely and constantly laid on at night, the salicylic cold cream already mentioned repeatedly smeared on during the day, and iron prescribed for internal use. It seems doubtful if eczema of the seborrhœic type alluded to by Besnier and Doyon, and well described by Dubreuilh,[2] ever occurs on the lips alone.

The case represented in the coloured illustration is a peculiar one, and though it bears a considerable resemblance to eczema, yet the careful investigation into its morbid anatomy made by Dr. Leith, pathologist to the Royal Infirmary, brings it into closer association with epithelioma.

B. S., aged 33, a Jew, native of Russian Poland, but employed in Edinburgh as a tailor in rubber works, was admitted to Ward 37 on June 26th, 1895. Though pale in complexion he had suffered from no ailment save an attack of piles six years previously. There was no history or suspicion of syphilis. His family was apparently vigorous, as his father (80) and his mother (65) were well. He was himself a great smoker of cigarettes till his lip was affected. The complaint began three years since, on the left side, as a scaly spot. This continued much the same for two years, then it extended, and the whole lower lip has been involved for the last seven months. The lip was swollen to double its normal size and everted. Its extreme lower edge for about an eighth of an inch in the centre appeared healthy; then there was a white cicatricial condition on each side of the lip close to the skin margin. The central portion was partly reddish and granular, partly covered with dirty yellow crusts, partly cicatrised, the scar being soft, white, and tender. The inner surface showed a whitish pellicle over the red mucosa, becoming gradually lost towards the gums. The gums themselves, particularly the interdental prolongations, were swollen and fungating. The lower teeth were brown and en-

[1] Kaposi, *Path. et Trait. des Maladies de la Peau*, Traduction Française 1891, T. 1, p. 664.
Annales de Derm. et de Syph., 1892, p. 221.

TO ILLUSTRATE DR. ALLAN JAMIESON'S PAPER.

crusted with tartar. At times pain of a darting character was experienced in the lip, or a sensation of burning. The surface bled readily. The treatment consisted in the first place of the application of boric starch poultices till the lip had been thoroughly cleaned from all secretions. It was then cauterised with 50 per cent. lactic acid in water, the acid being pressed firmly in with a swab of cotton wool, and subsequently dressed for some days with zinc ichthyol salve muslin, when the cauterisation was repeated. This occasioned considerable pain, but the appearance improved very materially. He was made an out-patient, and instructed to protect the still tender surface by investing it with a film of salicylic wool painted over with flexible collodion. In October there were no longer any crusts; the central part had a roughish and granular aspect, though everywhere there was an epidermic covering, and it could be handled without causing pain but it was still swollen to some extent. When he was admitted, a wedge shaped portion of the lip was cut out from the left side, placed in corrosive, and from this vertical sections were made by Dr. Leith, who thus reports on it:

1. *The Epidermis.*—This formed an even and unbroken layer upon the surface: (*a*) The stratum corneum was slightly and somewhat irregularly thickened; (*b*) the stratum granulosum was fairly normal; (*c*) the stratum Malpighii was well developed, its interpapillary processes varying in length and thickness. Several of these were branched at their ends and sides, a few slender processes dipping rather deeply into the dermis. The cells of the germinal layer mostly showed a separation from one another, with well-marked prickle, or, in some cases, larger branched, filamentous, processes. Some were roundish, oblong, long, flattened, or of irregular shape. Further out the cells were mostly very large, with large nuclei, containing one or two large nucleoli. A few here and there had lost their nuclei, and their protoplasm stained badly, an appearance not unlike an early stage of colliquative necrosis. The lymph spaces everywhere between the cells were notably very large, were crossed by faintly stained prickle processes, and here and there contained leucocytes. At one or two places there was an appearance suggestive of a slight colloid degeneration of a cell or cells.

2. *The Dermis.*—This was extremely cellular, due to a leucocyte infiltration, shown abundantly everywhere except in that part just superficial to the orbicularis muscle. The blood vessels of the papillæ were of normal calibre, but no nerves could be detected. A few of the papillæ were encroached on at their apices and sides by ingrowths from the stratum Malpighii. There were at least two small islands in the substance of the dermis, containing active-looking epithelial cells, with evidence of invasion of the rete by an ingrowth from the dermis. Nowhere could any trace be found of the minute racemose labial glands which lie between the epithelium and the muscle.

3. *Muscle.*—The muscular fibres were practically normal. Their lymph spaces were, however, somewhat enlarged and were crammed with leucocytes, which were also seen in small numbers here and there between the fasciculi.

On these pathological appearances Dr. Leith makes the following remarks: "There were here essentially only three abnormal conditions: (1) great enlargement of the lymph spaces, with œdema; (2) a moderate overgrowth downwards of the stratum Malpighii; (3) an abundant small round celled infiltration of the dermis. As a deduction from these, only two classes of lesions suggest themselves to which the disease of the lip seems allied, namely, (*a*) a true dermic inflammation of a chronic nature, secondary to the epidermic changes, and (*b*) a mild form of epithelioma: if the former, it shows nothing distinctive of the kind of inflammatory process present, such as tuberculous—neither tubercle bacilli nor any other micro-organisms were found—syphilitic, or otherwise. The marked œdema is a noticeable feature, which, so far as the sections indicate, is not accounted for by any widespread obstruction to the lymphatics or the veins. The moderate downgrowth of the stratum Malpighii is not inconsistent with the inflammatory nature of the lesion, as even more pronounced proliferation of the interpapillary epithelium is frequently noticed in various forms of chronic inflammation in the dermis. At the same time, it is impossible, after a careful consideration of the sections, to shut out the probability of the second alternative, namely, that the disease is primarily epitheliomatous in its essence. The appearances undoubtedly point to a primary epidermic affection. The local well-marked thickenings of the corneous layer suggest a form of psoriasis, but this is not supported by the other characters nor by clinical evidence. A diffuse or spreading variety of papilloma might be surmised, but many of the appearances are not consistent with this disease. It is much more probable that it is a form of epithelioma. The long, slender epithelial processes invading the dermis here and there, the small islands of epithelium found in it, support this opinion. The appearance of early colloid degeneration is significant of imperfect cell nest formation, while the small round celled infiltration of the dermis is characteristic of epitheliomata."

The conclusion arrived at by Dr. Leith from the microscopical examination is the same as that drawn by myself from the clinical aspects. The case in many particulars resembles one already briefly recorded by me as an example of epithelioma,[3] though the diagnosis was not confirmed by any biopsy. Certain very superficial epitheliomata of the skin can spontaneously cicatrise, or are curable by mild treatment, just as some instances of cutaneous tuberculosis may heal though uninterfered with by curative methods—*ex sponte*, in fact. How far the relief afforded in B. S.'s case may be lasting, or whether a deeper or more active form of disease may eventually supervene, time only can determine.

The case in recent literature which bears the closest similitude to it is that of chronic exfoliating inflammation affecting the lower lip, related by Dr. James Galloway.[4] In his case, however, there was a tendency to seborrhœa of the face and scalp, absent in mine. It differs also from the cheilitis glandularis of Volkmann and Purdon,[5] since in the latter there was

Fig. 1.—Microphotograph of vertical section × 20. The irregular thickening of the corneous layer, the ingrowths from the stratum Malpighii and the leucocyte infiltration, can be readily made out. The break in continuity towards the upper right is accidental.

distinct evidence of hypertrophy of the labial glands.

The coloured plate shows the appearance of the lip previous to the institution of any treatment. The epidermic accumulations, the granular surface, and the œdematous swelling are all visible.

Other occasional disorders of the lip may occur. Small warty growths may form. Such generally appear on the lower lip. They are annoying from their presence, and may long remain superficial, analogous in that way to the warty

[3] *Diseases of the Skin*, 4th Edition, 1894, p. 542.
[4] *Brit. Journ. of Dermatology*, 1895, p. 113.
[5] *Ibid.*, 1893, p. 29.

stage of rodent ulcer. In the end, however, such warts on the lip are apt to degenerate into deeply penetrating epitheliomata.

Vascular growths may form on the lip, usually assuming the form of venous nævi, dark purplish, soft prominences, of the size of half a pea or larger. They are not very uncommon on the underlip of elderly women, cause no subjective sensations, but are disfiguring. They can be dealt with very satisfactorily by electrolysis.

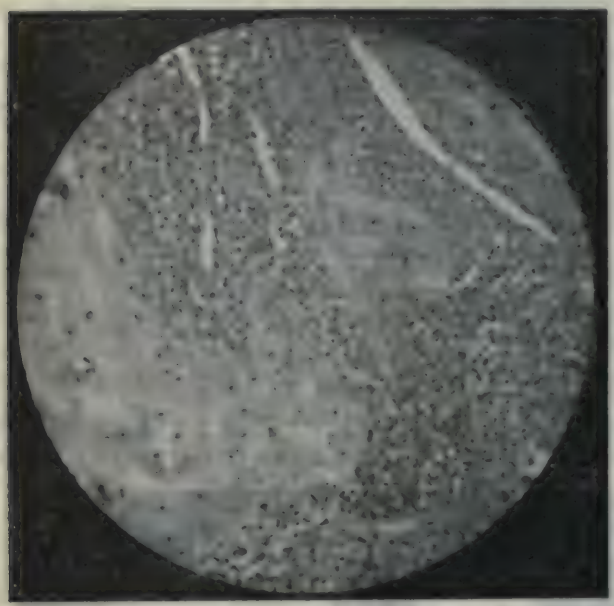

Fig. 2.—Microphotograph × 150. One of the slender epidermic processes invading the dermis, the abundant small, round celled infiltration, even the enlarged lymph spaces, are perfectly brought out. At the lower part, to the right, is seen one of the epithelial islets.

One instance has come under my notice where the little tumours of molluscum contagiosum occurred on the prolabium. They were not limited to that region, and if the view be accepted that the ailment owns a glandular origin they may have taken their rise in the labial glands.

ON A PREPARATION OF MILK FOR DIABETIC PATIENTS.

By SYDNEY RINGER, M.D., F.R.S.,
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The extremely meagre and distasteful diet of diabetic patients induces me to draw attention to a preparation of milk which I hope may be found useful and not distasteful.

In the *Journal of Physiology*, vol. xi, p. 473, and vol. xii, p. 164, in recording experiments with caseinogen and casein, I drew attention to a method of preparing caseinogen from milk, which is freed from all sugar (and salts). The following is the method: Add to a pint and a half of milk about 90 c.cm. of a 10 per cent. solution of acetic acid. This precipitates a curd-caseinogen. It should be allowed to settle, and the clear fluid siphoned off and distilled water added. After settling, this should be decanted or siphoned off, and the curd should be filtered and well washed with distilled water. If it is then rubbed up in a mortar with some calcium carbonate, and water is added, and all the caseinogen becomes dissolved, the calcium carbonate soon settles and the milky fluid can be decanted off. The dissolved caseinogen behaves just like milk. If rennet and a calcium salt is added, and the mixture is heated to 40° C., it quickly clots, the caseinogen becomes changed into casein, which precipitates by combining with the calcium salts.

My friend, Mr. Martindale, with the aid of his able laboratory assistant, Mr Lee, has lately made some of this solution of caseinogen, or in other words, milk without the sugar of milk. They find that the caseinogen settles better after the addition of the acetic acid if the milk is diluted with an equal quantity of water, and they filter and wash the precipitated caseinogen on a calico filter, which allows the washing to be made quicker than in my experiments where I used filtering paper.

On the addition of about 2 per cent. of glycerine to the mixture of caseinogen a not unpalatable form of milk is produced.

THE RED LIGHT TREATMENT OF SMALL-POX.

By NIELS R. FINSEN, M.D.,
Copenhagen.

Historical.

The method here treated of, which is the result of half-forgotten empiric experience and modern scientific investigations of light, is of considerable medico-historic importance. In the Middle Ages small-pox patients were treated by wrapping them in red coverings and by putting red balls in their beds. John of Gaddesden treated a Prince of Wales for small-pox by surrounding him with red objects. According to information which has appeared in connection with the new red light treatment, red is as yet much employed in different places in the popular treatment of small-pox. In Roumania, according to Dr. Capitanowitz, the small-pox patient's face and hands are covered with red cloths; Dr. Lassabatie informs us that in Tonkin the patients are placed in alcoves which are closed with numerous red carpets, whilst Dr. Sassakawa reports that in Japan the patients are covered with red blankets, and children with small-pox are given red toys.

This remarkable and uncertain employment of the red colour in the treatment of small-pox has naturally been looked upon as a mediæval superstition, but the numerous new experiments which proved the importance of the red light treatment must undeniably lend them something more than a historic interest

Whilst engaged upon some investigations as to the effect of light upon the skin, my attention was drawn to some old reports (Picton,[1] 1830, Black,[2] 1867) on the favourable results arrived at by the exclusion of light in cases of small-pox. As everything, from a theoretical point of view, was in favour of the correctness of the observations, and as at the same time practical experience proves that the pock-marks are thickest on the face and hands—that is, those parts of the skin which are most exposed to the light, I drew (without having any knowledge of the mediæval treatment) attention in an article in *Hospitalstidende*, July, 1893, to this treatment, but proposed at the same time the use of red light instead of complete darkness—that is to say, the exclusion of the light's chemical rays. Shortly afterwards this modified treatment was tried in Bergen (Norway), where Drs Lindholm and Svendsen[3] treated 8 patients in red light. Of these 8, 4 were unvaccinated children, of whom some had confluent small-pox; they were all cured without suppuration, without secondary fever, and without pitting.

These favourable results, and the explanation which I had given at the same time led to the method being tried in various places. Before proceeding to the reports which have appeared on the subject, I purpose giving a short theoretical account of the effect of light upon the skin, which is of course the basis for an understanding of the method.

The Effects of Light on the Skin.

It has for a long time been a recognised fact that sunlight can produce an irritation of the skin of a greater or less intensity, from a slight erythematous redness to the formation of vesicles, and desquamation (erythema or eczema solare). It was formerly believed that this was caused by the heat rays, and the erythema was therefore called erythema calori-

[1] On the Exclusion of Light as a Means of Preventing the Pitting in Small pox; the *American Journal of Medical Science*, 1832, p. 119.
[2] How to Prevent Pitting of the Face by Small-pox in Persons unprotected by Vaccination, *Lancet*, 1867, vol. i, p. 792.
[3] *Medicinsk Rev.*, October, 1893.

cum. More recent investigations (especially by Charcot,[4] Widmark,[5] Unna,[6] Hammer,[7] Maklakoff,[8] Robert Bowles,[9] and myself[10]) have proved that the inflammation is not due to the solar heat rays but to the most refrangible, the so-called chemical rays. This also explains various practical observations. For instance, when climbing glaciers, even when the temperature is below freezing point, the skin is liable to light erythema, which is principally due to the strong reflection of the light from the ice fields. Very strong electric light, such as that produced by the electric welding of metals, can cause a severe inflammation of the skin and of the mucous membrane of the eye, which is much more violent than that caused by solar light. The Russian physician, Maklakoff, who exposed himself to this influence of light, describes the phenomenon as follows:—All those parts of the skin which were exposed to the light became severely inflamed, the face was brick red, swollen and painful, the skin of the eyelids baggy so that it was impossible to open the eyes. After two days had elapsed the symptoms improved, and a few days later the skin peeled off in large flakes, as after scarlet fever.

The inflammation of the skin caused by the chemical rays of light differs macroscopically from that caused by heat, inasmuch as it appears from a couple of hours to half a day after the exposure, whilst, as we know, a burn appears at once; further, it is followed by a pigmentation of the skin. Microscopically it differs, as I have proved by experiments on tadpoles,[11] from all other forms of inflammation, inasmuch as the red blood corpuscles are much contracted.

Erythema solare is most frequently observed in the spring and in fair persons—that is, when the pigment of the skin is impoverished. The pigment of the skin is, in fact, principally a defence against the inflammatory influence of the chemical rays, and we are doubtless right in supposing that this is still the principal reason for the negro's blackness, and for the circumstance that the skin of the different races becomes darker the nearer we approach the equator.

It will then be seen that the chemical rays are capable of producing an inflammation of the skin, and that Nature finds it necessary to protect even a healthy skin against these rays; it is, therefore, not surprising that when diseased, as for instance in small-pox, the skin requires still more protection. This protection is best and most pleasantly given by excluding the chemical rays, as I have recommended, and allowing the light to be filtered into the patients' room through red glass or red curtains.

It is curious to observe that many of the methods which have been employed to prevent pitting in small-pox have had as a main feature the exclusion of light, and in all probability their utility has been due to this circumstance. I may mention painting the skin with tincture of iodoform, with strong solutions of nitrate of silver, and in particular the covering of the face with a mask, or with compresses. Great stress has been laid upon the fatty substance or other matter with which these compresses should be impregnated, but this question is of secondary importance, the main point being the exclusion of light. Various authors, among others Stokes,[12] have observed that scars were formed only where the mask or compress left the face uncovered, but not where the skin was entirely covered. Stokes was of opinion that this was owing to the action of air upon the skin; his observations were excellent and correct, only he attributed to air what was due to light.

The objection may be brought forward that the faint light which comes into a sick room would not be sufficient to cause an inflammation of the skin or to increase the inflammation already present. To this we can reply that the skin in certain cases and under certain circumstances is remarkably sensitive to the influence of the chemical rays. There are many accounts of such particularly sensitive skin; for instance, Veiel[13] mentions a lady whose skin was so sensitive that even when sitting in her room the side of her face nearest the light became slightly inflamed. Veiel advised her to wear a thick red veil with favourable results.

Another interesting circumstance is that cattle and sheep which have eaten buckwheat get an eruption when they stand in the sunshine or ordinary light, but not when they stand in dark sheds. This is known to farmers, and has also been made the subject of scientific investigation by Virchow and Wedding.[14] It is interesting to learn that it is only light-coloured cattle which are subject to the inflammation, not the pigmented, and a white cow which Wedding tarred on the one side did not get the inflammation on that side, but only on the other. This is another good example of the protective qualities of pigment.

It is, then, evident that ordinary daylight can produce an inflammation of the skin where there was none previously. It is, therefore, much easier to understand that ordinary daylight can increase an inflammation already existing, as is the case in small pox.

RESULTS OF THE USE OF RED LIGHT IN SMALL-POX.

After the favourable results of Lindholm and Svendsen mentioned above had been published, the method was tried in various places, and there are already numerous reports on the subject from the following various authors: Feilberg[15] (Copenhagen), Benckert[16] (Götenburg), Strandgaard[17] (Amager, Denmark), Krohn[18] (Saxkjøbing, Denmark), Mygind[19] (Nakskov, Denmark), Oettinger[20] (Paris), and J. W. Moore[21] (Dublin). The results obtained by all these authors[22] have been extremely favourable. The total number of patients treated by them was about 70, and the method failed in only one case (Benckert).

It must be observed that these reports are of considerable value, as the authors as a rule were evidently exceedingly sceptical before they had tried this strange method. Some few of them have confined themselves to mere reports of the history of the cases, and have otherwise been extremely reserved in their expressions of opinion; some (Feilberg, Svendsen) have for certainty's sake made controlling experiments: others (Oettinger, for instance) chose the most severe cases to experiment with.

CASE.—The illustration on p. 1414 shows the condition of the face of C. B., aged 48, on the eighth day of the disease. She was treated in the Copenhagen Small-pox Hospital, and was kept in red light from the third to the twelfth day of the disease. She was discharged twenty-four days after the day on which the photograph was taken, and then did not present any pitting whatever. The temperature chart, which is also reproduced, shows that there was not any secondary fever whatever.

By comparing these reports and the results obtained, the following view of the action and importance of the treatment will be obtained: When the patients come under treatment early enough—before the fourth or fifth day of the disease—suppuration of the vesicles, even in unvaccinated persons and in cases of confluent small-pox, will be avoided—1 exception out of about 70; as a rule, the secondary

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[4] *Comptes rendus de la Société de Biologie*, 1858, p. 63.

[5] Ueber den Einfluss des Lichtes auf die Haut, *Hygiea*, Festband No. 3.

[6] Ueber das Pigment der menschlichen Haut, *Monatsh. für praktische Dermatologie*, 1885, p. 285.

[7] *Ueber den Einfluss des Lichtes auf die Haut*, Stuttgard, 1891.

[8] *Archives d'Ophthalmologie*, 1889, p. vi.

[9] Observations on the Influence of Solar Rays on the Skin, BRITISH MEDICAL JOURNAL, September [illegible]th, 189[illegible].

[10] Om Lysets Indvirkning paa Huden, *Hospitalstidende*, July 8th, 1893.

[11] Om de kemiske Straalers skadelige Virkning paa den dyriske Organisme, *Hospitalstidende*, November 1st, 1893.

[12] See J. W. Moore, *Textbook of the Eruptive and Continued Fevers*, Dublin, 1892, p. 116.

[13] Ueber einen Fall von Eczema solare, *Vierteljahresschrift für Dermatologie und Syphilis*, 1887, p. [illegible].

[14] *Verhandlungen der Berliner Gesellschaft für Anthropologie*, 1887, p. [illegible].

[15] Behandling af Kopper med Udelukkelse af lysets kemiske Straaler, *Hospitalstidende*, No. 27, 1894.

[16] Om Smittkoppors Behandling med uteslutande af ljusets chemiska straalar, *Hygiea*, vol. lvi, 1894.

[17] See Finsen: Les rayons chimiques et la variole, *La Semaine Médicale*, 20 Juin, 1894.

[18] Tre Tilfælde af Kopper behandlede "rødt Lys," *Hospitalstidende*, October 3rd, 1894.

[19] See Finsen: Die Behandlung der Variola in rothem Licht. *Neissers stereoskopisch-medicinischer Atlas*, Zweite Lieferung, 1895.

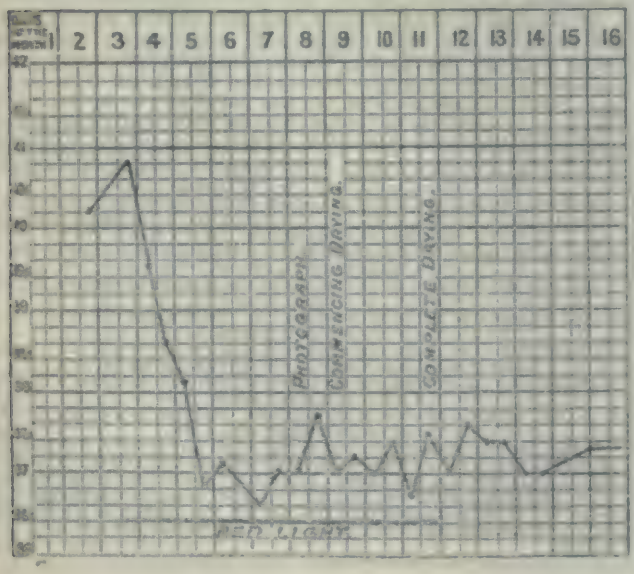
[20] Traitement de la variole par le procédé dit "la chambre rouge," *La Semaine Médicale*, Mai 30, 1894.

[21] A Case of Small-pox and its Lessons. *The Dublin Journal of Med. Science*, December, 1894, p. [illegible].

[22] Besides the authors above mentioned Juhel-Rénoy of Paris (*Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, December 14th, 1894) has also made use of the red-light treatment. His results were not so favourable as those elsewhere obtained, but still so good that he recommends the method. I have not mentioned him among the other authors, as he did not carry out the treatment quite correctly (see *La Semaine Méd.*, June 20, 1894.

fever does not appear, but even when it does the temperature is lower and the fever of shorter duration than is usually the case. As a result of the absence of suppuration the disease becomes of shorter duration and less dangerous, as the greater number of complications do not show themselves; further, the patient escapes pitting. Some authors have observed "minute scars" on the nose and fingers in some few cases; but this only proves that what are generally known as "pock marks" are done away with. It would seem that children—perhaps on account of their fine epidermis—are more completely exempted from scars than adults. It must, however, be mentioned that this treatment does not prevent the skin becoming hyperæmic where the vesicles have been; the hyperæmia, however, disappears after six to eight weeks, and it is then impossible to see that the person in question has suffered from small-pox.

Case of Small Pox: Treated in Red Light; no subsequent pitting.



From the above it is evident—so much so that I need hardly point it out—that this treatment is only a skin treatment; upon the infection itself it has no influence, or at least so slight a one that it is not worth noticing. Should the patient come under treatment after the fifth day of the disease, it is uncertain whether the suppuration can be avoided; sometimes this is the case, sometimes not; but it would appear that in such cases the treatment renders the suppuration less severe and less malign. Some authors (Feilberg) advise the use of the red light even when the suppuration is commencing.

Method of Carrying out the Treatment.

As far as the carrying out of the treatment is concerned, the following main points must be noticed:

1. The exclusion of the chemical rays must be absolute; even a brief exposure to daylight may produce suppuration and its sequelæ. In other words, the skin during small-pox is as susceptible to daylight as a photographic plate, and must be kept from the chemical rays in the same way and almost as carefully. If, therefore, red window glass is employed, it is necessary for it to be of a deep red colour, and if curtains are used, they must be very thick or in several layers. When the patient takes his meals, or during the physician's rounds, artificial light—for instance, faint candle light—may be used without any danger. As even a brief exposure to daylight can produce suppuration, and as this treatment is somewhat burdensome for the nurses, so that they are often tempted to draw back the curtains, it is necessary when they cannot be depended upon to take care that the treatment is carried out correctly, for instance by nailing the curtains.
2. This method does not prevent but allows the employment of any other treatment which may be considered necessary.
3. The treatment should be commenced as early as possible; the nearer the commencement of the suppuration the smaller the chance of success.
4. The patient must remain in the red light until the vesicles have dried up.

A CASE OF MYOMATA OF THE UTERUS, WITH PREGNANCY OF FIVE MONTHS' DURATION: TOTAL EXTIRPATION OF UTERUS AND TUMOURS: RECOVERY.

By MURDOCH CAMERON, M.D.,
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The following case is of interest from the rapid development of the tumours during pregnancy, and the almost complete obstruction of the parturient canal caused by them:

Mrs. C., aged 36, was admitted to the Western Infirmary under my care on July 16th, 1895, complaining of great distension of the abdomen. The patient considered herself about five months pregnant, but as the abdomen was so much distended she consulted me regarding her condition. She stated that she had always enjoyed the best of health until the spring of the present year, that menstruation commenced at the age of 15 and continued perfectly normal and regular until February, 1895, that she had been married for

about two years, and had had no children and no miscarriages.

About eight years ago the patient noticed for the first time and quite by accident a swelling in the left iliac region. It was about the size of a hen's egg when she first felt it. For a month or two it increased in size slightly, then ceased growing and remained stationary until she became pregnant at the end of February. On February 19th she menstruated for the last time. Three or four weeks after she began to be troubled with morning sickness, and about the middle of June she felt fœtal movements for the first time. She was quite satisfied that she was pregnant; but what troubled her was the fact that her abdomen became so rapidly distended. It was, however, during the six or seven weeks previous to her admission into hospital that the distension seemed to increase most rapidly.

Her general condition on admission was not very satisfactory. There was great œdema of the legs and thighs but apparently no ascites. There was some dyspnœa. The mucous membranes were of a good colour. She had no difficulty in passing urine but her bowels had been very constipated. There was nothing abnormal in the lungs and heart; milk could be expressed from both breasts. The abdomen was much distended, presenting the appearance of a pregnancy at full time. It measured 37 inches at the level of the umbilicus. On palpating the abdominal tumours, a large smooth, round, hard swelling was found to occupy the left side. It crossed the middle line, and was continuous with a swelling on the right side, from which it was separated, however, by a sulcus. This swelling on the right side was elastic in consistence, but two or three hard rounded nodules could be distinctly made out upon its anterior surface. The uterine *souffle* could be heard over it, but no fœtal heart sounds could be recognised.

On vaginal examination, the whole cavity of the pelvis was filled up with a hard mass firmly impacted into it, and continuous with the tumour above. So completely did this tumour block up the pelvic cavity that the forefinger could with difficulty be passed up the vagina. The uterus appeared to be very much drawn up, as the examining finger could not reach the os externum.

On July 19th, the patient was examined under chloroform, but nothing further was made out.

On July 22nd abdominal section was performed. On opening into the abdomen a large irregular tumour was met with, the left portion consisting of an interstitial myoma, the right of the distended uterus. In addition, implanted on the upper and posterior uterine walls, were several subserous myomata, varying in size from a walnut to an orange. Having made an incision through the anterior wall, a fœtus of 5 months was removed. It was perfectly formed, and had evidently only quite recently died. The placenta was well developed, and was easily detached. An elastic ligature was passed round the uterus and tumours as close as possible to the cervix and secured, after which the uterus with the tumours were cut away. The uterine and ovarian arteries could now be more easily reached and were ligatured. The ovaries and tubes were also removed. The tumour blocking up the pelvis was with some difficulty drawn up on account of impaction and adhesions. Having enucleated this mass of tumour nothing remained but the cervix, which was also separated from its connections. The peritoneum was stitched round and round with catgut ligatures to the mucous membrane of the vagina. These ligatures were then drawn down into the vaginal canal by means of a pair of long forceps passed up into the abdomen through the vagina. The abdominal wound was then closed with silkworm sutures: no drainage tube was used. The parts removed weighed 27 lbs.

The patient made a good recovery. She had a little sickness on the third and fourth day, when the temperature thrice registered 100·2° F. After that it never rose above 100°, and fell to normal after the ligatures were discharged from the vagina on the tenth to the twelfth days. She left the hospital in the seventh week after the operation perfectly well.

A POST GRADUATE School of Medicine has recently been founded in Washington, where it is said to be much needed, as there is no school of the kind south of New York and Philadelphia.

THE TREATMENT OF MALIGNANT TUMOURS BY THE TOXINS OF THE STREPTOCOCCUS ERYSIPELATIS AND BACILLUS PRODIGIOSUS.

By JAMES SWAIN, M.S., M.D.Lond., F.R.C.S.Eng.,
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THE treatment of inoperable malignant disease has hitherto proved so hopeless that it is not to be wondered at that we have been slow to believe that any remedy can do good in such cases, and that therefore the method indicated by the title of this paper has scarcely received the attention it deserves, although in proportion to the hopelessness of the case we should be glad to welcome any gleam of hope.

Malignant tumours have been known to disappear occasionally after the patient affected had suffered from an intercurrent attack of erysipelas, and when Fehleisen[1] made the important discovery that he was able to produce a factitious erysipelas by inoculating pure cultures of the streptococcus erysipelatis, he applied this knowledge to the treatment of malignant disease. Although only 1 of the 6 cases which he inoculated was reported as being well six months after inoculation, other inquirers were stimulated to work in the same direction, and Bruns,[2] Kleeblatt,[3] Coley,[4] and others have published cases in which an accidental or factitious erysipelas has exerted a beneficial or curative effect in cases of malignant disease. Sarcoma has generally been more amenable than carcinoma, and Bruns, in his record of 14 cases of malignant disease associated with erysipelas, found that of 5 cases of sarcoma in which the diagnosis was confirmed microscopically 3 were permanently cured.

Coley[5] has collected 38 cases (including his own) of malignant disease, in which erysipelas occurred either accidentally or intentionally. "Of these 38 cases the erysipelas occurred accidentally in 23 cases, and was the result of inoculation in 15 cases." Seventeen cases were carcinomatous, of which 3 (17.6 per cent.) were cured and 1 (5.9 per cent) died; 17 were sarcomatous, of which 7 (41 per cent.) were cured, and 1 (5.9 per cent.) died; 4 were either carcinomatous or sarcomatous, of which 2 were cured. "Grouping by themselves then the cases where the erysipelas was artificially produced, we find 7 cases of carcinoma, 1 cure or 14.3 per cent., and 8 cases of sarcoma, 2 cures, 25 per cent." From these figures it appears that a factititious erysipelas has not been attended with such good results as regards disappearance of the tumours as an accidental erysipelas.

The reaction following inoculations (for Coley repeated them in the same patient) usually subsided in 36 to 48 hours, unless a definite attack of erysipelas was produced; but as the effect on the patient and the tumour was much the same in either case, Coley argued that the effects must be due to the toxic products of the streptococci rather than to the active development of the organisms themselves, and he therefore determined to experiment with filtered cultures, "the germs having been removed by means of a Kitasato filter, without subjecting the filtrate to heat."

Roger's[6] researches pointed in the same direction, but he further found in experiments upon rabbits that the bacillus prodigiosus has the power of intensifying the action of the streptococcus erysipelatis, and therefore the toxins of the two germs were mixed—the filtrate in each case being obtained by means of a Kitasato filter as already explained. The advantage of using these filtrates, if successful, lay in the fact that the danger of an attack of erysipelas would be removed, and that isolation of the patient would not be necessary.

This was a great advance, and Coley[7] confirmed the fact that the mixed toxins had a more beneficial effect than when used singly, and also found that in a certain proportion of cases (one in five) the tumours disappeared. He subsequently thought that the filtration method failed to utilise anything of value in the bodies of the organisms themselves, and he therefore prepared the toxins "by subjecting the cultures to the lowest temperature (58° C.) that would suffice to destroy the germs." In this way Coley[8] has treated 15 sarcomata, with 3 cures, and 11 carcinomata with improvement only; or,

counting all cases of sarcomata in which the mixed toxins have been used, we find 38 cases with 9 cures.

The toxins prepared in the way last stated represent the present method of dealing with these cases. I am aware that Coley[2] has treated several cases with blood serum obtained from animals inoculated with the two organisms under discussion, but I am informed by my friend Dr. Parker (Clifton) that Dr. Coley has told him that the results are unsatisfactory.

The following is a brief record of a case which I treated unsuccessfully in this way, the toxins being obtained from America, where they had been prepared according to Coley's directions.

G. K., aged 48, had the right upper jaw removed on April 10th, 1894, for malignant disease. Microscopical examination of the growth showed it to be round-celled sarcoma. On December 3rd, 1894 he again came under my care with a recurrence, and the remainder of the malar bone and part of the zygoma were removed.

On June 2nd, 1895, he was admitted to the Bristol Royal Infirmary for the third time. There was then a large recurrent sarcomatous growth occupying the whole of the right cheek, and extending into the orbit and towards the base of the skull. There were enlarged lymphatic glands in front of the right ear, in the right submaxillary region, and at the angle of the jaw. There was also a secondary subperiosteal deposit in the frontal region immediately above the root of the nose.

On June 3rd, injections with the toxins were commenced and continued until July 9th. In all the patient had twenty-eight injections, which at first were given daily. The quantity of injection used was gradually increased from ♏j up to ♏xviij, according to the effect produced. The first eleven injections were given either under the healthy skin, or into the affected cheek or glands. ♏ij into the cheek was the smallest dose which produced a rise in temperature, but as no temperature reaction followed the injection of ♏vij under the healthy skin, all the later injections were given either into the affected cheek or lymphatic glands. The maximum temperature recorded was 103.8° F. Rigors frequently followed the injections. The details are as follows:

June 4th. ♏j injected into affected cheek. One hour afterwards complained of feeling cold but there was no rise of temperature.

June 8th. ♏iij injected into gland in front of ear, followed by rigor, and temperature rose to 100°. Complained of severe burning pain in throat, and was very restless.

June 10th. ♏iv injected into gland in front of ear, followed by rigor and temperature of 101.8°. Centre of affected cheek had become softer and more prominent, and on the following day the skin "broke," and pus was discharged.

June 12th. ♏v injected into cheek. There was a slight rigor but no rise of temperature occurred. Complained that it "made him feel ill." The gland in front of the ear was found to be fluctuating.

June 15th. ♏vj injected into cheek. Two hours afterwards had headache (which was an usual result), followed by muscular pains in limbs. Vomited twice.

June 20th. ♏xj injected into cheek. No rigor had occurred since June 12th. The discharge from the cheek still continuing. Several other parts of the growth where injections had been given were softening, and some appeared less in size. Patient had lost 2 lbs. in weight since admission.

June 27th. ♏xiv injected into gland at angle of jaw. Temperature rose to 101.8°.

June 28th. ♏xv injected into gland in front of ear, followed by rigor and temperature of 103°. Patient had lost another 1½ lb. in weight. Feels weak and ill. Gland at angle of jaw rather larger, but softer. Gland in front of ear and secondary deposit on forehead both smaller and softer.

June 30th. Gland at angle of jaw breaking down rapidly.

July 1st. Portion of growth near right side of nose into which the last two injections had been given getting softer. ♏xvj injected into gland at angle of jaw, followed by rigor and temperature of 103.2°.

July 2nd. ♏xvij into gland at angle of jaw, followed by rigor and temperature of 103.8°. Although the parts into which the toxins have been injected appear to rapidly soften, the general infiltration of the growth is over a more extensive area.

July 5th. ♏xviij injected into portion of cheek adjacent to the upper lip. Rigor and temperature of 101.4°.

July 6th. The soft area at the angle of the jaw almost "bursting."

July 7th. The portion of growth injected on 5th has now "broken down." Patient has lost another 2¼ lbs. in weight.

July 9th. The area injected on 5th has now "burst," and is discharging pus freely. The patient, who was much weaker and very depressed, decided to have no more injections.

The patient ultimately died at the end of September, 1895.

This case was doubtless an unfavourable one for injection with the toxins, but the rapid necrobiosis which occurred in the neighbourhood of the injections gave some hope for the future. Moreover, it is desirable that unsuccessful cases should be reported, so that we may form a proper estimate of the value of this method of treatment. McBurney[1] has also recorded three unsuccessful cases.

It is, perhaps, interesting to speculate how the toxins act in these cases. Although tumours have been known to disappear in the course of infectious fevers other than erysipelas, I cannot think that temperature alone is the cause of the rapid destruction of the sarcomatous tissue, for in the case above recorded the temperature was at no time very high and never continued much more than twenty-four hours after injection. From the marked difference in action between the injections placed under the healthy skin and those into the growth itself it appears as if the toxins exerted some direct influence on the sarcomatous tissue, but whether of a specific or non-specific character it is difficult to determine.

Can it be that the lowly-vitalised cells of a malignant growth are more easily destroyed than the stable and resistant cells of normal tissue, by such baneful influences as toxins and febrile conditions acting in a non-specific manner? Whether this is so or not, I am unable to admit that there is necessarily any specific action of the toxins, or that the results support the theory of a bacterial origin of sarcoma and carcinoma upon which the streptococcus erysipelatis has a directly antagonistic effect. Bruns seems unable to account satisfactorily for their action.

That all cases should be equally affected by the toxins is not to be expected. According to Coley, the osteo-sarcomata are least benefited, and from the fact that in the case reported above the effect was greater and more rapid when the injections took place into the growth itself, it seems that the more superficial forms of sarcoma would be more hopeful than those in which the growth has extended very deeply.

It is scarcely necessary to point out that this method of treatment should not be thought of except in cases that are unfit for operative interference. My chief object is to draw attention to a therapeutic measure which may have some good in it, and in such deplorably hopeless cases as inoperable malignant disease we may surely give it a fair trial; but in order that we may not arrive at false conclusions it is necessary that the diagnosis should in all cases be supported by microscopical examination.

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A CASE OF CELLULITIS TREATED WITH MARMOREK'S ANTISTREPTOCOCCIC SERUM.

By FRANCIS HEATHERLEY, M.B., B.S., F.R.C.S.,

New Ferry.

On July 2nd I was asked to see J. P. B., aged 15 years, an engineering student, previously healthy except for an attack of acute rheumatism two years ago. He had a suppurating boil below the right angle of his mouth, which had been coming some days, and was making him feel ill. The temperature was 103° F. The boil was incised and some thick creamy pus let out. The patient felt faint. No enlarged glands were to be felt. During the next few days the swelling gradually spread over the right side of his face, becoming red and brawny, and being surrounded by an advancing zone of œdema; points of slough also appeared on the mucous membrane of the lower lip. The swelling was attended with very little pain, but the patient rapidly became weaker and was restless at night. The ordinary treatment of cellulitis, including incisions, was carried out, but apparently without benefit; the tissues, when incised, cut like potato, and bled slightly.

On July 6th nearly all his joints were painful and tender, but not enlarged nor red. He complained also of pain in the left side of his chest, and a pleuritic rub was heard in the axillary line. The surface of the brawny swelling was mottled in colour, and there was no fluctuation; the right half of his upper lip and the adjoining part of the cheek were 1 inch in thickness; there was tenderness over the region of the liver; there was no albuminuria.

For the above condensed notes of his progress I am indebted to my friend, Mr. E. W. Phillips, who had charge of him from July 2nd to July 8th. When I saw the patient again the swelling of the right side of the face made him almost unrecognisable. He was weaker, his sensibility blunted, and there was more restlessness than pain. He was in charge of a trained nurse, to whom great credit is due for the way he took his nourishment throughout his illness.

July 9th. No rub to be heard in the axilla, but there is a rub below the apex beat synchronous with the heart's action. This lasted two or three days, but was not followed by signs of effusion nor of pericarditis. He had a dry tongue, and was troubled with tenacious mucus accumulating in his mouth. He was at times slightly delirious. Some of the incisions, from which serum previously trickled, now exuded small quantities of thick pus on pressure.

On July 9th he was worse, and owing to his desperate condition, which was evidently tending to a fatal termination, I thought myself justified in trying the effects of Roger and Charrin's antitoxin. Having obtained his parents' sanction to the experiment, I telegraphed to London, but failed to hear of a supply. I accordingly tried Paris, and received two bottles from Dr. Marmorek on July 11th.

Fig. 1

On that day the swelling extended over the forehead to the edge of the hairy scalp, to the middle line at the back of neck, beyond the clavicle in a downward direction, and slightly across the middle line of the front of neck. There was a pyramidal swelling upwards from the root of nose, in which the thrombosed frontal vein could be felt. The right eye was closed by brawny swelling of the lids, and was considerably protruded owing to the process having spread into the orbit. There was chemosis of the ocular conjunctiva. On separating the lids the patient said he could see quite well, and counted fingers held up before him. The nose was red and slightly swollen, and there was some œdema of the left eyelids. Both lips were much swollen, and the right halves brawny, making the use of a feeding-cup difficult. Brawny swelling of left cheek over region of lower jaw extended backwards to the angle. On the right side the brawniness extended down to the clavicle. The ears were not affected. The patient was taking food well, but was weaker and apathetic. He did not flinch when his eye was syringed. The pulse was bad at times, and his back was beginning to look red. Fig. 1 is from a photograph taken on this date, for which and Fig. 2 I am indebted to my friend, Mr. Frank H. Elsby.

At 3 P.M. the serum arrived from the Pasteur Institute. At 4 P.M. a portion of skin over the right buttock was well scrubbed with soap and water, and washed afterwards with 1 in 20 carbolic lotion; 10 c.cm. of serum was injected deeply from a new syringe which had previously been soaked in 1 in 20 carbolic solution, then well washed out with boiled water, and the needle passed several times through the flame of a spirit lamp. The site of the puncture was covered with lint and strapping. The lad did not seem to feel the injection. In the evening two capillary tubes were charged with serum from the right temple and forwarded to Guy's Hospital for examination. The conjunctiva of the right eye gave way towards night, and serum began to trickle from it down the cheek.

On July 12th there was no increase or extension of the swelling. There was dysphagia, and he had coughed up

Fig. 2.

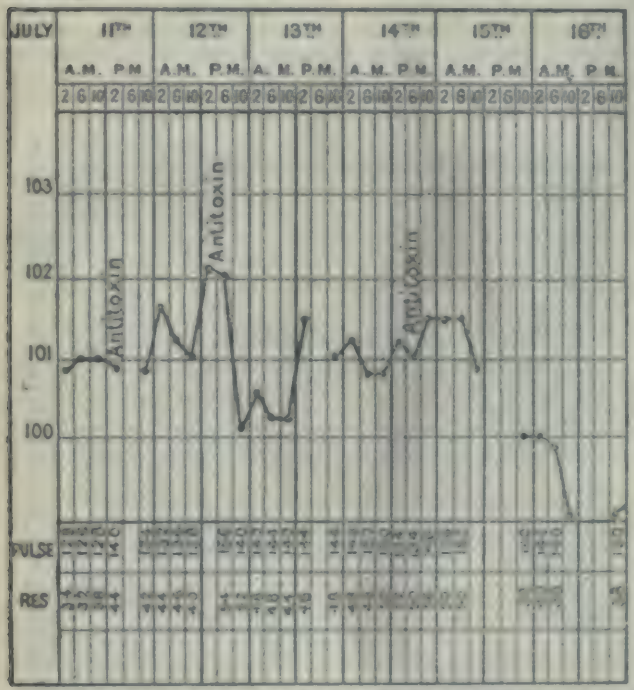
several lumps of bloody mucus. The pulse was running. In the afternoon the respirations were deep and laboured, and he appeared to be moribund. At 4 P.M. the rest of the serum, 13.5 c.cm., was injected. This lot of serum was slightly flocculent. In the evening he appeared rather brighter, although there was no other improvement apparent.

On July 13th the swelling of the right eye was less, and the eyeball less protuberant; the swelling of the nose and the left lids had gone; the lips were less swollen and the neck softer.

On July 14th the swelling in general was less, and the cheek was becoming less brawny. As his pulse and temperature remained up, it was decided to give him the benefit of a fresh supply of serum which had arrived from Paris. At 6 P.M. 21 c.cm. were injected into the right buttock. There were no signs of local trouble at the sites of previous injec-

tions. He flinched when the serum was injected, and whenever his eye was syringed. Fig. 2 represents his appearance on this day.

On July 15th the swelling of the face was less in the morning, and diminished visibly during the day. He was ordered calomel gr. iij. He slept fairly well during the night, and on July 16th was much brighter, although still very weak and with a running pulse. The swelling everywhere was less and much softer; the skin was becoming more natural in colour over the swelling. Owing to the reduction in the swelling the thrombosed frontal and submental veins were more prominent. He turned his head about in bed to see who was coming in, and showed some choice as to his food. He opened his right eye pretty freely. He complained of his limbs aching very much. Owing to the calomel not having acted, the dose was repeated in the morning, and that having no effect, he was given ol. ricini ℥iij in the evening.



On July 17th he was much worse; the bowels acted six times during the night and early morning. He was very low and apathetic; the circulation was evidently failing, although he was still taking nourishment well.

At 3 A.M. on July 18th he became very collapsed, and, although he rallied for a time, he eventually sank at 6 A.M.

Throughout his illness he took on an average in twenty-four hours milk 3 pints, eggs 4, meat extract ℥ij, brandy ℥iv, champagne Oj.

Report on Specimen of Serum by Guy's Pathologist.—Microscopic examination of serum showed the presence of a staphylococcus (probably staphylococcus pyogenes albus) in large numbers, whilst a blood serum cultivation gave abundant colonies of the same organism at the end of twenty-four hours.

Remarks.—My friend, Mr. R. W. Murray, of Liverpool, who was very interested in the boy, and saw him with me on several occasions, agrees with me in the following notes. In the first place, I think the case worth recording, being, so far as we know, the first instance of the remedy having been tried in this country. Secondly, up to the date of the first injection the disease was, in our opinion, proceeding to a fatal termination, and in the natural course of events one would have expected the swelling to have increased rather than diminished as the end approached. The way in which the process stopped spreading and then diminished was, in our opinion, more than a coincidence. Thirdly, we should like to draw attention to the temperature, which, on reference to chart, will be seen to have risen after the first and fallen after the second and third injections. Probably, at the advanced stage of the disease which our patient had reached it would have been better to have given 20 c.cm. as a first injection. There were apparently no bad results, either local or general, attending the use of the serum. We consider that if it had not been for the regrettable over-stimulation of the bowels the boy would probably have pulled through. Our experience of the serum in this case will encourage us to have recourse to its use earlier in the course of any future case.

Lastly, I take this opportunity of expressing my indebtedness to the Pasteur Institute for so promptly supplying a foreigner and complete stranger gratuitously with the serum in this case, as they did last year in the case of the diphtheria antitoxin before a supply was established in London. It may be hoped that this remedy will prove in its own way as valuable in a class of cases where in the past our efforts have had to be confined practically to keeping up the strength of the patient until the disease wore itself out, or *vice versâ*.

A CASE OF ERYSIPELAS NEONATORUM TREATED BY ANTISTREPTOCOCCIC SERUM.

By ERNEST A. T. STEELE, L.R.C.P., M.R.C.S.,
Plaistow.

The male child of Mrs. B., aged 3 weeks, presented on October 4th, 1895, dusky redness spreading downwards from the umbilicus over the hypogastric and iliac regions, buttocks, and upper part of the thigh. The redness also involved the penis and scrotum, which were very much swollen. Above the pubes the skin was of a purplish red colour, and pitted deeply on pressure. The umbilicus was not yet healed. The child was very ill, and refused the breast. The temperature was 102° F., the pulse 150. I gave an injection of 6 c.cm. of Ruffer and Robertson's antistreptococcic serum between the shoulders.

On October 5th the temperature was 101.2° F. The child was taking the breast, and looked better. The redness had not extended, had lost its defined margin, and the skin was not so tense. The scrotum was more swollen. Another injection of 6 c cm. was given.

On October 6th the redness was fading, patches of normal colour appearing in affected area. The temperature was 100° F., and the general condition of the child much better.

On October 8th the child was doing well, but a fresh patch of redness had appeared on the left thigh, and the scrotum was sloughing in one place. The temperature was normal. A further injection of 5 c.cm. serum was given.

October 13th. Since the last note all has gone well, and were it not for the slough on the scrotum the child would be quit well. The slough is about the size of half a-crown, and separating nicely. It involved the whole thickness of the skin and subcutaneous fissures. The slough separated on October 19th, leaving a granulating surface with healing margins. The ulcer left by the separation of the slough had healed on October 26th, and the child is now quite well.

Remarks.—In the practice of the Plaistow Maternit Charity I have seen a fair number of cases of erysipela neonatorum, but I have never seen one recover when th disease was so far advanced as in this case. I am convince that the child's recovery is due to the antistreptococci serum. No other treatment of any kind was adopted.

A CASE OF MULTIPLE ENLARGEMENTS OF THE (LONG) BONES WITH SPONTANEOUS FRACTURES.

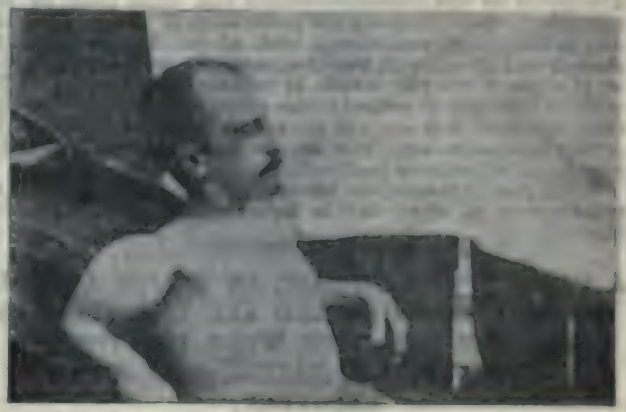
By GEORGE GUNN SINCLAIR, L.R.C.P.Edin.,
L.R.C.S.Edin.,
Esh, co. Durham.

I wish to bring under notice the following case, not only on account of the rarity of the disease, but also on account o the curious history of accidents which preceded it. The case has been under my care for the past five years.

The patient, R. S., a man, aged 37, is the third son of a

family of nine; four of these are alive. His family history on both sides is exceptionally good. R. S. was born on March 18th, 1859. He was a strong healthy child; he began to attend school at the age of 7, and continued until he was 11. At that age he started work in a coal mine, and continued steadily at work until the age of 20. He was employed as a "putter," and later as a "hewer." For the next seven years he frequently complained of pains of a rheumatic character in his legs and arms, but these did not hinder him from working. When he was 27 years of age he met with an accident. He had a severe wrench of his right shoulder, necessitating his stopping work for nineteen weeks. After that time he returned to work, but complained of gradually increasing weakness in the shoulder. Five weeks after restarting he received a second injury. He fell and dislocated the left hip-joint, which was reduced by a qualified practitioner. Owing to this accident he was confined to bed for eight weeks, subsequently being able to get about with crutches, and later with the aid of a stick. While in this condition he slipped and fell downstairs, fracturing his right humerus. This occurred in November, 1886.

From this time he has never been able to get about. He has been confined to bed, being occasionally lifted into an invalid chair, on one of which occasions the accompanying photographs were taken. During that time there has been a gradual increase of his symptoms. The right humerus increased in circumference to 14½ inches, growths appearing on the lower thirds of the right radius and ulna, which measure 7½ inches in circumference. The digits of the right hand are deformed. There is a growth the size of a lemon on the left clavicle at its sternal end. The left humerus, radius, and ulna are normal. The left hand is deformed, there being also a large growth on the thumb. The trunk is well nourished and normal in size. There are no changes in the spine or in the pelvic bones. The condyles of the right femur are greatly enlarged, but the bone is normal in its length. The right tibia is enlarged; the measurement round the calf is 13 inches. The left femur is enlarged throughout, measuring 17½ inches in circumference. The left tibia and fibula show irregular thickenings throughout their entire length. The circumference below the knee is 16 inches; both feet are deformed. The muscles of the extremities are everywhere atrophied, particularly in the right arm. There have been spontaneous fractures of the right tibia below the knee, and of the left tibia and fibula in their middle thirds. The bones of the head are uniformly enlarged, the occipito-frontal measurement being 21½ inches, the occipito-mental 28 inches.



During his illness he has passed large quantities of phosphates in his urine. He suffers occasionally great pain from the passage of phosphatic calculi, one, the size of a bean, being extracted by instrumental aid. He has contracted stricture from laceration of the urethra during the passage of the calculi. His other systems are normal. During this year his condition has somewhat improved, and from being totally incapacitated from all exertion he is now able to busy himself in light fancy work, for which he has shown great aptitude.

CASE OF DIPHTHERIAL CONJUNCTIVITIS IMPLICATING BOTH CORNEÆ TREATED BY ANTITOXIN.

BY

W. M. HAMILTON, M.D., Patricroft, Lancashire. and A. EMRYS-JONES, M.D., Surgeon, Manchester Royal Eye Hospital.

ON February 28th I found M. M., aged 1 year, suffering from a mild attack of scarlatina, with temperature 103°, rash well marked, and no throat symptoms. The rash disappeared, temperature fell, and desquamation began on March 4th. On March 16th the upper lid of the right eye became swollen, the skin smooth and shining. The margins of the eyelids were red, and there was photophobia. Next day the conjunctiva was very vascular and dotted with red spots. The left eye similarly affected. Ordered a sedative astringent lotion. Next day the lids could be everted only with the greatest difficulty; the conjunctiva was yellow, smooth, and infiltrated with a thick fibrinous exudation. I ordered lotio hydrargyri perchloridi 1 in 5,000 every hour. Next day the cornea manifested an exudative opacity, and a marginal ulcer appeared on the right cornea, extending to one-sixth of its circumference. The bottom of this ulcer was covered with a yellow opacity. Dr. A. Emrys-Jones now saw the case with me. He diagnosed diphtherial conjunctivitis. He advised the application of nitrate of silver, gr. xx-℥j every three hours, and that the eyes should be syringed with solution of boroglyceride. On March 21st there was evidence of the throat being affected, a large diphtheritic patch appearing on the tonsil. That evening, by the advice of Dr. Emrys-Jones, I injected 10 c.cm. diphtheria antitoxin. By next morning the temperature had fallen from 102° to 99·2°, the swelling of the lids was less and a piece of membrane was detached from the lids. I again injected the antitoxin, and again with marked improvement. The membrane disappeared from the throat and from the lids. We still continued the application of nitrate of silver and boroglyceride. On March 26th, as

there was a recurrence of the membrane in the throat, I again injected the antitoxin. From this time there was no relapse, and the cornea began to clear. The condition of both eyes at this time was inability to open the lids, great vascularity and redness of the conjunctiva, purulent discharge, and complete opacity of the cornea. We continued the nitrate and boroglyceride, and instilled atropine every two hours, substituting eserine at night and in the morning. The layers of the cornea separated and came away in the syringing. Unfortunately the infiltration of the right cornea was so deep that perforation took place. The left eye has cleared up entirely with the exception of a very small nebula at the lower margin, which is rapidly disappearing. The sight in this eye is perfect; the child can pick up crumbs from the floor, and can see the normal distance. The right cornea is also clearing, and we are hopeful that in time we may by an iridectomy restore full vision to the eye.

We report this case on account of the extreme rarity of preservation of sight in this fortunately rare and dreadful disease.

A CASE OF CUT THROAT, IN WHICH ALL THE CAROTID ARTERIES AND ALL THE JUGULAR VEINS ON ONE SIDE WERE LIGATURED: PERFUSION OF SALINE SOLUTION: RECOVERY.

By W. THELWALL THOMAS, F.R.C.S.,

Assistant Surgeon to the Royal Infirmary, Liverpool; Demonstrator of Surgery and Surgical Pathology, University College, Liverpool.

J. E.,[1] aged 45, was brought on a police ambulance to the infirmary on October 5th, 1894, having attempted suicide half an hour before. We were conducting the out-patient clinic at the time, so there was no more delay. He was unconscious,

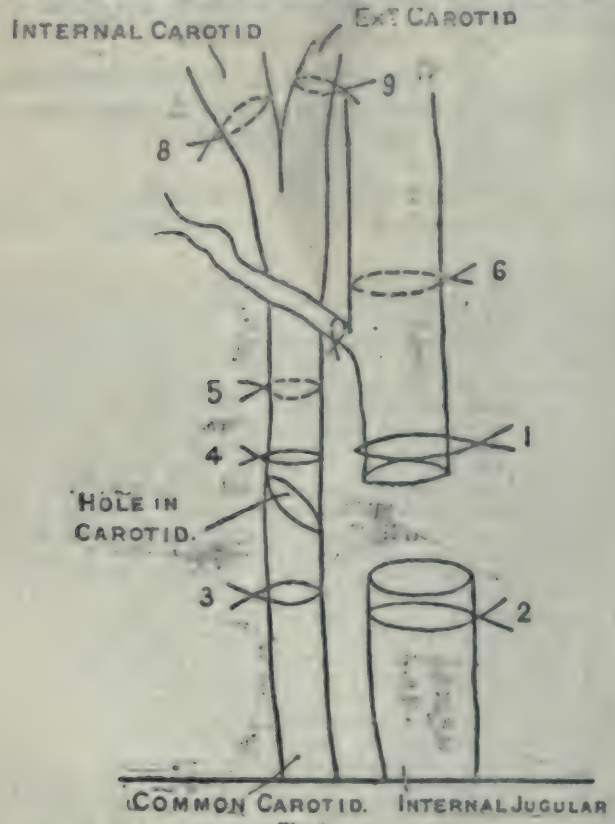


Fig. 1.

deathly white in colour, and pulseless; the lower jaw spasmodically dropping, with feeble inspiratory attempts. There was a deep wound in the left side of the neck (produced by a penknife). The sterno-mastoid and omo-hyoid muscles were divided, the internal jugular vein was cut through, its cut ends were collapsed and three-quarters of an inch apart, the common carotid artery was cut into, but not divided. The

Fig. 2.

Fig. 3.

[1] The patient was shown at the Liverpool Medical Institution, Dec., 1894.

thyroid cartilage was notched, and the external and anterior jugular veins severed. The perfusion apparatus and saline solution was sent for. Clamp forceps were immediately applied to the cut vessels, and one on each side of the aperture in the common carotid, from which a small spurt of blood, certainly not half a teaspoonful, was jerked out.

The left median basilic vein was exposed by an incision, to which the patient did not object, being "too far gone," and 20 ounces of warm saline solution slowly perfused. An ordinary glass syringe with a capacity of 5 ounces was used, with india-rubber tubing attached to a cannula in the vein. The effect was most marked. After 7 ounces he took a short, distinct inspiration, at 10 ounces a deeper one, and his radial pulse was now felt beating feebly. After 15 ounces his breathing became regular and deep; at 18 ounces he opened his eyes, but did not appear to be conscious. The clamped vessels were now tied with catgut, the wound cleansed with carbolic acid lotion, and dressed with cyanide gauze.

Thus far the treatment had been carried out on the ambulance, elevated at the foot. He was now wheeled to bed, surrounded by hot water bottles, and the foot of the bed elevated 18 inches. The house-surgeon, Mr. McCormack, accompanied him, and remained by his side until we saw him an hour later, when he had sufficiently recovered to answer to his name, when called loudly, although he did so in a very squeaky voice. He rapidly improved in condition until October 27th (the twenty-second day), when a violent hæmorrhage occurred, preceded a few hours previously by a small trickle, easily controlled by pressure.

The house-surgeon, assisted by his colleagues, at once opened up the wound, found blood oozing from the distal ends of the carotid and jugular, which were promptly clamped. My colleague, Mr. R. A. Bickersteth, who was in the infirmary, arrived in time to apply ligatures to the common carotid, which was not sound; this necessitated search for the internal and external carotid arteries, which were tied, and the internal jugular with a small branch entering it. The patient was very collapsed after this, but quickly rallied, only to suffer from another hæmorrhage nine days later (November 5th) from the internal carotid artery. The house-surgeon, Mr. T. H. Agnew, applied sponge pressure until our arrival, when on removing it no bleeding occurred, so we decided this time to rely on pressure, a sponge well sprinkled with iodoform under cyanide gauze, and a figure-of-8 bandage of elastic webbing around the forehead and neck. A quart of hot water was injected into the rectum, all of which was absorbed, and acted most beneficially in reviving him. This dressing was removed in two days, and cyanide gauze only, used.

From this time he made a slow recovery and was discharged, but returned with a small sinus in the lower part of the neck, in which we found a catgut ligature; it was removed, and the wound quickly healed.

The result of all this interference in detail is found to be: weakness of the sterno-mastoid, paralysis of the trapezius owing to division of the spinal accessory in the posterior triangle of the neck; paralysis of the deltoid, due to injury of the brachial plexus; paralysis of the left vocal cord, due to division of the left pneumogastric; paralysis of the left hypoglossal nerve and a few filaments of the facial; division of the left sympathetic, evidenced by contracted fixed pupil and diminution of palpebral fissure; and, finally, when he coughs, a distinct hernia of the left lung into the root of the neck. Put thus in detail the list looks formidable, but the only symptom that causes any inconvenience to the man is the weakness of the shoulder, which necessitates him doing light labour, of course, at less remuneration than his former employment. We do not feel justified in endeavouring to reunite any of the severed nerves in such a cicatrised neck.

We cannot too highly praise the assistance rendered by Mr. McCormack and Mr. Agnew, house-surgeons, on whom, of course with their colleagues, the success of the case really depends for their prompt treatment of the secondary hæmorrhages, which might easily have proved fatal in less capable hands. The case is interesting as an example of what some patients can recover from. It teems with many important physiological points, and, as far as we can gather, the man has not altered mentally in the slightest.

The photographs were taken in May, 1895.

Summary of Treatment.—October 5th. Ligature of common carotid in two places, 3 and 4 (Fig. 1). Ligature of internal jugular in two places, 1 and 2 (Fig. 1). Ligature of external and anterior jugular. Perfusion of 20 oz. saline fluid. October 27th, secondary hæmorrhage, attempted ligature of common carotid, 5 (Fig. 1). Ligature of external carotid, 6 (Fig. 1). Ligature of internal carotid, 8 (Fig. 1). Ligature of internal jugular and branch, 6 and 7 (Fig. 1), by Mr. R. A. Bickersteth. November 5th. Hæmorrhage from internal carotid treated by packing and pressure. Injection of 2 pints of warm water in the rectum.

THORACOPAGOUS MALE TWINS WITH A COMMON HEART: TRANSPOSITION OF VISCERA IN ONE TWIN.

By C. M. KEMPE, M.R.C.S., L.S.A.,
New Shoreham.

On May 2nd I attended Mrs. A. during her first confinement. On my arrival at 2.30 P.M. the nurse informed me that the pains came on at 4 A.M. on April 30th, but were not sufficiently bad for her to be sent for until 8.30 A.M. on May 2nd. The pains at that time came at intervals of about every ten minutes, and the membranes had ruptured between 10.30 and 11 A.M. The pains becoming more frequent and stronger I was sent for at 2 P.M.

I found the os uteri well but not fully dilated, and the head presenting. The pains were strong and forcible, coming on every three or four minutes.

In a short time the os became fully dilated, the head coming down at each pain, but receding in the interval in such a manner that I came to the conclusion there was some obstruction from above which prevented it descending, as the pelvis was capacious and the pains very strong and expulsive. Shortly after 4 P.M. I applied the long forceps, and with great difficulty delivered the head, and then, with much trouble, got down the arms and shoulders. Directly the second arm was delivered a third arm shot down; then I

found I had to do with connected or interlocked twins. Finding it impossible to deliver the woman unaided I procured the assistance of my partner, Dr. Fuller. On his arrival he took the arms and shoulders, already outside, of the first infant, which presented and bore it well back, giving it a twist so as to bring the body in the oblique axis of the pelvis. I at the same time pulled on the other arms that protruded. By these means the first infant was soon delivered, the buttocks coming out under the arch of the pubes, shelling out as it were. The second child quickly followed, the breech coming first. By my traction on the protruding arm it probably lessened the tension of the band between the two infants, and so allowed us to hook out the first. The placenta (there was one placenta and only one umbilical cord) followed

almost directly, and the uterus contracted. The woman has made a good recovery without a single bad symptom, and is now about her usual duties. I may mention that she went to her full time.

By a *post-mortem* examination it was found that the infants had not breathed; their weight was about 13 lbs., length 18½ inches, circumference of heads respectively 14 and 13⅝ inches. There was only one heart, which was lying in the space between the two, and had six cavities—namely, four auricles and two ventricles.

Playfair mentions only nineteen such cases as having been recorded.[1]

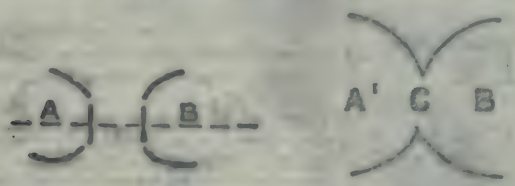
NECROPSY OF TWINS JOINED TOGETHER, BORN MAY 2ND, 1895.

The specimen apparently represents twin pregnancy at term. The twins, both male, and well-nourished, are united face to face by the anterior part of the thoracic and abdominal walls from the top of the sternum to the insertion of the umbilical cord. Below the umbilical level the anterior abdominal walls are wanting in both children, the abdominal viscera being seen through the peritoneal membrane. The children are twisted so as to make both faces look to the front, and both gluteal regions backwards and outwards.

Measurements.—Circumference, occipito-frontal, of right head ... ... 13½ inches.
Circumference, occipito-frontal, of left head ... ... 14 inches.
Circumference round the united thorax ... ... 17 inches.
Length of specimen ... ... 18½ inches.
Weight of specimen ... ... 12lbs. 8ozs.

For the purpose of inspecting the viscera with as little disturbance as possible incisions were carried: (1) Down the line of union in front as far as the umbilicus; (2) outwards from the upper end of the first incision along the two anterior clavicles. The flaps thus formed were turned back, exposing the anterior sternum and ribs.

Each sternum is composed of half a sternum belonging to each foetus, and between the two sternums thus formed is a space. Diagrammatically it might be represented somewhat thus: Suppose A and B represent two transverse sections of



sternums and ribs placed facing each other. Let the interrupted line represent a division of each sternum; then let the upper and lower part (in the diagram) of each sternum unite with the opposite side, and you have the condition present. The anterior ribs were divided, and the breastbone turned up.

Thorax.—The heart, for there was only one, was found lying in the space (c). It was large, and had six chambers, four auricles, and two ventricles. It would appear that each child had had the rudiments of a perfect ventricular cavity, but though the septum separating them was well marked, yet there was no trace of the intraventricular septum which should have divided each ventricular space into right and left chambers. The aortæ and pulmonary arteries sprung directly from their own ventricular cavities. The aorta of the left child curved over to the right, and ran down the right side of the spine. The viscera in this child were, of course, transposed. There was a common pericardial sac, but four pleural sacs. There were four lungs, in which it was evident that no attempt at respiration had taken place.

Abdomen.—There was one common peritoneal cavity. The livers were complete, and united in the middle line. There were two gall bladders and a double set of all the other abdominal organs, those of the left child being transposed, situs mutatus being the rule in one of a pair of thoracopagous twins.

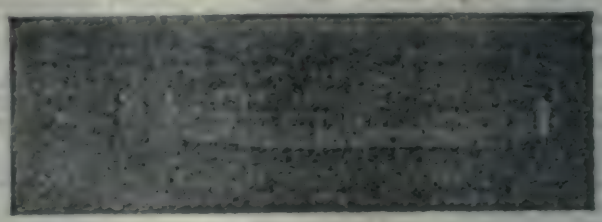
[1] See No. 76, Royal College of Surgeons Museum, Teratological Series. The heart (No. 76) is common, and has two ventricles and an auricle. There is no situs mutatus in either twin.—(ED.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

FOREIGN BODY IN ORBIT: THE BILL OF A FISH.

LANCE-CORPORAL G. S., 2nd Battalion West Riding Regiment, while at a bathing parade in Barbadoes, W.I., on July 21st, 1891, was struck by a fish. About half an hour later, on admission into hospital, he presented a small lacerated wound beneath the right orbital ridge, at the junction of its outer and middle thirds. On examination with the finger a rough body was felt embedded in the orbit. This required some amount of force for its removal, having apparently passed from the outer side downwards and inwards behind the eyeball, to be wedged into the bones on the inner side of the orbit. Some slight bleeding occurred from the right nostril on its removal. This foreign body was found to be the bill of a fish, 2¼ inches in length: the greatest



Natural size.

width was ½ inch, and it was armed with six teeth, the longest of which was ¼ of an inch. The eyeball, which was intact, had been levered forward; it protruded considerably and was fixed and immovable. The conjunctiva on the edge of the globe was torn transversely. There was some ptosis. The pupil was widely dilated and reacted slowly. There was no vision except perception of light. The man was subsequently invalided from the service with loss of vision from atrophy of the right optic disc. Surgeon-Major Whitehead, A.M.S., Assistant Professor of Surgery, Netley, reports that on his admission into Netley on April 18th, 1892, there was found to be "marked atrophy of the right optic disc."

W. BURRELL THOMSON,
Surgeon-Major, A.M.S.

York.

VIPER BITE: A PERSONAL EXPERIENCE.

ON July 12th, the weather being warm, while incautiously handling a viper 16 inches in length, the reptile struck me with its fangs, inflicting two small punctured wounds on the left forefinger close to the metacarpo-phalangeal joint. I was in good health, and weighed 136 lbs. at the time of the injury. Grasping the wrist I sucked the wounds energetically, spitting out the blood withdrawn, and about ten minutes later applied strong solution of ammonia to the punctures, noticing while I did so that my conjunctivæ were much injected, and feeling slight throbbing at the temples. The finger and hand had commenced to swell immediately after the injury was inflicted.

The heart's action now became rapid, and numbness of the lips and tongue, with swelling of them and the sublingual glands, followed. Within half an hour of the accident epigastric sinking and vomiting occurred, the vomit having a peculiar earthy taste; colic, purging and strangury succeeded, while the swelling of the lips, tongue, and sublingual glands increased, until deglutition and articulation were abolished.

These symptoms continued to intensify, with much prostration, an intermittent pulse (140), and slight cyanosis, till about three hours after the inoculation, when improvement commenced. The general symptoms of poisoning and the swelling about the mouth then quickly disappeared, conversation and swallowing being easily accomplished two hours

later. At no time were the mental faculties in any way impaired. Meanwhile lymphangitis and swelling were rapidly extending over the hand and up the forearm, and increased for forty-eight hours, spreading along the anterior and posterior axillary folds to the side of the thorax, the whole upper extremity becoming greatly swollen. Much ecchymosis occurred, especially about the elbow. Pain was not so severe as the appearances suggested, and the temperature at no time reached 100° F. These local effects gradually subsided, no vesication, suppuration, or sloughing taking place, and at the end of a week a sling was not required. From the fifth to the eighth day an urticarial eruption with much itching frequently recurred round the punctures and on the back of the hand; slight puffiness about the knuckles and branny desquamation of the forearm continued till the end of the third week. Though I felt no inconvenience from the injury after the tenth day from its infliction.

As treatment, whisky and sal volatile were taken while swallowing was possible, and the tension of the arm was much relieved by hot water sponging. The most serious symptom was the swelling of the lips, tongue, and floor of the mouth, seemingly due to contact with the venom: fortunately this did not extend so as to embarrass respiration. The mucous membranes appeared to be intact, so that the propriety of ever sucking a snake wound may be questioned. The strangury was not accompanied by any change in the urine. It will be noticed that injection of the conjunctivæ was the first phenomenon of general poisoning observed.

Ivybridge. W. H. Bowes, F.R.C.S.Eng.

TREATMENT OF DIPHTHERIA BY LOCAL APPLICATION OF GERMICIDES.

In the BRITISH MEDICAL JOURNAL of September 21st I expressed the belief that the fatal accumulation of the diphtheria toxins is prevented by local application of germicides, when the disease is recognised early. The following case (one out of many) is a striking instance in favour of that statement:

On Sunday evening, September 29th, E. W., aged 22, came under my notice suffering from sore throat. Her case was clinically diagnosed to be diphtheria, and the correctness of this was upheld by bacteriological examination in the laboratory of the Clinical Research Association, which revealed the presence of diphtheria bacilli and staphylococci. When first seen both tonsils were thickly coated with exudation. A tube of blood serum having been inoculated with some of this exudation, the parts affected were carefully and freely insufflated with pure magnesium sulphate. This treatment was continued throughout Monday, September 30th, and Tuesday, October 1st, and on Wednesday morning (a period of sixty hours from the time the case was first seen) the throat was perfectly clear. She was kept under observation until Saturday, October 5th, but there was no return of the disease, nor any symptom of secondary toxæmia.

It is possible that other germicides might have acted equally well, but having used this drug for more than seven years with perfect success, I have no desire to experiment with any other.

Ravenscourt Park, W. FREDERICK H. MARTIN.

A CASE IN WHICH A CONVULSION OCCURRED IN A HEALTHY WOMAN DURING THE ADMINISTRATION OF CHLOROFORM.

We so frequently see cases of cardiac death during the administration of an anæsthetic, that it is well to place on record all cases where any events of an unusual character occur, whether followed by death or not, since it is only by the accumulation of such cases that we can arrive at the truth as to the relative danger or safety of the various anæsthetics. In this case the chloroform used was administered by Messrs. Duncan and Flockhart, and some from the same bottle has been used by me both before and since without any unusual results.

Mrs. M., aged about 34, a primipara, went into labour about 2 P.M. on October 13th. The presentation was vertex, position L.O.P.; the cervix was very rigid, and dilatation of the os in consequence slow, in spite of the administration at various times of opium and chloral hydrate. There was a great deal of vomiting. At about 2 P.M. on October 14th the os was almost fully dilated, but after the membranes had been ruptured the pains became feeble, so that little progress was made. Between 3 and 4 P.M. I commenced to administer chloroform, with the intention of applying forceps. She took the anæsthetic very quietly, and all went well for the first few minutes, when suddenly clonic spasms of the face and limbs came on, the pupils being widely dilated and not reacting to light. The clonic spasms passed into tonic, and as the chloroform was pushed further these in their turn passed off. As soon as she was deeply narcotised the forceps were applied to the head, and delivery of a large healthy child effected in about ten or fifteen minutes. There were no further convulsions. The puerperium was normal, and she made a good recovery.

A few hours after delivery the urine was drawn off with a catheter and was found not to contain any trace of albumen, its specific gravity being 1025. I found on inquiry that she had always been quite healthy, and that she had never before had any convulsion nor suffered from any nervous disorder; she was not at all nervous or excited during the prolonged first stage of labour, and showed no symptoms of hysteria. Her heart was found to be quite healthy and normal except for the slight hypertrophy of the left ventricle usually found in the later stages of pregnancy.

In the BRITISH MEDICAL JOURNAL of October 19th is an account of a death under chloroform where a clonic spasm preceded death, and this frequently appears to be the case. Here, however, a convulsion occurred in a perfectly healthy woman, apparently as the result of the administration of the chloroform, and yet no untoward result followed.

Broughty Ferry. G. OWEN C. MACKNESS, M.D.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

LONDON HOSPITAL.

THE TREATMENT OF SEVERE BURNS.

(Under the care of Mr. HURRY FENWICK.)

[Reported by HAROLD L. BARNARD, M.B., F.R.C.S., House-Surgeon.]

The mortality in burns divides itself into two periods—early and late. Early mortality is due to shock, and this depends upon two causes—pain and cold. Late mortality is due to suppuration, but is, in most cases, immediately caused by diarrhœa.

To strip and dress a child directly after the accident is an unnecessary exposure to cold, and adds more pain to that already experienced. Personally I have found it less painful to be burnt over than to be dressed after being burnt. These two causes combine gravely to increase the shock and often accelerate a fatal issue.

Our treatment is as follows: The child is wrapped in a blanket just as it is, and the blanket secured with safety-pins around the neck and chest, so that its movements may not uncover it. Hot-water tins are placed in bed with it, and the bed moved before the fire, with a screen behind it to protect from draughts and to reflect the heat upon it. Thus shock from cold is avoided, and the heat of the body somewhat restored.

To combat shock from pain brandy and opium are given at once, and the child is not dressed until well under the influence of the latter. The dose of opium should be not less than four or five minims of the tincture for a child of 2 or 3 years old, and about two drachms of brandy should be given with it. In most cases, if left alone, the child sleeps in less than an hour, and does not awake for three or four hours, when it is warm and drowsy from the opium. Not only have we had no ill-effect from this above dose of opium, but we give a further dose of three minims should the child still be crying at the end of an hour.[1]

When the child awakes the screen is drawn close, and one

[1] It is a saying with us that "Babies that do not cry die."

part after another rapidly exposed and dressed with zinc ointment and cotton wool, and the blanket once more wrapped round it. It is quite unusual for the child to cry whilst this is done. These dressings are left undisturbed until the fourth day, when suppuration commences—another great saving of pain.[2]

The three or four days which follow are spent in preparation for the drain of suppuration. Tincture of opium is given in doses of ♏ ij or iij every fourth hour to induce sleep and to prevent restlessness and friction. The rule of never awaking the child for its medicine is sufficient safeguard against overdose. Thirty minims of brandy are given every hour to such a child, and from the morning following the accident it is induced to take as much food as circumstances will allow, in spite of the temperature of reaction, which will fall of itself on the third or fourth day.

When suppuration has set in, we put our trust in daily dressings and plenteous food with brandy. If there be much pain or restlessness opium is still continued, otherwise it is stopped. The great fear at this stage is diarrhœa, and this we vigorously combat at its very inception with carbonate of bismuth gr. x, ipecacuanha wine ♏ iij, tincture of opium ♏ iij, mucilage and dill water ℥ ij every fourth hour; for this reason also, we never give aperients for constipation, but enemata as in measles.

It would be interesting to learn something definite of the relations of burns to scarlet fever. A quite disproportionate number of burns (2 out of 8) develop on about the fourth day signs and symptoms of scarlet fever—rash, throat, tongue, and temperature. There have been very varying opinions as to this. Some deny that it is scarlatina, and these attribute it to boracic acid absorbed from so large a surface, but the symptoms have all appeared in a case dressed entirely with zinc ointment. The explanations of those who think it scarlet fever are ingenious. Some say that children sickening for this disorder have a natural tendency to drop things and to stumble in the fire; whilst others attribute it to the ready infection of a large raw surface.

ROYAL INFIRMARY, EDINBURGH.

A CASE OF BACKWARD DISLOCATION OF THE CARPUS.

(By JAMES HOSSACK, L.R.C.P.& S.Edin., House-Surgeon to the Infirmary.)

THIS condition is so rarely met with that I think the following case may be of interest:

J. B., aged 16, came to the hospital on September 10th, 1895. He gave the following history: Twenty minutes previously he was riding on a lorry, and, in attempting to jump off when it was in motion, caught his foot against the edge

and fell to the ground, landing on the flat of his hands. At first sight, to all appearances it was a case of Colles's fracture, and, seen from the radial side, was a beautiful specimen of the "silver fork" deformity seen in that fracture. The photograph shows the condition fairly well. On examination, however, the styloid processes of both the radius and ulna were in their usual positions, while the prominence on the back of the wrist was not limited to the radial side of the forearm, but was equally marked over the ulnar. On the palmar aspect the ends of both radius and ulna made an abrupt prominence, while the flexion lines there were especially well marked.

Reduction was simple. The forearm was steadied and slight extension made on the hand. Suddenly the carpus slipped back with a distinct "click." There was no fracture present; this was definitely ascertained after reduction. No crepitus could be felt when rotating the radius. The whole bone rotated in one piece, and no prominence or deformity was to be made out along the course of either bones. There was no suspicion of return of the condition. It was put up in anterior and posterior splints, and resort was early had to passive movement. The wrist is now—three weeks after—perfectly well; the boy, however, complains of weakness and stiffness in it. The exact position of the hands, an important point, unfortunately could not be accurately got. The palms of both hands were slightly bruised and covered with dust, indicating, I think, that the boy's version is correct.

My thanks are due to Mr. Hodsdon, surgeon to the infirmary, for permission to publish the case.

NORTHUMBERLAND COUNTY ASYLUM, MORPETH.

TRAUMATIC ANEURYSM OF THE ANTERIOR TEMPORAL ARTERY.

(By BURTON ROBINSON, M.B., M.R.C.S., Assistant Medical Officer.)

W. W., aged 70 years, suffering from organic brain disease, has had rare but severe epileptic attacks during the last two years. On September 4th he had one of his seizures, and fell

forward off a garden seat. The injuries received consisted of slight cuticular abrasion and severe contusion of the tissues about the left external angular process of the frontal bone. In a few days the diffused ecchymosed swelling subsided quietly, with the exception of a circumscribed tumour of the size of half a bantam's egg just above and behind the left

[2] Here might be mentioned another saying current in our children's ward, "If a burn vomits soon after admission it will die."

external angular process of the frontal bone. It fluctuated, but did not pulsate, and was regarded as a hæmatoma. Local redness and increase of heat gave indications of an inflammatory state of the tissue about the tumour, and, with fluctuation, strongly suggested the supervention of suppuration and abscess. The margin of the tumour underwent distinct induration, whilst the more central parts gave physical signs of fluid contents. Five weeks after the fall slight enlargement of, and pulsation in, the tumour were discovered. Pulsation was expansile; a systolic *bruit* was audible with the stethoscope; constant pressure over the tumour produced diminution in size and tension; pulsation ceased on application of digital pressure to the superficial temporal artery at the root of the zygoma, and more locally on pressure over the anterior temporal artery at the margin of the swelling. The partially emptied tumour refilled, with distinctly perceptible and palpable pulsations on relaxation of the pressure on the feeding artery.

The illustration shows the condition at this time. The increase in size slowly continued, stretching the skin. Shortly after the aneurysmal nature of the tumour was recognised the patient was anæsthetised with chloroform, the sac laid open, the peripheral laminated fibrin and central dark jelly-like coagulated and fluid, blood turned out, and the spouting artery ligatured. The cavity was drained for 48 hours, and the wound closed without further trouble. It is possible that the direct result of the fall was a simple hæmatoma and contusion of the anterior temporary artery, leading subsequently to arteritis and weakening of the vessel wall, and final rupture, thus explaining the onset of pulsation after a definite interval of five weeks.

Small circumscribed traumatic aneurysms usually occur in connection with injury to such arteries as the palmar, plantar, radial, and ulnar. Erichsen mentions having seen two cases of traumatic aneurysm of the temporal artery resulting from cupping in the temporal region. The nature of the exciting cause, and the uncommon seat of the aneurysm, with the close likeness of the tumour to a suppurating hæmatoma in the early period, make the case noteworthy.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

HENRY TRENTHAM BUTLIN, D.C.L., F.R.C.S., President, in the Chair.

Tuesday, December 3rd, 1895.

A New Form of Steriliser and Incubator.

MR. P. D. ADAMS exhibited an apparatus devised to serve both as a steriliser and an incubator. This consisted of a large glass cylinder secured to a metal stand, and provided with an india-rubber cork, perforated for a thermo-regulator, etc. Steam could be admitted so as to sterilise media, etc., or the apparatus could be used as an incubator by allowing hot water to circulate around it. He called attention, also, to a method of making cultures on gelatine or agar films on cover glasses. The cover glasses are held between the coils of a spiral spring, which is weighted with lead so as to remain upright. A series of such covers could be prepared, and they could be left incubating after inoculation in the damp atmosphere of the glass cylinder. The air could be replaced by hydrogen where necessary.

Mr. S. G. SHATTOCK did not gather what advantages such preparations possessed over those made by means of the ordinary moist chambers which could be placed in an incubator, and subsequently made permanent by removing the cover glasses, and drying and staining.

Dr. N. PITT observed that, as the author claimed, the chief point in the apparatus lay in its being both a steriliser and an incubator.

In answer to Dr. GOODALL, Mr. ADAMS did not think that the exposure entailed in removing the rubber cork to introduce the cover glasses was a serious occasion of contamination.

Adenoma of Sebaceous Glands.

Dr. H. D. ROLLESTON described a specimen of what he considered as coming under the above term. The tumour was removed from the outer angle of the orbit in a man, aged 67, and had been noticed many years. It consisted of a framework of fibrous tissue, was lobulated, and constructed of epithelial cells arranged in an acinous manner. Some of the cells were like those of sebaceous glands, others like those of rodent ulcer. A certain number of false pearls were present, but there was no calcification. As against the view that the growth was a rodent ulcer, he noticed the fact that it did not invade the dermis.

Dr. A. A. KANTHACK regarded the specimen as one of rodent ulcer by reason of the atypical character of the cells. The rodent "ulcer" lay at first beneath the epidermis, and was a solid growth. Seeing that the tumour had been noticed so many years, he thought it arose probably as a sebaceous adenoma, and that this subsequently altered its characters.

Mr. J. H. TARGETT recounted the case of a man, aged 45, from whom a sebaceous adenoma was removed from the region of the zygoma, superficial to the parotid. A sebaceous cyst had previously been removed from the same situation. The cells were arranged in alveoli, and he regarded the new formation as either a sebaceous or sudoriparous adenoma.

Mr. A. A. BOWLBY agreed with Mr. Targett that rodent ulcer was an unfortunate term, since the disease arose in the substance of the skin and did not necessarily ulcerate. The possible origin of such in sebaceous adenomata was a subject that was well worth investigation. In elderly people it was not rare to see small multiple rounded swellings on the face which might remain quiescent for years, and in such possibly rodent ulcer often started.

The PRESIDENT had seen a case of the kind referred to by Mr. Bowlby, where he had excised a rodent ulcer which started in such a swelling, though the nature of the others was not determined. Such formations could not be considered malignant, or rodent, unless they infiltrated surrounding structures; this was the test of their real nature.

Dilatation of the Œsophagus.

Dr. H. D. ROLLESTON recorded this condition in a boy, aged 8 years, who died after six weeks' vomiting, which followed whooping-cough. After death the dilated œsophagus contained a certain amount of food; the muscular coat was hypertrophied. There was nothing else abnormal in the body. He did not think the case bore out Sir Morell Mackenzie's view that this condition arose from general weakness of the tube, seeing the muscularis was hypertrophied. As there was no organic stricture at the cardia, one had to assume a functional one. He considered a permanent spasm of circular fibres disproved, because there was no annular hypertrophy, and he thought that the closure of the cardia was due to inhibition of the longitudinal fibres, the contraction of which was the normal means of dilating this orifice. It was noteworthy, as pointing to a nervous origin, that a brother of the boy had died of vomiting after scarlet fever, and an uncle was also said to have died from vomiting. The whooping cough was the exciting cause, such a neurotic predisposition existing. In answer to Dr. Goodall, he did not do more than connect the cough in this way with the dilatation.

Gall Stone Impacted in the Small Intestine.

Mr. J. HUTCHINSON, jun., showed a calculus 9.5 cm. in circumference, and 121 grains in weight, which was removed during life through a longitudinal incision of the small intestine. The symptoms, in a woman, aged 69, were quite obvious, and comprised jaundice and hepatic colic. Acute intestinal obstruction was present for four days before operation, the gallstone having passed by ulceration into the duodenum. It was tightly grasped by the bowel, and lay at some distance from the ileo-cæcal valve, the intestine below it being empty and contracted. The patient rallied, but subsequently died from causes not very clear. He remarked that the calculus was comparatively small, though it caused fatal obstruction. It was of the size of a Murphy's button, which might also cause complete obstruction when set free into the lumen of the small intestine. A calculus of an inch diameter was probably as much as would traverse the small intestine. He had collected about thirty cases of fatal obstruction arising from the impaction of biliary calculi. The author referred to specimens showing fatal obstruction due to a damson stone, and even to a cherry stone.

Dr. Septimus Gibbon recalled one case of the kind—fatal after nine days. Kneading of the abdomen was had recourse to, the modern procedures of surgery not having then arisen.

The Formation of Intra-Abdominal Bands.

Mr. J. Hutchinson jun., exhibited a remarkable instance of band, about six inches in length, which arose from the broad ligament, and was attached at the other end to the great omentum. The latter end was dilated into a small cyst, and the structure was evidently a greatly elongated hydatid of Morgagni. The elongation had been effected by the excursions of the great omentum, which were known to occur during life. He had seen the great omentum folded up after death so as to conceal the liver. Dr. Perry had recorded instances of bands similar to elongated appendices epiploicæ. He thought that many cases of volvulus really depended upon the presence of slender cord-like bands. That bands were not always due to peritonitis was shown by the absence of any history of this, as well as by the absence of adhesions, etc., after death. It had been suggested by an American writer that persistence of the omphalo-mesenteric vessels was a cause of band, the vessels remaining connected with a umbilicus or forming an attachment to the mesentery, etc., after losing free at the end. Such a persistence of vessels would be parallel with that of the hydatid artery. As another cause of band he cited the case of Mr. Macarthy's, where a ring of fibrous tissue apparently torn from the neck of a hernial sac, was found round the gut after a reduction *en bloc*.

Mr. A. A. Bowlby noticed that the two commonest forms of band were Meckel's diverticulum and the vermiform appendix; but sufficient attention had not been paid to those arising from adhesions between the intestine and the caseous mesenteric glands. In the last set of cases there was no history of acute peritonitis, and no widely distributed lesions were necessarily found after death. In other cases of tuberculous peritonitis there might be definite bands.

Dr. N. Pitt agreed as to the importance of tuberculosis in the production of bands. He had seen such. The occasionally great length of the adhesions was noteworthy. He had seen the omentum rolled up into three long cords. Possibly a local injury leading to inflammation was the originating cause of certain such bands as were single, especially as their seat was sometimes the sacral region. In such circumstances there would be no history of any general acute peritonitis.

Dr. Septimus Gibbon did not think peritonitis explained the existence of bands, for they were not common in children in whom tubercle of the glands and peritoneum were most frequently met with.

Mr. J. H. Targett cited the observation that in two fœtuses he had seen bands running to the umbilicus, which were probably omphalo-mesenteric vessels. He had moreover seen a case of adhesion of intestine to a tuberculous gland leading to longitudinal torsion.

Rupture of the Right Bronchus.

Dr. Hector Mackenzie exhibited this specimen from a boy who was run over by a van; there was no fracture of ribs, and he could not explain the result. Emphysema and pneumothorax ensued. The rupture was half an inch long and longitudinal in direction.

Traumatic Separation of the Epiphysis of the Great Trochanter.

Mr. J. Hutchinson jun., remarked upon this, that it was due to direct violence—a fall from a tree—in a lad aged 16 years; he lived ten weeks, and the accident was not diagnosed, as the patient could stand and raise the limb. The detached epiphysis was found after death attached to the shaft by bands of periosteum.

LIVERPOOL MEDICAL INSTITUTION.

Chauncy Puzey, F.R.C.S., President, in the Chair.

Thursday, November 28th, 1895.

Vyrnwy Drinking Water.

Dr. Hope (M.O.H.) asked a question, of which he had given notice, as to whether any member of the Institution had had experience of the alleged deleterious effects from the use of Vyrnwy drinking water. He stated that, so far as his investigations enabled him to judge, the one or two allegations concerning illness due to the use of the water were absolutely destitute of any foundation. In one of them the Vyrnwy water was not supplied to the house in question at the time the alleged mischief from its use arose. A short discussion ensued, but no one had any adverse comment to make in reply to the question.

Pityriasis Rubra.

Dr. Stopford Taylor showed a case of this disease. It was the patient's second attack, the skin having remained quite free from any eruption during the interval. The first attack occurred in 1892, and was secondary to a psoriasis of many years' duration. The patient was admitted into the Skin Hospital in March of this year on the recommendation of Dr. Carter. The treatment adopted was of a soothing character until and for some weeks after the temperature had become normal. Prolonged daily baths of several hours' duration were given, the water being at the temperature of 95° F. After each bath the patient was smeared with an ointment of glycerine of lead and vaseline equal parts, with the addition of a drachm of glycerine to each ounce. In August, the scaling having ceased and the redness still remaining, an ointment of chrysophanic acid, 10 grains to the ounce and afterwards increased to 20 grains to the ounce, was rubbed in night and morning, and the patient was allowed out of bed. The effect of the chrysophanic acid was to cause the rapid disappearance of the redness, except in a few isolated patches; these were painted with pure liquid tar, and finally cleared. Quinine in large or small doses was continued almost the whole time. On one occasion thyroid extract was given, this certainly aggravated the disease; on another iodide of potassium, which seemed to depress. The patient was shown at the meeting, perfectly well, the skin being pale, smooth, and soft.

Mr. Richmond Lamb asked Dr. Taylor if he had found pityriasis rubra specially fatal. In a table of some 23 cases published in the *British Journal of Dermatology* by Dr. Stephen Mackenzie there were 3 deaths. Half of these cases were primary, and one of the deaths was in a case secondary to pemphigus foliaceus, a most fatal disease.

Drs. Carter and Alexander also made remarks on Dr. Taylor's case.

Therapeutic Actions of Oxygen.

Dr. Macalister related two cases in which oxygen had proved very serviceable. One of them was a case of uræmic coma associated with lividity; the patient almost at once gained consciousness when the oxygen was administered. The other was a case of morphine poisoning, and artificial respiration was necessary until the gas was given, when the respiratory function was restored and the cyanosis of the face, lips, and extremities was greatly relieved. In both cases recovery was complete.

A Life Table for Liverpool.

This paper was by Dr. Hugh Jones and Dr. S. G. Moore. After describing the method adopted by the authors in the construction of the table, it was shown that a considerable saving of life had been effected since the first life table was prepared by Dr. Farr in 1843. A reduction had taken place in the death-rate at all age groups, with a consequent higher expectation of life at all ages. The life table, based upon the figures for 1881-90, showed that the expectation of life at birth was 34.2 years, compared with 41.3 years for England, 31.7 for Manchester, and 33.2 for Glasgow. The diminished mortality had resulted in a considerable addition to the useful years of life, that is, between 20 and 65 years, amounting to 2,500 years of life per 1,000 births. It was further shown that the chief incidence of the excessive mortality in Liverpool was at the earlier ages, though, compared with England and Wales, the mortality was high at each age period. The authors pointed out that the enlargement of the city boundaries, by which a large suburban area is being absorbed, would result in an apparent diminution in the death-rate, but that this diminution would not of necessity imply any improvement in the sanitary condition of the city, nor in the vitality of the inhabitants.

Dr. Hope complimented the authors on the pains taken in constructing the life table, and, in criticising it, indicated directions in which elaboration was necessary before the table would add materially to knowledge upon the subject. Notwithstanding that the duration of life was shorter amongst dwellers in cities than amongst dwellers in rural districts, insurance companies drew no distinction. This circumstance suggested that the mortality was not excessive in the insuring and thrifty class, but amongst the vast labouring population. The inclusion or exclusion of rural areas in urban registration districts was a most important factor in modifying the death-rates of cities.

MIDLAND MEDICAL SOCIETY.

T. Edgar Underhill, M.D., President, in the Chair.

Wednesday, November 27th, 1895.

Exostosis of Femur.

Mr. J. T. J. Morrison showed a specimen of exostosis of unusual size, which he had removed from the lower end of the left femur. The patient, a collier, aged 22, had been aware of the swelling for sixteen years. It had not interfered with locomotion or caused any pain, but it had led to his rejection as a candidate for the police force. Mr. Morrison briefly discussed the etiology of cancellous exostosis springing from epiphysial cartilage; and remarked on the advantage of operating by the bloodless method, and of dressing the wound without drainage before removing the Esmarch tube. In the present case the bony pedicle had been chiselled through. The deep wound had healed in a few days by first intention, and the patient was now active on police duty.

Cases of Skin Disease.

Dr. Leslie Phillips showed: (1) A case of lymphangioma circumscriptum cutis in a girl aged 17. The patch was situated over the right scapula, and was stated to have been of six months' duration. It was the size of a small hand, fawn or straw coloured, and consisted of aggregated, raised, flattened, resisting vesicles, almost verrucous in character. Over much of the eruption vascular tufts are seen, giving it an ecchymosed appearance in places. The vesicles when punctured exuded lymph. There were no subjective symptoms. The patient had red hair, and the angles of the mouth were scarred. The exhibitor expressed doubt as to the reliability of the reputed duration of the disorder. As the eruption was out of sight and did not give rise to inconvenience, it was probable that its onset was not accurately observed. (2) A man with lichen ruber planus of three months' duration, which began acutely as an eruption indistinguishable from patchy erythemato-squamous eczema—a character which still persisted in some of the lesions.

Cystic Ovarian Tumour.

Dr. Malins showed a large cystic ovarian tumour, the chief peculiarity of which was two broad pedicles. The ovaries were firmly united, probably from pelvic pressure in early growth; they had increased rapidly in size, one large cyst reaching up to the liver on the right side. The patient was single, aged 36, and was in good health up to June. A week before admission to hospital she had been tapped, 80 ounces of fluid of specific gravity 1019 being evacuated from the cyst on the right side. The pedicles were tied in several divisions, with prepared silk. Recovery was without incident.

Dermoid Ovarian Cyst.

Mr. Heaton showed (for Mr. Law Webb) a dermoid ovarian cyst removed from a woman, aged 40. It contained the usual pultaceous fatty material found in such cysts. Attached to the cyst wall at one point was a portion of a jaw, having four well-formed teeth firmly fixed in it. They resembled the incisor and premolar teeth of a child of 6 years old. From another point in the cyst wall there grew a long tuft of long silky hair, some 4 or 6 inches in length.

Universal Purpura.

Mr. Prosser showed a patient with a purpuric eruption covering the entire body.

Ruptured Tubal Pregnancy.

Mr. Gamgee showed a specimen of ruptured tubal pregnancy. The patient, aged 30, had had five children born alive and one miscarriage, the latter seven months ago. Since then she menstruated regularly every five weeks. She lost some blood on September 18th, this being the time when she expected to menstruate. On September 19th she had some abdominal pain, and on September 22nd she felt sudden violent abdominal pain, vomited, and became collapsed. Laparotomy was performed twelve hours after onset of symptoms. The pelvis and lower part of abdomen were full of blood. A left tubal pregnancy, which had ruptured, was found. The broad ligament was ligatured with silk, and the tube removed. The abdomen was cleaned by sponging. After the operation the patient had a severe attack of bronchitis, but had no abdominal symptoms, and was discharged cured on October 24th.

Paris Hospitals.

Mr. William Thomas read a paper entitled Notes on a Paris Hospital Visit. The hospitals visited were the Hôtel-Dieu, Laennec, and one of the hospitals for sick children. He described the wards, and contrasted them somewhat unfavourably with those of English hospitals. He spoke with approval of the system of "consultations" instead of out-patient practice, and described several operations which he saw performed, noting some points which might give rise to discussion.

Anatomical Society of Great Britain and Ireland.—The annual general meeting of this Society was held at Guy's Hospital on November 22nd. Professor Thane was elected President in place of Professor Cunningham. The Treasurer's account showed a balance of £76 2s. 6d.—Dr. G. F. Blaxall read a paper on the Topographical Anatomy of the Fourchette. He pointed out the discrepancies in the descriptions of this part in different textbooks, and gave statistics from the observation of 397 patients attending his out-patient department. The most important of these showed that in about 15 per cent. the fourchette was formed by the united posterior extremities of the labia minora, while in the rest it was a fold of skin apparently uniting the posterior extremities of the labia majora.—Mr. F. G. Parsons read a paper and showed drawings of a Rare Form of Parasitic Fœtus, lately added to the Museum of the College of Surgeons. The paper contained an account of the different systems.—Mr. A. Keith read a paper upon the frequent occurrence of a Divided Inferior Vena Cava in the Genus Hylobates (Gibbons). In it he discussed the development of the veins of the abdomen, and criticised Hochstetter's views.—Mr. Higgins showed a series of specimens illustrating the true capsule of the knee-joint.

North-West London Clinical Society.—At a clinical meeting on November 20th, Dr. J. H. Stowers in the chair, Dr. R. F. Gill read notes of a case of Pleuritic Effusion and Pulmonary Cancer.—Mr. C. G. Brodie showed a case of Nævus treated by Electrolysis, and a case of Congenital Dislocation of the Hip; Dr. Guthrie a case of Plumbism and Monoplegia; Dr. Cagney one of Telangiectasis of the Face; Mr. W. H. Battle, Bullet Wound of the Skull in a Would-be Suicide, and Intestinal Obstruction by a Large Gall Stone; Dr. Stowers a case of Epithelioma of the Back and one of Tinea Versicolor; Mr. Mayo Collier a series of cases of Nasal Obstruction; Mr. Jackson Clarke a case of Hallux Valgus and Hammer-toe.

Bradford Medico-Chirurgical Society.—At a meeting on November 26th, A. Broxholme, M.D., President, in the chair, Dr. Hornyansky gave a demonstration of microscopical specimens illustrating (1) Typhoid Bacilli in Spleen and in Ulcer of Intestine; (2) the Deposition of Iron Salts in the Kidney and in the Liver in cases of Pernicious Anæmia and in Lead Poisoning; (3) Cylindroma of Cervix Uteri.—Dr. S. Lodge, jun., showed two patients with Hemianopia.—Dr. Campbell showed a patient suffering from Progressive Muscular Atrophy. There was wasting of the muscles of the arms, hands, and legs; deltoids not affected; knee-jerks brisk. The differential diagnosis of the case was discussed. Dr. Gorton, Dr. Evans, and Dr. Ranaglianti made remarks, and Dr. Campbell replied.—Dr. A. Broxholme showed two patients on

whom he had operated for Mastoid Disease.—Mr. Horrocks read a paper on Three Cases of Hernia with Unusual Complications. In the first case the cause of the trouble was a small tumour in the mesentery, which blocked up the inguinal canal and prevented the reduction of the hernia. In the second case a half twist of the mesentery was found, and in the third case the cæcum formed part of the sac wall.—Dr. Major read a paper on the Diagnosis of Hystero-Epilepsy and the Treatment of the Paroxysms. The differential diagnosis between epilepsy and the hysterioid attacks was considered, the involuntary passage of urine, biting of the tongue, and the formation of petechiæ pointing to true epilepsy. The treatment recommended for the hystero-epileptic attack was (1) to compress the nose and mouth for thirty seconds, (2) strong faradism, (3) apomorphine, gr. $\frac{1}{10}$, hypodermically. Dr. Carey laid stress on insensibility as pointing to epilepsy. Dr. Mantle would watch the temperature, and look upon fever as indicative of true epilepsy. Mr. Horrocks and Dr. Farrar made remarks, and Dr. Major replied.

Kidderminster Medical Society.—At a meeting on November 22nd, Mr. W. Moore, President, in the chair, Mr. J. L. Stretton read notes of the following cases: Appendicitis in a farm labourer aged 19. An operation was performed, and the appendix, which was found perforated near the base, was ligatured, removed, and the stump sutured. The man died thirty-six hours after the operation. A limited necropsy disclosed a quantity of pus in the right iliac region. The appendix removed contained a fæcal concretion. Notes were also read of a successful case of Operation for the Results of Injury to the Shoulder; of a case of Congenital Contraction affecting the index finger of the right and the middle of the left hand, and resembling in appearance Dupuytren's contraction, in a child six weeks old; and of the case of a quarryman, aged 24, with a piece of Granite in the Anterior Chamber of the Eye.—Mr. W. Hodgson Moore described a case of Carbonic Oxide Poisoning in a young healthy bricklayer, who was at work pointing the defects in a retort which had not been used for some time. His mate left him for a few minutes, and found him unconscious on his return. When seen by Mr. Moore he was quite dead, and all efforts to restore animation were unavailing. The only peculiarity noticed about the body was the salmon-pink colour of the cheeks, which extended to the chest and arms. On raising the legs a suffused appearance of the face was produced. At the necropsy two days later the pink colour was still quite distinct, and the muscles when cut into exhibited a bright colour; the blood was fluid and very bright; with a 30 per cent. solution of caustic soda red stringy clots were produced. The organs of the body were healthy, but all exhibited the peculiar colour. The gas authorities denied the possibility of carbonic oxide poisoning, but Mr. J. L. Stretton, who attended the *post-mortem* examination on their behalf, strongly supported Mr. Moore's view. It is probable that in scraping some of the decayed places or in moving some of the rubbish admitted to be on the floor of the retort, the man liberated some of the gas, a very small quantity of which produces a fatal result.—Mr. Davies showed the Spleen and Internal Organs from a case of Leucocythæmia in a female, aged 10 years, admitted under Mr. J. L. Stretton, in a very bad state, though she had been ill for only seven days. Mr. Davies also read a paper entitled Rough Notes on Clinical Treatment.

Proposed Registration of Midwives in New South Wales.—A Bill "to promote the better training of women as midwifery nurses and for their registration as such" was introduced into the Legislative Assembly of New South Wales by Dr. Graham on September 11th. The Bill provides for the examination and registration by the Board of Health of women who desire to act as midwifery nurses. From and after twelve months from the date of the establishment of the Midwives' Register no woman shall be entitled to recover any fee or charge in court for attendance or service rendered as a midwife, unless such woman be registered under the Act. Section 2 of the Bill defines a midwifery nurse as "a woman who undertakes to attend in cases of natural labour." It does not, however, define "natural labour."

REVIEWS.

The Life of Sir Henry Halford, Bart., G.C.H., M.D., F.R.S., President of the Royal College of Physicians, etc. By William Munk, M.D., F.S.A. London: Longmans, Green and Co. 1895. (Cr. 8vo, pp. 300. 12s. 6d.)

The extraordinary position attained by Sir Henry Halford has always been something of a puzzle to succeeding generations, and we turn, therefore, to this work—issued with the *imprimatur* of the Royal College of Physicians—with the hope that Dr. Munk may help us to a solution. Halford's career and character presented many contrasts. He was the fashionable physician of his day—in fact, he might almost be called the type of a fashionable physician—yet he was President of the College of Physicians for twenty-four years. He guided it through the crisis in its affairs which attended the removal from Warwick Lane to Trafalgar Square, yet he induced it to institute the evening meetings at which lectures on medical topics were delivered to popular audiences, an undertaking foreign to the general policy of that somewhat austere body. His hospital experience was small; he was appointed physician to the Middlesex Hospital when 27 years of age, and resigned the office seven years later; yet he sprang into large consulting practice at a very early age, and he was appointed Physician Extraordinary to the King when he was 27.

The achievements of his life were rather those of an eloquent writer of Latin orations and a neat turner of epitaphs and verses in the same polite language than those of one who was anxious to make serious contributions to medical knowledge. He became a country squire by right of inheritance, made an aristocratic marriage, entertained royalty at his country seat, and evidently enjoyed the position to the full, yet he was a very hard-working physician in London, and almost died in harness.

One main element in his success was the tact with which he maintained himself as, in the literal sense of the words, physician in ordinary to the Royal Family through three reigns. When his intimate relations with the Court ceased at the beginning of the present reign, his practice fell off so much that he had, according to Dr. Munk, to find solace and occupation in the composition of Latin verse. His repeated re-elections as President of the Royal College of Physicians were, in part, at least, indirectly due to the same cause. It was through his influence with the Court and leading politicians that a grant of the site in Trafalgar Square was made to the College, but it was characteristic of his energy and determination of character that he by no means rested satisfied with this success, but devoted his best efforts to finding the funds necessary for erecting the building and to the management of the affairs of the College. Another, and the main element in his success was that he felt none of the scepticism as to the value of drugs which is so common at the present day. Dr. Munk gives on this head a very illuminating quotation from Dr. Marshall Hall. Sir Henry Halford, we are told, "was remarkable for his fertility and invention in regard to remedies. This fertility in resources is not, perhaps, the highest or most scientific branch of medicine, but it is indubitably that which, if judiciously applied in practice, affords the greatest solace and benefit to the patient, and may therefore be regarded as the highest faculty which a physician can possess in the actual exercise of his Art." Added to this, Halford displayed an absolute loyalty to what he conceived to be the best interests of his patient, sometimes under circumstances of a most trying nature. A very nice point in medical ethics, indeed, arose on more than one occasion during the course of his attendance on several members of the Royal Family. This was how far a physician is entitled to conceal from a patient the gravity of the illness if the revelation, in his opinion, will have an unfavourable effect upon its course. The difficulty of a decision was in these cases increased by the necessity of making public some statement as to the actual condition. Halford throughout acted with great firmness in his relations both with the other members of the Royal Family and with the Government. He appears to have been guided by the principle that even in the course of

a fatal malady no direct communication of the expected issue should be made to the sufferer so long as the physician himself entertained any "hopes of administering the resources of our art to him with good effect"—that is, as the context shows, while there was any prospect that treatment could produce even a brief improvement. Again, in dealing with this subject in an address to the Royal College of Physicians, he says, speaking of the proper conduct of a physician in the issue of bulletins "when his patient is of so elevated a station that his safety becomes an object of anxiety to the nation": "He will not write one word which is calculated to mislead, but neither ought he to be called upon to express so much as, if reported to the patient, would destroy all hope and hasten that catastrophe which it is his duty and their first wish to prevent." In the case of ordinary patients he held that it was better that the probable termination of his malady should be communicated to the patient by his friends. "They do so," he said, "without destroying his hopes, for the patient will still believe that he has an appeal to his physician beyond their fears."

There are many other topics which would afford matter for interesting discussion, but we have left ourselves little space to speak of the manner in which Dr. Munk has discharged his task. We have already said enough to show that he has written a most interesting volume. He has given a vivid picture of the life and character of a remarkable man, and has thrown many sidelights on the position of medicine in this country in the early part of the century.

We are rather disappointed to find so few letters from Sir Henry Halford's distinguished contemporaries: for them we could well have spared some of the not very interesting royal epistles with which Dr. Munk has rather encumbered his pages. Nor can we sympathise with Dr. Munk in his regret that Sir Henry Halford yielded gracefully to the necessity for extending the borders of the Royal College of Physicians by the admission to the Fellowship of graduates of universities other than those of Oxford and Cambridge. It is at least a curious commentary on the alleged dangers of the course that of the nine physicians freely elected by the Fellows to the Presidency since the death of Sir Henry Halford, four have been graduates of London, Edinburgh, or Aberdeen, and we may add that the erudite author of so many works dealing with the history of the College would himself apparently have been excluded had the barrier been maintained.

Tuberculous Disease of Bones and Joints, its Pathology, Symptoms, and Treatment. By W. Watson Cheyne, M.B.Ed., F.R.S., F.R.C.S., Professor of Surgery in King's College, Surgeon to King's College Hospital and Paddington Green Children's Hospital. Edinburgh and London: Young J. Pentland. 1895. (Demy 8vo, pp. 374, 63 engravings. 14s.)

This work deals with a subject of absorbing interest to surgical practitioners, by reason on the one hand of the frequency and serious results of articular and osseous tuberculoses, and, on the other, of the great advance that has recently been made in the pathology and the treatment of these affections. Mr. Watson Cheyne has exceptional claims as a teacher of this branch of surgery, as he is not only well acquainted with the work of Continental authorities, but has himself done much both in the laboratory and in the hospital ward to add to our present knowledge of the matters which are here discussed.

The first part, dealing with the pathology of tuberculous diseases of bones and joints, is based on the author's Astley Cooper Prize Essay, modifications having been made in accordance with the results of subsequent research; and the second part, which is devoted to their treatment, describes that which Mr. Cheyne has himself found best, and which is now followed by those modern surgeons who have paid special attention to these morbid conditions.

In discussing the very doubtful question of an essential histological element of tubercle Mr. Watson Cheyne, agreeing with Baumgarten, holds that such element is to be found in the epithelioid cell, which is constantly present in tubercles and tuberculous tissue, and bears a constant relation to the tubercle bacillus. Many, however, will be disposed to doubt whether the presence of this element in morbid structure can be regarded as a strict criterion of its tuberculous origin; and, indeed, it is acknowledged here that the characteristic features of epithelioid cells with regard to tubercle consist not so much in their forms as in their arrangement and abundance, and in their life-history. With regard to the difficulty experienced by many observers in making out the tubercle bacillus in tuberculous joints and abscesses, and the scarcity of these organisms when found, the conclusion is arrived at, after very careful investigation, that they can usually be seen after sufficiently careful and prolonged search, and, further, that present methods of staining do not permit us to determine the numbers present. The somewhat complicated description of the different forms of tuberculosis in bones and joints would seem to indicate that further and more extended pathological research is needed to permit of a clear and comprehensive classification of the apparently diversified phenomena presented by this disease.

In some interesting chapters on the non-operative treatment of osseous and articular tuberculoses the author insists on the value of rest and extension, and asserts that counter irritation—particularly the use of the actual cautery, though now rejected and, indeed, derided by many—often results under certain conditions in marked improvement. In dealing with Koch's tuberculin treatment, whilst making no mention of its indications in cases of joint disease, he expresses the opinion that this method in phthisis has been unduly discredited and too hastily abandoned. In his remarks on the operative treatment of tuberculous affections of the larger joints, the indications and contra-indications of which, together with the selection of method in each case, are most carefully considered, Mr. Cheyne points out that the danger of arthrectomy and excision is greater than that of amputation. Notwithstanding the attempts that have recently been made to preserve the articular ends of the bones in the operative treatment of tuberculous joints, excision as at present performed is advocated as the preferable method in most instances in subjects who have reached full growth.

The second section of this book presents an instructive review of the symptoms and treatment of tuberculous diseases of joints and bones, which will be found of great service to the practitioner, both for reference and careful study.

Trattato di Patologia e Terapia Chirurgica Generale e Speciale. [A Treatise on Surgical Pathology and Therapeutics General and Special.] Per Professor Francesco Durante, Direttore della Clinica Chirurgica della R. Università di Roma. Vol. I, with 109 original illustrations in the text. Rome: Società Editrice Dante Alighieri. (Large 8vo, pp. 576, viii. 15 lire.)

The appearance of the first volume of Professor Durante's work on surgery is a very important event for the Italian school of surgery, for up to now no complete modern work on surgery written by an Italian has been published. We, therefore, have taken up this volume for review with unusual interest, as we were anxious to know the present position of surgery in Italy, as expounded by one of the greatest surgeons in that country. It is known that within the last two decades a distinct and great advance in medical and surgical science has taken place amongst the Italians, and this volume is a remarkable proof of this fact.

The work, when completed, will consist of three volumes, extending to some 2,000 pages. The first chapter, which is devoted to Inflammation and its [illegible], includes an excellent summary of present knowledge as to pathogenic bacteria, particularly in relation to the phlogistic process. The author defines inflammation as "that typical and [illegible] nutritive activity determined by special micro-organisms." He then concludes from the phlogistic process the histological changes which take place in the regeneration and reintegration of tissues. The etiology, pathological anatomy, symptomatology, and treatment are admirably discussed.

The second chapter—on Surgical Fevers—opens with general considerations on the subject, and then pyrogenic agents and the various forms of surgical fever are described. The clea-

t isation and complications of wounds are next discussed; and the remaining two-thirds of the volume deal with tumours. Taken as a whole, this is the most important portion, as it contains a very large amount of original matter, as might be expected from so distinguished a pathological histologist as Professor Durante. It opens with a brief history of the classification of tumours, in which, whilst giving due credit to Virchow and others the author, basing his facts on original observations, does not blindly follow any of them. He maintains "that for a diseased product to be called a tumour it is necessary that it be generated from cellular elements which multiply continuously, and endeavour to reproduce a physiological type which they do not always reach." When this diseased product is not of new formation, or is arrested in its development, he does not consider it a tumour, although it may have the external shape, and its elements may be analogous to those of true tumours. He, therefore, excludes inflammatory products, cysts by retention, hypersecretions in pre-existing cavities, and animal parasites from the class of tumours. In a short review it is impossible to follow Professor Durante in his classification of tumours, which is founded on an anatomico-physiological basis in contradistinction to the clinical basis adopted by Billroth. We must refer the reader to the work itself, in which he will find plenty of food for thought, and perhaps for criticism.

The volume is beautifully illustrated, well printed, and its style is concise, clear, and eminently logical. In conclusion, we have no hesitation in saying that, if the forthcoming volume equals this one the work will deserve to rank with the most scientific, philosophical, and practical works on surgery at the present time.

A Medico-Topographical Account of Jeypore. By Brigade-Surgeon-Lieutenant-Colonel T. Holbein Hendley, C.I.E. Calcutta: Central Press Co. 1895. (Cr. 4to, pp. 128, with maps, diagrams, and tables.)

Jeypore is one of the largest and most important independent Rajput states, and has gained a high reputation in India on account of the liberal and enlightened character of its rulers, and the very commendable efforts made by its sovereign to promote the comfort and well-being of his subjects. The late Maharajah Ram Singh was conspicuous among Indian rulers for his loyalty, his encouragement of art and learning, his benevolent administration, and the measures which he undertook to promote the physical welfare of his people, and under his successor, Maharajah Sawai Madho Singh, the state continues to flourish. Not least among the material benefits conferred on the inhabitants of the State and city of Jeypore have been the measures undertaken with a view to sanitary improvement and medical relief, and the work and institutions completed and founded during the past quarter of a century have been substantial and costly, and are now in full and beneficent operation.

Brigade-Surgeon-Lieutenant-Colonel T. H. Hendley has served for twenty years as Residency Surgeon, and for thirteen as Superintendent of Dispensaries at Jeypore. He is well known as a sympathetic expositor of Jeypore history and art, and better qualified than any man living to write such a report as this, in which the topography, climatology, vital statistics, prevalent diseases, sanitary conditions, and medical institutions of Jeypore are minutely dealt with. The report is one of a class which is very common in India. There is hardly a district or town of which some industrious civil medical officer has not compiled a record of all that is known of its hygienic and medical history. The Medical Board of the Company, early in the present century, called on its medical officers to prepare reports of this kind, and many of these contain most interesting information bearing on the public health and the conditions affecting it.

The author of the present report modestly hopes that it will be useful to his successors. It will be very useful to those responsible in the future for the sanitary and medical administration of the Jeypore State; but the report has a wider value, as representing what an enlightened and benevolent native ruler can accomplish, under good guidance, towards raising the standard of physical well-being and rational enjoyment of an Indian community. *O si sic omnes.*

CHRISTMAS BOOKS.

The harvest of gift books and Christmas cards and of seasonable books of a more serious character suitable for presentation is this year larger than ever. So, too, is the crop of story books and of the holiday kind of religious publication.

Messrs. Smith, Elder, and Co. send us a new volume by the author of *Voces Populi*, under the title of *Lyre and Lancet* (3s.), with 24 full-page illustrations. It is a story in scenes, reprinted from *Punch*, which will amuse everyone, and is a model cure for dyspepsia. A short story by Mrs. Humphry Ward, *The Story of Bessie Costrell* (2s.), will be a welcome present everywhere. The Rev. Harry Jones has numbered a long series of medical men of distinction among his friends and colleagues. In his *Reminiscences of Fifty Years* (6s.), he has much to say of Joseph Rogers, Anstie, Russell Reynolds, and others who worked cordially with him as a thoroughly sound-minded, cheery, and sensible clergyman, who put sanitary and social progress in the forefront of his work. Other publications from the same firm which will be found well worthy of notice, for all are by good authors and have solid merits, are *Off the Mail* (6s.), by G. F. Browne; *The Grey Lady* (4s.), by Henry Seton Merriman; *The Coming of Theodora* (4s.), by Eliza Orne White; *Our Square and Circle* (5s.), or the Annals of a Little London House, by Jack Easel. *The Signora* (6s.), by Percy Andreae, has much medical matter in it. *Gerald Eversley's Friendship* (6s.), by the Rev. J. E. C. Welldon, has already reached its third edition.

The Religious Tract Society sends us a parcel of books which combine instructiveness with interest. Of such a character is *Lighthouses, their History and Romance* (2s. 6d.), by W. J. Hardy, F.S.A.; *The Hidden Beauties of Nature* (3s. 6d.), by Richard Kerr, F.C.S., with 59 illustrations, are lectures reprinted which will influence not a few to form collections of suitable objects of natural history, and to do some work with the microscope. Of the same character but more definitely of the textbook type is the *Popular Handbook to the Microscope* (2s. 6d.), by Lewis Wright. It has no element of novelty, but its contents are accurate and instructive. *Consider the Heavens* (2s. 6d.) is a popular introduction to astronomy by Mrs. William Aldis, well written, and carefully illustrated. *The Girls' Own Annual* (8s.), the *The Boys' Own Annual* (8s.), the *Sunday at Home* (7s. 6d.), and the *Leisure Hour* (7s. 6d.) are now all classics, and well known to our readers. They fill one with astonishment at the extraordinary wealth of really good literature and attractive illustrations which they offer for the lucky boys and girls of this generation whose privileges far exceed those of an earlier date. They are all of them portly volumes of a really delightful character.

Messrs. Blackie and Son, Limited, have series of science textbooks, very well known and successful, among which this year must be included *Earth Knowledge* (2s.), a textbook of physiography, by W. Jerome Harrison, F.G.S., in its ninth edition, extended and revised in accordance with the 1895 syllabus of the Science and Art Department. In the same series is a small textbook of elementary inorganic chemistry, theoretical and practical, by A. Humboldt Sexton, F.I.C., F.C.S. (2s. 6d.), with a course of chemical analysis and a series of examples in chemical arithmetic, revised and considerably enlarged to meet the requirements of the syllabus of the Science and Art Department. *Food and its Functions* (2s. 6d.) is a textbook for students of cookery, by James Knight, M.A., B.Sc. No teacher of cookery can now secure a first class diploma without some knowledge of the chemistry of foods and the digestive processes, while the code for evening continuation schools liberally encourages the popular teaching of such subjects. This volume aims at supplying students in training with a complete manual of the theoretical part of their curriculum. Of story books of the more popular character we have from the same publishers *For Life and Liberty* (5s.), by Gordon Stables, M.D.; *At War with the Pontiac* (6s.), by Kirk Munroe; *The Tyger of Mysore* (6s.), a story of the war with Tippoo Saib, by G. A. Henty; *Hallowe'en Ahoy!* (4s.), by Hugh S. Leger; *Through Russian Snows* (15s.), a story of Napoleon's retreat from Moscow, by G. A. Henty; *A Knight of the White Cross* (6s.), a tale of the siege of Rhodes, by G. A. Henty; and *A Thane of Wessex*, by Charles W. Whistler (6s.).

From Frederick Warne and Co. come a bright little series of excellent books, prominent among which stands out *Two*

Little Pilgrims' Progress (6s.), a story of the City Beautiful, by the famous authoress of Little Lord Fauntleroy, which will certainly achieve great popularity. Others which should be mentioned are *Lancashire Idylls* (6s.), by Marshall Mather; *The Heart of Man* (3s. 6d.), by Silas K. Hocking, F.R.Hist.S., which has reached its third edition; and *The Shuttle of Fate* (3s. 6d.), by Caroline Masters.

Thomas Nelson and Sons send a series of books entitled *In Far Japan* (2s.), by Mrs. Isla Sitwell; *A Lost Army* (3s. 6d.), a tale of the Russians in Central Asia, by Fred Wishaw; *Norseland Tales* (2s. 6d.), by H. H. Boyesen; *How Jack Mackenzie won his Epaulettes* (3s. 6d.), a story of the Crimean war, by Gordon Stables, M.D. None of these, however, stand out of the common, and that by Dr. Gordon Stables is even below his usual merit, and this is saying a good deal.

Bentley and Co. send *At the Court of the Amir* (16s.), by John Alfred Gray, M.B.; it is a serious descriptive book, giving a very thorough, but not a very lively or picturesque, account of Dr. Gray's residence in Kabul. Many people would be curious to have a trustworthy sketch of the present state of things in a country which is still, for the most part, closed against Europeans, but Dr. Gray has, unfortunately, not the art of either seeing or describing things which are interesting.

Fisher Unwin send *The Riviera, Ancient and Modern* (7s. 6d.), with maps and plans, by Charles Lentheric; translated by Charles West, M.D. It is not a new book, but newly translated by Dr. West, whose excellent English style does full justice to the original. It is an historical, physiographical, and archæological study of the Riviera, which intelligent travellers will be glad to have, not only as a guide book, but as a companion.

Among the Christmas numbers of the illustrated periodicals the *English Illustrated Magazine* deserves special mention for the beauty of its artistic contents not less than for the interest of its literary matter. The *Queen* offers a splendid and varied bill of fare, including a story by Bret Harte, in his best style, entitled "Barker's Luck." *Yule Tide* gives its readers a treat in the shape of a charming love story by "Q.," entitled "Ia." *Black and White* has a strong cast, including Antony Hope, Arthur Morrison, Robert Barr, and Harold Frederic, and the performance of all these well-known writers comes fully up to the promise of their names. *Pears' Annual* consists of the fifth and last of the series of Charles Dickens's Christmas stories, "The Haunted Man," with illustrations by Mr. Charles Greene, R.I. The three large coloured plates presented with the number are excellent examples of artistic chromo-lithography.

Diaries.

Messrs. Collins issue as usual an extensive series of convenient diaries, amongst which may be mentioned the *Large Scribbling Diary* with a week at an opening, interleaved blotting paper, 2s.; the *Commercial Diary*, quarto size, interleaved blotting paper, 1s. The *Desk Diary* will be found of a handy form for the desk or table, and the *Tablet Diary* with one week on a page, octavo size, 6d., for suspension. The *Gentleman's, Lady's, Portable*, etc., are a new issue of the well-known series of diaries, bound in leather, some of them fitted with pencils and pockets, and varying in size to suit every requirement.

Medical Diaries.

Messrs. Hazell, Watson and Viney (London) publish two types of visiting lists. One of these, a new venture this year, is called *Hazell's Physicians' and Surgeons' Visiting List*, and can be obtained in limp cloth (5s. 6d.) or morocco tuck (6s. 6d.). The paper used for this list is thin and tough, there is space for 110 patients, and the visits for a month are, by means of a half page, shown in an opening. There are a number of useful tables of weights, etc., and other information, an alphabetical list of the doses of drugs in the *British Pharmacopœia* and of many unofficial preparations, as well as the formulary of the British Pharmaceutical Conference, and a combined calendar and utero-gestation table. *Smith's Physicians' and Surgeons' Visiting List* for 1896 is issued by Messrs. Hazell and Co. in various sizes and bindings, varying in price from 2s. 6d. to 5s. 6d. This publication has now reached its fiftieth year, so that its convenience must have been recognised by several generations of practitioners. It can be had either with or without a journal showing a week in an opening.

Messrs. John Wright and Co. of Bristol send us the third edition of their annual *Visiting List*. Certain minor alterations have been made, chief among which is that a blue cast has been given to the paper to increase its opacity. The page, by means of a half page, shows a month in an opening, and there is space for a case account. It contains also much useful information in tables and other compressed forms. (In leather wallet cover, 5s. 6d.) The same firm issue for the first time this year a "perpetual" visiting list, which has the same general character as the annual list, but is undated; it may thus be used continuously from year to year until full, which for some purposes will be a convenience. (In leather wallet cover, 5s. 6d.).

From Messrs. Duncan Campbell and Son of Glasgow we have received a *Medical Visiting Book*, also of the perpetual kind. It is extremely simple in arrangement, and would make a good surgery book. They have sent also a *Professional Account Rendered Book*, with thumb-cut alphabetical index for the entry of monthly visits, and totals for the year. The two books are apparently intended for use together, the first showing the daily visits and midwifery engagements, the second the monthly and annual totals.

Cards.

Messrs. Raphael Tuck and Sons have sent us a more than usually excellent collection of Christmas and New Year's cards, amongst which are their highly artistic black and white etchings. Amongst their humorous cards is the "Living Picture" series, which will certainly be one of the hits of 1895. There are also some particularly good calendars, comprising several new designs, such as "Tennyson's Heroes and Heroines" Calendar, and the "Browning," the "Whittier," and the "My Lady" Calendars; the "Britannia Yacht" Calendar, a perfect model of the Prince of Wales's famous yacht, marks the acme of daintiness and perfection. The whole series of cards, booklets, calendars, etc., are perhaps better than have ever yet been issued, and it is interesting to notice that, notwithstanding the prediction of the decline of the popularity of these pleasant mementoes of the season and the goodwill connected with it, the sale of Christmas and New Year's cards last year was larger than it has ever been.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

LIQUOR CARNIS COMPANY'S PREPARATIONS.

Renewed examinations of samples of virol, marrol, liquor carnis, and malto-carnis, the well-known preparations manufactured by the Liquor Carnis Company, have shown that they continue to present the characters and properties claimed for them as being valuable nutrients for invalids and others. Virol and marrol being prepared from ox bone marrow and extract of malt—the former containing in addition the constituents of eggs—are from their palatable form and easy digestibility of great service in diseases where food containing a considerable proportion of fat is indicated. Virol *sans sucre* is also prepared to meet the requirements of cases in which sugar is undesirable. Liquor carnis as claimed for it, is an uncooked meat juice, and has evidently been prepared by cold pressure, for an analysis of the sample submitted to us gave a copious coagulum on being heated, and every evidence of being a well-prepared meat juice. The addition of glycerine as a preservative overcomes the difficulty usually met with in keeping such articles as meat juice, whilst at the same time it renders the meat juice more palatable. Malto-carnis is a preparation containing meat juice, added in the form of liquor carnis, malt extract, and cocoa. The sample examined by us was a blond cocoa-like preparation, having a decided action on gelatinised starch. On examination it gave evidence of containing meat juice and cocoa extract blended in such a manner as to make a very palatable mixture, and

thus combining the digestive action of malt extract with the stimulating and nutritive properties of cocoa and meat juice.

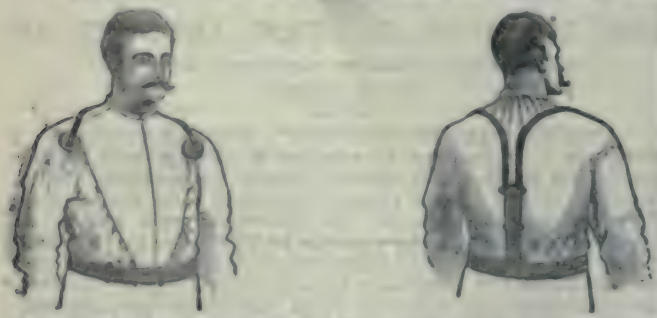
HYPODERMIC SYRINGE.

Messrs. Allen and Hanburys have submitted to us a new hypodermic syringe which seems to present certain distinct advantages. It consists of a graduated glass barrel with plunger, also made of glass, accurately fitted into it. The piston being of glass does not get out of order, even if not in regular use, as those made with packing of leather or asbestos are apt to do, especially in hot and dry climates. The needles are readily detachable, and the whole instrument is easily sterilised by boiling. Inside the metal mount is a

collar of asbestos, which prevents any leakage of fluid from the top. The syringe should be filled and emptied with water a few times to moisten the asbestos collar, and to fill up any little space between the surfaces of the glass. The syringes are made in 10-minim and 20-minim sizes; also of the capacity of 5 c.cm. and 10 c.cm. for the injection of diphtheria, tetanus, or any other antitoxin. Altogether the syringe is one of the best and most convenient that we have yet seen.

"ANTI-STOOP."

Messrs. Arnold and Sons are the agents for the Carson Anti-stoop, for preventing or curing stooping habits. It consists of two steel arms connected at the back by a cross-piece, and passing up the back of the wearer to within about 3 or 4 inches of the neck, where they branch out on either side and come over the shoulders. At the extremity of the arms are attached padded blocks which, it is stated, press gently and uniformly upon the shoulders, gradually forcing them into their proper position. The excoriation and abrasion of the



skin caused by the pressure and friction of straps passing under the arm are said to be entirely avoided. Owing to the elasticity of the steel it will give way to any sudden movement of the wearer, instead of breaking or cutting into the flesh. It is claimed that it can be put on and adjusted by the wearer alone, there being no straps or bands to buckle at the back.

Influenza in London.—It is reassuring to learn that the deaths from influenza in London last week were 11, against 15 and 11 in the two preceding weeks; 1 death occurred in West London, 2 in North London, 2 in East London, and 6 in South London, including 3 in Deptford. It is satisfactory also to know that the deaths from diseases of the respiratory organs in London (285) showed a considerable further decline from the numbers recorded in recent weeks, and were as many as 146 below the average.

REPORTS
on
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

X.—BALLYSHANNON WORKHOUSE INFIRMARY.

Our visit to this house was the first cheerful experience since the beginning of our commission in Ireland; it was a revelation of the possibilities of an Irish workhouse under humane and enlightened management. The town is beautifully situated on the Erne; the falls, up which we saw the salmon leaping, are near the fine bridge which, spanning the river, connects the two halves of the town. The workhouse stands on the southern side, on a hill overlooking town and river. Dr. Condon introduced us to the Mother Superior, whose keen enthusiasm in the cause of the poor forgotten workhouse inmates was indeed refreshing.

We were conducted first to

The Fever Hospital,

which stands apart on the other side of the road from the rest of the house. Structurally it differs in no respect from other buildings of the same class; it has two storeys, with two small wards on each side of the middle staircase on the ground floor, holding four beds each; on the top storey there is but one long ward on either side of the landing. The nurse's rooms are built out behind at right angles to the block, this annexe containing also the kitchen and laundry. The whole building was quite clean and ready for possible patients. The ground floor wards are flagged, which always seems to us unsuitable for sick wards; the stones strike cold to the feet of the attendants, and make the wards more difficult to heat. Straw ticks on iron bedsteads are used in this division. The nurse is trained, and she has paupers for the service of the building, but they do not act as nurses. There are no baths in the block, nor waterclosets; commodes are not kept in the wards, the vessels being emptied outside as they are used. The walls are smooth, whitewashed, locker tables stand between the beds, and we noticed armchairs. Spacious grass courts both to the back and front of the hospital form cheerful recreation grounds for the patients. Crossing the road we returned to the workhouse, of which the whole administration is

Entrusted to the Nuns,

the head of the community acting as matron, and working with the master, so that the infirm wards were under her supervision as well as the hospital. The infirm wards were the same in position and structure as in any other house, but their whole aspect was different. The walls were smooth, colour washed, and decorated with pictures; the floor was clean, the patients were washed, armchairs took the place of benches. Both men and women

Looked like Human Beings.

Each bed had its separate towel, and at the foot a little bag with soap and brush and comb. We informed the Superior that we had been told that the old people objected to be washed; was it so? "We found," she said, "a little difficulty at first, and the men were rather shy, but by the exercise of a little tact and consideration the objection was overcome, and now they prefer being clean; we have also got rid of the vermin to a great extent." We were told by some of the few visitors who penetrated into the house in the old days that it was necessary for a woman to take care that her skirts should not touch floor or beds if she would avoid carrying away with her lively evidence of her venturesomeness.

Iron Bedsteads

are used in this division, and also in the able-bodied quarters, and in the boys' and girls' dormitories. This is the first house we have seen in which these inmates did not sleep on the floor. The old people were mostly out of doors, in the

yards, seated about on benches. The day rooms in each wing are flagged, and are used by the able bodied. The infirm class have no attendant at night. There are commodes in the wards, and bells communicating with the master's rooms and the porter's lodge.

The Nursery,

upstairs in the body of the house, is the one department which resists the civilising influence of the Sisters, and is a source of grief to the Superior: it was untidy, the atmosphere close, and the infants dirty. The mothers are here with their infants, and as long as this system prevails, so long will the infants be as we found them, brought up in squalor, for the ignorant women resent and resist any interference with their treatment or neglect of the infants. All that the Sisters can do is to watch the children being fed, and thus secure to each child its proper quantity of food. There were five children in the nursery in cradles, one of them being a little friendless waif.

The Hospital

exhibits the same style of construction as that of other workhouses throughout the country; it is a long two-storeyed building, of which part is reserved to the use of the nuns. There are two small wards for isolation purposes on the ground floor in the male or female divisions, holding 3 or 4 beds. Here the floors are flagged, a locker table is between the beds, and we saw wooden armchairs in addition to the benches. The straw beds which are used in these wards are destroyed on the termination of the case. On the male side was a lad suffering from erysipelas. Above in the long ward, with 17 beds, only two men were in bed, about five were up and about in the ward, and others were in the garden, for the Sisters have contrived a garden for their patients.

The Wards

had many neat little arrangements which gave them a comfortable aspect. Spring beds and hair mattresses are used for the chronic and sick cases; scarlet and white quilts, small squares of dimity on the lockers, short curtains to the windows, pictures on the walls, flower pots in the windows, wooden armchairs with cushions, slow combustion grates, strips of linoleum down the middle of the ward—all these details were evidence of humane and considerate management. Each patient had his or her separate towel hung on a nail at the side of the bed, and here also the little bag at the foot contained soap, flannel, and comb. The women had clean caps, bedgowns, and shawls over their shoulders. On the female side there were many more patients, and the wards looked somewhat overcrowded. The ground-floor wards were occupied by some of the chronic cases, as there was no case requiring isolation. In the wards the beds are of straw; the head rail beneath the beds has been removed, the Superior condemning it as unclean, insanitary, and very much in the way. Wooden screens (too heavy to be of much use) with chintz covers were in use in the wards.

The Lying in Ward

is a small room on the first floor containing two beds. The midwifery cases are about six in the year. When we visited the hospital a little patient with rickets was being nursed there. He was an orphan, and an old woman was in charge of him.

The Lunatic Ward

was empty, the imbeciles and epileptics being nursed in the hospital wards.

The Nursing

is under the control of the nuns, the Superior being the responsible head; a trained nurse is on duty at night, and she works from written instructions left by the nuns. There are bells from the wards to the convent, to the master's room, and to the porter's lodge. The nurse undertakes the maternity cases under Dr. Condon. The nursing staff consists of the Superior, three nuns, and the night nurse, the Superior being also matron of the workhouse.

There are No Pauper Nurses.

We were interested to see the method by which in the absence of modern sanitary conveniences the wards are kept clean and sweet. Dr. Condon told us that the question of supplying baths and waterclosets was now under the consideration of the Board, and that they would shortly be added. In the meantime there are no commodes in the wards; the vessels are kept in the garden in a screened recess, brought in when required, emptied and rinsed; when we saw them they were quite clean, and so also were the privies. There is a tap with cold water on the hospital landings, over a basin. All the hot water is heated in the hospital kitchen, where also the cooking for the patients is carried on, under the supervision of the Superior.

The Domestic Offices

are all under the same management; they were clean and serviceable, the appliances kept in a state of repair, even the tin mugs and plates were well scoured and walls and floors swept. The kitchen still retains the unwieldy boilers, each with its separate fire, and we hope that the guardians will soon see their way to remove these to make way for a cooking range. In the laundry the hospital washing is kept quite apart from that of the house, and each department has its own linen. The fever hospital has its own laundry. The water supply comes from the town, but the service is not constant and is supplemented by the wells on the premises.

In Conversation with the Superior

we learned that this house had until lately been quite as bad as others on which we have already commented; pauper nursing prevailed, and with it the attendant evil of blackmailing, the demoralised creatures preying on the helpless inmates, robbing them of their tea, tobacco, money, or any marketable article on which they can lay their hands before they will render them even such services as they are told off to do, and for which they receive extra rations from the guardians. Rather than go back on that oft-told tale, let us record our admiration of the work done in the short eighteen months which had elapsed between the date of our visit and the day when the nuns took possession. The Superior, by filling the matron's post, has been able to make her influence felt in almost every department, and it is clear that the Board has been ready to second her efforts.

Recommendations.

Our concluding paragraph of suggestions is hardly needed in the case of this house, where the work of reform is being carried out by clear heads and able hands. We hope the ratepayers will give full authority to the guardians to expend what is necessary to construct baths and other sanitary appliances. We also wish that the nursery department could be reformed, and would suggest the appointment of a trustworthy attendant, who should have the entire charge of the infants, the mothers being allowed access to them only at stated times. Light screens to supersede the heavy ones now in use in the wards, a modern range and fittings in the kitchen, and more labour-saving appliances in the laundry are also desirable, and when they are added we may point to this house as a model of what may be done by guardians who worthily fulfil the task delegated to them by the community.

THE DEATH OF A PAUPER AT [illegible]

It sometimes happens that the death of an [illegible] individual accomplishes more than the concerted efforts of [illegible]; this seems to be the honour reserved for John O[illegible], whose sudden death has let in a flood of light on the nursing of the paupers in Lisburn Workhouse. The poor man was admitted to the infirmary suffering from [illegible]; from the inquiry as held by the coroner and subsequently by the guardians it is evident that the only person who attended to the patient, and, if we are to say, treated him, was the "night nurse," a woman who had come as a [illegible], and [illegible] one better had been recommended by the [illegible] to watch the wards at night." The doctor was not at hand, and there was no one to read signs and symptoms of [illegible] and [illegible] in medical aid in an acute disease, and so the poor man died. Our readers will remember that in the report from our Commissioner, recently published in the BRITISH MEDICAL JOURNAL, it was mentioned that there was no trained nurse; the ratepayers have now an object lesson placed before them, and they have to give the mandate to their representatives that this shall be a thing of the past. The [illegible] paper [illegible] to the editor of the *Lisburn Standard* for his outspoken comment on the report in the BRITISH MEDICAL JOURNAL. He says: "The perusal of this report is [illegible] in the extreme, and [illegible] in our belief in our ability for local self-government. We do not wish to repeat the sickening details of the [illegible] state of the workhouse, nor the utter want of [illegible] for the [illegible] inmates—they are fully disclosed in the [illegible] report; but we must protest against a continuance of the present state of affairs in the Lisburn Workhouse; and we are certain we voice the sentiment of the public when we call upon the guardians of the poor in this union to

rouse themselves to a sense of their duty and responsibilities, and to remember that the pauper inmates of the workhouse are human beings." These are brave words, and we thank the editor for them. If the Irish press in general would enter with us into the arena and fight for those who cannot fight for themselves, we should soon see something done to improve the condition of the Irish pauper. We note with pleasure that the official inspector has severely condemned the cells used by the lunatics; his strictures—more scathing than anything we ventured to publish—come with all the weight of official censure.

MECHANICAL ROAD CARRIAGES: HORSEFLESH v. STEAM.

The possibility of substituting for the costly horse carriage a mechanical vehicle which will do the same work at a cheaper rate naturally appeals to the doctor, especially to the country doctor; and, indeed, that medical practitioners are alive to the importance of the question is shown by the number of inquiries on the subject which have been addressed to this office. We believe, therefore, that many of our readers will be grateful for a little information on the subject of mechanical carriages, and will like to know just how the matter stands at the present time.

Of the advantages of mechanical over animal traction there can be no question. The mechanical horse, unlike his living rival, only eats when he is at work. He does not want his meals served with regularity when he is at home in his stable. His food costs a great deal less. He is never sick or sorry, never tired. He will go on all day, and if need be all night. He does not require a stable. He does not grow ill or die. He will not run away. He does not deposit ordure on the roads. On the other hand, he may break down. He may even blow up. He wears out (though very slowly), and he requires a certain amount of skilled attendance.

All this is on the assumption that a good mechanical horse can be found, and probably the questions our readers most desire to have answered are: How far is mechanical power available; or, at least, what prospects are there that such power will be available before very long? What will be the probable cost? What are the chief difficulties in, or objections to, its use? What sort of power will be the most convenient? These questions we will try to answer, in at all events a summary fashion.

Legal Obstacles.

First of all there is the legislative question. Locomotive engines on common roads can (under the Highways Act) only travel at a very slow speed, preceded by a man with a flag. Their wheels must have 3 inch tyres, and there are certain other conditions intended to prevent the roads from being damaged or horses from being scared. If a mechanical carriage is a locomotive these provisions obviously prevent its being used on a highway. But is it? It certainly is not a vehicle of the class contemplated by the framers of the Act, and it seems quite possible that in law it would not come under the Highways Act at all. A strong argument against mechanical carriages being so classed is found in a clause of the Customs and Inland Revenue Act of 1888, which includes mechanically-propelled carriages in the list of vehicles for which a licence has to be taken out, thus placing them on the same footing as ordinary carriages, and removing them from the category of road locomotives and traction engines. However, the cases which have been decided up to the present are against this liberal view, and until they have been upset or until fresh legislation puts matters on a reasonable footing mechanical vehicles can only appear on our roads on sufferance.

Electricity as a Motive Agent.

Assuming these artificial hindrances to be cleared out of of the way, what is to be the character of the mechanical carriage of the future? There are practically three sources of power available—steam, oil, electricity. The last-named, if practicable, would be the most convenient of all, but in practice it has been found the least successful of all three systems. In the recent French trials the electrically-propelled carriage failed entirely, though most elaborate and costly preparations had been made by its proprietor. Possibly, where ready means exist of charging a storage battery, electricity might be used to drive a private carriage, but only in exceptional cases could such means exist, and then the carriage could never go more than a certain distance—say half a day's journey—from its station. Its battery once exhausted it would become as helpless as a steamer with a broken screwshaft, and nothing would remain but to tow it ignominiously home.

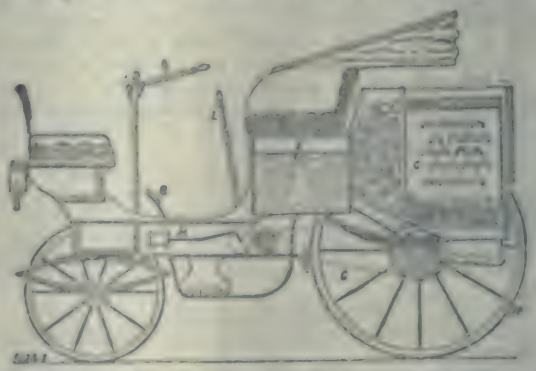
In the case of public vehicles, tramcars and omnibuses running from one charging station to another, the application of secondary batteries comes under different conditions, but these we are not concerned to discuss. As to primary batteries, no primary battery suited for work of this kind has as yet commended itself to the approval of electricians. The invention of one might go far to solve the question of mechanical road traction.

Oil Engines.

The successful competitors in France and the carriages recently shown by Sir David Salomons at Tunbridge Wells were all driven by oil engines, and the same class of motor is used in, at all events, the large majority of the vehicles now becoming popular in France and Germany. These engines are of the same type as the ordinary well-known gas engine, which is driven by a series of small explosions of mixtures of gas and air; but instead of gas they employ the vapour of light petroleum oil generated as required from a supply of such oil carried with the engine. They are by no means free from danger, and the benzolene which they require is a very unsafe material both to use and to store. The ordinary petroleum oil used for lighting purposes will not serve for the purpose. There is another form of oil engine, usually known as the naphtha engine, in which the oil vapour is used after the manner of steam in the steam engine, being condensed after it has served its purpose. These have been used both here and in America for the propulsion of launches; they are cheap, but more dangerous than the first mentioned class. We are not aware whether they have been tried for driving road carriages, but they are not likely to be so employed. All the oil engines give off an unpleasant smell of petroleum. They are of course absolutely free from smoke and steam. They can be started very quickly, as there is no delay for "getting up steam" as in the steam engine.

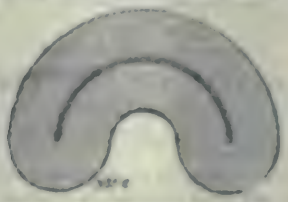
Steam Engines.

Notwithstanding these advantages, and the practical success these oil motors have attained, the tendency of expert opinion in this country seems to be in favour of steam. Engineers seem to believe that a small steam engine



can be constructed which will work as conveniently and as efficiently as the oil engine. The lightest and most efficient steam engine yet made is certainly the one constructed by Mr. Maxim for his flying machine, and it is quite possible that a motor of this class will prove the most suitable for road propulsion. The boiler for such an engine would be fired with petroleum such as is now used for lamps. For the present, however, the oil engine is the best motor available, though possibly the liberal prize offered for the best road carriage by *Engineering* may bring out something better. In order to give our readers an idea of the general arrangements of a mechanical carriage we reproduce (by the courtesy of the editor of *Engineering*, an illustration of a steam carriage in which the source of heat is coke.

The carriages of this pattern are designed and manufactured by MM. Serpollet, of Paris. The latest type of this carriage is shown in the diagram. The furnace and steam generator (G) is shown at the back. The reservoir of water is under the seat of the carriage. The steering apparatus, break, etc., are shown in the body of the carriage (D L B) near the hand. The boiler consists of a series of straight tubes of very thick steel having in section the form shown in our second figure. Water is admitted into these tubes at the



base of the boiler near the firegrate. Here it is almost immediately converted into steam, which becomes superheated as it passes through the upper tubes to the steampipe leading to the motor (M). Very little water is admitted into this boiler, but the tubes, on account of their great thickness, are able to retain so much heat as to render them unaffected by any temporary variations in the intensity of the fire. The iron casing round the boiler is lined by refractory brick to check radiation of heat. The carriage weighs about 13½ cwt. when empty, and will carry a load of four passengers at the rate of nine to fifteen miles, or even twenty-two on favourable gradients, so it is said. It consumes about 3½ lbs. of coke a mile, and uses about one-tenth of a pennyworth of lubricating oil in the same distance. It is stated not to make much noise, to give no smoke, and to show no steam except when the atmospheric conditions are very unfavourable.

The motor, whatever type be selected, may obviously be fitted to a carriage of any sort. A tricycle with added motor is spoken of as being a delightful form of conveyance. The rider may rely entirely on the engine, or he may use his feet as a supplementary source of power, or he can put the engine out of gear and work the tricycle in the ordinary way. At present the carriages which have been exhibited are rather expensive: £300 or £250 appears to be about their price; the cost of the tricycle is given at £62; but it must be remembered that they are more or less experimental, and the cost will drop considerably when they come to be produced in large numbers and on a manufacturing scale. The present price, moreover, is regulated not by the cost of production, but by the demand for a novel and fashionable toy. Probably it will not be a very inaccurate estimate to say that a carriage fitted with a motor will cost something about the same price, or rather less, than a similar carriage and the horse or horses required to draw it. The cost of working seems to be something like a penny a mile.

On the whole there seems to be every reason to believe that there will soon be available for general use several types of mechanical carriage, any one of which can be driven by a person without much mechanical knowledge or skill, some of which will be moderate in cost, and all of which will be much cheaper in working than similar carriages drawn by horse power. At present, however, the regulations of the Highways Act block the way, and till they are removed we shall probably have to content ourselves with looking on at the progress made in other countries.

A TEACHING UNIVERSITY FOR LONDON.

An influential deputation from institutions named in the report of the Royal Commission on the Gresham University waited, on November 28th, upon the Duke of Devonshire at the Privy Council Office, to urge that the Government should introduce at an early date a Bill similar to Lord Playfair's University Commission Bill, 1895, appointing a statutory Commission to carry out the recommendations of Lord Cowper's Commission, but with an added clause giving to all institutions or persons directly affected by any statute or ordinance proposed by the statutory Commission a right of appeal to the Privy Council.

Lord Kelvin introduced the deputation, whose views were enforced by Professor Rücker on behalf of the London University, Dr. Allchin for the Royal College of Physicians, Mr. Heath for the Royal College of Surgeons, Sir G. Young (University College), Dr. Ward (King's College), Dr. Frederick Taylor (Medical Schools), the Rev. Dr. Whitehorne (Cheshunt College), Sir H. Roscoe, and Professor Silvanus Thompson.

The Duke of Devonshire, in reply, said that he had listened with the utmost attention to the views expressed by those who had spoken. He believed the deputation was a very representative one, but he must make one reservation in regard to the large body of students, drawn from the whole British Empire, who could never avail themselves of facilities for university teaching in London, but who had in the past obtained from the London University in its examining capacity valuable guidance in their studies, and a highly-valued recognition of their acquirements. They would not expect that he should on this occasion commit the Government to any course. He had desired to learn what were the views of the bodies represented on the deputation, and it was equally his duty to obtain if possible an expression of opinion from the body of external students he had referred to. The Duke proceeded to refer to the differences of opinion on the scheme of a teaching university which had appeared in the Convocation of London University. He expressed the opinion that it would be a rather strong proceeding, that in order to create a teaching university a constitution should be imposed on the existing University against the will of Convocation, which, under its existing charter, possessed the right of imposing a veto on any alteration in its constitution. Professor Thompson said there was a majority of two to one in Convocation in favour of the scheme of a Statutory Commission. The Duke referred to certain amendments to the scheme which he understood were advocated by a majority of the existing graduates, and urged the expediency of doing everything that was possible to reconcile this opposition. If a Bill on the subject were presented to Parliament it was extremely desirable that it should come in a shape which would excite as little opposition as possible.

THE ANNIVERSARY CELEBRATIONS OF THE ROYAL SOCIETY.

Addresses by Lord Kelvin and Sir Joseph Lister.

On Saturday, November 30th, St. Andrew's Day, the anniversary meeting of the Royal Society was held at Burlington House. The auditors of the Treasurer's accounts having read their reports, and the Secretary having read the list of Fellows elected and deceased since the last annual meeting, Lord Kelvin, the President, proceeded to deliver his address. Of four of the deceased members, Cayley, Neumann, Huxley, and Pasteur, he made special mention. Of the late Professor Huxley, the President spoke as follows: "The death of Huxley, one of my predecessors in the presidential chair of the Royal Society, takes from us a man who can ill be spared. During the fifty years since he sailed from England as assistant surgeon on board H.M.S. *Rattlesnake* bound for a surveying expedition in the southern seas, he had been a resolute and untiring searcher after truth, and an enthusiastically devoted teacher of what he learned from others and what he discovered by his own work in biological science. His first contribution to science was a short note, communicated while he was still a student in the Charing Cross Hospital to the *Medical Times and Gazette*, describing a structure in the root sheath of hair, which has since borne the name of 'Huxley's layer.' It was followed by papers on the blood corpuscles of the amphioxus lanceolatus and on the anatomy and affinities of the family of medusæ, for the British Association and the Royal Society; and several other articles on various biological subjects, all describing some of the work of the leisure left him by his medical duties during his four years' cruise on board the *Rattlesnake*, which were sent home by him to England and published during his absence. It is to be hoped that the long series, thus so well begun, of papers [illegible] skilful and laborious research by which knowledge was increased in every department of biology, will be given to the world in collected form as soon as possible. Even those purely

scientific papers contain ample evidence that Huxley's mind did not rest with the mere recording of results discovered by observation and experiment; in them, and in the nine volumes of collected essays which he has left us, we find everywhere traces of acute and profound philosophic thought. When he introduced the word "agnostic" to describe his own feelings with reference to the origin and continuance of life, he confessed himself to be in the presence of mysteries on which science had not been strong enough to enlighten us, and he chose the word wisely and well. It is a word which, even though negative in character, may be helpful to all philosophers and theologians. If religion means strenuousness in doing right and trying to do right, who has earned the title of a religious man better than Huxley?" Of Pasteur, introduced as another name literally of world-wide fame, Lord Kelvin said: "Having been led to trace microbes as the origin not only of fermentation and putrefaction, but of a vast array of destructive blights happening to plants and animals—vines, silkworms, birds, cattle, and mankind—Pasteur was forced to take up the question, as of supreme practical importance, Whence came these microbes and what are their antecedents? Pasteur set about to trace the antecedents of every microbe he met with, and he found for it in every case a living thing, whether in the air, or in water, or in earth. During all the latter part of his life and to the end Pasteur devoted himself to biological research and to vigorous practical realisation of its benefits for the world." A statement of the work for which medals were to be conferred followed, the awarding of the Davy medal to Professor Ramsay being described as a crowning act of recognition of his work on argon and helium, which had already been recognised as worthy of honour by scientific societies in other countries. Lord Kelvin concluded his address by acknowledging the kindness he had received during his five years of office. Medals were then presented to Dr. John Murray for his services to biological science and oceanography in connection with the *Challenger* reports, and for his original contributions to the same; and the Davy medal to Professor William Ramsay, F.R.S., for his share in the discovery of argon, and for his discoveries regarding gaseous constituents of terrestrial minerals.

In the evening the anniversary dinner was held in the Hôtel Métropole, when the newly elected President, Sir Joseph Lister, occupied the chair. A large and distinguished company sat down. In replying to the toast of "The Royal Society," proposed by Mr. Shaw Lefevre, the President took occasion to recall the deaths which had occurred during the year among those Fellows of the Royal Society who were members of his own profession. Among others he mentioned Sir W. Savory, a distinguished surgeon and a man of general eloquence; Mr. Hulke, one of the most accomplished members of the profession, and at the same time a most eminent geologist; Sir George Buchanan, who was a fellow student with himself and a pioneer in sanitary science, rendering important service in that department; and last, not least, Thomas Henry Huxley. Huxley's claims to the admiration and gratitude of mankind were set forth fully in the great meeting recently held to do him honour, and Lord Kelvin, in his address in the afternoon, had further referred to them; but he should like to say a word with regard to Huxley's personal character, and to express the great admiration he had for that character. They might not all of them feel the difficulties Huxley had with regard to matters of supreme interest, but those very difficulties only made more striking his virtues, and well indeed would it be for mankind if all had his perfect truthfulness, his large-hearted benevolence, and in equal measure, if he might borrow Lord Kelvin's expression, the religion that consists in the strenuous endeavour to be and to do what is right. Again, he could not avoid expressing the grief he felt in common with the whole scientific world at the death of M. Pasteur, who was, perhaps, as conspicuous an example as the world ever saw of how pure science might lead to the conferring of incalculable material benefits on mankind. The first time he himself saw M. Pasteur was in his laboratory. It happened that on that occasion the great physiologist was good enough to demonstrate to him a fact of very great physiological importance. It could only be demonstrated upon a rabbit. A small incision was made. It was an operation involving really but little pain, but he well remembered M. Pasteur's exclamation, "*Pauvre bête!*" From that he derived the impression that M. Pasteur was a man of tender heart, and that impression had been confirmed by all he had known since of him and his career. Little did those imagine who lightly spoke of M. Pasteur as cruel because some of his most beneficent work had required experiments on animals—experiments which, if the truth were known, involved but little suffering—how benevolent and humane a man it was whose character they thus ignorantly and lightly traduced.

THE BATTLE OF THE CLUBS.

At a meeting of the Dundee and District Branch of the British Medical Association, held on November 30th, the following resolutions were adopted:

Medical Aid Associations.—That is is derogatory to the dignity of the medical profession for any of its members to become medical officers to any medical aid association, and that no practitioner holding any such officer should be eligible as a member of the Branch.

Medical Clubs and Friendly Clubs.—(1) That in this district there is practically no abuse as regards the wage limit. (2) That medicines being excluded no fee less than 2s. 6d. per annum per adult member be accepted, and that medicines being included the minimum fee be 4s. 4d. per annum. (3) That in all cases a fee be paid for examination of candidates, and that the minimum fee be 2s. 6d.

[This last clause was agreed to after a division. The Council were instructed to arrange a conference with the officials of the various friendly societies.]

Unregistered Dental Practitioners.—That in the opinion of this Branch, members of the medical profession ought not to administer anæsthetics for unregistered dental practitioners.

LITERARY NOTES.

The Rebman Publishing Company announce for immediate publication a new edition, revised and brought thoroughly up to date, of *A Textbook of Surgery*, edited by Wm. W. Keen and J. William White; a new work, *The Pathology and Surgical Treatment of Tumours*, by Professor N. Senn, and a new edition of the same author's *Principles of Surgery: A Textbook of Obstetrics*, edited by Dr. R. C. Norris and R. L. Dickinson (as art editor), with the help of sixteen collaborators. The same firm has just issued a new (third) edition, in one volume, of Dr. J. V. Shoemaker's *Materia Medica and Therapeutics*.

The *Russisches Archiv für Pathologie, klinische Medicin und Bacteriologie* is the title of a monthly periodical, the first number of which will appear in January, 1896. The editor will be Professor W. W. Podwyssotzky, of Kieff, who will have the leading scientific authorities in Russia as collaborators. It is intended to place the work of Russian investigators and clinicians before the medical world. Abstracts of the original papers will be given in French.

A new periodical devoted to cancerous diseases has just appeared in Paris. Its name is *Revue des Maladies Cancéreuses*, and it is published under the direction of Professors Duplay, Lannelongue, and Cornil. The editor is Dr. Ozenne. The new review will be published quarterly.

Since the death of Professor Moos, of Heidelberg, the *Zeitschrift für Ohrenheilkunde* (which is the German edition of the well-known periodical conducted by Professor Knapp, of New York) has been edited by Professor Körner, of Rostock, and Dr. Arthur Hartmann, of Berlin, the former having charge of the original contributions, and the latter of the reports of societies, etc.

Dr. Burney Yeo has an article entitled "Medicine and Society" in the *Nineteenth Century* for December. It was, we understand, delivered as an address to the Medical Society of King's College.

Mr. H. K. Lewis will shortly issue in his "Practical Series" *The Treatment of Pulmonary Consumption*, a practical manual by Drs. V. D. Harris and E. Clifford Beale.

Our Belgian contemporary, *La Flandre Médicale*, which was originally started as the organ of the profession in Ghent, has has been so successful that, after transforming itself from a fortnightly into a weekly periodical, it has now changed its name to *La Belgique Médicale*, by way of indicating that it is no longer a local but a national journal.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 7TH, 1895.

THE ASSOCIATION, THE PROFESSION, AND THE JOURNAL.

Our Progress and Our Programme.

It has for many years been the custom in this annual number of the British Medical Journal, in which our programme for the ensuing year is set forth to the profession at large, to take our readers into our confidence and to discuss some leading features in our work during the past and our plans and forecasts for the immediate future.

This is the more useful and the more easy because for the most part our readers are also "our members"—members in common of the body corporate with which we are associated, and of which the Journal is at once an exponent and a leader. The issue of the programme number throughout the profession has now for thirty years proved to be the chief recruiting agent of the Association, and the medium by which the greater percentage of the new members enter. To those who desire to possess the Journal, but who for various reasons cannot be accepted as members, it is furnished at annual rates varying from 26s. to 32s. per annum; and of these there are now upwards of 2,000. But to all regular members of the profession of good standing the alternative is offered of acquiring the Journal for a reduced annual payment of one guinea, which covers at once the cost to them of the Journal and of all the other privileges of membership. It is of course impossible to assess these privileges at any money value, but they include the moral and social value of association and of the annual and other meetings, the powers arising out of organised and common action through a powerful and extended machinery, with an experienced and devoted general manager and secretary; the pride and honour of advancing knowledge by scientific grants; the convenience of a reading room and library; facilities for intercommunication and the activities of special organisations and committees, such as the Parliamentary Bills Committee, the Inebriates, Medical Charities, General Practitioners, and Therapeutic Committees, each pursuing stated public and professional purposes and supplied with funds from the surplus income which the Journal provides, and which its continually increasing success annually magnifies.

In addition to these returns, for the reduced subscription of a guinea, and in addition to supplying the cost of conducting the central work of the Association in all its departments, the Journal yields by its weekly receipts from advertisements and sales an annual sum of just upon £17,000—a sum nearly equalling the total receipt from subscriptions, and sufficiently large to admit of putting aside a surplus, which has reached now the respectable sum of upwards of £40,000, and which is increasing from these various sources by an average annual increment of £3,000.

These satisfactory results have been achieved within a period of thirty years—since 1866. During the previous forty years, when the Journal was small in size and attracted but a limited circulation, the total paying membership had hardly reached 2 000, and the accounts of the Association were with difficulty balanced; any expenditure on grants or committees had to be met by a special subscription. The actual membership is now over 16,000, and the subscriptions for 1894 were over £16,500, being eight times as large, while the Journal has been developed to ten times its former size and contents without any additional charge to the members. The total circulation of the Journal including those who cannot be allowed to become members, and who have, therefore, to pay 25 per cent. more than those who add membership to the other privileges of subscription, brings the total up to more than 19,000. We are able to look forward as confidently this year as in previous years to a further increment of the members of the Association from the distribution of the present issue beyond the bounds of the existing membership. Besides obtaining the Journal at a reduction of 25 per cent. below its normal subscription price, the elected member obtains the satisfaction and advantage of joining a professional body which has now been developed into the most numerous and the most popularly constituted that has ever yet grown up in any profession. The Association does not aim at any financial profits or material and personal advantages; its constitution, as laid down by its founders, defines its objects to be:

> The objects for which the Association is established are the promotion of medical and the allied sciences, and the maintenance of the honour and the interests of the medical profession by the aid of all or any of the following:
>
> (a) Periodical meetings of the members of the Association, and of the medical profession generally, in different parts of the country.
> (b) By the publication of such information as may be thought desirable in the form of a periodical journal, which shall be the journal of the Association.
> (c) By the occasional publication of transactions or other papers.
> (d) By the grant of sums of money out of the funds of the Association for the promotion of the medical and the allied sciences in such manner as may from time to time be determined on.
> (e) And such other lawful things as are incidental or conducive to the attainment of the above objects.

For these it was incorporated; to these it is by its form of incorporation limited; for these it has laboured and will continue to labour.

If we ask for the results of these labours we have only to look about us. The passage of the Medical Acts, the establishment of a *Register* and the protection of medical titles, and the existence of the General Medical Council; the unification of the profession in the three kingdoms, and the concurrent rights of practice in all parts of the kingdom; the remarkable elevation of the minimum standard of education; the prescription of a double qualification; the arrest of the "downward competition" of examining bodies—these are some of the larger results of the organised action of the Association in relation to internal organisation of the profession. They have transformed the profession, united it, and raised its whole character and standard. In its

public relations, too, to it are chiefly due the Royal Sanitary Commission and the Public Health Acts. To the JOURNAL may be credited, among other things, the Infant Life Protection Act, the Notification of Diseases Act, the creation of the Medical Sickness Annuity and Life Assurance Society, the steady defence and successful advocacy of the rights and privileges of the medical officers of the naval and military services, great advance in the organisation and remuneration of the Public Health and Poor-law medical services, and many notable achievements in the amendment of the relations of the practitioners to the State. The scientific and clinical value of its original papers, reports, reviews, special commissions, and Epitome of Medical Literature are self evident, and have reached a standard never before or elsewhere attained.

The advantages of the Branch meetings and of the annual meetings are no longer in need of advocacy; they are among the most prominent reasons and uses of membership. The JOURNAL is the mainstay and backbone of the Association, but the most certain hope of increasing its stability and development lies in popularising, extending, and strengthening the activity and influence of the Branches, which are the constituent bodies of the Association and the electors of the Council.

We repeat that although the limits of possible extension among the dwindling outside circle of non-members and non-subscribers shrink every way in proportion to our increasing annual growth, yet the experience of past years leads us to anticipate that the period when this, our annual appeal, will cease to be fruitful in the large recruitment of new members is not yet at hand, for the value of the JOURNAL continually grows, while the price of the subscription remains at a guinea, as it was fixed sixty years ago, when both it and the Association were relatively small.

During the past year the increase in circulation has been no less than 800. The coming year will witness the debate in our columns, and in the Council and Branches of the Association, not only of many great questions of scientific and practical progress in medicine and surgery, of which our programme on the inset will give a few preliminary details, but also of many problems of administration and organisation of active present interest. For many abuses and needs the profession is powerless to seek or provide a remedy outside of the local or central representative organisations of the British Medical Association. Among these are the midwife question, that of the reorganisation of the General Medical Council, the organisation of successful opposition to the medical aid societies, the abuse of hospitals, and the rampant malpractices of quacks.

Time and unity, moderation, and good statesmanship are needed to deal with these difficulties: finally to dispose of them will need all the strength, intelligence, and combination of purposes of a great profession, the whole of which is practically active in its Branches, and through them represented on the Council of the Association. As are the Branches, so must and will be the Association. The constitution of the Association enables and requires the Branches to express their views through their representatives, and this is really the only intelligible and stable mode of constitution.

DR. PATRICK MURISON has been elected to represent the fifth ward of the City of Dundee by a very large majority.

THE PARLIAMENTARY BILLS COMMITTEE AND MEDICAL OFFICERS OF HEALTH.

IF anyone wanted an object lesson of the multifarious activities of the British Medical Association, he could not do better than read the minutes of the Parliamentary Bills Committee, as published in the BRITISH MEDICAL JOURNAL of November 9th. This Committee has on many occasions done invaluable service, and as usually happens under such circumstances, its duties steadily grow. It has become the active intermediary between the Association, or indeed the profession, and the Government, and is constantly making itself heard by every department of the State on questions affecting medical interests.

At the meeting referred to, an ample bill of fare was placed before the members. The registration of nurses, the opening of workhouse infirmaries and lying-in hospitals for the teaching of male medical students in midwifery, the necessity of a further inquiry into the whole question of meat supply and inspection, the demands of medical officers of health for security of tenure in their appointments, the opposition to the registration of midwives, and the improvement of nursing in provincial workhouses and infirmaries, together with cases of grievance suffered by medical officers in the public services, formed a *menu* for the most omnivorous worker.

Other questions over and above these, of which the Committee has hitherto had the charge, such as the amendment of the Medical Acts, may, as they become more pressing, have to be dealt with by a smaller and more specialised committee, like the old Medical Reform Committee. Such a committee might also appropriately and usefully oppose any attempts to invade the rights of medical practitioners, like that attempted by the last Midwives Bill.

The Parliamentary Bills Committee is seen at its best in dealing with the administrative functions of the Government and in enlightening the official mind as to the real aims of State medicine. For example, the whole subject of the inspection of the meat and milk supply has been raised by the report of the Commission on Bovine Tuberculosis. In this connection there is work for the Committee, and medical counsel will be pre-eminently useful in suggesting the measures best calculated to save the community from the danger of a serious spread of tuberculous disease.

Security of tenure for medical officers of health in their appointments is a question on which real good has already been effected. Largely by the efforts of the Parliamentary Bills Committee permanent appointments have been secured for health officers in the metropolis and Scotland. In the early part of the year an important deputation, organised by the Parliamentary Bills Committee, made representations to the Local Government Board in favour of the universal application of this principle. The case was then stated in all its overwhelming strength, but the results have not yet been fully gathered. It must be borne in mind that until Parliament has time to amend the Public Health Acts the full measure of justice which the profession desires cannot be attained. The new Government will have the opportunity of doing this necessary piece of work. The late Government made an advance in this much desired direction by doing what it could to encourage the local authorities to make

longer or permanent appointments of health officers. The Parliamentary Secretary promised this much to the deputation of last March, and now the local authorities are always informed that it appears to the Board that in future, where a medical officer of health discharges his duties satisfactorily, the district council may consider whether it may not be desirable, on the renewal of the appointment, to appoint him for a term of years, if not permanently. This intimation, at all events, gives the right bias to the bodies newly constituted under the Local Government Act, 1894, and in a few instances it has already been followed by good effects.

We would urge upon medical officers of health everywhere to see that the hint of the Local Government Board is not overlooked. There can be no good reason why, in the interests of efficient administration, a health officer should be placed as regards the security of his appointment in a more precarious position than a clerk or any other official. There are overwhelming reasons on the other side. The delicacy of the health officer's functions, the intimate and intricate connections which his work has, not only with the well-being of the community but also with the pecuniary interests of influential property owners, make it imperative that he should be vigilantly shielded in the performance of his duty. The Parliamentary Bills Committee cannot do better than press the matter on the attention of the Government. A second deputation may be necessary later, but for the present it would be wise to try to induce the Local Government Board to put a little more pressure on the local authorities. It is, we are aware, a most delicate and difficult matter to adjust wisely the amount of influence which can be exercised by a central authority like the Local Government Board on bodies which are practically independent. The whole tendency of modern legislation has been to give localities more and more independence in administration. The passage of the great Local Government Act of 1894 has developed and extended this policy. In matters of public health, however, the long-garnered experience of the Local Government Board and the scientific authority which it derives from its permanent medical staff lend a weight to its judgment and advice which local bodies would be wise to follow. They should be encouraged in this course by a more decided expression of opinion on the part of the Local Government Board. The more widely the question is brought before the new district councils now, the less difficult it will be to carry security of tenure hereafter, when the expected amendment of the Public Health Act is undertaken. We calculate that about two out of every three of the present health officers outside London are appointed annually. There is, therefore, very useful work to be done in every district by the members of the profession in bringing the importance of this question to the notice of the urban and rural district councils. Let the profession do its part, and the Association, through its Committee, will be ready to help them to a successful result.

Wills and Bequests.—The late Mr. George Charles Benn, of Rugby, who died on October 15th, aged 73, has by his will bequeathed £1,000 to the Northampton Infirmary, £500 to the Birmingham and Midland Counties Eye Hospital, £500 to the Birmingham General Hospital, £500 to the Royal Hospital for Incurables. The testator devises the Boxcat Farm of about 145 acres in Northamptonshire to the Northampton Infirmary.

THE GENERAL MEDICAL COUNCIL.

The November session dragged its weary length over the week, and only concluded on Monday last. Our readers will find a full record of its proceedings elsewhere, so we propose to call attention here only to its more important features. On the whole it was a very dull session, and to the ordinary observer there was, if anything, more than the usual waste of time. This was especially the case over the report of the Examination Committee. That report was before the Council on several days, and occupied no small portion of three sittings, with the result that its recommendations were referred back to the Committee, to be drawn up in a form more suitable for transmission to the licensing authorities. The way of the Council with its reports is curious. They are presented and received, then discussed in committee of the whole Council, usually at considerable length, and then discussed again in the Council on report. The details are thus often debated on two, or even three, occasions, and when this ends in the remission of the report to its Committee, plain men of business are apt to consider the mode of procedure wasteful of time and patience.

In the case before us the report of the Examination Committee, dealing, as it did, with the results of the visitation and inspection of all Final Examinations in the United Kingdom during the last three years, was necessarily an important document. It failed, however, to reach the standard required by the Council. When it has been improved by having its recommendations codified with the former recommendations of the Council, and by the addition of specific references to the authorities which have failed to come up to the recommendations it will become an authoritative and valuable report. The Public Health Committee, on the other hand, made a model report on the examinations in Sanitary Science, which the Council adopted in a small fraction of the time spent over the remitted document.

The comparative barrenness of the session was, however, redeemed by two significant and novel departures. The Council has resolved to lessen the number of portals to the profession, and has determined to prosecute offenders against Section 40 of the Medical Act (1858).

The Apothecaries' Hall in Ireland, till recently, was conjoined with the Irish College of Surgeons, but this examination was reported to the Privy Council last May as "insufficient." Since then the Hall has been unable to form any fresh combination, and consequently applied to the Council to appoint examiners as provided in the Act of 1886, and as was done in the case of the Apothecaries' body in London in 1887, when it was unable to combine. There was a very interesting debate, in which, *more Hibernico*, the Irish bodies were not unanimous on their national concerns. There was also a little want of logic in the position assumed by the majority, who refused the application, inasmuch as they based their refusal to grant examiners, either surgical or general, on the ground that they had found a combined body "insufficient," while the application was preferred for the construction of a new examining body, of which the Council itself would create and control a large portion of the examiners. We admit that we are not sorry to see a step taken at last to lessen the number of portals to the

profession, but as this matter is pretty certain to come before the Privy Council by way of appeal against the extinction of the Apothecaries' Hall in Ireland, it is best not to discuss it further at present.

The other new departure we welcome most heartily. Persons still advertise, often in connection with very objectionable publications, in such a way as to lead the public to regard them as registered practitioners. This illegal assumption of medical titles, the 40th Section of the Act of 1858 was enacted to prevent. The Council has now resolved to prosecute by its own legal advisers such offenders. It has taken many years to arrive at this determination, but it is a case of better late than never. It may be too late to win for the Council that popularity with the profession which it might once have won, but it is not too late to leave the old and beaten track of timidity and impotence, and make use of all and every power which the Act contains to vindicate the profession and protect the public.

The Lord Rector of Edinburgh University, the Right. Hon. the Lord President of the Court of Session, will deliver his inaugural address to his constituents, the undergraduates, on Friday, December 6th.

The Government of India has ordered that copies of Mr. Hankin's pamphlet, entitled the *Cause and Prevention of Cholera*, shall be issued to all medical officers, with instructions to record the results of any experiments made by them and to communicate the results direct to Mr. Hankin at Agra.

It is gratifying to hear of the further testimony of the usefulness of the Library of the British Medical Association, which is open to all members, and is being daily used by increasing numbers of readers. In his preface to the new work, *Surgical Diseases of Children*, Mr. D'Arcy Power says: "The collection of theses for the Paris M.D. which is being augmented daily at the Library of the British Medical Association has afforded me invaluable assistance, for each contains a valuable bibliography in addition to the original work, which is often important."

ADDENBROOKE'S HOSPITAL.

The history of the origin of Addenbrooke's, as of so many other hospitals, was, to parody the old definition of a proverb, the needs of many and the munificence of one. It has been retold in a recent number of the *Cambridge Review*. Addenbrooke was a Fellow of Catharine Hall, who, when he died in 1719, left a bequest to found "a small Physical"—that is to say medical—"Hospital for poor people." Some twenty years later a small hospital was built, but funds were wanting to carry it on, and it was not until, in 1766, an Act of Parliament was obtained to make the institution a general hospital, and to give to subscribers of two guineas the privileges of governors, that Addenbrooke's Hospital was able to begin the work which has been carried on to the present with ever-widening scope. In 1865 the hospital was practically rebuilt, and with the additions since made its accommodation has been raised to 153 beds, and it is now one of the best equipped hospitals of its size in the country. As the hospital of the University town which has the largest and best equipped extra-metropolitan medical school in England, Addenbrooke's is a hospital in which the medical profession must take a peculiar interest. Owing to the special constitution of the hospital, fixed by the Act of George III, there is no direct connection between it and the University, but, it is stated in the article in the *Cambridge Review*, "no difficulty has ever arisen to mar the cordial relations between the hospital authorities and those of the University School of Medicine" throughout the fifty years during which medical students have been admitted for clinical teaching to its wards; yet the want of a connecting link has been felt, and probably the many medical graduates of Cambridge could not find a better mode of showing their gratitude to their Alma Mater than by becoming governors of Addenbrooke's Hospital, which, it would appear, finds some difficulty in meeting all demands upon its pecuniary resources.

THE BATTLE OF THE CLUBS.

Last week we had the pleasure of recording how, by standing shoulder to shoulder, and frankly appealing to the good judgment of the majority of club members, the Portsmouth Medical Union had won a complete victory against schemes which would have rendered intolerable the position of the medical officers of certain clubs there. This week we publish an extremely encouraging letter from the Honorary Secretary of the Inverness Medical Society relating the steps which have been taken there since the meeting in April last, when resolutions were adopted relating to medical attendance on members of clubs and friendly societies. The medical men in actual practice in Inverness are perfectly unanimous, and it appears that, as has happened in other places, the clubs are now advertising for a medical officer to "several benefit societies." We desire to call the attention of any young practitioner who may be tempted to apply for the appointment to the disadvantages by which it is surrounded. These are sufficiently set forth in Dr. Moir's letter at page 1461. Briefly stated, they are that he will be used to inflict a permanent injury on the profession to which he belongs, that he will be expected to do an immense amount of work, and will be paid a salary on which it will hardly be possible to keep body and soul together. It is honourable to refuse wealth in order to retain independence, but to be a slave and poor is not only degrading but contemptible.

THE TEACHING UNIVERSITY FOR LONDON.

It must be confessed that the large and important deputation representing all the institutions in London mentioned in the report of the Gresham University met with rather a chilling reception from the Duke of Devonshire on November 28th. Lord Rosebery, last January, was more genial if not more hopeful. He did indeed insist that there was little hope of passing a bill through Parliament for the creation of a Statutory Commission if it were to be met with serious opposition from any quarter in the House of Commons, and urged therefore the necessity for a compromise which would remove the opposition threatened, but personally he seemed to be strongly in favour of the proposed action. The Duke of Devonshire, his successor as Lord President, appears to be equally fearful of the effects of criticism in the House of Commons, and more deeply impressed with the difficulty of conserving the rights of those extern students who now obtain the degrees of the existing University without attendance at any teaching college. Further, he laid great stress on certain "amendments" which had been placed in his hands by those members of the old Annual Committee of Convocation who had been nominated to consult with the Senate on the matter. It should be remembered that this consultation never took place owing to the fact that the large majority of the old Annual Committee were not re-elected but were replaced by others well known to hold opinions favourable to the appointment of a Statutory Commission to frame statutes in general accordance with the report of the Gresham Commission, with power to make such modifications as they might see fit after hearing Convocation and other bodies affected. Practically this is what the deputation to the Duke of Devonshire asked; it is what the Senate desires, and what Convocation in

meeting assembled, the only fashion in which legally it can express an opinion, has on two occasions approved by considerable majorities. The amendments to which the Duke of Devonshire referred appeared to be certain suggestions which five members of the old Annual Committee appointed to meet to consult with the Senate submitted to a Committee of that body. These gentlemen, however, by that time had ceased to represent the Annual Committee, and in fact did not possess any representable quality. The "amendments" themselves appear to deal with matters of detail of such a nature as might properly be urged before the Statutory Commission which it it is sought to have appointed. A certain number of members of Convocation, however, appear now to wish to go a good deal further. As will have been seen by a paragraph in the BRITISH MEDICAL JOURNAL of November 30th, a meeting of members of Convocation was held on November 26th, and an opinion expressed that any scheme settled by Statutory Commission should afterwards be submitted to Convocation, for its approval or dissent. This was a private meeting, and the views there expressed cannot be accepted as having any authority. The proposal is contrary to the precedents established when it has been found necessary to institute reforms in other universities; and it seems hardly reasonable to expect Parliament to submit the decisions of a Statutory Commission, which is almost tantamount to saying the decisions of Parliament itself, to the veto of the Convocation of the University of London.

EXTENSION OF THE EDINBURGH ROYAL INFIRMARY.

At a meeting of the Extension Committee of the Edinburgh Royal Infirmary held on December 3rd, it was resolved to recommend that the extension operations should at once be proceeded with. By means of the large legacies lately received the debt on the existing buildings has now been paid off, and a balance of £30,000 to £35,000 left on hand. It is known that other funds will soon be received sufficient to bring the amount up to £50,000. Plans by Messrs. Sydney, Mitchell, and Wilson, architects, were submitted at the meeting. These indicate three new pavilions on the site of the old Sick Children's Hospital, and behind it. There will also be a small pavilion for diseases of the skin, with attendant offices, baths, etc., and a much-needed new laundry. All this scheme would cost about £100,000. It is proposed that a first instalment of this, to the cost of £50,000, and to include the laundry, should at once be begun, leaving the rest till funds have been received.

THE RABIES EPIDEMIC.

THERE can no longer be any doubt that the whole country is about to suffer from another severe epidemic of rabies, and for this the policy of the Board in Whitehall is wholly responsible. The severe outbreaks which during the past twelve months have occurred in various provincial centres, and which the utterly futile system of partial muzzling has been powerless to restrain, have naturally resulted in a spread of the disease over wide areas, and the metropolis is now threatened with a recurrence of the disastrous experiences of the years 1885 and 1886. The direct responsibility for this lamentable outlook rests, as we have again and again pointed out, with the Board of Agriculture, an authority which by its supineness and neglect to exercise the powers entrusted to it by the Legislature merits the severest censure. In January, 1894, a grave protest against the withdrawal of the general muzzling order was made by the Society for the Prevention of Hydrophobia, warning the Department that until a general muzzling order was enforced for twelve months simultaneously throughout Great Britain, the extinction of rabies would be impossible, and that deaths from hydrophobia would inevitably recur. This memorial, which was signed by the Duke of Northumberland as President of the Society, also bore the names of Sir Joseph Lister, Sir Spencer Wells, Professor Victor Horsley, Dr. Ruffer, Dr. Gowers, and Mr. Ernest Hart, as well as those of Professor Huxley, Professor Tyndall, Professor Ray Lankester, and Mr. Romanes, besides such recognised authorities on canine matters as Mr. Irwin Cox, Dr. Fleming, Mr. Everett Millais, and Mr. Briton Rivière. To this protest Mr. Chaplin, then President of the Board of Agriculture turned a deaf ear, and now the result anticipated has come to pass. Each succeeding Government is afraid to touch the question of general muzzling for fear of encountering the opposition of a section of its political supporters. Rabies might be stamped out of the United Kingdom by the enforcement of a general muzzling order for a sufficiently long period, followed by permanent quarantine regulations, as it has already been stamped out in other countries; and the majority of dog owners and dog breeders are quite as strongly in favour of muzzling as those who have no interest in dogs. But until the epidemic assumes such dimensions as to create a feeling of panic amongst the general public we may expect the official policy to be still one of *non possumus*.

HOUSE SPECULATION AND SANITARY AUTHORITIES.

THE Secretary of the Metropolitan House Investment and Agency Company (Limited) has sent to each member of the Islington Vestry, to the vestry clerk, and to the *Islington Gazette* a letter complaining of the expense occasioned to owners of house property in Islington by the manner in which the sanitary department of the vestry are enforcing the powers conferred upon them by the Public Health Acts. The letter states that the company owns sixty-eight houses in the parish and collects the rent of fifty-one other houses, making a total of 119 houses, of the aggregate net annual rateable value of £3,500, or thereabouts. "During the period from January 1st, 1894, to the present time," the letter continues, "notices have been served by your sanitary department on no fewer than fifty-three of the above mentioned houses, necessitating in all but two or three cases the entire relaying of the drains and erection of ventilating shafts, etc." The writer observes, "This continuous outlay renders house property in your parish almost worthless"; and he adds, "My directors some time since resolved that no more houses should be purchased in your parish, and notwithstanding the fact that this company has since purchased £50,000 worth of property in London, not a single house has been bought in Islington." Mr. A. E. Harris, the Medical Officer of Health, in forwarding a copy of the letter in question to the Local Government Board, writes: "In every instance the premises were visited, either by reason of the occurrence of an infectious disease or through complaint having been made to me of their insanitary condition." Mr. Harris observes that the document affords a strong argument in favour of Section 108 (*c*) of the Public Health (London) Act, 1891, which provides that the appointment of a medical officer shall not be for a limited period only; and he says, "I shall fearlessly continue to perform my duties in a manner consonant to the regulations laid down by the Local Government Board for my guidance."

THE TRAINING OF GIRLS.

A STUPID argument has more than one mischief in it; it is not only wasteful and wearisome in itself, but it actually damages the side on which it is urged, in so far as it drives more clear-sighted men to think that there can be nothing to say on the side which uses such arguments. Such we must say with all respect were the feelings with which we read the reports of a discussion on the woman question in the College of Physicians the other day. Stupid worn-out arguments on one side drive opponents to an intolerant forgetfulness of what truths may lie on the side of the "stupid party." The admirable remarks of Dr. Playfair, which we publish elsewhere, serve by their open-mindedness on both sides of the question to steady our minds. Side by side with a cordial sympathy with the enlargement and invigoration both of body and mind which the

new life has given to women he does not forget what lies at the bottom of the more reasonable objections to women's work in the world—namely, that she works under certain sexual conditions which she is disposed in her enthusiasm to minimise or ignore. Women will do well to give heed to the wise and generous cautions of Dr. Playfair, and this the more that the sacrifices he imposes are not so very burdensome after all. The ideal state for a woman is to ally herself with a husband of aspirations and culture no less than her own, and to find her peculiar happiness in the blessing of children. Not the least of the gains to be drawn from a more cultivated woman is that they may thus wean men from their more vulgar ideas of money-getting and ostentation, and from their grosser pleasures. Now, while we take a little objection to Dr. Playfair's literal statement that the great sexual function of menstruation dominates a woman's whole existence—an expression which, taken apart from the rest of his article, seems to ignore the psychical side of womanly sexual development—yet we cannot too strongly urge upon women, and those who have charge of girls, to watch and carefully respect the menstrual periods in their occurrence. Some of us were of opinion that by a little courage and habit, and in a higher state of bodily vigour, the menses might be disregarded in regular callings and exercise. We have changed this opinion, and have convinced ourselves that girls and women are unwise in pursuing their exercises, whether of body or brain, at any rate during the first two days of the period. This precaution is economical in the end. Employers of women, in paying lower wages, ought to give some relief in this matter in return; and mistresses of households ought to have some regard to this recurring event in the women under their care. Some women need this consideration more than others.

CONVICTIONS OF SUPPOSITITIOUS SURGEONS.

A correspondent has called our attention to paragraphs in the *Clevedon Mercury*, from which it appears that at the last Somerset Quarter Sessions two persons, described as "Surgeon" and "Doctor of Medicine" respectively, were convicted and sentenced to imprisonment. In the one case it is stated that "John Young, 74, Surgeon," was sentenced to three months' imprisonment, with such hard labour as he was capable of performing, for false pretences at Radstock and Midsomer Norton, and for false pretences at Shepton Mallet, under the names of James John Young and John de Courcy Young. In the other case, James Russell, *alias* Francis Victor Devene, 39, Doctor of Medicine, was sentenced to six months' hard labour for false pretences at Stoke-sub-Hambdon and Mudford. We have made inquiries, and find that neither of these persons is or has been upon the *Medical Register*. It would not be too much to expect that the police authorities, in framing indictments and drawing charge sheets, should take the trouble to find out whether such titles as Surgeon or Doctor of Medicine are actually legally possessed by prisoners, so as to prevent the slur being cast upon the medical profession by its appearing in the court records or reports that qualified medical practitioners were convicted and sentenced, when such is not the case. The *Medical Register* is perfectly easy of access to the police, and is in every assize court, so that there can be no excuse for these false descriptions of prisoners.

BELFAST ROYAL HOSPITAL.

The vacancies created by the lamented death of the late Dr. Ross have been filled up. At a meeting of the life governors and General Committee held upon December 2nd. Dr. Strafford Smith, who has been assistant physician for the last seven years, was unanimously elected staff-physician. To the post vacated by Dr. Strafford Smith, Dr. W. Calwell, who has been registrar to the staff of the hospital for the last two years, was elected by a large majority. For the post of registrar now vacant, which is in the gift of the staff, a large number of candidates have presented themselves. The post is an onerous and difficult one, but is much coveted as a probable stepping-stone to the staff. The appointment will be made in a few days. Dr. Thomas Houston has been elected extern house-surgeon to the hospital in succession to Dr. Whitaker. The annual meeting of the hospital was recently held. From the report it appeared that 2,255 intern patients, and 22,956 extern patients had been treated during the year. The financial year began with a small balance in favour of the hospital, and closed with a small balance against it. The subscriptions from the working classes show a steady and satisfactory increase, but most other sources of income have fallen off. Some discussions took place at the annual meeting regarding the use of stimulants in the hospital, and it was pointed out that the amount spent under this head was only about ½d. per day per patient. Extensive improvements are being made in the institution. The operating theatre has been enlarged, refitted, and brought into line with modern requirements. The isolation wards are being rebuilt, and an entirely new mortuary and pathological department are to be provided. The number of students in attendance is almost exactly the same as last year.

PITHECANTHROPUS ERECTUS.

The discussion at the Anthropological Institute, to which brief reference was made in the British Medical Journal of November 30th, disclosed considerable differences of opinion among the eminent anthropologists who took part in it as to the nearest affinities of the remarkable animal to which the bones discovered by Dr. Dubois belonged. His own opinion of the remains is that they must be regarded as a new family of the primates, occupying an intermediate position between the hominidæ and the similidæ, but in the direct line of ascent to man. He mentioned that while in Germany they were regarded as remains of apes, in Britain there had been a tendency to consider them as human. It may be interesting to add to the particulars contained in the account last week of Dr. Dubois's address in Edinburgh that the bones were found from 12 to 15 metres below the level of the plain, in pliocene and volcanic deposits which have, in consequence of late volcanic eruptions, been rearranged. The mammalian remains consist of several well-known forms of deer, elephants, and other animals similar to those of the pliocene fauna of India, and clearly indicate the epoch to which the strata belongs. These remains are never found as complete skeletons, but as single bones and fragments, on account of the disturbances which have occurred in the strata wherein they are deposited during the process of rearrangement just mentioned. The author described the position in which the remains of pithecanthropus was found and their character. They consist of a calvaria, the under portion of which is unfortunately absent, two upper molar teeth, and a femur. The calvaria and the teeth were found one metre apart, and the femur about 15 metres higher up the stream. Notwithstanding the distance apart at which the bones were found, Dr. Dubois gave reasons why they should be regarded as belonging to the same individual. The calvaria is a very remarkable one, presenting some resemblances to the Neanderthal type of skull but yet very different from it, and approaching more nearly to that of the gibbon, one of the anthropomorphous apes. The frontal region is extremely low and flat, the glabella and supraorbital ridges are enormously developed, as are also the external orbital processes; the parietal and occipital regions are more similar in form to man, but there is present a distinct ridge extending from the superior curved line of the occiput to the temporal region, which, while very characteristically developed in the apes, is entirely absent in man. In its general form the calvaria is dolichocephalic. The cranial capacity is only about 1,000 cubic centimetres, a size so small as never to be met with in

man, except in some of the lowest races of savages or microcephalic idiots. The last molar tooth is the more characteristic of the two, the other being considerably worn down on the grinding surface, while the former is but little worn. It is remarkable for the large size of its crown and roots. The characters of the grinding surface, though not far removed from those of the corresponding tooth in man, does not entirely agree with it, nor are they exactly the same as in either the gibbon or the orang. In general form the femur is remarkably human-like, but when examined closely as regards the characters of the lower and posterior surface shows considerable divergence, as do also the inferior aspect of the condyles; it also presents a curious and rare pathological condition in that there is a large ostitic mass present in the upper third of the shaft, the result of ossification of the tendinous insertions of the muscles attached to the upper and inner aspect of the bone.

THE SANITARY RESPONSIBILITIES OF WATERING PLACES.

It is right and proper that a health resort should be sensitive on the score of its sanitary reputation, and should spare no effort to find out and amend the weak points, if any there be, of the remediable kind. It is legitimate, also, to advertise its bracing or balmy or equable climate, its abundant sunshine and little rain, its pure air and water and soil, its low death-rate, and phenomenal freedom from zymotic diseases, and so on, always assuming that the statements made are reasonably accurate and not "selected" to such an extent as to be misleading. To a certain extent, which it would be difficult to define, it is permissible to maintain a discreet silence upon less favourable points; but the one thing to be avoided, next to neglect of sanitation, is a reputation for disregard of ascertained defects and for concealment of unpleasant facts and accidents. Unless the reporter of the *Eastern Evening News* misrepresents him, the Chairman of the Sanitary Committee of the Lowestoft Town Council holds peculiar views with regard to the real interests of the town and the responsibilities of the medical officer of health. At a recent meeting, it appears, he took exception to the publicity given to the health officer's report, and pretty plainly intimated his opinion that some degree of censorship was necessary. The report in question recorded a high death-rate for the month of October, largely due to the mortality from measles, whooping-cough, and diarrhœa, and, to a less extent, diphtheria. Reference was also made to some overcrowding of lodging-houses, and to the state of the middens. Which of these items the Chairman wished to suppress is not made quite clear, but he proceeded to pit his own opinion against that of the medical officer of health in the matter of the middens, contending, apparently, that the real contributory causes of the epidemics were to be found in the neglect to close schools at the proper time, and in the foul state of the public sewers due to the absence of proper means of ventilation and flushing. It is far from obvious in what way the fair fame of the town was supposed to be vindicated by the enumeration of these additional sins of omission on the part of the sanitary authority, especially in the absence of any promise of immediate rectification. Nothing could be less reassuring to the ratepayers or to intending visitors than to find the Chairman of the Sanitary Committee challenging the official report of the medical officer of health, unless it be the discovery that if the former could have his way, matters seriously affecting the public health should be kept from the public knowledge. It is not at all probable that either sewers or middens had much to do with measles or whooping-cough, whatever share they may have had in the causation of diarrhœa or diphtheria. Closure of some or all of the schools might or might not have been judicious; if it was not done, we may assume that the medical officer of health, with knowledge of the circumstances, did not think it necessary. It is for him, as the responsible professional adviser of the corporation, to judge of this, and it is his plain duty to report upon all the facts. This report is an official and professional one, not subject to revision by any second person, or by the committee or council to whom it is addressed. It does not appear that any other speaker expressed similar views, and it is to be hoped that the Chairman of the Sanitary Committee will take an early opportunity of disclaiming the interpretation to which his published remarks obviously lend themselves.

SAFETY IN OIL LAMPS.

The enormous increase which is everywhere apparent in the use of paraffin, both for heating and lighting purposes, makes it desirable to draw attention to the conditions of safety in an oil lamp. Even during the two summer quarters of this year, that is from April to September, more than two hundred lamp accidents were reported in London alone, besides an unknown number which were never heard of from their not having been attended with either fire or loss of life. For some years past Mr. Alfred Spencer, of the Public Control Department of the London County Council, has carefully investigated the origin of all the cases of accident from lamps which have come to his knowledge, and has experimented with the various types of so-called safety lamps with the object of determining how far they afford security. It is expected that the report which he will shortly issue on the subject will lead to definite steps being taken to prevent the sale of lamps which, from their construction, are known to be dangerous to those who use them. All serious casualties from the use of lamps are caused by the scattering and ignition of the oil. It therefore follows that for the sake of ensuring safety lamps must be so constructed that they shall not explode, that they shall not permit any considerable escape of oil when they are overturned, and that they shall be so strongly made as not to be liable to break under the strain of any accident which is likely to befall them. A metal reservoir may be so badly constructed and fragile as to be dangerous. The investigations of Mr. Spencer have led him to the conclusion that in at least 25 per cent. of the cases of accident brought to his notice the cause has been explosion of the lamp. The arrangements of the burner and the wick must be such as to prevent any communication between the flame and the oil reservoir. There are three principal ways in which this communication may take place: (1) from the wick not completely filling the wick tube; (2) from the air vent opening into the burner or into the wick tube; (3) from some other opening, as, for example, for the accommodation of the ratchet mechanism existing between the burner and the reservoir. The last two are obvious errors of construction. In regard to the first, the best protection is the presence of a long wick tube by means of which the wick is carried direct nearly to the bottom of the oil, so that even if flame were to strike down the burner, from the wick being turned too low, or from the lamp being exposed to a current of air, it would be trapped off from the explosive vapour by the oil in the reservoir. It would appear, then, that the old recommendations which the County Council made in a memorandum issued some time ago are still held to remain good, and to be sufficient if enforced practically to ensure safety in the use of paraffin as an illuminant. The three chief of these were that the reservoir should be of metal, strongly made; that there should be a wick tube descending nearly to the bottom of the oil; and that the burner should be firmly screwed into the body of the lamp.

THE ASHANTI EXPEDITION.

In the arrangements for medical supplies provision has been made for 35,000 cases of sickness. The term "cases of sickness" refers to daily returns, and embraces a man placed on the sick list for treatment one day and taken off the next. In the former Ashanti war there were 81 deaths

from disease and loss in action, with 2,587 officers and men of the European force under Sir Garnet (now Lord) Wolseley. After leaving the country there was a mortality of 3 per cent. on the strength disembarked. Tents on this side of Prahsu, it is thought, will not be necessary, as huts can be utilised for housing the troops at the various rest camps. Beyond Prahsu *tentes d'abri* will, it is stated, probably be employed. The daily ration scale is set down as 1½ lb. each of fresh meat and bread or biscuit; if preserved meat is used, 1 lb.; preserved potatoes, 1 oz.; sugar, 3 oz.; tea, ½ oz.; cocoa paste, 1 oz; dried onions or compressed vegetables, 1 oz; salt, ½ oz.; pepper, $\frac{1}{16}$ oz. In the matter of bread and meat, the scale is the same as in the last war, but the tea ration is ½ oz. less, the cocoa paste being additional. Surgeon-Colonel Taylor, principal medical officer of the expeditionary force, has visited Aldershot and inspected the whole of the officers, non-commissioned officers, and men of the Medical Staff Corps who are proceeding on service to the West Coast of Africa. The bearer company drilled in good style. All ranks paraded in service uniform and equipments, and looked fit for the work they will be called on to perform. Among the stores which the *Loanda* carried when she left Liverpool on Saturday, November 30th, for the Gold Coast, were a number of Pasteur filters for the provision of pure water for the troops. These filters had previously been tested by Surgeon-Colonel Taylor and Surgeon-Lieutenant Pratt, and a detachment of the men has been instructed in their method of working. They are capable of providing altogether 6,000 gallons of germ-free water daily. Filters of a similar kind are to be fitted to the hospital ship *Coromandel*.

THE FRENCH CRUSADE AGAINST ALCOHOLISM.

We have already recorded the systematic efforts of the Minister of Public Instruction to combat alcoholism through the schools in France. In the direction of preventive and repressive legislation the medical profession is largely represented in the league against alcoholism, and in a special committee which has been elected to formulate a suitable measure. Among the members are Drs. Semelaigne, Philbert, Bergeron, Lannelongue, Fleury, Ravarin, Guillemet, Bianchi, Ledain, Motet, Magnan, and Cheysson. Deputy Siegfried, at the last meeting, called attention to the enormous increase of alcoholism in France. In 1830 the consumption was 1.12 litre of pure alcohol per head per year; in 1894 it was 4.04 litres. In 1830 there was one shop for the sale of drink for every 113 inhabitants; in 1894 one for every 84. The results of this increased consumption were more exemptions from military service on account of physical inaptitude and mental alienation. On the other hand, the alcoholic consumption had diminished by one-half in Sweden, and in England from 2 86 litres per head per year in 1882 to 2.70 litres in 1892.

THE SICK POOR IN IRISH WORKHOUSES: BALLYSHANNON: THE TASK OF HERCULES.

Those who have been saddened by previous reports of the condition of the sick poor in Irish workhouses will be cheered by our Commissioner's account of Ballyshannon Union Infirmary. Eighteen months before the visit was paid a community of Roman Catholic nuns had taken over the management of the workhouse. The Superior, clearly a woman of rare capacity and tact, took on herself the office of matron, and with the willing co-operation of the medical officer, the guardians, and the master. She has in that short time worked wonders. The structure is the same, the sanitary arrangements were at the time of the visit of the old primitive kind, but order, efficiency, and above all, humanity, now prevail in the management. Pauper nursing is swept away, with its attendant evils, neglect, and blackmail; a trained night nurse is appointed; the epileptics and idiots are nursed in the infirmary wards, instead of being relegated to dark ill-ventilated cells; in short, though much remains to be done in the way of structural improvement, all that care and attention can devise is done to alleviate the lot—at best a dreary one—of the sick and aged pauper. And the moral of it is that capacity and self-devotion are not to be thwarted by the worst system ever invented; men, not measures, determine for good or ill the fate of those that lie under their authority. Yet it takes a Hercules to cleanse an Augean stable—average humanity shrinks from the task. The present system depresses the average official, and allows the bad to go undetected and unpunished. It should be possible so to reform it that the average official is kept up to the mark, and the bad eliminated. Such work as that of the good nuns at Ballyshannon brings us nearer the day of a general reform in the administration of the Poor Law.

MASSAGE INSTITUTIONS.

The recent charge against the proprietors of a bogus massage institution of obtaining from ladies by false pretences various sums of money, amounting in all to £300, has called attention once more to the existence of these pernicious establishments. The "astounding revelations" of the last few weeks, although they may have excited the surprise of the general public, have presented no aspect of novelty to the readers of the British Medical Journal, the whole subject having been fully dealt with in these pages more than a year ago. That these massage shops still exist in large numbers, not only in London, but in many provincial towns, is an undoubted fact; that most of them simply serve as a cloak for immoral practices of the most revolting description is equally well established. It is true that their advertisements are no longer accepted by the fashionable morning paper in which for so many months, in spite of repeated protests, they formed so prominent a feature, but little by little they have crept into other publications, notably those devoted to financial matters and circulating amongst members of the Stock Exchange. From advertisements before us we gather that in some of the establishments, which are described as being fitted up with every luxury, the proprietress is assisted by from four to eight qualified young lady assistants, by whom visitors are received from 10 till 8. The latest novelty is the custom of advertising these places by means of sandwich men, who, during the busiest hours of the day are very much in evidence in some of the West End thoroughfares. At night transparencies, lighted by electricity, are substituted; so that there is very little probability of the stranger in London failing to find the accommodation which is so prominently brought under his notice. Stories of blackmailing are common enough, but of these we say little, for the victims are but little likely to air their grievances in a court of law.

TASMANIA AS A HEALTH RESORT.

It is curious, considering the steady stream of invalids which has for so many years set towards Australia, that, comparatively speaking, so few should have turned towards the neighbouring island of Tasmania. Probably the old belief that warmth was an essential in the treatment of diseases of the chest has had something to do with this, and so it has happened that while phthisical patients have accumulated in the crowded cities of Australia, the breezy uplands of Tasmania have to a large extent been neglected. It is not of uplands, however, that we would now speak, but rather of a seaside resort standing on a large bay on the western side of the island, to the advantages of which our attention has recently been drawn. The town of Swansea is well situated on Oyster Bay, having opposite to it, but at a dozen miles distance, the fine headland of Freycinet Peninsula, on which is Mount Freycinet, a timber-clothed hill 2 014 feet high. The town is said to be well laid out, with wide streets and substantial buildings, and the scenery around is described as being of a most beautiful character.

The climate of Tasmania is of a much more temperate character than that of Australia; in fact, most English fruits grow there to great perfection. The difference between the mean temperature of summer and winter is 15 degrees. Snow is very rarely seen except on the mountains; the average rainfall for the island may be put down as something like that of England, but the amount of sunshine recorded in Tasmania is very materially in excess of that of Great Britain. The air is drier, the atmosphere clearer, and the extremes of heat and cold less trying than in the mother country. Here we seem to have the elements of a climate which ought to be useful to many who, if not already invalids, require a change of scene and an escape from the fogs of English winters. For such people it is undoubtedly a great advantage, if they wish to return shortly to their native country, not to become too much habituated to tropical heat, otherwise the return to a northern climate is apt to lead to a renewal of the very mischief they are most anxious to escape from.

FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATIONS.

A CORRESPONDENT sends us his experience as medical officer to one of these associations. He says every member paid 3s. a year, their wives 3s., and each child up to the age of 18 years 1s.; he was expected to visit within seven miles of the dispensary, and to attend during the year many confinements at the rate of 7s. for each one. From his visiting book it would appear that during one week he made as many as 230 visits. If many of these were at a distance of seven miles from the dispensary, it is to be wondered how he got through the work. "There were," he writes, "three sittings at the dispensary daily. One medical officer sat twice and the other once, alternately, and members out of work were appointed to follow us 'to show us the way.' I learnt there what it is to be servant of a working man, and God forbid that my professional brethren should have similar experience. It was really hard labour. In addition to this we were expected to attend about 200 cases each of confinements yearly at 7s. each. The members paid 10s. 6d., and 3s. 6d. was deducted by the Association. My health soon began to give way, and I sent in my resignation, and was reminded that they expected three months' notice according to agreement. While I was deliberating what to do I heard them discussing eight hours a day for working men, and I took advantage of what I heard to inform them that I intended setting them an example by not working more than eight hours a day, and I kept my word. The result was that I was allowed to leave in a week." It is not surprising that our correspondent soon got tired of his post, and the account he gives of what he had to put up with as the badly paid servant of an Association of this kind shows pointedly the degradation incurred by medical men in accepting such appointments. Surely the position of assistant to a brother practitioner is far preferable, even granting that some principals are not all that could be desired, to such a situation as is here described. The young practitioner desiring to be independent looks down on his position as an assistant, and often thoughtlessly accepts one of these posts, only to find out, too late, that far from gaining the wished for independence he is a greater slave than ever, and in return for a slightly increased pecuniary remuneration his work and responsibility are enormously increased.

MEDICAL CERTIFICATES FOR BOARD SCHOOL CHILDREN.

THE annual report of the School Attendance Committee was presented to the London School Board last week, and the attention there drawn to the matter of medical certificates has led to a correspondence in the *Times* in which Dr. J. G. Glover has taken an able and useful part. It must be understood that the School Board has no power to demand these certificates either from the medical man or from the parent, the whole duty of discovering the reason for a child's absence, and of prosecuting the parent in case of this proving insufficient, being thrown on the Board, who employ paid officers for the purpose. The sole object of a medical man in giving a certificate in regard to any child who may be under his care is to prevent the child being sent to school when unfit; in other words to protect the parent from possible prosecution for not enforcing his child's attendance. If, then, the certificate is not to be accepted as sufficient for this purpose, there is no longer any excuse or reason for giving it; in fact, if it is not recognised by the officials it is only likely to lead the parent into difficulties. It is needless to insist upon the enormous assistance which proper medical certificates are to the School Board officials in the performance of their very important duties, or upon the fact that this help has hitherto been given by our profession. We believe that medical men are perfectly willing to continue to give this help so long as they receive an assurance that their certificates will be accepted for the purpose for which they are given, namely, as a means of relieving the parent from the obligation of sending the child to school. It has been imagined by some that the medical certificate is a protection to the parent as against the School Board when a case comes before the magistrate. No doubt it may happen sometimes that a magistrate when greatly worried by innumerable School Board summonses may, almost thankfully, catch at a medical certificate as a reason for dismissing a case; but in no case which was seriously contested would such a certificate be accepted in a court of law. All evidence would have to be sworn and be open to cross-examination. Recognition of this fact puts the medical certificate in its true light. It is purely an assistance to the School Board officials in discovering which cases they ought to prosecute. That is to say its only use is to help these officials in doing work which, with or without such assistance, they are bound to perform. Under these circumstances the appointment of special medical men by the Board to decide in which cases these certificates shall be accepted, and in which refused, is a most ungracious act. We quite sympathise with the School Board in the difficulties they meet with in enforcing attendance. Their officials are overwhelmed every day with excuses and with certificates signed by unqualified practitioners or by chemists, herbalists, and quacks of all sorts. There can be no doubt that properly appointed medical officers should be employed to look through all the certificates received, and to investigate those which are not signed by duly qualified medical men. Such certificates, however, as are properly signed by legally qualified persons should be accepted without cavil. If people are found signing false certificates, let them be prosecuted; let it be demonstrated both to the profession and to the public that a certificate is not a mere form, but a document to be carefully considered before it is signed; but when once a certificate is honestly signed, let it be recognised as a protection from what the public still persists in calling "the bullying of the School Board officers."

MUSCÆ VOLITANTES.

FOLLOWING the example set by Dr. Gowers in the Bowman Lecture of the present year in studying one set of subjective visual sensations, Dr. George M. Gould, of Philadelphia, in a recent number of the *Medical News*, gives us a classification of muscæ volitantes, with a minute description of his own muscæ and of their behaviour under varying physiological states of the eye, and then proceeds to deduce some laws governing the phenomena of muscæ, and their bearing on the economy of the eye. Muscæ are either peripheral, originating in the globe including the optic nerve, or central, originating in the cerebral centres, or a combination of the two. He suggests the use of the word "phoses" for light sensations of whatever kind or colour of

a positive nature, and "aphoses" for absences or interruptions of light sensations, such as scotomata or shadows. Speaking of peripheraphoses, the subdivision under which ordinary muscæ volitantes come, the author concludes that the fluid in which these bodies float is contained in a chamber situated just behind the lens, which he calls the aquo vitreous chamber; the constant downward movement of the muscæ, when seen subjectively, locates this chamber in front of the vertical equator of the eye. The aquo-vitreous chamber plays the important part in the nutrition of the eye of acting as a drainage chamber to the vitreous body for the excretion of the *débris* of vitreous katabolic change; the fluid contained in it also acts as a lubricant to the movements of accommodation in equalising and distributing pressure. Further, the author thinks it not unreasonable to suppose that pathological conditions in the fluid may originate pathological conditions in the lens and disturbances in its nutrition, and may be an important factor in the etiology of cataract. Other pathological conditions of this chamber and its contents may lead to a clogging of the sieve of the lens ligament, and so act as the ultimate cause of glaucoma. Myotics like eserine and pilocarpin increase glandular, osmotic, and secretory activity, while mydriatics correspondingly lessen these processes; although an increase in the amount of aquo-vitreous fluid would seem to increase intraocular pressure, it would also lessen its viscidity, and reduce the clogging of the filtration membrane of the ligament, and consequently the intraocular tension. The author is of opinion that no one has given a satisfactory reason for the uncertain action of iridectomy in curing glaucoma; according to the theory here proposed removal of a portion of the iris only acts by increasing the porosity of the filtering membrane, but it is not suggested how this is brought about. The author admits that his theory has a very small basis of facts to support it. Before accepting it as a working hypothesis some anatomical proof of the existence of the aquo-vitreous chamber is required; with modern histological methods by the making of frozen sections of recently excised eyes, or of eyes hardened in formol, such a chamber should be capable of easy demonstration if it exists. Further, by the researches of Priestley Smith and Treacher Collins our knowledge of glaucoma has been so far advanced that we are able to explain some of the phenomena of the disease, such as the occasional failure of iridectomy, without recourse to a somewhat fanciful theory.

PROFESSIONAL "HOSTELS."

A CORRESPONDENT who protested in the BRITISH MEDICAL JOURNAL some time ago against the principle involved in the establishment of the Clergy Hostel, has written again to draw attention to the completeness with which this quasi-charitable scheme has been carried out. We are disposed very much to sympathise with our correspondent's view, that the establishment of this hostel is a bad precedent. It is not so much, as we view the matter, that the medical profession would be indisposed to render freely any necessary assistance to the poorer clergy of all denominations who may be incapacitated by illness, for the amount of such free service is already so considerable that a little more or less can, it might be urged, make little difference. Rather is the scheme to be objected to as a precedent which may be followed in the case of other professions. Already we see it reported that an actors' hostel has been started. The whole question of the provision which ought to be made for the medical and surgical needs of the poorer members of the professional classes is one which appears to stand very much in need of careful and dispassionate investigation by the medical profession. Such persons are not fit subjects for free treatment in the ordinary hospitals, and their admission to these hospitals as paying patients at low rates opens the door to many abuses. On the other hand, they cannot afford, in many cases, to pay the high charges commonly charged in nursing homes, and living, as many of them do, in lodgings, it is almost impossible for them to go through a long illness, or undergo a serious operation, except in some public or quasi-public and semi-charitable institution. As it is, one of two things commonly happens: either they go into a nursing home, and the physician or surgeon gets nothing; or they go into a general hospital and are maintained and treated gratuitously, or at a rate of payment which leaves the charity out of pocket.

KISMET?

THE letters which have lately appeared in one of our daily contemporaries upon the infectious nature of measles shows that the public is at last awakening to the fact that the exanthemata are preventable diseases. It was thought—and that not so very long ago—that a child's upbringing was not complete until he had passed through an attack of scarlet fever, measles, and whooping-cough. He was therefore allowed to contract these and kindred diseases by sending him to associate with some friend who was known to be passing through an attack. Wiser counsels prevailed with increasing knowledge, and the necessity for prompt and complete isolation is now recognised in all except the most benighted parts of the country. Few can read with dry eyes those pathetic extracts from Catherine Tait's narrative of her dreadful experiences in the Deanery at Carlisle, yet no medical man of to-day can read them without thinking what grief would have been spared if a rigid isolation had been insisted upon from the time the first child sickened. The children were rapidly born to a highly intellectual father and a fragile mother. They had moved from a comparatively healthy home at Rugby to the old and insanitary lodgings appropriated to the Dean at Carlisle. Chatty, the third child, was attacked with scarlet fever, which soon proved to be of a most malignant type, yet the other children were merely sent to the far end of the house, whilst the mother, who was in constant attendance upon her child, and was nursing the youngest baby, daily saw the other children and talked with them. Chatty died, and upon the day of her funeral Susan, the sixth child, sickened of the same disease. The other children remained at home, and there was still free intercourse between them and the attendants in the sick room. The children, indeed, were eventually removed to a house opposite the Deanery, and four days after Susan's death Frances, the fifth daughter, became ill, and she died five days later, yet still there was no interruption to the converse between the house of sickness and the children who had been removed from it. Catty, the eldest daughter, was struck down on the day Frances died, and whilst she was ill May, the second child, sickened. By this time the children themselves had taken alarm, for May's first request when she felt herself ill was, "Keep Crauford away from me; do not let him come near me." Her request was fortunately complied with, and the boy was removed to a distance from the deadly neighbourhood and from all its distressing surroundings. He indeed escaped with his infant sister, but there still remain the graves containing five little coffins to mark the agony of Easter, 1856. It is clear that these five children, like so many of the fairest and most precocious, lacked that toxin-destroying mechanism which might have reduced the poisonous effects of the infection. The importance of disinfection and of separation from the surroundings was then unknown, and as one child after the other sickened they were taken into the chamber of death until the first child died less from scarlet fever than from the attack of erysipelas which succeeded it. Yet nothing that skill or money would obtain was omitted; the best advice was forthcoming, Sir Robert Christison came from Edinburgh, Dr. Gull[illegible] from London; tidings from the Deanery were breathlessly awaited throughout England, but preventive medicine was still in its infancy.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1895.

Thursday, November 28th.

Sir RICHARD QUAIN, President, Bart., in the Chair.

(*Continued from page 1314.*)

REPORT OF THE EXAMINATION COMMITTEE.

THE Council in Committee proceeded with the discussion of the specific recommendations by the Examination Committee in regard to the results of visitation and inspection of the Final Examinations in Medicine, Surgery, and Midwifery of all the licensing bodies.

The third recommendation was moved by Sir DYCE DUCKWORTH, and seconded by Mr. BRYANT, as follows:

That in all the written examinations of the different bodies the questions in each subject should be submitted to the whole of the examiners in that subject before they can be set at any examination.

This was agreed to.

Moved by Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, and agreed to:

That candidates in all their examination work should be carefully supervised.

Sir DYCE DUCKWORTH moved:

That at least half an hour should be allowed for a candidate to answer each question in the papers on Medicine, Surgery, and Midwifery.

He said that evidence had come before the Committee that in some cases candidates had a great many questions to answer, and it was quite impossible for them to do the work properly in the allotted time. The recommendation as proposed would be a sufficient safeguard against that.

Mr. BRYANT seconded the motion.

Mr. TEALE said that some examiners might wish to give a larger number of questions, each of which could be answered in a shorter time than half an hour.

Mr. BRUDENELL CARTER reminded the Council that the suggestion embodied in the recommendation was founded upon absolute reports which they had before them, and upon statements contained in those reports as to the time allowed for questions, examples being given. They had found instances in which questions were of such a character that they could not be well answered in the time allotted, and they felt that the recommendation would have a twofold beneficial influence—in the first place it would secure to the candidate sufficient time in which to do justice to his knowledge of the subject, and, in the second, it would tend to some extent to guide the examiner as to the character of the questions which should be put, preventing examiners from putting all-embracing questions, and confining them to questions which admitted of a full answer within the specified time.

Dr. PETTIGREW thought that a few questions did not test a student thoroughly, and suggested that it should be recommended that the examinations in Medicine, Surgery, and Midwifery should each occupy three hours. He moved as an amendment:

That at least three hours be allowed to a candidate to answer the written examinations in Medicine, Surgery, and Midwifery,

leaving the details to the examining bodies.

Dr. LEECH seconded the amendment.

Mr. BRYANT suggested that the recommendation should be altered to read:

That an average of at least half an hour should be allowed for a candidate to answer each question in the papers on Medicine, Surgery, and Midwifery,

so that in a paper of, say, six questions, a man might answer one in twenty minutes, another in three quarters of an hour, and so on. In some of the examinations eight or ten questions were put and less than ten minutes allowed for each answer, so that it was absolutely impossible to obtain any thing but perfunctory answers and a bad paper.

Sir DYCE DUCKWORTH agreed to the suggested amendment of Mr. Bryant, which was put to the Council and carried.

Sir DYCE DUCKWORTH moved and Mr. BRYANT seconded:

That no candidate should be orally examined in any subject or part of a subject except in the presence of two examiners.

Dr. PHILIPSON suggested the addition of the words "or one examiner and one assessor."

The REGISTRAR pointed out that an assessor was included in the word "examiner."

The resolution was agreed to.

Moved by Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, and agreed to:

That the clinical examinations in Medicine and Surgery should be conducted under the personal surveillance of two examiners.

Sir DYCE DUCKWORTH moved and Mr. BRYANT seconded:

That the Final Examination should include the examination of secretions, the testing of urine, clinical microscopy, and prescription writing, and that there should be always an oral examination in both medicine and surgery, which should include the recognition of pathological specimens.

This was carried.

On the motion of Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, it was agreed:

That at every Final Examination there should be a practical examination in Pathology, macroscopic and microscopic, unless this has been included in the examination immediately preceding the Final Examination.

Sir DYCE DUCKWORTH moved, and Mr. BRYANT seconded:

That the examination in Midwifery, Forensic Medicine, and Hygiene should be made as practical as possible.

Mr. TEALE, although not objecting to the principle, thought that an examination in Midwifery was almost an impossibility. Was it possible to bring a number of men into a lying-in room and ask them one after another to examine a woman?

Mr. BRYANT said it was never the thought of the Committee that a midwifery examination should be conducted as Mr. Teale had suggested, but there were such things as phantoms, and a great deal was to be learned by their use.

Mr. TEALE asked what was meant by an examination in Hygiene.

Sir DYCE DUCKWORTH said that there was one examining Board in the three kingdoms which did carry out practical clinical midwifery, but the Committee fully realised that it was quite impossible to carry out the system, most Boards refusing, but in the course of examining the reports of the inspector they found that the examination in Midwifery had been by no means practical, no attempts having been made by means of the phantom to put practical questions to the candidates. With respect to the subject of hygiene, it was possible the Committee had a little overstepped the actual requirements, and since these recommendations were drawn up he would remind the Council that the whole subject of public health had been transferred to another committee under the excellent chairmanship of Dr. Thorne Thorne; therefore it might be advisable that the words "and hygiene" should be expunged from the recommendation, so that it should read: "That the examination in Midwifery and Forensic Medicine should be made as practical as possible." It was hardly possible to carry out any practical examination in hygiene.

Dr. THORNE THORNE concurred in Sir Dyce Duckworth's suggestion.

Dr. BUZZARD thought it was of the highest importance that a practitioner should be able to detect defects in waterclosets and other subjects connected with hygiene.

The recommendation as amended, omitting the word "hygiene," was agreed to.

Moved by Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, and agreed to:

That whatever may be the system of marking, the percentage for a pass (50 per cent.) in each division of a subject, should be uniform to all the Boards, and in accordance with previous recommendations of the Council, and that the marks given on the written examination ought not, as is the case with some Boards, to override those given at the oral or clinical examinations.

Sir DYCE DUCKWORTH moved, and Mr. BRYANT seconded:

That marks given in any part of an examination should be given on the merits of that part alone, and not be subject to future revision unless for the correction of a manifest error.

This was carried.

Sir Dyce Duckworth moved, and Mr. Bryant seconded:

That the former recommendation of the Council that knowledge of one subject should not be allowed to compensate for ignorance in others, should be more carefully regarded by some of the examining bodies.

Dr. McVail thought that the bodies referred to should be specified. It was a charge, and charges should be made openly, public interest requiring it.

Sir Walter Foster thought they had been proceeding on wrong lines. The best course they could have adopted would have been to have taken all the reports of the examiners and called out all the specified charges of negligence or inefficiency with regard to the examinations; then they should have passed directions that each body should be called to order for its omissions or neglect in its examinations, and lastly have informed the other bodies what they had done with the offending bodies. They would have got some result in that case, and would also have avoided sending mere truisms down to intelligent men as the directions of the Council.

Dr. Heron Watson thought that the matter would properly come up when the report came before the Council, not while they were in Committee.

The motion was carried.

Moved by Sir Dyce Duckworth, seconded by Mr. Bryant, and agreed to:

That as the art of examining is only to be acquired by practice, it is desirable that an examiner should be re elected, where practicable, for at least five consecutive years, particularly for the final examinations.

Dr. McVail moved and Mr. Wheelhouse seconded:

That the following recommendation be adopted by the Council in Committee: That the clinical examinations in Medicine and Surgery should be held in hospitals wherever that may be possible.

This was agreed to.

The Council then adjourned.

Friday, November 29th.

Sir Richard Quain, Bart., President, in the Chair.

British Dental Assistants' Association.

The President read the following letter from the British Dental Assistants' Association: "Sir,—A deputation will wait upon you to-morrow (Friday) in reference to my petition and others, at 1.45 P.M., at the Royal College of Physicians."

The question was considered *in camerâ*, and the following resolution was passed:

That the Council has already fully considered the question on which the British Dental Assistants' Association wishes to send a deputation to the Council; and not being prepared to depart from the decision of May 29th, 1891, cannot receive a deputation on the subject.

The Application from the Apothecaries' Hall, Ireland.

The Council then proceeded to the adjourned consideration of the application of the Apothecaries' Hall, Ireland, for the appointment of assistant examiners in surgery.

Dr. Charles Moore said that the corporation of the Apothecaries' Hall was accomplished by the Legislature to meet the needs of the masses of the Irish population by providing a general practitioner more than twenty years before that of the popular sister institution in this country, and for the protection of the public at large against spurious and injurious drugs, and its staff was even now called upon by the Government to decide on the quality of the water and other food of doubtful qualities. The Hall had encountered difficulties at times in carrying out certain parts of its examinations. Many candidates for the Hall licence were unable to pay the comparatively large examination fees required by other bodies. He felt much indebted to independent members of the Council for their testimony to the high character of the alumni of the Apothecaries' Hall, and he was authorised by the Governor and Council of the Hall to give the Council assurance that they should spare no expense, and would use their best endeavours to carry out a thorough examination, and to ensure the respectability of everyone who took the Hall licence. They had carried out to the utmost any amendments which had been recommended to them, and if the Council advised them further it was their determination to carry out that advice. He moved:

That the petition of the Apothecaries' Hall, Ireland, be granted.

Dr. Philipson seconded the motion.

Sir John Banks supported the prayer of the memorial. The Apothecaries' Hall, Ireland, took the place of what in England were called general practitioners. They were needed by the poorer class who could not pay the ordinary fees of physicians and surgeons, but were still able to get medicines from the apothecary. He knew from experience that that class of practitioner was highly respectable and had done its work well in the past; they were men of very high reputation and character, and many held highly respectable degrees.

Dr. Atthill: The Apothecaries' Hall had laid the blame of their grievous failure on the ill will and persistent hostility of the College of Physicians. He assured the Council that that hostility did not exist. He had known the governors of the Apothecaries' Hall for many years, and he and the other Fellows of the College respected and esteemed the great majority of them personally. But they did not think a body which was subordinated to the College of Physicians should be made in all respects their equal, and be made a qualifying body. When the College of Surgeons and the Apothecaries' Hall were first joined there was no difficulty in getting examiners; the examiners of the College of Surgeons and the College of Physicians and the Apothecaries' Hall were nearly identical to within a year or so, when they were all changed, and a Board of Examiners was got which were as lax as they could possibly be. Men rejected not only in Ireland, but in Scotland and by the Apothecaries' Society here—rejected in some cases three or four times—went over to Dublin, and although they had not complied with the curriculum, they were admitted within twenty-four hours as licensed practitioners. That brought the Conjoint Board into disrepute, and respectable men refused to act upon it. It was then, and not till then, that examiners could not be obtained. The Apothecaries' Hall, when constituted, was not left without any supervision; the College of Physicians was appointed their superior, with power to inspect the apothecaries' shops. That power was not a mere form, but was continued till very recently, when it had fallen into abeyance; but it only fell into abeyance when the Pharmaceutical Society of Dublin was established. There were several reasons for it, the chief one being that there were, and are, no apothecaries' shops in Dublin; the whole business had fallen into the hands of chemists. The College of Physicians had no jurisdiction over chemists and could not inspect their shops. The Apothecaries' Hall could make no by-law, statute, or ordinance for or concerning the composition of medicines which should be issued without the approbation of the College of Physicians in writing under the College seal. The only licence they could give was to carry on the art and mystery of an apothecary.

The President pointed out to Dr. Atthill that he was dealing with antiquated matters quite set aside by the Acts of 1858 and 1886. By those Acts the Apothecaries' Hall of Ireland was recognised as a medical authority. It was perfectly useless to go into what they were; it was what they are. If the Apothecaries' Hall of Ireland was on the same footing as the Apothecaries' Society of London, it was a very strong argument in their favour, but it was not so. The Apothecaries' Hall had had a full and a fair trial in conjunction with the College of Surgeons, and had failed because they did not maintain the standard of education, and allowed their examinations to degenerate into a mere form. He was sure the Council would do what was right and proper for the interest of the public first and of the medical profession second.

Sir Philip Smyly said he had applied to the body he represented—the College of Surgeons of Ireland—as to what action he should take upon the question, and had been left an entirely free hand. He did not think that the time had come for the Council to interfere with the Apothecaries' Hall. He had opposed that body as a Conjoint Board, and his feeling was against their being put on a level with their ancient Universities and examining and licensing bodies; but he thought in simple fair play they ought to be given an opportunity of proving what they could do, and he should vote for the motion.

Dr. MacAlister said that they had been repeatedly told that it was not on the surgical side that the conjoint

examination was defective, and yet they were asked to appoint surgical examiners. The defects associated with the Board were not only in the matter of laxity of the examination, but much deeper than that—in their curriculum. In their programmes and advertisements were matters the only object of which must have been to make the education easier to the country and so more attractive to less prepared candidates. He had a profound distrust of the machinery of the Hall, without any reference to the individuals composing it, to maintain the high standard which was required for admission to the *Register*. He declined to vote for that patch on the leak in a place where a leak did not exist.

Sir Walter Foster said he considered the application of Apothecaries' Hall, Ireland, as on all fours with that of the Apothecaries' Society of London, which had been granted, except that the former body had been labouring since 1886 under very great difficulties in carrying on its work. It was said that the great difficulty in getting examiners in Medicine had arisen, not from any inherent qualities in itself, but from a disinclination on the part of other Corporations in Dublin to give the Hall that meed of honest and just assistance which it ought to receive. He considered that that position should appeal to the more generous side of their nature, and help the Council to come to the assistance of a body which, to his mind, had not been fairly treated. They had an application made according to precedent, but that application could be amended if necessary. If the Council amended the proposition, and said they would give the Hall examiners in medicine, surgery, and midwifery, the Apothecaries' Hall would gladly accept that in place of the present motion, and in that way the Council would make the examination a good one by having themselves control over the examiners. He should be glad to support any amendment of that kind, if he could not support the original resolution. From his knowledge of the history of the body during the last three years, and the difficulties it had had, he was disposed to support the application.

Dr. Batty Tuke thought the discussion had been altogether upon too narrow grounds. For thirty-four years the Council had been trying to raise the standard of medical education in Great Britain. It had been done by sensible pressure slowly and gradually applied, and that standard must be protected. If the Council was so lax as to grant the application, and afterwards any body with which he was connected received from it any adverse criticism, he should put that criticism in the waste-paper basket. It would be of no value because it would be stultified by references to the action of the Council with regard to the Irish body. It was an imperial question affecting the medical practitioners of Great Britain. If from their action they lowered themselves in the estimation of the profession and the public, they showed that they were not able to maintain what they had done, and they must fall. The result would be that the public would take the matter into their own hands.

Dr. Heron Watson moved:

That the application of the Apothecaries' Hall, Ireland, and the motion of Dr. Moore founded upon it are not in accordance with the provisions of the Medical Act, 1886, Section 5. That the authorities of the Apothecaries' Hall be informed of this, with a view, should they think fit, to make a new application for the appointment of such examiners to assist at the examinations of that body in medicine, surgery, and midwifery as shall secure at the said examinations the maintenance of such standard of proficiency as is required under the provisions of the Act, 1886, from candidates at such qualifying examinations.

Dr. McVail seconded the amendment, which was put to the Council and lost. The numbers were: for, 9; against, 12; did not vote, 7; absent, 2.

Sir Dyce Duckworth said he could hardly recall an occasion on which the Council had had a more important statutory duty laid upon it than at the present moment, because they were deliberately called upon to do nothing less than to disfranchise one of the qualifying bodies in the three kingdoms. As chairman of the Examination Committee it had been his duty to go through the report of the Inspector of the Council and the examinations of all the qualifying bodies in the three kingdoms. These reports had been most carefully discussed in the Committee, and had also been brought before the Council and considered with great care. The reports relating to the Apothecaries' Hall of Ireland had given more trouble than any other body in the United Kingdom. They had been so unsatisfactory and inadequate that the Council had judged it necessary to visit and revisit on four occasions several of the examinations held by that body in conjunction with the Royal College of Surgeons of Ireland. The Examination Committee had reported the examinations as insufficient, and the Council had accepted that opinion and had reported the matter to the Privy Council. Now they were solemnly asked to put the body on its legs again and prop it up. They had first to determine whether they would do so, and if they decided that they would, it remained for them to determine what support should be given. But he hoped that the first part of the question would be answered in so decided a manner that there would be no occasion for them to consider the second. If the body was propped up it would stultify all the work of the Examination Committee and the opinion of the Council as expressed again and again during the last three years, and would render nugatory and impossible all further useful action on the part of the Council, which would become the laughing-stock of the whole profession. The Apothecaries' Hall had had many chances, and had not availed itself of them because it was not possible for it to do so. It was not a sentimental question. They had their duty to the public to perform. He recognised no higher body than the Council: if there was, there ought not to be; and if they were not fit to say what was best for the interests of the public and of the whole profession they were not fit to be there. Could they honestly say that they ought to keep open such a back door into the ranks of the profession? Most emphatically, No! He considered that the body was practically effete; it had had its day and ought to die gracefully.

Dr. Glover said that even in the serene atmosphere of London there had been a disposition on the part of certain Colleges to put down the Apothecaries. He admitted that the Apothecaries' Hall, Ireland, had given much greater reason to its opponents and to the Royal Colleges to be dissatisfied with its continued existence than the Apothecaries Society of London; but he thought they all now felt that it would have been a great mistake on the part of the Council to have obliterated the Apothecaries Society of London. They were asked to do a similar thing now with regard to the Apothecaries' Hall, Ireland; but, although there was a good deal of reason to be alleged for their taking that course, he did not think the reason was sufficiently strong to justify them in taking that exceedingly strong measure. He admitted that the examinations of the body had been exceedingly unsatisfactory, but they had not been so absolutely unsatisfactory as the Chairman of the Examination Committee would have them believe.

Sir Dyce Duckworth said that they had not had any examination at all comparable in inferiority and in weakness with that of the Apothecaries' Hall.

Dr. Glover said that the fact remained that the supreme reason for reporting that body to the Privy Council was in the facts of one case. There the words: "For these reasons, although we have no fault to find with the actual examination itself, the fact that a candidate passed who exhibited gross ignorance of medicine compels us to report that in medicine the examination is insufficient." Of the examinations in the last report it was said: "The examination itself was in every respect a most satisfactory one, and the marks awarded were strictly equitable."

Sir Dyce Duckworth submitted that they must not have little extracts without the context; that was not fair.

Dr. Glover said that he did not feel sufficiently justified in being a party to the obliteration of that body upon that basis. Sir John Banks had told them that in the economy of Ireland the body was wanted. He considered that the examinations were unsatisfactory; he had no controversy with Sir Dyce Duckworth upon that, and if they were not amended and improved the body must cease to be. But his opinion was that they should give the body a chance under better conditions. It was not denied that the Apothecaries' Hall had great difficulties to contend with. He would propose the following amendment:

That the petition of the Apothecaries' Hall, Ireland, be granted on the condition that the Council appoint in addition to two examiners in

surgery, one in medicine, and also one in midwifery, to act as assistant examiners under Section 5 of the Medical Act of 1886.

He hoped that that amendment would bring the Council to a unanimous vote, because it would have the admirable effect of putting the body on its metal, and the examiners, being their nominees, appointed by the Council, would virtually be inspectors. "It shall be the duty of the said examiners to secure at the said examination the maintenance of such a standard of perfection in medical surgery and midwifery as is required." If that were not secured it would be their duty, and he had no doubt it would be their action, to report to the Council as to the unsatisfactoriness of the examinations.

Dr. Bauce seconded the amendment.

Dr. Thorne Thorne asked if the amendment were really in order. They were asked by written document to appoint two examiners in surgery, and the amendment said, "We will do so, but we will do something more; we are going to appoint examiners in midwifery and in medicine also." They had never been asked to do anything of the sort, and the Apothecaries' Hall might not only resent it but disclaim it.

Dr. Charles Moore said he had a special letter from the Governor and Council of the Apothecaries' Hall, Ireland, authorising him to use his discretion in anything and in everything that came before the Council, and he therefore had power to withdraw the proposition which he had made to the Council.

The President said that Mr. Muir Mackenzie had informed him that the amendment was quite in order.

Dr. Leech thought it would be a very dangerous thing for them to pass the amendment, which was quite sprung upon them, and it ought not to be voted upon in a hurry.

Dr. MacAlister said that the Apothecaries' Hall would be quite in a position to accept the appointment of the two examiners and decline the condition.

Dr. McVail suggested to Dr. Moore to withdraw his resolution completely and allow the Apothecaries' Hall to make an application under the Act. It was perfectly certain that the motion would have a disastrous result, and many would vote against it in its present form who might be disposed to assist the Hall if the resolution asking for examiners in all three subjects were before the Council. He did not think the Council would be wise in accepting the mere statement of a plenary power on the part of Dr. Moore; there ought to be a definite written application for examiners under the terms of the Act. The Hall would lose little by the postponement of the matter until next May.

Mr. Brudenell Carter said that if they were to pass the amendment where were they to find the examiners, seeing that the Hall desired to hold an examination next January? They could not find them and settle their remuneration during the present session of the Council, and therefore it might just as well stand over until next May, for any good which the resolution would do. If Dr. Moore was of opinion that the proposal to appoint examiners in all branches would be acceptable to the body which he represented, Dr. Moore would be able in May to come prepared with the names of gentlemen who were willing to act as examiners, and for some remuneration which the Council would authorise them to receive. At present the resolution would be little more than an expression of an inclination of good will on the part of the Council, and would not carry the matter forward one single step. It would be very judicious if both the amendment and the resolution were withdrawn and the whole matter allowed to stand over till next May.

Dr. Heron Watson thought they would be occupying a singularly undignified position if they passed the amendment, because they would be passing away from the application which had been made to them, and would give the Hall something for which they had not asked.

Mr. Bryant said he hoped they would stick to the point, and keep before them the request made by the Hall. The Council was asked to help them. Were they ready to do so? The mode of helping them might come afterwards, but it was for the Council to consider whether they were disposed to give that rickety body a prop up. They were literally asked now to make that rickety body one which would be officered by nominees of the Council, and which would be looked upon in Ireland and all over the world as a remarkably good Board to go to because it had the stamp of the Council, and because the Council had elected all the examiners. Up till 1858 the Apothecaries' Hall was not a medical Board; it had powers for preparing a conjoint examination, but it never held the position of the Apothecaries' Society of London. Up to 1858 it simply had some examiners in materia medica and in some elementary things connected with dispensing medicine, and nothing more. It was proved to have been a failure; it was a failure when they nominated two surgical examiners; it had been a failure since it had been in combination with the College of Surgeons, and the College of Surgeons had quietly left them in the lurch. He must fix the responsibility as much upon the Royal College as upon the Apothecaries' Hall. It had a Committee of Management comprised of the representatives of the Royal College of Surgeons and the Apothecaries' Hall, and the Committee of Management was to blame.

Mr. Philip Smyly said that the College of Surgeons had maintained that they had a good surgical examination, and he called the attention of the Council to the fact that the Committee of Management had no voice whatever in the election of medical examiners. He had been asked why the College of Surgeons had separated from the Hall. It was because they had no control over the medical examination, and also because they had been recommended by the Council to separate. Those were the reasons, and not because the Apothecaries were condemned.

The amendment was then put to the Council and negatived.

Sir William Turner said that as Mr. Muir Mackenzie was present he should like to ask him a question upon Section 5 of the Act: "It shall be lawful for the General Medical Council from time to time, if they think fit on the application of such corporation," etc. What latitude was expressed in the words, "If they think fit"?

Mr. Muir Mackenzie said, as a matter of law, absolute latitude. That was held in the Bishop of Oxford's case. Perhaps the Council would forgive him for saying one thing which was perhaps a matter of law. It was that Section 4 prescribed the procedure by which the statutory privilege of granting a diploma was to be taken away—namely, by a representation to Privy Council; and if the Privy Council had not taken that statutory privilege away, it seemed to him that the body might remain as a statutory body entitled to grant a diploma; and although the power in Section 5 to refuse assistant examiners was no doubt absolute, he could not think that the Act of Parliament intended that the General Medical Council should, by refusing examiners, be able to deprive a college of its statutory position. The Council, in exercising its jurisdiction to refuse examiners, must have regard to the fact that the body possessed at this moment the statutory right to grant diplomas and to have assistant examiners appointed unless the Council saw some reason which made it obligatory upon them to refuse. Undoubtedly it could refuse. In answer to Sir Walter Foster, he said that Section 5 of the Act was passed with a view rather of allowing a body to go on than to destroy one.

The President said that after what Mr. Muir Mackenzie had stated, he thought that they should go under the 4th Section if they wished to be an extinguisher on the Apothecaries' Hall. To refuse the examiners was an indirect way of attempting the same thing, in which they might fail. Let them have the courage of their convictions and go upon the 4th Clause, but do not let them go in the indirect way of refusing to appoint examiners in surgery.

The motion

That the petition of the Apothecaries' Hall be granted

was then put to the Council and lost, the voting being as follows—against, 15; for, 8; did not vote, 4; absent, 3.

Moved by Dr. MacAlister, seconded by Sir Walter Foster, and agreed to:

That the Executive Committee be instructed to prepare for the consideration of the Council a suitable form of standing order for the procedure to be followed in cases in which, under the last paragraph of Standing Orders xiv. 14, a decision has been postponed.

Training of Students in Midwifery.

Dr. Leech moved and Mr. Wheelhouse seconded:

That the Education Committee be requested to consider whether the

recommendation of the Council of May 26th, 1868, and reaffirmed May [illegible], with regard to the attendance on cases of midwifery, under the supervision of a registered practitioner, required of candidates for medical qualifications, is carried out by the regulations of the different licensing authorities, and to report at the May session on this point, and on any modification of the recommendation which they may think to be desirable.

This was agreed to.

Examinations in Sanitary Science.

Moved by Dr. Thorne Thorne, seconded by Mr. Teale, and agreed to:

That the report of the Public Health Committee on the Inspection of Examinations in Sanitary Science be received and entered on the minutes; as also the reports of the Inspector of Public Health Examinations on the bodies inspected, and the answers of the bodies thereto.

Diplomas in Dentistry.

A letter was read from the British Dental Association, stating that the Faculty of Physicians and Surgeons, Glasgow, accepted the dental curriculum of Michigan, a curriculum no longer recognised as satisfactory by the General Medical Council in lieu of their own, and had admitted a gentleman holding the D.D.S. diploma of Michigan University, U.S.A., to examination. The Secretary submitted that the action of the Glasgow Faculty was *ultra vires*, and begged the Council to take steps to prevent a recurrence of such action.

It was moved by Dr. Cameron, seconded by Dr. McVail, and agreed to:

That the communication be referred to the Dental Education and Examination Committee.

The Council then adjourned.

Saturday, November 30th.

Sir Richard Quain, Bart., President, in the Chair.

The Application of the Apothecaries' Hall, Ireland.

Sir William Turner said a question had been sent to the Business Committee as to whether there should not be a communication made by the Council to the Lord President of the Privy Council, intimating what had taken place with regard to the position of the Apothecaries' Hall, Ireland.

The President said the only object was the Apothecaries' Hall, Ireland, might not make any application to the Privy Council. The better way would be to authorise the Executive Committee to reply to such application if it were made.

Sir William Turner promised that a motion would be drawn up and placed on the programme for the next sitting.

Training of Students in Midwifery.

Sir Walter Foster presented the following petition from the Council of the British Medical Association:

To the General Medical Council.

The Petition of the Council of the British Medical Association.

Respectfully sheweth

That the members of the British Medical Association view with deep concern and regret the recommendation of the General Medical Council to the Medical Examining Bodies that they should admit students to their Final Examination who present a certificate stating that they have "conducted personally" only three, and "been present at" only nine confinements, and also that the General Medical Council has refused in November, 1895, to alter this recommendation. We, the Council of the British Medical Association, therefore respectfully petition the General Medical Council to recommend that no student be admitted to his Final Medical Examination until he presents a certificate showing that he has personally conducted at least thirty confinements under the direct supervision of a registered medical practitioner.

J. Ward Cousins,
President of the Council of the
British Medical Association.
Francis Fowke,
General Secretary.

On the motion of Dr. Glover, seconded by Dr. MacAlister, the petition was received and entered in the Minutes, and referred to the Education Committee for consideration and report.

Examinations in Sanitary Science.

The Council then went into committee to consider the report of the Public Health Committee on the inspection of the examinations in sanitary science, and the recommendations contained in it.

Dr. Thorne Thorne stated that the Public Health Committee, instead of drawing up a report on each individual examination held by the different bodies, had dealt with the examination as a whole.

Dr. Philipson called attention to some discrepancies in the report of the inspector on the examination for the degree of Bachelor in Hygiene and the Diploma in Public Health of the University of Durham. He also expressed his surprise that the Committee in preparing their report had omitted a commendatory sentence, in which the inspector had described the examination as being "conducted with commendable care and precision." He stated that the recommendations of the inspector, as contained in the report, had been strictly attended to by the University.

Dr. Thorne Thorne thought that Durham had nothing to complain of, seeing that the Durham University was singled out by the Committee as one of the bodies that had reached the necessary standard.

Some remarks having been offered by the representatives of the University of London, the Victoria University, and the University of Aberdeen on the reports of the inspector at their examinations for the Public Health diplomas, the Council resumed, and it was moved by Dr. Thorne Thorne:

That the Council approve of the report of the Public Health Committee and of the conclusions and recommendations therein contained. That the report be transmitted to the medical authorities who conduct examinations in diplomas in Public Health.

Sir William Turner seconded the motion, which was agreed to.

In the report the Committee stated that there were fifteen bodies in the United Kingdom who conferred registrable or registered diplomas in Sanitary Science, Public Health, or State Medicine. Eleven of these bodies had been visited by Dr. G. F. Duffey, the inspector appointed by the Council, who reported that a number of the examinations viewed generally reached the necessary standard. The examination of the English Conjoint Board was stated to have been "excellent and painstaking;" that of the University of Cambridge as "excellent and conducted with care and efficiency;" of the University of London it was stated that only those candidates who possessed a high standard of proficiency received the degree; and at the University of Edinburgh it was found that there was evidence of "high proficiency, scientific and general;" the examination of the Durham University was "on the whole satisfactory." The Committee expressed their opinion that not only should these examinations be maintained at a distinctly high standard, but that the standard should be progressive, taking cognisance of the advance made from time to time in the knowledge which it was essential that a competent and skilled medical officer of health should possess. Those who sought the diplomas in question were not mere students; they were a body of qualified men, who, if successful, would be held out before the public and the medical profession to the possession of special and expert knowledge in one important branch of medicine, and would require a statutory monopoly of nearly all the best posts of medical officers of health in this country. After dealing at considerable length with the various matters the Committee arrive at the following conclusions: "1. We are of opinion that it is necessary to call the attention of some of the licensing bodies to the instruction of the Council (Minutes, vol. xxx, p. 140, Section 11) to the effect that every candidate to whom a diploma or certificate is conferred should give evidence 'of a distinctively high proficiency, scientific and practical, in each and all the branches of study which concern public health,' and we are of opinion that this instruction should admit of no exceptions, whether on account of the seniority of the candidate or by way of allowing excellence in one subject to compensate for failure in another. 2. We are of opinion that it is a matter of primary importance that each candidate should, in addition to giving indication of competency in the written and practical examination, display similar competency in the oral examination. The oral examination is especially called for in such matters as concern practical epidemiology and the duties of a medical officer of health. 3. Whilst we are not prepared to advocate a uniform standard for the several examinations, we are of opinion that they should all be regarded as of the character of an honours examination. 4. We are of opinion that no body conferring a registrable diploma or certificate in Public Health should adopt different standards for different classes of candidates. 5. We are of opinion that where the examination is conducted in two parts no candidate should be allowed to present himself in Part II until he has passed in Part I. And we are further of opinion that failure in any one subject in either part ought to entail rejection in the whole of that part. 6. We are of opinion that practical laboratory work should form a distinct part of every examination for a diploma or certificate in public health. 7. We are of opinion that practical examination in the outdoor work of a medical officer of health, including a test of ability properly to interpret plans, should form part of every examination for a diploma or certificate in public health. 8. Whilst we attach great importance to the possession by every successful candidate of distinctive competency in relation to the clinical aspects of the infectious diseases, we are not prepared to say that practical examination in this matter should in every case necessarily form part of the examination. 9. We are of opinion that a practical knowledge as to the wholesomeness of food supplied, including meat in the form of carcasses, should be regarded as properly coming within the scope of an examination which aims at providing expert medical officers of health. 10. In conclusion, your Committee desire to

express their regret that so many of the licensing bodies should have thought fit to institute examinations, and to grant diplomas and certificates, in public health. The multiplication of such examinations, quite irrespective of the number of candidates, is, in our opinion, not conducive to the maintenance of the standard of efficiency which should be aimed at."

It was moved by Dr. THORNE THORNE, seconded by Mr. TEALE, and agreed to:

That the Rule I (3) adopted by the Council on December 1st, 1893, for Diplomas in State Medicine be amended, and that the rule be as follows: Every candidate shall have produced evidence that, during a period of six months after obtaining a registrable qualification, he has either practically studied the duties of outdoor sanitary work, under the medical officer of health of a county or of an urban district having at the date of the last census a population of not less than 50,000, or of a combination of two or more sanitary districts having collectively at the date of the last census a population of not less than 35,000, or else has himself held an appointment as medical officer of health under conditions not requiring the possession of a special sanitary diploma. The certificate of an assistant officer of health of a county or a large urban district may be accepted, provided the medical officer of health of the county or district consents to the assistant officer giving such instruction.

REPORT OF EXAMINATION COMMITTEE.

Sir DYCE DUCKWORTH moved:

That the resolutions passed by the Council in committee on the recommendations of the Examination Committee be adopted by the Council in the following form:—(i) That fixed intervals of time between the several examinations should be maintained, and that at least two academic years should intervene between the date of passing the last examination in anatomy and physiology and that of admission to the Final Examination in medicine, surgery, and midwifery. (ii) That the extreme subdivision of any subject of examinations, and particularly of the Final, as now permitted by some Boards, should not be sanctioned. (iii) That in all the written examinations of the different bodies the questions in each subject shall be submitted to the whole of the examiners in that subject before they can be set at any examination. (iv) That candidates in all their examination work should be carefully supervised. (v) That an average of at least half an hour should be allowed for a candidate to answer each question in the papers on medicine, surgery, and midwifery. (vi) That no candidate should be orally examined in any subject, or part of a subject, except in the presence of two examiners. (vii) That the Clinical Examinations in medicine in surgery should be conducted under the personal surveillance of two examiners. (viii) That the Final Examination should include the examination of secretions, the testing of urine, clinical microscopy, and prescription writing, and that there should always be an oral examination in both medicine and surgery, which should include the recognition of pathological specimens. (ix) That at every Final Examination there should be a practical examination in pathology, macroscopic and microscopic, unless this has been included in the examination immediately preceding the Final Examination. (x) That the examination in midwifery and forensic medicine should be made as practical as possible. (xi) That whatever may be the system of marking, the percentage for a pass (50 per cent. in each division of a subject) should be uniform in all the Boards, and in accordance with previous recommendations of the Council. (a) That the marks obtainable on the written examination ought not to have greater weight than those given at the oral or clinical examinations. (b) That marks given in any part of an examination should be given on the merits of that part alone, and not be subject to future revision, unless for the correction of a manifest error. (c) That the former recommendation of the Council that knowledge of one subject should not be allowed to compensate for ignorance in others should be more carefully regarded by some of the examining bodies. (xii) That as the art of examining is only to be acquired by practice, it is desirable that an examiner should be re-elected, where practicable, for at least five consecutive years, particularly for the Final Examinations. (xiii) That the clinical examinations in medicine and surgery should be held in hospitals wherever that may be possible.

Dr. BATTY TUKE pointed out that Resolution ii as it stood practically repealed the existing standing recommendation of the Council and involved a very important principle. The Council had held the opinion all through that it was undesirable to break up the subjects for examination, whereas this resolution spoke of "extreme subdivision."

Mr. BRYANT said it was a change of principle, but not a change of practice, for it had been the practice in most examining bodies to allow men to come up for medicine, surgery, and midwifery separately. Although he agreed that in the case of very good men it was possible to pass these three important subjects at one examination, yet taking the body of men he held that such a requirement was impossible, and even if they were to pass such a rule he did not think they would induce examining bodies to compel a man who had done a thoroughly good examination in either subject to reappear at the Board and be re-examined on those subjects. The theory might be good, but practically he thought it would be inadvisable to compel men to do it. Under the circumstances he did not see how the Council could go further than the resolution they were now asked to pass.

Dr. BATTY TUKE said he was not advocating any principle but was only pointing out that this resolution changed the principle which had ruled in the Council for many years.

Dr. MCVAIL hoped the Council would not sanction the idea that a man might pass into the profession who after a five-year curriculum could not pass an examination in one of the subjects. He was surprised to hear the statement by the representative of the College of Surgeons of England that the candidates whom they dealt with could not at the end of the five-year curriculum pass an examination in any of the three subjects; that they came up to the College and passed in surgery, and went away and forgot that. The suggestion was that a man might come up to the College of Surgeons of England and pass in surgery alone, and might come back at some future time and be examined in medicine alone, and then come back again and having passed in midwifery alone could then enter the profession, the double Colleges believing that if at the last examination they had examined him again in medicine and surgery he would have failed. He held most emphatically that the Final Examination to admit to the *Register* should be in medicine and surgery and midwifery, and that unless a man knew his subject sufficiently to pass at the time of Final Examination he should not be passed. This resolution was no ordinary one, but was to go out as the outcome of four or five years of inspection of the Final Examinations. This was the first inspection of Final Examinations that the Council had undertaken since the new Act of 1886 was passed, and it was to be supposed that in adopting those recommendations they would get finality for half a generation. Were the Scotch Triple Board and the University of Glasgow to be at liberty to cut up the Final Examination, and to allow students to take the three subjects separately? He protested against the resolution telling the profession and the public, as it did, that a man was not able to pass in medicine, surgery, and midwifery at the same time.

Mr. TEALE said Dr. McVail's remarks were all very well, but he had failed to distinguish between passing an examination and having knowledge. He hoped it would not be laid down absolutely in this country that it was absolutely necessary for a man to take up the three great groups together, but that he could not take them all together did not mean that he had forgotten everything that was past.

Mr. BRUDENELL CARTER asked Dr. McVail what had been the practice of his body with regard to the subdivision of examinations since the Council's recommendation was issued, whether they had insisted upon combining all the subjects in one examination.

Dr. MCVAIL said his body had been unduly dragged by the double Board in England to have the subjects examined into separately; but it had been unwillingly done, certainly so far as the Glasgow Faculty was concerned.

Dr. CAMERON said as an examiner and a member of the Council of the Faculty he had resisted as far as he could this subdivision of the Final Examination, but he had always been met with the objection Dr. McVail had just stated, that they could not do otherwise than to allow candidates to come up for one department at a time as long as that method was followed by the Conjoint Board in London. He would say as an examiner in surgery for a long period of years that he never examined a student who came up in surgery alone and found him a thoroughly good man. Whatever it might be with the Conjoint Board in London it was the weak men who came up and passed the examination in compartments, and they appeared to do that on the same principle as shipbuilders built ships in compartments, because they found it made the voyage much more easy. It was the strong desire of the Faculty of Physicians and Surgeons in Glasgow, and of the two Royal Colleges in Edinburgh that that practice should be discontinued.

Dr. MCVAIL moved as an amendment that:

The Final Examination should include the subjects of medicine, surgery, and midwifery, and a failure in more than one of these subjects should involve the re-examination in all of them.

Dr. Cameron seconded.

Dr. Glover hoped the amendment would not be carried. They all knew there were giants amongst candidates who did everything well, but there were men equally entitled to respect, and who would make equally good practitioners, who could not pass all three at once. Probably the man who passed three good examinations would come out a better practitioner than the man who passed all at once. He hoped the Council would not listen to Dr. McVail in this matter.

Sir Dyce Duckworth said the Council had recognised the present system by a resolution passed in May, 1893, which suggested that a percentage of not less than 60 marks on each of any two subjects, supposing that the pass requirement was 50 per cent., should exempt from re-examination.

Sir Wm. Turner suggested that the Council should reaffirm the recommendation of the Council referred to by Sir Dyce Duckworth.

Dr. McVail said he would withdraw his amendment if that was done.

Sir Dyce Duckworth said the "extreme subdivision" was intended to refer to the division of subjects, not of groups. For instance, a man might pass in his surgical paper and fail in his clinical, and it had been the practice in some instances to let him come up afterwards for his clinical alone. That was the "extreme subdivision" objected to.

Sir Walter Foster: I condemn that as much as you do.

Mr. Bryant: That is an example of what we mean; we mean minute subdivision of subjects.

Mr. Brudenell Carter moved:

That the recommendation (ii) be adopted in the following amended form: (ii) That the subdivision of any one subject of examination, and particularly in the Final, now permitted by some Boards, should not be sanctioned.

This was seconded by Dr. Philipson, and agreed to.

It was then moved by Mr. Brudenell Carter, seconded by Dr. McVail, and agreed to:

That the following resolution, passed by the Council on June 5th, 1890, and reaffirmed on May 29th, 1893, be now reaffirmed and adopted as recommendation (iii): Seeing that the practice of different authorities varies on the question whether a student who fails to satisfy the examiners in each of the several subjects of medicine, surgery, and midwifery should be referred on all of them, or only on those in which he fails, the Council recommends that some general principle should be adopted with reference to this question; and suggests that a percentage of not less than 60 marks on each of the two subjects—supposing that the pass requirement be 50 per cent.—should exempt from re-examination in those two subjects.

It was moved by Dr. McVail, and seconded by Dr. Gairdner:

That the following recommendation be adopted in place of the present Recommendation xi (a): That when a candidate has, in clinical medicine or in clinical surgery, had a mark awarded that is below the pass mark, the mark shall not be raised because of any excess of marks in the oral or written parts of the examination.

The amendment was lost.

The Council then adjourned.

Monday, December 1st.

Sir Richard Quain, Bart., President, in the Chair.

Report of Examination Committee.

The first business at the final meeting of the session on Monday was the adjourned consideration of the recommendations of the Examination Committee.

Sir Dyce Duckworth moved that the following additional recommendation be adopted by the Council:

That in whatever subject, or part of a subject, a candidate may be rejected, satisfactory evidence shall be produced from his teachers that he has carried on his study during the interval of his remission; such a candidate shall not otherwise be eligible for readmission to examination.

He pointed out that whilst many Examining Boards carried out the recommendation, yet there were some who permitted the student to do whatever he liked during the interval of remission. It was a very proper thing that the student should be required to continue his study.

Mr. Bryant seconded the resolution. He said that no doubt many Examining Boards would welcome the recommendation.

Dr. MacAlister pointed out that many of the candidates were already qualified and in practice, and therefore could not produce evidence from their teachers.

Sir Dyce Duckworth said he was quite willing that the words "from his teachers" should be omitted, and the resolution was agreed to with that amendment.

Dr. MacAlister moved the following resolution:

That the resolutions on professional examinations, with the amendments now adopted by the Council, be remitted to the Examination Committee, with instructions to reconsider them in relation to the existing recommendations on the subject, and to draw up in a consolidated form a series of definitive recommendations suitable for transmission to the licensing bodies.

He said that many of the existing recommendations were of extreme value, and it would not do to omit them from the new recommendations. Then, again, many of the recommendations were somewhat ambiguous, and it was necessary before the rules were finally issued by the Council that they should go out in a complete form.

Dr. Batty Tuke seconded the resolution.

Sir Walter Foster moved the addition of the following words to Dr. MacAlister's motion:

And that reference be made to the reports of the inspectors on which each recommendation is based.

He said that many of the examining Boards already observed the recommendations, and it would therefore be a work of supererogation to the Council to send them the recommendations unless they contained a reference to the inspector's report on which each recommendation was based. In that way when the rules were sent out those bodies with whom no fault was found would see that there were other bodies who had not observed the rules, and those bodies who did not observe the rules would have their attention specially called to their own defects.

Dr. Bruce seconded the amendment of Sir Walter Foster. He said that the Council could not be too precise in fixing on the particular bodies that had not carried out the recommendations.

Dr. MacAlister said he would accept Sir Walter Foster's suggestion; and the resolution was carried with that addition.

Application for Registration.

The Registrar read a report from the Branch Council for Scotland stating that they had considered the applications for the names and diplomas of Mr. R. B. Taylor, Lic. of Faculty of Physicians and Surgeons of Glasgow, November 8th, 1864, and Lic. of the Royal College of Physicians of Edin., April 5th, 1865; and of Mr. Arthur Worsley Powell, Lic. of the Faculty of Physicians and Surgeons, Glasgow, 1880, to be registered in the *Medical Register*, as well as the documentary evidence in support of the applications, and had found them to be in conformity with the Council's directions. The Council recommended, therefore, that the General Medical Council should direct the Branch Registrar for Scotland to register the names and diplomas accordingly.

Dr. Heron Watson moved:

That the General Medical Council should give directions to the Branch Registrar for Scotland to register the names of Mr. Taylor and Mr. Powell.

Dr. Pettigrew seconded the motion, which was agreed to.

PROSECUTIONS TO BE CONDUCTED BY THE COUNCIL, UNDER PENAL CLAUSES.

The Council considered *in camerâ* a communication from the Royal College of Physicians to the President. On the readmission of strangers, the President stated that a communication had been made to the Council regarding the case of a person who had no qualification whatever in this country, calling himself an "M.D.," and practising medicine and sending out indecent pamphlets, and that the following resolution had been passed:

That the Council instructs its Penal Committee to inquire into the cases of persons offending under Section 40 of the Medical Act of 1886, and, when the Committee sees fit, to instruct the legal advisers to proceed against such persons.

THE APOTHECARIES' HALL, IRELAND.

Sir WILLIAM TURNER moved the following resolution:

That if the Privy Council should notify to the General Medical Council their opinion, and issue any directions on the points submitted to the General Council regarding the examinations of the Conjoint Board of the Royal College of Surgeons and Apothecaries' Hall, Ireland; also on the decision of the General Council not to grant the petition of the Apothecaries' Hall, that the Council should appoint Assistant Examiners under the Medical Act (1886); the General Council empowers the Executive Committee to explain to the Privy Council the grounds on which the General Medical Council have arrived at their conclusion, and to take any further steps that may be necessary.

He said that the resolution had been framed in accordance with the views of the Business Committee and the President. It was also in accordance with Section 19 of the Medical Act of 1886, which gave power to the Privy Council under certain circumstances to do any Act authorised to be done by the General Medical Council. There were two modes which the Privy Council might adopt. They might notify their opinion to the General Medical Council; that was, they could notify their opinion of what the Council had just done, and might give directions concerning it, and if the Council failed to comply, the Privy Council itself might give effect to such directions. It was felt by the Business Committee that in case the Privy Council expressed any opinion on the point under discussion, or gave directions relating to them, it would be as well, if the communication came out of session, that the Council should have some means of receiving it, and, if necessary, making a report upon it.

Mr. WHEELHOUSE seconded the motion.

Dr. MACALISTER: Shall we notify the Privy Council?

Sir WM. TURNER said it was thought that the Apothecaries' Hall would notify the Privy Council. It was for the body that was refused to make a representation to that body to issue directions to the Medical Council.

Dr. MACALISTER said he should be of that opinion but for the fact that it was not an isolated thing. He thought it would be more respectful to the Privy Council that the General Medical Council should give them all the facts without any remarks.

Sir WILLIAM TURNER said that the Privy Council had not, as in the other case, asked the General Medical Council for any opinion on the appointment of assistant examiners to the Apothecaries' Hall. If the Apothecaries' Hall was not satisfied with the decision of the General Medical Council, it was its business to raise the question with the Privy Council. On the whole he thought that the General Medical Council ought not to take the initiative.

Dr. CHARLES MOORE said the Apothecaries' Hall would take whatever legal steps were necessary to maintain its status. He thought that due notice should be given to any bodies interested in order that their representatives and legal advisers might be enabled to attend at all the conferences between the General Medical Council and the Privy Council.

The PRESIDENT thought that Sir William Turner's motion should be adopted by the Council.

Dr. BRUCE wished to know whether the Council was to be involved in a legal plea.

Sir WILLIAM TURNER said that the future steps to be taken would depend entirely on the nature of the communication received from the Privy Council.

Dr. BRUCE inquired if authority was to be given to employ counsel.

The PRESIDENT: Certainly.

Dr. GLOVER thought it would be unfair to give the Executive Committee power to deal with the question, and that the proper and most courteous course would be to send the minutes to the Lord President, and to await his further wishes and instructions.

The motion of Sir William Turner was then put to the Council, and carried, with three dissentients.

STUDENTS' REGISTRATION COMMITTEE.

The report of the Students' Registration Committee was adopted and entered on the minutes. The report contained applications that had been made to the Committee either for exceptional registration as students, or for the antedating of the commencement of professional study, with the Committee's decisions thereon.

Sir DYCE DUCKWORTH moved the following resolution:

That on and after January 1st, 1897, the registration of students under Resolution xi of June 2nd, 1891, shall be discontinued, so far as concerns the preliminary examinations of the Pharmaceutical Society.

He said that it had been the custom previously to allow students who had passed the preliminary examination of the Pharmaceutical Society to register as medical students on taking the previously omitted subjects, but the Council wished to discourage that in future.

Dr. MACALISTER seconded the resolution, which was agreed to.

VOTES OF THANKS.

Mr. WHEELHOUSE moved the following resolution:

That the thanks of this Council be conveyed, through its President, to the President and Fellows of the Royal College of Physicians for their courtesy in granting the use of their library and other rooms for the session of this Council, and for their generous and kindly hospitality to the Council.

Sir WILLIAM TURNER seconded the motion, which was carried with acclamation.

Dr. GLOVER moved the following resolution:

That the best thanks of the Council be given to the President for his able services in the chair during the present session.

Sir PHILIP C. SMYLY seconded the motion, which was carried with acclamation.

The session then terminated.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION IN 1896.

AT a meeting of the Border Counties Branch of the British Medical Association, held in Carlisle, it was unanimously resolved to invite the Association to hold its annual conference in Carlisle next year, and Dr. Henry Barnes was nominated for the office of President for the year. The invitation and nomination of President will come before the Council of the Association in due course, and if the invitation should be accepted the meeting will be held at the end of July or beginning of August next year.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons, England, was held on December 4th, 1895, Mr. GEORGE POLLOCK, President, in the chair.

A reply from the Council of the Royal College of Surgeons acknowledging the receipt of the resolutions which the Committee had passed at their last meeting was read. After some discussion, a resolution was adopted unanimously expressing regret that the Council of the Royal College of Surgeons had not discussed the important suggestions made by the Committee for the more satisfactory conduct of the half-yearly meetings of the Fellows of the College; but in view of the important questions set down for discussion at the half-yearly meeting of Fellows in January, it was resolved to postpone further action for the present.

The Committee then received a deputation from the Civil Rights Defence Committee, headed by Lord Stamford, in reference to the case of Mr. R. B. Anderson.

The agenda for the annual general meeting of the Association on December 11th were then determined.

At the instance of Mr. T. HOLMES, the question of the attitude of the Association in regard to the claims of the Members of the College was again brought under the notice of the Committee. It was decided that the advocacy of the Members' claims could not be undertaken by the Association, but it was pointed out that the adoption of this policy was not intended to fetter individual action or expression of opinion.

WE regret to hear of the serious illness of Dr. G. H. Kidd of Dublin.

A NEW ERA IN INDIAN SANITATION.

Under this heading the Exchange Telegraph Company has issued the subjoined paragraph, which accords in the main with our own despatches just received from India:

'We understand that the Government of India have adopted a highly important resolution for practically carrying into effect the reforms destined to meet the sanitary needs of India, which were so strongly advocated at the Indian Medical Congress held at Calcutta in December last by Mr. Ernest Hart in his published Address to the Congress, and by Dr. Simpson, the medical officer of health of Calcutta, and subsequently insisted on by Mr. Hart in his address in August last to the British Medical Association in London. These recommendations were endorsed and presented to the Indian Government by resolution, and although they created at the time and since no small opposition, it is satisfactory to see that the resolutions of the Congress have met with the approval of the Government. This resolution is destined to create a new era in sanitation in India. The broad outlines of the scheme, as suggested in Mr. Hart's address and Dr. Simpson's paper were:

1. The complete separation of the sanitation of the Army and of the military cantonments from that of the civil population.

2. The special sanitary training of students in the medical and veterinary colleges and schools of India, and the affording to other classes of students facilities for obtaining, when desired, special training in sanitary engineering and architecture in the engineering colleges and technical schools.

3. The compelling of each municipality, or combination, or group of municipalities or local authorities to appoint a health officer after a certain date. Such officer's appointment, pay, leave, dismissal, etc., being subject to the approval of the sanitary commissioner.

4. The formation on every municipal board of a small but special sanitary committee with a medical man, and, when possible, the civil surgeon as president, and the compulsory setting aside annually of a certain sum of money to be placed at the committee's disposal for sanitary work only.

5. The appointment of the civil surgeon on a proper remuneration with defined powers as chief consultant health officer of the district, and in those places in which he is not available, either owing to overwork or other cause, the appointment of a special district officer.

6. The placing of the local and district health officers in close relationship with the sanitary commissioner of the province.

7. The placing of the provincial sanitary commissioner in touch with the imperial sanitary commissioner.

8. The representation of health matters on the Imperial Council.

9. The establishment of a scientific institute for India.

With the exception of the representation of health matters on the Imperial Council, all the other suggestions have been most sympathetically dealt with, and more or less adopted, and the Congress is to be congratulated on being the means of bringing forward a reform which is destined to create a new era in sanitation in India.

The Government of India are to be heartily congratulated on the broad views they have taken in the question, and the excellent manner in which they have handled it. An imperial bacteriological laboratory is to be established at Agra under the directorship of Mr. Hankin, and an imperial chemical laboratory in Calcutta. Health officers are to have a six months' training in bacteriology; special diplomas, after careful training in hygiene, are to be granted by the colleges, and 1,900 municipalities will be expected to appoint trained men for sanitary work. The scheme, when completed in details and in course of time, will give to India a sanitary organisation and service second to none in any other country.'

The following are the paragraphs in Mr. Ernest Hart's address on The Medical Profession in India, its Position and its Work; an address delivered before the Indian Medical Congress held at Calcutta in January, 1895,[1] in which the outlines were laid down for the reorganisation of the sanitary services in India:

"The Indian sanitary services should be reorganised on the following basis:

"(*a*) An Imperial sanitary department attached to the Government of India.

"(*b*) A provincial sanitary department attached to each of the provincial governments, such as Bengal, North West Provinces, Punjab, Madras, Bombay, Central Provinces, etc.

"(*c*) A local sanitary department attached to each municipality, district board, etc.

"(*a*) The Imperial sanitary department should be administrative and scientific, and quite distinct from the sanitary department of the army. It should consist of (1) the Sanitary Commissioner with the Government of India; (2) a deputy sanitary commissioner; (3) a medical statist; (4) a veterinary commissioner; (5) a sanitary engineer; (6) a Minister of Health, having a seat in the Viceroy's Council, as president. Scientific agents: Laboratory with trained experts. Duties: The advising of the Viceroy and Council on important health matters, either initiated by the Imperial sanitary department, or referred to it by the local governments; the collection and publication of information as to epidemic diseases existing in India and in other countries; the right of asking from provincial governments what they propose to do, or have done, in checking or inquiring into diseases affecting man, animals, or agriculture in their provinces; the arranging that all administration reports shall be drawn up on a uniform plan for ready reference; the acquiring of all information regarding the movements of pilgrims, coolies, and emigrants, and the advising the provincial governments, and requiring the latter to take proper precautions; the consideration of new sanitary laws, etc.

"(*b*) The provincial sanitary department should consist of the following sanitary officers appointed by the local government: (1) sanitary commissioner; (2) assistant sanitary commissioner; (3) sanitary engineer; (4) a president, who should be a high officer in the Civil Service. Travelling agents: deputy sanitary commissioners or inspectors, veterinary surgeons, deputy sanitary engineers, as may be required: scientific agents: trained professors and assist-

[1] Calcutta: Thacker, Spink, And Co., 1895. Vide also Mr. Ernest Hart's address delivered at the Congress of the Sanitary Institute of Public Health at Edinburgh, and the annual meeting of the British Medical Association held at Newcastle in 1895. Indian Medical Journal, August 5th, 1895, February 15th and 20th, and December 20th, 1894, and Sanitary Century, October, 1895.

ants in government laboratory for bacteriological, chemical, agricultural work, etc., and general sanitary investigations requiring to be done in laboratory. Duties: to control local authorities; to institute special investigations at any particular spot on any particular subject; to make by-laws and amend sanitary laws; to investigate diseases of men and animals, and study agricultural pests, etc.; to analyse water, etc.

"(c) Local sanitary departments to consist of municipal commissioners or district magistrates, with civil surgeon when obtainable. Executive agents: A health officer, attached to one or more towns; an engineer in a similar position, and a sanitary staff for each place as required. Duties: Conservancy, water supply, building regulations, drainage; registration of births and deaths, vaccination, stamping out of infectious disease, and informing provincial authority by weekly reports as to prevalence of cholera, small-pox, or other dangerous disease."

These may be compared with the above scheme now proposed by the Indian Government, and it will be seen that they closely correspond, although, as might have been expected, the proposals of the Government fall short in some respects of the original proposals. These proposals were strongly reinforced by the able paper of Dr. Simpson read at the Congress on the same subject, and a resolution in their favour, which was suggested and drafted by Mr. Hart, was unanimously passed at the last general meeting of the Congress and presented to the notice of Sir Antony MacDonnell, the Secretary for Home Affairs of the Indian Government, by a deputation of which Mr. Hart was requested to act as spokesman, and of which Surgeon-Colonel Harvey, President of the Congress; the Hon. Dr. Lethbridge, member of the Indian Council; Surgeon-Colonel Joubert, and Dr. Simpson were members, and spoke in support of the propositions brought forward.

Mr. Hart's open letter to the Secretary for Home Affairs of the Indian Government urging that Mr. Hankin's laboratory at Agra should be transformed into an imperial bacteriological laboratory for the training of medical officers was published in the British Medical Journal of May 11th, 1895, p. 1057, and was forwarded to the Indian Government in March, 1895, and it is satisfactory to learn that this proposal also has been adopted.

To make the scheme complete further laboratories need to be, and we understand are likely to be, organised on a smaller scale in each of the great Indian presidencies, and arrangements will be made for giving six months' training of medical officers in the service.

We have received further congratulatory despatches and communications from officials and others in India on this subject too late for publication this week. Full credit should be given in the matter to Dr. Simpson, the able Medical Health Officer of Calcutta, to whom—and also, we hear, to Sir A. MacDonnell—much is due for the good and rapid result thus accruing from Mr. Hart's recent visit and labours in India during his last winter holiday and the work done at the Calcutta Congress.

In memory of the late Dr. Andrew Miller, of Hampstead, who was killed by a fall from his horse at Henley on-Thames in July, 1894, a stained-glass window has been placed in Holy Trinity Church in that town. The window has two lights containing the figures of St. Andrew and St. Luke, and a quatrefoil with the geometrical emblem of the Trinity.

CANON WILBERFORCE ON THE TREATMENT OF HOSPITAL PATIENTS.

A few days ago the *Times* published a letter from Mr. Burford Rawlings, exposing the attack made on our hospitals by the antivivisectionist societies. Among the letters that followed it was one from Canon Wilberforce. He says: "If vivisection be only one half what its assailants aver, it is impossible but that a vague feeling of uneasiness should exist as to the bare possibility of the extension of experiments in some measure to hospital patients.....Some authoritative assurance would counteract the vague impression which is undeniably perceptible amongst the classes for whose benefit the hospitals exist."

It is to be noted that Canon Wilberforce writes in a quiet and temperate style, rather as if he were understating his case. But we are not now concerned—bad as it is—with his style, but with some of the examples which he brings forward to support his assertion that hospital patients are in danger of being made subjects of experiment:

1. "Poor woman, admitted to a hospital in a dying condition, made the subject of constant observation and examination with tuning forks, etc. These examinations were continued till her death, which occurred twenty four hours after her admission." This was a case of tumour of the medulla. "A watch was heard one inch and a-half from the right and eight inches from the left ear, and the tuning fork was heard best on the left side.....The symptoms noted subsequently were increasing dysphagia, and rapid shallow respiration without dyspnœa. More complete notes could not be taken, as she was only under observation for twenty-four hours, when she died of asthenia" (British Medical Journal, October 27th, 1883).

2. "Patients admitted to hospital in dying condition made the subject of minute and tedious examinations, merely to furnish reports to the medical journals." Reference is made to the British Medical Journal of June 7th, 1879, but a careful search has failed to find any account of anything of the kind.

3. "Experiment of injecting milk into the veins of a dying patient" (British Medical Journal, June 6th, 1885). This case is cited in a long paper on the use of milk for transfusion, with an account of several earlier cases where the patient's life was thus saved.

4. "Experiments on varnishing the skin—so frequently tried on animals—tried on men" (British Medical Journal, May 11th, 1878). This statement, as made, is perfectly untrue. The reference is to a clinical lecture on myxœdema by Dr. Ord, who hazards a conjecture that the action of the disease is analogous to the effect of varnishing the skin in animals.

So much for the truthfulness of Canon Wilberforce's letter. Now let us see how much harm he may have done.

Perhaps it is not our business to consider what harm he may have done to himself. But this much must be said—that we demand of a priest that at least he should not bear false witness against his neighbour. He has disgraced himself by a reckless statement of things that are not true; he could easily have assured himself that they were not true; he has published his false statement to the world. And we hope that those who are put in authority over him will take notice of his offence, and tell him plainly that he has played fast and loose with common honesty, and has brought no small discredit on the English Church.

The harm that he may have done to our hospitals is probably not great. It is not likely that his letter will be taken very seriously by those who know either him or the hospitals. We have the poor always with us, and whensoever we will we can do them service: he has with him the antivivisectionists. Some of these will doubtless leave to animals the money that ought to go to men, women, and children; others will make their opposition to all experiments on animals an excuse for giving nothing to hospitals, and will spend the money on themselves. But we doubt whether the sums thus lost to our hospitals are so large that by losing them we lose our power of helping the poor. Moreover, the antivivisection societies have lost ground of late years; their exposure at the Church Congress at Folkestone weakened them; and they are disheartened by the discovery of the treatment of myxœdema with thyroid extract; the antitoxins have also been a great blow to them. Therefore their rallying cry is that the

patients in our hospitals are made subjects of experiment. And the harm done by this agitation is done not to the hospitals, but to the patients themselves. It is impossible to doubt this: Canon Wilberforce's letter has done most harm to those whom he least thought to injure.

Every hospital surgeon is familiar with those most unhappy cases where the patient refuses some operation that may prolong or save his life. It may be some simple thing—the opening of an abscess, the withdrawal of an effusion. Argument, appeal, assurance, encouragement are all in vain; one has the heartache all for nothing, the miserable prescient sense of failure. The patient only answers, "I'm not going to be cut about," or "I'm sure you are very kind, but I won't have anything done." Probably every year, in the London hospitals alone, 400 or 500 patients thus refuse treatment, and are discharged at their own request. Lives that might be saved are lost by the score. At whose door are these deaths to be laid? Some of them lie at the doors of the quack doctors of London. Others lie at the doors of those who make money out of Mattei's fluids, Mother Siegel's Syrup, and the like. For others, those are to blame who set the poor against our hospitals—the editors of certain papers or their correspondents. Ignorant, credulous, incredulous, self-willed, and proud of their own judgment are many hospital patients; and some of them pay a heavy price for it. We implore Canon Wilberforce, not for our profession nor for our hospitals, but for the sake of our patients, to write or speak not a single word against the hospitals. But if speak and write he must, at least we hope he will accept our "authoritative assurance" that his letter to the *Times* is not the way to do it.

PRESENTATION TO SIR HENRY ACLAND.

On December 4th, in the hall of All Souls College, Oxford, Sir Henry Acland was presented with the testimonial which has been raised to commemorate his long and faithful services to the University, the City, and the County of Oxford, and the part which he has borne in the advancement of medical science, more particularly in the direction of sanitary reform during the 40 years for which he held the office of Regius Professor of Medicine.

The presentation was made by the Vice-Chancellor, who, in the course of his speech, said that the allocation of the fund in part to defray the cost of a bust to be placed in the University Museum, and in part to increase, by over £3,000, the funds of the Sarah Acland Home for Nurses, had been so arranged in order that Sir Henry Acland's name might continue to be connected with two institutions, the one designed to foster the study of scientific medicine, the other to carry benefits into the homes of all classes.

Sir Henry Acland, in the course of a feeling reply, expressed his satisfaction at the manner in which the fund had been expended.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1896. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 15th, July 8th, and October 21st, 1896. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 26th, 1895, March 26th, June 18th, and October 1st, 1896.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held on Tuesday, December 10th, at 4 P.M., at Highgate Infirmary, Dartmouth Park Hill, Highgate; Dr. Cleveland will preside. Mr. D'Arcy Power will read a paper upon the Differential Diagnosis and the Treatment of Cystic Lymphangiomata in Children; specimens and a case will be shown. Intervening clinical cases will be shown by Dr. Chalmers, Medical Superintendent of the Infirmary.—HUGH WOODS, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting will be held on Tuesday, December 10th, at 3.30 P.M. at the Lambeth Infirmary, Kennington. Clinical cases will be demonstrated on by Dr. Quarry, Medical Superintendent. All practitioners, whether members of the Association or not, will be heartily welcomed.—H. BETHAM ROBINSON, Honorary Secretary, 1, Upper Wimpole Street, W.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—An ordinary general meeting will be held in Aberdeen on Wednesday, December 18th, at 8 P.M.—C. THISELTON URQUHART, J. SCOTT RIDDELL, Joint Honorary Secretaries.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.—A meeting of this District will be held at the County Hotel, Salisbury, on Wednesday, December 18th, at 2 P.M. The business will be as follows: 1. Statement of Accounts. 2. Election of Officers. 3. Consider the report of the Committee of the British Medical Association on Medical Charities. 4. Mr. Hosking: (1) Notes of a Case of Sarcoma of the Scapula; (2) Multiple Growths of Lower Eyelid, with specimen. 5. Mr. Stratton: The Use of the Tintometer in Water Analysis. 6. Mr. Manning: A Case of Ovariotomy for the Relief of Enlarged Prostate. 7. Specimens. Luncheon will be provided at 1 o'clock, at 2s. 6d. a head, not to include wine or ale.—H. J. MANNING, Honorary Secretary.

STAFFORDSHIRE BRANCH.

THE first general meeting of this Branch was held at Stoke-on-Trent on November 28th; Dr. GEORGE REID (the President) in the chair.

Cases and Specimens.—Mr. W. D. SPANTON showed: (1) A large Myoma of Uterus, weighing about 13 lbs., removed by abdominal hysterectomy from a married woman aged 35. The operation was performed on August 25th by long median incision, the uterus, both ovaries and tubes being removed and the pedicle clamped in the wound. The patient made a good recovery. (2) A very large Ovarian Tumour, removed from a married woman aged 43, densely and universally adherent, followed by good recovery. (3) A Malignant Right Ovary, removed from a married lady aged 40, from whose right breast a recurrent cancerous tumour was also removed after what seemed a simple growth had existed for about ten years; also a small tumour previously excised from the left breast some months before. It was brought forward as an illustration of the obscurity of the origin of malignancy. (4) A married woman, aged 48, whose Spleen, weighing 6½ lbs., had been removed in March. The patient had a good colour, and appeared in perfect health. (5) Mr. Spanton also described some Expanding Bougies he had had made for treatment of stricture of the œsophagus, and related a case in which they had been successfully employed.—Dr. MCALDOWIE showed a Piece of Steel from a corset, which had sprung in a bent position into a boy's mouth, and become fixed in the naso-pharynx, one arm passing above the soft palate, the other down the œsophagus.—Mr. H. H. FOLKES showed: (1) A child, 3 years of age, with Congenital Absence of both Irides, complete Coloboma of Choroids, and Anterior Polar Cataract in both Lenses, both Cornea hazy, marked Nystagmus. The child had very fair vision. (2) A specimen showing Ossification of Choroid in the right eye of a miner, who was operated upon twenty years ago for staphyloma of the cornea of the same eye, due to injury.—Dr. G. S. HATTON showed Stones removed by nephrolithotomy from a patient in whom one of the ureters had suddenly become blocked. The patient recovered well from the operation, but died two months afterwards from suppression. On *post-mortem* examination the other kidney was found to contain numerous calculi.

Papers.—Dr. MCALDOWIE read a paper on Pseudo-Bulbar

Paralysis, referring to this disease two cases which had come under his care in the North Stafford Infirmary, and whose symptoms he analysed.—Mr. A. W. GRIFFITHS read notes of a case of Inversion of the Uterus in a primipara. The condition was brought about apparently by kneading the uterus to expel the placenta. Hæmorrhage was profuse, but was checked on the organ being returned. The patient made a good recovery.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual general meeting of this Branch was held in Marischal College, Aberdeen, on November 16th; Professor STEPHENSON, the retiring President, in the chair.

Confirmation of Minutes.—The minutes were read and approved.

Installation of New President.—Professor STEPHENSON introduced Dr. MCHARDY (Banchory), the President for the year 1896, who then took the chair.

Report of Council.—The Council's annual report was read, and was a very satisfactory one. The members now numbered 152, as compared with 146 last year. Thirteen new members were admitted; one resigned, and two died, namely, Dr. Jenkyns (Gladstone Place, Aberdeen), and Dr. Samuel Davidson (Wartle, Aberdeenshire), who had been twice President of the Branch.

Treasurer's Report.—The Treasurer's balance sheet showed the funds of the Branch to be in a very satisfactory state.

Election of Officers.—The following were elected:—*President:* Dr. McHardy (Banchory). *President-Elect:* Dr. Trail (Strichen). *Vice-Presidents:* Dr. Paterson (Inverurie), Professor Stephenson. *Representative on Parliamentary Bills Committee:* Professor Ogston. *Representative on Council of the Association:* Professor Finlay. *Hon. Treasurer:* Dr. J. Y. Dalgarno. *Hon. Secretaries:* C. Thiselton Urquhart; J. Scott Riddell. *Council:* County: Dr. Fergusson (Banff), Dr. Taylor (Keith), Dr. Wilson (Old Deer); Town: Dr. Rose, Dr. Blaikie Smith, Dr. Mackenzie Booth.

June Meeting.—The next June meeting was arranged to be held at Auchinblae.

Postponement of Motion.—A motion by Dr. Mackenzie Booth was in his absence postponed.

Hospital Visit.—A hospital visit took place at 11 A.M., and the members of the staff kindly attended in their wards, and demonstrated the cases, of which due notice had been given to the members by circular.

Annual Dinner.—The annual dinner was held in the Imperial Hotel: Dr. MCHARDY, the President, was in the chair, while Professor STEPHENSON acted as croupier.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE 137th meeting of this District was held at the Kent and Canterbury Hospital on November 21st, Mr. ROBERT HICKS, of Ramsgate, in the chair. There were twenty-five members and visitors present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Chairmanship of the March Meeting.—On the proposal of Dr. TYSON, seconded by Mr. F. WACHER, it was resolved that Dr. Robinson, of Dover, should take the chair at the meeting to be held at Dover next March.

Rare Sequela of Pleuritic Effusion after Aspiration.—Dr. GOGARTY (Canterbury) read a paper on this subject. The case was related of a man, aged 28, who was admitted into the Canterbury Hospital suffering from rheumatism, endocarditis, and double pleural effusion following influenza. To relieve distress of breathing he was aspirated, and 18 ounces of serum were drawn off from the left pleura. Eleven hours after the operation, profuse albuminous expectoration, amounting to between 1 and 2 pints, set in, and the man died three hours afterwards. *Post-mortem* examination showed endocarditis, vegetations on the mitral valve, double pleural effusion, and enlarged heart and liver. The expectorated fluid was like serum—coagulable with heat and nitric acid. Dr. GOGARTY pointed out that but little was to be found on this subject in English medical literature, and that most of the information he had gained came from a paper by a French physician,[1] together with a discussion on the subject among the members of a French medical society. After enumerating the various theories which had been advanced to account for this albuminous expectoration, he said that pulmonary engorgement, leading to œdema and exudation of serous fluid into the bronchi, was the hypothesis which met with most approval. Some abnormal distribution of the vasomotor nerves to the lungs was the most probable explanation.

[1] BRITISH MEDICAL JOURNAL, 1872.

Boracic Acid Poisoning in Milk.—Dr. ROBINSON (Dover) read a paper on this subject. Of a household of seven adults five were attacked with severe colic and vomiting, lasting from two to four days, and accompanied, in the worst cases, by suppression of urine. Much prostration and irritability of the stomach persisted for some days. On the day of seizure it was found that some milk which was partaken of by the five victims had been treated with "glacialene" as a preservative. This glacialene was found to contain boracic acid. In addition to this, boracic acid had been added to the milk, with the same object, before delivery. The milk in question, mixed with some blanc-mange, was given to some fowls, and, out of nine, five died; the others showed signs of poisoning, though in a less degree. There were no other circumstances to account for the outbreak. Dr. Robinson dwelt on the necessity of precautions in prescribing this drug, and of greater restrictions in its use as a food preservative.

Appendicitis.—Dr. TYSON (Folkestone) read a paper on appendicitis. Clinically the disease was met with in three conditions: (1) A local adhesive peritonitis, capable of resolution; (2) a localised inflammation, resulting in the formation of pus; (3) an acute general peritonitis. The symptoms, pathological conditions, and treatment of each of the three classes were described. The first division contains the greater number of cases met with. They generally get well under proper medical care. The cases under the second head, when pus forms, are to be treated as ordinary abscess. In such instances the appendix is usually destroyed in the suppurative process, so that relapsing appendicitis need not be apprehended. The extreme fatality of the cases coming under the third head was then alluded to. Idiopathic peritonitis was so rare that Dr. Tyson deprecated the use of the term without some qualifying adjective. Peritonitis in a child, excluding enteric fever and tuberculosis, was almost invariably due to appendicitis. Other causes—intussusception, strangulation by Meckel's diverticulum or from trauma—should not be forgotten but they were very rare. As to the use of opium in appendicitis and peritonitis, Dr. Tyson was of opinion that it should be restricted to the early cases, when the patient was in the hands of the physician, and before the surgeon has been called in, and to those desperate cases where perforation had taken place and no operation was intended.

Refreshments.—After the meeting tea and coffee were served in the board room of the hospital.

BATH AND BRISTOL BRANCH.

THE second ordinary meeting of the Branch was held at Bath on November 27th, 1895, CAREY COOMBS, M.D., President, in the chair. Thirty-seven members and four visitors were present.

New Members.—The following were elected: C. E. Wigan, M.B., C.M.Aberd, Clevedon; A. L. Fuller, M.R.C.S., L.R.C.P., Bath; H. A. Beaver, M.B., B.Ch.Vict., Clifton; H. W. Kendall, M.R.C.S., L.R.C.P., Clifton; E. B. Garland, M.B., C.M.Edin., Bristol.

Communications.—Dr. GEO. PARKER read notes of (*a*) Case of Perforation of Appendix in Enteric Fever, and (*b*) Perityphlitis: Portal Pyæmia. In the discussion which ensued the following members took part: The PRESIDENT, Dr. MICHELL CLARKE, and Dr. GOODRIDGE.—Dr. MICHELL CLARKE gave particulars of the Sequel to a case of Trephining to relieve symptoms of Cerebral Tumour, and also described a case of Birth Palsy, in which an operation was performed. The PRESIDENT, Dr. GEORGE PARKER, and Mr. WOODS commented on these cases.—Mr. CHARLES GAINE read a paper on Some Forms of Cachexia arising from the Retention of Diseased Teeth and Stumps which are not amenable to conservative treatment, upon which Dr. J. G. SWAYNE, Dr. MARKHAM SKERRITT, and Dr. SHINGLETON SMITH made some remarks.—Mr. S. E. RIGG described for Mr. T. G. STOCKWELL,

and showed the specimen of, a Sarcoma of the Scapula. Comments were made by Drs. GOODRIDGE and HARRISON.—Mr. BASIL TREVELYAN gave a brief Clinical Comparison of Young and Old Primiparæ, which was discussed by the PRESIDENT, Dr. J. G. SWAYNE, Dr. WIGMORE, and Mr. WOODS.

JAMAICA BRANCH.

A GENERAL meeting of this Branch was held on July 31st, 1895, at the Institute of Jamaica, Kingston, the President in the chair.

Confirmation of Minutes.—The minutes of the last meeting (May 29th, 1895) were read and confirmed, and signed by the President.

Communications, Notes.—The following cases were read by Mr. G. COOKE: 1. Gangrene of Leg from Embolism of Femoral Artery in a Patient of Advanced Age, Amputation, Recovery; 2. Rupture of Femoral Artery from Muscular Action, Large Diffused Aneurysm, Recovery; 3. Abdominal Pregnancy lasting Eighteen Months, Death. The reading of the papers was followed by discussion. In the case of amputation for dry gangrene of the leg the operator and patient were alike congratulated on the fact that so grave an operation as amputation in the lower third of the thigh at so advanced an age was successful. The case of aneurysm especially interested the meeting, the cause being so obviously traumatic.

CAPE OF GOOD HOPE BRANCH.

General Report, 1894-95.—Since the last annual general meeting the Association has met nine times; thrice at members' houses in summer, and six times in the English Church House, Burg Street. At the various meetings a large number of interesting papers were read and discussed, among others on the following subjects: Abnormal cases of Typhoid, Diphtheria, and Antitoxin (three papers), Hydatid Disease (two papers), Sporadic Cretinism, Ectopic Fœtation, Life Assurance in South African Races, Hepatic Abscess, Intraocular Cysticercus, and Iritis in Young Children. Numerous pathological specimens were exhibited, both macroscopic and microscopic, and some living patients were shown. A committee was appointed to investigate the prevalence of hydatid disease with a view to disseminating information as to its dangers and the means of its prevention. The Health Bill and certain desired amendments to the Medical and Pharmacy Act were discussed, and a committee was appointed to impress on the medical members of Assembly, and on the Government through the Colonial Secretary, the necessity for legislation on these subjects. Although favourably received on both occasions, these measures had again been shelved to make way for less important matters. The Association having still no permanent home, was indebted to Drs. Anderson and Kitching for housing the library at 47, Burg Street. Surgeon-Colonel Hamilton and Dr. Dyer kindly represented the Branch at the general meeting in London. The report further stated that three members had resigned, one had died, and one new member had been elected.

Election of Office-bearers.—The following were elected office-bearers for 1896: *President:* G. E. C. Anderson, M.D.Lond., Sea Point. *Vice-President:* Surgeon-Colonel Hamilton, P.M.O., Newlands. *Honorary Secretary:* D. J. Wood, M.B., Cape Town. *Honorary Treasurer:* L. A. W. Beck, M.B., Claremont. *Council:* W. J. Dodds, M.D., Valkenberg Asylum, Mowbray; J. H. M. Beck, M.D., Rondebosch; C. F. K. Murray, M.D., Kenilworth; C. L. Herman, M.B., Cape Town.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE usual monthly meeting of the Branch was held on September 27th, 1895, Dr. E. J. JENKINS, President, in the chair. There were thirty-one members present.

Confirmation of Minutes.—The minutes of previous meeting were read and confirmed.

New Members.—The PRESIDENT announced the election of Dr. Richards, of Vacy, as a member.

Communications.—Dr. BENNET exhibited a patient suffering from Urticaria Pigmentosa, and read notes of the case.—Dr. FIASCHI read notes of a case of Partial Excision of the Elbow Joint for Ankylosis following Fracture. Drs. CLUNES, SYDNEY JONES, and THRING discussed the case.—Dr. W. C. WILKINSON read notes of two cases of Papilloma of the Larynx. Drs. W. F. QUAIFE, CLUNES, and SPENCER discussed the case.—Dr. SPENCER read a paper on Morbid Alvine Secretions. Drs. WILKINSON and WORRALL discussed the paper.

SPECIAL CORRESPONDENCE.

PARIS.

The Organisation of Medical Charity.—Closure of the International Sanitary Exhibition.—Law and Medicine.—Criminal Anthropology in the Law Courts.—The Association des Dames Françaises.—An Infant Asylum.—General News.

THE *Journal Officiel* publishes the decree, which sets forth how the Paris District Public Assistance is to be organised. The twenty district charity offices will henceforth be composed of the Mayor, the deputies, district municipal councillors, and four administrators to each district, nominated by the prefect; another member performing the double duties of secretary and treasurer. Women may be elected to fill the post of administrators in district benevolent offices. The members of the office elect a controlling administrator, whose duty it is to put in force the decisions arrived at by the officials, to verify the accounts and examine the documents connected with legacies and donations; likewise those relating to expenditure. The revenue of each office is drawn from gifts, subscriptions, and legacies; from the general fund under the direction of the Public Assistance, which apportions to each office its share of this fund according to the number of the poor living in the district; from the sum voted by the Municipal Council for poor relief and paid to the Public Assistance; from the poor-boxes; from the sums collected by ladies at the doors of public exhibitions, church collections, and charity festivals; the sum collected by mayors, deputies, administrators, commissaries, and lady patronesses. Only those poor who are inscribed on a list drawn up each year by the office of their district, and approved of by the Director of the Assistance Publique can receive help; none can be placed on the list but French citizens who have lived three years in Paris. In exceptional cases temporary help is granted persons in temporary distress. The district charity offices give money to those who apply bringing a card issued by the office, and signed by the applicant. Household articles are also lent to the poor on application; and they are sent back to their homes in the country by the district charity offices when unable to earn their living; when behindhand with their rent the office advances it as a loan. The indigent poor who are not inscribed on the list of their district charity office cannot receive gratuitous medical help except in cases of sudden severe illness. The medical help provided by the district poor relief offices is distinct from that of hospital medical help. The poor are treated in their homes or in dispensaries by medical officers appointed to take charge of the sick poor. These medical officers have to live in the district to which they are appointed by ministerial decree. After having passed a competitive examination they hold their appointment for three years. The patients can be treated by any one of the doctors they prefer appointed in their district; medicine is provided free.

The International Sanitary Exhibition is closed, and the last honours have been paid to its memory in the form of a public dinner at the Grand Hotel. M. Bourgeois, President of the Cabinet Council, was in the chair, supported by many notabilities. The Dean of the Paris Medical Faculty proposed the health of the President of the Republic, who had inaugurated the exhibition. Dr. Brouardel went on to say that faulty sanitation is a public danger. At the exhibition of 1888 nearly all the articles of sanitation were of foreign manufacture, principally English. At the present time Dr. Brouardel declares it is France that triumphs; at the exhibition of 1889 French articles of sanitation carried off the palm. The Dean concluded by asking M. Bourgeois to further the passing of a public health law. The Minister, in his speech, said it was the duty of the State to say to sanitarians, "Show us what to do, and we will do it." He further promised that the Chamber of Deputies would, as soon as possible, urge

the Senate to pass the public health law which the Chamber had voted two years ago.

Law and medicine frequently have disagreements, and law, rightly or wrongly, has the upper hand. Not long ago a medical man sued a client to recover fees which had been left unpaid. He recovered the £12 sued for, but was condemned to pay exactly the same sum to his client as indemnity for the injury he had done him by violation of professional secrecy. In proceeding against his debtor and stating the services for which he claimed payment the wife of the defendant became aware of circumstances her husband had hidden from her, and thus his domestic happiness was threatened.

A curious case of another nature has just been tried at the first civil chamber. Dr. Aubry some time ago published a book, entitled *La Contagion du Meurtre*. In this volume there is a chapter treating of *la contagion par la famille* (family contagion). The author maintains that heredity and example are important factors in criminality. In order to prove the truth of his views he relates in the chapter on contagion by family influence the history of a family of criminals in a good position in the social scale. The brother and sister in this family both committed murder. Dr. Aubry explains this criminal mania by tracing their genealogy; they were the descendants of the illegitimate children of a woman who was accused of attempting to poison her husband; the father was well born and honourable, acknowledged the children, and gave them his name; the mother of the children was the wife of a hairdresser, and had legitimate children. Dr. Aubry closely studies the generations descending from the legitimate and illegitimate children of the hairdresser's wife in order to establish the different degree of criminality manifested in these two branches possessing the same mother. It is thus that Dr. Aubry is led to conclude that the legitimate children, in consequence of the marriages they made, manifest much feebler tendencies to criminal acts. One of the descendants is living, and has proceeded against Dr. Aubry on the ground that she is mentioned in his book and her dishonourable means of gaining her living used as proof that the legitimate branch is guilty of offences but not crime. M. Selegman has given judgment in favour of the plaintiff, who is 81 years of age. Max Nordau, in his criticism on Emile Zola, accused this author of having plagiarised Dr. Aubry; the attention of the person libelled was thus drawn to the fact.

The Association des Dames Françaises have held their annual general meeting. In the report read by Dr. Duchaussoy it was stated that thirty new committees have been founded; the Auteuil Hospital has been built; hospitals organised for war time are in the possession of the Association; instruction has been organised for the benefit of the lycée pupils; and a large supply of medical comforts, clothing, etc., sent to Madagascar. The military authorities authorised the Association to distribute among the soldiers returning from Madagascar non-military clothing, and to provide them with means to return to their families. In Paris the Association distributes clothing, food, medicine, and money in sums from 4 francs to 40, three times a week, among the soldiers and their families left in distress. The Association has spent this year £8,200. The Press Festival Committee has placed £2,000 at the disposal of the Association des Dames de France.

The Pouponnière de Porchefontaine, an asylum for infants at Versailles, has been visited by Mme. Félix Faure, the wife of the President, and the baby inmates rendered happy by a shower of cakes and toys. This building is situated in beautiful grounds measuring 15 000 square centimetres. Quite recently fresh pavilions have been added, and they were inaugurated by the visit of Madame la Présidente. There is in addition to the pavilions an infirmary and a lazaretto. Every wet nurse and every nursling admitted to the Pouponnière is kept in quarantine during eight days in the lazaretto; all doubtful cases are immediately removed from contact with the other inmates and placed in the infirmary. Linen is disinfected in a stove, and every article after use is disinfected. Children brought up at the breast are paid for; 40 francs are charged, and given to the wet nurse; when the child is not entirely nourished by human milk 30 francs are charged. Money grants called *bourses* and *demibourses* are given under circumstances meriting help.

In 1890 the Michelet Asylum for Pregnant Women was constructed by the Municipal Council. During the last ten months the applications for admittance has been so numerous that 157 women a month have been refused. The Municipal Council in consequence asks a further grant of £12,000.

Professor Lannelongue, member of the Chamber of Deputies, has been elected member of the Academy of Sciences, in the place of the late Professor Verneuil.

BERLIN.

Centenary of the Pépinière.—The Brandenburg Medical Association and the Reform of Lunacy Administration.—Puffs and Professors.

The Pépinière of Berlin—the State training college for army surgeons—looks back on a hundred years of existence, and its jubilee, which has just been celebrated by a banquet and other festivities, has been graced by a congratulatory letter from the Emperor, and by quite a shower of "decorations" for its chief officials. And certainly the Pépinière may turn with proud satisfaction to its record of a century; modern military surgery owes to it a great part of its development, nor must it be forgotten that here for the first time surgery and medicine were united in one course of instruction. The Pépinière is a residential college; its director-in-chief at present is General-Army-Surgeon von Coler, who is assisted by twenty-eight staff-surgeons, but the principal lecturers are university professors. The entire cost is defrayed by the State; the students on their side bind themselves to serve as army surgeons for a certain number of years. Among the men who have gone forth from it are Helmholtz, Virchow, Nothnagel, Leyden, Nachtigal, von Lauer, von Coler, Leuthold, Gaffky, Loeffler, Hueppe, Behring, etc.

The autumn meeting of the Medical Association (Aerztekammer) for the province of Brandenburg, which includes the city of Berlin, was chiefly occupied by a discussion on the reform of the lunacy laws. Several Government representatives attended the meeting and took part in the debates. Professor Mendel and Dr. Lepmann were the chief speakers. Among the resolutions passed by the meeting were the following:

1. A request that no asylums or institutes for mental cases of whatsoever description be permitted except under the directorship and responsible guidance of properly qualified medical men.

2. A demand for more thorough psychiatrical training of medical students, with the proposal that a course of at least six months in a mental clinic be made obligatory for obtaining a doctor's degree.

3. A request for the creation of a separate department for matters connected with lunacy, with an experienced alienist as chief and alienists as assistants in the Ministry of Education (Cultusministerium).

Since its last meeting the Aerztekammer has suffered two severe losses through the death of its founder and president, Dr. Graf, and of Professor von Bardeleben.

Among the testimonials appended to the advertisements of a new soap in the Berlin papers were four signed by members of the medical teaching body of the Berlin University (one professor and three *privat-docenten*). These four gentlemen were requested by the Prussian Minister of Education to explain how their names came to be used as an advertisement for soap. It appears that three of them gave answers that were considered satisfactory. The fourth, the *privat-docent* Professor Krause (one of the laryngologists who attended the Emperor Frederick in his last illness), declined to give any explanation whatever. Thereupon the Minister passed the matter on to the Medical Faculty of the University, with the demand that this body should use its "disciplinary power," and call Herr Krause to account. Thus the matter now stands, and it is not yet known what steps the Faculty propose to take. The principle involved in this matter is twofold: (1) Should a member of the teaching body of the University allow his name to appear in a manufacturer's advertisement? and (2) Has the "Facultät" of the University disciplinary power over the *Privat-docenten*, as it certainly has over the professors?

At a special meeting of the Tyne Port Sanitary Authority held on November 25th, Dr. Harker, of Tynemouth, was appointed medical officer of health in succession to Dr. H. E. Armstrong.

EDINBURGH.

Alarming Outbreak of Waterborne Typhoid Fever in East Lothian.—The Water Supply of Dunbar.—The Stirling County Ball Poisoning.

A serious outbreak of enteric fever has occurred in the county of East Lothian, something like fifty cases being now under treatment. Most of the cases have occurred in and about Dunbar, a town with a population of 3 645. The local authorities look on the matter as of such gravity as to warrant them in ordering the compulsory removal to hospital of those cases that cannot be effectively isolated. The first case occurred at a hamlet called Pathhead, some four or five miles from Dunbar, in the end of October. This case was at once removed to the caravan hospital. A second case from the same house and family was also removed to this travelling hospital about November 16th. The Pathhead water supply is drawn from wells sunk in the vicinity of the Spott burn. This water has been examined, and declared to be satisfactory. On or about November 20th it was found that there were eight or ten cases in Dunbar. On December 2nd the number was upwards of fifty. An analysis of the water was ordered, and this analysis was discussed at a private meeting of the local authority the other day. Why such a matter should be private we are unable to say. Sir Henry Littlejohn, who has been at Dunbar, has been asked for a further report.

The water supply of Dunbar comes from the Spott burn, and this burn, or a tributary of it, flows past the place where the Pathhead Caravan Hospital has been located. Whether this has any causal connection with the Dunbar outbreak has yet to be determined. There is another possible source of evil. Pressmennan Loch, situated five miles from Dunbar, and about one mile from Pathhead, has an overflow outlet into the Spott burn. It is stated that no overflow has taken place for several weeks. It appears, however, to be the fact that during last summer the trout in Pressmennan Loch were dying in hundreds. Actually some 500 dead trout were removed, and the water was considered so impure that cattle were fenced off to prevent their drinking it. The cause of the impurity is not so clear. There is a large and rapid growth of weeds in the lake, and whereas formerly these weeds were cut yearly, or from time to time, they have not now been cut for several years. It is supposed that the intense frost of the early part of this year, followed by the sub-tropical heat of August and September, has so acted on these weeds as to give rise to the state of affairs we have indicated. But it does seem incredible that water in which fish were unable to live, in which they were dying in hundreds, water that was deemed unfit for cattle, should yet be allowed even several weeks ago, to overflow into the water supply of Dunbar. But so it is. Into all the facts the most stringent inquiry will have to be made, and responsibility laid in the proper quarter.

The official inquiry into the Stirling County Ball poisoning is proceeding but owing to the extended area is necessarily slow. It will be remembered that a large number of persons who had been present at the ball, and who had partaken of oysters at supper, suffered afterwards from enteric fever caused, it was believed and alleged, by these oysters. There was a case in the town of Stirling (undoubtedly virulent typhoid), one in the county of Stirling, one in Linlithgowshire, one in Dumbartonshire, three or four in Glasgow, one in London, one in Venice, one in Bombay, and probably cases in Edinburgh, Kent, and Oxford. There were at least three fatal cases. The oysters came from the island of Tholen, Holland. The consignment consisted of sixteen barrels, four of which, containing 2 000 oysters, were sent by rail from Tholen to Rotterdam, from Rotterdam to Grangemouth by steamship, from Grangemouth to Stirling by rail. They were not opened till they reached Stirling. It appears that certain other persons in Stirling and Glasgow received oysters from the same consignment, and that no evil results are known to have followed their ingestion. It is stated that the bacteriologist to the Glasgow Western Infirmary has examined samples of the oysters, and pronounced them to be healthy. It is not asserted that he actually examined any of the particular lot that produced the cases of enteric fever.

CORRESPONDENCE.

DR. CALMETTE AND PROFESSOR FRASER ON SNAKE POISON.

SIR,—I desire, without offering any comments on the facts, to bring under the notice of your readers the following simple statement:

In the *Annales de l'Institut Pasteur*, May, 1894, Dr. Calmette described in full detail his researches on snake poison, and demonstrated that not only can animals be rendered resistant to cobra (and other snake) poison by the injection into them of graduated doses of the poison (so that rabbits were rendered tolerant of sixty times the lethal dose), but that the serum of such immunised rabbits is found to contain a powerful antitoxin, which can be used successfully as an antidote to snake poison. In April, 1895, in the same *Annales*, Dr. Calmette described the result of a year's further work on this subject, giving the most important facts as to the antidotal action of snake antitoxin in regard to poisons allied to snake poison, and of other antitoxins in regard to snake poison. On both occasions Dr. Calmette formulated his discoveries in such a way as to render them applicable to the treatment of snake bite in man.

On June 3rd, 1895, Professor Thomas R. Fraser, of the University of Edinburgh, read to the Royal Society of Edinburgh a paper (subsequently printed in the *Proceedings* of that Society), On the rendering of Animals Immune against the Venom of the Cobra and other Serpents; and on the Antidotal Properties of the Blood Serum of the Immunised Animals. In this paper, read more than a year after Calmette's first paper above cited was published, Professor Fraser has refrained from any textual reference to Calmette's published work. His only citation of Calmette is as follows: "Within the last few months Phisalix and Bertrand have obtained experimental indications of the antidotal power of the blood serum of animals immunised, but only to a low degree, against the venom of vipers; whilst Calmette, working in the Pasteur Institute of Paris, after several unsuccessful endeavours had led him to express the opinion that immunity against snake venom could not be produced, afterwards succeeded in obtaining evidence of its production and of the power of the blood serum to counteract the effects of venom."

The medical journals of Great Britain have represented Professor Fraser as the discoverer of the antitoxin of snake poison. Two distinguished Edinburgh biologists—Professor Geddes and Dr. Arthur Thomson—writing on Pasteur in the *Contemporary Review*, have put forward Professor Fraser as one who has made an important life-saving discovery, which is the latest fruit of Pasteur's fertile conceptions. As a matter of fact, anyone who will take the trouble to read Dr. Calmette's papers and Professor Fraser's will find that the sole credit of discovery in this matter rests with Dr. Calmette, who worked under the direction and with the suggestions of Dr. Roux.

It would be interesting to know whether the *Annales de l'Institut Pasteur* are accessible to Professor Fraser, and whether he thinks that his vague reference to Calmette's detailed researches, and his designation of the interval between May, 1894, and June, 1895, as "a few months," are calculated to give to the British public a fair notion of the merit in this matter of his French colleague.—I am, etc.,

Oxford, Nov. 28th. E. RAY LANKESTER.

*** The results of Dr. Calmette's investigations were stated in a leading article published in the same number of the JOURNAL (June 15th, 1895) as Professor Fraser's paper.

THE BATTLE OF THE CLUBS.

SIR,—In April last the Inverness Medical Society unanimously adopted several resolutions relating to medical attendance on members of the clubs and friendly societies in this town; these resolutions were noticed in your columns at the time, and are briefly as follows:

1. An examination fee of 2s 6d. to be charged all candidates for admission to clubs or friendly societies.
2. That 2s. 6d. a head a year be the minimum sum paid to the medical officer for attendance on members of these societies; this sum not to include medicines; if medicines are supplied, the charge a head to be 5s. 6d.
3. No family branch to be countenanced on any terms, and juveniles to be charged the same as adults.

All the medical men in actual practice in Inverness have signed a pledge agreeing not to accept any appointment unless the club conforms to the terms of the above resolutions. Furthermore, the medical men have also unanimously resolved, in the event of any of the present holders of club appointments being discharged, or their vacating their appointments on account of the society of which they may act as medical officer refusing to adopt the conditions laid down by the Inverness Medical Society, that no medical practitioner in Inverness will accept any such appointments rendered vacant by the discharge of the present holder for at least one year from January 1st, 1896, and after that date these appointments will only be accepted if the societies comply with the conditions above referred to.

The foregoing resolutions were rendered necessary on account of the inadequate remuneration paid to the medical officers of several of the clubs in proportion to the amount of work performed, and also by the rapid growth of the family branch of the friendly societies; this branch of the club system is taken advantage of very largely by members, who are by no means in a position to require medical attendance at reduced rates, and who for a small annual payment get medical attendance for themselves and their families.

The clubs in Inverness were notified of the foregoing resolutions some weeks ago, and evidently consider we are asking too much for our services, as in to day's *Scotsman* an advertisement appears asking for a medical officer for several benefit societies. They have combined, and hope to get someone to carry on club work here for a salary which will be totally inadequate and unremunerative in proportion to the amount of work which will be expected from anyone who unfortunately may be got to accept the appointment. The combined salaries of the different medical clubs will not amount to more than £100.

In addition to the stand the Inverness medical men have taken in connection with club abuses, they have also unanimously resolved not to have anything to do with medical aid associations. It is to be hoped, now that the members of the medical profession are becoming alive to the fact that club work at the salaries paid the medical officers is unremunerative, and also that in the majority of clubs a large number of their members are in receipt of incomes which place them quite beyond the necessity of getting medical attendance at reduced rates, a stand will be taken by the profession in different parts of the country, and an effort made to have the salaries of club medical officers raised to a more remunerative rate. What Cork, Eastbourne, Portsmouth, and Inverness have done can be done in other parts of the kingdom, but this is only to be gained by organisation and unanimity amongst the members of our profession.

I do not anticipate that any medical man will be found to accept the appointment of medical officer to the combined friendly societies in Inverness, as the salary attached to the office will probably not be more than £100 a year. Should there be any such, I think it is only right to warn him that besides occupying an unenviable position in the eyes of his professional brethren, he will at the same time find that the work expected to be performed by him will be "sweating" of the hardest description.—I am, etc.,

J. Munro Moir,

Inverness, Dec. 2nd. Hon. Secretary Inverness Medical Society.

Sir,—We are having at Woolwich a contest on the subject of women's clubs. A newly-formed female lodge of the I.O.O.F. was taken on by the local Branch of the Metropolitan Provident Dispensary on the same terms as the rules provided for men's lodges, namely, 4s. a year. After a short time the ladies (who belonged to the superior artisan class, and included several publicans' families) not finding themselves treated with the consideration they had expected, invited the local practitioners to apply for the post of sole medical officer to the club at 4s. a year. Upon this a meeting of medical practitioners was held, at which a resolution was drawn up in the following terms:

> The undersigned members of the medical profession residing in the Woolwich district are agreed that it is incompatible with the interests of the profession, as also of the public, to accept any appointment of medical officer to a female club at a lower annual remuneration than 8s. per member; and pledge themselves to abide by this agreement, and to refuse any such appointment at a lower rate.

Every general practitioner in the district gave in his adherence to this resolution, and all but two have signed it. The resolution was not intended to be retrospective, and only to apply to new appointments; but, in consequence of it, the medical officers of the Provident Dispensary gave notice that they could not continue to attend the members of the female lodge of the I.O.O.F. unless they paid 8s. a year.

The matter is still under discussion by the Dispensary Committee, but in all probability the dispensary will agree to the terms of the medical officers, even though it should mean the loss of the club. We are told, however, that we, the doctors, have made a mistake, and are fixing too high a figure for female clubs. We maintain that women who are not in regular work will probably give twice as much trouble as men, and therefore, unless there is a wage limit, they ought to pay at least twice as much. I shall be glad to know from those who have had experience of female clubs whether they find this contention to be correct.

There is no doubt that the club referred to can well afford the payment proposed, but there is some question whether as much can be expected from all female clubs. I should be very glad to learn whether there are any clubs paying as much as 8s.—I am, etc.,

Plumstead, S.E., Nov. 30th. Sidney Davies, M.D.

Sir,—The successful issue of the contest at Portsmouth will do much to convince the medical profession that by shaking off their fatal apathy which renders them an easy prey to their enemies, and by honourably standing by one another, many of the evils of which we complain can be overcome. It is a scandal that clubs should have the upper hand of their medical officers—it is a disgrace that the medical profession should have lost control over these and similar associations. But seeing that the medical officer is the essential element of the club system, we can regain control over those bodies that now sweat the profession by organising ourselves against them in a business-like manner. Any extended movement can only be carried through successfully by adopting the more reasonable tactics of "trades unionism." In the British Medical Association we have ready all the organisation we require—what we want to do now is to make use of it. It is essential that we have a central organising body as well as local branches; without the former local exertions will as often meet with failure as with success, for there will be no bond of union. This is the one cardinal fact that is recognised by all associations organised for any common aim. It is so obvious that it may be reckoned a truism.

In July last a resolution was passed at the annual meeting, urging upon the Council the necessity of including among the active labours of the Association those duties which are comprehensively included under the title of "Medical Defence." Previous to this a large number of Branches passed similar resolutions. If members who realise how grave the condition of the medical profession is becoming, and who are anxious to do something to advance the interests of their profession, will propose the resolution at the next meeting of the Branch to which they belong, much good will result. Grumbling and invective are interesting and instructive, but not productive of much good unless accompanied by action. Dissatisfaction is the first step to progress, but to win the prize the second step of exertion must be taken. As a profession we are excellent hands at grumbling, but very difficult to move to do anything for ourselves.—I am, etc.,

Dover, Dec. 1st. A. G. Welsford.

THE GENERAL MEDICAL COUNCIL AND PENAL CASES.

Sir,—In your report of Sir R. Quain's presidential address to the General Medical Council the following passage occurs: "In reference to the subject of the penal cases, which happily are on this occasion but few.....I may mention that there has been, in the opinion of the Penal Cases Committee and the solicitor no well-established case of covering." I am directed to inform you that the Council of the Medical Defence Union reported two extremely grave cases of covering, and that I have written in accordance with my instructions to Sir R. Quain, as President of the General Medical Council, to learn what has become of the cases in question. I may further mention that during the past week I was informed by an

official connected with the Council that the penal cases were to be adjourned until the next session so as to enable the Council to complete its work quickly.—I am, etc.,

A. G. BATEMAN,
General Secretary, Medical Defence Union.

King William Street, Strand, W.C., Dec. 4th.

PROPOSED HOSPITAL FOR CAMBERWELL.

SIR,—We presume that Mr. H. Jephson, who has replied to our letter regarding the South London Hospital, is the promotor of this scheme. He has accused us of misstatements without mentioning what they are, and has not attempted to refute any of our reasons for opposing the project.

On inquiry to-day we find that there are 120 vacant beds at St. Thomas's, and over 100 at Guy's, from want of funds.

We, the "nine medical gentlemen" so frequently and satirically alluded to, beg to subscribe ourselves,

NORMAN B. ELLIOT. C. PINEL GALLIE.
HENRY B. SHILLINGFORD. CAMPBELL BOYD.
W. BRAMLEY TAYLOR. A. BRENCHLEY.
WALTER A. ATKINSON. FREDK NORMAN.
F. HORTON VILLANUEVA.

CONVOCATION AND THE NEW UNIVERSITY OF LONDON SCHEME.

SIR,—I am afraid that the notice in the BRITISH MEDICAL JOURNAL of November 30th, p. 1374, headed as above, is very likely to mislead those who are not themselves members of Convocation. It states that a meeting of members of Convocation was held on November 25th; and though it is not very clearly stated what the wishes of the meeting were and the place of meeting, and the chairmen are not mentioned, it may be gathered that the feeling of members present was opposed to Lord Playfair's Bill, and that they thought the scheme when arranged should be submitted to Convocation for approval in the manner prescribed for senatorial elections.

It is important to note that this was not a meeting of Convocation duly summoned, but only a meeting of some members of Convocation. Convocation of the University of London was not summoned for, and did not meet on, November 25th. Convocation has not met since May of this year; but the delegates of the Annual Committee of Convocation joined with others of the deputation to the Duke of Devonshire on November 28th, in the view that it was neither necessary nor desirable that the scheme should be referred back to Convocation at all.—I am, etc.,

FREDERICK TAYLOR,
Member of the Annual Committee of Convocation.

Wimpole Street, Dec. 4th.

JOHN HUNTER'S FAMILY.

SIR,—The following extract from a contemporary notebook belonging to one of the members of the Hunter family is, I think, worthy of publication. It was shown me this evening by Miss Hunter-Baillie whilst we were looking over a series of manuscripts belonging to the Hunter, Jenner, and Baron families. She has kindly allowed me to copy the note, which runs in the following words:

John Hunter and Agnes Paul marry'd Dec. 29, 1767. He died Oct. 30, 1793. She dy'd Sunday, Nov. 3; bury'd Wedn., Nov. 6, 1751.
1. Their son John. Born Oct. 5, 1768. Dy'd Feb. 27, 1722.
2. Their daughter Elizabeth. Born Feb. 3, 1770. Dyed Sept. 12, 1711.
3. Their son Andrew. Born Oct. 4, 1771. Dyed May 18, 1714.
4. Their daughter Jane. Born March 10, 1772. She dyed Saturday, May 27, 1769; was buried Tuesday, May 30.
5. Their son James. Born Thursday, Jan. , 1774. Dyed in Glasgow, Thursday, April 11, and buried there Saturday, April 13, 1793.
6. Their daughter Agnes. Born July 17, 1776. Dyed Friday, March 13, [1741] buried March 17, being Tuesday.
7. Their son William. Born May 28, 1778.
8. Their daughter Dorothy. Born Dec. 26, 1779.
9. Their daughter Isabel. Born Dec. 1, 1781. Dyed Friday, July 30; buried Monday, Aug. 2, 1782.
10. Their son John. Born Feb. 28th, 1728.

The note is of very great interest, for it is written by one who apparently obtained his information at first hand. It gives the names and dates of the births and deaths of Hunter's brothers and sisters, some of whom are vaguely alluded to in the various biographies as "having died young." It gives, too, yet another date for the disputed birthday of John Hunter.—I am, etc.,

Bloomsbury Square, Nov. 30th. D'ARCY POWER.

INDEX MEDICUS.

SIR,—In the BRITISH MEDICAL JOURNAL of November 23th you refer to Messrs. Davis's list of subscribers to the *Index Medicus* which contains only four British subscribers. I fancy this list must be of the old subscribers, for I have sent to Dr. Billings a list of new subscribers which includes a round dozen of orders from British institutions and private persons. Even this result is rather disappointing, but it is much better than Messrs. Davis's list.—I am, etc.,

J. Y. W. MACALISTER,
Resident Librarian,
Royal Medical and Chirurgical Society.

20, Hanover Square, W.

A MEDICAL HERO.

SIR,—It will be within the memory of most of your readers that in July last Dr. J. T. Reese of Ystradgynlais, near Swansea, met his death by lightning whilst crossing a mountain during a thunderstorm to attend a burnt child. Such cases do our profession infinite credit, and show that Ian Maclaren's picture of the doctor in *Beside the Bonny Brier Bush* is not overdrawn. Application is being made to secure the election of one of the sons, Oscar Reese, to Epsom Medical College, and I trust a favourable response will be widely made. My own vote is unfortunately engaged elsewhere.—I am, etc.,

Kingston-on-Thames, Nov. 27th. D. RIDDLE.

OBITUARY.

GEORGE R. MATHER, M.D.GLASG., F.F.P.S.G.

THE annual dinner of the Glasgow Faculty of Physicians and Surgeons, held in the Faculty Hall on Friday, November 29th, was brought to an abrupt and sadly tragic termination by the sudden death of one of the Fellows, Dr. G. R. Mather. He had just resumed his seat, after replying to the toast of the "Army, Navy, and Reserve Forces," and one of the guests, the President of the Art Club, Mr. Tom McEwan, had begun a song, when Dr. Mather was observed to be breathing stertorously. He was immediately attended to, but had hardly been removed from the hall when he expired.

Dr. Mather was one of the best known and most popular of the practitioners in the East End of Glasgow. Under any circumstances his death would have evoked evidence of the esteem and affection in which he was held by the people among whom he practised for over thirty years, but the suddenness of his death has made the expression all the more deep and impressive. He was 55 years of age, and had been all his life associated with the East End of Glasgow, where he succeeded his father in a large practice. What leisure he had was devoted to literature and art. He loved art, and gave free play to his passion for the possession of pictures, and his collection was more than once drawn on for illustrations of the Scottish school for exhibition purposes. Two years ago he published a volume on Drs. William and John Hunter entitled *Two Great Scotsmen*. He was one of the promoters of the Burns exhibition proposed to be held in Glasgow next year, and he was one of the original members of the Sir Walter Scott Club. Dr. Mather's funeral took place on Tuesday, and, in view of the circumstances attending his death and the fact that he was a member of the Council of the Faculty, it took place from the Faculty Hall, which at the hour of service was thronged by his medical brethren. A representative of the corps of which he was Surgeon-Lieutenant-Colonel was present, and there were also representatives of the other professions, of literature, of art, and of commerce.

THE death, at the age of 77, from typhoid fever, of Dr. VAN DYCK, the Arabic scholar, is announced. He was born in 1818 at Kinderhook, a small town in the town of New York. His father and mother were Dutch, and Dutch was the first language which he spoke. He received his early education at the Kinderhook Academy, from which he proceeded to the Jefferson Medical College, Philadelphia, where he took the degree of M.D. At the age of 20 he was accepted as a missionary by the American Board of Foreign Missions. In 1848 there was an outbreak between the Druses and the Maronites of the Lebanon, and Dr. Van Dyck, who had assumed the native dress, was attending the wounded on both sides.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A Senior Surgeon-Captain A.M.S., at present stationed in Rangoon, wishes to exchange with an officer whose position on the roster would secure him three years at home. Advertiser arrived in India on December 2nd, 1894. State terms.—Apply, Surgeon-Captain Davis, c.o. Messrs. A. Scott and Co., Rangoon.

A Surgeon-Captain, with about half Indian tour to complete (Bombay), wishes an exchange with an officer having a year and a half (or longer) to serve at home. Would have to sail towards end of February, 1896.—Address, [illegible], c.o. Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

The following appointments have been made at the Admiralty: Herbert E. Marsh, Staff-Surgeon, and Edward P. [illegible], M.B., Surgeon, to the *Rupert*, additional, for Gibraltar Hospital, undated; John Dudley, Staff-Surgeon, and Francis J. Carter, Surgeon, to the *Empress of India*, December 12th; Ernest D. Minter, Surgeon, to the *Rupert*, December 12th; Frank E. Bock, M.D., Surgeon, to the *Blake*, December 12th; Anthony Gorham, M.D., Fleet-Surgeon, and John E. Coad, M.B., Surgeon, to the *Majestic*, December 12th; John Lyon, M.D., Fleet-Surgeon, and Charles Strickland, Surgeon, to the [illegible], December 12th; Henry A. W. Richardson, Fleet-Surgeon, to the [illegible], December 12th; Arthur W. [illegible], Fleet-Surgeon, to the *Royal Sovereign*, December 12th; Anthony Kidd, Staff-Surgeon, to the [illegible], undated; Thomas E. H. Williams, Staff-Surgeon, to the *Flora*, undated; John Andrews, M.D., Surgeon, to the Royal Marine Artillery, Eastney, December 12th; Samuel W. Johnson, M.B., Surgeon, to the *Hebe*, when recommissioned; Henry F. [illegible], Surgeon, to the *Flora*, December 12th, and afterwards to the *Pomone*, undated.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel James Macartney, M.D., from half pay, is restored to the Establishment, supernumerary, with precedence next below Brigade-Surgeon-Lieutenant-Colonel J. Barry, M.D., November [illegible]. Brigade-Surgeon-Lieutenant-Colonel Macartney was placed on half pay on account of ill-health, September 8th, 1894.

The Christian names of Surgeon-Captain Willington Shelton Dowman are as now described, and not as stated in the *Gazette* of August 27th, 1895.

Surgeon-Captain Alfred Wright, from the seconded list, is re-appointed Surgeon-Captain, *vice* P. B. Skerrett, retired, November 2nd.

Brigade-Surgeon-Lieutenant-Colonel R. C. Eaton is appointed to officiate as Principal Medical Officer Allahabad and Nerbudda Districts.

Surgeon-Colonel H. S. Muir, M.D., on arrival from England, is appointed Principal Medical Officer, Secunderabad and Belgaum Districts.

It is announced that an examination will be held in London on February [illegible] for seventeen commissions in the Army Medical Staff. The names of candidates will be received till the end of January.

ARMY MEDICAL RESERVE.

Surgeon-Captain William Vernon, having resigned his volunteer appointment, ceases to be an officer of the Army Medical Reserve, December [illegible].

THE VOLUNTEERS.

Mr. Thomas William Butcher, M.B., is appointed Surgeon-Lieutenant in the 5th Lancashire Artillery, November 27th.

Mr. Harry Harte Gourley, M.B., is appointed Surgeon-Lieutenant in the 4th Durham Artillery (Western Division Royal Artillery), November [illegible].

Surgeon-Lieutenant-Colonel M. Baines, M.D., 1st Middlesex Engineers, Fortress and Railway Forces Royal Engineers, has resigned his commission, with permission to retain his rank and uniform, November 27th.

Surgeon-Captain D. E. Flinn, 5th (Irish) Volunteer Battalion the King's Liverpool Regiment, is promoted to be Surgeon-Major, November 27th.

Surgeon-Lieutenant-Colonel J. E. Foster, 2nd Volunteer Battalion the Duke of Wellington's West Riding Regiment, has resigned his commission, retaining his rank and uniform, November 27th.

Surgeon-Lieutenant J. Mason, 3rd (Renfrewshire) Volunteer Battalion the Princess Louise's Argyll and Sutherland Highlanders, is promoted to be Surgeon-Captain, November 27th.

Surgeon-Captain R. W. Edginton, M.D., 1st Worcester and Warwick Artillery, is promoted to be Surgeon-Major, December [illegible].

Mr. Alexander James Anderson, M.B., is appointed Surgeon-Lieutenant in the 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment, December [illegible].

Mr. Adam R. H. Oakley, late Surgeon-Captain, 2nd London Volunteer Rifle Corps, is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Essex Regiment, December [illegible].

Surgeon-Captain T. Carr, M.B., 2nd Volunteer Battalion the Manchester Regiment, and Surgeon-Lieutenant A. T. Collum, 13th Middlesex (Queen's Westminster) Rifles, have resigned their commissions, December 4th.

ALDERSHOT INSANITATION.

A letter to the *Morning Post* of November 19th is worth transcribing, as it reveals so disgraceful a state of insanitation of officers' quarters as to be almost beyond belief. The correspondent says: "Two or three months ago a young Royal Artillery officer was sent home from Aldershot suffering from scarlet fever, arising from insanitary conditions of his quarters, where the sewage came up through the boards, the excuse being that it would cost £[illegible] to remedy the evil. During the illness of the officers the place was examined and reported to be thrown down. You will scarcely believe that after their return to quarters the officers were again put into that unhealthy den, but such is the case. On Monday last my young friend was again sent home suffering for typhoid fever, and was put under the care of two doctors and two nurses. Other of his companions may be suffering in the same way. The regiment is to go to India next year. Is it to prepare them for India that they are put into such dens?"

THE MADAGASCAR EXPEDITION.

At the exceptional sitting at the Palais Bourbon the following interesting details[1] regarding medical affairs were submitted: M. Vigné d'Octon followed M. Pierre Alype with medical details as to the sufferings of the troops, the lack of quinine, bread, and wine, the crowding of the hospitals, and the unsatisfactory arrangements for bringing back the men. He advocated a commission of inquiry to ascertain responsibilities. M. Cavaignac, Minister of War, turning to the question of the present situation of the expeditionary corps, gave the following statistics: 17,[illegible] had been sent to Majunga, 4,000 had returned home, 3,000 had died, and [illegible] were still to be repatriated. In Antananarivo there were now 3,300 to 3,600 men, and 1,100 were scattered along the route. Besides the 3,000 men who had died in Madagascar, [illegible] had died on the way home and [illegible] in the hospitals. Nothing like this loss had been experienced by the French army since the cholera year in [illegible], when [illegible] men died. He contended that in murderous climates only seasoned men should be employed. The lack of porters was particularly alluded to by M. Cavaignac, who pointed his moral by a study of the Chitral expedition and English experiences in Abyssinia.

FOREIGN SERVICE AND PAY OF MEDICAL OFFICERS.

Nemo writes: The incidence of foreign service is heavier on medical officers than any other class, as shown in the subjoined table, calculated from the Monthly Army List; this alone ought to entitle them to special advantages in pay and pension, but does not. The truth is, the pay of all officers has been levelled up, until the Medical Department has no advantage whatever, and is at a positive disadvantage compared with Royal Engineers.

Table—Fractions Omitted.

803	Cavalry officers	at home,	507;	per cent.,	63
		abroad,	296	,,	37
1,[illegible]	Royal Artillery officers	at home,	609	,,	46
		abroad,	[illegible]	,,	54
[illegible]	Royal Engineer officers	at home,	[illegible]	,,	50
		abroad,	[illegible]	,,	50
4,619	Infantry officers	at home,	2,323	,,	50
		abroad,	2,296	,,	50
[illegible]	Army Service Corps officers	at home,	159	,,	77*
		abroad,	47	,,	23
[illegible]	Chaplains Department officers	at home,	63	,,	73
		abroad,	23	,,	27
832	Medical Department officers	at home,	343	,,	41*
		abroad,	490	,,	[illegible]
132	Ordnance Department officers	at home,	95	,,	71
		abroad,	37	,,	29
210	Pay Department Officers	at home,	176	,,	85
		abroad	32	,,	[illegible]
136	Veterinary Department officers	at home,	[illegible]	,,	[illegible]
		abroad,	[illegible]	,,	47

* Quartermasters are excluded.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ACTION BY A MEDICAL MAN.

Dr. Handfield Jones has been subjected to great annoyance from a very excitable female patient, and it became necessary for him to take steps in the police court. Ample apologies have been tendered, and the defendant has been allowed to go free on her own recognisances and undertaking for her good behaviour in the future. There is one point, however, in the matter to which our attention has been called, as to which Dr. Handfield Jones may probably desire to make some explanation. According to the statements reported as having been made by him in court he stated that when summoned by telegraph to a case of illness alleged to be serious, he replied by referring the patient to a neighbouring chemist. This was such a singular and unusual proceeding that there will probably be some further explanation.

"A CARD."

The following advertisement appears in the *Sussex Coast Mercury* for November 23rd, 1895:

(A Card.)
Dr. Alfred Wright,
Physician, &c.,
"Totaraoui,"
Selden Road,
Worthing.

QUESTION OF CONTRACT.

D.—We have read the statement of our correspondent and the agreement he enclosed, and in reply to his questions we think (1) That the agreement does not disclose *prima facie* any unfair arrangement, and that oral evidence would not be admitted in this country with the view of establishing a partnership, there being nothing in the agreement on

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[1] The *Times*, November [illegible]th.

the subject to show that this was intended. In the absence of fraud or impropriety, it may be taken as a clear general rule of law here that where a contract is reduced into writing it is presumed that the writing contains all the terms of it, and evidence will not be admitted of any previous or contemporaneous oral agreement which would have the effect of adding to or varying it in any way. (2) We are doubtful if proceedings would be successful here unless on the clearest evidence of a wilful and false assumption of the title. (3) There is nothing to suggest the invalidity of the agreement as a whole, but in this country, according to the case of Davies *v.* Makuna, *L. R.*, 29 Ch., Div. 596, it is not improbable that proceedings to enforce the bond would be unsuccessful so far as relates to the practice of a "physician." In our opinion it would be undesirable to litigate the matter in any way, and certainly this should be done only on the advice of a solicitor.

CLUBS AND MEDICAL ETIQUETTE.

ASTERION.—Were a brother practitioner to become an honorary member of a club to which another is the surgeon, and should he then agitate to alter the rules of the society in order to deprive the latter of a portion of the emoluments arising from the office for his own advancement, it would be a serious breach of professional etiquette. Such conduct would be severely condemned as very unworthy of a professional man.

CONSULTING SURGEONS AND GENERAL PRACTITIONERS.

M. D. writes: An old patient of mine, Mrs. C., whose medical attendant I have been for nearly fifty years, and on all occasions, discovered that she had a glandular swelling. At the wish of her son, who is practising in a colony, she consulted Mr. X., one of the assistant surgeons at a leading London hospital. He recommended its immediate removal, stating at the same time he would not undertake the operation unless the after-treatment was conducted by some one with whom he had previously worked, and recommending Mr. B., a practitioner in this neighbourhood, living about a mile from the patient's residence, thus altogether ignoring me. Mr. C. called on me, and assured me that this procedure was entirely contrary to the wishes of both himself and his wife, and asking me to call and see the latter occasionally. I did so this morning, and found to my great surprise that the operation was performed yesterday.

*.** Assuming, as we do, that the above statement justly represents the facts, we may note that, although it was within the right of the surgeon referred to to decline undertaking the operation in question, otherwise than conditionally, he was, in our opinion, unquestionably ethically wrong, and exceptionally discourteous, moreover, in ignoring the patient's old medical attendant.

FREQUENT CALL TO OLD PATIENT.

A. B. was attending a patient with heart disease, when, without his knowledge, another practitioner, C., was called in and prescribed for the patient. A. B. [illegible] to attend the patient. A few days later he was rung up early in the morning and asked to go to the patient again. A. B. objected at first, as the case of the patient had been taken out of his hands and had passed into those of C. On being told that C.'s further attendance was declined, A. B. went. A. B. asks whether when rung up he might have declined to go, and what C.'s conduct should have been when he found that A. B. was already in attendance.

. In reply to A. B.'s first question we may note that, although under the circumstances related he would have been justified in declining further attendance on the case, we are distinctly of opinion that in visiting the patient he acted wisely and in the true spirit of the profession. The answer to his second query will be found in the following rule: "When a practitioner is called in to, or consulted by a patient who has recently been, or still may be, under the care of another for the same illness, he should on no account interfere in the case, except in an emergency—having provided for which, he should request a consultation with the gentleman in previous attendance, and decline further attendance of the case except in consultation with him."—*M. E. Code*, chap. II., sect. 5, rule 9.

S. [illegible] would obviously be unethical.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

THE Oxford University Calendar just issued shows that between Michaelmas Term, 1894, and Trinity, 1895, six members of the University proceeded to the degree of M.D. and nine to that of M.B. The honorary degree of M.D. was conferred on Professor Burdon Sanderson on his election to the Regius Professorship of Medicine in succession to Sir Henry Acland. During the same period the honorary degree of D.C.L. has been conferred on two members of the medical profession, Sir William Flower and Professor Michael Foster. The only change in the professorial staff in the Faculty of Medicine is the transference of Professor Burdon Sanderson and the election of Professor Gotch to the Waynflete Professorship of Physiology.

UNIVERSITY OF CAMBRIDGE.

APPOINTMENTS.—Professor Bradbury, M.D., and Dr. L. E. Shore, of St. John's College are appointed members of the State Medicine Syndicate; Dr. A. Hill, Master of Downing College, a member of the Agricultural Science Syndicate; Dr. D. MacAlister, of St. John's College, a member of the Special Board for Medicine, and Dr. Gaskell, F.R.S., a member of the Special Board for Biology and Geology.

UNIVERSITY COLLEGE, CARDIFF.

PROPOSED PUBLIC HEALTH DEPARTMENT.—A meeting of representatives of the county councils of Glamorgan and Monmouthshire and the University College, Cardiff, was held recently in the college buildings for the purpose of considering the advisability of inaugurating a department of public health, in connection with the University College, for the purpose of teaching the higher branches of sanitary science [illegible] to sanitary inspectors and medical officers of health. Councillor J. Beauly Jenkins, Chairman of the Glamorgan County Council, presided. Several speakers urged the desirability of establishing a public health department established. Professor Reynolds explaining that the annual charge would be about £3,000, that the annual charge would be about £600. Eventually the following resolution was carried: "That in the opinion of this conference it is desirable that a public health department should be established in connection with the University College, but that the further consideration of the scheme should be deferred for the present." It was also decided to call another similar conference representative of the South Wales counties as early as would be deemed expedient.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE AËRIAL CONVECTION OF SMALL-POX.

WHAT is proof? Such is the question that must have occurred to many on reading the judgment given by Mr. Justice Kekewich in the case in which the Guildford, Godalming, and Woking Joint Hospital Board were arraigned in respect of their desire to erect a hospital for the treatment of small-pox patients. The question arises because of this desire having been held to be one that has in it no element of danger to the neighbourhood around the hospital such as to lead the law courts to restrain the defendant Joint Board from carrying out their design. The proof that is needed is one that shall satisfy the courts of justice that there is a distinct danger to a locality from a small-pox hospital by reason of atmospheric spread of small-pox therefrom. That there is danger from maladministration of such an institution was held, and the defendants are not to be allowed to use a cottage standing on their hospital site for small-pox patients, lest infection might be communicated to the outside world by personal means. It is true that during the hearing of the case there was evidence given that ought to have had weight with the court as to the inability of medical men of good standing to accept the hypothesis of aërial convection of small-pox. But it must not be overlooked that such evidence was of necessity of a negative rather than of a positive character. It is one thing to say that in some instances there has been no known spread of small-pox around a hospital in use for the treatment of cases of that disease, but it is another to show that the circumstances in which this exemption was found were on all fours with others in which mischief has been held to have accrued.

Whatever may have been the strength of the arguments put forward by those who have little or no faith in the hypothesis of aërial convection, the evidence of others to the contrary was of such character as to have carried the day in favour of the danger of small-pox hospitals to their surroundings being of appreciable quantity. The masterly and detailed reports of Mr. W. H. Power to the Local Government Board on the behaviour of small pox in the neighbourhood of the Western Hospital of the Metropolitan Asylums Board at Fulham, with the convincing arguments which were backed by circumstantial evidence in abundance, showed that the hospital had been disseminating small-pox around it by means of the atmosphere only. Other instances were those of the Leicester Hospital in the small-pox epidemic of 1892-93, and of the Halifax Hospital at Caddyfield in a recent small-pox epidemic principally around that building. Then, again, Birmingham furnished another example of the tendency of small-pox to centre round hospitals wherein cases were being isolated. Only a year or so ago Dr. Bruce Low found the same thing going on near Hastings, and these are but samples of occurrences which go far to show the positive side of the case which sees danger in the aggregation of small-pox patients in the vicinity of inhabited dwellings. Among those who gave evidence were Dr. Thorne Thorne and Dr. Bruce Low of the Local Government Board, and their statements should have carried conviction as to the potency for harm of small-pox hospitals. When small populations in the

immediate neighbourhood of a small-pox hospital are concerned, they can be warned of their danger, and the law as to vaccination enforced. But there is no compulsion as to revaccination, and none as to primary vaccination in respect of persons aged over 14 years.

It can never be held that primary vaccination in infancy will avail with absolute certainty to protect against small-pox attacks in persons over 10 years of age. Beside which, the matter would be entirely different where hundreds or thousands of persons were exposed to infection by means of the hospital. According to the decision given, there would seem to be nothing to hinder the erection in populous London districts of small-pox hospitals, and thus save the expense and trouble of the long ambulance and steamer transits of patients down river to the ships. The London small-pox hospitals were only given up after mature consideration and after repeated experience of their dangers. To revert to the old order of things would, we venture to assert, be a retrograde step of great magnitude. True that an absolute enforcement of our vaccination laws, and of revaccination into the bargain, would do something, nay much, to reduce the amount of danger to be apprehended from small-pox hospitals wherever set up; but then these measures would at the same time render small-pox hospitals but little needed at all. Hence, we would wish to see the two combined—namely, vaccination and revaccination universally enforced, and small-pox hospitals removed as far as possible from centres of population. Unless these things be done, we fail to see how danger is to be avoided pending the destruction of all air leaving the hospital wards prior to its mixing with the general atmosphere, and we seem as far as ever from the accomplishment of this destruction.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,620 births and 3,609 deaths were registered during the week ending Saturday November 30th. The annual rate of mortality in these towns, which had declined from 22.1 and 19.0 per 1,000 in the three preceding weeks, further fell to 17.9 last week. The rates in the several towns ranged from 11.3 in Croydon, 12.2 in Brighton, and 12.5 in Portsmouth to 22.7 in Preston, 23.3 in Liverpool, Salford, and Oldham, and 29.0 in Blackburn. In the thirty-two provincial towns the mean death-rate was 18.4 per 1,000, and exceeded by 1.1 the rate recorded in London, which was 17.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.6 per 1,000; in London the rate was equal to 2.8 per 1,000, while it averaged 2.5 in the thirty-two provincial towns, and was highest in Salford, Wolverhampton, and Blackburn. Measles showed a death-rate of 2.2 in [illegible], 2.4 in Wolverhampton, 3.5 in Salford, and 9.0 in Blackburn; whooping-cough of 1.2 in Wolverhampton, and 1.3 in Leeds; and "fever" of 1.1 in Sunderland, and 1.2 in Wolverhampton. The 93 deaths from diphtheria in the thirty-three towns included 63 in London, 6 in Birmingham, 3 in West Ham, and 3 in Sheffield. Two fatal cases of small-pox were registered in West Ham, and 1 in London, but not one in any other of the thirty-three large towns. The number of small-pox patients in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital, which had been 76, 86, and 89 at the end of the three preceding weeks, had declined to 79 on Saturday last, November 30th; 9 new cases were admitted during the week, against 14, 23, and [illegible] in the three preceding weeks. There were [illegible] scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, against [illegible], [illegible], and [illegible] at the end of the three preceding weeks; 324 new cases were admitted during the week, against 349, [illegible], and [illegible] in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, November 30th, 818 births and 503 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 21.4 to 18.1 per 1,000 in the three preceding weeks, further fell to 17.4 last week, and was 0.5 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 11.4 in Leith to 24.0 in Perth. The zymotic death-rates in these towns averaged 1.7 per 1,000, the highest rates being recorded in Aberdeen and Greenock. The 219 deaths registered in Glasgow included 9 from whooping-cough, 3 from scarlet fever, and 2 from "fever." Four fatal cases of scarlet fever were recorded in Edinburgh, and 2 of diphtheria in Dundee.

THE WATER SUPPLY OF CHESTERFIELD.

AT a recent meeting of the Chesterfield Town Council, the subject of the apprehended scarcity of water for the supply of the borough was under consideration. Some correspondence between the Town Clerk and the officers of the water company was read, and ordered to be entered on the minutes. In a letter dated October 19th from the Town Clerk, it was stated that the medical officer had reported to the Health Committee that portions of the borough had been without a supply of water from the company's service for upwards of two months, and that the health of the inhabitants had suffered in consequence. "If it shall become necessary," the letter continued, "to obtain water from the old wells of the borough in order to meet the needs of the people, I am directed to ask whether the water company will join with the council in the cost to be incurred." To this the company replied that it was doubtful whether they had power to join with the council in the cost suggested, and that it was hoped the usual autumn rains would gradually remove all grounds for anxiety. It was resolved by the council that the borough medical officer of health should be authorised to take all necessary steps to ensure the best practicable supply of water to the inhabitants of the borough.

CONDENSED SKIM MILK.

WE are glad to see that, following up our recent reports on condensed milk, the quarterly report of Mr. Stokes, analyst to the Paddington Vestry, draws special attention to some of the brands of condensed skim milk which find their way to the homes of the people. His analysis showed that nine-tenths of the cream had been abstracted from some of his samples, that 200 parts were boiled down to 100 parts, and 40 parts of sugar were added. The labels on the tins described the contents as "condensed skim milk and sugar." There can be no doubt that much of this mixture is used to feed infants, for which it is wholly unfitted. It has, however, a sweet flavour, and, having also the appearance of milk, it is much in demand among inexperienced mothers. Those who buy such an article are, perhaps, not aware that infants would starve if fed upon it exclusively. Several recent inquests have shown that this so-called condensed milk has contributed to the deaths of children. Condensed "whole milk," which has been successfully used as food for infants, is one thing, and condensed skim milk and sugar another.

THE ANTITOXIN TREATMENT OF DIPHTHERIA AND THE NEW YORK DEATH-RATE.

THE President of the New York Health Department has presented a report to the Mayor, in which it was stated that the use of antitoxin had reduced the death-rate from diphtheria and croup in the city of New York nearly 44 per cent. The antitoxin employed is produced in the bacteriological laboratory of the Board of Health, under the direction of Dr. Herman M. Biggs. The following table shows the cases of diphtheria and croup, and the mortality therefrom, for the first three-quarters of the years 1891, 1892, 1893, and 1894, as compared with the first three-quarters of the present year:

		Cases.	Deaths.	Per Cent.
1891	....	3,686	1,349	36.59
1892	....	4,158	1,540	37.04
1893	....	4,721	1,763	37.34
1894	....	7,446	2,284	30.67
		20,011	6,936	34.66
1895	....	7,921	1,539	19.43

The report proceeds: "The reduction in the mortality rate for the first, second, and third quarters of 1895, as compared with the average death-rate for corresponding periods of the previous four years, has been 43.94 per cent. If the death-rate from diphtheria and croup during the first, second, and third quarters of 1891-94 had been the same as in 1895, there would have been 3,048 fewer deaths in that period. The large reduction in the mortality-rate from diphtheria and croup for the first three quarters of 1895 is attributed mainly by the medical officers of this department to the introduction and use of diphtheria antitoxin, and if this remedy had been generally or universally employed the reduction in the mortality-rate would doubtless have been larger."

THE BACTERIOLOGICAL DETECTION OF DIPHTHERIA.

SOME time ago Professor Wynter Blyth, Medical Officer of Health for St. Marylebone, reported to his vestry in favour of putting at the disposal of the practitioners in the district the means for arriving at a complete bacteriological diagnosis in cases of suspected diphtheria. We understand that this recommendation has now been adopted by the vestry, and that each medical man in the parish will shortly receive a "diphtheria outfit," consisting of a sterilised test tube fitted with a cork carrying a wire holding a little sterilised cotton wool. This wool is to be gently applied to the affected part, and then replaced in the test tube, which is then to be forwarded to the bacteriological laboratory for examination. It will be observed that this arrangement is a simplification of the New York plan in so far that the inoculation of the culture is done at the laboratory and the medical man has only to infect the swab and forward it. The bacteriological diagnosis of diphtheria ought to have been long ago undertaken in London as it has in some provincial towns. This is a step in the right direction, but the fact must not be overlooked that, as has been well shown in Bristol, while the demonstration of the presence of the diphtheria bacillus is to be taken as proof of the diphtherial nature of the malady, its absence is by no means to be accepted as showing the innocence of the disease. There are, however, so many cases of true diphtheria in which the clinical evidences of the nature of the case are but vague that it will be of great advantage to the community that a certain means of diagnosis of such cases should be placed at the disposal of the profession.

COUNTY COUNCILS AND COMPULSORY NOTIFICATION.

THE Wiltshire County Council have once again had before them the question of the non-adoption of the Infectious Disease (Notification) Act by some of the district councils in the county. We are glad to see that they maintain their attitude towards the matter, deeming those councils who have persisted in their refusal to adopt the Act as "standing in the way of a general system of public health for the whole county." The county authority are desirous of getting into workable order a scheme whereby the health officers of the several sanitary areas shall communicate with the clerk of the county council whenever infectious disease breaks out, so that information can then be sent to all the constituent districts apprising them of the facts. And in this again the adoption of notification would materially assist the health officers in their endeavours to send complete and reliable information. But here the county council fails in one very important particular, inasmuch as it has not yet appointed a county health officer. It has, it is true, em-

ployed a medical man for the purpose of "codifying" the reports of the district officers. But a county wants something more than a medical précis writer. Not until the county authority have made good this deficiency will they be in a strong position to influence backward constituent health bodies for good.

SALARY OF POOR LAW MEDICAL OFFICER.

PUZZLED.—It would certainly seem that the amount paid by the Board is very inadequate; four guineas a year for the medical charge of a district with a population of between three and four hundred, mostly paupers, can scarcely be regarded as remuneration at all. It is sad to think that such a scale of payment is possible in the Poor Law Medical service. Our correspondent should investigate the salaries paid to their medical officers by other unions throughout the county, and press at least to be paid on the same scale as they are, and if unsuccessful in this, should appeal to the Local Government Board.

MEDICAL APPOINTMENT TO A PAUPER FEVER HOSPITAL.

A. ASKS whether he has committed any breach of professional etiquette in claiming to be appointed medical officer to a fever hospital under the following circumstances:

A. is a district medical officer, in whose district there is a town of 6,000 inhabitants. The sanitary authority of this town has erected a fever hospital in B.'s medical district, two miles from A.'s residence and three miles from B.'s. A. considers that, as at present arranged all the patients in the hospital will be from his district, he has the first claim for the appointment as medical officer of the hospital. B. also claims this on the ground that the hospital is in his district.

*** We are of opinion that as long as the hospital is for patients from A.'s district only, he has the first claim for the appointment, but should any arrangements be made (and this appears likely) for other patients to be admitted, A.'s claim for attendance on such might not be equitable or reasonable.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE NEW ASYLUM FOR THE COUNTY OF LONDON.

THE building of the new asylum for London at Bexley to house 2,000 patients is just about to be commenced. The main building is designed on the continuous principle combined with villas. The main building is to provide for 1,845 patients, and there are provided one villa for 35 farm workers on the male side, two villas each for 35 women, and a special hospital villa for 50 women, making a total of 1,100 women and 900 men. The patients' blocks are all two storeys high, and are divided into wards for the (1) infirm, (2) acute, (3) epileptic, and (4) chronics and working. An isolation hospital is also provided for, and a mortuary. The whole of the east, south, and west sides of the building are confined entirely to the patients. The building is to be completed with the least possible delay, as the asylum is urgently needed.

THE GREAT NORTHERN CENTRAL HOSPITAL.

ACCORDING to the *Islington Gazette*, a question was asked at the last meeting of the Islington Board of Guardians in reference to a circular letter sent out by Robert H. Bax, of 57, Finsbury Park Road, in which it was alleged that in the preparation of the balance sheet of the Great Northern Central Hospital a sum of £302 9s. 11d., described as for sundries, alterations, and repairs, included a sum of £119 6s. 9d. paid to the late secretary as commission in addition to his other salary, £375 having been deducted as commission from the legacy of the late Mr. R. A. Newbon. As to the facts we can give no opinion, but there need be no hesitation in saying that any hospital committee which entered into such a lax agreement with its secretary as to make such a payment possible was guilty of culpable want of foresight.

INDIA AND THE COLONIES.

INDIA.

SANITARY APPOINTMENTS IN BENGAL.—The *Indian Medical Gazette* writes: The reduction in the number of the deputy sanitary commissioners and the transference of vaccination duties to civil surgeons, who are overburdened already with State duties, have been distinctly retrogressive measures, and not conducive to the best interests of the inhabitants over which the Government rules; and now that these changes have been followed by the appointment of a surgeon-captain as sanitary commissioner, which is calculated to lower the status and curtail the powers of the sanitary commissioner, the retrogression has been accentuated. If this is the policy which the Local Government intends to carry out, it must have been decided on without a due consideration of the great health interests at stake; and it can only be characterised as extremely ill advised, and one which it will be the duty of all interested in preventive medicine to use their influence to reverse.

THE PROPOSED SANITARY RETRENCHMENT.—The proposal of the Government to abolish a considerable number of deputy sanitary commissionerships in order to raise funds for the establishment of a bacteriological institute at Agra is, says the *Times of India*, one which, if it has really been seriously entertained, is certain to come in for no small amount of severe criticism. Sanitation is still so backward in this country that even a bacteriological institute, valuable as it would undoubtedly be, would be too dearly bought at the price proposed. Even as it is the existing sanitary staff find it impossible to accomplish more than a tithe of the work which lies at their hands, and in some instances the removal of the deputy sanitary commissioner would mean the practical cessation of detailed sanitary work, and all the good which might be achieved by the bacteriologist would be counterbalanced by the evil involved in depriving the country of the already sufficiently meagre protection it may derive from sanitary work.

HOSPITALS IN NATIVE STATES.—Sir Dennis Fitzpatrick, during a recent visit to the native State of Nabha, opened a hospital, which has been erected by the Rajah at a cost of Rs.[illegible], to commemorate the visit of Lord Lansdowne to Nabha. The Nawab has already established seven hospitals for out-patients, and this new hospital will be mainly for in-patients. In declaring the hospital open Sir Dennis Fitzpatrick said that he would inform Lord Lansdowne of the fine building that had been erected in his honour.

THE MOHAMMEDANS AND THE PILGRIM BILL.—The Viceroy of India, in replying to an address presented to him on November 22nd by a deputation of the Mohammedans of Mysore, expressing the thanks of that community for the Pilgrim Bill, said he hoped that all doubt had now been removed from the minds of the Mohammedans of India that they need expect anything from the Imperial Government but sympathy and honest endeavour to serve their best interests.

NEW SOUTH WALES.

LEPROSY.—The last report of the Board of Health for New South Wales states that all known cases of leprosy in the Colony are now segregated in the Lazaret. Five new patients were admitted to the Lazaret during last year—a smaller number than in any year since the Leprosy Act came into force. This fall in the number of admissions supports the view taken by the Board that the comparatively large increases during the years 1891 and 1892 were not an indication of the spread of the disease, but were due to the fact that the Act rendered the reporting of all cases compulsory. Altogether 55 lepers have been treated in the Lazaret since 1885; of this number, 29 were natives of China, 15 of New South Wales, 2 of India, and 1 of New Zealand, of Java, of New Caledonia, of Fiji, of the Solomon Islands, of the West Indies, of England, and of Germany respectively. Clinical notes of the five cases admitted in 1894 are given in a separate report drawn up by the Chief Medical Inspector, Dr. Ashburton Thompson. Two of the patients were born in Australia, one in Saxony (resided in Australia since 1856), one was a New Caledonian aboriginal (in the Colony about one year), and one a native of Lascars, who had been in Australia since 1882. As to one of the cases in a native born Australian Dr. Ashburton Thompson adduces evidence, collected with great industry, which renders it highly probable that the patient's elder brother suffered from leprosy, and some further facts which appear to bring the cases into some relation with another case, that of the son of a German immigrant, who died of the disease.

MEDICAL NEWS.

DR. HAFFKINE, who has been carrying out the preventive inoculations against cholera on an extensive scale in India, will arrive in London on December 10th, and will be the guest of Mr. Ernest Hart, 38, Wimpole Street, W., where communications may be addressed to him.

A MUNIFICENT OFFER.—At a meeting of the directors of the Newport Infirmary, held on Tuesday, November 26th, the question of enlarging the present building was discussed. Dr. Garrod Thomas, J.P., offered, on behalf of himself and his wife, to contribute £5,000 towards the erection of another building in a different part of the town, the present one being unsuitable on sanitary and other grounds. This offer, it is stated, is conditional upon £15,000 being provided by public subscriptions.

UNDERFED CHILDREN.—An appeal is being made on behalf of the funds of the National Food Supply Association, which lays itself out to provide wholesome food to poor children attending elementary schools. The Association has three large centres, where 12,000 meals a day can be turned out. The food—soup, pudding, and the like—conveyed in asbestos tin carriers, arrives hot at its destination, mostly schools and poor homes. A charge of one penny is made, except in the most desperate cases, and thus the independence of both parents and children is preserved.

"DRUNK AND INCAPABLE."—A farm servant, aged 60, died in the Peterhead Police-office on December 2nd. He had come in from a neighbouring village on November 30th or December 1st, and on the latter day he was seen going about. On December 2nd he fell, and struck his head heavily on the edge of the pavement. He was taken to the police-office and placed in a cell as incapable. Truly he was. The necropsy, however, revealed that he was incapable because his fall had caused fracture of the cranium and haemorrhage in and about the membranes.

SUICIDE AT THE EDINBURGH ROYAL INFIRMARY.—A most unfortunate case of suicide occurred at the Edinburgh Royal Infirmary on November 20th. A young married woman, who had been confined three months before, was under treatment for myxoedema in a top flat ward. She was observed to be a

little strange in her manner, but there was nothing to suggest suicide. At 8 A.M. she suddenly pulled up the lower part of the window beside her, and threw herself out. The fall was not less than 43 feet. Several fractures and internal injuries caused her death six or eight hours after the accident. No blame can be attached to anyone in connection with what was evidently a sudden suicidal impulse.

Life Assurance Medical Officers Association.—The following officers and council have been elected:—*President:* Dr. Douglas Powell. *Vice-Presidents:* Drs. Boon, Crosby, and Symes Thompson. *Treasurer:* Dr. Theodore Williams. *Council:* Drs. C. Y. Biss, R. W. Burnet, H. Fox, C. E. Hoar, G. A. Heron, F. de H. Hall, M. Murray, J. E. Pollock, G. V. Poore, S. West. *Secretaries:* Drs. T. G. Lyon and H. G. Mackenzie.

Opening of a Crematorium at Glasgow.—The new crematorium at Glasgow, to which brief reference was made last week, is of red stone in the Gothic style of architecture, and stands in the western necropolis of Glasgow at Maryhill. The chapel is cruciform, and contains in the centre a catafalque, on which the coffin is placed during the service. Afterwards it is lowered into the vaults below, in which are placed the incinerating chambers. The work has been carried out under the direction of Mr. James Chalmers, I.A., and is the property of the Scottish Burial Reform and Cremation Society, Limited. The building was formally opened by Sir Charles Cameron, Bart., who was supported by Sir Henry Watson, Sir Henry Littlejohn, Medical Officer of Health, Edinburgh; the Right Rev. Dr. Donald Macleod, Rev. Dr. John Hunter, Ballie Bilsland, and other well-known gentlemen, in the presence of about 500 to 600 persons. The Cremation Society of England was also well represented. Sir Charles Cameron, in performing the opening ceremony, said the erection of the crematorium marked the entrance of the cremation movement in Scotland into a practical stage. It was a duty to inculcate by precept and example the necessity of reform in the matter of the prevalent method of disposing of the dead—a method to the dangers and drawbacks of which only long custom could reconcile an educated community; a method which abstracted hundreds of fertile acres from the land of the country available for the support of the living, and changed them into pestiferous storehouses for the germs of deadly diseases, which every dictate of reason and humanity should prompt to exterminate and destroy.

The Livingstone College.—The annual meeting of this institution was held recently at Stratford, where the new premises, which were opened on the same occasion, are situated. The work of the College has for some time been carried on at Bow, but owing to the extension of its work it has been found necessary to remove to Hamfrith Road, where a large house has been secured which will, it is hoped, prove sufficient for its purpose for some time to come. On the occasion of the opening a *conversazione* took place at the new College, the principal, Dr. Charles Harford-Battersby, receiving a numerous company, who had been invited to meet Captain Lugard and the Rev. Horace Waller. The object of the College is to provide those who definitely intend to become foreign missionaries with some elementary training in medical subjects. It is not intended for the training of "medical missionaries," but for giving enough knowledge of medicine and surgery to enable missionaries to look after their own health, and to render help to others when they are in isolated stations far from any qualified medical aid. The major part of the work of tuition is done by the Principal and Mr. McAdam Eccles, but in the third term lectures are also given by Dr. Patrick Manson and others. Clinical work is done at the West Ham and Poplar Hospitals, and visits are also made to the Shadwell Medical Mission and other institutions. The College appears to be doing a useful work in a quiet and unobtrusive fashion, and it guards against abuse by requiring those who enter "to sign a declaration that they will not take to themselves the title, or otherwise assume the position, of a qualified doctor."

The annual dinner of the Harveian Society of London took place at the Café Monico on November 28th, Sir J. Williams, Bart., President, in the chair. Sir J. Crichton Browne proposed the toast of the evening, "Success to the Harveian Society," which, he said, was most ably fulfilling its educational purpose for the medical practitioner. Mr. Edmund Owen proposed the "Visitors," and Mr. Charters Symonds (President of the Hunterian Society) responded. Mr. G. Eastes gave the "Sister Societies," the value of which to medical science, the profession, and the public was beyond all computation. Mr. Jonathan Hutchinson replied, and strongly urged all his hearers, especially the younger ones, to cultivate the societies. Mr. Howard Marsh proposed the "Health of the President," who made a suitable reply. Dr. Gee proposed the "Treasurer," and Mr. Cripps Lawrence, in reply, stated that the Society was now for the first time in many years free from debt. He proposed the last toast, the "Honorary Secretaries," to which Mr. Peyton Beale and Dr. Cagney replied.

Small-pox at Rio Janeiro.—The captain of the steamship *Hawkhurst* arrived on November 29th at Galveston from Rio Janeiro, and reports a terrible epidemic of small-pox at Rio. He states that the deaths number 150 daily, and the disease is spreading to such an extent that the inhabitants are in a condition bordering on panic.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH ROYAL UNITED HOSPITAL.—Resident Medical Officer. Appointment for three years. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary-Superintendent by December 17th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 2 Sa, Gray's Inn Road, W.C.—House-Surgeon. Rooms, coals, and light. Applications to the Secretary by December 10th.

CITY ASYLUM, Birmingham.—Resident Clinical Assistant; must be qualified. Board and residence provided. No salary. Applications to the Medical Superintendent.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House-Physician. Appointment for six months. Board and Residence provided and salary at the rate of £50 per annum. Applications to the Secretary by December 12th.

DENTAL HOSPITAL FOR LONDON, Leicester Square, W.C.—Assistant Dental Surgeon; must be L.D.S. Applications to J. Francis Fluk, Secretary, by January 6th.

DENTAL HOSPITAL FOR LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square, W.C.—Demonstrator. Honorarium, £50 per annum. Applications to J. Francis Fink, Secretary, by January 6th.

DERBYSHIRE ROYAL INFIRMARY.—Resident House-Surgeon and Resident House-Physician; doubly qualified. Appointments tenable for twelve months, with a possibility of extension. Salaries, £100 and £80 per annum respectively, with apartments and board. Applications, endorsed "House-Surgeon" or "House-Physician," to Walter G. Carnt, Secretary, by December 21st.

ENNIS DISTRICT LUNATIC ASYLUM.—Assistant Medical Officer, doubly qualified, unmarried, and not more than 30 years of age. Salary, £100 per annum, with furnished apartments, rations, washing, fuel, light, and attendance. Applications to Dr. Golston, Resident Medical Superintendent, by December 13th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department. Applications to the Secretary by December 17th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary £50 per annum, with apartments and board. Applications to William George Black, Secretary, 88, West Regent Street, Glasgow, by December 10th.

HARTLEPOOLS HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to Robert Edger, Honorary Secretary, 15, Town Wall, West Hartlepool.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road, Shoreditch, N.E.—House-Physician; doubly qualified. Appointment for six months; at the expiration of this term he will be required, if eligible, to serve as House-Surgeon for a further period of six months. Salary as House-Physician at the rate of £50, and as House-Surgeon at the rate of £60 per annum. Junior House-Physician for six months; doubly qualified. No salary, but board and lodging, including washing, provided. Also Ophthalmic Surgeon; must possess surgical qualification. Applications to the Secretary, 27, Clement's Lane, E.C., by December 9th.

NORFOLK AND NORWICH HOSPITAL.—House-Physician and House-Surgeon; doubly qualified; unmarried, and under 30 years of age. Salary for each office, £60 per annum, with board, lodging, and washing. Applications to Poole Gabbett, Secretary, by December 10th.

ROYAL BERKS HOSPITAL, Reading.—House-Surgeon and House-Physician. Salary in each case £60 per annum, with board, lodging, and washing. Also Assistant Medical Officer, with board, lodging, and washing provided, but not salary. Appointments for six months. Applications to the Secretary before December 9th.

ST. MARK'S HOSPITAL, City Road, E.C.—House-Surgeon; must possess a surgical qualification. Salary, £[illegible] per annum, with board and lodging. Applications to the Secretary by December 9th.

SWANSEA GENERAL HOSPITAL.—House-Surgeon. Salary, £[illegible] per annum, with board, residence, washing, and attendance. Applications to Jno. W. Morris, Secretary, 9, Castle Street, Swansea, by December 14th.

WARNEFORD HOSPITAL, Leamington.—House-Surgeon. Salary, £100, with board, lodging, and washing. Appointment for six months subject to re-election. Applications to the Secretary before December 14th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by December 18th.

YORK LUNATIC ASYLUM, Bootham, York.—Assistant Resident Medical Officer. Salary, £100 per annum, with board, washing, and attendance. Applications, addressed to the Committee, to be sent under cover to R. D. Horne, Secretary, by December 11th.

MEDICAL APPOINTMENTS.

BADCOCK, Mr. E. R., appointed Assistant Medical Superintendent for the Infirmary of the Lewisham Union.

BEVAN, Richard, L.R.C.P.Lond., M.R.C.S., reappointed Medical Officer of Health to the Lydd Town Council.

BROWN, Robert C., M.B., B.C., B.A.Camb., appointed Senior House-Surgeon of the Blackburn and East Lancashire Infirmary.

BROWNING, Benjamin, L.R.C.P.Lond., M.R.C.S.Eng., D.P.H.R.C.P.Edin., reappointed Medical Officer for the Melcombe District of the Weymouth Union.

BUCHANAN, P. Stedman, M.B., C.M.Glasg., appointed Additional Assistant Medical Officer to the Town's Hospital, Glasgow.

COLE, T. W., B.A.Dub., M.B., B.Ch., appointed Medical Officer of Health to the Bolsover District Council.

DALE, Frederick, M.D.Cantab., F.R.C.S.Eng., appointed Honorary Consulting Surgeon to the Scarborough Hospital and Dispensary.

DICKIN, E. P., M.B., C.M.Edin., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the General Infirmary, Northampton.

ELLIOTT, T. W., appointed Medical Officer for the Tonbridge Union, *vice* Penny, resigned.

FENNER, Dr. R. N., reappointed Medical Officer for the Northrepps District of the Beckham Union.

FULTON, Dr., appointed Medical Officer of Health to the Stevenston Parish Council.

GEDDES, John W., M.B., C.M.Edin., appointed Junior Assistant Medical Officer to the Durham County Asylum, Winterton, Ferryhill.

HAMILTON, W. Crosbie, M.B., C.M.Edin., appointed Senior House-Surgeon of the South Devon and East Cornwall Hospital, Plymouth.

HARKER, W. E., M.D.McGill, L.R.C.P.I., appointed Medical Officer of Health to the Tyne Port Sanitary Authority, *vice* H. E. Armstrong.

HEWLETT, J. E., M.B., C.M.Edin., appointed Junior House-Surgeon of the Blackburn and East Lancashire Infirmary.

JARDINE, Robert, M.D.Edin., M.R.C.S.Eng., F.F.P.S.Glasg., appointed Assistant Physician to the Glasgow Maternity Hospital.

LYONS, Edward, B.A., M.B., B.Ch., B.A.O.T.C.D., L.M.(Rotunda), appointed Junior Resident Surgeon to the Jervis Street Hospital, Dublin.

MACKAY, Fred. W., appointed Ophthalmic Surgeon to the Western Dispensary, Edinburgh.

PATTERSON, G. H., L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer of Health for the Dalton-in-Furness Urban District.

PERROTT, C. J., L.R.C.P., L.R.C.S.I., appointed Certifying Factory Surgeon for Kingswood, St. George, etc., *vice* Henry Grace, L.R.C.P.Lond., M.R.C.S.Eng., deceased.

PRIDHAM, John W., L.R.C.P.Lond., M.R.C.S., reappointed Medical Officer for the Upway and Chickerell District of the Weymouth Union.

PRIDMORE, Dr., appointed Medical Officer for the Weymouth District of the Weymouth Union, *vice* A. E. Drury, L.R.C.P., L.R.C.S.Edin., resigned.

PRINGLE, Dr., appointed Medical Officer of Health for the No. 3 District of the Bridgwater Union.

REYNOLDS, Dr., appointed Medical Officer for the Morchard Bishop District of the Crediton Union.

SIMPSON, E. P., M.D.Durh., M.R.C.S.Eng., reappointed Medical Officer for the Workhouse and Wyke District of the Weymouth Union.

SMITH, J. A., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Flockton District of the Wakefield Union.

TEW, James Scott, M.D.Durh., M.B., M.R.C.S., appointed Medical Officer of Health for the Sevenoaks, Southborough, Tenterden, and Tonbridge Urban Sanitary Districts and the Bromley, Cranbrook, Maidstone, Sevenoaks, Tenterden and Tonbridge Rural Sanitary Districts.

TURNER, Logan, M.D., M.B., C.M., appointed Physician for Diseases of the Ear and Throat, Western Dispensary, Edinburgh.

WARD, H. Randall, M.R.C.S.Eng., L.R.C.P.Lond., reappointed Resident House-Physician to the Great Northern Hospital, N.

WALSH, David, M.B., C.M.Edin., late Assistant Physician, Western Skin Hospital, London, W., appointed Physician.

WHITEHALL COOKE, Cecil, M.D.Lond., M.R.C.S., L.R.C.P., appointed Honorary Medical Officer to the Kilburn, Maida Vale, and St. John's Wood Dispensary.

WILLIAMS, W. T., M.R.C.S.Eng., appointed Medical Officer for the Second District of the Township of Manchester.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 8.30 P.M.—Mr. Thomas Bryant: On the Diagnosis and Treatment of Early Cancer and Cysts of the Breast.

TUESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Adjourned discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, etc.

WEDNESDAY.

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 5 P.M.—Cases, specimens, etc., by Mr. Cresswell Baber, Dr. J. B. Ball, Dr. Clifford Beale, Dr. Dundas Grant, Mr. De Santi, Dr. de Havilland Hall, Mr. Walter G. Spencer, Mr. Charters Symonds, Dr. E. B. Waggett, and Dr. W. A. Wills.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Gowers.

HOSPITAL FOR CONSUMPTION, Brompton, 4 P.M.—Dr. Sidney Martin on Tuberculous Disease.

WEST LONDON HOSPITAL, Hammersmith, W., 5 P.M.—Mr. Bidwell: Intestinal Anastomoses (Post-Graduate Course).

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. M. Handfield-Jones: Second Harveian Lecture on the Heart in its Relation to Pregnancy, Parturition, and the Puerperal State.

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Specimens by Dr. Smyly (Dublin). Mr. William Armstrong (Buxton): On Utero-Ovarian Irritation as a Factor in the Causation of Rheumatoid Arthritis and the Special Treatment necessitated thereby.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, W., 8 P.M.—Clinical evening. Mr. Hartridge: Case of Retinitis Circinata. Mr. Ernest Clarke: Rare Form of Nystagmus. Mr. Grimsdale: Rare Form of Nystagmus. Dr. R. D. Batten: (1) Unusual Form of Choroiditis; (2) Paralysis of the Third Nerve, with Spasm of Accommodation. Mr. Marcus Gunn: Case of Embolism of the Central Artery of the Retina. Mr. Holmes Spicer: Case of Retro-bulbar Neuritis. Dr. Ormerod and Mr. Holmes Spicer: Recurrent Paralysis of the Third Nerve, with Migraine. Dr. Donald Gunn: Peripapillary Choroiditis. Messrs. Silcock and Marshall: (1) Greenish Lenticular Opacities; (2) Exophthalmic Goitre in a man; (3) Coloboma of Iris with Localised Bulging of the Lens. Mr. Spencer Watson: Specimen of Eyeball lost after Penetrating Wound. Mr. Snell: Alveolar Carcinoma of Upper Eyelid.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY, Great Northern Central Hospital, Holloway Road, N., 9 P.M.—Dr. C. E. Beevor: On Arsenical Neuritis. Dr. Thomas Hamilton: On Abdominal Suppuration.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Dr. Hale White and Mr. Golding-Bird: A Case of Membranous Colitis treated by Right Colotomy and Subsequent Closure of the Wound. Dr. Lee Dickinson: Two Cases of Spontaneous Thrombosis of the Cerebral Veins and Sinuses in Children. Mr. R. Barwell: A Case of Congenital Median Cervical Fistula; operation; recovery. Dr. S. Ringer and Dr. A. G. Phear: A Case of Addison's Disease treated with Suprarenal Extract (with an abstract of previously recorded cases).

EPIDEMIOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, W., 8 P.M.—Dr. Walter Dowson: On Diphtheria in Older and Newer Bristol (notified cases for the five years 1890-94).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to insure insertion in the current issue.

MARRIAGES.

GORDON—OGILVIE.—At Gordon's College, Aberdeen, on November [illegible], by the Rev. Professor Cowan, D.D., assisted by the Rev. James Stark, D.D., John Gordon, M.D. Aberdeen, to Maria M. Ogilvie, D.Sc.Lond., elder daughter of the Rev. Alexander Ogilvie, LL.D., Headmaster, Gordon's College.

McELLIGOTT—MALINS.—November [illegible], 1895, at St. Joseph's Catholic Church, Dublin, Maurice Gerald McElligott, L.R.C.P.I., L.R.C.S.I., of The Limes, Belper, fourth son of Gerald McElligott, J.P., of Mount Rivers, Listowel, County Kerry, to Eleanor Marguerite, youngest daughter of the late [illegible] of [illegible] and Dublin, and of Mrs. [illegible], Glasnevin Lodge, Glasnevin, County Dublin.

DEATH.

SHAW.—On November 29th, at [illegible] College, Southport, [illegible], wife of Edmund Shaw, M.D., aged [illegible] years.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with duplicate copies.

(¶ Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

E. A. G. wishes to hear of a baker in Paris from whom a patient suffering from diabetes could obtain gluten bread while resident there.

A. M. desires to hear of a suitable home or institution for a young girl, aged 16 years, who is subject to epilepsy, followed by fits of temper. Her parents are middle-class people who could afford to pay from 14s. to 21 weekly.

E. M. H. writes: Will you kindly inform me if it is necessary to abstain from seeing patients for a fortnight, after the symptoms of mumps have disappeared, and also if there is any danger of conveying the contagion by letter.

A MEMBER would be very glad of suggestions for the relief of pain and spasm (tonic and clonic) in the arm and leg, in a case of amyotrophic lateral sclerosis of about two and a-half years' standing. Morphine is the only thing that has done any good, but that is losing its effect.

RHEUM asks what locality or localities in England will probably be best suited as a residence for a patient suffering from rheumatism, of a muscular and fibrous nature, who is much worse in damp foggy weather. What is the best small work published which might be consulted on this subject?

MEMBER writes: It is desired to place a mental patient (very troublesome, if allowed to be so), in an institution in the Midlands, the charge not to exceed £45 per annum. Can any member tell me if there is a suitable asylum? or would it be better for him to go as a paying patient to the county asylum? He is at present in an institution, but his relatives will not continue the payment, as his case is quite hopeless.

DISINFECTION WITH PERCHLORIDE OF MERCURY.

R. J. C. asks where he can procure perchloride of mercury made in blocks for coarse disinfection of drains, etc., in typhoid fever? He desires, also, to be referred to medical works where they are recommended.

PUBLIC BATHS.

DR. MULVILLE THOMSON (Bradford-on-Avon, Wilts) writes: Will any gentleman who has any experience of public baths for a small town kindly let me have any information he possesses on the subject as regards architecture, fittings, etc.

TREATMENT OF RHINITIS.

D. H. B. writes: Probably some of your readers can suggest treatment for a case of rhinitis in which a circular cast is thrown off by the nasal mucous membrane every three or four weeks. Sometimes there is profuse epistaxis after the membrane comes away, and then the patient feels better for eight or ten days. Alkalies and astringents have been tried locally with no result. At present he is using a 1 in 1,000 of perchloride of mercury douche and taking iodide of potassium internally with so far no benefit.

EXAMINATION FOR MEDICAL SERVICE, R.N.

MEDICO asks (1) If there are any textbooks which would be specially useful in reading for a surgeoncy in the Royal Navy? (2) Is the competition severe? (3) Is there any method of preparing for the examination by correspondence?

*** 1. No special textbooks are required, and none are recommended.

2. The number of candidates is usually far in excess of the number of vacancies. We are informed that there may be as many as four candidates for each commission.

3. We know of no such method, nor is it likely to be of much value, as the examination is largely by *viva voce* questions, and in practical and clinical work

ANSWERS.

CONSTANS FIDEI.—We have a much larger number of letters on the subject referred to than we can publish, but they are receiving attention.

W. P., M.B., in answer to "R.N., Medical," BRITISH MEDICAL JOURNAL, p. 1399, begs to recommend Adcote, Pilch Lane, Knotty Ash, Liverpool; Matron, Miss Foster.

A. B. E.—Our correspondent might in the first place communicate the circumstances of the case in which he is interested to Mr. Edward East, F.R.C.S., Honorary Secretary for Cases, British Medical Benevolent Fund, whose address is 16, Upper Berkeley Street, London, W.

E. A. L.—American degrees in medicine or dentistry are not recognised as qualifications to practise in the United Kingdom. Further particulars will be found in the Educational Number of the BRITISH MEDICAL JOURNAL, published on September 7th, 1895.

M. C. P.—The many disadvantages attending temporary hospitals for the isolation and treatment of infectious diseases have frequently been pointed out in the BRITISH MEDICAL JOURNAL. It is the duty of sanitary authorities to make adequate permanent provision, and this being so it seems desirable that all efforts should be directed to attaining this.

H. S.—This Association is one of those specially condemned in the resolution against medical aid societies passed by the Ethical Section of the British Medical Association at the annual meeting in London this year. We believe the Oxford Branch of the Association likewise has recently passed a resolution condemnatory of the same, so that we should advise our correspondent to reconsider the course he has adopted.

GAMMA.—A large number of papers on the Thyroid Treatment of Myxœdema has been published in the BRITISH MEDICAL JOURNAL during the last three or four years. Dr. G. R. Murray's first paper was published in the JOURNAL of 1891, vol. ii, p. 796; Dr. H. W. G. Mackenzie's paper on Myxœdema treated by Feeding with Fresh Thyroid Gland was published in the JOURNAL, vol. ii, 1892, p. 940. A discussion at the Edinburgh Medico-Chirurgical Society was reported in the JOURNAL of vol. i, 1893, and numerous references to the subject will be found in that volume as well as in the second volume of that year.

F.R.C.S EDIN.—We do not know of any work on railway ambulance and transport. It is possible that some of the St. John Ambulance Lectures deal with the subject. On railway injuries there have been several works, namely, Erichsen's *Concussion of the Spine*, Thorburn's *Surgery of the Spinal Cord*, Page's *Injuries of the Spine* and *Railway Injuries*, 1891; Oppenheim's *Die traumatischen Neurosen*, Hirschwald, 1889; Vibert's *Etude Médico-légale sur les Blessures produites par les Accidents de Chemin de Fer*, of which a new edition was published not long ago.

EOSIN TEST IN PERNICIOUS ANÆMIA.

DR. CAREY COOMBS (Castle Carey) sends the following method, from von Jaksch's *Clinical Diagnosis*, Chap. i, for the information of "A. M.": You must prepare cover glasses of blood (as of sputum when examined for bacilli), drying them for ten to twelve hours in a chamber at 120° C. Then drop eosin-glycerine on the glasses; allow it to stand, wash in water, dry and mount in balsam or oil of cloves.

STAMMERING.

L. M.—The scientific treatment of stammering is fully discussed by Dr. John Wyllie in his recent work on *Disorders of Speech* (Oliver and Boyd). The method to which our correspondent refers is a secret one, and we have no knowledge of its results.

PUERPERAL INFECTION.

TIMIDUS.—No mere lapse of time will destroy the possibility of carrying puerperal infection; antiseptics alone will do this. If "Timidus" has thoroughly destroyed all microbes adhering to his person, his clothing, and his instruments, he need not discontinue practice for a day.

LACHNANTHES.

IN reply to several correspondents, we may state that the herb lachnanthes (*Lachnanthes tinctoria*, nat. ord. *Hæmodoraceæ*, the blood root order) is the red root or spirit weed, growing in sandy swamps on the eastern coasts of the United States. The root is red and fibrous. According to Martindale and Westcott's *Extra Pharmacopœia*, a tincture, 1 of the dried herb in 10 of proof spirit, is prepared. The tincture given in doses of 1 to 10 minims is said to check the cough in phthisis and to be useful in arresting the destruction of lung tissue. Nothing appears to be known of the drug chemically, but the root has been used for dyeing in America.

J. W. T states that he has seen improvement follow the use of the drug together with cod-liver oil and hypophosphites in one case.

DR. HENRY C. BUCK (Upper Clapton) states that for several years he has used this drug in phthisis as well as for asthma, both internally and as an inhalation. He prefers to the tincture an extract prepared in combination with the hypophosphite of manganese. He has used the remedy empirically, but firmly believes the treatment is effectual in many cases in preventing extension of the tuberculous deposit, particularly in the early stages of phthisis.

PNEUMATIC TYRES FOR CARRIAGES.

EXPERIENCE writes: In the BRITISH MEDICAL JOURNAL of November 16th and November 23rd are inquiries from "Medicus" and "H. E. I." (Bradford) respectively, regarding pneumatic tyres for carriages. I have had over twelve months practical experience of them, and can answer some of their questions:

The outer casing is cut by new macadam, especially in wet weather,

but the cuts can easily be cleaned and sealed when the rubber is quite dry by the solution supplied with repairing set. The time when the casing is most damaged is when the tracks are formed on newly-laid macadam, and loose stones are about. This cuts the side of the tyre chiefly, and by letting in wet to inner canvas lining causes it to deteriorate and weaken. Mine gave way after six months of constant and hard work during this last winter. The Dunlop Company replaced them free of expense by new ones, with latest improvements.

The tyres decrease draught of carriage 33 per cent. to 50 per cent., under any and all circumstances; they reduce wear and tear of carriage and fittings to a minimum; they lessen wear and tear of horses; and last, but by no means least, they lessen to a wonderful degree one's personal wear and tear by taking off jolting and noise. For close or hooded carriages (mine is a hooded buggy) they take away all the worrying burr and sound of the hood when up, so that conversation can be carried on in the lowest possible voice.

I have never found mine to skid on any kind of roads. The tighter the tyres are kept inflated the better they run. I have only had slight experience of solid tyres, but am certain that they cannot compare in any particular with pneumatic. Riding with pneumatic tyres is the acme of comfort, but as all luxuries are of necessity expensive, the expense is fully compensated by the advantages and delightful comfort of this wonderful invention. For town work and country travelling with good roads they are insurpassable.

For all kinds of snow work they are superior to anything else, as they never bind whatever condition the snow may be in. I have driven over good roads, bad roads, frozen roads, stony roads, field roads, snowy roads, drifts and otherwise, and the tyres have stood the test. But no rubber ever made but will wear and cut with hard work. My new pair have been on the road from May last to the end of October, and are as sound as when put on.

I shall be pleased to answer any more questions to the best of my experience, either privately or through the medium of the JOURNAL.

Institutions for Idiots.

S. H. H.—There are several institutions which admit idiots, but some of them receive children only. There are the Earlswood Asylum for Idiots, Redhill, Surrey, which admits patients from all England; the Royal Albert Asylum for Idiots and Imbeciles, Lancaster, which admits patients belonging to the northern counties; Darenth Schools for Imbeciles, Dartford, Kent, for the children of parents who live in London; the Eastern Counties Asylum for Idiots, Essex Hall, Colchester; the Western Counties Asylum for Idiots, Star Cross, near Exeter; and the Midland Counties Asylum, Knowle. The Northampton County Asylum has a block for idiots. Failing these, the idiot might be admitted into the workhouse. In that case application should be made to the relieving officer of the parish in which the patient resides.

NOTES, LETTERS, Etc.

Medical Crusades.

A CONTEMPORARY (the *Kensington News* of November 2nd) says: "Three crusades are at present going on in the medical profession: one against semi-qualified midwives; another against advertising doctors and quack medicines; and a third against improperly conducted clubs, where medical officers are employed to do the work at rates incompatible with its being properly performed, and the members of the club pocket the dividend which the officers have earned."

It is satisfactory to know this is the case, and the profession is to be wished "God speed" in its endeavour to put down such prominent abuses as are here indicated, at the same time the task will not be found too easy.

As to the "semi-qualified midwives," this is doubtless an allusion to the opposition that was manifested against the recent Midwives Registration Bill, which sought to place midwives almost on a level with medical practitioners in one branch of their profession, and which was specially hard on qualified medical women, who naturally look to the obstetric branch of the profession as the one on which they must chiefly rely for a living, and for which, indeed, they may claim to be more fitted than their brother practitioners. That any form of curriculum now in vogue to train midwives can be compared with the obstetrical training required of a candidate for a medical diploma few will contend, and until it can be shown that the training of the two is much more on a level it would be highly dangerous both to the profession and to the public to countenance any legislation which would have the effect of obscuring the difference between a midwife and a legally qualified obstetrical practitioner, as the former ought to be, under the present system of education, never more than an obstetrical nurse in the eyes of the law.

As to "advertising doctors," this is an incubus under which the profession has laboured at all times; it is likewise a parasitic growth, extremely difficult to destroy, as it is intimately blended with much of the vitality of the profession. For advertising in some of its worst forms is by no means absent from a portion of the upper class of the profession, and vain is it to expect reform in the rank and file if the leaders go astray.

As to "quack medicines" the present time would seem to be their millennium; they meet us on every side, and it is a blot on the intelligence of the age to glance over the advertisement sheets of any newspaper. Where is the man so simple as to try quack remedies at law for the preservation of his property, and where the man so wise who has not at some time or other experimented with quack remedies on his body to preserve his health?

With regard to "improperly conducted clubs," it is to be feared there are few at the present time that merit any other appellation from a medical point of view, the amount paid by the best of them to their medical officer being a pittance hardly worthy of acceptance by a member of an honourable profession. Many practitioners, who would shrink from taking a penny or twopenny fee for a consultation, put pride in their pocket when such fees come to them in the shape of a quarterly payment of a few pounds.

Our contemporary further remarks: "How cheaply, independently of any abuse of paying dividends to members, the work of provident medical clubs is done." It then instances the Golborne Road Branch of the Metropolitan Provident Medical Association, where in one year 1,431 visits and 5,366 consultations at the dispensary were undertaken by the medical staff for the modest remuneration of £180 per annum, or £3 9s. 6d. per week, which it states is four visits and seventeen consultations daily throughout the year. We fail, however, to follow when it says: "Taking the two classes of patients together" (that is, those at home and those at the dispensary) "the amount came to 2s. per inspection." We should have thought it came to something less than 6d.

The profession is hardly to be congratulated on the labours of the Metropolitan Provident Medical Association if it can get no better payment for its medical officers than this, though, doubtless, the answer would be that it is due to the competition with so many clubs and benefit societies in which the medical fees are even lower.

Filtered Aerated Waters.

MESSRS. M. R. FOSTER AND SONS forward us a statement showing the precautions which they take to prevent pollution of their artificial aerated waters. They write: "We prepare, as hitherto, the first three waters (potash, soda, plain aërated) with recently boiled and cooled main water subjected to a special process for the removal of earthy and the destruction of organic matters. In the case of Lithia water, distilled is substituted for prepared main water. Boiling has always been strongly recommended by leading bacteriologists as a highly effective method for destroying most of those injurious germs with which common water is frequently polluted. As, however, micro-organisms of several descriptions are liable to be conveyed by air, and since it is extremely difficult to effectually guard, on a manufacturing scale, against aërial germs coming in contact with water, however carefully it may be stored and protected by the usual methods, we have deemed it well to add to our plant a Berkefeld filter and a Pasteur-Chamberland filter. Both kinds of filter have long been known to bacteriologists, and favourably regarded by them; but of the two, the Pasteur-Chamberland has been indisputably proved by laborious and exhaustive experiments to be the only filter that can be employed commercially for the absolute and constant removal of disease organisms from water and other fluids. The water, boiled, purified, and cooled as already described, or distilled, or any saline solution prepared therefrom—is passed through the Berkefeld, and then through the Pasteur-Chamberland filter into an adjoining small reservoir, so constructed that absolutely no air can find its way into the interior of the same without having slowly traversed a column of sterilised cotton-wool. This reservoir is within a few feet of the soda water pumps and the aërating cylinder, and no water can reach either unless it has passed first through the filters and the reservoir. To maintain efficient filtration the filters with their pipes, and also the reservoir, etc., are carefully cleansed and steamed every few days. After this the water is forced through at a given pressure and the rate of filtration from the Pasteur-Chamberland filter noted. We thus make sure that no fracture or other injury has occurred to any part of the apparatus. An abnormally high rate of filtration would be viewed with suspicion and would necessitate investigation. Siphons are chosen in preference to ordinary bottles for filling with these highly purified waters, since the latter vessels, in spite of every care in washing, may contract organic impurities from the dust always present in a busy factory, as well as from corks and other sources. Siphons are hermetically sealed up to the valve, and are, after their first filling for cleansing purposes, whether empty or full, devoid of atmospheric air and dust. It is recommended that before taking a siphon into use a small quantity of the contents should be run to waste so as to cleanse the interior of the spout. The salts used are chemically pure, and the quantities contained in each siphon of 25.5 oz. are: Soda water, 20.4 gr. bicarbonate of soda; potass water, 34.2 gr. bicarbonate of potass; Lithia water, 14.5 gr. carbonate of lithia—or 9, 13, and 5 gr. respectively in every 10 oz. of water."

In Memoriam.

DR. GEORGE MATHER, whose sudden death after making an after-dinner speech is referred to elsewhere, was one of the founders of the Sir Walter Scott Club. The following tribute to his memory is from the pen of the president of the Club:

> There he lay dead who a brief space before
> Had made a patriot's speech, a heart that told
> Full of the chivalry of days of old;
> Sir Walter Scott loved well a man who bore
> The spotless crest of Paladins of yore.
> And such was he who cast in brawny mould
> Was fond of gentle things: a heart of gold,
> Manly and tender, strong and true he wore.
>
> And so farewell, our friend, a last farewell
> To modest worth and unassuming mind!
> Within our hearts your memory will dwell
> As one whose peer 'twas difficult to find
> In high and generous qualities that tell
> The noble soul and friends unswerving bind.

The Cry is "Still they Come."

THOUGH an American contemporary is of opinion that the alleged claim put forth on behalf of hydrastin, that it has anti-alcoholic properties, is new, this drug has been administered in Canada in the treatment of alcoholism for many years. The last exponent of a method of cure, which he states has resulted in only two failures, and who claims to have found beer inebriety more stubborn to treatment than any other variety, has made known his *modus operandi*. After a hot bath and a cathartic, the inebriate is given a hypodermic injection of hydrastin sulphate, beginning with ⅛ gr. and increased to ¼ gr. four times daily. If nervosa, valerian and bromides are added. For some hours or days at first the inebriate patient is supplied with a generous allowance of liquor! The whisky treatment to begin with seems to be in high favour with the "discoverers" of all these modern and nearly always successful "cures."

The D.P.H. (Scottish Conjoint Board).

Mr. Jas. C. G. Macnab, M.B., F.R.C.S.Eng. (Dysart) writes: Dr. T. Harvey Thompson writes in the British Medical Journal of November 23rd re the Public Health Diploma: "This year's record appears to have been even worse, not one of ten candidates apparently having been awarded the diploma." Had he inquired a little more carefully into the matter, he would have found this statement to be incorrect. The facts of the October examination are as follows: Of the seven candidates who presented themselves for the first examination, two got through, and of the three that entered for the second examination, two were awarded the diploma, of whom I am one.

*** The report of the Inspector of the General Medical Council on this examination presented last week is somewhat critical, and does not convey the impression that the examination is one of exceptional severity, but rather the contrary.

The Pharmacology of Love.

The following comes to us from the practitioner who officiated on the occasion:

Scene.—A Lying-in Room.

Doctor: Nurse, some I in 1,000, if you please.

Patient (under chloroform): Ah! that's my Jack. He's one in a thousand. Dear Jack!

Common Salt for Ringworm.

Dr. Geo. Steele Perkins (Wimpole Street) writes: It is with much pleasure I endorse Mr. Bentley's statement as regards the beneficial results obtained from treating ringworm with common salt. More than twelve years ago a boy was brought me suffering from ringworm, who had been under constant treatment for the disease for over five years, a patch over the right ear proving intractable; it was evident all ordinary treatment was useless, and on thinking the case over I decided to try common salt, and this proved successful in a few weeks. Since that time I have treated all cases of ringworm (a large number) with chloride of sodium, and in every case successfully and quickly. I was led to use this remedy because of its well known destructive powers to animal and vegetable life, and therefore why not to the trichophyton tonsurans?

In reply to "G's" queries in the British Medical Journal of November 16th, I always use equal parts of pure vaseline and chloride of sodium (finely powdered), and thoroughly mixed so as to make an ointment. Have the part affected shaved, and then the above rubbed in night and morning until the place becomes very sore; the number of the applications depends upon the susceptibility of the skin to irritation and the energy of the rubber. When the above effect has been produced leave matters alone until healed, unless it is preferred to apply some simple ointment as a healing agent. In most cases a complete cure will result, but sometimes, especially when the disease is extensive, a small patch here and there may not be cured, in which case the process over the said points should be repeated. My theory is that the salt thoroughly irritates the skin, which alone doubtless does some good, and that when the salt is able to penetrate to the roots of the hair and destroy the fungus.

A New Speciality.

The following advertisement, which we take from the New York *Medical Record*, illustrates the increasing tendency to specialisation which is one of the most striking characteristics of the medical profession in our day: "New York, September 1st, 1895.—Dr. ——— begs to announce that he makes a specialty of giving advice regarding the medical and surgical diseases associated with the use of the bicycle. He is now prepared to make physical examination of men, women, and children, and prescribe for them the kind of bicycle and the amount of bicycle exercise adapted to their constitution. The doctor will also provide, to those who desire it, suitable wheels, and arrange the gearing, seats, and handle so that the machine will accommodate itself to the physiological peculiarities of each patient. Dr. ——— has had a large experience in this speciality, and confines himself to it." If the cycle offers a productive field, why not golf? Why do not enterprising specialists take up the diseases caused by dancing, by cigarettes, by drawing room music, by Parliamentary oratory?

Letters, Communications, Etc., have been received from:

(A) A. T. S.; Dr. T. Acland, London; A. B. B.; Dr. A. Ambrose, Buckhurst Hill; Annus Medicus. (B) Sir W. H. Broadbent, London; Mr. D. Biddle, Kingston-on-Thames; B. A. G.; Mr. L. A. Bidwell, London; Dr. J. Barr, Liverpool; Dr. E. M. Brockbank, Manchester; Mr. S. Buck, St. Neots; Mr. W. P. Bryne, London; Dr. A. H. Bampton, Ilkley; Bradford Medico-Chirurgical Society, the Secretary of, Bradford; P. S. Buchanan, M.B., Glasgow; Mr. P. B. Bentlif, Jersey; Bombay Assistant-Surgeon and M.B.M.A.; F. M. Blumer, M.B., Stafford; Mr. P. J. B. Beale, London; A. T. Brown, M.B., Wakefield. (C) Civil Surgeon in Charge of Troops; Dr. R. Crocker, London; Dr. J. K. Coutts, Manchester; Dr. E. M. Cosgrave, Dublin; A. J. Collis, M.B., Weston-super-Mare; Dr. C. W. Cooke, London; Mr. C. A. Corke, Wem; Mr. J. Carter, London; Dr. T. J. Compton, Norwich; Mr. J. W. Chapman, Grimsby; Mr. H. J. Campbell, Bradford. (D) Dr. F. Dale, Scarborough; Dr. H. M. Duncan, London; Dr. J. Dudgeon, Shanghai; Dr. S. Davies, London; Messrs. T. Dunlop, London; E. P. Dickin, M.B., Northampton; D. B. M. and J. J. C.; Dr. L. Drage, Hatfield; Miss C. M. A. D'Orsey, London; P. Duke, M.B., London; Dr. L. C. Dobson, London; D. H. B.; Dr. M. Dockrell, London. (E) Mr. C. Y. Eales, Torquay; East Dulwich; Mr. G. Eastes, London; S. G. Edge, M.B., Norwich. (F) Mr. W. Fryer, London; Mr. C. E. S. Flemming, Freshford; Mr. W. T. Freeman, Reading. (G) J. W. Geddie, M.B., Winterton; Mr. A. M. Greenhill, London; Mr. B. W. Gowing, Ilminster; Gamma; Mr. T. A. Goodchild, Beaminster; Mr. E. Gaylor, Helper. (H) G. S. Hodson, M.B., London; J. C. Hollick, M.B., Knowle; Dr. H. C. Highet, Singapore; Mr. W. H. Hughes, London; Dr. W. W. Hall, London; H. S.; Dr. J. Haddon, Galashiels; Dr. C. W. Hayward, Liverpool. (I) Inquirer. (J) Dr. R. Jardine, Glasgow. (K) Kidderminster Medical Society, the Secretary of, Kidderminster. (L) Dr. A. E. Lloyd, Rhyl; Mr. T. F. Lee, Salisbury; Mr. T. Laffan, Cashel; Professor E. Ray Lankester, Oxford; Dr. R. W. Leftwich, London. (M) W. C. Murray, M.B., Glasgow; Dr. McAldowie, Stoke-on-Trent; M.D.; Dr. J. Mackenzie, Burnley; Mr. F. C. Melhado, London; J. C. G. Macnab, M.B., Dysart; Medico; Member; Mr. E. H. Myddelton-Gavey, Weybridge; Mr. T. L. Macartney, Tattenhall; Mr. L. Mackenzie, Tiverton; Mr. W. Marriott, Mentone; Dr. J. M. Moir, Inverness; Mr. H. E. Moberly, London; Mr. J. Y. W. MacAlister, London; Mr. O. E. B. Marsh, Newport, Mon.; P. Murison, M.B., Dundee; M.R.C.S.; Medical Officer; Miles. (N) Nutrose, Limited, London; Mr. H. G. Nicholson, Hereford; Dr. J. A. Neil, Oxford; Mr. P. Newell, Crowborough. (O) O. M. A.; Dr. Oronhyatekha, London; Mr. J. S. Owens, Gorey; (P) Dr. J. P. Parkinson, London; Mr. F. G. Parsons, London; W. Price, M.B., Cardiff; Mr. J. R. Pleace, London. (R) Dr. H. B. Robinson, London; Mr. T. F. Raven, Broadstairs; Dr. J. Ramage, London; Mr. C. Robinson, Nottingham; R. J. C.; F. Rogers, M.B., Lohardage, Bengal; Rheum; R. W. W.; Dr. J. S. R. Russell, London. (S) Messrs. R. Sumner and Co., Liverpool; Dr. W. B. Saunders, Philadelphia; Dr. F. H. Spooner, London; Mr. T. A. B. Soden, Coventry; Mr. C. H. Sheare, Liverpool; Mr. E. A. T. Steele, Plaistow; S. M.; Surgicus; Sir Thornley Stoker, M.B., Dublin; Mr. J. C. Swinburne-Hanham, London. (T) Dr. W. Thomas, Rhyl; Mr. F. H. Tinker, Hyde; Dr. P. Turner, London; Timidus; Mr. H. Taylor, Guildford; Dr. W. B. Thorne, London; Mr. J. Topping, Ashley Hill; Mr. J. M. Tidmarsh, Luton. (U) C. T. Urquhart, M.B., Aberdeen. (V) Mr. F. Vacher, Birkenhead. (W) Mr. W. Whitworth, St. Agnes; D. Walsh, M.B., London; Dr. P. White, Wigan; R. H. Woods, M.B., Dublin; Dr. A. G. Welsford, Dover; Dr. T. M. Watt, Hovingham; Dr. T. Watt, Hyde; J. R. Whait, M.B., London; Dr. F. J. A. Waring, Brighton; (Y) Dr. M. Young, Brighouse; Mr. T. H. Yabbicom, Bristol; Mr. J. Young, London; etc.

BOOKS, Etc., RECEIVED.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XV, Session 1894-95. London: J. and A. Churchill. 1895. 12s. 6d.

Medical Diagnosis, with Special Reference to Practical Medicine. By J. M. Da Costa, M.D., LL.D. Eighth Edition. London: Smith, Elder, and Co. 1896. 24s.

Reasons Why the Office of Coroner should be held by a Member of the Medical Profession. By Frederick W. Lowndes, M.R.C.S. Second Edition. London: J. and A. Churchill. 1895. 3d.

Parasitism, Organic and Social. By Jean Massart and Emile Vandervelde. Translated by W. Macdonald, revised by J. A. Thomson. London: Swan Sonnenschein and Co. 1895. 2s. 6d.

The Chemist's Compendium. Compiled by C. J. S. Thompson. London: Whittaker and Co. 1896. 2s. 6d.

Hoppe-Seyler's Zeitschrift für physiologische Chemie. Herausgegeben von Professor E. Baumann und Professor A. Kossel. Heft 2 and 3. Strassburg: Karl J. Trübner. 1895.

A Manual of Syphilis and the Venereal Diseases. By J. Nevins Hyde, A.M., M.D., and Frank H. Montgomery, M.D. Philadelphia: W. B. Saunders. 1895. $2.50.

Annual of the Universal Medical Sciences. Edited by Charles E. Sajous, M.D., and seventy Associate Editors. Vols. 1-5. London: Rebman Publishing Company. 1895.

***** In forwarding books the publishers are requested to state the selling prices.**

OBSERVATIONS
ON
THE CAUSES AND TREATMENT OF CHLOROSIS.

By RALPH STOCKMAN, M.D., F.R.C.P.E.,

Assistant Physician to the Royal Infirmary, Edinburgh; Lecturer on Materia Medica and Therapeutics in the School of Medicine.

MANY causes of chlorosis are enumerated by authors, chief among them being absence of light and fresh air, overwork, especially under unfavourable conditions, heated rooms, insufficient exercise, depressing emotions and unhealthy excitement, indigestion, constipation, insufficient food, and excessive or otherwise faulty menstruation, besides others which need not be here particularised. Most of these are probably predisposing rather than direct causes, and I hope to show in this paper that there are two great and direct causative factors in chlorosis, namely, blood-loss and an insufficient supply of iron by the food. If this be correct, then excessive menstruation or other blood-loss and insufficient supply of food from any cause, are the only two factors among those just mentioned which directly bring on the anæmia, the others doing so only in as far as they contribute to produce these two.

Virchow's view that chlorosis is dependent on congenital hypoplasia of the arterial system is apparently contradicted by the fact that it is a condition which lasts at most for a few years, and often only for some weeks or months, being completely and permanently recovered from, and hence the causes which produce it must also be transient and avoidable. It is possible, however, that such individuals may be congenitally deficient in blood-forming power, and thus readily tend to become anæmic when any strain is thrown on the blood.

The theory supported by the late Sir Andrew Clark[1] and others, that chlorosis results from constipation, with consequent absorption of ptomaines which break down the red blood corpuscles, is in no way supported by facts but rather the contrary. Many cases of chlorosis do not suffer from constipation, and, further, it has now been proved by trustworthy investigations that there is neither excessive formation of decomposition products in the intestinal canal, nor any excessive breaking down of the red corpuscles. As a matter of fact, fewer corpuscles break down in chlorosis than under normal conditions. The very pale colour of the urine, and frequently also of the fæces,[2] indicates that less colouring matter than usual is being furnished by the hæmoglobin, and hence that fewer red corpuscles are breaking down. When excessive decomposition is going on in the contents of the intestine, the products of this (compounds of skatol, phenol, etc.) become more abundant than usual in the urine, but Rethera[3] and Möllner[4] have found that in chlorosis these products are generally diminished in amount, thus conclusively proving that there is no excessive sepsis in the alimentary canal. These researches help further to disprove the truth of Hannon's and Bunge's theory, which also rests on the assumption of increased intestinal decomposition, whereby the sulphuretted hydrogen and ammonium sulphide supposed to be formed are said to separate the iron out of the food, and thus prevent its absorption. I have already shown,[5] however, that both Sir Andrew Clark's and Bunge's theories are untenable on other grounds.

It may now be held as proved, therefore, that in chlorosis there is no excessive breaking down of red corpuscles, and hence the anæmia must result either from deficient formation or excessive loss of blood. What elements in the blood are specially affected? The blood serum seems to be very little or not at all deteriorated, for L. Beale found[6] the specific gravity and solids to be practically the same in a girl before treatment and after recovery, while Quinquaud[7] found the solids to be 88 to 94 per 1,000 in chlorosis and 92 to 94 in health, the several constituents being practically unaltered. On the other hand the hæmoglobin is always deficient, and the number of red blood corpuscles is usually, but not invariably, so. In 63 cases of chlorosis which I have treated in hospital,[8] the lowest estimate of hæmoglobin (on Gowers's hæmoglobinometer) was 20 per cent., the highest 66 per cent., while only 6 of these cases had over 4½ million corpuscles per cubic millimetre, the others having from 4½ down to slightly under 2 millions. Not only are the corpuscles deficient always in hæmoglobin and usually in number, but often many of them are ill-formed and small. The hæmoglobin, however, is invariably deficient whether the corpuscles be so or not, and the severity of the clinical symptoms depends chiefly on the extent of this diminution in hæmoglobin. Quinquaud found that in healthy women 100 c.cm. blood yielded 21 to 24 c.cm. oxygen, while in chlorotics the same amount of blood gave only 10 to 15 c.cm. It is the deficiency of hæmoglobin combined with the consequent deficiency of oxygen which gives rise to the pallor, debility, breathlessness, and impairment of functions generally which all go to form the clinical picture of chlorosis.

In discussing the etiology of chlorotic anæmia, as it is found in young girls at or not very long past the age of puberty, the chief points which attract attention are the sex, age, the condition of the digestive organs, the condition of the menstrual functions, and the frequent tendency to relapse. I shall consider these in the order named.

Sex.—Chlorosis is infinitely most frequent in very young women, and this suggests the question as to what influence sex exercises on the composition of the blood. Women generally in health have about 10 per cent. fewer corpuscles than men, 8 to 10 per cent. less hæmoglobin, and 4 or 5 per cent. more water in the blood. Their blood is therefore less able to withstand any drain on it, and, as will be more particularly noticed immediately, it is well recognised that at puberty and for some time after, there is a greater drain than takes place in lads at the same age.

Age.—Leichtenstern[9] found that from 18 to 25 the hæmoglobin is about 8 per cent. less than from 25 to 45 years of age, and Sörensen that from 15 to 28 in healthy women the number of corpuscles is less than at other ages, which he attributes to menstruation. Further, girls develop with extreme rapidity from 15 to 18, throwing a great strain on the organism, which suffers in various ways besides in blood forming. Out of my 63 cases of chlorosis previously cited no fewer than 41 were between the ages of 15 and 20, and the highest age at which a first attack occurred was 28. Owing to the strain of rapid growth at this age all the various functions of the body suffer, and not only is blood formation deficient in itself, but digestion is impaired and appetite poor, so that an inadequate amount of food, and consequently of iron, is consumed. The onset of menstruation at a time when mere growth is making such demands on the organism still further drains it of blood and of iron and tends to the production of anæmia.

The Condition of the Digestive Organs.—In growing girls and in chlorosis gastric digestion is very frequently impaired, and constipation is common, showing that the whole process of primary digestion is very ill-performed. Out of my 63 cases, 32 suffered from constipation, while 28 had marked dyspepsia, and in many cases where gastric dyspepsia was not complained of, it was found that the patient had learned by experience to be extremely careful in her diet. The dyspepsia and constipation lead to the consumption of a totally inadequate amount of food, and therefore of a totally inadequate amount of iron. I have recently analysed[10] fifteen dietaries of healthy persons, taking in each case an exact duplicate of the cooked food and liquids consumed during one day, and it was found that, for persons with moderate appetite and not working very hard, the total amount of iron ingested was from a little over 6 to 8 milligrammes (⅒ to ⅛ grain) per diem, while persons with larger appetite ingested from 8 to 11 milligrammes iron (⅛ to ¼ grain). Four analyses[10] of the daily dietary of two girls suffering from chlorosis gave only 2.5, 3, 3.2, and 1.3 milligrammes iron (about ¹/₂₅ to ¹/₅₀ grain), while

[1824]

[1] *Lancet*, II., 1887, 1288.
[2] Von Noorden, *Berlin. klin. Wochenschr.*, 1885.
[3] *Dissertation*, Berlin, 1891.
[4] *Ztschr. f. physiol. Chemie*, xviii., 1893.
[5] BRITISH MEDICAL JOURNAL, 1895, I.
[6] *Med. Times*, 1851, I., 459.
[7] *Chimie Pathologique*, 1895.
[8] *Edinb. Med. Journal*, November, 1895.
[9] *Untersuchungen über den Hämoglobingehalt des Blutes*, 1878.
[10] *Journal of Physiology*, xviii., 1895.

the dietary of a third chlorotic girl who had lived for three months on a small quantity of bread and milk daily gave only 1.2 milligramme of iron per diem. It is difficult to reckon accurately the total daily excretion of iron from the body, and no doubt it varies within certain physiological limits, but it is probably somewhere about 6 milligrammes on an average. It is evident, however, that persons habitually ingesting a quantity of iron so much less than is excreted in health will gradually acquire a deficiency of hæmoglobin in their blood, owing to the new corpuscles which are constantly being formed not finding enough iron in the organism to furnish them with a sufficient supply of hæmoglobin.

An experiment which I made upon a dog illustrates this.[11] The animal, a collie, in its ordinary dietary consumed about 10 milligrammes iron per day, its red corpuscles equalling 6 millions per c.mm., and its hæmoglobin 90 per cent. It was then put on a dietary which maintained its weight, but from which the iron had been as far as possible extracted, so that it only got 2 to 3 milligrammes per day. In forty-six days the hæmoglobin had fallen to 64 per cent., although the corpuscles had slightly increased. When put back on its old diet the hæmoglobin very gradually rose again, while the corpuscles also increased in number very considerably. There was no lack of power to form hæmocytes, but simply a deficiency in them of hæmoglobin, resulting from long-continued deficiency of iron in the food. Many cases of chlorosis present a similar condition.

The observation has frequently been made that during starvation the corpuscles and hæmoglobin both rise, often very considerably, in a given bulk of blood, but this is due simply to less fluid being taken, and the blood becoming thereby more concentrated. The same increase has been observed in cases of phthisis and of diarrhœa where fluid is drained off by sweating or by the watery alvine discharges. The increase is only apparent, and there is abundant evidence to show that during partial or complete starvation both corpuscles and hæmoglobin are reduced. Reinert[12] states that during inanition the corpuscles fall from the beginning if fluids be given, and Vierordt during the hibernation of a squirrel observed its red corpuscles fall from 7,748,000 per c.mm. to 2,355,000. Quinquaud found a very large fall of hæmoglobin in lunatics who refused food, and Piorry relates the case of a man who committed suicide by eating less and less each day, dying ultimately after two months, during which time he developed all the symptoms of anæmia.

Quality, as well as quantity, of food is of importance as regards the supply of iron. Verdeil[13] found that a dog fed for 18 days on flesh had 12.75 per cent. iron in its blood ash, while one fed on bread for 20 days had only 8.65 per cent., and Subbotin[14] confirms this on different species of animals, as regards the amount of hæmoglobin.

My own analyses of iron[15] in different articles of food showed that they contained very different amounts. Thus in two analyses of bread, one pound (undried) yielded 1.7 and 2.7 mg. ($\frac{1}{37}$ and $\frac{1}{24}$ gr.), one pint of milk 2.2 mg. (about $\frac{1}{30}$ gr.), and one pound of beefsteak 18 mg. (about $\frac{1}{4}$ gr.) iron.

There can be no doubt, therefore, that the quantity and kind of food consumed exercises an important influence on the amount of iron available for blood formation.

Menstruation or other Blood Loss.—The onset of menstruation while the body is actively growing makes a great demand on the blood. Gowers[16] found that during a menstrual period in a chlorotic girl the corpuscles fell as much as 10 to 20 per cent. of their total number, and in one case during five days I found that they fell from 4,432,000 to 3,764,000 per c.mm. Hunt[17] and Wilcocks[18] also observed a diminution. The loss is easily borne by the vigorous and fully grown woman, who finds no difficulty in regenerating the corpuscles and hæmoglobin, hence the rarity of chlorosis after the age of 25. In chlorotics, however, the corpuscle-forming power is often lessened temporarily, but this seems to be due largely to lack of iron and possibly also to general impairment of nutritional activity, for as soon as iron is given and the patient put under favourable hygienic conditions, new corpuscles are formed with great rapidity. Further, the healthy woman has sufficient reserves of iron at once available for use stored in the liver and spleen, but in girls ill-nourished from any cause, or who have been drained of this iron by hæmorrhage, there is little or no iron in the body to draw on for the manufacture of red corpuscles, and thus they become anæmic.

A fatal case of gastric ulcer which I had in a girl, aged 18, illustrates how completely the body may be deprived of its iron by hæmorrhage. During three days she had hæmatemesis to the extent of about 50 ounces, and then several smaller bleedings previous to death. The liver contained only 0.018 g. iron per 100 parts dried, and the spleen 0.041 g., calculated for 100 parts dried. It may give a better idea of the extreme poverty of these organs in iron when it is stated that the whole spleen only contained 5 mg. ($\frac{1}{12}$ gr.) of iron, and the whole liver 4 c.gm. ($\frac{2}{3}$ gr.), amounts which are probably fully accounted for by the blood which was unavoidably left in the organs. The iron usually stored in the liver and spleen cells had disappeared.

An experiment made on a dog proved the same thing. The animal, a large collie, at the beginning of the experiment had 8,000,000 corpuscles per c.mm. and 108 per cent. hæmoglobin, and during three weeks it was bled to the extent of 687 c.cm., when the corpuscles had fallen to 5,280,000 and the hæmoglobin to 48 per cent. In twenty-eight days afterwards the corpuscles had risen to their original number and continued to increase, but the hæmoglobin required ninety-seven days to reach 104 per cent. It was then killed, and only a mere trace of iron was found in the liver. During this time it had received no chalybeate treatment, and its food contained about 8 to 10 mg. iron daily.

It is certain, therefore, that loss of blood not only directly produces anæmia, but prevents speedy recovery from it by draining off the reserves of iron in the body.

Most cases of chlorosis, when fully developed, have amenorrhœa, which must be regarded as beneficial and protecting against further loss of blood. In many cases the loss of blood by menstruation has never been actually large, but only relatively so, when compared with what the organism is able to withstand at a time when a very heavy strain is being put upon it otherwise. Many cases, however, begin with very distinct menorrhagia, and date their illness from this.

In looking through my notes, I find a considerable number of cases in which the patient menstruated for five to seven days, sometimes every second or third week; there is one in which the period lasted nine to ten days every month, and there are two cases in which the bleeding continued for a month. Both these last suffered from typical chlorotic anæmia in consequence; in one of them a gynæcological examination was made under chloroform, but nothing was found to account for the menorrhagia. One girl, aged 19, presenting all the most typical symptoms of chlorosis, had for some months been in the habit of passing blood daily when at stool, apparently from a bleeding polypus high up the rectum.

How important a loss of iron even moderate bleeding entails on the body can perhaps only be realised after calculation. Becquerel and Rodier reckon the iron in 100 g. blood as 0 0366 g., and Pelouze as 0.054 g., so that if we take the mean we have 45 mg. iron in 100 cc. of blood. Now, during menstruation, 3 to 6 ounces is the average loss of blood, and in this about 45 to 90 mg. iron is excreted, that is to say, about as much iron as a healthy person ingests as food during 5 to 10 days. If we reckon, however, that 5 or 6 mg.[19] are excreted daily in other ways, it only leaves over 3 or 4 mg. per day to make good the loss of iron contained in the shed blood. In the intermenstrual periods the liver stores up from the food reserves of iron, which are immediately available for making new corpuscles, but if these reserves have been exhausted by menorrhagic or other bleeding, or have not been kept up owing to poverty of the food in iron, then the iron, even of a good dietary, is quite inadequate to meet the demand for hæmoglobin, and anæmia gradually results.

[11] *Journal of Pathology*, iii, 1895.
[12] *Die Entstehung der Blutkrankheiten*, 1891.
[13] *Annales de Chim. et de Pharm.*, xxix, 81, 1849.
[14] *Zeitsch. f. Biol.*, viii., 148, 1871.
[15] *Journal of Physiology*, loc. cit.
[16] *Lancet*, 1878, i, 573.
[17] *Lancet*, 1880, ii, 87.
[18] *Practitioner*, xxxi, 1, 1883.
[19] *Journal of Physiol.*, loc. cit.

Tendency to Relapse.—The slighter cases of chlorosis do not very often seek medical advice, as they recover spontaneously on the iron of their food, while many even severe cases frequently have no recurrence after treatment, the conditions which induced the anæmia having been evidently temporary. Many cases, however, are never really well; under treatment they recover more or less from one attack, and in a few months have another, this going on sometimes for years. The explanation is that such patients habitually eat too little, or habitually lose too much blood by menstruation, or there is most often a combination of both. In some cases also, there is possibly a deficiency in blood-forming activity.

Gastric Ulcer.—It is well known that obstinate anæmia accompanies gastric ulcer, and this is not surprising, for here we have at work the two most potent factors in causing anæmia, namely, blood loss and an insufficient dietary as regards iron.

Summary.—All the causes of chlorosis, ordinarily enumerated, may be reduced to two, or possibly three:—

1. Excessive menstrual loss, or (much less frequently) other blood loss. This may be relative, that is, too much for a weakly or rapidly-growing organism to bear, or it may be actually large.

2. Insufficient ingestion of iron with food. Anything which diminishes the appetite diminishes the consumption of iron, therefore dyspepsia, constipation, heated rooms, insufficient exercise, unhealthy atmosphere, mental depression, etc., all predispose to anæmia by lessening the amount of food consumed. It is probably owing to change of habits, confinement indoors, and want of fresh air—all leading to small consumption of food—that so many girls from the country become anæmic on coming into towns to live.

In a very large number of cases there is a combination of 1 and 2.

3. It is possible that certain persons are born inherently weak in blood-forming power, and tend to become anæmic under very slight provocation. Such a constitution does not directly cause anæmia, but simply predisposes to it. This would account for cases in which the consumption of food is fairly satisfactory, and there is no particular blood loss so far as can be made out. In such people, however, nutrition is never very active.

Chlorosis in Boys and in Non-menstruated Girls.—This can be explained by the strain thrown on the body by rapid growth and by the conditions mentioned under paragraph 2 above. The anæmia of the menopause, in which the blood condition and symptoms are similar to what is seen in young girls, is palpably due to dyspepsia, insufficient food, and excessive blood loss.

TREATMENT.

Iron.—When a fully developed case of chlorosis presents itself for treatment, clinical experience has abundantly shown that the chief remedial measure is the administration of iron. Whether given by the mouth, by the rectum, or subcutaneously, it is absorbed and utilised for the formation of new corpuscles.[20] There has been much discussion regarding this, but Macallum[21] has recently demonstrated its direct absorption from the intestine. It appears to be stored in the liver, and is there converted into an albuminous compound which is the predecessor of hæmoglobin, but exact details regarding the steps of the process are wanting. Treatment by iron ought to be continued for eight or ten weeks, because comparatively little is absorbed, and the corpuscles which have been formed during the anæmic state are poor in hæmoglobin; they disappear slowly from the circulation, and are only gradually replaced by others rich in iron.

Any one of the ordinary Pharmacopœial preparations suffices, as they can all be absorbed, and no one preparation in the present state of our knowledge can be definitely said to be much better than another merely as regards iron. The choice of the particular preparation to be used should be guided to a very large extent by the condition of the stomach. If, as is so often the case, the stomach is irritable, it is best to use the least irritating preparations, such as reduced iron, ferrous carbonate in its various pharmaceutical forms, or one of the scale preparations, and these will be found most generally suitable. Hayem strongly recommends the oxalate, while lactate of iron is also much used in France. The protochloride and sulphate are distinctly more irritating, and the ferric salts still more so. Large doses are generally given, and are held to be most efficacious and rapid in action, probably because more iron becomes absorbed, but many cases recover well in which comparatively small doses, such as 1 g. of reduced iron twice or thrice daily, are administered.

Manganese and *arsenic* given along with the iron are supposed to increase its efficacy. The former is certainly of no use, and the latter is unnecessary. It is supposed to stimulate the formation of red corpuscles, but in chlorotic anæmia such stimulation seems to be rarely required, for as soon as iron in sufficient quantity is supplied, the manufacture of hæmocytes goes on with great rapidity, generally leaving the hæmoglobin lagging behind.

Diet.—No specific dietetic rules can be laid down for all cases, as the diet must be regulated by the condition of digestion. The most easily absorbed and utilised diet is the best, although, as has been previously pointed out, farinaceous foods contain less iron than flesh. If gastric digestion is good, then an ordinary full mixed dietary is most suitable; on the other hand, if there be severe dyspepsia or gastric ulcer, the diet must be regulated accordingly, so as to give the patient most comfort and the food which can be digested most easily, and with most benefit to general nutrition.

Once a patient is markedly anæmic the amount of iron furnished by an ordinary diet can go only a very little way towards providing the iron necessary for recovery. Say that the blood is deficient in iron to the extent of 20 gr., it is evident from what has been previously stated, that it will be a very long time indeed before this can be made up from the small amount of surplus iron in an ordinary dietary.

Nasse[22] states that fat hastens blood formation, which is confirmed by Cutler and Bradford,[23] and Ebstein[24] recommends the treatment of corpulent anæmics by means of fatty and albuminous food.

Rest in Bed.—Many patients who are severely anæmic do best when kept in bed, and some few recover only after this is enjoined. The explanation seems to be that the most distressing symptoms arise from lack of oxygen and debility of the heart and muscles, so that when complete rest is obtained there is less fatigue, and less oxygen is required for muscular exertion. The supply can therefore be used almost exclusively for purposes of nutrition, and thereby the digestion and general health are improved, so that the food and iron can be better absorbed and utilised. Slighter cases do best with an open-air life and a very moderate amount of exercise (taking care not to overstrain the heart) as the appetite and general nutrition are thereby stimulated.

Improvement of Appetite and Digestion.—Good general surroundings and personal hygiene, treatment of dyspepsia and of constipation are of the utmost importance, as thereby the appetite becomes larger and the patient gets into the habit of taking sufficient quantities of food. The same is true of country air, spa treatment, hydrotherapy, and massage,[25] all of which may be useful adjuncts to more direct methods of cure. If the patient be not placed under favourable conditions or remain under the influence of the causes which originally produced the anæmia, then treatment may be inefficacious or very prolonged. For instance, in many factories the girls employed often take Blaud's pills as regularly as their meals, and yet they remain more or less anæmic chronically.

Prophylaxis.—Seeing that undue menstrual losses and insufficient food are the two great, if not the only, immediate causes of chlorosis, prevention seems simple enough. If the menstruation is relatively or absolutely too abundant, it can be held in check by giving ergot. In two severe cases of menorrhagia, where ergot did not control the bleeding, I have ordered hot douching with successful results.

More important still is the cultivation of a habitually good appetite and vigorous health, because sufficient iron is thereby ingested, and, as has been previously pointed out, healthy women bear menstrual blood-loss without serious deterioration of the blood. Leichtenstern found that when he lived generously and put on weight his hæmoglobin also

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[20] [illegible], BRITISH MEDICAL JOURNAL, [illegible]

[21] Journal of Physiology, vol. xvi, 1894.

[22] Cbl. f. med. Wiss., 1877.

[23] Amer. Journ. Med. Sci., lxxv, 1878.

[24] Corpulence and its Treatment, London, 1884.

[25] Mitchell, Amer. Journ. Med. Sci., 1884.

increased in amount, and it is obvious that abundance of food means a sufficiency of iron.

Good general surroundings, fresh air and exercise, are essential to a healthy appetite and digestion, and are of the utmost importance in preventing anæmia. Tea has often been blamed for causing chlorosis, but if taken at proper times it can scarcely exercise any deleterious effect. Many women, however, use it as a substitute for food, or take it before their meals, thus diminishing appetite and bringing on dyspepsia, both of which interfere with the ingestion of a normal amount of iron by means of the food.

A DISCUSSION ON THE REQUIREMENTS OF THE PROFESSION WITH REFERENCE TO THE REVISION OF THE *BRITISH PHARMACOPŒIA*.[1]

I.—D. J. Leech, M.D., F.R.C.P.,
Professor of Materia Medica and Therapeutics, Victoria University, Manchester; Member of the General Medical Council.

The discussion which I have the honour of opening to-day is for the purpose of eliciting the views of members of the British Medical Association as to the changes which may be advantageously made in the forthcoming edition of the *British Pharmacopœia*, with the view of adapting it to the present requirements of the medical profession. It may be well, however, if at the commencement I point out that, whilst the *Pharmacopœia* is specially issued for use by the medical profession, and should, therefore, be in accord with its needs, it is, in its legal relations, concerned chiefly with the protection of the public and with the guidance of pharmacists, for whom its provisions are laws, the infringement of which is punishable. Hence, the effect any changes made in the *Pharmacopœia* will have on the interests of the public and of pharmacists have to receive due consideration.

Furthermore, it must be remembered that the *Pharmacopœia* is published by the General Medical Council according to Act of Parliament, and the Council can make no alterations unless they be in keeping with this Act.

Fortunately, however, the instructions given by Parliament relating to the *Pharmacopœia* are very simple. By the Medical Act of 1858, Section 54, it has to contain (1) a list of medicines and compounds and the manner of preparing them, together with the true weights and measures by which they are prepared and made; (2) such other matter relating to them as the General Medical Council shall think fit.

No direction is given as to the nature or comprehensiveness of the list to be drawn up; but as in a subsequent Act, that of 1862, it is directed that the *Pharmacopœia* published by the Council shall take the place of the *Pharmacopœias* of London, Edinburgh, and Ireland, it is manifestly intended that the list shall be of the same kind as those published by these Colleges—that is, it shall refer to medicines used by members of the medical profession. It is clear, too, that though no mention is made of methods for determining the purity of drugs other than those furnished by a description of the method of preparation, the Act is intended to ensure uniformity in composition and the purity of drugs on the list set forth, for the benefit alike of the profession and the public.

The *Pharmacopœia* of 1864, in which, owing to the exertions of Sir Richard Quain, the best parts of the formularies of the three Colleges were so admirably welded, and that of 1885, have carried out the manifest intentions of the Act. Each of them has contained lists of drugs and compounds such as the existing state of medical practice required at the time of publication, with the means for establishing the uniformity and purity of the remedies named, an account of the weights and measures used in preparing them and accessory information, as, for example, with regard to dosage.

The advances made in chemistry, pharmacy, and botany, the changes in medical practice, and other circumstances now render another edition necessary; and we have to consider to-day what alterations and additions can be suggested which will add to its value, so far as the medical profession is concerned, without interfering with the value of the book in its legal aspects.

[1] In the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

It seems to me that in this discussion it will be well if we avoid details which have no direct bearing on the use of the *Pharmacopœia* by medical men, as, for example, modifications of tests and alterations in the description of drugs or their botanical origin. It will, I think, be sufficient if we only deal with (1) the nature and extent of the list of remedies, (2) the mode of preparation of compounds so far as regards their medical use, (3) weights and measures, (4) the amount and extent of accessory information which should be given.

In alluding to such possible changes I propose for the most part only to introduce them for consideration. As a member of the General Medical Council, I am here to-day rather to learn the opinions of the members of this Association than to express definite opinions of my own.

List of Official Medicines.—Is the present list of official drugs and compounds satisfactory? If not, how can it be improved? A considerable number of drugs and preparations, both old and new, which are not now in the *Pharmacopœia* are used more or less frequently by practitioners. To include them all and give tests for their purity would mean the production of a *Pharmacopœia* three or four times as large as the present one, containing remedies of which a very small portion would be in general use. On the other hand, as is well known, there are a large number of substances in the present *Pharmacopœia* which the majority of practitioners never use. From the investigation made by the Therapeutic Committee of this Association, which has been published in the Journal, it appears that out of 135 of the drugs which seem to the Committee least used, 54 were never employed at all by above 5,000 out of 5,609 who returned the circular forwarded to all members of the Association in England, Ireland, and Scotland, and of those who do use them the majority give them rarely. Many strongly urge that there should be a wholesale exclusion of little used drugs on the ground that they must be of small value. It has to be remembered, however, that every drug in the *Pharmacopœia* seemed to be prized by some practitioners out of the 5,609 who returned the circular. Of drugs, for example, nitrate of lead is often used by 80 out of this number, matico leaves by 67, sulphate of berberine by 48, lupulin by 39, and nitrate of copper by 22. Of preparations, confection of opium is often used by 56, confection of scammony by 34, confection of turpentine by 59, and ethereal extract of mezereon by 8. It would be interesting were it possible to determine why a small number used these and many other drugs often whilst 5,000 entirely discarded them.

We must not assume too hastily that the drugs and compounds which have not maintained their popularity are therefore without the utility entitling them to a place in the *Pharmacopœia*; several remedies of great value have in times past been excluded from the *Pharmacopœia* because the real purpose for which they ought to be employed was not at first fully known, and they were therefore little used. Bromide of potassium is an example of this. But if drugs cannot be shown on careful inquiry to possess the value formerly attributed to them they are better out of the *Pharmacopœia*, for the fact that drugs and preparations are in it gives a kind of official recognition of their utility. The retention of useless drugs seriously injures the *Pharmacopœia* in an educational point of view. The contents of the *Pharmacopœia* should be the basis of a student's work in materia medica in order that it may be the basis of his therapeutic work afterwards; but it is absurd to require men to acquire knowledge concerning substances which will be of no service to them in after-life.

As pointed out in the memorandum of the Therapeutic Committee on the *Pharmacopœia* the omission of a drug in no way prevents a practitioner ordering and obtaining it for his patients. It only takes away the guarantee for purity which arises from the fact that every drug on the official list sold or used by a pharmacist must conform to the pharmacopœial description and tests. Hitherto the General Medical Council have followed the example of the compilers of former *Pharmacopœias* in excluding a few of the least used remedies on the issue of a new edition, and adding others of which the value seemed proved. Whether the process of exclusion may with advantage to the profession be more fully carried out, or whether it would be well to deal as gently with remedies almost obsolete as heretofore, are points on which this meeting's opinion will doubtless be expressed.

In considering this question of the exclusion of preparations from the *Pharmacopœia*, two other points deserve notice. In our own *Pharmacopœia* and in the French *Codex*, descriptions are given of preparations which pertain rather to the methods in which medicines can be administered than to pharmaceutical preparations. The making of poultices, inhalations, and enemata is set forth in detail. Is it to the advantage of the profession that the *Pharmacopœia* should contain these details? Or should they be referred to books which deal with therapeutic procedures? It is very desirable that the views of members of the Association should be expressed on this subject, and also with regard to the multiplicity of preparations which consist of one active ingredient and one vehicle only, as, for example, solutions of lactic acid, chromic acid, and such ointments as those made with calomel and lard, acetate of lead and lard. That a few are wanted there is no doubt, but where the active ingredient has to be constantly modified to suit particular cases, as, for example, in liquor cocainæ hydrochloratis, the question arises whether owing to the difficulty in remembering the strength of the solutions there is any advantage in retaining many simple solutions in the *Pharmacopœia*.

The introduction of new remedies, like the exclusion of older ones, will probably give rise to considerable discussion to day. It may be well to remember in this discussion that as the main purpose of the *Pharmacopœia* is to ensure uniformity in composition and purity of the agents included in it, the introduction of substances which are patented, and concerning the preparation of which, therefore, no real indication can be given, is, apart from all other considerations, objectionable, and especially so if purity tests are not easy to establish.

Furthermore, it will be well to bear in mind that as by introduction into the *Pharmacopœia* a substance is stamped as being definitely proved of value, nothing should be accepted until its efficacy has been very fully established.

Modes of Preparation of Compounds.—Pharmacy has made great progress in the last few years, and it is evident that many of the methods of administering medicines which were formerly looked upon as satisfactory are capable of improvement. Our forefathers took boluses without a murmur, whilst at the present time people grumble at a 5-grain pill. The *Pharmacopœia*, however, must keep pace with the times, otherwise it will be little used. For improvement of methods of administration we shall be largely indebted to our pharmaceutical friends. Nevertheless, utility must not be sacrificed to less important matters, and each change in the form of a compound requires consideration from a therapeutic point of view. Many suggestions have already been made for the improvement of our official preparations, and I trust we shall have more to-day. Especially is it desirable that we should have an expression of opinion as to what should be done with those many forms of administration which the ingenuity of the large firms of manufacturing chemists has devised—tabloids, tablets, granules, etc. We cannot possibly put them all into the *Pharmacopœia*; can we leave them entirely without mention?

I have said that it is not necessary to day to discuss the question of tests for purity, but there is one point connected with these tests on which I should be glad to hear the views of members here present.

The tests for purity are given in the *Pharmacopœia* without any indication as to the impurity which they are meant to detect. A sufficient knowledge of chemistry of course enables anyone to see from the tests the impurities which may be present in a drug, but few of us retain our chemical knowledge sufficiently for this purpose. Nevertheless, it is of some importance in using a drug that the possible impurities which are present should be known. Would it not be an advantage if, after each test for impurity, the impurity itself were indicated as in the *American Pharmacopœia*?

Weights and Measures.—The English *Pharmacopœia* is the only one in which the metric system has not been adopted. It seems now certain, especially after the strong report which has been issued by the Committee, under the chairmanship of Sir Henry Roscoe, in favour of the metric system, that some general change in our weights and measures is impending. It has been suggested in the new edition of the *Pharmacopœia* to give them alternately with the present weights and measures, and I think there is little doubt this will be done.

Accessory Information.—The Council has been empowered by Act of Parliament to insert any information relating to the list of medicines and compounds which it shall think fit. The nature and amount of the information given is perhaps of all subjects the one which concerns the profession most closely. In the edition published by the Council in 1885 doses were appended to the other information concerning the drugs and preparations.

This had not been the case in any of the previous *Pharmacopœias*, and it has no doubt added much to the utility of the *Pharmacopœia*. In none of the formularies of other countries are the doses of all the substances meant to be taken internally given. In the majority there is no allusion to the subject; in a few, as for example the *Pharmacopœias* of Switzerland and Germany, the maximum amount which can be given at once in one day is given in the case of the most potent remedies. It is manifestly an extremely difficult matter to give a minimum and a maximum dose of many of the drugs. The minimum dose of iodide of potassium, for example, may be in some cases half a grain, but it has been given without any ill-effect in doses of 300 grains. Hence it is necessary to state only the average dose, or rather the average variation, in the dose which is usually administered. It seems probable that this best meets the requirements of the medical profession, and that save as regards revision no change is called for in system.

The difficulty in remembering dosage is one which every practitioner from time to time feels, and it has long been the opinion of many that an attempt should be made to simplify dosage by altering the strength of some of the present preparations so that the various extracts, tinctures, etc., should not have the varying dosage they now have. If, for example, the tinctures were made of such a strength that all the more powerful of them should have one dose and the less powerful another, it would be manifestly more easy for practitioners to remember the proper dose to give. As a set off to this advantage it may be pointed out that in this way the strength of the various tinctures would differ very much as regards the actual amount of ingredients contained in them. I can only say with regard to this matter that the importance of the subject has not been lost sight of by the General Medical Council.

The last point to which I shall draw the attention of the meeting is the addition of information not now given connected with the methods of administration of various preparations and their pharmacological and therapeutical effects. There can be no doubt that it is legally possible to add to the description of each drug some information which would be of service to the practitioner bearing on its use. Already indeed, this is done to some extent. The amount, for instance, of acid required to neutralise a certain amount of bicarbonate of potash in order to form an effervescing draught is appended to the amount of bicarbonate of potash. It may be well, too, to incorporate in the account given of the drugs and in the tests, information now not given which may be of service to the practitioner. It seems very doubtful, however, whether, in the present condition of pharmacology and therapeutics, more can be done. If the *Pharmacopœia* is to be a guide to the administration of medicines, it should be a complete guide, and contain full information on all points connected with administration. But this seems hardly possible, since it would lead to the insertion of details which are quite foreign to the purport of a *Pharmacopœia*. Nor does it seem now feasible to introduce information with regard to the pharmacological action and therapeutic uses of drugs. There may arrive a time when it will be possible, but that time I hold has not yet come; the object of the *Pharmacopœia*, so far as the medical profession is concerned, is to ensure the purity of drugs in ordinary use. It is an official book which is taken as a guide to legal procedure, and should contain no doubtful matter. Now, to introduce pharmacological and therapeutic statements would certainly cause the *Pharmacopœia* to lose the definiteness it now possesses. It is true, indeed, that in pharmacology there is some exactness which therapeutics does not possess; we know beyond doubt the action of certain drugs on tissues and organs, but even in pharmacology

much that is put forth is rather inferred than assured, and it would be impossible to give under each drug a reliable account of its pharmacological action. Whether it ever will be possible or not remains to be seen. That it would vastly enhance the value of the *Pharmacopœia* if definite and incontestable statements on pharmacology and therapeutics could be introduced there can be no doubt, but the production of such a *Pharmacopœia* is, I fear, a dream of the future.

I confess my own dream of the future *Pharmacopœia* is somewhat different. I look forward to a time when we may have a *Pharmacopœia* containing a list of drugs and preparations concerning the utility of which there is a general consensus of opinion, when the advance of chemistry shall enable us better even than now to determine the strength and purity of every item in the *Pharmacopœia*: when the *Pharmacopœia* shall be the initial textbook of every student, who must become thoroughly conversant with every statement it contains—at least, with all which bear upon the use of medicine.

Such a *Pharmacopœia* would be the basis of advanced textbooks on materia medica just as the present *Pharmacopœia* is; but, containing as it would only an account of drugs and preparations generally employed, the editors of the textbooks would have a freer hand than at present. For now, instead of introducing an adequate account of the various new and much used substances used in medicine, they are often limited to a bare notice of them by the necessity for inserting an account of all official drugs rarely employed. It would be the basis of all examinations, and we should not have, as at present, only part of it recognised as such a basis, and an indication plainly given that certain portions of it are not to be known by medical men. Lastly, it would be a book which, having been thoroughly studied in student days, would be the sound basis of future work, from which, indeed, excursions might be made into the more doubtful region of the new remedies, but to which all medical men would return as the reliable groundwork for their therapeutic practice.

II.—Donald MacAlister, M.D., F.R.C.P.,

Linacre Lecturer and Physician to Addenbrooke's Hospital, Cambridge; Member of the General Medical Council.

As a member of the Pharmacopœia Committee which is now actively engaged in the work of revision, I would have preferred to hear rather than to speak on the present occasion. The contributions of experienced practitioners to this discussion cannot fail to be of service in suggesting improvements in the *Pharmacopœia*, and I for one can promise to offer an open mind to all that promises to be of advantage in this connexion. It may help, however, to carry on the discussion on useful lines if I confine myself to emphasising a simple general principle alluded to by Dr. Leech, which in my view should be carefully observed in the preparation of our official book of remedies. It has already emerged in the discussions of the Committee, and it has not a little to do with the usefulness of the book to men who are busily occupied with the details of practice.

The principle I would thus enunciate: It is important that the essential formulæ of the *Pharmacopœia* should be so adjusted that they may be easily and accurately remembered. Most of us can call to mind the bewildering sense of hopeless difficulty which fell upon us when we first attempted to learn the doses, strengths, and varieties of the pharmacopœial preparations we were supposed to employ in our daily practice. We discovered no obvious law governing their innumerable variations, and we were fain to set ourselves to acquire, by a brute effort of mere memory, such of them as were most immediately needed. Continued practice has no doubt impressed the chief of these arbitrary and unconnected facts on our minds, until we have almost forgotten the early efforts they entailed. As in the case of English spelling, we have at last got more or less used to it, though we hold it no disgrace to have to look at the dictionary now and then, and to indulge in a British grumble at its lawlessness.

One way of diminishing this waste of mental energy is to strive after the greatest attainable uniformity in the formulæ of similar classes of preparations. A step in this direction was taken ten years ago, when the majority of the liquors were made into 1 per cent. solutions of their active ingredient. By general consent the step has been approved, and I trust that it will be followed by many others of the same kind. It would not be practicable, owing to pharmaceutical difficulties, to make all tinctures, for example, of one strength. Considering the widely differing potency and solubility in alcohol of the different drugs, one tincture would be too strong for convenient use, while another in sufficient doses would involve the administration of an undesirable amount of spirit. But it should be practicable to make two, or at most three, classes of tinctures, A, B, and C, such that the dose of all in the A group should be the same, say 5 to 10 minims; and that of the B group should be larger, say 30 minims to 2 drachms, and so on. It would be easy to learn and to remember that a given tincture was in the A or in the B group, as the case might be. And when that was mastered, the essential details of strength and dosage would be mastered at a stroke.

It will, of course, require careful experiment to determine what are the practical limits to the application of this principle, not only in the case of tinctures but of infusions, extracts, and the like. I am breaking no confidence if I say that I have every expectation that these experiments will be undertaken by competent hands, and that the next *Pharmacopœia* will be composed with full knowledge of the results.

There is another way in which the practitioner's memory, and therefore his power and facility, may be aided, namely, by extending this principle of classification and gradation to the different preparations of the same drug. Take the various compound preparations of opium, for example. Some of these can already be grouped by decimal gradations, 1 in 10, 1 in 20, 1 in 30 and so on; but there are others whose proportional strengths do not fit into such a convenient scale. If it could be managed, the principle of uniformity in the sense of uniform or at least decimal gradation might very helpfully be applied here.

In like manner, though the question has other and perhaps more important bearings, the standardisation of extracts, tinctures, etc., containing powerful and definite alkaloids is becoming not only practicable but necessary, and this too will tend in the direction of the desired uniformity. It is desirable, in my opinion, that when it can be done this standardisation should conform to some easily remembered sequence of gradation. The extracts, for example, should if possible be brought up say, to 5, 10, or 15 per cent. of alkaloid, as the case might be.

Lastly, it will undoubtedly make easier the quantitative improvement I have suggested if the metric system is introduced throughout the *Pharmacopœia*. The established system of grains and ounces, like what was once described as the "inspired British foot" it is, of course, impossible to ignore. But side by side with it there will certainly appear the alternative of grammes and cubic centimetres. The effect of this important innovation will, I take it, be not merely educational; it is bound to have some reflex effect on the proportions of the formulæ that have to be metrically expressed, and so tend towards what, speaking in London, I may be allowed to call "tenification" in general.

A second principle of importance in rendering the *Pharmacopœia* of readier usefulness is that of simplicity. This may be furthered in numerous cases by the avoidance of what I may call unnecessary duplicity. Of many of the acids and saline solutions two forms are given differing merely in strength. We are provided with a "stronger" and with a "dilute" solution. This has several inconveniences. First, the relative strengths of the two are not easily remembered. Secondly, ambiguity and, therefore in some cases, danger, may be caused by the prescriber forgetting to give the qualifying adjective—"concentratum," "fortior," or "dilutum." The druggist has to use his own discretion in determining which strength is most likely to have been in the prescriber's mind. Thirdly, the official dilution is by no means certain to be the most appropriate for the prescriber's purpose; it may be too strong or too weak. Fourthly, the duplication increases needlessly the size of the book, and so its handiness for everyday use.

I would therefore suggest that in most cases a single solution, preferably the stronger, should alone be made official.

The strengths of these stronger solutions should be made as nearly as practicable uniform. The prescriber's memory would be thereby relieved, and he would be able to order the exact degree of dilution which he deemed appropriate in each instance.

Connected with this point of solution-strength is another on which many of those who have aided the Pharmacopœia Committee by their suggestions are agreed. This is the introduction in some convenient place of concise tables of solubility. These would give for ordinary temperatures and the usual menstrua the exact solubilities of the several salts, alkaloids, and the like, which have to be given in a state of solution. There is good reason to expect that such tables will be introduced, and when they are I venture to predict that even the most expert and experienced of prescribers will not infrequently turn to them with thankfulness.

On the same grounds that I have deprecated single official dilutions as not likely to be appropriate to all cases, I think the introduction of official enemata, cataplasmata, and vapores, to be uncalled for, and in themselves undesirable. To lay down as pharmacopœial law that an opiate enema shall contain a fixed quantity of opium, no more or less, is, in my opinion, neither wise nor necessary. The age, the condition, the needs of the patient, must be taken into account. If anything has to be said about enemata at all, let a suitable composition for a simple starch enema be given, and let the prescriber himself add thereto the exact proportion of the active remedy which he sees his patient requires.

There are so many eminent speakers to-day whose views I am myself anxious to hear, that it would ill become me to detain the Section longer. The greatest mistake I could make would be to try to cover the whole ground of the improvement of the *Pharmacopœia*. It cannot be done in ten minutes. I have therefore sought to emphasise only a single point, which has, however, wide relations. To be really useful to the practitioner the *Pharmacopœia* should be constructed on so orderly and intelligible a system that its quantitative details can be readily held in the memory. To this end the essential means are, as I have tried to indicate, uniformity, regular gradation, the metric system, and simplicity or the avoidance of the superfluous.

III.—J. B. Bradbury, M.D., F.R.C.P.,

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As the time for the revision of the *Pharmacopœia* is at hand or actually going on, no more appropriate subject could have been chosen for discussion by the promoters of this Section than the merits and demerits of this book. That the present *Pharmacopœia* inadequately represents the existing state of pharmaceutical and therapeutical knowledge is generally admitted. The descriptions of many of the substances contained in it and the tests for impurities are insufficient and not in accordance with the science of the day; many of the substances and Galenical preparations are not required, and the doses given are by no means representative. Moreover, it contains much matter useless both to the physician and to the pharmacist—for example, the preparation of various commercial substances, as chloroform, liquor ammoniæ fortior, etc. It would be sufficient to give adequate characters and tests of such products whereby a certain standard of purity could be ensured, without entering into detail as to how the compounds *might* be made.

It is very important that the bulk of the *Pharmacopœia* should not be increased, and part of the space thus set at liberty might, as has been suggested, be utilised in giving fuller information as to the solubility of some substances under varying conditions, the neutralising equivalents of the commoner acid and alkaline substances, and similar information of a practical character.

I regard it, however, as very necessary that purely pharmaceutical processes should be retained, for example, the preparations of infusions, decoctions, etc., or at least that a general method for the production of such preparations should be included. Notwithstanding some advantages of concentrated infusions and fluid extracts I am inclined to regard the hastily made infusion in some instances as of greater therapeutic value.

With regard to some of the preparations in the present *Pharmacopœia*, I believe that by improved methods, as, for example, cold percolation and the use of slightly different menstrua, better and more potent preparations might be made. Thus it would seem from the experiments of Wright and Farr that the introduction of a weaker spirit is desirable. There is also room for much improvement in the ointment bases.

Although it is very important that the preparation of drugs should be made as uniform as possible, I consider uniformity of dose as of much greater importance. In some instances the two run together, but in the majority they run in very diverse directions. As yet, however, our pharmacological knowledge of crude drugs is so incomplete that uniform dosage is not possible. Much may be done, however, to lessen the existing irregularities. The want of uniformity in the doses of the different preparations of the same drug is in many cases manifest, but as this has been fully dealt with in an able article by Dr. Whitla in the Journal, and as it will doubtless be rectified by the Pharmacopœia Committee, it is unnecessary to allude further to the subject.

In some instances the doses of drugs or their preparations are too large. Those of aconite and dilute hydrocyanic acid are examples in point. In the latter case, instead of reducing the dose the official preparation might be made to contain 1 per cent. instead of 2 per cent. of acid, as at present. The preparation would thus be brought into uniformity with other powerful preparations, for example, the alkaloidal solutions. On the other hand, some of the doses given in the *Pharmacopœia* are too small. This is notably the case with the liquid extracts of ergot (mx to xxx) and male fern (mxv to xxx), and others might be mentioned, such as the subnitrate and carbonate of bismuth.

I think the introduction of maximum daily doses in the case of potent preparations, and especially in those in which there is a tendency to accumulation, would be an improvement. I would also replace in all circumstances a maximum dose for the present range of doses. The minimum doses are of doubtful utility, and do not represent what they are intended to do, inasmuch as the lowest dose likely to prove fatal will depend upon many other conditions, such as the number of times of administration, etc.

With regard to the process of elimination, the pruning knife should be used pretty freely. In this connection statistical information is of decided value, and admirable work has been done in this direction by the Therapeutic Committee of this Association and the Pharmacopœial Committee of the Pharmaceutical Society. I think it will be more profitable if I mention my dissensions from these lists than to enumerate those drugs which I think might be excluded. Those I should like retained are—bismuthi oxidum, glycerinum acidi gallici, infusum caryophylli, liquor ferri pernitratis, tinctura sumbul.

Where two solutions of the same drug exist—for example, ammonium acetate—it would be an advantage to exclude one of these. Such substances as elaterium, which are of very inconstant composition, and can be replaced by purer preparations, should also be omitted.

With regard to the introduction of new remedies, I think we ought to be very careful as to those which were admitted. I do not consider it so essential that we should have pure products as that we should have substances of proved therapeutic value. Thus, whatever the chemistry of gland extracts may lead us to, thyroid extract undoubtedly deserved a position in the new *Pharmacopœia*. I would suggest the inclusion of the following other substances: Bismuthi salicylas, chloralamidi, cocainæ (alkaloidi), glycerinum acidi borici, glycerinum [illegible], glycerinum pepsinæ acidum, lithii citr. tart. effervescens, lithii salicylas, morphinæ tartras, β-naphthol, quininæ salicylas, strychninæ sulphas, syrupus pruni virginianæ, tinctura ergotæ ammoniata, troch. (or pastil) cocainæ hydrochlor., ung. hydr. oxy. flav., ung. cocainæ.

The weights and measures of the *Pharmacopœia* seemed to prove a great stumbling block. Personally, I strongly advocate the metric system as the sole method of preparing remedies. All chemists have for a number of years had to pass an examination in the metric system, and very few could be found who had not some knowledge of it.

The difficulty in my mind arises in prescribing. It was not easy to divest oneself of the idea of grains and ounces, but the innovation must come, and little good would be done by introducing the metric system as optional. England and Russia are the only two European countries which have not adopted it, and recently a Select Committee of the House of Commons has almost unanimously voted in favour of it. The United States of America has passed a law making it compulsory for pharmaceutical purposes. If the metric system should be adopted it would be advisable to give instructions concerning the relative abbreviations of gramme and grain, as in the absence of liquid ingredients the chemist might be in doubt as to which the prescriber meant. The Centigrade scale ought to supplant the Fahrenheit, to be in keeping with the metric system. In conclusion, I should like to add that I regard the constitution of the Pharmacopœia Committee as admirable in every way. The names which had been added to the list as experts were such as must inspire confidence, and I have no doubt our new *Pharmacopœia* will be one worthy of the profession and of the country.

Mr. A. G. Mahomed (Bournemouth) was anxious that the pharmacopœial preparations should be standardised as far as possible. He suggested that the tinctures might well be made so that a drachm of tincture represented a gramme of the crude drug. Very potent drugs had better not be made into tinctures at all, but presented in the form either of solutions or elixirs. With regard to the question of omissions, he was of opinion that this required very careful consideration. The number of similar preparations of any given drug might with advantage be reduced, and poultices, vapors, and enemata might be altogether omitted.

Dr. Talfourd Jones said the *British Pharmacopœia* contained nine medicated suppositories. The first on the list was that of carbolic acid, made with curd soap and glycerine of starch. This basis was a bad one, it took too long to melt, and it was not readily absorbed, and if it was wished to retain a carbolic suppository it must be made with some other basis. There were two suppositories of tannic acid, each containing the same quantity—that is, 3 grains—of tannin. Two tannin suppositories of equal strength were not wanted. One of them had the same basis as the carbolic suppository; this one ought to be expelled. Of the mercurial, the iodoform, and the compound lead suppositories he would say nothing. The new glycerine suppository which was introduced into the *Addendum* to the *Pharmacopœia* would be better if it contained a larger percentage of glycerine. There remained two other suppositories, and they were of more importance than all the others put together. He referred to the morphine, and to the morphine and soap suppositories. Each of these contained exactly the same quantity—half a grain of the same salt, the hydrochlorate. One had a curd soap and glycerine of starch base; and, like the other suppositories that were made with such a basis, was so inferior to the morphine suppository made with oil of theobroma that it, too, ought to be expelled. Some new suppositories were needed: one of belladonna, also one of belladonna and opium; one of atropine, and one of atropine and morphine; one of cocaine, one of santonin, and one, say, of aloes or aloin; also a good nutrient suppository. The shape as well as the weight of the suppository ought to be defined. The old conical one was apt to slip out during the process of introduction. A better-shaped one had been designed by Messrs. Allen and Hanburys. It was largest about the middle, and tapered towards each end, the apex being pointed and the base being truncated. But the point was a bit too pointed, and the base might with advantage be tapered a little more. These new-shaped suppositories were a distinct improvement on the old ones; so, too, were the biconical suppositories of Lilly. Some medicated pessaries or vaginal suppositories were also needed in the *Pharmacopœia*: also, perhaps, a few medicated bougies or urethral suppositories. With regard to the dosage of suppositories, should the same dose of a medicine be given by rectum as by mouth? He asked the question with regard to drugs in general, but with more especial reference to the administration of morphine in any form and in any way by the bowel. He was inclined to think that the half-grain morphine suppository was unsafe for general use; and yet, since there was neither a weaker nor a stronger morphine suppository in the *Pharmacopœia*, it might be inferred that this half-grain one was held to be a medium dose; also, that it was a safe one for introduction into the bowel; and that it was applicable to all sorts and conditions of men, and of women too, irrespective of body weight. But this half-grain dose was precisely that of the maximum dose of the morphine salts, as directed to be given by mouth. Was it not, therefore, to be inferred that the official maximum half-grain dose was held to be a suitable one for general administration by bowel; and, if so, was it not also to be inferred that it was held to be necessary to give a relatively bigger dose by bowel than by mouth? He would give his own reasons for holding the belief that it was unsafe to introduce so much as half a grain of morphine salt into the bowel of a patient for the first time—that is, as a commencing or initial dose; and the same reasons would explain why he believed that a dose of morphine given by bowel should, in fact, be a smaller one than when given by the mouth. The dose of a drug, all other things being equal, must chiefly depend upon two conditions—namely, the rapidity of its absorption, and the rapidity of its excretion. The maximum effect was produced by injecting the drug directly into the veins; a very rapid but less speedy effect by injecting into the subcutaneous cellular tissue; and a much slower effect by administration by mouth for absorption by the gastro intestinal mucous membrane. With regard to the absorption of drugs from the stomach and intestines, it should be remembered, as was well described by Brunton, that this absorption might be considerably retarded and their action diminished by the liver. For before reaching the general circulation drugs absorbed from the gastro-intestinal canal must pass through the liver. "In this passage through the liver the drug may be partly arrested, and excreted again into the intestine with the bile, or it may be partly destroyed." Now it had been stated that drugs absorbed from the gastro-intestinal canal must all pass through the liver, and the inference was that all the blood which circulated in the gastro-intestinal canal passes through the liver. Speaking generally, this was perfectly true, but there was, he thought, an exception to this general rule. He referred to the way in which absorption by the blood vessels was carried on in the rectum. If, too, one considered the method of absorption in the whole length of the alimentary canal from the lips to the anus it would be found that there was one other exception to the same rule. This had reference to the process of absorption as carried on in the mouth, pharynx, and œsophagus. He would first refer to the rectum. The hæmorrhoidal plexus which surrounded the lower end of the rectum was formed first by the superior hæmorrhoidal veins, which were branches of the inferior mesenteric, and secondly by the middle and inferior hæmorrhoidal veins which terminated in the internal iliac veins. The portal and the general venous system had a free communication by means of the branches composing this plexus. The blood from the rectum flowed in part by the inferior mesenteric vein, which was a branch of the portal vein, direct to the liver, and in part by the internal iliac veins to the vena cava direct to the heart. It followed, therefore, that a drug introduced into the rectum was, when absorbed by the blood vessels, carried by two different channels: by one to the liver, by the other to the heart. That portion which traversed the entero-hepatic circulation was in part absorbed into the general circulation, but was in part excreted with the bile, and perhaps was in part absolutely destroyed. But that portion which traversed the vena cava entered the main blood stream direct and passed rapidly through the heart into the general vascular system. Absorption therefore by this direct channel must be more rapid, more certain, more complete than by the entero-hepatic circulation. Let it be supposed that half a grain of morphine, which, for sake of comparison, he would call two-quarters of a grain, was swallowed into the stomach. It all passed into the portal vein, to be dealt with as before described. Let a similar quantity be introduced into the rectum, and let it be assumed that half of it, that is, one-quarter of a grain, passed, like the whole of that from the stomach, into the portal vein, but that the remaining quarter of a grain, by taking the other channel and thus avoiding the liver, passed direct from the rectum to the heart. The

quarter grain of morphine entering the portal circulation from the rectum was exactly equivalent to one of the quarter grains absorbed from the stomach, but the quarter grain which entered the heart direct from the rectum was much more than equivalent to the other quarter grain absorbed from the stomach, which in its passage through the liver had been waylaid, in part stopped or excreted, and in part, perhaps, destroyed. If this were so the dose of a drug administered by the bowel ought to be less than that given by mouth. Some twenty-five years ago, soon after commencing practice and a few years after the introduction of chloral by Liebreich, he was struck by the excellent results obtained whenever he injected chloral into the rectum—results that often appeared to be better and more rapid than those usually obtained by mouth. Liebreich was of opinion that chloral on entering the circulation was split up by the alkalies of the blood into formic acid and chloroform. It was now generally held that this theory of the liberation of chloroform into the blood was wrong, but he had always fancied there might be some truth in it; and formerly he accounted to himself for the apparently quicker action of chloral administered *per rectum* by assuming that in consequence of the comparative alkalinity of the intestinal secretion as compared with that of the stomach that there occurred in the bowel perhaps a speedier liberation of chloroform. This better result, for such he conceived it to be, might in part be due to this cause, but more probably it was chiefly due to the direct way in which, by avoiding the liver, some of the chloral reached the heart. At any rate, ever since then he had held to the belief that 20 grains of chloral injected into the rectum was more than equivalent to 20 grains given by the mouth. Some five years after the time in question—say, twenty years ago—he saw, in consultation, a lady into whose rectum a half-grain morphine suppository had been introduced for the relief of pain, and who died comatose in about twelve hours afterwards. This case impressed him very much and made him timid of half-grain morphine suppositories, and ever since he had been very careful about the dosage of medicines so administered. It was his belief, formed on twenty years of observation, that morphine, introduced in solution or by means of a soluble suppository into the empty rectum, produced a more marked effect, dose for dose, not only locally but generally, than when given by the mouth. In Kirkes's *Physiology* it was stated that some observations on the absorption of poisons made many years ago by Savory, brought to light what was considered the singular fact that in some cases absorption took place more rapidly from the rectum than from the stomach. Solution of strychnine, for example, produced its poisonous effects much more speedily when introduced into the rectum than into the stomach. The reason for this was not given. At a meeting of the Leeds Medico-Chirurgical Society, in 1889, Dr. Swann related a case of pyelitis: the patient became comatose after insertion of a suppository of only one eighth of a grain of morphine. This patient, of course, might have died had the dose been given by the stomach; still it showed how very thoroughly absorption did take place in the rectum, and it also pointed to the danger attending the absorption of morphine into the system when elimination was defective. If they were to have but one morphine suppository in the *Pharmacopœia*, he would suggest that, in place of the existing half grain, one of a quarter of a grain should be substituted. If a smaller dose than this were specially needed for a patient, it was easy, by cutting off a portion from the base of the suppository, leaving the point entire, to reduce the quarter grain to about a sixth or an eighth of a grain. So, too, if a larger dose were wanted, a suppository and a half, or two whole ones, could be introduced at the same time. He was now simply referring to the official suppository. Doctors would of course continue to prescribe whatever they pleased. He concluded with a few words on absorption by the mouth, pharynx, and œsophagus. The mucous membrane of the soft parts of the mouth and palate was thin; that of the under surface of the tongue and the adjacent floor of the mouth was especially thin; the veins, too, were numerous, large, and superficial, and in these tissues absorption went on quickly; but what he especially wanted to point out was that the blood from the whole of the mucous membrane of the mouth, the palate, and the pharynx, was conveyed by the internal jugular veins in a direct stream to the heart; also, that the blood from the œsophagus was conveyed by its own veins, viâ the azygos veins, to the superior cava, and so to the heart. The whole of the blood, therefore, from that portion of the alimentary canal, commencing at the lips and terminating at the cardiac orifice of the stomach, went direct to the heart, and could only reach the liver through the medium of the general arterial system. The inference was that absorption of drugs by this portion of the alimentary canal, and especially by the mucous membrane of the mouth, was more rapid and complete than absorption by the stomach; and that it was comparable, though probably even superior, to that one of the two different ways of absorption from the rectum, which he had termed the direct method.

Professor CHARTERIS (Glasgow) said the profession required the forthcoming edition of the *Pharmacopœia* to be accurate, especially in regard to (*a*) tests for purity, and (*b*) dosage. The tests for purity were in many instances in the present *Pharmacopœia* lamentably and radically defective. They required most careful revision in accordance with present chemical and pharmacological knowledge. For example, the melting point of salicylic acid was stated to be about 155° C. instead of 156.5°, and that of carbolic acid should be 40°, not 33°, as now stated. The maximum of daily doses as well as the maximum of single doses should be given. The present system of dosage, especially for young practitioners, was very misleading. In some cases the dosage was too large, in others too small. As examples of incorrect dosage the following might be instanced: Ext. fil. liq. ℥30 should be ℥90; pil. ferri, at present 1 to 4, should be given in a maximum daily dose of 15. Further, in some cases, there should be new preparations of old drugs. For instance, the small pilule and granule were more convenient and more hardy than the large forms at present official. In consequence they were largely employed, and experience testified that they were more readily taken by patients, and that their action in the smaller forms was in no way diminished. The profession required that new remedies, loudly advertised, should not be made official until their actions, uses, and doses had been carefully tested by trustworthy pharmacological and therapeutic experts. The time had come for the adoption of the metric system of weights and measures, and of the Centigrade scale of temperatures. These should be introduced into the new edition of the *Pharmacopœia*. The equivalent in avoirdupois weight and imperial measure and the Fahrenheit scale of temperature might be added as alternatives. The adoption of these more reliable and more generally used methods would bring our *Pharmacopœia* into touch with the advanced *Pharmacopœias* of other countries. Our *Pharmacopœia* was at present antiquated. It should be the standard authority of scientific accuracy.

Professor W. CARTER (Liverpool) said the General Medical Council was limited by the terms of the Medical Act of 1858, which provided that they shall publish a book "containing a list of medicines and compounds, and the manner of preparing them." They might do other things; this they must do. This fact seemed scarcely sufficiently considered. They could have no security as to the composition of any medicine not included in the official list. An accurate standard was required for purposes of the Adulteration of Food and Drugs Act, which Act was indirectly of the greatest importance to medical men. The *Pharmacopœia* should contain certainties about which no question could be raised. For this reason he should differ from one of the many excellent suggestions of Dr. Lauder Brunton—namely, "that some indications of the actions of medicines should be given," for the moment we come to the actions of remedies differences of opinion arise. Such a difference had been shown in two of the recently published articles in the BRITISH MEDICAL JOURNAL, Dr. Brunton characterising the enema aloin as one of the most valuable of official remedies, and Dr. Whitla suggesting that all the enemata should be struck out. Another of the principles enunciated for the guidance of the Pharmacopœia Committee in the articles alluded to was that active principles should be made to take the place of Galenical preparations, more especially where any diversity of action existed among the several principles which such preparations might contain. This is the main text of Dr. Cash's article, and to a certain extent that of Dr. Stockman. If they acted on this principle they would have to exclude some of the most valuable and trusted remedies, such as digitalis, opium, jaborandi, etc.,

for every one of these contained not only several distinct active principles, but these principles were physiological antagonists—for instance, digitalin and digitonin, morphine and thebaine, pilocarpin and jaborin.

Professor Thane (London) commenced by stating that in spite of his connection with the Pharmacopœia Committee any remarks from him must be regarded as absolutely unofficial. In the course of the recent inquiry undertaken by the Therapeutic Committee numerous suggestions were made by members of the medical profession, and these gave clear indications of the requirements of the profession with reference to the revision of the *British Pharmacopœia*. The remarks clearly indicated a general desire that the volume should be diminished in size, and the conviction that its utility would be thereby enhanced. The list sent to members of the Association was frequently called "a most useless set of remedies." Numerous suggestions of considerable value were referred to in some detail, while others appeared to indicate a lack of consideration of purpose. There appeared to be a consensus of opinion that preparations should be rendered more reliable, more certain in composition, and less numerous. The introduction of new remedies had been urged by many medical men, but this advice was generally associated with the opinion that only active preparations of definite composition and strength should be admitted. He regarded the position of the *British Pharmacopœia* as somewhat unique. It belonged exclusively neither to the chemist nor to the practitioner; it really should form a standard for the guidance of both. To the chemist its great help should be to indicate precisely what was wanted by the practitioner; while to the prescriber it should supply the full assurance that he could rely upon obtaining the preparation he desired.

Dr. Neville Wood (London) said the plan he was about to describe for making the *Pharmacopœia* more accessible he had already published in the British Medical Journal of April 20th. It had received strong commendation from a large number of general practitioners. He proposed that in addition to the present maximum and minimum doses, a third or medium dose should be officially sanctioned, this being as nearly as possible the ordinary working dose of the drug, which in many instances would be found not to be exactly intermediate between the maximum and minimum doses of the *Pharmacopœia*. He proposed also that the convention should be established that the prescriber might, if he wished, use these doses thus: After naming a drug or its preparation, if he wrote "dose max." the druggist would dispense the maximum dose as laid down in the *Pharmacopœia*, if he wrote "dose min." the minimum dose was intended, while if he added instead "dose med." the new or medium dose was obviously to be dispensed. The use of this notation would be purely optional, and would not interfere with the full liberty of indicating in figures the dose required. The *Pharmacopœia* contained some 900 items, and one alone of the revisers proposed to add nearly 100 more. Taking it as it stood now, he calculated that about 260 drugs or preparations for internal use really required an effort of memory on the part of the prescriber. Very few prescribers were blessed with such a large share of the mechanical part of memory, and, in consequence, to quote Dr. Whitla: "The young physician soon breaks acquaintance with his official friends, and too often drifts into the daily use of semi-proprietary or ready-made pharmaceutical compounds, or else settles down to the routine use of a very limited selection of the pharmacopœial drugs and their preparations." This, Dr. Neville Wood thought was a striking admission from such an authority. He was not a drug man, but he thought that, if experience had furnished us with so many weapons of different temper, we ought to be put in a position to seize and use the precise one desired, even though in the stress of practice a weak spot was found in our arithmetical memory. What were the objections to this method? Obviously, first, that it might too largely encourage mechanical dosage. He held this to be unfounded, for dosage in the present state of knowledge was and must be largely mechanical, and it was better so than haphazard. It was certainly mechanical when we used drugs unfamiliar to us, and it was to this eventuality that his proposition chiefly applied. Another objection was that some difficulty might be found in applying it to every drug in the *Pharmacopœia*—say to those which in small and large doses had different or nearly opposite actions. He found that the number of these was very small, and he thought the difficulty could be overcome in almost every case by quite simple methods. He would mention one typical example of a drug requiring to be specially dealt with. Sulphate of zinc had a dose as a tonic of 1 to 3 grains; as an emetic of 10 to 30 grains. He proposed that to the smaller dose the new notation should apply, while for an emetic he would introduce a new solution of convenient strength, called solutio zinci sulphatis emetica; then the new notation would supply a ready means of its use in an emergency. Sulphate of copper, antimony, and ipecacuanha might be dealt with in a similar manner. He would not, for the mere sake of consistency, introduce a new solution of quinine for use in large doses, say as an antiperiodic. Opium was the one drug he would certainly exclude entirely from the scheme. Opium had no working dose. Its dose must be varied in such wide limits, according to age, temperament, and circumstances; and, moreover, they had such abundant opportunity of acquiring familiarity with its use that the man who required mechanical assistance in remembering the doses of the preparations which he used had better retire from practice till he had mastered them. Another advantage of the simplification of dosage was that a great objection would be removed to the frequent revision of the *Pharmacopœia* and to the addition of new preparations; and, moreover, it would obviate largely the confusion likely to arise in the transition period when the metric system was adopted. In conclusion, he did not expect this scheme to meet with much sympathy from lecturers on materia medica, nor, perhaps, from physicians and surgeons. These should remember that the general practitioner must act in turn as physician, surgeon, and specialist in many departments, and that his plan to mobilise the materia medica was devised for general practitioners, who, though they so largely used the *Pharmacopœia*, had no direct voice in its compilation.

Dr. W. Frazer (Dublin) called attention to the necessity of a limited *Pharmacopœia* for gentlemen commencing prescribing, whom he found in examinations could not be expected to remember or require accurate information on the very wide course at present forming our official lists. He suggested that medicines requiring special caution might be denoted by a special asterisk (possibly of red colour) as a danger mark.

Dr. Stockman (Edinburgh) said the few remarks which he had intended to make on the *Pharmacopœia* had been forestalled by previous speakers. He would therefore rather confine himself to a few points which had arisen during the discussion. He agreed cordially with Dr. Leech that it was necessary to exclude a large number of crude drugs which were at present official, but it was still more necessary to diminish the number of their preparations, which had been increased in many if not most instances out of all proportion to their usefulness. Only a very limited number of Galenical preparations was required for each drug. With regard to what Dr. Carter had said about the advantages of Galenical preparations over pure active principles in some instances, there was no doubt that occasionally, as with morphine and atropine, it was advantageous to combine two drugs having somewhat different actions. Although the combination of pilocarpin and jaborin in the case of jaborandi preparations might have an advantage over pure pilocarpin, yet he (Dr. Stockman) submitted that here, as with morphine and atropine, it would be preferable to use a combination of the pure alkaloids rather than a mixture of them in indefinite proportions such as one got in the Galenical preparations, and if they had the active substances of digitalis, hyoscyamus, and other drugs ready to hand there was no doubt that they would soon acquire the habit of using them in preference to the older preparations. In conclusion, the Therapeutic Committee of the Association might direct or have done under its auspices a very large amount of useful work in the direction of substituting the use of active principles for preparations of varying and indefinite strength.

Professor Leech, in reply, said it was impossible to allude to all the important suggestions which had been made for improving the *Pharmacopœia*. He was glad that Dr. MacAlister had alluded to the necessity for some system in the con-

struction of the formulæ of compounds, and in the arrangement of their strengths. Considerable advantage would ensue if the idea could be carried out. Much interest had been shown in the question of dosage, and two opposite suggestions had been made. Dr. Mahomed would like to see an approach to symmetry in the strength of the preparations, that is, in the amount of the drug contained in them; this would, of course, mean that the doses would vary more than they now do. Other speakers had suggested that doses of similar kinds of preparations should be rendered more nearly alike than they now are; this would mean that the amount of drugs contained in such preparations would vary more than they now do. Dr. Leech preferred the latter plan, because if, as seems now possible, the most important preparations can be standardised, it will be easy to determine the exact amount of the active principles of a drug in each dose administered, and this, for the purpose of exact comparison of effects, would be more useful than knowing how much of the crude drug was contained in the preparation. He did not think Dr. Neville Wood's plan would be satisfactory, because the dose of any drug must be graduated to the patient and the ailment. It was not sufficient to say the maximum or minimum dose should be given or an intermediate one. The dose had to be in many cases increased or decreased by degrees to suit the conditions of the case, and such additions and subtractions could not be made without a knowledge of the real amount given. As Dr. Bradbury had remarked, the dosage in the present *Pharmacopœia* would have to be revised, but it was manifest, considering the variation in views which had been expressed both here and elsewhere, that this revision would prove no easy task. The suggestion that the strength of hydrocyanic acid should be 1 per cent. instead of as at present seemed feasible. Dr. Dalfour Jones's views regarding morphine suppositories also called for serious consideration, and so did his suggestions for new suppositories. The defects to which Dr. Charteris had called attention, so far as regards tests, were deserving of consideration. The question of the value of introducing active principles, to which Dr. Carter and Dr. Stockman had alluded, was, as Dr. Stockman had pointed out, one which would probably receive different replies as time advanced. Doubtless the most exact method of giving drugs would be to determine accurately the amount of each active ingredient in the best specimens of a drug, and then give the active ingredients mixed in their exact proportion, for it seemed very probable that in some specimens of a drug the active principle might at times vary in relative amounts, and the same results, therefore, would not always follow the administration of a drug. But in the present state of chemistry and pharmacology this could not be done. It did not, however, appear impossible that at some future time active principles might be alone used.

THE ACTION OF BETA-NAPHTHOL AND BISMUTH SUBNITRATE AS INTESTINAL ANTISEPTICS.[1]

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THIS investigation to determine the antiseptic value of β-naphthol and bismuth subnitrate was undertaken because, like most other intestinal antiseptics, they are largely used in intestinal troubles supposed to be of bacterial origin by one class of practitioners, while there is a very important class that considers any such attempt as simply futile, if not dangerous, to the patient.

Diseases of the type of cholera, dysentery, typhoid, summer diarrhœa of children, which are most probably due to bacterial infection, or are at least invariably associated with an enormous increase of one or several types of micro-organisms, are daily being treated with one or another kind of antiseptic that happens to be the latest favourite.

[1] Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

Creasote, carbolic acid, perchloride of mercury have been at one time or another used extensively and dropped either on account of their extreme toxicity, or because the clinical results have proved to be unsatisfactory in some hands.

One of the recent additions to this class of drugs is β-naphthol, a coal-tar product which M. Bouchard introduced to the medical profession in 1887 as a valuable intestinal antiseptic for typhoid fever and summer diarrhœa of children. Since that time, this drug has been used extensively with varying results.

The following experiments were consequently undertaken to determine definitely the real value of β-naphthol as an intestinal antiseptic. In the course of the experiments bismuth subnitrate was used at first as an indicator to determine the completion of antisepsis as is suggested by M. Bouchard. However, some observations made with bismuth subnitrate alone in the presence of putrefactive bacteria showed that this drug is not quite inert, but that it is capable of modifying, hindering, or destroying them.

Thus the paper treats of β naphthol primarily and bismuth subnitrate secondarily. The observations were both chemical and bacteriological. Chemical experiments consisted in estimating the amount and ratio of alkaline and aromatic sulphates present in urine of man before, during, and after taking either of the drugs separately or together. The amount of urea was also estimated at the same time to see how far the body was kept on nitrogen equilibrium. The method of administration was always *per os* in the form of powders.

In the first series of experiments with β-naphthol, which lasted for nineteen days 1 g. was taken twice daily during twenty-four hours. The first dose was taken at breakfast, and the second at dinner time. The drug was taken during the last twelve days of the experiment, while during the first week the normal ratio of the sulphates was determined. The day and night urine was analysed separately. The day urine was collected from 9 A.M. till 7 P.M., and the night urine from 7 P.M. till 9 A.M.

The second series of experiments lasted for thirty-seven days. The first day's urine was tested for the normal ratio. On the succeeding seven days 0.5 g. of bismuth subnitrate was taken twice daily. The first dose was taken at breakfast and the second at dinner time. During the next week 1 g. of bismuth subnitrate was taken thrice daily. The third dose was taken at lunch time.

During the next four days 1 g. β-naphthol in the morning and evening, with bismuth subnitrate, which was continued in 1 g. doses thrice daily. During these days the urine was analysed daily except on Saturdays and Sundays. The urine was again analysed on the sixth day after the last day of β naphthol and bismuth subnitrate, and again for three days at the end of another week.

The general result of these experiments was to show an increase of aromatic sulphates during the time when β naphthol was taken either alone or with bismuth subnitrate. The total sulphates did not vary much during the same period as compared with normal periods. On the other hand, the alkaline sulphates were always diminished under the influence of β-naphthol. Consequently, the ratio between alkaline and aromatic sulphates, which was 10:1 during the normal periods, increased to 10:2 on an average, and on one occasion even went up as high as 10:4.

The general health remained the same during these periods, except that on the last day of bismuth subnitrate and β-naphthol griping and slight looseness of bowels occurred. The urine did not show any other alteration except that it had a greenish violet fluorescence during the time β-naphthol was taken, and on addition of a few drops of it to 10 c.cm. of pure sulphuric acid it acquired a dirty green colour, as is stated by Hoppe-Seyler, thus proving the presence of β-naphthol in the urine.

From these experiments it is not possible to say how far β-naphthol serves to diminish the aromatic sulphates, because that is most probably masked by the drug itself, which is excreted as an aromatic sulphate at expense of the alkaline sulphates. The aromatic sulphates, however, diminished considerably on stopping β naphthol, and the ratio fell as low as 10:0.83. During the time when 1 g. bismuth subnitrate was taken daily the alkaline sulphates increased at the

expense of the aromatic while the total sulphates remained the same. The ratio of alkaline to aromatics fell from 10 : 1.2 to 10 : 0.8. However, the reverse happened when the dose was increased to 3 g. per diem; on one occasion the ratio increased to 10 : 1.58. During the time when the larger dose was taken there was slight constipation.

The bacteriological observations consisted of the ordinary test tube experiments with bismuth subnitrate and β-naphthol: 1 mg. to 1 cg. of β-naphthol was added to 10 c.cm. of sterilised glucose gelatine, and set in the incubator for a week before using them for inoculation. Most of the tubes that had less than 6 mg. of β-naphthol developed a growth, that is, 0.06 per cent.; β-naphthol tubes remained sterile. Similar bismuth subnitrate tubes were also prepared and treated in the same manner. None of them were found to be contaminated. Those tubes that remained sterile were used for subsequent inoculations from either pure cultures of cholera bacillus, the vibrio Metchnikovii, bacillus coli communis, and the typhoid bacillus, or from mixed growths of putrefactive bacteria from infusion of meat.

These mixed cultures consisted of different forms of micro-organisms, and one of the most evident results of their growth was the evolution of sulphuretted hydrogen, which could be easily detected by the reduction of bismuth subnitrate.

Thus the addition of bismuth subnitrate to a culture of these produced two effects. First, it was converted into a sulphide; and, secondly, the reaction of the culture medium, which was strongly alkaline before the addition of bismuth subnitrate, became strongly acid in a short time. Returning to the tubes to which the antiseptics were added previous to inoculation, it was found that tubes to which 8 mg. to 1 cg. of β-naphthol was added, that is, those that had 0.08 per cent. to 0.1 per cent. β-naphthol, always remained sterile, while β-naphthol in smaller amount was not invariably able to prevent a growth. In small doses (1 mg. to 3 mg.) it was not able to prevent the evolution of sulphuretted hydrogen. The reaction of these tubes was strongly alkaline. The subcultures from these tubes always grew feebly. The bismuth tubes that had 1 cg. for 10 c.cm., that is, 0.1 per cent., remained sterile after inoculation, while scanty growth occurred in those that had even 8 mg. with reduction of the bismuth. The reaction in these cases was acid.

Subcultures from these tubes either could not be obtained or were very feeble. Tubes with still less bismuth subnitrate showed a copious growth and reduction of bismuth. Subcultures from these were easily obtained. The experiments with the specific micro-organisms mentioned above showed almost identical results. All of them are capable of reducing bismuth subnitrate.

Indol reaction in the case of bacillus cholerae, vibrio Metchnikovii, and bacillus coli communis, and also in the case of mixed cultures, could not be obtained with any of the tubes that had bismuth subnitrate, although subcultures from the weaker tubes could be obtained which were capable of giving the reaction.

These tests could not be applied in the case of β naphthol tubes because β naphthol alone gives almost an identical colour reaction. All these facts point to the conclusion that both β naphthol and bismuth subnitrate have the power of preventing or hindering the growth of micro-organisms, and that β-naphthol is the stronger of the two in some cases. The safest dose for β naphthol is about 8 in 10,000; while for bismuth subnitrate it is 10 in 10 000.

These experiments only show how far the growth of these microbes is prevented or delayed in test tubes, when the antiseptic is added previous to the germs. However, we must recognise the fact that in determining the value of an intestinal antiseptic the microbes are already there in enormous numbers before the antiseptic could be added, and that every meal adds to that number.

Two sets of experiments were therefore undertaken to see how far these drugs could act as intestinal antiseptics. The first series consisted of determination of the approximate number of colonies present in the contents of the different parts of the alimentary canal of dogs, after feeding them for several days on the same kind of food. These numbers were compared with those obtained from dogs treated with bismuth subnitrate, β-naphthol, or both of them combined.

The total contents of each part were diluted with about half a litre of sterilised water. The weight of the flasks and the weight of the water being previously determined, the weight of the intestinal contents was easily ascertained. This gave the ratio of dilution. The contents of the whole canal were divided into five parts, namely, those of the stomach, the duodenum, the upper half of the small intestine, the lower half of the small intestine, and the large intestine; 0.1 c.cm. from these flasks was added to 20 c.cm. of nutrient gelatine for plate cultures. However, it was soon found that the contents of the lower part of the small intestine and of the large intestine contained an enormous number of liquefying micro-organisms. Consequently, for the later experiments agar was substituted, and the contents of the last two parts were further diluted. The fæces of the dogs which were treated with β-naphthol and bismuth subnitrate or with the latter alone were daily observed to see whether the blackening due to the reduction of bismuth subnitrate could be used as a reliable indicator for completion of intestinal antisepsis, as is suggested by M. Bouchard.

The results were unfortunately varying. The bismuth dogs as a rule passed black fæces for some days, then there would be no blackening for a day or two; nevertheless, the colour reappeared although bismuth was continued throughout the period. The fæces of the β-naphthol and bismuth subnitrate dogs showed the same variations.

Again, it was found that the plate cultures of two normal dogs were not able to reduce the bismuth subnitrate. On the other hand, plate cultures from some of the β-naphthol dogs reduced the bismuth at once. However, the number of colonies gave more satisfactory results. Dogs that were treated with β naphthol and bismuth subnitrate showed considerable reduction of the colonies whole throughout the tract. Simple β-naphthol showed a similar reduction. The bismuth subnitrate produced a reduction in the number in the upper parts of the tract, while the colonies in the lower parts were hardly reduced.

The great disturbing factor for making a satisfactory comparison between different animals was the nature of food and the amount of contents found, as the number of colonies always varies with the food and the quantity of the contents. Dogs fed on biscuit showed an excessively large number as compared with those fed on meat alone. Again, the colonies from very scanty contents were very few even relatively to those from a tolerably fair amount of contents. Thus, for making any satisfactory comparison between the colonies from different animals these two disturbing factors have always to be taken into consideration.

The second set of experiments consisted in taking 50 c.cm. of the diluted contents of the large intestine of five dogs, and adding 0.5 g. of the antiseptics either singly or together, and these were left in the incubator at 37° C. for several days. Both the antiseptics being scarcely soluble in water, the flasks were shaken frequently. Subcultures from these were made daily to see whether the contents were sterilised or not. None of the β naphthol flasks were sterilised even after thirty-five days.

After the sixteenth day all the bismuth subnitrate flasks were sterilised, while flasks having both the antiseptics showed very feeble growth at the same period. Subcultures were made in glucose-gelatine tubes and put in the incubator. Control flasks having none of the antiseptic showed a growth during the whole period. One of these five dogs was a normal one; one had bismuth subnitrate for twelve days; two dogs had β-naphthol for sixteen days; while one had bismuth subnitrate and β-naphthol for twelve days.

These experiments show that bismuth subnitrate is more powerful as a germicide than β-naphthol when large doses are used. However, internally β-naphthol appears to act better than bismuth subnitrate. The reason for this discrepancy is probably to be found in the fact that although bismuth subnitrate is the stronger antiseptic, its value is lowered on account of its constipating property. The explanation of the fact that in the test-tube experiments β naphthol was found to be somewhat stronger that bismuth subnitrate is to be sought probably in the mode of action of bismuth subnitrate.

From the fact that this salt is easily converted into a sulphide in the presence of organisms that produce sulphuretted

hydrogen or some other sulphide, we might assume that nitric acid must be liberated at the same time. This is rendered highly probable by the fact that cultures that are alkaline before addition of bismuth subnitrate become acid after some time. However this acidity is not due to free nitric acid, but to some organic acid which the liberated nitric acid sets free from the culture medium.

However, to obtain some positive proof for the assumption the following experiment was performed. Bismuth subnitrate, when shaken up with boiled distilled water, gives a neutral reaction for about five minutes, after that it changes to acid. Ultimately it becomes so markedly acid that Congo red paper shows the presence of free nitric acid. Heat favours the reaction. This reaction gives a satisfactory explanation of the phenomena described above.

Why those flasks to which both drugs were added should not be sterilised earlier than those to which bismuth subnitrate was added alone is rather difficult to account for. A possible explanation is that the liberation of nitric acid is either delayed or retarded in the presence of β naphthol.

In the foregoing we have tried to state the facts as concisely as possible, and have avoided drawing any conclusions from them.

ON THE DIGITALIS GROUP AND THEIR USE IN THE TREATMENT OF DISEASE OF THE HEART.[1]

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The digitalis group comprises a considerable number of plants of different botanical families and of varying activities, ranging from the deadly upas to the comparatively innocuous convallaria and adonis, all of which have an action on the heart more or less resembling that of the plant which gives its name to the group.

The fundamental action of the members of this group is to increase the elasticity of muscular fibre so that it expands more slowly and contracts more perfectly. The effect of this upon a hollow muscle like the heart is that it dilates more slowly and empties itself more completely; residual accumulation is thus prevented and any dilating influences are counteracted. The heart is affected earlier and more powerfully than the other muscles because the blood passes so frequently through it that it receives a larger dose of the drug within the same space of time. For a similar reason the muscular coat of the arterioles also gets a disproportionate share of the drug and is early and strongly affected, though not nearly to the same extent as the heart, as the arterioles are only stimulated by the comparatively small quantity of blood passing to their own district. The more perfect contraction of the heart throws a larger blood wave into the arteries, and as the effect of the increased elasticity of the muscular coat of the arterioles is to keep their calibre contracted, the blood escapes more slowly into the veins, it accumulates within the arteries and the blood pressure within them is raised. The effect of this is that every muscle in the body, and amongst them the myocardium, is flushed with blood at an increased pressure and their nutrition and energy are improved and augmented by a more perfect metabolism.

The action just described is that of digitalis itself; it seems probable that, besides the general action on the muscles, each of the members of this group has a common action on the heart, coupled with specific differences of its own. We know, for example, that digitalis acts powerfully on the heart and arteries, and less so on the uterus and bladder; and that ergot acts energetically on the uterus and bladder, and less so on the heart and arteries; and Professor Fraser tells us that strophanthus acts powerfully on the heart, and but slightly on the muscular fibres of the arterioles. Fraser claims this as an advantage in favour of strophanthus; it seems to be a very doubtful advantage, and it distinctly shows that the action of strophanthus specifically differs from that of digitalis. From the absence of any marked constriction of the arterioles, any rise in the blood pressure following the use of strophanthus must be due to ventricular action only; it is not, therefore, persistent, and can only feebly affect the muscular metabolism. We need not, therefore, wonder that when the action of the drug is withdrawn the heart is not found to have received permanent benefit, but remains pretty much as it was. Strophanthus forces on the ventricles an increase in the strength and duration of the systole, which ceases with the action of the drug. It acts as a cardiac poison and not as a cardiac tonic. In cases of valvular lesion with ruptured compensation and dropsy, strophanthus acts doubtless as a diuretic, but in this respect it is uncertain. Apart from the experience of myself and others, the very discrepancy in the dose prescribed indicates this, for while some find 5 minims of the tincture every four hours amply sufficient, others find as much as 10 or more minims every two hours to be required. Past history and present experience alike teach us that to restore a ruptured compensation in cases of valvular lesion drugs are not always required. If such a patient is put to bed, the recumbent posture at once reduces the work of the heart by ten or twelve beats per minute, and this coupled with warmth and good food, is sufficient to rehabilitate the hearts of most hospital patients, to raise their blood pressure, increase the flow of urine, and drain their cavities. The addition of a few doses of strophanthus will not prevent this improvement, even if it does not materially assist it.

Strophanthin has, however, two advantages over digitalin: it is readily soluble in water, and it is rapidly absorbed; it is thus available for hypodermic injection, and, as it acts with great rapidity, it may be of service when administration of any drug by the mouth would be of little use. There may thus be circumstances in which strophanthin is to be preferred to digitalin, though it may be doubtful whether the hypodermic injection of ether is not more likely to be more useful than either, when the failing heart stands in need of an immediate fillip.

Strophanthus is the only member of this group which has any pretensions to rival digitalis, yet it is so much more uncertain in its action, and so devoid of tonic properties, that we are not tempted to displace in its favour our own indigenous drug.

Dotted all over our upland pastures there is no nobler plant in our indigenous flora than the digitalis purpurea, and there is no more potent benefactor to mankind among the many constituents of our materia medica. For more than a hundred years digitalis has been known as a sovereign remedy for dropsy, but it is only within the last twenty years that its true properties have begun to be recognised. And even yet the profession are hampered in its use by the continued prevalence of the idea that digitalis is a most powerful but dangerous sedative to the heart—an idea that dates from those not so far back days when digitalis was supposed to possess a number of distinct actions, all more or less antagonistic to one another. Now we know that digitalis is a tonic to the muscular fibre, and that it acts chiefly on the heart and on the muscular coat of the arterioles. From this action flow all the benefits we obtain from this drug, while any unpleasantness that may happen to follow its employment is due to the effects of an overdose, and for this the prescriber is to blame and not the drug.

Digitalis in every form is absorbed with difficulty and only slowly excreted, hence if the dose is repeated at too short an interval the drug accumulates within the system, and ere long symptoms of poisoning appear. This faculty of accumulation digitalis shares with many other drugs. Unfortunately for its own reputation its sphere of usefulness lies among a class of cases in which sudden death is no uncommon occurrence, and for many a day any sudden death in a patient taking digitalis was always ascribed to the cumulative action of the drug quite irrespective of the dose administered. Even yet there is an idea of danger connected with this drug which hinders the usefulness of this invaluable remedy. Deaths from digitalis poisoning in these otherwise healthy are amongst the rarest of occurrences; only a very few are on record. A full account of one has been published in which 211 grains of the powdered leaves were taken within five weeks before the fatal result.[2] Sickness, diarrhœa, faintness, and slow pulse had prevailed during fully four of these

[1] Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

[2] Kohlbrugge, Nederlandsch Tijdschrift voor geneeskunde, Medicus, 1879, p. 378.

weeks. Using ordinary medicinal doses with reasonable care we need have no apprehension, and in all my experience of many years I have never seen any unpleasant result follow even a somewhat free use of digitalis. As may be readily supposed, saturation is more easily brought about in small and anæmic individuals than in those who are more bulky and plethoric.

A tonic dose fitted to improve the nutrition and increase the energy of a feeble heart must always be a moderate one, and only repeated after the lapse of an interval sufficient to permit the preceding dose to be wholly excreted. In this way we secure that at the end of the interval there is a slight increase of the cardiac tone and energy, no digitalis remaining within the system. A usual and efficient dose to secure this end is 1 gr. of the powdered leaves, or an equivalent of any of the other preparations of the drug, every twelve hours. Such a dose may be continued safely for so long as may be required without risk of saturation. The feeble heart slowly and steadily improves, an imperceptible impulse becomes perceptible, and a feeble impulse a strong one, the patient meanwhile slowly acquiring an increasing sense of well being and capacity for exertion. Such a tonic dose may be safely continued for years with nothing but increasing benefit to the patient, and without the slightest need for any anxiety as to the possible occurrence of any disturbing saturation.

When we wish to contract young hearts which have got dilated, or to excite diuresis, we must employ larger doses than such as are merely tonic, and as these larger doses have a cumulative effect the patient taking them requires a little more attention.

The young dilated hearts we wish to contract are either such as follow various febrile affections occurring in early youth, or are the flabby dilated hearts of those who are chlorotic or anæmic. Such heart affections are often called functional, and the sufferers are supposed to grow out of them. But it is distressing to find a few years later that a want of timely attention has left this so-called functional affection as an obstacle to entering a profession or a hindrance to making provision for a family.

When the heart is feeble and dilated it beats more quickly and less forcibly than in health, the ventricles empty themselves less completely, there is residual accumulation within their cavities, the arteries get depleted and the veins overfilled. The result of this venous stasis is a soakage of all the tissues, and by persistence of all the conditions this ultimately collects as dropsy in the more dependent parts of the body and within its cavities. This dropsical accumulation is chiefly of consequence as an indication of heart failure, but in the tissue interspaces, and especially in the extremities, it constitutes an important peripheral obstruction to the circulation, increasing the work of an already failing heart.

In such cases our forefathers employed digitalis empirically as a diuretic, often with a dangerous freedom, sometimes giving as much as from 10 to 20 gr. in powder or infusion every hour or every two hours till nausea or sickness occurred. This sickness was accompanied by great diminution or complete suppression of urine, and was followed in two or three days by copious diuresis. Nowadays we know that digitalis has little if any action on the kidneys, and that it produces diuresis by improving the condition of the heart and circulation. As the arteries fill and the veins empty the effusion is absorbed, the blood gets more watery, and this excess of water is excreted by the kidneys. We need not, therefore, run any risk by giving absurdly large doses; a simple tonic dose acts as a diuretic by maintaining the integrity of the circulation; but when the heart is dilated as well as feeble and the accumulation of fluid considerable, we require to act a little more energetically. A moderate dose is, however, quite sufficient; 3 gr. of digitalis, either in powder or infusion, every eight hours, will be found a very efficient diuretic. Only exceptionally will a larger dose be required, and we must always remember that the larger the dose and the shorter the interval between the doses the more watchful we must be for symptoms of saturation. These symptoms may be looked for as soon as 30 to 40 gr. of the drug have been ingested; they are—diminution of a primary diuresis, slowing of the pulse, or nausea, more rarely diarrhœa. If the medicine is stopped on the first occurrence of one or other of these symptoms, the patient will suffer no damage, nor will the physician ever be disappointed in any reasonable expectation. This is Withering's statement, and with him I entirely agree. When symptoms of saturation occur diuresis diminishes, and almost complete suppression may last for two or three days; diuresis then recurs and may continue till all the fluid is drained off, or it may be readily kept up by a moderate dose at regular intervals of eight to twelve hours. Apart from any diuretic action, these cumulative doses, by gradually improving the tone and elasticity of the myocardium, not only enable it to resist dilating influences, but in favourable circumstances are able to restore a dilated heart to its normal dimensions.

Much larger doses than those indicated are frequently given without detriment. It is on record that a young woman affected with mitral stenosis took for six years 4½ gr. of digitalis leaves in infusion night and morning, with nothing but continuous benefit. Without her medicine she was unable to work, her limbs were œdematous, flashes of light dazzled her eyes, a rushing sound disturbed her hearing, her heart felt full to bursting, and her urine was suppressed. All these symptoms disappeared within a few hours after her medicine was repeated, and she was once more an active woman.[2] But such a case must be exceptional, and so large a dose cannot be recommended.

The first effect of a moderate but cumulative dose of digitalis is slight slowing of the pulse, with increased tension, and a gradually increasing flow of urine. After the ingestion of about 30 gr. we look out for signs of saturation; with moderate doses there are a more marked slowing of the pulse, and a diminution in the flow of the urine, immediately followed by a tendency to cardiac irregularity, the slow heart beat quickens, falters, and intermits on the slightest exertion. Unless we remember that after the administration of 30 gr. of digitalis we approach the point of saturation and are watchful, a slight drop in the pulse rate, or in the quantity of urine is apt to pass unnoticed, and the patient may get plunged into all the discomforts incident to vagus paralysis, while we are scarcely aware that the drug has begun to affect him. This, however, is not the fault of the drug, but an error on the part of the practitioner.

The slow pulse of digitalis action seems quite devoid of danger, but the rapid irregular pulse of digitalis poisoning certainly indicates a condition that is not free from risk, though it may be safely tided over by strict adherence to the recumbent posture and the moderate use of stimulants.

It is well to remember that after symptoms of saturation have appeared, the full diuretic effect of digitalis is often displayed for two or three days. The remembrance of this may help to prevent needless dissatisfaction with the action of the remedy, and in some cases it may avert the ascription of this postponed action to some much less effective drug. Now and then we meet with a constitution so sensitive to the action of digitalis that symptoms of saturation follow the ingestion of less than half the usual quantity, such cases are rare, and when met with must be treated on ordinary principles, with the necessary limitation of the maximum dose.

Digitalis may be beneficially employed in all cases of heart failure whatever may be the cause or the nature of the concomitant lesion. In cases of valvular lesion, apparently fully compensated, digitalis may not be imperatively called for, but as in all such cases heart failure is steadily if slowly progressive, no harm can ever result from giving tonic doses of the remedy sufficient to maintain the normal elasticity of the myocardium. Some object to this, especially in certain forms of valvular lesion, from an idea that "the heart may be thus unduly stimulated, and the left ventricle hypertrophied beyond the needs of the circulation,"[3] so that it gets prematurely beyond the feeding power of its arteries, and the final and irremediable breakdown of compensation thus inaugurated and hastened by the very means employed to avert it.

It is a curious commentary on the changes in medical opinion that in these latter days the production of active hypertrophy of the heart should be ascribed to that drug, which, for the first half of this century, was thought to be a

[2] Bölz, *Archiv der Heilkunde*, 1875, S. 468.
[3] *Edinburgh Medical Journal*, April, 1895, p. 871.

sovereign cure for that affection. Neither opinion is founded on either pathology or fact. We have many drugs which produce atrophy. I know of none that cause hypertrophy. Hypertrophy of a muscular organ is the result of a call for increased exertion, and arises in no other way. The heart has a large reserve of energy, and even when called upon for increased exertion does not at once hypertrophy; it is only when dilatation has occurred that the needful compensating hypertrophy follows. And so throughout the future progress of the affection the dilatation is ever in advance, the hypertrophy lags somewhat behind. Digitalis increases the contractility and improves the nutrition of the myocardium, and enables it to withstand the dilating influences to which it is subjected. Far from unduly stimulating the heart and forcing upon it a needless hypertrophy, the tonic action of digitalis checks the progress of dilatation, and retards instead of precipitating hypertrophy.

Corrigan long ago raised a warning voice against the use of digitalis in aortic regurgitation, because he looked upon it as a pure sedative, and regarded the prolongation of the diastole as a source of increased danger to the heart. It is an indication how ill understood the true action of digitalis still is that a similar idea is yet held by some. But the increased elasticity and energy that the myocardium acquires from the action of digitalis is not only sufficient to enable it successfully to resist the dilating influences to which it is exposed during the prolonged diastole, but is even adequate to produce a certain amount of contraction of the ventricular cavity, as shown by the recession of the apex beat upwards and to the right.

About a couple of months ago I found an old professional friend suffering from the effects of influenza upon a heart labouring under aortic regurgitation. I prescribed digitalis for him, and a fortnight afterwards asked him to detail his experience for your benefit. In his case the regurgitation is simple, and without mitral complication.

He writes: "When first I saw you my pulse was irregular and feeble. In the morning I could only walk about 250 yards. This took me from nine to twelve minutes, and I had to pause to gain breath three or four times on each occasion. In the afternoon, with usually the assistance of an arm, I could walk half a mile, resting say three times, but being troubled with occasional dull pain in the heart, constant distress from a feeling of constriction in the lungs, and a feeling of strain and weakness in the muscles. My stride was little more than half its natural length; and this half mile took me always over half an hour to accomplish. The night before I first took the digitalis was the most trying and distressing which I can remember. My breathing was just a succession of rapid gasps, which ceased whenever I seemed about to fall asleep, when I had to draw a breath by an effort of will. The inhaled air did not seem to get fully into the chest. There was mental confusion, if not absolute cowardice. The feebleness and irregularity of the pulse were extreme, and my condition was altogether so painful that a sense of duty alone restrained me from desiring death. I had to walk all night till 5 in the morning. After the first day of taking digitalis all this was for the most part changed. Even then, as I expressed myself to you, I was 'a different man.' I think anyone might be satisfied who has a pulse like mine now, I sleep well, the stride has lengthened out, five to six minutes now suffice for the 250 yards; with sometimes no rest at all I have walked about a mile and a half. Though there is occasionally a little panting, the air seems to get to the bottom of my chest, which is altogether free from any feeling of constriction. In fact, for a week I have been enjoying life, there is a kick in my pulse which tells of everything firming up, and there is not in my mind an atom of doubt as to the *post hoc propter hoc* in my case.—Ever yours, M. F. H."

Much as digitalis can do, it acts within certain limitations, and it fails occasionally when we most desire its success. It has no action whatever on the often protracted ingravescent asystole of a moribund heart, but as we are not always able at once to recognise this form of terminal failure we are bound to employ that remedy which holds out most hope, but we have no right to be disappointed when it fails. Since the days of Withering it has been known that when "the limbs in anasarca are solid and resisting we have but little to hope" from digitalis. But in these cases as soon as the tension is relieved by purgation, or local drainage from incisions, digitalis acts well, the rest of the fluid is absorbed and the heart improves. In dilatation of the right ventricle following marked stenosis of the mitral valve, or originating in that limitation of the area of the pulmonary capillaries always present in emphysema of the lungs, we cannot expect much from digitalis, it acts as a tonic and improves the condition of the heart, but it cannot in either case contract the right ventricle because of the permanent and incurable nature of the obstacle to the circulation that has produced its dilatation. Where loss of arterial elasticity from any cause has produced dilatation of the left ventricle digitalis acts badly, and may even increase the dilatation unless it is combined with some vascular stimulant, but with this proviso it acts well and is most useful in all such cases. Lastly, digitalis is said to act badly or to be even positively injurious in cases of fatty heart. But as hearts diagnosed as fatty are as a rule only feeble and dilated it would be a sad mistake to be deterred from giving such hearts all the benefits they are so likely to receive from digitalis by the baseless dread of an unrecognisable chimera. I may add that I have never seen any damage accrue from acting on this principle.

The most suitable preparations of digitalis to employ are first of all the powdered leaves carefully prepared, and not over a year old. The infusion ranks next to the powdered leaves; it seems to contain all the most active principles of the plant, and it lends itself readily to combination with vascular stimulants, which are so often necessary adjuncts to secure the full benefit of the remedy without discomfort to the patient. From the very small dose of the powdered leaves employed it is scarcely necessary to have recourse to any more concentrated preparation, but Nativelle's and Merck's digitalin are both active and convenient preparations, and are useful when merely a cardiac tonic is required; if given in larger doses for any other purpose they are both prone to excite nausea, and do not act so favourably as either the leaves or their infusion. The tincture is an intermediate preparation; it acts well as a tonic, and combines readily with other tonics, less readily with vascular stimulants; it ranks next to the infusion, and is a suitable and convenient form in which to employ the remedy.

To enter more at large into the various combinations of remedies or of other forms of treatment that may be advantageously conjoined with digitalis in the treatment of different heart affections would plunge us into the wide field of general cardiac therapeutics, into which I have no intention to enter at present.

In conclusion I have only to add that with attention to the selection of a suitable dose, and the ordinary precautions which every form of treatment demands, if we are to expect any benefit from it, digitalis will do everything that can be reasonably expected of it, and will confer more benefit on cases of cardiac disease than any other drug in the *Pharmacopœia*; not because it is a diuretic, a sedative, or a stimulant to the heart, but because it maintains and improves its metabolism: for failure of metabolism is, under all circumstances, the great source of danger to that important organ.

Professor Lauder said that the influence of digitalis as a tonic and sedative was a question of dosage. Such doses as Dr. Balfour had indicated were free from danger; yet in some cases very slightly larger doses may easily affect the heart and do unforeseen harm. The readiness with which comparatively small doses render the heart's beat unduly slow or irregular points to real danger from slight excess of dose, and although it is impossible to judge when a patient dies with heart disease taking digitalis there have not been wanting cases in which it was indicated that the digitalis was to blame. It is worthy of notice that in experiments on the excised heart of the frog the cessation of the heart's action is usually permanent; there is no such recovery when the poison ceases to circulate through the heart, as we see in the case of some other drugs. This points in the direction of the view that in cardiac diseases digitalis may readily become a dangerous remedy. The records of the treatment in pneumonia show that in this ailment digitalis can usually be given without danger, and the same seems to be the case in delirium tremens.

DR. ILLINGWORTH did not consider that digitalis was a cardiac tonic. If given in doses of 5 to 10 minims in cases of pneumonia, the pulse-rate might be very considerably reduced, and syncope or even death might occur. He considered this to indicate a depressant or calmative action. He admitted, however, that in cases of nervous palpitation the pulse-rate appeared to be slowed and the volume increased, but in his opinion this was a mere side issue, and not a main question.

THE SUBCUTANEOUS USE OF CREASOTE AND GUAIACOL IN PULMONARY PHTHISIS.[1]

BY F. R. WALTERS, M.D., M.R.C.P.,
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OF all the drugs which have been used in the treatment of phthisis there are probably none which have been so widely adopted as wood creasote and its derivations. Advocated in 1833 by Reichenbach, condemned in 1835 by Martin Solon, it fell into disrepute until revived by Bouchard and Gimbert in 1877, since which it has been tried and approved by a long list of authorities—Jaccoud and Dujardin-Beaumetz, Dieulafoy and Germain Sée, Sommerbrodt, Von Brun and Guttmann, Douglas Powell, Burney Yeo, and many more, who all agree as to its utility, while they differ as to its mode of action, dosage, and modes of administration. At the present time some are enthusiastic in its praises while others are as strongly opposed to it; and it must be admitted that it has a nasty way of failing in some of the cases where its help is most needed. It is, however, not surprising that this should be the case. To begin with, in a disease like pulmonary phthisis, where destruction and repair go on side by side, and the same process is sometimes useful and necessary, at other times disastrous, it is very difficult to estimate the effect of any remedy, owing to the impossibility of obtaining strictly comparable cases. In the next place, not only is there true or wood creasote and sham or coal-tar creasote, but several varieties of wood creasote, such as pinewood creasote, which contains more cresols, and beechwood creasote, consisting largely of guaiacol; and even beechwood creasote (which is usually preferred) varies in its composition. To add to these difficulties, the dose of creasote which can be borne with impunity varies considerably with individual idiosyncrasies and with the type of the disease, perhaps more than is the case with any other commonly used drug. Bearing these facts in mind, it is not so much remarkable that authorities should differ as to its utility as that there should be as great a unanimity. The concord becomes more striking than the discord. The number of cases dealt with by some of these observers is so considerable that there is at least strong *primâ facie* evidence in favour of the utility of the creasote compounds.

Bouchard in his first paper gave the results of 93 cases, and subsequently published more; Sommerbrodt's cases numbered over 5,000, Von Brun's 1,700.

Bouchard and Gimbert's early results were obtained by the admistration of comparatively small doses of creasote—3 to 6 minims—over long periods of time, although they subsequently increased their doses in certain cases. They gave it either in cod-liver oil, or in alcohol with a bitter tonic on an empty stomach. Sommerbrodt, writing in 1887, recommended the administration of three capsules, each containing 1 minim of pure beech-wood creasote, increasing the dose by one daily until the eighteenth day, when this quantity (20 minims) was to be continued for many months.

As a rule patients can be readily brought in one way or another to tolerate large doses if these are sufficiently gradually increased; but it is by no means certain whether more than 15 or 20 minims per day can be absorbed by the alimentary canal, judging by Poggi's results with guaiacol. And some patients are quickly nauseated by quite small doses which do not appear to be of any use. To overcome this difficulty several methods have been adopted. A less irritating ingredient may be given, such as guaiacol, introduced by Sahli in 1887, or the creasote may be prescribed with some bland fluid such as milk, or with a gastric sedative. Another method is to give it in capsules, or in keratin-coated pills which are only dissolved beyond the stomach. The administration of carbonate of guaiacol or creasote depends on a similar principle, as the combination is only exceptionally broken up in the stomach.

There seems to be some doubt as to the equal efficacy of guaiacol and creasote, the experiments of Main[2] appearing to show that the crude drug was more reliable. Hudeod, of Geneva, is strongly impressed with the advantages of rectal administration, and Burlureaux also adopts this method amongst others. Germain-Sée has recently advocated the employment of inhalations of compressed air containing creasote. Another plan is that of external applications, as guaiacol has been shown to be largely absorbed by the skin. But the method which I wish to dwell upon to-day is that by subcutaneous injection. This has been adopted in one form or another by Schetelig, Picot, Diamantberger and Weil, Burlureaux, and others. Schetelig uses 20 to 30 per cent. solutions of creasote in oil of cloves, injecting 16 minims into the thigh or abdomen from four to twelve times daily, leaving the needle in and applying gentle massage between the injections, which are repeated at intervals of a quarter of an hour to an hour. He states that, although the taste of creasote was sometimes noticed after the injection, there was no digestive disturbance, and marked antipyretic effects were observed. He gives guaiacol in the same way, in one-third to one-fourth the dose. Meunier, of Lyons, prefers liquid vaseline as a medium. Picot, of Bordeaux, injects a mixture of sterilised olive oil and vaseline containing 1 per cent. iodoform and 5 per cent. guaiacol, beginning with 1 c.cm. of the mixture and increasing to 3 c.cm. He remarks that no swelling or other local reaction follows. Burney Yeo has used the same method with a more concentrated formula.

The method, advocated by Diamantberger and Weil at the Paris Congress for Tuberculosis in 1891, was to inject creasote dissolved in an equal volume of sterilised almond oil. Of this they injected two Pravaz syringefuls in twenty-four hours, and after over 1,000 injections have had no accidents. Shingleton Smith adopts this method. Prévost, on the other hand, declares that a chemical combination of guaiacol with oleic acid is much less irritating than a mere oily solution. The chief advocate of the subcutaneous injection of oily solutions of creasote and guaiacol is Burlureaux, of the Val de Grâce. He lays stress on the importance of using a pure preparation such as creasote prepared by Choay's method dissolved in sterilised olive oil free from oleic acid, and on the gradual introduction of large quantities into the body up to the capacity of the individual, which is a variable quantity. He uses a special apparatus originally contrived by Gimbert and modified by Guerder and himself, one form of which I am able to show you to-day. The oily solution is driven into the body by atmospheric pressure, the degree of which is indicated by a manometer. Not more than 20 grammes (say 5 fluid drachms) per hour must be introduced, so that as most of his patients receive from 50 to 100 grammes of creasoted oil per diem at the height of the treatment, a single injection may last several hours. He begins with 5 grammes of a 1 in 15 solution, and if there are no signs of intolerance increases it to 50 grammes or more. One of his patients received 5 kilos. under the skin in as many months, besides 1 kilo. per rectum. This represents between 30 and 40 minims of pure creasote per day. The largest quantity which appears to have been injected at one sitting was 220 grammes, or nearly 8 ounces, of a 1 in 15 solution. Some patients of his were, however, less tolerant, as in one case 5 grammes of a 1 per cent. solution caused distress. Whenever small doses are persistently badly borne, he regards the prognosis as highly unfavourable. Where the treatment is doing good the appetite improves, flesh is gained, and the local lesions show signs of healing. Intolerance is shown by shivering, perspirations, and a condition resembling the collapse of pernicious malarial fevers, with or without high temperature. A persistent taste of creasote or black urine are of bad import when they come after small doses.

To come to my own results, which are unfortunately incomplete, as some of my notes have been mislaid or not yet returned. I have had some 6 or 8 cases treated in this

[1] Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association held in London, July-August, 1895.

[2] *Bull. de Therapie*, cxxii, 385.

way, and can refer to-day to 4: A married woman, aged 36, with early affection of one apex; a clerk, aged 21, with unilateral consolidation, with perhaps a few small cavities; a bookbinder, aged 20, in the second stage, both lungs affected; and a clerk, aged 27, with one lung in the first and the other in the second stage.

My material is insufficient to determine the value as regards cure of the pulmonary condition, but is of interest in showing the doses which can be tolerated. I have used three different solutions: (1) a solution of creasote, 1 in 15—a Parisian product, creasote *a*; (2) a similar solution of English manufacture; (3) a solution of guaiacol, 1 in 5, of French manufacture; all three solutions in sterilised and purified oil.

Burlureaux depended mainly on subcutaneous injections, and gave them nearly daily. My own cases only had them from once to three times a week, as daily injections are not convenient in out-patient practice. They all took creasote or guaiacol in some other form to about 10 to 15 minims daily. The injections were given in one of three ways: by the apparatus of Burlureaux and Guerder; by injection with a small hypodermic syringe holding 20 minims, the barrel being sometimes refilled while the needle was left *in situ*; and a large hypodermic syringe holding about 2 drachms; both syringes have asbestos plugs and are readily sterilisable. The doses injected varied from 20 to 30 minims of a 1 in 15 solution to begin with, to ℥j to ℥ij twice or thrice a week. The largest doses injected were 300 minims of 1 in 15 creasote solution, and 165 minims of 1 in 5 guaiacol. The treatment was continued in two cases for two months, in a third case for eight months, in a fourth for nine months.

The local effects were, slight burning at the seat of injection, which usually soon passed off unless the injection was made where the skin was tight. A swelling was left, which felt hard and indurated, the induration passing off, as a rule, in about a week, but sometimes lasting longer. There was usually no pain or inflammation afterwards, with two exceptions. In one case I had an accident with the Burlureaux apparatus, due to my own impatience, and a little air probably escaped into the cellular tissue. In the other the syringe had been rinsed out with carbolic solution, and probably incompletely freed from it. In neither case was there suppuration.

As regards the general effects, I did not find any complaint of tasting the creasote directly after injection, and am satisfied this was not usually the case. In one case there was slight collapse after the first injection of 20 minims of a 1 in 15 creasote solution; the same case subsequently readily stood drachm doses. In one case the appetite greatly improved, the lung trouble nearly disappeared, the cough disappeared, and weight was increased. This patient remains in good health. In another the lung trouble had increased, but much more slowly than was to be expected, while the general health remains exceptionally good. The two others were not long enough under treatment to be able to judge.

In conclusion, I believe the treatment is well borne, and may be useful where other methods fail. The doses should be very cautiously increased, and the treatment should not be tried where the kidneys are unsound, or there is a large area of inflamed lung, or decided signs of intolerance. No form of creasote treatment is of use unless it is long continued. I believe it to be useful in many cases if judiciously applied. One in 5 guaiacol appears to me to be as well borne as 1 in 15 creasote solution; and notwithstanding the results obtained by various observers, I do not think it is finally settled that guaiacol is inferior to creasote in the treatment of phthisis. The results with an ordinary syringe are apparently quite as good as with the Burlureaux apparatus, which should, I think, be reserved for exceptional cases.

The New York Academy of Medicine.—The list of Fellows of the New York Academy of Medicine for 1895, which has just been issued, shows that the Academy is in a very prosperous condition. Organised in 1847 and incorporated in 1851, it grew slowly for a time. At present it numbers 702 resident and 70 non-resident Fellows, 29 corresponding Fellows, and 6 honorary Fellows. The Academy has a commodious and well-appointed house of its own, in a good situation.

REMARKS ON GONORRHŒAL IRITIS.

By H. PERCY DUNN, F.R.C.S.,
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The eye is a small organ, and upon reflection the fact seems a strange one that the delicate tissues of which it is composed should so often exhibit inflammatory changes, associated with so-called constitutional diseases. What, for example, determines the outbreak of a rheumatic iritis when the rheumatic taint has, so to speak, almost the whole of the body upon which to expend itself? What, again, leads to a syphilitic iritis when the syphilitic virus has so wide a scope for attacking the other tissues and organs of the body? Why, further, it may be asked, should a sarcoma develop from the periosteum of the orbit when so vast an expanse of periosteal tissue exists elsewhere? And oftentimes no exciting cause can be shown to which the outbreak of inflammatory and neoplasmic attacks can be traced. Patients suffering from rheumatic iritis in its acutest form seldom have any other defined symptom of rheumatism. In cases of sarcomata of the orbit no history can be obtained, generally speaking, of any blow or disturbance of nutrition which might be regarded as exciting the outbreak. It was while reflecting upon this aspect of the subject that my mind recently reverted to the connection subsisting between gonorrhœa and gonorrhœal iritis.

In the only case of this form of iritis which has come under my notice, a detailed account of which is given below, there were several interesting features; but after all it is difficult to say how much of the iritis in a given case of gonorrhœal iritis is due to the gonorrhœa, and how much to the existence of a rheumatic taint in the patient. Upon the subject of the pathology of so-called gonorrhœal rheumatism authorities are still divided, and until we possess more information of a definite nature in regard thereto, it must still remain an open question whether we can correctly describe any cases of iritis as really due to gonorrhœa. Nevertheless, among the writers of textbooks a general consensus of opinion prevails that gonorrhœal iritis is a distinct form of iritic inflammation. By one and all the statement is repeated that it is a mixture of the plastic and serous forms. Wecker, in testifying to this fact, also remarks that "we never see an inflammation of the urethra followed by iritis without some joint having been attacked previously. The iritis is easily cured and leaves no traces, while appearing very readily whenever the patient has the least tendency to urethritis. It differs from the rheumatic form by the sudden onset, and its plastic nature is less pronounced. It shows a very peculiar predilection to alternate or succeed a rheumatic attack of the knee. Generally gonorrhœal iritis disappears quickly under treatment, without leaving synechiæ. This proves its absence of plasticity. Its rheumatic nature is shown by its tendency to recur, even when no synechiæ are present after the first attack."

Again, Duplay and Reclus observe: "It has for long been observed that cases of iritis occur in individuals who have had arthritic symptoms after gonorrhœa. Recently, Desgranet has noted the presence of gonorrhœal iritis without arthritis." This latter condition, however, appears to be altogether exceptional. Fuchs states that "gonorrhœal iritis develops in those cases in which gonorrhœa has given rise to a general infection. This latter runs a course similar to that of acute articular rheumatism. First, the knee joint is attacked by inflammation, which may afterwards migrate to the other joints also; associated cardiac complications may even occur. This disease is known as gonorrhœal rheumatism. Iritis does not generally set in until after the outbreak of the arthritis, and frequently attacks both eyes. Just as the gonorrhœal lesion of the joints is very similar to articular rheumatism, so also gonorrhœal iritis resembles in external features the rheumatic variety. Like the latter, too, it has very frequent recurrences, with which is frequently associated a renewal of the discharge from the urethra or a return of swelling in the affected joints." Lastly, Swanzy says: "Gonorrhœal iritis does not attend on, nor immediately follow, a gonorrhœa; but an attack of rheumatic arthritis, usually of the knees, always intervenes. The disease is extremely rare."

Thus the close connection subsisting been "rheumatism" and the iritis seen after gonorrhœa is shown by the fact that the iritis always succeeds the arthritic symptoms. In other words, experience teaches that no iritis occurs unless and until signs of joint inflammation have developed. The following are the notes of the case to which I refer above: Mr. S., aged 26, consulted me for acute iritis of his left eye. The history was that the eye became inflamed three days before I saw him. Some twelve or fifteen months previously the patient, who admitted that he lived freely, contracted gonorrhœa, and had suffered much from gonorrhœal arthritis. On asking him subsequently to show me his tongue, he said "That's impossible; I have not been able to do such a thing for the last six months." I then found that he had ankylosis of his tempero-maxillary articulation, which barely allowed him room enough to pass the tip of his tongue between his teeth. On examining the eye the globe was deeply injected, the pupil was small and inactive, and much pain was complained of.

Two days later, by means of leeching, instillations of atropine, with the administration of a mixture containing aconite and colchicum, considerable improvement took place; but the pupil was irregular though dilated. However, in view of the improvement, he asked permission to accompany a theatrical company on a day's outing, including a drive to Richmond. The excursion was to take place on the following day. I strongly advised him to remain quiet, but he was bent upon going. On the morning afterwards I had an early summons to see him, and on reaching his house he met me with the remark, "I wish I had taken your advice and not gone to Richmond. I am much worse; my eye is blind." On examination of the eye the anterior chamber was found to be more than half full of blood. An adhesion had probably given way, causing the hæmorrhage. The patient now agreed to submit to a regular course of treatment. He undertook to remain indoors and to follow the instructions as to his living, while, in addition to the treatment above prescribed, he was ordered a morning dose of Hunyadi Janos water. The pain in the eye, which was chiefly felt at night, was relieved by dry heat in the form of hot bran poultices. In ten days' time all the blood in the anterior chamber had disappeared. At the end of three weeks the eye was quite well, the pupil being regular and free. On subsequently testing his vision I found that he was myopic, and with correction — 3.50 in the left and — 3 in the right eye; he was able to see $\frac{6}{5}$ and $\frac{6}{6}$ respectively. This was the first attack from which he had suffered.

The case was interesting as showing the results of gonorrhœal infection upon his joints. Both knees had been the seat of a prolonged attack of arthritis, and in addition, the tempero-maxillary articulation became involved. The adhesions remaining in the latter joint accounted for the fibrous ankylosis which was present. The hæmorrhage into the anterior chamber which sometimes occurs in cases of acute iritis is commonly attributed to the rupture of a synechia following repeated instillations of atropine. I have found that the severe pain accompanying acute iritis, and especially rheumatic, in the early stages is best relieved by free leeching. In the later stages, or when the pain mainly occurs at night time, nothing is so effective as dry heat, applied in the form of hot bran poultices. Lastly, I think that some saline aperient is indicated in all cases of acute iritis, and for this purpose I always prescribe the Hunyadi Janos water, the good effects of which I have frequently seen.

The University of Virginia.—On October 27th the main building of the University of Virginia was destroyed by fire. The whole building was completely gutted, the loss being variously estimated at £20,000 to £80,000. The old chapel and the students' reading room were blown up with dynamite so as to prevent the fire from spreading to the professors' residences and dormitories. Owing to the efforts of the firemen, aided by students and ladies, a large proportion of the books, portraits, and statues belonging to the library were saved. A large copy of Rafael's picture of the School of Athens, which adorned the public hall, and which was valued at £1,000, was destroyed. Mr. Floyd Williams, a medical student, was seriously injured by the flames while assisting to subdue the fire.

ON THE TREATMENT OF ENCYSTED VESICAL CALCULI,

WITH A CASE WHERE SUPRAPUBIC LITHOTOMY WAS TWICE PERFORMED, AND A PERMANENT SUPRAPUBIC OPENING AFTERWARDS ESTABLISHED.[1]

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,

Surgeon to the Manchester Royal Infirmary; Lecturer on Operative Surgery, Owens College.

Though encysted vesical calculi are of somewhat rare occurrence, it is probable that they are present more frequently than is generally believed, and that they account for some of those obscure cases of chronic cystitis for which it is often difficult to find a cause.

The following case illustrates the advantage of suprapubic cystotomy as a means, first, of recognising the presence of encysted calculi; and, secondly, of effecting their removal; for when purely encysted—that is, lying entirely within a saccule which communicates with the bladder by a narrow neck—it is almost impossible to detect them by sounding, or to extract them, except through a suprapubic opening.

In the literature of the subject little is said as to the means which should be taken, after their removal by operation, to prevent the recurrence of calculi in such a pouch, and though the method adopted in the case to be described—namely, the establishment of a suprapubic fistula—has obvious disadvantages, it appeared to be the only one which was likely to prove successful.

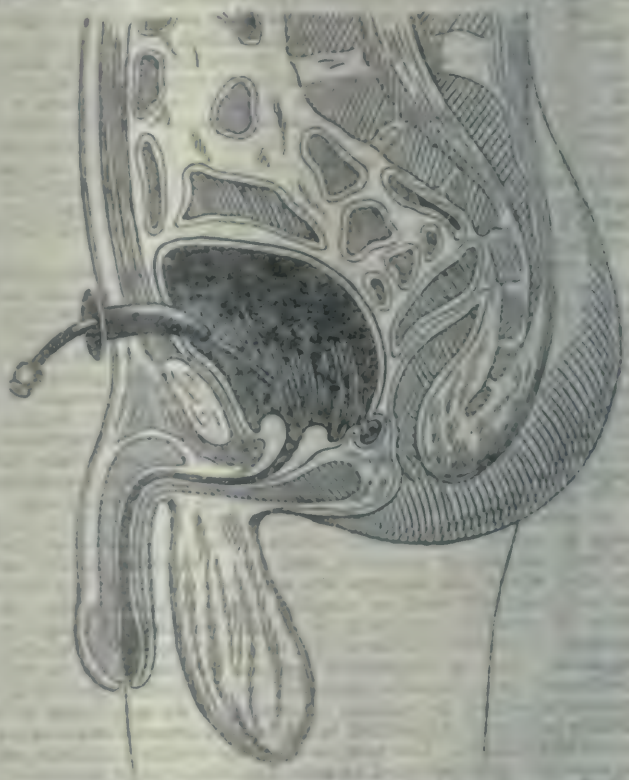


Diagram showing the situation behind the prostate of the saccule in which the calculi were encysted, and the vulcanite plug and catheter as worn in the suprapubic opening.

The patient, a gentleman, aged 49, was sent to me in May, 1891, by Dr. Anderton, of New Mills, with the following history. Three years previously he began to be troubled with difficulty in micturition, and for two years and a half he had passed no urine except by catheter, which he was obliged to use very frequently, sometimes as often as once an hour, otherwise he suffered great pain, which was always referred

[1] A communication to the Manchester Clinical Society, October, 1895.

to the neck of the bladder. No blood had ever been observed in the urine, which was alkaline and purulent. There was no perceptible enlargement of the prostate, and no stone could be detected on sounding the bladder, which was extremely sensitive, especially at its neck, the introduction of any instrument exciting very severe spasm. As the symptoms were somewhat obscure, it was resolved to explore the bladder from above the pubes, and the patient came into a private home for this purpose.

May 14th, 1891. Suprapubic cystotomy was performed in the ordinary way, and upon exploring the bladder a small phosphatic calculus was found lying loose in its interior. On further examination an opening, just large enough to admit the tip of the finger, was detected at the base of the bladder, a short distance behind the prostate; this led into a distinct saccule, the size of a pigeon's egg, and contained within it were a number of phosphatic calculi, the largest being almost ½ inch in diameter. The prostate was slightly enlarged, a collar-like projection surrounding the vesical orifice of the urethra. The calculi were all extracted from the saccule and the collar projection of the prostate was removed as completely as possible with scissors. The patient made a good recovery and returned home at the end of six weeks, the suprapubic wound being completely healed three weeks subsequently. The operation was followed by marked relief to his symptoms, as he could hold the urine, which became clear and acid in reaction, for five or six hours without any discomfort, though he still required a catheter to empty the bladder. The relief continued for about twelve months; at the end of this period, in spite of the fact that he had regularly washed out the bladder since the operation, he began to suffer from the same symptoms as before, the urine again becoming alkaline and containing a large quantity of pus and mucus. The patient was again sent to me by Dr. Anderton in April, 1893, and upon sounding the bladder a small calculus was felt lying loose in its interior.

As the cystitis had recurred and a fresh formation of stone had taken place, although the greatest attention had been paid to the toilet of the bladder, it was resolved to again perform suprapubic cystotomy, explore the saccule, in which more calculi had probably formed, and, after removing them, establish a permanent opening above the pubes, so as to allow of more thorough irrigation of the bladder than was possible by simply washing it out *per urethram*, in the hope that by this means a recurrence of the cystitis might be prevented, and at the same time an exit provided for any calculi that might afterwards form.

April 21st, 1893. The bladder having again been opened from above the pubes, a small phosphatic stone was removed from its interior, and a number of similar calculi were extracted from the same saccule as at the previous operation.

The question of excising the saccule and suturing its communication with the bladder was considered; but as this procedure would have involved opening the peritoneal cavity—for the saccule was situated well behind the prostate gland, and could only just be reached with the tip of the finger upon deep pressure, when passed into the rectum—it was not thought safe to attempt it, especially as the urine was in a foul and toxic condition. A suprapubic fistula was therefore established, and for two years after the second operation the patient continually wore in the wound a slightly curved vulcanite plug (3½ inches in length and ¾ inch in diameter), with a flange at its outer end to prevent it from slipping altogether into the bladder. The plug, which accurately fitted the wound, was retained in position by a canvas belt, and bored, so as to admit a No. 8 Jacques's catheter, one end of which projected into the bladder, while the other was connected with a urinal attached to the patient's leg. In this way the bladder could be kept continually drained, while by the removal of the plug its interior could be washed out much more thoroughly than was possible in the usual way—namely, through the urethra alone.

Since April, 1895, he has worn a solid plug in the opening by day; by this means he is able to dispense with the urinal in the daytime, and he finds that if he draws off the urine *per urethram* every three or four hours he can keep quite dry even when walking about. The perforated plug, catheter, and urinal he still, however, wears when in bed, in order that he may not be disturbed by having to get up to empty the bladder during the night.

At the beginning of the present year he suffered from another attack of cystitis, brought on, as he believed, by exposure to cold; and last February, on washing out the bladder (as is still his daily custom), the plug having been removed as usual, a small phosphatic calculus came away through the suprapubic opening. The escape of the stone was followed by a subsidence of the cystitis, of which there has since been no recurrence.

As two years and a-half have now elapsed since the second operation, the advantage of the suprapubic fistula as a means, first, of thoroughly irrigating the bladder and keeping in check the cystitis; secondly, of allowing the escape of calculi which may form in the bladder—is therefore well established.

At the present time he is in the enjoyment of very good health, being able to mix in society and walk several miles without any inconvenience; he is quite free from bladder symptoms, and suffers remarkably little discomfort from the presence of the permanent suprapubic opening.

I am indebted to my house-surgeon, Mr. J. P. Hall, for the diagram which accompanies this paper.

THE CHEMICAL AND PHYSIOLOGICAL CHANGES IN MILK CAUSED BY BOILING.

By J. L. KERR, M.D., C.M., F.R.S.E.,

Late Examiner in Chemistry and in Medical Jurisprudence, University of Aberdeen; Public Analyst, Kincardineshire Burghs.

Milk consists of a multitude of cells suspended in serum. The cells are fat cells which form the cream; the remaining cells are nucleated, and of the nature of white blood corpuscles. The serum consists of water, in which is dissolved milk-sugar, and serum albumin, with various salts, and chief of all casein. The cells, with the exception of the fat corpuscles, are all living cells, and they retain their vitality for a considerable time after the milk is drawn from the mammary gland.

Milk kept a few days may be perfectly sweet—that is, unsoured, but it has a different taste and appearance, and shows a tendency to separate into serum and the more solid portions, which tend to sink to the bottom of the vessel. This change in taste and emulsification is due to the death of the white blood corpuscle-like bodies contained in the milk.

There is reason for supposing that when fresh milk is ingested the living cells are at once absorbed without any process of digestion, and enter the blood stream and are utilised in building up the tissues. The casein of the milk is digested in the usual way of other albuminoids by the gastric juice, and absorbed as peptone. There is also absorption of serum albumin by osmosis.

The chemical result of boiling milk is to kill all the living cells, and to coagulate all the albuminoid constituents. Milk after boiling is thicker than it was before.

The physiological results are that all the constituents of the milk must be digested before it can be absorbed into the system; therefore there is a distinct loss of utility in the milk, because the living cells of fresh milk do not enter into the circulation direct as living protoplasm, and build up the tissues direct, as they would do in fresh unboiled milk.

In practice it will have been noticed by most medical practitioners that there is a very distinctly appreciable lowered vitality in infants which are fed on boiled milk. The process of absorption is more delayed, and the quantity of milk required is distinctly larger for the same amount of growth and nourishment of the child than is the case when fresh milk is used.

The Alvarenga Prize for 1895 of the College of Physicians of Philadelphia has been awarded to Dr. Guy Hinsdale, of Philadelphia, for an essay on Pyrin-pyocyella. Essays, which may be upon any subject in medicine, intended to compete for the prize (which is of the value of about 180 dollars) for 1896 must be received by the Secretary of the College on or before May 1st, 1896.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE DANGERS OF COCAINE.

IN connection with Mr. J. H. Marsh's notes on the dangers of cocaine as a local anæsthetic in the BRITISH MEDICAL JOURNAL of September 28th, p. 780, the following case may be of some interest.

Having occasion to evacuate a chalazion from each eyelid in a man aged 25, I instilled into each conjunctival sac three or four drops of a 5 per cent. solution of cocaine hydrochlorate, and a few minutes afterwards proceeded to incise the cysts and scrape them out; but while operating on the second the patient suddenly became blanched, perspiration broke out on the forehead, the pupils dilated, the respirations became sobbing, and after a slight convulsion he became rigid, only his shoulders and hips touching the chair in which he was sitting. All these symptoms passed off in a few seconds, though the patient remained pale and complained of feeling faint for some time.

Both this and another case I observed some time ago occurred during very warm weather, but this may be a mere coincidence.

H. CARTER MACTIER, M.B., B.Ch.T.C.D.,
House-Surgeon, Wolverhampton Eye Infirmary.

THE TREATMENT BY SETON OF ABSCESSES, SINUSES, AND SEROUS AND MUCOID CYSTS.

THERE is nothing new possibly in the treatment of abscesses by seton, but the practice is not general and it is not referred to in textbooks, so that the following remarks may not be without interest to some of your readers who, like myself, meet with many such cases. It suggested itself to me some time ago, as I found it successful in the treatment of a large submaxillary mucoid cyst in a dog in which I had tried an india-rubber tube. This he tore out, and it was replaced by a tight seton of quadrupled cord. The wound gave no further trouble, and the dog was well in a fortnight, no trace of the tumour remaining beyond the scars where the cords had passed through.

I next applied the seton treatment with success to diffuse abscess of the hand, then to superficial and deep abscesses in other parts of the body, as the parotid, axilla, female breast, knee, lumbar region, etc., and to sinuses. Many of of the abscesses were large and some huge. One completely covered the abdomen below the umbilicus to the pubes and extended laterally to the iliac crests. The man, a perfect wreck, recovered without a bad symptom, and left the hospital in a month. I have treated serous cysts in the popliteal space and other situations about the knee in the same way with equally good results. I have passed setons through sinuses beneath the gracilis and sartorius tendons from the popliteal space; and also through the muscles of the arm and forearm at the elbow, in positions where it would have been impossible to lay open the tracts sufficiently to ensure their cure.

In order to obtain free drainage the incisions through which the cords pass must be reasonably free and as far apart as possible. The tight cord may cause some inconvenience, but this soon wears off. The treatment is much less feared than large incisions. It leaves only insignificant scars. The wounds heal faster than when large cavities are laid open by incision, and the after-dressings are more simple and less painful than those of large open wounds. The constricted parts do not slough, and they quickly recover their normal conditions when the cord is removed.

An expeditious and simple, and at the same time successful, treatment of such cases is a matter of some consideration where large numbers of ignorant and dirty patients have to be treated outdoors, since many will not remain in hospital. Small openings into abscesses in such persons invariably lead to troublesome and extensive sinuses; and large openings require frequent and careful dressing, which natives do not understand. The seton ensures constant drainage, requires comparatively little dressing beyond keeping the part clean and the application of an absorbent pad and bandage. It is applicable alike to deep and superficial abscesses, and appears, therefore, worthy of a more extended use in cases in which incision and the drainage tube are now employed.

J. C. H. PEACOCKE,
Satara. Surgeon-Major I.M.S.

MELÆNA NEONATORUM.

THE following case may be of some interest, partly on account of the rarity of the disease and partly because of the similarity between it and the one published by Mr. Pringle in the BRITISH MEDICAL JOURNAL of November 23rd:

On November 11th I was called in to see an infant girl, forty-eight hours old, by an old midwife who had attended the confinement. From her and the mother I elicited the following history: About thirty hours subsequent to the birth of the child the mother stated that she heard "something go off" inside its body, and then a gurgling, bubbling sound. Shortly afterwards a motion was passed, which was composed of foul-smelling, dark blood—as far as I could judge by the napkin, about half a pint. Vomiting came on in about an hour, and about 4 ounces of blood and meconium were voided by the stomach. The midwife stated that the cord was tightly wound around the neck three times.

I found the child in a very collapsed condition, perfectly anæmic and comatose, with a slight general icteric tinge—in fact presenting all the symptoms of severe internal hæmorrhage, and evidently with but a few hours to live. Having passed two more similar motions and again vomited blood and meconium, it died about twelve hours later.

It was the twelfth child, and there was nothing in the family history (such as hæmophilia) to account for the condition. I made a necropsy with the following result:

There was general jaundice and great anæmia. Rigor mortis was absent. The body was well developed. On opening the abdominal cavity, the intestines were seen to be congested, and of a deep purple colour generally, but much more so towards the descending colon. From the duodenum to the ileum the mucous coat was covered with a very viscid pink coating, which gradually got darker in colour towards the ileum. This portion showed dark red patches of mucus, which, when washed off, left the surface quite anæmic, giving the impression of the tinted mucus having oozed through from great congestion. The cæcum, colon, and rectum were full of dark blood and meconium. The pyloric end of the stomach was covered with pink glairy mucus, the cardiac end was smeared with meconium, but neither it nor the œsophagus contained blood. There was absolutely no lesion to account for the hæmorrhage. All the other organs were normal, with the exception of being perfectly anæmic. The lungs, however, were of a whitish colour, about half the usual size, and only partially inflated and crepitant.

Irthlingboro. CHAS. B. ROSSITER, L.R.C.P., etc.

REPORTS

ON MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

LIVERPOOL ROYAL INFIRMARY.

CASE OF PYLOROPLASTY.

(Under the care of Mr. RUSHTON PARKER, Professor of Surgery in University College, Liverpool.)

A MARRIED woman, aged 37, had suffered from indigestion for twenty-four years, and had, during some months before her admission on April 2nd, 1895, been under treatment for ulceration of the stomach. She remained in a medical ward until July, and was treated by washing out the stomach. The stomach was greatly dilated, and visible in outline through the abdominal wall. Before admission she had pain, worse after food, and only relieved by vomiting, which took place about three times a day. The movements of her stomach

and rumbling were violent and kept her awake at night. Temporary relief was given by the washing out, and later by curtailing her diet; but distress returned, and she begged for relief, and readily consented to operation. This was done on August 14th, 1895, after washing out with salt solution three or four times (on the day of operation and preceding day).

An incision about 4 inches long was made in the middle line in the epigastrium, and the pyloric end of the stomach found much marked with cicatrices. The pylorus itself was greatly narrowed, appearing no thicker than a cedar pencil outside all. The narrowed part was laid freely open (for about 2½ inches), and one of Mr. Mayo Robson's bone bobbins inserted, as suggested by him in the BRITISH MEDICAL JOURNAL of July 20th, 1895. The stomach was washed out again at the operation with salt solution, and found to be quite clean.

Some difficulty existed at first in getting the pylorus into an accessible part of the wound, and in putting in the bobbin, which was of large size; but when once in, although at first greatly stretching the edge of the wound, the bobbin facilitated the sewing up, and kept the edges well together. A continuous silk suture was put through the mucous layer and another through the peritoneum. Sponge packing was used round the part operated on, and hot water irrigation of the exposed tissues. The abdominal wound was sutured through all layers simultaneously without drainage tube, and the skin well carbolised before operation and after putting in the sutures. A dressing of carbolised cyanide gauze was put on, and the wound healed quickly without suppuration. The greater part healed by first intention in two or three days, and the small gaps under dry scabs of blood and collodion. The patient had no inconvenience after the operation, which, on the contrary, gave complete relief to the previous discomfort. For two days she had only tea and weak brandy and water, and then, in addition, about half a pint of milk daily, diluted with an equal part of hot water; on the seventh day rice pudding, and on the tenth meat, and afterwards ordinary full diet. She was not hurried either in feeding or getting up for fear of too early resuming her long discontinued and unaccustomed daily habits, but by the end of a fortnight she was evidently quite well.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

JONATHAN HUTCHINSON, F.R.S., President, in the Chair.

Tuesday, December 10th, 1895.

ADJOURNED DISCUSSION ON THE POSSIBILITIES AS TO THE LATENCY OF PARASITIC GERMS OR SPECIFIC POISONS IN ANIMAL TISSUES, AS IN HYDROPHOBIA, ERYSIPELAS, SYPHILIS, LEPROSY, RINGWORM, TUBERCULOSIS, ETC.

THE adjourned discussion was resumed by Dr. PHINEAS ABRAHAM, who said that there were many facts in connection with leprosy which bore upon the question of latency. Numerous instances were before us in which the symptoms of that disease had not made their appearance until long and irregular periods had elapsed since the individual could have been subjected to infection; and there were many cases on record in which the symptoms appeared to have become dormant during the course of the malady or subsequently to its full development. We might thus distinguish an initial or "primary" and a "secondary" latency. The study of the subject was beset with considerable difficulty, as might be seen from the following considerations: (1) In the present state of knowledge we could not speak of any definite period of incubation for the bacillus of leprosy, since no one had yet succeeded in cultivating it, and of its life-history we knew nothing. (2) We could not clinically determine the entry of the microbe into the human body, for as a general rule no initial lesion or particular symptom was observed. In a few cases there might be a history of some previous traumatism with localised persistent inflammation or difficulty of healing; but the vast majority of patients did not point to anything of the kind or give any precise date as to when they could have contracted the malady. In point of fact it was not yet proved that the virus of leprosy might not gain entry by the stomach or by as many different channels as the sister disease, tuberculosis. (3) It was not easy to distinguish between the true latent and the incubatory periods. We might, with M. Besnier, consider that the incubatory stage only commenced when the latent spore found the soil and other conditions suitable for its proper growth and development, but the subjective and and objective phenomenon of the incubation might be slight and overlooked, and it must often be practically impossible to draw a line of demarcation between the two stages, which nevertheless must be theoretically admitted to exist. A period could only be regarded as one of latency (*a*) if there was absolutely no concomitant, general, or local disturbances, and (*b*) if the interval between infection and the appearance of symptoms was more or less prolonged and of indefinite duration. (4) From the above considerations, and from the fact that the inhabitants of an infected country might at any time be unknowingly placed under conditions for contracting the disease, we could only—to be quite free from doubt—take into view (*a*) those individuals who were of a leprosy-free race and who had recently come from a leprosy-free district, and (*b*) those, natives or others, who, having sojourned in a leprous district, had subsequently manifested the disease after removal to a country free from leprosy. The field of accurate observation was therefore much narrowed. When facts of some definiteness were obtainable, the main thing observed was the irregularity of the period between the probable time of entry of the virus and the first appearance of the usual erythematous patches and other early pathognomonic signs. Some observers gave two to five years, others much longer. Instances were known of the disease appearing a few weeks after a patient had come from an unaffected to an affected district, as in a case related by Arning; and, on the other hand, there were many examples of a prolonged retardation, as in cases mentioned by Leloir, Hoegh, Thin, etc. Three remarkable instances of prolonged primary latency had come under his notice. The first was the well-known Whitechapel case, exhibited at the Epidemiological Society in 1889. The man had been in his youth, upwards of forty years previously, on voyages to the Baltic and and Mediterranean, had been for years selling meat in London, and had never mixed with sailors or others from foreign parts. He declared that he had no spots or other symptoms until six years before the speaker saw him. Although difficult to prove absolutely, it was most improbable that this man could have been exposed to any new source of infection during these forty years. It was more likely that the germ had really remained somewhere quiescent in his system for a great number of years, although perhaps not so many as he thought, seeing that he might have overlooked, as many lepers do, the very earliest signs of the disease. In the following two cases, the facts were tolerably certain. An Englishman had been taken to India as an infant, and brought home when 10 years old. When 21 he married a young English girl, and shortly afterwards developed spots. He died a few months ago a confirmed nodular leper. Since his return home, he had lived in a humble way in a small inland town, and had never had communication with anyone or anything from India. A young lady, now a typical case of nodular leprosy, was born in Ceylon of English parentage, and brought to England when quite a young child. She remained perfectly healthy for some seven years, when she had an attack of what was thought to be rheumatic fever, accompanied with persistent erythematous swellings. The family had had no communication directly or indirectly with the East, and we were driven to admit that in her case also the microbe must have remained dormant for many years. Instances of so-called arrested or dormant leprosy, in which the symptoms remained in abeyance for a number of years, were frequently met with in asylums and leprous countries, and might be taken to illustrate the secondary latency of the disease. If, as in rare cases, a recrudescence did not take place, the patients might be regarded as in a condition of permanent arrest or real cure. Hanson's views and the investigations of the Cape Commission were referred to. A case of temporary arrest of early symptoms in a boy now in England was also mentioned. In such cases the microbes had for some reason ceased growing and multiplying, and had assumed a latent condition. Manson's hypo-

thesis was quoted as affording a plausible explanation of the vagaries of leprosy, its periods of quiescence, its prolonged and uncertain incubations, its difficulty of inoculation, and many other points. It was shortly as follows: the bacillus was the cause of leprosy; it grew only in a medium existing in the bodies of certain human beings, and then perhaps only intermittently; if the bacillus fell upon such a person it grew if the medium was present, or when it was produced; it grew at the expense of the material, and until the latter was exhausted; it then passed into a condition powerless to resist certain cells, not phagocytes, which incorporated it, and in which it became encysted, until fresh cultivating medium was supplied; the bacilli then became active, passed by the vessels and lymphatics, and established other foci, when the cultivating medium became exhausted, and the bacillus again became intercellular and passive.

Mr. J. ERASMUS LANE continued the discussion, taking for his subject the latency of syphilis. He first alluded to the interval which might elapse between the appearance of the initial lesion and the first manifestation of constitutional infection. The minimum recorded period of "this second stage of incubation" was 12 days and the maximum 150. The latency of syphilis was next exemplified by cases in which after the disease had apparently disappeared, it again manifested itself by the appearance of unmistakable symptoms after a lengthy period of complete immunity. While the possibilities in the direction of long latency were infinite, the duration of this period might continue for only two years. In hereditary syphilis the disease might be latent in the father, who, though apparently healthy, might infect his wife and children; or it might be latent in the mother, who having suffered from syphilis and having been presumably cured, might on marrying a healthy man produce a long series of syphilitic children. Further, Colles's law on the immunity of the mothers of syphilitic children was another example of the latency of the disease, for such mothers, though to all appearances perfectly healthy, had been proved by inoculation with syphilitic secretions to be protected from the disease. Lastly, cases of syphilis hereditaria tarda were instanced as proof that the disease might remain latent for a long time in the subjects of congenital syphilis.

Mr. SPENCER WATSON said that the discussion would be of great value if it improved and rendered more accurate the diagnosis of latent disease. Diseases were often thought to be cured when really they were only latent. In syphilis glandular enlargement during quiescent periods was evidence of the disease being latent, and gave indication for continued treatment. The experiments of Professor Marshall Ward on the bactericidal power of sunlight were interesting in connection with the possible cure of tuberculosis by the actinic rays of the sun. In conclusion, he thought that the remarkably long latent period of forty years in Dr. J. K. Fowler's case depended on the conditions of the patient, and insisted on the difference between attenuation of the bacilli and the cure of the disease.

Dr. LAZARUS-BARLOW thought that, given the micro-organism, the question whether it remained latent or no depended almost entirely upon its environment. He instanced the microbe which was shown by Pasteur to be the cause of *pébrine*. This microbe can be seen in the silkworm's egg immediately after laying, but it remains inactive throughout the winter, though the eggs are kept at a temperature not prohibitive of growth for the microbe, and only commences to reproduce itself in the spring, when the young caterpillar is forming. Another marked case of latency was related by Boussingault in 1855. He made experiments to determine whether plants absorp atmospheric nitrogen when that element is absent from the soil. Two seeds of mimulus speciosus under such conditions germinated, but remained, after putting forth their first leaves, in an arrested, though perfectly natural, condition for two months. They were at the end of that time unfortunately killed by undue exposure to the sun's rays. The speaker cited these cases as examples among many of the fact that the peculiarities of the soil are of essential importance in dealing with the question of latency, and suggested it was probable that, from the widespread occurrence of pathogenic micro-organisms in congregations of persons, they were far more commonly latent than was generally supposed, and that it was only in a minority of cases that the conditions under which they found themselves were such as to allow of their taking on active growth and causing disease.

Dr. THEODORE WILLIAMS had difficulty in distinguishing between latency and arrest of tubercle. Dr. J. K. Fowler had with characteristic caution only gone so far as to say that in arrested tuberculosis the bacilli might be dead, and with this he agreed. In a patient who died from renal disease thirty-six years after the onset of pulmonary tuberculosis and sixteen years after arrest had taken place, caseous material was found in one lung; if this caseous material had passed in to the circulation the man might have died, as in Dr. Fowler's case, from acute tuberculosis. He would prefer to say that no case of tubercle was arrested until the patient was dead. He referred to numerous examples of latent tubercle becoming active, and thought that the development of tuberculosis after scarlet fever might be due to tubercle latent in the bronchial glands infecting the system.

Sir W. BROADBENT thought the introductory papers so complete that further criticism was difficult. Clinically latency was foreseen before the experimental proof was forthcoming, and great interest attached to the experimental explanation of the clinical observation. He referred to a case of latent tuberculosis in a young man in whom a fall from a horse was followed in six weeks by death from acute tuberculosis. Here the bacilli had for a time been encapsuled and prevented from gaining access to the organism, and had been liberated by the injury. In typhoid fever it was sometimes impossible to trace the origin of infection during the normal period of incubation. Influenza had in the last five years so frequently ushered in typhoid fever that it seemed probable that the typhoid germ being latent in the body had been able to multiply, when the resistance of the host was impaired by influenza. In the same way the frequent incidence of scarlet fever after surgical operations might be explained. Experimental changes in the environment of animals were followed by a disorder the development of which they were previously able to resist.

Dr. P. MANSON remarked that the causes of latency were various even for the same micro-organism. The malarial germ was not killed, but rendered latent by quinine; similarly, improved health and vitality of the host rendered the malarial organism latent for the time. The same was true of fungi, as was shown by a form of itch in the scrotum, due to fungi which remained latent in the cold season and became active in warm weather. In filarial disease no symptoms as a rule were present, but mere change in the mechanical position of the parent worm might, by blocking up the thoracic duct, produce elephantiasis.

Mr. JONATHAN HUTCHINSON, jun., quoted the case of a man with a primary syphilitic sore on the penis, who, six weeks after treatment was begun, infected his finger and developed a typical chancre there. A patient was exposed to infection, and two weeks later developed an indolent bubo. Though frequently seen, the primary sore did not develop till seven weeks after exposure; here the poison must have remained latent on the situation of the primary sore. He also referred to a girl who, after ten weeks' solitary confinement in prison, developed a primary sore. The development of secondary manifestations might be very considerably delayed by the occurrence of severe fevers.

Dr. GEORGE OGILVIE pointed out the difference between immunity and latency, and criticised the distinction which the President in his introductory remarks had drawn between "true" and "apparent" latency in syphilis. Remarkable statements had been made as to the duration of latency in syphilis; its possible duration had been artificially extended by putting down non-specific diseases to the agency of syphilis merely because they occurred in syphilitic subjects. So-called syphilitic nervous diseases did not in reality differ from the ordinary forms of disease. Irritation and other factors played a part in bringing out manifestations of latent syphilis: thus, in cases of congenital taint, injury, or disease such as rheumatic fever might give rise to typical interstitial keratitis. A solitary inoculation experiment was not sufficient to prove that the mother of a syphilitic child was protected and not capable of infection, inasmuch as inoculation of healthy subjects with the blood of syphilitic patients was only successful in one out of every four trials.

Dr. J. E. SQUIRE pointed out that latency of the disease and

latency of the cause of the disease were separate and distinct. The disease, for example phthisis, was often latent, but it was another thing to say that the bacilli were also latent. If the latter contention was accepted, it followed that all tuberculosis might be hereditary—a conclusion which he did not believe to be true.

Dr. W. K. Sibley thought latency was equivalent to hybernation of the germs of the disease. This he had shown in snakes, in whom tubercle bacilli could not grow at the ordinary bodily temperature: if, however, an infected snake was put into an incubator, tuberculosis developed. On removing the snake from the incubator the tuberculous process remained stationary. He thought it probable that tubercle would similarly become latent in hibernating animals.

Dr. J. A. Hayward quoted as an example of the latency of the diphtheria bacilli the case of a child who, after recovery from diphtheria, developed measles, and then a second attack of diphtheria, which proved fatal twenty-eight days after the primary attack.

The President said, in reply to Dr. George Ogilvie, that in real latency there was absolute quiescence; if the germ was in any degree active the latency was only apparent. Thus, if a man passed through the secondary stage of syphilis without any obvious manifestations, and then had tertiary symptoms, the latency was apparent, for the poison was quietly at work, and very careful investigation might have shown some evidence of this, such as elevation of temperature.

Dr. Washbourn replied very briefly to Dr. Lazarus-Barlow.

Dr. J. K. Fowler agreed with Dr. Squire in drawing a distinction between latency of the disease and latency of the germ.

MEDICAL SOCIETY OF LONDON.

Monday, December 9th, 1895.

Sir J. Crichton Browne, M.D., F.R.S., President, in the Chair.

On the Diagnosis and Treatment of Early Cancer and Cysts of the Breast.

Mr. Thomas Bryant said he had been induced to write this paper on account of a series of cases of cystic disease of the breast he had met with, most of which had been diagnosed as cancerous. He pointed out that such errors of diagnosis might be diminished by due care and thought. He admitted that typical examples of cancer, as well as of adeno-sarcoma, were usually readily recognisable, and that difficulties of diagnosis, and consequent uncertainty of treatment chiefly occurred when any or many deviations from the typical examples presented themselves. He divided the cases in which difficulties of diagnosis were liable to occur into three groups, the divisions being based on chemical symptoms alone: Group 1. This group included cases in which, either in a young, middle-aged, or even old married or unmarried woman, there was some enlargement or thickening of a mammary gland without external evidence of anything being wrong, either in the integument covering the affected lobe of the breast, the nipple, or the lymphatic glands. Group 2. This comprised cases in which there was a distinct and very evident lump the size of a hazel nut or walnut, encapsuled or unencapsuled, and inseparable from the breast gland, with some of the local conditions generally accepted as indicative of a cancerous tumour, such as a flattened or reticulated nipple with or without enlarged lymphatic glands in the axilla. Group 3. In this group fell the cases in which, in the middle-aged woman just past childbearing, the breast gland was felt to be generally, or in one or more of its lobes, harder than natural, the knots varying in size from small to large peas, and in which there might be at times, with or without the application of pressure upon the gland, some discharge from the nipple of either a clear yellow or blood stained fluid or some cheesy pultaceous material, associated or not with an enlargement of some lymphatic glands. He remarked in respect of the first group that the main question was to decide whether the local lump or induration was an early cancerous tumour or a cyst, or, if in any way connected with lactation, a chronic abscess. If the probabilities pointed to its being cancerous it was, he said, hardly necessary to point out how important it was to have the diagnosis clear and the local tumour removed. Such a measure, when undertaken at the very earliest stage of incipient infiltration, was far more likely to be followed by permanent cure than when performed at a later stage. For this purpose he thought the best course was an early exploratory incision as a preliminary measure to excision of the growth and gland should the diagnosis of carcinoma be verified. He had followed this practice for many years with the best possible results. In Group 2, in which there was a distinct tumour and the diagnosis lay between a local cancer and a cyst, he urged the desirability of the possibility of its being a cyst being always present in the surgeon's mind. It was, he believed, owing to a neglect of this that so many mistakes of diagnosis were met with. He said he was aware that cysts did sometimes disappear by time and treatment, of which he had met with several examples; but he pointed out that such cases were not common, and their occurrence did not justify the practice of allowing the local trouble to continue without treatment. He believed that cases of reputed disappearance of adeno-sarcoma and of cancer were probably instances of mistaken diagnosis, and that they were really cysts. He said he had never known a tumour which was solid disappear without surgical assistance. Instances were numerous in which cysts, said to have disappeared spontaneously, had subsequently reappeared. In some cases the re-enlargement of the cyst might be genuine, while in others the cysts might be of the proliferating kind. In respect of Group 3, the cases falling into this group were too often regarded as cancerous without going carefully into the points which ought to guide them in deciding that question. In conclusion, he stated his belief that in the three groups of cases a place would be found for most, if not all, the doubtful and difficult cases which came before them. He particularly insisted on the fact that if surgeons always took with them to the bedside the thoughts and methods of investigation to which he had called attention, many of the difficulties would be lessened, if not altogether avoided, and a conclusion would be arrived at on which a sound treatment could be based, to the advantage of the patient and to the credit of the surgeon.

Mr. Marmaduke Sheild said that, in looking over the literature of the subject, he had been struck by the difficulty of arriving at a reliable diagnosis of tumours of the breast, as to whether they were or were not sarcomatous. On looking through the records he had found that a large number of tumours of the breast described as adenoma even after microscopical examination, had ultimately proved to be sarcomatous. He related a case of his which occurred some years ago, and had brought this difficulty very prominently before him, the patient being a woman of 40 with a tumour growing fairly rapidly, and obviously not cancerous. Even with the aid of a microscope it was difficult to say definitely whether or not such a tumour was likely to recur. He believed that a large proportion of indurations of the breast were syphilitic, and these often improved under appropriate treatment. The author, he remarked, had insisted on elasticity and fluctuation as characteristic of cysts of the breast, but he pointed out that the cyst might be so tense that neither of these qualities were present. In the absence of distinct signs of malignancy he always went on the assumption that a lump in the breast was a cyst. Many patients objected to the scar resulting from incision, and he did not see why the doubtful cases should not be treated by aspiration. He observed that it was easy enough to make a mistaken diagnosis, even with the help of the trocar, as in the case of a patient aged 40, who came with a hard lump in the centre of the breast, which he thought was probably a cyst. He punctured it, but nothing came out, and he removed the breast, and then he found that it had a hard fibrous wall, within which was a putty-like mass, evidently the remains of a long standing galactocœle cyst. The cyst cases were the ones which recovered under various quack remedies, and it was therefore highly important to make a correct diagnosis. He asked whether the author had ever met with a dermoid cyst of the breast. Personally he doubted whether such cysts ever occurred in that organ.

Dr. Snow referred to the case of a patient with a lump in the breast which had been stated by a very eminent surgeon

to be only a cyst. Some time later this woman came to him with a fungating mass involving the whole of the breast tissue, which was in an advanced stage of degeneration. He did not put this forward as a case of mistaken diagnosis, but he supposed the surgeon had overlooked the association between cysts in the breast and malignant disease. In patients over 34 years of age he held that every tumour of the breast, whether cyst, fibroma, or what not, sooner or later underwent malignant development in one form or another. Personally he always removed such tumours, and he had never once met with a simple cyst. The whole breast was usually undergoing cystic degeneration. One came across one or two cysts, but many others might be present. Cysts were rare during the adolescent period, but he had never seen a genuine cyst disappear. He added that the quality of the fluid was by no means a certain guide in respect of the nature of the tumour, and he said he had seen many cysts in connection with malignant disease giving issue to straw-coloured or pale fluid.

Mr. Tunner mentioned a case of sebaceous tumour of the breast which had given rise to a doubtful diagnosis. It had the appearance of being a dermoid cyst. The patient was a woman aged 30, who had borne children, and the growth only dated from some months previously. He also referred to a case of sarcoma of the thyroid which disappeared. He performed tracheotomy, and the growth subsided almost completely, but it recurred, and then he cut down again and removed a portion for microscopical examination when it proved to be undoubtedly sarcomatous. That patient died a year after the first operation, and *post mortem* there was a distinct, though small, sarcomatous growth in the gland. There were many cases on record of supposed disappearance of sarcomatous tumours, but he agreed that in all probability many of these were inflammatory.

Mr. Bidwell mentioned two cases of cyst of the breast which did not refill after aspiration. That fact, he thought, suggested the possibility of spontaneous cure, seeing that the tapping could not in itself be curative. He agreed with Dr. Snow that the escape of clear fluid from the nipple was not absolute evidence of non-malignancy, for he had seen two cases of malignant growths in which clear fluid escaped.

Mr. Lockwood agreed that the injunction to cut into the tumour and see what it was would, if observed, save surgeons much humiliation. He related a case in which he had been called to a patient with ascites, evidently due to growths in the liver and great omentum. It transpired that ten years before a cyst in the left breast had been punctured and injected with iodine, and he believed that the subsequent growths were secondary to the breast affection. She had a large hard mass in that breast at the time.

Mr. Bryant, in reply, observed that he had never seen a dermoid cyst of the breast except, perhaps, in one instance. He insisted on the importance of the clinical history in deciding on the nature of the lump. He admitted that many of these cysts might go on to malignancy if the patients lived long enough but he did not think it was justifiable to tell patients that cysts, unless removed, were certain to be followed by cancer.

OBSTETRICAL SOCIETY OF LONDON.

F. H. Champneys, M.D., President, in the Chair.

Wednesday, December 4th, 1895.

Specimen.

Dr. Cullingworth, Supposed Tubo-ovarian Cyst.

Tubo-uterine Pregnancy; Primary Intraperitoneal Rupture; Recovery.

Mr. Bland Sutton read a paper on this subject, in which he detailed the possible modes of termination of a tubo-uterine (interstitial) pregnancy, and compared them with those of a purely tubal one. He related a case occurring in his practice of a woman aged 22, who had been married two and a-half years and had not been pregnant. Menstruation was fourteen days overdue when she was seized with severe pain in the belly and vomiting. When seen she was blanched, and the physical signs pointed to rupture of a gravid tube. On opening the abdomen a large quantity of blood was evacuated, and a rent was found at the right angle of the uterus from which arterial blood was issuing at several points. The bleeding surfaces were secured by silk ligatures passed through the substance of the uterus, and the tube and ovary cut away. The uterus was found to be unusually large, and, probably owing to the large decidua which had to come away, the patient vomited frequently during the seventy hours after operation. After the decidua had come away the patient recovered quite satisfactorily. The author believed this to be the first recorded example of primary rupture of the sac of a tubo-uterine gestation treated by a surgical operation. The ovum was not found, but no other explanation of the condition of affairs suggested itself than that of tubo-uterine pregnancy.

Mr. Alban Doran considered that Mr. Sutton had shown that the treatment of a ruptured interstitial pregnancy was relatively simple, though the danger was usually extreme. Amputation of the uterus was the course which had so often been recommended on partly theoretical grounds. But Dr. Dunning[1] recently lost a case of this kind during operation. In his report he very properly dwelt on the dangers of performing hysterectomy on a patient already in a profound state of shock. In regard to the decidua, Pilliet[2] had shown that so far from it being ill-developed in ectopic gestation, it was particularly well-formed and bulky. This fact must be remembered in association with the theory that the fœtus was relatively ill-developed.

Dr. Horrocks asked if the size of the uterus had been measured in any way. It was only stated in the paper that it was enlarged. He agreed that the case was probably one of gestation. As a result of investigations he had found that in cases of extrauterine gestation the uterus began to grow in size just in the same way as it did in intrauterine gestation, and if the embryo lived it went on growing, and did not stop at the end of a few months. If the fœtus died involution of the uterus commenced, and was completed unless prevented by complications such as would cause involution ordinarily. Hence in any given case the size of the uterus was a most important factor in the diagnosis. If the uterus were not enlarged one could say that either the case was not extrauterine gestation at all, or if it were the fœtus was dead, and had been dead long enough to have allowed involution to be completed. Of course it was to be remembered that the uterus was not so great absolutely as in intrauterine pregnancy; what was meant was that at any given date of pregnancy the uterus was as great in extrauterine as in intrauterine gestation when in the latter case the uterus had been emptied of its contents. He asked also whether the rupture in this case had taken place through the substance of the wall of the uterus or close to the edge where the Fallopian tube emerges.

Dr. Boxall inquired if, apart from the absence of menstruation for six weeks there existed any evidence, for example, morning sickness, of pregnancy having exceeded that duration; and also if Mr. Sutton, from a comparison with the character of preceding periods was disposed to regard the last flow prior to the operation as a regular period or as a hæmorrhage accompanying the abnormal gestation and symptomatic of it.

Mr. Sutton replied.

Uterus Didelphys.

Dr. Arthur Giles read this paper. He recalled the three principal types of double uterus, namely, uterus septus, uterus bicornis, and uterus didelphys. A description of these was given, with outline figures. He next described his case, observed at the Middlesex Hospital. The patient complained of a protrusion from the vagina; this was found to be the remains of the vaginal septum. Under ether the exact condition was ascertained; it was illustrated by a drawing. The author discussed the clinical features of uterus didelphys as illustrated by recorded cases. Abstracts of these were given under five headings: (1) Cases of unilateral atresia with retained menstrual products, 5 cases; (2) pregnancy in one-half the uterus, 8 cases; (3) simultaneous pregnancy in both halves, 2 cases; (4) cases uncomplicated by atresia or pregnancy, 6 cases. These 21 cases (including the author's) were all that he could find recorded during the last twenty-five years

[1] *Amer. Gyn. and Obstet. Journ.*, October, 1895.
[2] *Annales de Gynéc. et d'Obstét.*, October, 1895.

as occurring in living adults. [Two recently-published cases were also given which were met with after the paper had been sent into the Secretaries.] (5) Cases discovered on the *post-mortem* table, 4 cases. A table was given of the 21 clinical cases, illustrating the following points: (1) Age: Most of the patients were under 30. (2) Marriage: Fifteen were married; in 2 there was dyspareunia. (3) Parity: Pregnancy occurred in 14 of the 15 married cases; 11 had borne children and 3 had miscarried. Among the 11 sixteen labours occurred, of which ten were natural. The 6 cases of dystocia were as follows: Obstruction to labour by the empty retroverted half, 3 cases; obstruction by the vaginal septum, 1 case; forceps, 2 cases. (4) In 4 cases the two halves were of equal size; the right was the larger in 6 and the left in 11. (5) In only 1 case the vagina was originally single; in 6 there was atresia of one half; in the remainder the two vaginæ were patent and separate. (6) Menstruation was slightly delayed; it occurred at 14 in 3 cases, at 15 in 4 cases, at 16 in 4 cases, at 17 in 1 case, at 18 in 1 case, at 26 in 1 case. It was regular in 12 out of 16 recorded cases, and painless in 12 out of 15. In 1 case the two halves menstruated separately. In the 8 cases of single pregnancy there is mention in 4 of a decidua in the non-gravid half. The clinical complications that might arise: (1) Unilateral atresia, with retained menstrual products; (2) dyspareunia; (3) double vaginitis or endometritis, unsuccessfully treated by application to one half only; (4) obstruction to labour by the retroverted non-gravid half; (5) obstruction due to the vaginal septum; (6) retained and undiscovered products of conception in one half in cases of double pregnancy. A bibliography was appended.

Dr. Galabin referred first to two cases of uterus didelphys, one associated with congenital absence of the vagina, one with fibroid tumour of one uterus only, notes of which are appended to Dr. Giles's paper. In a third case he had met with dystocia of a very unusual kind arising from a double uterus—not a complete uterus didelphys, but rather a uterus bicornis, yet not of the usual kind, for the uteri were completely separate, without any uniting band, even below the level of the internal os. The lower part of the cervix, however, was common. The woman had had several children normally; but, for some unexplained reason, in her last pregnancy the poles of the two uteri became turned in opposite directions. The result was that the ovum, which began in one uterus, made its way also into the other. At full term one fundus was in the normal position, the other fundus lay in a reversed position in the pelvis, and contained the head of the fœtus. The patient was admitted into Guy's Hospital in labour, and the true state of affairs was naturally not discovered till abdominal section had been performed. A large hard mass filled the pelvis, and was thought to be a fibroid tumour. The os was quite out of reach, the liquor amnii had escaped, and a hand of the fœtus could just be touched. Cæsarean section having been performed, and the fœtus removed, the displaced body of the uterus at once sprang back to its normal position, and the two halves lay side by side. The incision, at first straight, was thus converted into an elongated U shape, and the centre of the U ran through very thin over-stretched cervical tissue. The edges had become so distorted that it was very difficult to sew up the incision satisfactorily. This was at length accomplished, and the patient recovered without a bad symptom, the child also being alive.

Dr. Amand Routh thought these cases were not so rare as the scanty bibliography appeared to indicate. He had seen two cases. The first was described and pictured in the *Illustrated Medical News*, March, 1880. The woman was married, 3-para, aged 24 years. Catamenia began at 13½. There was amenorrhœa during pregnancy. The vaginal septum had been torn through, but the two uteri were quite distinct, one being anteverted, 2½ inches long; the other (right) being 3¾ inches long and retroverted. Bimanually the uteri were felt to be quite separate, but joined loosely by a thick transverse band. She was suffering from subinvolution in the larger uterus. His second case[1] was that of a single woman, aged 27, who was under the care of Dr. C. H. F. Routh. She was found to have a tense vaginal ridge on the left side continuous with an elastic mass in the pelvis, on the left of what appeared to be a normal uterus. The vaginal ridge was incised, and its contents allowed to escape. It was then found to be a case of distinct double uterus and double vagina, with left vaginal atresia producing left hæmatocolpos and hæmatometra. The left uterus eventually contracted down to 2½ inches, but remained retroverted.

Dr. Giles, in reply, agreed with Dr. Amand Routh as to the degree of rarity of these cases. He was interested in the cases related by Dr. Galabin, and would ask permission of the Society and of Dr. Galabin to include a short account of the two cases of uterus didelphys in the paper in the form of an appendix.

[1] *Obst. Soc. Trans.*, vol. xxxvi.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

D. Argyll Robertson, President, in the Chair.

Wednesday, December 4th, 1895.

Cases.

Dr. R. A. Lundie showed a case of Rare Tumour of the Upper Lip in a boy, aged 13. It was of six months' growth, slow at first, but fast later. It appeared in the form of a beak or supernumerary nose. A wedge-shaped portion of the lip was removed, and when the tumour was examined afterwards by Mr. Stiles it was found to be an endothelioma with myxomatous degeneration, or, as it used to be called, a myxo-chondro-sarcoma.—Mr. Stiles showed a Low and a High Power Slide from the case.—Dr. W. Allan Jamieson showed a case of Morphœa under the right eye in a boy, aged 10.

Exhibits.

Mr. Hodsdon, for Dr. Felkin, showed a new Safety Pin, which by means of a sliding spring was locked after being closed, and was opened by pressure on the spring by the thumb nail. It was made by Mr. Robb, of Kincardine O'Neil.—Mr. Stiles showed several Pneumatic Rubber Trusses for double inguinal hernia in infants, which seemed to meet most of the difficulties of that particular time of life, and the rapid growth.

Oxaluria.

Dr. J. C. Dunlop read a paper on oxaluria and the physiological excretion of oxalic acid in urine. In all men eating a mixed diet oxalic acid was a normal product in excretion. It was precipitated a calcium salt in octahedral form and in dumb-bell crystals, the latter soluble in acetic acid. In 35 per cent. of the urines he examined he found deposition of oxalate of lime. Excess of lime or excess of oxalic acid might prevent the precipitation, the latter most. A deposit of crystals of oxalate of lime meant an excess of oxalic acid. Dr. Dunlop restricted those under observation to a diet absolutely free from oxalic acid, and then found a deficiency in excretion. He then added tea, which contained oxalic acid, and that substance was present in the urine. The amount of oxalic acid excreted varied much from day to day. Various figures were given—from 5½ to 25 milligrammes in the twenty-four hours. He found 17.2. The excretion of oxalic acid was affected by two factors—the ingestion of oxalic acid in the food and the acidity of the stomach after food. The clinical symptoms said to be concomitants of what was called "oxaluria" in the books were discussed, and shown to be of little help. Many of them occurred in merely acid dyspepsia as well as when oxalates were present. An artificially produced acidity increased the excretion of oxalic acid in oxaluria, as also did the ingestion of oxalic acid. The nervous symptoms were due to the dyspepsia present and not to an accumulation of the oxalic acid. Oxaluria, therefore, did not differ essentially from acid dyspepsia, and should not be differently treated.

Dr. Noel Paton agreed that the symptoms were simply those of acid dyspepsia.

Dr. Graham was inclined to stand up for his old friend oxaluria on the grounds given by Dr. Dunlop, on the ground of those cases in which undoubtedly oxaluria and diabetes alternated, and on the ground of recent experiments on dogs in regard to respiration and dyspnœa.

Dr. Lockhart Gillespie thought Dr. Dunlop had proved his thesis, but was rather dogmatic in saying that in no other circumstances could oxaluria occur. Might not oxaluria be due to fermentation? Then in what form of acid dys-

pepsia did oxalates appear—in lactic, acetic, or hydrochloric? Might we not get oxalic acid from the decomposition of proteids?

Dr. James said he also wished to take up the cudgels on behalf of the physicians as against laboratory investigators. He believed oxaluria might result from deficient metabolism. With long-continued milk diet, or milk diet followed by acids you get acid dyspepsia—what then?

Dr. Stockman doubted if oxalates were not formed from starches and sugars. Certain persons alternately excreted oxalates and sugars. If Dr. Dunlop went on long enough, he might get more typical cases of this. He thought too much stress had been laid on oxalate of lime crystals in the urine. There might or might not be oxalic acid present, but all that the microscope showed was that there was something present in the urine which threw down oxalic acid. He had never yet seen a case of oxaluria in the sense in which it was understood in this country.

After some remarks from Dr. R. F. C. Leith,

Dr. W. Russell said he was not inclined to accept laboratory work as a sole guide to the physician. After all, oxaluria, despite Dr. Noël Paton, was referred to even in students' books as an exploded disease. He was taught that it was an associate of certain intestinal disturbances. Could Dr. Dunlop exclude all the processes in the gastro-intestinal tract as possible producers of oxalic acid?

Dr. Dunlop replied.

Brain Surgery.

Dr. George Gibson read a paper entitled Remarks on the Results of Surgical Measures in a Series of Cerebral Cases. He referred to six cases that had been under his own care: (1) A gliosarcoma, which had been operated on, and recovered; (2) a glioma of the corpus striatum, operated on, died; (3) a cyst *plus* fibrous sarcoma in the middle lobe of cerebellum, operation and uninterrupted recovery; (4) boy with alleged compression of the skull at birth, convulsions for two months, when the results of trephining were negative; (5) a woman—a fright and a blow, "fits" eight years later; became a dement; operation was followed by hyperæmia and death; histologically a condition of general paralysis was found; (6) a man who had received a blow on the head, and presented various symptoms of intracranial pressure; on trephining there was found thick red membranes, and increase of cerebro-spinal fluid only; the patient recovered. The conclusion forced upon one by the experience of this series of cases was the necessity for bringing in surgical help at the earliest possible moment.

Mr. Caird desired information as to optic neuritis in such cases. How often was it recovered from? What was the limit?

The President, answering these questions, said he thought that if the optic neuritis had not lasted so long as to lead to permanent changes in the fibres of the optic nerve there was recovery. The time limit was difficult to fix.

Dr. W. Russell spoke of the value of a series of observations of this kind from one person.

Dr. Gibson replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

Lombe Atthill, M.D., President, in the Chair.

Friday, November 22nd, 1895.

Specimens.

Dr. W. J. Smyly showed the following specimens: Ectopic Gestation, three specimens. (1) The right tube was enlarged and ruptured, the left also enlarged, and the ovary of the same side cystic. Operation in consequence of commencing putrefaction of hæmatocele; recovery. (2) Uterus and gestation sac containing placenta, also full-term macerated fœtus 21 inches long, removed two months after term. The uterus was so much involved in the gestation sac, which had evidently been originally interstitial, that its total removal was considered advisable; recovery. (3) Ruptured tubal pregnancy of right tube; left tube and ovary had been previously removed for suppuration following birth of only child fifteen months previously. Admitted to hospital in very bad health. Enlarged right tube ruptured during bimanual examination, collapse, abdominal section; recovery delayed by inflammation of left kidney. Double Pyosalpinx, two specimens. Both recovered. Uterus removed in a similar case. Abdominal section. Attempt to remove tubes failed after rupture of one with extravasation of pus; vaginal hysterectomy; abdominal cavity shut off with Mikulicz's bag; recovery. Pedunculated Myoma larger than adult fist. The soft tumour was diagnosed as dermoid of left ovary, but found to be a myoma; recovery. Myomatous Uteri, four specimens. (1) Patient had been greatly reduced by weeks of septic fever and constant pain; uterus curetted and cancer diagnosed by microscope. The organ, which was about twice the normal size, was removed *per vaginam* by *morcellement*: immediate relief from pain and fever; recovery rapid. (2) Uterus weighing 2 lbs. removed for bladder symptoms. A myoma as large as an adult fist enucleated from left broad ligament with difficulty, and a pedunculated myoma of same size easily removed after the uterus. Bladder trouble continued, but was improving; convalescence otherwise good. (3) Myomatous Uterus removed twelve hours previously; fragments weighed 3 lbs.; doing well; pulse 88, temperature 98·2°. (4) Myomatous Uterus removed by abdominal section by Martin's method—panhysterectomy. Patient, who was very anæmic at time of operation, died in twelve hours. Cancerous Tumour of Left Ovary: Operation simple; sudden and severe internal hæmorrhage same evening; abdomen reopened, bleeding controlled, and abdomen cleared of clots; convalescence uneventful until ninth day; complete paraplegia with anæsthesia, loss of reflexes in lower limbs, and paralysis of bladder; some fever for a week, then normal temperature, but paralysis persisted.—Dr. E. Winifred Dickson exhibited a Fibromyoma removed from the Cervix Uteri in a 4 para, aged 30. The last pregnancy had ended a few weeks previously, at 6½ months; there had been severe hæmorrhage on this occasion, and the tumour had been then diagnosed. The symptoms had been slight. The tumour was removed with scissors, and the edges of the wound united with sutures. There was not much hæmorrhage. The patient made an uninterrupted recovery.—Dr. Alfred Smith showed a Uterus with large Fibro cystic Tumour, which was removed by complete hysterectomy; recovery was rapid.—Dr. R. A. Flynn exhibited a Uterus removed by vaginal hysterectomy for cancer in a woman aged 46, who had had ten children. The operation was performed on November 14th, the broad ligament being secured with Landon's clamp forceps; the clamps were removed in forty-eight hours. The patient had up to the present (November 22nd), nine days after the operation, made an uninterrupted recovery.

Paper.

Dr. Walter Bernard (Londonderry) read a paper entitled, "Brief Sketches copied from my Breviary of the Priceless Sayings of other Men; with some remarks showing what valuable outposts they were in helping me to extend the boundaries of my knowledge, and to avert death while practising the obstetric art."

LIVERPOOL MEDICAL INSTITUTION.

G. G. Hamilton, M.B., F.R.C.S.Edin., in the Chair.

Thursday, December 5th 1895.

Pathological Section.

Lamellar Fibromata.

Dr. Abram read a short paper upon lamellar fibromata, which was illustrated by specimens and lantern slides; he expressed his indebtedness to Professor Boyce for the latter.

Dr. Buchanan had examined one of the specimens, and considered the structure to be identical with that of hydatid membrane. He had not observed any cellular elements.

Dr. Wiglesworth called attention to the similarity in microscopical structure shown by Dr. Abram's specimens and the fibrous thickenings of cartilaginous consistence which are not infrequently met with on the splenic capsule in old people and alcoholic subjects, and said the latter formations might be described as lamellar fibromata.

Professors Boyce and Sherrington, Messrs. Hamilton, Paul, and Larkin discussed the subject, and Dr. Abram replied.

Lesions after Carbolic Acid Poisoning.

Dr. Buchanan showed the stomach from a case of carbolic acid poisoning, also a beautiful drawing of the appearance of the specimen in the fresh state. He drew attention to the escape of the tongue and glosso-epiglottidean folds from injury, and pointed out that the duodenum was intact. The stomach was greatly contracted, and the mucous membrane in the fresh state had a greyish brilliant pearly lustre like oily putty.

Brain Tumours.

Dr. Wiglesworth showed (1) Brain from a case of Hydrocephalus: (2) Brain from a case of Cerebral Tumour.

Mr. Parkes referred to a case of brain tumour in which some six years ago he had removed a growth from the right Rolandic area, the patient being still alive and well. In his case, however, the diagnosis had not been one of great difficulty, unlike Dr. Wiglesworth's, in which diagnosis of the condition was impossible.

Cerebral Hæmorrhage.

Dr. A. W. Campbell showed some brain sections from a case of cerebral hæmorrhage prepared by a new method. They were made in March, 1895, and had retained their colour satisfactorily. The following is the method of procedure: 1. Immersion of the brain in 1 in 20 carbolic acid for a few days. 2. Sections ⅛ to ¼ of an inch in thickness are then cut. 3. The sections are placed face downward upon a piece of glass, surrounded by a framework of wood, and covered with melted paraffin (46° C.); the paraffin is allowed to set. 4. The glass is then lifted up, some Farrant's solution poured upon the section, and the glass replaced, the edges being sealed by Canada balsam. 5. A plaster-of-paris frame is then moulded on to the sides and back of the specimen.

Lymphangioma.

Mr. Murray exhibited some patients suffering from lymphangioma, and sections of the growth.

Dr. Parkes had lately had a similar case. He discussed the question of angeiomata and lymphangiomata, and asked for an opinion on the subject of "degenerated nævi," which he considered to be lymphangiomata.

Professor Boyce, Mr. Hamilton, and Dr. Barendt spoke.

Sacrococcygeal Tumour.

Messrs. Murray and Paul brought forward a case of sacrococcygeal tumour in a boy, aged 2 years. Mr. Paul said the growth measured 5 inches by 4 inches by 3 inches, and was situated between the rectum and the coccyx, projecting on the surface behind the anus, where the skin was ulcerated over it. The central part consisted of a soft fungating growth of malignant appearance, composed for the most part of trabeculæ of connective tissue set with one or more layers of cubical epithelium, but also containing tracts of skin with hairs, sebaceous and sweat glands. The outer parts of the growth were dense and fibrous, and contained miniature bone. In another part Lieberkühn's follicles were recognised. The structure, therefore, was very complex, and discussing the relation of this with other tumours, Mr. Paul thought it should be grouped with the congenital renal and thyroid growths.

Mr. Parker said Mr. Paul had not mentioned the adenoid variety of these growths, of which he had shown a specimen at the previous meeting. He considered the growth was not malignant, but simulated the malignant state from the rupture of a cyst, and subsequent septic inflammation.

Miscellaneous Specimens.

Mr. Thelwall Thomas exhibited (1) Specimens of Tuberculosis of the Peritoneum snipped out during an operation. The specimen showed typical tuberculous granulations. The boy 18 months after operation was in perfect health. (2) Implantation Cyst from the head of the metatarsal bone of the great toe. The epithelial graft had no doubt been made in the process of scraping for caries, which operation had been performed on three occasions. (3) Multiple Epithelomata (*a*) epithelioma in centre of the lower lip removed by operation, followed three years later by two separate and distinct growths in the same lip, but away from the scar; (*b*) Hard Warty Epithelioma of the Lip and Juicy Epithelioma of the Under Surface of the Tongue, from a man, aged 39. —The Chairman showed (*a*) Union of Intestine by Murphy's Button; (*b*) Cholecystocolostomy.—Dr. Leon showed Photographs of a "freak" now on exhibition in Liverpool. He considered it to be a case of osteomalacia.—Dr. Annett showed Microscopic Lections from a case of Meningo-Encephalitis.

Hunterian Society.—At a meeting on November 27th, the President in the chair, Messrs. B. Byrne, J. McClymont, R. Jones and H. E. Blandford were elected Fellows of the Society.—Dr. Herman read a paper on Vaginismus and Allied Affections. He divided these into three classes, namely: 1. Simple smallness of the vaginal orifice. The treatment was to enlarge the orifice—(*a*) by gradual dilatation, (*b*) by rapid dilatation, (*c*) by incision. The last method was the best. 2. Disease of the vulva such as to make it tender. One such condition was that to which the late Professor Breisky of Vienna had given the name of kraurosis vulvæ. It was characterised by progressive contraction and tenderness of the vaginal orifice. Mr. Lawson Tait had described a condition having similar features, but in addition patches of purple to brown discoloration. He thought Tait right in thinking that his cases were examples of the disease described by Breisky, but that the coloration was not an essential part of the disease. Kraurosis came on towards the climacteric age. Sometimes it followed oophorectomy. It was often associated with vaginitis, and with itching and burning of the vulva without contact. The best treatment was the use of sedative vaginal injections, such as lead or boric acid; and dusting the vulva with sedative powder, such as boric acid or dermatol. If such treatment failed, or if the patient were a married woman, the only treatment was to excise the tender and shrunken mucous surface. He had done this in one case with success. 3. Vaginismus. This was a nervous disease, attended with hyperæsthesia of the vulva and spasmodic contraction of the levator ani and other muscles, often associated with dysmenorrhœa and hyperæsthesia of the rectum. This disease was generally discovered on marriage, but might suddenly appear after years of healthy married life. Sometimes it was cured by curing dysmenorrhœa; otherwise genuine vaginismus was incurable, even by childbirth, though in the course of years it got somewhat less. It was sometimes difficult to distinguish genuine vaginismus from mere smallness of the vaginal orifice in a sensitive patient. In a doubtful case the best treatment was to give the patient the benefit of the doubt and enlarge the vaginal orifice by operation. Dr. Herman exhibited a drawing of a case of kraurosis vulvæ. Mr. Stevens asked if herpes vulvæ might not be the actual lesion in some cases. Dr. F. J. Smith thought that kraurosis vulvæ was a trophoneurosis allied to morphœa. Mr. Sandors (President) mentioned leucoplakia of the tongue and a fibrous condition of the male prepuce as probably pathologically identical with kraurosis vulvæ. Dr. Cotman and Dr. Shadwell also discussed the condition; and Dr. Herman replied.—Dr. Arnold Chaplin read a paper on Physiological Rest for the Lung in Phthisis, which was a plea for non-intervention by mechanical means in cases of pleural effusion, whether of serum or pus, where the underlying lung was the seat of tuberculous processes, and was based on clinical experience of some two or three cases in which, after aspiration, the patient had rapidly gone down hill. He also advocated artificial restraint of the movements of a tuberculous lung. The President said he had actually been asked by the late Dr. Mahomed to produce an artificial pneumothorax in a case of phthisis. Mr. Openshaw remarked that the late Dr. Sutton agreed with Dr. Chaplin in objecting to aspiration in such cases. Mr. Humphreys, Sir H. Barron, Dr. Cotman, Mr. Stevens, Dr. J. H. Sequeira and Dr. F. J. Smith also discussed the paper; and Dr. Chaplin replied.

Harveian Society of London.—At a meeting on November 21st, Sir John Williams, Bart., M.D., President, in the chair, Mr. Henry Juler read a paper on Some Forms of Iritis. Excluding the traumatic and sympathetic forms, he divided iritis into two main groups, plastic and serous. Dismissing the latter with a few remarks Mr. Juler entered more fully

into the causes of plastic iritis. He considered all kinds arising spontaneously to be due to some dyscrasia, whether it were gout, rheumatism, syphilis, tuberculosis, or any other constitutional disease. The uric acid diathesis could exist, in his opinion, and give rise to this affection without any other evidence of gout, and it was very necessary to examine the urine, and make a quantitative estimation of the nitrogenous excreta. Certain local signs by which the different varieties could be differentiated were pointed out, but the importance of examining the patient as to his general health was emphasised. Speaking of the treatment, Mr. Juler said he could not lay enough stress upon the vital importance of adopting both general and local rest. The latter was best carried out by means of sulphate of atropine, which paralysed the sphincter pupillæ and the ciliary muscles. Besides giving rest to the intrinsic muscles of the eye, it prevented or, if present, broke down iritic adhesions, and was also a local sedative. To relieve pain by the use of several leeches, and to give sleep by administering opium or bromidia, were useful adjuncts. In gouty subjects the exhibition of hot air baths, attention to diet and regular habits, and depletion, were essentials. Mercury in syphilitic iritis, salicylate of soda in rheumatic iritis, and such-like constitutional treatment, were not to be forgotten.

Society of Anæsthetists.—At a meeting on November 21st, Mr. G. H. Bailey, the President, delivered his introductory address, in which he commented upon the large number of fatalities from chloroform administration reported in the medical journals this year. He suggested that the meetings of the Society should be occupied more in the discussion of clinical cases, and trusted that thereby the Society might gather valuable information tending to diminish the present alarming mortality due to chloroform administration.—Mr. Richard W. Lloyd read notes of a case of Strychnine Poisoning by Hypodermic Injection, in which he administered chloroform for upwards of six hours. He referred to the address of Dr. Horatio C. Wood on Anæsthetics at the Berlin International Medical Congress in 1890, in which that physician said that for many years chloroform had been used as the antagonist to strychnine, and it seemed rather odd that strychnine should not have been employed as the antagonist to chloroform. Several recorded cases of strychnine poisoning treated by the administration of chloroform were cited. The difficulty or inability to swallow, and the promptness with which rectal injections were expelled in cases of strychnine poisoning, rendered medication by hypodermic injection and inhalation of vapour especially valuable methods of treatment, and therefore when the strychnine had been swallowed apomorphine by hypodermic injection was the most suitable emetic; and chloroform by inhalation was another most applicable antidote when the spasms are severe. Dr. Silk thought that Mr. Lloyd's paper was of great value to anæsthetists, as raising the whole question of the use of strychnine in cases of exhaustion or "shock" under anæsthetics. Dr. Silk had no experience of the antidotal action of chloroform in cases of strychnine poisoning, but he had a very high opinion of the value of strychnine in conditions of "shock." He had employed hypodermic injections of strychnine for this purpose with increasing frequency since Professor Wood, of Philadelphia, had drawn attention to it, and of late he had been in the habit of injecting one-sixtieth of a grain hypodermically immediately after anæsthesia had been induced in cases in which there was reason to anticipate any serious degree of exhaustion from whatever cause, repeating the dose, if need be, towards the end of the operation. Dr. Silk had seen no cumulative effects following the use of the drug, but, in the face of Mr. Lloyd's experience, this was obviously a possibility to be borne in mind. From some cases which had come under his notice, Dr. Silk was further inclined to think that the drug was of value in preventing after-sickness, but he should not like to speak with certainty upon this point, although Mr. Lloyd's case rather supported that view. Mr. White referred to the great benefit which frequently attended the prolonged administration of chloroform in cases of tetanus, and alluded to a number of cases of traumatic tetanus in which the use of chloroform during the more acute spasms, and extending at intervals over many hours, had proved of the greatest advantage. Dr. Dudley Buxton, after referring to the President's address, for which he thought the Society owed him a cordial vote of thanks, said, with regard to Mr. Lloyd's paper, that he regarded the right time to use strychnine as an antagonist to chloroform just before the administration of the anæsthetic was commenced. If used when dangerous symptoms had occurred it was of less value, probably because it was imperfectly absorbed. The best method of its exhibition was by hypodermic injection. Although the employment of very large doses of strychnine in critical cases—even gr. ½ had been recommended—he (the speaker) had seen dangerous interference with respiration from this drug, and believed its use must be less heroic. In persons blanched and pulseless from prolonged bleeding strychnine was invaluable as an adjuvant in chloroform narcosis. Mr. Eastes recalled to mind a case of tetanus in a boy, aged 15, treated at Guy's Hospital in 1864 for seventy-one hours, but unsuccessfully, with inhalation of chloroform, of which from 2 to 8 drachms were used every hour. The anæsthetic was pushed during the tetanic spasms, which it greatly controlled, but withdrawn in the intervals or when food was given. At the necropsy the bronchi were filled with dark purulent secretion, whilst the other organs were healthy. Here, therefore, the prolonged use of chloroform vapour apparently caused bronchitis, a result rarely ascribed to that anæsthetic, though often charged against ether. Mr. Eastes had also given chloroform for six hours continuously to a lady suffering severely from the passage of biliary calculi, in whom no unpleasant after-effect was produced by the anæsthetic. Mr. Tyrrell said it would be interesting to know what dose of strychnine was given, and whether it was given every four hours night as well as day. The dose which would produce a physiological effect varied in different people. He had known one dose of $\frac{1}{20}$ gr. produce muscular spasms, and in the same patient a week later one dose of $\frac{1}{30}$ gr. produced the same result. As an antidote to the depressing effect of chloroform on the circulation, it was necessary to produce a slight physiological effect to do any good, and for this purpose he generally administered $\frac{1}{30}$ gr. to an adult.

Medico Psychological Association.—A general meeting (being the first statutory meeting since the incorporation of the Association) was held on November 24th, under the presidency of Dr. Nicolson. Before beginning the ordinary business the President referred to the death of Dr. Jamieson, of Aberdeen, the oldest superintendent of an asylum in Scotland, who had died at the ripe age of 77. In his day he carried on a great work at Aberdeen, while his writings on insanity were very well worth perusal now in the light of the best work that had been done in recent years.—Dr. Gilmore Ellis read a paper on "Latah," a disease which affected the natives in the Malay peninsula. It seemed closely allied to the hysterical or hypnotic condition, but was yet essentially different from them. Many of the cases seemed to be markedly of an imitative character. The onset was due to the person being startled by something, or by being suddenly excited; the condition varied in degree, and in his experience it did not incapacitate the person affected from ordinary work. Latah was just as frequent at the present day, when there were British-taught schools throughout the peninsula, as it was forty or sixty years ago. The disease was not of the nature of insanity in any way, for the subjects of latah carried on their work like other people, and were very able as far as Malays go. The histories of some cases were given. A discussion followed, in which the President and Drs. Cooke, Mercier, Mickle, Seymour Tuke, Richards, and Fletcher Beach took part.—Six candidates, including one lady, were elected ordinary members of the Association.

Nottingham Medico-Chirurgical Society.—At a meeting on December 4th, Dr. Cattle in the chair, Mr. Anderson read a paper on Nephrectomy for Hydronephrosis. Details of five cases were given, all of which recovered after operation. In two (a boy aged 10 and a woman aged 37) the usual symptoms of hydronephrosis were present. In both the origin of the ureter was reduced to a pin-hole, the kidney substance atrophied, especially in the case of the woman, whose symptoms had lasted twenty years, and the pelvis

dilated to the capacity of a pint or more. In three other cases, one in a man, the hydronephrotic condition was associated with mobility of the organ. The man was successfully treated by suturing the kidney to the loin. The same treatment was pursued in the case of a female, but the kidney subsequently became loose. This was occasioned, it was thought, by the stitches cutting through the attenuated kidney substance. The patient was seized with rigors; high temperature and swelling of the abdomen. On exploration the kidney was found swollen and livid, owing to twisting of the pedicle. The kidney was removed and the patient recovered. In a third case of hydronephrotic and movable kidney extirpation was at once performed. The paper concluded with a review of the various causes of hydronephrosis, the writer remarking that he believed his cases of pinhole ureter were almost unique.—After some remarks by Dr. WATSON, Mr. PRYCE read notes of a case of Diabetic Neuritis in a man, aged 50, who had drunk freely. He was ataxic, but Romberg's symptom was not well marked. In the left leg no knee-jerk could be obtained; there was an erythematous rash and trophic ulcers on the foot. He had suffered from sciatic pains. The urine contained much sugar. The CHAIRMAN and Mr. ANDERSON made remarks, and Mr. PRYCE replied.—Mr. ANDERSON showed the following specimens: (1) An Ovarian Tumour weighing 10 lbs.; (2) Tumour involving Right Lobe of Thyroid Gland; (3) Two Hydronephrotic Kidneys with Pinhole Ureters.

TORQUAY MEDICAL SOCIETY.—At a meeting on November 20th, R. POLLARD, M.B., President, brought the case of Dr. Anderson, of Tobago, before the notice of the members present, and the following resolutions were carried unanimously: 1. "That on the grounds set forth in the interim reports of the Civil Rights Defence Committee, the members of the Torquay Medical Society present desire to express their entire concurrence with the Civil Rights Defence Committee in earnestly inviting members of Her Majesty's Government, Members of Parliament, public men and public bodies both medical and lay, to co-operate with the Committee in defence of the chartered and statutory rights of medical men, and of the ancient rights and liberties of British subjects." 2. "That this Society, having considered the case of Dr. Anderson, desires to express its sympathy with him under the wrongs he has sustained, and recommends for approval by the Council that a sum of five guineas be contributed in the name of the Society to the fund being raised in support of Dr. Anderson's appeal." The sum of five guineas was subsequently forwarded to the Civil Rights Defence Committee, with a further sum of ten guineas subscribed by medical men in Torquay, and a memorial signed by most of the medical men in Torquay has been forwarded to their M.P.—Captain Philpotts, R.N., M.P.—asking him to afford the Civil Rights Defence Committee his co-operation and support.

REVIEWS.

MANUAL FOR ARMY MEDICAL SERVICES—ADDENDA. By Surgeon-Colonel W. E. RIORDAN, Medical Staff. London: Eyre and Spottiswoode. 1895. (Cr. 8vo, pp. 56. 2s.[1])

ON May 3rd, 1890, we reviewed this admirable manual, which has proved a very valuable book of study and reference, not alone to the medical but we believe to other branches of the army. The changes—inevitable and necessary—in army organisation and administration, even during the short space of five years, have, in the opinion of the author, called for addenda extending to over fifty pages, which take the form of additions to the various chapters in the *Manual*. The changes in the last edition of the *Manual of Military Law* are first touched on; and it is strange to find that this important official volume is not, as it ought to be, faultless; for instance, "in the definition of a corps, the Army Hospital Corps is still included, instead of the Medical Staff Corps;" of course the former name has been obsolete for more than a dozen years past. Surgeon-Colonel RIORDAN deals with the extended powers of summary punishment conferred on commanding officers, which, however, are safeguarded by the right of a prisoner to have the option of a district court martial. He mentions the new arrangements by which principal medical officers are relieved of details connected with pay, clothing, and equipment of the Medical Staff Corps, which now devolve on the company officers and quartermasters.

His criticisms seem to us fair and always to the point, while the suggestions he occasionally throws out are well worthy the attention of those in authority. He makes the admirable suggestion, for instance, that when a well-conducted soldier is allowed to re-engage he should start with a clean company sheet, instead of storing up a record of bygone and atoned-for offences against him.

In treating of Boards, he naturally refers to the petty and mischievous exclusion of medical officers from mixed Boards. Although their opinion may be asked, the advantage of their knowledge, consultation, and advice is lost on report, even on such special medical subjects as sanitation and hygiene. He comments on another ridiculous regulation whereby "the judicial principle of inquiry is in many instances set at naught." For example, if there are local sanitary defects of an engineering character to be inquired into, the President of the Board is to be the local commanding Royal Engineer; or, if there be defects in the provisioning of the troops, the President of Inquiry is the local officer commanding the Army Service Corps. By this arrangement these officers probably report on their own acts and shortcomings.

No fewer than twenty out of fifty pages of the addenda are in Chapter V, treating of organisation and administration. The author writes: "The primary object of military organisation is to render the soldier individually and collectively as efficient as possible," and "the ultimate object is, with a minimum sacrifice, to defeat an enemy," an excellent definition, and ideal, no doubt, to be aimed at by our War Office, but the big blot on our system is the "diffusing of authority," an evil which greatly impressed the Hartington Commission, and through which very few heads of departments are allowed to come into direct contact with the military or civil heads of the army. It is to be hoped this defect will be met in a reorganised War Office. Every question, however important or trifling, has to filter through a series of War Office officials. Under this system all direct power or responsibility is diffused or lost. The remedy is concentration at the head and decentralisation at the extremities of an army administration. The latter, though easy enough in such an army as that of Germany, is very difficult for us with our large colonial and Indian garrisons. For much of the delay and circumlocution at headquarters the author very properly holds "no one accountable." Greater devolution must be extended to our units of regiments, batteries, troops, etc. As matters are, regimental officers are so bound by rules and regulations, and "unaccustomed to stir in the matter of providing themselves or their men with anything," that they come to lean helplessly on the departments. The power of initiative is lost or stunted through repression and non-use. This was specially noticeable, he remarks, when medical officers, owing to be regimental, were suddenly thrown on their own resources of administration and command. The system of regimental fetters has, it is declared by competent authority, developed in the British officer "an extravagant dread of responsibility in administrative matters," yet no men are more trustworthy and self-reliant when really thrown on their own resources and their faculties allowed free scope.

In discussing the duties and qualifications of an efficient staff officer, the author shows the absolute necessity of cordial and close relations between these officers and those of regiments. It is just here that the present arrangements of the Medical Staff lamentably break down. The medical officer is far more in physical touch with regiments and corps than any other of the general staff, but he is isolated and prevented from coming into mental and moral touch with them to his and their infinite disadvantage. "Community of feelings" has become sadly interrupted, and Surgeon-Colonel Riordan thinks this can best be remedied by giving medical officers army rank, which would break down distinctions between men who are essential to each other,

[1] The unsold copies of the book with addenda attached will be sold at the original price, 6s.

The medical department exists merely at the War Office; its executive is the Medical Staff, which is not a department but an integral and essential part of every unit and branch of the army.

The author recalls the fact that the Royal Wagon Train organised for medical transport during the Peninsular war was disbanded in 1833; and so for twenty years before the Crimean war we had absolutely no provision for succouring or removing the wounded. Such want of provision seems almost incredible; yet, with the terrible experiences of the Crimea it took another twenty years to inaugurate our present field medical organisation; at the end of yet another twenty years it is very doubtful if we are now sufficiently prepared.

The addenda on Hygiene are interesting and important, and it is shown that, while a general knowledge of that subject is desirable on the part of all military officers, all "questions of vital importance must ultimately be referred to the medical officer."

Chapter XIII, dealing with the Organisation of an Army Corps, the author shows yet once again the absurdity and futility of a general attempting to keep the principal medical officer of the force at arm's length on the line of communications. His chief and most difficult work will be the "evacuation of the wounded from the fighting line," and therefore his position must be in front.

We have said enough to show the value of this *Manual* and its addenda, which should certainly be in the hands of every medical officer who wishes to get a thorough grasp of his military duties and position.

Clinical Lectures on the Prevention of Consumption. By William Murrell, M.D., F.R.C.P. London: Baillière, Tindall, and Cox. 1895. (Cr. 8vo, pp. 103. 3s. 6d.)

These lectures, delivered by the author at Westminster Hospital, discuss points of great importance in the history of the disease. After drawing attention to the terrible yearly mortality, as well as the physical incapacity caused by it, he enters upon the question of its contagiousness. He deals summarily with the well-known Brompton statistics, and shows by the evidence of experimental pathology and clinical observation that phthisis is a communicable disease. In discussing the relation of tuberculosis in animals to that in man Dr. Murrell takes the opportunity of showing that tuberculin has not been a failure in the sense of providing a valuable diagnostic agent in tuberculosis in animals. The predisposing causes important in the prevention of phthisis are also dealt with. The very important and practical question as to whether phthisis should be made a notifiable disease is discussed. The author, although acknowledging the propriety of it, does not think that public opinion is yet ripe for it. Finally he draws attention to a number of practical points in preventing the spread of phthisis, especially to those living in the same house or nursing the patient. These lectures contain information based on sound principles, and are also an expression of our greatly increased knowledge of phthisis obtained by the aid of bacteriology.

NOTES ON BOOKS.

Diaries.

Messrs. John Walker and Co., Limited, Farringdon House, Warwick Lane, London, E.C., publish a large number of convenient diaries carefully compiled to meet various wants. Amongst the pocket diaries a very excellent form is the *Graphic Diary* (No. 17), a thin long oblong volume which lies flat in the breast pocket (1s. 6d. to 2s. according to binding). The No. 1 diary is a similar diary, but adapted in shape to the waistcoat pocket (cloth, 6d.; American Russia, 1s. 6d.). The No. 2 diary, rather longer, can also be carried in the waistcoat pocket (6d. to 2s.). Nos. 3 and 4 are flat diaries for the breast pocket, allowing rather more space for each day. All the diaries contain separate almanacs, and pages for cash accounts and for memoranda, and all can be obtained in loose leather cases, into which "refills" can be inserted, the book being thus renewable yearly (No. 4 in this form in American Russia case costs 5s.). The same firm issue a desk diary with detachable sheets, which can be renewed yearly, convenient for noting casual appointments, etc.

Messrs. Cassell and Co. publish *Letts's Diaries* in many forms, suitable to all sorts of purposes to which a diary can be put. They are strongly bound, and contain a great deal of information. Thus in one before us (No. 8, large post 8vo, one day on page, price 6s. 6d.) we find a Parliamentary directory, as well as the lists of bankers, markets, and postal information usually supplied. No. 1 is a large volume, and affords space for the fullest notes of the most introspective keeper of a diary.

The *British and Colonial Druggist* issues an office diary for the use of chemists. It is interleaved, and shows a week on a page. It contains a large number of advertisements, to which a classified index is provided, and a great deal of miscellaneous information. Among this is one list to which we feel disposed to take exception. It is a list of physicians and surgeons in London, Birmingham, Bristol, Dublin, Edinburgh, Glasgow, Liverpool, and Manchester. The names are classified under Cancer, Diseases of the Chest, and so on through the whole gamut of specialities. The list, we are told, has been compiled "by an experienced London practitioner," who has apparently sought to be impartial, but we should judge that to be thus ticketed and classified for the information of the chemist and his customers must be extremely distasteful to many of the eminent physicians and surgeons whose names appear.

Medical Diaries.

In addition to the medical diaries noticed in the British Medical Journal of December 7th, we have received *Letts's Medical Diary*, published by Messrs. Cassell and Co. (London, Paris, and Melbourne) in various forms. Bound in cloth, with space for fifty-four patients, its price is 2s. 6d.; for 108 patients, 4s.; in French morocco with tuck, 3s. 6d. and 5s. respectively. It contains notes on infectious diseases and their notification, on disinfectants, on hypodermic medication, on the general treatment of poisoning, on professional fees, and on many other points to which it may be necessary to make reference in haste. It is a convenient and well arranged medical diary.

Atlas of the Diseases of the Skin. In a Series of Illustrations from Original Drawings with Descriptive Letterpress. By H. Radcliffe Crocker, M.D., F.R.C.P. (Edinburgh and London: Young J. Pentland. Fasciculi ix, x, xi. 21s.)—We have three more fasciculi of this excellent *Atlas* before us. In Fasciculus ix we notice three figures in one plate showing the appearances of hydroa herpetiforme, in which groups of bullæ are associated with rings of erythema. Psoriasis punctata, dermatitis exfoliativa, ichthyosis hystrix and ichthyosis congenita are all well shown, the various forms of ichthyosis almost profusely. The last plate in this fasciculus, Plate lxv, is a very interesting one, showing lupus erythematosus in three forms, one a very early form on the cheek with appearances almost like erythema nodosum, a form on the nose, and the characteristic appearances of the disease when it attacks the scalp. Fasciculus x contains Plate xxxix, in which four forms of vaccination eruptions are reproduced. Plate xli shows an example of the gangrenous dermatitis of infants, and one of erythema multiforme occurring after vaccination. Varieties of elephantiasis and ichthyosis are shown in Plate li. Seborrhœic dermatitis and papular eczema are shown in Plate lxxxi. Two excellent representations of alopecia areata are shown in Plate lxxxix. A well-marked case of tinea versicolor fills the final plate of the fasciculus (Plate xcv). Fasciculus xi contains an example of acute lichen planus, the eruption covering the thorax and abdomen. Plate lxxxv contains five representations of the interesting and rare disease lymphangiectodes, otherwise known as lymphangioma circumscriptum, lupus lymphaticus, or angioma cysticum. One of the figures shows a condition of the mucous membrane of the lower lip so similar to the affection on the skin as to suggest an identity in the nature of the two affections. Another rare disease, xeroderma pigmentosum, with development of papillomatous growths, is shown in Plate lxxv. Plate lxxxiii shows illustrations of milium, and a well-marked one of the grouped comedones of

childhood. Well-marked examples of acne are shown in Plate LXXXIV, and typical examples of tinea circinata in Plate XCIV. The plates in all the three fasciculi are artistically excellent.

Exposures of Quackery. By the EDITOR of *Health News*. (London: The Savoy Press. 1s.)—This small volume consists of reprints of articles which have appeared in various journals showing the nature and composition of many of the much-advertised quack medicines with which the world abounds. The book is written in popular language, and is primarily addressed to the general public. Nevertheless, we can commend it to the perusal of medical men, who ought to know the ingredients of the strange pills and mixtures with which people dose themselves. The author lays great emphasis on the "gross wrong" done to the community by the fictitious value given to quack remedies by the Government stamp with which they are sealed. He urges that every proprietary medicine should bear upon each bottle, box, or packet in which it is sold a conspicuous label stating its composition, and that licences to sell patent medicines should be withheld from all persons having no knowledge of the real nature and action of what they are selling.

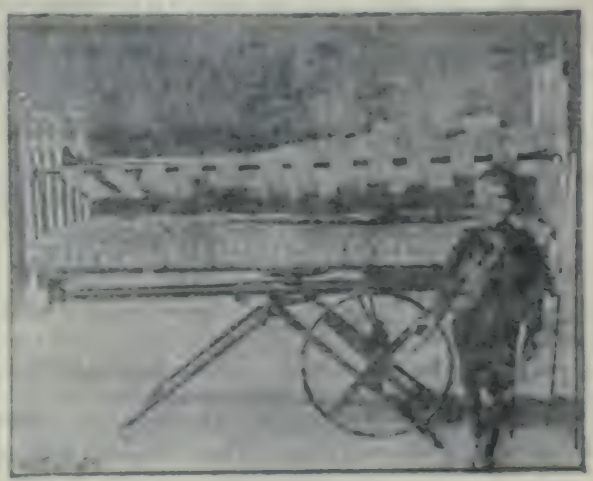
Traité Pratique des Maladies des Yeux. Par Dr. ED. MEYER. Fourth Edition. (Paris: G. Masson. Crown 8vo, pp. 800. 281 illustrations. Fr.12.)—The publication of a fourth edition of this well known treatise, which has already appeared in seven different languages, speaks well for the place which it fills among students of ophthalmology. The author has brought this edition up to date, while several matters which have been found useless have been omitted, so that in spite of the new additions there is no great increase in bulk. The plan of the book is to give an elaborately classified system of diseases with their causes and treatment, each section being preceded by an account of the structure of the part concerned. In the matter of treatment the author is careful to give all the methods in use while indicating what is, in his opinion, the best one. Thus, in the section on cataract extraction, the old flap extraction and the method of couching are described in full, but the operation of extraction with iridectomy is the one which is preferred. Perhaps too much importance is assigned to obsolete operations, however necessary these may be in showing the steps by which the more satisfactory methods now in use have been arrived at. While the book is in every way excellent from the surgical point of view, and in the parts which deal with the purely local affections of the eye, it would be more useful to the general practitioners if the parts dealing with the relation of eye symptoms to general diseases and to affections of the nervous system were more elaborately deal with. It would be difficult for one author, however, to write a treatise so thoroughly good in every part as this one is in its surgical and operative parts.

The Management and Medical Treatment of Children in India. By EDWARD A. BIRCH, M.D., F.R.C.P. Third Edition. (Calcutta: Thacker, Spink, and Co. London: W. Thacker and Co. 1895. Demy 8vo, pp. 432. 10s. 6d.)—The history of this book is interesting. Dr. Edward Goodeve, while practising in Calcutta, conceived the idea of drawing up for the use of Indian mothers a brief code of instructions regarding the management of infants under the trying circumstances of Indian life. His little work was found very useful, and became popular throughout the whole of our Eastern Empire. Successive editions were called for, and the original manual has grown under the able revision of Drs. J. Ewart and E. A. Birch into a treatise in which everything that a mother or nurse ought to know respecting the dieting, clothing, and general care of an infant is very plainly and fully set out. The more common diseases and accidents of infancy are also described in homely language, and their treatment in the absence of medical advice indicated. This is the third edition of Dr. Birch's version of Goodeve's *Hints*, and he has spared no pains to bring it into line with the most recent views and practices regarding the hygienic and medical treatment of infants and children.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

INVALID BED.

THE Gorham Invalid bed is the invention of an American physician, Dr. George E. Gorham. By means of it any invalid, no matter how heavy, may be placed in a reclining or sitting position on a comfortable seat with foot rest, turned on the side, lifted and swung in an easy hammock, transferred to a stretcher, or placed sitting at a table for eating or writing, with no more muscular effort on the part of the nurse than a 10-year-old child can easily exert. The bed is made throughout of iron and steel, and is therefore easily rendered aseptic. Instead of the usual four supporting bed legs, the plane of the bed frame is mounted at its centre on an A shaped supporting frame. Transversely attached to this supporting frame is a right and left steel screw. On this screw work two supporting arms, travelling in opposite directions when moved from the centre. These supporting arms are each at their upper extremity attached to the frame of the bed bottom, where each works in a ball and socket joint. The screw (and by the screw the supporting arms above it) is worked by turning the wheel shown in the illustration. The wheel may be attached to either side of



the bed; thus a patient who can use either hand can himself change his position. Turning the wheel to the left depresses the foot of the bed; turning it to the right depresses the head. The bed remains automatically fixed at any angle from the horizontal at which the wheel is stopped.

All the various movements and liftings above described are accomplished by turning the wheel. The bed is useful in cases of typhoid, heart disease, dropsy, rheumatism, and gout, and it is particularly valuable in surgical cases requiring immobilisation. The bed is 30 inches high, a convenient height for operating, and may be changed in five minutes, without disturbing the patient, into an operating table. The lift hammock raises a patient suffering from acute rheumatism, flexing his joints and muscles, without noise or jar. It also renders frequent changing and airing of linen and mattress possible, and prevents bedsores. By means of it the patient can be raised to a most convenient position for making examinations and dressings. The German bed is now in use at the following London hospitals: St. Thomas's, the London, the Royal Orthopædic, and the Middlesex, and by the Cottage Hospital, Surbiton. The bed may be seen at 11a, Finsbury Square, where inquiries should be addressed.

AN ADDITION TO THE AURAL SPECULUM.

Dr. LENNOX WAINWRIGHT (Folkestone) wishes to call attention to a modification of Seigel's Aural Speculum, which has been suggested by him, and carried out by Messrs. Krohne and Sesemann. The improvement consists in having a small receptacle fixed to the mouth piece, in which is placed a small pad of cotton wool, which effectually prevents dimming and fogging the glass, and also acts as a filter, preventing bacilli or offensive odours being sucked in by the operator. The addition is small and light, and does away with the cumbrous Eustachian. Warming the glass of the speculum prevents fogging for a time, but does not act as a filter. This is why he has introduced the wool.

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FRAU EMMA KREISCHMANN, of Salzburg, the first and so far the only legally qualified medical woman practising her profession in Austria, is about to leave that country. She intends, it is stated, to return to her native country, Russia, in order to take up the duties of the chair of ophthalmology in the new Medical College for Women, St. Petersburg.

CHOLERA IN EGYPT.

[FROM OUR SPECIAL CORRESPONDENT.]

The District in which Cholera has occurred recently.—Previous Experience (1883) in the same Locality after Wholesale Pollution of Water Supplies.—Precautions taken in October, 1895.—Their Success in Preventing the Spread of the Disease.—Number of Cases and Deaths.—The Present Position.—Need for Strict Precautions in the Immediate Future.

How cholera has been introduced into Egypt does not now concern us. No doubt this will be the subject of future investigation by the sanitary department of that country. The present outbreak was first detected about October 11th, the first cases being reported from Damietta. Subsequent events would, however, lead to the belief that the disease was prevalent in the low-lying districts of Mutarieh and Menzaleh on the shores of Lake Menzaleh, before the occurrence of cases at Damietta. The country north from Mansourah to Damietta north-east from Mansourah to Matameh is a low-lying delta intersected with canals and drains. The Damietta branch of the Nile flows by Mansourah and falls into the sea some few miles north of Damietta. The Bahr-el-Saghir branches off from the Nile at Mansourah, and falls into Lake Menzaleh near Matameh. Mansourah is thus the apex of a delta, and it is within this district that the large majority of the cases have occurred. It is fortunate for the country that the outbreak should have taken place at the present season.

In 1883 cholera appeared in Damietta in June. The rivers and canals were at their lowest level, almost stagnant. The Bahr-el-Saghir, up which the disease rapidly extended to Mansourah, was a series of stagnant pools; there was wholesale water pollution, and the cholera explosion which always follows such pollution. In addition to this the country relied on sanitary cordons alone for the prevention of the extension of the epidemic. As was to be expected, they failed lamentably.

Now the Nile and canals are full, a strong current is flowing, and the wholesale pollution of the water supply which occurred in 1883 is rendered much more difficult. The disease is being dealt with on modern principles, and so far, considering the deplorable sanitary condition of the country, with considerable success. On the arrival of Rogers Pasha, the Director-General of the Sanitary Department, on October 22nd, the following organisation was at once decided on and put in force. The disease was advancing up the Bahr-el-Saghir, and Mansourah was menaced. Between Mansourah and Damietta there were no cases, but Damietta itself was infected. Every effort had to be made to save Mansourah, for Mansourah once badly infected, the disease would probably extend over the country. The measures were as follows:

1. Inspection of all boat traffic on the Nile and the Bahr-el-Saghir and the provision of accommodation for isolating and treating cholera cases at the boat inspection station.

2. Establishing numerous medical inspection posts all over the infected districts. In the house to house examination of villages, the immediate detection, isolation and treatment of cases, and the carrying out of the disinfection of the house in which the case occurred.

3 The provision of hospital accommodation for cholera cases in the infected districts.

4. Superintendence of travellers from infected districts, and provision of special ambulance carriages in the trains running through or from infected districts.

The European inspecting staff of the department, so often reported as insufficient—consisting only of one English inspector, Pinching Bey—was supplemented by Dr. Kaltspergr, subdirector of the School of Medicine; Dr. Mirian, the medical officer in charge of Kasr-el-Aini; Graham Bey, of the Medical Corps of the Egyptian Army, and for a time Dr. Sandwith, who generously offered his services. The staff now employed in the provinces in controlling the epidemic consists of 4 English inspectors, 45 Egyptian inspectors, and 72 employees.

The epidemic gradually increased, and the highest mortality was registered on November 5th, when 106 deaths were recorded in forty-eight hours. But though it increased in the

infected districts, for a time it was confined within limits, and only imported cases occurred in Mansourah and the neighbourhood; these were successfully dealt with so far without any extension. On November 6th a village on the Nile midway between Mansourah and Damietta was infected, since which, as was to be expected, there have been dropping cases down the river in villages to the north.

The total number of cases up to date is 893, and the deaths 681. These figures as regards the cases registered are inaccurate, and it is more than probable that over 1,500 cases of the disease have occurred. A population has to be dealt with absolutely opposed to assisting the sanitary authorities, and who do everything in their power to conceal the existence of cholera. They go so far as to hide the cases in the cotton and dhoura fields.

The position at present is that the disease is well under control in the Bahr-el-Saghir, and it is hoped will soon be stamped out there. Dropping cases are occurring on the Nile between Mansourah and Damietta, and in the villages north of Damietta. These being all centres of infection, are naturally in danger. Mansourah, a town of 60,000 inhabitants, has so far been saved. Three local outbreaks in the Charkieh province to the south of the infected districts have been dealt with successfully.

The danger lies in the future, for if the disease be allowed to smoulder on until next spring, there is the possibility of a serious epidemic. We trust that the Sanitary Department will be given the means to stamp out the disease now, when it is limited to a comparatively small district, and when the number of cases is limited. All suspicious cases have been examined bacteriologically by Dr. Bitter and Dr. Kaufmann, who further verified that the disease was true Asiatic cholera.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND, AND THE CASE OF MR. R. B. ANDERSON.

A deputation from the Civil Rights Defence Committee, introduced by the Earl of Stamford as President, waited upon the Committee of the Association of Fellows of the Royal College of Surgeons, England, on December 4th, Mr. George Pollock, President, in the chair.

Before proceeding to the business of the deputation, Mr. Percy Dunn (Honorary Secretary) read a letter from General Graham, conveying the thanks of the Civil Rights Defence Committee to the Committee of the Association for having at the last meeting adopted a resolution expressing appreciation of the action of the Council of the College in co-operating in support of the rights of a Fellow and Member. A letter was also read from Mr. Holmes to the effect that the published reports of Mr. Anderson's case made it quite clear that he had suffered the grossest injustice as well as indignity, the former at the hands of the Trinidad judges and the latter at those of the English; that he ought to be fully and fairly compensated, and that the Association could not be better occupied than in supporting Mr. Anderson in obtaining compensation and the reversal of the illegal sentences and orders against them.

Lord Stamford having briefly introduced the deputation, Major-General Graham expressed a hope that the measures adopted would be confirmed by the general meeting of the Association, and that the example would be followed. In such a hope they already had much encouragement, several Branches of the British Medical Association having organised subscriptions, and some having voted amounts from their funds. The Torquay Medical Society had lately done the same, recommending a vote of £5 from its funds, and organising a uniform subscription of 5s. each from the members, amounting in all to £18. Besides this that Society had adopted resolutions calling upon Her Majesty's Ministers, members of Parliament, public men, and public bodies to unite with the Civil Rights Defence Committee in defence of the common rights of all medical men and all British subjects, and had obtained the signatures of its members to a memorial to Commander Philpott, R.N., M.P. for the Torquay Division. Mr. Cohen, M.P., had promised his support to the Committee. The Council of the British Medical Association had been asked to use its great influence with its Branches throughout the country, and the friends of Mr. Anderson in Lincolnshire, his native county, had taken up the matter warmly. By such means it was hoped to enlist the sympathy and co-operation of other public bodies, especially that of the guilds and corporation of the City of London. They had a special ground to do in this case, since the rights of one of those guilds—the Worshipful Society of Apothecaries—had been violated, Mr. Anderson being a Licentiate; his licence granted by them under charter being rendered valueless. Major-General Graham concluded by asking the Association to appoint a representative on the Civil Rights Defence Committee.

Mr. Walter Rivington supported the proposals of the deputation, and remarked that there had been nothing like the case of Mr. Anderson since the time of James II.

Mr. Gant and Dr. Robert Barnes also spoke.

Mr. Anderson answered various questions.

Lord Stamford thanked the Committee of the Association for their cordial reception, and on the motion of Mr. Gant a vote of thanks was passed to Lord Stamford and those acting with him for their public-spirited action in taking up the case of Mr. Anderson.

Mr. Pollock, on behalf of the Committee, undertook to bring Mr. Anderson's case before the Association at its general meeting.

The deputation then withdrew.

LITERARY NOTES.

Die Cholera in Hamburg is the title of a work by Dr. Friedrich Wolter now in course of publication. It embodies the results of an exhaustive inquiry into all the circumstances of the disastrous epidemic of 1892. The work is divided into three sections dealing respectively with the causes and the history of the outbreak and its effects on the domestic life of Hamburg. The second part completing the second section has just been issued by the Verlag der Neue Börsen, Halle. Two further parts, composing the third section, will complete the work.

With the issue for November 1st the *Medical Reporter* changed its title to the *Indian Lancet*. The reason given for the alteration is that the name "Reporter" "does not give that weight and importance which a scientific journal should claim." It is a matter of regret that the change was not postponed until the beginning of a new volume: altering the title of a journal in a running volume gives much trouble in making references to it.

Everyone knows Lord Fletcher of Saltoun's saying, "Let me make a nation's ballads, and let who will make its laws.' The honour of making one ballad which has often been a powerful stimulant to the heart of a mighty nation, belongs, it would seem, to a member of the medical profession. The author of "Yankee Doodle" was Dr. Richard Shuckburgh, a medical officer in General Amherst's army in the "good old colony times."

The *Edinburgh Medical Journal* for December contains an article by Dr. W. G. Aitchison Robertson, in which, under the title of "The Therapeutics of the Sixteenth Century," some account of "The Secretes of the Reverend Father Mayster Alexis of Piemont" is given. The work is a translation from the Italian, and was printed in London in 1595. Mayster Alexis's "Secretes" include prescriptions for the following among other purposes: "The manner and secrete to conferne a man's youth and to hold back old age, and to maintaine a man alwaies in health and strength as in the fairest flower of the age"; "to make a woman that is wont to have daughters to bear sonnes also;" "against the difficultie of bringing forth childe and the retention of the skin that the child is wrapped in, called in Latin secunderia," etc. The following is a specimen of antiseptic surgery as practised by our rude forefathers:—

A verie goodlie and present remedy for to heal the pestilence in drawing out the venim from the botch or sore or otherlike accidents:

Take a quicke hen and pluck the feathers from hir arse and from the place whereas she layeth hir ege, and set hir so that the said bare place may be uppon the greese, and that she may as it were sit on the botch or sore or on the place of the plague, and hold hir so a good while. Then you shall see that the said hen will have drawne all the poison and infection that shortlie after she will die. It shall be good to do this with two or three or more hennes, immediatelie one after another.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 14TH, 1895.

THE PROPOSED GENERAL HOSPITAL IN CAMBERWELL.

For some time back a considerable amount of correspondence has taken place in our columns and the press regarding the lack of hospital accommodation in those parts of London which are situated south of the Thames. The friends of the two great hospitals, Guy's and St. Thomas's, which have for so long ministered to the wants of that part of London, have not, however, been slow to point out that not only beds, but the whole administrative machinery on which so large a proportion of the income of every hospital is spent, exist within their walls, ready for occupation, at very little more cost than that of food and service, if the public will but provide the money.

Other schemes which have been put forward involve the erection of new buildings either as complete hospitals, or as what have been termed "out-post hospitals" in connection with existing institutions. Of the plans which entail building, that of erecting a new and completely equipped general hospital in Camberwell has obtained considerable prominence in consequence of the support given to it in the report of the House of Lords Committee (1892).

It can hardly be doubted that this Committee was influenced by the enormous preponderance of hospitals on the north side of the Thames, and by a desire to see a greater symmetry of distribution, and not merely by the proved necessities of the southern sides. They say: "It was suggested that certain hospitals might be removed from places where they are not so much required to localities where the accommodation is deficient. The Committee cannot regard this suggestion as practical, but they would strongly advise that more hospital accommodation should be provided south of the Thames, and were it possible to find the site, and were philanthropic endeavours to be made for further accommodation for the sick in London, a large General Hospital, say in the densely-populated district of Camberwell, would no doubt be of extreme value. The Committee do not lose sight of the tendency of individuals to prefer some particular hospital, and many instances were given of patients passing four or five hospitals on their way from their homes to a particular hospital in which they had confidence. Though the Committee cannot doubt that this is a fact, and that possibly this migratory disposition would not be checked by the building of a large general hospital, they are, nevertheless, convinced that more hospital accommodation is required south of the Thames."

We have given the above in full so that the exact bearing of the report of the Committee may be evident, for it is clear that their recommendation in regard to this Camberwell scheme is not a very strong one, and is hedged round with many "ifs."

The Committee had before them in evidence that at Guy's there were at least 100 beds (on an average 150) unoccupied for want of funds, while one ward was set apart for patients paying £3 3s., and other patients paying smaller amounts were taken into the general wards.

At St. Thomas's also no fewer than five wards were closed, reducing the accommodation from 569 to 485 beds.

It is clear then that, with upwards of 200 beds available and unused south of the Thames, the statement of the Committee regarding the want of accommodation by no means involves the necessity of a new hospital.

As bearing upon much that has been said, it is worth noting that the Committee say, "As regards in-patients (except accidents) it appears that the proximity of the hospital to their homes is not generally a matter of such great importance."

Then they state that "the prevailing though not unanimous opinion, as appearing from the evidence, seems to be that on the whole the hospital accommodation in London is sufficient," thus disposing of another of the provisos made by the Committee with regard to the Camberwell scheme.

It cannot then be said that the recommendation of the Lords Committee is of such a character as to overrule the discussion of the matter on ordinary general principles. Enormous areas of the outer part of London are as far from hospitals as most parts of Camberwell are now. To erect a new hospital there will not alter largely the central preponderance, and there is but small security, or in fact likelihood, that the people in Camberwell will desert the old hospitals for the new.

The common-sense method of dealing with the question is to open the beds now lying idle on the south of the Thames, and then if after that is done philanthropic efforts should still be made for further accommodation for the sick in London, it will be time enough to consider whether Camberwell is the best locality in which to place a new hospital.

HOSPITAL ELECTIONS.

Our Melbourne Correspondent, in a letter published a few weeks ago, related the history of a recent contested election to the staff of the Melbourne Hospital. We cannot but agree with him that the system is urgently in need of reform. It possesses the worst features of the worst system known in this country, with the added disadvantage that the tenure of office is only four years, and that at the end of that short period the whole of the appointments are again thrown open to competition. At the recent election there were thirty-one candidates for eighteen vacancies, and it is a significant fact that all the old members of the staff were re-elected. Our correspondent states, however, that for months beforehand the candidates, or some of them, had been issuing self-adulatory advertisements, and the newspapers had contained paragraphs, more or less inspired, relating to the merits of certain among them. The whole business was conducted

apparently on the lines of a contested parliamentary election, with this difference—that as the candidate could, from the nature of the case, have no policy to set forth and no opinions to express, he was compelled to found his claim on his personal attainments and professional qualifications.

Our correspondent appears to think that some of the candidates never had much chance, but adds that it may be concluded that none "in this scramble," which further on he likens to a football scrimmage, "have been entirely disappointed. Everyone has got something of value to him. They are all happy, although in various degrees. They have not all hit the target in the centre, but they have all hit it somewhere." This is an apt simile. The system, bad in itself, is made worse by the way in which it is seized upon by persons with a rudimentary perception of medical ethics for the purpose of professional advertisement. Such proceedings endanger the ethical standard within the profession, and tend to lower it in the eyes of the public, who cannot be expected to discriminate too nicely between illegitimate and so-called legitimate occasion for advertisement. They will take the broad fact that every now and again the newspapers are deluged with advertisements—direct and indirect—of medical men seeking the most honourable posts open to the profession in the locality, and they will be slow to understand why, if this is esteemed right or permissible, it is wrong for a struggling practitioner starting in a poor locality to distribute handbills setting forth his place of practice, his fees, and so forth.

In this country we are not by any means in a position to hold up our hands in pious horror at the doings of our colonial brethren. It is only within the last few years that we have got rid of this pernicious system in London, if indeed we have altogether got rid of it. Perhaps in this matter the practice of London hospitals is a little better than the theory of their constitution. Direct election by the governors, with all its attendant evils of canvassing and advertisement, is, however, still the rule rather than the exception at most of our provincial hospitals and infirmaries. Happily the scandal is less serious because the elections are not periodical, but an appointment once gained is held for life, or until the incumbent attains 60 or 65 years of age.

Some remedy must be generally applied for the cure of the existing defects, and we would strongly urge on the managing bodies of all hospitals to give early attention to this matter. In Melbourne it would seem that a very drastic remedy may possibly be enforced. It appears that a Bill to establish a council for the election of medical officers of public hospitals and other charitable institutions has been introduced into the Legislative Council of Victoria. This Bill proposes the formation of an electoral council, to consist of ten ordinary members, to be appointed by the Governor in Council, two medical men by the Faculty of Medicine of the University of Melbourne, and four others, who may or may not be medical men, representing the medical practitioners. This seems a very fairly satisfactory body for the purpose, but it is to be understood that no medical man is to be employed in, or appointed to, any subsidised charity unless he has been previously nominated to such office by the council.

A properly constituted elective council of this sort would be found in practice, no doubt, to be an immense improvement upon the bad system of election by the whole mass of the subscribers to each charity. But it may not be inopportune to point out that it strikes at the root of the autonomy and independence of the individual hospitals. Those who advocate Government subsidies as a way out of the financial difficulties of hospitals, must recognise the fact that the control will always lie with those who provide the funds.

THE TITLE OF "DR."

THE discussion as to the title of physician having been closed by the publication in our columns of the opinion of Lord Selborne and Mr. Justice Denman, a number of correspondents have raised the further question as to the right of the physician to style himself "Dr."

In the discussion which arose in the BRITISH MEDICAL JOURNAL as to the title of physician, attention was drawn to the fact that the diploma of the Royal College of Physicians of Ireland expressly confers the title of physician on their licentiates, and it is suggested by some of our correspondents that the same College also accords to its licentiates the courtesy title of "Dr.," irrespective of their holding a recognised University degree; but however this may have been formerly, the practice is no longer followed, and an express instruction to that effect was some time since issued to the registrar and the clerk of the College. Again, it is urged by some of our correspondents that the examinations which they have passed to obtain their qualifying diploma give them a far better right to style themselves doctors than some of those who hold a registrable University degree.

Our own views of the matter are much the same as those we expressed on the title of physician. The result of the Acts of 1858 and 1886, and what has occurred in connection with them, has tended to confuse or break down altogether distinctions which existed formerly. Reasons may exist more in one case than another in favour of the moral right to use the title of "Dr.," but we can only deal with the question as a whole, and on broad and general lines. So dealing with it we think that we may safely affirm that no legal proceedings will lie against a qualified medical practitioner who chooses to call himself "Dr.," or even to put that title on his doorplate. On the other hand, it is clear that if he describes himself as a Doctor of Medicine or writes the letters "M.D." after his name, or directly expresses or implies that he holds a university degree, he can be prosecuted under the 40th section of the Medical Act of 1858. It goes without saying that he can equally be prosecuted if he describes himself or appends to his name any higher title than the one which he actually possesses. This solution of the question may not be satisfactory to many of our correspondents, but it seems to be the only possible one under the circumstances.

The modern tendency is evidently to get rid of the academic and restricted meaning of the terms physician and doctor as limited to those only who hold a specific licence or a university degree, and rightly or wrongly to extend the application of those terms to all who are duly licensed to practise medicine. If the Gresham University should ever become an accomplished fact, the title of "M.D." will in all probability be largely sought after, and the legal right to use it increased extensively.

THE Royal Commission upon Vaccination is now engaged, under the chairmanship of Lord Herschell, in drawing up their final report, and meetings have been held since November 6th, and are being continued every Wednesday till December 18th, when a short adjournment will be made over Christmas. It is contemplated that the report will be ready by the date of the reassembly of Parliament.

WE understand that the injuries inflicted on the boy William Cattell have proved not to be of a very serious character. Besides a superficial wound, two inches long, in the sacral region, and an incised wound of the scrotum, the most serious was a punctured wound below the xiphoid cartilage, penetrating the peritoneal cavity. There was also much bruising of the right side of the face. The child continues to make good progress, and will shortly leave the hospital.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

AT a Comitia of the Royal College of Physicians of Edinburgh, on December 3rd, Dr. Batty Tuke was elected President, Dr. A. R. Simpson Vice-President, and the following members of Council: The President, the Vice-President, and Drs. Wyllie, Affleck, Sibbald, Gibson, and Berry Hart. At a second Comitia on December 10th, the remaining office bearers were elected as follows: Dr. P. A. Young, treasurer; Dr. R. W. Philip, secretary; Dr. George W. Balfour, librarian; Dr. John Sibbald, curator of museum; Dr. J. Batty Tuke, curator of research laboratory.

NEW LABORATORY FOR THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

IN consequence of the proposed immediate extension of the Royal Infirmary the buildings now occupied as a laboratory by the Royal College of Physicians are to be demolished. After a hot competition between the Municipality and the College, the latter has secured, at a cost of £7,350, the block of buildings between Forrest Road and Bristo Street, and to the south of the Free New North Church, till recently occupied by one of the Edinburgh Parochial Boards, now superseded by the parish councils. The buildings will be altered under the direction of the College architect, and are expected to be ready for occupation in May next. The new President of the College, Dr. Batty Tuke, has been closely associated with the rise, establishment, and development of the laboratory. His election to the presidential chair (failing the late Dr. Brakenridge, who would have had that honour with universal acclamation) is peculiarly appropriate at a time when the Research Laboratory is about to be moved into quarters more suitable for good work.

M. HAFFKINE'S LECTURE ON ANTICHOLERA INOCULATION.

M. HAFFKINE, who is at present in London, has consented to deliver an address at the Laboratories of the Royal Colleges of Physicians and Surgeons, on the Embankment, on Wednesday next, December 18th, at 5 P.M. The chair will be taken by Sir Russell Reynolds. M. Haffkine will relate the history of his anticholera inoculations in India. Briefly stated, his plan has been to select a village or small town in a cholera district, the average mortality of which from the disease was known. He inoculated one-half or a large proportion of the inhabitants. In this way it was anticipated that after a year or so two epidemics of cholera would have visited the place, and that it would be possible to make a comparison between the resistance of the inoculated with that of the uninoculated. It was not in all cases possible to follow this plan in its completeness, and in large towns it had to be so far modified that it was applied to bodies of people or to families, one half being inoculated and the other half not inoculated. M. Haffkine visited in all 98 localities, and inoculated under the test conditions described 42,179 persons. The general results will be stated in the lecture, but we may quote as examples of the bulk the latest information which has reached this country. An outbreak of cholera occurred among a party of coolies on the Assam-Burmah Railway. At the beginning of the outbreak Surgeon-Captain Haro, who is employed by the Assam Government to make the inoculations on M. Haffkine's system, inoculated more than half the coolies. The result has been that only 4 cases, all fatal, occurred among the inoculated majority, while 34 cases with 30 deaths occurred among the uninoculated minority.

IMMORAL ADVERTISEMENTS.

WE have frequently protested against the indecent advertisements with which so many managers of newspapers, no doubt greatly to the grief of their editors, persist in disfiguring their pages. Nothing, however, seems to have any effect in checking the flood of obscenity which fathers of families, in strange contradiction to all their professions, allow to be left about in their homes. For years we have been accustomed to the advertisements of "female pills" and other remedies, which are guaranteed to remove "obstructions" and to have the "desired effect" without pain or danger. Most of these are mere swindles, for, although some of them undoubtedly contain injurious and poisonous substances, the majority contain nothing more than a little aperient. They are, however, none the less direct incitements to crime, and it cannot be doubted that the women who buy them do so with the direct intention of producing abortion. The prolonged impunity, however, with which these things have been sold has led their vendors to throw off the mask and drop all periphrasis in their advertisements. Perhaps they fear that young girls may not quite understand what is meant by "female pills" and "obstructions" and the "desired result," so they have lately taken to putting the matter in plain English for the benefit of their readers—and their daughters. From the *Newcastle Evening News* of December 4th we extract the following: "To Married Ladies (gratis).—Write for my secret Remedy for the Prevention of Large Families. Guaranteed infallible." Again: "Marriage and its Consequences.—Advice how to limit your family, and valuable information to ladies." Is it not obvious that a public offer of a means of getting rid of the "consequences" of marriage is a direct incentive, not only to undesirable practices among the married, but to all sorts of immorality among the young, by holding out a promise of relief if difficulties should arise? This is a matter of police. That the police should not take steps to put a stop to what is a public incitement to crime is a cause of unending surprise, which is only exceeded by our astonishment that parents who would be shocked at any suggestion of immorality on the part of their daughters should allow such newspapers to come into their houses.

THE RECENT CHOLERA IN EGYPT.

WE have reason for believing that the cholera which has for some time been hanging about the lower part of Egypt, and has culminated in the outbreak at Damietta, described by our Special Correspondent in another column, is the product and result of the deficient arrangements at the so-called quarantine station at Tor. There is reason to believe that the malady was imported from Tor, the quarantine station there serving as a focus for the distribution of cholera to Egypt just as the quarantine station at Camaran had served as a similar focus for its distribution through the Hedjaz. It appears that a considerable number of the pilgrims who returned by way of Yambo, the port for Medina, suffered from an acute fatal choleriform gastro-enteritis, a malady which, from the clinical symptoms it presented, would certainly have been considered to be cholera but for the fact that a bacteriologist who was lately sent out failed to discover the cholera bacillus. Nations which love quarantine have adopted many devices for obscuring the evils which

seem always to dog the steps of that most delusive method of obtaining protection against cholera, but of all methods of obscuring truth in regard to such matters, negative bacteriological reports are probably the most dangerous. Positive evidence of the presence of cholera bacilli must, even in the absence of acute disease, lead to the adoption of sanitary precautions, but bacteriology has not yet advanced to such a position as to make it safe to accept negative evidence as showing that precautions may be neglected.

THE CHELSEA HOSPITAL FOR WOMEN AGAIN.

We are informed that a meeting of the Chelsea Hospital for Women will be held on Wednesday next, when a motion will be made "to consider the propriety of the Governors dispensing with the services of a member of the honorary medical staff, and to pass a resolution thereon." According to the manner in which the voting is conducted at the Chelsea Hospital—by cumulative votes in proportion to the amount of money subscribed or collected—this may mean the dismissal of the member of the staff if it should so please a few large givers. We are further informed that the officer in question has offered to submit to a fair arbitration the matter in dispute. It will be the general opinion of the medical profession that this question should be referred to an impartial board of arbitration.

LOCAL ANÆSTHESIA.

Dr. Theophilus Parvin, at a meeting of the County Medical Society, Philadelphia, on November 13th, read a paper on Schleich's Method of Local Anæsthesia by Subcutaneous and Parenchymatous Injections of Weak Cocaine-Morphine Solutions, and demonstrated the effect in his own person by allowing an incision an inch in length to be made in his forearm, and to be stitched up, under its influence, in the presence of the Society. He declared it to be an absolutely painless procedure, and predicted great future usefulness for this method in surgery, expressing his belief that at least 50 per cent. of the operations now performed under general anæsthesia will ultimately be done by this method, which he declared suitable even for major operations.

MEDICO-CHIRURGICAL DISCUSSIONS.

The discussion at the Royal Medical and Chirurgical Society on the Latency of Parasitic Germs suffered from two drawbacks—the width of the subject and the length of the introductory speeches. The second was perhaps in part the consequence of the first. Altogether, with the additional half hour granted on the second evening added, and with the time spent in formalities at each meeting deducted, three hours were devoted to the discussion. Out of this very nearly two hours was given to defining the scope and to introducing the subject to be discussed. These lengthy preliminary remarks were able and useful summaries of knowledge, but necessarily they contained, over and above several instructive clinical cases, and with the exception of some of the points in Dr. Washbourn's essay, nothing with which the majority of persons who have taken any interest in these subjects is not familiar—little, indeed, beyond facts and arguments which are to be found in the larger textbooks and in other easily accessible works of reference. This was, of course, inevitable, and is no reproach to these gentlemen, who had evidently been at great pains to prepare their essays. But to hear a reader slowly wading through an essay of which you have a printed copy in your hand is not an exhilarating occupation. It might be well on a future occasion were the scope of the discussion defined in a circular letter from the Council, and if the summaries of the literature of the subject provided by the industry of those who are invited to open the discussion could be limited strictly to ten minutes. If, as at present printed, they might even be taken as read, instead of the whole of one evening and part of the second being spent in reading them out. The discussion proper when it was at length reached was interesting, though several speakers wandered rather far from the main subject. Perhaps the most suggestive observations were those made by Sir William Broadbent as to the influence of disease or injury, occurring after exposure to infection, in deciding the struggle between the organism and the infection to the disadvantage of the former. The idea is not new, and it has in particular found support as explaining the occurrence of so-called surgical scarlet fever, but Sir William Broadbent's statement that he was convinced that an attack of influenza might in this way determine the outbreak of typhoid fever which the organism might otherwise have been able to avert is valuable. He stated that in some cases the typhoid pyrexia ran on from, and was, as it were, a prolongation of that of influenza; in others a distinct apyrexial interval was recorded. In the latter class at least, the interval between any discoverable exposure to the infection of typhoid fever and the onset of that disease might be prolonged much beyond the usual period.

ULSTER MEDICAL SOCIETY.

The annual dinner of this Society proved a most successful and enjoyable function. The President of the Society, Professor Sinclair, F.R.C.S., occupied the chair, and fifty-eight gentlemen sat down to dinner. Among the guests were the Lord Mayor of Belfast, Sir William McCammond, and the President of the Queen's College, Dr. Hamilton. After an excellent dinner the Chairman proposed the health of "The Queen, the Prince and the Princess of Wales, and the other Members of the Royal Family," which was duly honoured. Dr. McKeown proposed the toast of "The Lord Lieutenant and Prosperity to Ireland," and spoke in flattering terms of the impression which his Excellency had made upon all classes in the country. Dr. Bingham responded in a very happy speech. Mr. Fagan, F.R.C.S.I., proposed the toast of "The City and Corporation of Belfast," and expressed the satisfaction which was universally felt in Belfast at the conferring of a knighthood upon their guest of the evening, Sir William McCammond. The Lord Mayor, in rising to respond, received an enthusiastic reception. Brigade-Surgeon McFarland, A.M.S., proposed the toast of "The Queen's College, Belfast, and the Belfast Medical School." This was responded to by President Hamilton, Dr. Walton Browne, and Professor Whitla. The remaining toasts were "The North of Ireland Branch of the British Medical Association," proposed by Dr. Kevin and responded to by Dr. Campbell, Secretary of the Branch; and "The Ulster Medical Society," proposed by Dr. Dempsey and responded to by the President (Professor Sinclair) and the Secretary (Dr. McKisack). The proceedings of the evening were agreeably diversified by some excellent songs and glees from Drs. Mackenzie, McCaw, McKisack, Leslie, and McCullagh, and Dr. Morrow recited two of Kipling's ballads very effectively. The proceedings came to an end shortly after midnight.

BLINDNESS IN SCANDINAVIA.

A very valuable series of statistics has been collected by Widmark, which show the variable frequency of blindness in the four northern countries—Sweden, Norway, Denmark, and Finland. Denmark had in 1890 for every 10,000 inhabitants only 5.3 blind, Sweden 8.3, Norway 12.8, Finland 15.5. Compared to other European countries, of which Portugal and Russia stand highest with 20 blind for every 10,000, and Holland lowest with only 4.5, the order is as follows: Portugal, Russia, Finland, Spain, Norway, Hungary, England, Germany (without Prussia), France, Prussia, Sweden, Belgium, Austria, Switzerland, Italy, Denmark, and Holland. The most common cause of blind

ness in Finland is trachoma, which is very common. It is a curious fact, however, that this disease almost exclusively occurs among the Finns proper; the Swedish inhabitants (in Finland) do not suffer from it. Some authors would attribute this to the smoky and unhygienic huts of the Finn, but the infectious nature of the malady doubtless plays a great part. In Norway the most common cause of blindness is cataract, probably because operations for cataract are only rarely performed, owing to the scantily populated country. In Europe blindness is as a rule more common in men than in women, but in Finland and Sweden (there are Finns in the north of Sweden) the opposite holds good, probably because trachoma is more common in women than in men. In all the Scandinavian countries blindness is decreasing. In Stockholm very good results have followed the adoption of Credé's method of preventing ophthalmia neonatorum; from 1884 to 1890 the percentage of this affection has decreased from 1.20 to 0.24.

NURSING IN IRISH WORKHOUSES.

We are glad to notice that among other Boards of Guardians that of New Ross has refused to adopt the resolution which is now being sent over the country in denunciation of the Local Government Board. One member very properly observed that the poor should get the benefit of a trained nurse when they were entitled to it and when the ratepayers paid for it.

THE DUBLIN MEDICAL SCHOOL.

The returns from the Anatomical Committee for this session show that the number of dissectors in the various schools is 460, showing an increase of 50 on last year. Trinity College has 208; the Royal College of Surgeons 154, and the Catholic Medical School 118. There are probably also about 400 in the different stages where dissection is not required.

MEDICAL INSPECTION UNDER THE PILGRIM SHIPS BILL AND CAMARAN.

The prospect of the Pilgrim Ships Bill being shortly considered during the Calcutta session raises a question as to which there has been a good deal of feeling on the part of some of the native population of India. We hope, however, that no opposition will be made to those portions of the Bill which tend to the health and the comfort of pilgrims. Such an attitude will go far to undo all the efforts of the Government to secure an abatement of the quarantine detentions at Camaran. It has been suggested, for example, that medical examination of intending pilgrims before going on board is likely to raise the greatest opposition; even "riot" has been talked of. But surely such a result could only be brought about by making improper appointments, and by bungling methods of procedure. Medical women and adequate privacy can surely be obtained in Bombay, and these would suffice for the purpose. Moreover, no one can contend that pilgrims should start utterly irrespective of their condition in the matter of health and infection. Turkish officials would be the first to take advantage of any hesitation on the part of the Indian Government, and they would retort that British India had no right to ask that Camaran shall be abolished, or that the detentions there shall be shortened, when her Government refuses to take such precautions as to health as nearly all other nations deem to be necessary. This is an aspect of the question that needs to be borne in mind.

HOSPITAL ABUSE AT BRIGHTON.

We have received a report of a paper read before the Brighton Medico-Chirurgical Society by Dr. Francis Waring, from which it would appear that the remarks made recently in our columns on this subject have by no means exaggerated the gravity of the evil. We have already mentioned the fact that over a third of the confinements taking place at Brighton are attended gratuitously. In regard to this, Dr. Waring brings forward an interesting fact, as showing that many of the recipients of this charity neither need it nor very much care about having it. He says: "A few years ago, when the late midwife was appointed to the Western Branch, the attendance was not so high; but she was a skilled woman, kindly in manner and much liked, and the consequence was the number of cases rapidly rose, and I believe has nearly doubled . . . . . This midwife has now started on her own account in the same part of the town, and, strange to say, as she informed me, many of the patients whom she formerly attended for the institution are now engaging her services and paying the fees." This reminds one of the scene in *The Children of the Ghetto*, where, in the midst of the wedding feast in the Jewish quarter, while the table was groaning with good things, the daughter of the house arrived with the jug of soup from the soup kitchen. The good, careful souls knew that soup was being given away, and, even in the midst of the feast, did not neglect to send out the girl to fetch the daily dole. So it would appear that these good, careful Brighton mothers take the good things the gods provide, doubtless without any great exuberance of thankfulness, and, as Dr. Waring suggests, use the club money they receive on the birth of a child for other purposes; for does not money always come in handy? It seems quite clear that those who are scattering such favours in the name of charity, and especially those who, on the plea of charity, are collecting money for the purpose are perpetuating a great abuse.

"THE EYES OF ENGLAND."

Under this pretentious title the *Pall Mall Gazette* of December 5th printed what purports to be an interview with an optician. We much regret that our contemporary should lend its columns to the writings of "representatives" who are so little qualified to judge of the fitness of things as the author of this article. No good purpose can be served by the publication of such catchpenny effusions, and we do not for a moment believe that the readers of the *Pall Mall Gazette* are likely to be guided by the opinions of a manufacturing optician upon the use of the ophthalmoscope or the medical care of patients with diseases of the eyes.

JOHN KEATS AND GUY'S HOSPITAL.

A recent number of the *Guy's Hospital Gazette* contains an interesting letter from Mr. F. G. Hopkins, in which he suggests that the centenary of John Keats (who was born on October 29th, 1795) would be an appropriate occasion for the erection of a memorial of some kind to him in Guy's Hospital, which the poet once "walked" as a student of medicine. John Keats was entered as a surgeons' pupil at Guy's on October 1st, 1815, under Mr. Lucas. The personality of Astley Cooper was predominant at Guy's in those days, and we know from Dr. Wilks's *Biographical History of Guy's Hospital* that the great coryphæus of surgery took a special interest in the "cheerful crotchety rhymester," whom, however, he may not have recognised as a beloved son of Apollo. Keats passed the "Hall" on July 16th, 1816, as Dr. Wilks (in the *Guy's Hospital Gazette* of November 9th) shows by an extract from the minute book of the Court of Examiners of the Society of Apothecaries. Some of his medical notebooks are or were till lately to be seen in the Chelsea Free Library. Medicine was not so utterly distasteful to the poet as his purely literary biographers make out. Two years after he had qualified we find him writing to a friend: "Every department of knowledge we see excellent and calculated towards a great whole. I am so convinced of this that I am glad at not having given away my medical books, which I shall again look over to keep alive the little I know thitherwards." Somewhat later he writes: "I have enough knowledge of my gallipots to ensure me an employment and maintenance." For surgery he lacked nerve, but

as late as 1819 he had serious thoughts of going to Edinburgh for a degree, with the view of practising as a physician. His chief objection seems to have been one that does not greatly trouble more prosaic natures, for he says: "I know I could not take the fee!" In this, however, habit might, perhaps, have begotten tolerance. The real reason of his want of enthusiasm for his profession is revealed in the following passage of one of his letters: "The other day during the lecture there came a sunbeam into the room, and with it a whole troop of creatures floating in the ray, and I was off with them to Oberon and fairyland." Keats's connection with the medical profession is usually passed over very cursorily by his biographers, and we are therefore grateful to Dr. Wilks for having established the fact that the poet was a qualified practitioner. Guy's Hospital would honour itself in honouring so famous a son, and in this case it should not be left to American admirers of the poet to put up a tablet to his memory. If properly appealed to many members of the profession to which he belonged, and many lovers of poetry, would doubtless be glad to subscribe. Keats wished to have as his epitaph "Here lies one whose name was writ in water." If not written in the human body like those of other famous Guy's men, it is written deep in countless human souls, and it shines as a bright particular star in the firmament of fame.

THE LATE SURGEON-MAJOR PARKE.

A handsome memorial brass has been set up in the parish church of Kilmore, Ireland, in memory of that distinguished medical officer, Surgeon-Major Parke, whose premature death called forth such widely expressed sympathy at the time. The following is a copy of the inscription: "In Memory of Thomas Heazle Parke, Surgeon-Major A.M.S.C., second son of Wm. Parke, Esq., J.P., of Croghes House, Kilmore. Born November 27th, 1857; died September 11th, 1893. Beloved and honoured by all who knew him. He entered the Army Medical Staff in 1881; served in Egypt with distinction, accompanying the Bazuda Desert column of the Nile Expedition for the relief of General Gordon, 1884-1885. From January, 1887, to December, 1889, he served on the expedition for the relief of Emin Pasha as surgeon. It is as a tribute to his constant gentleness and care for the sick and suffering and to the splendid services he rendered alike to Europeans and Africans during the three years' march across Africa that this tablet is erected in grateful and affectionate remembrance by the two surviving officers of the expedition, Henry Morton Stanley, A. J. Mounteney Jephson (lieutenant)." The brass is mounted on a slab of polished marble.

DEFICIENT CHILDREN UNDER THE LONDON SCHOOL BOARD.

Children of deficient brain power and mental ability have been the subject of investigation and study by a Committee of the British Medical Association since 1888, and several reports upon their investigations have been issued. A full report on 100,000 children is in the press. Following upon evidence afforded by this Committee, the Royal Commission on Blind and Defective Children in 1890 recommended all public educational bodies to make provision for such children, and in 1891 the London School Board provided experimental centres of special instruction for deficient children who attend school daily. The movement was found successful, and was approved by the Education Department; parents gladly sent their weak children who previously were left untaught, and much improvement in the pupils is reported. Recently a new special training centre was opened by Lord George Hamilton at the Hugh Myddelton School, Clerkenwell, for the instruction of physically and mentally deficient children; there are now twenty such centres, and more are in course of erection. It should be stated that these children are distinct from the classes of blind and deaf, for whom special provision is made under the Act of 1893. There appear to be over 2,000 of these children mentally and bodily defective who are known to the School Board in London; it is a wise provision that is thus being made for their early training, which may render some of them useful members of society, and save many from those depths of degradation and helplessness into which they sink when uncared-for and untrained. Birmingham, Leicester, and Brighton have already established similar classes. The School Boards in other towns will, it is to be hoped, follow the same lines of action which now receive the direct encouragement, if not pecuniary support, of the Education Department. A special report on the 400 odd "deficient children" now under the care of the London School Board, classifying them and describing their condition, would be valuable. Experts' description is needed as a guide to the efforts of others. It is not at present evident exactly what classes of children are dealt with, and how distinctions are made between those really deficient and the dull, lazy, backward, and neglected or starved children. The great social importance of training from earliest days the children of deficient mental capacity is now more generally understood, and this matter is being pressed forward by many of the Poor law guardians, who confess their want of homes where such children may be boarded. The whole question of the provision necessary for children mentally and physically feeble needs careful consideration as a matter of public policy. All are agreed that early training may prevent much future misfortune, and may check their degradation to the ranks of pauperism, crime, and failure. The census (England and Wales) of 1891 gives the number of blind persons as 23,467, and of deaf and dumb persons, 29,280. An estimate from returns by the Committee of the British Medical Association founded on their observations in schools shows that probably there are between the ages 3 to 13 years 55,000 children of deficient mental capacity, excluding the imbeciles, the deaf, and the epileptic.

M.D.U.S.A.

The Medical Defence Union is to be congratulated on having carried through so successfully the prosecution, a full report of which appears on p. 1532. This is the most important prosecution under the Medical Acts which has been carried through for many years, as up to the present time it was imagined by the fraternity of quacks that, by adding certain letters to the title M.D. they were safe from conviction under Section 40 of the Medical Act. It would be monstrous if the law permitted any unqualified person to use the title of M.D., and to practise medicine with impunity, merely by the addition to the title of some cabalistic letters.

THE WORK OF THE METROPOLITAN ASYLUMS BOARD.

Mr. Duncombe Mann, the able and energetic clerk to the Metropolitan Asylums Board, has addressed a letter to the Chairman of the Board, pointing out that, whatever may be said about the deficiencies in the present accommodation for fever cases, an immense amount of work has been done in the five years during which he has held office. He draws attention to the fact that so long as the work of the Board was confined to its original function as a department of the Poor Law there was every reason to believe that the provision arranged for would be ample for its purpose, and that it was the sudden and overwhelming rush of patients, caused by the simultaneous action of the introduction of notification and the opening of the hospitals to all classes, that led to the immediate demand for a very much larger extension of the hospital system than could possibly be immediately provided. What has been done, however, makes a very good show. Five sites for new hospitals have been purchased, two large hospitals have been built, one more is approaching completion, another is in course of erection, and the plans for

still another have been approved. In addition to this the existing hospitals have in most cases been enlarged, and the process of conversion from "temporary" to permanent buildings has been steadily proceeded with. The ambulance service has also been extended and improved, new ambulance stations having been provided; the accommodation for small-pox has increased, and a site purchased on which to erect a permanent hospital for its treatment; the provision for imbeciles is being increased; and in addition to all this all the daily work of the Board in managing these great hospitals and asylums has had to be carried on without intermission, and often under the greatest strain. While, then, retaining to ourselves the right to criticise to the full the system according to which all these duties are thrown upon the Asylums Board, we must most heartily congratulate Mr. Manu on a splendid record of hard work well done in the short space of five years.

STUFFY CABINS.

THE great extension of the practice of taking holidays by sea is due, no doubt, in great part to the increased attention which the better steamship companies now give to the comfort of passengers. A good deal remains to be done, especially in the matter of ventilation, before these floating palaces are really rendered as comfortable and as health-giving as they might be. A correspondent has sent us an account of the experiences of a lady travelling recently to South Africa. After starting, she found that she was expected to share a cabin with a lady suffering from "asthma and lung disease." "She coughs most dreadfully," the lady wrote to our correspondent, "the cabin gets very hot and close with someone in it all day, and the cigarettes she smokes and the stuff she inhales makes me feel horribly sick," and so on. Eventually the lady had her berth changed into another cabin, but there is nothing, so far as we know, in the statute law, nor in any order in Council yet prescribed, for promoting health on board of passenger ships, that would apply to such cases as this. Nor would it be easy to frame regulations so as to cover all such abuses, unless, indeed, the surgeon's authority could be somewhat extended. The proper course to pursue would be to make a complaint to the purser, and ask for a change of berth, as was probably done in this case; if unsuccessful, then to appeal to the master and obtain the support of the surgeon. In no respectable company would such a request be refused if it could be complied with. In the case of steerage and intermediate or second-class passengers the law requires a certain amount of space to be set apart for use as a hospital, and in the case of cabin passengers ship companies may well be expected to provide a similar space for like use in case of necessity. The law, however, considers that cabin passengers are able in many respects to protect their own interests, and they would probably do this if necessary by bringing an action in a court of equity for return of passage money were they to fail in obtaining redress in the orthodox way.

ADENOID VEGETATIONS.

THE late Dr. Wilhelm Meyer, of Copenhagen, shortly before his death published the result of a painstaking investigation[1] on the extension of adenoid vegetations, and the age at which they occur in different parts of the world and in different races. In Greenland, amongst 60 Esquimaux children between 6 and 14 years of age, Dr. Helms found only 16 free from adenoid vegetations. In North Dakota Dr. Quarry found adenoid vegetations frequently amongst the native tribes of Indians, but the growths were very little developed in adults. Dr. Cantlie, of Hong Kong, reported that the native Chinese of the Mongolian race, as also those belonging to the mixed Chinese-Portuguese race, frequently suffer from them; while in Bangkok, Dr. Demitzer rarely found the disease amongst the native Siamese. Dr. Rombach, medical superintendent of the Dutch-Indian Colonies, collected evidence on the subject from several military surgeons with the following results: In Singkil, on the north-west coast of Sumatra, 113 natives were examined; of these, 3, that is, 2.6 per cent., had adenoid vegetations; on the island of Amboina, of 326 school children examined, none of the girls and only 2 of the boys (0.8 per cent.) were found to have adenoid vegetations; on the island of Saparoa, none of 100 adults examined had the growths, while 5 out of 717 school children (0.7 per cent.) suffered from them. Dr. Meyer therefore came to the conclusion that adenoid vegetations are to be found in varying degrees of frequency in at least three-parts of the world, namely, Europe, America, and Asia. The Mongolian is almost as much predisposed as the Aryan. A warm climate seems to be less favourable to their development than a cold one. Dr. Meyer, moreover, studied portraits and busts in numerous European collections, with the object of finding evidence of such growths in past generations. As a proof of the existence of adenoid vegetations in the beginning of the present century, the numerous likenesses of the famous sculptor Canova are mentioned. They all show the artist with an open mouth, a narrow nose, and a somewhat dull, stolid look. We have, further the testimony of one of his pupils that he was somewhat deaf. There is also evidence that the Emperor Charles the Fifth suffered from adenoid vegetations. His portraits show the characteristic physiognomy associated with these growths. It is also known that he was the subject of asthma; that this disease was not produced by nasal polypi is proved by the fact that the portraits taken early in life are much more typical than the later ones. King Francis the Second, the first husband of Mary Queen of Scots, who, according to M. Potiquet, suffered from adenoid vegetation, may perhaps have suffered from these growths; but Dr. Meyer points out that the nose being far from typical, there is some doubt whether he did not suffer from nasal polypi. Amongst specimens of ancient sculpture, Dr. Meyer has not found a single instance which might serve as a proof of the existence of adenoid vegetations in Greece; this may, however, easily be explained by the fact that the ancient Greek artists had a tendency to idealise the human features. On the other hand, several ancient Roman statues and busts show incontrovertible evidence that adenoid vegetations existed as far back as Roman art goes. As the most pronounced examples, Dr. Meyer mentions Nos. 80, 189, and 192 of the Chiaramonte Gallery in the Vatican, of which three busts the two first mentioned represent children. He finally concludes that it is probable that adenoid vegetations have existed from a very remote period of human history.

[1] *Hospitals-Tidende*, Nos. 6 and 7, 1895.

THE CARE OF PAUPER LUNATICS OR IMBECILES.

THE question of the care of quiet pauper lunatics has been exercising some Boards of Guardians lately. In some cases the patients of this class are spoken of, at the meetings in which their disposal is discussed, as being imbeciles. In one workhouse some of these so-called "imbeciles" were reported to be quiet and well conducted; some of them had been in the union workhouse for over thirty years. To build a large new lunatic asylum for these and for similar cases in other union workhouses would not be likely to add to their comfort and welfare, and would be to accommodate in a very costly way those who would probably be happier and more comfortable under more simple surroundings, and what to them would be a more congenial and homelike method of care and control than the county lunatic asylum. Thus we find that some Boards of Guardians or individual members of them are inclined to prefer making such accommodation as may be required for cases of the kind in the existing union workhouses or in workhouses at present disused. Other Boards

or individual members of them look forward to providing for the quiet chronic lunatics (or often so-called "imbeciles") a county establishment, intermediate between a workhouse and the present ordinary county lunatic asylum. From a report in the daily press of a meeting of the Camberwell Board of Guardians, it appeared that an account had been submitted by a medical man for fees for certifying forty-six inmates of the Constance Road Workhouse during the four weeks he was acting as *locum tenens* for the regular medical officer. Strong comments were made upon it as a grave public scandal, and it was alleged that some of those so certified had been in the workhouse for years, were simply childish, and were now discovered by the *locum tenens*, in the absence of their regular medical attendant, as being, and certified as being, insane. The subject was further complicated by the fact that one particular justice had ordered nearly all the examinations of these persons, and had departed from the usual custom by ordering a fee of one guinea in each case instead of the usual fee of 10s. After a long and heated discussion it was resolved to seek an explanation from the justice, to be referred, when received, to the Finance Committee for consideration and report. Certainly, the certification of so many inmates in so short a time should be carefully regarded by the Board, and we hope the matter will be thoroughly threshed out.

THE TREATMENT OF CARBONIC OXIDE POISONING.

Poisoning by carbonic oxide, which is the most lethal constituent of coal gas and of afterdamp, is not very uncommon in this country, though far less often encountered than in France, where a brazier of charcoal, which yields large quantities of carbonic oxide, in a closed room is a favourite means of suicide. Its treatment is unsatisfactory, and the remarks on the subject in a recent paper by Dr. J. Haldane in the *Journal of Physiology*, vol. xviii, p. 458, are well worthy of attention. Carbonic acid appears to endanger life in three ways. Its primary effect is, as is well known, to displace the oxygen of the blood, the presence of which is essential to life, but a subsidiary effect is to cause a fall of temperature owing to diminished heat production. This effect was noticed in mice, and Dr. Haldane states that some of the men still found alive but suffering from the effects of afterdamp after the terrible explosion in South Wales in 1894, got worse and sank when brought to the fresh air at the bottom of the downcast pit. At this point the air would be cooler and drier than in the workings, and there would be a very rapid current of air. As the men in the pit were clothed very lightly, their removal into this cool dry current might have accelerated a fall in temperature. Dr. Stevenson has stated in a case of slow poisoning by carbonic acid the extremities were exceedingly cold. Those who have become cold owing to poisoning in this way are restored by warmth, and Dr. Haldane suggests that in man a hot bath might be found useful in cases of carbonic oxide poisoning in which the surface temperature was low. Artificial respiration and the inhalation of oxygen when obtainable will assist in clearing the blood of carbonic acid, and as the nervous system suffers especially from the deprivation of oxygen, it is thought that it would be advisable to keep the head low and the limbs raised. The most serious aspect of the poisoning of the nervous system is that carbonic oxide causes serious and lasting damage to the central nervous system, which may cause death long after the patient has been restored to pure air. In such cases neither artificial respiration nor the inhalation of oxygen can be expected to do any good, and the former may even do harm by exhausting the patient. It is, therefore, desirable to be able to ascertain whether the patient is suffering from present want of oxygen or from the effects of previous want of it. This may be ascertained by examining a specimen of diluted blood. Normal blood diluted with 100 parts of water in a small test tube has a yellow colour, while blood containing large quantities of carbonic oxide has a pink colour. A drop of blood from the patient and a drop of blood from a healthy individual should therefore be diluted with about 100 drops of water; if the diluted blood from the patient is distinctly pink when compared with normal blood similarly diluted, it may be concluded that the patient is in want of oxygen, and the inhalation of that gas if available, or the use of artificial respiration should be persevered with. If, on the other hand, the diluted blood is not pink, it will be safe to conclude that the patient is suffering from the after-effects, and special care should be given to keeping him warm and quiet.

IS LEPROSY A TELLURIC DISEASE?

In the Public Health Section of the Australasian Association for the Advancement of Science, at the Brisbane session, 1895, Dr. Ashburton Thompson read a paper bearing this title. Although he grants that leprosy may perhaps be directly communicable through the sick to the healthy, he considers that leprosy in any country is not maintained by direct communication, and that sufficient information has not been given to justify the belief that leprosy has spread in Australia by contagion, and that in the absence of that information the severely strict isolation of lepers in that continent must seem to be "a renaissance in the nineteenth century of the product of mediæval ignorance into mediæval egoism." "The extremely severe laws against the liberty of lepers in force in five colonies amount to the hardship of adding imprisonment for life to the infliction of incurable disease." It is somewhat difficult to appreciate Dr. Thompson's position. If a case of leprosy occurs in a country where there are pre-existing cases, the new case has occurred on an area of recognised "endemicity," so that primary and secondary case alike were under the influence of locality; but it is evident that in a disease for the development of which only a small portion of persons present a suitable soil, if you go outside countries where cases already exist, it must be very difficult to get new cases at all. That is the reason why cases like Dr. Hawtrey Benson's, of which Dr. Thompson is aware, and the remarkable case from Guernsey reported by Dr. Liveing, to which Dr. Thompson does not refer, are so rare; nor does he refer to the remarkable development of leprosy at Parcent, although as Parcent is in Spain, and as leprosy has long existed in Spain, probably the inferences which most people would draw from the facts would be vitiated in Dr. Thompson's mind by endemicity. The discovery of the bacillus of leprosy, and the proof that leprosy is not hereditary, have placed the opponents of contagion in a very difficult position, and it is interesting to observe to what fanciful hypotheses they will resort to escape accepting the most simple and natural explanation. Dr. Thompson's hypothesis is that "the concurrence of some other sort of organism with the bacillus of leprosy is necessary to the successful implantation of the latter," and that this would explain how of all the people living on a tract of country, freely infested with the cause of leprosy, only a few would become lepers. We would only remind Dr. Thompson that pathology is a practical science, and of the old maxim, "Causæ non sunt multiplicandæ præter necessitatem." The Australians have wisely acted on the well-known fact that where lepers are fresh cases appear, and that the only approach to a condition in which lepers are not is to so isolate them that their existence can threaten their fellow-colonists as little as possible. The existence of a leper is one of the most miserable conditions known to mankind, but if that is a proper reason for alleviating the leper's misery, it is an equally strong reason for adopting every precaution against healthy persons being attacked by the disease. Dr. Thompson is not convinced by the evidence that has accumulated in recent years in favour of the maintenance of leprosy by contagion, but it is we believe not probable.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XI.—SLIGO WORKHOUSE INFIRMARY.

Our visit to this house was made at an inauspicious moment, owing to a recent outbreak of fever. It seems that during a long period of immunity from infectious disease the fever hospital had been used for the female sick, but, on its being required for its original purpose, the hospital patients were removed to the infirm wards of the body of the house. The male patients are nursed in the hospital proper. When we visited the house the fever hospital—cleansed and disinfected—was standing empty. We gathered that there was some difference of opinion among the authorities as to the use of the fever hospital for general patients. We are not able to decide as to the rights of the question, but any unprejudiced observer would be struck by the inadequacy of the present arrangements for the nursing of the sick. There is an average of

140 Patients,

who were thus distributed: the men in the hospital proper, where also we found the female lunatics placed at one end of the block and the male lunatics at the other. In this block there were about 70 beds. The female patients are on two floors of the female infirm block; 30 beds on each floor in one long ward. If our readers will call to mind the plan of an Irish workhouse they will recollect that these blocks are distinct buildings, separated by wide open spaces. At the time of our visit the female patients far outnumbered the males: there were 70 women on the books and 38 men.

The Female Wards

were crowded; the low-pitched roof and want of cross ventilation and the length and narrowness of these rooms rendered them quite unsuitable for sick wards. The passage between the two rows of beds was levelled up to the height of the platforms. An additional stove, with a flat top, serviceable for keeping food warm, was placed in each ward, and two windows had been opened in the outer long walls. The coloured plaster of the walls had a smooth surface. There were a few armchairs, small tables, and commodes. The bedsteads, which are close to each other down either side, are wire woven, and have blankets laid on them instead of mattresses.

The Male Hospital

was equally crowded. As the wards were so full in the summer we wondered how accommodation of any kind could be found in the winter months for the additional patients, many of whom come in with phthisis in the acute phase. The large wards on the upper floor held twelve beds each; one on the ground floor had 19 beds, and a smaller one 5. We also found the bath room converted into an isolation ward for an offensive case. An inmate was in charge of the unfortunate patient, who looked very ill, dirty, and uncared for. Two beds were in this little room, already half filled by the bath; there was a small window and a stove. We judge from the appearance of things that the bath room was seldom used for its legitimate purpose. Upstairs the roof is pitched and plastered, the walls plastered and colour washed. The wards are ventilated by openings in the roof and in some cases by perforated panes in the windows. The windows are small, and there is no cross ventilation; the old-fashioned fireplaces, one to each ward, are inadequate for heating purposes and very wasteful of fuel. There are no day rooms.

The patients in this hospital included a *cretin* of 23 years of age, who in size and general appearance resembled a child of 5 or 6. The poor little creature seemed to be a general pet in the ward, or perhaps we should rather say that he furnished some amusement to the inmates, who were many of them confined to bed with chronic ailments. The bedsteads in this division are "harrow" frames, with straw ticks and pillows; a board let into the wall forms the bed head. The majority of the cases were helpless old age and chronic diseases. In an inner room a phthisical patient was dying; he had just been visited by his priest as we came into the ward. There is no night nurse for these 140 patients.[1] The day staff is quite inadequate, and, in the words of Dr. Murray's report, "the night nursing is in the hands of paupers." We saw one nurse in the male hospital and one in the female wards, and we understand that there is a third nurse on the staff, the senior nurse being trained, and the two junior nurses acting as assistants to her. A hospital of 140 beds, as large as some of our county hospitals, with 3 nurses by day and none at night! Among the women was a case of fractured leg; the other patients, of whom about half were in bed, were chronic or helpless cases.

The Lunatics

are in charge of paid attendants; the cells are not in use in this workhouse, but the quarters provided for this class, especially for the females, are cramped and unsuitable. As we mentioned above, the women of this class are lodged in two small wards at one end of the male hospital, with the result that they have no yards for air and exercise. The listless, apathetic air of the idiots and epileptics showed that nothing was done in the way of occupation for the lightening of their unhappy lot. Perhaps nothing was possible in their surroundings.

The male lunatics are slightly better off; they have the use of an airing court, such as it is, some of them find occupation about the house, and they are not so overcrowded. As the workhouse is close to the county asylum the more dangerous inmates are removed thither as there is room in the asylum.

The Infirm Class

on the female side are lodged in the quarters set apart for the able-bodied; they have no dayrooms because the sick are in their wards. We found the men in the ground floor ward of the male wing, and for them there is a dayroom. Men and women alike sleep on harrow beds with straw ticks; there is one basin and one roller towel in each dormitory for the use of 24 to 28 individuals. The women are crowded together in the room which should be the dayroom, where both light and warmth are insufficient. The only outlet is into the large yard, common to both firm and able-bodied, used also as the laundry drying ground.

The Male Infirm Attendant,

known as Peter, a fine tall man, told us that he was working in Glasgow and doing well, when he injured his ankle, and, falling into the hands of the Poor-law authorities, he was sent back under the Act of Settlement to his native place, Sligo, though he professed himself able and willing to resume his work; and there he remains a burden on the rates, though he appears to be able to maintain himself. There is probably another side to the story, but on the face of it it appears to bear out the contention that timely and generous medical relief, coupled with discriminating assistance, would save many a man from becoming a pauper. We noticed

Some Concessions

to the old people which betokened kindly thought on the part of the authorities; the old men have their dinner in their own dayroom, which does not indeed afford much comfort or cheerfulness, but it keeps them apart from the ruder and noisier class. The old women are allowed to wash their own caps, kerchiefs, and other small belongings, and have the use of the laundry on one day in the week for the purpose. This privilege is much appreciated by the more respectable class, and we have heard of the women paying an inmate with tea to do this small service for them, rather than that their personal clothing should pass through the general laundry.

It is the Same Old Tale,

almost nauseating in its iteration, of the entire absence of anything like decency or sanitation, when we come to the conveniences provided for the inmates. Outside are privies on the waggon system; indoors, buckets, pails, and commodes are in use in the sick and infirm wards, these vessels

[1] Since this report was written we understand that two paid nurses have been appointed, who are allowed to sleep by day.

remaining unemptied and frequently uncovered the whole night. In considering the cubic capacity and amount of ventilation in a ward, we must remember that it needs to be unimpeachable in these particulars when the atmosphere is poisoned in such a way at night. We have already noted that these wards are crowded and doubtfully ventilated; nor are there any facilities for the cleansing of the inmates or of their surroundings.

A Basin and a Round Towel.

are provided for common service among the sick, and a bath or two, without hot water. Every drop of water has to be carried to the wards for use, and carried away when used, and when warm water is required it must be heated in a kettle or fetched from the main kitchen. It is not surprising that we noticed a lack of cleanliness and sweetness in the wards. The town water supply is laid on to the workhouse. Some of the sewage is carried to a large pit at a distance from the house and some drains into the river. The matron kindly showed us

The Laundry and Clothes Store.

Both are under the charge of the same officer. The room set apart as a clothes store is anything but suitable; the brick floor and the walls were stained with moisture, and the window was very small. We saw no mangle in the laundry; the drying closets are fair, and are heated by steam from a central boiler. The same steam heats the jacketted boilers in the kitchen—there is no other means of cooking—where the stirabout for that day's meal was being prepared.

The Fever Hospital,

then standing empty, is at the back of the hospital block. It stands on a slight hill, and as the building is also raised somewhat above the level of the ground it has quite an imposing appearance. In internal arrangements it is similar to other fever hospitals: four wards on the ground floor, two long wards above, administration block in the middle, cross light and ventilation, kitchen and laundry, all offering excellent accommodation for the unhappy patients now crowded into the infirm wards. We do not wonder that the officials felt aggrieved at the sight of the empty hospital.

The Nurseries.

This department is in three sections for purposes of classification; the first division being for unmarried mothers who have had more than one child. Here we found, unhappily, several women with their infants. The second nursery is for unmarried women with their first child; here we saw three women, but are not sure that there were not others of the class in the house. The third nursery is for the use of the married women; this section was empty. An inmate is supposed to be in charge of each section, but as the inmates can have but little control over each other, we found the nurseries wretched, dreary, and bare; the infants dirty and unnursed, and the usual absence of order and method. But the classification whereby the unmarried women of the first class are kept away from the more depraved is a real boon.

Recommendations.

Our visit to the house made it clear to us that the sick department had quite outgrown the limits of the hospital as originally planned. The first necessity, therefore, is a hospital department adequate to the number of patients. The temporary character of the present female wards is so evident, especially to those who have to work them, that we wonder they have been tolerated so long. With the remodelling of the hospital will come, we trust, a sanitary system in accordance with modern requirements. But even before this can be carried out the nursing of the patients should be provided for. It seems to us nothing less than inhuman to leave from 140 to 160 paupers—sick, helpless, and infirm—with no skilled attendance at night, and equally inhuman to expect the day nurses to face the alternative of either breaking their night's rest continually, or leaving their patients to die alone in the night. The nursing staff is lamentably insufficient; we would urge the Board to consider the whole question, with a view to superseding the pauper help by skilled service.

TRAINED *VERSUS* UNTRAINED NURSES.

The *Freeman's Journal* is quoting our Special Commissioner against ourselves in a long quotation from the report on the Ballyshannon Workhouse Infirmary, in which report our Commissioner gives honour to whom honour is due. "Foremost among our assailants—if we except a Tory Lord Justice—was the British Medical Journal," then, with the curious want of discrimination which so often characterises a lay professional writer in dealing with professional matters, mixes up our comments on the general management of a workhouse with those on the skilled nursing of the sick.

Into the merits of this particular dispute with the Athlone Board we do not enter, but on the wider question as to whether the pauper is to be nursed by trained or untrained nurses our opinion is very decided. The reports that we are placing before our readers will disabuse any candid mind that we are prejudiced against the nuns as nuns; our Commissioner always recognises the excellence of the work done by these religious-minded women in the workhouses, but good intentions cannot take the place of knowledge, nor can 'experience' supersede training. Experience gained in a workhouse infirmary will only carry the possessor of that experience as far as the limits of the sphere wherein the experience was acquired will permit, in other words, because the bulk of workhouse patients are of the chronic order the experience there gained will be mainly of that class of case. Again, experience being the application of knowledge acquired by one person, and passed on to another as from teacher to taught, it is limited to the amount of knowledge on the part of the teacher. In a workhouse infirmary, unless there is a resident medical officer, the head nurse is the fount of knowledge, and if she is not trained she has no special knowledge to impart. In a hospital the training of the nurses is carried on on varied cases of sickness, and it is guided and supplemented by direct tuition from teachers skilled in the application of the art of nursing; hence, when a pupil has completed the course, she has seen or taken part in the nursing of all forms of disease, she has seen the treatment of disease by professors in medicine and surgery, and she has learnt the management of patients and wards from those who are qualified to teach. Public opinion has distinctly stated that it is its wish that the paupers for whose care it is responsible shall be nursed by nurses trained in the nursing of the sick in properly equipped hospitals, and by professors of the art of nursing; this mandate will have to be obeyed sooner or later. The Local Government Board is only carrying out the mandate of its masters, the public. We are entirely at one with the public on this point: we feel that the sick, wherever they may be found, have a right to treatment by a qualified medical man, and that his prescribed course of treatment shall be carried out by a properly trained nurse. Whether in the particular instance of the Athlone Board it was judicious to insist at once upon a levelling up, for which both guardians and nursing staff were unprepared, is a matter upon which there would be several opinions, but that the principle contended for is a right one we are most fully assured.

IRISH WORKHOUSES.

The Chairman of the Lisburn Board, in seconding a motion to make an examination of the sewers, said "that a sewer recently opened presented a shocking sight, and the stench from it was horrible. He did not wonder that the representative of the British Medical Journal should aver that the poor creatures who were compelled to sleep over such a receptacle of filth were in a condition of living death."

We welcome this testimony to the value of the crusade that we have entered upon in the interest of the Irish pauper; and if we can only arouse those in authority to look into the sewers and all the dark places of the Poor Law we shall have secured some results for our work.

GREAT YARMOUTH.

It is extraordinary the delusions that cloud the intellect of the guardian when considering the question of the nursing of the sick in the workhouse infirmary. The valiant lady guardian in Yarmouth has again taken up the cudgels on behalf of the paupers, and moves that a trained nurse be advertised for; she again suffers defeat, because "there are fourteen nurses in the house, and they cost £200 a year." This looks well on paper, but the facts are these: Most of these so-called nurses are inmates; the salaries average £50 a year. The head nurse, who is superintendent of the whole house, is now 81 years of age, and her official assistants are two nurses untrained. The patients average about 200, of whom many are acute cases. The guardians argue that because there are a certain number of inmates told off as ward helpers that the nursing staff is adequate; but we maintain that the effectives are three, and the non-effectives as many paupers as the officials like to place in the wards. We trust that Mrs. Leach will return to the charge again, for she will have the sympathy of all humane people with her.

THE "INDEX MEDICUS."

Our readers will hear with pleasure that it has been definitely decided to resume the publication of the *Index Medicus*. A circular letter has been issued by Dr. Billings and Dr. Fletcher, in which they state that the necessary number of subscribers has been obtained, and that the work will be put in hand at once. The replies to the inquiry made as to the preferred date of commencement of the journal have been overwhelmingly in favour of its continuance from May 1st, 1895, thus making the work continuous. The first current number will appear in January, 1896, and the *Index* will be continued monthly thereafter. The preceding bibliography, from May to December, will be printed in one number as quickly as the large quantity of material will permit.

A list of subscribers is sent out with the notice. This list is more complete than the one recently issued by Messrs. Davis, to which we referred in a previous note. The editors state that "it is understood that some foreign subscriptions are yet to arrive." A glance at the list of those received up to the date of the determination to proceed with the *Index* shows that we have to thank the United States for the resumption of the publication of the *Index*. Three copies are subscribed for in France and only one in Germany; excepting Great Britain, these are the only European countries represented in the list.

The only towns in Great Britain from which subscriptions have been sent are the following: London, represented by the Royal College of Physicians, Royal College of Surgeons (two copies), and the British Medical Association (two copies). Manchester is represented by the Manchester Medical Society, and Bristol by the Bristol Medical Society. Edinburgh sends three subscriptions. The Royal College of Physicians, Sir T. Grainger Stewart and Mr. Young J. Pentland. Oxford, Cambridge, Glasgow, and all our large towns, excepting those mentioned above, are conspicuous by their absence. Ireland does not appear on the list at all.

Mr. MacAlister stated in the British Medical Journal of December 7th that he had sent some dozen names in as subscribers; these, we presume, were not received in time to be included in the list just issued. Even with these twelve added London cuts a sorry figure in comparison with New York or Philadelphia.

THE ASHANTI EXPEDITION.

[From our Special Correspondent.]

An account of the arrangements on board the hospital ship *Coromandel*, which sailed on Saturday, and will serve as hospital ship with the Ashanti expeditionary force, may be of interest to your readers.

The whole of the outside of the ship is painted white, and the wards inside are coloured pale green; thus the effect of the direct rays of the sun and of the glare from the surface of the sea will be mitigated as much as possible. The wards are on the upper and main decks, the upper deck being reserved for the worst cases and fitted with specially long enclosed swinging cots of iron, which can be fixed or allowed to swing freely at will. If desired also they can be unshipped from their supports, and then stand on folding feet like ordinary bedsteads. They can then be carried into the open air, or into the operating room, which communicates with this ward through folding doors. These bedsteads, as in fact is the case with nearly all the hospital cots, have an arrangement which admits of the use of the bed pan without lifting the patients, and each is fitted with a little table at the patient's head, a punkah, and with a rope and crossbar whereby the patient can raise himself.

The wards are beautifully light and airy, have large square ports on each side fitted with "chicks" or split cane blinds, which keep out flies and glare, while permitting natural ventilation, which is assisted by Dr. Edmond's steam spray extracting apparatus as well as by a steam fan blast for pumping in fresh air.

The smoking room on the hurricane deck has been fitted up as a small ward for officers, and is very cheerful and airy.

A complete laundry is fitted up for washing linen, etc., and is paved with grooved tiles, as are also the latrines and washhouses, so that all fouling or dampness of the decks is avoided.

The operating room is fitted with a steriliser for instruments, glass irrigators, and every appliance for the carrying out of all operations under strictly antiseptic precautions. There is a drying room fitted with hooks close to the engines, wherein all personal clothing, etc., can be thoroughly dried—a most necessary precaution in the intensely damp climate of West Africa.

The ship is fitted with Pasteur-Chamberland filters supplied by Messrs. Defries, and a soda water making machine is supplied, whereby any amount of the condensed water, of which almost unlimited quantities will be manufactured on board for drinking and cooking purposes, can be aërated and medicated as required.

The troop decks for the men going out in the *Coromandel* are unusually light, roomy, and well ventilated, ample room and cubic space being available owing to the small number of men—under 300—to be carried, while the quarters for the warrant and non-commissioned officers are most comfortably fitted up. The ventilation throughout the ship, assisted as it is by the artificial means above described, is most perfect, and no expense appears to have been spared or anything which science or experience could suggest omitted, tending to promote the comfort and well-being of the sick and wounded in the trying climate to which the *Coromandel* is about to proceed. The nursing sisters have been supplied with electric furnaces, in which a plate of platinum foil, when connected with the wires of the electric light, will in a few minutes boil a kettle, or heat up soup, beef-tea, etc. This arrangement is not only extremely convenient, but is also much safer than using spirit lamps or open fires.

THE CASE OF DR. ANDERSON.

At a meeting of the Trinidad and Tobago Branch of the British Medical Association, held on November 6th, the following resolution, moved by Dr. J. A. de Wolf, President, and seconded by Dr. C. F. Knox, Vice-President, was passed:

That the Secretary be instructed to acknowledge the receipt of the letter of General Graham of August 13th, 1895, with accompanying papers setting forth the efforts of Dr. Anderson to secure a hearing of the appeal against the decision of the Court of Appeal in the case of Anderson v. Gorrie, Cook, and Lumb, and to inform General Graham that these documents have been laid before this Branch (at a general meeting held this day, November 6th), and that the Branch desires to express its continued sympathy with Dr. Anderson in his efforts to secure justice to himself and thereby to uphold the dignity and rights of the profession.

A similar resolution was recently passed by the Torquay Medical Society (see p. 1501).

THE BATTLE OF THE CLUBS.

The Norwich Medico-Chirurgical Society.

We are informed that at a meeting of this Society, held at the Norfolk and Norwich Hospital on December 3rd, the report of the Council in reply to Mr. Belding's question, Are the medical officers of the Liverpool Victoria Friendly Society included in the strictures passed by the Norfolk and Norwich Medico-Chirurgical Society on medical men holding medical aid appointments? was received and adopted. The *modus operandi* of this Society had been fully investigated by the Council, and the members were unanimously of opinion that the Liverpool Victoria Legal Friendly Society comes within the meaning of Law VI "as unbecoming and unprofessional for any member of the profession to lend his name or to associate himself in any way with such a Society;" and it was resolved that the decision of the members should be made known at an early date to each member of the Society by circular. Law VI reads as follows:

VI.—Any registered medical practitioner who shall be adjudged guilty of and persist in unprofessional conduct, as defined by the code of rules adopted by this Society, shall be ineligible to be a member of this Society.

The rules adopted by the Society are those formulated by Dr. Stirrup, with clause appended with regard to medical aid associations, defined as associations formed as trade speculations carried on by lay proprietors for the purposes of deriving pecuniary profits from the earnings of members of the profession, and pushed by means of advertisement, or by the employment of paid canvassers who tout and enlist the patronage of other practitioners; and that it be deemed unbecoming and unprofessional for any member of the profession to lend his name or to associate himself in any way with such societies or clubs.

Fermanagh Medico-Ethical Association.

The Fermanagh Medico-Ethical Association has been formed with the object, among others, of promoting professional intercourse, mutual protection and co-operation, and providing opportunities to members for obtaining the advice and united support of the profession in the locality. This Association proposes to arbitrate in disputes between members; to consider and take action upon the relation of medical officers with all kinds of club practice, and with regard to Poor law and other appointments; to circulate a code of ethics (founded on that of the Manchester Medico-Ethical

Association), as well as a tariff of fees; to establish, maintain, and circulate among members a "patients' black list;" and, in particular with regard to club practice, (1) to enforce a wage limit, (2) to insist on a medical examination for all new members and an examining fee, (3) to raise the usual rate of subscriptions for females and juveniles, (4) to safeguard the tenure of office by a three months' notice on either side. Further, the Association will seek to obtain "increased and more efficient representation for general practitioners on the General Medical Council, and of medical men in Parliament." These are all very laudable objects, but we cannot help regretting that it has not been at least attempted to attain them through the local organisation of the British Medical Association. "United we stand, divided we fall," is as true of organisation as of individuals, and while we rejoice to see an awakening of local interest in these matters and a greater disposition to deal with them by local effort, we cannot doubt that local action would be far more effective if it were organically a part of a combined effort throughout the United Kingdom.

THE HISTORY OF SYMPHYSIOTOMY.

IN a recent number of the *Quarterly Medical Journal* Dr. P. Dymock Turner has an interesting article entitled Symphysiotomy, its Introduction, Decline, and Revival, in which the history of the operation is told in great detail. A work published in 1597 by Severinus Pinæus, a surgeon of Paris, paved the way for the introduction of symphysiotomy, though it was nearly two centuries before it was actually performed. He describes the *post-mortem* examination of a woman hanged ten days after delivery. The examination was made in the presence of most of the eminent doctors of Paris, including Ambroise Paré. The pubic bones were clearly seen to be freely movable, and Pinæus suggests that more room for the passage of the fœtus might be made by aiding the separation of the symphysis, which was believed to take place in labour, if necessary, by cutting.

In 1655 J. C. de la Courvée divided the symphysis with a knife to save the child in the case of a woman who had died in labour, and the same thing was done by Plenck in 1766. In 1768 Jean René Sigault presented a communication to the Académie Royale de Chirurgie in which he called attention to the bad results of Cæsarean section, and proposed to substitute for it division of the symphysis in certain cases. Sigault asked that the Académie should procure for him a condemned criminal on whom he might try the operation. This request was refused by the Académie, which also emphatically rejected the proposed operation.

It was not till 1777 that Sigault had an opportunity of performing the operation. On October 1st in that year he operated on a rickety dwarf, aged 30, who in her four previous confinements had been delivered by version. The operation was done, with the assistance of Alphonse Leroy, in the night by the light of a candle held by a woman. The patient sat up in bed on the forty-first day, and on the forty-sixth she was able to walk a few steps. On December 3rd, nine weeks after the operation, the woman appeared before the Faculty of Medicine, and the result of the operation was so satisfactory that the Academy decided that Sigault's two memoirs, with the Commissioners' report and the proceedings of the meeting, should be printed in Latin and French, and sent to the civil authorities and to the medical profession; also that a moderate sum should be given to the woman, and that she should be recommended in the proper quarter for a pension. It was also decided that the following inscription should be engraved on the reverse of the Dean's silver medal, and that 100 specimens should be given to Sigault and fifty to Leroy:

Sectio
symphyseos. ossis. pub.
Lutetiæ Nova.

1768
Invenit Proposuit
1777
Fecit Feliciter
J. R. Sigault, D.M.P.,
Juvit
Alph. Leroy,
D.M.P.

Sigault's triumphant success with the physicians may have been partly due to the fact that the surgeons had previously pronounced against him, and the surgeons were not slow to find fault with the operation after its performance. The controversy reached the public, and the *Journal de Paris* published a large number of letters on both sides, one enthusiastic lady proposing that a statue should be erected to Sigault in the form of the God of Health. The second operation was performed at Würzburg by Gaspar von Siebold on February 4th, 1778; the child was killed in the delivery, but the mother recovered. Sigault himself operated five times in 1778, in four of them the mothers recovered, but in none was the life of the child preserved. Leroy, Sigault's assistant, operated four times up to 1785, losing one mother but saving all the children. In the hands of others, however, the operation had disastrous results, due either to septic mischief or to its being undertaken in extreme degrees of pelvic contraction, for which it was unsuitable. The publication of Baudelocque's treatise (1781, 2nd ed., 1789) led to the abandonment of symphysiotomy in France. In England it never met with much favour, being opposed by William Hunter and other authorities. In Germany it was very little practised, perhaps on account of the lamentable results of the operation in that country. In Belgium, Holland and Italy it took firmer root, and in the last-named country it never died out of practice altogether. After the introduction of the antiseptic method, the results, especially at Naples, showed an extraordinary improvement in the hands of Morisani, Novi, Mancusi, and Mangiagalli. So little was their work known to the profession in other countries, however, that Morisani astonished the London International Medical Congress in 1881 by the recital of his statistics from 1868 to 1880. In that period he had operated 50 times on 48 women (two having undergone the operation twice), with the result that he had saved 40 women and 41 children. The operation, however, showed no sign of coming into favour with the profession outside Italy until 1891, when Morisani's assistant, Spinelli, visited Paris and induced Professor Pinard to try the operation. He did so with very encouraging results, and up to the end of 1894 49 symphysiotomies had been performed at the Clinique Baudelocque, with the loss of 4 women and 5 children.

It is a curious irony of fate that the hospital named after the man whose teaching caused the operation to be rejected in France should have been the scene of its successful revival.

Since 1892 symphysiotomy has been practised pretty extensively throughout Europe and in America, and the operation has been highly successful in skilled hands. Widely varying opinions, however, are still held as to the position which it ought to take among the resources of the obstetrician. The whole question is discussed in a judicial spirit by Dr. Turner.

RESOLUTIONS OF THE INDIAN GOVERNMENT; A NEW EPOCH IN INDIAN SANITATION.

THE Government of India has now issued its important resolution on the subject of sanitary administration. This State paper, which promises to inaugurate a new era in Indian sanitation, is a response to the representations made by the Indian Medical Congress on this subject in Mr. Ernest Hart's address, and in a paper read at the Congress by Dr. W. J. Simpson, Health Officer of Calcutta, where suggestions were set out as to the organisation of a sanitary executive for the purpose of promoting reforms in Indian towns and villages tending to the betterment of public health. These suggestions, which were cordially supported and endorsed by the Congress, were devised for the purpose of adapting the administrative arrangements existing in India, more especially those founded on the principle of local self-government, to the end of applying local resources to meet the cardinal sanitary needs of the country, namely, the provision of a pure water supply, and of proper arrangements for scavenging and drainage. Mr. Hart and Dr. Simpson's main proposals were (1) the separation of civil and military sanitation; (2) the education and training of a suitable sanitary executive in medical, veterinary, and engineering schools; (3) the appointment by the larger municipalities and by groups of smaller municipalities and local bodies of health officers;

(4) the formation of special sanitary committees to consider the sanitary needs of localities; (5) the appointment of district sanitary inspectors in cases where the civil surgeon is unable, from pressure of medical work, efficiently to supervise the sanitary executive; (6) the retention of provincial and imperial sanitary commissioners as heads of sanitary administration; and (7) the special investigation of disease causes by means of properly equipped chemical and bacteriological laboratories.

The Government resolution now issued is practically a reply to these proposals. It is pointed out that the sanitation of the army and of military cantonments, which is entrusted to cantonment committees working under the order of the Government of India, has already been completely separated from that of the civil population. As regards the latter, the Government virtually accepts Mr. Hart's proposals in his Indian address, and in his address to the British Medical Association at Newcastle in 1895; which it will take time fully to realise. As a commencement it has been resolved to create a strong chemical department in Calcutta for the whole of the Bengal Presidency, for purposes of medical and sanitary analysis, and for training men in practical sanitary work. A bacteriological laboratory is to be organised at Agra under Professor Hankin, who has already done such excellent work, for purposes of investigation and education. Medical and engineering colleges are to be utilised more largely and specially for sanitary teaching, and it is proposed to grant diplomas in public health to men who have undergone a course of study in hygiene. A sanitary executive is to be gradually provided in this way, and it is hoped that by the beginning of the next century a sufficient supply of trained men will become available to justify local bodies being required to appoint health officers. The other items of the programme are accepted as objects to be realised in the early future. Meantime young men specially qualified and selected are to be appointed for a limited term of years as sanitary commissioners, whose main duty will be sanitary inspection. The separation of sanitary from medical work is not a feature of the policy of Government, and it is fully recognised that men who have had a regular medical training are best fitted for devising and executing measures having for their object the prevention of disease, which ought to proceed hand-in-hand with measures designed for the cure of disease.

The question of additional expense is one which confronts the Government on the threshold of this undertaking, and it has been found necessary, in order to provide for the cost of the new laboratories, to abolish the post of Deputy Sanitary Commissioner of the Punjab and close the small bacteriological laboratory in Calcutta, hitherto conducted by Professor D. D. Cunningham. It will probably be possible eventually to throw the burden of these new arrangements on local bodies.

Meantime we hope that on the principle of *salus populi suprema lex* the new sanitary movement will not be stifled by misplaced economy. The sanitary needs of Indian towns and villages are easily discovered, and it does not require high scientific training to recognise and remedy them. They are, as was recently pointed out in a letter to the *Calcutta Englishman* by a native gentleman, by name D. C. Roy, pure drinking water, conservancy, and drainage. These are the simple changes which have to be pealed out all over India, and it remains for the new sanitary executive to ring them in the ears of Indian peoples so loudly and persistently that cleanly ways will in time become national habits.

THE DOCTOR'S WARS.

THE fact that the success of the Ashanti expedition must depend very largely upon the efficiency of medical arrangements is generally recognised, and in consequence the number of army medical officers employed is large. They include, in addition to Surgeon-Colonel Taylor, Principal Medical Officer, Brigade-Surgeon - Lieutenant - Colonel Townsend, Surgeon Lieutenant-Colonel Blennerhassett, 8 officers of the rank of Surgeon-Major, 10 Surgeon-Captains, and one Surgeon-Lieutenant—23 in all. As the European force sent from this country is only 300, to which a battalion from Gibraltar is to be added, the staff of army surgeons is large in proportion. In 1874 the expedition included 2,400 Europeans, and there were altogether 80 medical officers detailed for service, of whom about 50 accompanied the force to Kumassi. In addition, Sir Garnet Wolseley could command the services of nearly 30 surgeons R.N.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—A meeting of this District will be held on Tuesday, December [illegible] at 4 P.M. at Brighton Infirmary, Bartholomew's Park Hill, Brighton; Dr. Cleveland will preside. Mr. D'Arcy Power will read a paper upon the Differential Diagnosis and the Treatment of Cystic Lymphangiomata in Children (specimens and a case will be shown). Interesting clinical cases will be shown by Dr. Chilcott, Medical Superintendent of the Infirmary.—[illegible] Worms, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—An ordinary general meeting will be held in Aberdeen on Wednesday, December [illegible] at 4 P.M.—C. THISELTON DYCKHARE, J. SCOTT RUSSELL, Joint Honorary Secretaries.

SOUTHERN BRANCH: SOUTH WILTS DISTRICT.—A meeting of this District will be held at the County Hotel, Salisbury, on Wednesday, December 18th, at 2 P.M. The business will be as follows: 1. Statement of Accounts. 2. Election of Officers. 3. Consider the report of the Committee of the British Medical Association on Medical Charities. 4. Mr. Hosking: (1) Notes of a Case of Carcinoma of the Scapula; (2) Multiple Growths of Lower Eyelid, with specimen. 5. Mr. [illegible]. The Use of the Tintometer in Water Analysis. 6. Mr. Manning: A Case of Orchotomy for the Relief of Enlarged Prostate. 7. [illegible]. Luncheon will be provided at 1 o'clock, at 2s. 6d. a head, not to include wine or ale.—H. J. MANNING, Honorary Secretary.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—An ordinary meeting of this District will be held on Tuesday, December 17th, at 9 P.M., at the Medical Library, 5, Pembroke Road. Agenda: Professional Specimens.—C. C. CLARKMONT, Honorary Secretary, 57, Elm Grove, Southsea.

GLOUCESTERSHIRE BRANCH.—The next ordinary meeting of this Branch will be held at the General Hospital, Cheltenham, on Tuesday, December 17th, at 7 P.M., under the presidency of Dr. Oscar Clarke. A paper will be read by Dr. Mackinnon, of Gloucester, on Puerperal Eclampsia, and one by by Dr. Herbert Bramwell, of Cheltenham, on Friedreich's Disease.—S. T. PRUEN, Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—The adjourned meeting of this Branch will be held in the Medical Institution, Liverpool, on Wednesday, January 8th, 1896. All matters of business to be sent to the Secretary, JAMES BARR, M.D., 72, Rodney Street, Liverpool, at once.

GLOUCESTERSHIRE BRANCH.

THE first general meeting of the session was held at the General Infirmary, Gloucester, on November 19th, Dr. OSCAR CLARKE, President, in the chair. Thirty-one members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

President's Address.—Dr. OSCAR CLARKE delivered the opening address upon Prognosis. After the address a vote of thanks to the President for his address was proposed by Dr. RAYNER BATTEN, seconded by Dr. E. T. WILSON, and carried unanimously. The PRESIDENT acknowledged the vote in graceful terms.

Communication.—Mr. G. A. CARDEW showed a Cast of the Foot of a child having six toes.

Supper.—After the meeting the members adjourned to the New Inn Hotel, where twenty-six sat down to supper. At the supper a vote of thanks to Mr. O. H. Fowler, the retiring President, for his able and energetic year of office, was proposed by Dr. OSCAR CLARKE, seconded by Mr. G. A. CARDEW, and carried unanimously.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

AN ordinary meeting was held at Hastings on November 29th; Dr. ALLEN, the President of the Branch, in the chair.

Confirmation of Minutes.—The minutes of the East Grinstead meeting were read and confirmed.

Place of March Meeting.—It was resolved to hold the March meeting at Brighton, conjointly, if possible, with West Sussex District.

Communications.—Professor W. H. Corfield delivered an address on the Water Supply of Towns.—Mr. Cleland Lamman related several cases which tended to establish some Connection between Disease of, or Operations upon, the Female Pelvic Viscera and Serous Effusion into the Pleural Cavity.

Dinner.—Eighteen members dined together at the Grand Hotel after the meeting.

SOUTH-WESTERN BRANCH.

An intermediate meeting of this Branch was held at the Barnstaple and North Devon Infirmary, Barnstaple, on November 30th. Dr. Harper, Vice-President, in the chair.

New Member.—Dr. Hallett, of Bradninch, was elected a member of the Association and Branch.

Communications.—Mr. Swain, of Plymouth, read a paper on the "Technique of Abdominal Surgery." At the conclusion of the discussion, a vote of thanks to Mr. Swain for his paper was moved by Dr. Davy (Exeter) and carried unanimously.—Mr. Penny (Barnstaple) showed a case of Acute Exfoliative Dermatitis or Pityriasis Rubra.—Dr. Solly (Exeter) read a case of Colitis.—Mr. Cooke (Barnstaple) read notes of a case of Cæsarean Section—deformity from rickets—with recovery, the child being also alive. Also of a case of Tumours in Both Breasts, simultaneous removal, and recovery.—Mr. Jackson (Barnstaple) showed a patient in whom he had cured Anthrax by the local application of Pure Carbolic Acid.

HALIFAX, NOVA SCOTIA, BRANCH.

A very largely attended meeting was held in November 1st, at the Queen's Hotel, Halifax; the President (Dr. Trenaman) in the chair).

New Member.—Dr. Thomas Walsh was elected a member of the Branch and Association.

Communications.—Dr. Kirkpatrick showed a patient with Primary Tuberculosis of the Larynx.—Dr. Campbell showed a case of Lupus.—Dr. Farrell reported three cases of Abdominal Section and one of Ventral Fixation.—Dr. Black reported a case of Hysterectomy, showing specimen.—Dr. N. E. McKay showed a patient, for whom he had Wired the Olecranon for Fracture.

Treasurer's Report.—The Treasurer's report was received, and referred to an auditing committee consisting of Drs. Kirkpatrick and Hattie.

A regular meeting was held on November 15th; the President (Dr. Trenaman) in the chair.

New Member.—Dr. W. F. Smith was elected a member of the Branch and of the Association.

Communications.—Dr. Walsh reported a case of Poisoning from Belladonna and Aconite.—Dr. Carleton Jones reported a case of Spontaneous Fracture of the Femur of a child 2 years of age.—The discussion on the Management of Abortion was introduced by Dr. Farrell, and continued by Drs. Muller, Milsom, Reid, Campbell, Walsh, Smith, Carleton Jones, and others.

SYDNEY AND NEW SOUTH WALES BRANCH.

The usual monthly meeting of this Branch was held at Sydney on October 25th; Dr. Jenkins (President) in the chair. Thirty-two members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The President announced the election of Dr. Woods, of Albury, and Dr. Woodford, of Glen Innes, as members.

Communications.—The Honorary Secretary read a letter from the Brisbane Branch of the British Medical Association with reference to the case of leprosy. Resolved that the question be referred to the Council to be dealt with.—Dr. Bennet exhibited a case of Lichen Planus.—Letter from the Registrar of the University was read.

Midwifery Nurses Bill.—The President stated that Dr. Graham could not be present at the meeting, but as the question of the Midwifery Nurses Bill was an urgent one the discussion might go on. He would therefore ask the Honorary Secretary to read the Bill through.—A discussion ensued in which Drs. Thring, Mullins, Worrall, McCulloch, Crago, Neill, Wilkinson took part. Dr. Wilkinson moved that the debate be adjourned for one week. Carried.

MALAYA BRANCH.

An ordinary meeting of this Branch was held in the Raffles Library, Singapore, on August 3rd. The members present were Surgeon-Captain Greig, A.M.S.; Drs. Middleton, Lim Bom Keng, Croucher, Fowlie, Jansz, and the Honorary Secretary, Dr. H. Campbell Highet. Mr. H. N. Ridley, F.L.S., was present as a visitor.

Election of Chairman.—In the absence of the President and Vice-President Dr. W. R. C. Middleton was called to the chair.

The Potentialities of the Branch.—Dr. Jansz read a paper with this title. He said the Malaya Branch might in a sense be said to be barely out of its swaddling clothes, but it was really the late Straits Medical Association in a new garb, with an accession of new members, and with a mighty organisation at its back. This was the youngest of the many and widely-spread branches of the parent tree, having been fully acknowledged by the central governing body only early this year, though in the latter part of the previous year they were tentatively recognised as a Branch. Dr. Jansz gave an account of the organisation of the Association and its Council, and the influence which through it the profession could bring to bear on the Government. He dwelt on the importance of this and such matters in relation to the proposed new ordinance as to the registration of deaths, which was being considered by the Government, and the question of the notification of infectious diseases. Linked with these subjects, and moreover forming the only basis upon which any legislation would be of real benefit to the community, to science, or to themselves was the suppression of unqualified practice (which was so rampant there), and the due regulation and registration of qualified medical practitioners. The question regarding the payment of a fee for the notification of infectious diseases had been in a measure practically settled. The Municipal Commissioners had admitted the reasonableness and justice of the claim for a fee for such notification, but pleaded their inability to comply with the demand, owing to the present state of the municipal ordinance, and they had, through their President, assured the profession that it would be dealt with and remedied in the proposed amending municipal ordinance in course of preparation. Their thanks were due to the Subcommittee of this Branch entrusted with the conduct of the question for the favourable and satisfactory result of their labours. The consideration of the subject of death registration was now in the hands of another subcommittee of the Branch. With regard to the suppression of unqualified practice, they should take this opportunity of asking the Government to pass an ordinance by which the public and the profession would be protected as a set a class of men who did untold harm by being allowed, without restraint, to practise and to employ European drugs, medicaments, and methods. What was required was a short, simple, and straightforward Bill by which those who had duly qualified themselves to practise medicine according to Western methods—in contradistinction to those native doctors, who had their own methods and drugs—should be regulated and registered, and such only should be permitted to practise who hold degrees or diplomas or licenses from European or other universities or colleges, and are also registered in the *Medical Register* of the United Kingdom or in the Colonial *Register*. Should the local government fail to give such redress, they could then bring to bear on the subject on their behalf "the great influence of the powerful British Medical Association" by appealing to them and their Parliamentary Bills Committee, and to invoke their aid. Dr. Jansz then proceeded to refer to the extensive field of study offered by tropical diseases, and urged on members of the Branch to be "up and doing," and to use their advantages as members of a vast Association. In the discussion which followed, Drs. Croucher, Fowlie, Highet, Middleton, and Lim Bom Keng took part.

Vote of Thanks.—Dr. H. Campbell Highet proposed that a hearty vote of thanks be accorded to Dr. Jansz for his very able and stimulating paper. Dr. Middleton seconded the proposal, which was carried by acclamation.

SPECIAL CORRESPONDENCE.

PARIS.

Hernia in France.—The Library of the Faculty of Medicine.—The Opening of the Medical School.—Military Hygiene.—General News.

M. Bertillon, in a paper recently read before the Academy of Medicine on the frequency of hernia, stated that this was independent of race, but appeared to be in relation to easy circumstances or the reverse. The recruits coming from the Paris districts inhabited by a well-to-do population are freer from hernia than the recruits from poor districts. The occupations which induce the occurrence of hernia are the following: Zinc workers, bakers, pastrycooks, millers, hat makers, bleachers, those who prepare tissues, dyers, iron-founders, and locksmiths. On the other hand, tanners, bootmakers, wood turners, clockmakers, goldsmiths, and those whose calling permits them to be seated are comparatively free from hernia. Among members of the literary profession hernia is rare. Between the ages of 5 and 15 the condition is uncommon. After 40 years of age the proportion rapidly increases.

The French medical student of the present time is easily roused to wrath when suffering from a real or an imaginary injustice, but in some matters he is a long-suffering creature. The bad management of the library of the Medical Faculty is quoted as a proof of his meekness and endurance. During the year which is now passing away 159,180 students have consulted 270,000 volumes in the said library, these statistics giving a flattering idea of the library which is not supported by fact. The library is so overweighted by debt that not only new books are not bought, but sixty subscriptions to publications have been discontinued. Five thousand volumes and pamphlets have been bequeathed to the library by deceased medical men. Among these thousands of volumes there were one hundred new works. Books that the library does not possess are constantly and repeatedly asked for. The medical press, with justice, considers this state of things to be hard on the medical students, who pay something towards the expenses of the library. The position of the library is a difficult one. The allowance for the new spacious library and reading room is the same as that granted to the old one, which was much smaller, and therefore comparatively inexpensive. The staff is larger, and binding is a costly item, and for want of funds books remain ragged. More books than ever on medical and scientific subjects are produced, and yet fewer are bought by the Medical Faculty library. Last year this state of things was commented on by the medical press. The remedy is easy. Without spending either public or private funds, the library could be provided with a good supply of books by simply decreeing that the copy of all published medical books which must according to law be deposited at the St. Geneviève library should find its way to the Medical Faculty library as its natural home.

The Quartier Latin has now resumed its wonted aspect. The Boulevard St. Michel is again peopled by its usual inhabitants. The startling difference between the Boulevard St. Michel at the present time and what it was during the summer holidays is a more convincing proof that the lecture theatres of the medical faculty are opened than the blue and green bills posted on all public buildings, furnishing the details of the lectures to be given during the winter session. On December 10th the opening lectures were given. Thousands of students assembled to applaud MM. Mathias Duval, Farabœuf, and Dieulafoy, the most popular among the lecturing professors of the medical faculty. Three thousand tried to find room in a lecture theatre capable of containing 1,500. M. Farabœuf, who is always listened to attentively by the students, gave much useful advice concerning not only how to study anatomy but how to teach it. There is a belief that medical instruction requires reform here, and that it is better organised in England and Germany. Professor Farabœuf is dissatisfied with the examination of the "Second Doctorate," which he does not consider sufficiently difficult. He read a list of questions set in certain written and *viva voce* examinations in England. M. Farabœuf considers that the Paris Medical Faculty has too many students to be able to give them practical instruction. As to the examinations, he very truly declares that it is impossible to judge of the knowledge of a candidate by questioning him during five minutes. Written examinations would be a much better test, and the candidate would not be handicapped by timidity, which causes hesitation and frequently failure.

M. Viry has published a book entitled *Précis d'Hygiène Militaire*, which is a valuable collection of sanitary measures to be applied to human agglomerations on the vast scale modern warfare demands in standing armies. This volume is positively a sanitary codex. The weak points in French military sanitation are conscientiously and ably exposed, and the improvements due to the reorganisation of the military health service are duly enumerated. Barrack sanitation is fully treated, the mode of their construction, etc. The food, clothing, and equipment of the soldier are treated in detail with the same knowledge and care. Precise and minute directions are given for examining all articles of food, in order to prevent intoxication from unhealthy or deteriorated provisions.

Le Conseil d'Hygiène et de Salubrité de la Seine has elected M. Moissan to take the place of M. Pasteur, and M. Albert Josias, Chef at the Trousseau Hospital, to replace Baron Larrey.

Mme. Guérant has bequeathed to the Assistance Publique £6,720 to be used to build a consumption hospital for chest patients between the ages of 15 and 30.

The Prefect of the Seine has organised a departmental commission for the purpose of overlooking in a sanitary point of view the agricultural sewage system of the Seine Department.

At the Conseil Académique de Paris M. Darboux, Dean of the Faculty of Sciences, stated that a bacteriological laboratory is attached to the Faculty. M. Henrot, Mayor of Rheims, likewise announced the existence of a bacteriological laboratory at Rheims accessible to all doctors.

M. Monod, the well-known surgeon, has been elected member of the Academy of Medicine.

The Budget of the Interior for 1896 accords a State grant voted by the Chamber of Deputies to the Public Assistance amounting to £58,000. M. Lechevallier said this sum would probably have to be increased each successive year.

BERLIN.

Retirement of Professor Krause.—A Professorship for Dr. Ehrlich.—The Berlin University.—Industrial Exhibition.—The Police and Secret Remedies.

In consequence of the disapproval with Professor Krause's conduct expressed by the Medical Faculty of the Berlin University, Dr. Krause has retired from the teaching body of the University. Dr. Krause is the *Privatdocent* who refused to explain, when officially summoned to do so, how his name had come to be placed below the puffing advertisements of a new soap.

Dr. Paul Ehrlich, an assistant of Koch, has been appointed to a Professorship of Special Pathology and Therapeutics in the Berlin University, and will therefore give up his position at the Koch Institute.

The Berlin University numbers 5,568 students this half-year, of whom 1,238 are medical students. For the first time women have been admitted officially to University courses; they are, however, not called students, but visitors or listeners. Their number this half-year is forty.

In the Berlin industrial exhibition of next summer a prominent place is to be given to the Berlin ambulances. A fully organised and fitted ambulance station, with a clinic containing a certain number of beds, and a surgical station, will not be for exhibition merely, but for practical use in case of accidents or sudden seizures in the exhibition grounds.

A Berlin chemist some time ago advertised a preparation of iron in a Berlin newspaper, and was ordered by the sheriff (*Schöffengericht*) to pay a fine as punishment. The chemist brought the case before a judge, and obtained a favourable verdict, the judge being of opinion that the iron preparation was not a secret remedy. But the judicature court (*Kammergericht*) annulled the verdict on the ground that the prepara-

tion must be considered a *Geheimmittel*, as it was recommended, not only as a general tonic, but for the cure of special diseases. Thus the case was carried back to the common court and the sheriff's fine upheld. Once again the unfortunate chemist appealed, and maintained that his preparation ought not to be considered a *Geheimmittel* for that he had, before advertising it, submitted the formula of the preparation to the police committee, and had received from it the permission to recommend it publicly. The Senate of the Court, however, has not admitted the appeal. Its decision—the final one—is that *Geheimmittel* means a remedy recommended for the cure of diseases the components of which are not made known to the public at the time of purchase, and that in this case, though the police committee was told what the preparation in question was made of, the public was not. All this uncertainty and "going to law" would be avoided if a properly established definition of a *Geheimmittel* existed in the German law.

VIENNA.

Thyreo-Antitoxin.—The Admission of Women to Medical Study.—A Theory of Gout.

At one of the last meetings of the Vienna Medical Club Dr. Fraenkel gave a preliminary report of investigations as to the active principle the thyroid gland. He succeeded in extracting from the gland of sheep a well-characterised crystalline substance in powder, called by himself "Thyreo-antitoxin." The details of the chemical processes by which it is obtained will be described in a special paper. To this antitoxin Dr. Fraenkel ascribes all the well-known effects produced by the gland itself or its preparations. By taking it himself for six successive days, he found a daily diminution of 600 grammes of his body weight. Experiments on animals have also been successful, but are few in number, and are to be continued.

The question of women's medical education brought before the public by Professor Albert's essay some time ago, has now become of new and more actual importance, since the Emperor has shown his favourable opinion of the subject. By a late decision of the Emperor in Hungary, women will be allowed to frequent universities as ordinary students, and take degrees of the philosophical and medical faculties. Next day the same question arose in the Austrian Parliament, and found much sympathy. The Minister of Public Education gave a startling picture of the very precarious position of the marriageable girls in Austria—473,335 (or 11 per cent.) of whom cannot marry at all according to statistical reports. But though he felt keenly the necessity of opening new callings to these girls he could not recommend as such medicine or the other higher studies of men. A resolution has been accepted, which recommends to the Government the admission of women to university studies.

A very original theory of gout and the "uratic diathesis," based wholly on chemical principles, has been suggested by Kolisch in a paper lately read before the Society of Physicians. The uratic diathesis is, according to Kolisch, a typical form of auto intoxication, consisting in some disturbance of the physiological process of nuclein decomposition, whose last products are uric acid and the substances of the xanthin group. Increased decomposition of nucleins and increased production of the bodies form the disturbance, which appears clinically as "uratic diathesis." Kolisch succeeded in producing, by injections into the circulation of animals of the bases referred, lesions of the kidney similar to those found in gout. At the beginning of the gouty diathesis, also, an excess of uric acid is formed in the kidney, and at the same time the amount of bases increased. Early diagnosis can be made by examination of the blood, which shows Neusser's perinuclear granulations. Later the substance of the kidneys is injured by the prolonged passing of poisonous substances, the uric acid therefore diminished in favour of the bases mentioned, and thus the *circulus vitiosus* is closed. Not without success Kolisch tries to explain by his theory the various symptoms and phases of the gouty disposition.

Some of the newspapers caused general excitement by stating that, according to the monthly reports published by the Board of Health, the prevalence of enteric fever is increasing in Vienna. There have been, indeed, sixty-two cases reported in the last month, which is more than we have had for a long time. As it has been generally believed that since, more than twenty years ago, an abundant supply of excellent water was obtained, enteric fever had almost entirely ceased in Vienna, and it would have been a great shock to the population if this belief had now been shaken. Happily the Board of Health was able to prove not only that the frequency of enteric fever, though exceedingly high in the last month, is this year still below the yearly average, but also that a large number of the cases were not genuine Viennese, but had occurred in strangers or in people just come back from a long sojourn in the country.

ROME.

The Italian Red Cross Society in Africa.—Maragliano's Serum and Parliament.—The Roman Doctors and the Income-tax.—Outbreak of Typhoid Fever at Cremona.—The Opening of the New Institute of Clinical Medicine at Pisa.

The Italian Red Cross Society, with the consent of the Minister of War and General Baratri, the Commander of the Italian troops in Africa, sent some months ago a fully equipped mountain hospital to Eritrea. It appears from the report lately presented to the Central Committee in Rome that the hospital has already done excellent work. It was opened at Asmara in May, and it has a branch, including a dispensary, at Adi Ugry. The treatment of the troops in the neighbourhood of the hospital has been entrusted to it. The mountain ambulance has been removed from Asmara to Adigrat, where it is at present stationed. The wounded at Macallè have been received there, and several of the patients have been discharged cured. In the six months the hospital has been working 294 white and 428 native soldiers, as well as some white and native civilians, have been received. Twenty-nine surgical operations have been performed in the hospital. To the dispensaries situated at Asmara and Adi Ugry in the six months over 10 000 visits have been paid by the soldiers and the non-combatants. The total expenses of the Society in Africa exceed 5,000 lire (£200) a month.

At the meeting of the Italian Parliament on December 3rd Professor Celli, Director of the Institute of Experimental Hygiene, asked the Minister of the Interior why the Government permitted the sale of Professor Maragliano's anti-tuberculous serum in Italy. Signor Galli, in the absence of Signor Crispi, in his reply, stated that the Public Health Act of 1886 could not make provisions for a treatment which was then unknown. When, however, Behring and Roux's anti-diphtherial serum had given positive experimental results, the Minister permitted its sale in Italy under certain conditions. Dr. Maragliano's serum having been discovered for the treatment of tuberculosis, the Minister—for reasons of equality of treatment—had also permitted its sale. At the present time the Superior Council of Health were deeply studying the question in order to enable them to make definite regulations. Professor Celli not being satisfied with Signor Galli's reply, observed that the regulations, as far as concerned the sale being under the responsibility of the inventor who prepared it, were not well defined. It appeared to him also that the sale of this serum at high prices was a pure speculation, and he therefore desired that the Superior Council of Health be consulted in the matter. This was agreed to by Signor Galli.

The Consiglio dell' Ordine dei Medici of Rome has sent a petition to the Prefect as to the increase of income-tax demanded this year of medical men. Up to the present the income-tax amounted to about 14 per cent. of the estimated income, but this year it has been increased to 18 per cent. Some few years ago the average annual income of medical practitioners in Italy was estimated officially as under 600 lire (£24), which was certainly not an excessive estimate, although the average earnings of the profession in Italy are very small in comparison with that of their colleagues in England. The present condition of the population, however, especially of those who wish to pay their medical attendants is, it is urged, not such as to justify this increase of taxation on a hard worked and very much underpaid profession.

About the middle of last month a severe outbreak of

typhoid fever was reported at Cremona, caused, it is believed, by the impure water of the aqueduct, which has been for a long time in a bad state of repair. Within a very short time more than 200 cases were reported, chiefly amongst young persons between 10 and 18 years of age. The municipal authorities have taken precautions to prevent the further spread of the epidemic.

The New Institute of Clinical Medicine was opened lately at Pisa. The building, a very fine one, is of a severe type of architecture. Representatives from most of the Italian universities, as well as the municipal, political, and military authorities, were present at the opening ceremony.

DUBLIN.

The Conjoint Scheme of the Irish College of Surgeons and the Apothecaries' Hall.

I AM not satisfied that the General Medical Council appears to the best advantage in its conflict with the Conjoint Board of the College of Surgeons in Ireland and the Apothecaries' Hall. It is true that, having considered the letter of the former to the Privy Council, it still adhered last week to the opinion that the examination in medicine was insufficient. I do not quarrel with that, although the inspector and visitor comment upon the candidate's failure to diagnose an affection which it seems did not exist. But I think there is very reasonable ground for complaint by the Irish College of Surgeons that the report upon which the examination was condemned was not submitted to that body before the trial and verdict, and that sentence was passed without their having seen the document or even known its character. This charge was plainly made, and it was not contradicted by any member of the Council.

The important fact is that, as the General Medical Council informs us, the final decision rested upon this report. Its judgment regarding the part of the examination conducted by the Irish College was quite satisfactory; indeed, it was in part distinctly flattering, because it declared the examination in ophthalmic surgery to be a model for others. The fault was that a candidate was passed in clinical medicine who, in the opinion of the inspector and visitor, ought not to have been passed. The Irish College points out that the examiners were most competent; that the disease which was supposed to be empyema was not empyema; and that in any case the candidate was of necessity rejected in this subject because he had failed in other parts of the group.

At this stage, when the case was before the Council in June, a most unfortunate thing happened. Mr. Wheelhouse, who was the visitor of the examination, having pointed out the candidate's serious shortcomings, declared to the Council that not only was he passed in medicine, but that he was "now a qualified man." This statement the Irish College of Surgeons, in its letter to the Privy Council, repudiated in very emphatic terms, for the simple reason that it was not true.

It now appears that the College is quite right, for Mr. Wheelhouse withdrew the allegation, and apologised for it at the meeting of the General Medical Council last week. The Irish College complains that such an announcement from the visitor, who was necessarily regarded as an authority, must have had considerable weight in determining the decision to refer the case to the Privy Council. It was sought to get out of the difficulty by stating that the representation depended upon the three preceding reports as well. But it must not be lost sight of that the last report was certainly the one upon which the final action of the Council depended. If that report had been favourable—and Mr. Wheelhouse declared that it would have been but for the answering of this candidate—the General Medical Council could have taken no steps to bring the Conjoint Board before the Privy Council.

The proceeding was in my view bad *ab initio*. Admitting that everything in the report is accurate, that document ought to have been sent to the bodies interested in sufficient time. The meeting of the Council at which sentence was pronounced was on June 6th. The report did not reach the Secretary of the Conjoint Board in Dublin until June 3rd; no formal meeting could be held in the intervening time, and certainly no reply could have been prepared. The Irish College of Surgeons protests, and I think justly, against this form of doing business. It is, like other bodies, jealous of its own reputation, and not unnaturally resents being pilloried in this fashion.

The whole thing is most regrettable. It has excited a good deal of bitterness, and it has not helped to dignify the proceedings of the General Medical Council. I am sorry that body did not recognise its mistake, and leave a practically dead scheme alone. It was already dying when the dispute arose, and I do not see that any real advantage has been gained by referring its shortcomings to the Privy Council. Perhaps, however, the public attention which has been attracted to the Council may make it careful in future to follow the ordinary usage of allowing defendants to know what the charges against them are, and of giving them the fullest opportunity for explanation.

BRISTOL.

Small-pox.—Medical Officer of Workhouse.—Divided Authority and River Pollution.—Faculty of Medicine University College.

THREE cases of small-pox have occurred in the Barton Regis Union, the infection probably having been introduced from outside, as the city proper is free from the disease. Some cases have arisen in Stapleton, a district to all intents and purposes, except sanitary ones, a part of Bristol. If the recent Boundary Bill had been passed it would have been included, but the determined opposition of the inhabitants of the better residential parts just outside Clifton succeeded in obtaining the rejection of the Bill by the House of Lords. The consequence is that much difficulty arises in notifying and isolating cases of small-pox which occur just outside the parliamentary boundary. At present the Stapleton authorities do not appear fully to appreciate the necessity of providing means for the proper isolation of small-pox and scarlet fever, and have to apply for assistance to the sanitary authority of Bristol for help.

The report of the Stapleton Visiting Committee as to the appointment of a medical officer for the workhouse was read at the meeting of the Bristol Board of Guardians on November 29th. The recommendations were that the medical man appointed should live within half a mile of the house, that he should pay two visits daily, dispense all medicines, attend urgent calls at any time of day or night, visit every ward once a week, and fulfil certain other specified regulations. On the adoption of the report being proposed, an amendment was moved that a resident medical officer should be appointed, and was carried by nearly two to one. The question of salary was referred back to the committee.

The inspector of nuisances reported on November 29th that the Stapleton Urban District Council were cleaning out a sewer which runs parallel with the river Frome, and that in a field near Eastfield Park had diverted the sewage into the river whereby the water, which passes by an open and in places covered way to the floating harbour in Bristol, was being polluted. In response to a letter, the clerk to the Stapleton Urban District Council stated that the sewer having become blocked, men were sent to see to what the obstruction to the flow was due. It was found to be caused by an accumulation of rags, some bearing the stamp B. L. A. (Bristol Lunatic Asylum), scrubbing brushes, wearing apparel marked with a number, felt hats of a pattern worn at the asylum, stockings, and a large quantity of rags and dusters. To remove them the drain had to be opened, and the sewage was diverted into the river, then nearly in flood. The clerk added that the council have repeatedly expressed surprise that such articles are allowed to get into the drains, and that they will consider what legal steps can be taken to prevent its recurrence in the future.

The Bishop of Hereford, as President of the College, presided at the annual distribution of prizes and certificates to the students of the Faculty of Medicine of University College, and was supported by Mr. Albert Fry, Mr. F. J. Warley, the Master of Balliol, Professor Lloyd Morgan, and all the professors and lecturers of the Faculty. Mr. N. C. Dobson, F.R.C.S., Emeritus Professor of Surgery, distributed the prizes and addressed the students.

CORRESPONDENCE.

BATTLE OF THE CLUBS.

SIR,—I have watched with great satisfaction the victories at Portsmouth, Inverness, etc., where medical men have united to ameliorate their condition, and also the small number of those poor creatures who applied for posts, vacant only on disputed conditions.

Here in Leicester it seems a wonder that no advance towards redress is made, especially as the pittances are much smaller than those paid in the above places. The secretary or rather mainspring of the "Provident Dispensary," a powerful institution claiming 40,000 members, and from 20 to 30 chosen medical officers, assigns that these worthy gentlemen shall attend each member for less than 1s. 10d. per annum (families being admitted for 1s. per month).

As a result of this underselling, some who are not medical officers to this commendable institution have been literally forced to associate themselves with clubs, medical aid societies, etc., and thus enter into unhealthy competition, however degrading the conditions. It should be for the medical officers of this provident dispensary to take the initiative, when I feel certain all holding clubs, etc., would amalgamate for the common good.

I might add, that upon approaching one or two of the medical officers aforesaid, they seemed in great fear of the secretary, and appeared to prefer to drudge on this state of sweating slavery than to risk a fall in their annual receipts.—I am, etc.,

ERNEST W. HAYDON, M.B.

Leicester, Dec. 14th.

MILK FOR DIABETIC PATIENTS.

SIR,—Will you kindly allow me to state that I have received a communication from Dr. A. E. Wright, in which I learn that in an interesting lecture delivered by him as Grocers Research Scholar at London University, he recommended a preparation of desaccharated milk very similar to that I described in the BRITISH MEDICAL JOURNAL of December 7th. We both precipitate caseinogen with acetic acid, wash, and filter; we differ only in the solution employed to dissolve the precipitated caseinogen. Dr. Wright recommends the following—a 1 per cent. solution of the following admixture of salts:

Sodium chloride ...	11.5 parts	Magnesium citrate ...	4.4 parts
Potassium chloride ...	9.9 "	Dicalcium phosphate ...	8.0 "
Monopotassium phosphate	13.8 "	Tricalcium phosphate ...	9.6 "
Dipotassium phosphate	12.9 "	Calcium citrate	28.5 "
Citrate of potassium ...	5.9 "	Calcium oxide	5.5 "
Dimagnesium phosphate	4.0 "	Sodium carbonate ...	40.0 "

May I also draw attention to another and similar plan which no doubt has occurred likewise to many others—the separation of sugar by dialysis? Milk is first heated in a hot water bath and then poured into tubular parchment dialysing paper, and the whole placed in a vessel filled with tap water, the water being kept running by means of a tube connected with a tap, the tube ending in a piece of glass tubing long enough to reach the bottom of the vessel, so that it is supplied from the bottom. In about three days Mr. Martindale and Mr. Lee found that the sugar is reduced to one-sixth. If the milk be again heated to destroy germs and the dialysis proceeded with all the sugar can be withdrawn.—I am, etc.,

Cavendish Place, W., Dec. 9th. SYDNEY RINGER.

THE NEW ERA IN INDIAN SANITATION.

SIR,—With reference to the article with the above heading, which appeared in the BRITISH MEDICAL JOURNAL of December 7th, I write to say that so far back as in 1891 I wrote a pamphlet entitled *The Hygienic Conditions of Indian Cantonments, and the Necessity for Sanitary Legislation*, in which I advocated the separation of the sanitation of the army and of military cantonments from that of the civil population, also many of the other sanitary reforms which were so strongly urged by Mr. Ernest Hart, D.C.L., in his address to the Medical Congress held at Calcutta in December, 1894.

My pamphlet was submitted to the Government of India for legislative action, but a more powerful voice was required to obtain official action. "One man sows and another reaps" is a matter of everyday experience, and I do not complain.

May I ask the favour of the insertion of this letter in the next issue of the JOURNAL as a subject of some historical interest in the progress of Indian sanitation? I rejoice to know that the action of Mr. Ernest Hart, backed up by our powerful Association, has been so successful for improving the health of our army in India, and of the teeming native population of that country, has thereby become a question of "practical politics."—I am, etc.,

W. HILL CLIMO, M.D.,
Brigade Surgeon Lieutenant-Colonel,
Aldeburgh, Dec. 9th. Army Medical Staff (Retired).

*** Our correspondent has omitted to notice the important part taken by Dr. Simpson, of Calcutta, in bringing about this reform.

THE COUNCIL OF THE ASSOCIATION AND THE GENERAL MEDICAL COUNCIL.

SIR,—As your report of the recent proceedings of the General Medical Council is necessarily somewhat condensed, I should be glad of an opportunity of stating somewhat more fully the circumstances attending the Council's action concerning certain resolutions of the annual general meeting of the Association. It is important that the documents in which these resolutions were communicated should be set forth at length. I give them here as they appear in the minutes of the Executive Committee:

5. Read: The following communications from the British Medical Association:

(*a*)

"British Medical Association,
"General Secretary's Office,
"429, Strand, London, W.C.,
"November 4th, 1895."

"Sir,—I forward to you subjoined herewith copy of resolution passed by the Council on the 23rd ultimo, together with copy of resolution passed at the annual meeting on July 31st referred to:

"I am, yours obediently,
"FRANCIS FOWKE, General Secretary."

"The PRESIDENT of the General Medical Council."

"Resolved: 'That the General Medical Council be informed that the annual meeting has passed this resolution, and that the Council of the Association has under consideration the means for giving effect to the recommendation.'"

"(Passed at the annual meeting, July 31st.)

"That as Sections 7 and 8 of the Medical Act, 1886, provide for the election of only five direct representatives to the General Medical Council by the registered medical practitioners resident in the United Kingdom; and as Section 10, subsection 1, paragraph C of this Act provides that the General Medical Council may represent to the Privy Council that it is expedient to confer upon the registered medical practitioners resident in any part of the United Kingdom the power of returning an additional number of direct representatives to the General Medical Council; and as the General Medical Council has in November, 1890, in November, 1891, and in November, 1892, refused absolutely to make such representation; and as the number of registered medical practitioners has increased from 22,713 in 1876, to 32,634 in 1894; and as we medical practitioners were not given our due and proper number of direct representatives in 1886; and as the registered practitioners contribute all the income of the General Medical Council by which the Medical Acts are administered, while the twenty universities and colleges represented on the General Medical Council do not contribute any income to it; and as the representatives of the universities and colleges are elected to the General Medical Council by their small convocations, senates, and councils, and not by open vote of all their medical graduates only, and as other important councils, having similar but larger duties to the General Medical Council (such as the Councils of the Incorporated Law Societies of England and of Ireland, the Councils of the Pharmaceutical Societies of Great Britain and of Ireland, and the Council of Veterinary Surgeons), consist of direct representatives only, this Association instructs its Council to take immediate steps to have a Bill introduced into Parliament providing that the registered medical practitioners in England and Wales be empowered to elect five additional direct representatives, the practitioners resident in Scotland one additional direct representative, and the practitioners resident in Ireland one additional direct representative to the General Medical Council."

(*b*)

"British Medical Association,
"General Secretary's Office,
"429, Strand, London, W.C.,
"November 5th, 1895.

"Sir,—I am directed by the Council of the 23rd ultimo to forward to you copies of resolutions passed at the annual meeting of the Association held in London on July 30th and 31st: the first on the subject of the registration of medical, surgical, and midwifery nurses, and the

second resolution upon the question of the admission of students to their Final Examination after being present at a certain number of confinements.

"I have the honour to be, Sir,
"Your obedient servant,
"FRANCIS FOWKE.

"The PRESIDENT of the General Medical Council."

"That we, the members of the British Medical Association, while anxious to improve the training and supervision, and, if need be, to support a practical scheme for the registration of medical, surgical, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical or surgical or midwifery practitioners other than those recognised under the Medical Act, 1858, as now existing."

"That we view with deep concern and regret the recommendation of the General Medical Council to the medical examining bodies that they should admit students to their Final Examination who present a certificate stating that they have 'conducted personally' only three, and 'been present at' only nine confinements, and as the General Medical Council has refused in November, 1895, to alter this recommendation, we instruct our Council to petition the General Medical Council to recommend that no student be admitted to his Final Examination until he presents a certificate showing that he has personally conducted at least thirty confinements under the direct supervision of a registered medical practitioner."

Resolved, That these communications be received and entered in the minutes.

The first resolution of the annual meeting (July 31st) is a long statement ending with an instruction to the Council of the Association "to take immediate steps" to procure by Parliamentary action certain changes in the constitution of the General Medical Council, on the ground, among others, that that body had on various occasions "refused absolutely" to make such changes by their own action. It does not ask the General Medical Council to reconsider their refusal; it "appeals to Cæsar." The Council of the Association, by their resolution, simply agree to give certain information to the General Medical Council by way, presumably, of courteous notice. They express no opinion as to the soundness of the views of the annual meeting, but they so far accept the "instruction" that they take into consideration "the means for giving effect" to the annual meeting's wishes.

On November 26th, Sir Walter Foster moved in the General Medical Council, Mr. Wheelhouse seconding:

That a committee be appointed to consider the resolution of the British Medical Association .....and to report thereon to the Council at his session.

I ventured to point out that it was practically impossible for the Council "to consider the resolution" as it stood. The annual meeting represented those members only who happened to be present in person. The Council of the Association alone were entitled, by virtue of their representative character, to speak in the name of the Association, and the Council had not spoken. Moreover, the resolution was in effect a menace to the General Medical Council; it was not an ultimatum, but a declaration of war. No place was left for repentance, should the Council hitherto recalcitrant be now inclined to relent. Parliament was to be moved to overrule the Council; the Council could do nothing but abide the event. There was nothing for a committee to consider. Had the Council of the Association informed the General Medical Council that, before taking steps to introduce a Bill, they desired the latter body once more to go into the question at issue, I am sure that their wish would have been courteously considered. But there was no evidence of such a desire in the documents submitted. The General Medical Council adopted the attitude I have indicated, and by 21 votes to 7 said in effect, "The persons present at the annual meeting have appealed to Parliament, to Parliament they must go."

The second communication, dated November 5th, was in a different case. The annual meeting here "instruct" the Council of the Association to present a petition to the General Medical Council, praying for certain changes in the recommendations in respect of training in midwifery. The Council of the Association sent up, not a petition, but a copy of their "instructions," without a word of comment! The natural inference was that the Council did not approve of the "instruction." They did not endorse it, they did not obey it. When, therefore, Dr. Glover proposed that the "petition of the British Medical Association" should be granted off-hand, it became necessary to point out that no such petition appeared to be in existence. To take action on the mere resolution of the fortuitous concourse present at a particular time during the annual meeting, unsupported by the Council of the Association, was in effect to offer a slight to the representative body at the instance of the non-representative gathering. The inevitable result was that Dr. Glover had, with pardonable reluctance, to withdraw his motion.

Between Tuesday and Saturday the Council of the Association apparently considered the question again and did decide to endorse the resolution of the meeting. The result was that a "petition" in their name, duly attested by the President and the General Secretary, was presented and printed in the agenda of the General Medical Council. It was at length possible to feel that we had something of tangible authority to deal with, and I had great pleasure in seconding Dr. Glover's proposal that the petition should be considered and reported on by the Education Committee.

I have trespassed too much on your valuable space; but I think it of importance to remove misapprehensions on a question affecting the relations of two important bodies each in their way representing the profession—the Council of the British Medical Association and the General Medical Council. The formalities of communication usually observed between such bodies are not idle: they are necessary for smooth working and mutual respect. Nothing was gained, much was in danger of being lost, by their relaxation in the present instance.—I am, etc.,

Cambridge, Dec. 6th. DONALD MACALISTER.

THE BRITISH MEDICAL BENEVOLENT FUND.

SIR,—May I ask you kindly to allow me to acknowledge the following additional donations to the British Medical Benevolent Fund through your columns?

	£	s.	d.		£	s.	d.
Dr. Ealand	1	1	0	"A Friend," per Dr. Barnes,			
Mr. Herbert Allingham ...	2	2	0	Carlisle	100	0	0
Dr. Gervis	10	10	0				

I am, etc.,

Brook Street, W., Dec. 11th. W. H. BROADBENT.

ST. LUKE'S HOSTEL.

SIR,—On being requested to assist in starting the Hostel of St. Luke, I hesitated at first, as I feared that this might be another attempt to exploit the medical profession for the benefit of those who could well afford to pay the ordinary fees for attendance. When, however, I became acquainted with the principles on which it was proposed to conduct the hostel, I at once gave in my adhesion. Herewith I am sending to you the rules and the certificates required to be filled in by the applicants. From these you will see that three classes of patients are received: Class A, absolutely free; Class B, those who pay towards their board, but receive free medical and surgical attendance; Class C, those who pay both for board and also for attendance. No case is admitted without a statement from some independent person as to the pecuniary position of the applicant, and a certificate from his medical attendant that in his opinion the case is a suitable one. These certificates have to be passed by the House Committee, which consists of two clergymen, one layman, Dr. Champneys, and myself. I should like to take this opportunity of saying how anxious my non-medical colleagues on the House Committee have been to see that medical attendance is paid for whenever the position of the applicant permits. Paying patients are quite at liberty to select any member of the profession to attend them, so that the hostel is in no sense to be regarded as being run for the benefit of the staff; as a matter of fact, most of the paying patients have called in outside help. The visiting medical officer receives an honorarium. I therefore maintain that by the establishment of this hostel fees which would otherwise go into the pockets of the profession are not diverted, but that many patients have been kept out of the wards of general hospitals.

I have only to add that I have been painfully struck by the extreme poverty of many of the patients who have been admitted, and the uncomplaining way in which they have battled against illness until quite broken down.

The Committee will be very glad if any members of the profession will pay the hostel a visit; the address is 14, Nottingham Place, W.—I am, etc.,

Wimpole Street, Dec. 12th. F. DE HAVILLAND HALL.

THE SCHOTT TREATMENT OF HEART DISEASE.

SIR,—No one has read with greater interest than I the correspondence which has been evoked by Dr. Saundby's important paper on the Schott treatment of heart disease, and I feel sure that many of your readers share with me a sense of obligation to Dr. Poore for the mathematical formula which he offers for the approximative estimation of the actual shrinking of a dilated heart which is represented by the remarkable and rapidly induced diminutions of areas of dulness which have been attested by so many observers that their reality has been placed beyond the range of reasonable question. That such shrinkage may be actually less than the diminished area of dulness would at first sight suggest Dr. Richard Greene's acute anatomical reasoning makes sufficiently clear; but, as he well remarks, clinical facts far outweigh both explanations and objections. Indeed, the restoration to health, in the course of a few weeks, of sufferers who have been treated for months or years with little or no success by the methods which have hitherto held the first place among therapeutic resources is one of those facts which is too stubborn to admit of cavil, however wide the field which it may offer for discussion and explanation.

It must, however, be said that Dr. Poore's reasoning on the subject of lung expansion seems to be based on a misconception of the views which have been advanced by Dr. Schott and his followers. Unless I misunderstand Dr. Poore, he is under the impression that it is contended that "the lungs undergo no extra expansion." Such is not the case. What is contended is that the migration of the apex beat towards the mesial line is not the result of an overlapping of the pulmonary margin induced by more complete inflation of the lung.

The argument which I adduced in a communication to the BRITISH MEDICAL JOURNAL in March last appears to me to be conclusive on that point; for the interposition of an air cushion of inflated lung tissue, however thin, between the apex and the chest, would of necessity diminish the force of the blow communicated to the thoracic wall, whereas the opposite is the case. If the apex beat be modified, as it often is, it increases in force. Moreover, it appears to me that the argument deduced from the greater weight which would be incumbent on the lower lobes in consequence of the inclination of the body of the bather is not consistent with the results of clinical observation. The apex beat is never vertically depressed as the result of the baths or the exercises, but it may be frequently noted to rise obliquely in the direction of the sternum.

The inference, therefore, is that the lungs, by inflation, advance passively to occupy the vacuum which would otherwise be created by the shrinking heart. As a matter of fact, it is not uncommon for the patient to volunteer the remark that he can breathe more deeply, and in such cases the respirations are found to have diminished in frequency. On the other hand, Dr. Schott would be the last to contend that deeper inspirations do not, in their turn, assist a burdened heart to expel the contents of its distended chambers.—I am, etc.,

W. BEZLY THORNE.

Upper Brook Street, Dec. 2nd.

CHITRAL RELIEF FORCE.

SIR,—In the BRITISH MEDICAL JOURNAL of October 19th a letter appears under the above heading, signed by Staff-Surgeon Kirker, R.N., in which he refers to an article of mine published on August 10th, entitled "Waterborne Typhoid." In that contribution I tried to draw attention to the common fly as a probable carrier and disseminator of morbific products.

Your comments at the end of Staff-Surgeon Kirker's letter are I think apt to be misunderstood, hence I take this earliest opportunity of asking you to kindly elucidate them. You state that "Dr. Battersby's observations are of course theoretical, and based on the hypothesis of *omne ignotum*:" I do not think this expression is quite correct, as I am as much a believer in the waterborne theory of enteric fever and cholera (under certain circumstances) as you are, but as the result of practical experience and personal observation. I am strongly impressed with the belief that in certain outbreaks other primary causes have to be looked for. With reference to the common fly, my theory is based upon the argument by analogy. Having witnessed the marvellous manner in which the cholera bacillus is capable of multiplying on agar jelly within a few hours of inoculation, I say it is probable that the typhoid organism may do likewise when implanted by flies on suitable pabulum. Since my letter of August 10th, I have read an account in which some of our Continental friends have actually demonstrated the existence of typhoid bacilli in the dejecta of flies previously fed on typhoid excreta. So after all my observation may not be so theoretical, nor based upon the hypothesis of "*omne ignotum*."—I am, etc.,

J. BATTERSBY, M.B., D.P.H.,
Surgeon-Major, A.M.S.

Rawal Pindi, Punjab, Nov. 11th.

THE SECRET OF CENTENARIANISM.

SIR,—In your criticism of Sir B. W. Richardson's recommendation of total abstinence as one of the conditions for longevity, you state that "a strictly temperate use of alcohol tends to prolong life," and you cite Sir George Humphry's statistics of centenarians and octogenarians as showing that abstainers have "only a slight advantage in point of longevity over the non-abstainers." I wish to point out that these statistics are overwhelmingly in support of the advantage of total abstinence. Thus, of 45 centenarians, 12 were abstainers and 30 were moderate drinkers. These numbers must not be compared together, but with the number of the class from which each was taken. The number of abstainers 100 years ago must have been very small, probably not 1 per cent. of the population, yet these furnish more than 25 per cent. of the centenarians. The same reasoning applies to the 650 persons between 80 and 100. The abstainers supplied 12 per cent., while it is noted that a considerable percentage besides took very little and not regularly. It is perfectly clear that if the whole population had been abstainers for the last 100 years, the number of centenarians would have been enormously greater than it is, and with the spread of total abstinence we may reckon on an increase in their number and of the average age at death. This can only operate gradually, but every one who abstains from intoxicating liquors is surely helping to increase his own longevity and that of his posterity who walk in his steps. I need hardly say that the statistics of life insurance societies entirely support Sir Benjamin's dictum.—I am, etc.,

J. JAMES RIDGE,
Honorary Secretary British Medical Temperance Association.

SIR,—In the annotation on "The Secret of Centenarianism" in the BRITISH MEDICAL JOURNAL of November 30th, I read: "The most trustworthy statistics on this subject are those of Sir George Humphry. Of 45 cases of centenarians collected by him only 12 were total abstainers, while 30 were moderate drinkers, and 3 were heavy drinkers," going on to say, "the abstainers would appear from these figures to have only a slight advantage in point of longevity over the non-abstainers."

Sir George Humphry found that between 80 and 100 of the abstainers were a fraction over 12 per cent., whilst the percentage of abstainers amongst the centenarians had risen to 26 per cent., rather more than "a slight advantage." If we knew the proportion of abstainers between 50 and 60, 60 and 70, 70 and 80, 80 and 90, and 90 and 100 we would have material which would show whether it is or is not the case that the proportion of deaths amongst non-abstainers are in all periods higher, and that therefore the percentage of abstainers would steadily increase with age. The statistics of Sir George Humphry, as far as they go, support the affirmative.

Your annotator also says that "what evidence is available on the subject seems to show that a strictly temperate use of alcohol tends to prolong life, for the excellent reason that it assists digestion and therefore promotes health." I am deeply interested in the subject but do not know any evidence to the above effect.

Finally, may I recommend your readers to a leading article dealing with this matter in the BRITISH MEDICAL JOURNAL of October 19th?—I am, etc.,

E. MACDOWEL COSGRAVE, M.D.

Dublin, Nov. 30th.

REGISTRARS AND DEATH CERTIFICATES.

SIR,—The Registrar-General approves of the conduct of the Holloway Registrar in refusing to accept as reliable or sufficient evidence of the cause of death my certificate given in the case already recorded in your columns. Now, sir, I think I am justified in supposing that the registrar reported the case to the coroner on the usual form, a copy of which is in my possession. If he did so, then I say emphatically that if this document had been published so as not to be protected by "privilege," I should at once have brought an action for libel against the author. This being so, I can only say that when inquiry showed that there were no grounds for refusing my certificate, there was no honourable course open to the Registrar-General's department but to apologise to me.

The Registrar-General contends that the registrar acted according to his instructions in reporting to the coroner a case of "death after operation." If so, then a registrar who fails to report such a case should be censured. Will the Registrar-General do this? If so, I will at once supply him with the requisite information. He knows he will not.

No reasonable man believes for a moment that the registrar reported the case to the coroner on any other ground than the suspicion of an "illegal operation." Many people have told me that they understood this to be the ground for refusing my certificate. The relatives of the girl told me they believed this.

The law would enable me to punish such an imputation if it originated without the protection of "privilege." I should have a remedy if a charge of the kind were made in a police court, as it would have to be sworn to, and so on. It would seem, however, that under the present involved system of registering and inquiring into causes of death there is nothing to prevent registrars from finding "mares' nests," to the detriment of medical men, except the fear of "horse-whipping."

I do not for a moment believe that my character will suffer from what I and others regard as the highly improper action of the Holloway registrar; but it is more than likely that some even of your readers may think that there may have been some reasonable grounds for suspicion, or the Registrar-General would hardly try to justify the action of his subordinate as he has done. I therefore publicly challenge the Registrar-General to prove that the Holloway registrar had any reasonable grounds for refusing my certificate (outside his own ignorance). If the Registrar-General cannot do this, I call upon him to say so publicly. If he does not respond to this challenge, his department must stand convicted of having unnecessarily and recklessly brought upon a respectable medical practitioner a false imputation of the worst kind; and the medical profession will have to face the fact that the certificates they are compelled to give without payment place their characters at the mercy of any registrar who is suffering from detective aspirations.—I am, etc.,

Highgate, Nov. 28th. HUGH WOODS.

DR. CALMETTE AND PROFESSOR FRASER ON SNAKE POISON.

SIR,—In reference to the statements contained in Professor Ray Lankester's letter in the BRITISH MEDICAL JOURNAL of December 7th, I have to point out that no claim of priority has ever been advanced by me. Hitherto my communications have been of the nature of preliminary statements, and in such communications it is neither possible to enter into details of the work done by others on the same subject, nor usual to attempt to do so. On each occasion in which I have described the results of my experiments, I have briefly referred to all previous workers on the subject in so far as they were known to me, and in particular I have definitely mentioned or otherwise drawn attention to the fact that before I had done so, Dr. Calmette had published evidence showing that animals could be immunised against snake venom, and that the blood serum of these animals possesses antidotal properties. At the same time the work done by me was absolutely independent in its conception. It was originated several years ago, and has been carried out on a plan and with aims which were formed independently of the work of any other experimenter. That part of it which has as yet been described in the published abstracts had for the most part been completed before Dr. Calmette's first paper announcing successful immunisation had come to my knowledge. I need scarcely add that I entertain a high opinion of his work.—I am, etc.,

Edinburgh, Dec. 6th. THOMAS R. FRASER.

SIR JOSEPH FAYRER AND ZENANA WORK IN INDIA.

SIR,—Will you kindly give me space to ask the following questions and make the following statements with regard to the assertions made by Sir Joseph Fayrer in his speech at the Royal College of Physicians to the effect that, "so far as his experience went, there was no difficulty in the way of medical men entering the most jealously-guarded harem when there was need for their services." And again: "There is scope for educated women to instruct native women in the principles of prevention of disease but no need of them as doctors." If these statements are correct, how is it that the Countess of Dufferin Fund has grown to its present proportions, and why is the scheme bearing that name so warmly supported by the Indian gentry? They, at least, seem to want women doctors for their women.

I presume that Sir Joseph Fayrer bases his beliefs on a few exceptional cases where, under circumstances of great urgency, family affection has won the day, and, contrary to tradition and usage, a European surgeon has been called in to see a zenana inmate, and has even operated on her. But these are rare occurrences. How many civil surgeons have actually seen the ladies for whom they have prescribed, and what percentage would such cases be of the entire number of the secluded?

When a civil surgeon has a patient who needs special examination, he calls in the aid of the female hospital assistant, and on her report the advice is based. In the course of six and a-half years of work in connection with the medical mission at Lucknow I have myself been frequently called in consultation by the civil surgeon when he had a case that needed more skilled investigation than the hospital assistant was capable of making, and generally on these occasions the conduct of the case was handed over to me.

If the zenana system were to be abolished at one stroke, it would be quite impossible for the medical men at present in the country to attend more than a mere fraction of the liberated population, for the women who are secluded in zenanas number many millions. But we must face facts as they are. For all practical purposes the zenanas of India are still closed to male surgeons and physicians, and the attendance the ladies receive at the hands of the native *dais* is worse than useless and often cruel.

The women of India have appealed to their British sisters to bring them help in their times of sickness and dire need, and it only remains for the women of Britain to rise and answer the call. To do so efficiently they must fully equip themselves as physicians and surgeons, and be ready to practise as well as to instruct.—I am, etc.,

Adelphi Terrace, Dec. 10th. JANE L. J. HASKEW, M.D.Brux.

THE LEPER STATION ON ROBBEN ISLAND.

SIR,—In consequence of our having seen the paragraph in the BRITISH MEDICAL JOURNAL of October 29th relating to Dr. Impey and the alleged cure of leprosy, we consider that you should be made aware of the following circumstances, which you are at liberty to publish.

1. That since February 15th, 1895, Dr. Impey has had absolutely nothing whatsoever to do with the Leper Institution on Robben Island, and in proof thereof we forward you a copy of an official letter received from the chief official of the island at that time, Dr. Impey having been divested in January, 1896.

2. For nearly two years previously to February, 1895, Dr. Impey has visited the leper wards solely in an advisory capacity and not in a medical capacity, and then only at very rare intervals.

3. For further information as to why Dr. Impey was deprived of the sole administration of this institution which exists entirely for medical reasons and the control vested in a layman, and as to why, in the second place, he was deprived of any supervision, medical or otherwise, of the Leper Institu-

tion in particular, we beg to refer you to the reports of the Cape Leprosy Commission, which are no doubt already in your hands, after the perusal of which you will doubtless arrive at a fitting conclusion.—We are, etc.,

ARTHUR J. H. THORNTON, M.B. Dubl. Univ.
P. EVERARD TODD, M.B., C.M. Edin.

Robben Island, Nov. 14th.

[COPY.]

Acting Commissioner's Office.
Robben Island,
February 18th, 1895.

REARRANGEMENT OF DUTIES OF MEDICAL OFFICERS ON ROBBEN ISLAND.

SIR,—I have the honour to inform you that the Under Colonial Secretary, by letter No. 3[illegible]/8 of the 14th inst., approves of the following changes in the Medical Staff:

Dr. Impey to be Medical Superintendent in charge of the Male and Female Lunatic Asylums. Dr. Todd to be Medical Officer in charge of the Male and Female Leper Wards and Convict Station, having Dr. Thornton as an assistant. These changes will therefore take place from the morning of February 19th.

I have the honour to be, sir, your obedient servant,

H. A. JENNER, Acting Commissioner.

Dr. P. E. TODD, M.B., Robben Island.

WATERBORNE TYPHOID AT DUNBAR.

SIR,—It may interest you to know that at the inception of the Spott water scheme for this town more than twenty years ago, I protested against the burn water being used, and I advised that the springs about the farm of "Kalls" should be impounded instead.

The analysis of the burn water was by no means a bad one, but being an open stream with several communities dwelling close upon its banks, it would, I argued, always be open to contamination, and therefore unsafe as a supply source. What I feared has happened, although the Dunbar community may be thankful that they have had so long a period of immunity.—I am, etc.,

Bedford Park, W., Dec. 9th. DAVID JAMES, M.D.

P.S.—I had frequent opportunities, on my professional rounds, of observing the filth thrown upon the banks of the stream, which filth was certain to be washed down to the reservoir as soon as heavy rain fell.—D. J.

RE THE DEBATE ON A POSTURE IN ANÆSTHESIA.

SIR,—In all cases of asystole experience has led me to consider the orthodox mode of raising the trunk and legs a mistaken one, as adding embarrassment to the dilated heart by not only increasing thoracic blood pressure, but by allowing the abdominal viscera to roll against the diaphragm. Indeed in cases of impending syncope in other instances even quiet walking about often relieves more than resting still or lying down does.

The indication, it seems to me, is to lower the head and thorax only, not the head alone, so as to avoid tracheal constriction. This can be done by means of an inclined plane, and by a table I have made myself.

I wonder why so called "mixed narcosis" is not now used in nervous cases as a means of deadening reflexes—I allude to the hypodermic injection of morphine and atropine or the plethoric glass of brandy or two given before anæsthesia, which were once used?

There is a curious condition of irregularity met with generally in the dog's heart, which I presume others have noticed likewise, which may have some interest in connection with these experiments.—I am, etc.,

Finsbury Pavement, Nov. 19th. JAMES MACMUNN.

THE CHILDREN'S INCUBATOR.

SIR,—Having seen in the BRITISH MEDICAL JOURNAL of November 16th (page 1280) a paragraph on the contemplated provision of an incubator at the Liverpool Workhouse, with your comments on Hearson's and Auvard's systems, I should suggest to you the latest type devised by Mr. Lion, which has met with general approval at Marseilles, Lyons, and Paris. I have had the opportunity of examining it here in this town, where in a large room eight or ten incubators are kept for the general public. The expenses are met by small fees, voluntary contributions aided by the Town Council, as a set-off to the destitute parents who are unable to give pecuniary help.

The main features of this incubator are:

1. The incubator is entirely composed of galvanised sheet iron, which therefore can be easily disinfected should this be necessary. Its dimensions are: height, 0.70 cm.; length and breadth, 0.55 cm.

2. The ventilation is effected by a row of holes at the lower part of the apparatus and another row at the top; besides, there is a ventilating shaft (0.10 cm. diameter) fixed in the roof, which can be connected with the exterior of the room or house.

3. The temperature is kept up by a Bunsen burner beneath a reservoir containing 12 litres of water, from which metal coils pass into the apparatus to heat the air; the feeding required is insignificant and obviates the inconvenient changing of hot water bottles or larger reservoirs as in Auvard's invention. The regulation of the temperature is automatic, by a simple expedient depending upon the variation in volume of a column of air altering the position of a column of mercury, which in its turn allows more or less gas to reach the Bunsen burner.

4. For further security there is a detachable small arrangement consisting of a dry battery connected with a thermometer and an electric bell; the variation in temperature is transmitted by a movable needle placed between two commutators; should the mercury depart from the mean range of temperature the needle comes into contact with one of the commutators and the bell rings.

To this summary of advantages I may add that the apparatus is easy to put into working order, and has been very favourably reported on at the Paris Academy of Medicine by Professor Pinard. The price of the incubator in galvanised sheet iron is about £18, in wood about £9; these figures I have obtained second hand, as Mr. Lion is away at present and I have not been able to make his acquaintance. No doubt for hospitals the price would be materially modified. —I am, etc.,

Nice, Nov. 18th. J. EGERTON BRANDT, M.D.

A FIXED RATE OF PAY FOR EXAMINING CANDIDATES FOR LIFE ASSURANCE.

SIR,—After Dr. de Havilland Hall's statement that a discussion on this subject was ruled out of order at a recent meeting of the Life Assurance Medical Officers' Association, there can be little doubt that the time has now arrived when the question should be considered by the members of the British Medical Association.

The difficulty seems to be to fix a minimum fee for policies of small amount. I wrote to some of the principal companies in Great Britain—about 30. A few refused the information I asked for; the remainder may for convenience be classed in three groups:

A. Offices which pay a minimum fee of £1 1s. on all proposals of £100 and upwards. They were 12 in number, and their names deserve to be known:

The Economic Life	The National Provident Institution
The Prudential (ordinary policy)	The Scottish Widows
The Eagle	The London Assurance Corporation
The University	The Equity and Law Life
The Metropolitan Life	The New York Mutual
The Legal and General Life	The London Life Association.

B. Offices—7 in number—which pay a fee of 10s. 6d. on proposals under £250, and £1 1s. on sums above this.

C. Offices—6 in number—which pay a fee of 10s. 6d. on sums under £500, and £1 1s. on sums above £500.

So that, out of 31 offices, 12 pay a minimum fee of £1 1s. on £100 proposals, and 13 pay a fee of 10s. 6d.

The nature of the information required from the examiner varies. Some companies go very carefully into the question of family history and trivial ailments, others leaving this almost entirely to the discretion of the examiner; others, again, ask for full information as to personal habits, consumption of tea, tobacco, etc.; all require a careful examination of the urine for sugar albumen. Is 10s. 6d. an adequate fee for such an examination and report? A professional brother of some forty years' experience tells me that in his younger days the lowest fee offered was £1 1s. An authoritative statement that the minimum for which a member of the Association would conduct an examination was £1 1s. would soon lead to a levelling up movement amongst the more important societies. The examination for industrial

policies is somewhat different; the same amount of information is not required, and rarely is an examination of the urine asked for.

I make it a practice to decline examination where the fee is not £1 1s. In country practice advice is usually sought from the medical attendant as to the status, etc., of various offices by intending assurers.—I am, etc.,

J. Dickinson Leigh, M.B., L.R.C.P., L.R.C.S.E.

Brotton, Nov. 6th.

MEDICAL "ENGLISH AS SHE IS WROTE."

Sir,—As chief medical officer to two assurance companies it falls to my lot to see a good many specimens of the "English" of my professional brethren whose "reports" on proposers I supervise. Seldom has anything richer in the way of orthography fallen under my notice than the following misspellings, all of which appeared in a single "report" perused by me this morning. Anæmia is spelt "anemia," erythema is turned into "erethyma," and phthisis blossoms out in "phythisis." The only other strictly technical term in the whole report is the word "paralysis," and that happens to be spelt correctly. The medical examiner who perpetrates these orthographical jokes appends M.D.Lond. to his name. Surely the "schoolmaster" must be very much "abroad" at Burlington House.—I am, etc.,

London, Dec. 8th. Verbum.

JOHN HUNTER'S FAMILY.

Sir,—I have compared the dates given in Mr. D'Arcy Power's interesting letter in the British Medical Journal of December 7th with those in the Hunter Family Bible, which is now in the possession of the Royal College of Surgeons. The only difference in the dates is that Agnes is said by Mr. Power to have been born in 1716, whereas the Bible gives the year as 1717; John's birthday is February 7th according to the document published last week, and February 9th according to the Bible. This still further complicates the disputed point as to the day on which John Hunter was born. Sir Everard Home gives it as July 14th; this is explained by his having misread Hunter's handwriting. "Feby." in John's writing is not unlike "July," and it was thus read by Home. Ottley says: "The parish register states February 13th to have been his birthday, but he himself used to date it on the day following, and it is on the 14th consequently that his anniversary is celebrated at the College of Surgeons." The entry in the register of births and baptisms for the parish of East Kilbride was as follows: "John a lawfull son procreat betwixt John Hunter and [1] Paul, born Feby. 13th and baptised March 30th 1728."

It is quite plain that the valuable document printed by Mr. Power was written before 1783, as the date of William Hunter's death is not filled in; this date is given in the Bible, as is also the year of Dorothy's death, 1807. The Bible also contains the following record which is not without interest:

James Baillie and Dorothea Hunter.
Married 1758.
Their Children.

	Born.	Died.
William	1759	1760
Agnes	October 26th, 1760	
Matthew	October 30th, 1761	1823
Joanna	September 11th, 1762	

On the same day with Joanna a female infant who lived only a few hours.

In the *Dictionary of National Biography* it is stated that Joanna's birth was premature. I do not know whether the fact that she had a twin sister has been recorded before.—I am, etc.,

Royal College of Surgeons, Dec. 6th. James Blake Bailey.

[1] Blank in the original.

THE GENERAL MEDICAL COUNCIL.

Sir,—On reading in the British Medical Journal the remarks of Sir Richard Quain as to the disabilities of the legal profession, I could not see that there was any reason for our being content with the present constitution of our Council. Some of us from Lancashire and Cheshire who were present at its session in May last certainly were not favourably impressed with what we witnessed.

We certainly hope that those members of our profession who can visit the Council chamber during any session will avail themselves of the opportunity, for the public have free access, as they will then see how and by whom the business of the government of our profession in these realms is conducted.

As to Sir Richard's remarks about the number of direct representatives, many of us in this part of the country are of opinion that if we had had more we should have had a far more practical outcome of the investigation in reference to medical aid associations than we can find in their report on that question.

One effectual means of bringing the medical officers of such trading institutions into line would be to have an annual registration as in the legal profession that the president referred to. If the amount of the fee were 5s. the Council would have an additional income of about £8000. This would provide us with ten additional direct representatives, and leave a large balance to be applied to some other useful purpose for the benefit of the profession at large.

It is not necessary to state at length the advantages that would be derived from an annual registration, but this one might be stated, that such men that I have mentioned would at once begin seriously to reflect that it would be absolutely necessary to put their houses in order. For the first year or two there might have to be a prolonged session of the Council or its executive to inquire into the reasons why certain men should not be again licensed to practise, or whether their licences should be endorsed both as a record and a warning, as is done by the magistrate in certain other licences. But as time went on and better discipline resulted, the extra sessions would become small matters, for members would always feel that they were under direct control and supervision of the General Medical Council.—I am, etc.,

Manchester, Dec 7th. G. H. Broadbent.

SUPERFICIAL AFFECTIONS OF THE RED PORTION OF THE LIPS.

Sir,—After reading the interesting paper of Dr. Jamieson on Some Superficial Affections of the Red Portion of the Lips, I am sending you a short account of a case that occurred in my practice.

In the spring a young girl, aged 17, was under me suffering from anæmia. During her illness she developed a soreness of the lower lip, which became dry, and a thick crust formed which on being removed left a red moist-looking surface, which was very tender. Several applications were tried both by the hospital (where she attended later on) and myself without any benefit. As one crust was removed another began to collect, and if not removed got very thick. The condition only affected the red portion of the lower lip. She is now attending the St. John's Skin Hospital, and is under Dr. Milton, who, I think, looks upon the condition as akin to eczema and lepra.—I am, etc.,

W. H. Payne, M.R.C.S., L.R.C.P.Lond.

Brockley, S.E., Dec. 10th.

SUPERSTITIONS AND CUSTOMS AS TO DEATH AND BURIAL.

Sir,—I am endeavouring to obtain for scientific purposes trustworthy evidence concerning customs and superstitions connected with death and burial, and it has been suggested to me that there are many medical men in villages and country places all over the United Kingdom who often come across odd old-world customs, sayings, and superstitions, especially among the peasantry and labouring classes, and who, if they knew that they were of value, would be glad to forward a note of them. You will be conferring a favour on me if you will allow me to make known through your columns that I shall be most grateful for any such information, and that I shall be happy to acknowledge the kindness of my correspondents in any use I may make of their communications.—I am, etc.,

E. Sidney Hartland, F.S.A.,
Hon. Sec. of the Folk-lore Survey Committee of the British Association, Editor of *Folk-lore*.

Highgarth, Gloucester, Dec. 6th.

PROPOSED HOSPITAL FOR CAMBERWELL.

SIR,—I learn from our local press that you have opened your columns to a correspondence upon the proposed general hospital for Camberwell. The philanthropic intentions of the proposers of this scheme have all my sympathy, but I fear that the scheme, if launched, would end in disaster. "More hospital accommodation should be provided for South London" we are told.

In Mr. Gladstone's letter, which lies before me, it is stated that there are 100 beds unemployed in Guy's Hospital from want of pecuniary means to keep them open, and that unless a considerable sum can be obtained a further closing of a portion of the hospital will have to be made. I learn that St. Thomas's Hospital is in a like crippled condition from want of means, having about 150 beds vacant.

Have the proposers of a general hospital for Camberwell any funds at their disposal? If so, is it not their obvious duty, and would it not be praiseworthy on their part, to utilise those funds in making once more available the accommodation already existing, but in painful idleness at Guy's and St. Thomas's? A new hospital would necessitate the acquisition of a site, erection of buildings, provision of beds, equipment and staff, involving a very large outlay, before a patient could be admitted.

Do the promoters of the scheme rely upon diverting subscriptions from already starving charities to effect their purpose? Where is their justification?

We have in our midst, in Havil Street, an up-to-date infirmary, with 450 beds under the care of an efficient medical and nursing staff directed by a resident medical superintendent. On the other side, in Constance Road, we have a sister institution with 898 beds, also having an experienced medical and nursing staff. We have two dispensaries—apart from the provident dispensary, which has been so deservedly commended in your columns—and we have eight district medical officers. In the face of these facts the general hospital scheme savours of an unmerited reflection upon the large-hearted and broad-minded local authorities. We are told that the institution is to benefit surrounding parishes. We do not need an institution here which would attract into Camberwell the *lazzaroni* of neighbouring parishes. Our own poor are groaning under a rate of 6s. 10d., and we do not wish to see their burdens augmented or the scanty beneficence which now reaches them diverted into another channel.

Mr. Jephson has sent you a copy of a resolution which was carried at a so-called public meeting in our Vestry Hall. The meeting was, in my opinion, a failure so far as local representation went.

I regret, for his own sake, that Mr. Jephson did not send you the vestry's own resolution upon the subject. I use the freedom of supplying his omission. I take it from the minutes of the vestry of August 14th, two months after the very public meeting:[1]

"Report of the Finance Committee.—Your Committee has considered the reference to it from the vestry of a letter from Mr. Waugh, secretary to the Committee for the proposed General Hospital for South London, enclosing resolution asking the vestry to call a public meeting for the discussion of this subject. A letter has also been received from the London County Council stating that an offer has been received by the Council to take on lease the remainder of the surplus land in the Coldharbour Lane improvement with a view to erecting such hospital thereon, and asking the views of the vestry upon such proposal; recommending that the Council be informed this vestry is of opinion that the site is not a suitable one, and that pending the decision as to the same no further steps be taken as to the vestry calling a meeting."

This recommendation was carried *nem. con.*, not in a thin public meeting, but in full vestry.

I fear that Mr. Jephson is not too well acquainted with this locality. I write as a resident in it of some years' standing, and whose membership of its Board of Guardians and vestry should tell him something of its requirements and resources.—I am, etc.,

Denmark Hill, S.E., Dec. 6th. WHITWORTH ST. CRDD.

[1] See p. 534 Minutes.

PRURITUS.

SIR,—Your valuable report on pruritus, with remarks of the distinguished dermatologists who took part in the discussion are not only interesting but an important contribution to cutaneous medicine. However, what has struck me as singular is the fact that not one of the speakers mentions the advantages of linen to be worn next the skin in itching or other irritable conditions of skin. The ordinary Irish linen probably is rather "cold" for winter wear. However, for years I have recommended Balbriggan "Flaxonia," especially the most porous kind. This linen is made from pure flax, is knitted in place of being woven, and improves with washing. It is far over silk or any cotton garment for comfort.—I am, etc.,

Belfast, Dec. 2nd. H. S. PURDON, M.D.

A NOVEL APPLICATION OF TENDON GRAFTING.

SIR,—Under the above heading in the EPITOME of November 30th, you describe as a new operation the grafting of part of the tendon of a healthy muscle into the distal end of the tendon of a paralysed muscle. I beg to refer you to a case of a similar nature which I showed at a meeting of the Lancashire and Cheshire Branch of the British Medical Association in June last, which was operated on in February, 1894, and fully reported in the July number of the *Liverpool Medico-Chirurgical Journal*.—I am, etc.,

Liverpool, Dec. 8th. F. T. PAUL.

VENESECTION IN CHLOROFORM POISONING.

SIR,—In reading the constantly recurring accounts of death from chloroform, I have never noticed that bleeding the patient has been tried. As a rule, in these reports there is no account of a *post-mortem* examination, but in some of those reported I have noticed that the left ventricle is stated to be empty and the right full.

Now, it strikes me if the engorgement of the right side could be relieved there would be a much greater chance of the patient's recovery. The bleeding might be supplemented by galvanism to stimulate the heart's action. No harm, at any rate, would be done in bleeding, as none of the usual remedies have any beneficial effect, the patient always dying if the pulse ceases before the respiration. I should recommend opening the jugular vein as more directly relieving the heart.

Many years ago, when I was house-surgeon at the Children's Hospital, Shadwell, I noticed that at the *post-mortem* examinations of children dying from morbus cordis, the right side of the heart was engorged and the left empty, although just before death the child had been pale and not at all cyanotic. I determined to bleed in the next case of impending death in morbus cordis. A few nights later I was called to a child with morbus cordis—I forget the particular form—and found him pale, pulseless, and apparently *in extremis*. I opened the jugular vein, and with difficulty got the blood to flow, but after a very little blood had come the child roused up and seemed much relieved; by the next morning he was quite himself again.—I am, etc.,

Clapton, N.E., Dec. 2nd. FRED. H. SPOONER, M.D.

OBITUARY.

ROBERT GORDON TATHAM, M.R.C.S., L.S.A.

WE regret to have to record the death on December 3rd, at the age of 66, of Mr. R. G. Tatham, of East India Road, an old and well-known practitioner of Poplar, where his family have practised for hard on a century. Mr. Tatham received his medical education at the London Hospital, and obtained the diploma of L.S.A. in 1851, in which year he joined his father, the late Mr. Christopher Tatham. He took the diploma of M.R.C.S. in 1856, and eventually succeeded his father as Surgeon to the Trinity House and to the East and West India Dock Companies. Mr. Tatham took a warm interest in all social and philanthropic work in the district in which he resided, and where he was much respected. He will be missed also by many friends at the Hunterian Society, of which he was at one time Vice-President. He was a Surgeon-

Lieutenant-Colonel to the Tower Hamlets (15th Middlesex) Rifle Volunteers, and received the Volunteer Decoration. Mr. Tatham had long suffered from mitral regurgitant disease, and the immediate cause of his death was dropsy. He was buried at Nunhead Cemetery on December 6th. He leaves a son, settled in Australia, and two daughters.

Dr. Andrea Verga, of Milan, who died on November 21st, was one of the leading authorities on mental diseases in Italy. He was born at Previglio in 1811, and studied medicine at the University of Pavia, where in due course he took his doctor's degree. After acting as assistant to the professor of anatomy (Panizza) he became physician to a private lunatic asylum. His subsequent professional career was passed in the practice of this department of medicine. He was director of various large asylums till 1861, when, visiting the Asylum of Siena for the purpose of lecturing, he received a blow from a patient which destroyed his left eye; he had lost his right eye as the result of a similar assault many years before. He contributed largely to the literature of his speciality; his writings include a monograph on the skull, and papers on *Odio a Morte*, the relation of celibacy to insanity, widowhood and insanity, the distinction between hallucinations and illusions, etc. Verga was at different times President of the Reale Istituto Lombardo di Scienze e Lettere, and of the Society of Temperance. He was a Senator of Italy, a Knight of the Legion of Honour, a Commander of the Brazilian Order of the Rose, and of those of the Crown of Italy and Saints Maurice and Lazarus. In him Italy has lost a genuine philanthropist as well as an eminent physician.

Dr. J. Duncan Menzies, R.N., who died on November 12th at the Royal Hospital, Portland, was only 34 years of age, but was a distinguished surgeon of the Royal Navy. For his services on board H.M.S. *Magpie* in 1890-91, during the expedition to the West Coast of Africa, he was awarded the Gilbert Blane medal. He also served on board H.M.S. *Sans pareil*, *Manchester*, *Speedwell*, and others. He had recently been appointed one of the surgeons at the Royal Hospital, Portland. Dr. Menzies was the son of Surgeon-General Duncan Menzies, who so ably commanded the Medical Staff during the Crimean war, the British hospitals at Scutari being under his direction, where the wounded from the battles of Alma, Balaclava, Inkerman, and those daily from the field were treated by him with a care that has made his name to be remembered by the wounded.

Dr. Richard Hodges died on November 28th in Camden Road in his 75th year. He was admitted L.S.A. in 1844, and a Fellow of the Royal College of Surgeons in 1849 by examination after studying at St. Thomas's Hospital. He took the degree of M.D., King's College, Aberdeen, in 1853. He was awarded the Fothergill gold medal in 1851 for an essay on *Hemorrhage* by the Medical Society of London.

Dr. Bruce A. Bremner died in Edinburgh on November 25th, at the ripe age of 78. His father was Acting-Governor in the West Indies, when, in 1817 Bruce A. Bremner was born at Dominica. He came to Scotland at an early age, went to school, and subsequently to the University at Aberdeen, where he graduated A.M. in 1837. He then went to Edinburgh for his medical education, and in 1840 he took the degree of M.D. and also the diploma of L.R.C.P.E., and was engaged in practice in Bombay for thirteen years. In 1853 he came home, living in Perthshire for a time. More than thirty years ago he settled in Edinburgh, where he has been a director of the National Securities Savings Bank; and a vice-president of the Indigent Old Men's Society. He originated or helped to originate the Association for Improving the Condition of the Poor; and was a director of the Royal Edinburgh Hospital for Sick Children, and of the Edinburgh Medical Missionary Society. He devoted a large part of his life and energies to philanthropic work, and few men will be so much missed by so large a number of friends. He was a man of boundless sympathy and endless energy.

The death is announced of Dr. Henry Lawrence, of 14, Berkeley Square, Clifton. He was a M.R.C.S.Eng. and L.R.C.P.Edin. In addition to other appointments he was public vaccinator and medical officer to several institutions.

Dr. A. J. Woitoff, Professor of Bacteriology in the University of Moscow, recently fell a victim to his devotion to scientific research. He infected himself with a virulent culture while experimenting in his laboratory, and died soon afterwards of the effect of the accident.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Ludwig Teichmann-Stawiarski, formerly Professor of Anatomy in the University of Kraków, well known by his researches on the lymphatic system, aged 72; Dr. Almeida Couto, Professor of Clinical Medicine in the Medical Faculty of Bahia; Dr. Antonio de Vergueira Pinto, sometime Professor of Organic Chemistry in the same school; Dr. Ludwig Rütimeyer, Professor of Comparative Anatomy in the University of Basel; Dr. Adolph Markuni, President of the Medico-Philanthropic Committee of Moscow; Dr. Bourienne, Professor of Clinical Obstetrics in the Medical School of Caen; Dr. Julio Arthur da Silva Gomes, Surgeon to the San José Hospital of Lisbon; Dr. Tepljasin, of Kazan, a distinguished ophthalmologist well known by his writings; Dr. Francis Peyre Porcher, some time Professor of Materia Medica and Therapeutics in the South Carolina Medical College, and author of *Resources of the Southern Fields and Forests, Medical, Economical, and Agricultural*, aged 70; and Dr. Paulin Silbert, Chief Physician to the Aix (Provence) Hospital.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 2s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A Senior Surgeon-Captain A.M.S., at present stationed in Rangoon, wishes to exchange with an officer whose position on the roster would assure him three years at home. Advertiser arrived in India on December 2nd, 1894. State terms.—Apply, Surgeon-Captain Brown, c/o Messrs. A. Scott and Co., Rangoon.

THE NAVY.

The following appointments have been made at the Admiralty: Surgeon W. Anderson, Staff Surgeon to the Queen, December 6th; William Bett, Surgeon, to the *Ruby*, December 7th.

Staff Surgeon Thomas Russell Fortescue died at Durban, Natal, on December 3rd, aged 37. He was appointed Surgeon February 28th, 1884; and Staff Surgeon April 10th, 1888.

ARMY MEDICAL STAFF.

The services of Surgeon-Captain H. N. Dunn have been placed at the disposal of the Admiralty for employment on the Egyptian Army.

Surgeon-Major General James Ingram, M.D., is placed on retired pay, November 24th. He entered the service as Assistant Surgeon, December 19th, 1857; became Surgeon, March 1st, 1870; Surgeon Major, April 1st, 1881; Brigade Surgeon, May 1st, 1881; Surgeon-Colonel, September 6th, 1885; and Surgeon Major General, June 24th, 1891. He was with the Naval Expedition of 1860, including the disembarkation at Peiho, operations in the Indian Mutiny campaign of 1861, including the capture of Lucknow and the actions of Cawnpore 27th, 28th, and 29th November, and with the Abyssinian expedition of 1868 (medal with clasp). By the retirement of Surgeon Major General Ingram, Surgeon-Colonel T. Maunsell becomes Surgeon Major General, and Brigade Surgeon Lieutenant-Colonel T. O'Farrell, M.D., Surgeon-Colonel.

ARMY MEDICAL RESERVE.

Surgeon-Captain J. W. Hodgson, M.D., is promoted to be Surgeon-Major, December 11th.

Surgeon Lieutenant James Taylor, M.D., 4th Volunteer Battalion the Gordon Highlanders, is appointed Surgeon Lieutenant, December 14th.

INDIAN MEDICAL SERVICE.

The retirement of Brigade Surgeon Lieutenant-Colonel P. A. Bruce, Bengal Establishment, Medical Officer, and Professor and Commandant which was announced in the Indian Medical Journals of November 2nd, is cancelled.

THE VOLUNTEERS.

Surgeon-Captain T. Bowen Rhys, 2nd East Lancashire Artillery (Western Division, Royal Artillery), has resigned his commission, December 11th.

Surgeon-Lieutenant W. B. Macrae, M.B., 1st Volunteer Battalion the Northumberland Fusiliers, to promoted to be surgeon-Captain, December 11th.

Surgeon-Captain R. S. Gunn, M.B., and Surgeon-Lieutenant J. L. Wilson, M.B., 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers, are promoted, the former to be Surgeon-Major, the latter to be Surgeon-Captain, December 11th.

Surgeon-Major W. Hammond, 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry, has resigned his commission, with permission to retain his rank and uniform, December 11th.

Mr. William H. H. Hayhurst, M.B., is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the King's Own Yorkshire Light Infantry, December 11th.

Surgeon-Colonel Gunn, Principal Medical Officer of the Scottish military district, died on Friday night, December 6th, in Edinburgh very suddenly. He was accompanying his son, a lieutenant in the Derbyshire Regiment, stationed in Ireland, to the Waverley Railway station. Becoming ill on the way, he was at once placed in a cab, where he expired almost instantly. Deceased had thirty years' service, most of which was passed in India.

PROMOTION IN THE A.M.S

The position of some of the Surgeon-Colonels as regards promotion at the beginning of the next financial year gives some food for reflection. After the retirement of Surgeon-Major-General Callahan, now P.M.O. in Ireland, on March 30th last, and the promotion in his succession, some medical officers in surgeon-colonel's rank will not only have passed 57 years of age, but some will be very near the completion of that age. It is now generally understood that an officer of surgeon-colonel's grade who has completed 57 will not be likely, except under the conditions of "special ability and merit," to obtain promotion, seeing that he would not be able to complete three full years in surgeon-major-general's rank. It is futile to say that all the officers in surgeon-colonel's grade can claim promotion on these grounds. What then is to become of those who, through the circumstances of the recent numerous extensions in service granted, will have become debarred by age from attaining higher rank? Three officers of surgeon-colonel's rank will, on April 1st next have exceeded 57 years of age, and two will be within measurable distance of it. On looking over the *Army List*, there are four surgeon-major-generals to retire next year; one of these, for obvious reasons, may be excluded as being the best fitted, and likely, we hope, to be selected to succeed to the director-general's chair when the vacancy occurs on May 7th next. There is no reason why the tenure of the director-general's chair should exceed five years, and the appointment should be for the same period as other staff billets.

THE MEDICAL STAFF CORPS.

There is a rumour current at Aldershot that the Medical Staff Corps will only be employed at large stations where complete units can be kept together, and that in the smaller stations there will practically be a return to the regimental system in hospitals. It is said that the manœuvres afforded examples of the non-cohesion of the units. Some of each unit were from Chatham, Woolwich, Netley, etc., and as a result confusion regarding rations occurred.

THE RECRUIT AND HIS TRAINING.

The current number of the *United Service Magazine* has an article by Brigade Surgeon-Lieutenant-Colonel Climo, who finds much in the recruit and his training that might be improved. He suggests verification of the ages of recruits, and the need of elementary drill and physical training being enforced in all Government grant-aided schools. If their inferiority of physique should continue, the writer recommends that the age of enlistment should be raised, the system of training altered, and the subjects of ration and clothing investigated. The clothing and equipment of the recruit are discussed. Brigade-Surgeon Climo considers the meat rations not nearly enough for a growing lad, much more so in a lad suffering from defective nutrition. The rations are not sufficiently varied in cooking.

THE GERMAN ARMY MEDICAL COLLEGE.

The centenary of the foundation of training establishments for army surgeons was celebrated in the hall of the Berlin University on December 2nd in the presence of representatives of the civil and military authorities, the professors of the Medical Faculty, and more than one hundred army surgeons from all parts of Germany.

Dr. von Coler, Chief of the Medical Department of the Prussian Army, delivered an address, in which he alluded to the achievements of German surgery, and the extension of the Army training system. The Minister of Ecclesiastical, Educational, and Medical Affairs addressed the meeting in the name of the Government, and the Rector spoke for the University. The Emperor sent a telegram to Dr. von Coler expressing his regret at being unable to be present, and bearing grateful testimony to the unselfish and beneficent work of all the medical officers of the army, especially in the late war. He has issued a Cabinet Order directing that the Frederick William Medical and Surgical Institute and the Military Medical and Surgical Academy shall be united under the name of "The Emperor William's Academy for the Training of Army Surgeons." The order also recognises the great services of the establishments in question to the army and navy.

The Empress Frederick has presented a portrait of her late consort to the Academy.

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

Lieutenant-General Moncrieff made the sixteenth annual distribution of prizes of the Volunteer Ambulance School of Instruction recently at Crosby Hall. The principal award was Surgeon-General Hamilton's Challenge Bowl, held by the London Rifle Brigade for the year. A team of the Civil Service, headed by Corporal A. B. King, which scored 222 points out of the possible 240; a team of the London Rifle Brigade, led by Private Fuller, 213 points; and a second term of the Civil Service, led by Lance Corporal Douglas, won the other prizes.

VOLUNTEER BRIGADE COMPANIES.

Critic writes: 1. Let surgeon-Captain Turton consult the *Army List*, p. 316, for brigades that have no bearer company. 2. The brigadier decides from what regiments the bearer company is to be formed. It would, perhaps, be best to form it from one regiment only, so that the men could drill together. 3. The personnel of the company remain part of their corps for discipline and otherwise; but it would be better to have them under the medical officer and the direct orders of the brigadier. 4. The sergeants have the same rank as other sergeants of their corps, which perhaps might exclude them as combatants from coming under the Geneva Cross. They are not supernumerary in their regiments, but ought to be.

THE ARMY MEDICAL SERVICE.

Another A.M.S. (Burmah) writes: I feel I cannot allow the letter of "A.M.S." in the British Medical Journal of September 21st, to pass without saying a word or two. You may, indeed, ask him what his lot would have been without the advocacy of the Journal and the Parliamentary Bills Committee. Our position without your aid would have been intolerable.

Mr. Ernest Hart, in an after-dinner speech last winter in India, referred to a matter which I think deserves more attention, namely, the establishment of messes, for which a grant should be obtained. Medical officers are sometimes not made honorary members of the regiments or batteries of which they are in medical charge. No notice whatever is taken of their call on the mess. I think, too, the establishment of messes would go far to removing that "social boycotting and ostracism" of which you speak, and which undoubtedly exists. As for "A.M.S.'s" contention about your "injudicious criticism," I often think you are not strong enough in your remarks. Surely it is only fair to let candidates know what they may expect before they enter the service.

That a surgeon-lieutenant and surgeon-captain up to five years' service should draw Rs 317 80 a month is a crying shame. A veterinary-lieutenant comes out to India on Rs.400, and a Staff Corps subaltern (aged, perhaps, 20 or 21) draws Rs.325, while you see surgeon-captains of 30 years of age and over drawing Rs.317 8-0. After five years there is a paltry increase of about Rs.17. Even after six years the surgeon-captain draws less pay than captains of the line, who get the smallest pay of all captains in the army. For example, the surgeon-captain after six years gets Rs.434-10-2; the infantry captain gets Rs.415 *plus* Rs.30 company allowance. Total Rs.445. I have no personal interest now in advocating an increase of pay to junior medical officers, but I drew Rs.317-8-0 myself, and know its inadequacy.

In conclusion, I will venture to mention a few reforms which would, I think, tend to bring about a better state of things in the Army Medical Staff:

1. Formation of a corps with proper titles, the present hybrid titles being a failure.
2. Establishment of messes where practicable with a Government grant.
3. Increase of pay for junior medical officers and for brigade-surgeons in India. For juniors I would suggest: Surgeon-lieutenant, Rs.375, for three years; surgeon-captain, Rs.450, after three years; surgeon-captain, Rs.500, after ten years.
4. Reduction of the foreign tour to five years.

Apropos of (4), engineers now serve for five years only in India and draw better pay. They formerly served seven years. Why should medical officers serve six years if it is considered too long for engineers?

MEDICO-LEGAL AND MEDICO-ETHICAL.

M.D.U.S.A.

On December 6th a summons was heard before Mr. Shell, at the Westminster Police-court, taken out against a Mr. John Ferdinand, of 291, King's Road, Chelsea, on an information laid by Mr. Thomas William Tyrrell on behalf of the Medical Defence Union.

Mr. Muir Mackenzie, who appeared to support the summons, said the charge was that the defendant "falsely and wilfully took and used the title of M.D., thereby implying that he was recognised by law as a physician." The summons was taken out under the 40th section of the Medical Act, which had been construed by the Courts to apply to a case in which a person without registrable qualification practised medicine, and in doing so assumed a title leading persons to believe that he had a qualification. In the present case the defendant had described himself in newspaper advertisements as a "physician" and as "fully qualified;" he also signed certificates as "M.D.," sometimes adding "U.S.A."

Mr. Thomas William Tyrrell, the informant, said that he saw the defendant lecturing from a cart outside Battersea Park on a Saturday evening in October. He went up to him and asked him to prescribe for a cold. Defendant gave him a bottle of medicine, and he paid 1s. He called on defendant at Chelsea on the following Tuesday, and told him he had pains in his back. Defendant said he had a nasty cold and should rest. He signed a certificate as "Dr. Ferdinand, M.D.U.S.A." He gave witness another bottle of medicine, for which he charged 4s. 6d. He spoke of wonderful cures which the doctors dare not refute, and also said that if witness went to the chemist's to have the medicine made up he would be charged three guineas. He gave witness a local newspaper containing a long advertisement occupying nearly the whole page, in which it was stated "Dr. Ferdinand, 291, King's Road, Chelsea, has no connection with any of these good men or their qualifications, as he graduated in the Eclectic Schools of America, and is now the first physician in the world, the only authority in rupture, cancer, consumption

etc. Advice free every Tuesday 9 A.M. till 3 P.M., Sunday 10 to 1. No connection with any English practitioner. No canvassers for advertisements ever admitted. Letters only. Ferlandi, 2s. 6d. and 4s. 6d. only; no reduction. Ferlandi applied to warts and corns night and morning and taken internally destroys them." He also claimed to be "a duly qualified Doctor of Medicine from the Eclectic Schools of America, handing over to the testimonials." On visiting defendant again he said his medicines were purely vegetable, and that 'Ferlandi' could not be purchased elsewhere for twenty sovereigns. He gave witness a further certificate for his employers, again signing himself as "M.D.U.S.A." Witness told him he had heard that he was a quack. He said, "I am fully qualified, and these," pointing to the "M.D.U.S.A.," "are my qualifications."

In cross-examination by Mr. Turrell, who appeared for the defendant, witness said he was a clerk in the employ of the solicitors for the prosecution.

Other witnesses were called, who had also consulted the defendant and received certificates from him, in which he signed himself as "M.D.U.S.A." In one case he signed a receipt "Ph.D., L.L.D., B.A."

A copy of the *Medical Register* was put in to show that the defendant's name did not appear.

Mr. Turrell submitted that no proof had been shown that the defendant had assumed the name of M.D. "wilfully and falsely" in accordance with Section 40. He did not claim to be an English medical man, and no man who added to the words "M.D." the words "U.S.A." or "qualification of a foreign university" could be convicted under that section.

Mr. Shell said the "M.D." assumed his being a doctor of medicine according to English law. Defendant said he took that title because he was a Doctor of the Eclectic Schools of America. It was for him to show that.

Mr. Turrell said he had no evidence on that point.

Mr. Shell said it was laid down by Mr. Justice Coleridge that the "M.D." implied in English law that the man was a qualified medical man.

Mr. Turrell admitted that if the defendant had simply styled himself "M.D.," it would have been incumbent upon him to show that he was qualified. But in these certificates he had added "U.S.A."

Mr. Shell said he should utterly disregard that. The addition of all the letters of the alphabet after the "M.D." would not prevent the assumption that he was a qualified medical man according to the English law.

For the defence a Mrs. Maria Blumer, of Lavender Hill, was called, and said she consulted the defendant because she heard that he was an American doctor. She had a large cancer of the liver, and Dr. Ferdinand cured her.

In cross-examination she admitted that she had sometimes testified with the defendant as to this "remarkable cure."

Mr. Shell said he was quite satisfied that the defendant had violated the law. This was a most proper prosecution, seeing that the people who were imposed upon by his kind of practices were generally those who were poor and ignorant, and unable to protect themselves from such quackery. Rich people might be able to look after themselves, but it was the poor who were victims in such cases. He should fine the defendant £20, with £10 costs, or two months in default of distress. Pending the return of the distress warrant, the defendant must be detained, or find surety for the penalty and costs. The defendant said he could find surety.

"SALISBURY MEDICAL CLUB."

A. C. S. M.—The issuing of such cards, as the one sent us by our correspondent is contrary to all rules of medical etiquette. It would certainly seem to amount to personal advertising, and whoever is responsible for them can have little regard for professional ethics. Few offenders in this way have shown such disregard for the opinion of their professional brethren as to affix their names to a club of this description.

CIRCULARS TO PATIENTS.

E. J. W.—In view of the fact that the partnership in question has *de facto* existed for eleven months or more, the suggested notification would be inexpedient, and could not fail to give rise to the supposition that it was especially intended to make known to the patients, and through them to others, what would be regarded by the profession as an ill judged flourish of academic titles and degrees. If such had been introduced by the senior partner in the autograph or other announcement of the impending or effected partnership, with the view to emphasising the prospective advantages to be derived from a highly educated junior, it would have been admissible and legitimate, but not so under existing circumstances.

CALLING FOR ORDERS.

ALPHA derogatory to himself and to the medical profession as is the alleged trade of the action of B. in daily calling at the chemist's for messages, or, in other words, orders, and that, moreover, in the immediate neighbourhood of a resident practitioner, we would counsel A., in his own true interest and that of the profession, to abstain from any unfriendly step towards a medical brother, however unjustifiable though his conduct may be, but rather seek to devise means by which he may be induced to review and amend his ill-considered procedure.

FAIRPLAY.—The principle enunciated in the rule appended relates to, and should govern the case referred to: "When a practitioner is called to an urgent case, either of sudden or other illness, accident, or injury in a family usually attended by another, he should (unless his further attendance in consultation be desired), when the emergency is provided for, or on the arrival of the attendant in-ordinary, resign the case to the latter, but he is entitled to charge the family for his services."

SALE OF POISONS.

SAX writes as follows: A. is M.R.C.S., L.S.A., and keeps a retail shop managed by an assistant, who holds the assistant certificate of Apothecaries' Hall. Can the assistant legally sell poisons? The Pharmacy Act, Section 14, says: "Nothing hereinbefore contained shall extend to or interfere with the business of any legally qualified apothecary." Lex's connection is in above section.

*** The special regulations as to the sale of poisons are contained in Section 17 of the Pharmacy Act, 1868. The section quoted by "Lex" is the 15th. We think it doubtful that such assistant can sell the poisons in Schedule A to the Act, except in the presence of, and to persons known to, the employer. We mean when such poisons do not form part of the ingredients of any medicine supplied to a patient. To provide for such a case there are certain special provisions in Section 17 to be complied with.

SALE OF PRACTICES.

RECHT writes: Your correspondent from the North of England has just cause of complaint against the man who, having made himself acquainted with the particulars of the practice, canvassed for a club, took a house, and settled down in the neighbourhood. There is no excuse for so dishonourable an action. I could give you particulars of the conduct under similar circumstances on the part of a qualified man in London whose action was more grossly dishonourable and outrageous.

A HANDBILL.

A MEMBER has sent us the whole of a chemist's handbill, part of which was referred to in a note under the head "Dental Irregularities," published in the BRITISH MEDICAL JOURNAL of November 25th. At the foot of the handbill, which we are informed is distributed broadcast, is the following announcement:

> DR. MORRIS JENKINS, M.R.C.S.Eng., L.R.C.P.Lond.,
> Attends daily.
> Hours of consultation—morning, 10 to 1; evening, 6 to 9.
> Midwifery attended.

The handbill is one which might with advantage be brought to the notice of the Royal College of Physicians of London.

ABSENT FRIENDS.

J. K. C.—THE course of action which B. should have pursued is clearly laid down in the appended rule: *M. E. Code*, 4th edition, Chap. II, Sec. 8, Rules 6 and 7. "(6) When a practitioner is ill or absent from home, and the patient wishes to have a medical man of his own choice rather than the officiating friend, partner, or locum tenens, the practitioner so elected should act in accordance with the following rule. (7) When a practitioner is called to an urgent case, either of sudden or other illness, accident, or injury in a family usually attended by another, he should (unless his further attendance in consultation be desired), when the emergency is provided for, or on the arrival of the attendant in ordinary, resign the case to the latter, but he is entitled to charge the family for his services;" to which we may add that B.'s invitation to C. to administer the chloroform under such exceptional circumstances is, to say the least, remarkable and indiscreet.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

GEOLOGICAL MUSEUM.—The late Mr. James Carter, F.R.C.S., of Cambridge, has bequeathed to the Woodwardian Museum his very valuable collection of fossil crustacea, on which he was an acknowledged authority, together with the MS. of a work on the group, which he was preparing at the time of his death.

WALSINGHAM MEDAL.—The medal annually given by the Lord High Steward for biology (including physiology) has this year been awarded to Mr. I. L. Tuckett, Fellow of Trinity College.

THE DEGREE OF MASTER OF SURGERY.—The Special Board for Medicine have published an important report in which new regulations for the M.C. degree are proposed. The report states that: "The Board have had under consideration the conditions on which the degree of Master of Surgery is at present conferred, with a view to their possible improvement. They find that under the existing regulations only seven candidates have presented themselves for examination during the last ten years, and of these only two were admitted to the degree. The degree of Bachelor of Surgery is now taken by the great majority of those who graduate in medicine, and serves as primary qualification in surgery. The mastership of surgery cannot be taken except by Masters of Arts of until after three years from graduation as B.C., and it is accordingly regarded as a distinction rather than a qualification. Those surgeons who might be expected to aspire to it are in general men of some standing in their profession, and they naturally feel some reluctance to submit themselves to an examination of the ordinary kind. In view of the practical failure of the present arrangements, the Board have thought it expedient to propose as an alternative to the present plan, which may still be maintained as equivalent for the requirements of certain students, a procedure in some respects analogous to that for the degrees of Sc.D. and Litt.D. They think it probable that such an alternative would lead to an appreciable increase in the number of candidates for the degree, both directly by making it attainable by surgeons of standing and reputation who have passed the age for ordinary examination tests, and indirectly by enhancing the dignity of the degree, and so raising its value to younger men of ability, for whom the present examination is well adapted. The Board further think it expedient that the present regulation 3, which prescribes that two years shall have elapsed between the time of passing the last examination required for Bachelor of Surgery and the time of admission to the examination for Master of Surgery, should be altered in so far as it affects Masters of Arts." The proposed regulations will allow a candidate

either (1) to present himself for the ordinary examinations, or (2) to apply for permission to proceed to the degree without examination. In the latter case the candidate must have passed the examination for Bachelor of Surgery at least three years before. He must submit to the Special Board for Medicine the printed or written contributions to the advancement of the Science or Art of Surgery on which he bases his claim to the degree. Letters will be addressed to report on his contributions, and on their reports the Degree Committee of the Board will decide whether the degree should or should not be granted. A fee of five guineas will be required when the application is made. The proposal introduces a new departure, but it finds some precedent in the procedure recently approved for "advanced students" in arts and law.

MEDICAL DEGREES.—At the Congregation on Thursday, December 5th, the following degrees were conferred:

M.B. and *B.C.*—G. V. Wartington, B.A., Pembroke.

M.D.—W. S. West, M.A., M.B., Trin. Coll., St. John's; G. T. Birdwood, B.A., M.B., Pemb., St. Peter's.

EXAMINATION IN SURGERY.—As there are over 50 candidates for Part I (Surgery and Midwifery) of the Third M.B. Examination, the Deputy Vice-Chancellor has approved the appointment of Dr. Joseph Griffiths, M.A., F.R.C.S., of King's College, to be an additional Examiner in Surgery.

PROFESSORSHIP OF PHYSIOLOGY.—Professor J. G. McKendrick, M.D., F.R.S., of Glasgow, has been appointed an elector to the chair of Physiology in the room of the late Professor Huxley.

EXAMINERS IN STATE MEDICINE.—Dr. A. Ransome, Dr. Lazarus Barlow, Dr. J. L. Notter, Dr. T. Stevenson, and Dr. R. Thorne Thorne have been appointed Examiners for the Diploma in Public Health during the ensuing year.

UNIVERSITY OF LONDON.

EXAMINATION FOR HONOURS.

Medicine.—First Class: F. G. Crookshank (Scholarship and Gold Medal), University College; A. Salter (Gold Medal), Guy's Hospital; B. L. Abrahams, B.Sc., University College; S. Gillies, St. Bartholomew's Hospital; J. H. Cook, University College. Second Class: H. B. Shaw, University College; A. R. Cook, B.Sc., Cambridge University and St. Bartholomew's Hospital; W. S. Handley, Guy's Hospital; A. Dimsey, University College; C. J. Harnett, Guy's Hospital; G. H. Savory, St. Bartholomew's Hospital; W. T. G. Pugh, Middlesex Hospital; H. J. Walton, St. Bartholomew's Hospital. Third Class: G. L. Eastes, B.Sc., Guy's Hospital; L. E. V. Every-Clayton, Guy's and London Fever Hospitals; A. J. Rodocanachi, B.Sc., University College; T. M. Thomas, Guy's Hospital; H. Sinigar, Mason College; Rosina Clara Despard, London School of Medicine for Women; Charlotte Elizabeth Bull, London School of Medicine for Women and Royal Free Hospital; S. W. Brook, Owens College and Manchester Royal Infirmary; J. H. Bodman, University College, Bristol and St. Bartholomew's Hospital; Margaret Marion Tra[illegible] Christie, London School of Medicine for Women and Royal Free Hospital.

Obstetric Medicine.—First Class: S. Gillies (Scholarship and Gold Medal), St. Bartholomew's Hospital; W. S. Handley (Gold Medal), Guy's Hospital; R. Burton, Yorkshire College; A. R. Cook, Cambridge University and St. Bartholomew's Hospital; L. E. V. Every-Clayton, Guy's and London Fever Hospitals; A. Salter, Guy's Hospital. Second Class: J. H. Cook, University College; W. T. G. Pugh, Middlesex Hospital; A. J. Rodocanachi, University College; J. H. Bodman, University College, Bristol, and St. Bartholomew's Hospital; W. H. Jewell, Guy's Hospital; G. H. Savory, St. Bartholomew's Hospital. Third Class: J. J. Coleman, Guy's Hospital; A. Dimsey, University College; H. B. Shaw, University College; F. N. Vellacott, Guy's Hospital; Rosina Clara Despard, London School of Medicine for Women.

Forensic Medicine.—First Class: C. J. Harnett (Scholarship and Gold Medal), Guy's Hospital; S. Gillies (Gold Medal), St. Bartholomew's Hospital; B. L. Abrahams, University College; A. Salter, Guy's Hospital; H. Sinigar, Mason College; T. G. Nicholson, B.Sc., St. Thomas's Hospital; H. B. Shaw, University College; R. G. Kirton, London Hospital. Second Class: W. S. Handley, Guy's Hospital; G. L. Eastes, Guy's Hospital; E. F. H. Hardenberg, Guy's Hospital; T. H. Hunt, Owens and Yorkshire Colleges; M. G. Pearson, B.Sc., St. Bartholomew's Hospital; F. N. Vellacott, Guy's Hospital. Third Class: Rosina Clara Despard, London School of Medicine for Women; F. G. Crookshank, University College; A. R. Cook, Cambridge University and St. Bartholomew's Hospital; S. W. Brook, Owens College and Manchester Royal Infirmary; P. J. Edmunds, B.Sc., University College.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

AT a Comitia of the College held on Tuesday, December 10th, the following gentlemen were appointed examiners for the ensuing year:

I. *For the Licence*.—First Board.—Drs. Dawson Turner and Daniell, Physics. Drs. Allan Gray and John Gibson, Chemistry. Dr. Lovell Gulland and Mr. J. Arthure Thomson, M.A., Biology. Second Board.—Sir James A. Russell and Dr. Whitaker, Anatomy. Drs. Noel Paton and J. G. Dunlop, Physiology. Third Board.—Drs. A. Bruce, R. Muir, and R. F. C. Leith, Pathology. Drs. Murdoch Brown, Stockman, and Gillespie, Materia Medica. Drs. R. Peel Ritchie, Andrew, P. A. Young, and Carmichael, Medical Jurisprudence. Final Board.—Drs. Smart, Muirhead, Wyllie, Affleck, Jamieson, James Braidwood, Gibson, Philip, Graham Brown, and William Russell, Medicine. Drs. Croom, Berry Hart, Mure Murray, and Barbour, Midwifery. Drs. Batty Tuke and Clouston, Insanity.

II. *For the Membership*.—Dr. G. W. Balfour, Dr. R. Peel Ritchie, Sir T. Grainger Stewart, Sir Douglas Maclagan, Dr. Simpson, Dr. Crum Brown, Dr. Smart, Dr. Muirhead, Dr. T. R. Fraser, Dr. Wyllie, Dr. Batty Tuke, Dr. Carmichael, Dr. J. Carmichael, Dr. Affleck, Dr. J. Playfair, Dr. Sibbald, Dr. Underhill, Dr. Jamieson, Dr. James, Dr. McBride, Dr. Croom, Dr. Berry Hart, Sir James A. Russell, Dr. Greenfield, Dr. Barbour, Dr. A. Bruce, Dr. James Ritchie, Dr. W. Russell, Dr. Melville Dunlop, Dr. Brewis, Dr. Hamilton, Dr. J. W. Ballantyne, Dr. John Thomson, Dr. Haig Ferguson.

III. *For Diploma in Public Health*.—First Examination.—Dr. Charles Hunter Stewart, Practical Work in Laboratory; Dr. Crum Brown, Chemistry; Dr. Dawson Turner, Physics. Second Examination.—Dr. Muirhead, Epidemiology and Endemiology; Sir Douglas Maclagan, Practical Sanitation; Sir James A. Russell and Dr. J. Alan Gray, Sanitary Law, Vital Statistics, and Statistical Methods; Dr. R. W. Philip, Registrar of Applicants for the Licence; Dr. Noël Paton, Superintendent of Laboratory.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT the monthly meeting on Friday, December 6th, the President admitted to the Licentiate in Medicine and Midwifery the following candidates who had been successful at the Final Examination held in November, 1895, under the Conjoint Scheme with the Royal College of Surgeons in Ireland:

J. F. O'Malley (passed with honours), J. W. Benson, G. Corcoran, T. J. Crean, M. J. Cuffe, R. Glynn, C. E. Hodgson, J. Lynch, J. M. Morrissey, J. J. O'C. M'Donogh, J. A. M'Munn, J. R. O'Brien, J. J. O'Reilly, R. W. Scully, J. N. Shee, J. E. P. Shera, and F. C. Wright.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, IRELAND.

First Professional Conjoint Examination.—Honours (in order of merit): M. Gavin, G. C. L. Kernan. Pass (alphabetically).—Completed the examination: E. Bennett, W. A. Cooke, A. D. C. Cummins, A. D. Dunwoody, R. J. Franklin, P. A. Frazer, R. Hughes, J. L. Jones, J. N. B. Martin, E. R. Townsend, A. A. Woods.

Passed in Anatomy: A. J. Connolly, P. Heffernan.

Passed in Biology: A. G. Bennett, H. L. Boyce, P. Heffernan, J. L. M'Carthy, P. J. M'Glinn, J. G. Young.

Passed in Pharmacy: A. J. Connolly, H. E. Hayes, P. Heffernan, P. J. M'Glinn.

Second Professional Examination.—Completed the Examination: D. B. Bradlaw, J. A. Browne, W. E. Brunskill, J. M. H. Conway, F. C. Fowler, D. Hadden, N. J. Keller, W. O'Connor, B. A. O'Donovan, G. J. Powell, T. W. Rodgers.

Passed in Anatomy: W. J. P. Ayde Curran, W. H. May, J. F. Treston, T. A. J. White.

Passed in Physiology: G. Kennedy, W. H. May, R. H. Moffit, J. F. Treston.

Passed in Materia Medica: G. Carroll, C. W. Crowe.

Passed in Histology: W. J. P. Ayde Curran, J. A. Byrne, V. F. Connor, J. Conway, W. E. May, J. M'Carthy, W. H. Speight.

Passed in Hospital Practice: J. L. Allen, J. M'Carthy.

Third Professional Conjoint Examination.—Candidates have passed this examination as undernoted.—Completed the Examination: Honours Division, None.

Pass Division: W. J. Beveridge, H. V. Blake, H. S. Bradley, S. C. Elgee, L. R. Fannin, T. Fitzgerald, J. G. Gill, M. Mitchell, G. G. H. Muirhead, B. M'Caul, J. G. G. Pigott, Miss L. F. Strangman, V. B. Taylor.

Passed in Anatomy: J. J. Foley, W. C. W. Glenny, C. J. D. Odevaine, B. R. Phillipson, De C. S. Potterton.

Passed in Physiology: T. E. Cotter, W. C. W. Glenny, W. H. Odlum, B. R. Phillipson, De C. S. Potterton, J. F. Shortt.

Passed in Medicine: J. J. Foley, J. O'M. Irwin, C. A. Kenny, C. J. D. Odevaine, J. F. Shortt, De C. S. Potterton.

Passed in Surgery: J. J. Foley, W. C. W. Glenny, J. O'M. Irwin, C. J. D. Odevaine, A. N. Sampey.

The following candidates have passed the Final Conjoint Examination:—Honours Division: T. F. O'Malley. Pass (completed the examination): J. W. Benson, G. Corcoran, T. J. Crean, M. J. Cuffe, R. Glynn, C. E. Hodgson, J. Lynch, J. M. Morrissey, J. J. O'Donogh, J. A. M'Munn, J. R. O'Brien, J. J. Reilly, R. W. Scully, J. N. Shee, J. E. P. Shera, F. C. Wright, R. M. Hamilton.

Passed in Medicine: H. Herrick, S. J. Scott, J. Sheridan.

Passed in Surgery: M. Cahill, G. F. Caithness, R. M. Hamilton, R. Hassard, T. G. M'Grath, J. Sheridan.

Passed in Midwifery: C. J. Burke, M. Cahill, W. M. Cummins, R. M. Hamilton.

Passed in Ophthalmology: M. Cahill, G. E. Caithness, R. M. Hamilton.

Passed in Hygiene: G. E. Caithness, M. A. J. J. M. Catcher, F. Dudley.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

DENTAL EXAMINATION.—Mr. John Stanton, having passed the necessary examinations, has been admitted a Licentiate in Dental Surgery of the College.

APOTHECARIES SOCIETY OF LONDON.

AT the Preliminary Examination in Arts held on December 6th and 7th, Eighteen candidates were successful, of whom one was placed in the first class. Three candidates passed in certain subjects under the old regulations.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,765 births and 3,844 deaths were registered during the week ending Saturday December 7th. The annual rate of mortality in these towns, which had declined from 22.1 to 17.9 per 1,000 in the four preceding weeks, was again 17.9 last week. The rates in the several towns ranged from 10.

in Croydon, 10.9 in Derby, and 11.3 in Brighton, to 22.7 in Blackburn, 23.3 in Salford, and 24.0 in Liverpool. In the thirty-two provincial towns the mean death-rate was 19.4 per 1,000, and was 1.1 above the rate recorded in London, which was 17.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.9 per 1,000; in London the rate was equal to 3.0 per 1,000, while it averaged 2.6 in the thirty-two provincial towns, and was highest in Wolverhampton, Liverpool, Blackburn, and Salford. Measles caused a death-rate of 2.1 in Manchester, 3.7 in Oldham, 4.3 in Salford, and 4.5 in Blackburn; scarlet fever of 1.1 in Gateshead, whooping-cough of 1.2 in Bradford; and "fever" of 1.0 in West Ham, Norwich, Birkenhead, and Newcastle-upon-Tyne. The 109 deaths from diphtheria in the thirty-three towns included 60 in London, 8 in Liverpool, and 4 each in Wolverhampton, Birmingham, and Manchester. Two fatal cases of small-pox were registered in West Ham, 1 in London, and 1 in Oldham, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital, which had been [illegible], [illegible], and 79 at the end of the three preceding weeks, had risen again to 87 on Saturday last, December 7th; 19 new cases were admitted during the week, against 23, 20, and 9 in the three preceding weeks. There were 2,608 scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, against 2,845, 2,807, and 2,702 at the end of the three preceding weeks; 312 new cases were admitted during the week, against 298, 296, and 326 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, December 7th, 765 births and 562 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 21.4 to 17.4 per 1,000 in the four preceding weeks, rose again to 19.5 last week, and exceeded by 1.6 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.3 in Leith to 24.4 in Dundee. The zymotic death-rates in these towns averaged 2.3 per 1,000, the highest rates being recorded in Greenock and Aberdeen. The 257 deaths registered in Glasgow included 12 from whooping-cough and 6 from diphtheria. Four fatal cases of scarlet fever were recorded in Aberdeen, and 3 of measles in Greenock.

ENTERIC FEVER AT PONTARDAWE.

A SERIOUS state of things prevails at Pontardawe, in the Swansea valley, where enteric fever has occurred to the number of upwards of 40 cases, with no fewer than 8 deaths. The disease is said to have been imported to the workhouse by a tramp, towards the end of September, spreading thence it is held to the western side of the town, to which the disease seems to be limited. Much indignation is felt locally at the inaction, especially in the past, of the rural district council of the Pontardawe Union, the county health officer, Dr. Williams, having so far back as April, 1894, made certain recommendations for the placing of the sanitary district in proper condition. These he repeated in July, 1895, as few had been carried out. The disgraceful state of the town may be in some measure imagined when we say that there is no sewerage system, that slop water is allowed to create nuisance in the public roadways, that the canal is polluted, that the compulsory notification of infectious diseases is not in operation, that there is no hospital accommodation, no means of public disinfection of clothing, bedding, etc., and that no building by-laws are in existence. The cause of the present epidemic has not yet been traced, but one of the sources of water supply is suspected, and while chemical analysis finds nothing wrong, a sample has also been sent for bacteriological examination.

THE TURN OF THE TIDE.

IT is satisfactory to note from the returns presented to the Metropolitan Asylums Board on December 7th that the number of notifications received during the preceding fortnight, both as to scarlet fever and diphtheria, show a substantial diminution. We may fairly hope, then, that we have now reached and passed the turn of the tide, that for this year the worst is over and that, in accordance with the well-known facts as to the seasonal variations in the prevalence of these diseases, the pressure on our hospitals will now for some months to come diminish. In this relation the following figures are not without interest:—

Number of cases notified in the two weeks ending—

September 28th......	Scarlet	Fever	1,1[illegible]	Diphtheria	[illegible]
October 12th........	"	"	1,[illegible]	"	[illegible]
October 26th........	"	"	1,355	"	651
November 9th........	"	"	1,[illegible]	"	[illegible]
November 21st........	"	"	1,[illegible]	"	[illegible]
December 7th........	"	"	1,[illegible]	"	[illegible]

TYPHUS FEVER IN SHILLELAGH UNION.

AT the weekly meeting of the guardians of the Shillelagh Union on November [illegible] it was reported that since the last meeting 1 fresh case of typhus fever had been admitted to the workhouse hospital, making in all [illegible] cases with [illegible] deaths. Dr. Whelan, Hacketstown, reported in reference to the cases from that district that the patients caught the disease by having communication with the people from [illegible]. After a discussion the sub-sanitary officer was directed to serve notices on all the householders in Moffitt's Lane, Hacketstown, to have the houses cleansed, disinfected, and limewashed.

ENTERIC FEVER AND PRIVY MIDDENS IN SHEFFIELD.

DR. HARVEY LITTLEJOHN, the Medical Officer of Health for Sheffield, has prepared a report on the prevalence of typhoid fever in that city. He points out that with variations as to the number enteric fever has never been absent since the establishment of notification in 1889. The rise in numbers, general all over the country, in the autumn months appeared in certain quarters to have given rise to some uneasiness. Careful inquiry in the present instance has been made in each case as to the sanitary surroundings of the house where the disease occurred, as to the milk supply, and other possible sources of infection. As a result of these inquiries Dr. Littlejohn says he can exclude the milk supply with certainty, and with equal certainty he thinks the water supply may be excluded. He does not think the suggestion tenable that the present cases may be due to defects in the water pipes caused by the severe frost last winter, whereby infected matters may have been sucked into the pipes. If this were the case the great prevalence of the disorder would have been shortly after the time when pollution would have taken place. The chief cause in Dr. Littlejohn's opinion of enteric fever in the city is the offensive and insanitary condition of the majority of the privy middens, which admit of accumulations of filth in close proximity to dwelling houses. He goes on to point out how when cases have not been removed to hospital but treated at home the disease tended to spread from the house first affected to those who used the same midden. Statistics are given showing the greater mortality in cases treated at home to those who have been removed to hospital, and he regards, with the present privy-midden system, removal of cases to the hospital as one of the most effectual and important which the authorities possess for limiting the spread of the disease.

MILK POISONING.

DR. GRESSWELL, the Health Adviser to the City of Melbourne, has published a report by his assistant, Dr. Gray, on two fatal cases of poisoning by milk, which report, though two years old, has such amount of interest for our readers as leads us to find space for a short summary of its contents.

Briefly, the facts are that milk purchased from a local dairy farm on August 11th, 1893, by two households, proved, as it can be inferred almost with certainty, to be of such poisonous quality as to cause the death of two children who partook of it in a raw and fresh condition. The three cows of the farm yielded some seven or eight quarts daily, and this amount was consumed by 51 persons, in 9 families. Of these persons 10 were under 5 years of age, and 36 over 10 years of age. On the date in question only three or four quarts were consumed by 29 of the persons, and of these 7 were under 5, but only one of them took the milk as drink, and that one drank it in a boiled condition. In one household, taking two quarts, all the members were adults. The other two households, taking two quarts between them, contained the deceased children, aged respectively 3 years and 17 months. They were the youngest in the families, and the only ones who took much of the milk in a raw state. Indeed, with one exception, they were the only children consuming the milk raw. They developed the symptoms which usually follow the ingestion of milk which contains tyrotoxicon. No trace of poison was found *post mortem*, but vomiting was a marked symptom in both cases, and no milk had been taken for some hours preceding death. All other known conditions likely to have caused these fatal illnesses could be excluded; and these were the only cases of the sort at the time or place. They both fell ill the same day, one dying after two and the other after three days' illness. In the one case the home surroundings were deplorably dirty, but not so in the other. The whole locality was in a wretchedly insanitary and [illegible] polluted condition. But the state of the dairy premises and vicinity was quite enough to set aside all question of where the milk acquired its injurious quality. The sleeping apartment of the farmer's family was littered with excreta. The cows in wet weather stand up to their udders in liquid filth; they are milked standing on an accumulation of dry manure; the water used is from an adjacent tank, and contained on analysis [illegible] grains of solid residue and [illegible] grains of chlorine per gallon, being grossly polluted.

These are the chief of the circumstances which Dr. Gray has to report, and one wonders when reading the account what the local authorities can have been about to have permitted the occupants of premises so grossly filthy to go on with the sale of milk and farm produce. All we need say is that it was not for want of caution by the responsible medical adviser that the conditions leading to this report were allowed to persist.

ACTION AS TO WELL CLOSURE.

WE congratulate the Ipswich Corporation in having taken action in the case of a neglected order calling for the closure of a polluted well, with the use of the water in which typhoid fever had been associated. From the report of the police-court proceedings in the *East Anglian Daily Times* we learn that the state of the well was discovered only upon the occurrence of a case of typhoid fever in one of the houses supplied by the water. Upon this side of the matter we cannot congratulate the health authorities, as it should not be left for actual disease to bring to light the defects in a water supply. Especially is this the case in a district which, we are told, is "honeycombed with dead wells, the matter from these percolating into the drinking wells." Still, the order of the magistrate demanding the closure of the well within a fortnight and mulcting the defendant in the costs of the proceedings will have a good effect in the district. Neglect of an order of a sanitary authority to close a well may be serious in its resulting sickness and even loss of life. It is not only the individual owner of the well that may suffer, but his neighbours.

INFECTIOUS DISEASE AND SCHOOL CLOSURE.

J. W. H.—The power of a medical officer of health in the matter of school closure on account of the prevalence of an infectious disease is that contained in the current issue of the Code of Regulations of the Education Department, and in part reproduced by the Local Government Board in their memorandum on the whole subject of school closure on public health grounds. Article 88 of the Code prescribes that the managers of public elementary schools (presumably those referred to by our correspondent as "Government schools") must at once comply with any notice of a sanitary authority or of any two members acting under the advice of the medical officer of health, requiring them, for a specified time, for the purpose of preventing the spread of disease, either to close the school or to exclude particular scholars therefrom. But although the power of the health officer stops short at recommending

advice, he should nevertheless keep schoolmasters posted up as to the presence of illness in the homes of scholars when he becomes possessed of this information, and should request the exclusion from school of children from infected houses. If our correspondent does not already know the memorandum of the Local Government Board to which we have referred he will do well to make application for a copy.

THE AERIAL DISSEMINATION OF SMALL-POX.

DR. W. ARNOLD EVANS (Town Hall, Bradford) writes: In the Public Health column of the BRITISH MEDICAL JOURNAL of November 23rd I see that you refer an inquirer, "J. B. L." for information on the subject to Mr. Power, Dr. Priestley, and Dr. Bruce Low; and I merely write to point out Dr. McVail, of Dumbarton, also gave a valuable contribution on the matter to the Epidemiological Society in 1894, which is published in the *Transactions*. I also read a paper on the same subject at the meeting of the British Medical Association in Bristol in August, 1894, which was afterwards published in the BRITISH MEDICAL JOURNAL. I could send "J. B. L." a copy of my paper.

INFECTIOUS HOSPITAL CHARGES.

D.SCL. has written saying that his district council have had a summons issued for the attendance before a committee of their number of a working man for the non-payment of a bill in respect of the maintenance of his child in the isolation hospital, well knowing that he is unable to meet the demand. There is a prevalence of scarlet fever in the district, and the action of the council in demanding payment for hospital treated cases is having the result of preventing parents from making the use of the hospital which is desirable in the best interests of the public health. D.SCL. desires to know whether such action has been adopted by other authorities, and if it is in accord with the recommendations of the Local Government Board and of county councils.

*** We think the attitude described is to be deplored. We know that almost all the leading health officers are in favour of free treatment of isolated cases in hospitals provided out of local rates. These institutions have been erected with the prime object of preventing the spread of infectious disease. Anything which tends to lessen their use is detrimental to their avowed object. We believe we are correct in stating that cases have been brought into court with the view of obtaining payment from persons in respect of isolation charges. We cannot, however, suppose the Local Government Board or county councils are favourable to such action. Rather, we should look for support from these bodies in all attempts to free our hospitals for infectious cases, just as they are free in London to-day.

DEPUTY PUBLIC VACCINATION WORK.

C. R. D.—The regulations of the Local Government Board with respect to the granting of awards to public vaccinators who have appointed deputies are extremely simple and explicit. They lay down the rule that no award will be made to any vaccinator who has not habitually done his duties in person. Then, again, the employment of a deputy must be limited to those occasions when the vaccinator is unavoidably absent from his station. This being so, the fact that an award is granted to a public vaccinator shows that there has been no excessive use of a deputy's services, and any such award will be made in respect of all vaccinations performed by both contractor and deputy, since "all the successful infantile vaccinations recorded in the vaccinator's register" are to be taken into account for the purposes of award.

ALTERATION OF DISTRICT AND SALARY OF A POOR-LAW MEDICAL OFFICER.

MEDICAL OFFICER writes: I hold an appointment at a salary of £30 per annum, and my district has been altered by a portion of it having been transferred to another union, and the guardians have reduced the salary to £25. Can they do this without consulting the Local Government Board and without giving me a quarter's notice, and can I appeal to the Local Government Board for adequate remuneration?

*** Even if our correspondent holds a life appointment as district medical officer by Art. 5 of Medical Appointments Order, May 28th, 1857, this may be determined with the sanction of the Local Government Board by six months' notice in writing, signed by the clerk to the guardians, if at any time an alteration of the district appears necessary. If this has been done a fresh appointment will have to be made, and the salary for this fixed by the guardians. It would then be for "Medical Officer" to decide whether he would accept the fresh appointment or not on the terms offered. If he decides on doing so, we apprehend that any subsequent appeal to the Local Government Board on the question of salary would not be entertained.

SCOTTISH PARISH COUNCILS AND MEDICAL OFFICERS.

RUSTICUS.—We are in a position to state authoritatively that, in the absence of any agreement to the contrary, a parish council in Scotland may dispense with the services of their medical officer without consulting the Local Government Board, provided due notice is given.

A FEVER-STRICKEN VILLAGE.

TYPHOID fever is raging in Pottersbury, a small Northamptonshire village, and from the report of the Local Government Board inspector who has just visited the place, matters are likely to grow worse. The medical officer of the rural district reports 55 cases and 4 deaths since November 17th. He believes that the wells are contaminated.

MEDICAL NEWS.

ST. THOMAS'S HOSPITAL has now obtained nearly £27,000 towards the £100,000 asked for last February to enable the five wards which have long been closed to be opened. In consequence two of the wards are to be opened in January. This will add sixty beds to the hospital.

A PASTEUR INSTITUTE FOR INDIA.—Brigade-Surgeon-Colonel W. A. C. Roe, of the Indian Medical Service, has been appointed Honorary Secretary of the Association which has been for some time collecting funds for the foundation of a Pasteur Institute for India, and has received sufficient support to assure the success of the scheme.

THE eighth annual *conversaziono* of the Royal British Nurses' Association was held in the galleries of the Royal Institute of Painters in Water Colours, Piccadilly, on December 9th, and was largely attended. The guests, who numbered fully 2,000, included a large number of nurses in their working costumes.

FRENCH CONGRESS OF SURGERY.—The following are the questions proposed for discussion at the meeting of the French Congress of Surgery fixed to take place in Paris in October, 1896: 1. Surgical Treatment of Flat-foot, to be introduced by M. Forgue, of Montpellier. 2. Treatment of Prolapse of the Genital Organs, to be introduced by M. Bouilly, of Paris.

A MEETING of the Selection Committee of the Royal Infirmary, Newcastle-on-Tyne, was held on December 5th to elect a pathologist in succession to Dr. Drummond, who had served for fifteen years, and did not seek re-election. The candidates were Dr. Beattie and Dr. George Murray. As a result Dr. Beattie was elected. At a meeting of the House Committee, held the same day, Mr. W. H. Vickery, F.R.C.S., was elected Surgical Registrar.

AT a meeting of those interested in self-propelled traffic and horseless carriages, held on December 10th under the presidency of Sir D. Salomons at Cannon Street Hotel, an association was formed to deal with the subject, which, it was suggested, closely affected agriculture, trade, and private interests. The first vice-presidents elected were Lord Winchilsea, Sir F. Bramwell, Mr. Alexander Siemens, and Mr. John Philipson. A provisional council was also chosen.

GIFT TO THE NATIONAL PORTRAIT GALLERY.—The trustees of the National Portrait Gallery have just received as a gift from Mr. Watts, R.A., seventeen portraits painted by him, including those of Matthew Arnold, Robert Browning, Thomas Carlyle, Sir Andrew Clark, Sir Charles Hallé, Lord Lawrence, Sir Henry Layard, the Earl of Lytton, Cardinal Manning, John Stuart Mill, Sir A. Panizzi, D. G. Rossetti, the Earl of Shaftesbury, Viscount Sherbrooke, Sir Henry Taylor, Lord Tennyson, and Thomas White the philantropist.

TREATMENT OF DEFECTIVE CHILDREN.—At a meeting held on December 2nd at the Hotel Victoria, on the initiative of the Council of the Charity Organisation Society, to consider the question of the care of defective or feeble-minded children, Sir Douglas Galton presided; and addresses on various aspects of the subject were delivered by Dr. F. Warner, Mrs. Burgwyn (superintendent of schools of special instruction under the London School Board), and Mr. C. S. Loch. The meeting approved of a proposal that a Bill dealing with the subject should be prepared by the Charity Organisation Society and introduced into Parliament.

A HOSPITAL RECORD.—The following extract from the yearly report of the Medical Board of the North Staffordshire Infirmary, read at the annual meeting of the governors on November 27th, is worthy of note: "The medical staff regret to record the loss of their colleague, Mr. Daniel Ball, at the advanced age of 96. Mr. Ball joined the infirmary as a pupil in 1815, and was elected on the staff in 1835. He continued to take a deep and active interest in the surgical work of the hospital, attending at consultations and operations up till within a few months of his death, his connection with the institution therefore extending over the phenomenal period of eighty years."

ANTITOXIN FROM THE EXCISE POINT OF VIEW.—The Board of the United States General Appraisers, New York, has decided that antitoxin is vaccine virus, and as such is exempt from duty under Par. 604, Act of August 28th, 1894. The decision is satisfactory in substance, although in form it rather recalls John Leech's railway porter adjudicating upon the question of a tortoise considered as freight: "Cat is dogs and rabbits is dogs, and must be paid for: but this 'ere tortis is a insect, so there ain't no charge for it."

THE thirty-third annual meeting of the Surgical Aid Society was held on December 9th at the Cannon Street Hotel, under the presidency of the Lord Mayor. The report of the Committee, which was read by the Secretary, showed that the scope and efficiency of the Society's work had been further augmented during the past year. The income had amounted to £10,599, which was a larger sum than that obtained in any previous twelve months. The total sum subscribed by the provincial branches, which now numbered fourteen, had been increased to nearly £800. During the period under review 13,345 patients had been relieved, including 1,542 children, among whom 20,046 surgical instruments had been distributed. In addition great relief had been afforded in many cases of temporary disablement and illness by the loan of air and water beds, invalid chairs, and other articles. In the course of the proceedings the Secretary announced that the contributions received in connection with the meeting amounted to £294.

ANTIRABIC INOCULATIONS AT ODESSA.—In the *Archives des Sciences Biologiques*, published by the St. Petersburg Imperial Institute of Experimental Medicine, Dr. Diatropoff gives the annual report of the bacteriological station at Odessa for 1894. In the course of that year 1,000 persons were subjected to antirabic inoculation by Pasteur's method; of this number 16 did not, for one reason or another, complete the course of treatment. Of the 984 who were fully treated 42 had not been bitten, but had been exposed to infection either in treating animals or men suffering from rabies, or in examining the bodies of animals which had died of the disease. Of the remaining 942 cases, in 2 the bites had been inflicted by human beings, in 883 by dogs, in 46 by cats, in 4 by horses, in 3 by wolves, in 1 by a cow, and in 1 by a pig. The nature of the disease was proved experimentally in 137 cases, by the symptoms observed in the animals which inflicted the bite in 126, by the development of rabies in men or animals bitten at the same time in 18 and by *post-mortem* examination in 251. The bites were severe in 109 cases, moderately severe in 522, and slight in 311. The wound had been cauterised in 246 cases. Treatment was begun in the first week in 717 cases, in the second week in 181, in the third in 21, in the fourth in 8, and more than a month after the infliction of the bite in 15. Among the 940 persons who went through the whole course of treatment the mortality was 0.32 per cent., or, deducting 1 case in which death occurred within a fortnight of the termination of the treatment, 0.21 per cent. In 1893 the percentage of deaths, corrected by the addition of a case which has proved fatal since the issue of the report for that year (hydrophobia having developed just a year after the completion of the treatment) was 0.26.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH ROYAL UNITED HOSPITAL.—Resident Medical Officer. Appointment for three years. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary-Superintendent by December 18th.

BRISTOL INCORPORATION.—Medical Officer for the Workhouse at Stapleton; doubly qualified. Salary, £80 per annum, with residence and rates and taxes free, together with vaccination fees. Applications to J. J. Simpson, Clerk to the Guardians, St. Peter's Hospital, Bristol, by December 31st.

DENTAL HOSPITAL FOR LONDON, Leicester Square, W.C.—Assistant Dental Surgeon; must be L.D.S. Applications to J. Francis Fink, Secretary, by January 6th.

DENTAL HOSPITAL FOR LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square, W.C.—Demonstrator. Honorarium, £50 per annum. Applications to J. Francis Fink, Secretary, by January 6th.

DERBYSHIRE ROYAL INFIRMARY.—Resident House-Surgeon and Resident House Physician, doubly qualified. Appointments tenable for twelve months, with a possibility of extension. Salaries, £100 and £80 per annum respectively, with apartments and board. Applications, endorsed "House-Surgeon" or "House-Physician," to Walter G. Carr, Secretary, by December 31st.

DEVON COUNTY ASYLUM.—Assistant Medical Officer, single. Salary, £100 per annum, with board, lodging, and washing. Applications to Arthur E. Ward, Clerk to the Visitors, 9, Bedford Circus, Exeter, by December 31st.

DEVONSHIRE HOSPITAL, Buxton.—Assistant House-Surgeon. Salary, £60 per annum, with furnished apartments, board, and washing. Applications, endorsed "Assistant House-Surgeon," to the Secretary by December 21st.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department. Applications to the Secretary by December 17th.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary £80, to be increased to £90 per annum after the first year's service, with apartments, board, and attendance. Applications to R. E. Greene, Secretary, 54, Moorfields, Liverpool, by December 23rd.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—Second Assistant Medical Officer for the Asylum at Bromley, Middlesex. Salary, £80 per annum, increasing £10 yearly to £100. Applications, on forms provided, to be sent to Robert Puckett, Clerk to the Managers, Bromley, Middlesex, E., by January 2nd.

SWANSEA GENERAL HOSPITAL.—House-Surgeon. Salary, £60 per annum, with board, residence, washing, and attendance. Applications to Jno. W. Morris, Secretary, 8, Castle Street, Swansea, by December 16th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months, without salary, but board, washing and lodging in the Institution provided. Applications endorsed "Assistant House-Surgeon," to J. H. Randolph Pinchard, Secretary, 13, Hammet Street, Taunton, by December 31st.

TOTNES UNION.—Medical Officer and Public Vaccinator for the No. 2 District (Paignton and Marldon). Salary, £40 per annum, to include all extra medical fees (but not vaccination). Applications to Thos. W. Windeatt, Clerk, by December 20th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments for six months. Board and lodging provided. Applications to R. J. Gilbert, Secretary-Superintendent, by December 18th.

WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho, W.—Resident Medical Officer. Applications to the Secretary by December 20th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Appointment for six months. Board, lodging, and washing provided. Applications, endorsed "Application for Resident Assistant," to the Chairman of the Medical Committee by December 30th.

MEDICAL APPOINTMENTS.

BEATTIE, Thomas, M.B.Durh., B.S., appointed Pathologist to the Newcastle Infirmary.

BELDING, D. T., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of Health to the Dereham District Council.

BROWN, W. Croumbie T., B.A.Lond., M.B., Ch.B.Vict., late Medical Officer in charge of small-pox outbreak in district and town of East London, appointed to supervise the outbreak in Kimberley, Cape Colony.

BYERS, Henry Stagg, of the Northern Hospital, Liverpool, appointed House-Surgeon of the Stockton and Thornaby Hospital, vice *pro tem.* H. C. Hoffmeister, resigned.

CALWELL, William, M.A.Q.U.I., M.D.R.U.I., appointed Assistant Physician to the Belfast Royal Hospital.

CHAMBERLAIN, E. T., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Banstead District of the Epsom Union, vice J. B. Jacob, M.B., resigned.

CLARIDGE, H. A. H., M.B., B.S.Durh., appointed Medical Officer for the Norton Canes District of the Cannock Union.

DAUBER, J. H., M.A., M.B., B.Ch.Oxon., M.R.C.P., M.R.C.S., L.S.A., appointed Honorary Assistant Physician to the Hospital for Women, Soho.

DAWKINS, George Mansel, L.R.C.P., M.R.C.S., appointed House-Physician to the London Hospital.

DOIDGE, M. J., B.A.Camb., M.R.C.S.Eng., appointed Medical Officer for the Fourth District of the Wells Union, *vice* J. A. Bright, M.R.C.S., L.S.A., resigned.

FARMER, W. H., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the Royal Portsmouth Hospital.

GRAVELY, H., M.R.C.S.Eng., reappointed Medical Officer of Health to the Chailey Rural Council.

HARDWICK, A., M.D., appointed Medical Officer of Health to the Newquay Urban District Council.

HEATH, H. T., L.R.C.P.Edin., L.R.C.S.I., appointed Medical Officer of Health to the Mansfield Woodhouse Urban District, *vice* T. Jones, M.R.C.S., resigned.

HERMON, J. M., M.B., C.M.Edin., appointed Medical Officer for the Sharlston District of the Wakefield Union.

MACGREGOR, D. A., M.B., C.M.Edin., appointed Medical Officer of Health to the Skelmanthorpe Urban District Council.

MIDDLEBROOKE, E., L.S.A., L.M., appointed Medical Officer to the St. Ives Union.

MORGAN, J., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Rhaidol District of the Aberystwith Union.

MORTON, A. C., M.R.C.S.Eng., reappointed Medical Officer of Health to North Walsham Urban District Council.

NORRIS, O., L.R.C.P.I., L.M., L.S.A., appointed Medical Officer of Health for the Sherburn Rural District, *vice* R. Cud, M.B.Lond., M.R.C.S. Eng.

POOTS, L., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Headley District of the Epsom Union, *vice* W. C. Hearnden, M.R.C.S., resigned.

RICE, T. E., L.S.A., appointed House Surgeon and Dispenser to the Tiverton Infirmary, *vice* R. H. Chilton, M.R.C.S., resigned.

ROLL, C. W., appointed Ophthalmic Surgeon to the Leicester Infirmary, *vice* — Hodges.

SALTER, Charles E., M.D., B.S.Lond., F.R.C.S.Eng., appointed Honorary Medical Officer to the Scarborough Hospital and Dispensary.

SMITH, C. J., L.R.C.P.Lond., M.R.C.S., reappointed Medical Officer for the Worplesdon District of the Guildford Union.

SMITH, R. Stafford, M.D.R.U.I., M.Ch., appointed Physician to the Belfast Royal Hospital.

SNOW, L. M., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the No. 3 District of the Horsham Union.

STEELE, W. C., M.B., C.M., appointed Medical Officer for the Seventh District of the Tendring Union, *vice* J. C. Potter, resigned.

STEPHENSON, D. R., appointed Medical Officer for the Woodstown Dispensary District.

VICKERY, W. H., F.R.C.S., appointed Surgical Registrar to the Royal Infirmary, Newcastle-on-Tyne.

WAGNER, Frank, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health for Canterbury Urban District.

WALLINGTON, W. T., L.S.A., appointed Medical Officer for the Bunbury District of the Cannock Union.

WANE, C. Carew, M.B., B.C.Cantab., appointed Dispensary Surgeon to the Bradford Infirmary, *vice* A. Rutherford, M.B. and C.M.Edin., resigned.

WEST, R. Melbourne, M.R.C.S., L.R.C.P., appointed Surgeon to the Leicester Provident Dispensary.

WILD, R. E., M.D.Lond., M.Sc.Vict., appointed Honorary Assistant Physician and Medical Superintendent of the Cancer Pavilion and Home, Manchester.

DIARY FOR NEXT WEEK.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Dr. Fetere: The Variation of Diphtheria Bacilli. Mr. Eyre: The Xerosis Bacillus. Messrs. Kanthack and Stephens: The Escape of Diphtheria Bacilli into the Blood and Tissues. Card Specimens:—Dr. Weber: Heart from Case of Angina Pectoris. Dr. Snow: Colloid Carcinoma of Breast. Mr. Lenpol Browne: Malignant Growth of Tonsil. Dr. Rolleston: Crateriform Ulcer. Dr. Hugh Walsham: Tuberculous Liver with Lardaceous Change.

THE CLINICAL MUSEUM, 211, Great Portland Street.—Open at 2 P.M., Lecture at 4.

WEDNESDAY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3 P.M.—Lecture by Dr. Beevor.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, 7.30 P.M.

HOSPITAL FOR CONSUMPTION, Brompton, 4 P.M.—Dr. Percy Kidd: Demonstration of Laryngeal Tuberculosis.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, 8.30 P.M.—Dr. M. Handfield-Jones: Third Harveian Lecture on the Heart in its Relation to Pregnancy, Parturition, and the Puerperal State.

SOCIETY OF ANÆSTHETISTS, 20, Hanover Square, W., 8.30 P.M.—Dr. R. W. Carter (Weymouth): A Precise and Scientific Method of Administering Chloroform and Ether, with Demonstration of the Inhalers by which these Results are obtained.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

NICHOLSON.—October 29th, at Mayfield, Grassendale, Liverpool, the residence of her father, Surgeon Lieutenant-Colonel Cayzer, A.M.S., the wife of Lieutenant M. S. Nicholson, R.N., of a daughter.

SCOTT.—November 29, at Finstall Park, Bromsgrove, Worcestershire, the wife of Sidney Jacob Scott, M.A., M.B., F.R.C.S., of a daughter.

MARRIAGE.

ALEXANDER—MITCHELL.—At Brechin Cathedral, on December 4th, by the Rev. John A. Clark, B.D., Minister of the First Charge, assisted by the Rev. J. T. Forbes, M.A., Dublin Street Church, Edinburgh, John Alexander, M.D., Glasgow, to Jane Morgan, only daughter of the late Charles Mitchell, formerly at Kintrockat, near Brechin.

DEATH.

ORR.—On the 6th of November, at Grove House, Filey, Yorkshire, Hugh J. H. Orr, Physician and Surgeon.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

CAREWORN asks whether there is any hospital or home into which could be received, upon payment of some small sum annually, an orphan girl, 8 years old, who is suffering from lupus in a mild form, principally affecting the scalp.

P. I. F. would be glad to know the cause of and best treatment for persistent pain and tenderness in the muscles of the thigh and leg in a case of fracture of the upper third of the femur persisting for some time after complete osseous union. Various liniments have been tried, but without success.

GAS AND ETHER APPARATUS.

X. Y. Z. asks for particulars as to the cost of a gas and ether apparatus, as well as the advantages and disadvantages of the various kinds. There is little doubt that ether is a much safer anæsthetic than chloroform; but the difficulty of administration, owing to the struggling stage, is often very great in private practice, where there is usually little if any help at hand. A portable gas and ether apparatus at a moderate cost would be a great boon.

BATHS.

INQUIRER asks the address of an establishment in London where sulphur baths can be obtained for a case of muscular rheumatism.

*** There are baths at Argyll Place, Regent Street, and at York Terrace, Regent's Park.

THE PROLONGED USE OF SACCHARIN.

R. W. W. wishes to know if any harm is likely to accrue from small doses of saccharin continued for an indefinite period. He is himself to think it is harmless, having taken it daily in tea or coffee for the last six years, but would like to be assured that there is no ground for a rumour he has lately heard to the contrary.

*** Dr. Pavy informs us that nothing is known of any injurious effect being produced by the prolonged use of saccharin in the quantity employed for sweetening purposes.

ANSWERS.

MEDICO.—The papers set for examination for entry into the Naval Medical Service can be obtained by candidates on written application to the Medical Department of the Admiralty.

R. M.—Information as to appointments in the Colonial Medical Service is given in the BRITISH MEDICAL JOURNAL of September 7th, 1895, p. 616. Copies of the memorandum issued by the Colonial Office can be had on application to the Colonial Office.

INQUIRER.—A person really suffering from delirium tremens and doing homicide, etc., is held responsible or not on the same conditions as apply to anyone else with regard to whom the plea of abnormal mental state at the time of the act is raised.

B. A. G.—We referred our correspondent's query to our Paris correspondent, who writes that the best maker of gluten bread in Paris is P. Laporte (successor to Durand), 24, Rue des Grands Augustins, Paris. But there are others.

J. O.—Diphtherial antitoxic serum can be obtained from the British Institute of Preventive Medicine, 101, Great Russell Street, Bedford Square, London, W.C. Messrs. Allen and Hanburys, Plough Court, Lombard Street, E.C., are agents for the Institute. Diphtherial antitoxic serum is also supplied by Messrs. Burroughs and Wellcome, Snow Hill Buildings, London, E.C.

A MEMBER.—India-rubber when new may give a taste to water, but this tendency disappears after use for a week or two. A taste in any filter may also arise from the sides of the vessel and the surface of the filtering medium being left uncleaned and exposed for air; and this taste is often mistaken for that of india-rubber. The remedy is to keep the filter as constantly full as possible, and to clean occasionally, preferably by washing out with boiling water. If this has been neglected, a little acid (for example, citric acid) dissolved in the water is useful. Of course filtered water should not be kept in the reservoir till it becomes offensive, but should be emptied out, preferably every day.

GERMAN AND FRENCH MEDICO-SCIENTIFIC DICTIONARIES.

A MEMBER will probably find the *National Medical Dictionary*, edited by Dr. J. S. Billings, the book most suited to his purpose. It is published in two volumes, and contains English, French, German, Italian, and Latin scientific and medical terms. The price is £3 10s. nett.

PARISH COUNCILS AND MEDICAL AID ASSOCIATION.

A. J. E.—The parish council of Walls, in Orkney, have followed, but warily, in the footsteps of the Portpatrick parish council, to whose doings we had occasion to direct attention a few weeks ago. They offer a salary of £22 for a medical officer, and announce a further salary of £10 from a medical association "scale of fees fixed by medical association." This "scale of fees," however, is not a condition of the appointment, and it is open to the man appointed to decline or accept it.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

W. B. G.—The most complete and recent information concerning the whole question of the antitoxin treatment of diphtheria is to be found in the reports of the annual meeting of the British Medical Association. In the Section of Pharmacology a discussion was opened by Dr. Klein, and in the Section of Medicine by Dr. Martin. The first of these is reported in the BRITISH MEDICAL JOURNAL for August 17th, and the second in that for August 24th. A discussion on the bacteriological diagnosis of the diphtheria is also reported on August 31st.

COLLEGE ARMS.

IT is incorrect for graduates or licentiates in medicine to use the university or college arms on their notepaper. Such arms are properly used only by the members of a society when they are writing from, or on the business of, the society. When a guinea licence has been taken out, there is nothing in law to prevent the licensee from assuming or using any arms he pleases, the authority of the College of Arms to proceed against offenders in this line having been upset by the King's Bench in the last century. The Fellows and Members of the Royal College of Veterinary Surgeons appear to stand upon an entirely different footing from those of the various bodies granting licences to practise medicine.

NOTES, LETTERS, Etc.

INSURANCE COMPANIES AND TOUTING.

OUR attention has been directed to the fact that one of the friendly societies for granting assurances on lives has made a proposal to its medical examiner to tout for business on behalf of the society. We are glad to find that the gentleman in question has very properly declined to have anything to do with what he justly stigmatises as "a gross breach of professional etiquette," and we trust that other members of the profession will take the same view. This would seem to be an attempt on the part of the society to induce medical men to accept low fees for examining lives by holding out to them the prospect of "a liberal introduction fee" for business introduced by them.

REMUNERATION OF CIVILIAN MEDICAL PRACTITIONERS IN CHARGE OF TROOPS.

CIVIL SURGEON IN CHARGE OF TROOPS writes: In reply to "I. W. M." in the BRITISH MEDICAL JOURNAL of November 23rd, permit me to say that I was very glad to accept the appointment, even at contract rate, as if I did not take it some neighbouring practitioner would be sure to do so. Nowadays competition is so keen in the profession that I hardly think the correct way to get a grievance such as this remedied would be to throw up an appointment which would be sure to be snapped up by somebody else, even at a lessened rate of remuneration. Combined agitation is what is needed.

COMMON SALT FOR RINGWORM.

DR. DAVID WALSH (Physician Western Skin Hospital, W.) writes: With regard to the use of salt in the treatment of ringworm, described by Mr. F. J. Reilly in the BRITISH MEDICAL JOURNAL for November 23rd, last, I beg to say:

1. I have used salt successfully in cases of ringworm during the past two years.

2. Like most other remedies recommended for this troublesome disease, it fails altogether in some obstinate cases.

3. By the kindness of Dr. Littlejohn, the medical officer of the City of London Schools at Hanwell, I have been enabled to carry out an extensive trial of salt in chronic cases of tinea tonsurans. The result of this investigation I hope to publish before long.

4. Salt appears in obstinate cases to require special methods of application, and to act best in combination with other remedies.

5. I have used salt successfully in some skin conditions.

THE D.P.H. (SCOTTISH CONJOINT BOARD).

DR. T. HARVEY [illegible], D.P.H. ([illegible], N.B.) writes: In the BRITISH MEDICAL JOURNAL of December 7th, Dr. McNab takes exception to an extract from my letter regarding this diploma, which appeared in the JOURNAL of November [illegible]. In this, by a printer's error, "the candidates" appeared as "the candidate." Dr. McNab's contribution places the recent examination for the diploma in a different light from what appeared to be the case from "A Candidate's" statement that "for the final examination only one candidate presented himself." By pointing out that while one failed two others were successful, Dr. McNab has given more encouragement to prospective candidates for this diploma, from more than one of whom I have had private inquiries on the matter.

CODE NAMES AND MEMORIA TECHNICA.

AXILLA writes: We must all thank Dr. [illegible] for his suggestion in the BRITISH MEDICAL JOURNAL of October [illegible] to have "Code Names" for preparations, that they may not "be understanded of the people." I would even venture hope that examiners will not be too hard on candidates if their over-strained memories cannot remember the synonyms. In aid of these I would invite attention to the *Chemist and Druggist* of May [illegible], p. [illegible], and May [illegible], p. [illegible], as some students are very good at inventing specimens of "memoria technica." For instance:

Pulv. Rhei Co.
Of rhubarb, two; magnesia, six;
Of ginger, one. These rightly mix.
Scammony and Kino.
What will make the bowels to go?
Scammony, jalap, and ginger, oh!
And what will stop excessive flow?
Cinnamon, opium, plus kino!
Pil. Scillæ Co.
Take an ounce and a quarter of squill,
One of ginger well ground in a mill;
Ammoniacum and soap,
One of each—and I hope
That with treacle you'll make a good pill.

One of my fellow students was a treasure at making rhymes and catches for "memoria technica," turning every little accident to good purpose. One day a man was dissecting the axilla, the arm being stretched upwards in the usual position. Another student, in passing the table, happened to get the chain of his dissecting hooks caught in the fingers of the arm, and jerked the "subject," so the axilla man called out: "Sam, Sam, Sam, don't pull my arm." Immediately our friend said: "Thank you, that's just what I wanted, as I couldn't remember the branches of the femoral artery in the proper order, but now I can; listen: *Sam*, *Sam*, *Sam*, *superficial* epigastric, *superficial* circumflex iliac, *superficial* external pudic. *Don't*, deep ext. pudic. *Pull*, profunda. *My*, muscular. *Arm*, anastomotica." This happened thirty-three years ago, yet I can recall it without an effort, and I hope my successors have comrades like mine.

THE EDUCATION AND TRAINING OF GIRLS: A CORRECTION.

DR. W. S. PLAYFAIR (George Street, W.) writes: On p. 1469 of the BRITISH MEDICAL JOURNAL of December 7th, in my paper "On the Education and Training of Girls of the Easy Classes at and about the Period of Puberty," is a misprint which has escaped notice in correcting the proof sheets. In the sentence ending "in the cases of two young ladies, aged respectively 11 and 16," the figures should be "14 and 16."

THE EXAMINATIONS OF THE CONJOINT BOARD IN ENGLAND.

G. H. writes: I am informed, but it seems really hardly credible, that the Conjoint Board, after giving notice of an examination in [illegible] in January next, have now suddenly announced that that examination will not be held, although many students have been working for some months past specially for it. I will not say the time has been altogether wasted, but many of them would have worked for some other examination if they had known this one was not to be held; and now that there are so many examinations it is really a serious matter for them.

SIMULTANEOUS DISLOCATION OF TWO JOINTS.

MR. CHARLES A. STURROCK, F.R.C.S.Edin. (Dunfermline) writes: A case of simultaneous dislocation of both shoulders was reported in the BRITISH MEDICAL JOURNAL of November 9th. The following notes refer to a similar case which I saw on September [illegible]. A man, aged [illegible], fell backwards off a ladder to the ground, a distance of [illegible] feet, and sustained on the right side a subcoracoid dislocation, and on the left a subglenoid dislocation. Both were reduced by [illegible] without chloroform, but the movements at the joints, though improving, are still incomplete. With the exception of [illegible] he received no other injury. On July 28th I saw a man, aged [illegible], upon whose back, while he was bending, a mass of [illegible] weights fell. He sustained a dorsal dislocation of the left hip and, falling on his right hand, received a [illegible] dislocation at the first interphalangeal articulation of the [illegible] finger, the wound being on the flexor aspect, and the head of the [illegible] phalanx being displaced forwards. Both dislocations were reduced under chloroform by manipulation. Movements of the finger were completely restored in fourteen days; but as a result of the injury to the hip he still has a limp. He suffered no other injury.

DOCTORS IN RUSSIA.

SOME interesting figures have, says the Moscow correspondent of the [illegible], been published concerning the medical profession in Russia. There were, up to July 1st, in all Russia [illegible] and women, [illegible] of whom did not practise. [illegible] medical [illegible].

AN EASY METHOD OF [illegible] DISLOCATION OF THE [illegible] JOINT.

DR. F. T. [illegible] ([illegible]) writes: With reference to the method described by [illegible] in the BRITISH MEDICAL JOURNAL of November [illegible], p. [illegible], that he has practised the same

method since 1879 or 1880. He writes, referring to that period: I was called to a strong young farmer who had been thrown out of his dog-cart, and failing in my attempt to reduce the dislocation by the old and cumbersome means of the heel in the axilla, I made the man sit on the edge of his bed principally on his right buttock in order to bring his left shoulder (the injured one) prominently forward, and grasping the arm firmly above the elbow with the left hand, and making steady traction downwards and outwards, at the same time inserting the fingers of the right hand closely wedged together well between the head of the humerus and side of thorax, the dislocation was at once reduced. I have tried it frequently since, and with, I might say, perfect success, with the exception of one case, and that was in a powerful countryman who had fallen off a cart twenty-four hours previously, and when all methods failed short of being chloroformed, etc. I published my first case in the JOURNAL at the time it occurred.

DR. J. C. FRASER (South Norwood) writes, with reference to the same subject, that two years ago in Switzerland a young American, about 21 years of age, slipped on a mountain side and put his left shoulder out. I happened (he continues) to be near, and reduced the dislocation (subcoracoid) by manipulation after two tries with heel in axilla had failed. The following was the method used. The fingers of my left hand grasped the patient's left acromion, and my left thumb was in the patient's axilla against neck of humerus. Then with my right hand the patient's left elbow was brought across his chest, so that my thumb acting as a fulcrum the head of the humerus was worked by leverage into the glenoid cavity. I was much struck by the ease with which reduction was effected.

A "SYSTEM OF MURDER."

MR. BRAXTON HICKS on December 7th held an inquest on an unknown male child, which was picked up in Chichley Street, York Road. Medical evidence proved that the child had been born alive, but that it had been suffocated immediately after birth. The coroner said the people concerned showed more than ordinary coolness. As a rule they attempted to hide dead bodies, but in this case they absolutely threw it in the middle of the road. The unfortunate child had never had a "legal" existence, but there could be no doubt that many so-called midwives carried on a system of what was certainly moral, if not legal, murder. There should be an act to compel the registration of all still-born children.

INSANITY OF CONDUCT.

THE following paragraph, which has appeared in the lay press, has caused a good deal of excitement: "The laughing negro is a type very well known to medical men, and several curious cases are on record of grave personages, who had rarely been seen to smile, suddenly breaking into a habit of uncontrollable and contagious laughter. Dr. Clouston tells of a solid, prudent, business man who one day startled his family by a fit of laughter which lasted so long and was so hilarious that everyone in the room had to join in. From time to time after that he would be seized in the church, in a train, or the streets, and whenever he started all who heard him would have to follow. It was the first symptom of mania. Very soon delusions and the most outrageous conduct supervened, and then—the asylum." The above paragraph is of interest as evidence of a form of insanity of conduct; in such cases there is defect of the highest control, and some very slight external cause gives rise to an emotional display which cannot be readily stopped. This is of the nature of impulse, a kind of exaggerated emotional reflex. It is interesting, but quite in accordance with experience that such emotional disorder should be the first symptom of grave mental disorder. Such disorder, if occurring in men, is most frequently met with as an early warning of general paralysis of the insane.

ACETYLENE AS AN ILLUMINANT.

ORDINARY coal gas, though a convenient, is by no means a perfect illuminant, since it contains various constituents which have no illuminating power, while they are injurious when mixed with the air of a room. Acetylene—a gas which burns with a brilliant light—can now be obtained from what is practically a waste product—carbide of calcium, a crystalline body which, when treated with water, yields acetylene almost quite pure. The gas which is thus obtained has a distinct garlic like odour, so that its presence in air, due to leakage of pipes, would easily be perceived. During combustion it produces less heat than coal gas, less moisture, and less carbonic acid, and uses up about half the quantity of oxygen. The light is white, and for the same volume yields nineteen times as much light as coal gas with an ordinary burner. Dr. Notter, who has published a note on the subject in the *Revue d'Hygiène*, believes that acetylene thus produced has a considerable future, since the ease and simple appliances with which it may be made will render it suitable for use for small installations. Further, its addition in certain proportions to ordinary coal gas will increase very much its illuminating power.

LETTERS, COMMUNICATIONS, ETC., have been received from:
(A) Messrs. Allen and Hanburys, London; Dr. J. H. Abram, Liverpool; Anti-hypocrisy; A. B.; Mr. T. H. Appleby, Newark-on-Trent. (B) A. B. Boyd, M.B., Christchurch, N.Z.; Mr. W. E. Bear, London; Dr. P. Boulton, London; Mr. G. H. Broadbent, Manchester; Mr. C. C. Braine, London; Mr. F. M. Beckett, Ely; Mr. J. Broadbent, Newark; Dr. C. Y. Bise, London; Dr. G. S. Batten, London; J. W. Batterham, M.B., St. Leonards-on Sea; Mr. E. F. Bindloss, Royston; Dr. J. Barr, Liverpool. (C) Mr. J. H. Chaldecott, Hanwell; Dr. J. Cook, London; Mr. W. H. Cope, Birmingham; Dr. J. Chapman, Southampton; Dr. C. C. Claremont, Southsea; Careworn; Mr. A. Clarke, Leeds; Mr. W. J. F. Churchouse, Long Buckley. (D) Mr. P. Dunn, London; Mr. T. J. Daly, Manchester; Dr. D. K. Dalziel, Glasgow; Dubiety; Dr. R. Domenichetti, Louth; W. K. Dutt, M.B., Cambridge; Mr. A. J. Day, Manchester; Mr. B. H. Dale, Swindon; Mr. W. Davidson, Liverpool; C. B. Dobell, M.B., Tewkesbury. (E) E. J. W. (F) Mr. H. W. Fisher, Swaddlincote; A. R. Ferguson, M.B., Partick; F. A.; D. Fairweather, M.B., London; Mr. W. H. Farmer, Bournemouth; F.R.C.S.; F. T. M.; Mr. M. V. Fitzgerald, Rugby. (G) Mr. A. F. Greenhill, London; G. H.; Mr. T. Galton, London. (H) Mr. E. S. Hartland, Gloucester; Mr. W. Halford, Battle; Mr. E. H. Hicks, Loughborough; Mr. R. N. Howard, Port Nolloth; Mr. F. J. Harvey, Clatterford; Dr. J. L. Hastrew, London; Dr. J. Haldane, Oxford; Mr. F. Haydon, London; E. W. Haydon, M.B., Leicester. (I) Dr. C. R. Illingworth, London; Mr. F. Imlach, Liverpool; Inquirer. (J) Dr. W. A. Jamieson, Edinburgh; Dr. C. James, London; Mr. S. E. Jones, Bangor. (K) Mr. C. King, London; Dr. T. J. Kelly, Leicester; Dr. J. Kidd, Enniskillen. (L) Lex; Messrs. Lazarus and Davidson, London; Leeds and West Riding Medico-Chirurgical Society, the Secretary of, Leeds; Mr. H. Littlewood, Leeds. (M) Mr. F. Melland, Manchester; Dr. D. F. F. Mullen, Eastbourne; Dr. J. H. Murray-Aynsley, Christchurch, N.Z.; Member of the B.M.A.; M.B.M.A.; Mr. R. Mosse, Colne; M. A.; Member; M. D. S.; Mr. C. A. Morton, Clifton; Dr. E. J. McWeeney, Dublin; M. D.; M. C.; Mr. E. C. Milner, London. (N) Mr. T. B. Napier, London. (O) Dr. J. Orton, Beeston. (P) Mr. H. R. Procter, London; Dr. H. S. Purdon, Belfast; Dr. G. W. N. Potter, London; Dr. W. S. Playfair, London; Dr. S. J. Parkhill, Burton-on Trent; Dr. S. T. Pruen, Cheltenham; Mr. W. H. Payne, London; Mrs. Pomeroy, London; J. C. Palmer, M.B., Woking; P. J. F. (R) Dr. B. Rogers, Clifton; Mr. C. B. Rossiter, Irthlingboro; Rusticus; Dr. S. Ringer, London. (S) Mr. W. St. Cedd, London; J. B. Story, M.B., Dublin; Mr. P. L. Sclater, London; Dr. J. G. Swayne, Clifton; Mr. J. C. Stanley, London; Dr. R. M. Simon, Birmingham; Dr. C. E. Salter, Scarborough; Dr. H. Smith, Durham; Dr. J. M. Scatliff, Brighton; Mr. H. G. Sanderson, Stockton-on-Tees; Mr. J. M. Shaw, Edinburgh. (T) Dr. F. Taylor, London; Mr. F. Treves, London; A. J. H. Thornton, M.B., Robben Island; Traveller; Dr. T. H. Thomson, Campbeltown; Mr. R. Tressider, London; Dr. R. Temple-Wright, St. Luke's, Jersey. (V) Mr. W. Van Praagh, London; Veritas. (W) G. Whittle, M.B., Liverpool; Dr. K. Warry, London; Mr. E. W. Wallis, London; Mr. R. M. West, Leicester; Mr. N. Wood, London; Mr. T. M. Watt, Hovingham; Mr. R. H. Wolstenholme, Salford; G. E. Williamson, M.B., Newcastle-on-Tyne; Mr. G. Worthington, Bournemouth; W. B. G. (X) X. Y. Z.; etc.

BOOKS, Etc., RECEIVED.

Hints to Medical Practitioners concerning the Granting of Certificates o Death. By A. Braxton Hicks. Second Edition. London: T. Vickors-Wood. 1895.

Précis Élémentaire de Dermatologie. Par L. Brocq et L. Jacquet. Paris G. Masson.

Catechism Series. Midwifery, Parts I and II. Edinburgh; E. and S. Livingstone. 1s. each part.

On the Localisation of the Foramina at the Base of the Skull. By E. Fawcett, M.B., C.M. Bristol: J. W. Arrowsmith. 1s.

Medical and Surgical Report of the Children's Hospital, 1889-1894. Edited by T. M. Rotch, M.D., and H. J. Burrell, M.D. Boston, U.S.A.: Published by the Board of Managers. 1895.

Diseases of the Chest, Throat, and Nasal Cavities. By E. F. Ingals, A.M., M.D. Third Edition. London: Henry Kimpton and Hirschfeld Bros.

Hygiène Générale de la Peau et du Cuir Chevelu. Par Dr. H. Fournier. Paris: Société d'Editions Scientifiques. 1895. Fr. 3.

Les Variations de la Mortalité à Paris, leur Cause Météorologique. Par Dr. F. Chiais. Paris: Société d'Editions Scientifiques. Fr. 3.

The Housing of the Working Classes. By Edward Bowmaker, M.D. London: Methuen and Co. 1895.

The Medical Digest, or Busy Practitioner's Vade Mecum. Appendix, including the Years 1891-2-3-4 and to August 1895. By Richard Neale M.D. London: Ledger, Smith, and Co. 1895.

Hygiene. By J. Lane Notter, M.A., M.D., and R. H. Firth, F.R.C.S. Second Edition. London: Longmans, Green, and Co. 1895. 3s 6d.

*** In forwarding books the publishers are requested to state the selling prices.

A LECTURE
ON
VACCINATION AGAINST CHOLERA.

Delivered in the Examination Hall of the Conjoint Board of the Royal Colleges of Physicians of London and Surgeons of England, December 18th, 1895.

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The Principles of Preventive Inoculation.

Before dealing with my work in India allow me to recapitulate here the chief circumstances connected with the problem of preventive inoculation. After experimental medicine had been inaugurated the efforts of bacteriologists remained for a long time concentrated on that classical form of infectious disease, splenic fever, in connection with which the fundamental laws of the new science have been elucidated. It was reserved to Dr. Koch to discover in the formation of spores the means by which the microbe of this disease, when outside the animal body, protected itself against the external world. Shortly after this it has been found that the spores not only preserved the life, but also all specific properties of the microbe, and that it is owing to this circumstance that the bacillus of anthrax is one of the most constant species of schizomycetes known. On the other hand, a great mutability of properties has been discovered in all microbial virus not possessing spores, or in which sporification is arrested for a certain period. On the bacillus of chicken cholera Pasteur observed for the first time the loss of virulence in a microbe of a high infectious power. Since then it has been found that the virus of every disease, although it remains constant in the nature of the affection it produces, varies without limit in virulence; that in one and the same specimen this property can be diminished or strengthened by special proceedings, and that in this we have the greatest part of the explanation of the variability of disease in individuals and communities.

This variation in virulence was familiar to all observers, and from time immemorial has been turned to advantage by the peoples of the East. It is known that the practice of inoculation against small-pox was originated from the observation that there are mild and severe epidemics of the disease, and that people affected in mild years remained immune in severe years. At the appearance of a non-fatal epidemic every one wished to get through the disease, and not only did not avoid infected people, but sought their presence and a close contact with them. A practice thus arose in Asia to take artificially the infectious stuff from mild cases and to communicate it to healthy people. Unfortunately, very often in a resistent patient a mild semblance of disease conceals an infectious agent of unexpected virulence, and such virus, on being transferred to a less resistent subject, produces a terrible attack, not infrequently leading to a fatal epidemic in the community. In view of this dangerous character the religious laws of the Hindus, by special regulations, restrict the practice, and the Government from time to time find themselves under the necessity of instituting legal proceedings against those who apply the method. As soon as Jenner discovered an attenuated virus, and showed the method of keeping it in the desired strength by passage through the calf, the practice became immediately safe and certain, and the Eastern method has been abandoned in the whole civilised world.

In the case of small-pox, however, as in the case of rabies or syphilis, the disease is communicated from individual to individual, and the morbid virus is cultivated exclusively in the animal body, under conditions varying little in their character. The modifying influences become infinitely greater when a virus can grow in a saprophytic form and is exposed, in the interval between visiting animal bodies, to the vicissitudes of nourishment, oxidation, light, temperature, which are to be found in the external world. Even microbes, like that of anthrax or tetanus, provided with protective spores do not escape this law, and one finds in Nature their specimens presenting a very large scale of modifications; but there appears to be no limit to variability in infectious virus leading a saprophytic life and deprived of the sporulating faculty. The microbe of cholera is one of the most striking examples of this phenomenon.

Variability of the Cholera Microbe.

When the cholera bacillus was first discovered, eleven years ago, its properties were described with great precision, which helped in concentrating for a long time all studies on well-defined and carefully-chosen specimens. Little by little, as the field of investigation grew larger, a number of varieties have been found with characteristics differing so largely as to annihilate almost completely the original description. When we open the intestines of deceased cholera patients and investigate the microbes there, the adopted methods will bring to the surface vibrios in which the external form, instead of the characteristic comma or spirillum, will vary between a coccus and a straight thread; the number and disposition of the cilia, the secretion of acids, the form of growth in broth, will vary; instead of giving in gelatine a discrete and well-defined figure of liquefaction, the variation will extend from the complete loss of this property to a rapid dissolution of the whole of the medium; there will be varieties which grow luxuriantly in given media, and others which do not grow there at all; some will be phosphorescent in the dark, and others not; some will give the indol reaction, and others will be deprived of this property, and so on. The first thing to be done is carefully to select amongst these the most typical specimens, rejecting the others, and then we try their pathogenic power. We shall find such a divergence in strength that the extreme forms will not be believed to be of the cholera species. There will be commas deprived of any virulence demonstrable on animals, and others which kill the most resistent species. Some will be fatal to a guinea-pig at a dose of $\frac{1}{100}$ of a culture tube, and others harmless in doses 500 times stronger. The average comma dies out when introduced under the skin to an adult animal; others will spread in the system and give a fatal septicæmia. The ordinary comma will be without effect on birds; but several specimens have been isolated, and believed to be typical, which easily killed pigeons by hypodermic or intramuscular injection. I believe to be of great value the method worked out by Pfeiffer for comparing all such varieties with one selected as typical, and which he employed for the preparation of an antitoxic serum. This method will be found of efficient help in distinguishing specimens of the greatest affinity with the average cholera comma. But once such specimens are selected and their particular properties studied, they begin to change from the first day they are introduced into the laboratory, and no calculation based on these studies is possible. In a case quoted by M. Metchnikoff, the proportion of initial power of the microbe, and the strength it showed at a later trial, was of 75 to 1, the microbe having gradually sunk to $\frac{1}{75}$ of its initial virulence. If, for producing a certain infectious, or preventive, or curative effect, we had to use, in the first days, 1 c.cm. of this culture, later on a dose smaller than 75 c.cm. would be without effect, and the changes of the microbe would certainly continue still further.

The System followed in India.

In all operations on men done in India we used exclusively living cholera virus, for the reason that sterilised cultures or products of cultures, as a rule, produce an effect of a far shorter duration than living microbes. The symptoms in anticholera vaccination consist in localised swelling and pain in the side, at the seat of injection, and in an attack of fever. The pain is felt only on pressure, and its amount is such as to prevent a soldier from putting on his belt for a couple of days, and a coolie worker from doing work involving bending the body or stretching otherwise the interested tissues. But the intensity of the symptoms and their duration vary in direct proportion with the virulence of the cultures and the doses administered. On the other hand, in all forms of preventive treatment the amount of protection depends on the intensity of reaction produced in the subject. A small dose of a given virus, or

else the same dose of a weakened virus, will produce less reaction and afford less protection; a higher dose of the same virus, or the same dose of a stronger virus, produces more reaction and affords a higher and, probably, more lasting protection.

In the first period of my work in India I adopted $\frac{1}{10}$ of a standard culture, of a given strength, as a dose for an adult person. The reduction of this dose by a small fraction is sufficient not to produce in the subject any noticeable reaction at all. Later on, after the first series of observations was collected, I was induced to apply a treatment by increased doses of a stronger vaccine. A series of experiments and observations, for which I am especially indebted to Dr. Arthur Powell in Cachár, have been instituted with this object. It has been found that with the increase of the doses the amount of local pain, and especially that of general discomfort, was proportionately increasing, the fever was of a more severe type, and lasted longer, disabling the men for work for four, five, and more days. In Dr. Powell's mind there remained no room for doubt that with the increase of the doses the operation would become fatal to man. The limit of the doses adopted for the strength of the vaccines we used was between $\frac{1}{4}$ and $\frac{1}{3}$ of a culture.

From this it will be seen that it is a matter of vital importance, a *sine qua non*, in order not to exceed or fall below the intended reaction, to have a method of fixing the properties of this modifiable microbial virus, to keep it at the same degree of activity, and to know exactly the amount of power contained in a given dose.

The general method worked out for that purpose consists in finding out an animal susceptible to the given virus, and discovering the conditions in which the virus can be transplanted from animal to animal without interruption and without having recourse to artificial media. Jenner's method in its essential features remains intact, and our proceedings correspond exactly to the cultivation of vaccinia from calf to calf, or from vaccinated man to man. The particular difficulties which were connected with the diseases for which vaccines have been worked out, have been treated in the technical literature, and I believe there is no room for dealing with the matter in the present lecture. The terms virus and vaccine are still used in the same sense as they were used in regard to small-pox. The infectious substance from a subject who naturally fell ill from a disease—a small-pox patient, a rabid dog, a person affected by cholera—is a virus; the Eastern practice of inoculating small-pox virus against small-pox is variolisation. On the other hand, the substance cultivated under conditions intended to keep the morbid agent at a given and fixed state of virulence, permitting the use of it with safety and sure measurement, such as Jenner's calf lymph, or Pasteur's rabies emulsions, is a vaccine, and the application of such substances for preventive treatment is called—following the suggestion of Pasteur and in honour of Jenner who first used the term—vaccination.

The method which I worked out for the preparation of two cholera vaccines, one weakened and a second one strengthened, has been described in my previous lecture delivered in this hall three years ago.

It is the difference between vaccination and variolisation that distinguishes the method which I have applied in India from that tried in Spain by Dr. Jaime Ferran in 1885. Ferran's operations consisted in inoculating vibrios collected from cholera patients. The method employed in India consists in inoculating a vaccine worked out following the proceedings of Jenner and Pasteur.

The difference between the two operations is such that Jenner's method has survived criticism and the test of a century's daily application, and has been vastly generalised; the other method, imitating the inoculation of small-pox virus against small-pox, had to be abandoned on every occasion where attempts to apply it were made. At present there is not a single practice, in therapeutics or in preventive medicine, where the use of living virus taken directly from infectious persons, is allowed, whether on individual subjects, or, still less, in application to whole populations. The attempts made by Toussaint, previously to Pasteur's operations, of inoculating anthrax virus against anthrax, died out without the slightest possibility of practical application. In the treatment against anthrax by Pasteur's method, an excessive attenuation of the first anthrax vaccine, which was permitted to fall below the desired amount of virulence, caused on some occasions serious accidents. The neglect to make strict distinction between vaccine and virus was responsible for a disaster which occurred in the inoculation of sheep against anthrax in the south of Russia. The misadventure led to a prolonged suspension of all anthrax inoculations in that country, and partly in Austria-Hungary, and Italy; but one shudders to think of any similar accident occurring, instead of a flock of sheep, in a regiment of men. The attempts at inoculating cholera virus against cholera by Ferran had to be stopped by the Spanish Government, and was disapproved by all commissions sent out to investigate these operations by the Governments of Spain, Great Britain, France, Russia, Belgium, a result which was used as one of the arguments, seven years later, by the Government Committee in Russia, in refusing to admit the trial of my method of protection against cholera. On the other hand, *vaccination* against rabies has been going on these ten years with a marvellous precision, and has been already applied to about 15,000 people in France alone; innumerable flocks of domestic animals are vaccinated yearly in different parts of the world, against anthrax and pig-measles. And now we come to record the results of upwards of 70,000 injections of living bacteria, performed on 42,170 people, without having to record a single instance of mishap or accident of any description produced by our vaccines.

Indian Experiences.

My actual work in India lasted twenty-nine months, between the beginning of April, 1893, and the end of July, 1895. During this period the anticholera vaccination has been applied to 291 British officers, 3,206 British soldiers, 6,629 native soldiers, 869 civil Europeans, 125 Eurasians, and 31,056 natives of India. The inoculated people belonged to 98 localities in the North-West Provinces and Oudh, in the Punjab, in Lower Bengal and Behar, in the Brahmaputra valley and in Lower Assam. No official pressure has been brought on the population, and only those have been vaccinated who could be induced to do so by free persuasion. In every locality efforts were made to apply the operation on parts of large bodies of people living together, under identical conditions, in order to compare their resistance in outbreaks of cholera with that of not-inoculated people belonging to the same unit of population. This object has been obtained in 64 British and native regiments, in 9 gaols, in 45 tea estates, in the fixed agricultural population of the villages parallel to Hardwár pilgrim road, in the *bustees* of Calcutta, in a certain number of boarding schools where the parents agreed to the inoculation of their children, in orphanages, etc. The vast majority of inoculated people lived thus under direct observation of the sanitary and medical authorities of India.

Cholera broke out in the inoculated localities from 1 to 459 days after the operation, and careful statistics of occurrences were immediately collected by the corresponding civil and military and medical authorities, as well as by myself. The whole number of observations made, as they were at the time when I left India, may be grouped in three categories: (I) the first, containing unsuccessful results, or such in which no conclusion was possible; (II) the second, with results slightly favourable to the method; and (III) the third with results satisfactory.

I. To the first category belong observations made on a series of tea estates in Assam. The coolie workers on these plantations live in well-defined isolated bodies, distant from the villages, and not mixed with outside population. The inoculated individuals were scattered among the non-inoculated, and shared with them food, water supply, and all other conditions of life. In all instances belonging to this category the people had undergone only one part of the preventive treatment—namely, were inoculated with first attenuated anticholera vaccine given in maximal doses; the second inoculation, with the final vaccine, was applied after the cholera season had ceased. The disease occurred from one to six months after the first inoculation with the following results.

Adam Tila.

657 non-vaccinated had no cases.
318 vaccinated had 2 cases (0.63 per cent.) with 1 death (0.31 per cent.).

KALACHERRA.

859 non-vaccinated had 4 cases (0.77 per ct.) with 3 deaths (0.58 per ct.)
211 vaccinated had 1 case (0.47 per ct.) with 1 death (0.47 per ct.)

CHANDULA.

1,007 non-vaccinated had 3 cases (0.30 per cent.) with 1 death (0.10 per cent).
201 vaccinated had no cases.

PALLARHUND.

1,170 non-vaccinated had 2 cases (0.17 per cent.) with 2 deaths (0.17 per ct.).
481 vaccinated had no cases.

LONGLA.

2[illegible] non-vaccinated had 7 cases (0.[illegible] per cent.) with 5 deaths (0.[illegible] per ct.).
471 vaccinated had no cases.

BURNIE-BEARS, LOOHACHERRA, KALAINCHERRA, AND SANDHURA.

Number of non-vaccinated not stated; had 11 cases with 5 deaths
877 vaccinated had no cases.

II. To the second category, with results slightly favourable, belong (*a*) two observations made on people inoculated with maximal doses of the first vaccine only, cholera occurring a short time after the inoculation, and (*b*) two observations on people inoculated with weak doses of both vaccines, cholera occurring thirteen to fifteen months after vaccination had been applied.

(*a*) The 2nd Battalion Manchester Regiment at Dinapore 2 to 6 days after injection of first vaccine only:

729 non-inoculated had 6 cases (0.82 per cent.) with 3 deaths (0.41 per cent.).
103 inoculated, no cases.

[illegible] Tea Estate, 2½ months after inoculation of first vaccine only:

[illegible] non-inoculated had 2 cases (0.89 per cent.) with 1 death (0.44 per cent.).
397 inoculated, no cases.

(*b*) The British troops in Cawnpore, 13 months after inoculation with small doses of both vaccines:

797 non inoculated had 19 cases (2.38 per cent.) with 13 deaths (1.63 per cent.).
75 inoculated, no cases.

The East Lancashire Regiment in Lucknow, 14 to 15 months after inoculation with small doses of both vaccines:

640 non-vaccinated had 120 cases (18.75 p. ct.) with 79 deaths (12.37 p. ct.)
133 vaccinated had 18 cases (13.53 p. ct.) with 13 deaths (9.77 p. ct.)

III. To the third category, with results satisfactory, belong (*a*) observations on maximal doses of first (mild) vaccine made on the Karkurie and Kalain Tea Estates, one to three months after inoculation; (*b*) observations on small doses of both vaccines, made on the prisoners of the Gaya Gaol inoculated during an epidemic; (*c*) observations on middle doses of one and of both vaccines in the *bustees* in Calcutta, collected during a period of 459 days, and finally, (*d*) the observation made quite lately on the Kassia Hill coolies, from the survey party of the Assam-Burmah Railway.

(*a*) Karkurie Tea Estate, 2 to 3 months after inoculation with strong doses of first vaccine only:

203 non-inoculated had 5 cases (2.46 per cent.) with 2 deaths (0.98 per cent.).
769 inoculated had 1 doubtful case (0.24 per cent.) with 1 death (0.24 per cent.).

Kalain Tea Estate, 1 to 3 months after inoculation with strong doses of first vaccine only:

1,575 non-inoculated had 23 cases (1.67 per cent.) with 11 deaths (0.8 per cent.).
661 inoculated had 2 cases (0.29 per cent.) with 1 death (0.15 per cent.).

(*b*) In the Gaya Gaol the inoculations were for the first time applied in a prevalent epidemic, and very weak doses of relatively weak vaccines have been used. The gaol contained over 400 inmates. After 6 cases with 5 deaths had occurred, a half of the prisoners, including aged and young people, women, children, patients from the hospital, and people affected with premonitory diarrhœa, was inoculated; the other half, of an exactly similar composition, was left uninoculated. The result was a gradual disappearance of cases and deaths among the inoculated, the difference in susceptibility having gradually increased during the period of 10 days necessary for the two vaccines to produce their full effect.

During the first period of 5 days necessary for the 1st inoculation:

219 non-vaccinated had 7 cases (3.19 per ct.) with 5 deaths (2.27 per ct.)
212 vaccinated had 5 cases (2.35 per ct.) with 2 deaths (0.94 per ct.)

During the second period of 5 days necessary for the 2nd inoculation:

197 non-vaccinated had 9 cases (4.57 per ct.) with 7 deaths (3.55 per ct.)
208 vaccinated had 3 cases (1.46 per ct.) with 1 death (0.48 per ct.)

During the last 4 days of the epidemic:

193 non-vaccinated had 3 cases (1.56 per cent.) with 1 death (0.52 per cent.).
201 vaccinated had no cases.

The total results are as follows:

The non-vaccinated half had (9.90 p.c.) of cases with (4.66 p.c.) of deaths
The vaccinated half had (3.89 p.c.) of cases with (2.41 p.c.) of deaths

The treated prisoners showed a reduction of 2.56 times of cases, and of 2.05 times of deaths. I wish to call your attention to the fact that the inoculations had been applied in this instance not before the epidemic, but a week after it had actually broken out, in order to arrest it, and to cure, so to say, the community from the disease. The reduction of deaths by one half will therefore justify the application of the method in all similar conditions, there being up to now no other method known in medicine by which such an effect could be obtained. We shall see directly an instance of the same kind when far higher results have been obtained by an application of stronger doses.

(*c*) In the *bustees* situated round the tanks in Calcutta, where cholera exists in a permanent state, the disease occurred in 36 houses with inoculated people. In each of these houses there was one part of the family inoculated and another not. The observations were continued for 459 days, with the following results:

During the first period of 5 days subsequent to the inoculations with first vaccine cholera occurred in 8 houses:

75 non-inoculated had 5 cases (6.66 per cent.), with 3 deaths (4 per cent.).
52 inoculated had 3 cases (5.77 per cent.), with 3 deaths (5.77 per cent.).

During the second period of 5 days subsequent to the second inoculation cholera occurred in 2 houses:

8 non-inoculated had 2 cases (25 per cent.), with 2 deaths (25 per cent.).
17 inoculated, no cases.

After the 10 days necessary for the preventive treatment had expired, and up to the 459th day, the disease visited 26 houses, with the following results:

263 non-inoculated had 38 cases (14.45 per cent.), with 34 deaths (12.93 per cent.).
137 inoculated had 1 case (0.73 per cent.), with 1 death (0.73 per cent.), in a child that had not been brought up for the second inoculation.

Thus, after the expiration of the first 10 days, the inoculated members of the affected houses had 17.24 times fewer deaths and 19.27 times fewer cases than the non-inoculated inhabitants of the same houses, and this proportion was maintained up to the 459th day after vaccination.

(*d*) The last observation comes from the Brahmaputra valley, where Surgeon-Captain Hare, of the Indian Medical Service, my co-worker during the last eight months of my stay in India, is continuing now the work of inoculation for the Assam Government. Dr. Hare's full account of this observation has not yet reached me, but from a communication of the Health Officer of Calcutta, and from the Indian papers, it appears that 350 Khassia Hill coolies had been collected for the survey party of the Assam-Burmah Railway and put under the escort of a detachment of Goorkhas, when cholera broke out amongst them. The largest part of the coolies immediately submitted to the preventive inoculation, the rest remained uninoculated. The result was that among the not inoculated minority there were 34 cases, with 30 deaths; whereas the inoculated had 4 fatal cases. In this instance, also, the inoculation appears to be applied not as a preventive but as a curative for an existing epidemic, and the result, if the information is complete, has been the reduction of the mortality of more than seven times.

SUMMARY.

The following seems to be a summary of the results observed up to now:

1. In all those instances where cholera has made a large number of victims, that is to say, where it had spread sufficiently to make it probable that the whole population, inoculated and uninoculated, were equally exposed to the infection, in all those places the results appeared invariably favourable to inoculation.

2. The treatment applied after an epidemic actually breaks out tends to reduce the mortality even during the time which is claimed for producing the full effect of the operation. In the Gaya Gaol, where weak doses of a relatively weak vaccine had been applied, this reduction was to half of the number of deaths; in the coolies of the Assam Burmah survey party, where, as far as I can gather from my preliminary information, strong doses have been applied, the number of deaths was reduced to one-seventh. This fact would justify the application of the method independently of the question as to the exact length of time during which the effect of this vaccination lasts.

3. In Lucknow, where the experiment was made on small doses of weak vaccines, a difference in cases and deaths was still noticeable in favour of the inoculated fourteen to fifteen

months after vaccination, in an epidemic of exceptional virulence. This makes it probable that a protective effect could be obtained even for long periods of time if stronger doses of a stronger vaccine are used.

4. The best results seem to be obtained from application of middle doses of both anticholera vaccines, the second one being kept at the highest degree of virulence obtainable.

5. The most prolonged observations on the effect of such middle doses were made in Calcutta, where the mortality from the 11th up to the 450th day after vaccination was, among the inoculated, 17.24 times smaller, and the number of cases 19 27 times smaller than among the not inoculated.

RESULTS OF ANTICHOLERA INOCULATION.

The evidence accumulated up to now is decidedly in favour of the anticholera vaccination, and my own conviction in the matter is more and more strengthened. The special responsibility, however, which lies on me in this subject forces me to point out that the number of observations is not yet very large, and that it is most desirable that the results obtained should be further confirmed by new and more ample information. At the same time, you will find it, I hope, pardonable on my part if, before finishing the review of the results, I cite the opinion expressed on the subject by the scientist who himself accomplished the first and the most difficult part of the cholera problem, and whose discovery was the starting point of the whole of the modern researches on cholera.

When recapitulating with Professor Koch the data of my report to the Government of India, I said that, in my idea, the results tend to prove the efficacy of the method, but that I feel necessary to do all in my power in order to confirm them by new observations, I was most happy to learn that, for Professor Koch, the demonstration was already complete; that he believes the protective power of the method to be established finally by the observations collected in India up to now; that further perfections and simplifications may be possible, but that the main question at issue, the chief part of the problem, is solved by the facts recorded in the above report. Professor Koch gave his kind permission to quote these decisive conclusions in this Hall and to use the very terms I used, and he added that, in his conviction, the chief struggle against cholera must certainly take place on the banks of the Ganges, in the home of the disease; that this struggle is to be effected by preventive inoculation, and that he sees in the application of this method the way in which, by gradually restricting the area of the extension of the disease, it shall be brought to such a limit when it will become possible to control its prevalence by simple measures of a sanitary police.

PROGRAMME FOR NEXT OPERATIONS.

Allow me now to consider the question whether the new facts brought to light during my absence in India ought to be incorporated into my method of anticholera vaccination. The treatment by antitoxic serum, which by now may be considered as having proved a decided success in diphtheria, could not, unfortunately, be substituted for a preventive vaccination, its effect being rapidly worn out by the system. According to the observations made up to now, neither the antidiphtheritic nor an anticholera serum could be used for protecting a population against an epidemic lasting more than a few days, not to speak of an endemic prevalence of the disease. The question stands otherwise as regards the possibility of treatment in individuals actually affected with cholera. Although in this particular disease we have against us the great rapidity with which the symptoms take hold of the system, the antitoxic serum has accomplished in other instances such excellent results that there is every possibility of its being beneficial in the case of cholera also. I intend, therefore, on my return to India, to give, in connection with the physicians of the country and with the help of Professor Pfeiffer from Berlin—who most kindly put at my disposal all his experience in the matter, as well as a supply of a very active antitoxic serum—an extensive trial to this method.

In case a simple application of the antitoxin serum proves to be insufficient to stop the rapid course of the symptoms, I intend to combine it with intravenous saline injections and to prolong in this way the period left for treatment. And if in this case also the attempt should fail, I shall try to utilise the new therapeutic for accelerating the effect of my vaccines in a manner which I will characterise in a few words. We have seen up to now that in the places where anticholera vaccination has been applied in a prevalent epidemic, the total number of deaths was reduced from two to seven times in comparison with the deaths in the non-inoculated, but the effect of the treatment was nil in the first four or five days after the first inoculation. There is the possibility that, by injecting a mixture of my vaccines with a powerful antitoxic serum, the mortality may be reduced also in the first days after the treatment, the serum arresting the disease for the time necessary for the vaccines to produce their full effect. The admixture of antitoxic serum with the vaccines may mitigate the vaccinal reaction, as has been suggested to me by Professor Wright from Netley, and this reduction of reaction may possibly reduce the amount of active protection conferred by the vaccines. A series of experiments have therefore been undertaken in the Netley bacteriological laboratory in order to investigate this important question.

Mr. Chairman and Gentlemen,—On the day when I came back from my expedition to India, I found my former chief, M. Pasteur, lying on his bed of death. Whatever might have been his appreciation of the work done in India, there can be only one desire on my part, that all the honour for the results which may possibly come out of my efforts, should be referred to him, to his sacred memory.

To the Government of India, the gentlemen of the Indian and Army Medical Staff in India, to Professor Hankin in Agra, Dr. Powell, and especially to Dr. Simpson, the eminent health officer of Calcutta, I address my hearty expressions of gratitude for the assistance they have given me in carrying out my work. I beg these gentlemen, if my present words are destined to reach them, to accept this public acknowledgment that without their most efficient help I would have never been able, with all my individual powers, to accomplish in India the smallest part of the work which has been done.

I also beg the Chairman and the organisers of the present meeting to accept my best thanks for having given me this opportunity of making the present communication.

A RINGWORM HOSPITAL.—In the *Journal des Praticiens* Dr. A. F. Plicque gives an account of a hospital for children suffering from ringworm and other contagious affections of the scalp at Moisselles. This hospital was opened in 1894 for the reception of 212 children, who had to be sent away from the seaside hospital at Berck-sur-Mer on account of ringworm. The improvised hospital was installed in some farm buildings which had formerly been used for a penitentiary colony. The buildings, though very defective in structure, are situated in a wide, airy space, near the great forests of Montmorency, in the Isle of Adam. Drs. Queyrat and Beurnier had medical and surgical charge of the children, all of whom were suffering from tuberculous joint or gland disease besides their ringworm, for which they were under the care of M. Sabouraud. In the course of eighteen months there have been only five deaths. There are at present 105 children in the hospital; although not yet cured of ringworm their general health is said to be most satisfactory. During their stay at Moisselles the children's education is not neglected. The hospital, however, is it seems, doomed to disappear as soon as the last little patient has been discharged. This is a pity, for there will then be no place to send children suffering both from tuberculous disease and ringworm who cannot be received at Berck. Moreover, as M. Plicque testifies, the inland country air of Moisselles has a most beneficial effect on many cases of conjunctivitis, bronchitis, and pulmonary tuberculosis, which are made worse by the sea air of Berck.

AT an examination for inspectors of nuisances held in London by the Sanitary Institute on December 6th and 7th, 128 candidates presented themselves, of whom 83 passed. At an examination in practical sanitary science held on the same days, 22 candidates presented themselves, and 10 passed.

THE USE OF ANTISEPTICS IN THE TREATMENT OF INFANTILE DIARRHŒA.[1]

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During the last few years a considerable amount of attention has been directed to the various chemical changes which occur in the digestive tract as the result of bacterial activity, and certain facts have come to light which prove beyond doubt that many clinical phenomena, which formerly were either ignored altogether or regarded as symptoms of a fortuitous nature, must now be attributed to the direct absorption of organic poisons from the stomach or intestine. The various researches which have so materially contributed towards this discovery have also indicated that certain morbid conditions of the digestive organs which are usually assigned a simple etiology owe their origin in reality to diverse and often complex causes which are themselves intimately connected with abnormal fermentations of the food. In view of these facts it is not surprising to find that the principles which were formerly laid down for the treatment of disordered digestion have undergone a corresponding change, and that instead of employing sedatives or astringents for the relief of gastric or intestinal irritation, our principal efforts are now directed to control the immediate cause of the disorder by the exhibition of drugs which possess the power of inhibiting the processes of fermentation.

The question of gastro-intestinal antisepsis extends over such a wide field, and embraces so many subjects, that any attempt to deal with it in an adequate manner is beyond the scope of a single paper. I will therefore confine the few remarks I have to make to the antiseptic treatment of the intestinal dyspepsia of infants, the chief symptom of which is diarrhœa.

Etiological Considerations.

The researches of Escherich, van Puteren, and others have shown that, although at birth the contents of the digestive tract are sterile, bacterial infection is brought about within the first twelve hours of life through the medium of the atmospheric air which the infant swallows in large quantities. The various micro-organisms thus introduced into the system thrive and multiply in the mucus and undigested food which soon fills the intestine, and are constantly reinforced in numbers and diversified in species by the ingestion of contaminated milk or the swallowed secretions of the mouth. The danger which arises from these natural sources of infection is greatly increased by the fact that during infant life the gastric juice is incapable of exerting any decided control over microbic growth, owing to its comparative deficiency in free hydrochloric acid. Milk fermentation ensues from the presence of *B. lactis aërogenes* and the *B. butyricus*, which along with several other varieties of lesser importance are constantly found in the stomach of infants suffering from indigestion. The first-named converts the milk sugar into lactic acid with the precipitation of casein, while the latter changes a portion of the lactic into butyric acid, and in so doing liberates free hydrogen gas. The presence of these abnormal products in the contents of the stomach give rise to abdominal pain, distension, and vomiting, a series of symptoms which characterise the disorder known as acute dyspepsia.

The entrance of undigested and fermenting material into the intestine induces violent peristalsis, with the result that the infant suffers from colic and diarrhœa until the bowel has succeeded in ridding itself of its irritating contents. If proper means be taken to assist this effort of Nature and to prevent a recurrence of the disorder, the stools soon resume their normal appearance, and perfect recovery ensues. But if these evidences of digestive derangement are overlooked or neglected and the child is constantly plied with food, each fresh supply of milk undergoes the same process of fermentation in the stomach and hastens the advent of the second stage of the disorder—namely, gastro-intestinal catarrh. This inflammatory condition probably arises from direct irritation of the mucous membrane of the digestive tract by the acid products of fermentation, and since it is always accompanied by a diminution in the secretion of hydrochloric acid, gastric digestion becomes greatly enfeebled, and the various bacteria are afforded an unlimited scope of action. Within a short period of time the intestine becomes affected in a similar manner, and the child begins to lose flesh and strength and to present all the symptoms characteristic of chronic intestinal catarrh. The third and last stage of the disease is marked by a more or less extensive cirrhosis of the mucous membrane of the digestive tract, often associated with the follicular ulceration of the colon. The diarrhœa continues and the stools are largely mixed with mucus or streaked with blood; the marasmus increases, and death finally ensues either from exhaustion or from some nervous phenomena due to the absorption of toxins from the alimentary tract. This sketch of the etiology of the infantile diarrhœa serves to emphasise three important facts. In the first place the disorder is a direct result of the activity of certain bacteria which produce abnormal fermentations of the food with subsequent inflammation of the stomach and intestines. Secondly, the intestinal derangement is primarily dependent upon gastric indigestion, and hence the symptomatic diarrhœa will not be overcome until the gastric disorder has subsided. Lastly, the prognosis in chronic cases depends upon the extent of the organic changes which have taken place in the digestive organs, and the influence they exert upon the assimilation of the food.

Medicinal Antiseptics: their Administration and Mode of Action.

Although the theory of intestinal antisepsis is comparatively modern, its practice dates from the earliest times. Thus the empirical value of emetics and purgatives in cases of dyspepsia obviously depends upon the fact that these measures serve to rid the system at once of the agents of putrefaction and their products; while in the routine treatment of diarrhœa by such drugs as calomel and subnitrate of bismuth, the same unconscious adoption of antiseptic principles may be discerned.

The various antiseptic drugs which are specially adapted for medicinal use can be roughly divided into two classes according as they are soluble or insoluble in water. The first group comprises such substances as carbolic acid, perchloride of mercury, lactic acid, hydrochloric acid, salicylate of sodium, and resorcine. The chief members of the insoluble class are naphthalin, β-naphthol, betol, benzol-naphthol, salol, the salicylates of bismuth and strontium, and calomel. In addition to the question of solubility there exists another and more important distinction between the members of the two classes. The soluble varieties possess germicidal and toxic properties in direct proportion to the dose in which they are administered, and since they are absorbed rapidly from the alimentary tract it is obvious that they can only exert their specific action in the stomach and upper part of the small intestine. The insoluble drugs, on the other hand, remain for the most part unaltered in the stomach, and therefore exert but little influence upon the fermentative processes which occur in that organ. In the intestine, however, the majority of them are subjected to chemical influences by which they are decomposed, with the ultimate production of secondary substances that exhibit both antiseptic and poisonous properties far in excess of the original drug. These latter remedies are accordingly reserved for cases where it is necessary to control bacterial activity in the intestine, and for this purpose they are administered in full doses at short intervals of time.

Hydrochloric acid inhibits the growth of most species of bacteria when it exists in the proportion of more than 0·17 per cent. (Miller). It is probable that in its natural combination with pepsin the acid not only kills but actually digests many bacteria, and in this manner serves to protect the intestine from the action of pathogenic organisms introduced with the food. The acid has been much extolled as an efficient antiseptic in cases of infantile dyspepsia, and is usually administered either in the form of 0·4 per cent. solution or as the Pharmacopœia preparation of the dilute acid. Its use is contra-indicated by the presence of gastric catarrh.

Lactic acid possesses less than one-fifth of the antiseptic

[1] Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

power of the mineral acid aforementioned. It has been chiefly recommended by certain French physicians as a remedy for the green diarrhœa of infants, attributed by them to the presence of a chromogenic bacillus. It is most advantageously employed as a 2 per cent. solution, of which a teaspoonful may be given every two or three hours. This acid occasionally gives rise to gastric pain and vomiting, especially if the mucous membrane of the stomach be inflamed. It is excreted by the kidney in the form of lactate of sodium.

Carbolic acid is undoubtedly one of the most powerful germicides we possess, but unfortunately its medicinal value is considerably impaired by its unpleasant taste and poisonous character.

Although the presence of pyrocatechin in the urine does not necessarily indicate danger to life, it should always be regarded in the light of a warning, and the dose either decreased or the drug discontinued altogether. Carbolic acid can be administered to children either in the form of the pure acid (1 minim well diluted), or as the glycerine preparation (2 to 4 minims).

The use of perchloride of mercury is also somewhat limited on account of its toxic properties. In severe cases of diarrhœa it has been used with success when given in doses of $\frac{1}{6}$ to $\frac{1}{3}$ of a grain every two hours. It is rapidly eliminated by most of the excretory organs of the body.

Resorcin (metadioxybenzolum) is a crystalline powder, freely soluble in water, and possessed of a harsh sweet taste. Its solution is powerfully antiseptic, 0·4 of the substance inhibiting the growth of all the micro-organisms which are found in the stomach and intestine. It is rapidly absorbed by the mucous membrane of the alimentary tract, and can be detected in the urine by means of perchloride of iron (violet colour) within a short time of its ingestion. In moderate doses resorcin is devoid of toxic properties, but when a drachm or more is given at a time giddiness, headache and sweating are apt to supervene. For these and other reasons, which will be mentioned immediately, I consider it one of the most useful remedial agents we possess for the treatment of infantile diarrhœa.

Among the insoluble aromatic compounds of the carbon series naphthalin has, perhaps, enjoyed the greatest amount of reputation. Although insoluble in water, a certain amount is absorbed by the intestine, and is excreted by the kidney in the form of naptho-sulphite of sodium, thereby producing a brownish-black coloration of the urine. When mixed with nutritive media this substance exhibits comparatively feeble antiseptic properties, as much as 1.5 per cent. being usually required to inhibit the growth of the intestinal bacteria. Naphthalin possesses a powerful and disagreeable smell, and in certain cases its administration is followed by renal and vesical irritation. The dose for a child is from 2 to 5 gr., either mixed with sugar or suspended in some sweet emulsion.

Naphthol is a powerful germicide when it exists in a proportion greater than 0.08 per cent. It is only slightly poisonous, but its taste and smell are unpleasant. It has been used with success in cases of infantile diarrhœa, about 2 gr. being given every four hours either mixed with white sugar or dissolved in olive oil and emulsified.

Salol (salicylate of phenol) is a white, tasteless powder which remains unchanged in the stomach, but in the duodenum is rapidly split up into phenol and salicylic acid, the latter of which can be detected in the urine within seventy minutes of its administration. In test-tube experiments this substance only retards the growth of bacteria when it exceeds 0.6 per cent. of the medium. To infants 10 gr. may be administered in divided doses during the course of the twenty-four hours.

Benzol naphthol is a tasteless powder, which in the intestinal canal becomes decomposed with the liberation of naphthol and benzoic acid. The latter is excreted in the urine, partly in combination with alkaline bases, and partly in the form of alkaline hippurates. This substance is not poison when given in moderate doses, and it is therefore of considerable value in case of infants and young children, to whom it may be administered in doses of 30 grains per diem.

Iodoform was formerly advocated as a medicinal remedy, but it has now been to a great extent replaced by the before-mentioned preparations. Its antiseptic properties are probably greater in the intestine than laboratory experiments would indicate (0.3 per cent.), since it undergoes partial decomposition in the bowel with the liberation of free iodine. In combination with charcoal, it has been strongly recommended by Bouchard as a means of diminishing the toxicity of the urine and fæces.

The salicylates of bismuth and strontium both undergo chemical changes in the intestine with the formation of salicylic acid and the corrresponding metallic sulphides. The acid exerts a powerful antiseptic influence upon the contents of the bowel, and is slowly eliminated by the kidney. The sulphide of bismuth betrays its presence by the characteristic blackening of the motions. Both preparations are tasteless and insoluble, and may be given to infants in doses of 1 to 3 gr. every four hours. It is usually stated that the salicylic acid exerts an irritant action upon the kidney, and that the drugs which cause its elimination in the urine are contraindicated in cases of albuminuria. This objection is, I believe, more theoretical than real.

Calomel is an excellent example of that class of remedies which owe their antiseptic properties to a change in their chemical composition occurring after ingestion. It is probable that the subchloride of mercury when given in minute doses is partially converted in the stomach into the perchloride, and in the intestine into the sulphide. It is by far the most reliable remedy we possess for acute cases of diarrhœa in infants when administered in fractions of a grain at frequent intervals.

Results

In the selection of an appropriate drug for a child several factors have to be taken into consideration which in the case of an adult can safely be neglected. Substances which possess a nauseous taste or offensive smell are hardly tolerated by a child even when mixed with an excess of sugar; and hence naphtholin, β-naphthol, and iodoform can seldom be prescribed with success. Again, absorption takes place so readily from the alimentary tract of an infant that it is often impossible to obtain any degree of intestinal antisepsis from the use of perchloride of mercury and the phenol compounds without running great risk of poisoning the patient in the process. Lastly, powders like charcoal, which have to be administered in large bulk in order to produce any effect at all, are obviously inapplicable to the treatment of disease in infants. In the majority of cases, therefore, our choice is limited to the tasteless and comparatively non-toxic powders, such as calomel, benzol-naphthol, and the salicylates of bismuth and strontium, or to the soluble antiseptics like resorcin and the acids. During the last three years I have used the various medicinal antiseptics in more than 500 cases of digestive disorders in children which have come under my notice at the Evelina Hospital and elsewhere. The results which have accrued from their use in cases of infantile diarrhœa have been so satisfactory that for more than twelve months I have never once had occasion to resort either to astringent drugs or to opium, whilst in almost every instance where these latter remedies had been previously tried without effect the substitution of an antiseptic was at once followed by complete success. Acute dyspepsia is readily cured by dietetic treatment combined with the use of castor oil or an emetic. Antiseptics are only necessary when the disorder has already continued for several days, and has resisted the simpler methods. Under these conditions calomel is of the utmost value when administered in doses of one-sixth to one-third of a grain every three or four hours. Hydrochloric acid has been extolled by many authorities, but, according to my experience, the mineral acid more often does harm than good. It is most serviceable when all acute symptoms have subsided, and the child is suffering from weak digestion as the result of catarrhal process. It may then be combined with pepsin with great advantage.

It is in cases of chronic diarrhœa due to fermentation that the systematic employment of antiseptic drugs proves of the greatest value; and for this purpose the insoluble substances which act exclusively upon the intestine are usually recommended. This, however, is a mistake. The disorder always commences in the stomach, and is most easily controlled by the administration of remedies which exert their specific action within that organ. Formerly I was wont to employ

carbolic acid for this purpose in all cases of infantile diarrhœa, but its hot taste and unpleasant smell, as well as the occasional occurrence of carboluria, has made me transfer my allegiance to resorcin. This drug has the advantage of being extremely palatable to children, devoid of toxic properties when given in ordinary doses, and very inexpensive. According to the *Pharmacopœia*, the dose of resorcin is 1 to 5 gr., and it is probably on account of this insufficient dosage that the value of the remedy has been so much overlooked. As a matter of fact, the drug produces no ill effects in an adult unless the dose exceeds a drachm, and I have long been accustomed to prescribe 3 gr. every four hours to infants only a few weeks old without the least ill effect.

In cases of diarrhœa the first effect of the drug is usually noticeable after the third or fourth dose, when the motions decrease in frequency and in amount, the dejecta at the same time acquiring a more natural appearance and losing their excessive fœtor. At the end of the second day the diarrhœa has generally ceased, and is not infrequently replaced by obstinate constipation. I have before me the notes of 120 cases of intestinal dyspepsia in infants and young children which have been treated in the manner described. Of these, in 53 per cent. the disorder had lasted from one to two weeks, in 34 per cent. from two to four weeks, in 10 per cent. from four to eight weeks, and in the remaining 3 per cent. for a period of more than two months. Out of the entire number in only nine instances did the diarrhœa continue after the treatment had been pursued for a week, the majority ceasing within three days. Of these nine refractory cases two were instances of cholera infantum, both of which succumbed within a short time of being brought to the hospital; in one case tuberculous ulceration of the intestine was found to exist after death, while the remaining six, most of which were very chronic in their nature, were rapidly cured as soon as benzonaphthol or salicylate of bismuth were added to the original mixture. These results go to prove that when given in sufficient quantity resorcin constitutes a reliable remedy in cases of infantile diarrhœa arising from fermentative processes in the stomach and intestine. When, however, the disorder has lasted for a long time and follicular ulceration of the large intestine exists, the drug may be advantageously supplemented by those remedies which exert their antiseptic properties in the intestine. Benzol naphthol is particularly valuable in this connection since it is but slightly toxic, but in order to prove effective it must be given in full doses at short intervals. Thus in some cases where the symptoms were obstinate I have prescribed as much as 40 gr. to a child during the course of twenty-four hours with only the most excellent results. My experience with the most recent antiseptic, the salicylate of strontium, has not been altogether satisfactory, and I have been unable to convince myself that it possesses any superior advantages over the corresponding salt of bismuth.

THE ATROPINE GROUP:

An Experimental and Critical Note.[1]

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Some twelve months ago, I had under my care for a considerable period, a lady of 25, who suffered from repeated attacks of renal colic in whom a ¼ gr. of atropine sulphate (along with ½ gr. morphine hydrochlorate) although always relieving the distressing conditions, produced unpleasant flushing of the face, dryness of the throat, and confusion of the senses. Having read of scopolamine being free from the disagreeable properties of atropine just named, I thought I might be able to get all the advantages of atropine with none of its disadvantages. I resolved to try the drug for myself, but after trial I found it differed little or not at all from atropine. Previous acquaintance with hyoscine taught me that it was little different from atropine, and after some experiments with daturine and duboisine I was led to extend my studies of the whole atropine group, and to read up the literature for the past twenty years, hence this paper.

[1] Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association, held in London, July-August, 1895.

To the student of pharmacology no group of bodies is more confusing than the so-called mydriatic alkaloids known by the names of hyoscyamine, hyoscine, daturine, duboisine, scopolamine, and atropine, etc., all of which possess the property of dilating the pupil. A vague examination of them might lead one to the belief that each had some peculiar action of its own, but closer examination and increased knowledge show them to be very closely related if not identical one with another. True their sources are varied, but reasoning by analogy we know that tea, coffee, guarana, Paraguay tea and kola-nut are all very widely different plants, and yet they all contain one common alkaloid, theine, and not each a different base as at one time supposed.

The literature of the group of the atropine bodies is most interesting, because it shows the conflicting views of authorities; but as one comes to the present period it further shows a tendency to the view that we have only one or two bases to deal with. One other point it teaches us is that we cannot clear up the difficulty from the chemical side alone, but must call in the aid of pharmacology and therapeutics. With regard to Gerrard's test for the mydriatic group, I find after repeated trials that we do not, as is often supposed, get a yellow colour with one and a red colour with another member of the group, but with a trace of any one of them an alcoholic solution of mercuric chloride heated gives a yellow, while an appreciable quantity of any one of them gives a bright red colour of red oxide of mercury. The test is difficult to apply, and failures to obtain colour reactions with certain members may be accounted for in this way.

Hyoscyamine.

Whether hyoscyamine be identical with atropine or no one thing is certain—that they are are very closely related: for in 1880 A. Ladenburg converted hyoscyamine into atropine, and in the following year the same authority found that both bases split up into tropic acid and tropine. Further comparisons show both to give a bitter almond odour with potassium bichromate and monohydrated sulphuric acid, and both, when heated with nitric acid and afterwards treated with alcoholic solution of caustic potash, become of a violet colour. Chemically so far, then, they would appear to be identical, and pharmacologically I do not know if we can distinguish between them.

Duboisine.

The introduction of duboisine about the year 1878 by Bancroft, Holmes, Gerrard, Ringer, and Tweedy stimulated research, and soon it was found that it was not a new base, but only an impure atropine. At this time A. Ladenburg gave it as his opinion that we had only three mydriatic alkaloids—namely, atropine, hyoscyamine, and hyoscine agreeing in formula and in decomposition products. Later Ladenburg so far modified his views as to believe only two bases exist—namely, atropine and hyoscyamine, and these are isomeric and very closely related.

Daturine.

The introduction of daturine led to disputes amongst authorities. Some believed it to be identical with hyoscyamine, while A. Ladenburg considered daturine, duboisine, and hyoscyamine as identical. In the same year (1880) E. Schmidt said he failed to detect the difference between daturine and atropine. Deduction from this makes atropine and hyoscyamine identical. Passing to the year 1895 we find E. Schmidt saying atropine and daturine are identical, and in this view he is joined by Ladenburg.

Hyoscine.

Coming to hyoscine we have seen that A. Ladenburg had so modified his views as to regard this body as not a different base from atropine or hyoscyamine. Pavloff in 1888, in summing up the pharmacology of hyoscine, regarded it as differing from atropine only in that it (hyoscine) diminished the irritability of the brain. Reader in 1892 looked upon hyoscine and scopolamine as identical, while in 1893 A. Ladenburg disputed the identity of the two. In the same year E. Schmidt said the so-called Ladenburg's hyoscine was really scopolamine, and in this view he was supported by O. Hesse.

Scopolamine.

In 1880 the alkaloids from both the Austrian plant and from

Japanese belladonna were looked upon as either a mixture of hyoscyamine with other alkaloids or as a mixture of hyoscyamine, atropine, and hyoscine; but in 1892 E. Schmidt named the supposed pure base scopolamine, and said it occurred in belladonna root, stramonium seeds, and occasionally in duboisia myoporoides. O. Hesse looked upon scopolamine as identical with hyoscine. Last year, however, O. Hesse, as the result of experience, came to look upon scopolamine as made up of two bases: one identical with hyoscine, and the other isomeric with it, and he proposes to name it atroscine. Kaehlman quotes Kobert as saying scopolamine has a paralysing action on the brain, and does not accelerate the pulse, differing in this respect from atropine. He believes as a mydriatic, analgesic, and antiphlogistic it is superior to atropine, and is free from the objection of causing dryness of the throat, congestion of the head, and acceleration of the heart's action. Bokenham in 1894, as the result of his experience, said in some animals the pulse was slowed where it would have been rendered rapid by atropine, and in himself it caused no dryness of the throat. As an offset to these opinions we have the experience of Thos. K. Poolcy, who found that six instillations of the conjunctival sacs of a one-fifth per cent. solution of hydrobromate of scopolamine produced in a girl of 13 irregularity in the heart's action, with a pulse of 120, staggering gait, complaint of dryness of the throat, and of "pins and needles" sensation in the soles of the feet, and there was continual working of the muscles of the face and lips. Two adult women in whom the drug was employed were similarly affected.

The conflicting views held as to the identity or non-identity of the various named bases makes it certain that our knowledge of them is yet far from exact. When we come to search for a cause of all this confusion, we have to bear in mind the following points: (1) the difficulty of obtaining a pure alkaloid; (2) the great readiness with which the members of the atropine group decompose, heat above a certain degree, acids, and alkalies readily breaking them up; (3) in certain animals atropine slows, while in other animals it makes the pulse rapid. Temperature of the surroundings, too, alters its effects, and in small doses it has one action, in large doses another, and individual peculiarities must not be forgotten, hence the difficulty of deducing from clinical experience. I have known atropine produce no dryness of the throat and no flushing in one patient, while in another these symptoms were very marked.

In favour of there being only one base we have the following considerations: (1) All authorities are agreed that the one base readily passes into the other, as, for example, atropine can be changed into hyoscyamine and hyoscyamine into atropine. (2) In experiments on the frog's heart every one can replace the other; stop the heart with muscarine and any one of them will start it; stop the heart by simple exposure to the air and any one will start it—under certain limits, of course. (3) They all dilate the pupil and all increase the intraocular tension, and, although this latter property is denied some of them, it is well-nigh impossible to prove the negative. (4) They all possess hypnotic action. (5) They all react in the manner of caustic soda or potash towards alcoholic solution of mercuric chloride.

Each new mydriatic base, when introduced to the notice of the profession, has had some special property ascribed to it, but time and trial have generally proved it to be in most cases only another name for atropine. As well-known examples we have daturine and duboisine. In this country we now regard them as impure atropine. Neither has been employed extensively internally, although it must be mentioned that recently Belmondo found hypodermic injections of duboisine equal to hyoscine, and Mazzochi and Antonini believe it to be superior to atropine and morphine. Hyoscyamine in some respects has been less studied than the other members of the group, and most people seem afraid to hazard an opinion whether it is or is not identical with atropine. All are agreed that at least it is closely related to atropine. A curious point is that the source does not determine whether the product be hyoscyamine or atropine but rather the manner of manufacture. All agree that at least one is a conversion product of the other, but it does not matter which you start with; if you have atropine and wish hyoscyamine you have only to convert it, and if you have hyoscyamine and wish atropine conversion is easily accomplished. Another interesting point must be mentioned. Samples of supposed atropine, employed as such and giving atropine results, have by experts been declared to be hyoscyamine. A further point of interest is that daturine has by authorities been declared identical with both atropine and hyoscyamine; if this be so we must infer that atropine and hyoscyamine are identical with one another, that is if expert opinion is worth anything at all. We must here mention that we mean the white hyoscyamine, not the brown amorphous substance which is a calmative in delirium.

Hyoscine has not been sufficiently long before the medical world for a definite opinion to be formed regarding its effects and therapeutic value. Different samples may vary and account for the varying results obtained. I have used the drug in the form of hydrobromate both clinically and pharmacologically, and am unable to think it differs in any way from atropine. Its hypnotic action may be more marked, but I do not know but what I could have obtained the same results by means of atropine. It certainly produces dryness of the throat, rapid pulse, flushing of the face, and delirium (in fairly large doses).

Scopolamine is the newest member of the atropine group, and is only now on its trial, so that all the evidence one can collect is important. My own experiments with scopolamine hydrobromate were repeated again and again, and every effort made to eliminate error, and I gave the results in detail, so far as is necessary, to illustrate every point. From the hydrobromate the pure alkaloid was obtained and compared with pure atropine in its behaviour towards alcoholic solution of mercuric chloride, and no difference could be detected. One-hundredth of a grain of hydrobromate placed on the frog's heart, the pericardial sac being opened, caused diminution of the ventricular contractions. Another frog's heart was stopped by the application of muscarine nitrate. It commenced to beat strong and regularly after $\frac{1}{150}$ of a grain of the hydrobromate had been applied, and the subsequent exhibition of muscarine in the same heart failed to produce stoppage. A frog's heart, allowed to stop for some hours, did not start when $\frac{1}{150}$ of a grain of the hydrobromate was applied, but did beat when the same quantity of atropine sulphate was exhibited. (See later trials.) At another time a frog's heart poisoned by muscarine applied well over it failed to beat when scopolamine hydrobromate increased to the $\frac{1}{75}$ of a grain was applied. Atropine sulphate freely applied also failed to bring about beating of the organ. On the heart-rate the following notes were made. A frog's heart beating regularly 38 in the minute was brought down to 29 in five minutes by $\frac{1}{150}$ of a grain. In an hour another $\frac{1}{150}$ of a grain was instilled, and the rate became 28. Atropine sulphate in 1 per cent. solution was afterwards applied, and the rate fell to 26.

Some weeks later than the foregoing the following trials were made.

As before a frog was pithed, the cord destroyed, the pericardial sac opened, and the animal allowed to lie till the heart had ceased to beat spontaneously. The $\frac{1}{150}$ of a grain of scopolamine hydrobromate applied in five minutes caused it to beat afresh. The same heart standing overnight had ceased beating, and another $\frac{1}{150}$ of a grain started the heart, the contractions being chiefly in the sinus and auricles, while still another $\frac{1}{150}$ of a grain caused the ventricle to contract more powerfully, at the same time increasing the contractions in the auricles and venous sinus. In three hours atropine sulphate was applied freely, but the contractions remained the same in character.

One-hundredth of a grain instilled in my own eye at 10 one night produced complete dilatation by 7 the next morning. In twenty-five hours after complete dilatation the diameter had become reduced by half; and in sixty hours after complete dilatation the pupil had nearly, but not quite, returned to normal. The $\frac{1}{150}$ of a grain taken by the mouth on myself gave dryness of the throat, some slight hypnosis, and some slight slowing of the pulse. In a month later $\frac{1}{75}$ of a grain was taken, and there was some acceleration of the pulse, distinct mydriasis, hypnotic tendency, very dry throat, and some confusion of the senses. Some ten days later the $\frac{1}{75}$ of a grain was swallowed, and the noticeable symptoms were: the pulse was at first more rapid, then slower

than normal, but full and bounding all along; throbbing was felt in the temples; the throat and nostrils were disagreeably dry; the sight was blurred and the pupils markedly dilated; the gait was staggering, and there was confusion of the senses; the face was flushed, and there was a tendency towards sleep, but the uncomfortable conditions prevented rest for any considerable time. In less than twelve hours all discomfort had passed off, and no ill effects remained. (Results have been detailed as they occurred, and without comment.)

All my experiments with scopolamine were conducted with the salt supplied to the profession by *Messrs.* Burroughs, Wellcome, and Co. The temperature at which the experiments on frogs were carried on was 65° F. In the cases where the salt was applied the heart muscle was moistened by normal saline solution, and a tablet of the named strength laid on the surface of the heart and allowed to slowly dissolve.

To gather up the various threads of our essay. Daturine and duboisine we might call impure atropine. The varying effects obtained by different observers in the case of hyoscine and scopolamine may be accounted for on the supposition that neither is a definite base. Hyoscyamine we might further suppose to be identical with atropine. Atropine is the alkaloid of which we know most, and we might call it the fundamental or representative base; and our knowledge permits us to say at least that in hyoscine and scopolamine we have a certain proportion of atropine along with a varying proportion of a conversion or decomposition product of atropine, and which one might call *a* tropeine.

Instead, then, of multiplying names, we should call atropine what is usually atropine, and get hyoscine and scopolamine free from any admixture, and name the resulting products by names corresponding to hematropine. For my own part, as I have already said, my experience of hyoscine, scopolamine, daturine, and duboisine has led me to think they differ little from atropine but other observers think different, and for this reason I have endeavoured to indicate the lines upon which investigations might be carried on, and by means of which we might arrive at the truth.

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LORETIN: A NEW ANTISEPTIC.[1]

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LORETIN is an organic iodine compound, discovered by Professor Claus, of Freiburg. Its formula is $C_9H_4IN.OH.SO_3H$, and its euphonious proper title in chemical nomenclature meta-iodo-ortho oxyquinoline-ana-sulphonic acid. It is a bright yellow odourless crystalline powder, very slightly soluble in water and alcohol; cold water takes up 1 to 2 parts per 1,000, boiling water 5 to 6; it is insoluble in ether and oils, forms emulsions with the latter and with collodion. Being an acid it forms neutral salts with sodium and potassium, with ammonium and magnesium, which are readily soluble in water, forming solutions of a deep orange-yellow colour; the neutral calcium and barium salts are only slightly soluble. The manufacture process consists in boiling together in water equal parts of potassium iodide, potassium carbonate, and oxyquinoline-sulphonic acid with chloride of lime, representing one atomic equivalent of chlorine. After cooling a little hydrochloric acid is added. Thus is formed the calcium salt of loretin, which is again decomposed with hydrochloric acid to obtain the crude drug, subsequently carefully purified. The pure acid is extremely stable for an iodine compound, being unaffected by prolonged exposure to air or even to direct sunlight; it is easily decomposed only by oxynitrogen compounds, by free chlorine and bromine, or by certain organic compounds already undergoing decomposition.

Ammelburg administered, for several weeks in succession, loretin to dogs in doses up to 10 g., rabbits to 5 g. Hypodermic injections amounting to 5 c.cm. of a 5 per cent. solution of the sodium salt of loretin, were made daily into guinea pigs for long periods. In no case did any objectionable symptoms follow; and in the urine, which was carefully collected by means of specially constructed cages, no iodine, blood, sugar, or albumen. These physiological experiments were continued by Professor Albrecht in the Veterinary High School at Munich, the results being published in the *Deutsche Zeitschrift fur Thiermedicin und vergleichender Pathologie*, 1894, vol. xx., p. 353.

Ammelburg's bacteriological investigations proved loretin to be a powerful microbicide, much superior to iodoform, with which comparison more particularly holds weight. They deal with the micro-organisms of cholera, anthrax, suppuration, typhus, etc. Some of the more significant tables are appended; the experiments are being still continued.

Schinsinger has extensively used loretin for burns and operations of all kinds, including empyema, herniotomy, resection of the upper jaw, arthrotomies, carious and tuberculous processes, etc.; in six months he had not a single instance of toxic symptoms, much less of death. Hausing has largely employed it in veterinary practice, with the most favourable consequences. The former remarks: "The absolute absence of any irritant effect upon the skin is a very important advantage. Artificial erythema or eczema I have never yet observed caused by it; but, on the other hand, very persistent eczema has been cured by loretin." Extensive burns were healed by dusting with loretin, and left very slight scars.

Loretin is recommended for use as a dusting powder, either alone or mixed with calcined magnesia, starch, or French chalk; as collodion (2 to 10 per cent.); in pencils of cocoa butter (5 to 10 per cent.); in ointment, 5 to 10 per cent., with vaseline or lanoline; in solution of 0.1 to 0.2 per cent. of the free acid, or 1 to 2 per cent. of the soluble sodium salt; lastly, as gauze impregnated with precipated calcium salt. My own experience is confined to the powder, which I have never found occasion to mix with any other substance. Dusted on the skin, or over a granulated wound, this causes not the slightest irritation or unpleasant sensation. It immediately destroys the malodour of the most fœtid cancerous sore, controlling this in a manner which no other agent I have yet tried will do. Copiously puffed with an insufflator into the deep cavity formed by evacuating the axilla of carcinomatous glands, it efficiently precludes suppuration, even when free hæmorrhage has taken place after the closing of the wound, an occurrence almost inseparable from anæsthetic vomiting when the patient has been removed from the operating table. Not the slightest bad symptom from its employment in this way has so far been detected. When there is no deep cavity a wound dusted with loretin heals rapidly by first intention. I have had recourse to loretin in some 60 cases, mainly operations on the breast and axilla, notoriously a test region for antiseptics. In my hands it has proved an ideal antiseptic and deodorant, with no single drawback; and I am sure that no surgeon who has once tried it will ever again resort to the noisome and toxic iodoform from the free use of which I have seen more than one death. Though whenever old-established agents answer sufficiently the purpose I have a strong prejudice against novelties, yet this substance—non-poisonous, devoid of smell, and absolutely preventive of suppuration—seemed to me so marked an advance upon anything previously brought forward, that I felt constrained to direct thereto the notice of the Section.

APPENDIX (Abstract of Dr. Ammelburg's Bacteriological Experiments).

In each 20 c.cm. of a solution or mixture containing 2 per cent. of one of the following disinfectants was employed: beta-cresol, lysol, carbolic acid, loretin, iodoform, as well as a control experiment. In some cases 20 c.cm. of a 2 per mille

[1] Read in the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association held in London, July-August, 1895.

loretin solution, or a 1-2 per cent solution of loretin-sodium. To each 20 c.cm. three drops of a bacteria culture or of pus were added repeatedly shaken and allowed to stand twenty minutes. With each of the mixtures four test tubes, containing sterilised gelatine broth were then inoculated in the following way: to the first 1 c.cm. of the infected antiseptic solution, to the second and third each ½ c.cm., and to the fourth ¼ c.cm. was added by means of a pipette, thoroughly mixed and poured upon plates (4). (For the sake of brevity the experiments with lysol, beta-cresol and carbolic acid are mostly omitted):

TABLE I.—*Cholera (Pure Cultivation).*

Loretin, 2 per cent.	Loretin, 2 per 1,000.	Iodoform, 2 per cent.	Control Plates.	Date.
Nil	*Nil*	Very few	Numberless (Zahlreiche) colonies	4th day
"	"	Numerous (Zahlreiche) colonies	Numberless (Zahlreiche) colonies	6th day
"	"	Numberless	Numberless (Zahlreiche) colonies	10th day

TABLE II.—*Staphylococcus Pyogenes Aureus (Pure Cultivation).*

Loretin, 2 per cent.	Loretin, 2 per 1,000.	Iodoform, 2 per cent.	Control Plates.	Date.
Nil	*Nil*	Scattered colonies	Numerous	3rd day
"	"	Numerous	Very numerous	6th day
"	"	Countless	Countless	10th day

TABLE III.—*Anthrax (Milk Bouillon).*

Loretin, 2 per cent.	Loretin Sodium, 1 per cent.	Iodoform, 2 per cent.	Control Plates.	Date.
Nil	*Nil*	Scattered colonies	Countless colonies	3rd day
"	"	Numerous	Countless colonies	6th day
"	"	Numerous	Countless colonies	9th day

TABLE IV.—*Bacterium Coli (Pure Cultivation).*

Loretin, 2 per cent.	Loretin, 2 per 1,000.	Iodoform, 2 per cent.	Control Plates.	Date.
Nil	Numerous, about half as many as in the iodoform experiment	Numerous	Countless	4th day
"	Ditto	"	"	9th day
"	Ditto	"	"	12th day

TABLE V.—*Typhus (Pure Cultivation).*

Loretin, 2 per cent.	Loretin Sodium, 1 per cent.	Iodoform, 2 per cent.	Control Plates.	Date.
Nil	*Nil*	*Nil*	Numerous	3rd day
"	Very few	Fairly numerous	Countless	7th day
"	Numerous colonies with retarded growth	Fairly numerous	"	11th day

TABLE VI.—*Streptococcus (Pure Cultivation).*

Loretin, 2 per cent.	Loretin Sodium, 1 per cent.	Iodoform, 2 per cent.	Control Plates.	Date.
Nil	*Nil*	*Nil*	Numerous	3rd day
"	"	"	Countless	6th day
"	"	"	"	13th day

TABLE VII.—*Pus from very Infectious Carbuncle, containing Streptococcus and Staphylococcus.*

Loretin, 2 per cent	Carbolic Acid, 2 per cent.	Iodoform, 2 per cent.	Control Plates.	Date.
Nil	Retarded growth of streptococcus	Retarded growth of streptococcus	Very numerous colonies of both kinds	3rd day
"	Numerous colonies of retarded growth (streptococcus)	Numerous colonies of retarded growth (streptococcus)	Very numerous colonies of both kinds	6th day
"	Numerous colonies of retarded growth (streptococcus)	Numerous colonies of retarded growth (streptococcus)	Very numerous colonies of both kinds	10th day

THE GENERAL THERAPEUTIC EFFECT OF THE ALTERNATING ELECTRIC CURRENT OF HIGH FREQUENCY AND OF HIGH TENSION.

Dr. G. APOSTOLI (Paris), together with Dr. Berlioz, on March 18th, 1895, presented a paper on the above-mentioned subject to the Academy of Sciences of Paris. He now, after longer and riper experience, desires to present a summary statement of his general conclusions: (1) According to Professor d'Arsonval's discoveries alternating currents of high frequency and of high tension exert a powerful action upon all living bodies submitted to their inductive influence. (2) The best methods of applying these induced currents is to place the patient, free from all contact with electrodes, in the circuit of a large solenoid traversed by the currents. The patient being thus completely insulated, the currents, which circulate in his body by auto conduction, have their origin in his tissues. The body plays the *rôle* of a closed induced circuit. (3) By this method the physiological discoveries of Professor d'Arsonval are confirmed, and we are able to prove the powerful influence of these currents upon the vasomotor system, although they produce absolutely no sensation, and although they have no apparent effect upon the motor or sensory nerves. These currents have nevertheless a powerful action upon all the nutritive functions, as has been verified by Dr. d'Arsonval's numerous analyses of the gaseous products of respiration, and by Dr. Berlioz's not less numerous analyses of the urinary excreta. (4) The general therapeutic applications to be deduced from this physiological action are confirmed by clinical observation. Dr. Apostoli has now treated more than a hundred patients by this method at his clinic and at his private consultation rooms. The greater number of these patients have been greatly benefited by this new treatment, which, be it remarked, has been used to the exclusion of all other forms of medication, dietetic or otherwise. (5) These currents exert in the majority of cases a most powerful and generally beneficial action upon diseases due to slackening of the nutrition by accelerating organic exchanges and combustion. This is proved by analyses of the urine made by Dr. Berlioz, of which the following is a brief summary: The quantity becomes more normal; the products of organic waste are better eliminated. The increased combustion is shown by the diminution of uric acid, while the percentage of urea is generally increased. The relative proportion of these two substances changes under treatment so as to reach in general the figure of 1:40. The elimination of the mineral products is also affected, but to a less marked extent. (6) When daily *séances* are given, each lasting fifteen minutes, we may generally observe in patients submitted to the influence of

these currents the following modifications in their general condition. We mention them in the order of their occurrence: Return of sleep; increase of strength and vital energy; increase of gaiety, of power for work, and ability to walk; improvement of appetite, etc.; in short, general progressive improvement. This general improvement often manifests itself after the first *séances* before any local influence is apparent, and before any change has occurred in the urinary secretions. (7) Local pain and trophic changes are often more slowly affected by these currents, and at times they are entirely refracted for a longer or shorter period. In such cases the same currents must be applied locally by contact with the electrodes. This subject will be treated later on in a separate communication. (8) The diseases which have appeared incurable by this treatment are those not associated with well-defined organic changes, such as hysteria and certain forms of neurasthenia. Dr. Apostoli has also observed that certain localised neuralgias are refractory to this form of currents; they require its more direct local application. (9) The diseases which have derived most benefit from this therapeutic agent belong to the arthritic class, rheumatism and gout. (10) In certain diabetic subjects the sugar has disappeared altogether from the urine under the influence of these currents, while in others there has been no such change, notwithstanding the manifest and constant improvement in the general condition. Is this difference due to the imperfection of the electric apparatus or to the manner of its application? It is hoped that further experience will soon afford an answer to this question, although the fact that diabetes has many different causes may in itself explain the difference in the results obtained by this treatment. (11) In conclusion, the currents of high frequency and of high tension introduced into electro-therapeutics by Dr. d'Arsonval greatly increase the field of action of medical electricity. They furnish general medicine with a new and valuable means of treatment, capable of modifying more or less profoundly the processes of nutrition.

The Pharmacological Action of Berberine.

Dr. C. D. F. Phillips read the following paper, founded on experiments undertaken by him in conjunction with the late Dr. Herbert Ashdown in the physiological laboratory at University College, London: Berberine was first obtained from the bark of the xanthoxylum clava Herculis L. by Chevallier and Pelletan[1] in 1826, and named by them xanthopicrit. Buchner[2] in 1835 isolated from the root of the berberis vulgaris an alkaloid, to which he gave the name berberine, and Perrins[3] in 1862 showed that these two substances are identical. Since then it has been found in calumba root, in the rhizome of podophyllum peltatum, of hydrastis Canadensis, and in a number of other plants belonging to different natural orders. When pure it occurs in yellow acicular or prismatic crystals, having a bitter taste and neutral reaction, readily soluble in boiling water, very slightly so in cold water. Its salts are also yellow in colour and very insoluble in cold water. Previous researches have shown that ½ to 1 g., administered hypodermically to rabbits caused death after some hours, with muscular tremors, paresis, especially marked in the hind limbs, and great embarrassment of the respiration. The alimentary canal was not distinctly affected when the substance was given subcutaneously. In dogs 2.75 g. by the mouth produced symptoms of severe gastro-intestinal irritation, abundant watery and mucous diarrhœa, marked salivation, general muscular tremors and paresis. The respiration was not markedly affected. After death the spleen was found to be much contracted, as also the whole intestine, and the abdominal organs generally much congested; the heart contracted. Curci has pointed out in an elaborate series of observations that locally its action is very irritating, and readily causes chronic inflammatory thickening. Berberine exerts a very decided action on the alimentary tract when given by the mouth, but when given hypodermically so much irritation is caused locally, and such large quantities of fluid are required to dissolve it, that the slowness of its absorption renders its action very uncertain. In rabbits and dogs the first manifestations after medium doses are profuse salivation with loose motions, followed by severe watery diarrhœa and colic, great thirst and muscular tremors also occur. After death from an overdose the intestines are found very much contracted, generally empty or containing an abundance of mucous and watery fluid, the mucous membrane being much inflamed. There does not appear to be any direct action on the liver, as there is no increase in the quantity of bile produced, but the gall bladder is usually found contracted. When applied to the heart of a pithed frog *in situ* the effect is not very marked. A solution of 1 in 400 produces a slight slowing, the systole being prolonged and the diastole apparently less complete; with stronger solutions stoppage occurs in systole. Observations made on the detached heart with Williams's apparatus showed that 1 part of berberine in 5,000 parts of circulating fluid slows the heart and strengthens its contractions, the rhythm remaining perfectly regular, and the general character of the beat being unaltered. The blood pressure is a little increased, or may be unaltered. Larger doses (1 in 2,500) slow the beat very considerably, the systole becoming more prolonged and the diastole less complete. The pressure may be increased at first, but symptoms of cardiac failure soon begin to appear, with irregularity of action and a rapidly falling pressure, until death occurs with the heart in systole. The action on the heart of warm-blooded animals appears to be very similar to that just described in the case of the frog. Intravenous injection of 0.025 to 0.03 g. in cats, dogs, and rabbits causes an immediate and rapid fall in blood pressure, with great slowing and more or less irregularity of action. These effects, however, are transient, the pressure soon returns to normal, and then rises somewhat above it. During the period when the blood pressure is rising, irregularity of the heart's action, if it has not previously occurred, is generally more or less pronounced, and, though lasting only a few seconds at a time, recurs at intervals. This effect, however, seems to be due rather to stimulation of the cardio-inhibitory centre in the medulla than to any direct action on the heart itself, since the irregularity never occurs if both vagi be divided. The rise of blood pressure which succeeds the primary fall is apparently due to the vasomotor centre being thrown into action and causing a constriction of the peripheral arterioles throughout the body. It does not occur if the spinal cord be divided high up in the neck, the scarcely appreciable rise which then takes place being explained by the contraction of those vessels of the head and neck, the connections of which with the centre in the medulla are still left unsevered. In this series of experiments the heart was found to have stopped in systole, although Guenste[4] and Falck[5] state that in rabbits they generally found it dilated and engorged. The left ventricle is always contracted and empty, but a small amount of blood may be found in the right side of the heart. Berberine does not appear to exert any marked effect upon the respiratory system, excepting in the case of rabbits, which appear to be more susceptible. In them small doses injected into a vein cause a gentle excitement of the centre in the medulla, and this, increased in its activity, manifests itself by the respiratory movements becoming quickened. Large doses cause respiratory embarrassment to a very considerable extent, great irregularity, occurring not only in the frequency but also in the fulness of the inspiratory efforts. The reflexes cardiac and vasomotor disturbances, already alluded to as being produced by the exhibition of this drug in quantity, render it impossible to recognise how much of the respiratory embarrassment may be due to a direct action on the centre in the brain alone, or to the vascular disturbance. That the action is directed rather upon the medulla than upon the terminations of the vagi in the lungs is readily recognised, since the influence upon the respiratory functions is still well marked, even after both vagi have been divided. The methods employed to appreciate any special action that this drug might exert upon the function of the kidney were the following: First, to collect and measure the quantity of urine secreted by the kidneys for several hours previous to the exhibition of the drug, and then to observe the alteration in the quantity of urine eliminated during and after the intravenous injection of different solutions of berberine. This

[1] *Journ. de Chimie Méd.*, vol. ii., p. 314.
[2] *Repert Pharm.*, vol. liii., p. 1, vol lvi., p. 177.
[3] *Journ. Chem. Soc.*, vol. xv., p. 330.
[4] *Inaug. Dissertation*, Marburg, 1885.
[5] *Zeitschrift f. Biologie*, 1874.

was readily ascertained by placing a cannula in both of the ureters and collecting the urine as it was secreted, this method being much more reliable than that of emptying the bladder at stated times, as it is always difficult to ensure complete evacuation of its contents in living animals. And, secondly, to record by means of the oncometer any alterations in the volume of the organ, collecting and measuring the urine at the same time. The influence that berberine exerts upon the urinary flow does not appear to be a very pronounced one. It does, however, cause a slight increase in the quantity of urine eliminated, even after the injection of small quantities of solutions into the venous circulation, quantities not sufficiently large in themselves to cause any increase in the urinary flow apart from the action of the drug. By studying the condition of the organ by means of the oncometer, and at the same time collecting the urine secreted, the conclusion was come to that the increased diuresis is dependent rather upon the elevation of the blood pressure brought about by the drug than by any direct stimulation of the renal cells themselves. The volume of the organ as registered by the oncograph is found to follow very closely the variations in the blood pressure. After intravenous injection, when the blood pressure falls, the kidney contracts and becomes smaller; at the same time there is diminution in the urinary flow, and again when the pressure gradually again returns to, and rises above the normal, the volume of the kidney increases to a greater size than previously. Although the diminution in bulk is synchronous with the lowering of the blood pressure, the subsequent increase does not precisely correspond in point of time with the rising pressure, but rather is a little delayed, and is prolonged over a longer period. The period of greatest activity of the kidney is during the state of full distension, the urine may then flow sometimes twice as fast as prior to the injection. By repeating small doses with sufficient frequency a state of almost constant contraction of the organ may be brought about, and thus a diminution in the urinary flow. Berberine cannot therefore be said to have any very marked action upon the kidneys themselves as a special diuretic, though it undoubtedly does cause under ordinary conditions an increase of the urinary eliminative processes. As has already been stated, after death the spleen is found to be very much contracted, but if the organ be studied during life with the oncometer it is seen that this organ follows much the same course as the kidney, diminishing in size with the fall in pressure, and again expanding when the pressure has risen. This latter effect—expansion—however, does not occur at the same time as the rise in pressure, but comes on gradually a little later, and after a short duration the organ again contracts to a little less in size than the volume previously occupied, and thus the spleen is a little smaller after each dose, until finally it becomes very markedly contracted, and will no longer respond except by a further contraction to the subsequent administration of the drug.

Scientific Massage.

Dr. F. Churchill read a paper on this subject. After some introductory remarks on the proper use of massage and the kind of cases in which it was likely to be beneficial, he said that, while approving generally the accustomed methods of dry massage by kneading, rolling, and local friction, he did not object to the employment of local remedies. The inunction of soothing liniments in certain obstinate and painful cases would greatly facilitate the employment of other methods of treatment. The cutaneous tissues, contracted and hardened by long confinement, became supple and elastic, and the deeper structures participated in this. He often ordered the liniment to be warmed at the fire before use, as this would help to give a glow to the vascular system, was a sedative to the cutaneous nerves, and favoured inunction to the deeper structures. For the efficient carrying out of the "movement cure" it was necessary to abandon the use of machines and apparatus which the patient was taught to rely upon for communicating external activities to his torpid muscles. By skilful, well-tutored, and firmly-applied manipulation it was possible to arouse the slumbering activities of vital organs by energising the natural motive powers of the individual, so that the confirmed invalid became gradually self-reliant, and kept within the range of undue fatigue. By scientific massage was to be understood the application of well-trained fingers to the groups of muscles or tissues requiring special manipulation, endeavouring to promote the flow of blood and lymph plasma, and to accelerate the metamorphosis of tissue in the disorganised part. Much depended upon the patience, skill, anatomical knowledge, and proper appreciation of the actual mischief requiring to be rectified by systematic daily application of massage. The manipulator must have a soft, warm, and well-padded hand, carefully trained to use the needful amount of pressure required in each case, according to the properly-defined prescription of the medical attendant. There must be accurate knowledge of the anatomical situation of the attachment of muscles, the course of the arteries and veins, and the situation of the nerves. The masseur should have a general idea of the structure and function of the alimentary canal, especially the course of the colon and the situation of the liver and gall bladder. He should be warned of the danger of using massage without skilled directions as to the details of manipulation required. The effect of massage was to improve the circulation, to increase the nutrition of the part, to remove accumulations, adhesions, and inflammatory products; to promote health and vigour; to increase the appetite, and in so doing to act as a general tonic to an enfeebled constitution; to increase the electrical contractility of muscular tissue; to raise the temperature of the body, and to increase the flow of lymph in the lymph channels and glands. When one remembered the wide distribution of the sympathetic nerves, the regulating control which they exercise over the abdominal organs, the large splanchnic nerves being situated at the back of the abdomen, contributing branches of communication to the muscular coats of stomach and bowel, it could not be doubted that the influence of these nerves upon the hollow viscera and their contents must be largely increased by inhibitory and excito-motor action, when stimulated to contract by efficient massage. For dyspepsia and functional disorders of the alimentary canal massage might be applied with advantage, as it increased the flow of gastric and biliary secretions. It was eminently successful in the case of anæmic and hysterical girls with sluggish circulation and indolent habits; also in infantile paralysis, gout, rheumatism, writer's cramp, etc. In the Weir-Mitchell treatment, which was designed to promote active nutrition of internal organs, scientific massage was an essential part of the treatment. Patients suffering from corpulence and what was now known as neurasthenia were greatly benefited by massage over the back, spine, and abdomen. In cases of neuralgia of the spine, face, and limbs the local pain was much relieved by *tapôtement* or *pétrissage* over and around the painful part. Dr. Churchill related some cases, limiting them to those patients who had been certified by their medical attendant as depending largely upon manipulative treatment for efficient cure.

I.—A ponderous Scotchman, 6 feet in height, and weighing about 16 stone, was alighting from a hansom cab at London Bridge station late one evening after excessive indulgence in his native mountain dew—a by no means rare occurrence with him. He stumbled and fell heavily on to his left ankle. When picked up he was taken back to his home in South Kensington, having sustained a severe sprain of the ankle with fracture of the internal malleolus. Dr. Ridge Jones requested Dr. Churchill to take charge of the case. He found the limb very much swollen, with much extravasation of blood around the ankle, effusion into the joint, the patient complaining of much pain. He ordered evaporating lotions to be applied to the leg. The limb was placed on a Liston splint with adjustable foot piece. The patient remained under treatment for several weeks. Owing to his luxurious habits and the swarthy condition of his body generally, the effusion around the ankle did not subside; the torn ligaments and tendons became matted together, and the joint quite stiff. Dr. Churchill engaged the services of a skilled masseur, and superintended the treatment. Considerable pressure was required to break down the agglutinated tissues and to promote active absorption of the extravasated blood. The patient ultimately made a very good recovery.

II.—A young girl, 15 years old, still growing rapidly, was playing at lawn tennis, when, with a sudden lunge forward, she felt something give way in her spine. She was put to bed and attended by Dr. Hewer, of Stoke Newington. Mr. Adams was called in, and he treated her for slight displacement of the third lumbar vertebra with effusion into the sheath of the erector spinal muscle at this part. She came to Dr. Churchill some months after and he could detect some thickening and effusion in this situation, with some local tenderness. There was a hæmic murmur at the base of the heart, and she had some menorrhagia. The pupils were much dilated. He treated the constitutional symptoms with arsenic and digitalis. For local treatment he ordered a reclining board for the spine, a firm flannel binder, and massage to the spine; also warm sea-water baths and massage directly after the bath. Her health considerably improved, and she made a good recovery.

III.—A middle-aged lady, married ten years, during which she gave birth to eight children in rapid succession, with two sets of twins and some miscarriages. She had been under Dr. Churchill's care for several years, coming up from Sussex for the London season. She was ordered to Bourne-mouth for her health, and he met Dr. Eccleston in consultation there. She was suffering from neurasthenia and feeble circulation. Her body was well nourished and her general condition good. There was nothing to indicate organic disease. The heart was fairly sound, with slight dilatation of the right ventricle. She suffered from insomnia. They arranged for her to have a thorough course of massage by a skilled rubber. After some months of this treatment she returned to Sussex very much benefited by the treatment. Dr. Churchill placed her under strict *régime* of diet, baths, and regular habits of going to bed early.

Dr. Playfair in his book on *Functional Nervous* remarks that in neurasthenic patients "drugs, pessaries, uterine treatment, hydropathic establishments, and health resorts, have been tried in vain." "But a scientific and rational means of dealing with such illnesses rarely fails to effect a cure in well selected cases." The cases in which the Weir-Mitchell treatment had proved eminently successful were nervous exhaustion without organic disease, hysteria, habitual use of narcotics, etc. In prescribing massage it was essential to make a clear distinction between collapse of nerves and hysteria. In the former one was able to trace the origin of the illness to some definite shock or exhausting malady which had for the time prostrated the patient; whereas hysteria was due to functional disorder from emotional causes and degeneration of moral and mental stamina. When writing on "high pressure education" he referred to the breakdown of physical health from overstrain in competitive examinations, and the too close application to study, producing complete prostration of nerves. The neglect of hygienic measures for the proper ventilation of schoolrooms, and failure to provide a daily allowance of active exercise out-of-doors frequently induced a breakdown of health, the result being a constant feeling of weariness and fatigue. The appetite gradually failed; dyspepsia, flatulence, and constipation followed in due course. Fine constitutions had been wrecked by neglect of physical education. In such cases massage might prove of great value. As regards indulgence in narcotic drugs, it was astonishing how patients acquired the habit of gradually increasing the dose until the nervous system was quite broken down. It was by prompt isolation of such cases under direct supervision and management by dieting and regular habits, combined with effectual massage by a competent nurse, that a speedy cure was effected. There were numerous kindred cases of *malades imaginaires* that it was well to leave to their own resources. These were melancholic dyspeptics who lived in affluence, were well nourished, and surfeited with the luxuries of life. Such people were self-centred, and much enjoyed their invalidism, though they would be the last to confess it. They made no effort to rid themselves of their vicious surroundings. They were pampered by their husbands, spoilt by their friends, and sometimes fadded by their doctors. For such cases there seemed little hope unless by the strict *régime* of the Weir-Mitchell system, (1) isolation, (2) massage, (3) systematic feeding, (4) moral training, and (5) outdoor exercise. Accepting these views of the scientific application of the movement cure for the relief of deep-seated pain and deep-seated mischief about a joint, how essential it became to keep the sufferer under constant supervision so that the varying amount of pressure and inunction of appropriate remedies might be prescribed according to the particular circumstances of each individual patient, with a definite determination to restore the activities of the crippled limb if possible. The *rationale* of all scientific treatment must be based upon an accurate consideration of the special requirements of each patient as distinguished from those of a sufferer from a similar complaint, but with a different constitution and with different recuperative powers. The one patient lends himself more readily than the other to the precise direction of the surgeon, and gained the benefit thereof. Derangement of nerve function was largely due to exhaustion and fatigue of nerve energy. City merchants overtaxed their mental powers by the hurry and rush of business, with its keen competition, and the limited periods given to recreation. Those who, like actresses, were called to lead a very active life in public under high mental pressure, exposed to public criticism in crowded, ill-ventilated theatres, with late hours, turning day into night, suffered from neurasthenia. In such cases "wearied Nature seeks repose." The result of such overstrain was exhaustion of physical energy and impaired assimilative functions. The overwrought brain declared itself by excessive irritability; the sufferer attempted to rectify the depression by recourse to alcoholic stimulants or narcotics. The vital powers became depressed, the appetite failed. The blood plasma became impoverished; the brain cells were poorly nourished; and there was a general breakup of the constitution. In such cases, when the disease could be arrested in its earlier stages before structural decay had set in, much might be done to restore the shattered health by recourse to the manipulative treatment and proper regulation of diet, sleep, and exercise.

Treatment of Disease by Dietetics

Dr. Dutton said disease, taken generally, was due to some malnutrition of the cells which composed the various organs through the food being defective in quantity or quality, hence the astonishing results of treatment which often followed when nourishment was ordered which could be easily digested and assimilated. The main cause of disease, exhaustion, and debility, particularly among the poor, was bread, their staple food, being deprived of the most nourishing part of the corn. Physicians should study not only the chemical side of food, but the practical side also; they should also be well versed in all agricultural matters, and be good judges of food in its raw state, and above all they ought to possess a sound technical and practical knowledge of the culinary art, in order to be able to give sound advice to their patients on dietetic subjects.

Effect of Chloroform on the Liver.

Dr. J. T. Heymans (Ghent, Belgium) showed some anatomical specimens and microscopic slides of the liver of a rabbit. They showed that in chronic poisoning by subcutaneous injection of chloroform the hepatic cells underwent a gradual change, and also the tissues immediately surrounding them, so that at length the liver presents all the appearance of true cirrhosis.[1]

Treatment of Tuberculosis by Pure formed Ferments.

Dr. de Backer (Paris) read a paper on this subject, in course of which he stated that he had succeeded in obtaining varieties of yeasts which throve well in the living tissues, and which, when injected into tuberculous patients, produced a remarkably beneficial effect on the local lesions and general symptoms. He attributed these effects to a phagocytic action of the living yeast cells. He exhibited an ingenious apparatus for making the injections of yeast cultures.

Tabloids, Tabellæ, etc.: Their Uses and Abuses.

Dr. C. R. Illingworth read the following paper: I wish to consider what advantages tabloids of various medicaments offer to the practitioner in lieu of the long tried forms of mixture, pill and powder; and also to point out the dangers which lurk in them, first to the patient, and secondly, though importantly, to the doctor's pocket. 1. A solution is much more easily dispensed than a solid, because the former is measured whilst the latter has to be passed through the tedious process of weighing. 2. Solids have to be dissolved to make a bottle of medicine, and solution is far better effected *en masse*, as in ordinary dispensing for the making of stock solutions, than bit by bit for each bottle of medicine needed. 3. Tabloids are never made for children, who are the greatest anxiety of the physician in active practice; and the calculation of doses for them is more complicated and inaccurate in the case of "tabloid prescribing" than might be thought or supposed. 4. If the calculation of dosage be left to the parent or guardian or nurse, it therefore stands to reason that the door is widely opened to grave miscalculations, possibly with fatal consequences in the case of children's diseases. 5. Much remunerative practice is unavoidably thrown into the hands of chemists and charlatans, who become thus the middlemen between the manufacturer and the public for the sale of thousands of remedial agents in handy form, with full instructions on their labels, rendering, in the opinion of both, the intervention of a medical man totally unnecessary; and putting the noble science of medicine into the position of a degrading trade. 6. There is a very grave doubt as to the solubility

[1] *Archives de Pharmacodynamie*, 1894, vol. i. and 1895, vol. ii.

in the semifluid contents of the stomach and bowels of very many of the drugs put up in tabloid form. Indeed, it is well known that many have been found by accident quite unchanged in the dejecta on the casual giving of an enema during their administration. For these reasons it is, I think, impossible that we shall ever submit to a revolution in the methods which have obtained for so many generations in the dispensing of medicines to our patients, whether effected personally or by prescription, as was recently and very forcibly averred to be imminent, in the columns of the JOURNAL. Tabloids dosed for adults only can be put with safety into the hands of adults for their own use only, and children remain an unlooked-for and yet a more important, because a more numerous, quantity in the proposed charge of administration; and if the difficulty be fairly met, the means parrying trouble is not compensated for by the advantages of such a form of medicament for children, whether calculated by the doctor or left to the arithmetical wisdom of the parent or guardian of the little patient. Of the great usefulness of tabloids and tabellæ in subcutaneous medication no one doubts. But that is no argument for the invasion by the said tabloid into the whole arena of the dispensary. As an instance of the extreme danger of some undissolved tabloids I may name iodide of potash. Careful instructions are, I know, given by most if not all firms regarding this drug, as to dissolving each tabloid in water: and all hypoderms are of necessity first dissolved. But there is a growing tendency I find to cultivate a rapid and easy mode of despatching tabloids by swallowing them like pills rather than a safer one of dissolving or pulverising them first. Of the insolubility of many, taken whole, I have had ample proof in my practice, and my desire in this paper is to advocate most strongly the solution of all which are soluble before administration, and the pulverising of all which are not; if so be, that is, that a course of tabloids instead of mixture has been determined upon. In this way only I feel convinced from experience will the results which are expected be secured. For instance, I had seven cases of a common disorder recently to treat. Six of these I treated in the ordinary way, and one, because he wished it, by the tabloid and tabella method. The six were cured in one-eighth part of the time, although larger doses were given by tabloid than by mixture. It will readily appear that if a form of tabloid of a more soluble nature, made not by great compression but by simple enclosure of the ingredients in some soluble capsule, could be administered, much that is objectionable might thus be removed, although other improvements might still be needed in other directions. I refer to the soluble gelatinous or glycerine jujube capsules named by some palatinoids and by others *cachets*, which latter are, I understand, so largely used on the Continent, and are superseding the compressed drugs very extensively in America. The objection of the insolubility of a tabloid, tabella, etc., being in these ways completely overcome, there remains the question of causticity of the contents, a matter of no slight importance. Manufacturers of all these specialties need only a general recommendation emanating from the Council of this department of our Association to place on their labels full directions for the prior solution in water of all those capsules containing either suspiciously or actually caustic drugs, or to dilute them so thoroughly with harmless vehicles that their causticity is rendered absolutely *nil*. And this difference in the capsules might be indicated and accentuated the more readily by a difference in the shape of the tabloid, palatinoid, *cachet*, etc., by making those which are to be first solved square or oblong, and labelled as desirable.

THE ETIOLOGY OF ACUTE PEMPHIGUS.[1]

BY GEORGE PERNET, M.R.C.S.ENG., L.R.C.P.LOND.

A FATAL case of acute pemphigus,[2] which came under my care recently, led me to look up the literature of the subject, with the view of throwing some light on a morbid condition, which has given rise to much controversy. The facts of the case just alluded to were briefly as follows: A journeyman butcher, aged 31, injured his little finger in the course of his work. He paid no attention to the wound, and it remained as a small gathering for about three months. A large blister then appeared on the site of the injury. This was treated as a whitlow, and healed. Ten days after the blister formed, a bullous eruption appeared, which rapidly became general. The patient died sixteen days after the first appearance of the eruption. The case may be described as one of acute bullous eruption, accompanied by severe constitutional symptoms, occurring in a journeyman butcher, and evidently as the result of a wound.

I have been able to collect four very similar cases, all occurring in young journeyman butchers. In three the disease was fatal in from ten to twenty-eight days. In two cases, one of which recovered, there is a distinct history of a wound.

In 1856 Sir George Burrows[3] published a lecture on a case of acute bullous eruption. A young butcher was admitted to St. Bartholomew's Hospital on April 8th, 1856. Five weeks before admission the patient, whilst chopping a sheep's head, cut his left thumb. The wound continued to discharge, but he remained well until April 5th, when the eruption commenced. The patient suffered severely, but recovered. He was convalescent a month after admission.

Burrows compares this case with another, which had come under his care in 1854. The patient was also a young butcher, with a precisely similar eruption. In this case, too, there was a history of a wound, inflicted whilst dressing sheeps' heads. He was admitted to St. Bartholomew's in March, 1854, in a more advanced stage of the disease than the case just referred to, and died at the end of a fortnight.

Horand,[4] of Lyons, had a case under observation in 1872. A journeyman tripe butcher, aged 17, first noticed some small bullæ on the sides of the fingers and toes on August 21st. He was admitted to the Antiquaille Hospital on August 22nd. During the night the eruption became general, and the patient died on August 30th.

Gibier[5] refers to a case of a journeyman pork butcher, aged 17, under the care of Vidal at St. Louis. The eruption commenced on August 14th, 1881, four days before admission to hospital. The patient died on August 31st.

In the two last cases there is no mention of a previous wound. The occupation is one, however, in which wounds of the hands and fingers are frequent.

In a case referred to by Moissenet[6], but of which no details are forthcoming, an alcoholic pork butcher is stated to have succumbed in twenty-four hours to acute pemphigus.

There is another case of acute pemphigus on record (1813), occurring in a weaver, who also slaughtered animals. The patient was seen by Henning[7] eight days after the commencement of the eruption. Two days later the patient died.

Adding these seven cases together, including my own, no fewer than six terminated fatally, and in three there is a distinct history of preceding injury.

In a second series of cases (8), apart from butchers, but where the nature of the occupation brought the patient in contact with animals or with dead portions of animals: meat, hides, etc., the acute bullous eruption was fatal in 5 (4 females, 1 male). In 3 of the 8 cases there is a distinct history of injury to the hands, and in two others a whitlow of the finger was noticed on admission to hospital. In as few words as possible the data of these 8 cases are as follows:

CASE I.—A tanner, aged 50, under Dr. G. Newton Pitt[8] at Guy's. Health good up to October, 1887, when the patient poisoned his left little finger; ill five weeks. Five weeks later he poisoned his left thumb; ill three weeks; then noticed small vesicles on arms, neck, and thighs. These disappeared. On December 27th, 1887, fresh vesicles appeared on the perineum, penis, and thighs. Admitted to Guy's Hospital on January 3rd, 1888. Died on January 10th. This case was very much like the one I had under observation, but was not so extensive.

[1] Read in the Section of Dermatology at the Annual Meeting of the British Medical Association held in London July-August, 1895.

[2] *British Journal of Dermatology*, April, 1895, p. 129.

[3] *Medical Times and Gazette*, 1856, vol. i, p. 589.

[4] *Ann. de Derm. et de Syph.*, vol. iv, 1ère série, p. 401, 1872.

[5] *Ann. de Derm. et de Syph.*, 1882, p. 161.

[6] Discussion of Horand's case, *Ann. de Derm. et de Syph.*, *loc. cit.*

[7] *Journal d. pralt. Arzneymunde u. Wundarzneykunde*, 1813, vol. xxxvii, p. 89.

[8] *Path. Trans.*, 1889, vol. xl, p. 333.

Case II.—Published by E. Ballard.[9] On August 16th a man, aged 31, whilst administering a physic-ball to a horse, was slightly bitten on the dorsum of the right hand, blood flowing from the wound. The same day he milked some cows suffering from a bullous eruption on the udders and teats. About a week after a blob appeared at the bitten spot, and a few blebs of a similar kind appeared on the skin just around it. About a week later a large crop of bullæ appeared; this was followed by another crop. The forearms, hands, legs, knees, buttocks, face, neck, and scalp were affected. There were also blebs in the mouth and throat. The patient was very ill for a time, but gradually recovered. On October 8th he was practically convalescent.

Case III.—Malherbe's[10] case. A female servant, aged 46, admitted to St. Louis on February 12th, 1889. Eruption commenced February 13th; death February 19th.

Case IV.—Under Bleibtreu,[11] of Cologne. A female servant, aged 20. Eruption commenced on June 1st, 1893; admitted to hospital on June 8th; death on June 27th. On admission a subcutaneous whitlow was noticed round the nail of the right index finger, which Bleibtreu suggests may have arisen from a suppurating bulla.

Case V.—Under Southey[12] (1875). A general servant, aged 19, came to the hospital on October 28th for a sore on the side of the hand, which commenced as a blister. It had been suppurated. She first felt very ill on November 15th, the day the eruption commenced. The patient recovered.

Case VI.—Reported by Spillmann.[13] A fatal case in a housewife, aged 36. Eruption severe; ill from May 25th to June 5th.

Case VII.—Under Dr. S. Coupland.[14] A hard-worked woman, aged 45. On admission to the Middlesex Hospital it was noticed she had a whitlow at the base of the right thumb-nail. The patient recovered.

Case VIII.—Under Dr. Penrose,[15] at St. George's. A kitchen-maid, aged 22. Eruption first noticed on November 13th; she got rapidly worse on November 22nd, and died on November 29th. The patient had been treated previously as an out patient for sore throat.

In the case of a married barmaid, aged 28, under the care of Dr. West,[16] at St. Bartholomew's, the patient was bitten on the right thumb by a dog a month before admission. A week after the bite small spots like blisters appeared on the back of the right hand. This was followed by others on the arms, legs, and trunk. She was discharged a fortnight after admission.

The case of the man[17] who attended horses and milked cows is specially interesting from the fact that the disease which followed a wound of the hand was contracted by inoculation from the teats of a cow. There appears to be a bullous pemphigoid, or vesicular eruption on the teats and udders of cows which is distinct from true vaccine.[18]

Acute bullous eruptions are also described as occurring in cattle and horses. Seaman[19] mentions a case of pemphigus in a bullock resembling pemphigus in man, in which the illness commenced on May 14th. The animal was seen on the same day by Seaman, and he noticed bullæ or bladders, from a small nut to a fowl's egg in size. The animal was very ill at the time. Excoriations and loss of hair disfiguring the animal followed.

Loiset[20] observed a "pemphigus enzootie" in cows near Lille during September and October, 1887. There were no febrile symptoms. A woman with an excoriation, it is stated, presented bullæ, similar to those seen on the cows, on the right hand, arms, and breast.

Gibier,[21] with Bouley, observed two horses with acute pemphigus.

Bullous eruptions are also said to have been seen in dogs.[22]

With regard to the bacteriology, a characteristic micro-organism has been described by Demme[23] under the name of "diplococcus of acute pemphigus." In Bleibtreu's case[24] Claessen found an organism very much like the one described by Demme. More recently, Dr. W. Bullock,[25] from the case under my care, has found a diplococcus closely answering Demme's description, especially as regards culture experiments. On the other hand, Leichardt[26] reports that he has found the organism in a case of chronic pemphigus. It should be added that in Demme's case, a boy aged 13, the eruption could not be traced to cattle, although inquiry was made in the patient's native village.

The subject is admittedly a complex one, and in the foregoing remarks a portion of it only has been touched upon. Sufficient has been said, however, to allow of the following conclusions being arrived at:

1. There is a group of rare cases of acute bullous eruption, accompanied by severe constitutional symptoms, and generally terminating fatally, which affects butchers.
2. The disease follows a wound of the hand or fingers.
3. Is probably due to a micro-organism.
4. The same etiological factors are probably at work in another group of very similar cases, in which the patients by their occupation are brought into contact with animals or dead portions of animals, such as meat and hides.

All these points require further investigation. In future it would be well if the following data were carefully sought for in all cases coming under observation:

1. Occupation: (*a*) butchers; (*b*) cooks, tanners, milkers, etc.
2. History of a wound.
3. Presence or absence of a characteristic micro-organism, that is, Demme's diplococcus.
4. Contact with animals suffering from a bullous or vesicular eruption.

As far as the last two points are concerned, veterinary surgeons might render valuable assistance, especially by the bacteriological examination of bullous eruptions in animals.

Before concluding, I would draw attention to a point of practical importance: wounds of the fingers and whitlows in butchers and those handling meat, etc., should be thoroughly disinfected with powerful antiseptics, such as perchloride of mercury solutions.

The Treatment of Trichophytosis (Ringworm), based on the Physiology of the Trichophytons.

Dr. Leslie Roberts (Liverpool) read a paper on this subject, in which he said that the conclusions he had arrived at were as follows: (1) There existed in the vegetable world a class of minute flowerless plants (fungi), capable of digesting and assimilating hair and other keratogenous tissues; (2) that the process might be called trichophytosis, of which there were divers varieties; (3) that this process might take place on the skin of the living host, or in the hair that had no connection with a living organism. (4) It followed that trichophytosis follicularis was a combination of a saprophytic destruction of an inert body, which led to pathological cell processes; (5) that once the fungus had entered into the interior of the follicle any further direct control over it was lost; (6) that our therapeutic influence over the fungus lay in our power of exciting proliferation of the soft cells of the follicle; (7) that in many cases it was desirable to carry the excitement beyond physiological bounds, so as to produce pus; (8) that epithelial pus formation was not followed by any sensible loss of tissue, but that connective tissue pus led invariably to ulceration; (9) that we should therefore endeavour to limit suppuration to the epithelium.

A Case of Adenoma Sebaceum, intermingled with Flaccid Mollusca Fibrosa; Treatment by Excision.

Mr. William Anderson (London) read a paper on this subject. He said that in the case of the man under his care, he had obtained very gratifying results. He considered that a great improvement could be gained in such cases by the judicious employment of the knife.

Alopecia Areata.

Dr. Henry Waldo (Clifton) read a paper on this subject,

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[9] *Med. Times and Gazette*, 1871, vol. i. p. 5.
[10] *Bull. Thérap. Médicales*, 1889, p. 564.
[11] *Deutsch. Arch. f. klin. Med.*, 1889, p. 471.
[12] *Trans. Clin. Society*, vol. viii. p. 159.
[13] *Ann. de Derm. et de Syph.*, 1889, p. 93.
[14] *Med. Times and Gazette*, 1878, vol. ii. p. 29.
[15] *Lancet*, 1889, vol. i. p. 995.
[16] *St. Bart's Hosp. Rep.*, 1889, vol. xxvi. p. 297.
[17] Ballard, *loc. cit.* [18] Bullock, *loc. cit.*
[19] *The Veterinarian*, 1869, p. 269.
[20] *Journ. de Méd. Vét.*, 1888, cited by Falke in Schmidt's *Jahrbücher*, 1889, vol. cc. p. 262.
[21] *Recueil de Méd. Vét.*, 1888, vol. ii. série 6, p. 680.
[22] Falke, *loc. cit.*

[23] *Verh. des Cong. f. innere Med. Wiesbaden*, 1888, p. 196.
[24] *Berl. klin. Woch.*, 1888, p. 971.
[25] *Edinb. Journal of Dermatology*, May, 1889, p. 338.
[26] *Jahrbuch med. Wiss.*, 1887, vol. xiii. p. 111.

observing that the conclusions he had arrived at were that, clinically, the great majority of cases of patchy alopecia areata did not appear to him to be due to a fungus. The causes were often, he considered, overwork, too little sleep, bad hygienic conditions, and perhaps, in addition to these, malnutrition. He had obtained the best results by improving the patient's general condition, combined with moderate stimulation of the more or less anæsthetic surfaces.

A Case of Dermatitis Repens.

Dr. J. H. Stowers (London) read a paper on this subject, in the course of which he said that the special features clearly pointed to the affection being a distinct disease, however much it resembled eczema in some of its characters. He insisted on the following points in his case: 1. The age and circumstances under which the disease commenced, that is, fourteen days after confinement. 2. Its persistent character and long duration, that is, forty four years. 3 The involvement of both feet as well as both hands. 4. The disordered nervous system. 5. The presence of well marked glossy skin. 6. The association with recurrent acute gout; and 7. The absence of traumatism and its probable idiopathic origin.

An Uncommon Papulo-pustular Eruption in Infants.

Dr. Colcott Fox (London) read a paper on this subject. The conclusions he arrived at were that the affection was not of syphilitic origin. He looked upon the eruption as one not due directly to tuberculosis, but as one occurring in certain infants with poor nutrition who were prone to tuberculous infection. In such children it was very likely that an organism found a favourable soil in the follicles. He was inclined to attach the affection to one now pretty well known in London, that is, acne scrofulosorum.

A Case of Lichen Planus Verrucosus.

Mr. Gilbert Smith (Birmingham) in this paper said that the cause in this case was probably nervous exhaustion in a nervous woman, through derangement of the generative system. The case was also interesting from the extent of the affection, but more so from the fact that the warty patches were derived from the conical papules seated at the hair follicles, and not from the flat papules. The process was the same as lichen planus.

Two Cases of Cheiro pompholyx in Association with Eczema.

Dr. Edward Mackey (Brighton) read a paper on this subject. He considered the connection of cheiro-pompholyx and eczema was closer than was thought; and, further, that the pathology was not far different. He expressed the view that cheiro-pompholyx was a variety of eczema.

A Case of Cheiro-Pompholyx.

Dr. H. Barendt (Liverpool) read a paper on this subject. He said it must be admitted that cheiro pompholyx was a neurosis, that is, a disturbance of the digital vasomotor nerves; but whether this view helped them much etiologically was open to doubt.

Corns, True and So-called.

Dr. Alfred Eddowes presented a paper on this subject. He said he might instance numbers of patients whom he had found to be suffering from what they termed corns, for which they had sought the advice of a surgeon or the help of a chiropodist without obtaining permanent relief. Moreover, many of them possessing ample means had spared no trouble or expense to obtain suitable boots. He would content himself with a brief description of one typical case. About two years ago a lady came to him and told him she had tried everything she had heard of for the relief of excessively painful corns. He found she had the typical horny formation on the classical position for a corn, namely, the joint of the little toe, as well as elsewhere. But the trouble she complained of most was underneath the foot, where he found a callosity which did not correspond exactly to the head of any bone. It was smooth upon the surface and possessed much the appearance of callosities such as were met with upon the palms of the hands of carpenters and others accustomed to work with hard tools. It was not until he commenced to remove some of the horny substance that he realised the pathological condition with which he had to deal. The centre, after being cut down a short distance, presented numerous minute dark points which, when cut still further, commenced one after another to bleed. There was no difficulty whatever in diagnosing the real nature of the malady. It was nothing more than a wart. Warts were by no means uncommon on the feet, and a considerable number of them occurred on the soles; others between the toes (forming a considerable portion of the so-called soft corns) and in rare instances he had found them at the edge of the hard horny layer covering the sole. Recently he met with a group of three warts in the latter position on the heel. So far he had not been fortunate enough to find any literature on the subject, and should be much obliged if any of those present would refer him to such. Even if attention had been drawn to this subject he thought it was well worth while emphasising it, as probably few of the lesser maladies incidental to daily life caused more suffering and inconvenience than corns—true or false. The lady whose case he had mentioned above had to do her shopping in a cab, though she could not well afford it. She assured him that it was painful for her to walk about her own home, and that this unhappy condition had existed for at least two years, notwithstanding constant efforts to obtain relief. The practical point was that, although a wart and a corn might assume a similar external appearance, yet, for successful treatment of the two conditions measures must be adopted which were as different as the pathological processesses involved. It would be obvious to those who gave the subject a moment's consideration that, while a cornplaster or modifications of a boot might completely cure a corn, which was nothing more than an accumulation of an inverted horny cone that could easily be removed or allowed to fall off, leaving the true skin and epidermis normal, in the case of a wart no amount of modification of boots or application of cornplasters could be of the slightest use. Naturally, the more room warts had the better they would flourish, and therefore their treatment when occurring on the feet must be in accordance with the principles of treatment of similar growths elsewhere.

The Skin Lesions of Syringomyelia.

Dr. Galloway (London) read a paper on this subject, in the course of which he said that the conclusions he had arrived at were that the great weight of clinical evidence tended to corroborate the experimental results obtained by Mott, Sherrington, Ferrier, and Turner—namely, that sensory impulses in all their modes were conducted by grey matter, and not by the antero-lateral or posterior ascending fibres, as once asserted. The possible conduction of educated touch, in opposition to ordinary contact sensation, by the white matter of the posterior columns was admitted. Further, in the numerous lesions of the skin that played so important a part in Morvan's type of the disease, he felt inclined to consider that local infective processes played by far the preponderating part in their production. He was also of opinion that it was needless to seek for recondite causes for the production of the pustulo-vesicular eruptions, when there were plenty of common staphylococci and streptococci at hand to do the work. Dr. Galloway also mentioned the possibility of an ascending toxic neuritis from the affected part or due to absorption of bacterial poisons. The scarcity of herpetic eruptions was evidence that the irregular pustulo-bullous eruptions met with were of local rather than of central origin.

Two Cases of Unusual Verruca Necrogenica.

Dr. A. J. Harrison (Clifton) read a paper on this subject, in which he said that the conclusions he had arrived at were that, although the two cases differed etiologically from, yet clinically they seemed to be identical with, verruca necrogenica. Both cases were very rebellious to treatment. The affection he had described might be neither verruca necrogenica nor lupus, but a tuberculosis of the skin, and not very active, but no bacilli were found.

A Case of Pityriasis Rubra Pilaris (Devergie): Clinical Features and Minute Anatomy.

Dr. J. Liddell (Harrogate) read a paper on this subject, in which he said that the conclusions he had arrived at were that the alterations in the epidermis, hair follicles, sweat glands,

and sebaceous glands were primary and not consequent upon any change in the corium. There was certainly a source of irritation which produced the changes he had described, but whether it came from within or without remained an open question. From the circumstance that the lesions were symmetrical, some would be inclined to look upon the condition as a trophoneurosis. On the other hand the irritation might be external. He had found a parasite in his sections of excised portions of skin, but what its relationship was to the disease was not yet determined. It might have a causal connection, or it might be simply associated with the disease, the morbid products affording it a favourable nidus for growth and development.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ROYAL MARINE INFIRMARY, WALMER.

ISOLATED CASE OF DIPHTHERIA IN CONNECTION WITH FAULTY DRAINS: ANTITOXIN TREATMENT.

(By J. N. Stone, Fleet-Surgeon, R.N.)

[Communicated by the Director-General of the Medical Department of the Royal Navy.]

W. D., aged 4 years 11 months, daughter of Private H., was brought to the infirmary July 14th. The tonsils, uvula, and soft palate were reddened and swollen, and characteristic yellowish-white patches were present on tonsils. Deglutition was difficult and painful. Pulse 140, temperature 102°, respirations 30. The child had been ill about forty-eight hours. The drains of the lodging house from which she came were found by the medical officer of health to be at fault. There were no other cases of diphtheria in the neighbourhood.

The child was admitted to the infirmary, and although there was little doubt as to the nature of the case, some membrane was forwarded to the Institute of Preventive Medicine, where the bacillus diphtheriæ was isolated. At 1 P.M. on the day of admission 10 cubic centimetres of antitoxin were injected between the scapulæ. At 6 P.M., there being no fall in temperature or pulse, a further injection of 10 cubic centimetres was given. At 10 P.M. the temperature had fallen to 101°.

July 15th. Little sleep last night, offensive nasal discharge. Respiration 28, pulse 136, temperature 100.8°. Bowels open. To have Liebig's extract and port wine in teaspoonful doses. Throat to be brushed from time to time with weak bichloride of mercury solution. 10.45 p.m. Temperature again rising, 102.8°. Much prostration; cannot be roused from lethargic condition. Membrane has extended from tonsils and uvula to soft palate. Breathing laborious; pulse 140, feeble. Injected 10 c.cm. of antitoxin.

July 16th, 9 a.m. Slept well. Temperature reduced to 100.2°, respiration 24, pulse 136, stronger. Condition generally improved. Throat congestion less; portions of membrane come away, followed by slight bleeding. Trace of albumen in urine. To have 5 minims of tinct. ferri sesq. three times daily.

July 21st. Continues to improve daily. Eruption like urticaria on face and extremities. Temperature 98°.

July 23rd. Urticaria gone, throat nearly well. Discharged on the 29th quite well.

QUETTA CIVIL HOSPITAL.

VESICAL CALCULUS WEIGHING ONE POUND.

(By A. Scott Reid, M.B., Surgeon-Lieutenant-Colonel I.M.S., Civil Surgeon, Quetta.)

Shahdad Khan, a native of Shorán, on the Persian border, was brought by his friends on June 1st, 1895. He was a very old man, apparently between 80 and 90, reduced to "skin and bone," and hardly able to stand. He stated that he had suffered from urinary trouble for upwards of fifty years, and that for the last thirteen his life had been a burden to him. He had spent his time and substance in consulting numerous *hakeems* and *fakirs*, and now applied for European aid as a last resource. The urine dribbled from him continuously night and day, and was found to be slightly acid, of specific gravity 1015, and to contain albumen to the extent of one sixth. On introducing a sound the bladder was discovered to be occupied by a large and very hard stone. The case was a hopeless one as regarded ultimate recovery, but as the patient prayed for relief from his present agony at any cost I consented to operate. I had previously successfully removed some large calculi by litholapaxy, and as it was desirable to save the patient if possible the risk of a cutting operation, and not realising that I had in this instance such an enormous stone to deal with, I first tried what I could do by crushing. No difficulty was found in introducing the largest lithotrite in my possession—a No. 17 Weiss. With this I worked for an hour, removing a large quantity of *débris* through a corresponding evacuating catheter. I then found that it was impossible to proceed further by this means, as the unreduced portion of the stone was encapsuled by the bladder, and I could not get the blades of the instrument round it. I accordingly introduced a grooved staff and performed lateral lithotomy. It was like opening into a miniature quarry; the base of the bladder was occupied by a quantity of *débris*, and behind a solid wall of rock. Having now my left forefinger as a guide, I managed to insinuate the female blade with a little difficulty behind the mass, and, with two actions of the instrument, to reduce it to fragments capable of passing through the incision. The bladder was then cleared as far as possible and washed out with boric acid lotion; but its walls, which were enormously thickened, were found to be encrusted, and calcareous particles continued to come away for several days.

The fragments and *débris* at first weighed 22 ounces, but after being thoroughly freed from blood clots, mucus, etc., the weight was reduced to 1 pound. A quantity of fine sand was unavoidably lost, but I leave that to counterbalance any moisture retained in the matter weighed. The stone appeared to consist entirely of uric acid.

The patient rallied well from the operation, and expressed himself as greatly relieved. The bladder was washed out twice daily with boric acid solution. No inflammatory symptoms supervened, and only on two occasions did the temperature rise slightly above normal. On June 15th, or seven days after the operation, the old man, however, began to sink, and died on June 17th, while his relatives, contrary to my wish, were in the act of removing him from hospital.

I am aware that the suprapubic operation has again come into vogue, and some may consider that this was the one I ought to have selected. The stone, however, in its entire condition, could not have been removed through an incision, compatible with safety in this region, and, in my opinion, the perineal route offered superior advantages for subsequent drainage.

REPORTS OF SOCIETIES

PATHOLOGICAL SOCIETY OF LONDON.

Alban Doran, F.R.C.S., Vice-President, in the Chair.

Tuesday, December 17th, 1895.

THE VARIETIES OF DIPHTHERIA BACILLI.

Mr. E. K. Peters read a communication on this subject. The observations were based on experiments which had been carried on for over a year with specimens of diphtheria bacilli. Four species of bacilli were described. The appearance of the twenty-four hours' growths are as follows: 1. Long Klebs-Loeffler's bacillus. A twenty-four hours' growth on blood serum, short bacilli, numerous segmented forms, 0.003 mm. in length, long clubbed bacilli and short clubs. The bacillus is pathogenic to guinea-pigs, and does not readily lose this property. 2. Short diphtheria bacillus (described in detail for the first time). This bacillus when compared under the same conditions as the long Klebs-Loeffler's bacillus differs from it in that at six hours it presents a large number of short pointed coccal forms 0.0015 mm. in length, with a

few segmented elements, both of which are characterised by a pointed sheath. The bacillus is pathogenic to guinea-pigs, but soon loses this character. 3. The short pseudo-diphtheria bacillus under the same condition appears as a short bacillus 0·001 mm. in length. Segmented forms are short and of rare occurrence, a few often appearing later. Segmentation forms appear in both cultures. The bacillus is never pathogenic to guinea pigs. 4. Bacilli which resemble the long Klebs-Loeffler bacillus, except for slight clubbing and more definite segmentation. These bacilli are not easy to distinguish by a microscopical examination. The clinical aspects of the cases in which these bacilli are found are as follows: (1) The long Klebs-Loeffler bacillus is found in cases of severe diphtheria. (2) The short diphtheria bacillus, which is less common than 1 and 3, appears in some mild cases of diphtheria. (3) The short pseudo-diphtheria bacillus is widespread, and is found in many cases of follicular tonsillitis, in scarlet fever, simple angina, laryngitis, and other catarrhal conditions. This bacillus does not cause a fatal affection *per se* as the long Klebs-Loeffler bacillus. The importance of distinguishing between these several bacilli, which is possible by a microscopical examination of a 24 hours' growth on blood serum, was urged. (4) These bacilli caused no apparent harm to the persons on whose throats they were found, and were possibly non-pathogenic long Klebs-Loeffler bacilli. Experiments which had been carried on by the author for over a year had not demonstrated a change from one variety to another. The short diphtheria bacillus had, however, readily lost its pathogenic quality. (These inoculation experiments were carried out by Dr. Washbourne.) It seems probable that these bacilli are allied species, while their morphological characters and clinical significance warrant the separation of the four, or at all events of the first three forms described. The paper was illustrated by lantern slides prepared by Dr. Bousfield, and by cultures and microscopical specimens.

The Xerosis Bacillus.

Mr. J. Eyre read this paper on Neisser's xerosis bacillus, commenting on its close resemblance to the bacillus diphtheriæ. He had isolated it from the conjunctival secretion of a series of cases which presented slightly different appearances from the ordinary form of follicular conjunctivitis, and which appeared to be somewhat infectious. Also from one case of trachoma; but had been unable to detect it in the secretion from normal conjunctivæ. The cultural and morphological appearances upon various media were described and the difference between it and the Klebs-Loeffler bacillus pointed out. The chief points to be relied upon in differentiating the xerosis bacillus from the bacillus diphtheriæ were summed up as follows: (1) First cultures from the conjunctival secretion, etc., do not make their appearance under thirty-six to forty-eight hours. (2) The production of an alkaline (never an acid) reaction when grown in broth or milk. (3) Retarded and scanty growth on gelatine, poor growth and rapid death upon potato. (4) The invariably innocuous character of both cultures when inoculated into animals susceptible to the bacillus diphtheriæ. (5) The transition to a short straight bacillus staining evenly, after cultivation upon blood serum for ten to fifteen generations; and the restoration of those characters which render it liable to be mistaken for the diphtheria bacillus when transplanted on to glycerine blood serum.

Mr. Lennox Browne, after remarking that the two preceding papers had somewhat confused him, criticised the diagrams exhibited as not very faithfully reproducing the microphotographs, especially he did not see in the latter certain long spiral forms. The alterations in character that occurred on different media rendered it very necessary that some single medium should be selected for the purposes of diagnosis in practical medicine. As to Mr. Peters's statement that the shorter form was less virulent, he would say that some of the worst cases of diphtheria he had seen were associated with the presence of short bacilli, and one of the mildest with that of the long. In ordinary tonsillitis, in his experience, no pseudo-diphtheria bacilli were encountered. He observed too that in the first lantern slide exhibited of long bacilli there were also present short ones. He did not gather the practical purpose of describing the appearances of a ten-day old culture; in some of these he thought micrococci were shown in the photographs.

Dr. Washbourn remarked that the pseudo-diphtheria bacillus described first by Hoffmann was non-pathogenic, but it might occur in conjunction with the Klebs-Loeffler bacillus. It was found in various affections of the throat. Roux and Yersin showed subsequently that there were varieties of diphtheria bacilli which were quite innocuous, though morphologically resembling the true form. The pseudo-diphtheria bacillus, which he thought Mr. Peters had shown to retain its characters without being convertible into the other forms, he had seen in German measles, when there was a slight inflammatory condition of throat, in scarlatina without diphtheria, in the nasal discharge associated with scarlet fever, etc. He did not reckon the case as one of diphtheria if this bacillus alone was present. Roux and Yersin had included under pseudo-diphtheria bacilli both the diphtheria bacilli which had lost their virulence and this other form of Hoffmann's. The shorter pseudo-diphtheria bacillus, if grown on blood serum, lengthened out and resembled the longer form. None of the photographs of Mr. Peters were from any but pure cultures.

Dr. A. A. Kanthack thought that Dr. Washbourn and Mr. Peters had added to the confusion already existing on this subject, as two forms of pseudo-diphtheria bacilli were by them included under the term. The speaker would give up the expression pseudo-diphtheria bacillus altogether. There was only one reliable test, and that was inoculation of a susceptible animal with the culture; if no result followed this, the bacillus was not that of diphtheria. He knew of cases where the bacillus corresponded with the third kind of Mr. Peters, and when broth cultures were toxic for guinea-pigs. In severe cases of diphtheria the speaker had often found, not the long variety, but the short, and even the pseudo variety of Mr. Peters. It was easy to change the long kind into the short by reducing the supply of free oxygen, and by other means. He had usually noticed small varieties in association with the longer. The short forms, if sown on agar, grew into long; and this admixture was also shown in the microphotographs of Mr. Peters. The classification of long and short was a mere matter of convenience. As to the xerosis bacillus, he had obtained it from a series of different cases of conjunctivitis, two of them mucopurulent forms, as well as from the membrane resulting from the caustic action of lime and nitrate of silver. On gelatine the bacillus grew in extremely small colonies, not in a wrinkled streak like that of diphtheria. A long form of bacillus like that of diphtheria had been found in cow's milk, in ulcers, and by Dr. Klein in cases of meat poisoning; in fact it was a type to which not a few bacilli conformed.

Dr. Durham did not think that the pathogenic action of cultures on animals was so absolutely diagnostic as Dr. Kanthack held; for other vibrios than Koch's produced results similar to the latter on animals. No one had yet raised a virulent diphtheria bacillus from a non-virulent one, and until this was done it would be open to regard the forms as different.

Dr. E. W. Goodall remarked that isolated observations might be fallacious. Sometimes the true bacillus was overlooked in cases of virulent diphtheria, and a short form occurring with it might be cultivated. Of the two, he held the longer to be decidedly the more virulent; the short was not often found without the long in really grave cases. He had seen short bacilli in German measles, scarlet fever, etc., and did not think it very virulent, though he did not know what should be comprised under the term short.

Mr. Peters, in reply, attached much importance to the fact that what he considered the more virulent forms might be overlooked; this might happen in laryngeal diphtheria, when examinations made from the throat might reveal a pseudo-diphtheria bacillus, whilst another variety might exist at the real seat of disease. He had only himself once seen a membrane formation associated with the pseudo-diphtheria organism, and he had not known of a fatal case in which the latter bacillus was found, though angina and obstructive laryngitis might be produced.

Mr. Eyre remarked that he had pointed out the differences of character in jelly-streak cultures between the xerosis and

diphtheria bacilli. One of the best means of diagnosis was the growth on potato.

Card Specimens.

Dr. Weber: Heart from case of Angina Pectoris.—Dr. Snow: Colloid Carcinoma of Breast.—Mr. Lennox Browne: Malignant Growth of Tonsil.—Dr. Rolleston: Crateriform Ulcer.—Dr. Hugh Walsham: Tuberculous Liver with Lardaceous Change.

CLINICAL SOCIETY OF LONDON.

Thomas T. Whipham, M.D., F.R.C.P., Vice President, in the Chair.

Friday, December 13th, 1895.

Membranous Colitis Treated by Right Colotomy and subsequent Closure of the Wound.

Dr. W. Hale White and Mr. C. H. Golding-Bird reported the case of an neurotic lady aged 30, who first began to pass mucus from the rectum and suffer from constipation in 1885. From that time both these symptoms became more marked, and by 1891 she was suffering from severe abdominal pain. In the next year the motions often consisted of nothing but mucus and blood, and the pain was agonising. This state of things continued till 1894, when she began to pass tubular casts; the pain kept her in bed most of the day. Very strong purgatives were necessary to move the bowels, and she was a complete invalid. When seen by the authors in 1895 she was in the same condition, and had much tenderness over the descending colon and sigmoid. A motion was examined, it consisted of little fæces, much mucus, long tubular casts, and a considerable amount of blood. As during the previous ten years all sorts of drugs, various diets, prolonged rest in bed, and many health resorts had been tried, it was decided with the consent of Dr. Walter Smith, of Dublin, to perform a right colotomy. The bowel was fixed to the surface on May 16th, and opened on May 17th. Three days later the colon was washed out from the artificial to the natural anus with hot water, but already the membranes had ceased to be formed. For five weeks all the motions were passed through the artificial anus without the aid of purgatives. The fæces always appeared normal. As at the end of this time all the original symptoms had disappeared, the colotomy wound was closed and the bowels were subsequently kept confined for a week with opium. Some compound liquorice powder was then given and the motion which was passed contained neither mucus nor blood. The general health and strength improved, and she went into the country on July 24th, feeling better than she had done for many years, having passed no blood or mucus since the operation on May 16th. The authors submit that in a severe case of membranous colitis this treatment was justifiable and was the most rational, for by it the colon could have complete rest. Their patient, it was true, had since died, but, as far as could be made out, her death had nothing to do with the operation or the colitis. Her subsequent history was imperfect, but it could not be made out that she suffered from membranous colitis after she left London.

Dr. Adeney (Tunbridge Wells) had attended the patient in her final illness, which occurred nearly two months after her departure from London. She died after about forty hours' illness with symptoms of acute suppurative general peritonitis, due apparently to the rupture of something in the pelvis, possibly a suppurating gland. A *post-mortem* examination could not be obtained. The patient before death stated that the improvement in her condition which had been attained when she left for the country had continued until her final sudden seizure.

Mr. Greenlee said that the treatment of dysentery by colotomy had been suggested to him years ago by Dr. Manson. This year he had put the suggestion into practice. The patient, a lady, had had dysentery in India, and fistula, for which he operated. She became better, then had phlebitis after childbirth, and suppuration of the liver, from which she recovered; but the dysentery recurred, and he performed left colotomy. This, however, he found did not allow such complete treatment of the bowel as did right colotomy, which for the future he should prefer. On opening the gut the mucous membrane was found to be completely studded with small polypoid growths. The dysentery and the patient's general condition were much improved, and she was relieved from the constant irritation. She eventually died from some return of the phlebitis, which had nothing to do with the dysentery.

Dr. Turney said that Mr. Ballance had operated on a case of his which was diagnosed as dysentery. The man had been in India, but had no dysentery there. Subsequently he passed blood and mucus from the bowel, and became greatly emaciated. There was difficulty in fixing the appropriate time for the operation, so as to be neither too soon nor too late. Unfortunately it was eventually done a little too late. The operation was done on the right side by an inguinal incision. The ileum was completely cut through, the upper end being fixed to the wound. The lower end was reserved for irrigation. The patient recovered satisfactorily from the operation. The bowel was douched frequently, and he seemed to be improving when hypostatic pneumonia showed itself, and he died a week after the operation. The chance of recovery from severe dysentery under ordinary treatment was, he thought, almost hopeless, as the raw surface of the gut allowed the absorption of poisonous products which hastened the patient's death. The operative treatment, however, should be limited to cases in which the disease existed only in the large intestine. He considered colotomy preferable to division of the ileum.

Dr. Francis Hawkins (Reading), while admitting that the casts in the authors' case came from the colon, thought that the term "membranous colitis" should not be used, because casts similar in structure came also from the jejunum and ileum, as he himself had seen. The casts consisted of mucus, and he would describe the malady as a type of "mucous disease of the intestines." He doubted if it was so rare as some thought it, and considered that it might pass undetected when the stools were not systematically examined. He would advise operative treatment for intractable forms of the disease only, and thought it would be rarely called for. He cited a case, where casts had been passed for a year, which recovered, so that for two years no further casts had been passed.

Mr. Barker asked the authors what was the exact nature, microscopic structure, and mode of production of the membranous casts? In a recent case he had found the casts structureless, containing a few epithelial cells, and having the appearance of coagulated mucus.

Dr. Herringham considered that the casts were not the cause but the consequence of the disease, inasmuch as they usually followed a long period of constipation. They were quite structureless. He had seen two cases. The patients had great pain, with swelling on the left side of the abdomen; one recovered, one died after operation from an abscess in the neighbourhood of the descending colon. Why should patients have an abscess there, except from some retention of fæces leading to ulceration? In the fatal case there was a pinhole opening into the bowel; in the other case the pus was sweet, and apparently there was no communication with the bowel. A German had called the condition "pericolitis sinistra," and asserted that it was as common as suppuration about the appendix. He suggested that possibly there was such suppuration in the authors' case, which broke into the peritoneum and caused the fatal termination.

Dr. S. Phillips said that the case under discussion was colitis, not dysentery. The casts mentioned by Mr. Barker and Dr. F. Hawkins might come without any disease of the mucous membrane, being structureless and quite different from the sloughs of mucous membrane found in colitis, which were accompanied by much hæmorrhage. Further, with colitis there was often disease of the small intestine as well. He could but notice that the end of all the three cases treated by operation which had been related had been a fatal one.

The Chairman had been consulted about a case similar to that related by the authors. The patient was a neurotic young lady who had passed mucous casts for years, and had before that suffered from constipation. She had constant pain over the descending colon. He ordered small doses of calomel, which secured evacuation of the bowels, the motions containing mucous casts. She was kept in bed on milk diet, but became so emaciated that it was thought she must die.

Then, without change of treatment, she improved, and now for six months had remained well and able to drive out. He added that since her recovery a sister had suffered from the same kind of colitis.

Dr. Hale White, in reply, thought the term "mucous disease of the bowel" was not a good one, being already applied to a different disease of the bowel in children. He believed membranous colitis was fairly common, and often accompanied chronic constipation; and that when the bowels came to act it also ceased. It was not common in neurotic subjects. As to the abscess on the left side of the abdomen, it must be remembered that abscess of the vermiform appendix occasionally opened there. The patient had not gone to Kissingen until she had had the disease for many years. The microscopical appearances of the casts had been described by Drs. Wilks and Goodhart in the Pathological Society's *Transactions*.

Mr. Golding-Bird, in reply, said that the reason for locating the disease in the descending colon was simply that the pain was there, just below the splenic flexure. He did not think it was necessary to divide the ileum. Mr. Godlee, for example, did nothing more than open the bowel in his remarkable case, and yet the patient was greatly benefited. In fact, the mere diverting of the stream of fæces of itself effected great relief. So soon as the contents of the bowel came within the range of the defæcating apparatus it made in these cases of ulcerated bowel a profound impression on the central nervous system, which was avoided by colotomy.

Congenital Median Cervical Fistula.

Mr. Barwell related the case of a young lady, sent to him in April last by Dr. Bezly Thorne, with well marked lateral curvature of the spine. On June 11th, her back being nearly straight, she showed an opening in the mid line of the neck situated on the most prominent point of the thyroid cartilage, which occasionally, at least once a day, discharged a thin fluid. The small orifice was surrounded by depressed and reddened skin for about a quarter of an inch from side to side, nearly half an inch from above down it was partially overhung by a transverse narrow fold of healthy skin. While the deeper parts of the throat were at rest the coloured depression was very shallow, but in swallowing it deepened, being drawn upward and inward, gliding under the transverse fold, which thus became more overhanging, widening also so as to stretch almost from one sterno-mastoid to the other. On palpation a line of cylindrical somewhat hard tissue could be felt running up from the opening to the hyoid; it seemed about the size of a cedar pencil. The foramen cæcum was not abnormally large. He diagnosed a tubular remnant of a suprahyoid accessory thyroid gland, and as she was exceedingly anxious to be rid of the blemish, he believed it would be feasible to remove the tube through an opening so small that the scar would be hardly visible. On June 19th ether was administered and caused considerable flow of saliva, about half a drachm of which escaped down the fistula and showed itself on the neck. He made an oval incision just wide enough to include the reddened skin, and seizing this together with the fibrous tube in a vulsellum, the whole was brought down, any retaining bands being severed with the scalpel. After about two thirds had thus been extruded it broke, but by gliding the skin and wound upward, the end was easily brought into view, again seized, and the truncated end removed flush with the hyoid. The little wound was dressed with sutures going deeper than the floor of the wound and secured by lead buttons. Adhesion took place rapidly, and she went down to dinner on the fifth day (23rd). 29th. She went into the country, and about a fortnight after the operation sang—contrary to his directions—several songs. A little saliva doubtless found its way through the foramen cæcum downward, and when he saw her ten days after that event there was in the place of the wound a semiglobular enlargement; puncture with a tenotome liberated a drop or two of slightly turbid, not puriform, fluid. Pressure along the track of the old sinus caused no further flow, nor was any thickening to be felt. A letter, dated October 20th, received from the patient, said, "Nothing remains of the place but a little reddish mark, quite flat, smooth, and completely healed. It is delightful that my collars do not now get dirtied."

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Edward Nettleship, F.R.C.S., President, in the Chair.

Thursday, December 12th, 1895.

Clinical Evening.

Case of Retinitis Circinata.

This was shown by Mr. Hartridge. It presented the appearance of a grey degeneration at the yellow spot, with a mass of white deposit in the nerve fibre layer of the retina radiating from the yellow spot region. There were no retinal hæmorrhages; it did not agree in every detail with the recognised appearances, but he thought it was possibly an early stage of retinitis circinata.

Mr. Holmes Spicer thought that the characters of the white exudation in this case were more like those of renal retinitis than of retinitis circinata. In all the undoubted cases that had been observed there had been a remarkable constancy in the character of the exudation, a grouping quite different from that shown in this case.

Dr. Habershon asked if there were renal disease or hypertrophy of the heart present.

Mr. Hartridge replied that there was no renal disease; the heart had not been examined.

Rare Form of Nystagmus.

Mr. Ernest Clarke showed one case and Mr. Grimsdale three cases of nystagmus in the fixing eye and occlusion of its fellow. In Mr. Clarke's case the vision in the two eyes together was 1; when either eye was occluded by placing a card in front of it, the uncovered eye immediately began to oscillate violently. In Mr. Grimsdale's cases the nystagmus was of the same kind but less marked.

Dr. Habershon had examined Mr. Clarke's patient. There was no sign of actual nerve disease, but he was of a neurotic type; all his reflexes were rather more pronounced than usual.

Dr. Ormerod remarked that the patient was a jeweller, and had been using a single watchmaker's glass to one eye; he thought this may have partly caused the nystagmus. It was not present before he began that work.

Superficial Peripheral Choroiditis.

A case of peripheral choroiditis of obscure origin was shown by Dr. Rayner Batten. The patient was a woman aged 40. The choroiditis was limited to the periphery; the outline of the patches was irregular, map-like; the deeper layers were not affected, but the surface layers had a bleached appearance; vision was almost unaffected except for slight contraction of the fields. No evidence of acquired syphilis could be found; the condition was probably a late manifestation of inherited syphilis. It was still progressing.

Mr. Holmes Spicer thought the cause of the disease in Dr. Batten's case was hereditary syphilis, on account of the white lines along the smaller veins, which was a common feature in that affection; for the same reason he thought it had been progressive comparatively recently.

Embolism of the Central Retinal Artery.

Mr. Marcus Gunn related the case of a young adult in whom this lesion occurred, without evidence of cardiac disease. About three weeks ago there was sudden failure of the left eye, with the appearance of a thick film before it, in a young anæmic girl. The vision had somewhat recovered in part of the field since. She was suffering from amenorrhœa at the time. Although there was not much change in the size of the arteries, there was the typical cherry-red spot at the macula. Although at first he regarded it as a case of embolism, he had since thought that it may have been a hæmorrhage into the optic nerve sheath which had affected the vascular supply of the nerve.

Mr. Hartridge had lately seen a case of embolism of the central artery in a healthy man two and a-half hours after its occurrence. There was already œdema of the retina.

Mr. Bickerton had seen a case recently in which there was very little appearance of change in the vessels. The pupil acted to light.

Dr. Batten had recently seen a case of sudden failure of

sight in an anæmic girl, in which there had been little change in the vessels.

Mr. Drake Brockman had seen some time ago a lady who had a sudden attack of giddiness; she lost the sight of one eye completely. There was no cardiac disease and no albumen, but the patient was anæmic.

Retrobulbar Optic Neuritis.

Mr. Holmes Spicer showed this patient, a healthy man, 68 years old, whose sight had been failing seven months. He had been a great smoker, but had given it up. There was no history of rheumatism, gout, nor syphilis: no locomotor ataxy nor disseminated sclerosis, no renal disease nor diabetes. The optic discs were very pale and slightly swollen. The fields were quite full, but he had a large colour scotoma at the fixation point. The case presented all the features of a severe tobacco amblyopia, but recovery had not followed abstention from the poison; he had got steadily worse.

Mr. Griffith thought the pallor in this case was too great for tobacco amblyopia.

Mr. Johnson Taylor thought it was an aggravated case of tobacco neuritis combined with alcoholism.

Dr. Habershon thought that this case occupied a place midway between tobacco amblyopia and the family cases of optic atrophy described by Leber.

The President said that cases were occasionally seen in which the action of tobacco did produce much more grave results on the nerve than was customary, and this generally occurred in old men. He thought it not improbable that this case might be one of tobacco amblyopia in an old man.

Recurrent Paralysis of Third Nerve with Migraine.

This case was shown by Dr. Ormerod and Mr. Holmes Spicer. A boy, aged 15, had had complete paralysis of the left third nerve when a year old; recovery took place. When he was about seven years old he had a second attack; since then he had had an attack every nine or ten months. He was subject to "bilious" attacks, with intense headache in the left side, and the paralysis always came on during a bad attack. There was some atrophy of the left optic nerve, and some of the paralysed muscles now never recovered. The present attack was passing off, but there was still slight ptosis, a dilated pupil, and complete paralysis of the external muscles of the eye supplied by the third nerve.

Double Ptosis.

Mr. Warren Tay showed a case of recent double ptosis with loss of convergence and weakness of the internal recti. There was no apparent cause for the attack; at first the movements of the eye were good, but complaint was made of diplopia; later the failure of convergence was marked. Recovery quickly followed the use of iron and nux vomica.

Paralysis of both Internal Recti.

This case was shown by Mr. Treacher Collins. A man, aged 22, had suddenly had paralysis of both internal recti five days, accompanied by headache. He was unable to move either eye towards the nose either in looking to one side or in convergence. The pupils acted normally, and vision was good; his gait was unsteady, his knee-jerks were exaggerated, and he became unsteady on standing with his eyes closed.

Dr. Turner remarked on the probable seat of the lesion in the two last cases.

Other Cases and Specimens

(1) Peripapillary Atrophy of Choroid of unusual character, shown by Mr. Donald Gunn. There was a patch of atrophy around the O.D., the retina over the patch being raised, distended, and perfectly clear, with shining lines in it like a cracked ball of glass. (2) Specimen of an Eye lost after removal of a foreign body by the electro-magnet, shown by Mr. Spencer Watson. (3) Specimen of Papilloma of conjunctiva, shown by Mr. Jessop.

Co-operative Carriages.—A number of medical practitioners in New York have formed a co-operative association for the care of horses, carriages, and harness. It is expected that by this means a considerable reduction in the expense of conducting a practice will be effected.

HUNTERIAN SOCIETY.

Chartres J. Symonds, M.S., F.R.C.S., President, in the Chair.

Wednesday, December 11th, 1895.

Tuberculosis of the Choroid.

Dr. Fred. J. Smith showed two specimens of tubercle of the choroid taken from a case tuberculous meningitis.

Perforation of the Stomach.

Dr. Cotman showed a specimen of perforating ulcer of the stomach, taken from a man aged 48.

The President spoke on some points in the diagnosis of the occurrence of perforation, and quoted some cases of correct and incorrect diagnosis within his own experience.

Dr. Fred. J. Smith also spoke of the difficulties of diagnosis and advised operation (even exploratory) when perforation was diagnosed.

Mr. Openshaw said there was no difficulty in posterior perforations.

Dr. Cotman replied.

Rheumatoid Arthritis.

Dr. Jas. H. Sequeira showed a specimen of rheumatoid arthritis taken from a dissecting room subject. The left shoulder-joint was affected and there was atrophy of the biceps muscle.

Dr. Campbell McDonnell discussed the relationship of rheumatism and rheumatoid arthritis, as did also Dr. Glovan Lyon.

Dr. Sequeira replied.

Sarcomatous Tumours.

Mr. Openshaw showed (1) a solid and sarcomatous growth of the ovary, weighing 7 lbs. 7 ozs.; (2) a sarcoma of the kidney removed by operation from a man aged 24; it had only been growing five months, and weighed several pounds; (3) a myeloid sarcoma of the middle of the shaft of the femur for which he had performed amputation at the hip-joint by a method of his own.

In connection with Mr. Openshaw's second case, the President mentioned a large abdominal tumour which had existed more than six years without apparent increase or serious discomfort to the patient; he thought it was an adenoma of the suprarenal capsule, but had not been able to obtain a necropsy when the patient died of an intercurrent disease.

SOCIETY OF MEDICAL OFFICERS OF HEALTH, METROPOLITAN BRANCH.

Tuesday, December 10th, 1895.

G. E. Yarrow, M.D., in the Chair.

An Epidemic of Milk Typhoid.

Dr. Sidney Davies read a report of an epidemic of enteric fever at Plumstead distinctly traceable to a particular milk supply, although the actual source of the disease could not be discovered. The drains of the premises were very defective, the cowsheds dirty, and the business conducted in a slovenly manner. The water supply (that of the Kent Co.) was unimpeachable, but there was a filthy brick tank used for watering the cows and probably for washing the churns, since the same bacteria were found in it and in the milk, but the typhoid bacillus was not detected, and the cows were apparently healthy. But such negative evidence could not be set against the palpable fact that over 90 per cent. of the cases were proved to have used the milk of this dairy, and the proportion would probably have been even higher had there been any books kept, or better means for tracing the distribution. In the three preceding years the number of cases notified had been 22, 22, and 26, and 6 had been reported at intervals in the previous months of the present year, but in the week ending May 15th there were 25, and all but 1 having been traced to this dairy, an order for stopping the sale "within the district" under Sec. 71 of the Public Health (London) Act was obtained. The dairyman, however, defied and evaded the magistrate's order, sending his milk to the railway station, and alleging that he bought it there. A second conviction happily led to the breaking up his business, and the sale of

his stock, after which the epidemic began to decline, though cases probably of secondary origin continued to make their appearance up to the end of July. The weekly notifications from May 18th to June 30th were 25, 53, 39, 28, 19, 7, and 6: total, 177: besides 13 in July. Of the 177, no fewer than 159, or 90 per cent. were clearly connected with the same milk; 33 of these through a dairy in Woolwich, and there may have been many more among the customers in the latter district. Indeed, had the man been content to comply with the letter of the law and sent in his milk to places "out of the district" there is no knowing how far the mischief might have extended. Probably over 200 or 250 houses in Plumstead had the milk in question, but in 44 of 141 houses at which the carts called daily there were 65 cases. Of 49 houses in two streets supplied by this dairy 29 were invaded, but only 2 of the remaining 150, and these may have been casual consumers or secondarily infected. The occurrence within six weeks at a time when enteric fever is not usually prevalent of 177 cases, as against an annual average of 26, and over 90 per cent. of these being known to have been consumers of this particular milk leaves no room for doubt as to its cause. The lower case mortality of 15 per cent. as compared with that of 22 per cent. in previous years was probably due to the larger proportion of children attacked in an epidemic having its origin in a milk supply for that of persons under 20 was 8·75 and of those over 20 23·5 per cent. The actual age and sex distribution, and mortality was as follows:

	Males.	Females.	Total.	Deaths.	Per-centage of deaths.
Under 5 years	17	11	28	2	7.0
5 to 10 ,, ...	15	26	41	4	10.0
10 to 20 ,, ...	20	34	57	5	9.0
20 to 40 ,, ...	18	29	45	9	20.0
Over 40 ,, ...	3	3	6	3	50.0
Totals	74	103	177	23	13.0

Of these, 64 were treated at home with 10 deaths, or 15 per cent., and 113 removed to hospitals with 13 deaths, or 11 per cent., a result doubtless owing to the greater care in diet, and contrasting with the higher hospital mortality observed in scarlatina and diphtheria.

EDINBURGH OBSTETRICAL SOCIETY.

Wednesday, December 11th, 1895.

ALEXANDER BALLANTYNE, M.D., President, in the Chair.

SPECIMENS, ETC.

PROFESSOR A. R. SIMPSON showed Exomphalic and Anencephalic Fœtuses, also a Fœtus with irregular and defective development of the bones of the forearms.—Dr. FELKIN showed a new form of Safety-pin which locked by means of a simple mechanism.—Dr. F. W. N. HAULTAIN showed (1) Hæmatoma of the Ovary. (2) Hæmatosalpinx simulating Hydrocele of the Ovary.—Dr. J. W. BALLANTYNE showed photographs of a Dicephalic Fœtus, of a case of Congenital Elephantiasis, and of Spurious Hermaphroditism.

THE SO-CALLED "MITTELSCHMERZ."

Dr. HAULTAIN (for Dr. J. HALLIDAY CROOM) read a paper on this subject. The condition was first described by Valleix, and in our own country many years ago by Sir William Priestley, later by Fashender and Sorel. Dr. Croom gave notes of three cases that had come under his own care, in the first of which the intermenstrual pain began after a very severe attack of scarlet fever at the age of 14; in the second it began at the age of 30, was probably due to over-distension of the Fallopian tube with fluid, the pain being associated with the expulsion of that fluid; the third began about the age of 20, and appeared to be of the nature of intermittent hydrops tubæ profluens, and was cured so far as known by removal of the appendages. The details of Priestley's four cases will be found in the BRITISH MEDICAL JOURNAL for 1872. The prominent features were paroxysmal pain in the region of the ovary during the intermenstrual period, in some cases continuing up to the commencement of the flow, in others stopping before then. The normal menstrual flow was scanty, regular, and painless. Sorel's observations led him to state that *Mittelschmerz* bore a more definite relation to the commencement of the period which followed it than that which went before. Heinrich Fashender in 1876 gave full notes of a case in a woman of 24, where there was a midtime flow of mucus into the vagina; and gave as his view of causation a premature summation of nerve stimuli in the ovary, with the occurrence of ovulation. Anteflexion had been suggested as the cause of *Mittelschmerz*, but to this it had to be replied that anteflexion was not present in all cases, while if it were caused by anteflexion, *Mittelschmerz* would be much commoner than it was. The condition occurred under three different manifestations: (1) No external manifestation at all; (2) where the pain was associated with an escape of blood; (3) where the intermenstrual pain was associated with a clear discharge. In the first, probably ovulation and menstruation did not occur simultaneously, and thickening of the capsule of the ovary caused pain at delivery of the follicle. In the second group the slight flow was probably due to endometritis, and the pain to the passage of clots. In the third, the condition was almost certainly one of hydrops tubæ, reaching its full development at midterm. Some of course denied the existence of intermittent hydrosalpinx, and predicated a vaginal fistula communicating with the cyst. But either explanation was compatible with the view given.

The discussion which followed was taken part in by the PRESIDENT, Drs. A. R. SIMPSON and MILNE MURRAY (who gave particulars of two cases), Dr. J. W. BALLANTYNE, and others. All were agreed as to the importance and value of Dr. Croom's paper.

VIBURNUM PRUNIFOLIUM AND ITS VALUE IN THE TREATMENT OF DYSMENORRHŒA.

Dr. THEODORE SHERMAN read a paper on this subject. He detailed his investigations into the botany, chemistry, and pharmacology of the drug. He used the liquid extract evaporated down and given in capsules. This he had made by Mr. D. Middleton, of Edinburgh. The drug seemed to diminish reflex pain, to lower blood pressure, and to act as a uterine sedative. It was of great value in certain forms of dysmenorrhœa, in threatened abortions, etc.

Dr. WILLIAM CRAIG said he had for years maintained in his lectures its pre-eminent value in abortion, and had used it in his practice.

Professor A. R. SIMPSON said he had frequently used it with good effect in certain cases of early abortion, and in dysmenorrhœa of non-obstructive forms.

Dr. HAULTAIN thought it was a direct uterine sedative, and was of value in the first stage of labour, in after pains, in dysmenorrhœa with clots, and in abortions where there was pain and a little hæmorrhage.

The PRESIDENT and others also spoke, and Dr. SHERMAN replied.

A RARE FORM OF ABORTION: EXPULSION OF THE AMNIOTIC SAC, WITH RETENTION OF THE CHORION AND DECIDUA.

Dr. F. W. N. HAULTAIN, in his paper on this subject, showed three illustrative specimens. Case I. Amniotic sac of the size of a large orange, no embryo, cast off from a patient believed to be three months pregnant. The decidua and chorion were removed some days later for uterine hæmorrhage. Case II. Amniotic sac of the size of a large goose-egg, containing embryo about the eighth week of development, granular *débris*, cast off from a patient supposed to be three and a half months pregnant; the decidua, with chorion attached, was removed seven weeks afterwards for symptoms of profuse constant watery discharge and irregular hæmorrhages. Case III. Amniotic sac of the size of a turkey's egg, embryo about the eighth week of development, but he was unable to give a clinical history. These specimens were of interest on account of their want of description in popular midwifery works and the thus scanty knowledge of the possibility of the occurrence of such a form of abortion. The mechanism of production from the specimens shown undoubtedly pointed to: (1) Pre-existing disease and death of the embryo, with, in the first two cases, a continued increase

of liquor amnii. (2) Detachment of the amniotic sac from the chorion, thus forming an intrauterine foreign body, setting up uterine contraction by irritation. (3) Rupture of chorion with expulsion of the sac, the adherent chorion remaining attached to the still vascularised and healthy decidua. (4) Occasional continued growth of decidua lined by chorion. This when cast off forms a variety of the so-called carneous mole, and accounts in many instances for the presumed absorption of the fœtus so commonly met with in these moles. The condition was clinically interesting as showing how abortion might take place with a minimum of detachment of the decidua and thus a minimum of hæmorrhage.

Professor A. R. SIMPSON, the PRESIDENT, Dr. J. W. BALLANTYNE, Dr. W. CRAIG, and others took part in the discussion, and Dr. HAULTAIN briefly replied.

MIDLAND MEDICAL SOCIETY.

T. EDGAR UNDERHILL, M.D., President, in the Chair.

Wednesday, December 4th, 1895.

LEUCODERMIA.

DR. MARRIS showed (for DR. SIMON) a boy of 7, afflicted with leucodermia. He was one of ten children, and had always been weaker, mentally and physically, than the rest of the family. Twelve months ago his hair, which had been almost black, began to fall off in patches. As the hair grew again it was found to be pure white. At present the head was well covered with a growth of very soft white hair, except for a band about 2 inches broad reaching round the back of the head from ear to ear, which retained its original dark colour. Below this band the hair was again white. Scattered without symmetry over the body and limbs were patches of white skin, surrounded by a brown pigmentation fading gradually into the natural skin tint. The areas of white skin varied in size. The skin of the face was uniformly dark, contrasting markedly with the white hair. Under the microscope the hairs were seen to contain a few relics of the dark medulla. No deepening in colour of the nipples, and no pigmentation within the mouth.

SPECIMENS.

Mr BARLING showed photographs of an unusual case of Syphilodermata, with hæmorrhage centres to the individual patches.—Mr. HAMMOND SMITH showed a Knee-joint, with fracture of the outer head of the tibia extending into the joint. The cause was a fall of coal which produced a compound fracture of the leg, unconnected with that into the knee-joint. Large hæmorrhage into the joint and indistinct crepitation led to the diagnosis of the outer fracture, and amputation through the lower part of the thigh.—Mr. BARLING showed a Sequestrum from a case of "Quiet Necrosis" in a man, aged 52, which in many ways simulated sarcoma of the femur. The necrosis followed double pneumonia some three months before, the swelling appearing during convalescence.—Dr. PURSLOW showed a specimen illustrating Perforation of the After-coming head. The patient was a primipara, and when Dr. Purslow saw her attempts had been made, under chloroform, to deliver the head by traction on the body and by forceps. Pulsation in the cord had ceased some hours previously. The perforator was passed through the roof of the mouth, and after evacuation of the brain matter the head was delivered by traction on the body. Attention was drawn to the advantages offered by the roof of the mouth as a site for perforation of the after-coming head.—Dr. SHORT showed (1) the Gall Bladder and Ducts from a man aged 79, who died of senile asthenia. A few days before death jaundice set in with bilious urine; there was no pain, and the stools were dark in colour. After death the gall bladder was found full of gall stones, contracted, and fibrosed. The common bile duct was much dilated, and partially obstructed by a stone. The dilatation appeared of old date, but no history of any attack resembling hepatic colic could be obtained. (2) The Stomach of a man aged 40 who, three years before death, had an extremely severe hæmatemesis, followed by pain but unaccompanied by signs of hepatic cirrhosis. The pain, at first paroxysmal and afterwards constant, persisted, and the case ran the clinical course of a pyloric cancer with dilated stomach, but no tumour was felt during life. He refused operative interference. At the necropsy a large flat ulcer, a crown piece in size, was found on the posterior wall of the stomach, close to the pyloric aperture, which was narrowed by the hard raised edge of the ulcer. Microscopically no evidence of cancer could be found.—Dr. RUSSELL showed a specimen of Dilated Duodenum from a case of peripheral neuritis.

EXHIBIT.

Mr. W. EDELSTON BRACEY showed a Portable Irrigator, the main feature of which was a bucket of sufficient size which was collapsible, in the manner of the well known drinking cup. The apparatus was very well made, there being absolutely no leakage, and the price was moderate.

VAGINAL CŒLIOTOMY.

Mr. JOHN W. TAYLOR read a paper on Cases of Vaginal Cœliotomy. A description was given of the operation, followed by a series of cases illustrating Mr. Taylor's experience of vaginal cœliotomy as applied to vaginal fixation of the uterus, removal of the appendages, igni-puncture of the ovaries, and separation of pelvic adhesions. Mr. Taylor concluded his paper with a description of the part played by this operation in the practice of Professor Martin and Dr. Dührssen of Berlin, and drew attention to the important position which the operation was rapidly assuming, and to some of its more recent developments.

MANCHESTER MEDICAL SOCIETY.

F. A. SOUTHAM, M.B., F.R.C.S., President, in the Chair.

Wednesday, December 4th, 1895.

A CASE OF CHORDITIS TUBEROSA.

DR. YONGE showed a case of "singers' nodes" of the vocal cords in a boy, aged 14, without history, and without symptoms except partial loss of the upper register in singing. The unusual features of the case were the absence of hoarseness or symptoms of laryngeal fatigue; the peculiar position of the nodes, which were situated about the centre of the cords instead of anterior to that point, and the absence of any history of laryngeal overstrain. The cords, in spite of being weighted, as it were, by the nodes, vibrated in a similar manner to healthy cords. This was proved by blowing indigo on to the cords, when the particles moved outwards in a curved line towards the ventricles during phonation, behaving in precisely the same manner in which, as Dr Hodgkinson has shown, they do in the normal vibrating cord; the efficient vibration explained the absence of vocal impairment in the case.

PATHOGENESIS OF CANCER.

Mr. ROGER WILLIAMS remarked that for many years the microbic theory of cancer had been the order of the day. Inasmuch, however, as the cancer microbe had not yet been discovered, and as collateral indications of its existence were conspicuous only by their absence, he thought the time had now come for setting forth a rival theory, and that was the task to which he proposed to address himself. It was evident that out of the confusion of a transition period but two conceptions as to the origin of neoplasms had emerged, the one based on the cell theory and the other on the microbic theory. The question now was, Did cancers and other neoplasms arise, as J. Müller maintained, through a modification of the formative process, or were they the outcome of the inflammatory process, owing to the presence of microbes or other irritants *ab extra*? He inclined to the former alternative, and then discussed the various considerations favourable to this view, and the conclusion was reached that in most cases the outbreak of cancer was entirely spontaneous, and could not be attributed to the immediate action of any appreciable extrinsic cause whatever. In the genesis of neoplasms, as in the genesis of other organic structures, two factors had to be taken into consideration—the cells whence they originate, and the force that regulates the cellular activities. Lowly organised cells abounded in all parts growing and capable of growth, and these were the only real cancer and tumour germs. The essence of the neoplastic process was that certain cells of the affected part grew and multiplied more rapidly than their congeners, regardless of the requirements of the adjacent tissues and of the organism as a whole. The essential feature of malignancy was the persistence of this undue proliferative activity. The process by which cancers and

other neoplasms arose might be regarded as a kind of abnormal generation. Hence the genesis of cancer and other neoplasms was a phenomenon of the same order as discontinuous growth in general.

Malignant Endocarditis.

Dr. Dreschfeld made a communication on the etiology of this disease. Of the organisms found some did not occur in other affections; others were well-known microbes, such as the staphylococci, streptococci, pneumococci. In some rare cases the typhoid bacillus, the bacillus of tuberculosis, the bacillus of diphtheria, and the gonococcus had been found. Of the predisposing causes, besides pyæmia and septicæmic diseases, the acute zymotic diseases, pneumonia, and chronic endocarditis. Dr. Dreschfeld mentioned chorea, which in one case, without any previous endocarditis was associated with malignant endocarditis. A case was also referred to in which rupture of one of the aortic valves from overstrain was soon followed by malignant endocarditis. The season had also some influence on the occurrence of malignant endocarditis; several of the cases observed commenced during the months of September and October. Of the various clinical forms one was specially referred to in which the chief symptom besides the physical signs of endocarditis was an intermittent pyrexia, the temperature rising only a few degrees for several hours, and being soon succeeded by a normal temperature. The rise of temperature was ushered in by a sensation of cold or distinct chill and general *malaise*; during the afebrile period the patient felt comparatively well, and these cases often went on for months; they usually terminated fatally, but occasionally recovered. The examination of the blood during life, withdrawn by means of a syringe from a vein, often gave negative results on microscopic examination and on cultivation; occasionally, however, an organism—usually a streptococcus with virulent properties—was obtained. Large doses of quinine and the administration of arsenic appeared to give the best results. Several cases, with typical signs of malignant endocarditis—intermittent or remittent pyrexia, with evidences of embolism, etc.—recovered under this treatment.

Tuberculous Disease of the Middle Ear.

Dr. Milligan commented on the insidious onset of tuberculous disease of the mucous membrane of the middle ear. The occurrence of a discharge from the mucous membrane of the middle ear, unaccompanied by pain or any of the usual symptoms of an acute sthenic inflammation, and the presence of a perforation in the centre of a pale, œdematous, and uninflamed membrana tympani, should always excite suspicion. The presence of enlarged cervical glands and the early appearance of facial paralysis were also important symptoms. Special reference was made to the occurrence of facial paralysis in these cases, and to its comparative rarity in non-tuberculous middle ear affections. In order definitely to establish the tuberculous nature of such cases, scrapings of portions of diseased bone, removed from the interior of the mastoid process, were taken and inoculated subcutaneously into guinea-pigs. In the course of from two to five weeks the animals were killed and scrapings from enlarged glands taken and examined for bacilli. Microscopic sections of liver and spleen were also made and examined. Of ten cases thus experimentally examined, eight proved to be tuberculous and two non-tuberculous. Great stress was laid upon ascertaining the essential character of the morbid affection, not only from the point of view of treatment, but also from that of prognosis. In tuberculous middle-ear affections the prognosis was grave, and the younger the patient the graver the prognosis, thus differing very materially from simple inflammatory non-tuberculous cases when the prognosis was good. Free removal of all diseased foci of bone should be undertaken, and in general to effect this it would be found necessary to open the mastoid cells. Good food, tonics, and fresh air were essentials in the treatment. The paper was illustrated by lantern slides, microscopic sections, and dissections of guinea-pigs.

Medical Magistrates.—The names of Inspector Eames, R.N., of Harlesden, and Dr. J. S. Brookfield, of Enmedesbury, have been added to the Commission of the Peace for the county of Middlesex.

British Gynæcological Society.—At a meeting on December 12th, Dr. Clement Godson, President, in the chair, Dr. Smyly (Dublin) showed the following specimens: (1) Pyosalpinx removed by Vaginal Colpotomy; (2) three Myomatous Uteri removed *per vaginam* by *morcellement*; (3) Ectopic Gestation operated on at term. All the patients recovered. Dr. Bantock hoped that Dr. Smyly did not advocate colpotomy for all cases of pyosalpinx; in many it would be almost impossible to get good results by that method. In support of this statement Dr. Bantock related cases operated on by laparotomy where the complications could not have been dealt with *per vaginam*. With regard to the vaginal operation for fibroids, he did not think it was so good as the abdominal. He considered it most important that the integrity of the pelvic floor should be preserved, even if the uterus were represented only by the cervix. Compared to this, the prolongation of convalescence by one or two weeks was of little importance. Drs. Heywood Smith and Routh also discussed the question. Dr. Smyly replied that the rule that had guided him was the selection of the operation which seemed best for the patient; he held it wrong to perform a new operation for any other consideration. Many cases of pyosalpinx were rendered unsuitable for colpotomy by fixation of the uterus, for it was most necessary for this operation that the uterus should be capable of being drawn down. Briefly the principal advantages of vaginal over abdominal operations were: First, the risk of hernia was obviated; secondly, convalescence was shorter; thirdly and chiefly, the shock of operation was much less, and results were proportionately more favourable.—Mr. William Armstrong, J.P., of Buxton, read a paper on Utero-Ovarian Irritation as a Factor in the Causation of Rheumatoid Arthritis, and the special treatment necessitated thereby. After some remarks by the President, Dr. Leith Napier said Dr. Halliday Croom had pointed out some years ago the association of inherited rheumatism with a type of dysmenorrhœa, which he was the first to call rheumatic. It was possible for rheumatism to remain long latent, and to break out when uterine disturbance occurred, as in a case he had seen where the patient got an attack of acute rheumatism in two successive puerperal periods, remaining well in the interval. Dr. Elder (Nottingham) said that all the facts mentioned by Mr. Armstrong were consistent with the view that rheumatoid arthritis was neither the cause nor the effect of uterine disorder, but that both were alike effects of a common cause. The paper was also discussed by Dr. Routh and Dr. Fortescue Fox; and Mr. Armstrong replied.

South-West London Medical Society.—A clinical meeting of this Society was held at the Town Hall, Wandsworth, on December 11th, Dr. Gilbert Richardson in the chair.—Mr. Thos S. Howell read notes of a case of Hydronephrosis in which the obstruction in the ureter was believed to have originated in a strain at the age of 13; the patient died suddenly from hæmorrhage into the sac at the age of 41.—Mr. Percy Pope read notes of (1) Five Cases of Lightning Stroke occurring simultaneously, and (2) a large quantity of Morphine taken subcutaneously with suicidal intent.—Mr. M. G. Biggs read notes of a case of Septic Pneumonia.—Mr. A. E. Benson made some remarks on the Treatment of Incised Wounds, advocating the avoidance of the use of water in surgical incisions.—Mr. John Gay showed a patient who had received a Gunshot Wound above the Right Elbow, causing extensive laceration of the tissues and severance of the musculo-spiral nerve. The healing of the wound was followed by complete loss of power in the forearm, which was entirely restored by a ten months' course of massage.—Dr. A. D. Rose showed a case of Mitral Disease in a boy.—Dr. M. Mackenzie showed a case of Empyema in a boy, which had been entirely cured by one aspiration.

West London Medico-Chirurgical Society (Clinical Evening).—At a meeting on Friday, December 6th, Dr. Symons Eccles, President, in the chair, Dr. Seymour Taylor showed (1) a man, aged 30, with Symmetrical Drooping of the Pinnæ, which might, he suggested, be an instance of maternal impression, the mother having been frightened by a rat when four months pregnant. (2) A woman presenting the

classical signs of Myxœdema; the thyroid body was enlarged, though probably dystrophic. He believed that, as in the parallel case of disease of the adrenals, any actual disorganisation of the thyroid body would produce myxœdema. (3) A woman with the usual signs of Myxœdema, except that she was remarkably pallid, and was without the usual circumscribed blush on the cheeks. He believed that there existed a distinct variety of pallid cases. In this case there was no albuminuria or evidence of cardio-vascular changes.—Dr. Dobson remarked that in one of his cases there had been albuminuria, which disappeared under the thyroid treatment.—Mr. Bidwell showed a case of Sclerosis of the Superior Maxilla in a woman, aged 52. A molar tooth was extracted, and since then the swelling had greatly decreased, thus showing that it was not an osteoma. There was no evidence of syphilis or acromegaly.—Mr. McAdam Eccles showed (for Mr. Paget) a case of Resection of the Elbow for compound fracture of the humerus.—Mr. Bidwell said that when possible resection should not be performed in these cases, since a stronger joint thus resulted.—Dr. Pardoe showed (for Dr. Gannod) a case of White Spot on the Heart in a patient, aged 45, who had complained only of shortness of breath and pain in the chest. There was a loud systolic rub or *bruit*, most intense to the left of the sternum in the third intercostal space, heard faintly at the base, not conducted to the angle of the scapula, and varying with respiration. The area of cardiac dulness was not increased. There was no history of rheumatism, syphilis, or scarlatina, and the pulse was normal.—Mr. Keetley showed a boy on whom he had operated for Radical Cure of Hernia with Undescended Testis by bringing the organ into the scrotum and fixing it there by suture to the adjacent tissues of the thigh.—Mr. McAdam Eccles showed a girl, aged 13, with at least Twenty-three Exostoses. There was a history of rheumatism, but none of syphilis. The mental condition had not been noted. Dr. Shuttleworth quoted the case of a boy thus afflicted who was imbecile, and a girl who was mentally defective.—Dr. Alderson showed a case of Rodent or Epitheliomatous Ulcer on the Nose of a man, aged 50. There had first been a wart, which had been treated with caustics. He believed the ulcer to be epitheliomatous. Mr. Bidwell concurred in the diagnosis, and advised operation under cocaine. Mr. McAdam Eccles thought it was rodent ulcer owing to its history, its slow growth, and the non-involvement of glands. He suggested ethyl chloride as a local anæsthetic. Mr. Keetley believed the case to be probably one of rodent ulcer. Dr. Potter held that rodent ulcer was an early stage of epithelioma.

Cardiff Medical Society.—At an ordinary meeting on December 6th, Alderman Edgar Jones, M.D., President, in the chair, Dr. Patterson showed three cases of Graves's Disease, in none of which was there either exophthalmos or von Graefe's sign. Dr. C. T. Vachell thought the slight thyroid enlargement was of a simple nature, and the accelerated pulse due to a neurotic temperament. Dr. John Williams spoke, and Dr. Patterson replied.—Mr. J. Lynn Thomas showed (1) Scirrhus of Male Breast, the size of an orange. (2) Vermiform Appendix recently amputated after the seventh attack of typhlitis. Patient doing well. (3) Calculous *Debris* removed from the Left Kidney, the chief symptoms being hæmaturia and extreme irritability of the bladder, the location of the mischief being differentiated by the cystoscope. Eighteen months after the nephrolithotomy the patient's health and urine were normal. (4) Calculus weighing 6 drachms suprapubically removed from a girl aged 9 years. (5) Alternating Calculus weighing 6 ounces 6 drachms removed by the combined perineal and suprapubic methods. The combined method greatly facilitated the removal of the large stone. Dr. Herbert Vachell remarked on the rarity of scirrhus of male breast, he having seen only one in the practice of the late Mr. John Wood. Dr. Cook had seen a Calculus in a young girl, and Mr. Lynn Griffiths made remarks and showed two Calculi removed by lateral lithotomy.—Dr. Stewart (Bridgend) read a paper on the Increase of General Paralysis in England and Wales. He treated the subject chiefly from the statistical standpoint, and showed in which grades of society and sex the increase took place.—The library and the other rooms have recently been newly furnished at much expense. The membership numbers eighty.

REVIEWS.

The Physiology of the Carbo-hydrates: An Epicriticism. By F. W. Pavy, M.D., LL.D., F.R.S., F.R.C.P., Consulting Physician to Guy's Hospital, etc. London: J. and A. Churchill. 1895. (Cr. 8vo, pp. 162. 3s. 6d.)

It will be remembered that Dr. Pavy devoted his Croonian Lectures to the record of a series of experiments, extending over many years and involving a prodigious amount of work, as to the physiology of the carbo-hydrates and the exposition of certain conclusions to which he had been led by them on this subject. Subsequently his experiments and deductions were more fully stated and expounded in a volume entitled *The Physiology of the Carbo-hydrates*, published last year. His views, it will be remembered, were of a somewhat revolutionary kind, being directed to nothing less than the overthrow of the glycogenic doctrine, which, since it was enunciated by Claud Bernard, has held undisputed sway in text-books of physiology. The conclusions were of such fundamental importance, affecting not only the pathology of diabetes, but also the whole theory of nutrition, and were based upon a course of investigation so painstaking and elaborate, that we felt bound at the time to devote much space to laying them before our readers. It was to be expected, and, indeed, to be desired, that these views should be closely and thoroughly criticised both by physiologists and physicians. Dr. Noël Paton, in consequence of a statement contained in a paper by him published in the *Philosophical Transactions*, to the effect that Dr. Pavy's theory rested on an unsubstantial basis, and had been completely refuted by the work of Seegen and others, was under some obligation to take up the gauntlet which Dr. Pavy had thrown down. This he did in the *Edinburgh Medical Journal* for December, 1894, and some astonishment must have been felt by those who read this article at the extremely unsubstantial grounds on which Dr. Pavy's lifelong labours were curtly condemned as "unsubstantial." The volume before us is a very elaborate reply by Dr. Pavy. In it every point appears to have been taken up, and it will be admitted that Dr. Pavy makes out a very strong case. At any rate, he succeeds in showing that much of the evidence upon which Dr. Paton relies is not capable of supporting the very sweeping conclusions which he seeks to base upon it.

Dr. Pavy's main contention is, to quote his own words, "that the chemical changes taking place in connection with life result in building up on the one hand and breaking down on the other. The building up is effected by the synthesising power possessed by living protoplasm. Protoplasmic power is the term applied to it. The breaking down is a process effected by ferment action, and different ferments break down in different ways. For instance, as I have suggested, the proteid molecule built up by the synthesising influence of protoplasmic action from carbo-hydrate and nitrogenous matter may be subsequently broken down by ferment action of different kinds, with the liberation it may be of glycogen, it may be of sugar, or it may be of fat. There is nothing chemically inconsistent, indeed on the contrary, with the proposition that carbo-hydrate may enter the molecule and fat be cleaved off."

Dr. Paton himself says in one place that "it is now universally admitted, on the evidence of the formation of glycogen from proteids, that in the laboratory of living protoplasm carbo-hydrates may be formed from proteids," but he wishes Dr. Pavy's analytical evidence to be rejected mainly on the ground that Dr. Pavy has not given an elementary analysis. Dr. Pavy meets this by here producing the results of special analyses made for him by Mr. Ling, which fully confirm Dr. Pavy's contention founded on other analytical data. Sugar is present in the blood, but, according to Dr. Pavy, it is there as a constitutional ingredient just as it is present in other, and perhaps in all, the organs of the body. The quantity of sugar in the urine is for him an exact index of

the amount of sugar in the blood. The glycogenic doctrine requires that there should be a considerable portage of sugar by the blood from the liver, where it is said to be manufactured to the tissues, where it must be used to meet the functional requirements of the organs; of any such transfer the urine would give evidence, since the increase in the urinary sugar required by the theory does not take place the transfer, Dr. Pavy contends, cannot take place: The carbo-hydrate stuff is charioted by the blood not as such, but as a constituent part of a complex proteid molecule. *Q.E.D.*

There can be no doubt that Dr. Pavy's theory is very fascinating in its simplicity and completeness. We shall hope at an early date to have an opportunity of discussing some of its bearings more fully. Meanwhile, we have said enough to show that this *Epicriticism* has intrinsic merits which render it worthy of perusal. Dr. Pavy is a vehement controversialist, and we cannot but regret some of the expressions of which, in the heat of a very natural indignation, he makes use. But we shall not dwell on this side of the question, nor shall we enter into a discussion of his complaint against the officials of the Royal Society, which is set out in a preface to this volume. We gather that it is admitted that an irregularity did occur in the manner in which Dr. Pavy's paper was accepted for insertion in the *Philosophical Transactions*, but the President and Council of the Society have expressed their regret that the statement to which we have referred at the beginning of this notice should have been published, and the matter may well be allowed to rest there, now that Dr. Pavy has taken steps to vindicate his views from the rather cavalier treatment which they met with at the hands of Dr. Paton.

Lectures on Auto-Intoxication in Disease, or Self-Poisoning of the Individual. By Ch. Bouchard, Professor of Pathology and Therapeutics, Member of the Academy of Medicine, and Physician to the Hospitals, Paris. Translated, with a Preface, by Thomas Oliver, M.A., M.D., F.R.C.P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, Newcastle-upon-Tyne; etc. Philadelphia: The F. A. Davis Co. London: F. J. Rebman. 1894. (Demy 8vo, pp. 318, 10s.).

Dr. Oliver is to be congratulated on introducing to the English-speaking medical profession Professor Bouchard's *Lectures on Auto-Intoxication*. The busy general practitioner is, as a rule, unable to follow the rapid advances of medical science, partly, no doubt, because the researches are frequently too technical or are incomplete, and partly because, leading so practical a life, he is apt to subordinate everything to the acquisition of means of immediately relieving the patients under his charge. Professor Bouchard holds a distinguished place in medical science, and has, moreover, the faculty of expressing his views in language to be understood by everyone.

In the extremely able preface which Dr. Oliver has placed before the translation of the lectures under consideration, he shows in a succinct and very lucid manner the importance of the study of auto-intoxication. This term is perhaps not strictly scientific, since it includes two very different processes, or rather two processes which have not yet been sufficiently elucidated to be classified together. One of these processes is the self-poisoning which may occur by means of the retention in the body of certain poisonous products of tissue change; and the other is the self-poisoning resulting from the bacterial decomposition of food in the gastro-intestinal tract. In the latter case the question is simply one of the absorption of poisons which are formed outside the tissues, that is, in the alimentary tract; in the former case the poisonous substances formed by the tissues are retained in the body.

It is not necessary to follow Professor Bouchard into all the details he has brought forward, perhaps somewhat egotistically; but no one who reads these lectures can but be struck by the fact of the great practical importance of the subject with which they deal. The part of the work which deals with the toxicity of urine and with the toxic condition known as uræmia, is one in which, as Dr. Oliver says in his preface, Professor Bouchard is at his best; and although, from the experimental point of view, the account is incomplete, the suggestiveness of the lectures is to be highly commended. With uræmia every practical medical man has to deal, and our knowledge of it is so deficient that the clear statement of fact to be found in Bouchard's work is of great value. But little need be said concerning auto-intoxication from the gastro-intestinal tract: the subject is treated in the same manner as that of uræmia, and with highly suggestive conclusions, since the great need of disinfection of the intestine in many conditions is clearly shown. Professor Bouchard's lectures, excellent as they are, deal only partially with a wide subject; but they are worthy of study by everyone interested in practical medicine.

As knowledge progresses the question of auto-intoxication will have to be considered in its relation to that of the "internal secretion" of the normal glands of the body, a subject which was clearly dealt with by Professor Schäfer in his address before the Association at the annual meeting; and it may, in the future, be decided how far many cases of "auto-intoxication" are really cases of the stoppage of a normal internal secretion which is essential to the well being of the body.

In conclusion, Dr. Oliver's translation of Professor Bouchard's work is to be heartily recommended to the medical public.

Fonctionnement de la Maison d'Accouchements Baudelocque Année 1894. [Report of the Baudelocque Lying-in Hospital for the year 1894.] Paris: G. Steinheil. 1895. (4to, pp. 100).

In the preface to the annual report for 1894 of the Baudelocque Clinic, Professor Pinard states that since 1872 the mortality of lying-in cases under his care has constantly diminished until in the year 1894 the total mortality was 7 out of 2,127 women who were delivered or miscarried (3.4 cases). Under natural labour, with a normal pelvis and presentation of the vertex, there were delivered 732 primiparæ and 1,014 multiparæ. Two of the children of the primiparæ died during the act of birth, but none of the children of the multiparæ. After the birth, 20 children of primiparæ and 14 of multiparæ succumbed. Under spontaneous labour with contracted pelvis (that is, diagonal conjugate of 4½ inches or less) and head presentation, 21 primiparæ and 49 multiparæ were delivered, and the 70 children all left the institution alive with the exception of 1 multipara which died on the second day of double meningeal hæmorrhage. Presentation of the face was met with 4 times (2 multiparæ, 2 primiparæ); all the mothers recovered, 1 child died (fracture of skull by forceps).

Breech or footling presentation occurred in 42 cases (21 primiparæ, 21 multiparæ); of these, 6 cases had contracted pelvis, and two of these children succumbed; 35 had normal pelvis, and 2 of the children died; all the mothers recovered.

There were 8 cases of presentation of the shoulder, with 3 dead children (1 macerated, 1 from basiotripsy, and 1 died during extraction); all the mothers recovered.

The forceps was used in cases of normal pelvis 29 times in primiparæ, with the result of the death of one child; 4 times in multiparæ, with the result of 3 living children. The forceps appears to have been employed in no case of contracted pelvis, symphysiotomy having taken its place. During the year there were 21 symphysiotomies (12 primiparæ with 1 maternal and 1 fœtal death, 9 multiparæ with 1 maternal and 1 fœtal death).

Basiotripsy was performed 7 times (always on dead children and with success as to mothers). There was 1 case of Porro's operation for contracted pelvis, successful to mother and child. Premature labour was induced in 3 cases, with recovery of the mothers and of 2 children. The indications were in one case hæmorrhage and in the other two a grave cardiac condition in the mother; the operation was not performed for contracted pelvis. There were 4 cases of extra-uterine gestation: 1 of these died before operation, the other 3 were operated upon with success (1 by vaginal section, 2 by abdominal section and "marsupialisation").

Artificial delivery of the placenta (that is, introduction of the hand into the uterus to remove the placenta, whether separated or not) occurred in 34 cases (19 primiparæ, 15 multiparæ); of these women 1 died. The indication for the artificial delivery of the placenta was usually hæmorrhage; 4 cases only required it on account of failure of the placenta to separate.

Twenty two women (9 primiparæ, 13 multiparæ) were delivered of twins; amongst these was an interesting case of both twins presenting by the face. Eleven fœtuses were deformed. Ophthalmia occurred in 38 cases; this was treated in the first three-quarters of the year by irrigation with solution of carbolic acid and cauterisation with nitrate of silver: in the last quarter of the year by solution of permanganate of potash; in no case did corneal opacity occur. Nine patients (8 primiparæ, 1 multipara) suffered from eclampsia. Of these, 1 who was attacked during pregnancy recovered; of 5 in whom the attack occurred during labour, 1 died; both of the patients attacked after labour succumbed. Six of the children survived. The treatment employed was the administration of chloroform and chloral, inhalation of oxygen, and injection of artificial serum where there was a tendency to anæmia.

The report ends with a full account of the fatal cases and with statistical tables, including one of the gynæcological operations performed in the clinic; of these there were 56, with 3 deaths.

THE SCHOTT METHODS OF TREATMENT OF CHRONIC DISEASES OF THE HEART. Illustrated. By W. BEZLY THORNE, M.D., M.R.C.P. London: J. and A. Churchill. 1895. (Roy. 8vo, pp. 79. 5s.)

THIS book contains an account of the physical treatment of cardiac disease introduced by the brothers Schott, of Nauheim, which has recently been the subject of a long correspondence in our columns. The first and second chapters are devoted to a short description of Nauheim and its baths. In the third chapter the results of the therapeutic movements on the pulse and heart are given and an attempt made to explain them. The exercises are limited in the Schott treatment to movements against resistance, this resistance being interposed by the "operator," or in some instances by the patient himself. The next chapter is an important one, since it deals with the special conditions for which the Schott treatment is available. As regards heart disease, all chronic cases are subjected to the treatment except those with marked disease of the endocardium or advanced disease of vessels. Diseases due to the uric acid diathesis, asthma etc., also, it is stated, derive benefit. In Chapter v the series of regular exercises are described, with illustrations. These exercises are never pushed to the extent of producing dyspnœa, palpitation, or fatigue. The last chapter gives cases illustrating the benefits obtained.

There can be no question that if the Schott treatment can accomplish all that is claimed for it, it should become one of the recognised modes of treatment; at all events, it deserves a more extended trial than it has yet obtained. One of the striking facts is, according to those who recommend this treatment, the diminution of the cardiac dulness produced by it. It is admitted that the whole of the gain is not permanent, but the dulness does not relapse to its former dimensions. This is one of the subjects raised by many of those who took part in the recent correspondence in the JOURNAL and as will have been seen no explanation which is entirely satisfactory can be given. This book explains in a lucid fashion the main features of the Schott treatment so as to enable the reader to carry it out for himself.

STATISTIK DER INFECTIONEN ERKRANKUNGEN IN DEN JAHREN 1881-1891, UND UNTERSUCHUNG DES EINFLUSSES DER WITTERUNG. [Statistics of Infectious Diseases in the Years 1881-1891, and an Examination of the Influence of the Weather.] Von JOSEF KÖRÖSI, Director des Communal-Statistischen Bureaus (Buda-Pesth). Berlin: Puttkammer und Mühlbrecht. (8vo. pp. 141; 5 tables. 4½M.)

STATISTICS of the mortality from infectious diseases in any locality, if founded upon the returns from a sufficiently large population, are always valuable, and in the hands of such a master as M. KÖRÖSI may be trusted, in spite of the evil reputation for mendacity which statistics have earned, to give some instructive information. Since June 1st, 1881, compulsory notification has been in force in Buda-Pesth for small-pox, scarlatina, croup, diphtheria, measles, typhoid fever, cholera, and cholerine. The notification certificate requires particulars to be given as to the number of other residents in the house in which the patient was attacked, the number of children, whether the patient if a child, attended school, and if so what school, and the number of other children in the house of school age, and the school they attended. The first striking fact brought out is the enormous increase in the number of notifications of diphtheria, which rose from 183 in 1885 to 2,429 in 1891. Increased accuracy in diagnosis cannot be invoked to explain this increase, since the number of notifications of croup rose in the same period from 180 to 422. Even when some allowance is made for a greater thoroughness of the operations of the notification law, the figures appear to prove conclusively that Buda-Pesth has been no exception to the rule that during recent years diphtheria has become increasingly prevalent, especially among town populations. Epidemics of measles and scarlet fever recurred at irregular intervals, and there was no distinct evidence of any diminution in their extent and severity; but small-pox has been almost abolished, and the number of cases of typhoid fever as well as their mortality has shown a decided tendency to diminish. The marked diminution in the number of cases and deaths from small-pox M. KÖRÖSI attributes to the increased efficiency of vaccination, dating from 1887. In the previous year there had been a considerable epidemic. The mortality from measles was per 10,000 living—in 1881-83, 7.0; in 1884-86, 13.7; in 1887-89, 2.7; in 1890-92, 0.0.

It would be impossible to follow M. KÖRÖSI through all the interesting discussions of the statistics, but we may remark that he gives some very striking figures to show that measles is a "school disease." In nine out of the eleven years under consideration a measles epidemic broke out, or was very largely increased, soon after the opening of the schools, and in every one of the eleven years measles ceased to prevail shortly after the closing of the schools. A minute examination of the dates of opening, which varied in certain years, is held very strongly to confirm this conclusion that school conditions favoured the spread of measles. The long incubation period of measles renders it necessary to make special allowances at the beginning of the school term before drawing final conclusions; but even the gross figures are sufficiently striking. Adding together the figures for the eleven years, M. KÖRÖSI finds that during the holiday quarter 3,554 cases of measles were notified; in the first school quarter, 11,865; in the second school quarter, 13,253; and in the third school quarter, 13,147.

NOTES ON BOOKS.

The Bacteriological Test of the Purity of Water.—By E. H. HANKIN, M.A. (Agra: *Star Press* Artillery Bazaar. 1895. Demy 8vo, pp. 22. 8 annas.)—This is a pamphlet urging the small utility of chemical tests of the purity of water, and giving very simple and complete directions for applying what may be called the quantitative bacteriological test. The directions will prove invaluable to those who have only a limited knowledge of manipulation, and are sufficient to enable any waterworks engineer to safely take the necessary sample and sow his tubes. The chief value of the publication is, however, in the incidental expression of those opinions, which the author's unusually minute experience of water examination has led him to adopt. Professor HANKIN emphasises the extreme delicacy of the slime film on which the efficiency of waterworks sand filtration depends, and demands the separate examination of the water from each filter bed, a precaution which it is not laborious to take, and one which adds greatly to the value of the *prima facie* quantitative test. He also deduces the conclusion, already well established by independent research, that the use of sand and similar material in domestic filters is at the best worth-

less, and mentions instances in which it has led to the actual contamination of otherwise pure water by serving as a breeding ground for microbes. The Pasteur Chamberland filter will, if introduced into barracks, jails, and other establishments in India, do much to remedy this evil. The pamphlet does not deal with the qualitative examination of organisms, which is of course desirable as soon as the appearance of an epidemic or the quantitative test has thrown suspicion on any water supply.

A Textbook on the Science and Art of Bread Making, including the Chemistry and Analytical and Practical Testing of Wheat, Flour, and other Materials employed in Baking. By WILLIAM JAGO, F.I.C., F.C.S. (London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. 1895.)—In this book the scientific as well as the mechanical aspect of bread making is fully considered, and the author gives, in addition to his own researches, the views held by other recognised authorities. The latter part of the book, consisting of seven chapters, contains a useful description of a thoroughly practical character of the analytical processes for the commercial testing of wheats and flours, the estimation of the constituents of bread, and the detection of adulteration. The whole book is very clearly arranged, and is illustrated with fourteen large plates and a number of woodcuts. It should not only prove of value to those directly engaged in bread making, but is likely to be useful, partly on account of the many tabulated results of investigation, to any who have to deal with the scientific side of the subject.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Messrs. BURROUGHS AND WELLCOME (Snow Hill Buildings, London, E.C.) issue a chart for recording on a uniform system the results of the treatment of diphtheria with antitoxic serum. It is issued in two sizes, the larger being 14 inches long and 6 inches wide. Space is afforded for noting the important points in the patient's condition before and for four days after injection. There is also a temperature chart and space for notes as to complications. The smaller chart is constructed on the same plan. Messrs. Burroughs and Wellcome ask us to state that in order to minimise the difficulty of adjusting the dose in various cases and at various ages they have adopted the Behring unit system of estimation, and the serum is now supplied by them, either dry or liquid, in phials or tubes containing an adult therapeutic dose of exactly 600 units.

A TWO-HEADED MONSTER (PLEUROPAGUS).

ON February 25th, 1894, Dr. Griffiths, of Carlton, Melbourne, was called to attend a poor woman in labour. The pains were feeble, and the patient was nervous and anxious. A foot was felt and brought down with gentle traction, and presently the second foot was caught, and very quickly the pelvis and lower half of the child was delivered. Up to this time everything pointed to the swift and safe delivery of a living child at full term. The arms were delivered folded across the chest, and Dr. Griffiths then endeavoured to find the mouth with his finger, but failed, owing to the firm contraction of the uterus.

Assistance was now obtained and chloroform administered, but the difficulty of delivering still continued. With very great trouble a hand was forced in between the head and neck and tightly contracted uterus. Chloroform was now suspended, for though the woman lost no blood she was in a very alarming condition of prostration and weakness. Another medical man was now called in, but before his arrival at 5.30 P.M., the woman became collapsed and expired undelivered, the legs of the fœtus dangling between the thighs of the mother.

Permission being obtained from the husband, Dr. Griffiths made a *post-mortem* examination. He found that the child had two perfectly-formed heads and necks springing from the one thorax.

The child was a female, and the body below perfectly formed in every respect. The heads were perfectly symmetrical and well shaped, and, as can be seen by the photographs, which were taken by Mr. Herbert Hewlett, the head on the right side is more in the mid-line. The chest is wider than usual, and there are two spinal columns converging at the sacrum. The photographs will explain the cause of the impossible delivery, for the greater the pull downwards the more the heads became impacted at the brim. The mother was a healthy, industrious woman, and had previously given birth to seven children.

Mr. Hamilton Russell, F.R.C.S., undertook the dissection of the fœtus, but had to discontinue it owing to objections made by the father. As far as the examination went, he found two œsophagi opening into one stomach, from which one duodenum led away. The rest of the canal was normal. Two aortæ were found leading away from one left ventricle, but the distribution of the branches and the terminations of the main trunk were not ascertained.

A case very similar to this is reported by Dr. Tinley in the BRITISH MEDICAL JOURNAL of February 2nd, 1889, page 240 (illustrated).

The obstetrical aspect of Dr. Griffiths's case is interesting. Large monsters often cause great anxiety to the medical attendant, especially when the labour proceeds easily at first. In arrested head after a footling presentation the odds that a second head causes the difficulty are so small that the possibility of the existence of monstrosity is very naturally overlooked. When one head presents, as in Dr. Tinley's case, the true state of affairs is detected much earlier and with little difficulty.

Teratologically Dr. Griffiths's monster was most probably a

"pleuropagus" or "dicephalus bispinalis." As Mr. Lowne classifies the variety in the College of Surgeons' *Catalogue*, pleuropagus is distinguished by having "two axes adherent side by side. Such abnormal twins have hitherto been called dicephalus, from their external resemblance to dichotomous conditions of the anterior extremity of the axis.

In these forms, however, the whole axis is double. They are transitional between anterior dichotomy"—bifurcation of the axis at the anterior (in animals) or upper (in man) extremity, double head and shoulders, in fact—"and emprosthozygosis" (union face to face above the umbilicus, the well-known "xiphopagus" and "thoracopagus," according to degree of union). "The median limbs are frequently fused together, and are sometimes reduced to mere tubercles."

In Dr. Griffiths's case there were "two spinal columns converging at the sacrum," which was probably more or less double. The upper and lower extremities on the median aspect were suppressed—a feature in true pleuropagus. In Dr. Tinley's case one fœtus had an arm on the median axis, as the first illustration in his report will show. It was probably another example of pleuropagus. In dicephalus proper the axis is more completely double down to the point of union of the two vertical columns. Pleuropagus is the usual, if not constant, variety of two-headed monster in man, whilst dicephalus is common in cattle. In the same way acardiacus acephalus, or headless twin, is common in man, whilst perocephalus, or single fœtus with the head not developed, seems unknown in man, though not rare in calves.

Presentation.—Mr. John Rand, F.R.C.S., of Dulwich, has been presented by his friends and patients with his portrait, as a mark of their appreciation and esteem, on the occasion of his retirement from practice.

A new children's hospital, with accommodation for sixty patients, has recently been opened in St. Petersburg. The hospital, which owes its creation largely to the initiative of Madame E. von Wahl, wife of the mayor of the Russian capital, is intended for the reception of chronic cases.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XII.—OMAGH WORKHOUSE INFIRMARY, CO. TYRONE.

Our visit to this house was, unfortunately, made during the absence of the medical officer (Dr. Fleming), but the master and matron courteously gave us every assistance for the purposes of this inquiry. The house is of medium size, standing at a little distance from the town. As we entered the gates it was pleasant to see an old man enjoying a rest on a sheltered seat in the drive. This is the first time that such an indulgence has come before us.

The Hospital Department

has overflowed into the house, where a male and a female ward on the first floor in the infirm wings have been set apart for the use of the chronic cases. The male ward had 9 patients, and the female ward 12. Some of these appeared to be feeble minded, but not of the lunatic class. In the hospital the 34 beds are generally full. The hospital wards occupied the two floors, the nurses' quarters being in the middle of the block. Besides the adult wards there is a small room for children, holding 8 beds; here we found three little ones, all out of bed, under the care of a wards-woman. They were retained in this division on account of delicacy, which unfitted them for the rougher life of the schoolroom. The lying-in ward is on the first floor, holding 3 beds, which were empty. We were struck with the cleanliness of the room.

In the Wards

there is a painted wooden dado, except in the male ward on the first floor; the top of this dado forms a shelf, and there are besides bracket shelves between the beds, on which we saw fancy mugs and cups, evidently personal property. Most of the beds are the "harrow" frames with straw pillows and ticks; there are a few wire-wove mattresses scattered about the wards. The merits of straw as bedding are an open question; much may be said for and against it, and a good deal depends on how the tick is filled and how often the straw is changed; but there can be no doubt as to the unsuitability of narrow wooden frames (2 feet 3 inches by 6 feet), without sides, for use in a hospital ward. The windows are on one side only, the north, and there are small slits in the opposite wall. Some of the bed heads were across the window, and in winter the imperfect frames admit more weather than is suitable for a sick ward. As the grates, one to each ward, are of the old style, the wards in winter must be cold and draughty. There are no day rooms, and the wards were decidedly crowded. We saw no bed cards. The flags on the ground floor wards are covered with cocoanut matting; a strip of the same material is laid down the middle of the upper wards, and also on the landings.

The Lunatics

are placed as usual at each end of the hospital block; their quarters are decidedly superior to those provided in many other houses; the cells have been entirely removed; the ceilings are boarded; one room is used as a day room and the other as a dormitory. The walls are coloured, and there is an endeavour by means of pictures and such adornments to make the surroundings cheerful. The patients looked clean and had a brighter aspect than many we have seen. There is an attendant on each side, not trained, or paid, except by rations and extras. There were seven men and eleven women in these divisions.

System of Nursing.

There is one nurse to take charge of six wards in the hospital and two large wards in the body of the house, these

latter being in a distinct building at some distance from the hospital. This nurse is not trained, and her assistants on the female side are the unfortunate women detained with their children in the house; and on the male side, the nearest approach to a decent able-bodied pauper who can be found in the house. As Dr. Fleming says in his report, the selection "has to be made from material damaged mentally, morally, physically, or in all three ways combined." There is no night nurse, nor are there any bells placing the wards in communication with the officials.

In Justice to the Nurse

we would note that her wards were clean, her patients and their bedding appeared to be clean, and certain slight details betokened thoughtfulness for the patients; mugs and cups showed individual possession; the crockery for the service was not only pretty but bright and clean. In the absence of Dr. Fleming, we asked no questions as to the various diseases of the patients under treatment; several, perhaps about half, were in bed; among these were the chronic and helpless cases and senile patients; winter increases the number of admissions and the severity of the cases. It is therefore evident that though the nurse is capable her hands are overfull, and hence the nursing is not as good as it might be. At this point we cannot do better than refer our readers to Dr. Fleming's exhaustive report published in the *Tyrone Standard* of September 21st, 1895.

The Infirm Wings

having been invaded by the patients from the hospital, the infirm class are placed not only in one of the ground-floor wards, but some of the women are on the second floor, these wards holding 27 and 22 beds respectively. We saw some of these old women in bed, the matron telling us that she did not enforce the rising of the old people every day if they seemed unfit for the exertion. The old men and women looked clean and neat in their persons and clothing, and the wards also were clean and tidy. The only light came from a window at either end; stoves were used for heating the wards; there was need of more armchairs for the use of the old people. The beds are the barrow frame, with straw ticks and pillows. A wider frame would make these beds much more comfortable. The men have a day room; that for the women is taken for

The Nursery.

This room is of the same size and shape as the infirm ward; the long low-pitched room, with a window at each end, one fireplace, and a door leading into the female infirm ward, is difficult to warm in winter, and rarely bright and sunny in summer. This department has successfully resisted the civilising influences brought to bear on the other parts of the house. There were six dirty, untidy, uncared-for infants with their mothers; the air was close, the cradles filled with straw contributing their unsavoury odour to the atmosphere. We saw no apparatus for washing or bathing the infants, nothing but the slatternly women with their dirty children. An inmate may have been responsible, but she was evidently unable to exercise control. The house has made

No Advance in Sanitation.

The sick wards, infirm wards, lunatic wards have no indoor conveniences; pails and buckets placed in the wards are all the provision made, which is neither decent nor sanitary; these must remain in the locked wards all night. There is no service of water in the hospital, and therefore no baths or means of giving such. We saw a washstand and basin in each ward of the hospital, and also in the infirm wards, but these offer a poor substitute for the generous supply of hot and cold water in a properly constructed lavatory, and for the bath.

Recommendations.

There were many points in the management of this house which betokened humane and enlightened care for the inmates on the part of the guardians and their officials, but no amount of thoughtfulness will correct the evils of an antiquated building, or supplement the services of an overworked nurse, and it is to these two points that we would direct the attention of the guardians. The nursing of the sick is carried out under the disadvantage of the patients being located in widely separated wards; and when we add that the only nurse has only pauper assistance of a doubtful kind, it is clear that the work cannot be done efficiently. Then the sanitary arrangements add to instead of saving the labour of the staff, and, worked at their best, are unsatisfactory from all points of view. We most heartily endorse every word of the report which Dr. Fleming has placed before his Board, and we would add our suggestions that the nursing staff be increased by at least a second nurse by day and by a trained nurse by night; that bells or some other means of communication from the hospital and wards be contrived with the lodge and the master's quarters; that the whole of the sanitary system be overhauled with the intention of bringing it up to date. It would be found a more satisfactory method of working to place all the sick under one roof. Lastly, the infants should be placed under the charge of one nurse, the mothers having access to them at stated hours.

The Mode of Election of Poor Law Officials.

Dr. Richard R. Leeper (Rathdrum, co. Wicklow) writes: The attention of the public being now directed to the Irish workhouses mainly through your active endeavours to improve these institutions—I venture to think the present moment not an inopportune time in stating some of my ideas with regard to the working of the Poor Law in this country.

First, I wish to ask any who really understand the Poor law system if they consider that system can ever be made perfect in its working so long as the present mode of election of officials to Poor law appointments is adhered to. I say it cannot. From the election of a medical officer or clerk of a union to that of the most subordinate of officials, is not the open canvassing, the modes of voting, and the election generally too often but a scene of envy, hatred, and malice, and all uncharitableness, undignified and unbecoming to our profession, alike to electors and elected, and most hurtful to the efficient working of the Poor-law system? If information is needed by the unlearned in these proceedings, let such a one attend a Poor law election, or read the Carmichael prize essay, written by Dr Lalor some years ago, which truthfully describes these matters. The writer clearly and with no sparing hand exposes this foul ulcer; but alas! the Legislature and the public seem too careless or too unwilling to apply the sorely-needed cautery of reformation to effect its cure.

Improve a workhouse as you will so that you can improve no more. Allow the existing staff to be perfect and the working of the institution be without fault. Now suppose a vacancy to occur in the staff; supposing an unsuitable person be elected, will not such a bad appointment undo all your good work for years? A drunken master or immoral matron, or untrained and unsympathetic nurse of course might be elected under the most perfect of election systems; but is not such an appointment far more likely to be made when an election is a mere party affair, a political trick, or a job to oblige a friend or annoy an enemy? Why cannot the candidature for election to a Poor law appointment enter the service by examination with some hope held out to him of advancement when once there? When will experience, knowledge, and ability be the means by which men hope to gain these appointments? Take for example the post of sub-sanitary officer. When will these posts be filled by reason of the applicants' knowledge of the rudiments of sanitation and the laws of public health and not by reason of his knowledge by the local guardians, their feelings, politics or religion? The microbes of disease have no politics and their religion is the destruction of men.

In improving the workhouses we are opposed by guardians on grounds of expense. "It is all a matter of money," we are told. Have the guardians ever thought how much money is yearly wasted by their own carelessness? How many paupers are now in Irish workhouses, whose families could be made to pay for their maintenance, or at least contribute towards it? How many lunatics are in Irish asylums whose relations (often well-to-do farmers) place them in pauper asylums where the are "kep' for nothin'." I myself know of many such a case, and am of opinion that if the guardians were to carefully sift every case in their unions much relief would be given to the rates, and much money saved which might profitably be expended in modernising the workhouse infirmaries and rendering them suitable for their purpose. Lastly, when we have night nursing, proper cooking, and well managed institutions, we shall still want good sound legislation to enable us to prevent the children of the vagrant being reared as vagrants. We shall want authority to send the dangerous lunatics to asylums, an authority which is now denied us by law. We shall want a legal hammer to repel and drive out from our workhouses the idle and professional pauper who uses the union as a tourist does a hotel.

Overcrowding in London.—In spite of the provisions made in the Public Health (London) Act, 1891, respecting overcrowding, there is still much overcrowding in the more central districts of London. The best and most natural cure for the evil is that workmen should live farther from the centre, but before this can take place to any great extent there must be cheap means of locomotion from the central districts where the work is done to less crowded neighbourhoods. Efforts are again to be made to obtain improved services of cheap workmen's trains, and to see that the Cheap Trains Act, 1883, is more effectually enforced. The Government will also be asked to deal with the matter.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 21st, 1895.

WANTED, A PILOT.

Means, we understand, are being taken to convince the Lord President of the Council of the extreme weakness of the arguments on which he relies to defend his policy of doing nothing in the matter of a University for London. Whether they will meet with much success we greatly doubt. Seldom in our experience has a great subject been dealt with by a responsible statesman in so cavalier a manner as the Duke of Devonshire dealt with this question in his interview with Professor Ramsay's Committee on November 28th. The agencies of higher education disorganised and stunted in the centre of the British Empire; the training of English medical men being driven from England to the sister kingdoms; the greatest city the world has ever seen without the intellectual advantages which a dozen petty capitals in Germany possess—these were the topics tendered for his Grace's consideration. They were topics which might have been expected to move the most phlegmatic of Ministers to interest; they were topics which at least merited sympathetic consideration of the means proposed as remedies. But the Duke of Devonshire apparently cares for none of these things. Scarcely a word does he vouchsafe to the real merits of the question. The University of London itself, the London medical schools for whose purposes it was originally founded, every important educational interest in the locality from which it takes its name, desire a change in its constitution. The Duke replies that there are persons holding degrees of the University who object to the reform. It is pointed out that the authorised Convocation of Graduates has twice deliberated on and approved the proposed reorganisation; the Duke retorts that the members who have not deliberated seem not to be convinced on the point. Men of European distinction urge that the objections of such members have been weighed by a Royal Commission of singular strength and ability, and found to be baseless. His Grace in return quotes from an anonymous paper which, he says, some unnamed person has placed in his hands, and which he gravely proceeds to commend to the consideration of the leading educational authorities of the metropolis. It is needless to argue; there are some country graduates who object; *rus locutum, causa finita*. Rudderless London must wait, tossing helplessly on the sea; the pilot declines to put forth in the face of an expected storm.

But if anything could excuse the attitude taken up by the Lord President, it would be the singular ineptitude of the manner in which this great question was brought before him. The lack of *savoir faire* which characterised the London University movement from the outset unhappily attended it still. If the Duke failed to understand that a great public question was awaiting his action, it is fair to say that his petitioners had taken but little trouble to convince him of the fact; if he treated the matter as one of institutional and sectional interests mainly, it is but just to point out that hardly any but institutional and sectional interests were represented before him.

Eleven years of failure seem to have taught the movers in this question no lesson in the conduct of public business. It is not in the interests of London colleges and their teachers that we should ask for the reorganisation of this State Examining Board as a real university, but for the benefit of the people of London for whom those colleges were founded. It is not for the profit of the medical schools of London that we must ask Parliament to ignore, if necessary, the obstructive privileges of Convocation, but for the good of the profession that is to be trained in them and the advantage of the public for whom the profession exists. But where in the deputation of last month was the profession of medicine, apart from the colleges and schools, and where was the public of London? Where was the Lord Lieutenant? Where the Lord Mayor? Where the Chairman of the County Council? and where the metropolitan members? Where—it is not purposeless to ask—was the British Medical Association?

It is vain in these democratic days to expect statesmen to legislate at the voice of the "superior person," unless some broadly felt public need be at the same time shown them as justification; but for all that appeared in the deputation headed by Lord Kelvin, neither the London public nor the medical profession might ever even have heard of the matter at issue.

We are not writing for the sake of blaming, but in the earnest hope that the persons and institutions concerned in this business will at last learn an elementary lesson in public affairs, and will understand, when next an approach is made to Government in the matter, that if they wish to succeed they must treat public questions as matters of public interest, and go with an assured and obvious body of public opinion at their back. We say "when next an approach is made," for on one thing all are agreed, that matters cannot be left as they stand at present.

That Professor Ramsay's Committee will succeed in inducing the Lord President to change his attitude to Lord Cowper's scheme, as we have said above, we greatly doubt; nor do we build much on the prospect held out of an arrangement with the recalcitrant members of Convocation. But on the other hand we have never shared either in the extravagant admiration expressed in some quarters for Lord Cowper's scheme, or in the counsels of despair heard in others which represented it as a sort of Hobson's choice for despised London to take or leave, without hope of any alternative. If the labours of the Gresham Commission are after all to go for nothing, the time has clearly come to revive in some modified and improved form the original Gresham project for a genuine metropolitan university by the side of the titular University of London. The Government which declines to take in hand the Royal Commissioners' scheme cannot in consistence refuse a charter to carry out the only

alternative solution of the question; and to such an alternative, indeed, the Duke of Devonshire's remarks seemed, albeit obscurely, to point.

MEDICINE AND SOCIETY.

We can scarcely congratulate Dr. Burney Yeo upon the article which he has contributed to the current *Nineteenth Century* on the above subject. It seems an unwise thing to publish such matter in a lay journal unless the contents be far more thoroughly digested and more lucidly presented than in the article before us. We are by no means too rigorous in our demands. We are far from saying that medical men shall never write on medical matters for the public; but we think that such communications should fall within two categories: either the articles should deal with matter which has reached a certain stage of definition in the eyes of those best able to judge—as in the case, let us say, of protective inoculations, or of serum therapeutics, which have reached a point of definition that enables us to set them before the layman greatly to his interest; or again with matter which pertains to the domain of individual opinion. But when, as in the latter case, a medical man betakes himself to the public, with views of his own, he enters upon a serious affair, and he is bound to present the subject in a manner which if it do not silence the learned reader, shall command his respect.

Now Dr. Yeo's article seems to us to lay itself open to much dissent, both in respect of matter and form. It seems to us loose both in style and in thought. To prove this judgment in this place would take up more room than we can spare. Some points of dissent, however, we will indicate. Dr. Yeo utters, with less than ordinary point, some of the stock arguments against "extreme specialisation." When we enter upon the context we find that Dr. Yeo does not mean by these words that which they express, but rather that the specialist, however "extreme," should keep himself abreast with the general knowledge of his subject—surely a very different proposition. Anyone who has thought carefully on modern scientific progress has satisfied himself that this progress depends upon "extreme specialisation," or what, in our dislike of such an ugly word, we should call accurate research.

That society is beginning to "resent the increased costliness of medical and surgical help," if true, is not Dr. Yeo's fault, unless, indeed, he encourage an ungrateful public. We are happy to think, however, that as compared with the law for instance, the leaders of public opinion regard the members of our profession as kindly and moderate in their demands. Many reasonable people think, indeed, that the fees of leading physicians are too low to secure good work from men so busy. That some adventurers prey upon the public is true; it has always been true: yet we are disposed to say, if these persons be as rapacious as ever, that they are not so ignorant and mischievous as in former times. Nevertheless, they are adventurers still, and not to be taken as examples of our ranks.

Dr. Yeo is very oracular on the subject of medical etiquette. Now, we are not sure that we disagree with him in some of his words on this head; that is, if we were ever sure of his meaning, or that he had thought out what he would say. But when Dr. Yeo proclaims that medical etiquette is "common sense, good faith, gentlemanlike feeling," and so forth, we think he is confounding the raw material with the finished product. If we were all agreed about such qualities, and agreed to act accordingly, medical etiquette would be unnecessary, and indeed many of the laws on the statute book likewise. Dr. Yeo's methods would make our relations to each other a matter of individual taste. All laws, whether of professions or of nations, leave plenty of room for common sense and good taste. For instance, in the story of Dr. Yeo's letter, written to the medical attendant of a patient without that patient's knowledge, we conceive that the indignant patient was right, not because Dr. Yeo wrote to his doctor, but because he did so without the patient's permission, and even without his knowledge.

Dr. Yeo compares our too reticent manners and customs with those of the Bar, whose members permit and desire the publication of their names in the journals. The Bar may take care of itself; meanwhile we deny the parallel. The advocate succeeds or fails absolutely in the face of the world; from his public form there is no appeal. That advocate is the best who wins his case, or who makes a good fight for it, under the control of certain well-understood rules. There is no appeal from the obvious results. Is this so with our profession? Surely it is rather the reverse. Our successes are known only to our brethren and to our advanced pupils, our loyalties to others only to ourselves; the estimate of the public, except in a very remote sense, is worth little. Again Dr. Yeo, taunting us with inconsistency, says that we are keen enough in advertising after our own fashion, and that our fashion is "intraprofessional advertising," a process the author denounces as much the same thing as public advertising.

That medical men write books, some bad and some good, for their own advantage with professional readers is true; but it is mere paradox to say that books written for skilled critics, who can judge with more or less certainty of the value of their contents, are in the same position as such books or other publications addressed to the general public. It is a droll thing to compare us to our disadvantage in this respect with the Bar, seeing that in the latter profession the custom of writing a book or books for the edification of the solicitor is almost invariable among men who would rise; books, that is, which are never supposed to pay directly, and are written avowedly, as with us, to show what the author is made of: no improper purpose, perhaps, in either profession. The thing surely is in a nutshell: in most callings a man advertises that which can be more or less immediately tested, and bad wares or blundering and ignorant counsel, if not found out at once, can be recognised in no long time.

In medicine the tests are far more difficult, while unfortunately the issues are far graver; not one patient only, but a generation of patients, may be fleeced, maimed, or killed, and their medical attendants stabbed in the back, before the world can discover the incompetence or bad faith of the pretender. Hence it is that our profession is the paradise of the quack and the unscrupulous practitioner, and will always be so; and hence it is that we must present a stern countenance to all semblance of selfishness, even if, in the sight of thoughtless people, we appear prudish and self-righteous. If the "tact which Dr. Yeo wishes to see in us is to result in the kind of cunning which gives the

point to some of his illustrative anecdotes, we earnestly hope the time is far off when such "tact" is to take the place not only of self-respect, but also of "etiquette."

THE PERILS OF RIGHT DOING.

We have long felt, and have oftentimes expressed, the need for a total change in the organisation of our system of appointments of medical officers of health. It has now for a long time been held that the system whereby a local health body can appoint and reappoint again and again at will any properly qualified medical man for one year and for one year only is wrong in principle; yet the matter continues to-day in precisely the same position as it has now for so many years occupied. No sanitary authority is in the position of being forced to appoint their health officer for a longer period than one year. Granted that many have done so, even to the extent of making the appointment one for life, yet these are a comparatively small minority; and we may safely assume that such appointments have been made for districts that have some pretension to advancement in the direction of sanitary completeness. This is precisely the main difficulty. Were it those districts which can boast of a desire, borne out by results, to benefit by the best advice of their medical adviser, which had elected to abide by an annually repeated election, the system might be defended; but when we see districts wherein sanitation is of the crudest, and where even the elements of sanitation have been ignored, when we see these localities clinging to the antiquated form of annual appointments for their health officers, then it is that we see also the danger that threatens the officer who dares to confront his Council with the true state of the district under his care.

In illustration of our point, we may say that we have received from Dr. Churchouse, the late medical officer of health of the Daventry rural district, a copy of the correspondence which he has recently had with the Local Government Board on the subject of his supersession in his post by the election recently of another medical man in his place. Dr. Churchouse has held the post for ten years, having been elected annually without opposition. But he has had to report very strongly on the insanitary condition of two of the twenty-seven parishes in his district—namely, Long Buckby and Weedon. These two places seem to be without the simple elements of sewerage and adequate and wholesome water supply. The state of the wells in the former place is specially deplorable, that of the public wells being equally bad with those of a private nature, as shown recently by the results of the analyses by Professor Attfield. This action, says Dr. Churchouse, has incurred the odium of several of his councillors, and he has been ousted from his position. Thus is sanitary rectitude repaid. Yet here are 7,500 people living under conditions of gross insanitation, with absence of proper sewerage, with cesspools leaky and foul, with no system for the disposal without nuisance of their excrement, and with a condemned water supply which may at any moment give rise to disease. Indeed, Dr. Churchouse shows typhoid fever to have been during several years past unusually prevalent, and of the 367 notifications under the compulsory system in the whole of the twenty-seven parishes in the period 1890-94, as many as 111 have been in Long Buckby alone. We are further told that one of the medical inspectors of the Local Government Board found grave fault with the state of the two parishes in question in 1893; and yet in these circumstances the local authority got rid of their health officer after ten years' faithful service.

If the circumstances be as here stated, we sincerely hope that the matter may receive reconsideration, and that the year of office of the present holder may merely be a break in the otherwise permanent tenure by Dr. Churchouse of the office of medical officer of health. People on all hands nowadays say a good deal concerning the benefits of decentralisation, but we have ever felt that no sanitary official is safe so long as his tenure of office depends on the caprice of a few councillors, or the packing of a committee, or the desire of a health authority to see a minimum of zeal commensurate with the nominal sum doled out as a salary. What we contend for is that sanitary officers shall be appointed by, and hold office subject to the control of, a responsible but not local body, a body that is free from the prejudices and narrowness of a purely district council. Not until we see the sanitary staff of our country placed on a permanent basis, free from the trammels of local petty government, and independent enough to be in a position to give advice founded on true statement—not until then shall we see that progress in matters sanitary in England which is needed in only too many of its areas of local jurisdiction.

The Albert Lévy prize, of the value of £2,000 sterling, has been awarded by the Academy of Medicine to Drs. Behring, of Berlin, and Roux, Sub-Director of the Pasteur Institute in Paris, for their discovery of the means of curing diphtheria.

Dr. L. A. A. de Verteuil, the President of the Trinidad and Tobago Branch of the British Medical Association, has been created a K.C.M.G. Dr. Verteuil is about 85 years of age, and has practised his profession in the town of Port of Spain for over fifty years. He was an unofficial member of the Legislative Council for nearly thirty years, and only resigned this year on account of old age. He is an M.D. of Paris.

ANTI-CHOLERA INOCULATIONS IN CALCUTTA.

We learn with satisfaction that the Calcutta Municipality has, with wise liberality, decided that Dr. Haffkine's anti cholera inoculation experiments are to be continued there for another year, and have assigned a grant of 7,500 rupees for the purpose.

THE PURIFICATION OF SEWAGE.

At a sessional meeting of the Sanitary Institute held at the Parkes Museum, Margaret Street, W., on Wednesday, December 11th, Sir Benjamin Baker, K.C.M.G., LL.D., F.R.S., in the chair, Sir Douglas Galton, K.C.B., LL.D., F.R.S., read a paper on The Lessons to be Learned from the Experimental Investigations by the State Board of Health of Massachusetts upon the Purification of Sewage. After dealing with the various systems of sewage filtration, he described the systems devised for the aeration of the filters, dealing more particularly with experiments made by Colonel Waring at Newport. He summed up the conclusions to which the various experiments lead as follows: (1) The suspended matters of sewers (sludge) can be mechanically withheld by straining slowly through suitable material. (2) The filth accumulated by this straining material can be destroyed, and the straining medium restored to a clean condition by mere aeration. (3) The successive alternate operations of fouling and cleansing

can be carried on indefinitely without renewal of the straining material. (4) The purification obtained by this straining process practically equals that accomplished by chemical precipitation, and is sufficient to admit of discharge into any considerable body of water not used as a source of domestic supply or for manufacturing purposes requiring great purity. (5) Such filters can be maintained in constant and efficient operation by suitable aeration. (6) The erection of a plant capable of purifying large volumes of sewage upon a relatively small area calls for no costly construction. Repairs and renewals are merely nominal. The attendance required is but slight. There is no outlay for chemicals, etc. The only expense of mechanical operation is the driving of the blower or air compressor. (7) The process admits of wide variation in the selection of filtering material, and nearly every community can find, in its local resources, something suitable for the purpose.

RABIES.

The Board of Agriculture has, for some time now, been busying itself in regard to stopping the increase of rabies round about London. The counties of Middlesex and Surrey, and the boroughs of Richmond, Kingston, and Guildford have passed muzzling orders, and London has likewise been asked to do so. Upon careful inquiries it is found that, although the cases in 1895 show a great increase on the figures of the years 1890-94, they are less than one-half the number in 1889, when all dogs in London had to be muzzled. Measures are being taken to watch the progress of the disease, and instructions have been given that the carcasses of all dogs slaughtered as suspected of rabies, except those certified by the veterinary inspectors not to have been rabid, are to be sent to the Brown Institution for investigation. Until it is found to be greatly on the increase the London County Council will not reimpose the muzzling regulations, which, by the way, have been altered by the order issued last February. The provisions of the new order include the examination of rabid or suspected dogs, the isolation of suspected dogs, the slaughter of rabid dogs and the destruction of their carcasses, and the disinfection of premises on which they have been kept. In addition, it gives power to local authorities to make regulations (*a*) for the muzzling of dogs, and (*b*) for the seizure, detention, and disposal of unmuzzled dogs. London dogs may therefore rejoice in perfect freedom on their walks, at all events, for a while longer.

PHOTOGRAPHY OF RETINAL IMPRESSIONS.

An article of much interest, by Mr. W. Inglis Rogers, appeared in the *Amateur Photographer* of November 22nd, 1895, under the startling heading "Psychography or Photography without a Camera. The Dawn of a New Science." Although written in a style which savours more of cheap sensation than science, with a profusion of italics and capitals, the article is one which deserves careful study, and is in many respects suggestive. The essential part of it is the record of experiments by the author, the first more or less accidental, the succeeding two premeditated and deliberate. By psychography, the writer means an impression upon a sensitive plate of an image formed upon the human retina and thence projected on to the gelatine surface. His endeavours to supply a theory which will explain the phenomena he has observed have led him beyond his depth in the sea of cerebral physiology and chemistry. This portion of the article is however of minor importance. The record of the experiments is briefly as follows: The first deliberate experiment was performed in his own "dark room," and without assistance; the next took place at the house of a friend, a medical man, and in the presence and with the help of the medical man and two other gentlemen. A small object, in one case a shilling, in the other a postage stamp, was placed in a good light before the writer, who gazed fixedly at it for one minute; the light was then shut off, and the test object replaced by a rapid photographic plate, at which the author looked steadily for a period (in the second experiment) of twenty minutes, concentrating his thoughts meanwhile wholly upon the image of the object he had been previously fixing. During the substitution of the plate for the last object, the observer's eyes were closed. The plate was then developed in the ordinary way, and reproductions of the psychograms are given in the journal. In the first case, in which a shilling was the test object, the print shows an ill-defined circle on the plate, and in the second, when a postage stamp was employed (and a larger plate used than before) "two impressions were obtained, one from each eye, and at respectively the same distance from each other as the eyes." These impressions (in the reproduction) bear a distinct resemblance to a postage stamp; more than this we cannot at present admit. These experiments, or similar experiments, can be carried out by anyone with a little assistance. The subject is one which merits most careful and thorough investigation, and by such research alone can we determine whether or no Mr. Rogers's sanguine expectations in regard to his discovery are likely to be realised. When his observations have been confirmed it will be time enough to formulate an hypothesis in explanation of the phenomena described by him. Those who are interested in the subject from the psychological, physiological, or photographic side should read Mr. Rogers's account of his experiments, the *bonâ fide* character of which has been vouched for by the three gentlemen who witnessed them.

STATUE TO A GERMAN DOCTOR IN TOKIO.

The ceremony of unveiling a statue of the late Dr. Müller in the grounds of the Imperial University took place recently. Dr. Müller was the first German Professor at the Tokio Medical College, the embryo of the present College of Medicine in the Imperial University. He came to Japan in 1871, when few even among the Japanese Professors of the College could speak German. In spite of serious difficulties he patiently laboured to impart his knowledge to his students, and thus laid the foundation of modern medicine in Japan. Hearing of his death in January, 1894, his former pupils—including Surgeon-General Dr. Ishiguro, Professors Miyake, Taguchi, and Aidachi, and a large number of well-known Japanese—decided to erect a bronze statue of their esteemed master in the compound of the University. The work has been executed by Mr. Fujita Bunzo, the sculptor who earned a reputation by casting the statue of Dr. Aogama. The statue represents the German Professor in his military uniform.

THE SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Committee of the Society of Members of the Royal College of Surgeons of England has put out a very ably written and moderately worded paper, containing a statement of the propositions made by the Society of Members for the amendment of the charters of the College. The first proposition is that no alterations in the constitution and external relations of the College should be effected without the consent of the corporation convened to discuss such alterations. The second proposition is to the effect that a statutory annual meeting should be held to which the Council should present a report and an audited financial statement, the report to be submitted to the approval of the meeting and formally adopted by it. The remaining proposition deals with the admission of members to the Council. It is proposed that the number of the Council should be raised to thirty-two, eight of the members of Council to be Members of the College, and elected by the Members. The Society has dropped the proposal that those Members who were also Fellows should be ineligible to be elected to represent the Members on the Council, and the proviso that no Member should be eligible until he has attained twenty years' standing is retained. The Society

points to the fact that a petition embodying similar proposals was in 1888 signed by nearly 5,000 Members proves that its proposals have met with substantial support among the Members, though at the same time it is admitted that there is much apathy and want of interest among Members in all matters relating to the College, owing, as the Society believes, to the past attitude of the Council towards the Members. The Society urges further that if the Council still have any doubt as to the sentiments of the Members it should take steps to ascertain the facts by a direct communication addressed to every Member. The point to which most weight is attached by the Society is the proposal to provide for the direct representation of the Members on the Council. Were it adopted the Council would be rendered representative of the whole body. This wider basis would increase the authority with which the Council could act in all matters affecting the Members, especially in ethical questions. "We hope," the Committee write, "to see in the near future not only increased activity in dealing with 'infamous conduct' in our own body, but that powers will be obtained by the College to suppress unqualified practice in surgery, these powers having been sadly needed for many years." The honorary secretary of the Society is Mr. W. G. Dickinson, M.R.C.S., Southfields, S.W.

M.D.U.S.A.

Mr. Ferdinand, of King's Road, Chelsea, whose conviction under the Medical Act we reported last week, has lodged an appeal to the next General Quarter Sessions of the Peace to be holden at Clerkenwell, and has entered into the required sureties. We shall watch the result with interest.

WATERBORNE TYPHOID AT DUNBAR.

The epidemic of waterborne typhoid fever at Dunbar and in its immediate neighbourhood shows little sign of abatement. There are stated to be no fewer than eighty cases, and there have been a good many deaths. The Shore Hall and the Baths Hospital are both full of patients, and on application to the military authorities the New Inn Barracks Hospital has been placed at the disposal of the local authority. The opinion grows that the Pathhead cases and the consequent contamination of one of the sources of the water supply are the most probable causes of the epidemic. We are unable to say why the result of the water analysis should so long remain a mystery. Mysteries and delays in such matters as public health tend to no good end. It is said that the fierce light of public criticism may tend to cause a panic, but even if this were true publicity is invaluable later as compelling a greater alertness on the part of the local authorities. In many country districts it must be freely admitted that the policy is mainly one of indolent drift, to be interrupted only in the presence of grave catastrophe.

THE FEVER HOSPITAL DIFFICULTY.

Hardly a morning passes without our table being littered over with complaints about the conduct of the Metropolitan Asylums Board. Yet we find their officials working well, we find no shirking of work, we certainly find no hesitation in spending money, and the more one sees of the work which is being done at Norfolk House every day the more is one convinced that it is not the officials who are to blame, but the system. The fact is the Metropolitan Asylums Board have never been able to throw off the taint of their pauper origin, and although they are doing great things for the public the public have no rights in the matter. Nevertheless, we can hardly doubt that if the Metropolitan Asylums Board had not existed the metropolitan sanitary authorities would long ago have been driven to provide hospital accommodation for their ratepayers. Where to look for a way out of the *impasse* it is difficult to say. What is certain is that the real root of the trouble lies in the divorce which has taken place between the work of the sanitary authorities and the management of the infectious diseases of the metropolis. In the meantime grave questions arise as to how far the point of view from which the Asylums Board regard the treatment of their patients is the right one. We have every admiration for what we may term a counsel of perfection, and if on the one hand there were plenty of beds, and if on the other London was not stuffed full of infection, we would gladly see patients kept in hospital even for a very long time so as to be quite free from infection on their return home, but under existing circumstances we doubt whether any sanitary authority which had thrown upon it the whole responsibility of dealing to the best of its power with an epidemic of scarlet fever, would, in presence of the present lack of beds, keep its patients in hospital so long as the Asylums Board do theirs, namely, on an average ten weeks, for during half of this period, while they are running about practically well, they are still occupying beds, to the exclusion of other children, who are being refused admission every day although acutely ill, and often actually dying for want of hospital treatment. The Asylums Board is concerned for the credit of the hospital system, but the public not unnaturally demands that the greatest good should be done to the greatest number. It is to be noted, moreover, that this aiming at perfection for the few seems not only to be a characteristic of the whole Board, but to affect the different committees. It is not easy otherwise to explain the reluctance of the Board to open the Gore Farm Hospital for the use of scarlet fever convalescents. Evidently, even within the Board, there is a strong feeling in favour of such a step, which would at once put over 700 beds at their disposal for the use of fever cases, and one can only imagine that the small-pox interest, if one may so call it, is sufficiently strong to keep these beds to itself in view of a possible extension of small-pox in London. Again we do not say that they are wrong from their point of view, but this point of view does not seem to be the practical one which would be adopted by any single sanitary authority trying to use its limited means to the best advantage in defending itself against the onslaughts of epidemic disease.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Arris and Gale Lectures before the Royal College of Surgeons of England by Dr. E. H. Starling on the Physiological Factors involved in the causation of Dropsy will be delivered on February 17th, 19th, and 21st. Mr. Leonard E. Hill's lectures on Cerebral Pressure and the Cerebral Circulation will be delivered on February 24th, 26th, and 28th. The course of lectures by Professor Charles Stewart on the Integumentary System, its Structure and Functions, will be delivered on March 2nd, 4th, 6th, 9th, 11th, and 13th. The Erasmus Wilson Lectures on the General Pathology of Bone will be given by Mr. W. G. Spencer, F.R.C.S., on March 16th, 18th, and 20th. The lectures by Dr. J. A. Coutts on Infantile Syphilis will be given on March 23rd, 25th, and 27th. All the lectures will commence at 5 p.m. on the days mentioned.

LEITH V. EDINBURGH.

The Leith Dean of Guild Court, on December 16th, gave judgment dismissing the petition by the Edinburgh Corporation for warrant to erect a temporary hospital on ground belonging to them as governors of Trinity Hospital, at Quarryholes, Easter Road. To this interlocutor there is appended a note, extending to the length of a column of an ordinary newspaper, explanatory of the judgment. The "note" may be excellent in law, but, from an extra-legal point of view, one may fitly quote Omar Khayyám, and say: "I heard great argument about it and about, but evermore came out by the same door wherein I went." The Town Clerk stated that the Court desired him to say that this judgment was drawn entirely by Mr. Salvesen, a Scotch barrister,

who sat as assessor at the hearing of the case, but that the Court entirely concurred in it. It will be observed that the respondents, or some of them, in whose favour the judgment is drawn were the judges who tried the case and issued the judgment. At a meeting of the Edinburgh Town Council, the convener of the Public Health Committee on the following day said that as the Quarryholes Hospital was proposed to be erected in connection with the order of the Local Government Board that the city might be prepared for the possibility of an invasion of cholera, they had proposed the site in question as nearest the probable point of attack. They thought they had only to ask their friends in Leith for formal permission, since Leith had, without asking leave, erected a hospital on ground belonging to the City of Edinburgh. He did not think they could or ought to accept without higher authority the decision of the Leith Dean of Guild Court. He therefore moved that the Council do now instruct the Clerk to intimate an appeal from the decision. The Lord Dean of Guild seconded, and the motion was passed unanimously.

THE "INDEX MEDICUS."

We are glad to learn that the number of subscriptions from Great Britain to the *Index Medicus* is larger than would appear from the list published a short time ago in America. In addition to the institutions mentioned last week we now learn by a letter from Sir Henry Acland, published in another column, that the Radcliffe Library, Oxford, has subscribed, and that the Medico-Psychological Association of Great Britain and Ireland is also to be numbered among the new subscribers. Dr. Karl Grossman, the Honorary Librarian of the Liverpool Medical Institution, informs us that that Institution has been a subscriber to the *Index Medicus* for the past sixteen years, and will continue its subscription.

CORONERS AND DIPHTHERIA.

THE Borough Coroner for Ipswich has followed a rather unusual course in holding an inquest upon a fatal case of diphtheria, but the evidence elicited, as reported in the *East Anglian Daily Times*, was such as to suggest that the example is deserving of occasional imitation, if only as a means of stimulating the local authority, and at the same time of strengthening their hands against the opposition which the most necessary improvements in sanitary matters are pretty certain to meet with among a section of the ratepayers. There had been four deaths from diphtheria in the same family within a week, and this in a house with only two bedrooms, occupied by a family of seven children. The parents would not agree to removal to hospital, but it transpired afterwards that there was no room there, even if consent had been given. The drainage was about as bad as it could be, and the water supply was derived from a contaminated well. School influence, and the effluvia from sewer gratings also came into question. Indeed, in the course of the inquiry nearly every point connected with the etiology of diphtheria seems to have been put before the jury and the public in a very clear way, with a practical application to the duties of the sanitary authority in matters of water supply, drainage, and sewerage, inspection and abatement of nuisances. In the end the jury made some very sensible recommendations with regard to the systematic inspection of houses of this class, particularly as to drainage and water supply. The publicity thus given to such a terribly tragic object lesson can scarcely fail to do good, and we shall not be sorry to hear of other coroners trying to throw light in an equally efficient way upon preventable deaths that have not been prevented.

THE ABERDEEN MEDICO-CHIRURGICAL SOCIETY.

AT the annual dinner of this Society, which was held in the Medico-Chirurgical Hall on December 14th, the chair was taken by Professor Stephenson, and Dr. Ogilvie Will acted as croupier. After the usual loyal toasts had been duly honoured, that of the "Navy, Army, and Reserve Forces" was given by the Chairman, and acknowledged by Fleet-Surgeon Kirker for the Navy, by Brigade-Surgeons Maconachie and Mackie for the army, and by Dr. Angus Fraser for the reserve forces. The toast of the "Medico-Chirurgical Society" was also given by the Chairman. That of the "University and Medical School," given by Brigade-Surgeon Maconachie, was acknowledged by Dr. Angus Fraser. The toast of the "Medical Charities" was proposed by Dr. Ogilvie Will, and acknowledged by Dr. Gordon. The toast of the "Founders" was then given by Dr. Edmond, who also responded to the toast of the "Health of the Retiring President," which was proposed by the Chairman. The health of the "President" was proposed by Dr. Beveridge and suitably acknowledged by Professor Stephenson. Finally the health of the "Guests" was given by Dr. Thomas Milne, and acknowledged by Mr. J. P. Cumine, advocate. The company was the largest which had ever assembled on this annual occasion, and a most enjoyable evening was spent, the speeches being diversified by music and story.

THE DIRECT REPRESENTATION OF IRISH PRACTITIONERS.

IN another column we publish with some reluctance a letter from a correspondent in Ireland discussing the future of the direct representation of the profession in Ireland on the General Medical Council. We learn from various sources that since it became known that the illness of Dr. Kidd, the direct representative of Irish medical practitioners on the General Medical Council, was of a serious character, canvassing has taken place for the seat which it is thought may become vacant. Should the seat be vacated several candidates are ready to come forward, among others Mr. Wm. Thomson and Dr. Jacob of Dublin, Dr. Hercules MacDonnell of Dundalk, and Dr. King of Castlepollard. When the vacancy is declared, there will, we understand, be other candidates who feel a delicacy in coming forward at the present time, and it would appear to be from many points of view undesirable, as it is unbecoming, for some one or more of the possible candidates to invite voters to give pledges at the present moment.

THE CASE OF DR. LIONEL SMITH.

THE wrongs which Dr. Lionel Smith has suffered at the hands of the West Australian Government are familiar to our readers, and it is also well known to them that after fighting against his oppressors for eight years he at last received from the highest Court of Appeal, instead of redress, only only that *summum jus* which is proverbially *summa injuria*. We are sure that our readers will be pleased to learn that Mr. Chamberlain, partly at the instance of the Parliamentary Bills Committee, has offered Dr. Smith the appointment of District Surgeon of Zululand. The salary is, small and the prospects of private practice somewhat doubtful, but it may be hoped that as the Secretary to the Colonies, to whom the Chairman of the Parliamentary Bills Committee not long ago addressed a letter strongly supporting Dr. Smith's claim for compensation, has shown himself disposed to do what is in him to repair the wrong which Dr. Smith has suffered, the appointment will be a stepping stone to something better. Mr. Chamberlain has also, we understand, suggested to the Governor of Western Australia the propriety of that colony paying Dr. Lionel Smith the damages awarded by the jury before which the case was first tried on appeal, together with the costs of the action, amounting in all, we believe, to some £500. In the meantime, Dr. Smith's pecuniary position, owing to the drain on his resources entailed by his long struggle against injustice, is so unsatisfactory that unless the profession come forward to help him it will hardly be possible for him to accept the appointment offered to him. We ven-

ture to express a hope that the appeal by Drs. De Havilland Hall and Goodhart, which we publish in another column, will met with a prompt and liberal response. Dr. Smith has been fighting not his own battle only, but that of all medical men holding appointments in the civil service of the Crown.

THE SICK POOR IN IRISH WORKHOUSES: OMAGH.

At Omagh, as at Ballyshannon, our Commissioner found the difficulties inherent in obsolete structures and an antiquated and rigid system largely overcome by more enlightened guardians, seconded by humane and able officials. Here the dreary tale of dirt and squalour gives place to the description of clean wards and careful attendance; those little indulgences are permitted which do so much to lighten the pitiful lot of the aged; the nurse, though untrained, clearly does her best for the comfort of the sick. She is, however, single-handed but for pauper help, selected, as the medical officer says, from material "damaged mentally, morally, or physically, or in all three ways combined." And her patients are not only in the thirty-four beds of the hospital (usually all filled) but in the wings of the body of the house, some distance away. An increase of the nursing staff is therefore urgently needed. There is no nursing of any kind at night. Then the nursery "has successfully resisted the civilising influences brought to bear on the other departments." The infants in charge of their ignorant and too often degraded mothers are dirty and untended. It is misplaced sentiment to leave these unhappy babies entirely in their mothers' hands. If these women come on the rates and their children are brought up at the expense of the State, the State is in duty bound to see that the poor infants have as good a start in life as it is possible to give them, to lift, if possible, the new generation out of the slough of pauperism. The sanitary arrangements are still on the old lines, neither decent nor wholesome. We trust that the guardians will shortly turn their attention to these matters.

DEATH AT THE INSTITUT PASTEUR.

On October 13th a little girl, E. W., aged 3, was bitten in the eyelid by a mad dog, and was placed under the care of Dr. Murphy, of Twickenham. He at once took advice of those best able to give it, and the child was sent by her parents three days later to the Pasteur Institute in Paris. The treatment was begun the same day; it was finished on November 6th, and she was to return home at the end of that week. On November 8th she was seized with hydrophobia, and, though further inoculations were made in rapid succession, she died two days later. That the dog was mad has been proved for certain by investigations made at the Brown Institute. Those who know the especial fatality of bites on the face, and, above all, of bites about the eyelid can hardly be surprised at her death or at the shortness of the period of incubation. The mortality after face bites not treated by Pasteur's method is estimated by Leblanc at 80 per cent.; the statistics of the Comité d'Hygiène for 1882-72, giving 50 cases of face bites not treated by Pasteur's method, give a mortality of 88 per cent. These figures are, for different reasons, too high to be accurate, but they serve to show the frightful mortality of these bites on the face. In the Pasteur Institute in 1887 the total number of patients inoculated was 1,778; the total mortality was 1.34 per cent., but 145 of them were bitten in the face and head, and the mortality of these was 7.61 per cent. In 1888 the total number of patients inoculated was 1,626; the total mortality was 1.16 per cent., but 128 of them were bitten in the face and head, and the mortality of these was 7.33 per cent. The lowest mortality of people bitten by rabid animals and not inoculated, if we take bites of all parts of the body, and not only of the head and face, is 15 per cent. at least. The period of incubation after face bites is, on the average, 48 days, but in many cases it is far short of this; and it is fairly certain that after a bite of any part of the body the period of incubation is shorter in a child than in an adult. Such are the facts of the case; it was a bad case to begin with; the only possible treatment was followed, and that without loss of time, and there is not the very faintest shadow of reason for thinking that the child's death was in any way due to the treatment. The *Star*, however, has made some statements concerning it so outrageous that they go beyond anything it has yet done in its shameful hunt for horrors. It speaks of "vile experimentation, reckless experimentation of a cruel and odious quackery, merciless experimenters, a piteous story of reckless experiment, the patient agonised with the injected poison;" it employs gross flaring headlines, and every possible trick to raise a sensation, and to feed a coarse lust for reading of pain and death. It asks, "Did Dr. Murphy know that only one person in six, of those who actually have hydrophobia, dies of it? Did he know that the chances of the child's getting hydrophobia were almost incalculable?" These questions are as libellous as they are absurd. A further publicity has been given to the case by a statement made by a girl aged 16, who alone accompanied the child to Paris, that the poor child's body "was hustled into her grave like a dog, without service of any kind, because she was a Protestant." We have independent written evidence before us that flowers were placed on the coffin, and that a service was duly read over the body in the mortuary by a Protestant clergyman. There are doubtless differences of custom and of thought regarding these things between one country and another; nor are we here concerned with this matter; still it may be worth while to note that care was taken to fulfil the wishes of those who have lost their child. Such are the facts of the case. It is evident that Dr. Murphy did everything that could possibly be done, and lost no time over it. We offer him our sincere sympathy that his name has been dragged into publicity by such disgraceful methods, and we assure him that he has the sympathy and approval of all reasonable and honest men.

A NATIONAL SYSTEM OF NOTIFICATION AND REGISTRATION OF SICKNESS.

At a meeting of the Royal Statistical Society on December 17th, Dr. Arthur Newsholme strongly advocated an extension of the present system of notification of diseases as a means towards a more complete and accurate knowledge of the natural history of these diseases, and ultimately of their prevention. A modified system of weekly returns for all but the more urgent diseases was recommended. Dr. Newsholme pointed out that if medical practitioners were required to make such returns gratuitously, this must go along with much more efficient protection of them in the discharge of their skilled work. A system of sickness registration already existed in Germany and in the Scandinavian countries, the value of which for epidemiological purposes was very great. Dr. Newsholme added that such a system to be satisfactory must include tuberculous and respiratory diseases, alcoholism, insanity, and many others; every disease that flesh is heir to, he said, except old age, falls within the scope of preventive medicine. He formulated the following proposals: (1) That all cases occurring among the parochial poor should be periodically reported to the medical officer of health, and tabulated statements of them forwarded by him to a central office in London. (2) All cases of sickness in all hospitals and public dispensaries should be similarly reported and utilised. The importance of these hospital statistics was specially emphasised. (3) All friendly and allied societies should be required to furnish periodical returns of new cases of sickness in their experience to the medical officer of health, and a yearly statement of the total number of members classified according to age. (4) An attempt should be made to obtain

accurate returns of sickness in the great industries. The present state of the law on this subject was stated, and strong exception taken to Section 29 of the Factory Act of 1895, which requires notification of certain diseases direct by the medical man to the chief inspector of factories. (5) The schedule of notifiable diseases under the Infectious Diseases (Notification) Act should be widely extended, and a modified system of weekly notification of certain diseases introduced. (6) A central office in London should be organised for the reception, tabulation, and publication of the preceding sickness returns, which would have all in the first instance been sent to the medical officer of health for utilisation in each district.

THE CHILDREN OF THE ALIEN POOR.

A COMMITTEE appointed by "the Committee of Ministers and others visiting among the Jewish poor in the East End of London," has presented a report on infant mortality. It would appear that the mortality among Jewish infants in the East End is very high, though the available statistics do not render it possible to say whether it is higher than that of the population among whom they live. The main causes of the infant mortality would seem to be diseases of the respiratory and of the digestive system. As to the latter class, disease seems in most cases to be produced rather through ignorance of the proper way of feeding infants by hand, than through neglect. The large number of deaths due to the former are probably to be attributed to deficient ventilation. As to this the report says: "Dwelling rooms are frequently converted into workshops. Rooms in which children are placed to sleep at night are frequently used in the daytime, and till late in the evening, for trades such as tailoring or bootmaking, which require heating stoves, gas light, etc. Coke is generally used for fires even for purely domestic purposes. Overcrowding takes place, the atmosphere becomes vitiated, and the children are deprived of healthful rest at the proper time." The Committee believe that the Jewish poor are "singularly free from those vices which are referred to by recent writers as causing infant mortality, such as wilful neglect of children in order to obtain policy money; drunkenness resulting in overlying; immorality, resulting in illegitimacy; syphilitic diseases, etc. This, however, all tends to show that the actual causes of mortality must have a very much greater effect on the Jewish population than upon the general community." As tuberculous diseases also are thought to be very little prevalent it seems clear that the other causes mentioned must be affecting the Jewish child population more severely than the general child population. The Committee recommend that the staff of nurses working among the Jewish poor should be increased; that all visitors should be instructed to explain the rules of health as to ventilation, cleanliness, etc.; and that the use of public baths and washhouses should in particular be advocated. Further, it is thought that special steps should be taken to prevent rooms used by day as workrooms from being used at night as sleeping rooms for young children. For this purpose the assistance of the factory inspectors and sanitary officials should be enlisted. The circulation of simple rules in English and Yiddish to married women giving instructions as to the management of their health during pregnancy, and as to the up-bringing of their infants, would also, it is believed, be advantageous. Every day experience in the East End shows that the foreign Jews and their children are, on the average, more dirty in their persons than even the poorest of the English population, which is saying much; and that while showing no little affection towards their offspring, and perhaps too much anxiety, they are more incompetent to feed and nurse them. Home nursing by trained women will do much to ameliorate the present lamentable condition of affairs; but, to work this system to the best advantage, all the medical men practising in the district and all the hospitals and dispensaries should be supplied with forms for transmission to the nursing headquarters giving the name and the address of the child and the nature of the disease for which it is being treated. The fate of an infant or young child attacked by acute disease of the respiratory or digestive organs is commonly sealed within the first forty-eight hours, and unless efficient nursing and instruction are obtained within that time good results can hardly be hoped for. The communication between the medical man and the nursing staff should be direct and speedy.

RATE-SUPPORTED HOSPITALS.

IN reference to the proposal that hospitals should be supported out of the rates, a correspondent in the *Daily Chronicle* writes that it is already carried out in some of our colonies. In South Australia and in New Zealand not only hospitals, but all duly authorised charitable institutions send in an annual statement to the central department (called in South Australia the Destitute Poor Department) as to the funds they are likely to require during the coming year. The Board then orders contributions from the various localities proportional to the value of property in each district, the Government contributing an equal amount, besides also making grants to supplement voluntary donations. Thus every town or district contributes to charity in proportion to its wealth—surely a better plan than that in vogue among ourselves, where the main burden of support falls upon the shoulders of a comparatively small number of philanthropic individuals. In South Australia the State makes itself largely responsible, not only for the support of charities but for their administration. Their expenditure on relief is believed to be barely one-sixth of that so spent here.

EPIDEMIC PNEUMONIA AND SCORIA DUST.

IT may be remembered that in 1888 an epidemic outbreak of acute pneumonia which occurred in Middlesbrough was most carefully investigated in all its features by Dr. Edward Ballard, then one of the medical staff of the Local Government Board. So thoroughly did he execute his commission that his conclusions have ever since been accepted, at least in Great Britain. Dr. Attivant, of Nantes, however, has revived the hypothesis that the epidemic at Middlesbrough was simply due to the dust of scoria produced by the pulverisation of the slag of iron furnaces where the Gilchrist-Thomas process is resorted to for the dephosphorisation of iron. Dr. Attivant, from an examination of the scoria dust and its effects upon persons exposed to it at Nantes, has arrived at the conclusion that this dust is the true cause of the acute croupous pneumonia that prevails; and this opinion seems shared by other physicians in Germany and France, where the process of dephosphorising iron and of grinding of the resultant slag is carried on. From his general statement of his pathological observations and arguments,[1] we gather that he relies especially upon the fact that the production and prevalence of the pneumonia stand in direct relation to the extent of exposure of sufferers, represented by the amount of floating dust, and the duration of exposure to it. Or, to state the fact in reverse order, that ventilation and whatever reduces the amount of dust are attended by a reduction in the number and severity of the cases attacked. He states that the dust is highly irritating to the respiratory passages and sets up acute bronchitis. The variations observed in the frequency and severity of attacks he attributes, not to atmospheric conditions, but primarily to the greater or less activity of trade as affecting the amount of dust generated in the mills. In individual sensitiveness and the circumstance of usage and habit he sees causes of variations in the symptoms and course of the pneumonia. Relapses are common, and scoria workers suffer in a higher ratio than others, and at times are the only persons attacked in an epidemic. This notion possessed the public mind when Dr. Ballard entered upon his

[1] *Revue d'Hygiène*

researches; but when these were completed it at once had to be given up, and a cause admitted to reside in certain insanitary conditions connected with the existence of a contagious agent in the shape of a particular bacillus named bacillus pneumonicæ. This bacillus differs in vital characteristics from the bacillus of Friedlaender and also from the diplococcus of Fraenkel. In studying these bacteriological points Dr. Ballard had Dr. Klein as a distinguished coadjutor. Dr. Attivant does not seem to have made investigations of external conditions and surroundings, and of the dietary of the workpeople, as Dr. Ballard did. Before he closed his inquiry he traced out the entire history of the epidemic, and fathomed the collateral conditions associated with the outbreak. This complete inquiry dispelled the theory that the epidemic was owing simply to the dust of the scoria. He showed that pneumonia attacked individuals of all sorts and classes in no way exposed to the dust, and that it prevailed in the town workhouse at such a distance from the factories that no such heavy dust would reach its inmates. At the same time, he was ready to admit that the irritant dust was an assisting cause of the malady, but not its *vera causa*. The essential agent required to lend the property of epidemicity to the dust is the presence of a specific bacillus in connection with it, and with surrounding insanitary conditions found in food and in sewage gases and fluids. The frequent concurrence of acute inflamation of the bronchi no necessary concomitant of pneumonic fever—must be accepted as an indication of the peculiarly irritating qualities of the scoria dust when in contact with pulmonary mucous membranes.

THE PREVENTION OF CHOLERA: DR. HAFFKINE'S WORK IN INDIA.

We publish in another column the very able address given by Dr. Haffkine, of the Pasteur Institute, by invitation, at the Examination Hall of the Royal Colleges of Physicians and Surgeons, explaining the results of the work which he has done during the last two years and a-half in India in carrying out the practice of his method of vaccination as a preventive of cholera in India. Dr. Haffkine's work is of the highest scientific value and promises to confer a great boon on our Indian Empire. It has been carried out under circumstances of the most remarkable self-sacrifice and devotion to the interests of humanity and of science. He has given many of the best years of his life to this research, and has with unwearying industry and transparent sincerity worked out in India all the details which can test the value of this new gift to science to life-saving purposes without fee or reward other than his own conscience, his love to humanity, and his scientific devotion. Dr. Haffkine has with steady diligence and unquestionable enthusiasm braved every danger, and endured the extremes of climate and of unhealthy seasons. He has listened to the appeals from every direction regardless of personal risk and unmindful of his own health, which has suffered greatly. He returns to Europe greatly debilitated by the continuous trials of his arduous labours. In India he earned the respect and affection of all with whom he came in contact. His unaffected simplicity of character, his undeviating search for the truth regardless of any other object than that of the largest possible application and the most rigorous tests of his method have won for him universal esteem. It is fitting that his first great public reception should have been in this country, for it is in our Indian Empire that his discovery and his invention will find its largest field of usefulness, and while the boon which he has conferred on humanity is one which all the world must recognise, and by which all will be benefited indirectly, even where not directly, still it is especially in the Indian endemic home of cholera that the application of his method will find a most useful field. It may be hoped that with the larger views on sanitation which the Indian Government are now adopting and carrying out, and with the universal recognition in India and the unspeakable importance of recognising the waterborne theory of the causation of cholera, the necessity for the application of Dr. Haffkine's method will become narrowed within diminishing limits. Dr. Haffkine concluded his address by a touching, eloquent, and deeply-felt tribute to the memory of his illustrious master, Pasteur, from whom he derived his inspiration, and who gave, it should be remembered, the most generous financial help, as well as his scientific aid and countenance, to this great enterprise of Dr. Haffkine. The adoption of the Pasteur filter throughout India, where it is now being extensively introduced, will in its own way tend probably almost as largely to prevent the development of cholera as Dr. Haffkine's vaccination will limit its extension within the areas of its prevalence. Thus Pasteur's name will be doubly connected with the crusade against this terrible plague, which annually slays hundreds of thousands in our Indian empire, and thus extends its ravages from time to time to European countries. The Pasteur filter and the Haffkine-Pasteur vaccinations will go hand in hand in rendering this great service to humanity. The tribute which Dr. Haffkine paid to the memory of his great master comes at a timely moment, and everyone who reads his luminous and convincing address will feel that his concluding words are not the least interesting part of it. We trust that the Indian Government may see its way to some just and adequate recognition of the unstinting services which Dr. Haffkine has rendered to our great Indian dominions, and that his unexampled devotion and self-sacrifice will not pass without due official recognition.

THE RISING OF THE CREAM.

The explanation urged by the defence in a recent milk prosecution, that the sample was taken late in the day, when the cream having risen to the surface had been unavoidably removed with the milk dealt out to the previous customers as it was ladled out from the vessel on the counter, is not an unreasonable one. It is easy to say that in dipping the vendor ought to have stirred and mixed it better, but negligence of this kind does not amount to wilful fraud. The difficulty arises also when milk is drawn from a tap at the bottom of the churns or cans in which it is carried through the streets for serving customers at their own houses, and which are securely locked to prevent tampering with it. As time passes the cream rises, until the last drawn off consists of little else, the drawings immediately preceding being proportionately impoverished. To check this separation and to equalise so far as possible the distribution of the cream Mr. O. Bolle, a dairyman, of Berlin, has adopted a very simple contrivance in the form of an inverted cone of finely perforated tin plate, the open base of which rests on the bottom of the churn. While the fat globules in the milk outside rise to the surface, those within the cone adhere to the inner surface of the upper portion, from which they are detached as the level of the milk sinks below its apex, and the cream that had floated in the outer space is sucked back through the perforations, assisting in the loosening of that within, and with it mixing with the general mass of milk without the necessity for agitating the contents of the cans. Numerous examinations of milk drawn off at intervals from the first filling to the time when the last is exhausted, and in hot and cold weather alike, have shown by the almost inappreciable differences in their composition that the apparatus, simple as it is, works most satisfactorily.

Dr. Hamilton J. Bodan, of Arthurstown, has recently been sworn in a Justice of the Peace for the county of Wexford.

The *Gazette Médicale de Liège* states that Mlle. Olympe Herpin, of Liège, has taken the degree of Doctor of Medicine in the University of that city, obtaining also the special diploma in gynæcology with the highest honours.

THE ASHANTI EXPEDITION.

THE HEALTH PROSPECTS OF THE EXPEDITION.

[FROM OUR WAR CORRESPONDENT.]

The Base Hospitals and the Hospitals on the Line of Communication.—The Route from Prahsu.—The Weather to be Expected.—The Diseases Likely to Occur.—The Pocket Pasteur Filters.—Dress.—The Health Statistics of the Last War.

THE medical arrangements for this expedition are now fully completed. The disposition of the officers and men, as regards numbers, etc., has not yet been announced. The Base Hospital at Cape Coast Castle will consist of 75 beds, and 35½ miles on the road another hospital of 60 beds will be established at Mansu, and a third of 75 beds at Prahsu, which is 74 miles, or exactly half way to Kumassi. Between these stations there will also be placed small sections, which will be useful in giving aid, and where a short rest can be made and the hammock bearers changed. A medical officer will be at each, under control from Prahsu or Mansu, and will be ready to accompany the convoy if necessary.

After leaving Prahsu, the route will be through dense bush and forest, and no permanent posts except the ordinary halting places can be utilised for medical purposes. Sick or wounded will have to receive the best available attention, and then be formed into a convoy and brought down to Prahsu.

It seems to be generally accepted by the colonial officials that King Prempeh is fully determined to resist to the best of his power. As regards climate, there is no probability of any severe rain falling during the expedition. The wet season lasts from April to September inclusive. During the months of December, January, and February, the Harmattan blows; it is a dry breeze coming from the north-west, and when this wind is not blowing, southerly and westerly winds prevail. Tornados do not generally occur during this period. The mean maximum shade temperature varies between 82° F. and 87° F. Owing to the great dampness of the climate, chilliness is a common sensation, and thicker clothing must be worn than might be expected in a country so near the equator. Decomposition aided by the extreme dampness of the atmosphere is so rapid that its products hang over particular places like clouds, and poison those who are exposed to their influence. In the way of diseases likely to be encountered in the expedition, waterborne disease will, it is hoped, be largely obviated by the use of the Pasteur-Chamberland filters. Many officers have provided themselves at their own cost with a new pattern of Pasteur pocket filters; it were much to be desired that the men also were provided. However, malarial fever naturally takes the first place—all degrees from the slight "seasoning" to those grave varieties with algid and adynamic symptoms. In fact on the west coast these latter or bilious remittents closely resemble ordinary endemic yellow fever. Dysentery has also to be reckoned as a formidable factor; during the last expedition of 1873 it was remarkably prevalent; amongst the residents it is comparatively rare, and its presence must be regarded as the result of the conditions of military life. Small-pox occurs as an epidemic at intervals, and though the precaution of ordering the troops to be vaccinated is advisable, the occurrence of a single case may be regarded as unlikely. It is a tradition amongst the white residents, perhaps totally untrustworthy, that the small pox amongst the natives does not attack Europeans.

The dress of the men will consist of serge clothing, flannel vest, and flannel shirt; nothing has been spared to make the kit serviceable and adapted to the requirements of the climate.

To conclude, as a guide the statistics of the last Ashanti war may be quoted. The European troops landed were 1 578 strong and remained between 50 and 60 days ashore. During this time there was 71 per cent. of sickness; 59 per cent. of this due to fever (malarial), 13 per cent to dysentery, 28 per cent. to other causes. The mortality, including men killed in action, was 1 per cent., and 42 per cent. were invalided home. In the present campaign the total European troops actually engaged will be between 600 and 700, and, without in any degree being too sanguine, it is anticipated that no such large proportion of sickness will be met with. As long as excessive fatigue is avoided, rapid movement to the front is the surest stimulant to the soldier's courage and health.

THE STRENGTH AND CONSTITUTION OF THE EXPEDITIONS IN 1874 AND 1896.

It is difficult to arrive at anything approaching accurate figures as to the numbers of the force to be employed. If we analyse the actual strength of corps we find the number mounting up to 1,900. Thus: 300 European troops from England, consisting of (*a*) 200 picked infantry, (*b*) artillery, (*c*) engineers, (*d*) Army Service Corps, (*e*) Medical Staff Corps, 400 men 2nd Battalion West Yorkshire Regiment stopped at Gibraltar *en route* home from India. The native troops number 700 Houssa Military Police and 500 West India Regiment. The numbers of the West India Regiment have varied from 400 to 600 in the different reports. Thirty specially selected officers proceed with the troops from England. The bulk of the force being native reduces transport and expense generally. The West Indian troops are said to be acclimatised, well disciplined, brave, and moderately good shots. There will, in addition to the troops aforenamed, be available, if not actually employed, a naval brigade from the men-of-war stationed at Cape Coast Castle. In the last Ashanti war the number that actually marched into Kumassi, according to the *Broad Arrow*, was only about 1,500 Europeans with some 200 levies. The force employed was far smaller than generally supposed, and the total European strength did not exceed 2 400. The proper complement of officers for the various troops in the present expedition will have to be added to the thirty specially selected officers.

The medical department consists of twenty-three officers, of which number Brigade-Surgeon Lieutenant-Colonel Townsend and Surgeon-Majors R. Porter and J. R. Dodd are detailed for the hospital ship, the others being employed in base and field hospitals and regimental duty. In the Gold Coast service there are some nine officers—three surgeon-majors and six surgeon-captains whose services can be utilised.

The men of the Medical Staff Corps who have been detailed form a provisional company eighty-four strong, under Surgeon-Major W. O. Wolseley and Surgeon-Captain O'Callaghan. Orders have been issued for the Medical Staff Corps and Ordnance Store Corps, with their respective stores, to march towards the front on December 26th. On the same date the Special Service Corps and the 2nd Battalion West Yorkshire Regiment may be expected to arrive at Cape Coast Castle. It is probable, therefore, that by the close of the first week in January the rearmost troops will have closed up to the Prah. On December 11th seventy Houssas from Elmina began their march to the front.

The following is we believe a complete list of the medical officers serving with the present expedition: Surgeon-Colonel W. Taylor, P.M.O., Brigade-Surgeon-Lieutenant-Colonel Townsend, Surgeon-Lieutenant-Colonel Blennerhassett, Surgeons-Major Hughes, Wolseley, Dodd, Porter, Wilson, Beatty, J. Stevenson, Bentlett, Hickman; Surgeons-Captain Wilson, Beevor, Maher, Joslling, Burke, Eckersley, O'Callaghan, Cumings, Corcoran, Hilliard; Surgeon-Lieutenant Spencer.

The number of medical officers who went to the West Coast of Africa in 1873 74 would appear to have been 80, namely: One deputy Surgeon-General, local, 19 Surgeon-Majors, 60 Surgeons; but we doubt whether more than 50 were actually employed at one time on shore. The Principal Medical Officer was Sir Anthony Horne, who, falling sick, was succeeded by Surgeon-General Woolfreyes, who in turn was succeeded by Sir W. A. Mackinnon, now the Director-General Army Medical Department.

THE INEBRIETY OF ADOLESCENCE.—A young woman, aged 19, was sent to prison last week by Mr. Denman at Westminster Police-court for being drunk and disorderly. She had been apprehended on the same day she had been discharged after having been a month in prison for a similar offence. She had a total record of twenty-three former convictions.

CHELSEA HOSPITAL FOR WOMEN.

A special meeting of governors of this hospital was held on Wednesday for the purpose of considering "the propriety of the governors dispensing with the services of a member of the honorary medical staff, and to pass a resolution thereon." Lord Glenesk, Chairman of the hospital, presided. There was a very large attendance.

At the commencement of the proceedings Mr. O'Callaghan applied for the attendance of Mr. Russell as his legal friend. After some discussion this was agreed to.

The Chairman said the governors had been called together to decide upon the conduct of the Council in a matter affecting the hospital. Rumours had got abroad respecting the condition of the patients, but the fact was that the hospital was never in such good circumstances as it was at the present moment. From January 1st to December 18th the percentage of mortality on the total number of operations performed had been only 2.2, and on the total number of patients 2.5, which would compare favourably with the statistics of any hospital in London. Mr. O'Callaghan was appointed in November, 1894, as honorary surgeon to the out-patients; and of his skill from that day to this no one ever had the slightest doubt. In a pamphlet issued by Mr. O'Callaghan he represented himself as being a victim, alleging no motive except that he was a reformer, and had met the usual fate of a reformer—namely, martyrdom. His reform consisted in interfering with the general law of the hospital in a case where he suddenly forbade the resident medical officer to interfere with his patient. This being brought before the Board, Mr. O'Callaghan was requested to comply with the rules of the hospital. He subsequently saw Mr. O'Callaghan, and told him that any suggested reforms should have been brought before the Board, and that if they were desirable they would have been carried out. In this particular case a patient on whom Mr. O'Callaghan had performed an operation died, and in his statement written in the hospital book Mr. O'Callaghan virtually attributed the death to a secondary shock received from the action of the resident medical officer in interfering with the dressings. This was a very serious imputation, and necessitated an inquiry. The result was that Mr. O'Callaghan was informed on July 3rd that he had lost the confidence of the Board. He did not at once resign as might have been expected, and on the 15th a report was received from the medical staff, in which, for reasons given, they intimated that they could not possibly go on with Mr. O'Callaghan. The Chairman then read a number of letters which passed, and from which it appeared that the Council declining to rescind their resolution, it was suggested that the matter should be inquired into by two medical men of high standing appointed by the Colleges of Physicians and Surgeons, and Dr. Black and Mr. Bryant were appointed for the purpose. Mr. O'Callaghan did not attend the inquiry, and those gentlemen accordingly reported that the inquiry could not be proceeded with in his absence. In conclusion, the Chairman stated that the Council, at some eighteen meetings, had carefully considered the whole matter. "Arbitration" was asked for, but there was nothing at all to arbitrate. It was a matter of discipline and a matter of etiquette. As representatives of the governors, the Council had done their best to maintain discipline and etiquette. They thought Mr. O'Callaghan had acted entirely wrongly towards his colleagues, and, under the whole circumstances, if their action was not confirmed, the Council would feel it their duty to place their resignation in the hands of the governors.

Mr. Russell complained of the last statement made by the Chairman as tending to prejudice the case. He explained that Mr. O'Callaghan objected to the arbitrators or consultants appointed, because they had already had an interview with the Chairman in Mr. O'Callaghan's absence. He claimed, however, that the case should be fairly decided by properly appointed arbitrators, who would be in a position to deal fairly with the whole matter. In the particular case before them the patient was admitted on May 30th, and after consultation with other medical officers an operation was decided upon, and Dr. Granville Bantock who saw the operation performed by Mr. O'Callaghan, was of opinion that it was the proper operation. After it was performed at 11 o'clock at night, the resident medical officer came in and removed the bandages and put on new ones, and in that action he did interfere when Mr. O'Callaghan could easily have been sent for. No doubt he acted in perfect good faith, but at the same time Mr. O'Callaghan had very grave reasons to complain of his conduct, and did speak severely to him. The house surgeon reported him, and the Board without hearing Mr. O'Callaghan censured him. He said Mr. O'Callaghan sought for arbitration in the matter, and asked that the charges against him might be definitely stated and dealt with.

Dr. Duncan said that the resident medical officer had placed a statement in his hands denying that any instructions had been given him by Mr. O'Callaghan with regard to the dressings, or to send a wire or cab for him in case the patient required immediate attention. As a fact in this case the whole of the dressings were not changed, but only the superficial ones. Speaking for the medical staff, Dr. Duncan said the pamphlet issued by Mr. O'Callaghan teemed with inaccuracies. As to the order to the resident medical officer not to interfere with dressings in serious cases, it was the invariable rule in every hospital where there was a resident medical officer that he, and he alone, in the absence of the physician or surgeon, was solely responsible for the treatment and care of patients. In the case of haemorrhage coming on, if Mr. O'Callaghan's order was carried out, and he had to be sent for to attend to the case, living as he did three miles away, the patient might easily have bled to death before he could arrive. All the facts of this case and the evidence given before the Council were referred by them to the medical staff for consideration and advice. They met, with the exception of Mr. O'Callaghan, and after very careful consideration came to the unanimous conclusion that the death of the patient was in no way contributed to by the action of the resident medical officer, and this was conclusively proved by the *post-mortem* examination, which showed that the death was the result of a kink obstruction. The medical staff entirely endorsed the action of the Council.

A long discussion followed, in which Mr. Burdett Coutts urged that the only fair means of arriving at a solution of this difficulty was by arbitration.

Mr. Ferguson, *per contra*, said there was nothing to arbitrate. The whole question was as to the infringement of the existing rules.

Mr. Langham moved as an amendment to the Board's resolution that the whole matter should be referred to arbitration. This having been seconded was put to the vote and a ballot taken, with the result that 17 votes were recorded for the amendment and 106 against.

The resolution on behalf of the Board, which was seconded by Mr. Dyer Edwards,

That the Council after full investigation and consideration, being of opinion that the continuance of Mr. O'Callaghan as a member of the medical staff would be incompatible with the maintenance of the proper discipline of the hospital and injurious to its interests, and all the other members of the honorary medical staff having in a formal manner, distinctively refused to co-operate with him in the discharge of their professional duties in the hospital, resolved that Mr. O'Callaghan be and he is hereby relieved of his duties as honorary medical officer of the hospital,

was put to the meeting and carried by show of hands.

ROYAL COLLEGE OF SURGEONS.

An ordinary Council was held at the College on December 12th, Mr. Christopher Heath, President, in the chair. The minutes of the last meeting were read and confirmed.

The following resolution was received from the Board of Examiners in Dental Surgery, and was referred to a committee of the Council for consideration and report:

The Board of Examiners in Dental Surgery have fully considered the letter from the National Dental Hospital as well as other questions arising out of it and whilst they do not recommend that an examination in mechanical dentistry be instituted "for dental students previous to their commencing their surgical training," yet they are of opinion that the time has now come when it is desirable that the examination for the diploma should be divided into two parts, and should include chemistry and physics and histology. The importance of these subjects to the dental practitioner cannot be questioned, and it is generally felt that

under the present system candidates do not obtain a proper knowledge of them, doubtless owing to the fact that there is no definite examination in chemistry and metallurgy.

Dr. Arthur Pearson Luff, of St. Mary's Hospital, was elected an examiner for Part I of the examination in Public Health.

A report was received from the Discipline Committee dealing with two cases which were referred to them for consideration.

Mr. N. C. Macnamara, who delivered the Bradshaw lecture on December 5th, received the best thanks of the Council, and was requested to publish the same.

A letter was read from Mr. Frank Marshall, Honorary Secretary of the Newcastle-on-Tyne Dental Hospital, applying for the recognition of that institution by the College for the purpose of teaching. The matter was referred to the Board of Examiners in Dental Surgery for consideration and report.

A letter was read from Mrs. Garrett Anderson, acknowledging the receipt of the letter informing her of the reply of the Council to the memorial from the London School of Medicine for Women, and expressing the belief that the memorialists, while much regretting the decision, will greatly value the assurance contained in the resolution of the Council that, had the matter rested solely with them, the prayer of the memorialists would have been granted.

It was announced that the Royal College of Physicians had adopted the report of the delegates on the arrangements of the Examinations under the Five Years' Curriculum with the following rider:

That the College of Surgeons be informed that this College would consider it an improvement if pharmacology were placed with therapeutics under the head of medicine, instead of being accorded a distinct position as a subject separate from medicine, surgery, and midwifery.

The proposal was accepted by the Council.

INDIAN SANITATION: ARMY CHOLERA REGULATIONS.

It is, as in some other important matters, it is satisfactory to see that the outspoken criticisms of Mr. Ernest Hart in his address in India and the last meeting of the British Medical Association have been productive of early and decisive effect. In pointing out the antiquated character of the cholera regulations still in force for the army in India, Mr. Hart spoke of it in strong language as a discreditable document, and one which ought to be withdrawn. We are now informed that the Government of India have approved of a Committee assembling in Calcutta in January next to revise the present cholera rules for the forces, of which Mr. Hart spoke as inadequate and discreditable. The Committee will be composed of the Quartermaster-General in India, the Principal Medical Officers H.M. Forces in India, and the Sanitary Commissioner with the Government, associated with Mr. Hankin, the bacteriologist.

ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

The annual general meeting of this Association was held on December 11th. The chair was taken by Mr. George Pollock, President, who stated that his address practically embodied the report of the work done by the Association for the past year, of which the following is a summary. The first business of importance was the appointment of a Subcommittee to meet and confer with a Subcommittee of the Society of Fellows with respect to the election of the President of the College and other matters. As the result of this conference (on November 7th, 1894) the Society of Fellows undertook a canvass of the Fellows upon the subject of the mode of selection of the President. The Association had, however, adopted a resolution asking the Council of the College of Surgeons to agree to a conjoint Committee of the Council and the Fellows for the purpose of considering what alterations should be made in the existing charters of the College. This resolution was brought before the Fellows' meeting in January last. Upon several occasions, both officially and unofficially, communications bearing upon College politics have been received from the Society of Members; but the Committee of the Association had in all cases declined to pledge itself to any definite policy in this regard, leaving it to the members of the Association to act in their official capacity as they might deem fit. A deputation of the Association had met a Committee of the Council of the Royal College of Surgeons on June 10th, 1895, to discuss the proposed amendments of the charters and by-laws. Documents were subsequently submitted, and the matters were still under the consideration of a Committee. The mode of conducting the proceedings at the half-yearly meetings of the Fellows had claimed attention from the Committee, and certain resolutions had been forwarded to the Council of the College. The Council of the College replied to the effect that the proceedings had been conducted in accordance with the regulations. But in answer to some further resolutions for the amendment of these regulations, the Council had sent merely a formal acknowledgement. It is still hoped that the action of the Committee will bear fruit, but if not, it may be necessary to take further steps in the matter.

Mr. A. T. Norton read the auditor's report for the past year, and added that he would have great pleasure in rendering all the assistance that he could in keeping the books of the Association. The report was unanimously adopted and a vote of thanks was passed to Mr. Norton.

The following is the list of officers elected for the year 1895-96:—*President:* Mr. George Pollock. *Vice-Presidents:* Mr. T. Holmes and Mr. W. Rivington. *Treasurer:* Mr. Tweedy. *Auditor:* Mr. A. T. Norton. *Honorary Secretary:* Mr. Percy Dunn. *Committee:* Mr. W. Allingham, Mr. Herbert Allingham, Dr. Robert Barnes, Mr. Wickham Barnes, Mr. Bruce Clarke, Mr. John Cooper, Dr. Ward Cousins, Mr. Gant, Mr. Victor Horsley, Mr. Jordan Lloyd, Mr. Mayo Robson, Mr. Manley Sims, Dr. C. Steele, Mr. George Jackson, Mr. George Helm, Mr. C. B. B. Keetley, Mr. Mansell Moullin, Mr. Vincent Bell, and Mr. J. J. Parnell.

The meeting unanimously approved of the action of the Committee in regard to the case of Mr. R. B. Anderson.

Mr. Pollock, Mr. Holmes, and Mr. Percy Dunn were appointed representatives of the Association on the Civil Rights Defence Committee. The following resolution was then unanimously passed:

That this Association adopts the reports of its Committee and of the Civil Rights Defence Committee on the case of Mr. R. B. Anderson, and desires to express its thanks to the Right Honourable the Earl of Stamford as president, and the public men and bodies constituting the Defence Committee who have stood forward in resistance to illegality oppression, and persecution, and its appreciation of the action of the Council of the College in uniting in defence of the rights of its Fellows and Members.

Further, Mr. Holmes undertook to give notice of the following resolution for the half-yearly meeting of Fellows at the College in January next, namely:

That this meeting learns with pleasure that the Council of the College are represented on the Civil Rights Defence Committee in the case of Mr. R. B. Anderson, and pledges itself to take every possible step to promote the objects of that Committee.

CYCLING FOR WOMEN.

A Correspondent writes to us: "One is frequently asked if cycling is good for women. I should be very glad if you would, through the columns of the British Medical Journal, answer this question fully, giving the *pros* and *cons*, and pointing out the considerations which should weigh in giving a reply to such a question. I have seen nothing in the Journal to help much in this direction so far. One reads a good deal of the 'permanent injuries' which women may incur through bicycling. I should like to know what is the pathology of such injuries and why they need permanently disable. I have never met with a case directly or indirectly, but I am anxious to acquire a more precise knowledge of the results in injudicious cycling, in view of the great popularity it has now attained to. I am not seeking information as to the effects of overexertion on the system generally, but as it applies to women and their sexual systems."

We have requested opinions on this subject from several

physicians likely to have good opportunities to furnish information on the subject.

Dr. W. S. Playfair writes: With reference to the inquiry as to whether cycling is good for women, I may say that I have never come across a single case, with one exception, in which I had the least reason to think that cycling had been in any way injurious. That case was a very trivial ecchymosis of the external labia produced by the pressure of a badly fitting saddle, which might readily have been produced by riding on horseback or by any similar pressure. I do not see any reason why cycling should be hurtful, excluding, of course, falls and the like. The pedal movement of the limbs is accompanied by general exercise of all the muscles of the trunk and upper extremities; and it is practised in the open air, so that it is quite different from that of the sewing machine. Of course if there is any marked uterine or ovarian lesion, cycling, like other forms of exercise, should be prohibited, and it should not be practised during menstruation. I know of one lady who has tender swollen ovaries who cannot take carriage exercise, who tells me she is able to cycle without any bad results. On the other hand, I have recommended cycling in several cases of anæmia and chlorosis in girls with very beneficial results. It is a form of exercise which interests and amuses them, and which they can therefore be induced to take, while mere general advice to exercise would be useless. If young ladies at school were taken out for a good bicycle ride, instead of for the usual perfunctory walk in couples, I feel sure it would be a very good thing.

Dr. Herman writes: The popularity of cycling as an outdoor exercise for both sexes gives importance to the question which is often asked, Is bicycling good for women? For women as well as men, who are free from disease, outdoor exercise is good, especially such as takes them into pure air and sunshine. For both alike the good effect is counterbalanced by the harm if the exercise is pushed to the point of excessive fatigue. Excessive fatigue we may define as that which is not renewed by rest and food. For certain persons of both sexes, owing to peculiar conformation of the body, which permit protrusions of parts which ought to be internal, exercise short of fatigue may do harm if it produces hernias, prolapse, etc. These ill-effects are common to both sexes, and are not peculiar to cycling, but they nevertheless require to be borne in mind when advising patients with regard to the special influence of cycling on women. The bad effects are mainly two. If the pedals are too far from the seat, the rider cannot make her feet follow the pedals without inclining the pelvis. Such side to side movement of the pelvis produces unnecessary strain on the muscles of the back and loins, and also friction against the sensitive external genitals. If the saddle is badly shaped, the friction thus produced may lead to bruising, even to excoriations, and short of this, in women of certain temperament, to other effects on the sexual system, which we need not particularise. Medical men who are consulted by ladies as to whether they may cycle should qualify their assent by insistence on the points that the pedals should be of the right length from the saddle, and the saddle of proper shape. There are many saddles in the market, each claiming special advantages, and the ingenuity of the makers is constantly being exercised to devise improvements. We cannot therefore attempt to adjudicate between the rival merits of the different productions. All we need say is that a saddle which causes friction against the sensitive structures at the anterior part of the vulva is one to be condemned.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

The last usual monthly meeting of the Executive Committee of this Society was recently held at 429, Strand. There were present the Chairman (Dr. de Havilland Hall), the Treasurer (Dr. G. F. Herman), and Mr. H. H. Clutton, Dr. J. B. Ball, Mr. F. Swinford Edwards, Mr. W. J. Stephens, Dr. Walter Smith, Dr. Major Greenwood, Dr. J. Pickett, Dr. F. J. Allan, Dr. W. Knowsley Sibley, Mr. R. S. Charsley, and Dr. Alfred S. Gubb.

The accounts presented showed that an unusually large number of new members had joined the Society during the preceding month. This is mainly owing to the fact that the meeting of the British Medical Association was held this year in London, and the Medical Assurance Society was in consequence enabled to bring the advantages of its membership under the notice of the large number of members of the profession who attended that meeting.

The Committee, as usual, carefully considered the list of outstanding sickness claims. As the Society gets older this list naturally increases both in extent and interest, and in particular in the winter and spring, shows the Society to be doing a large and useful work. Thanks to the care taken in the examination of new applicants, the sickness experience of the Society has so far been well under the expectation, but as time passes the results of selection slowly but surely die away, and the experienced sickness has a tendency to approximate to the expected.

During the twelve years the Society has been in operation it has paid more than £30,000 in sickness benefit in respect of some thousands of claims. The claim register contains full particulars of all these cases, and when the time arrives for grouping and analysing the mass of information here collected some interesting and useful results may be anticipated.

Prospectuses and all information may be obtained on application to Mr. F. Addiscott, Secretary, Medical Assurance Society, 33, Chancery Lane, London, W.C.

ABORTION AND CHILD MURDER.

The collapse of the charge of libel brought against a representative of the *Sun* in reference to allegations made in the course of a series of articles published in that newspaper under the heading "Massacre of the Innocents" sets us free to comment upon the remarkable revelations there made as to the modern practice of abortion and child murder as now carried on amongst us. First of all, however, we must give expression to the feeling that in laying bare the details of these hideous crimes the *Sun* has done good service to humanity, and to the hope that these revelations will speedily have the effect of, at the least, making the perpetration of such misdeeds as dangerous as it now appears to be easy and free from risk.

Last week we published a comment on the immoral advertisements which so often appear in presumably respectable newspapers, and we pointed out that although in many cases the nostrums advertised for "removing obstructions" and "preventing large families" were mere swindles, containing nothing of any efficacy for the purpose, the mere fact of their extensive publication was an incentive both to immorality and crime.

There is, however, much reason to believe that such advertisements are but the introduction to much worse things, and that in too many cases those who are led into the trap by the hope of getting rid of their "trouble" by a few pills are, by the introduction so given, induced to discuss and entertain questions of criminal abortion and even of murder. There would seem to be three principal ways by which the "girl in trouble" (often, by the by, anything but a girl in knowledge) is brought into communication with the abortion monger and the child murderer: (1) by the advertisements of quack medicines; (2) by advertisements of lying-in homes; and (3) by the advertisements of baby farmers. Whether it is the man or the mother who wants to have the difficulty arranged, it is from the newspaper that information is sought, and there is no thinking the fact that these three classes of advertisement are intimately allied with each other, both as to their more or less veiled meaning and as to the class to which they appeal; and that in each case it is by the managers of newspapers that the associates in the contemplated crime are introduced to one another.

It is idle to deny that such deeds are done or to maintain that they are only exceptional and rare results of the constantly repeated advertisements, to the nature and evils of which we have so frequently drawn attention. The *Sun* has but focussed, and made certain with names and dates, what has long been known to be going on. There is no smoke without a fire; and it has long been recognised that adver-

tisements for children for adoption were but a cloak for more or less slow murder. The Infant Life Protection Act, 1872, was an attempt to deal with this evil, but it still continues, and it is now apparent that "adoption," "baby farming," starvation, and child murder, are but the smoke showing the existence of another crime smouldering still deeper in modern society, and are but the efforts to get rid of what one may call the failures of the abortion monger—children born alive and viable, sometimes from delay on the mother's part, sometimes from the fear of the consequences, or perhaps from some trace of humanity holding the employer back from giving the fatal order, often, it is to be feared, because "adoption" is cheaper in ready cash than murder during birth, which, as we are informed by the *Sun*, runs to £40 or £50.

A careful consideration of the facts recently made public, in the light of all that has for long been well enough known by those who took the trouble to dive into such matters, is sufficient to show that for the abolition of this abominable traffic action must be taken in four separate directions.

It is of the first importance that the disposal of the body of a stillborn child should be made as difficult as possible, and for this purpose the registration of all stillbirths, whether premature or not, should be made compulsory. The reckless indifference to child life which leaves stillborn children to be buried in the back garden or cast out upon the dust heap, and their births left unregistered is purely English, and would not be tolerated in any other civilised country.

Then it is absolutely necessary to extend the provisions of the Infant Life Protection Act to all cases in which children are removed from their parents, even when only one is taken in at a time. Such an extension can do no harm to honest people, at the worst nothing more than inconvenience can be caused, and that only here and there, while as things are it is open to any woman to receive child after child and to "do for" as many as she likes, so that she only takes in one at a time.

The registration and inspection of all lying-in houses would be a useful measure, although there might be many difficulties in the way of efficient inspection without which mere registration would not do much. None of these measures, however, will put a stop to the trade of the abortion monger. They will increase the risk of the process, and by driving it to earlier months, before the expectant mother has been brought to terror regarding her condition, the number of those who are willing to submit to "operation" will be much diminished, but no stop will be put to this abominable trade so long as facilities are offered by the press for introducing men who hate the idea of paternity, and young girls terrified at the thought of motherhood and shame, to scoundrels who are willing for a fee to break the law. It is the filthy advertisement columns which lie on every breakfast table that form the first link in the chain, and it is the suppression of such advertisements which would itself do most to suppress the evil about which we write, and without which it may be doubted whether any other steps will be of much avail.

THE BATTLE OF THE CLUBS.

CORK.

WE understand that a meeting of the medical profession in Cork will be held on December 27th for the purpose of considering the desirability of establishing in Cork a medical club or dispensary under the control of the medical profession. A set of rules will be submitted, and, should they be approved, the new organisation will probably be started with the new year.

INVERNESS.

We are informed that the following letter is sent to applicants for the post of medical officer to the clubs and societies under the circumstances described in Dr. Munro Moir's letter published in the BRITISH MEDICAL JOURNAL of December 7th, p. 1461. If anything could recall to a sense of their duty to the medical profession those who may be disposed to become candidates for the post, it would be a perusal of this letter, especially the several sections of Paragraph III. Let them consider what it would mean to attend 600 men in the railway works for £25 a year, just 10d. a head; a foundry company with about 180 hands for 10 guineas; a juvenile lodge of 45 members for 60s. a year, and so on!

[COPY.]

Inverness, December 9th, 1895.

DEAR SIR,—Annexed find particulars *re* benefit societies' advertisement for medical officer.

I. Reasons for advertisement. The medical association here are increasing their charges to higher figures than some of the societies can pay.

II. All the societies have agreed to combine for the purpose of getting a new medical man to Inverness, who would act as their medical officer. Societies would also support him in general practice."

III. There are four registered societies and two not registered, who presently pay as follows

1. Oddfellows, 220 members, at 2s. 6d. per member, without medicine.
2. Shepherds, 53 members, at 2s. 6d., *without medicine*, and 1s. for examination of intending members.
3. Rechabites, 25 members, at 2s. 6d., without medicine.
4. "Legal Friendly" Medical Aid Branch, about £15 per annum.
5. Railway works, about 600, present £25 per annum.
6. Foundry company, about 180, present £10 10s. per annum.
7. Juvenile Lodge of Oddfellows, 45 members, about £3 per annum.

IV. Each Lodge responsible for its own payment, half-yearly, except railway works, yearly at present.

V. Foundry company's medical officer's term does not expire till May, 1896.

VI. Medical officer would require to be here in January, 1896, owing to short notice of alterations given to us by the Medical Association.

VII. There are twelve practitioners in the Association.

Address—
Wm. Munro, Bookseller,
Eastgate, Inverness.

OLD MEMBERS AND NEW RULES.

A correspondent states that the medical officers of certain clubs in his neighbourhood have unanimously passed resolutions to the effect that in future female members shall not be taken for a less annual fee than 6s. 6d., nor male members for less than 5s. At present the members of the societies are attended for 4s. 4d. a year, and our correspondent asks whether the resolution can justly be put in force in the case of present members. The medical officer's tenure of office is not, we are told, in any way secured, and we are of opinion that the change in the rate of payment will equally affect both old and new members, the only question is, When can it take effect? This will depend on the conditions under which the medical officers to the societies hold office; if their appointment be at the "pleasure of the society," the new rule will take effect as soon as promulgated; if a certain period of notice has to be given on either side, then the new rule cannot be enforced till after the period has expired. Of course, in any case, the insisting on this increased payment is equivalent to a notice of vacating the appointments in question in event of the payment being repudiated by the members; so that if the latter elect to retain the services of the medical officers after they have made these demands, it obviously implies that they accept the altered conditions.

LITERARY NOTES.

THE last three numbers of the *Phonographic Record of Clinical Teaching and Medical Science*, issued by the Society of Medical Phonographers (London, Sir I. Pitman and Sons, 1895, 6d., by post 6½d.) contain some excellent contributions in well-lithographed shorthand. In the October number a member of the Society contributes his notes of a lecture by Mr. Treves on abdominal section in private practice; Dr. Fletcher Beach discusses the causation of sporadic cretinism and its treatment by thyroid extract, whilst the notes of the bedside teaching of Mr. Davies-Colley, taken by another member of the Society, show to what excellent use shorthand can be put at the bedside. In the November number, Dr. Gowers relates the case of a young man who, after being at a swimming bath, was seized with headache, culminating, after pyrexia, swelling of the eyelids, and protrusion of the eyeball, in unconsciousness, slight convulsive attacks, and general convulsions. Dr. Gowers gives the reasoning by which he arrived at the conclusion that the case was one of rheumatic inflammation of the cellular and fibrous structures of the orbit. Mr. Roger Williams, in the December number, declares against the germ theory of cancer. There are also papers dealing with the administration of gas and ether; recovery from melancholia of long duration; and desquamation after scarlet fever.

* Nearly half the members being married.
† The sex might be slightly increased.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS FOR 1896. ELECTION OF MEMBERS.

Meetings of the Council will be held on January 15th, April 15th, July 8th, and October 21st, 1896. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, December 26th, 1895, March 26th, June 18th, and October 1st, 1896.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETING TO BE HELD.

Lancashire and Cheshire Branch.—The adjourned meeting of this Branch will be held in the Medical Institution, Liverpool, on Wednesday, January 8th, 1896. Agenda: Report of the Council of the Branch on the Midwifery Nurses Registration Bill as drafted by a Subcommittee of the Parliamentary Bills Committee and amended by a Committee of the Branch Council. Report of the Committee of the Branch appointed March 9th, 1894 "to watch the progress and to oppose any proposed legislation for the registration of midwives." Mr. H. H. Preston will move and Dr. G. H. Broadbent will second, "That a Vigilance Committee of the members of the Branch be at once elected, with power to add to their number, to watch the progress of any legislation for the registration of unqualified persons to practise medicine, surgery, or midwifery without the supervision of those already registered under the Medical Acts." Mr. Walter Whitehead will move a resolution standing in his name as to the present system of government of the British Medical Association. Mr. Colin Campbell will move and Dr. J. Brassey Brierley will second, "That this Branch contribute £50 to the fund which is being raised to repay Dr. R. R. Renteul his expenses incurred in defeating the first and second Midwives Registration Bills." All notices of motion and amendments for the meeting, and applications for membership of the Association and the Branch, should at once be sent to the Honorary Secretary, James Barr, M.D., 72, Rodney Street, Liverpool.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The third ordinary meeting of this Branch was held in the library of the Medical Institute, Edmund Street, on Thursday, December 12th. The chair was taken by the President, Dr. Carter, seventy-six members and visitors being present.

Ethical Committee.—A report was received from the Council on the formation of an Ethical Committee. The report was considered paragraph by paragraph, and slightly amended to read as follows: "1. The Committee shall consist of seven members of the Branch, of whom the President of the Branch shall be one, and not less than four shall be engaged in general practice, the same to be elected annually by ballot after previous nomination. Three shall form a quorum. 2. The Committee shall appoint from their number a Chairman and an Honorary Secretary, whose names shall be printed upon the list of the officers of the Branch. All correspondence relating to the work of the Committee shall be conducted through the Honorary Secretary. 3. The general object of the Committee shall be to promote fair and honourable practice, to exercise judicious supervision of matters touching medical interests, and to use their influence to prevent abuses in the profession. 4. The duties of the Committee shall be: (*a*) To arbitrate and adjudicate upon any professional disputes which may be voluntarily submitted to them by both parties as occurring between members of the Branch, or between a member of the Branch and any person or persons other than members of the Branch. (*b*) To hear professional complaints or grievances of any member or members of the Branch, and to advise them thereon if so requested. (*c*) To make recommendations or suggestions to the Council of the Branch when corporate action appears to be desirable for the promotion of professional interests. (*d*) To co-operate with the Ethical Committee of the Council of the Association by obtaining information, or in such other ways as may from time to time be required. 5. The Committee shall be called together from time to time by the Chairman at his discretion, or at the request of three members of the Committee, but at least one meeting shall be held annually for the purpose of drawing up a report to be presented to the Branch at its annual general meeting. 6. The formation of this Committee shall be notified in writing to the Secretary of the Association, together with the name and address of the Honorary Secretary. Resolved:

That the report as amended be approved and entered on the minutes, and that steps be taken to give effect to the recommendations therein.

The following members were elected to serve on the Committee: The President, Sir Walter Foster, Mr. Priestley Smith, Mr. Langley Browne, Mr. M. A. Messiter, Mr. Vincent Jackson, and Mr. J. St. S. Wilders.

The Treatment of Typhoid Fever.—A discussion on this subject was opened by Dr. Simon. The following members took part in the discussion: The President, Drs. Richards, Saundby, Foxwell, and Stacey Wilson.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

A meeting of this District was held on Tuesday, December 17th, at the Highgate Infirmary, Dartmouth Park Hill, N. Dr. Cleveland presided.

Paper.—Mr. D'Arcy Power read an instructive paper on the Differential Diagnosis and the Treatment of Cystic Lymphangiomata in Children, showing a child from whom he had successfully removed a large growth of the above nature. Several members spoke on the subject, and Mr. D'Arcy Power replied.

Clinical Cases.—Dr. Chilcott and other members of the staff showed several interesting cases in the wards of the infirmary.

Votes of Thanks.—Votes of thanks were passed to Mr. D'Arcy Power for his paper, and to the guardians and the superintendent and staff of the infirmary for their kind hospitality.

SOUTHERN BRANCH: SOUTH EAST HANTS DISTRICT.

An ordinary meeting of this Branch was held November 1st, 1895, at the Medical Library, 5, Pembroke Road, Portsmouth.

Cases.—Dr. Watson exhibited a boy practically cured of Pityriasis Rubra under thyroid treatment, which seemed to have affected his general health beneficially.—Dr. Carling exhibited an infant aged 19 months having nearly all the characteristic appearances of Cretinism—the arrested development, dumpy growth, weakness, imbecility, placid expression, sallow aspect, face swollen, with the waxy transparent appearance of œdema, thick lips, large tongue, dribbling of saliva, dry and rough skin, hair scanty, dry, and coarse, absence of sweating, hands broad and thick, fingers short, feet flattened out, extremities cold and blue, abdomen large and pendulous. A course of mercury had produced no improvement. Dr. Carling now proposed to give thyroid extract.—Dr. Charremont showed a boy suffering from Pharyngo-mycosis. The membrane contained leptothrix, yeast cells, and cocci. Cultures yielded a luxuriant growth of staphylococci and some yeast cells. Microscopic sections were also shown.

Exhibit.—Surgeon-Major General J. Davis showed a sample of a preparation of Iron which he recommended as compatible with both acids and alkalies. It was made by mixing golden syrup ℥iv with liq. ferri perchl. fort. ℥j and adding liq. ammoniæ fort. in slight excess (about ℥v) and water to ℥viij. Dose about ♏xx.

Specimens.—Dr. G. A. O'B. Reid showed (1) the Skull of an Australian aboriginal from Roebuck Bay, Western Australia, and compared it with a Maori skull and a European skull. The Australian skull was of remarkably low type. It was

highly dolichocephalic. The face bones were almost entirely in front of, not below, the brain case. The anterior nasal opening was nearly round but with the anterior nasal spine well developed, though it was absent from a specimen from the same locality now in the Edinburgh University Museum. The angle of the mandible was unusually wide; there were thirty-two perfectly developed teeth. Dr. Reid proposed to present the specimen to the Edinburgh University Museum. (2) A Dermic Horn from the wrist of an elderly woman.—Dr. KELLY showed the Bowel from a fatal case of carbolic acid poisoning.—Dr. CLARKSON showed microscopic sections of a case of Epithelioma of the Œsophagus. He had shown the œsophagus at a meeting of this Society on November 17th, 1892, and it was referred to in the report of that meeting at p. 1173, vol. ii., 1892, of the BRITISH MEDICAL JOURNAL, as a case of apparently simple ulceration. The sections, made by the Clinical Research Association, showed that the case was one of epithelioma in which the ulceration had kept pace with the new growth.—Dr. J. R. ROBERTSON read a paper on the Influence of Large Doses of Arsenic in Chorea, quoting a series of cases showing its favourable effect. A discussion followed, in which Drs. WATSON, OWEN, OXFORD, CLARKMONT, and Messrs. GOSS, WILLMAR-PHILLIPS, COUNSELL, and Surgeon-Major General DAVIS took part.

Paper.—Mr. H. E. COUNSELL read a paper on a Few Important Details in Aseptic Surgery.

SPECIAL MEETING.

Registration of Midwives.—A special meeting was held on November 29th, when the following resolutions were passed:

1. That this meeting cordially endorses the vote passed by the annual meeting, 1895, in support of Mr. Lawson Tait's amendment, namely: That we, the members of the British Medical Association, while anxious to improve the training and supervision, and if need be, to support a practical scheme for the registration of medical, surgery, and midwifery nurses, emphatically condemn any proposal which has for its object the formation of a class of medical, or surgical, or midwifery practitioners other than those recognised by the Medical Act of 1858 as now existing.

2. That it is to the interest of the public and of the medical profession that the Council of the British Medical Association should take power and authority to protect both the individual and collective interests of the medical profession, and that the Council be requested to take such steps as may be necessary to enable it to actively undertake these duties, and to devote a portion of the income and funds of the Association for these purposes.

HALIFAX, NOVA SCOTIA, BRANCH.

A LARGELY attended meeting was held on November 29th at Halifax; the PRESIDENT (Dr. Trenaman) in the chair.

Discussion on Scarlet Fever.—Dr. MAHER read notes of 145 cases of scarlet fever, with special reference to the complications.—Dr. D. A. CAMPBELL reported three cases of hyperpyrexia during scarlet fever.—A prolonged discussion on scarlet fever then followed, in which the following took part: Surgeon-Colonel O'DWYER, Drs. FARRELL, CUNNINGHAM, WALSH, CHISHOLME, ALMON, REID, and CARLETON JONES.

SPECIAL CORRESPONDENCE.

PARIS.

The Paris Medical Faculty for Frenchmen only.—An Operation by an Interne and its Consequence.—Treatment of Tuberculosis at Cannes.—Surgeon's Fees on Transport Company's Boats.—Medical Men Inheriting from Patients.—Sanitation: its Effects on Typhoid Fever at Toulon and St. Ouen.—General News.

IN order to keep the Paris Medical Faculty for born and bred Frenchmen, foreign students with foreign matriculation certificates are accorded an "*equivalence*," which gives them the right of studying in the provincial faculties only; the dearth of subjects in the dissecting room and the overcrowding of students has led to the passing of this measure. The Paris Faculty is organised to give medical education to 3,000 pupils; 6,300 were last year within its gates. This new regulation will benefit the provincial medical faculties, and the students likewise if they choose wisely, inasmuch as in many provincial faculties the first two or three years of the medical curriculum are more profitably passed than at the Paris Medical Faculty, where order and method in the programme of the medical students, judging by the dissatisfaction expressed, are far from perfect. Dr. Lutaud proposes in the *Journal de Médecine* what he considers to be a sovereign remedy to prevent the plethora of medical men in France, which is no other than to allow foreign medical students to take their degree in the Paris Medical Faculty, but to withold from them the permission of practising in France.

There is at the present time great excitement among the house-surgeons at the Lariboisière Hospital. M. Villières, in M. Périer's service, operated on two patients suffering from hernia in the absence of his chief, giving as a reason that these patients had waited too long. M. Périer, interviewed by the *Temps*, gives another account, and states that on the morning of the same day he had seen all the patients with his *interne*, and decided that there was no case in his wards needing immediate surgical treatment. In case such an occurrence happened, he gave directions to his *interne* as to the surgeon to whom he should apply for assistance in case of need, as he had to go to a distance from Paris to perform an important operation. M. Villières neglected these directions, and, aided by another *interne*, performed the operation. M. Villières has been suspended from his official duties. The *interne* who helped him has claimed the right to share the same punishment; this has been accorded. The affair will be judged in a few days by the Conseil de Surveillance of the Assistance Publique.

At a recent meeting of the Academy of Medicine M. de Valcourt dwelt on the good effects of open-air life at Cannes on tuberculous patients who continue to take sea baths in winter; good results in winter are more rapid than in summer. This fact has already been noted by Dr. Cazin, and confirmed by further observations in sanatoria for the treatment of pulmonary phthisis.

According to the *Bulletin* of the syndicate of the medical men of the Seine, the fees of the medical men attached to different seafaring companies are as follows: The Messageries Maritimes, £7 4s. a month. After several years of service, £8 and £12 a month. The maximum is £20 a month after six years' service. In the General Transatlantic Company on the New York and West Indies line, £12 a month; on the Mediterranean line, £6 the first three months, afterwards £8. In the Fraissinet Company for the Levant and Asia Minor, £8 a month; for Brazil and La Plata, £12 a month. In the Chargeurs Réunis, £20 for the journey to La Plata and back, which takes about three months.

At a recent meeting of the Société de Médecine Légale the report of Maître Decori, an eminent barrister, on a nice point of law and medicine, was read: Whether medical men, *officiers de santé*, and dispensing chemists who have treated a patient during the illness followed by death, can inherit from the said patient by a will made during the last illness. The decision arrived at by Maître Decori, in the name of the Commission appointed to study the question, permits medical men to inherit under such circumstances; and he points out that an adverse interpretation of the Article 909 is neither necessary nor logical. A case at the beginning of the year in which it was applied induced the Société de Médecine Légale to take up the question.

Dr. Cartier, in a pamphlet on Toulon, states that in that town the deaths are a third more than the births. For the last twenty years there have been yearly 33 deaths and 24 births per 1,000. A third of the deaths may be imputed to bad sanitation. The sewerage system is of the most primitive and dangerous kind. The water supply, under such circumstances, is evidently contaminated. There are at Toulon 1,800 wells situated in contaminated soil. This water is the principal factor in the 20,000 cases of typhoid fever and the 3,500 deaths which have occurred among the lay, military, and marine population of Toulon in the course of twenty years. All the contaminated wells ought to be filled up. In a short time 130 litres of water will be supplied daily to every inhabitant. In this quantity, from 60 to 65 will be potable. Throughout France the average number of deaths from typhoid fever is 51 per 100,000 inhabitants. At Toulon, among the lay population, it is 84, and during certain epi-

demics 142 per 100,000. The proportion would be greatly increased if the military and marine typhoid statistics were added. In twenty years 1,651 deaths from typhoid fever occurred among the soldiers and sailors. Alcoholism and syphilis are two other scourges which devastate the Toulon population. Twenty years ago the average yearly consumption of alcohol was 2.16 litres a head; it is now 6.83 litres. In 1873 there were 226 wine shops; in 1894, 830. From 1883 to 1888 there were constant cases of typhoid fever at St. Ouen. In 1888 the contaminated wells were closed, and the fever disappeared. Dr. Dubousquet Laborderie and Dr. Léon Parisse, in their report on the St. Ouen typhoid fever epidemic declare that the water supply was the principal factor in these outbreaks. Sand filters were established, which ensured a pure water supply.

The General Council applied to the State some time back for help from it to defray the expenses of medical inspection in departmental schools. This demand has been made repeatedly, but without success, because the budget neglected this item. Now, things are changed. The omission is corrected, and the Minister of Public Instruction informs the Prefect of the Seine that £622 will be paid by Government towards the expenses of medical inspection in departmental schools. This is about half the total expense.

The Municipal Council, at the request of M. Albert Robin, has ordered that the therapeutical laboratory annexed to the late M. Dujardin-Beaumetz's service at the Cochin Hospital be attached to M. Robin's service at the Pitié Hospital. All the instruments, etc., at the Cochin Hospital laboratory will be transferred to the Pitié Hospital laboratory, which will be in receipt of the £80 a year granted to the therapeutical laboratory formerly at the Cochin Hospital.

In accordance with M. Berchelot's report the General Council has voted £2,164 for the municipal laboratory.

A scheme of removing household refuse by means of an underground system is being considered by the Municipal Council; carts are to remove the refuse from the sewers to boats, which will carry it away. Thus it is hoped the public health will be protected and agriculture advanced.

In accordance with the report drawn up by M. Dubois, the Municipal Council has voted that a service of isolation for diphtheria points be organised; also that dwellings be constructed for the nurses of the Necker Hospital and of the Children's Hospital. The expenses are estimated to be £17,168. These will be defrayed by the £20,000 the *Pari Mutuel* pays yearly to the Assistance Publique. It is also proposed to establish services in different hospitals similar to that organised at the Maternity Hospital for the purpose of treating asthenia.

M. Leroy Beaulieu states that civilisation with its results of education and comfortable living weakens the prolific power of nations. The degree of civilisation attained by a nation can be estimated by studying its birth-rate. Italy is the only exception to this rule; the percentage of births does not decrease in that country, it is 37 per mille. The antidote to this evil is furnished by the fact that civilisation brings with it better sanitation; the mortality is less and the average span of life is greater.

A chemist and druggist who indulged in invectives against a medical man has been condemned by a provincial law court to pay £12 indemnity to the injured doctor, whose practice was threatened: £60 was demanded. The tenth Chamber has condemned a chemist and druggist to pay a fine of £20 for having made up a prescription illegibly signed by a charlatan practising without a diploma.

CORRESPONDENCE.

THE GENERAL MEDICAL COUNCIL AND DIRECT REPRESENTATION.

SIR,—I approach this subject with great reluctance, as the present representative for Ireland is a near and beloved relative of my own and is very ill, so ill that two metropolitan consultants have already put themselves forward as candidates for the position still held by Dr. Kidd on the General Medical Council. This premature action on the part of the metropolitan candidates forces the "provincials" into the field before the time selected ordinarily by the dictates of good taste.

I hope to awaken the provincial medical men to a consideration of their own interests, and ask them to vote for a provincial general practitioner instead of a Dublin consultant, who will simply be a second representative of whatever teaching school he belongs to.

The Council is composed of thirty members, twenty of whom are sent from the various medical corporations, five nominated by the Crown, and five are "elected representatives." The corporations have thus double the voting power of any possible combination of the remainder. To quote from the BRITISH MEDICAL JOURNAL: "Direct representation is powerless against the interests of the corporations, bodies which the Council was created to control, and which nevertheless have the exceptional advantage of ruling the Council, and receiving through their members the larger share of the funds to which they contribute nothing." Registered practitioners contribute all the income of the General Medical Council by which the Acts are administered, while the twenty corporations represented contribute nothing.

Of the six Irish members on the Council, five are sent from the schools; in their selection the great body of the profession have no voice, as they are nominated by the Senates or Councils, whose election is further narrowed to those holding the higher honour degrees. Indeed, so jealous are the "metropolitans" of their monopolies that a provincial "Fellow" can have a seat on their Councils.

In the face of such an intolerable state of affairs, are we provincials to extinguish what little influence we have in the administration of our profession by voting for metropolitan candidates who are members of the Councils of the corporations? No, vote for a man who will support as asked for at the annual meeting in London this year an extension of the principle of direct representation, a man who will vote for enlarging the sphere of action of the Council by obtaining from Parliament the necessary authority to make it what it ought to be—penal and protective to the profession and a majority of its members "elective."

There are 800 Poor-law medical officers in Ireland. What influence or voice have they on the Council? But they have the influence and power to turn the election in favour of a provincial candidate, and they should realise that twice has the Council used its majority to reject the reasonable request made to it to apply to the Privy Council, as provided for in the Medical Act of 1886, for power to increase its number by an addition of elected representatives.

Dr. MacDonnell, of Dundalk, who has done good work on the Council of the Irish Medical Association for the Poor-law medical officers, will stand if assured of support, or if a stronger man is nominated he will retire in his favour. If the provincial vote is split it is useless to expect success.

In this county we have formed a society, one of whose objects is to obtain "increased representation for general practitioners on the General Medical Council and for medical men in Parliament." If other districts throughout the country would do likewise, and eventually become affiliated to the Incorporated Society of General Practitioners (the Irish Medical Association as at present constituted is useless), the provincial profession would have the machinery ready to work and carry the election of their nominees, and to further their interests in many ways at present impossible.

We have also made an effort to get Belfast, Cork, and Derry into line by appealing to the medical societies in these cities to adopt concerted action, and put our man at the head of the poll.

As Dr. Greene pointedly says in his letter to the *Irish Times*, November 18th: Let no man hold back for want of a personal knowledge of the candidate, or because he comes from any particular part of the country, or thinking that one vote will not make any difference. Every vote is wanted, and whoever is nominated by the "delegates" must be loyally supported. There should be a meeting of representative men from all parts of the country, and a suitable candidate chosen. We must begin without a moment's delay to combine and organise; at present the 800 Poor-law medical officers are powerless to help themselves.—I am, etc.,

L. KIDD, M.D.,
Enniskillen, Dec. 16th. Hon. Sec. Fermanagh Medical Association.

MIDWIFERY ENGAGEMENTS.

SIR,—In the BRITISH MEDICAL JOURNAL of November 16th you kindly answered my query about a midwifery engagement in which another medical man was called in. I submitted a copy of the JOURNAL to the county court judge's notice, and am pleased to tell you that he has to-day given judgment (with costs) in my favour, although he only assessed my damages at £1 1s., or one-half the fee that was originally agreed upon between defendant and myself.—I am, etc.,

December 17th. T. A.

THE *INDEX MEDICUS*.

SIR,—With reference to your remark in the BRITISH MEDICAL JOURNAL, December 14th, 1895, that Oxford have not subscribed for the renewal of the *Index Medicus*, I have to inform you that this Library subscribed immediately on learning that it was to be revived.—I am, etc.,

HENRY W. ACLAND.

Radcliffe Library, Museum, Oxford, Dec. 14th.

MEDICAL AID ASSOCIATIONS.

SIR,—Permit me in reference to the above subject to direct attention to the *modus operandi* of what is known as "The National Medical Aid Company, Limited."

Recently an advertisement appeared in the *Daily Telegraph* for a medical officer to a club. In response I made application and received the following reply:

THE NATIONAL MEDICAL AID COMPANY, LIMITED.
Chief Offices:
80 and 81A, Fleet Street, London, E.C.
December 9th, 1895.

DEAR SIR,—With reference to your application we beg to inform you that the vacancy advertised by us which was at Rugby is now filled. We have one of a similar nature at Leith, N.B., the guaranteed salary for first year being about the same as at Rugby [£75], midwifery and surgical cases extra.

From what I have been able to ascertain there appears to be a good chance of working up a good private practice.

Yours faithfully,
E. T. HARWOOD,
Secretary.

Upon seeing the nature of the business, I acted upon the sentiments of the BRITISH MEDICAL JOURNAL, and at once wrote as follows:

December 10th, 1895.

Dear Sir,—When replying to your advertisement I had no idea that the club for which a medical practitioner was required was carried out under the auspices of the Medical Aid Company. Since your letter has apprised me of the fact I emphatically withdraw my candidature, and at the same time express astonishment that any qualified man with self-respect could be found to lend himself to such professional prostitution as employment in a so-called Medical Aid Company.

Faithfully yours,

My object in sending these particulars is to show that self-respect in the junior members of the profession is not yet dead, and I am sure that if the senior practitioners treated their assistants in a more liberal spirit and as brothers in the same profession, instead of masters, the assistants and junior practitioners would not be so hasty in accepting offices under the patronage of the "National Medical Aid Company, Limited."

If this crisis in the profession is the means of directing attention to the root of the malady, namely, the intolerable position of many qualified assistants, good may yet come out of evil.—I am, etc.,

December 11th. ERINENSIS.

THE AERIAL CONVECTION OF SMALL-POX.

SIR,—The article which appears in the Public Health Department of the BRITISH MEDICAL JOURNAL of December 7th is, by itself, so much calculated to discourage effort by sanitary authorities to limit the epidemic diffusion of small-pox, partly by means of "isolation" at hospitals, situate outside the centres of population, that I trust you will allow me to comment thereon.

Inasmuch as, for official reasons, I do not desire to refer specially to the particular case under notice, I would prefer to write at present from the standpoint of one who for several years has had the responsibility of teaching the subjects relating to public health administration at one of the principal medical schools.

The article speaks of "a distinct danger to a locality from a small pox hospital by reason of atmospheric spread of small-pox therefrom," and further on, in connection with the establishment of hospitals outside centres of population it speaks of "the potency for harm of small-pox hospitals." Now are we in the existing state of medical knowledge justified in the use of such expressions? I certainly think not.

In my yearly course of lectures, after describing fully the ordinary means of epidemic diffusion, as given in the standard works on medicine and in the reports of medical officers of health, I have always given an account of the circumstances of the extraordinary outbreak of small-pox which took place round the Fulham Hospital in 1881, which was reported on with scientific care and precision by Mr. W. H. Power, and which was subsequently inquired into by a Royal Commission.

I have endeavoured to do this impartially, not omitting any of the essential points in a case which has been held to be so important as proof of the aërial convection of small-pox from hospitals or houses for distances of a mile or more. This description has been coupled with the statement, which I think will be considered only fair, namely, that from my experience, and that of many others, the possibility of infection in the ordinary way (that is, personally or by fomites) in the majority of cases cannot, from the circumstances of town life, be excluded.

I hold that this teaching is what might be expected with our present day knowledge, although it differs from that which appears to meet with the approval of some high authorities.

The article on which I now comment begins by asking "What is proof?" I need not remind your readers that constant reiteration of expressions such as those quoted above does not constitute "proof," although they may give the "impression" of a distinct danger to a great many; the result being costly actions at law such as that which furnishes the subject of the article, and which tend to prevent the establishment of isolation hospitals as part of the system of defence against small-pox in this country.

As to the comparative value or signification of "positive" rather than "negative evidence" referred to in the article, is there not a great distinction between the signification of evidence as applied to questions of possibility apart from probability? Negative evidence, chiefly irrelevant on the question of possibility, becomes all-important in the estimation of probability, or, in other words, indicating the extent or proportions of a risk or danger.

I offer these remarks because it seems to me clear that a good system of notification and hospital isolation has proved to be efficacious in controlling the epidemic diffusion of small-pox. Small-pox hospitals situate outside the centres of population may therefore be a boon to the public by providing a means of checking epidemic diffusion which, in its power, is second only to vaccination.

I purposely refrain from comment on the case now under notice, in which I was not subpœnaed.—I am, etc.,

December 12th. EDWARD SEATON,
Lecturer on Public Health St. Thomas's Hospital.

THE REAL MEANING OF MIDWIVES' REGISTRATION.

SIR,—The following circular letter has been forwarded to every Board of Guardians in England and Wales:

Union Offices, Peterborough, November 12th, 1895.

SIR,—I am directed by the guardians of this union to forward to you copy of a resolution passed at their meeting held on the 9th instant, and at which meeting it was resolved that the various Boards of Guardians throughout the country be invited to co-operate with the guardians of this union by adopting a similar resolution, and forwarding a copy thereof to the Local Government Board.

I am requested to ask that you will be good enough to bring the matter under the consideration of your guardians, and shall feel obliged if you will let me know their decision in relation thereto.—Your obedient servant,

WILLIAM PETTIT, Clerk.

[COPY OF RESOLUTION.]

That the members of this Board are of opinion that it is desirable that Boards of Guardians should have the discretionary power of appointing duly qualified midwives for attendance at childbirth in place of the district medical officer (subject to the condition as laid down in the Poor-law Board's Official Circular, No. 88).

I have applied to the Local Government Board, and am informed that there is no such circular No 88; the circular referred to is No. 57, 1858, and it is as follows:

VII.—MEDICAL OFFICER.

"1. Fee in case of child-birth, where a midwife attends. Article 2 of the General Prohibitory Order. June 6th, 1857.

"Clerk of Bromsgrove Union.—It frequently happens that able-bodied men on the occasion of the confinement of their wives apply to the guardians for temporary assistance. The women are attended by midwives, and go on well, not requiring the assistance of a medical officer, who, if called upon by the relieving officer or guardians to attend to certify the sickness in such cases, claims the fee allowed under Article 182 of the General Prohibitory Order. Requested, that the Board would, in these cases, sanctioned a departure from the rule laid down in Article 2 of the General Prohibitory Order.

"Answer.—The Board think that it must have escaped the notice of the guardians that Article 2 of the General Prohibitory Order only applies to cases in which a medical officer or some other medical practitioner has attended, and therefore does not extend to such cases as these to which your letter refers. At the same time time the Board think that in cases of childbirth the practice of employing only female midwives in place of the medical officer is one which, if adopted by the guardians, should be exercised with due caution; and they rely on the guardians directing their officers in all cases of difficulty or danger to at once authorise the attendance of the medical officer."

I have obtained a copy of Article 2 of the General Prohibitory Order, and it is as follows: "In every case in which outdoor relief shall be given on account of sickness, accident, or infirmity to any able-bodied male person resident within any of the said unions, or to any member of the family of any able-bodied male person, an extract from the medical officer's weekly report (if any such officer shall have attended the case), stating the nature of such sickness, accident, or infirmity, shall be specially entered in the minutes of the proceedings of the Board of Guardians of the day on which the relief is ordered or subsequently allowed. But if the Board of Guardians shall think fit, a certificate under the hand of a medical officer of the union, or of the medical practitioner in attendance on the party, shall be laid before the Board, stating the nature of the sickness, accident, or infirmity, and a copy of the same shall be in like manner entered in the minutes."

I would earnestly call the attention of all Poor-law medical officers to the above. Articles 181 and 182 of the Poor-law Commissioners, 1847, provide that a confinement fee of from 10s. to 40s. may be paid by the guardians to a district medical officer. In 1879 the Local Government Board found that a practitioner with only the qualification of a physician was not competent to attend a pauper surgical case, and so ordered that each medical officer appointed must possess both a medical and surgical qualification. Is it not also indispensible that a person practising midwifery must also have a medical and surgical qualification? The Medical Act, 1886, says so. There are some Poor-law guardians who evidently think that a poor woman in her hour of labour deserves less attention than a sow, and that anything which will heighten the death-rate of pregnant women and of infants is worthy of their support.—I am, etc.,

Liverpool, Dec. 9th. ROBERT R. RENTOUL.

CONTROL OVER MIDWIVES.

SIR,—Since the publication in the BRITISH MEDICAL JOURNAL of July 27th of my proposed definition of a midwife or midwifery nurse, namely, "a woman who attends a case of natural labour under medical control and personally undertakes the subsequent nursing of the mother and child," I have been frequently asked what control I suggest, and shall be glad if you will grant me space to explain it. I hold that every case attended by a woman of this class should be seen by a duly qualified medical practitioner within twelve hours of delivery. A complete check would by this stipulation be placed upon the midwife, knowing her work would be carefully scrutinised on arrival of the doctor; she would run no risk during the labour, nor would she be tempted to keep back information of any accident, such as ruptured perineum, the neglect of this mishap alone being the cause of subsequent and often permanent injury to the patient in an enormous number of women. Nor would she dare to trifle with the life of the child, a thing she is so generally accused of. I name twelve hours because within this time of delivery the primary operation for a lacerated perineum could be performed with a perfect assurance of success.

It is objected, however, that as this would mean forcing medical attendance on every woman it would not be tolerated. That being so, by far the best control to adopt would be that in force in Austria, where, by decree of the Minister of the Interior, in the instructions to midwives on "summoning of doctors," rules are laid down with such definiteness as to entirely preclude a woman from doing mischief. Take an example, "(8) If placenta be not expelled in one hour, even if no bleeding has occurred; (9) In all cases of ruptured perineum as soon as they occur; (14) In the apparently dead newborn child," and so forth.

The Committee of the East Anglian Branch appointed to consider the registration of midwives reports that "no legislation can be permitted which tends in the least degree towards the licensing of a lower grade of practitioners." Substantial reasons are given for this opinion, and the report very properly points out the stern regulations of the State which forbid any district medical officer employing an unqualified person to attend a pauper.

I am, however, quite at a loss to understand how the East Anglian Branch Committee could recommend the Bill of the British Medical Association, seeing that Clause 2 actually allows a nurse to practise without any control at all. This Bill defines a midwifery nurse as a "woman who undertakes to attend cases of natural labour," and there is no penalty provided for malpraxis. The mischief such a woman may do is incalculable.

Further this Bill by Clause 8 imposes all the expenses of the Midwives Board upon the General Medical Council, and the cost of prosecutions, which may presumably be frequent amongst an enormous number of ignorant women, are to be borne by this Council—in other words, out of the pockets of registered medical practitioners. Surely the profession will never submit to such barefaced robbery. It was bad enough when proposed by the Midwives' Institute, but when seriously suggested by our fellow practitioners it is most ill-advised.—I am, etc.,

Old Trafford, Oct. 14th. JAS. BRAMBY BRUMBY.

DEATHS UNDER CHLOROFORM.

SIR,—Mr. E. C. Cripps asks why chloroform was administered and not ether to the case reported on October 12th. The following are my reasons: (1) The patient had, six weeks previously, taken chloroform well. (2) The surgeon who was about to perform the operation requested me to administer chloroform, as he much preferred it. (3) I saw no sufficient reason why chloroform should not be administered.—I am, etc.,

Newport Infirmary, Oct. 22nd. RICHARD COATES.

THE CASE OF DR. LIONEL SMITH.

SIR,—The case of Mr. H. Lionel Smith, whose unjust treatment by the Government of Western Australia was commented on in the BRITISH MEDICAL JOURNALS of June 1st and 8th has, we are glad to say, assumed a more hopeful aspect. After an eight years' struggle with what *Truth* designated as "bitter persecution" Mr. Smith found himself practically ruined and unable to obtain redress in Australia. Fortunately, however, we have in Mr. Chamberlain a Minister who acts promptly. On August 8th he sent a courteous reply to an official letter on Mr. Smith's case from the Royal College of Physicians of Ireland, and this week Mr. Smith has received the offer of the appointment of District Surgeon in Zululand from the Colonial Office. The salary is small, but it will enable Mr. Smith to start once again on his professional career. To do this, however, he is urgently in need of funds to meet expenses which have been incurred for the education of his children, now all but completed, and to provide for the passage and outfit of his wife and two youngest children. If prompt and substantial relief is not forthcoming, we see no alternative but the workhouse for Mr. Smith and his family; but, on the other hand, if he is enabled to accept the post which has been offered to him, he will have the opportunity of making a provision for them. In the eight years which have elapsed

since his dismissal, Mr. Smith has exhausted all his own resources, hence he is reluctantly compelled to allow this appeal to be made, and we cannot but think there must be those within and outside the profession both able and willing to help under circumstances so urgent and yet so temporary. The Editor of the British Medical Journal has kindly undertaken to receive and acknowledge subscriptions.—We are, etc.,

James F. Goodhart.
F. de Havilland Hall.

London, Dec. 17th.

HOW TO AVOID THE TITLE OF "DR."

Sir,—I am a Member of the Royal College of Surgeons of England and a Licentiate of the Royal College of Physicians of London, and have a trouble which causes me to seek your kind assistance and advice. I am perpetually called "Dr." instead of "Mr.;" my visiting cards are printed "Mr.;" my bills are headed "Mr.;" and my doorplates advise the world that I am "Mr.," not plain "Dr." Patients will call me "Dr.;" fellow practitioners—themselves Doctors of Medicine, who should know better—write letters to me and address the envelopes "Dr.;" as public vaccinator, bills over which I have no control style me "Dr.;" cheques are made payable to me as "Dr.," and, ridiculous though it seems, I must endorse them "M.R.C.S.," not "L.R.C.P."—for does not the Royal College of Physicians make us promise we shall not call ourselves "Dr.," while the Royal College of Surgeons does not forbid it?

I went to a place many hundred miles away. I was asked whether I was "Dr.," and denied it, for I wished for a holiday, and if one is known as a medical man everyone wishes to address you as "Dr." and to talk shop or ask advice—generally the latter occurs in hotels in the middle of the night. Unfortunately the next post brought me a letter with "Dr." on it, and I was at once regarded as a fraud.

When I first settled in practice I tried hard to stem the tide, but in vain, and now life is too short to try afresh; in fact I am branded "Dr.," and when I die "Dr." will be found as a cicatrix on my pia mater.

All this shows the ridiculous aspect of the case and how little the public cares for qualifications when one is a general practitioner in the country. I am glad to see how sensibly you sum up the subject in the British Medical Journal of December 14th. Of course anybody who is qualified in surgery, medicine, and midwifery, and practises them all, is a "Dr." to the world, and the ludicrous aspect of the case is for anybody to deny it.—I am, etc.,

December 16th. Steynham.

MILK FOR DIABETIC PATIENTS.

Sir,—With reference to Dr. Ringer's article in the British Medical Journal of December 7th, I would say that, under his advice and direction, I have been preparing milk for several weeks in the manner he suggests, and administering it with some amount of success to a child of 2 years suffering from diabetes.

I find, however, that a 10 per cent. solution of acetic acid is not sufficient to precipitate the caseinogen, and have been compelled to use one of twice that strength. Moreover, in the case of my patient, the addition of one tabloid of saccharin to the pint and a-half of milk makes a more palatable preparation than when the 2 per cent. of glycerine is used.

A very good preparation of milk may also be made by using a Pasteur-Chamberland filter, but the process is tedious and expensive.—I am, etc.,

Newark, Dec. 16th. F. H. Appleby.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 5s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A Senior Surgeon-Captain A.M.S., at present stationed in Rangoon, wishes to exchange with an officer whose position on the roster would assure him three years at home. Advertiser arrived in India on December 2nd, 1894. State terms.—Apply, Surgeon-Captain Davis, c.o. Messrs. A. Scott and Co., Rangoon.

CHANGES OF STATION.

The following changes of Station amongst the officers of the Army Medical Staff have been officially notified to have taken place during the past month:

		From	To
Surg.-Maj.-Gen.	J. B. Hamilton, M.D.	C. of Good Hope	Devonport.
Surg.-Col.	W. D. Wilson, M.B.	Secunderabad	York.
"	W. Taylor, M.D.	Dover	Gold Coast.
"	J. H. Hopkins, M.D.	Devonport	Chester.
"	J. Maturin	Ceylon	Colchester.
Brig.-Surg.-Lt.-Col.	T. O'Farrell, M.D.	Egypt	London.
"	T. O'Reilly	Gosport	Portsmouth.
"	E. Townsend, M.D.	Cork	Gold Coast.
"	R. Harman, M.B.	Dover	Shorncliffe.
"	M.D.O'Connell, M.D.	Fallincollig	Cork.
Surg.-Lt.-Col.	R. M. Blennerhassett	Bengal	Gold Coast.
"	W. B. Slaughter	Portsmouth	Gosport.
"	W. B. Allin, M.B.	Punjab	Aldershot.
"	C. T. Lang, C.B.	"	Aldershot.
"	J. Powell	Dover	Madras.
"	H. Charlesworth	Brighton	Bombay.
"	W. M. James	Shorncliffe	Canterbury.
Surg.-Major	W. H. Allen	Queenstown	Madras.
"	G. A. Hughes, M.B.	Chatham	Gold Coast.
"	P. M. Ellis	Aldershot	Bengal.
"	R. T. Beamish, M.D.	Portland	Portsmouth.
"	J. E. Nicholson	Devonport	Bengal.
"	W. O. Wolseley	Wakey	Gold Coast.
"	F. H. Fox	Cork	Jamaica.
"	W. J. Macnamara, M.D.	Gosport	Portland.
"	M. W. Kerin	Athlone	Bombay.
"	W. Dugdale	Punjab	Aldershot.
"	J. R. Dodd, M.B.	York	Gold Coast.
"	R. Porter, M.B.	Portadown Hill	"
"	E. M. Wilson	Salford	"
"	J. W. Beatty, M.D.	Enniskillen	"
"	J. McLaughlin, M.D.	Maryhill	Edinburgh.
"	C. R. Bartlett	Edinburgh	Gold Coast.
"	J. Hickman	Colchester	"
Surg.-Capt.	J. J. F. Boyle	Dublin	Kilkenny.
"	C. L. Jaulling	Colchester	Gold Coast.
"	R. H. Hall, M.D.	Pembroke Dock	Devonport.
"	B. A. Maturin	Gibraltar	Warley.
"	F. T. Skerrett	Chester	Hulme.
"	J. Will, M.B.	Berrylinks	Barbadoes.
"	J. Moir, M.B.	Maryhill	Glasgow.
"	E. Eckersley, M.B.	Woolwich	Gold Coast.
"	D. M. Saunders, M.D.	Cumping	Salford.
"	D. M. O'Callaghan	Adj. V.M.S.Corps	Gold Coast.
"	H. A. Cummins, M.D.	Formoy	"
"	J. J. Russell, M.B.	Kilkenny	Formoy.
"	G. F. H. Marks, M.D.	Lydd	Shorncliffe.
"	R. H. Scott, M.D.	Punjab	Bombay.
"	J. W. Cockerill	Madras	Dover.
"	J. Ritchie, M.B.	Malta	Colchester.
"	B. Macdonald, M.B.	Portsmouth	Gosport.
"	E. Corcoran	Colchester	Gold Coast.
"	D. Stiell, M.B.	Aldershot	Edinburgh.
"	L. E. A. Salmon	Devonport	Jamaica.
"	M. P. C. Holt	Aldershot	Sheerness.
"	H. I. Pocock	Devonport	Horfield.
"	G. Hilliard	Shorncliffe	Gold Coast.
"	A. Wright	Cape Col. Ser.	Aldershot.
"	H. N. Dunn, M.B.	Punjab	Egyptian Army.
Surg.-Lieut.	F. M. Mangan	Aldershot	Punjab.
"	W. J. Taylor, M.B.	Shorncliffe	Bombay.
"	H. A. Berryman	Jersey	Bengal.
"	C. G. Spencer, M.B.	Woolwich	Gold Coast.
"	J. R. McMunn	Hilsea	Punjab.
Quartermaster	R. T. Osborne	London	Woolwich.
"	C. Arbeiter	Devonport	W. Coast, Africa.
"	E. Lines	Colchester	"
"	A. Freshwater	Netley	London.
"	C. F. Dear	Portsmouth	Colchester.

Surgeon-Captains G. Wilson, M.B., J. Maher, and J. FitzG. Burke, who have been serving on the West Coast of Africa, are to do duty on the Gold Coast, in connection with the Ashanti expedition.

THE NAVY.

Fleet-Surgeon J. W. H. Hawton has been placed on the Retired List, at his own request, December 9th. He was appointed Surgeon, March 31st, 1874; Staff Surgeon, March 31st, 1886; and Fleet-Surgeon, November 20th, 1894.

Staff-Surgeon George F. Wales has been appointed to the *Pallas*, and Surgeon George F. Dean to the *Wildfire*, additional, for the *Sans Pareil*, both dated January 1st.

INDIAN MEDICAL SERVICE.

The following promotions, which have been already announced in the British Medical Journal, have received the approval of the Queen:—*Bengal*: Surgeon Majors P. A. Weir, P. J. Freyer, M.D., P. de H. Hall, John Lewtas, M.D., and John O'Neill, M.D., to be Surgeon-Lieutenant-Colonels, September 30th; Surgeon-Captains J. J. Pratt and Robert Shore, M.D., to be Surgeon-Majors, September 29th. *Madras*: Surgeon-Majors Edward Ferrand and F. H. Pedroza to be Surgeon-Lieutenant-Colonels, September 30th; Surgeon-Captains W. B. Bannerman, M.D., and Henry Thomson to be Surgeon-Majors, September 29th. *Bombay*: Surgeon-Majors J. W. Clarkson and Joseph Parker, M.D., to be Surgeon-Lieutenant Colonels, September 30th; Surgeon-Captain C. J. Sarkies to be Surgeon-Major, September 29th.

The retirement from the service of Brigade-Surgeon-Lieutenant-Colonel

H. B. Purves, of the Bengal Establishment, which also has been already announced in the British Medical Journal, has likewise received the sanction of the Queen.

Surgeon-Lieutenant-Colonel W. M. Courtney, Bengal Establishment, has retired from the service, December [illegible]. He was appointed Assistant-Surgeon, October 1st, [illegible], and Surgeon-Lieutenant-Colonel twenty years thereafter. He served with the Duffla expedition in 1873-74; with the Burmese expedition in 1886-87, in medical charge of No. 18 Field Hospital with the 4th Brigade Upper Burmah Field Force (medal with clasp), and with the Chin Lushai Expeditionary Force, under Brigadier-General Symons in 1889-90 as Senior Medical Officer in charge of the General Hospital.

An examination for appointments in the Indian Medical Service will be held in London on February [illegible] and following days.

Brigade-Surgeon-Lieutenant-Colonel Rajendra Chandra Chandra, late of the Bengal Establishment, and formerly Professor at the Medical College Calcutta, died in London on December 14th. He entered the service as Assistant-Surgeon January 27th, 1858, and became Brigade-Surgeon February 24th, 1880. During the Indian Mutiny in [illegible] he was present at the action with Ferozeshah on the banks of the Jumna. He was also with the expedition against the Kookies in 1861, and in the Cossyah and Jyntiah Hills campaign in 1862-63.

THE MILITIA.

Surgeon Edward Savile [illegible], M.D., formerly of the 2nd West York Light Infantry Militia, died at Sidcup, Kent, on December 11th, after a long and painful illness.

THE VOLUNTEERS.

Surgeon-Lieutenant T. E. [illegible], 1st Essex Artillery (Eastern Division Royal Artillery), is promoted to be Surgeon-Captain, December 18th.

Surgeon-Lieutenant A. Jones, 4th Lancashire Artillery, has resigned his commission, December 18th.

Mr. Berkeley George Andrew Moynihan, M.B., is appointed Surgeon-Lieutenant in the 3rd Volunteer Battalion the Prince of Wales's Own West Yorkshire Regiment, December 18th.

Surgeon-Lieutenant R. Mitchell, M.D., 1st Volunteer Battalion the Lancashire Fusiliers, is promoted to be Surgeon-Captain, December 18th.

Surgeon-Captain G. H. Mackay, M.B., 3rd (Morayshire) Volunteer Battalion the Seaforth Highlanders, has resigned his commission, December 18th.

Surgeon-Captain G. T. Rawnsley, Army Medical Staff, is appointed Adjutant of the Volunteer Medical Staff Corps, *vice* Surgeon-Captain D. M. O'Callaghan, who has resigned the appointment, December 18th.

The Volunteer Officers' Decoration has been bestowed upon Surgeon-Lieutenant-Colonel T. E. Pearson, M.D., 1st North Riding of Yorkshire Volunteer Artillery (Western Division Royal Artillery); Surgeon-Major S. H. [illegible], M.D., 5th Volunteer Battalion the Cheshire Regiment; and Surgeon-Major G. W. Bramwell, 2nd Westmoreland Volunteer Battalion the Border Regiment.

PAY OF SURGEON-LIEUTENANTS ON SERVICE IN INDIA.

A point on which a ruling seems called for, says the *Pioneer*, is the question of how the pay of surgeon-lieutenants who are in temporary charge of regiments shall be calculated, when they are ordered to join a field hospital proceeding on service. For instance, a surgeon-lieutenant who has passed the lower standard Hindustani and is in officiating charge of a regiment draws Rs. [illegible] plus [illegible], a total of Rs. 386. 10. For practical purposes, this may be taken as the lowest pay drawn by any one who has passed the L. S. Hindustani when in cantonments, since the instances where an officer remains unemployed are rare. As soon as they start on service, however, they are at once placed on unemployed pay on Rs. 317. 5, thus incurring a loss of Rs. [illegible] per mensem. The anomaly that an officer when he is hardest worked should receive unemployed pay seems to call for explanation. The present rules only act prejudicially as against the junior ranks, since those who are in permanent charge of regiments remain entitled to their full staff pay; but there is no reason why juniors should suffer wrongfully.

THE ASHANTI EXPEDITION.

News has been received from Cape Coast Castle to the effect that the preparations for the expedition are in an advanced state. A hospital for the troops is being erected at Connor's Hill. In it beds will be provided for 5 officers and 75 men. A bearer company of [illegible] men has already been organised to carry the sick. A slight breakdown has occurred in the transport service, owing to desertion of carriers at Mansu. In consequence work on the pontoon bridge, which is being constructed over the Prah, has been brought to a standstill. Three canoes, capable of holding 20 men each, have been constructed for the passage of the river. Eight rest camps have now been built along the route, and, with one exception, water is obtainable at all. Twenty officers and [illegible] non-commissioned officers and men of the West India Regiment have left Freetown, Sierra Leone, for Cape Coast Castle. The Special Service Corps and draft Medical Staff Corps have left Las Palmas in the [illegible], as also the transport [illegible] with the 2nd Battalion West Yorkshire Regiment, from Gibraltar for Ashanti; both these vessels sailed for Sierra Leone. Surgeon-Captain Eckersley has started to organise the hospital at Prahsu.

THE INDIAN MEDICAL SERVICES.

It has been settled that the Bengal, Bombay, and Madras Indian Medical Services will be entirely amalgamated in January, under the control of the Surgeon-General with the Government of India. The Military Assistant-Surgeon class of the three services was so amalgamated in October last, but this was only preliminary to bringing the commissioned rank into the service also. It is with a view to arranging the details of this scheme that Surgeon-Major-General Cleghorn is now on tour in the Bombay and Madras Presidencies. A not unimportant detail is the change in the designation of that officer, who, it is understood, will be called the Director-General of the Indian Medical Department, a change of title which has been in contemplation for two or three years.

THE CASE OF SURGEON-MAJOR CLARENCE SMITH.

The Commission that has been sitting to deal with the case of Surgeon-Major Clarence Smith has concluded its inquiry, and the verdict will now be awaited with much interest. Although the hearing was in camera, the *Pioneer* thinks it possible that a report of the proceedings may eventually be published.

MEDICO-LEGAL AND MEDICO-ETHICAL.

UNQUALIFIED PRACTITIONERS AT MANCHESTER.

An advertising "hernial specialist," named Samuel John Sherman, of 25 King Street, Manchester, was summoned to appear at the Manchester County Court lately for the recovery of 21 guineas, which it was alleged was obtained by him by fraud. Damages were also claimed for negligence in treating the plaintiff, Mr. John Howard, for rupture. The evidence, according to the report in the *Manchester Courier*, showed that the plaintiff had seen the advertisements issued by Sherman, in which a cure was guaranteed. He had visited the defendant, and had paid him one guinea for examination, and was absolutely assured of a cure. Upon this assurance he underwent the treatment, which consisted in a bottle of a curative compound and an apparatus to be worn, and paid 20 guineas for the same. The apparatus gave him great pain, which finally became so intolerable that he sought other surgical advice, consulting Mr. Whitehead, F.R.C.S., who told him that he had a small rupture on the right side, for which a proper truss was needed and that the apparatus he was wearing was of no use and was the cause of the severe pain. The plaintiff went back to Sherman and told him what Mr. Whitehead had said, and was informed by him that the rupture was on the left side and that for [illegible] guineas more he could be cured. The plaintiff continued the treatment, but after a short time was obliged to abandon it owing to the pain.

Mr. Whitehead supported the evidence of the plaintiff, and stated that there was no hernia on the left side at all, and that the appliance was an improper one, was cumbrous and heavy, and was wrongly applied.

Sherman gave evidence in defence to the effect that he had not promised a cure and that the truss applied was a good one. In cross-examination he stated that it was true he was not qualified, and that previous to taking up the work of hernial specialist he was connected with horse trotting in the United States.

The Judge gave judgment for the plaintiff, observing that the case was one of considerable importance to the public. He held that the plaintiff had parted with his money upon fraudulent representation, and ordered £22 and costs to be paid him.

One of the features of this case was that "Dr. John Tanner of London," who it was said "held a number of high qualifications," supported the evidence of Sherman in so far as the value of the appliance was concerned. It may be interesting to learn that a duly qualified medical practitioner was struck off the *Medical Register* last year for covering Sherman, at the instance of the Medical Defence Union, and that a hernial specialist of the same name practising in London was about four years since prosecuted at Bow Street by the Medical Defence Union, and convicted for falsely using the title of "Dr."

The successful prosecution at the Manchester County Court is most satisfactory. If the public can only realise that when swindled by quacks the law will aid them in at least getting their money back, a good deal of mischief will be done to the fraternity of charlatans.

A CANCER CURER AT MANCHESTER.

An action for damages for negligence in treatment was brought by Harriet Bayliss, a cook, of Bury, against [illegible], a "cancer specialist," of [illegible], Brunswick Street, Chorlton-on-Medlock, Manchester, last week.

The plaintiff in her evidence, as reported in the *Manchester Courier*, stated that she had seen an advertisement of the defendant's, and being ill went and consulted him, and was informed that she was suffering from weakness. About two months later she noticed a growth on her chest, which the defendant pronounced to be a "tumour," adding that it would turn into a cancer. He gave her some plaster and medicine, and painted the growth with something which gave her great pain. The pain increased to such an extent that she spoke to her mistress, who sent her to Mr. Whitehead, F.R.C.S., Senior Surgeon to the Manchester Royal Infirmary, who removed the growth by operation. Mr. Whitehead gave evidence, stating that the tumour was a benign one, but was much inflamed owing to the irritation from some caustic application. The growth was not a cancer, and the treatment adopted was a barbarous and painful one. The defendant gave evidence in his own favour, but the judge gave judgment for the plaintiff for £[illegible] and costs, and stated: "In this case definite harm had been done; as long as people would pay for unqualified assistance, they must be allowed to do so."

This case illustrates the value of the county court in exposing the methods of unqualified practitioners.

A YOUTHFUL ASSISTANT.

Inquirer writes as follows: Would I be acting unlawfully by employing as an assistant a gentleman who has passed all the examinations necessary for the degree M.B., C.M. ([illegible]), but who is unable to graduate, and therefore register, in consequence of his age ([illegible] years)? He would reside only half a mile from my house, and would be under my supervision.

*** We think our correspondent may employ such an assistant, provided that the latter will act only under the immediate supervision of his employer, and will not be allowed to conduct a branch practice or dispensary.

THE PROTECTION OF SURGICAL APPLIANCES.

We have received the following statement: A surgeon some years ago designed and made for himself a small apparatus for use in a certain class of operations. Several of his colleagues, recognising the utility of the apparatus, obtained permission to send the original apparatus to a firm of surgical instrument makers, who copied it and made altogether a considerable number of the apparatus. Recently these surgical instrument makers received a communication from another firm of surgical instrument makers, warning them that by continuing to make and sell the apparatus they were infringing a patent of the second firm. It appears on inquiry that this second firm patented the invention some year or more after the surgeon had made and put into use in hospital the original apparatus. This is proved by the printed receipts of a firm of instrument makers for supplying the surgeon with an essential part of the appliance which he could not make himself. The matter has been brought to our notice by the surgeon in question, who wishes to know

(1) Whether he or the firm of instrument makers who made the apparatus from his pattern have any remedy. Supposing this firm to go on making the apparatus, to what penalties are they liable and how are these recovered?

And generally he asks (2) for advice as to what would be the proper course for members of the medical profession to follow in like case, with the view of preventing outsiders from seizing upon devices which the inventor desires should be placed at the disposal of the medical profession in the public interest, bearing in mind that the medical profession generally consider it undesirable that surgical appliances should be patented.

*** We have submitted this statement to a legal correspondent, who writes:

(1) I am of opinion that the alleged patent is bad, and that the firm of instrument makers who have issued the warning referred to have probably no right in the matter at all, assuming, as I do from the facts stated, that the appliance they purported to patent is the same thing as that originally invented in the hospital, and "published" to all surgeons who chose to use it, a year or more before the patent was taken out. I am also of opinion that the surgeon who originally invented the appliance, or the firm of instrument makers who are authorised by him to manufacture it, may petition for the revocation of the patent, on the ground that the surgeon was the true inventor of the invention, and that it had been publicly used within the realm before the date of the patent. These proceedings would now be taken under the Patent Act (1883), and if the facts are correctly stated in the memorandum, I think they ought to be successful. In this view it is also clear that the original firm who manufacture under the authority of the real inventor are liable to no penalties whatever, and that if any action for damages for infringement should be commenced against them they can successfully resist it.

(2) As to the general question, it appears to me that there is much to be said in favour of the legal protection of new appliances by their original inventors, as being the best means of carrying out the desire of the medical profession that such improvements should be available for the use of all authorised persons. If a surgeon obtains legal protection for some novel appliance, he would, as I understand, be bound by the prescriptive rule of conduct to charge no royalties to anybody for the use of it, and not to restrict its use for professional or scientific purposes in every legitimate way. He would, however, be able, if it was thought right, to prevent unauthorised makers or sellers of instruments from producing some counterfeit which would be incorrect, and which might, of course, undersell in the market the proper and authorised appliances. Beyond this, however, there is a further danger of still greater importance. Although, as I have said above, any patent which may be taken out by somebody who is not the true inventor, for an appliance which has already been invented and made known, is in itself invalid, and can, if necessary, be struck out; nevertheless, it must be remembered that it is not at all impossible for an unscrupulous trader to obtain a patent for something which he may allege to be an improvement upon the original appliance. Such an "improvement" might be in itself, from the scientific point of view, a matter of small moment, and yet it might be sufficient to make the subsequent patent to a certain extent valid, so as to cause considerable trouble.

My view, therefore, upon the whole question is that it will be found in the end to be the safest course for the medical profession, if surgeons who invent appliances will have them protected either in their own name or in that of an authorised instrument maker, with a distinct covenant to the effect that no royalties shall be charged, and that all members of the profession shall be entitled to use them for professional purposes without hindrance.

"A CARD."

DR. ALFRED WRIGHT (Worthing) writes: On returning from abroad after an absence of ten years, I came in August last to settle here. Being a stranger in the place and finding that, owing to the local quack having but recently been punished, I had arrived too late to take advantage of the orthodox method of medical advertising followed in this town, which is done, it appears, by having the doctors' portraits, with their names and qualifications, printed in the *Illustrated Guide to Worthing*, I had to be satisfied with inserting in a local newspaper my "card," simply notifying my address to visitors and any others it might concern. I have to thank you for giving prominence to the same in the columns of the BRITISH MEDICAL JOURNAL for December 7th, p. 1464, for by this I hope that those of my formerly intimate and many other highly esteemed professional brethren throughout England (of whom, owing to long absence abroad, I have lost touch) will be made aware of the present address of an old friend.

*** In giving insertion to the above note with the view to afford the practitioners of Worthing an opportunity of repudiating the questionable allegations with regard to the local "orthodox" mode of self-announcement on commencing practice therein, we would simply remark that if it be based on fact a more glaringly unprofessional device could not well be.

CHANGING THE "DR."

A. C.—The excerpt transmitted by B. formed only part of the rule referred to, and especially related to the case therewith submitted. We now append the entire rule, which, if fulfilled by our correspondent, would justify the course he pursued. "When a practitioner is called in to or consulted by a patient who has recently been, or still may be, under the care of another for the same illness, he should on no account interfere in the case, except in an emergency, having provided for which he should request a consultation with the gentleman in previous attendance, and decline further direction of the case except in consultation with him. If, however, the latter refuse this, or if the patient insist on dispensing with his services, and a communication to that effect be made to him, the practitioner last consulted will be justified in taking charge of the case, ere assuming which, however, he should satisfy himself that such intimation has been given by the patient or family. Under such circumstances no unjust or illiberal insinuations should be thrown out in reference to the conduct or practice previously pursued, which, as far as candour and regard for truth and probity will permit, should not only be justified, but, if right, honourably persisted in; for it often happens that when patients (capricious ones especially) do not experience immediate relief from the treatment they become dissatisfied, and under the impression that their case is not understood by the 'doctor,' unjustly impute the blame to him. Many diseases, moreover, are *per se* of so protracted a nature that the want of success in the early stage of treatment affords no evidence of a lack of skilled professional knowledge."[1]

SPECIALIST DOORPLATES.

A. B. writes: Is it desirable, or if not desirable, can the medical men of a district, with justice, take exception to the prefix "Ophthalmic" on a doorplate (*sic*), "Dr. Smith, Ophthalmic Surgeon," the plate being affixed to the door of a house in a town where there is no eye hospital, nor other possibility of acquainting the public with Dr. S.'s special acquirements, about which there is no doubt. If inadvisable, kindly state how the public should be made acquainted with the fact that their eyes can be attended to by a competent specialist at their doors instead of having to go twenty miles for special treatment.

*** With reference to the proposed innovation, although no legitimate objection could well be taken thereto by the district practitioners, we hold it to be professionally undesirable, and it would moreover be attended by the serious disadvantage of being unintelligible to the majority of the public. The most unexceptionable mode of intimating our correspondent's speciality might be to effect a cure of some ophthalmic case, and let the fact speak for itself through the medium of the patient, who probably would not be slow to make it known.

FREE ATTENDANCE ON HOMŒOPATHIC PRACTITIONERS.

DOUBTER asks: Has a fully-qualified medical man, who has spent his whole life as a professed homœopathic physician, any claim on members of the medical profession for gratuitous advice?

*** In response to our correspondent's query, we deem it best to refer him to the following authoritative view expressed in the *Code of Medical Ethics*, chap. ii., sec. 2, rule 1, and leave him to form his own conclusion as to the legitimacy (so to phrase it), or otherwise, of the homœopathic practitioner in question: "1. All legitimate practitioners of medicine, their wives, and children while under the paternal care, are entitled (not as a matter of right, but) by professional courtesy, to the reasonable and gratuitous services—railway and like expenses excepted—of the faculty resident in their immediate or near neighbourhood, whose assistance may be desired," etc.

NOTE PAPER.

M. O.—In answer to our correspondent's question, we are distinctly of opinion that exception might justly be taken to the third line of the proposed heading, which we regard not only as ethically injudicious, but, as printed, calculated to convey an erroneous impression as to the real source of the title. We would suggest, therefore, the substitution of "Medical Officer of Health," which would be ethically unobjectionable, and, moreover, fulfil the expressed object in view.

CERTIFICATES TO TRADESMEN.

INQUIRER.—The proposed report, if it be directly or indirectly recommendatory of an article of daily consumption, and printed on the back of the vendor's business card as suggested, with the practitioner's name appended, would not only contravene a well understood ethical rule, but constitute a covert mode of unprofessional advertising, and therefore subject him to severe criticism.

[1] *Code of Medical Ethics*, Chapter ii, Section 5, Rule 9.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

FIRST M.B. EXAMINATION.

Part I. Chemistry and Physics.—Bate, King's; Bentley, Joh.; Brown, Emm.; Buttar, B.A., Pemb.; Carey, Emm.; Cave-Moyles, Gonv. and Cai.; Child, Pemb.; Clarke, A. J., Emm.; Claxton, King's; Dixon, G., B.A., Trin.; Elliston, H. Ave.; Fehrsen, Gonv. and Cai.; Fox, W. N., Trin.; Gabb, Down.; Geoghegan, Gonv. and Cai.; Gould, Trin.; Hardie, Queens'; Heap, Sid. Suss.; Hedley, J. P., King's; Heller, Sid. Suss.; Hindle, Corp. Chr.; Holroyde, Trin.; Hudson, A. C., Trin.; Ingram, Trin.; Ingram, A. C., Joh.; Kempthorne, Joh.; Knight, Emm.; Laycock, Joh.; Lee, W. E., Trin.; Loveday, Gonv. and Cai.; McDonnell, Joh.; Nash, B.A., Emm.; Nothwanger, Joh.; Phillpotts, Christ's; Richmond, B.A., Cla.; Roberts, J. H., B.A., Joh.; Sedgwick, Sid. Suss.; Sephton, Gonv. and Cai.; Shipman, Trin.; Shipway, Christ's; Simey, B.A., King's; Smedley, Pemb.; Spearman, Gonv. and Cai.; Stiff, Gonv. and Cai.; Stockwell, King's; Taylor, E. J. D., Gonv. and Cai.; Taylor, non-coll.; Whale, Jes.; Wilcock, Gonv. and Cai.; Wilson, G. R., Trin.; Wisdom, Emm.; Woods, Sid. Suss.; Worthington, Trin.

Part II. Elementary Biology.—Ball, Emm.; Browne, H. S. D., Trin.; Burrows, Emm.; Carey, Emm.; Carroll, Trin.; Claxton, King's; Cooke, J. G., B.A., Sid. Suss.; Cooper, J. G., Trin.; Dencke, Gonv. and Cai.; Dickinson, W. H., Trin.; Dixon, G., B.A., Trin.; Enthoven, B.A., Gonv. and Cai.; Gabb, Down.; Hawkins, Gonv. and Cai.; Horsley, Gonv. and Cai.; Lawson, G. C., Trin.; Laycock, Joh.; Lushington, Jes.; McDonnell, Joh.; Manser, Pet.; Marcy, G., Trin.; Masterman, H. W., Christ's; Miller, C. H., Trin.; Newton, Pemb.; Parez, Emm.; Perkins, H., Ave; Rees, Down.; Roberts, J. H., B.A., Joh.; Roberts, N. O., Christ's; Ross, E. A., Trin.; Sanders, B.A., Christ's; Sanger, F., Joh.; Scott, C. A. St. J., Trin.; Sedgwick, Sid. Suss.; Shropshire, Jes.; Spearman, Gonv. and Cai.; Stiebel, Trin. H.; Stiff, Gonv. and Cai.; Stokes, W. H., Pemb.; Stuttaford, H. Selw.; Taylor, E. J. D., Gonv. and Cai.; Wales, Down.; Ward, W. D., Joh.; Wilgress, H. Selw.; Wilkinson, B.A., Pemb.; Woods, Sid. Suss.

SECOND M.B. EXAMINATION.

Part I. Pharmaceutical Chemistry.—Ainsworth, B.A., Pemb.; Almond, Emm.; Ascherson, non-coll.; Atkinson, Gonv. and Cai.; Attlee, Joh.; Bainbridge, Trin.; Barnicot, Pemb.; Bell, R. L., B.A., Pet.; Bemrose, Joh.; Bigg, Gonv. and Cai.; Boulton, Trin.; Bousfield, Pemb.; Breddon, Trin. H.; Burnand, Jes.; Carey, Gonv. and Cai.; Crimp, Gonv. and Cai.; Ede, King's; George, Gonv. and Cai.; Gibson, Jes.; Hadfield, Trin.; Hall, D. G., Emm.; Holmes, Gonv. and Cai.; Howard, C. R., Pemb.; Hubbert, H. L. P., B.A., Trin.; James, W. M., B.A., Christ's; Kimbell, Trin.; Langton, J. M. E., Trin.; Larner, M.A., Pemb.; Leech, Christ's; Levy, Joh.; Malim, Christ's; Mellor, King's; Mercer, Cla.; Morgan, Joh.; Mummery, Gonv. and Cai.; Orme, Gonv. and Cai.; Percival, Joh.; Pitkin, H. Ave; Roper, B.A., non-coll.; Saunders, C. G., Trin.; Scott, Christ's; Smith, T. D., Jes.; Spurrell, Trin.; Stirling-Hamilton, Jes.; Talbot, E., B.A., Trin.; Taylor, C. E., Joh.; Telford, Gonv. and Cai.; Ticehurst, B.A., Cla.; Truman, Trin. H.; Upward, Christ's; Urwick, R. H., Trin.; Weatherhead, Joh.; Whittemore, Gonv. and Cai.; Williams, R. F., Gonv. and Cai.; Woods, W. H. O., H. Selw.; Wright, Christ's.

Part II. Human Anatomy and Physiology.—Bates, T. W., M.A., Queens'; Bolland, B.A., Emm.; Brincker, B.A., Joh.; Clarke, H. N., B.A., Gonv. and Cai.; Cox, B.A., Gonv. and Cai.; Curme, B.A., Gonv. and Cai.; Dacre, B.A., Trin.; Ellis, B.A., Gonv. and Cai.; Glasier, B.A., Emm.; Glynn, B.A., Cla.; Graham, J. G. W., B.A., Trin.; Harman, Joh.; Harmer, B.A., King's; Hay, B.A., Gonv. and Cai.; Hedley, E. W., B.A., King's; Horne, B.A., Trin.; Hunt, E. B., B.A., Trin.; Keeling, B.A., Gonv. and Cai.; Killick, Down.; Lea, J., B.A., Gonv. and Cai.; Le Fleming, E. K., B.A., Cla.; Maxwell, Trin.; Mayo, Cla.; Nicholls, Joh.; Parker, Emm.; Percival, Joh.; Priddle, Gonv. and Cai.; Reid, B.A., Joh.; Rose, B.A., Joh.; Rowland, B.A., H. Selw.; St. Leger, B.A., Gonv. and Cai.; Seaping, B.A., Cla.; Sewell, B.A., Pemb.; Slade, B.A., Trin.; Taylor, J. G., King's; Walker, A. N., B.A., Queens'; Wilkin, B.A., Pemb.; Wilson, A. G., B.A., Gonv. and Cai.; Wilson, E. A., B.A., Gonv. and Cai.

THIRD M.B. EXAMINATION, MICHAELMAS TERM, 1895.

Part I. Surgery and Midwifery.—Allan, J. L., B.A., King's; Appleyard, B.A., Emm.; Auden, B.A., Christ's; Barker, E. M., B.A., Emm.; Barton, B.A., Joh.; Black, B.A., Trin. H.; Blatchford, B.A., Sid. Suss.; Edwards, C. D., B.A., Joh.; Falkener, L., M.A., King's; Garner, W. L., B.A., Emm.; Harrison, L. K., B.A., Gonv. and Cai.; Haward, B.A., Sid. Suss.; Hermes, H., B.A., Joh.; Hewitt, B.A., Gonv. and Cai.; Hutchinson, M.A., Trin. H.; Jackson, T. L., B.A., Joh.; Mackenzie, B.A., Gonv. and Cai.; Maturin, B.A., Gonv. and Cai.; Maxwell, B.A., Corp. Chr.; Milsome, H. B., B.A., Trin.; Moritz, B.A., Gonv. and Cai.; Pendlebury, B.A., Pemb.; Penny, M.A., Pet.; Rawling, B.A., Gonv. and Cai.; Richards, W. G., B.A., Christ's; Robinson, B.A., Gonv. and Cai.; Roper, B.A., Christ's; Salt, B.A., Emm.; Selby, B.A., Down.; Somers, C. D., B.A., Pemb.; Stawell, B.A., Trin. H.; Stead, B.A., Gonv. and Cai.; Tod, H. F., B.A., Trin.; Tyson, B.A., Gonv. and Cai.; Waddington, M.A., Magd.; Ward, A. B., B.A., H. Selw.; Wedd, B.A., Down.; Wills, B.A., Gonv. and Cai.

UNIVERSITY OF LONDON.

M.D. EXAMINATION. PASS LIST.

Medicine.—A. J. Adkins, St. Thomas's Hospital; L. W. Bathurst, St. Bartholomew's Hospital; Lizzie Bennett, London School of Medicine and Royal Free Hospital; A. E. Berry, Owens College and Manchester Royal Infirmary; E. F. Blumfeld, B.S., London and Guy's Hospitals; J. H. Boulton, B.S., B.Sc., University College; J. Le M. Bunch, B.S., B.Sc., University College; R. H. Castellote, University College; R. H. Cole, St. Mary's Hospital; B. Collyer, St. Bartholomew's Hospital; R. H. Crowley, St. Bartholomew's Hospital; F. S. Eves, B.S., University College; R. C. Gully, St. Bartholomew's Hospital; R. Hamilton, Owens College, Manchester Royal Infirmary, and Guy's Hospital; Lillie Mabel Agnes Jones, London School of Medicine for Women; A. H. Joseph, University College and Royal Infirmary, Bristol, and King's College; C. A. Lane, St. Mary's Hospital; A. C. Lankester, St. Thomas's Hospital; A. H. Leete, B.Sc., Guy's Hospital; V. W. Low, B.S., St. Mary's Hospital; G. E. Manning, Guy's Hospital; H. B. Meakin, St. Bartholomew's Hospital; Elizabeth Margaret Pace, London School of Medicine and Royal Free Hospital; C. T. Parsons, St. Mary's Hospital; E. A. Perram, St. Bartholomew's Hospital; *W. J. Potts, Owens College and Manchester Royal Infirmary; C. H. Roberts (gold medal), St. Bartholomew's Hospital; C. M. Rogerson, Yorkshire College; J. A. Shaw-Mackenzie, University College; E. Smith, St. Thomas's Hospital; W. E. Smith, B.S., King's College; R. M. Smyth, St. Mary's Hospital; W. N. Soden, St. Bartholomew's Hospital; A. Stanley, St. Mary's Hospital; T. B. Stedman, University College; Mary Darby Sturge, London School of Medicine and Royal Free Hospital; A. C. Ta' Bois, St. Bartholomew's Hospital; E. C. Taylor, B.S., Guy's Hospital; F. R. P. Taylor, B.S., Westminster Hospital; T. Warner, King's College; S. R. Wells, B.Sc., St. George's Hospital; Ethel Mary Nucella Williams, London School of Medicine and Royal Free Hospital; S. Williams, University College; C. J. Woollett, Charing Cross Hospital; S. F. Wright, St. Thomas's Hospital; *E. A. Young, B.Sc., Middlesex Hospital.

State Medicine.—J. C. Symes, St. Mary's Hospital; J. Williamson, St. Bartholomew's Hospital.

B.S. EXAMINATION. PASS LIST.

First Division.—H. L. Barnard, London Hospital; Frances May D. Berry, M.D., London School of Medicine and Royal Free Hospital; D. A. Channing-Pearce, Guy's Hospital; Charlotte Elizabeth Hall, Royal Free Hospital; G. B. Hunt, University College; W. T. G. Pugh, Middlesex Hospital; A. E. Russell, St. Thomas's Hospital; H. B. Shaw, University College; J. S. Sloane, B.Sc., St. Bartholomew's Hospital; T. M. Thomas, Guy's Hospital; W. Turner, King's College.

Second Division.—Elizabeth Louise C. Appel, B.Sc., London School of Medicine and Royal Free Hospital; Frances Armitage, London School of Medicine for Women; V. J. Blake, University College; J. H. Bodman, University College, Bristol, and St. Bartholomew's Hospital; J. N. Brown, University College; F. K. Byrne, B.A., University College; Alice Mary Corthorn, London School of Medicine and Royal Free Hospital; F. J. Coutts, University College; C. S. De Segundo, St. Bartholomew's Hospital; A. Dimsey, University College; D. E. Evans, St. Mary's Hospital; L. E. V. Every-Clayton, Guy's Hospital; J. W. Haines, St. Bartholomew's Hospital; W. S. Handley, Guy's Hospital; R. Hopton, Yorkshire College; J. Hora, Guy's Hospital; W. E. L. Horner, University College; A. Hunnard, University College; W. H. Jewell, Guy's Hospital; H. D. Levick, St. Thomas's Hospital; A. A. Martin, St. Mary's Hospital; L. J. Mackin, St. Thomas's Hospital; A. Palling, Middlesex Hospital; L. A. Parry, Guy's Hospital; B. A. Richmond, B.Sc., Guy's Hospital; A. J. Rodocanachi, B.Sc., University College; A. Salter, Guy's Hospital; F. A. Smith, St. Bartholomew's Hospital; G. H. Sowry, St. Bartholomew's Hospital; J. K. Steinhauser, Guy's Hospital.

M.S. EXAMINATION: PASS LIST.

Louisa B. Aldrich-Blake, M.D., London School of Medicine and Royal Free Hospital; E. T. K. Hamilton, M.D., B.Sc., Guy's Hospital; A. W. Sheen, M.D., Guy's Hospital.

UNIVERSITY OF EDINBURGH.

THE FACULTY OF MEDICINE.

THE following table gives the number of students enrolled for the various years in the Faculty of Medicine in the University as at November 30th last, and at the corresponding date of 1894.

	First Year.	Second Year.	Third Year.	Fourth Year.	Fifth Year.	Total
November 30th, 1894	203	246	213	246	212	1,[illegible]
November 30th, 1895	234	193	244	209	221	1,[illegible]
	Increase.	Decrease.	Increase.	Decrease.	Increase.	Decrease.
	31	53	31	37	9	[illegible]

Total number enrolled in all the Faculties for 1895-6 is 3,[illegible] at November 30th, and that for 1894-5 is 3,[illegible], showing a decrease of [illegible].

It will be remarked that the number of first year students shows an increase of 31 in place of "a large decrease," as has been stated in some quarters. Doubtless the error has arisen from inferences drawn from the numbers, recently reported, of candidates who had passed the preliminary examination. But, as has already been pointed out in the BRITISH MEDICAL JOURNAL, such inferences are quite invalid, since there are now many ways of taking the preliminary. This will be best illustrated by taking these 234 first-year students of medicine, and indicating the mode in which they variously qualified for registration. The figures are as follows:—(1) Passed University Preliminary Examination, [illegible]; (2) passed Preliminary, partly with outside exemptions, [illegible]; (3) passed Preliminary entirely with outside exemptions, [illegible]; (4) exempted by M.A. qualification, [illegible]; total who completed Preliminary in October, 1895, 1[illegible]; formerly completed, [illegible].

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* Obtained the number of marks qualifying for gold medal.

pleted Preliminary or otherwise accounted for, of total first-year students of medicine, [illegible]. The complete exemptions will be found on pp. [illegible] to [illegible] of the University Calendar for [illegible]. Thus in England the Oxford Responsions and Moderations, the Cambridge Previous Examination, the Oxford and Cambridge Schools Examinations, the Matriculation Examination of the University of London, the Victoria University Preliminary and Arts Entrance exempt. It is matter for much regret that considerably less than 1 per cent. of these [illegible] students are graduates in Arts.

THE UNIVERSITY COURT.

The Court met on Monday, December 16th. A letter was read from Dr. Argyll Robertson intimating his resignation of the Lectureship on Diseases of the Eye, an office which he has held for thirteen years.

Dr. Joseph Bell was appointed a member of the electing body of the Steven Lectureship in Agriculture.

It was intimated that the Senatus had re-elected Professor Crum Brown as an Assessor in the University Court for four years from November 5th.

Leave of absence from the Christmas recess until the end of the current session was granted to the Professor of Clinical Surgery (Mr. Annandale) on account of the state of his health. The Court further approved of the recommendation of the Senatus that the Professor's duties should during his absence be discharged by Dr. John Duncan.

On the recommendation of the Senatus, and in order to meet the changes effected in the curriculum by the new ordinances, it was agreed to substitute the following regulations for those at present in force regarding the Vans Dunlop Scholarships in Medicine: (1) For students of the first year, a scholarship shall be offered for competition in the subjects of chemistry, physics, and elementary anatomy (with definition of the last subject), and one in the subjects of botany and zoology, to be competed for in July. (2) For students of the second year, a scholarship in the subjects of physiology (comprising the subject as required for the second professional examination) and surgery, the examination to be held in March. (3) For students of the third year, a scholarship on the subjects of advanced anatomy and physiology to be competed for in October, and a scholarship in materia medica (including pharmacology), to be competed for in October. In the case of these two scholarships the examinations are to include practical tests in dissecting, in experimental physiology, and in experimental pharmacology. In the case of each of the above scholarships special papers will be set for the written examinations. The general conditions of tenure of these scholarships will remain as at present. It was also agreed that the Grierson bursary in medicine, at present awarded on the results of a conjoint examination in pathology and materia medica, shall in future be divided into two bursaries, one of which shall be offered for competition to students of the third year on an examination in materia medica alone, and the other to students of the fourth year on an examination in pathology alone.

The Court approved of a recommendation of the Senatus that remitted candidates in the Faculty of Medicine who are required to reattend classes, and have taken any of these classes with extra-academical teachers, shall not again be admitted to examination unless the fees paid for former attendance have been, in the case of extra-academical classes in Edinburgh, the same as those charged for the corresponding classes within the University.

Applications by Mr. J. R. Whitaker, M.B., Lecturer on Anatomy, and Dr. F. W. N. Haultain, Lecturer on Midwifery, for continuance of recognition on change of teaching premises were granted.

The application of Mr. R. Barclay Ness, M.A., M.B., Anderson's College Medical School, Glasgow, for recognition as a teacher of materia medica and practical materia medica was granted.

On the recommendation of the Senatus, the following request of the University of New Zealand was granted: That graduates in arts or science of that University be exempted from examination in botany, zoology, physics, and chemistry required from candidates for degrees in medicine, provided that they have passed in these subjects as part of their arts or science course.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen (whose names are arranged in order of seniority as Members) having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted "Fellows" of the College:

E. Ferrand, Surgeon-Lieutenant-Colonel I.M.S., M.D.Durh., L.R.C.P.Edin.; A. G. R. Foulerton, L.R.C.P.Lond.; H. Tanner, L.R.C.P.Lond.; L. J. Pisani, Surgeon-Captain I.M.S., L.S.A.Lond.; N. C. Ridley, M.B.Lond., L.R.C.P.Lond.; F. Lace, L.R.C.P.Lond.; C. H. Leaf, M.B., B.C.Camb., L.R.C.P.Lond.; H. J. Curtis, L.R.C.P.Lond.; C. Addison, L.R.C.P.Lond.; H. A. Ballance, M.D.Lond., L.R.C.P.Lond.; E. M. Hainworth, M.B. and B.S.Lond., L.R.C.P.Lond.; M. Randall, M.D. and L.R.C.P.Lond.; W. G. Sutcliffe, L.R.C.P.Lond.; H. L. Barnard, L.R.C.P.Lond.; T. R. H. Smith, M.B.Camb., L.R.C.P.Lond.; W. Turner, M.B.Lond., L.R.C.P.Lond.; H. S. Elworthy, L.R.C.P.Lond.; G. J. Arnold, L.R.C.P.Lond.; H. A. D. Dickson, L.R.C.P.Lond.; F. E. A. Colby, M.B.Camb., L.R.C.P.Lond.; R. C. Brown, M.B., Ch.B.Melb., L.R.C.P.Lond.; W. H. Brodie, M.D.Edin.

Seventeen gentlemen were referred for six months and two for one year.

The following gentlemen, having passed the necessary examinations, have been admitted Licentiates in Dental Surgery:

W. H. Baker, E. C. D. Bascombe, F. C. Beaumont, J. J. Breakell, T. R. Chambers, S. W. R. Colyer, W. J. O. Dawson, N. Denham, E. C. Dimock, J. W. Goddard, F. E. Händel, S. J. Hankey, E. Harrison, W. J. Humby, B. E. James, H. E. Jepson, F. W. Jones, H. King, T. Lees, J. W. Lewis, S. P. Ludbrook, G. E. Macdonald, R. McKay, W. Marston, H. D. Mathews, J. L. Payne, W. H. Pidgeon, H. J. Relph, H. L. Robertson, S. F. Rose, A. B. Ryle, C. L. Seccombe, G. R. Spencer, A. W. Turton, W. [illegible] Veitch, J. Wood.

Seventeen gentlemen were referred for six months.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

FELLOWSHIP EXAMINATION.—The following gentlemen, having passed the requisite examination, have been elected Fellows of the College:

L. W. [illegible], L.R.C.P.Lond., M.R.C.S.Eng.; E. G. Fortune, M.B., C.M.Edin.; A. W. Hall, L.R.C.P. & S.Edin., L.F.P. & S.Glasg.; F. M. Graham, L.R.C.P. & S.Edin., L.F.P. & S.Glasg.; J. L. Yuill, M.B., C.M.Glasg.; T. H. Morgan, M.B., C.M.Edin.; T. B. Kelly, L.R.C.P. & S.Edin.; W. J. C. Nourse, L.R.C.P. & S.Edin., L.S.A.Lond.; A. S. Ferguson, M.R.C.S.Eng., L.R.C.P.Lond.; F. T. Anderson, L.R.C.P. & S.Edin.; A. K. [illegible], L.R.C.P. & S.Edin., M.D., C.M.Edin.; G. C. A. Moir, M.R.C.S.Eng., L.R.C.P.Lond.; W. A. Bonney, M.R.C.S.Eng., L.S.A.Lond., L.R.C.P.Edin., M.D.Brux.

BATHGATE PRIZE.—The Bathgate memorial prize, open to all students who have taken their course of materia medica at the School of Medicine of the Royal Colleges, and who have passed in the second examination under the old regulations or the third examination under the new regulations of the triple qualification, has been presented to Mr. Patrick Pearse.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

PROFESSOR ALEXANDER FRASER, having passed the necessary examination, has been admitted a Fellow of the College. Mr. Richard Keatinge, L.R.C.P.I. and L.S.A.Lond., having passed the necessary examination, has been admitted a Licentiate of the College.

INDIA AND THE COLONIES.

INDIA.

SANITARY ARRANGEMENTS IN THE BOMBAY PRESIDENCY.—The sanitary staff in this presidency consists of one sanitary commissioner, five deputy sanitary commissioners allotted to as many registration districts into which the presidency is divided for administrative purposes, and twenty-three inspectors of sanitation and vaccination distributed to as many collectorates. A correspondent draws our attention to the fact that these latter functionaries are not qualified medical men, and points out that, at a slightly enhanced cost, medical graduates of the Bombay University could be obtained. Sanitary inspectors should certainly be specially trained men, and medically trained by preference, on the basis of the scheme of sanitary organisation proposed by Dr. Simpson and Mr. Ernest Hart. Probably under the orders recently issued by the Government of India, the present untrained staff of district inspectors will be replaced by properly educated men.

DISSECTION IN CALCUTTA.—The new dissecting rooms in the Calcutta Medical College, though not yet completed, have already been taken into use. Their size may be gauged by the fact that they comprise [illegible] square feet of space as compared with [illegible] feet in the Edinburgh institution, where space is anything but cramped. They are fitted with marble slabs and all the latest appliances, and are an enormous improvement upon the miserable go-downs in which the work had previously to be carried on.

DR. SIMPSON AND THE BENGAL GOVERNMENT.—A little learning is a dangerous thing, especially when used to delay necessary public reforms. None would be more ready than ourselves to acknowledge and to appreciate the remarkable ability and the large smattering of encyclopaedic knowledge which characterise the secretaries of the various Indian provinces, and on the whole, we have observed that their activity is generally used for excellent purposes and in the right direction. In dealing with sanitary questions, however, they are too often apt to presume upon their inadequate smattering of knowledge and to show their smartness by criticising the reports of experts with dangerous results. We have before us a communication from one gentleman occupying this high position in an important presidency, addressed to the provincial medical officer, begging him not to make any new suggestions, and not to write long reports, for he frankly confesses his inability to understand the reports and his want of time even to read them, but expresses the unwillingness of his Government to act upon new suggestions which involve expense, and their desire not to be troubled with the reports which would involve expenditure. The Secretary of the Bengal Government has recently placed himself in an unenviable position by completely misunderstanding a report by Dr. Simpson, the able medical officer of Calcutta, animadverting upon the notoriously bad draining of that city, and attributing to it a causal relation to the increasing prevalence there of febrile and malarial affections of a typhoid type. The Secretary of the Government interprets this as meaning an increase of typhoid fever, a vulgar error which is permissible, perhaps, in no one else than a Government officer penning an official criticism. Unfortunately this ill-informed criticism may easily be interpreted as an argument against introducing a better system of drainage so much needed in Calcutta. Typhoid fever is essentially a waterborne disease, and so long as the water supply of Calcutta is undefiled typhoid fever is not and is never likely to be prevalent there. On the other hand, the water-logged and polluted soil of Calcutta is in itself a threatening condition, tending to give a typhoid type to all forms of fever and debilitating disease. Dr. Simpson's reply is complete and overwhelming. It means, we fear, that the ill-judged action of the Government Secretary is likely to be prejudicial. Dr. Simpson has a sufficiently hard task in combating the obstructive tendencies of the native population, and it is unfortunate that these difficulties should be increased by the result of misapprehension on the part of a high European official. In the main we are sure that the sympathies of the Bengal Government under the enlightened rule of Sir A. Mackenzie will be in favour, as they have been under the distinguished rule of Sir Charles Elliott, of decisive sanitary reform, and we trust that this unpleasant episode will soon be forgotten. Meantime it is unnecessary to say that all the sympathies of intelligent Europeans must always be enlisted on the side of the admirably successful exertions of the eminent medical officer of Calcutta who has won for himself both here and in India the highest esteem and confidence of all well informed sanitarians, and who under great difficulties is carrying out a most important work for which he may fairly look for general encouragement and appreciation.

NEW ZEALAND.

In 1889 we published a statement, or disclaimer, by Dr. Macbean Stewart, of Christchurch, New Zealand, in regard to an advertisement of "Macbean Stewart's New Cure for Asthma," in which he stated that he "neither owns it, runs it, nor advertises it." We have now received, from a correspondent in New Zealand, under date October 27th, 1895, a cutting from a newspaper, the name of which is not given nor its date, but which was published in 1895, containing the evidence of Dr. Stewart given at an inquiry into various charges brought against the Christchurch Hospital. In his evidence he is reported to have said that "he had an interest in a drug called the New Asthma Cure." It would, we think, be advantageous to Dr. Stewart if the truth could be laid clearly before the public, and more still if we could be assured that he had no interest in this proprietary medicine, and that he had taken steps to put an end to the advertisement of his name in connection with it.

OBITUARY.

The death is announced of Mr. Thomas Amyot, F.R.C.S., of Diss, in his 79th year. The deceased, who was the son of Mr. Thomas Amyot, F.R.S., Treasurer of the Society of Antiquaries, was born in London in 1817. He was educated at the Westminster School, and went to Norfolk early in life, and for more than fifty years practised there.

The death is announced of Mr. Abraham Hargreave Middleton, B.A., M.D. He was a grand nephew of the late Dr. Hargreave, Senior Physician to the City of Dublin Hospital. Taking his M.B. at the Dublin University early in the present year, he had since then been acting as *locum tenens*. He contracted typhoid fever at Chester, which was complicated by pneumonia, and caused his death after an illness of thirty days. Dr. Middleton was an ardent sportsman.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,561 births and 3,609 deaths were registered during the week ending Saturday, December 14th. The annual rate of mortality in these towns, which had been 17.9 per 1,000 in each of the two preceding weeks, declined to 17.8 last week. The rates in the several towns ranged from 10.9 in Croydon, 11.3 in Brighton, and 12.2 in Halifax and in Portsmouth to 21.7 in Blackburn, 22.6 in Liverpool, and 25.5 in Salford. In the thirty-two provincial towns the mean death-rate was 17.9 per 1,000, and exceeded by 0.4 the rate recorded in London, which was 17.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.6 per 1,000; in London the rate was equal to 2.7 per 1,000, while it averaged 2.5 in the thirty-two provincial towns, and was highest in Liverpool, Birmingham, Blackburn, and Salford. Measles caused a death-rate of 1.8 in Manchester, 2.4 in Birmingham and in Norwich, 4.8 in Salford, and 5.3 in Blackburn; scarlet fever of 1.0 in Hull and 1.3 in Birmingham; whooping-cough of 1.1 in Liverpool and 1.3 in Cardiff; and "fever" of 1.0 in Norwich and 1.1 in Sunderland. The [illegible] deaths from diphtheria in the thirty-three towns included [illegible] in London, 4 in West Ham, 4 in Birmingham, 3 in Leicester, and 3 in Newcastle-upon-Tyne. Two fatal cases of small-pox were registered in Hull and 1 in London, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylums Hospitals and in the Highgate Small-pox Hospital, which had been [illegible], [illegible], and [illegible] at the end of the three preceding weeks, was [illegible] on Saturday last, December 14th; [illegible] new cases were admitted during the week, against [illegible], [illegible], and [illegible] in the three preceding weeks. There were [illegible] scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital on Saturday last, against [illegible], 2,7[illegible], and 2,803 at the end of the three preceding weeks; 329 new cases were admitted during the week, against [illegible], [illegible], and 312 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, December 14th, 841 births and 546 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.4 and 19.5 per 1,000 in the two preceding weeks, declined again to [illegible] last week, but exceeded by 1.1 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from [illegible] in Paisley to [illegible] in Perth. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Dundee and Greenock. The [illegible] deaths registered in Glasgow included [illegible] from whooping-cough, [illegible] from measles, 5 from scarlet fever, and [illegible] from diphtheria.

THE HEALTH OF EDINBURGH.

The mortality for last week was only 14 per 1,000, a remarkably low figure for the month of December. At the Town Council meeting on Tuesday, December 17th, it was reported that there were 410 cases in the City Hospital, and that 334 of these were scarlet fever. The epidemic of this disease had been on the whole mild, though now that it was passing away there were some few malignant cases. Typhoid fever, too, was [illegible], and there were only [illegible] cases of measles in hospital.

WATERCRESS AND TYPHOID FEVER.

The existence of watercress beds at Wycombe Marsh, where typhoid fever has been endemic since the latter part of September, has aroused the suspicion of the London County [illegible] apparently, as the local press makes mention of a communication which has been addressed to the Rural Health Officer, asking as to the likelihood of danger arising by way of the cress beds in the presence of fever. Dr. Dickson has made report to his Rural District Council, in which he discusses at length the matter of pollution of the water [illegible] the cress is cultivated. It appears that the water is not without danger of contamination by piggery refuse, slop water, drainage, and other filth; but, on the other hand, the beds are spoken of as having been last cut on May 23rd, so that whilst enteric fever poison has been [illegible] passing through the lower bed during the past two months, there would appear little likelihood of the cress having been sent to the London market or elsewhere. Since September there have been 14 cases in twelve houses, with one death. Not far above the cress beds the effluent of the sewage of Wycombe borough is discharged, and it is contended that the farm is too small for the amount of matter to be treated on the allotted area. Further space seems to be in immediate contemplation, however. The system whereby shallow wells furnish water for drinking purposes in the locality is one to be condemned, looking to the nature of the soil in which they are sunk. A somewhat serious impression, if it has any ground for its existence, is that since the establishment of the sewage farm for Wycombe the water in the wells in the Marsh district has not been so good. Certain it is that the cesspools with which the locality is riddled must add their quota to the pollution of soil, and [illegible] of the wells, especially looking to the ease with which [illegible] finds its way through fissured chalk and gravel. The public have been warned to boil all water; and active steps are being taken in other directions to stay the fever, measures of prevention of stream pollution being also resolved upon.

ACTIVE COUNTY AND APATHETIC DISTRICT COUNCILS.

The Glamorganshire County Council, and for the first time, have made a lever of the Local Government Act of 1888 for the purpose of instituting, by means of a Government Medical Inspector, an inquiry into the state of one of the constituent district council's areas of jurisdiction. The little borough of Cowbridge has more than once been the subject of adverse report both from the pen of its own local medical adviser and that of Dr. Williams, the county medical officer of health. An inadequate water supply, and not free from suspicion of quality, defective flushing of such drains as there are, the chief being the town drain, pollution of the river running through the place—such are some of the facts. Sanitation seems to have been laid on one side whilst the construction of markets and the improvement of the town hall have been deemed of prime importance. If these indictments be proved, we shall congratulate the county on possessing a council which has the courage to show up so publicly a "health" body so recalcitrant as they would have us regard the council of Cowbridge to be.

SANITARY INSPECTORS.

At the monthly meeting of the Sanitary Inspectors' Association, held on December 7th at the Carpenters' Hall, a paper was read by Mr. [illegible] on the difficulties in the administration of the Public Health Acts. The Act provided for prompt abatement of nuisances dangerous to public health, yet cases were frequent in which from two to seven weeks had elapsed from the serving of the notice to the execution of the repairs. He was of opinion that Parliament should give the sanitary inspector power to enforce the abatement of the nuisance within seven days of its being detected. Among the recommendations of the paper were that all sanitary inspectors should have the same security as to tenure of office as medical officers of health appointed under Section [illegible] of the Public Health (London) Act, and that adequate salaries should be paid in order to encourage more men of good education and experience to compete for appointments as they occurred.

SCARLET FEVER IN EDINBURGH.

The scarlet fever epidemic in Edinburgh, following the usual experience, now shows signs of abatement, inasmuch as only [illegible] new cases were notified last week, and no deaths. Leith in the same period had [illegible] new cases.

DAMAGES FOR VACCINATION.

Some time since Mr. [illegible] Schneider, of Brooklyn, brought an action against Dr. H. L. Schelling, of the Brooklyn Board of Health, to recover [illegible] dollars for alleged personal injuries sustained. He stated that Dr. Schelling entered his house and compelled him by force and violence to submit to vaccination, and that he suffered severely from loss of blood and the effect of the vaccine lymph. The trial of the case came up in the Circuit Court, Brooklyn, before Justice [illegible], on [illegible], and at its conclusion the jury gave a verdict for the plaintiff and awarded him [illegible] dollars damages.

PHTHISIS IN FRANCE.

In a work by Dr. Léon Petit, just published, the following figures based on statistics obtained from the cities and towns as to the ravages of phthisis in France are given. Paris heads the list with a death-rate from phthisis of [illegible] per [illegible] of the population. In eleven towns with a population of from [illegible] the average mortality from the same disease is [illegible] per [illegible] inhabitants; [illegible]. In the Seine department, which has more than [illegible] inhabitants, the yearly average mortality from tuberculosis from [illegible] to [illegible] was [illegible].

TYPHOID FEVER AT DUNBAR.

An outbreak of typhoid fever has occurred at Dunbar, in the county of East Lothian, and Sir Henry D. Littlejohn has been called in to help the local authorities in determining the cause, and in taking measures to prevent its spread.

THE DRAINAGE OF LONDON.

The drainage of London on the north side of the Thames is far from what it should be. The deficiency is due to the fact that in the original scheme the population allowed for was a million fewer than it now is. Some 3,000 tonnes are added annually to London. Additional intercepting sewers are now to be constructed with as little delay as possible at an estimated outlay of three-quarters of a million.

DUAL NOTIFICATION.

A Medical Officer of Health asks whether the dual notification of infectious diseases can be enforced in a court of law, that is, whether the householder can be summoned for default of notification in a case where the medical attendant has notified.

**** The duty is obligatory upon the head of the family, under section 3 (2) of the Notification Act, whether there be medical notification or not. It has not been customary to enforce this, where the medical notification has been duly received, and if such a case were taken into court, the magistrate would probably take a lenient view of the offence.

IS AN INFECTIOUS HOSPITAL AN "OFFENSIVE BUSINESS?"

A. E. L.—The question at issue appears to be whether a hospital for infectious diseases, including small pox, is an offensive trade or business. This point was settled in the negative by the Withington (Manchester) case some three years ago (Withington Local Board *v.* Corporation of Manchester, in the High Court of Justice, Chancery Division, before Mr. Justice Chitty; confirmed in the Court of Appeal by Lords Justices Lindley, Lopes, and Kay). In the absence of particulars it is impossible to say how far the question would be governed by this decision, but an account of the Withington case was given in *Public Health* about March, 1893.

REMUNERATION OF MEDICAL OFFICER OF ISOLATION HOSPITAL.

Hospital.—There are no standard conditions, and various arrangements are in force in different districts. Under the circumstances the practice of the neighbouring authority affords a convenient precedent, and the payment of a fixed sum per case is, on the whole, the most satisfactory arrangement.

AERIAL DISSEMINATION OF SMALL POX.

M. R. would refer "J. R. L." to the *Lancet*, February 9th, 1884, and August 9th, 1884, for a criticism by E. T. Wilson, M.B., of Mr. Power's paper; and also to a paper by the same author in the *Transactions* of the Medical Officers of Health, read January 16th, 1885.

NOTIFICATION DIFFICULTIES.

U. K. D.—The action of the Committee appears to have been singularly ill advised and calculated to create totally unnecessary difficulties in their relations with the medical profession. Whatever communication upon the subject was necessary might much more fittingly have come through another channel, and ought in any event to have been worded with more courtesy and consideration.

TENURE OF OFFICE OF M.O.H.

A. E. T. has no remedy if the local authority elect some other practitioner, duly qualified for the appointment, in his place. He should, however, make application for reappointment, and inform the Local Government Board of the circumstances. The short distance named cannot be regarded as a serious difficulty, although if the appointment were being newly made it would properly carry some little weight, among other and much more important considerations. "A. E. T.'s" experience is a fresh illustration of the results of the perverse policy which the Local Government Board cherished until quite recently.

NOTIFICATION FEES.

J. A. A. inquires if a gentleman who holds a surgical qualification only can demand payment for notifying infectious diseases to the local authority.

**** We think that any duly registered practitioner is entitled to give the notice required by the Act, and to require payment of the fee.

ARCHÆOLOGICA MEDICA.

XVI.—THE JEWS AND THEIR INFLUENCE ON MEDICINE.

Jewish influences have never been of any importance in English medicine, though they have predominated in southern Europe. It is for this reason that no English book gives a clear account of the part played by the Jews in the history of medicine. Most people know that the Jews in the early Middle Ages numbered many great physicians among their race, and that the physicians of the great emperors and kings were usually of Hebrew extraction. Few, except the professed student of the history of medicine, know to how great an extent the very existence of medicine has depended upon the Jews.

Dr. Richard Landau has just published a history of Jewish doctors which is full of interest, even to the general reader.[1] He traces the medical faculty amongst the Jews from Moses, their greatest law-giver, who was essentially a member of our profession in its highest and best form, for he was a sanitarian, through Solomon, Elisha, Isaiah, Ezekiel, and Jesus the son of Sirach, to the Essenes, whose Aramaic root-name shows that they at first professed medicine, though the sect soon became lost in mysticism. It was not until the first century of our present era, however, that the really great school of Jewish physicians began with Akiba and Ismaël, followed by Hanina about the year 200. Hanina was contemporary with Samuel, the great oculist and even greater accoucheur, whose collyrium was long a formula throughout the then known world. Samuel practised first in Palestine and afterwards in Mesopotamia. His bosom friend was Raw, a man possessed of the truest scientific spirit, for the Talmud tells us that he would spend his all to obtain bodies for dissection to perfect himself in anatomy. Abba Oumna and Rabbi Gamaliel III in the fourth century ably maintained the prestige of the Jewish physicians, who in the fifth century became pre-eminent in Western Europe. When a knowledge of Greek was lost they made themselves masters of Arabic and obtained a key to all that mass of literature which was locked away for many subsequent years. Soon after Spain had been conquered by the Caliphs in the eighth century great schools arose in Africa and in Europe, and in these the Jews were the leading teachers. The Jewish School at Cairo first migrated to Cordova, then to Sicily, and, afterwards moving to the Italian mainland, it established itself at Salerno, proceeding thence to Arles, Narbonne, and, still later, to Montpellier and Paris. Avicenna, a Latinised form of Ebn-Sina, Ebn Zohar, who is better known to us as Avenzoar, Ibn Roschd, or Averroës, and Moses ben Maimon, called Maimonides, were the most illustrious Jews in the tenth and eleventh centuries; their names are familiar to us from Chaucer's mention of them in his Prologue to the *Canterbury Tales*. The priests looked with a jealous eye upon the encroachments of the Jews in medicine, and they obtained a formal excommunication against all who committed themselves to the care of a Jewish physician, whilst the canon law enacted that no Jew might give physic to any Christian.

During the twelfth and thirteenth centuries the Jewish doctors spread from Spain over the whole of Europe, penetrating even to the far East, for Saad Eddula was both physician and Prime Minister to the Great Cham, Argun. This was the time of their highest repute. The Spanish decree of 1492 compelled 160,000 to 800,000 Jews to leave Spain within four months of its promulgation. About a tenth of these made their way into Portugal and established schools there; the rest were dispersed, but many thousands died by the way. The persecution of Spanish Jews was not an unmixed evil; it led to a still wider distribution of the Hebrew race throughout Europe and to a dissemination of the knowledge and of the culture possessed by its best members. France and Italy received especial benefit, and the Popes were wise enough to attach a Jewish physician to their service for several generations after the edict of banishment had been promulgated in Spain.

Dr. Landau is to be congratulated upon the readable form into which he has thrown the vast amount of information contained in his book.

[1] *Geschichte der Jüdischen Aerzte.* Berlin. 1895. 3s.

Sanitary Reform in Constantinople.—Redvan Pasha, the Prefect of Constantinople, some time ago commissioned Dr. Theodore Weyl, whose *Handbuch der Hygiene* is well known as a standard work, to carry out a complete inspection of the city. In this he is being assisted by three medical men and several police officials. He began with the filthiest quarters—Skutari, Hafsköi, Balata, and Ouncapan, and has already sent in his report on these; but whether his recommendations will be accepted, or if accepted whether any serious attempt will ever be made to carry them into effect, is more than doubtful.

MEDICAL NEWS.

A generous gift of 3,000 guineas has been received by the Middlesex Hospital from an anonymous donor as a perpetual endowment of one bed and two cots, in memory of his wife.

Insanity and Cider.—For some time past the claims of cider as a temperance drink have been loudly proclaimed; yet in the report of Burghill Asylum, the medical superintendent states that more people were in the asylum through cider drinking than through any other cause.

A Large Claim.—The mother of a boy, named Dunbar, has taken an action against the Ardee (Ireland) Board of Guardians for £10 000 for the loss of her son. He was in the fever hospital, and he escaped during the night. He was found in the fields almost naked eight hours afterwards, and he subsequently died. The question of the sufficiency of the nursing staff is involved.

Among the bequests left by the late Dr. Anthony, of Greenfield Crescent, Edgbaston, Birmingham, is a sum of £1,200 for the purpose of providing a new lifeboat and boathouse at Rhyl. The bequest is left in memory of a young lady to whom the late doctor was engaged, and who was drowned while bathing at Rhyl forty years ago. The deceased was an eye-witness of the occurrence, and used every possible effort to resuscitate life, but without avail.

Street Noises.—The Association for the Suppression of Street Noises is now at work. A Bill has been drafted which has the support of several members of Parliament. A subscription of not less than 2s. 6d. per annum is the qualification for membership; the vice-presidents comprising subscribers of not less than one guinea annually, and such ladies and gentlemen as, in the opinion of the Committee, can render valuable assistance. It is desired to bring electoral influence to bear upon parliamentary representation.

The West End Hospital for Nervous Diseases, Welbeck Street.—Sir W. H. Broadbent, Bart., has accepted the post of Consulting Physician on the staff of this hospital, rendered vacant by the death of Dr. Bristowe. Owing to the resignation of Dr. Hughes Bennett, on account of ill-health, Dr. T. Outterson Wood becomes the Senior Physician, Dr. W. Wallis Ord becomes second, and by arrangement with Dr. de Watteville the beds allotted to the third physician have been taken over by Dr. Fletcher Beach. This rearrangement leaves a vacancy for a physician to out patients, which will be filled up in due course.

Another Lung for London.—London still suffers from want of breathing places, notably in the congested districts in the centre; and the deficiency in these places is difficult to make good owing to the value of land in such places. An excellent opportunity is just now afforded of acquiring an open space in a crowded district at Hoxton. The property belongs to the Haberdashers' Company, and is known as Aske's Schools. The schools are to be removed to another district, since they no longer answer the purpose for which they were intended. The London County Council intend to throw open the playground as an open space, and retain some of the premises for a municipal technical school. The space covers an area of about 1½ acre.

We are asked to state that as a wish has been expressed by some medical students who are to spend the Christmas vacation in London for facilities for making progress in the art of shorthand so as to be able to turn it to practical use at the beginning of the next term, steps are being taken to organise a class. Those interested in promoting the use of shorthand in medicine very wisely discourage any attempt by students to acquire it during the session. During the vacation, however, the study is a useful recreative occupation. Students willing to join such a class should communicate at once with Mr. J. F. Hayns, Westminster School of Shorthand, Palace Chambers, Bridge Street, Westminster.

The Committee of the After-Care Association for Poor Persons Discharged Recovered from Asylums for the Insane earnestly appeal for funds to enable them to carry on and extend their efforts. The objects of the Association are to assist cases (male and female) on their discharge from asylums for the insane. Subscriptions and donations will be received by the Secretary, Mr. H. Thornhill Roxby, Church House, Dean's Yard, Westminster; or they may be paid into the account of the "After-Care Association," Union Bank of London (Regent Street Branch), Argyll Place, W.

The Twelfth International Medical Congress.—The date of the Twelfth International Medical Congress, to be held in Moscow, has now been definitively fixed for the week August 19th-26th, 1897—cholera and the state of the political atmosphere permitting. The Czar has signed the Imperial Rescript sanctioning the Congress, and His Majesty's uncle, the Grand Duke Sergi, Governor-General of Moscow, has consented to be its patron. The President will probably be Professor Klein, Dean of the Medical Faculty of Moscow University; Professor Erisman, Professor of Hygiene in the same University, will be General Secretary. The Russian Government has granted a subvention of 120 000 francs towards the expenses of the Congress. The official languages of the Congress will be French and German.

At the last meeting of the British Medical Temperance Association a paper was read by Dr. C. R. Drysdale on Therapeutics without Alcohol. He took the position that alcohol was of very little use, if any, in the treatment of disease. Sir B. W. Richardson, who presided, said that, in conjunction with the late Dr. Farr, he had found that alcohol caused more deaths in England and Wales than consumption. His experience at the Temperance Hospital had been most satisfactory. The discussion was continued by Dr. Norman Kerr, Dr. Hazel, Dr. Paramore, and Dr. Ridge, and a vote of thanks was unanimously accorded to Dr. Drysdale.

On Tuesday evening, December 17th, the Romany Amateur Dramatic Club gave a performance for the benefit of University College Hospital at St. George's Hall. The well-known comedy in three Acts *The Overland Route*, by Tom Taylor, was excellently rendered. Mr. C. W. A. Trollope especially distinguished himself. Before Act III commenced, the pleasing announcement was made to the audience that the Club would have much pleasure, after paying all expenses, in handing over £80 to University College Hospital. During the twenty-five years that the Romany Amateur Dramatic Club has existed, it has handed over to various charities the sum of £3,300, for which its members deserve the warm and hearty thanks of the public.

Obstetrical Society of London.—The following are the names on the preliminary balloting list recommended by the Council for election as the officers for 1896:—*President:* F. H. Champneys, M.A., M.D. *Vice-Presidents:* *W. Duncan, M.D.; J. H. Galton, M.D.; P. Horrocks, M.D.; T. C. Nesham, M.D. (Newcastle-on-Tyne). *Treasurer:* J. B. Potter, M.D. *Chairman of the Board for the Examination of Midwives:* C. J. Cullingworth, M.D. *Honorary Secretaries:* W. R. Dakin, M.D.; *J. Phillips, M.A., M.D. *Honorary Librarian:* *W. S. A. Griffith, M.D. *Other Members of Council:* T. R. Adams, M.D. (Croydon); *J. Walters, M.B. (Reigate); *J. Thompson (Nottingham); *A. Kleeh; L. Drage, M.D. (Hatfield); W. Turner (Brighton); *P. Boulton, M.D.; *A. South, M.D.; *J. J. Tweed, jun., F.R.C.S.; C. Holman, M.D.; J. D. Malcolm, M.B., C.M.; *M. Handfield-Jones, M.D.; W. R. Pollock, M.B., B.C.; L. Remfry, M.A., M.D.; J. H. Salter (Kelvedon); *H. A. Des Vœux, M.D.; *C. C. Clarement; W. W. H. Tate, M.B. Those gentlemen to whose name an asterisk is prefixed were not on the Council, or did not fill the same office last year. The election will take place at the annual meeting on February 5th, 1896.

MEDICAL VACANCIES.

The following vacancies are announced:

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House-surgeon, doubly qualified. Salary, £60 per annum, with board and lodging in the Infirmary. Appointment for one year, but eligible for re-election. Applications to the Honorary Secretary, Infirmary, Bridgnorth, by December 21st.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, 28, West Street, Brighton.—House-surgeon unmarried, and under 30 years of age. Salary, £50 per annum, with furnished quarters and board, gas, coals, and attendance. Applications to the Honorary Secretary before December 31st.

BRISTOL INCORPORATION.—Medical Officer for the Workhouse at Stapleton; doubly qualified. Salary, £200 per annum, with residence

and rates and taxes free, together with vaccination fees. Applications to J. J. Simpson, Clerk to the Guardians, St. Peter's Hospital, Bristol, by December 31st.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn Road, W.C.—Assistant Registrars. Applications to Richard Kershaw, Secretary, by January 11th, 1896.

CHELSEA HOSPITAL FOR WOMEN.—Clinical Assistantships. Applications to the Secretary.

CHORLTON-UPON-MEDLOCK DISPENSARY, Manchester.—Resident House-Surgeon, doubly qualified, unmarried. Salary, £100 per annum, with furnished rooms and attendance. Applications to the Secretary before December 26th.

CITY OF LONDON UNION INFIRMARY, Bow Road, E.—Dispenser, must be between 25 and 45 years of age. Salary, £100 per annum, and dinner daily. Applications on forms provided to be sent to F. W. Crane, Clerk to the Guardians, St. Bartholomew Close, E.C., by December 27th.

CITY ORTHOPÆDIC HOSPITAL, Hatton Garden.—Assistant Surgeon, who should be a Fellow or Member of the Royal College of Surgeons of England. Applications to the Committee.

COUNTY BOROUGH OF CARDIFF.—Resident Medical Officer of the Reception Hospital for Infectious Diseases, unmarried. Appointment for one year. Salary, £80 per annum, with board (exclusive of wine), lodging, and residence in the hospital. Applications to Dr. Walford, Medical Officer of Health, Town Hall, Cardiff, by January 1st, 1896.

DENTAL HOSPITAL FOR LONDON, Leicester Square, W.C.—Assistant Dental Surgeon; must be L.D.S. Applications to J. Francis Pink, Secretary, by January 6th.

DENTAL HOSPITAL FOR LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square, W.C.—Demonstrator. Honorarium, £50 per annum. Applications to J. Francis Pink, Secretary, by January 6th.

DEVON COUNTY ASYLUM.—Assistant Medical Officer; single. Salary, £150 per annum, with board, lodging, and washing. Applications to Arthur E. Ward, Clerk to the Visitors, 9, Bedford Circus, Exeter, by December 31st.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Four Clinical Assistants to the Out-patient Department, and Clinical Clerks to the In-patient Physicians. Applications to the Secretary by December 31st.

HULME DISPENSARY, Manchester.—Honorary Physician. Applications to the Honorary Secretary by December 23rd.

KING'S COLLEGE, London.—Demonstrator in Bacteriological Laboratory. Applications to Walter Smith, Secretary.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary £80, to be increased to £90 per annum after the first year's service, with apartments, board, and attendance. Applications to R. R. Greene, Secretary, 54, Moorfields, Liverpool, by December 23rd.

OWENS COLLEGE, Manchester.—Junior Demonstratorship in Physiology and Histology. Salary, £100 per annum. Applications to the Registrar by January 4th, 1896.

POPLAR AND BLACKWALL SICK ASYLUM DISTRICT.—Second Assistant Medical Officer for the Asylum at Bromley, Middlesex. Salary, £80 per annum, increasing £10 yearly to £100. Applications, on forms prepared, to be sent to Robert Puckett, Clerk to the Managers, Bromley, Middlesex, E., by January 2nd.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone Road, N.W.—Surgeon to the Out-Patient Department. Applications to the Secretary, George Soudamore, by January 7th, 1896.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months, without salary, but board, washing, and lodging in the institution provided. Applications endorsed "Assistant House-Surgeon," to J. R. Baldwin Pinchard, Secretary, 18, Hammet Street, Taunton, by December 31st.

WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho, W.—Resident Medical Officer. Applications to the Secretary by December 24th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Appointment for six months. Board, lodging, and washing provided. Applications, inscribed "Application for Resident Assistant," to the Chairman of the Medical Committee by December 30th.

YORK COUNTY HOSPITAL.—Assistant House-Surgeon, doubly qualified. Salary, £80 per annum, with board, rooms, washing, etc. Applications to Fred W. Howell, Secretary and Manager, by January 1st, 1896.

MEDICAL APPOINTMENTS.

BACK, H. H., M.B.Lond., M.R.C.S., appointed Medical Officer of Health to the Aylsham District Council.

BATE, J. Brabant, L.S.A., appointed Surgeon in the Royal Mail Steamship Company.

BOOTH, R. St. G. S., M.B., C.M.Edin., appointed Second Assistant Medical Officer to the Metropolitan Asylum, Caterham, Surrey.

BOWES, W., M.R.C.S.Eng., appointed Medical Officer for the Sixth District of the East Ashford Union.

CRISP, A., M.R.C.S.Eng., reappointed Medical Officer for the Horsey District of the Smallburgh Union.

DICKIN, E. P., M.B., C.M.Edin., appointed House-Surgeon to the Northampton Infirmary.

EDGEWORTH, Alfred, M.D.Edin., appointed Physician on the staff of the St. George's and St. James Dispensary, King Street, Regent street, W.

FARRAR, Charles, M.D., L.F.P.S.Glasg., reappointed Medical Officer of Health to the Chatteris District Council.

FOSTER, A. Graham Foljambe, M.B., C.M.Edin., appointed Assistant House-Surgeon to the Northampton Infirmary.

HARPER, Joseph, L.R.C.P.Lond., M.R.C.S., reappointed Medical Officer of Health to the Barnstaple Rural District Council.

HARVEY, Frank, M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Padstow Urban Council.

HOOD, J. A., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Shardlow District of the Shardlow Union, *vice* C. Harwood, M.D., L.R.C.S.Edin., resigned.

JENNINGS, W. M., M.B., appointed Medical Officer for the Kentchurch District and the Workhouse of Abbeydore Union.

LEIGHTON, Gerald R., M.B., C.M., L.R.C.P. and S.Eng., L.F.P.S.G., appointed Medical Officer to the Skenfrith District of the Monmouth Union.

LEWIS, Frederick W., M.R.C.S., L.R.C.P.Lond., appointed Senior House-Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Institution.

LISTER, Thos. D., M.D., B.S.Lond., F.R.C.S.Eng., appointed Honorary Surgeon to the Westminster General Dispensary.

MACLENNAN, D. C., M.D.Edin., reappointed Medical Officer of Health to the Widnes Town Council.

MANBY, E. P., M.B., M.R.C.S.Eng., appointed Assistant Medical Officer of Health for Liverpool.

MOORE, T., M.R.C.S.Eng., L.M., appointed Medical Officer of Health for the Stockport Rural District.

MORTON, A. C., M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Smallburgh Urban District Council.

NEWBY, Thomas, M.B.St.And., M.R.C.S.Eng., reappointed Medical Officer of Health for the Borough of Grimsby.

O'CONNELL, J., L.R.C.P., L.R.C.S., appointed Senior Assistant Medical Officer at the Toxteth Park Workhouse, *vice*— Walker, resigned.

PATRICK, J., M.B., appointed Assistant Medical Officer to the Belfast Lunatic Asylum.

PERROTT, G. J., L.R.C.P., L.R.C.S.I., appointed Medical Officer of Health to the Kingswood Urban Council, *vice* Henry Grace, L.R.C.P.Lond., M.R.C.S.Eng., deceased.

RICHARDS, John E., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer and Public Vaccinator for the Woodhouse District of the Huddersfield Union.

RICHARDSON, T. W., M.R.C.S.Eng., appointed District Medical Officer of the Beckham Union.

RODERICK, S. J., M.B., C.M.Edin., reappointed Medical Officer of Health to the Llanelly Urban Council.

STANLEY, H., M.B., appointed Medical Officer for the Fifth District of the East Ashford Union.

STEPHENSON, Sydney, M.B., F.R.C.S.E., appointed Ophthalmic Surgeon to the North-Eastern Hospital for Children, Hackney Road, Shoreditch.

THOMPSON, H. E., M.R.C.S., L.R.C.P.Lond., appointed Assistant House-Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Infirmary.

TIBBETTS, T. M., M.B.Lond., M.R.C.S.Eng., appointed Medical Officer of Health for the Quarry Bank Urban District, *vice* W. H. Thompson, M.D.Durh.

WAGSTAFF, J. P., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the Pelham District of the Bishop Stortford Union, *vice* P. G. Griffith, M.B.Dubl., resigned.

WALKER, Dr., reappointed Medical Officer of Health to the Stoke Urban District Council.

WALKER, Dr. E. W., appointed Medical Officer of Health for the Shoeburyness Urban District.

WALSH, Leslie H., L.R.C.P.Lond., M.R.C.S., appointed Resident Medical Officer to the Royal Mineral Water Hospital, Bath.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BLATCHLEY.—On December 10th, at 97, Evelyn Street, Deptford, S.E., the wife of J. B. Challands Blatchley, L.R.C.P., L.R.C.S., and L.M.Irel., of a daughter.

BONAR.—At his residence, 114, Via del Balbuino, Piazza di Spagna, Rome, on December 8th, the wife of Dr. Thomson Bonar, of a son.

RENDLE.—On December 4th, at 2, Buckland Terrace, Plymouth, the wife of C. E. Russel Rendle, M.R.C.S., L.R.C.P., of a son.

MARRIAGE.

PATERSON—MUTLOW-WILLIAMS.—On November 4th, at the Cathedral, Barbados, West Indies, by the Right Reverend the Lord Bishop of Barbados, assisted by his chaplain, the Rev. W. G. Murray, George William Paterson, M.R.C.S., L.R.C.P.Lond., of Grenada, W.I., to Olivia Hannah, second daughter of Thomas Mutlow-Williams, Esq., of Maida Vale, London.

DEATH.

MIDDLETON.—On November 23rd, at the residence of his father, Athgoe Park, Shankill, co. Dublin, Abraham Hargreave Middleton, M.B., B.A., aged 27. Deeply mourned.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with duplicate copies.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M.D. asks to be referred to the best book of instructions for preparing and mounting specimens, pathological and physiological, for the microscope.

AN INQUIRER desires to know if there is any book written by a medical man which gives information to mothers and schoolmistresses on the treatment of girls on arriving at the age of puberty?

PRACTICE IN QUEENSLAND.

QUEENSLAND writes: Can any member kindly say from personal or reliable knowledge if a competence could be made in one of the Queensland Government village settlements by a fully qualified and experienced middle-aged man of robust health, and with £250 capital and some knowledge of agriculture and fruit growing?

COLONIAL MEDICAL SERVICES.

WEST INDIAN asks: Is it necessary that candidates for medical appointments in the Colonies should be resident in the United Kingdom? In the article on this subject in the Educational Number of the BRITISH MEDICAL JOURNAL this is implied, although not distinctly stated to be the case.

⁂ Medical candidates resident in the Colonies are equally eligible for appointments in the Colonial Medical Services with those resident in the United Kingdom. The only difference of procedure is that candidates resident in the Colonies should, in accordance with the Colonial Office regulations relating to correspondence with the Secretary of State, send their applications through the Governor.

REMOVAL FROM THE "REGISTER."

X. Y. Z. writes: When the name of a person is taken off the *Medical Register* for the offence of "covering," but he still retains his qualifications, is he expected to give up practice entirely, and, if not, what professional work can he undertake without detriment to the restoration of his name at some future time? What is the usual length of time before he may be restored?

⁂ When the name of a medical man is erased from the *Medical Register* for the offence of "covering," or for an offence declared by the General Medical Council to be "infamous conduct in a professional respect," he should, although he may retain his degree or diplomas, absolutely cease to practise his profession. It is only by ceasing to practise that he can recognise the penalty which has been inflicted, and which deprives him of the right to act as a registered medical practitioner. If such a person employed a registered medical practitioner to carry on his practice, while he remained in the locality taking part in in the work, he would place the registered medical man in the unenviable position of being liable to a charge of "covering" for enabling him to evade the consequences of the judgment of the General Medical Council. If he went to another locality and acted as a medical assistant he might compromise his employer in the same sense. There is, therefore, only one course to pursue—namely, to cease absolutely to practise, and, if possible, devote himself to the study of his profession by attending hospital practice or doing some similar work. Giving evidence of such action he might apply for restoration at the end of twelve months, but, unless under very exceptional circumstances, two years would probably elapse before his restoration to the *Register*.

ANSWERS.

LEX does not enclose his name. He should address the Dublin Branch of the British Medical Association on the subject.

M.B.—We have referred our correspondent's letter in a direction which is likely to lead to investigation.

A. would probably find what he desires in the catalogue of the National Temperance Publication Depot, 33, Paternoster Row, E.C.

F. T. M. writes, in reply to "Member," in the BRITISH MEDICAL JOURNAL of December 7th, p. 1470, to suggest phenazone (antipyrin).

M. D.—The document in question is scandalous. It should be brought to the notice of the Assistant Commissioner of the Metropolitan Police, New Scotland Yard, S.W.

A. A.—We entirely agree with our correspondent's view that co-operation is necessary, but we think that the best machinery for bringing about this co-operation is the Branches of the Association or special local committees appointed by them.

CONVICTION OF SUPPOSITITIOUS [illegible].

W. D. S.—In law a person may have all the qualifications required for registration, but unless he be registered under the Medical Act he cannot be recognised as a "duly qualified medical practitioner" according to the Act. The non-registered are therefore not entitled to assume any "name, style, title, or addition" implying that they are duly registered.

BOVINE TUBERCULOSIS.

P. W. M.—The recent work by Professor Nocard, of Alfort, entitled *Les Tuberculoses Animales: leur Rapports avec la Tuberculose Humaine* (Paris: G. Masson. 2 fr. 50 c.) contains an excellent summary of the subject, and deals at length with the question of tuberculosis in cows, as to which our correspondent specially inquires. The book has been translated into English by Dr. H. Scurfield, and is published by Messrs. Baillière, Tindall, and Cox under the title *The Animal Tuberculoses and their Relation to Human Tuberculosis* (4s.).

INSURANCE OF CHILDREN.

O. F.—We are not aware of any Act passed during the last five years which deals with the insurance of children. We know of no Act which gives a friendly society the power to enrol members down to the age of one year. The Friendly Societies Act of 1875 states that "a person under the age of 21 but above the age of 16" may become a member—Sec. 15, par. 8—and a special clause follows stating that "societies and branches consisting wholly of members of any age under 21 years, but exceeding 3 years" may register under the Act. Three years is, we believe, the minimum age of membership in any case, but in burial societies small sums may be assured on the lives of children of any age, and large numbers of such assurances are effected on the lives of infants. This, however, does not make the infants members, the membership belongs to the parents who effect the assurances.

GAS AND ETHER APPARATUS.

DR. STANLEY B. DE BUTTS (Eaton Terrace, S.W.) writes: In reply to "X.Y.Z.'s" query concerning a gas and ether apparatus, I think he will find the pattern in which the same india-rubber bag is used for both the anæsthetic vapours to be the best, as it is the least costly. It consists of an ordinary Clover's inhaler, to which a tap is inserted at the kneed joint of the bag to admit nitrous oxide at the commencement of the administration. The apparatus costs, complete in case (Messrs. Cox and Co., Bond Street), [illegible], but the necessary addition of the tap and tube to join the gas bottles could be fixed to any Clover's inhaler for about [illegible] or [illegible]. Other patterns, such as Hewitt's and Barth's, though excellent, are considerably more expensive and less portable, as they require a separate gas bag, and include more or less complicated valves and stopcocks. I should advise "X.Y.Z." to keep his gas in two 50-gallon bottles, which cost about [illegible] empty, or [illegible] charged. I think he will also find the struggling during ether inhalation he refers to greatly obviated by strictly observing the method laid down in Dr. Hewitt's Anæsthetics, the principal point being the absolute exclusion of air till the patient is unconscious. I should be happy to answer more fully if "X.Y.Z." will communicate with me.

MEDICAL FEES FOR LIFE ASSURANCE EXAMINATIONS.

EXAMINER writes: Permit me to call attention to a mistake in Dr. Parkinson Leigh's letter in the BRITISH MEDICAL JOURNAL of December 14th. He gives the Prudential Assurance Company amongst the list of those who pay [illegible] for a proposal of [illegible] and upwards. I examine a large number of cases for the Prudential Assurance Company, and would point out that for a proposal of [illegible] they only pay a fee of 10s. 6d., but that for any sum over [illegible] they pay [illegible]. For a proposal of [illegible] the fee is 10s. 6d. They do not ask the medical referee or examiner to make a careful analysis of the urine for sugar, albumen, etc., but they expect him to say if there is any reason to suspect disease of the kidneys or generative organs. I quite agree with Dr. Parkinson Leigh that the fees are too low, and I think one guinea quite little enough for any examination the proposal for which amounts to [illegible]. I may also say that the highest fee paid by the Prudential is one guinea, so that if the proposal is [illegible] or [illegible] the fee paid to the medical examiner is the same—namely, one guinea.

MEDICAL AID SOCIETIES.

H. S.—Our correspondent has acted very properly, and it is satisfactory to learn that this society has decided not to attempt business in his district. Had his action been other, in all probability his own practice would have suffered in the long run, and he might not unreasonably have been regarded by his professional brethren in the neighbourhood as the prime cause of any harm brought on their practices by the operations of the society. It not infrequently happens that by the dignified action of a leading practitioner a whole district may be protected from the ravages of these societies, which have done so much to bring discredit on the profession.

NOTES, LETTERS, ETC.

PASTEUR FILTERS AND THE MADAGASCAR EXPEDITION.

MALTHOUSE writes: As regards the form of fever prevalent among the troops of this expedition, as I know something of that island, I am disposed to think that at least 80 per cent. of it was malarial, fully under the control of quinine. This fever would not be so much affected by the use of the Pasteur filters, the microbe being generally airborne.

THE "INDEX MEDICUS."

MR. ROGER WILLIAMS, F.R.C.S. (Preston) writes: Although the *Index Medicus* is an admirable bibliographical work, I am not at all surprised that it has failed to attract adequate support. The truth is that English-speaking students require something more than a bare bibliographical record; they need as well brief abstracts in their own language of the chief publications. Germany and France are well provided for in this respect; but not a single work of the kind is issued in English. The progress of medical science in English-speaking countries is much impeded by this deficiency. It is a pity that the editors of the *Index Medicus* cannot be induced to modify their publication in the direction I have indicated, for I am convinced that it would then attract a large number of subscribers.

ENTERIC FEVER IN INDIA.

HINDU writes: The importance of water in propagating this fever in India cannot be overestimated, but there are two other factors (excluding age) in operation that are not much in evidence in this country (England). One, the dry earth system of conservancy in general use. The contents of the pails are soon dried up by the fierce heat, and as the latrines are never far from the sleeping rooms, the dust from them is often blown into these places, and over the soldiers' food stored in them. The other factor is the flies that act as carriers between the pails in the latrines and the food in the barrack rooms.

ALCOHOL IN MENTAL SHOCK.

MR. T. L. CRAISTER (District Surgeon of Xalanga, Cala, Cape Colony) writes: In your article on Alcohol and its Effects, you say, p. 992, "that alcohol acts first as a narcotic—that there is first no stimulation," etc. Perhaps it may be worth while for me to report the following case:

A lady who had not to my positive knowledge taken any form of alcohol for any number of years not less than seven, may be ten, was suddenly confronted with "information," which (to use her own words) "oh! oh! I feel overpowered, I am oppressed;" and she seemed to me suffering from mental shock. She was not a strong woman, but subject to weak heart and uterine complication. I at once administered to her half a tumbler of Perrier's Sans Sucre Champagne, and in five (or less) minutes she was apparently sleeping. I asked her "How she felt now?" "I feel quite comfortable, all thought is gone, just as if you had given me a little chloroform; I want to sleep." The effect I wanted was produced; the shock passed over.

I ought to add that this occurred at night—10 P.M.—long after any food had been taken, and after a quiet evening.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) A.; P. H. Abercrombie, M.B., London; Mr. R. T. Andrews, Hertford; Dr. F. H. Alderson, London; Sir H. W. Acland, Bart., Oxford; Messrs. Arnold and Sons, London; Auto; A.D.; A.B.C. (B) Dr. T. H. Barnes, London; R. S. Bond, M.B., Caterham; Mr. G. F. Burchill, Wallington; Dr. E. Berdoe, London; A. M. Branfoot, M.B., Madras; Mr. D. Biddle, Kingston-on-Thames; Dr. W. Brown, Bristol; Mr. J. P. Bush, Clifton; Mr. J. B. Bate, Clifton; Messrs. Bryce and Rumpff, London; Dr. G. H. Broadbent, Manchester; Mr. W Bassett, Newport; J. F. Boa, M.B., Bishops Castle. (C) Dr. C. C. Claremont, Southsea; Dr. T. L. Craister, Calo (Cape Colony); Critic; C.M.; Dr. J. W. Cook, Colchester; Mr. W. Church, Lisburn; Mr. S. Constable, Dublin. (D) Dr. F. H. Daily, London; Dr. S. B. De Butts, London; Mr A. Dixon, Preston; Mr. W. G. Dickinson, London; Mr. E. Donaldson, Londonderry; Mr. J. P. Dixon, London. (E) Erinensis; Dr. A. Eddowes, London; Examiner; Mr. H. S. Elsworthy, London; Mr. B. Esmarch, Birmingham. (F) Mr. C. Fox, London; Dr. T. R. Fraser, Edinburgh; Mr. C. E. S. Flemming, Freshford; H. B. Flemming, M.B., Omagh. (G) Mr. D. A. Greaves, London; Mr. A. Goldschmidt, London; Mr. F. Graves, Birmingham; G.S.P.; Mr. W. Gripper, Wallington; Dr. K. Grossmann, Liverpool. (H) Homocæanus; A. E. H. C. Hallen, M.B., London; Hindoo; Dr. S. Harris, London; Dr. A. Hill, Birmingham; D. Hooper, M.B., London; Dr. T. G. Horder, Cardiff; C. O. Hawthorne, M.B., Glasgow; Miss M. Hannan, Cardiff. (I) Dr. C. R. Illingworth, London; Dr. F. Imlach, Liverpool; Insurance; Inquirer. (J) Jeyes's Sanitary Compound Company, London; G. Jones, M.B., London; Mr. A. Jefferson, Rochdale; Mr. H. H. Jennings, London. (K) Mr. T. N. Kelynack, Manchester; Dr. N. H. Kane, Kingston Hill; Dr. L. Kidd, Enniskillen. (L) Messrs. Lazarus and Davidson, London; Mr. W. W. Lake, Guildford; Lantis; G. R. Leighton, M.B., Pontrilas; Mr. R. R. Leeper, Rathdrum; Mr. F. Lawrence, London; Mr. J. Lawrence Hamilton, Brighton. (M) Messrs. J. A. Marshall and Co., London; Dr. D. McKeown, Manchester; Member of the B.M.A.; M.D.; Mr. H. H. Monk, Leicester; Mr. A. G. Mackenzie, Much Wenlock; Dr. E. J. McWeeney, Dublin; Mr. F. Marsh, Birmingham; Mr. T. H. Morse, Norwich; Mr. H. Macdonald, Dundalk; J. R. Morison, M.B., Newcastle-on-Tyne. (N) Nemo; N.W.; Mr. H. H. Newington, Ticehurst; Dr. A. Newsholme, Brighton; Mr. S. E. Norway, Newquay; Dr. J. Neil, Oxford; Dr. J. B. Nias, London; Mr. N. H. Nixon, London. (O) Dr. A. T. Ozzard, Demerara; Old Member. (P) Mr. H. P. Pike, Gloucester; Dr. C. Porter, Stockport; Mr. N. Porritt, Huddersfield; Mr. W. R. Parker, Kendal; Mr. A. Pringle, London; Princeps, Mr. F. Passmore, London. (Q) Queensland. (R) Mr. G. Q. Roberts, London; Mr. B. Roth, London; Dr. J. Ramage, London; Mr. W. Robb, Kincardine O'Neil. (S) Mr. W. Sykes, Gosport; Mr. H. F. Stokes, London; Mr. G. F. Stone, Bristol; Dr. E. Seaton, London; Dr. G. E. Shuttleworth, Richmond Hill; Mr. C. H. Sheare, Liverpool; Steynham. (T) Mr. W. T. Thomas, Liverpool; G. W. Thompson, M.B., Scarborough; Mr. F. H. Tinker, Hyde; Mr. A. E. Tunstall, Thornton; R. E. Todd, M.B., Robben Island (Cape Colony); Dr. E. A. Tracey, Boston (U.S.A.); Mr. J. G. Thomson, Ayr; T. A.; Dr. F. S. Toogood, London. (V) Vigilant; Victim. (W) Mr. H. Wilson, Manchester; Mr. C. S. Wills, Lancaster; R. E. Wilmot, M.B., Leamington; Dr. W. A. Wadsworth, Belfast; D. Walsh, M.B. London; Dr. W. M. M. Woodhouse, London; Dr. E. T. Wilson, Cheltenham; Mr. L. H. Walsh, Bath; J. R. Whait, M.B., London; Mr. T. M. Watt, Hovingham; Mr. W. Whitehead, Manchester; Mr. A. M. Weir, Malvern Link. (Y) M. Young, M.B., Brighouse. (Z) Z.Y.X.; etc.

BOOKS, ETC., RECEIVED.

Saving of Life through Sanitary Legislation. By T. M. Kendall, B.A., L.R.C.P. Sydney, N.S.W.: G. Booth and Co. 1895.

Hundert Jahre allgemeiner Pathologie. Von R. Virchow. Berlin: August Hirschwald. 1895. M.1.

Galen: two Bibliographical Demonstrations. By J. Finlayson, M.D. Glasgow: Alex. Macdougall. 1895.

The British Guiana Medical Annual and Hospital Reports. Edited by J. S. Wallbridge and C. W. Daniells. Georgetown, Demerara: Baldwin and Co. 1895. 5s.

Lectures on Appendicitis and Notes on Other Subjects. By R. T. Morris, M.A., M.D. London and New York: G. P. Putnam's Sons. 1895. 9s.

Public Health in European Capitals. By T. Morison Legge, M.A., M.D., D.P.H. London: Swan Sonnenschein and Co. 1896. 3s. 6d.

A Manual of Obstetrics. By A. F. A. King, A.M., M.D. Sixth edition London: Henry Kimpton. 1895.

The Treatment of Pulmonary Consumption: a Practical Manual. By V. Dormer Harris, M.D., and E. Clifford Beale, M.A., M.B. London: H. K. Lewis. 1895. 10s. 6d.

In the Money-Lenders' Clutches. By Thomas Farrow. London: The Yeoman Co. 1d.

The Schott Treatment of Chronic Heart Diseases. By Richard Greene, F.R.C.P. London: The Scientific Press. 1895. 6d.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Vol. XVI. Washington: Government Printing Office. 1895.

Alphabetical List of Abbreviations of Titles of Medical Periodicals employed in the Index Catalogue of the Library of the Surgeon-General's Office, United States Army, from Vol. I to Vol. XVI, inclusive. Washington: Government Printing Office. 1895.

Latent Gastric Ulcer. By F. H. Alderson, M.D. Leicester: *Provincial Medical Journal* Office. 1895.

The A.B.C. Medical Diary and Visiting List, combined with the "Excerpta Therapeutica." 1896. London: Burroughs, Wellcome and Co.

A Doctor of the Old School. By Ian Maclaren. London: Hodder and Stoughton. 1895. 7s.

The Johns Hopkins Hospital Reports. Vol. IV, No. 9. Deciduoma Malignum. By J. W. Williams, M.D. Baltimore: The Johns Hopkins Press. 1895.

The Evolution of the Function of Public Health Administration, as illustrated by the Sanitary History of Glasgow in the Nineteenth Century, and especially since 1854. With an Exposition of Results. By J. B. Russell, B.A., M.D., LL.D. Glasgow: William Hodge and Co. 1895.

*** In forwarding books the publishers are requested to state the selling prices.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PATHOLOGY,

At the Annual Meeting of the British Medical Association at London, July, 1895.

By SAMUEL WILKS, M.D., F.R.C.P., F.R.S.,
Consulting Physician to Guy's Hospital.

ON REPARATION.

As President of the Section of Pathology I trust you will not consider it out of place if I give a short address embracing a few remarks on a subject in which I have all my life taken an especial interest. When looking back upon my own past medical career I have always found my mind dwelling with the greatest satisfaction upon opinions which I very early derived from my introduction to, and experienced in, the *post-mortem* room. I there soon perceived that diseases supposed to be recent were very often but the termination of chronic changes, and that the generally accepted idea that diseases arise suddenly in healthy persons was not in accord with fact. I am not alluding to specific diseases arising from the introduction of germs from without, for they appear to have a general preference for healthy persons, but to pathological changes originating from within, and mostly induced by the ordinary conditions of life. The opinions which I then formed with regard to these processes were probably strengthened, or, at all events, held with greater tenacity by myself when I subsequently found they were in accord with the doctrines which were coming into vogue with respect to every other branch of science both in the organic and inorganic world. They seemed to be in perfect agreement with the lessons taught in the *Origin of Species* by Darwin, and in the *Principles of Geology* by Lyell. The latter had shown in a most masterly manner how the changes we observe on the surface of the earth came about by slow degrees and not by violent catastrophic action, as had previously been taught. It was therefore satisfactory to think that pathology might take its place in perfect harmony with other branches of biology and natural history.

The most evident and most momentous fact in Nature is the incessant change ever going on in the world; in fact throughout the universe as far as the power of the telescope and spectroscope can reach motion and action never cease. This endless activity in the organic world implies continual growth and decay, or, in other words, life and death. As the earth in its revolutions produces the seasons, so we witness living objects growing up under the influence of the sun's rays, and again decaying as the warmth departs. The higher animals take a few revolutions round the centre of heat, during which time they first grow and then decay; and one of these is man. The variable time in which he endures is determined in great measure by his surroundings, for many of those which are detrimental to him and shorten his days are quite obvious to us, and to study still further his environments and discover their influences for good or evil is one of the most important provinces of the physician.

Now just as the body grows and decays as a whole during a term of years, so we may see the two processes of production and destruction going on in its several parts when subjected to any special stimulus, such as an injury or other morbid influence. It is to this subject I wish to draw your attention, for although my own mind has often been directed to it, I think in all that I have written and taught I have failed to lay sufficient weight on the distinction between them. When speaking of any unnatural condition or any adventitious substance found in the body, I have, like many others, employed the term "morbid," and been content with the expression, whereas a little further consideration would have shown that only a portion of what is found would rightly answer to the term, a part only being strictly pathological, whilst the other is a result of a true physiological process; in fact the simple words "disease" or "morbid" imply too much of destruction without a recognition of a corresponding reparation.

With regard to injuries, the reparative and conservative conditions are generally clear, witnessed in scars, or where a spine of bone is made to support the fractured shaft of a limb which is united at an angle. In many forms of internal disease also we all recognise the reparative process, and have no difficulty in distinguishing the physiological from the truly pathological: for example, in valvular disease of the heart, where we at once perceive how the hypertrophied cavities are the manifestation of physiological and conservative processes, and in the same manner hypertrophy of the muscular fibre of the uterus, of the intestine, or of the bladder, indicate obstruction in the passages of these organs. There are, however, more complex states where the pathological and physiological changes have gone on side by side and thus make it more difficult to assign to each their due proportion. It may be that the constructive and destructive forces are more intimately associated than we have hitherto conceived, and that a mutual relation may exist between them of an electrical or chemical nature. This was suggested in the remarkable observations and experiments of the Golding-Birds, father and son, who showed that if one electrode be placed on an ulcer the latter will rapidly heal whilst a sore is being produced at the other positive pole. In an ordinary ulcer the two processes are seen going on before the eye, for although the old definition implied a simple destructive process merely, yet we can clearly perceive during the process of granulation, and in the secretion, that new material is being formed.

Mr. Golding-Bird has well said that in an ulcer we see a constructive inflammation, and that there is not merely a loss of tissue, but there is embryonic life going on again—a recommencement of evolution, a redevelopment of growth from elementary cells, the embryonic elements being always present and roused to action by the inflammatory process, so that the two conditions of growth and decay are mutually dependent. This local process is the same which is going on throughout the whole body, where the nourishment is obtained from outside materials, or, as Herbert Spencer puts it, "we grow by reconstructing the elements previously dispersed in animals and plants." It is the same process indeed which is going on throughout the world. Naturalists tell us, for example, of the formation and decay of coral reefs; whilst these are constantly growing and being renewed on the surface, they are wasting beneath, so that the lower parts consist of nothing but the detritus of the older reefs which have broken up. Growth and decay are thus constantly proceeding, and Nature, with her myriad voices, proclaims the great truth that life is ever ceasing and ever being renewed.

In the human being the same processes are perpetually going on, not only in health but in states so called diseased, as in the above-mentioned example of ulcer. Yet this double process is continually overlooked, no doubt from the difficulty we have in being able to separate the reparative from the true morbid action. In most instances this is owing to the fact of the reparative material not being equal in organisation and similar in structure to the original tissue. The complex parenchymatous structures are not renewed after injury like the simpler ones of bone or areolar tissue, although occasionally we meet with a true growth of nerve fibre or adenoid structure. What we generally mean, therefore, by repair is not reparation by a growth resembling the original structure, but by a growth of lower organisable material. Still the attempt at repair, in whatever way it may be accomplished, is continually visible, and the object of these remarks is to point out not only where we have been remiss in failing sufficiently to recognise the true interpretation to be put upon many of the new changes we meet with in the tissues, but have been content to style them all in a very cursory manner "morbid." This distinction has an important clinical side as regards prognosis and treatment besides being one of pathological interest.

I will endeavour to illustrate my meaning by one or two examples, and will take first the case of phthisis. During a long experience in practice I have seen nothing so common as an error in the prognosis of this disease. And why? Because the constructive changes have been confounded with the destructive ones; in fact, the very signs which the beginner regards as the strongest proofs of disease are those which indicate the probability of cure. He learns the signs of a cavity in the lung, and then recognising its existence in a particular case he immediately condemns his patient,

feeling instinctively that nothing could be more terrible than the existence of a large hole in a vital organ. And yet a moment's consideration would show him that the dull tympanitic note, the absence of vibration in the chest walls, their sinking in, the pectoriloquy, etc., all point to a well-walled cavity due to a reconstructive action following the destructive process. The formation of this fibrous tissue has shut off the part destroyed from that of the healthy lung; a reparation and cure have been going on, and produced those marked physical signs which he has regarded as indicative of disease. No wonder, therefore, that a mistake in prognosis has been made, and that after condemning a patient who has manifested such physical signs the medical man has been surprised to find him still living years afterwards. I have, indeed, not only seen the mistake made by young and inexperienced men, but by older members of the profession; they have often confessed their surprise on seeing phthisical patients still alive whom they had condemned years before. This case of phthisis is perhaps the commonest example, where the constructive and destructive processes have not been sufficiently distinguished, but we will now take another case where the changes are more complex and where a greater difficulty exists in distinguishing those which may be regarded as destructive and those which are reparative. I refer to cirrhosis of the liver. This organ may be observed during life to be first enlarged and then become nodulated and shrunken; amongst other signs of the disease which the textbooks describe is an enlargement of the veins on the surface of the abdomen. These were thought at one time to be due to some pressure on the vena cava, but this is really not the case, and the appearance is now shown to be due to an enlargement of the epigastric vein in connection with the opening up of the old umbilical vein, which often becomes as large as a goose quill. Through this the portal blood flows and finds a free passage into the vena cava and systemic circulation. Injections may be easily made to pass from one system into the other. The patient in this way is relieved from an engorgement of the portal system and from the consequent dropsy. This enlargement of the veins, therefore, which is simply described as a sign of cirrhosis, should also be spoken of as a sign of a reparative character. And probably this is not all, for when the cirrhotic organ is examined carefully and microscopically, we find that, although the nodules are composed mainly of atrophied hepatic tissue, there has also been an attempt to replace it by a new formation of cells and vessels. New blood vessels may be seen and apparently new ducts, as well as cell growth. Now although these new elements are not perfect enough to take on the function of the liver, there can be little doubt that they do relieve the circulation in a disabled organ. That new hepatic structure may grow under the strain of necessity is seen in those cases where portions of the liver have been destroyed by injury or disease in the same way that one kidney will double its size when its fellow from any cause has become atrophied; illustrating the doctrine of Aristotle that function precedes organisation.

Many other illustrations might be mentioned where a truly morbid process occurs intermingled with the reparative. A common example of this may frequently be found in cancerous pylorus, where a hard lump is felt in the right hypochondrium. This is composed not only of cancer but of hypertrophied muscular and areolar tissue, and sometimes, if the primary affection has been the cicatrisation of a chronic ulcer, the whole tumour is composed of a conservative or reparative material.

In diseases of the spinal cord it is very difficult to place the truly morbid and conservative processes in their right category. I have little doubt that in a case, for example, where a man for 20 years has had symptoms of locomotor ataxy, the sclerosis from which he is said to suffer is the result of a more active pathological change which occurred at the commencement of his malady. At that time the new tissue took the place of the old, and the cord has remained quiescent ever since. As such a patient is able to follow his sedentary occupation and has a fair enjoyment of health, he can scarcely be regarded as the subject of disease, or no more so than a person who has a cicatrix on the skin arising from an old injury, although the tissue may differ from the original healthy one.

If time had allowed me to carry the subject into clinical medicine I could have shown the importance of endeavouring to distinguish physiological processes from the purely pathological ones, such as the salutary hæmorrhage from the lungs in heart disease or the serviceable hæmatemesis and melæna in cirrhosis of the liver; we might also see how diarrhœa is a real safeguard in nephritis, or a profuse sweating in bronchitis. The mode in which organs and functions accommodate themselves to one another or supplement one another requires our most careful study. That vicarious action must go on to a greater extent than we imagine is seen in the fact that when we discover after death the kidneys to be scarcely a quarter of their normal size, we express our surprise at the absence of symptoms indicative of so great a destruction; and the same when we find a marked cirrhosis of the liver where the disease has never been suspected. A study of these relations of organs ought to lead us to more rational modes of treatment, and prevent us from merely making an attack upon symptoms whilst in ignorance of their true significance.

I have now, I trust, said sufficient to make my opening statement clear, that, as a teacher of pathological anatomy, I have not paid sufficient regard to the distinction between constructive and destructive processes; that whilst there have been decay and degeneration there have been also growth and regeneration. To study these for the sake of discovering the several influences exerted in the production of each is a matter of great practical import; they also show, as I have already affirmed, that pathology is governed by the same laws as those which exist in every other department of Nature, and therefore may safely take its place among the other sciences.

SOME CASES IN WHICH ARTHRITIS AND ENDOCARDITIS WERE PRODUCED BY DRUGS WHICH DIMINISH THE SOLVENT POWERS OF THE BLOOD FOR URIC ACID.

By ALEXANDER HAIG, M.D.Oxon., F.R.C.P.,

Physician to the Metropolitan Hospital, and the Royal Hospital for Children and Women.

For how many years was the evidence which now seems so obvious of the earth's motion or the blood's circulation overlooked because the facts were regarded through the mist of preconceived ideas and partial ignorance? May not our failure to find the cause of acute rheumatism be due to similar difficulties, our preconceived ideas and our ignorance of the chemistry of uric acid combining to prevent our seeing the real relation between cause and effect?

For years we have been observing that people get their first attack of rheumatism or a relapse later on, under several fairly definite conditions, such as exposure to cold after heat and fatigue, the sudden onset of a febrile disease, or some change in diet, or the administration of some acid or acid-forming food.

But what we did not know was that one and all of these causes affected in a most important manner the solubility of uric acid in the blood, preventing the blood from continuing to hold it in solution, and so bringing about its precipitation or concentration upon the fibrous tissues of the joints, the fasciæ, or the heart; with the result that it set up more or less marked irritation in these structures, and produced the phenomena of acute rheumatism.

We did not know further that a very large number of drugs, metals, salts, acids, and other things which directly or indirectly interfere with the solubility of uric acid in the blood, produce precisely the same results as the above-mentioned causes, and precipitate more or less irritation of fibrous tissues by uric acid.

Further, we did not know that every drug which we had empirically used in the treatment of acute rheumatism, alkalies, colchicum, hot baths and blankets, or salicylates, had this one effect common to them all—that they increased the solubility of uric acid in the blood, and so led to its being taken up from the fibrous tissues and excreted in the urine,

with the result that the irritation in the fibrous tissues quickly begins to subside.

So long as we persist in believing that rheumatism is due to some unknown cause, miasm or microbe, we shall continue to say that the patient had an attack or a relapse with endocarditis, which resulted in serious heart lesion and a crippled life, and shall regard these things as inevitable, much as do the jury who bring in a verdict of "Death by the visitation of God."

But once we realise that these diseases depend solely upon the quantity and solubility of uric acid in the blood, and that, as I have further pointed out, the quantity of uric acid in the blood and its solubility in that fluid are absolutely and completely within our control, we shall pass at one bound from the unknown to the well known, shall see that these deadly diseases are not the result of unpreventable causes, but of our own dietetic follies; and that our children need not be crippled or decimated by them, if we allow them to live according to their own inclinations on milk and garden produce, and abstain from forcing down unwilling throats the stimulating but deadly products of animal metabolism.

For some years past I have been in the habit of asking all rheumatic children I have seen this question: If I offered you a plate of fruit and a plate of meat, which would you take? I have never seen a child that would have taken the meat.

Before giving you my own cases I will just refer to the well known cases of Sir W. Foster, who, with the object of diminishing the amount of sugar, administered lactic acid to two patients suffering from diabetes, with the result of producing severe arthritis resembling acute rheumatism, and in one of the cases six attacks were produced by repeated administration of the acid.

I have every reason to believe that any acid that is absorbed and affects the alkalinity of the blood will produce similar effects if it is given at a time when there is an excess of uric acid in the blood,[1] and the only point about diabetic cases is that they very frequently have an excess of uric acid in their blood as I have elsewhere pointed out.[2] Not only acid but any drug (and there are many of them) that interferes with the solubility of uric acid in the blood will do the same thing.

Dr. Lauder Brunton speaks[3] of cases in which both rheumatism and endocarditis have been produced by injecting acids into the blood, and he also mentions an instance in which drinking the red wine of Southern Europe appeared to keep up a lumbago from which a man was suffering, and that it had often acted similarly in other cases. With regard to endocarditis, he refers to a thesis for the degree of M.D. in the University of Edinburgh presented by Dr. J. A. MacDougall in 1865, and says that he was able, by injecting phosphoric acid into the blood "to produce undoubted evidence of endocarditis."

Coming a few years after these remarks of Dr. Brunton's were made, the following case startled me very greatly and made me fear that I had inadvertently caused both rheumatism and endocarditis, and I shall leave my readers to judge for themselves whether this was so.

CASE I.—M. J., aged [illegible], was suffering from phthisis of the left apex, with some tuberculous trouble also at the left base. In March, [illegible], he had some fresh signs of consolidation at the left base, with a temperature of 102°. After a few days in bed the temperature began to come slowly down, and on March [illegible], as his appetite was bad and he was a good deal pulled down by night sweats, I gave a mixture containing some nitro-hydrochloric acid and a few minims of liq. strychninae. On March [illegible] he complained of pain and tenderness about the left shoulder joint, increased by movement of the limb; the temperature had risen very decidedly, and on listening over the apex of the heart I was horrified to find a distinct systolic murmur which I had not noticed before. I at once stopped the mixture and gave salicylate of soda in its place, and on March [illegible] the temperature was lower and the pain in the shoulder had gone; but the systolic murmur remained, and, though I saw him from time to time for six months after this, it never completely disappeared. I have no doubt whatever that I thus caused some arthritis, and I fear also some endocarditis as well.

CASE II.—J. H., aged [illegible], suffering from chorea, was admitted under my care at the Royal Hospital for Children and Women on October [illegible], 1894. The temperature on admission was [illegible], the pulse [illegible]. I examined the heart, and, finding no murmurs, put her on a mixture containing ℳxv of liq. arsenicalis to be taken three times a day. On October [illegible] the temperature was nearly normal, on October [illegible] it rose to [illegible]° in the evening, on November 1st to [illegible]°, and November 2nd to [illegible]° in the evening. It then kept between [illegible]° and [illegible]°, but on November 6th the pulse had risen to [illegible] and above, and it remained quick for some time after this; the arsenic was left off. On November [illegible] the highest temperature was [illegible]°, and liquor arsenicalis [illegible] was given three times a day. On November [illegible] the highest temperature was [illegible]°, on November [illegible] [illegible]°. From this the temperature remained just about [illegible]° until November 21st, when the arsenic was left off. On November 22nd a well-marked postsystolic murmur was observed at the apex. From that onward the temperature kept about [illegible]°, rising to [illegible]° on December [illegible], and [illegible] on December 10th. By this time the chorea, which had improved markedly on the large dose of arsenic given at first, and more slowly afterwards, was quite gone. She was allowed to get up, and on December [illegible] she went home, the murmur at the apex of the heart remaining well marked to the last.

With regard to the onset of this murmur, I should say that Dr. Huntley, our very able resident medical officer, believed that there was a very slight systolic murmur at the apex from the first, but that it became more marked while under observation. It is quite certain, however, that I heard no murmur on admission, for my rule is not to give arsenic, and certainly not the large dose I gave in this case, if there is any sign of endocarditis.

The fairly marked rise of temperature under the arsenic, and its fall later on when it was reduced and left off, point, I think, to some inflammatory trouble in the body, and there was no evidence of any except in the heart; and then the very marked rise in the pulse rate about November 6th may, I think, be taken as pointing to some fresh heart trouble. I may say that my researches show that arsenic, so long as it does not upset digestion, causes a diminished excretion of uric acid in the urine.

CASE III.—A. S., aged 7, was admitted under my care at the Metropolitan Hospital on February 13th, 1895, suffering from broncho-pneumonia, coming on pretty suddenly with headache and shivering. The temperature on admission was 104°, but it at once began to slope downwards, touching normal on the evening of February [illegible]. On February [illegible] it rose slightly above 100° in the afternoon and evening, but up to February 20th it kept between normal and [illegible]°. On admission dyspnoea was the most obvious sign, and percussion was altered over several portions of the left lung, but a few days later there were more obvious signs of consolidation at both bases. There was no murmur over the heart and no increase of dulness. On February [illegible], after the temperature had been at 100° or below it for four days, a systolic murmur was noticed at the apex of the heart, and the cardiac dulness was also found to be a little increased to the right. The temperature now continued for some time between [illegible]° and [illegible]°, on February 28th it became subnormal, making, however, daily excursions from [illegible]° to 99°. On March 6th it became more steady and kept nearer the normal, but occasionally ran up to 100°. On March 9th the systolic murmur was still heard at the apex, and reduplication of the second sound at the left base. On March 12th I gave, three times a day, a mixture containing tincture of digitalis [illegible], dilute sulphuric acid [illegible] and some glycerine. I gave this because I was not very certain whether the raised temperature and the apex murmur meant endocarditis or not; and, on the other hand, if the murmur was merely due to dilatation, the digitalis might be of some use. As there was some doubt, however, I told the house-physician to stop the drugs at once if the temperature rose. On March [illegible] and [illegible] it rose to [illegible]° and [illegible]°, on March [illegible] it rose to [illegible]°, and on March [illegible] to [illegible]°. Accordingly, on March [illegible] the mixture was left off, and the temperature, though it touched [illegible]° that day, at once began to fall, and did not reach 100° on either the two following days. On March [illegible], as the temperature, though lower, was still unsteady, I gave some salicylate of sodium, and the temperature then became more steady, and, with two exceptions, was always below 100° till the end of the month. The systolic murmur remains, and if anything is now more distinct than before, and can be heard outwards in the axilla. The rest of the history is uneventful, the temperature during April and up to his discharge on May [illegible] kept between [illegible]° and [illegible]°. The systolic murmur continued, and on April [illegible] the whole of the first sound was replaced by a murmur.

I have very little doubt that we had here to deal with an endocarditis possibly originating, as I have elsewhere suggested,[4] in the great strain which falling temperature and its consequent rising blood pressure put upon the valves of the left side of the heart; that this went smouldering on for some time, and accounted for the irregular temperature which followed convalescence, and then blazed up again at once on the acid and digitalis mixture, for the digitalis not only put extra pressure and strain on the valves of the left side, but the sulphuric acid very probably precipitated some fresh urate upon them.

The temperature fell at once when these drugs were left off, but the local irritation went on smouldering as before, though before the patient went out it had been practically normal on several occasions for a few days.

CASE IV.—L. G., aged [illegible], was admitted into the Metropolitan Hospital on January 22nd, [illegible], suffering from pain in the fingers of the right hand. He had pain first in the toes and insteps [illegible] and since that in the fingers, [illegible]. The pain and swelling in the fingers, which were swollen, tense, and shining, began two days before. Temperature on admission [illegible]°, rose at night to [illegible]°. He was given a mixture containing

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[1] British Medical Journal, 1895, vol. i, p. [illegible].

[2] Uric Acid, 2nd edition, Ch. [illegible].

[3] Proceedings of Royal Medical and Chirurgical Society, April, 1895.

[4] Practitioner, 1891, p. [illegible].

gr. xx of salicylate of sodium four times a day. On January 24th the pain in the fingers had ceased. The temperature fell in the evening to 99.6°. After this he went on well, and the salicylate was left off on February 7th. On February 8th and 14th he suffered pain due to an alveolar abscess. On February 17th the temperature rose at night, and there was some return of the gout in the fingers and in the bursæ of the olecranon process on the left side. On the morning of February 18th the temperature was 99.6°; the stumps were extracted and some salicylate given again, and the temperature soon fell to normal and the pain went.

I have elsewhere[7] narrated the case of a boy where similar teeth trouble brought about a relapse of acute rheumatism; and I have also seen a case where the fever of an attack of pneumonia produced a relapse of gout in a patient who had had previous attacks.

Case V.—E. S., aged 36, admitted into the Metropolitan Hospital on December 21st, 1891, suffering from acute rheumatism; had been confined nine weeks before.[8] The pains began three weeks before admission, first in the head and then in the limbs, shoulders, knees, wrists, and elsewhere in that order. The joints were all very tender. The temperature was 102°. She was given a mixture containing salicylate of sodium gr. xv and bicarbonate of potassium gr. x, to be taken every two hours. On January 2nd the temperature was 100°, but the joints were still tender. The bicarbonate of potassium was omitted from the mixture. The temperature ran up that night to 102.8° (the highest it had been since admission), and there was a sharp return of all the pains. It fell to 100° the following morning, soon went down to normal, and never rose again.

Now what was the meaning of this sharp and sudden relapse when the drugs were altered? was it due to the untamable microbe? I believe it is in my power to show that it was simply and solely a matter of the solubility of uric acid, for I have observed the same thing before under similar conditions.

Some years ago I had under my care a patient suffering from subacute Bright's disease whom I had put on admission on a mixture containing citrate of potassium. After she had been on this for several days she got some pain and swelling in several joints, so I stopped the potash salt and put her on salicylate of sodium, and in a few days her pains were very much better, and the salicylate was therefore left off and the potash mixture resumed; here again, just as in the case of E. S., there was a sharp but temporary return of all the joint pains as the result of the change of drugs.

It seems then quite clear that when arthritic pains are being relieved by a salicylate it will make them worse to add potash, and, conversely, when arthritic pains are being relieved by potash, it will do harm to add a salicylate. My own personal experience quite bears this out, for when some years ago I had my uric acid under less perfect and complete control than at present, I used occasionally, after severe exercise in hot weather, to get some pain and stiffness in the fascia either of the neck or the lumbar region; and I often found that these troubles were completely removed by a few doses of salicylate of soda, so long as I kept quiet and cool in the house in the morning; but if in the afternoon I went out and got overheated, still continuing the salicylate, my pains returned, and were worse—perhaps much worse—than if I had taken nothing.

Now what is the effect of going out and getting hot? It has been shown by Sir A. Garrod and myself that it produces a fall in the acidity of the urine, or, to put it more correctly, a fall in the hourly excretion of acid in the urine—say the hourly excretion of acid in any individual is equal to 3 grains of oxalic acid, then going out and getting very hot will, other things being equal, reduce it to 1½ or 2 grains in the following hours; that is to say, getting hot is equivalent to a dose of alkali.

But we have already seen that alkalies and salicylates do not pull well together, and we know that uric acid may be excreted in excess under alkali or under salicylate, and it must be extremely annoying to preconceived opinions that giving the two together does not produce the best effect of all; but unfortunately it does not, as can be proved by experiment.

And further there is, as I have for years been trying to point out,[9] a chemical explanation of the fact, for it appears that salicyluric acid differs from all other compounds of uric acid in being soluble in more or less acid fluids.

Now it is well known that salicylic acid compounds act best in acute arthritis, and better the more acute the case and the higher the temperature; and it is a matter of the most simple observation that the higher the temperature the higher the acidity of the urine, the greater the hourly excretion of acid, and the less the alkalinity of the blood; therefore salicylates act well when the alkalinity of the blood is low.

It is further known that in subacute cases with but little rise of temperature salicylates may act far less satisfactorily, and I have pointed out that in such cases their activity may be increased by giving them along with substances which raise the acidity or in alternate doses with an acid; therefore salicylates act badly when the alkalinity of the blood is high or undiminished.

It appears, then, that uric acid in the blood may be in solution either with a salicylate or with (potash or soda) alkali, but it cannot be in solution with both at one and the same time; and that if it is in solution with alkali and a salicylate is added this will diminish the alkalinity, and hinder the solubility of uric acid under alkali; but until the alkalinity has been very greatly reduced the uric acid will not pass into solution as salicyluric acid, that is to say, between the two drugs there is a dead point at which the uric acid is not in combination with either, in fact, it is rendered insoluble, and is driven out of the blood into the fibrous tissues of the joints or fascia, producing a relapse of the gout or rheumatism, and a rise of temperature. If the salicylate is continued the acidity rises still further, and then salicyluric acid is formed and got into solution, the uric acid passes freely in this form from the joints into the blood, the temperature falls, and the pains subside once more.

Now, what occurred in the case of E. S. was that she was being given a considerable amount of potash along with some salicylate and her urates were got into solution with potash and little or at all with salicylate; but when the potash was left off the alkalinity fell, the potash lost its hold over the urates before the salicylate gained it, and the urates were for a time driven out of solution into the joints and fibrous tissues, producing a sudden relapse of all her pains, and a temperature of 102.8; later on, the salicylates had it all their own way, and there was no further joint irritation or rise of temperature. This shows, I think, that salicylates control the pain and temperature of arthritis simply by eliminating uric acid; if anything prevents their eliminating uric acid the pains promptly return, and the temperature rises in spite of them.

On the other hand, I have seen salicylates given in various local and traumatic inflammations and in pyæmia, and their effect on the pain and temperature was just nothing, because these were not due to uric acid. Further, I have pointed out[9] that the compounds of salicin and salicylic acid are powerful in the relief of acute rheumatism exactly in proportion to their power over the solubility and excretion of uric acid; and that those that have least power of elimination (salicin) must be given in much larger doses than those (salicylic acid) that have most. I make bold to say that every drug that has ever been used with benefit in acute rheumatism in the past, and every drug still to be discovered that may be used with benefit in the future will be found to do good in direct proportion to its power of dissolving and eliminating uric acid. But I believe most strongly that, once these simple facts about the causation of rheumatism are generally recognised, prevention will be so simple and so certain that it will soon become quite a rare disease.

I shall now, in conclusion, shortly mention one or two cases in which a relapse of chronic rheumatism was produced by drugs given for other purposes.

Case VI.—T. P., aged 71, was admitted into the Metropolitan Hospital on January 14th, 1891, suffering from chronic rheumatism (? gout). He had had an attack of sciatica ten years earlier, and, two years later, arthritis in both hands. This he had had off and on ever since, chiefly in the legs, but the hands were a good deal distorted and crippled. He was ordered salicylate of sodium and given some cod liver oil. He improved steadily, and was soon able to walk much better, and had little or no pain. The temperature varied from 97° to 99°. On February 8th he had some little bronchitis, the salicylate was stopped, and he was given a mixture containing ammonia and senega. As the pain returned the ammonia mixture was stopped and the salicylate resumed on February 9th. On February 13th the pains were distinctly better, but the salicylate was kept on, and, as the previous dose was small, it was increased to gr. xv, and the improvement was steady and continuous. We have here only

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Uric Acid, second edition, p. 394; and Wood's *Medical and Surgical Monographs*, 1886, p. 365.

[8] Parturition generally brings an excess of uric acid through the blood, and some of this was eventually driven into the joints.

[7] *Medico-Chirurgical Transactions*, vol. lxxi, p. 131.

[9] *Medico-Chirurgical Transactions*, vol. lxxiii, p. 297.

the patient's word for it, as the temperature showed nothing, but there was no reason why he should have complained of more pain just at the time the drugs were altered.

Case VII.—H. K., aged ∞. This case, very similar to the above, was suffering from chronic rheumatism and sciatica. He was admitted into the Metropolitan Hospital on January 14th, 1895. There was a history of having suffered for some years. Pains were now chiefly in left knee and hip. He also was put on salicylate, and improved considerably, but he also later on got bronchitis, and on March 26th was given the same ammonia mixture as in the other case. On February 23rd the note says: "Can get about better and pain is, comparatively speaking, gone." On March 5th he got some bronchitis. The salicylate was stopped, and mist. acetatis cum ammonia ordered. On March 25th the pains were decidedly worse again, especially in the knee. He was ordered to have the salicylate mixture as well as the ammonia, and the pains soon got better.

I may explain that urate of ammonium is one of the more insoluble urates, and that ammonium raises the acidity of the urine and increases the hourly excretion of acid. It would therefore increase gouty or rheumatic pains when given alone, but would not interfere with the action of salicylates; on the contrary would aid it.

I could easily give a number of similar cases; indeed, a week never passes without my seeing one or more of them. Almost every time a uric acid headache is cured some joint pains are produced, and in gouty and rheumatic cases the well-known effects of changes of weather can almost always be translated into changes in the alkalinity of the blood, secondary to the effects of the weather on the excretion of the skin.

Thus a patient recently seen gives me the following history of an attack of gout. He lives in India, but occasionally comes home to England, and after a previous visit to England, where he had been "feeding up," he felt the heat very much in the Red Sea on the way out, and then in Bombay was exposed to comparatively cold March winds, and had a violent attack of gout. Can anything be more simply and easily explained than this history? We have (1) the ingestion of a lot of uric acid, (2) its solution in the blood (uricacidæmia) as the result of heat, and (3) its precipitation on the joints by the rising acidity produced by cold winds.[1]

Similarly in patients who suffer from mental depression, pains in the joints are often looked upon as the harbingers of better things; and in women, when menstruation with its depressing influences causes a rise in the alkalinity of the blood and an excess of uric acid in that and the urine, mental depression or headache are generally worse, while rheumatic pains are to some extent relieved.

It is not my object in this paper to lay any great stress upon the cases quoted above, which I have been able to collect in a few months, but I hope, by bringing them to the notice of clinical observers, to induce them to regard their cases of arthritis and endocarditis in the light of what is now known about the solubility of uric acid; and if I am successful in doing so, I feel sure that they will very soon see hundreds and hundreds of similar cases, which only the mist of an erroneous pathology has prevented their seeing before, and they will not only see, but will be able to prevent and control, these disease processes to an extent which was previously impossible.

Disease by the visitation of God, or the work of that Jupiter Tonans of modern pathology, the nervous system, will give place to disease the result of folly in diet; the straightforward and easily verified chemistry of uric acid will replace the hypothetical microbe, and gout and rheumatism will be regarded as mere modifications of one and the same disease—arthritis due to uric acid.

[1] See British Medical Journal, 1895, previous reference.

The Medical Profession in Hungary.—According to a statistical report recently issued by the Hungarian Minister of the Interior, the total number of medical practitioners and lower grade Surgeons (*Wundaerzte*) in Hungary in 1894 was 4 280, being an increase of 106 as compared with the previous year. The distribution of practitioners throughout the country is very unequal; thus there are counties where 20 per cent. of the population are without a doctor. The average proportion of medical practitioners to population in the towns in 1894 was about 11.1 in 10 000. In Buda-Pesth there was 1 doctor to every 345 inhabitants, the lowest proportion in any town being at Hód Mező-Vasárhely, where it was 1 in 3,460. In rural districts there was on an average 1 medical man to every 4,992 inhabitants.

OBSERVATIONS ON THE PATHOLOGY OF ENLARGED OR HYPERTROPHIED PROSTATE.

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In advocating what I would speak of as the muscular theory in explanation of hypertrophy of the prostate I am not aware I ever denied that the prostate was dissociated from the genital function. I have referred to it as "a muscle containing a tolerably large proportion of glandular or secreting tissue embedded in it," and though failing to see evidence showing that it is engaged in elaborating the secretion of the testicles I adopt the view of Dr. Handfield Jones[1] expressed in the following words: Its function relative to the sexual act is "in supplying a vehicle which enables the fecundating fluid to act with greater certainty over a larger area whilst at the same time it supplies a muscular buttress against which the ejaculatory muscles of the urethra may advantageously act in the emission of the semen." It is therefore, I believe, to this extent a compound organ, and I am not aware that anyone has brought forward arguments contravening this limitation of duality.

I regard senile enlargement of the prostate as an example of a muscular hypertrophy analogous to other similar kinds of overgrowth, and arising out of the muscular functions in which the part is unceasingly engaged. It is of the first importance that its muscular action should be clearly established, for unless this can be done the whole of my argument necessarily falls to the ground. The difficulty that has hitherto arisen in fully recognising this explanation is in some measure due to the isolated manner in which the prostate has been studied.

It has been urged that though the prostate is in some measure involved in the process of micturition, the fact that it is used for this purpose half a dozen times or so in the twenty-four hours is insufficient to account for its overgrowth. This, I would emphasise, is merely the casual part the organ plays in what we generally regard as a voluntary act. Such a limited view as this implies is in a large measure due to the habit we have acquired of taking our ideas of the living organ from the condition it presents after death when removed from the body in a more or less contracted state, somewhat resembling a Spanish chestnut in shape. This is no more like the living prostate than the dead heart resembles the organ in full vigour and activity. The prostate assumes, I believe, no such appearance during life except on the rare occasions when the bladder is absolutely empty, but, on the contrary, the muscular fibres of which it is so largely composed are spread out like a funnel so as to furnish a contractile support for the bladder and its varying contents. This disposition is probably best appreciated by examination by the rectum when the patient is in the erect and semi-erect positions with the bladder empty as well as in various degrees of repletion. Though the existence of a prostate is not limited to man, I am not aware that in any animal it undergoes a change analogous to the senile enlargement observed in the human species. Hence, though enlargement of the prostate and the habit of maintaining the erect position may be mere coincidences, this fact cannot be allowed to pass unnoticed.

As the normal prostate is in this funnel shaped manner spread out, so is it when it is enlarged. We are often surprised to find after death, or by a suprapubic incision, how much smaller the prostate turns out to be as compared with what it was when examined during its functional activity by the finger in the rectum. Under an anæsthetic an enlarged prostate usually ceases to oppose the introduction of an instrument into the bladder. Unless this continuous muscular action of the prostate in supporting the contents of the bladder in accordance with the degree required, as well as in minimising the effects of shock applied to this part of the body are fully appreciated, it is impossible to understand how the functions of the viscus can be discharged without some other provision than that afforded by a mere fibrous floor.

It was not until I recognised the funnel-shaped manner in

[1] London Med. Gazette, vol. v, 1847.

which during life the prostate was disposed in contradistinction to the contracted mass presented after death that I could find an explanation for certain results following different lesions of the part, as for instance in the various perineal incisions made for the removal of stone by lithotomy. Why an incision into the prostate, radiating from the urethra passing through it, and not as a rule dividing more than one-third of the solid mass presented by the dead prostate, should be followed by absolute incontinence of urine for some days seemed difficult to understand when so much of the circumference remained intact. Such a result, however, at once became intelligible when we recognised that the incision, though limited, absolutely destroyed, until repair took place, the capability of a cone-shaped muscle to hold fluid.

The male bladder, in its mechanical arrangements, has little in common with that of the opposite sex. In the latter the process of micturition and the axis of urine pressure relative to the pelvic outlet are different, whilst there is an absence of provision for ejaculation of semen or even any direct connection with the genital function. In the female the manner in which the bladder is supported when distended has a resemblance to what is found in some quadrupeds.

Further, the surgery of the part furnishes evidence in various ways of the muscular power of the prostate. Thus openings may be made into the urethra in any part of its course as high up as what we term the apex of the prostate without incontinence of urine following. After lithotomy by the median operation patients often retain full control over the bladder during the whole period of their convalescence, in spite of the dilatation to which the prostate has been subjected by the introduction of the finger and the extraction of the stone. Directly, however, the knife impinges to any appreciable extent on the prostate, as in the lateral operation for stone, incontinence from that moment takes place; the patient has no command over his urine, he can neither collect nor expel it; and in this condition he remains until the healing process has made considerable advance. Some instances I have examined in which permanent incontinence of urine followed the operation of lateral lithotomy appeared to have been connected with the complete division of the prostatic circumference by too free an incision. I can hardly see how such a consequence as this could follow if the prostate during life presented the appearance of the contracted mass we are accustomed to look at after death.

In cases of extroversion of the bladder, in which there is no receptacle for the urine, the prostate is only met with in a rudimentary form. In advanced life, so far as I have been able to ascertain, hypertrophy never occurs in these malformations, though sexual desires are often vigorous. I have recorded the case of a boy[3] in which incontinence of urine appeared to be associated with an arrest in the development of the prostate. This, however, may merely be a coincidence, as at this period of life this part only exists in a very rudimentary form. In an instance[4] of removal of the prostate I performed for malignant disease, although the patient recovered completely from the operation, and lived over fourteen months afterwards, during the greater portion of which time he followed an active and laborious occupation, control over the bladder was lost. To provide against the incontinence the patient was fitted with a sort of truss, which, by exercising pressure on the urethra below the arch of the pubes, enabled him to prevent the involuntary escape of urine and go about his work. Before proceeding to point out the steps by which prostatic enlargement seems to me to be brought about, I would mention one or two points which are generally admitted in connection with the natural history of his growth. In the first place there can be no doubt that though a considerable proportion of elderly males develop it, only a minority suffer from any ill-effects on the urinary apparatus it may produce. If such a growth serves no useful purpose, it is difficult to understand how this can be, and why we should draw our conclusions as to the process being a morbid one from the lesser number of instances of it than the greater. It is a matter of common observation to find persons with largely hypertrophied prostates, and yet showing no other structural defect either in the capacity of the bladder to contain or to expel fully the urine for which it acts as a reservoir. Nor with proper safeguards is it necessary that persons so situated should develop any prostatic trouble calculated to shorten their lives. Another point is also worthy of notice. The process of hypertrophy involves no structural substitution or the importation of tissue foreign to the part other than those degenerations, such as the fibrous, to which the human body is liable. Hence we are narrowed down to offering an explanation as to the purpose for which this excess of normal structure is called into existence.

In studying pathological lesions, more particularly in relation to function, instances can be found in the human body where defects may call into existence such compensatory changes as eventually themselves constitute disease. A very small lesion, for instance in the mechanism of the heart, if it happens at the right spot, is capable of producing a hypertrophy which, though first compensatory, by-and-by proves to be a source of disorder. Thus the prostate in the course of its growth, so as to form a buttress or support for the most dependent portion of the bladder, tends to project in directions in which the resistance is least, and to form, by the fibrous degeneration these portions undergo, those obstructing masses with which we are familiar. Nor, though the whole gland is eventually more or less involved in the hypertrophy, can we fail to observe that in these changes the posterior segment, where it exists, is usually primarily and principally involved.

I have already laid stress on the importance of not regarding the normal prostate merely in the light of an individual organ, but as forming a part of the genito-urinary system. This holds good with its pathology. In the study of instances of enlarged prostate in the *post-mortem* room it is impossible not to be struck by the coincident changes that are taking place in the adjacent parts. For some reason or other there is a concentration of hypertrophied tissue in the form of buttresses or supports about the perpendicular axis of urine pressure at the base of the viscus. This is seen in the development of the inter-ureteral bar, the growth of the prostate, the gradual approximation and consolidation of these two structures, and the restriction of the natural trigonal area.

The trigone or floor of the bladder, in addition to being a highly sensitive part, is peculiar in that it contains the minimum amount of muscular fibre as compared with the rest of the viscus; muscle in abundance may be found as low as a transverse line drawn between the openings of the ureters marking the superior boundary of the trigone, and below in the prostate, but between these two points the power of muscular contraction can hardly be said to exist. Assuming, as I have stated, that from any cause, such as the long retention of urine, habit, position of the body, or the debility connected with advancing years, the floor of the bladder sinks lower within the pelvis relatively to the prostate, so as to offer some difficulty in expelling the last portion of urine, the effect will be frequently repeated efforts in all the muscles immediately adjacent to a part of the bladder which by reason of its connections and structure has but little power of contracting. It is suggested that in this way quantity is substituted for quality, and that as age advances structural deterioration and incapacity are in a measure provided against by superabundant tissue.

I have said that although hypertrophy usually includes the entire gland, the posterior segment or that in relation with the rectum is principally involved. When the part which was originally described by Sir Everard Home[5] as the third lobe, but subsequently shown by Sir Henry Thompson[6] to have no independent or isolated existence, is imperfectly or not at all developed, as is sometimes the case, it is interesting to notice that hypertrophy of the inter-ureteral bar may be observed taking place independently, and thus provision is made by a buttress of this kind for the support of the posterior wall of the bladder.

An inability to empty the bladder and the discomfort, or rather the consciousness of an incompleteness, of the act of micturition, is a common symptom in connection with the

[3] *Surgical Disorders of the Urinary Organs*, fourth edition, 1892, Churchill, p. 164.

[4] Ibid.

[5] *Philosophical Trans.*, 1808.

[6] *Diseases of the Prostate*, 1884.

early form of prostatic enlargement. This is due, I believe, not to atony or paresis of the bladder in the ordinary acceptation of the term, but to a sinking or tendency to prolapse of the posterior wall.

Though it is difficult to demonstrate these changes after death by measurements or castings accurately representing the previous shape and relations of the part, there are signs existing during life which tend to corroborate this view. By the catheter and by examination through the rectum we are usually able to convince ourselves of this. That the bladder alters its position relative to the pelvic outlet during life there can, I think, be no doubt. In early adult existence it may be regarded as an abdominal rather than as a pelvic organ; as years advance it gradually sinks within the pelvis, whilst still later it will be found to have become further depressed within the pelvic area. In this way a prominence is sometimes given to the floor of the prostate, which is due not in the first instance to the development of more prostatic tissue, but to the subsidence of the posterior wall of the bladder. This mode of forming a prostatic bar may readily be imitated, and is, I believe, the initial lesion in the hypertrophic changes which follow.

The most important objections urged against my views as to the muscular origin of the hypertrophied prostate are based on the statement that this organ is essentially a genital gland, and that the muscular fibre it includes, both intrinsic and extrinsic, is for the most part occupied in this function. This view has been supported by Mr. Joseph Griffiths, of Cambridge, and is based upon a series of observations,[6] both in human and in comparative anatomy, which are deserving of careful consideration. Though in no way taking exception to the histology of the parts investigated, I cannot accept all the conclusions arrived at by this author relative to the disposition and function of the prostate.

As I have already pointed out, I believe we have formed a wrong conception of the arrangement of the prostate during life, and that to this is due in a large measure the difficulty we have hitherto experienced in recognising the extent and limitations of its true functions. My views are much more in accordance with those of Professor Visser Ellis,[7] who speaks of the prostate as "essentially a muscular body."

The fact, however, that the hypertrophied organ contains a considerable amount of gland tissue of an inferior quality, yielding a secretion which Mr. Griffiths refers to as "scanty, thin, and watery" as compared with the normal exudation, is in no way opposed to the views I have advanced in reference to the circumstances under which the conglomerate growth is called into existence. The degenerated character of the gland tissue is in keeping with a function which at this period of life is on the wane, and not in that state of activity which in some of the lower animals at certain periods is attended with a large and more than usually developed gland. There can be no analogy between the large prostate of a rutting animal and that of a septuagenarian male.

Still more recently it has been put forward, in consonance, I presume, with the genital view of the function of the prostate, that the operation of complete castration is likely to prove of service in connection particularly with the treatment of the more advanced forms of prostatic obstruction. In a paper of considerable interest Dr. J. W. White, of Philadelphia,[8] summarises the somewhat scattered evidence that exists in favour of the view that in man removal of the testes is followed by atrophy of the normal prostate, and thus remarks on the suggestion as to its practical value as a means of treatment:

> As to the possibility of employing castration as a therapeutic method in prostatic [illegible] I [illegible] that the final answer must be left to our patients. Of one thing I am convinced, however, that if we ever reach a [illegible] of knowledge in this direction comparable to that already attained in regard to antiseptics in relation to uterine [illegible] and can promise equivalent results, there will be no lack of cases willing to submit to an operation almost painless, with a low mortality, and followed by no such unpleasant conditions as accompany persistent [illegible] trauma, either suprapubic or perineal, even although the operation carries with it the destruction of every [illegible] power has survived the sufferings of such patients.

In a subsequent communication,[9] Dr. White reviews further evidence he adduces tending to show that shrinkage of the enlarged prostate has followed castration. As a contribution to the discussion which these papers elicited on this subject I narrated the particulars of a case which incidentally came under my notice some years ago, where, with the same object in view, and under considerable pressure, I had divided the vasa deferentia of a man with a large and troublesome prostate. The proceeding and its effects were summed up in the following words:[10] "This operation was readily done, first on one side and then on the other, with a tenotome at a few days' interval, and my patient left me in the course of a short time, alleging that he had already derived benefit from it. Six or seven years afterwards, when I was in America, I ascertained that he was alive and well, but as I had no opportunity of testing the case I thought nothing further of it until reading Dr. White's interesting lecture."

From a recent paper by Dr. Ewing Mears[11] it seems not unlikely that interference with other constituents of the spermatic cord may be found to lead to atrophy in the prostate by first inducing changes in the nutrition of the testicle. Dr. Mears more particularly refers to subcutaneous ligature of the vessels of the cord for varicocele, in which he has noticed more or less atrophy of the testes following. The accidental division of a vas deferens under somewhat similar circumstances has also resulted in a like consequence. These are observations which I think other surgeons can corroborate.[12] I refer to these collateral points requiring further consideration and testing, but without in any way wishing to detract from the credit due to Dr. White in first bringing this matter forward.

Shrinkage of the prostate has followed other measures than castration. Some years ago I published[13] the particulars of a case in which for this condition in its most advanced and distressing form I punctured the bladder from the perineum through the enlarged prostate, and retained the cannula in this position for six weeks. This process has since been described as tunnelling the prostate. In the instance referred to the patient not only entirely recovered his power of normal micturition, but on the removal of the cannula it was discovered that the prostate had undergone a diminution in size, in fact, it had almost returned to its natural shape. This patient died at the age of 90, eight years after the operation, without any recurrence of his ailment or the necessity for again using a catheter.

Mr. Teale,[14] of Leeds, has recently added testimony as to the value of physiological rest and the importation of some amount of scar tissue into the prostate in bringing about its shrinkage. In former days, when lateral lithotomy was more generally practised than now, I have seen in several instances where it has been necessary to divide a large prostate with some freedom to permit of the withdrawal of the stone, atrophy of the gland follow, and prostatic symptoms cease. More recently I have observed the same effects after a prostatotomy for bladder drainage, and in instances where comparatively small portions of the prostate have been removed.

Assuming, on the evidence of some cases which have been recently recorded, that shrinkage of the prostate follows upon castration, I do not see that such a conclusion is either at variance with the views I have advanced relative to its pathology when enlarged, or proves it to be essentially—that is to say, exclusively—a genital gland. That it secretes in association with the genital act no one, I think, will deny. That some atrophy must follow the extinction of this function by removing the testicles is equally clear and logical.

My object in this paper is to show: (1) That the prostate in connection with its associated parts has an arrangement and muscular function which are not sufficiently recognised; (2) that its hypertrophy is to be regarded as a provision against structural dilapidations in adjacent parts, arising for the most part out of senile degenerations; (3) that these

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[6] Journal of Anatomy and Physiology, vols. xxvii., xxix.

[7] Med. Chir. Trans., vol. xxiii.

[8] British Medical Journal, September 7th, 1895.

[9] British Medical Journal, June 22nd, 1895.

[10] Ibid., September 23rd, 1893.

[11] Philadelphia Academy of Surgery, November 4th, 1895.

[12] Mr. Bickham, in referring to a patient of the late Mr. Hilton, whose case (Holmes's System of Surgery, vol. ii. p. 722) that "in a case dissected by him hypertrophy of one testis extensively atrophied and the vas deferens of the same gland ruptured and closed at both ends; the ends were at least 2 inches apart. The vesicular seminales on the same side was smaller than that on the opposite."

[13] Surgical Diseases of the Kidney, Ureter, Bladder, and Prostate, fourth edition, 1894.

[14] Lancet, October 26th, 1895.

changes are mainly compensatory, whilst in others they are excessive and hurtful; (4) that in the latter respects it resembles other provisional hypertrophies.

GIDDINESS AND STAGGERING IN EAR DISEASE.

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Máxiñan's classical paper on aural giddiness in the *Gazette Médicale de Paris* for February 9th, 1861, marked an epoch in the history of medicine. Founding his conclusions partly on the experiments of Flourens in 1828-42, but chiefly upon very carefully observed cases, he demonstrated that a sudden attack of giddiness, with nausea and vomiting, with noises in the ear and deafness, has frequently its pathological basis in the interior of the ear. The view previously held that such an attack meant a lesion in the brain involved serious mistakes in prognosis and treatment. Paralysis, imbecility, and death itself were the gloomy prospects held out to such a patient; while blood-letting, mercurials, and vesicants were the usual remedies employed. All this is now changed. In the light of Ménière's discovery and of subsequent investigations the patient who is the subject of such a seizure may now, in the majority of cases, be assured that the ear and not the brain is the seat and source of the mischief; that the danger to life is very slight; that the dread of mental disease may be dismissed, and that, by simple and rational treatment, the symptoms will partially, if not entirely, disappear. It must be admitted, therefore, that the knowledge of the connection of these symptoms with the organ of hearing has been a great gain to medical science and fraught with valuable practical results. How desirable it is that every medical practitioner should be fully alive to the far-reaching influences of Ménière's discovery.

Frequency of Giddiness in Ear Disease.

Since Ménière's discovery the profession has become gradually impressed with the importance of giddiness as a symptom of ear disease, and most practitioners now think of the ear when a case of giddiness presents itself. As a sign of ear disease it is by no means a rare phenomenon, occurring in all degrees of intensity from that of a slight and temporary lightness in the head to so violent a disturbance of the equilibrium as necessitates the lying posture. From my own experience, gained both in private and hospital practice, I am prepared to say that in a marked form it is far from being rare, while in a comparatively mild degree it is a very common concomitant of ear disease. At the Glasgow Ear Hospital a scheme is in use in which the existence of giddiness is included among the questions put to every patient of sufficient age, and the answer recorded. Examination of the scheme shows that in 1,276 consecutive cases, occurring in hospital practice, there were 73 cases, or 5¾ per cent., of marked giddiness; while in 237, or 18 per cent., there was slighter or occasional giddiness. In 1,025 consecutive cases, occurring in private practice, there were 63 cases, or 6 per cent., in which giddiness was a distinct and indubitable feature. In the case of hospital patients we cannot, of course, vouch for the accuracy of all the replies. Excluding slight and occasional giddiness observed in hospital practice from our calculation, these being possibly in many instances connected purely with gastric or hepatic disturbance, the proportion in the severer forms is pretty much the same in hospital as in private practice.

Considering the importance and frequency of giddiness as a symptom of ear disease, it is remarkable that it seems to have eluded such able observers as Wilde and Toynbee. Neither in Wilde's volume on *Aural Surgery*, published in 1853, nor in Toynbee's treatise on *Diseases of the Ear*, published in 1860, do we find any definite reference to giddiness as a symptom of ear disease. In the supplement to the 1868 edition of Toynbee's work, however, written by James Hinton, there is reference to the symptoms of Ménière.

Various Forms of Giddiness Due to Ear Disease.

Ménière's discovery naturally stimulated much investigation, with the result, not only of still more widely connecting the symptom of giddiness with disease in the ear, but also at the same time of modifying some of his views. While he believed that these symptoms had always as their basis a lesion, usually hæmorrhagic, in the labyrinth or semicircular canals, further investigation and experience have modified and enlarged this view, and it is now well known that giddiness may be associated with almost any form of ear disease. In the light of the fuller experience of recent years aural giddiness may now be conveniently described as manifesting itself in four distinct forms.

I. The typical form, or true Ménière's disease (sometimes termed apoplectiform deafness), due to the presence of exudation in the labyrinth. In a person with either previously normal hearing, or who may have suffered from a chronic affection of the middle ear, the four great symptoms—namely, sickness and vomiting, giddiness and staggering, subjective sounds in the ear and deafness—occur as a sudden seizure. In this class entire disappearance of all the symptoms is rare.

II. This form of aural giddiness is due to pressure upon the walls of the middle ear of air, liquid, or inflammatory products. Here the symptoms are somewhat less severe in character, the sickness and vomiting being occasionally absent. The vertigo is usually preceded by other symptoms of auditory disturbance. Disappearance of the symptoms, however, is usually effected by suitable treatment.

III. The giddiness is in this class due to pressure upon the walls of the external auditory canal or outer surface of the tympanic membrane, especially by cerumineous masses. Here, also, the giddiness is usually preceded by disturbance of the hearing, and here also entire recovery is often brought about by treatment.

IV. In the fourth class of cases, the giddiness is due to irritation of the auditory nerve, chiefly through chronic processes in the middle ear leading to pressure upon the labyrinth at the fenestral openings, or to vasomotor disturbance in the labyrinth. The vertigo of this class is that usually termed by writers *vertigo ab aure læsa*, and may occur in almost any affection of the ear, but usually in the course of a chronic inflammatory affection of the middle ear. The giddiness is generally preceded, accompanied, and followed by subjective sounds and deafness, but it is frequently without nausea or vomiting. Recurrences of the giddiness are common from time to time. In most cases the giddiness eventually disappears, but the deafness and noises in the ear remain permanent.

I.—Labyrinthine Giddiness.

This is true Ménière's disease or apoplectiform deafness, and is a form of aural giddiness, which is most apt to be confounded with cerebral or cerebellar disease. It is perhaps best illustrated by the description of an actual case, such as the following:

Case I. *Typical Ménière's Disease.*—A married lady, aged 32, was never, up till the time of seizure, conscious of any impairment of hearing or affection of the ear. On a spring forenoon, while walking in the garden, she became suddenly conscious of a loud sound in the left ear and left side of head, like steam blowing off, accompanied by deafness in the same ear. Almost immediately afterwards she became extremely giddy, staggering with difficulty into the house, where she became very sick and vomited freely. After resting in the dining room for two or three hours she was helped up stairs to bed, still extremely giddy. Next morning, however, the vertigo had, to a great extent, disappeared, and, with the exception of slight transient attacks, has never returned. The nausea and vomiting did not return after the first day, but the noises in the ear and deafness continued. A few days after the attack I examined both ears. In the left, or affected, side there was no sign of disease in the external or middle ear. The hearing by air conduction was practically gone, while bone conduction, as tested by Rinne's and Weber's tests was very defective. Inflation of the middle ear by Politzer's method and the catheter had no appreciable effect upon the deafness or on the subjective sounds. The right ear was perfectly healthy, with normal hearing. Seven years after the seizure the condition of the left ear was unchanged. Neither tick of watch nor speech was heard, and the bone conduction was defective. No abnormal change in external or middle ear. The subjective sounds still continued pretty much the same, but there had been no return of the vertigo. This patient had given birth to a child prematurely a few months previous to the attack, and a year afterwards a child—born at full time—had to be treated with anti-specific remedies. The husband, some years prior to his marriage, had a specific affection, for which he was treated for a long time. In the case of the lady a course of pilocarpin, employed subcutaneously, as well as long continued mercurial treatment, made no impression upon the ear affection.

ANALYSIS OF THE LEADING SYMPTOMS IN TRUE MÉNIÈRE'S DISEASE.

Let us now consider the leading individual symptoms which go to make up a typical case of true Ménière's disease. The *giddiness* is very sudden and intense, and is usually the first symptom of the seizure. The objects around may seem to rotate, or the ground in front may seem to rise or fall, or there may be a sense of movement only in the patient's body, either that of rotation or of moving backwards or forwards. There may simply be a staggering or want of control in the legs, especially in the dusk or dark, when the movements may resemble those of a drunken man. The patient is generally apt to turn or fall in the direction of the affected ear. If attacked while walking in the street, he staggers and tries to hold on by the wall or lamp-post. If he be in bed he feels as if in a ship in a storm. After a short time, from a few minutes to several days, the giddiness passes off or markedly diminishes, but it may return again, even repeatedly, although generally more slightly. A certain degree of staggering or giddiness is specially apt to return when the patient at first resumes the upright posture. It is apt, also, to be excited by sudden movement of the head, and it is often much worse in the dark. A gentleman recently informed me that in the dark his legs collapse as if paralysed, while in the light he has no difficulty in walking. Another young gentleman says that in the dark "his legs go all ways," and he takes the whole breadth of the road, so that he avoids going out at night. He walks quite well during the day. The giddiness seems sometimes to be excited by superficial irritations, or by particular postures. A patient said that when, in combing his hair, the comb touched a particular spot on the side of his head, he dropped on the floor and felt like a "spinning top." The following is the case of a lady in whom giddiness was excited when she lay on the affected ear, and who, if she turned on that side while sleeping, immediately awoke quite sick and giddy.

CASE II. *Ménière's Disease: Giddiness Excited by Lying on the Affected Ear.*—A lady, nervous and liable to headaches, 41 years of age, was seized at the end of January, 1891, just before breakfast, with giddiness, dulness, and noises like machinery in the left ear, followed in an hour by nausea and vomiting. Before the attack she had perfect hearing. I saw her first on March 31st, 1891, when the hearing on the right side was [illegible], and on the left [illegible], where the bone conduction was defective. She was examined by me again on April [illegible], 1891, when she reported that since the last visit, a month before, she had had only one attack of giddiness, unaccompanied by nausea or vomiting, when coming out of church. In a letter to me in April, 1893, she writes: "I daresay you would not be astonished to hear that I was still quite deaf in my left ear. I do not suffer so much now from giddiness as I did at first, if my stomach is out of order. I suffer sometimes from it when I go to bed; not everything moving round and round, but the feeling as if I were sailing in a storm, everything moving up and down—a most unpleasant feeling. I cannot sleep on my left side (affected side); if, when asleep, I unconsciously turn to that side, I immediately awake quite sick and giddy; perhaps I should persevere and try to overcome that feeling, but I think I would get sick if I persevered. I cannot do with any public speaker speaking loudly or rather bawling; it makes me all in a quiver, ready to jump, and the effect does not pass off for some hours. I know I am rather nervous, so far as temperament is concerned, and that may probably intensify all these feelings. I have always more or less noise, sometimes a buzzing sound, but, strange to say, this week the noise has been like the trickling of water accompanied by the hush. Indeed, I could not describe it better than by saying it is the sound of water in the distance running gently but accompanied by the hush of water, or, rather, more water at a great distance."

In the great majority of cases the giddiness sooner or later passes permanently away.

The *sickness and vomiting* usually begin soon after the disturbance of equilibrium, and are probably due to reflex action through the vagus nerve. This symptom naturally suggests the possibility of brain mischief. On the other hand, owing to this symptom, both patients and practitioners frequently regard such attacks as purely bilious in their nature. The sickness and vomiting soon pass off, and rarely extend beyond a day or two.

The *subjective sounds* in the ear are always well-marked, and in many cases they are most distressing features of the disease. They generally come on simultaneously with the vertigo, but sometimes they are not experienced for a few hours after, or in rare cases for a day or two. The characters of these sounds are variously described by the patients; the following taken from my notebook are some examples:—Sound of a shell, waves, railway whistle, bell, rushing, buzzing, loose shutters in wind, singing, humming, ticking, roaring, rushing water and waving of trees, whistling, sound of factory, twittering and whistling of birds and crickets, blowing off steam, howling, hissing, flaring of gas, piano playing, electric bell. The behaviour of these sounds is sometimes peculiar. For example, in the case of the electric bell, a sound precisely like an electric bell was heard followed by half a minute or so of silence, then there again came the sound of the electric bell followed by silence, this alternation going on continuously. In nearly all my cases the sounds in the ear, while varying in intensity at different times, remain permanent. I have always found them present years afterwards when I had the opportunity of examining the patient.

The *loss of hearing* is usually very marked, often practically total. It is sometimes found to precede for a few hours the other symptoms, but in general it comes on almost simultaneously with the giddiness. As a rule a loudly-ticking watch is not heard close to the ear, neither are words whispered into the ear perceived. Bone conduction is also defective, as tested both by Weber's and Rinne's test. Objective examination usually shows nothing abnormal in either the external or the middle ear. Fortunately in the large majority of cases only one ear is affected; the disease sometimes, however, affects both ears, and then, if occurring in young children, deaf-mutism is generally the result. The deafness, like the noises in the ear, is in the great majority of cases permanent.

Pallor of the face and cold sweats, with, in some cases fainting, are often observed. Unconsciousness is rare, and, if present, is very short in duration. Headache is in some cases complained of. Depression, slowness of thought, and weakness of memory may follow for a time.

THE CAUSES OF TRUE MÉNIÈRE'S DISEASE.

In regard to the causation of this class of cases, there is no doubt that many occur in persons who, on careful inquiry, are found to have nasal obstruction or other forms of nasal disease, and who have had, at some past time of their lives, a catarrhal affection of the ear. I have been struck by the frequency of the association of ozæna with Ménière's disease.[1] It might be expected that a tendency to vascular disturbance of the middle ear is likely to be associated with a similar tendency in the internal ear. As exciting causes, abnormal states of the constitution or blood are the most frequent sources of the attack, and my own experience would place specific disease, either in the hereditary form or during the tertiary stage of the acquired form, among the most important of all the causes. (See Case I.) In such constitutional states the proximate cause is no doubt effusion of blood into the cavities of the labyrinth from rupture of a vessel specifically diseased. Such effusions constitute irritative lesions which act upon the auditory nerve terminals in the membranous ampullæ or utricle. The degenerative lesions of the vessels, connected with Bright's disease, are no doubt in some instances the explanation of the hæmorrhage. The following case is probably an instance of this:

CASE III. *Ménière's Disease associated with Bright's Disease.*—An unmarried lady, aged 50, of a nervous temperament and dyspeptic, was the subject of chronic atrophic rhinitis, and liable to catarrhal attacks in the middle ear. She awoke one morning (April [illegible], [illegible]) with a severe headache and the sense of being quite deaf in the left ear. An hour or two afterwards she was seized with great giddiness, great "buzzing" in the ear and sickness. For three days she vomited everything and had also slight diarrhœa, and had to lie in bed for a week, the giddiness during that time being such as to forbid the erect posture. It was regarded as an "attack of the liver." I saw her about a fortnight afterwards, when disturbance of equilibrium had to a considerable extent passed off, although it still threatened to return when extra fatigued. There was practically total deafness in left ear to bone and air conduction. The noise and deafness have continued permanent, and on [illegible] the hearing was: in right, [illegible], and in left [illegible]. The sound, which was a combination of hissing and ringing, with the occasional tinkle of a bell, was distressing, and always aggravated by excitement, fatigue, or extra noise. Noisy surroundings have a peculiarly [illegible] effect upon the head and sounds in the ears. She has had two attacks of acute albuminuria, with partial unconsciousness, and since spring time [illegible] has been much troubled with a feeling as if the head were constricted with a tight band.

Atheromatous disease of the vessels is, in elderly people, an important cause of the disease. When we consider the intimate relation between the blood supply of the labyrinth and that of the interior of the cranium, the internal auditory

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[1] "Nervous deafness is relatively more frequent in [illegible]." J. M[illegible], [illegible].

artery being a branch of the basilar, it is easy to understand that atheroma in the cerebral arteries is likely to be associated with a like degeneration of the labyrinthine vessels. The following case is a notable instance of this.

A well-known Glasgow gentleman, aged 74, having normal ears and hearing, was seated in his office one forenoon, became suddenly conscious of a loud "humming" or "singing" in one of his ears, with deafness in the same ear. He almost immediately afterwards became extremely giddy and sick. When I saw him a day or two afterwards the vertigo and sickness had greatly subsided, leaving behind, however, profound deafness and most distracting noises in the ear. No mischief whatever was found in the external or middle ear, and I believed it to be due to sudden hæmorrhage into the labyrinth. The deafness and sound have continued, and a few months afterwards he was attacked with cerebral apoplexy, and died soon afterwards. Professor Gairdner, who saw him, wrote in answer to an inquiry from me, that "the death was from some apoplexy of the ordinary kind, no doubt from hæmorrhage into the corpus striatum or other mesial part of the brain."

In young children the condition may be associated with mumps,[3] acute labyrinthitis of Voltolini, cerebro-spinal meningitis, or leucocythæmia. The hæmorrhage may, on the other hand, be traumatic in origin, and due to a blow or a fall on the head. Many instances of this kind have come under my own observation. The giddiness continued in such cases for many weeks, and was especially severe when the patient assumed the upright posture. There was also total loss of hearing, with great subjective sounds, which were permanent. Examination of the external or middle ear usually yielded in such cases a negative result. Excessive exertion, especially of the respiratory organs, occasionally excites effusion into the labyrinth. I have had, for example, under my care, a young gentleman, an enthusiastic football player, who, during a keenly-contested game of football, was seized with great giddiness and excessive noise in one of the ears, which also became deaf, the latter symptoms—the noise in the ear and the deafness—remaining ever after. In another of my cases, excessive blowing with the mouth in the use of a blow-pipe for several hours seemed to be the exciting cause of the disease. The disease on the other hand, may come on while in bed, the sensation of the bed heaving, as if in a ship in a storm, being the first indication of the seizure.

Diagnosis of True Ménière's Disease.

We assume the affection to be labyrinthine, if, immediately after the sudden occurrence of the typical symptoms, an examination fails to discover any affection of the middle or external ear, while, at the same time, the deafness is extreme, with defective bone conduction. With such symptoms as those described, and, in the absence of disturbance of function or paralysis in the areas supplied by the other cerebral and spinal nerves, we may safely exclude the possibility of an intracranial affection, because, if the nuclei of the auditory nerve centre in the brain were affected, some of the other nerves whose centres are in juxtaposition would certainly also be involved.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TETANUS FROM A CHILBLAIN.

The following case may be of interest on account of such a trivial ailment as a chilblain terminating fatally: On March 18th, 1895, I was called to see J. K., aged 12 years. His mother believed that for five days he had been suffering from "influenza," and she did not think it necessary to seek medical aid, as her other children had all recovered from that disease a fortnight previously. I found the patient semi-conscious, with well-marked trismus, slight dysphagia, and both tonic and clonic spasms all over the body. There was also opisthotonos, and so rigid were the muscles that it was impossible to put him sitting in the upright position. The temperature was 100°, the pulse about 120, respirations very irregular, perspiration profuse. During examination I noticed, on attempting to move the left leg, that the spasms were greatly increased, and the patient cried out, apparently in much suffering. The leg was not swollen, nor was there any enlargement of the inguinal glands. On the upper and posterior surface of the heel there was an ulcer about as large as a threepenny piece, with a purple areola about half an inch in diameter. The mother then informed me that he had complained of a chilblain a few days before. I could only obtain a very vague account of the early part of his illness, nor do I believe he had had influenza. The patient was able with difficulty to swallow a little milk and beef tea, and I administered chloral, 10 grains, every fourth hour. When I saw him on the following morning he was moribund, and died shortly afterwards.

Harman F. Lawrenson, M.D.Dub.

Dunlavin, co. Wicklow.

DEATH OF A CHILD FROM THE PRESENCE OF VOMITED MATTER IN THE LARYNX.

On August 6th, 1895, at about 4 P.M. I was summoned in haste to see a child who, it was feared, had died suddenly. I found the child, a little girl about 5 years of age, dead, and, to all appearance, from asphyxia. The presence of a little vomited matter on the bedclothes sufficed to confirm the suspicion, and to suggest the cause.

The history was as follows: The child's dinner consisted of ham and eggs with tea. In the interval between breakfast and dinner she had an orange and some melon, and after dinner she was provided with a second orange.

About 45 minutes before I was called, the child, feeling sick, was put to bed by her mother. Shortly afterwards she seemed to be asleep, and the mother went on with her scrubbing, etc., in the same apartment.

When next she looked at the child it was apparently dead. Neither noise from vomiting nor from expulsive efforts had occurred sufficient to arrest the attention of the mother, who had not in the meantime been out of the apartment. The vomited matter consisted of a bit of ham measuring roughly half an inch square, and a little orange pulp.

The authorities appearing satisfied with the opinion I had expressed, that death was due to suffocation from the presence of some vomited matter in the trachea; no formal *post-mortem* examination was ordered. Permission, however, was granted me by the parents to make an incision in the windpipe, which I did 24 hours after death, and found, as I suspected, firmly engaged in the rima glottidis a piece of orange pulp rolled up upon itself lengthwise, and measuring 1 inch in length, and when opened out, ½ inch in breadth at its widest part.

Death from such a cause is very uncommon. Occasionally such cases occur in association with drunkenness, and a case is referred to in Taylor's *Medical Jurisprudence*, p. 418, in which an infant of one year old was suffocated from the presence of curdled milk in the trachea and bronchi. What happens in such a case is that when vomiting occurs in the horizontal position a portion of the vomited matter is readily drawn by aspiration into the trachea with resulting suffocation unless sufficiently vigorous expulsive efforts are set up. What is singular in the present case is that a child of 5 years of age should have been thus suffocated without any struggle occurring or noise being produced, sufficient to arrest the attention of the mother.

Rothesay. D. Mitchell, M.D.

A NOTE ON THE METHOD OF SKIN BRIDGING IN INGUINAL COLOTOMY.

In the British Medical Journal for April 6th, 1895, Mr. Bidwell, of the West London Hospital, describes a method of insuring free exit of fæces from the upper opening in the bowel after inguinal colotomy, and at the same time of preventing recession of the gut into the abdomen. The method consists in bringing the upper lip of the skin wound through an opening made in the meso sigmoid, and attaching it to the lower lip of the wound, by which manœuvre the bowel comes to be placed across a bridge of skin, in lieu of one of glass or rubber, as employed by some surgeons.

I can fully endorse all that Mr. Bidwell has said in praise of this proceeding. The operation is rapid, and the bowel need have no sutures inserted into it, and, if the length of the skin incision is properly calculated, nothing more than the

...1880, do we find any o... of total loss of hearing in both as a symptom of ear disease. In... observations, in the *Glasgow* 1888 edition of Toynbee's work, how... Hinton, there is reference to the symptom.

one suture to fasten the bridge of skin is necessary. I have tried it in two cases—one a case of inguinal colotomy, the other of Littre's operation. The former, a broken down man aged 57, recovered and left the hospital in a short time without any mishap. The skin bridge united at once, and the bowel opening (made on the fourth day) remained patent and well up on the surface. The latter was a woman, aged 59, in whom, as a purely palliative measure, to alleviate suffering, I did Littre's operation. The bridge of skin united at once, in spite of the fact that the bowel had to be opened at the time to relieve distension. In this case some interrupted sutures to attach the bowel to the skin were employed to prevent the chance of the intestinal contents getting into the peritoneal cavity. She also, as far as the operation was concerned, made a rapid recovery.

C. H. Golding-Bird,
Surgeon to Guy's Hospital.

A CASE OF PSORIASIS OF TWENTY-SIX YEARS' STANDING: RECOVERY.

On November 28th, 1894, I first saw G. N., a farmer, aged 39. He appeared of a full alcoholic habit, and said he had had skin disease for over twenty-six years, and been under treatment nearly all that time, but for the last few months had ceased. He was covered (except the face, hands, and feet) with an eruption, raw and reddish-purple, varying to scarlet, fissured and exuding serum in most places, and having a large amount of scaling.

He had taken many drugs, including arsenic, in small doses at various times. I thought the only thing to do was to persevere with the arsenic. This I did, commencing with 3 minims of the liquor arsenicalis, and increasing the dose every fourth day. Improvement commenced about the eighth day, and continued till his skin was smooth and pink and almost normal. About the seventeenth day he (though only taking about 24 minims of the liq. arsen. daily) showed marked symptoms of arsenic poisoning, and I had to delay the treatment a few days, but resumed it later in smaller doses. In about five weeks his skin was, except for a little deep pigmentation, quite normal, and while he continued taking small doses of arsenic kept quite clear. Now and again he leaves it off for a few weeks, and the spots and patches begin to manifest themselves, but on taking a few doses they rapidly disappear. In order to present all the facts fairly I may say I combined potassium iodide with the liquor arsenicalis, and gave him an ointment containing white precipitate, but as he had taken large doses of the iodide, and had had a mercurial externally in several of his former prescriptions, I think we are justified in putting their effect down as supplementary only.

The patient appeared to be rather susceptible to arsenic, and never took more than 8 minims of the liquor arsenicalis three times daily.

Rustat H. Hemsted, M.R.C.S.Eng., L.R.C.P.Lond.
Whitchurch, Hants.

ADVANCEMENT OF THE RECTI MUSCLES.

The fixation of the muscle to the conjunctiva has made the advancement of the recti muscles a satisfactory operation. Sometimes, however, cases are met with in which the conjunctiva tears so easily that the surgeon would desire to have something more reliable to depend upon. Such an experience about eight years ago led me to adopt for these cases a method which I have employed on several occasions. Instead of severing the muscle close to the eyeball I leave a small portion, sufficient for the placing of a suture, attached to the sclerotic; a single suture is passed (from within outwards) through this and the overlying muscle (drawn into position) and tied; the end of the muscle is then fixed to the conjunctiva in the neighbourhood of the cornea by two sutures parallel to the extremity. The incision is vertical and near the insertion of the muscle. The suture through the tendon and the muscle, if it does not absolutely prevent tension upon the conjunctiva, reduces it to a minimum. Where there is no ground for misgivings about the conjunctiva I only use the two conjunctival sutures mentioned above.

Manchester. David McKeown, M.D.

MASTOID DISEASE IN AN INFANT AGED 7 MONTHS: OPERATION: RECOVERY.

At the end of September, 1895, I was called to see a child aged 7 weeks on account of a "lump behind the ear." I had attended the mother in the confinement, and the labour had been quite straightforward, and no instruments were used. I found a small fluctuating tumour situated behind the left ear over the mastoid process. The skin was slightly red. The temperature was 103.6°. There had been no vomiting. A purulent discharge was issuing from the external meatus, but had not previously been noticed, so small was it in amount. On clearing this away with a probe and wool, and pressing over the tumour, pus was seen to exude from the external meatus. There was no wound visible which could have caused glandular infection.

Chloroform was administered by Dr. G. Lacy Barritt, of Spalding, and an incision was made over the swelling, and a fair amount of pus escaped. The bone was found bare, and a minute opening through which communication with the ear had been established. I enlarged this opening, and inserted a small drainage tube, plugging the rest of the wound with gauze.

The ear was then syringed daily with antiseptic lotions, and the discharge, at first profuse, gradually subsided. The tube was removed on the eighth day. Now, five weeks after operation, the wound is quite healed, and there is no discharge from the ear.

The age of the patient and the favourable termination of the case seemed to make it worth reporting.

Courtenay C. Weeks, M.B.C.S.Eng., L.R.C.P.Lond.
Pinchbeck, Lincolnshire.

THE TREATMENT OF DISLOCATION OF THE PERONEUS LONGUS TENDON.

As Mr. Walsham, in his instructive paper, has brought up this rather rare accident, the following case, treated successfully without operation, may be of interest:

John Goodall, the well-known International football player, during a match in December of last year suddenly displaced, for the first time, the peroneus longus tendon of his left foot. I saw him about two hours after the accident, the appearance of the injury being very typical, the tendon lying about 1 inch in front of the external malleolus. He could himself replace it with his fingers, and then by muscular action displace it again.

I determined to try first complete rest, so as to give the torn fibrous sheath the opportunity of reuniting. With that object, after firmly bandaging a semi-circular pad over the replaced tendon, I fixed the foot and leg in plaster of Paris. This was taken off at the end of three weeks, and the pad held in position with strapping; finally, at the end of six weeks, he was allowed to go into training again, wearing an elastic anklet, having being cautioned to avoid, as he well knew how, the particular action that caused the accident.

Three months after the accident he played for England against Scotland, and is still playing, his skill in the football field being in no way diminished. The tendon has never since left its proper place.

Derby. C. H. Taylor, M.B.Lond.

THE ABSORBING AND DISINFECTING PROPERTIES OF SAWDUST.

Not only is sawdust of great value in deodorising urine which has been absorbed by it, as shown in the interesting demonstrations of Professor G. V. Poore recorded in the British Medical Journal of August 31st, but it forms one of the best absorbents for serum, pus, and other putrescible fluids. For many years we have employed cedar and pine wood sawdust enclosed in muslin bags of fine texture and various shapes. We have found that these dressings answer all the chief requirements of an ideal surgical dressing, being cheap, easily procurable, soft, firm, convenient to handle, and capable of being rendered reliably antiseptic. Dr. Poore's experiments reminded me of a series conducted by my late uncle Mr. Arthur Neve with ascitic serum and pus. Muslin bags full of sawdust were saturated with these fluids and kept various lengths of time. The results were most interesting, being similar in kind to those recorded by Dr. Poore. Further

investigations were carried on by us as to the enhanced value of sawdust when saturated with solutions of corrosive sublimate, and then dried and filled into muslin bags treated with zinco-cyanide of mercury according to Lister's method.

We have been so satisfied with the result that these sawdust bags constitute now our chief surgical dressing. While thoroughly reliable for simple surgical wounds, such as those of laparotomy or the excision of tumours, it is, however, especially in cases in which there is excessive discharge that the sawdust dressing proves to be of conspicuous value.

I feel sure that if this form of dressing, modified to taste, were introduced in our large hospitals and infirmaries, and carefully tried, it would be found that much saving could be effected in the at present expensive item of surgical dressings. —I am, etc.

Ernest F. Neve, M.D., F.R.C.S.Ed.
Kashmir Mission Hospital.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

CANCER HOSPITAL, BROMPTON.

TWO CASES OF EPITHELIOMA PENIS TREATED BY DIFFERENT OPERATIVE METHODS.

(Under the care of Dr. Herbert Snow.)

I. Walter P., aged 39, married, painter, was admitted on August 3rd, 1893. The duration of the disease was 18 months, of which 8 had been occupied by the notorious Mattei treatment. The cause of the disease was a long prepuce, under which the secretion had been allowed to accumulate. There was no family history.

The whole glans penis was converted into a large fœtid mass of fungous granulations, and the infiltration extended along the body of the organ nearly to the scrotum. The inguinal glands were normal. After the temporary introduction of a bougie, the penile structures were exposed by a median perineal incision, dissected out until the finger could be hooked around it and transfixed. The crura were divided as near the rami as possible, the urethra about ½ inch in front. The penis was dragged forwards and liberated by a circular incision through the skin and fascia of the scrotum, without division of the raphé, and without interference with the testes. The perineal and scrotal wounds were separately closed, the urethra being sutured to a buttonhole aperture in the skin, and a self-retaining catheter left in. The man was discharged well on September 4th.

He reappeared in March, 1895, with a superficial cicatricial contraction of the perineal orifice, duly relieved. There was no trace of disease; and although the man was in excellent general health, wiry and fairly youthful in appearance, no sexual desire whatever had been experienced since the operation.

II. J. L., aged 69, a carpenter, was sent in October, 1893, by Dr. Howells, of Talgarth, Brecon. The cause of his disease was chronic balanitis, the result of neglect; its duration four years; there was no family history of cancer. The greater part of the glans was occupied by a hard mass of epithelioma, the body of the penis remaining, however, free. As a sufficient margin of healthy tissue was thus obtained, it was considered sufficient to excise in front of the raphé, the urethra being slit and sutured to the skin in the usual way. A good recovery ensued, the patient being discharged on November 21st. Dr. Howells has just (September, 1895), kindly written to say that he remains in "excellent health, with no sign of recurrence."

Remarks by Dr. Snow.—The course of both these cases illustrates an exception to what is or should be the golden rule in average instances of malignant disease dealt with by operation. In most situations carcinoma or epithelioma infects the adjacent lymph glands within a very few weeks or months of inception, and enlargement is a relatively late symptom of that infection. Hence as a general rule, whether evidently larger or not, these should be carefully removed simultaneously with the primary lesion. Penile epithelioma may not however be transferred to the inguinal glands for a much longer period, and this "anticipatory" extirpation is uncalled for; though a vigilant watch should be maintained for the subsequent twelvemonth. The operation in Case I substitutes two small wounds for one much larger, avoids division of the raphé and removal of the testes, steps which involve a huge raw surface in a spot specially prone to subsequent cellulitis. After radical removal of the penile structures, there need be no fear of trouble from subsequent sexual instincts, thus practically annulled.

REPORTS OF SOCIETIES

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, December 18th, 1895.

W. Craig, M.D., Vice-President, in the Chair.

Clinical Meeting.

Cases.

Dr. W. Allan Jamieson showed a case of Xeroderma Pigmentosa in a boy aged 3½ years. This he believed to be the second seen in Scotland, the first having been a case of Dr. McCall Anderson's. In the present case the disease only occurred on the face, on which also there were several warty growths. There was a history of cancer and of tuberculosis in the family.

Mr. McGillivray showed a girl in whom he had Excised the Condyles of the Humerus for dislocation and fracture, and the resulting condition was extremely satisfactory. He also showed a boy on whom, after a preliminary tracheotomy, he had performed Thyrotomy for Papillomata on the Vocal Cords. This was the fourth case in which he had done this operation. The operation seemed safe enough, but the voice did not appear to be restored to its normal.

Mr. Cotterill showed a young girl on whom he had operated for the Drainage of a Pancreatic Cyst. She had been ill twelve weeks, and was very ill when she came under his care. There was a large swelling in the spaces known as epigastric, umbilical, left hypochondriac, and left lumbar. There was also some dulness in the direction of the right hypochondriac region. Aspiration was first done, then later incision immediately below the left twelfth rib, and continued drainage for three months. She was fed on Benger's liquor pancreaticus, etc., and had made an excellent recovery. He also showed a rare form of Spina Bifida in a boy who seemed to be a pathological curiosity. The spina bifida was large, to the right of the middle line and over the sacrum. The bowel could be invaginated through the opening in the sacrum, and one's fingers nearly met. The boy's ears were feebly developed, he had a right congenital inguinal hernia, he was able to perform an extraordinary series of movements of the right forearm and hand, in consequence of great freedom and relaxation at the shoulder-joint, and finally he had club foot. He also showed a case of Actinomycosis on the Right Cheek in a young woman, with two illustrative microscopic preparations. The important feature was the difficulty of diagnosis.

Mr. F. M. Caird showed (1) a young man who had suffered from Osteomyelitis, and had been treated by passive congestion, etc; (2) a young man who had his Mastoid opened for suppurative disease of the ear; this was followed by a meningitic attack, probably tuberculosis: trephining was resorted to, and some fluid escaped after the dura mater had been punctured; he was unconscious for several days, but recovered; (3) a young man after Operation for Dilatation of the Stomach.

Dr. John Thomson showed a boy suffering from Peripheral Neuritis following Measles, and a case of Elephantiasis of the Face and Neck in a girl of 14, which appeared to have come on after whooping-cough.

Mr. David Wallace showed a young man, aged 19, who had recovered after Operation of Cerebral Abscess following or coincident with Otorrhœa.

Mr. Stiles showed (1) a baby with Arrest of Development of Both Ears, which seemed consequent on arrest of development of the petrous part of the temporal bone. There was no auditory meatus on either side, and evidently no hearing sense. There was defective development of the left lower

jaw, and paralysis of the occipito-frontalis on that side; (2) a baby with Cervical Ribs; and (3) a child with Symmetrical Tuberculous Lesions, Osseous Tubercles of the Orbit.

Mr. Alexis Thomson showed two cases, both elderly men, after Neurectomy for Trigeminal Neuralgia of long standing anæsthesia of the lower jaw seemed to be the condition mainly complained of now.

Dr. Norman Walker showed four cases of Lichen Planus, and a case of Leucoderma on the Abdominal Wall of a child.

Specimens.

Dr. Burn Murdoch showed (1) a Foreign Body (a piece of rhubarb) which caused intestinal obstruction; (2) Caries of the Atlo-axoid Articulation.—Dr. W. Allan Jamieson showed a series of Microscopic Preparations, stained and unstained, illustrating the Parasites of Ringworm.—Mr. McGillivray showed the Condyles excised from a Humerus. Warts removed from the Larynx, and a Calculus (oxalates) removed from the Ureter.—Dr. Graham Brown (for Dr. R. Mackenzie Johnston) showed Foreign Bodies removed from the Nose, Throat, and Ear.—Mr. D. Wallace showed Epithelioma of Larynx (complete laryngectomy) and second malignant Double Stricture of the Œsophagus.—Dr. Leith showed specimens illustrating a case of coincident simple Perforating Ulcer of the Stomach, and primary Colloid Cancer of Cæcum, with great secondary Infiltration of the Omentum and Diaphragm, etc.; also two specimens illustrating Malignant Disease of the Terminations of the Common Bile Duct.

Exhibits.

Mr. F. M. Caird: A Portable Steriliser for Instruments.
Mr. D. J. Stiles: An improved Tonsillotome (Matthieu).

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

Conolly Norman, M.D., President, in the Chair.

Friday, November 29th, 1895.

Tumours of the Kidney Composed of Suprarenal Tissue.

Dr. M'Weeney described two new cases of this condition. The paper will be published.

Dr. O'Sullivan, when in Vienna last summer, had seen two of these growths.

The President said there was a case published in the *Journal of Pathology* about three years ago by Kanthack and Hollerton, resembling in many ways that of Dr. M'Weeney. Another case of adenomata of the kidney, not mentioned by Dr. M'Weeney, was published in France in 1882. It was argued that adenomata of the kidney were almost invariably associated with a cirrhotic condition of the kidney. He had himself brought before this Section a somewhat similar case. It occurred in an elderly man who was dying of cirrhosis of the kidney.

Dr. M'Weeney, replying, said that in the class of cases he was referring to, the tumour originated in the kidney, altogether apart from the suprarenal. In both his cases the tumour originated in the lower end of the kidney. Because adenomata occurred in a cirrhosed kidney it did not follow that they were caused by it. The fully formed tissue of these tumours is not like urinary tubules. In the cortex of the human suprarenal, but more especially in that of the higher mammals, pseudo-tubular structures of the same kind were found by Creighton, Marchand, Flaundler, and others.

Joint Meeting of Sections of Medicine and State Medicine.

Thos. W. Grimshaw, M.D., F.R.C.P.I., President of the Section of Medicine, in the Chair.

Friday, November 15th, 1895.

Dr. Grimshaw made some opening remarks, and thanked the Academy for his present position as President of the Section.

The Infectious Hospitals (Dublin) Scheme.

Dr. J. W. Moore read a paper in which he severely criticised the draft scheme prepared by the Superintendent Medical Officer of Health of the City of Dublin "for the formation of a Board for establishing hospitals for infectious diseases in the County Dublin" as unnecessary, inexpedient, calculated to damage the Medical School of Dublin, and likely to prove a costly failure. He freely admitted, however, that the accommodation for small-pox patients in the late epidemic was neither adequate nor safe. Again, for twenty years he had been advocating the provision of refuges, or temporary habitations, for the reception of the inmates of houses in which infectious disease had broken out, and of convalescent homes for those recovering from infectious disease. So far he was heartily in accord with Sir Charles Cameron. Let, then, the urban and rural sanitary authorities of the Dublin metropolitan district combine under Sections 12, 149, and 155 of the Public Health (Ireland) Act, 1878 (41 and 42 Vict., cap. 52) to carry out these needed sanitary reforms.

Isolation of Fever Cases.

Sir Charles A. Cameron prefaced the essential part of his paper by some statistics showing the much greater decline in the mortality from zymotic disease than in that from all other causes. These statistics showed the possibility of the extinction of zymotic disease. The reduction of the fever death-rate was largely due to the sanitary measures passed by Parliament, and the enormous sums expended in the sanitary improvement of towns. Medical men had also contributed to it by the suggestions and by the action of medical officers of health—the latter had successfully resisted two threatened invasions of cholera. The isolation of fever cases and the adoption of a perfect system in the management of hospitals for infectious cases were telling favourably in England, but in Dublin they were open to the reproach of not only having two fever hospitals in somewhat crowded parts of the city, but of having no fewer than seven fever departments in general hospitals. There was no proper provision for an epidemic of small-pox, and in the recent epidemic of that disease both fever hospitals were crowded with patients, and 153 cases of small-pox had to be accommodated in huts erected in the workhouse grounds. Sir C. Cameron advocated provision for a future epidemic of small-pox, the establishment of one or two hospitals outside the city for typhus and scarlet fever cases, and that a hospital for convalescents from infectious cases should be provided, and the restriction of enteric fever, pneumonia, and diarrhœa to the present city hospitals.

Dr. James Little said that for the last thirty years he had been connected with the Adelaide Hospital, where they had always taken infectious diseases of all kinds except small-pox. During that time he had known only two patients who contracted an infectious disease in the hospital. One was a patient with enteric fever, who caught typhus. The other was also suffering from enteric and he caught scarlatina. In each case the patient that gave the disease was lying in the next bed. There had never been a spreading of scarlatina from the fever hospital to the main hospital, which was a few yards from it. He thought students would learn a great deal more about fever by carefully watching one or two cases than by going into a large fever hospital. According to Sir Charles Cameron, there was a great decrease of fever cases under the existing circumstances, and so he did not know why they should be changed.

Mr. Tobin said there was a great necessity that students should be thoroughly instructed in each variety of fever.

Dr. Walter Smith said it was perfectly absurd to talk of theory as against the enormous mass of practical facts. Besides the finances of Dublin must be considered. It would inflict an irreparable loss on the education of students. How was the proposed new hospital to be always kept a mile outside the town? How were people to be prevented from building around and up to it?

After remarks from Dr. C. F. Moore, Dr. S. M. Thompson, Surgeon-Major Daly, and Dr. O. Jones, Dr. Cranr said he did not think they should consider the cost of the hospital if it was good for the public health. With regard to the interference with medical teaching he would not discuss that, as it would not carry much weight either with the public or with the corporation. All who had any experience knew that the friends of those suffering from infectious diseases had a great objection to sending them into a fever hospital. If not able to send them into the fever wing of a general hospital they would keep them at home, and a great deal of concealment

would go on. The people must be taught that small-pox was preventable by proper vaccination and revaccination, and sufficient force was not laid on this point. The spread of typhus could also be prevented by better sanitation. Refuges for the temporary accommodation of the inmates of houses in which small-pox had broken out were also needed.

Sir THORNLEY STOKER was entirely in accordance with the previous speaker, that the proper course with regard to small-pox was its prevention, and not its cure. He agreed with Sir Charles Cameron on the necessity for a convalescent home for patients getting well from infectious diseases. He was not aware that fever found its way into the Richmond Hospital, nor did they even find any inconvenience from the small-pox when its was treated in the Hardwicke Hospital. He thought that one fever, to a certain extent, prevented an attack from another fever.

Mr. CROLY thought that if they had in Dublin a good arrangement for treating small-pox and cholera, and a good place for convalescent patients, the present hospitals should be left as they were.

Dr. BEWLEY said that if Sir Charles Cameron had no evidence to show that the various general hospitals were the centres of infection, his argument fell to the ground. He would like small-pox excluded from the town, as there was good evidence that it was transmissible through the air to a considerable extent. But with regard to the other fevers, unless it could be shown that there was a greatly increased prevalence of them around the hospitals, they were very well contented with the present condition.

Mr. W. THOMSON said that, according to Sir Charles Cameron, there were nine centres of infection from hospitals in Dublin. If any members of the families of those present were taken ill with an infectious disease, Sir Charles Cameron would not require the individuals to be removed from their homes. Suppose there were 200 such cases through the city, and the present fever hospitals were abolished, and one outside the city were erected in their place, how would simply extinguishing the nine centres and leaving 200 centres scattered in individual houses through the city get rid of the difficulty? In a hospital the physicians, students and nurses took care, as far as possible, that they did not bring infection outside. In private cases these rules were not obeyed.

Dr. PARSONS said that, if statistics proved anything, then Sir Charles Cameron had furnished very strong evidence in favour of the present system of treating infectious diseases. They were better here than in other cities where they had isolated hospitals. If the scheme was carried out, they would require half a dozen isolation hospitals for the different diseases.

Dr. DAY did not agree that people were unwilling to let their friends go to a fever hospital. As regards the spread of infectious diseases, artisan dwellings had been put up within 300 yards of Cork Street Hospital. They had had only one case of typhoid and one case of scarlatina from these dwellings.

Dr. FALKINER endorsed Dr. Day's opinion that patients now wished to go to a fever hospital. The poor people would go to any institution where they were properly treated.

Sir CHARLES CAMERON, replying, said he wished to make an explanation with regard to the circumstances under which the scheme was brought before the Corporation of the Sanitary Authorities held in the Public Health Office. The original Conference was held simply for making arrangements for future epidemics of small-pox, and also for providing one or more homes for patients convalescing from fever. There was considerable discussion at the first meeting. He was asked to meet Dr. Stafford and prepare a scheme. He was distinctly asked to include in the scheme the consideration of hospitals for other infectious diseases. Dr. Stafford fully approved of the scheme which was drawn up, and was quite willing to share the responsibility. It seemed they all were agreed that two out of the three objects set forth in the scheme should be carried out. He had subordinated the third all along if the first two were accomplished. He would be glad to have the third also, because he was still convinced that what they did in other countries was right, and that it would be better to treat infectious diseases in special hospitals. The Public Health authorities had the power of compelling all infectious cases in tenement houses to go to hospital. When he had a case of scarlatina in his own family he sent it to hospital. When his child was at the Adelaide Hospital the Resident informed him that he had got scarlatina from his child. When small-pox was received in the Adelaide Hospital there was not a house in one street at the back of the hospital which had not a small-pox case. He thought that if the Corporation of Dublin contributed £5,000 to the Dublin hospitals they might also contribute to the expense of having a hospital for small-pox. He said there were 220 square miles in London, and so the fever hospitals could not be established outside London, but they were in the best position that they could be. If they admitted that small-pox and typhus and scarlatina could be transmitted through the air, their position fell through altogether. He did not say that typhus and scarlatina were as contagious as small-pox. Everything done to prevent contagion must be of some use. The chances that persons in the neighbourhood of patients suffering from small-pox or scarlatina would get it were more than if they were at a distance from them. The cause of the decrease in the death-rate from infectious diseases was the general improvement in sanitation. He had no intention of interfering with existing Dublin hospitals. He resisted the proposal that the grants to them should be considered, but he was defeated. The scheme was proposed with the very best intentions. Having regard to the weighty opinions expressed by the leading medical men, he had decided to abandon the third part of the scheme. His paper contained his honest conviction as a sanitarian. The two primary objects, namely: (1) The making proper provision for a future epidemic of small-pox; and (2) the establishment of a home for convalescent infectious cases, he was determined to keep to, and to use all his influence to carry them out.

Dr. J. W. MOORE, replying, said that he had heard with great gratification the statement made by Sir Charles Cameron, that he would limit his scheme to providing accommodation for small-pox patients, and of having a convalescent home for persons recovering from all infectious diseases.

Dr. DUFFEY proposed, and Dr. FALKINER seconded, the following resolution, which was passed:

Resolved: That the General Council be requested to convene a special general meeting of the Academy to consider and express an opinion upon the proposed scheme for a hospital for infectious diseases in Dublin.

LIVERPOOL MEDICAL INSTITUTION.

CHAUNCY PUZEY, F.R.C.S., President, in the Chair.

Thursday, December 12th, 1895.

REMOVAL OF SINGER'S NODULE.

Mr. BARK showed a man, a "star comique," who at one time had completely lost his singing voice. In July, 1893, a growth was completely removed by Grant's guarded laryngeal forceps; two weeks later he was able to fulfil a professional engagement, and said that his voice had never been better; there had been no recurrence since. A second patient, a choirmaster, had suffered from hoarseness and loss of singing voice for over two years. In June, 1894, a nodule was removed from the larynx in the same manner, and the voice had been good ever since.

A RESPONSIBILITY TO THE LYING-IN PATIENT FROM A SANITARY POINT OF VIEW.

Dr. STEEVES thought that a variety of puerperal fever existed that was caused by defective sanitation, and he gave instances in which he believed puerperal septicæmia had resulted from atmospheric infection by sewer gas. In the city of Liverpool one-third of the reported cases of puerperal fever were from houses described as insanitary. The prevalence of the disease was no necessary index of the amount of zymotic disease existing, for, in 1894, though there were nearly 1,000 more cases of zymotic diseases than in 1893, the number of puerperal fever cases was considerably less. When a medical man is engaged to attend a confinement he rarely inquires into the sanitary condition of the house, but

Dr. Steeves thought that this should always be done, and if the medical man did not consider himself fully competent he should obtain an expert opinion. A protracted period of ill-health frequently followed a confinement, and Dr. Steeves thought this not seldom due to chronic sewer gas poisoning. Dr. Steeves then moved the following resolution, which was seconded by Dr. IMLACH:

That in the opinion of the members of the Liverpool Medical Institution it is the duty of every medical practitioner, when engaged to attend a confinement, to forthwith inspect, or cause to be inspected, the premises of the patient, with a view to having any sanitary defects which may exist corrected, and so further the stamping out of puerperal septicæmia by the methods of preventive medicine.

Several members spoke on the resolution, some stating that, in their opinion, insanitary conditions had nothing whatever to do with puerperal septicæmia. Others thought that the resolution, to be effectual, should apply to illness of every kind, and not especially to the puerperal woman. It seemed to be generally agreed that it would be very unwise that any such resolution should go forth to the public from the Medical Institution, and, on being put to the vote, it was rejected by an overwhelming majority.

Spinal Localisation.

Professor SHERRINGTON referred in his paper to the distribution to the skin of the sensory spinal nerve pairs arising from the cord. He pointed out that experiments show the field of skin supplied by each sensory spinal nerve root to be a large area of somewhat simple configuration. Where simplest, as in the trunk and neck, the segmental skin field is band-like, wrapping transversely round one lateral half of the body. In the region of the limbs the mid-dorsal line of the body may be said to extend laterally in a side branch, forming a secondary axis almost at right angles to the main axis; upon this secondary axis, which may be called the limb axis, the spinal skin fields are arranged as though upon folded portions of the axial lines of the trunk itself. Each spinal skin field spreads out to a marked extent into neighbouring spinal skin fields, and in this way has an overlap into the field in front and behind it. There is, therefore, no area of skin which is supplied by one spinal nerve alone; the supply is from two roots in some places and three in others. Although in a plexus each sensory spinal root gives separate contributions to many nerve trunks, the cutaneous distribution of the root composes a field, not of discrete or disjoined patches, but of patches so joined that the distribution of the entire root forms one continuous field.

Professor PATERSON, by means of a large parti-coloured model of the "Fighting Gladiator," demonstrated the distribution of spinal nerves to the skin and muscles of the trunk and limbs in man. This showed how closely the skin fields in man corresponded with those found experimentally in the monkey by Professor Sherrington. Professor Paterson pointed out that, while superficially segmental in origin, the spinal nerves are truly segmental in distribution only to the muscles of the thoracic wall. With regard to cutaneous innervation, it was certain that overlapping took place in the distribution of the simplest type of nerve, so that it was possible to affirm that no spot of skin and no muscles (except the intercostals) were supplied by a single spinal nerve. With this qualification, the cutaneous innervation of the trunk, between the limbs, was zonular; continuous belts of skin were supplied from back to front. The growth of the head and limbs caused the adjacent nerves to be drawn out of their primitive position. In the limbs, lines—dorsal and ventral axial lines of Sherrington—could be drawn from the middle line of the body down the limbs, and indicated the meeting place of widely-separated nerves; it was only at the ends of these lines that a continuity of distribution again appeared.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A. W. MAYO ROBSON, F.R.C.S., President, in the Chair.

Friday, November 29th, 1895.

An Unusual Case of Cranial Hypertrophy.

Mr. HARTLEY showed a case of congenital cranial hyperostosis in a boy, aged 12. The condition was almost entirely confined to the cranium, the bones of the face being very slightly affected. The principal bosses were two—one at the vertex and a second on the left side of the skull, involving chiefly the parietal region. In addition there was irregular thickening of the occiput, and an invasion of the orbits producing marked proptosis, absolute loss of one eyeball and complete blindness in the other. The upper jaw was much compressed laterally, the two halves forming a very acute angle in front, and the teeth growing very irregularly. [Plaster casts by Mr. MARGETSON were shown.] The lower jaw was normal. There was no evidence of intracranial disease, of hydrocephalus, or congenital syphilis, and no deformity of the limbs or joints. The patient's mental development was quite up to the average; he had a good ear for music, and was being educated on the Braille system. The case seemed nearest akin to leontiasis ossea.

Dr. GRIFFITH mentioned that the Museum of the Medical School contained a skull closely resembling that in the case shown, and he himself had shown a somewhat similar case at a previous meeting.

The PRESIDENT had seen a somewhat similar case improved by iodide of potassium.

Dr. EDDISON asked whether there was any evidence of syphilis in the parents. He thought the appearance of the boy suggested it. It was unlike any case of osteitis deformans he had seen, nor was it ordinary hydrocephalus.

Fracture of the Ethmoid Bone with Basal Meningitis.

Mr. W. H. BROWN read notes of this case, a boy of 16, who was struck over the occipital region of the skull by a falling stone. He fell forward, his forehead coming violently into contact with the ground. He was unconscious for a short time. No special symptoms were noticed but he was kept in bed. On the third day when sitting up a copious watery discharge ran from both nostrils and continued for six days, when it ceased. Temperature rose to 101·5° F., and was accompanied by intense frontal pain, photophobia, tinnitus, and a transient strabismus. Three weeks after the accident he was admitted to the Leeds Infirmary under Mr. Brown's care. There were then no external signs of injury beyond some discoloration of the skin at the root of the nose. He complained of severe temporal pain; the movements and sensations of all limbs were normal. Temperature 100°; convergent strabismus affecting both eyes, pupils dilated, reacted slightly to a bright light; double optic papillitis present. Later on vomiting occurred at irregular intervals, the boy was irritable and at times delirious, but gradually his symptoms disappeared and he was now quite well. Mr. Brown believed that only a few cases of basal fracture with nasal discharge of transparent fluid recovered, and said that a discharge from the Schneiderian membrane might be taken for cerebro-spinal fluid. He thought the fluid in this case was cerebro spinal on account of the quantity and absence of any affection of sense of smell.

Mr. SECKER WALKER had lately examined the eyes again, and all the ocular symptoms had disappeared except some slight swelling of the optic disc; vision in each eye was good. He mentioned that at least 4 cases of double optic neuritis associated with constant discharge of cerebro-spinal (?) fluid from the nose had been reported, but in these cases there was no traumatism.

Mr. WARD and Mr. LITTLEWOOD both thought that the ice-bag was of little value in the treatment of head injuries.

Dr. TREVELYAN thought it a typical example of traumatic cerebro-spinal meningitis both in its symptoms and temperature chart. He observed that the prognosis of these cases of non-tuberculous meningitis was a matter of exceptional interest. The longer the disease had lasted after a certain point the better the patient's chance of recovery. Spinal puncture might in the future throw light on the particular micro-organism setting up the disease, and show how far the pathological processes might extend in the direction of pus production and yet be consistent with recovery.

Shortening at the Neck of the Femur.

The PRESIDENT demonstrated a method of measuring the shortening at the neck of the femur which he had employed

for several years, and which, he believed, had not been hitherto described. The method consisted in drawing a transverse line from the tip of the great trochanter forward to the front of the thigh on each side and dropping a vertical line to meet this from the tip of each anterior superior iliac spine; the latter lines constituted the ones in question. The advantages presented by these measurements were: (1) The ease with which they can be made with the patient in the dorsal decubitus; (2) the degree of exactitude which the method renders possible; (3) the manifest advantages for demonstration purposes of seeing at once the limbs which have to be compared.

AN EPIDEMIC OF HYSTERIA.

Dr. J. CROSSLEY WRIGHT gave an account of an epidemic of hysteria, which took place on the girls' side at the Crosby and Porter School. It consisted of 14 cases, the ages of the patients varying between 11 and 14 years. They occurred between November 11th and November 24th, and in the majority one type was distinguishable—namely, clonic rhythmical spasm of the upper limbs, varying in intensity between a fine tremor and coarse violent movements involving the whole of the trunk. In some of the cases the elbow-joint was rigidly extended, the fingers being flexed firmly into the palm, while the chief motion was at the shoulder-joint, giving rise to forcible alternate adduction and abduction as well as internal rotation of the whole limb. In two cases there was a distinct hammering action of the clenched fist against the side, table, or against any surface with which it was placed in contact. In a single instance there was spasm of the eyelids, with an occasional quick opening and shutting. No definite cause for the commencement could be ascertained. Some one or two of the girls were in for an examination. The treatment was the same in all the cases, namely, isolation, rest in bed, milk diet, faradism, a succession of blisters in order to cause pain to the moving part, and, as for drugs, valerian and bromide of potash. That which seemed to have the greatest effect was the blistering, and a marked improvement was at once recognisable after the first one or two blisters had been applied.

Dr. BARRS considered that tremor was a common symptom in hysteria.

Dr. EDDISON advocated a more vigorous line of treatment, and asked if it was certain, as Dr. Wright had stated, that the movements continued during sleep.

CARD SPECIMENS AND CASES.

Card specimens and cases were shown by the PRESIDENT, Mr. LITTLEWOOD, Mr. BROWN, Mr. SECKER WALKER, and Dr. T. WARDROP GRIFFITH.

PATHOLOGICAL SOCIETY OF MANCHESTER.

H. R. HUTTON, M.B., President, in the Chair.

Wednesday, December 11th, 1895.

DILATATION OF RECTUM WITHOUT OBSTRUCTION.

MR. FRICKE showed the rectum and sigmoid flexure of a man, aged 35, who had suffered from general paralysis of the insane. He had been employed at outdoor work up to the morning of his death, when he began to vomit at breakfast, dying at 2 P.M. the same day. During the last year his abdomen had been noticed to become very big. *Post-mortem* examination showed that the peritoneal cavity was full of fæces mixed with exudation; the rectum was enormously distended, at least 5½ inches in diameter, and ascended close to the middle line from the pelvis as far as the left wing of the diaphragm, displacing the heart upwards. At the lower part of the sigmoid flexure there was a perforation the size of a shilling with much-thinned edges and without any sign of inflammation, through which the fæces escaped into the peritoneal cavity. The contents of the intestines consisted of soft fæces of slightly greater consistency than cow-dung; there were no hard masses anywhere. There had never been any constipation, the patient being very dirty, and passing fæces at all times in his bed and clothes. There was no trace of organic obstruction, the whole hand being easily passed through the anus into the rectum.

FRACTURED SKULL.

Mr. FRICKE showed the fractured vault and base of a female epileptic aged 36. She was 16 stone in weight and 5 ft. 4 ins. in height; she fell in a fit down three steps, each 6 ins. high, on the back of her head, and died immediately afterwards. A fracture was found starting from the upper part of the right lambdoid suture, going downwards and then forwards into the foramen magnum, leaving the latter at the right side of the basilar process and then extending forwards on the same side as far as the pituitary fossa; at this level the fracture went across to the left side through the pituitary fossa, and ended in a slight crack extending slightly backwards on the left side. The body of the sphenoid bone was completely broken through. Although the skullcap was much thickened the lower occipital fossa was very thin.

ANGIOSARCOMA OF KIDNEY.

Mr. FRICKE showed the microscopic preparations of an encapsuled renal tumour from a patient aged 72, who died from heart disease. The tumour was considered to be angio-sarcoma.

SECONDARY CANCER OF THE HEART.

Dr. WILD showed a heart of which the myocardium presented numerous nodules of cancer; the left ventricle was chiefly involved and one papillary muscle was deeply infiltrated, the pericardium was only affected where a nodule in the heart muscle reached the surface. Microscopic preparations showed that the nodules had the structure of a squamous epithelioma, typical cell nests were numerous and the new growth infiltrated the cardiac muscle. There were no cardiac symptoms during life. The specimen was obtained from a man, aged 43, whose tongue had been removed for epithelioma nearly four months before death; rapid recurrence took place in the cervical glands, which ulcerated deeply, and involved the surrounding tissues. Death occurred from exhaustion, consequent on septic absorption and inability to take food. As far as could be ascertained, less than five months elapsed from the first appearance of disease in the tongue to death. The lungs also presented secondary growths of a similar character to those found in the heart.

COLLOID CANCER OF ŒSOPHAGUS.

Mr. RAY showed for (Dr. DIXON MANN) a specimen, with microscopic sections, of colloid cancer of the lower end of the œsophagus. Secondary growths were found on the left third rib, and in a submaxillary gland on the left side. There was also a fibroid stricture of the pylorus.

CARD SPECIMENS.

Dr. KELYNACK: Chronic Ulcer of Stomach from an elderly female.—Dr. STOCKS: Large Sarcomatous Growth below the Lower Mandible of a Fowl.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—At a meeting on December 12th, Mr. CHARLES KING, President, in the chair, Dr. BREVOR gave an account of a case of Abdominal Aneurysm showing peculiar symptoms. The patient was admitted into the Great Northern Hospital under his care suffering from symptoms of pressure on the roots of the upper lumbar nerves on the left side. Thus on carefully comparing the sensation of each thigh it was noted that there were areas of comparative anæsthesia on the left; the left knee-jerk was also diminished on comparison. A certain amount of reflected pain was complained of over the left great trochanter, and on percussion over the spines of the first and second lumbar vertebræ, tenderness was found. It was then observed that there was a small abdominal tumour on the left side of the spine, but from the other symptoms it was thought to be of malignant character. In a short time this tumour increased in size, occupied a large area on the left side of the abdomen, and showed expansile pulsation. Soon after this increase began to be observed, one morning while moving in bed the patient was seen to fall back, his face became blanched, and he expired almost immediately. On *post-mortem* examination there was found to be an aneurysm of the abdominal aorta which had caused erosion of the bodies of the first and second lumbar vertebræ, and which had penetrated the left psoas muscle dissecting through the soft muscular structure, and turning it into a secondary aneurysmal cavity. The blood had then passed upwards, and passing below the diaphragm, had escaped

suddenly into the left pleural cavity; death had resulted as the consequence of this accident. Dr. Beevor remarked on the importance of observing with care apparently insignificant physical signs as a means to accurate diagnosis, and especially the comparison of one side of the body with the other, in the case of any symptoms involving sensation or any other interference with the nervous system. In discussing the case, Dr. Galloway remarked on the absence of signs of referred pain along the course of the lumbar nerves, which must have been pressed on during the progress of the aneurysm. Mr. Mower White pointed out the fact that from the anatomical relations the aneurysm must have perforated the strong iliac fascia on gaining access to the psoas muscle, and inquired whether it was not possible that the aneurysm might have originated in either the first or second lumbar artery instead of in the aorta itself. After remarks by Dr. Glover and Dr. Morison, Dr. Beevor replied, and said that there was no evidence that the aneurysm had originated in either of the two positions mentioned as possible by Dr. Mower White.—Dr. Thomas Hamilton related a case of Abdominal Suppuration. The patient, a man in late middle life, had long suffered from symptoms of chronic dyspepsia, with gradual loss of strength, when he developed a tumour in the left side of the abdomen about the iliac region. This increased in size with rise of temperature, and presented much difficulty in diagnosis. The patient was seen in consultation by several physicians, and the opinions differed, some being in favour of the diagnosis of abdominal suppuration, and others of malignant disease. At length on being seen in consultation with Mr. Langton, it was decided to incise the mass with the idea of exploration. On incision the tumour proved to be an abscess in connection with the descending colon, and on microscopic examination of the walls of the cavity there was found to be no evidence of malignant origin. While the abscess was being drained there appeared in the discharge a coil of sausage skin, and a bristle about ½ inch in length. The speaker was of opinion that the abscess was associated with the presence of these foreign bodies as irritants. In spite of all efforts to prevent the spreading of the suppuration it spread over the abdominal wall, and ultimately caused death. Dr. Glover, who had seen this case with Dr. Hamilton, stated that in the first instance he felt quite assured of the malignant origin of the obstruction that was produced. The Chairman criticised Dr. Hamilton's supposition that the foreign bodies mentioned had been the immediate cause of the abscess. Mr. King was of opinion that it was more probable that there had been a fæcal accumulation, possibly around the foreign bodies, which had caused ulceration of the mucous membrane, with a resulting pericolic abscess.

Sheffield Medico-Chirurgical Society.—At a meeting of this Society on December 5th, Dr. Porter (President) in the chair, Mr. Snell showed (1) a large number of stereoscopes with photographs illustrating Eye Operations and Methods of Examining Eye Patients; (2) an Electrolysis Needle; (3) a woman with Embolism of Central Artery of Retina.—Mr. Richard Favell showed Gynæcological Specimens, and gave particulars of a successful case of Nephrectomy.—Dr. Sinclair White exhibited and made remarks on (1) a successful case of Laminectomy for Complete Paraplegia due to Spinal Caries. The paralysis had been present for upwards of a year, and had resisted seven months' treatment by continuous extension and other recognised expectant plans. The patient, a boy, aged 8 years, was operated on five months ago, and could now walk well. The arches of the fourth, fifth, and sixth dorsal vertebræ were removed, and a large cavity corresponding in extent to the body of the fifth dorsal vertebra cleared out; (2) upwards of 200 Gall Stones removed from a woman by operation. Dr. White, instead of stitching the cut edges of the gall bladder, tied them over a glass tube with a constriction at the point of ligature. This plan had answered well by saving time at the operation, and by keeping the wound from bile during its healing; (3) a child with Supernumerary and Webbed Fingers and Toes.—Dr. Clyde Hayes showed a case of Malignant Disease of the Tongue.—Mr. Cuff showed (1) a woman with a large Venous Nævus of Tongue; (2) a boy, aged 10, with Enchondromata (two in number) on the Right Hand.—Dr. Arthur Hall showed (1) a case of Melanoderma; (2) a case of Syphiloderma.—Dr. Gwynne read a paper on the Radical Cure of Hernia. He maintained that it was one of the most successful operations of modern surgery, relieving the patient not only from grave inconvenience, but also from the ever-present danger of strangulation. He advocated Macewen's method of stitching up the inguinal opening, but thought that ligature and excision of the sac simplified the operation, and produced as good results, especially in children, as Macewen's mode of dealing with it. In Dr. Gwynne's opinion this applied with still greater force to congenital hernia. In cases of the latter he preferred closing the ring with stout ligatures, so as to restore the valvular condition of the canal and subsequently ligaturing the sac as high up as possible without excising any portion, due care being taken not to include or otherwise injure the spermatic cord. A number of cases were exhibited dating from one to five years after operation.—The President, Dr. Sinclair White, Dr. Wilkinson, Dr. Gwynne, Dr. Burgess, Dr. Swinton, and Dr. Addison discussed the cases and paper.

Glasgow Medico-Chirurgical Society.—President, Dr. W. L. Reid. At the meetings of the Society during the present month the following cases, etc., have been shown: Dr. Finlayson narrated the case of a man who died from Rupture of the Descending Aorta, the result of violence. The patient having been able for some weeks after the accident to pursue his occupation as a quay labourer, and making little or no complaint; the wall of the artery appeared to be healthy. Dr. Finlayson also gave an account of a case of Aneurysm of the Arch of the Aorta, with diastolic murmur, the aortic valve on *post-mortem* examination being competent.—Dr. Macartney reported on the use of Tetanus Antitoxin in two cases, in neither of which did the remedy appear to have any beneficial influence.—Dr. Dalziel showed a specimen of Perforating Ulcer of the Duodenum, which he had removed after rupture occurred; the patient, who was a young woman, made a good recovery. Dr. Dalziel also showed a patient whose foot he had partially removed on account of a Perforating Ulcer, the result of injury to nerves; the result was considered highly satisfactory.—Dr. John Love showed Microscopic Preparations of the Nerves from cases of diabetic and traumatic peripheral neuritis.

Infirmary Medical Superintendents' Society.—A meeting of this Society was held at the Infirmary of St. George-in-the-East on December 14th, Mr. J. R. Lunn in the chair.—Dr. M. M. Bowlan (Medical Superintendent of St. George-in-the-East) exhibited the following cases: (1) Extensive Ulceration of Both Feet; (2) Suppuration of Knee-Joint Cured and Perfect Movement Regained by Draining and Free Irrigation; (3) Congenital Heart Disease; (4) Pityriasis Rubra; (5) Jaundice associated with Rupial Eruption.—The question of a Uniform Diet for all Workhouses within the metropolitan area was discussed and approved of, Mr. Walter Burney (Greenwich) pointing out that those houses which adopted a more liberal diet were favoured with the company of the professional workhouse loafer, who was a pest to society, and made these institutions unendurable to the respectable poor.—Various other administrative matters of interest were discussed, and a vote of thanks to Dr. Bowlan for his interesting series of cases terminated the proceedings.

Laryngological Society of London.—At a meeting on December 11th, Dr. Felix Semon, President, in the chair, Mr. C. Banks reported further on the case of Papilloma of the Nose shown to the Society on April 10th, 1895. On April 22nd the growth was removed under an anæsthetic. No recurrence had taken place by November 29th. Microscopic examination showed the growth to be a true papilloma.—Dr. J. S. Hall showed a mechanic, aged 48, with a Pedunculated Growth which in his opinion grew from the inner edge of the left vocal cord.—Dr. Clifford Beale showed two specimens of Tuberculous Infiltration of the Pharynx and Tongue.—Dr. Bennett showed a microscopical section of a round-cell Sarcoma of the Thyroid.—Mr. L. Lawrence showed a case of Naso-pharyngeal and Nasal Polypi.—Mr. de Santi showed two pathological specimens of Tuberculous Ulceration of the Trachea, Larynx, and Pharynx.—The President brought

forward a case for diagnosis which showed some ulceration in the Larynx.—Mr. Spencer showed a case of Stenosis of the Larynx caused by chronic inflammatory thickening.—Mr. Stack showed the case of Enlarged Thyroid he brought before the Society at the last meeting; the tumour had been removed, and the lad was doing well.—Mr. W. R. H. Stewart showed a case of very large Fibroma of the Nasal Septum. The tumour when fresh measured 4 by 2½ by 1½ inches, was a true fibroma, and was by far the largest on record. It had been found impossible to move it with an *écraseur*, so Mr. Macready had removed it by turning back the upper jaw, performing a slightly modified Mansell Moullin operation. As this seemed to be a unique case, the President suggested that a woodcut should be obtained for insertion in the *Proceedings* of the Society.—Mr. C. Symonds gave a further report of two cases of Lesion of the Septum shown at the October meeting.—Mr. E. B. Waggett brought forward a case for diagnosis, a woman aged 54, who gave a history of Impacted Fishbone, with symptoms persisting for fourteen months.—Dr. W. A. Wells showed a case of Inspiratory Spasm of the Vocal Cord.

Newport Medical Society.—A meeting of the Society was held on December 4th, Dr. A. Garrod Thomas (President) in the Chair.—The evening was chiefly occupied by an interesting lecture given by Dr. Paterson (Cardiff) on Movements of the Heart within the Chest. The lecture was profusely illustrated by limelight views of experiments made by Dr. Paterson and Professor Haycraft (Cardiff) on the hearts of frogs and frozen animals, showing the increased antero-posterior diameter of the heart during diastole, and decrease of the same in systole.—An exhibition of Bacteriological Specimens was given by Dr. Howard Jones.

Bristol Medico-Chirurgical Society.—The third meeting of the Session was held in the Medical Library of University College, Bristol, on December 11th, 1895, Mr. A. W. Prichard in the Chair.—Dr. Watson Williams read a paper on the Symptoms and Diagnosis of Malignant Diseases of the Larynx, illustrated by patients and drawings.—Dr. Edgworth showed a patient with Unilateral Neuritis of the External Popliteal Nerve.—Dr. Prowse showed specimens from a case of Acute Nephritis, in which the Inferior Vena Cava was plugged with clot, leaving a small central channel; both Pulmonary Arteries were plugged with similar clots.—Dr. Skerritt showed a specimen of Diffuse Cancer of the Stomach.—Dr. Michell Clarke showed a specimen of Aneurysm of the Ascending Aorta communicating with the Superior Vena Cava, and Dr. Shingleton Smith and Professor Fawcett spoke on the subject.—Professor Fawcett read a paper, illustrated with numerous specimens and diagrams, on the Retinacula of Weitbrecht or Cervical Ligaments of Stanley. Mr. Harsant and Dr. Edgworth commented on the paper.

REVIEWS.

A Medical and Surgical Help for Shipmasters and Officers in the Merchant Navy; including First Aid to the Injured. By Wm. Johnson Smith, F.R.C.S., Principal Medical Officer, Seamen's Hospital, Greenwich. London: Charles Griffin and Co. 1895. (Crown 8vo, pp. 350. 6s.)

It is commonly believed, or at least said, that the first mate's remedy for all ills to which sea-going flesh is liable, is "a handful of salts," and it is certain that the seamen on trading vessels often undergo a great deal of unnecessary suffering owing to want of proper medical treatment. The evil is beyond complete cure, but Mr. Johnson Smith has done what is possible to diminish it by writing this book. The task could not have fallen into better hands, as by the official position which he holds he is not only brought into constant relation with the seafaring classes, but has the opportunity of keeping himself well acquainted with the improvements in surgical methods and with the increase of knowledge as to exotic diseases.

In the opening chapters of the book general topics are discussed, the contents of the medicine chest are described, and occasion is taken to recommend the use of solid drugs, tabloids being specially mentioned. The chapters on fevers, which are preceded by an account of the uses of the clinical thermometer, are extremely well done. The administration of drugs is kept well in the background, and sound advice is given as to the measures which should be taken to prevent the spread of the disease.

About one-third of the volume is occupied by chapters on the treatment of injuries, and the concluding pages deal with diseases of the eye, skin, urinary organs, and bowels, with venereal disease, with poisoning, with the treatment of insensibility and suspended animation, and with the application of bandages and other appliances. There is a short chapter on cooking at sea, with some practical receipts. The appendices contain a great deal of useful information of a miscellaneous kind bearing on health on board ship, including the statutory provisions dealing with the subject, port sanitary regulations, dietary scales, etc.

We have tested the book in various ways, and have found it neither redundant nor deficient. It is written in plain language, is thoroughly practical, free from padding or fine writing, in fact, always brief and to the point. Higher praise it would be impossible to give.

The Theory and Practice of Counter-irritation. By H. Cameron Gillies, M.D. London: Macmillan and Co. 1895. (Demy 8vo, pp. 236. 6s.)

Although perhaps hardly the same interest is taken in the subject of counter-irritation as formerly, yet its undoubted value in some cases would render a satisfactory explanation of its mode of action very acceptable.

Dr. Gillies's book is divided into two parts—(1) Historical and theoretical, and (2) practical. The historical survey occupies six chapters, and in Chapter vii a new theory is stated and discussed. There seems to be no difficulty in accepting in general the author's contention that inflammation is a natural effort to repair an injury or a diseased state. The science of bacteriology has somewhat modified the views on inflammation, and one well-known definition at the present moment is that inflammation is the method by which the organism attempts to render inert noxious elements, introduced from without or arising from within. On the other hand, the author's reasoning is not convincing if it is intended to prove that inflammation in every phase and stage is under all conditions a reparative process. His views as regards inflammation and its relation to counter-irritation are summed up on p. 111 thus—that every process of inflammation is a natural effort towards cure, and that the beneficial effects of counter-irritation result from their facilitating or accelerating that process.

In Part II the uses of counter-irritation are discussed in general in Chapter i and in detail in Chapter iii, whereas in Chapter ii some practical observations are made on the circumstances in which counter-irritation should and should not be employed. The detailed uses given are: (1) To quicken repair, (2) to relieve pain, (3) to promote absorption, (4) to throw off diseased tissues, (5) to remove passive engorgement, (6) to rouse from a state of unconsciousness, and (7) to draw poisons from the tissues (as in dog-bite).

Objections might readily be made to some statements made under the author's allusion to the Koch treatment in the section dealing with the throwing off of diseased tissues. Dr. Gillies prefers the use of blistering fluid in the treatment of lupus to the sharp spoon. He is satisfied (p. 166) that if the health is rightly cared for the blister leaves the scraper under such conditions with far worse than no excuse. It may fairly be stated that the power of blisters to draw poisons from wounds as in dog-bite remains to be proved.

In Chapter iv, the Davies Hall treatment of acute rheumatism with blisters is interestingly discussed, and in Chapter v the various agents used as counter-irritants with their different preparations are dealt with in a very practical manner.

It will be readily admitted that the question of counter-irritation is a difficult one. It is one of those subjects which, not lending themselves directly to experimental investiga-

tion, have furnished opportunity to keen and philosophical, but almost endless, discussion without our appearing to come much nearer to the solution.

Part I of this book will be read with interest, but Part II is of greater worth. At times the thought comes to the reader (very wrongly, no doubt) as to whether in these busy days the subject might not have been treated in a more condensed form.

Lehrbuch der vergleichenden Pathologie und Therapie des Menschen und der Hausthiere. [Handbook of Comparative Pathology and Treatment in Man and Animals.] Von Dr. Georg Schmeidemühl, Privat-Docent der Thiermedizin in Kiel. 1te Lieferung. Die Infectionskrankheiten. Leipzig: Wilhelm Engelmann. 1895. (Royal 8vo, pp. 216. M.5.)

There can no longer be any doubt concerning the importance of the comparative study of diseases in man and animals. The latest developments of bacteriology as applied to the prevention of disease in animals and man, as well as to the cure of disease in man, have rendered it essential that similar infections in man and animals should be carefully studied and thoroughly understood. A further reason lies in the important subject of the communicability of disease from animals to man.

In the author's introductory remarks there is a very clear indictment as to the neglect which this comparative study has met with in the past. He laments that in Germany no University with the exception of Munich has a chair of veterinary science, such teaching being relegated to a secondary position. After this there is an interesting general account of some of the differences underlying diseases in man and animals.

The plan followed in this work is to give a general account of the infection, including the bacteriology, then a special description of the disease, first in man and afterwards in animals in their order of susceptibility. At the end of each chapter there is a valuable account of the sanitary legal aspects of the disease in question, including the police regulations. To the medical profession such infections as diphtheria, tuberculosis, hydrophobia, tetanus, anthrax, actinomycosis, will offer a more special interest, and in each case these diseases are satisfactorily dealt with. As regards the paragraphs on bacteriology, they are perhaps a little unequal. At times the description of the micro-organism is complete, including its morphology, mode of culture, etc.; at other times the information is hardly as full as it might be. Under the paragraphs on treatment there is no account of the all-absorbing topic of the serum treatment of diphtheria, and none of the antitoxin treatment of tetanus. It may be open to some doubt whether it was necessary to include diseases not known in animals, such as scarlet fever, etc. The short account given can hardly be of any value to anybody; this criticism applies specially to the treatment.

The above are but slight imperfections in an excellent book, and if the two succeeding volumes maintain the standard of the first a very valuable work will be the outcome of the author's exertions. It should supply a distinct want, and is well worthy of a place in a general medical library.

Origin of Plant Structures by Self-adaptation to the Environment. By the Rev. George Henslow. London: Kegan Paul, Trench, Trübner, and Co. 1895. (Cr. 8vo, pp. 236.)

Mr. Henslow has collected an immense number of facts, with full bibliographical references, to prove that "natural selection" has had nothing to do with the origin of species; and if he does not succeed in convincing the reader, he at least deserves the credit of having written an interesting book. His contention is that "variability and environment are the two great factors in evolution, and sufficient without the aid of natural selection." Indeed it amounts to this, that natural selection and survival of the fittest are mere dreams.

He recognises the fact that Darwin considered natural selection as distinct from adaptive variations in plants. It is generally admitted that local conditions determine or greatly influence the nature and characteristics of the vegetation, and especially its physiognomics; but the surviving flora must surely be due to a kind of selection, call it what we may. Mr. Henslow argues that varieties are simply incipient species, and so they often are; yet he lays special stress on the fact that many Alpine forms of [illegible] have not yet become fixed species, though botanists of eminence have described them as such.

Bonnier and Flahault's observations on the same species in different latitudes and at different altitudes are given in illustration. But it may be added that in a dry season such as the past, one had not far to go to find curiously reduced forms, and a succession of such dry seasons would cause the disappearance of certain species from certain localities and favour the development of others. Mr. Gaston Bonnier's latest experiments are the most interesting and instructive as to the influence of climate. He cultivated, or caused to be cultivated, at different altitudes plants propagated from one and the same individual, growing in the plains. In these experiments the soil and other conditions were as nearly as possible the same at the different altitudes, though differing from natural conditions, inasmuch as there was no struggle or competition with other plants for existence. The results were a reduction at once to the characteristic Alpine form; the size, the external morphology, and the anatomy having undergone great modifications. But we do not see how such facts—and many others that Mr. Henslow brings forward in support of his argument—prove that there has been no natural selection in operation.

However, apart from this question, this little book is well worth reading and studying. A considerable number of typographical errors have been overlooked, and care has not always been taken to verify statements easily verified. For example, it is stated (page 191) that Spitzbergen "has no annuals at all."

Suggestion und Reflex: eine kritisch experimentelle Studie über die Reflexphaenomene des Hypnotismus. [Suggestion and Reflex: a Critical and Experimental Study of the Reflex Phenomena of Hypnotism.] Von Dr. Karl Schaffer. Jena: Gustav Fischer. 1895. (Royal 8vo, pp. 122, 6 plates. M 6.50.)

Dr. Schaffer begins by stating the conflicting views about the nature of hypnotism maintained by the school of Nancy, as represented by Bernheim, and the school of the Salpêtrière as represented by Charcot. Bernheim holds that everything in hypnotism can be explained through the action of mental suggestion, and even when no direct suggestion is made that the hypnotised person knows or guesses what the operator wants, and obediently executes it. On the other hand, Charcot indicated some phenomena which could not be explained as the result of mental influences. He instanced the contraction of particular muscles on the skin being touched, for the patients are not anatomists who know the action of particular muscles. Freud noticed that by stimulating the surface of the skin the almost disused muscles of the ear could be made to contract.

Dr. Schaffer, while admitting the influence of mental suggestion, maintains that there is also present in hypnotism a heightened degree of cutaneous and muscular excitability which is the cause of many curious phenomena of muscular contraction and rigidity. These he attributes to the reflex action of the grey substance of the posterior horn of the spinal cord. He tells us that mental suggestion is but a form of association, and reflex action is also a form of association. Hence he considers it fruitless to discuss whether certain phenomena in hypnotism are really of psychical or somatic character. We do not see some analogy between mental association and spinal reflex action; but there is also a distinction sufficiently clear to prevent the disputants being satisfied with Dr. Schaffer's assurance that there is a substantial agreement between them. In reality Dr. Schaffer supports the school of the Salpêtrière. He gives in great detail a number of experiments made by Landermann, Heyes, and himself, in which different groups of muscles were thrown into contractions by stimuli applied not only to the skin but to the eye, the ear, and the sense of smell, and Dr. Schaffer

assures us that every precaution was taken to exclude mental suggestion during these experiments. The descriptions are well illustrated by six leaves of plates taken from photographs and also by some woodcuts in the text.

Microskopie und Chemie am Krankenbette [Clinical Microscopy and Chemistry]. Von Professor Dr. H. Lenhartz. 2te vermehrte Auflage. Berlin: Julius Springer. 1895. (Demy 8vo, pp. 325, with numerous illustrations and three coloured plates. M. 8.)

A demand for a second edition of this book in two years after its first appearance bears fitting testimony to its excellence. The examination is arranged under the following sections: (1) parasites, vegetable and animal, (2) the blood, (3) the sputum, (4) the secretions of the mouth, the stomach contents and stools, (5) the urine, and (6) fluids obtained by puncture. The importance of bacteriology is further accentuated by the introduction in this edition of a short description of cultivation media and of the mode of growth of certain micro-organisms. The work constitutes a very useful outline account of a subject of rapidly growing interest. Our much increased knowledge of the morbid changes in the blood is well reflected in the second section, which also contains an account of the blood in health. Both the general changes affecting the blood in disease, as well as those in the more special blood diseases, are described.

In each of the remaining sections the naked eye and microscopic examination is fully detailed after a few general remarks. In all cases a very useful account is appended of the alteration to be found in the excretions and secretions in the principal diseases. The chemical examination of the gastric contents and the urine include the most recent information on the subject. The account of the changes in the urine brought about by the administration of certain drugs is a useful addition. There is an appendix to the section on the alimentary canal, which includes the examination both of the vaginal secretions, lochia, and products of abortion, as well as that of milk.

The information in this book is reliable and well up to date, and the methods are clearly and succinctly described. It deserves to be most cordially recommended.

L'Alcool. Par les Docteurs Paul Sérieux, Médecin des Asiles d'Aliénés de la Seine, et Félix Mathieu, Médecin des Dispensaires de la Ville de Paris. Paris. 1895. (Small 8vo, pp. 192)

The authors, whose experience and observation of alcoholism have been extensive, present a clear and comprehensive account of the various questions which cluster around alcohol. The composition and effects of all varieties of alcoholic intoxicants are set forth at length. The least noxious of the alcohols—the alcohol (ethylic) of wine—are described as paralysing the higher mental faculties, the alcohol being called a poison of the intelligence, neither restoring nor fortifying—in short, a narcotic. The uselessness of alcohol in increasing endurance and in resisting extreme cold is insisted on, and the alleged advantages from the use of alcoholic liquors are stigmatised as illusions. A chapter is devoted to the hygiene of drink, in which, after water, the best drinks are stated to be coffee, tea, cocoa, maté, and acidulated beverages. Sweet aromatic drinks made from syrups of fruits are highly commended.

The opposition to abstinence, and the opinion in favour of moderate drinking are credited by the authors mainly to prejudgments which are among the consequences of drinking. The authors contend: (1) That the use, even moderate, of distilled liquors is dangerous, and should be proscribed. (2) That the habitual use of fermented drinks (wine, beer, cider, etc.) is useless for the performance of healthy function. (3) That the moderate use of very weak unsophisticated fermented drinks can be tolerated by some persons, but only with food. (4) That weak fermented drinks ought to be withheld from children and adolescents, from women in pregnancy and lactation, from persons of sedentary occupation, from neurotics (hysterical, epileptic, and neurasthenic), from descendants of these and of the insane, reformed inebriates, the children of inebriates and inebriates themselves; also from the obese, chlorotic, anæmic, dyspeptic, the subjects of diseases of the liver, kidneys, skin, the diabetic, the arthritic, etc.

NOTES ON BOOKS.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. xv. (London: J. and A. Churchill. 1895. Cr. 8vo, pp. 314. 12s. 6d.).—The first pages of this volume of the Ophthalmological Society's *Transactions* are occupied by Dr. Gowers's highly suggestive and original Bowman Lecture on Subjective Visual Sensations. It is illustrated by a large number of new drawings, some in colours, made by three patients liable to migraine. The volume contains also numerous other coloured plates which illustrate admirably the conditions with which they deal. One of the papers of most general interest is that by Dr. Argyll Robertson on a case of Filaria Loa in which the parasite was removed from under the conjunctiva; it is enriched by a description of the worm and by some critical remarks by Dr. Manson, and embellished by excellent coloured lithographs. Another paper of general interest is that by Mr. George Lawson on Plastic Cellulitis of the Orbit, a serious and commonly fatal malady, the exact causation of which is obscure, though there seems reason to suppose that it has sometimes been determined by operations within the nasal cavities.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A PARAFFIN SAFETY LAMP.

We have received from Messrs. Kieson and Co. (25, Fore Street Avenue, E.C.) an improved form of their safety lamp, in which the defects we pointed out in our former notice of it are removed. The base has been widened, so that it is not so easily upset as it was before, and the communication between the wick tube and the oil chamber, to which we drew attention, has been closed. The wick tube has also been made longer, so as to reach much nearer to the bottom of the reservoir. In its improved form we believe it to be a very safe lamp. It is strongly made, and its curved wick tube is very efficient, not only for the purpose of preventing explosion, but as entirely preventing the escape of oil by the side of the wick in case the lamp is overturned. Its price also is very small, and should put it within the reach of all.

Congress of Psychology.—The Third International Congress of Psychology will be held at Munich from August 4th to 7th, 1896. The President of the Organising Committee is Professor Stumpf, of Berlin, and among the members are Professor Ferrier, Professor Schäfer, Professor Sidgwick, Professor Sully, Professors Bernheim and Liégeois of Nancy, and Professor Richet of Paris. The programme includes four divisions—namely, psycho-physiology, psychology of the normal individual, psycho-pathology, and comparative psychology. The general secretary is Dr. Frhr. von Schrenck Notzing, Max-Joseph Strasse 2-1, Munich.

The Pennsylvania Colony Farm for Epileptics.—The project of establishing a colony for epileptics, where country living and farm work, judiciously apportioned, would constitute the principal therapeutic treatment, which has been under consideration by the Pennsylvania State Legislature, has at length assumed a definite shape. The court has granted a charter for the "Pennsylvania Colony Farm for Epileptics." A gentleman of Philadelphia has offered to give 50,000 dollars for the erection of suitable buildings, providing that the farm be secured before January 1st, 1896.

REPORTS
ON
THE NURSING AND ADMINISTRATION OF IRISH WORKHOUSES AND INFIRMARIES.

Special Commission of the "British Medical Journal."

XIII.—MULLINGAR WORKHOUSE INFIRMARY, CO. WESTMEATH.

We were somewhat amused when we reached this infirmary to find that the medical officer, Dr. Dillon Kelly, finding that the infirmary quarters were neither commodious nor suitable for all his patients, had taken the bull by the horns, and settled the male patients in the empty fever hospital; and a very pretty settlement it is. Entering by the lodge, and passing through the dining hall, we came first to

The Infirmary,

which we found quite in accordance with the medical officer's report as laid before his Board: "The infirmary is primitive in its arrangements for light, air, space, and sanitary arrangements, totally unfit for the treatment of medical or surgical cases, and positively injurious to asthma." These wards have rough surface walls, whitewashed; the roof is pitched and plastered, the floors are uneven and none too clean, the fireplaces are old, the windows small and draughty, the ventilation, by means of the upper part of the windows and small apertures in the opposite wall, neither sufficient nor easy to regulate. The beds are the old wooden frames with straw ticks, and are crowded together. The six wards hold 8 or 10 beds each, and are all appropriated to the women. There are no dayrooms. These wards are

Over the Lunatic Wards,

which are uncelled and admit of the free transmission of sound, and are within earshot of the yards used by the idiot class. These sick wards are locked at night, there is no night nurse, and no bells to the officers' quarters. We saw several serious cases in this division, two patients in advanced phthisis, one with eczema on the legs, paralysis (the patient lacked the power of retention), dropsy, a severe case of rheumatism, senile decay in all stages, etc.

There were but few Comforts,

the crowded and limited space does not admit of tables or armchairs. In the ward on the ground floor some attempt has been made to relieve the monotony of the whitewash by pasting some pictures on the walls. The airing courts are equally desolate, and would be improved by the addition of shelters and benches.

As we mentioned above, Dr. Dillon Kelly has placed his male patients in the

"Fever" Hospital.

Outside this hospital the doctor has laid out and stocked a small garden, and contrived a greenhouse, and here we saw the old men happily employed in gardening, and one of them showed us the greenhouse with much pride. They felt a proprietorship in the garden and an interest which it was refreshing to see. The "fever" hospital here, as in every other case, is better built and more adaptable than the infirmary, and we do not wonder that the doctor coveted these wards for his patients. The wards, four in all, are on the two floors, the administration block occupying the middle portion of the structure. On entering we found ourselves in a clean commodious hall, where there is a table with writing and other materials for the doctor's use; the nurse's room and the kitchen open out of the hall on the further side, and the wards on either hand, a wide staircase communicating with those above. There are 40 beds in all.

The Patients

were not very numerous, and the trained nurse was away for her holiday, her place being supplied by another nurse. Such cases as we saw were in much better condition than those in the infirmary; the wards are wider, the beds not so crowded; there is cross ventilation, and more light and sunshine. There was a case of abdominal disease, advanced phthisis, some cases of chronic asthma, etc. Several of the patients were able to be up, and they were seated in armchairs or round the tables. The smooth surface of the walls was coloured in two shades; the fireplaces were more capable of warming the wards, though we could not feel that the heat would be sufficient in the winter, especially if turf were used.

The Lunatics

are placed on the ground-floor of the infirmary, underneath the sick wards, their apartments being uncelled. There are no cells, but the wards are dark, dreary, and uninviting, with rough walls, small windows; the inmates are dirty and neglected in appearance, have no attendants but paupers, and no outlet but the confined yard. There was nothing that indicated kindliness or consideration for these unhappy creatures. There are no baths or conveniences in this division. The hospital nurse is responsible for the lunatics, who are locked in at night under the charge of a pauper, the nurse being over in the "fever" hospital. There were five men and seven women in these wards.

There is one Trained Nurse

who has 120 beds under her charge; there is no night nurse, the result being that the nurse's rest is frequently broken, and if not actually called up, she must often be very anxious about her charges. Her assistants in the wards are the paupers, on whom no reliance can be placed. But we have so often in these reports described the pauper "nurse," that our readers will not need any further insistence on this point.

The Lying-in Ward

is a small ward in the body of the house holding three beds; it was empty when we went over the house. The room had rough whitewashed walls, uncelled rafters, a poor fireplace, and bad ventilation. The number of confinements averages about fifty in the year, and the patients are attended to by a midwife from the town, the hospital nurse being responsible for them during their recovery, though their actual attendant is a pauper woman.

The Infirm Wards,

to quote again from Dr. Dillon Kelly's report, "are long, low, cold, uninviting apartments, badly lighted and heated, uncelled; they are locked on the outside at night, leaving the inmates without means of communication, even in case of illness or fire." These wards are in two-storeyed buildings, which stand at right angles to the infirmary and body of the house, forming one side of the two large yards; they answer in every respect to the above description. Both men and women are on the ground floor, the wards containing 22 beds respectively; there are no day rooms. We saw no seats for the old people other than benches. A table at the end of the wards was set out with mugs and plates; a few old women were in bed, and one old lady was washing out her cap by the stove. The ward did not look tidy.

In the Yard

in front of these wards were some unsavoury heaps of refuse awaiting removal, and some of the ward slops were being rinsed away, as was quite evident by the smell. This yard is much encumbered with laundry poles. On the male side the conditions were a little better; the yard was tidy and well swept, and the ward trimmer, though we could not see that in the matter of comforts the men were better off than the women. The system of pails and buckets is in force in this division, as there are no indoor conveniences.

Outside the Hospital

we found the usual privies, quite 25 yards away from the building, a distance which makes them practically useless in bad weather or at night. The waggon receptacles are frequently emptied. The outdoor conveniences for the infirm wards can also only be used in the daytime, as these wards are locked at night. No water is laid on except in the "fever" hospital, where is a separate laundry, and more efficient means of supplying hot water.

The Sick Diets

are cooked in the two hospital kitchens under the supervision of the nurse; in both we found cooking ranges of modern construction. The kitchen and laundry in the body of the house remain as they were built fifty years ago; they have the large coppers of the famine period, unwieldy and difficult to keep clean, and each with its separate furnace.

Recommendations.

In the "fever" hospital, where the medical officer has placed his male patients, the guardians may see what are the structural requirements of a place where the sick are tended; sufficient floor space, air and light, smooth wall surface, and good ventilation; under such conditions it is more possible to keep the patients clean and to nurse them efficiently. It is evident that the sick are overflowing the space assigned them, and the demand for hospital space will increase, as the district is a populous one. As things are the men are better off than the women, and we trust that the guardians will see their way to improving the female hospital; modern bedsteads and fewer of them, armchairs and modern fireplaces, walls plastered and coloured would be no small alleviation to the lot of the sick women, but entire reconstruction of the block would be by far the most satisfactory course. The sanitary appliances require to be brought up to date, and baths with hot and cold water supply are urgently needed. But in the front of all stands the nursing question; the medical officer has no opportunity of treating the patients with one nurse to 120 patients by day and none at all by night; until pauper nursing is superseded by a trained paid staff the sick department is a hospital only in name. Trained nursing will be found the truest economy in the end.

THE IRISH PRESS ON OUR COMMISSIONER'S REPORTS.

Just now much interest is, says the *Irish News*, awakened in regard to the manner in which the affairs of workhouses, especially Irish workhouses, are being administered. A great deal of information was recently furnished in reference to the manner in which nursing, infirmary, and hospital work has been carried out in the workhouses throughout Ireland. In many cases the arrangements provided were found to be wholly inadequate, and a number of the Boards of Guardians in the country, when roused to make investigations in reply to the allegations of the Irish Medical Association frankly admitted the necessity that existed for putting their house in order, and accordingly set themselves to the task with more or less success. Some others there are, however, who have not been so quick to act in the matter. The British Medical Journal, too, has done good service by laying bare the secrets of the lunatic wards of a number of workhouses throughout the country. There is no doubt that public attention is being more closely drawn to the administration of the Poor Laws and to the working of the Poor-law system. It is not to be assumed that the guardians are to blame for the unsatisfactory and disgraceful state of affairs that is now and again revealed. It is the system rather than the guardians that should bear the blame. It cannot be denied that most of those who are elected to the office of Poor-law guardians endeavour to carry out their duties in a kind and humane spirit. Occasionally mistakes may be made by individual boards, and now and again hardship may be inflicted; but, generally speaking, the guardians deal in as generous and kindly a manner with the poor as the nature of the cast-iron system under which they officiate will allow.

VACCINATION AND SMALL-POX IN 1894.

No. XXIV.—Stockport.

The borough of Stockport is to be congratulated on having curtailed to small dimensions an outbreak of small-pox in 1894, which at times threatened to develop into a serious epidemic. As a matter of fact the cases only numbered 37, but these comprised 14 separate introductions of the disease into the town, while of the sufferers, 12 were either tramps or inmates of common lodging houses frequented by tramps, one was an itinerant ice vendor, and one a navvy at the borough sewage outfall works, his attack necessitating the impression on his fellow workers of the expediency of re-vaccination. And in addition there were two localised outbreaks, each of which arose by reason of a mild unrecognised case, and one of which gave evidence of attempts on the part of patients to set the sanitary officials at defiance. In the first group of 9 cases the primary attack had been deemed three weeks before recognition to be chicken-pox, and the little fellow had resumed attendance at school and at a mill where he worked as a half timer. As stated, 8 other cases arose, and one adult fled on visitation by a medical man, and secreted herself in a house whence she was removed with difficulty. An inmate of an infected household visited a public house bar, and was only removed for bathing purposes on threat of being sent to prison.

In the second group, a mild case at a mill gave rise to six others, and some of these were only found to be ailing on being bathed prior to disinfection. Indeed, the action of the Stockport authorities in securing the bathing and disinfection of all inmates of invaded houses is excellent in its results, as showing plainly very often whether the suspected individuals are sickening. The promptitude with which the officials followed up every clue, and made themselves conversant with the circumstances of all infected households, did much to stay the epidemic. The condition of vaccination of those exposed to infection also did much. Not only were vaccinated sufferers attacked very mildly in their persons, but they may be considered as having a much modified potency for harm in the spreading of infection, as mild attacks are getting to be deemed less likely to cause dissemination of the virus than those severer cases which are so frequently seen among the unvaccinated patients. Vaccination—and by this term we mean primary vaccination—certainly in Stockport last year had a vast modifying power on the cases, and the utility of the operation may be seen from the fact that all the 33 cases in vaccinated persons recovered, whilst of the 4 persons unvaccinated who caught the disease, no fewer than 3 died, their several ages being 1 year, and 34 and 48 years. No revaccinated individual was attacked.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At a meeting of Fellows to be held at the College on Thursday next, January 2nd, the President will report that one deputation of Fellows and one of Members had been received by the Committee of the Council appointed to receive deputations from the Fellows in reference to the desirability, or otherwise, of applying for a new charter; and that the Committee had postponed its report until after January 2nd, when one of the resolutions upon which it will report is to be considered by the meeting of Fellows. A resolution carried at the annual meeting of Fellows and Members on November 7th will be considered by the Fellows. It is in the following terms:

That the number of the Council be increased to thirty-two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council.

Mr. Herbert W. Page will move:

That it is desirable to give to the Members of the College direct representation upon the Council, and that for this purpose the number of seats on the Council shall be raised to twenty-eight, of which four shall be filled by eligible Fellows, who shall be elected by the votes of Members only, in such a manner and at such time as the Council may determine.

Mr. R. Clement Lucas will move:

That, in the opinion of the Fellows of this College, women should be admitted to the diplomas of the College.

Mr. Timothy Holmes will move:

That this meeting learns with pleasure that the Council of the College are represented on the Civil Rights Defence Committee in the case of Mr. R. B Anderson.

Mr. C. H. Golding-Bird will move:

That the Council be requested to consider the advisability of changing the date of the winter meeting of the Fellows to the first Thursday either in December or February from the first Thursday in January.

An Exploring Trip under the Direction of two Medical Men.—Dr. William H. Furness and Dr. H. M. Hiller, both members of the class of 1891 of the Medical Department of the University of Pennsylvania, have started for the South Sea Islands, where they will spend at least a year in collecting ethnological and archæological specimens for the University. Should the field prove fruitful, it is probable that their stay may be prolonged to two years. After arriving at San Francisco they will sail for Yokohama, touching at Honolulu. They will proceed to Singapore, and from there will take passage for the Philippine Islands, visiting other groups of the East Indian and South Pacific Archipelagoes in a chartered vessel.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1895.

Subscriptions to the Association for 1895 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 28TH, 1895.

THE EVER-GROWING BURDEN OF GRATUITOUS WORK.

To those who watch the signs of the times it is becoming obvious that the erection of State medicine into a special department of knowledge, and the demand for what is practically a separate course of study from those who elect to enter the sanitary service, is having the effect of putting a considerable strain upon that feeling of sympathy and comradeship which ought to exist between medical officers of health and general practitioners, as members of one common profession.

Dr. Arthur Newsholme has recently on several occasions referred to the wide scope which the investigations of a medical officer of health should take.

Speaking of the extension of the schedule, Dr. Newsholme said: "There is, however, the important difficulty of expense. We cannot reasonably expect local authorities to pay half a crown or a shilling (according as the case occurs in private or in public practice) for each notification of these minor diseases unless we can show some immediate practical utility." To this we would say, Why not if it is for the public good? and if it is not for the public good the whole thing falls to the ground. Dr. Newsholme says that "this difficulty might be overcome by adopting the system in vogue in some Continental countries as Germany, Scandinavia, etc., a system which works smoothly and efficiently, as I have recently had personal opportunities of observing. The chief infectious diseases are required to be notified immediately, but there is a much longer list of diseases in connection with which only a weekly list is required. No fee is given to the notifying practitioner for either of these returns." This doubtless is, from the medical officer of health's point of view, the ideal system; and without definitely advocating its adoption in its entirety, Dr. Newsholme says that it is "evident that we can expect no general extension of compulsory notification unless medical practitioners are prepared to accept as small a fee as a shilling for each certificate, and are prepared to make weekly returns of the minor infectious diseases for a modified fee." But, we ask, why should the hard-worked and ill-paid general practitioner be called upon to make this great free gift to the nation, if the resulting benefits are so far off that "we cannot reasonably expect local authorities to pay" for it?

It speaks volumes for the different points of view occupied by the health officer and the medical practitioner, that anyone in the position occupied by Dr. Newsholme should think so lightly of the medical certificate, the filling up and signing of which has cost the practitioner much thought, much anxiety, and involved him in no small responsibility, that it should even be suggested that this should be done without fee, and we cannot but express our surprise that so able a statistician should so slightly appreciate the importance of the basis and foundation on which all the deductions of health statistics rest.

It should be understood by the public, as it certainly is felt by the profession, that the signing of a notification certificate, especially in an early stage of the disease, is a most anxious matter, often involving the exercise of far more special medical knowledge and experience than the prescription of the treatment for the case. It should also be borne in mind that the difficulty and responsibility are all the greater the more indefinite the disease, and, in view of the manner in which the profession has been harassed by the injudicious action of ill-advised sanitary authorities in regard to the comparatively simple certificates hitherto required in relation to some half-dozen of the best defined diseases in the nosology, medical men may well be excused if they decline to jump at the suggestion. Even in strictly legal consequences the signing of a certificate is a serious matter; if an error creeps in the medical man is liable to action, and damages may be recovered from him for assumed injury to business, or what not arising from the action taken upon his certificate, while if he withholds it until the disease has progressed so far as to render the diagnosis certain, he is always liable to be haled before the magistrate for neglecting to certify, and even if he escape a fine, to be held up to public obloquy as a breaker of the law.

THE EMPLOYERS' LIABILITY BILL.
Its Medical Aspects.

There is a general expectation that a new Employers' Liability Bill will be introduced in the coming session. It will not be Mr. Asquith's Bill, though it will contain many of its principles. The doctrine of common employment will certainly be abolished in the one as in the other, and the right of compensation for accident will probably be extended to workmen in the service of the Crown, to seamen, domestic servants, and all wage earners. Under the Act of 1880 proof of negligence upon the part of a fellow employee constituted no claim for compensation from the employer. What was required was proof of personal negligence upon the part of the employer or his superintending agents. Both Houses, however, agreed to the abolition of this requirement, and it may safely be assumed that the present Parliament will be of the same mind. Indeed, if Sir A. B. Forwood's Bill, which failed for lack of time to get read last session, be a true indication of what we may expect, even proof of negligence upon the part of a fellow workman will be unnecessary. Personal injury while engaged in the execution of the work of his employer will entitle the workman to receive compensation from his employer, unless the accident was caused by the wilful act or wilful default of the workman himself. If the liability is disputed the county court will settle the question, and the judge, if he

think fit, may appoint a legally-qualified medical practitioner to examine the claimant or otherwise assist him. In case of death or of permanent total disablement, the workman or his representative is to be entitled to a sum equivalent to the wages of the workman during the three years preceding the injury or the sum of £150, whichever of such sums shall be the larger. In case of permanent partial disablement the sum is not to exceed one-half of the amount which would have been payable in the case of death. And, lastly, in a case of temporary disablement the compensation is to be a weekly allowance not exceeding two-thirds of the workman's wages, the allowance to cease if a medical practitioner appointed by the judge certifies that the workman is able to return to his work, or if the workman declines to be examined by him.

The expression "total disablement" means loss of sight, or of both legs, or of both arms, and any other injury of such a nature as permanently to disable the workman from earning wages at the kind of work on which he was employed. "Partial disablement" means loss of one eye, or of one leg, or arm, or hand, and any other injury of such a nature as permanently to disable the workman from earning full wages at the kind of work on which he was employed. And "temporary disablement" means any injury of such a nature as temporarily to disable, for a period of not less than fourteen days, the workman from earning wages or from earning full wages at the work on which he was employed. A workman may contract out of the Act, but if the compensation in case of accident is reduced, such contract is void. If, however, after occurrence of the injury, he gives written notice to his employer that he does not claim compensation under this Act, he is then free to claim any right to which he may be entitled by common law.

It is plain, therefore, that the scope of the proposed measure is likely to be much wider than anything that has hitherto been suggested. Mining, shipping, railway travelling, and all sorts of dangerous trades are already protected by Board of Trade regulations for the purpose of preventing accidents. But accidents still happen, and one political party holds that liberal compensation, when negligence upon the part of a fellow workman is proved, would tend to make employers more careful in their choice of men and plant. It would leave the amount to be settled by a jury; it would have all men treated alike and allow no contracting out. The other party regards accidents as inevitable. Board of Trade regulations notwithstanding, no large piece of work can be undertaken without them, and all that can be done is to provide fair compensation. The negligence may be assumed without inquiry. Whether it hurt the negligent man or his neighbour, injury is done all the same; a man is thrown out of employment and his wife and children are without support.

The general relations of capital and labour do not come within the province of a medical journal. There are problems regarding the liability of employers with which medical men have little immediate concern and no special knowledge. In face of these a judicious reticence is becoming. But it would be mere affectation to fail to acknowledge our alarm lest the funds and management of our hospitals should suffer through a political dispute. It is a custom in small manufacturing towns to exact 1d. a week from every workman for the accident hospital, and the employer is also expected to make a generous contribution. In this free and easy way £800 or £1,000 per annum are collected, all cases of accident are immediately taken to the hospital, and an untold amount of suffering is relieved. Of course, where a railway company is concerned and a large number of men are kept in fairly constant employment it is an easy matter to put all this on a thorough business footing. But smaller employers, when they find they have to pay compensation, may not be inclined to continue their contributions to the hospital, and the individual working men who receive it may be in no more generous mood. In large cities it is possible that disturbance of hospital funds may be still greater.

If householders are to pay pecuniary compensation, perhaps £150, for each accident which may happen to their domestics, they will be apt to employ their hospital subscriptions in insuring their domestics against accidents, or rather in insuring themselves against their liability. Miners, shipowners, and other employers of labour will do the same with the result that, while hospital funds rapidly shrink to a minimum, insurance companies will undergo enormous extension. No doubt a way out of this difficulty may be discovered. Possibly the workmen may have some suggestion to offer. The voluntary system of hospital support cannot continue unless the volunteers are forthcoming, and already many of our hospitals are deeply in debt.

There is another point which appears to deserve the attention of those who are now engaged in framing the new Bill. While the question of compensation is still undecided, there is a mental restlessness in some cases of accident which decidedly retards recovery. It is important therefore that the necessary legal procedure should be simple, and the amount settled at an early date. But when the accident results in internal injury it is sometimes impossible to foretell forthwith whether the disablement will be permanent or only temporary. There ought to be a way of obtaining compensation for temporary disablement without prejudice to further action when the disablement has been clearly shown to be permanent.

THE FELLOWS AND MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.

On Thursday next a meeting will be held within the walls of the College of Surgeons which should be one of historic interest. The occasion is the half-yearly meeting of the Fellows of the College. Before this meeting, however, will be brought, as the main topic of discussion, the claim and petition of the Members of the College to some share and representation in the Council. The subject has been so often discussed in the past in our pages that it seems almost unnecessary to refer in anticipation to the cogent reasons on which their petition is based. During the last few years, owing to a most unfortunate conjunction of events which led to a serious miscarriage of the original well-organised effort, this claim has been somewhat in abeyance. Wisely, perhaps, and with the effect, we hope, of allowing the somewhat angry feelings which were developed in the course of

an ill-judged litigation to subside, the Members' Association had for a time desisted from any active steps. It is well that these past cases of disagreement should now be left altogether out of view, and that the proposed measure which we regard as one of simple justice in the higher sense of the word, and in any case of equitable conciliation, should be judged and dealt with solely on its own merits. Looked at from that point of view, it is clear that in the present day it cannot be regarded as other than a singular anomaly that the 16,000 Members of the College who are undoubtedly its main support, and in a large and popular sense the chief constituents of the College, should be wholly without representation, and without any kind of voice in the administration of the affairs of this great institution. The Fellows of the College have recently attained to a larger share than hitherto, and to a more distinct and audible voice in the conduct of the College affairs. It is only reasonable to expect that with the growth of liberal opinion and of that confidence in the good sense and patriotism of the great body of the profession which is now everywhere apparent, a further step shall be taken with their assistance towards liberalising and thus consolidating the government and administration of the College. Nothing will have a better effect in this direction than the admission of the Members to some share of representation in the governing body of its Council. There can be no question that both in the Council and among the Fellows this view is gaining ground, and some early steps in this direction might be looked for with confidence. Backed by the help of the Council and by that large number of Fellows who are known to be in favour of conciliatory steps, it might be hoped that the consideration by the meeting of Fellows on Thursday next of the proposal of the Members brought forward by the Council will meet with large favour. It depends on the willingness of those who are in favour of these proposals to take the trouble to attend next Thursday whether or not success will on this occasion attend the just efforts of the Members' Association. We earnestly hope that it may. In any case, we will put it to all those Fellows who desire to do justice to the Members that they should not fail personally to attend. In this way they can give effect to the excellent intentions which a large number of them are believed to entertain, and it is satisfactory to know that they will not be without considerable support within the Council itself. The Council are known largely to desire to be guided in this matter by the wish and opinion of the Fellows, and anyone who abstains from attending this meeting, and who holds the liberal views which we believe to be widely entertained, may in the end have to hold himself individually responsible for any failure to carry out the desired object.

Mr. James Grierson Gledhill, M.B., C.M., L.S.A., and barrister-at-law, is a candidate for Salford and County coronership, vacant by the death of Mr. Price. Mr. Gledhill is a member of the Council of the Lancashire and Cheshire Branch, and has been jointly concerned in drafting Bills to amend Medical, Coroners, and Births and Deaths Registration Acts. He has had considerable experience with the metropolitan and provincial coroners, and is the only medical candidate in the field.

THE DIRECT REPRESENTATIVE FOR IRELAND.

At a combined meeting of the Ulster Medical Society and the North of Ireland Branch of the British Medical Association held in Belfast on December 23rd, a resolution was cordially adopted approving of the candidature of Professor Cuming for the next vacancy as Direct Representative of Ireland on the General Medical Council. A letter was read from Professor Cuming accepting this nomination. A large and representative Executive Committee was appointed. Our Belfast Correspondent telegraphs that a strong feeling exists that Dublin should not monopolise the entire representation for Ireland, and that Professor Cuming would be in all respects an admirable and influential representative of the provincial practitioners.

A QUEENLY STUDENT.

The Queen of Portugal, who for some time past has shown a pronounced taste for the study of the healing art, has completed her second year of formal medical study, and has just successfully passed the examination for second year's students before the Faculty of Lisbon. It must need a good deal of nerve to pluck a queen, but we daresay there are more diplomatic methods of making the exalted candidate aware that a further course of study would be advisable. The study of medicine, by the way, is now about the one new thing left for the German Emperor to exercise his versatile genius upon. He might present himself for examination with a light heart, for the most Rhadamanthine of Teutonic professors would hardly care to risk ploughing him.

MEDICINE AND JUSTICE.

At the Leeds Assizes last week Annie Robinson was convicted of attempting to poison her husband with white precipitate, and sentenced to twenty years' penal servitude. It is satisfactory to know that the detection of this crime and the avoidance of a greater crime were due to the tact and judgment of a medical man. Mr. Demetriadi, the doctor in question, was called to the prisoner's husband, whom he had previously known, and found him suffering from vomiting and diarrhœa. After a short time the course of the symptoms suggested to his mind the possibility of irritant poisoning, and he made an endeavour to get some of the vomited matters or excreta for examination, but as the prisoner, who was in sole attendance upon her husband, always succeeded in defeating this object his suspicions became stronger, and he procured the services of a trained nurse, with the result that the day after her arrival a portion of one of the stools of the patient was saved for examination, and was found to contain mercury. Subsequently in two specimens of food prepared for the patient by the prisoner, and handed by the nurse to the doctor, on analysis white precipitate was found in the proportion of 66 grains to the pint in one, and 83 grains in the other. Mr. Demetriadi then applied for a warrant for the arrest of the wife on a charge of attempting to poison her husband, and, the sole cause of his illness being removed, he made a gradual and complete recovery. The parties had only been married last January, and had at first lived together affectionately; but the wife seemed to have soon tired of her husband and had formed a *liaison*. She had, moreover, got her husband to make his will in her favour, and had insured his life and was paying the premiums at the time of his illness. She had also told several people that her husband would not get over his illness, and that the doctor had confirmed this, which was not true. Save in one respect, but that of vital importance—namely, the result to the patient—there is a very close similarity between this case and the notorious Maybrick case, and it will be interesting to see whether any of Mrs. Maybrick's

champions—if there are still any left—can spare time to take up the cudgels on behalf of another female, who, except in the matter of youth and good looks, would appear to have just the same claims for their sympathy and support that Mrs. Maybrick had. The judge in his summing up spoke in the warmest terms of the propriety, skill, and care displayed by the doctor and nurse in this case, and we think his encomiums were richly deserved. The evidence of the prisoner's guilt was overwhelming, and the judge in passing sentence said it was one of the most heartless cases he had ever had to do with.

ABBREVIATED REFERENCES.

With the last volume of the Catalogue of the Surgeon-General's Library at Washington Dr. Billings has issued an alphabetical list of abbreviations of titles of medical periodicals employed in the sixteen volumes of that work. This list is of very great practical value; in the first place, it gives in moderate compass a list of nearly all the medical periodicals both past and present; up to the issue of this volume there has been nothing published of so comprehensive a character, especially as regards the more out-of-the-way journals published in the United States. These often have titles closely resembling some well-known journal, and much confusion is occasioned by references to the former unless the abbreviations are very carefully done. The printing of this list will easily clear up mistakes of this kind and be a great saving of time and labour. It is, however, the abbreviations themselves which will be most useful; if authors will abbreviate the titles of journals in their references in accordance with Dr. Billings's list much labour will be saved, as this will prevent many mistakes, particularly as regards journals with similar titles. These difficulties have all been guarded against in preparing this list of abbreviations, and it is sincerely to be hoped that advantage will be taken of the great labour and skill which the compilers have bestowed upon their work.

THE HUXLEY MEMORIAL.

Since the first meeting of the general committee on November 27th, which was fully reported by the press, two meetings of the executive committee have been held. At the first of these, at which Lord Shand accepted the office of chairman, it was reported that a number of foreigners of eminence had expressed a wish to be associated with the proposal to commemorate Mr. Huxley's distinguished services to humanity. It was resolved, in the first instance, to invite subscriptions from the members of the general committee. At the second meeting, held on December 18th, it was reported that the subscriptions, which at the general meeting had amounted to £557, had been increased to about £1,400, and it was resolved that a wider appeal for subscriptions should now be made to the friends and admirers of Mr. Huxley amongst the general public. The honorary secretary stated that in America committees were in the course of being formed to promote the realisation of an adequate fund. The committee resolved to communicate, by means of a subcommittee of their number, with Mr. Onslow Ford, R.A., who had the advantage of being well acquainted with Mr. Huxley, in reference to the statue, which it is proposed should be erected beside those of Darwin and Owen in the Natural History Museum, South Kensington. The extent to which the committee may be able to carry out the other intended objects of founding exhibitions, scholarships, and medals for biological research and lectureships, and possibly in assisting the republication of Mr. Huxley's scientific works, will of course depend on the subscriptions which may now be received. These may be sent to the treasurer, Sir John Lubbock; or the bankers, Messrs. Robarts, Lubbock, and Co., 15, Lombard Street, E.C.; or to the Secretary, Professor G. B. Howes, Royal College of Science, South Kensington. The amount received to December 20th is £1,535. The Court of the Fishmongers' Company, in consideration of the eminent and important services rendered by the late Professor Huxley to the cause of technical education, has agreed to give a scholarship of £60 per annum to the City and Guilds of London Technical College, Finsbury, to be called "The Fishmongers' Company's Huxley Scholarship," to be held for three years by any scholar who has given evidence of high scientific attainments, to enable him to proceed to the Central College at Kensington.

THE SICK POOR IN IRISH WORKHOUSES: MULLINGAR.

We suspect that the Medical Officer of the Mullingar Union had to cut his way through much red tape before he succeeded in appropriating the disused fever hospital of the union to the use of all the male patients in the workhouse, and we congratulate him on his energy. The female patients are already overcrowded in the whole of the old infirmary, where are the narrow, dreary wards, both draughty and ill-ventilated, the uneven floors, and the wooden framed beds with their straw bedding. It seems a pity that it was not possible to put the more serious cases, both male and female, into the far better equipped "fever" hospital, more especially as there is but one nurse, who, as matters stand, may have patients dangerously ill in both hospitals, which are quite apart from each other. We suppose however there were administrative difficulties impossible to overcome, but it does seem that the solution of some of the guardians' difficulties might lie in this adaptation of the fever hospitals, built when typhus and enteric were the scourges of the congested districts in Ireland, to the use of the non-infectious patients. For with better feeding and sanitation, and perhaps also with the thinning of the population, fever has greatly diminished, and the fever hospital, fairly constructed and decently equipped, stands empty, while the workhouse infirmary, usually totally unfit for the treatment of the sick, has all its evils increased by overcrowding. It ought not to be left to the courage and perseverance of a medical officer to follow the dictates of common sense, in spite of a distant and ill-informed authority stickling for the letter of the law. The rarer fever patients might be accommodated in temporary iron buildings, or removed in ambulances to the large fever hospitals, which if any well considered scheme of amalgamation is adopted will serve several unions. In such a scheme the old people would receive shelter in their own district, and also the sick of other than infectious disease, while special and joint arrangements would be made for the imbeciles, the children, and the fever cases.

THE PASTEUR INSTITUTE AND ITS ENEMIES.

We have again to note certain false statements lately made as to the work of the Pasteur Institute in Paris. The Victoria Street Society has published a paper entitled "M. Pasteur's Threefold Hecatomb," and Mr. Berdoe has published a pamphlet, *What is Our Debt to Pasteur?* and a leaflet, *A Pasteur Institute for Ireland: A Letter to the Irish Public.* The Victoria Street Society gives a list of every death from hydrophobia that has occurred, in spite of inoculation, during the years 1885-95. The total number is 281; of these, 219 were inoculated in Paris, 49 in Russia, 13 in other countries. It is childish folly to publish such a paper—to count the lives that could not be saved and not to count the lives that were saved. It would be equally reasonable to collect 281 cases of death from recurrent cancer after operation, and call them "a threefold hecatomb." They say that "it is easy to make a low average of mortality when those merely licked by dogs are reckoned among the total treated." It is impossible that any impartial man, who had paid the slightest attention to the subject, could write such nonsense. Mr. Berdoe is, if possible, even worse. He says "Pasteur's average is based on all comers; that is to say, on persons bitten by really rabid, doubtfully rabid, and non-rabid

dogs." Is it possible that he is really in such dense ignorance of the *Annales de l'Institut Pasteur*? He says that M. Pasteur himself wrote, in a case of dog-bite, "There needs no other treatment than cauterisation." But he does not say whether the dog in this case was rabid. Finally, getting more and more foolish as he goes on, he says "M. Pasteur's statistics are simply statistics of dog-bite or dog-lick; his treatment is a miserable delusion and a cruel mockery; nobody can prove that it has ever saved a single life." The statement that the cases bitten by doubtfully rabid dogs are mixed with those bitten by dogs proved to be rabid, is absolutely false; they are not. The suggestion that deaths, in spite of treatment, are deaths due to treatment, is worse than false. We hope against hope that Mr. Berdoe will try to understand the *Annales de l'Institut Pasteur* before he writes any more rubbish such as we have quoted. We hope, also against hope, that those who still keep the Victoria Street Society afloat will take the trouble to see for themselves what false and mischievous nonsense they help to publish.

SANITARY AUTHORITIES AND PUBLIC WATER SERVICES.

We have before referred to the autocracy of water companies, with special reference to the matter of inspection of their works. The health aspects of the subject are of vital importance. Companies having acquired rights of supply over certain areas, seem thereafter to wrap themselves up as above interference, at least in too many instances, and thus bring upon themselves an amount of suspicion which it should be their object to avert. Such suspicion need not exist if companies will only allow the moral right of sanitary bodies to satisfy themselves that the nature of the works is such as to leave no room for the entry to the distributing mains of the water service of matters of a deleterious sort. Of course, as things stand at present, there is no power by which a sanitary authority can depute its officers to visit waterworks of a private company, even though the district be wholly dependent on the works for its water. That this is wrong in principle need not perhaps be contended. And no water company with nothing to conceal need hesitate to allow visitation by sanitary officers whenever and wherever they please to come. Dr. Porter, of Stockport, insists that the power for such visits, at any time and without previous notice, should be in the hands of every health body, and we cordially agree with him. He would see bacterioscopic examination made at any rate occasionally of the water served to the public, and would have the officer deputed by his authority for the purpose in possession of the right to visit every source of water supply and every filtering bed, and so on; and he deems it well that an official of the company should be present. He set out the same idea in his special report of 1894 on the water supply of the borough, and we think he has done well to repeat and emphasise the important points in his annual report for last year.

ISOLATION HOSPITALS.

In another column an indictment against the present policy of the Metropolitan Asylums Board is urged with some apparent force. The Board, it is said, spend annually about £300,000 in the isolation of small-pox and "fever," and this with the twofold object of benefiting the patients and at the same time controlling the spread of these diseases. The former object is admittedly attained, but not the latter, according to our correspondent. It is argued that, although the removal of scarlet fever and diphtheria patients to hospitals lessens the number of foci, the seasonal rise and fall show themselves independent of all this; that the proportion of cases isolated is least during the autumnal prevalence, when the hospitals are full, and greatest in the spring when attacks are fewest, so that in point of fact the seasonal decline begins when the hospitals break down, and the seasonal increase occurs at the time when the hospital isolation is most efficient. This is true enough, although its real significance is less than might at first sight appear. At most the facts imply that the causes which determine the increase operate in spite of hospital interference with the free multiplication of known foci, and that later on the comparative breakdown of the hospital resources does not keep alive the waning epidemic. Not all the cases are isolated at best, and it would be strange if the seasonal curve were obliterated by an isolation which after all is only partial. But no one can doubt that at every stage the hospitals limit the opportunities for diffusion, or that, however great may be the actual prevalence, it would be greater still if all the hospital cases were turned loose on the community. Granting that the present partial isolation does not hold in efficient control the seasonal prevalence, and that the difficulties in the way of complete isolation are at present insuperable, is it necessary to assume that the number of foci is a matter of small moment, and that the seasonal causes have to do with dust and dirt, with uncleanly domestic habits, and with variations—seasonal variations—in personal susceptibility? Surely not. That there are obscure factors at work is tolerably certain, and one of the mistakes that have been made in the past is the assumption that the one and only cause of scarlet fever is scarlet fever in a readily recognisable form and in *genus homo*. We have learned something about milk scarlet fever, and even bovine scarlet fever, and quite recently Mr. Shirley Murphy has taught us to look to public elementary schools for a clue to some part of the mystery. The slight cases, beyond the reach of isolation and perhaps of notification, are probably responsible for much mischief. These are but examples of variable quality of contagium and variable facilities for diffusion, all of which may be thought of as possibly affected by seasonal conditions. If all else can be excluded, seasonal variation in susceptibility may come into question, but at present it awaits proof of any kind. More thorough cleanliness and disinfection would be excellent measures in themselves, but it is not epidemiologically permissible to argue too directly from cholera to scarlet fever. The value of the work of the Metropolitan Asylums Board is, perhaps, most clearly shown in the success which they have achieved in their campaign against small-pox, although even here the seasonal variation still shows itself, and occasional outbursts reveal the existence of undercurrents. If the statistical results are less convincing with regard to scarlet fever and diphtheria, we ought, nevertheless, to give credit to the Board for the good demonstrably done by the vast work of isolation which they are carrying on. It is no fault of theirs that the isolation of scarlet fever and diphtheria is at present less complete than that of small-pox.

THE METROPOLITAN ASYLUMS BOARD.

At a special meeting of the Metropolitan Asylums Board held on December 21st it was decided to open the Gore Farm Hospital for the reception of convalescents recovering from scarlet fever. In the course of the discussion the correctness of the comments on the situation which appeared in the British Medical Journal of December 21st was demonstrated almost to the letter, notwithstanding the somewhat astonishing protest raised against the assertion, made by "a medical journal," that a divorce had taken placed between the work of the sanitary authorities and the management of the infectious diseases of the metropolis. In regard to what we said as to the point of view from which the managers of the Asylums Board regard their duties to the public, it is interesting to record that one speaker, the mover of the amendment against the opening of Gore Farm, definitely stated that their duty was towards those patients who were in their wards, and that the Board had no responsibility in regard to those whom they were unable to take in. This of course is just the view which we know was taken by many of the managers, and it is worthy of note that it was

not till nearly the end of the discussion that any protest was made against this way of looking at the matter. We have stated that the real root of the trouble lies in the divorce which has taken place between the work of the sanitary authorities and management of the infectious diseases of the metropolis. The truth of this is obvious to any one who considers for a moment that hardly a sanitary authority in London has a hospital for infectious cases, and that as a fact the management of these cases is undertaken by the Asylums Board on which no sanitary authority is represented except through the Poor-law guardians. We have said that it is the system that is at fault, and as an illustration of the way the system works we would point again to the statement to which we have already referred, a statement made at a meeting of the Board on whom, *de facto*, falls the hospital treatment of all the fever of the metropolis, and one which we believe to be literally true, namely, that the managers have no responsibility in regard to those patients whom they are unable to take in.

LIBRARIES AND INFECTIOUS DISEASES.

It has been deemed necessary on several occasions to close the Brierley Hill Free Library during an epidemic of infectious diseases because of the danger of the spread of infection by borrowed books; and the Committee have now considered it wise to issue with their new catalogue a list of special rules dealing with cases of infectious disease in their relation to the uses of the library. The rules, which have been approved by the Urban District Council, are as follows: 1. The sanitary inspector shall ascertain if any books from the free library are in infected houses. 2. The sanitary inspector shall be empowered to retain any books found in infected houses until such books have been disinfected or destroyed, as required by the medical officer for the time being. 3. The inspector shall report any fresh cases of infectious diseases, such as small-pox and scarlet fever, to the librarian at the free library on the Tuesday and Friday nights in each week during the prevalence of any epidemic of such diseases, and the librarian shall keep a list of the same. 4. The inspector shall furnish the librarian with the library volume number of any book or books disinfected or destroyed, in accordance with Rule 2. 5. That all books belonging to borrowers having infectious diseases in their homes should be impounded by the librarian until the expiration of such period of time as the medical officer may consider necessary. 6. That any borrowers not having books from the free library at the time of any seizure of infectious diseases at their homes shall not be permitted to obtain books from the free library until the expiration of such time as the medical officer may direct. 7. Any borrower having books from this library who shall transfer his or her books to the home of any person known to be seized with any infectious disease, such as small-pox or scarlet fever, shall be liable to forfeit the privileges of the library during the pleasure of the Free Library Committee.

INSECURITY OF POOR-LAW LIFE APPOINTMENTS.

A further illustration of the insecurity of the position of district medical officers engaged in Poor-law practice is afforded by the case of a correspondent, who states that, owing to the alteration of the boundaries of several of the medical districts of the union in which he holds a life appointment his district has been so altered as to leave him with an additional area and also with additional population, and he states that this will without doubt cause him additional work. He tells us that when he consented to the proposed change being made, he did so with the full expectation that he would have an equitable increase of salary. This the guardians now refuse to give; he naturally thinks that he has not been justly treated, and asks for our opinion. If the facts are as stated, and we have no reason to doubt this, his application for an increase of salary is only reasonable, and any other public body but a parsimonious Board of Guardians would so regard the question. Unfortunately for our correspondent, his Board appears to study economy without any regard for equity. This case is one which points strongly to the necessity for some steps to be taken to render life appointments (so-called) really such, and only to be determined by the guardians for serious neglect of duty, or with due compensation for loss of office.

ST. ANDREWS AND DUNDEE.

In connection with a request from the Universities Commissioners for information as to a basis of negotiations for a union between St. Andrews University and Dundee University College, the University Court of St. Andrews has, by a majority of 9 to 3, passed a resolution declaring that it is useless to enter into any discussion regarding a new agreement until the defenders in the action of Metcalfe and Others *v.* Cox and Others withdraw their defences, and allow judgment to be given against them.

LORD CHANCELLOR'S VISITOR IN LUNACY.

Dr. David Nicolson has been appointed one of the Lord Chancellor's Medical Visitors in Lunacy in succession to Dr. Lockhart Robertson, who has resigned the office. Dr. Nicolson, who is a graduate of the University of Aberdeen, held several appointments in the Prison Medical Service before his appointment as Superintendent of the State Criminal Lunatic Asylum at Broadmoor, in succession to Dr. Orange, C.B. Dr. Nicolson is at the present time President of the Medico-Psychological Association, and the announcement of his appointment as Visitor in Lunacy will be received with much satisfaction by medical psychologists in this country, by whom he is highly esteemed. Dr. Nicolson is an active member of the British Medical Association, and has rendered considerable services as a member of the Parliamentary Bills Committee.

ADULTERATED MEDICINE.

According to a report of proceedings under the Food and Drugs Act at Birmingham, four cases were brought before the police magistrates, in which persons described as retail chemists were charged with selling medicinal preparations which were not of the nature, quality, and substance of the articles demanded by the purchasers, namely, tincture of aloes and tincture of iodine. These are both preparations of the *British Pharmacopœia*, and by the provisions of the Pharmacy Act, 1868, qualified chemists are required to compound them according to its formularies. But the evidence given by Dr. Alfred Hill, the local medical officer of health and public analyst, showed that the articles sold were not in any instance properly compounded. Some of the ingredients were present in much larger proportion than the *Pharmacopœia* directs, and as the preparations are intended for internal administration, the consequences of taking an overdose might have been dangerous. In three of the cases the defendants were convicted and fined, while the fourth was withdrawn by reason of a technical informality. Two of the defendants had previously been fined for similar offences. One of them admitted that he was not a registered chemist, and that seems to be the case with the other three, as their names are not on the *Register* of persons qualified under the Pharmacy Act. All the defendants appear, therefore, to have been unlawfully carrying on the business of chemist and druggist without having satisfied the requirements of the law as to necessary technical knowledge. Although the adulteration proved was not of a fraudulent nature, it showed ignorance calculated to be detrimental, for the purchasers of drugs or medicinal preparations cannot protect themselves, as they might do to some extent in buying ordinary articles of food, but must rely upon the honesty and accuracy of the chemist, who is alone qualified

to deal in such articles. In this respect the Pharmacy Act appears to be defective, and to fall short of providing for the safety of the public by merely prohibiting the sale of actual poisons by any but qualified persons. In the supply of medicine it is no less important that the persons engaged in that delicate and responsible business should possess competent skill and knowledge to justify the confidence which the customers must of necessity have in them. It is fortunate that the Food and Drugs Act can be applied to make up for the deficiencies of the Pharmacy Act, and the Birmingham authorities are to be commended for the activity they have shown in the public interest by instituting these prosecutions.

HOMICIDAL LUNACY.

Reverting to the recent articles in our columns on murders committed, and attempts to murder recently made, by persons mentally affected, we may briefly refer to two cases reported within the last few days, in one of which the murderer was found to be insane, and in the second of which the killing was done by one who, according to the reports published in the daily press, was stated by the neighbours to have been drinking heavily for some time, and to have been not considered sane by many people. We do not jump to this conclusion, of course. The former was a man named McQueen, who murdered his uncle recently, and was found insane by the High Court of Glasgow the other day. It was found that he was under a delusion that he was ordained by God to be the instrument of vengeance on materialists and sensualists. In pursuance of this mission he appears to have taken his uncle's life. People with "missions" and sane, or supposed to be sane, are a public nuisance, but lunatics with "missions" are a deadly danger to the public. If retaining their freedom, they are able to devote the considerable powers of mind still possessed by lunatics of that type to the logical carrying out of their delusions or of their pious obedience to their hallucinations in the form of "spiritual" or "heavenly" commands by the accomplishment of some homicidal or dangerous act. The second case recently came before the Southwark police court. A labourer's wife cut the throat of her baby, aged 3 months, with a table knife during the morning, and almost in the presence of her daughter, aged 11 years. When arrested immediately afterwards, she made references to suffering from jeers, and other statements which serve to indicate that a very close investigation into her mental state, just before and at the time of the commission of the act, is necessary as the basis for determining the question of responsibility or irresponsibility on the ground of disease.

THE PRESS AND PRIVATE LUNATIC ASYLUMS.

Our attention has been called to a recent article in a daily contemporary on the subject of private lunatic asylums. The writer of it starts with the Lanchester case as his text. He takes it as constituting an "exposure of the methods pursued by private asylums and the lunacy doctors," and as showing that "it is time something was done to protect the public from this insidious danger." For the sweeping statement that the case exposes the methods pursued by private asylums (that is, by all) there is no ground whatever; it does not expose the methods pursued even by a single asylum; for the published evidence shows that, whatever the rights or wrongs of that particular case may be, the only action that took place that could be so much as publicly called in question was that of the friends and certifiers, inasmuch as they alone had the opportunity of acting on previous personal knowledge. Then the writer proceeds to give a sort of explanation of an alleged frustration of all attempts at thorough reform; and in doing so he falls foul of what he calls "the three most gigantic and conservative trade unions that exist in this country"—namely, the lawyers, the doctors, and the permanent Government officials. The last are the worst; but "the influence of the legal and medical professions is only a little less insidious and powerful than that of the permanent officials. The lawyer finds his profit in keeping up the old legal forms as much as possible, so that its terms cannot be understood by the plain man; the doctor in making as much business and as many well-paid official positions for himself as he can." And this, too, in spite of all the achievements of preventive medicine. And this is taken to explain why the attempted reforms have been no reforms at all. But we are immediately enlightened as to part of the basis for the conclusion that the reforms urged by the writer are necessary—namely, "the exposures of the iniquitous methods pursued by the private asylums made by the late Charles Reade." It is really too absurd that the sensational writing of Charles Reade on this subject should be taken seriously. Nor would anyone who really knew the facts concerning asylum "methods" think it possible that, but for her position, Miss Lanchester might have remained "a prisoner for life, a sane denizen of a madhouse." The hearsay case, related at some length, would not be of any value until all the facts in connection with it were threshed out by those who could obtain, and are competent to sift, the evidence—and full and sufficient evidence—from all sides. A few years ago a Royal Commission sat on this subject and took volumes of evidence upon it. The investigation extended over a long space of time. All who considered themselves aggrieved were allowed to come forward and state their case, and their doing so was facilitated. But, on investigation, all the charges made broke down, and the members of the Commission reported to the House of Parliament, by which they had been appointed, that no case of unlawful detention had been made out. This is an asylum question, but not specially a private asylum question. Probably just as large a proportion of public asylum patients as of private consider themselves unjustly detained or placed in an asylum; certainly, considering their lack of means to bring legal actions, the percentage of pauper cases among the total of those instituting legal proceedings against those who placed them in asylums is very large. No system will get rid of it. For patients with certain forms of insanity are sure to believe themselves to be improperly and illegally sent to and detained in any asylum; and some of these are most dangerous lunatics.

THE SALE OF INFECTED MILK.

The epidemic of enteric fever at Plumstead during May and June, 1895, reported by Dr. Sidney Davies to the Society of Medical Officers of Health, exhibits in a striking manner the defects of the 71st Section of the Public Health (London) Act and the corresponding Section 4 of the Infectious Diseases (Prevention) Act, which, while enabling a magistrate, after a number of legal formalities have been gone through, to prohibit the sale "within the district" of milk which has been proved to his satisfaction to have been the cause of spreading dangerous infectious disease, implicitly permits its sale in any other district, in accordance with the real meaning of the legal dictum, so generally misunderstood, that "the exception proves the rule." In the provinces such milk would in all probability be sent up to London to swell the quantity of so-called "accommodation milk" sold at the railway terminal to casual customers and dealers whose regular supplies happen to be insufficient. The source of such milk, should inquiries be instituted, it is always difficult to trace. In this instance it was sent with impunity, but with disastrous results, to the adjoining district of Woolwich, to a retail dealer who had all along been supplied from the dairy in question. As to the connection of the fever with the milk there could be no reasonable doubt, though the mode of the infection of the milk remained obscure, for with the exception of some secondary cases due to personal transmission, and a few which, owing to the dairyman's irregular conduct of his

business, keeping no books, and allowing the utmost latitude to his men, could not be positively shown to have drunk this milk, the cases were exclusively among his customers, regular or casual. There is no knowing how far the consequences might have spread had he kept within the letter of the law instead of acquiring such notoriety, first by defying the order of the magistrate, and afterwards evading it by selling his milk to his own men at the railway station to be hawked about the place in alleged ignorance of its origin, and by other fraudulent procedure, as to find himself at length compelled to break up his establishment and dispose of his stock in the open market. The omission of the words "in the district" would render the section really effective for the prevention of disease.

A BLOCK FOR ISOLATION PURPOSES AT THE POPLAR HOSPITAL.

THE Chairman of the Poplar Hospital for accidents made an appeal a short time ago for £3,000 to provide an isolation block. He stated that the hospital was full of accident cases, that scarlet fever had broken out in the wards, and that there were no means of isolating nurses or patients; the hospitals of the Metropolitan Asylums Board being full, the fever patients had to be sent back to their own homes. The Poplar Hospital did not long remain in want of the money asked for, as the *Daily Chronicle* took the matter in hand, and the amount was raised within a week. The subscription list was closed on December 13th, on which day our contemporary was able to congratulate its readers upon the fact that this result had been so speedily achieved.

OVER-SUPPLY AND DIMINISHED DEMAND.

A DOUBLE suicide which, says the *New York World*, shocked Paris the other day, brought to the attention of the public the financial straits in which, it is said, a majority of the physicians of that city live. Dr. Arnaud de Langlard, an old physician who had been decorated by the Government for brave conduct during the cholera epidemic many years ago, committed suicide with his wife because his practice had dwindled to the vanishing point, and starvation was staring them in the face. In commenting upon the tragedy several newspapers asserted that in Paris not more than one doctor out of five is able to make more than the barest living. Among the causes of this poverty among physicians is the destitution of most of their patients. Medical science has made such great strides, too, that maladies of all sorts are more quickly cured, and such precautions are taken to prevent the spread of contagious diseases that epidemics are becoming practically unknown. The number of doctors, on the other hand, has rapidly increased. Another reason why there is not practice enough to go around is that in many of the hospitals people can be treated for nothing or at a very nominal figure. Many of these hospitals have training schools which are free, in which are taught the rudiments of medicine and surgery. These schools are largely attended, and many sick people are taken in hand at their own homes by some member of the family who has profited by this instruction.

PRIZES OF THE ACADÉMIE DE MÉDECINE.

THE annual distribution of the prizes of the Paris Académie de Médecine took place on December 10th. The list is a long one, and only a few of the principal prize winners can be mentioned here. The Barbier prize of £80, offered every year for the discovery of a remedy for an incurable disease, such as hydrophobia, cancer, epilepsy, cholera, etc., was not awarded to any of the ten competitors, but an "encouragement" of £20 was granted to M. E. Legrain for his work on the sero-therapeutic treatment of typhoid, and smaller sums were awarded to five others. The Henri Buignet prize of £80 for the best work on the application of physics or chemistry to medicine was awarded to Dr. Chabrié, for his memoir on the Chemical Transformation of the Fundamental Substance of Cartilage during Ossification. The Adrien Buisson triennial prize of £420, offered for the discovery of a remedy for a disease hitherto looked upon as incurable, was divided among the following: £240 to Dr. Jarre for his work on the Cure of Tic Douloureux of the Face by a New Surgical Method; £80 to Dr. Chervin for his memoir on Stammering and other Defects of Pronunciation; £40 to MM. Wurtz and Marcano for their essay on Leprosy: its Prophylaxis and Treatment; £20 to Dr. Guillard for his work on Pneumo-thorax; £20 to Dr. Christiani, of Geneva, for his researches on the Thyroid Body; and £20 to Dr. Calvin, of the Medical Department of French Army, for his work on Chronic Paludism. The Chevillon Prize of £60 for the best work on the treatment of cancer was awarded to Dr. Répin for his work entitled *Contribution to the Study of a New Method of Treatment of the Malignant Inoperable Tumours: Toxitherapy.* The Dauvel prize of £40 for the best work on myxœdema was divided between Dr. Combe, of Lausanne, and the Drs. Cristiani (M. and Madamé), of Geneva. The Desportes prize of £52 for the best work on practical therapeutics was divided between Dr. Thibierge (*Therapeusis of Diseases of the Skin*) and Professor Delorme (*Disappearance of Neuritic Disorders, etc., by Localised and Forcible Compression*). The Huguier prize of £120 (triennial) for the best work on diseases of women, especially their surgical treatment, was awarded to Drs. S. Bonnet and P. Petit for their *Practical Treatise on Gynæcology.* The Laborde Prize of £200 was divided, Drs. Gouguenheim and Glover being awarded £100 for their *Atlas of Laryngology and Rhinology*: Dr. Chipault £60 for his *Operative Surgery of the Nervous System*: Professor Reverdin, of Geneva, £20 for his essay on *Surgical Antisepsis and Asepsis*, and Dr. Delbet £20 for his *Surgical Anatomy of the Bladder.* A prize of £40 (Prix Adolphe Monbinne) was awarded to Dr. L. Petit for his book on *The Consumptive in the Principal Countries of Europe.* The Perron Prize (£132) was divided among six candidates, Dr. Sabouraud getting the lion's share (£72) for his work on *Human Trichophytoses.*

PREHISTORIC TREPHINING IN RUSSIA.

MR. D. G. BRINTON, writing in *Science*, calls attention to an article by General von Krahmer in the *Globus*, Bd. lxvii, No. 11, in which he describes an amulet obtained in 1883 from a neolithic burial in Russia. It was of bone, and on examination proved to have been taken from a human skull. Ten years later the archæologist Bielilachewski, in exploring a deposit on the banks of the Dnieper, exhumed a human skull from which a precisely similar fragment must have been removed. Careful inspection showed that the trephining had been performed after death, the spot selected for the operation being the right frontal bone. The instrument must have had a sharp cutting edge, but there is evidence of lack of skill in the use of it. The skull must have belonged to a comparatively young person, probably a woman. Such examples are said to be extremely rare in Russia. Among the skulls in the Anthropological Museum of Moscow there is but one showing evidence of ancient trephining, and it is catalogued as coming from the Caucasus. The evidence brought forwarn by General von Krahmer showing that this operation was occasionally practised in order to obtain amulets from the parietes of the skull is valuable as illustrating a primitive superstition which prevailed in several widely separated tribes.

PRESENTATION.—Dr. J. B. Brown, Division Surgeon G.P.O., was on December 13th presented by the pupils of his ambulance class (New Wandsworth Branch, St. John Ambulance Association) with a handsome clock, bearing a suitable inscription expressing gratitude for his instruction. This is the second occasion on which Dr. Brown has been the recipient of a similar testimonial.

A NATIONAL SYSTEM OF REGISTRATION OF SICKNESS.

As will have been seen by the reports published in our columns, Dr. Newsholme has brought before recent meetings of the Society of Medical Officers of Health and the Royal Statistical Society a subject of considerable general interest, and one which is almost new in this country—the need for a national system of registration of sickness.

Many attempts have been made in this country to secure a national system of registration of sickness, and it is gratifying to know that the British Medical Association took an active part for many years in pressing upon the Legislature the importance of the subject. On two occasions departments of the Government have undertaken the tabulation and circulation of returns of sickness: first in 1857-58, when the then General Board of Health undertook to print and circulate the weekly and quarterly returns of sickness of all kinds attended at the public expense in hospitals and dispensaries and by Poor-law medical officers in the metropolis; and, secondly, since 1889, when the Local Government Board have undertaken the task of circulating the returns of infectious disease received from a large number of towns, and thus securing the intermotification of the notifiable diseases. These precedents have an obvious value in arriving at a conclusion in favour of a larger official scheme on similar lines.

The local voluntary efforts made to secure the registration of sickness in London, Manchester, and several other towns have not been permanently successful, notwithstanding the enthusiasm and pertinacity of those who projected them. As Dr. Ransey long ago pointed out, "the voluntary principle has invariably proved quite unequal to the regular, constant, and universal performance of laborious official duties without any hope of profit or of praise." Gradually the plea for compulsory notification of infectious diseases took the place of that for the more general notification of sickness.

In addition to the immediate utility connected with isolation of the sick, disinfection, and removal of insanitary conditions, medical knowledge might be expected to benefit by increased acquaintance with the natural history of the various infectious diseases and with the conditions governing the occurrence of epidemic and interepidemic periods. The statistics obtained by means of compulsory notification were likely to be extremely valuable, as increased knowledge must eventually lead to improved and extended measures for the prevention of disease. Hence the compulsory notification of all infectious diseases was advocated, and the extension of notification to such diseases as phthisis, rheumatic fever, and pneumonia.

As to the expense of compulsory notification of sickness, Dr. Newsholme showed that a weekly return of cases would for many diseases be almost as valuable as an immediate return, and that by this means the expense of extended notification might be minimised. In the next place, he stated that in Scandinavian countries and in Germany there was a wider schedule of diseases than in this country, but no payment for notification was made. This, Dr. Newsholme admitted, could not be tolerated in England, unless the medical profession received as complete protection from vexatious prosecutions and from unqualified practitioners as is accorded to their Continental brethren.

Dr. Newsholme advocates a central office in London, probably in connection with the General Register Office, at which sickness statistics should be tabulated similarly to the death statistics. The sickness statistics should however, in the first instance, always be sent to the medical officer of health of each district for his immediate use. These statistics should comprise (1) returns of all new cases of sickness treated among the parochial poor; (2) returns of all new cases of sickness at hospitals and dispensaries; (3) similar returns of the sickness in connection with friendly societies—these returns to be made weekly to the medical officer of health, and to comprise a limited list of fifteen to twenty diseases, all others being classified under one heading. An extension of present machinery would be required, but gradually by this means a very valuable mass of sickness statistics would be collected. For some years they would undoubtedly be imperfect, but this was a strong argument in favour of an early start.

From the debate at the Society of Medical Officers of Health it would seem that, in the opinion of those well qualified to speak, a national system of registration of sickness is not yet within reach; still the possibility and the usefulness of such a system hardly admit of doubt; and if it is ever to be attained in this country it must necessarily be gradually, as Dr. Newsholme showed. At present about 33 per cent. of the people of England and Wales are placed under compulsory notification—that is, in the area represented by this large proportion of the population eleven diseases (small-pox, cholera, diphtheria, membranous croup, erysipelas, scarlatina, typhus, typhoid, relapsing, continued, and puerperal fevers) are notifiable. Already some seventy local authorities have added measles to this list, about twenty have added whooping cough, several have added autumn diarrhœa, a few German measles and chicken pox, and at least one authority has added hydrophobia. Why the line should be drawn below these seventeen diseases is difficult to explain.

The notification to the health officer of any of the following would surely be useful: Mumps, influenza, cerebro-spinal fever, dysentery, ague, remittent fever, glanders, syphilis, septicæmia, purpura, tuberculosis, pneumonia, and acute rheumatism; and some of them would have been made notifiable had not the Local Government Board withheld their approval. Doubtless, in time, most of them will be notifiable, and certainly cases of anthrax and poisoning by arsenic, phosphorus, or lead. This will involve the repeal of Section 29 of the Factories and Workshops Act, so as to provide for notification being made to the medical officer of health instead of to the inspector of factories.

Perhaps, after all, what would help on as much as anything the establishment of a national system of registration of sickness might be for some medical officer of health, possessed of enthusiasm and perseverance, to show what can be accomplished in one district, by getting in and tabulating all the returns which Dr. Newsholme has pointed out, are available, and may be had with little trouble and practically no expense.

THE TREATMENT OF CHILDREN MENTALLY DEFICIENT.

An address on this subject was given at a meeting of the Union of Teachers of the Deaf on the Pure Oral System on December 12th by Dr. Shuttleworth, formerly Medical Superintendent of the Royal Albert Asylum, Lancaster, the Rev. Dr. Stainer presiding. The lecturer traced the connection with institutions for deaf mutes of early efforts for the amelioration of the mentally defective class. Referring to the labours of Itard in his attempts to reclaim the *Sauvage de l'Aveyron*, he showed how, notwithstanding an unsatisfactory result, the scientific observation of the sensory and mental deficiencies of this case and the consequent indications for treatment led to an appreciation of the means afterwards found serviceable in the training of idiots and imbeciles. The lines set forth by Itard were:—(1) to develop the senses; (2) to develop the intellectual powers; (3) to develop the affective functions. Following a similar plan, his pupil Seguin undertook in 1837 the training of a young idiot in the children's hospital of Paris, and having achieved signal success became, as instructor of the imbecile children at the Bicêtre, the pioneer of the physiological system of education now followed universally in training institutions for the mentally deficient. Whilst there were some analogies between the deaf mute and the mentally deficient child (and Dr. Shuttleworth illustrated this by reference to family histories showing alternating instances of the occurrence of deaf mutism, idiocy, and insanity in the pedigree, and also to a certain correspondence of the causation of the two classes of infirmity), there were, of course, distinct differences in the treatment respectively suited to those deprived merely of one sense and to those suffering from imperfections or imperfect action of the nervous centres, sometimes indeed of the whole nervous system. In the case of mentally feeble children dumbness might be due to deafness, but more frequently lack of language was owing to lack of thought. Sometimes there was lack of power to co-ordinate the complex mechanism of speech, more

rarely there was imperfect development either of the cerebral centres (Broca's convolution, etc.) or of the organs necessary for articulation. Speech had been made a basis for the classification of idiots and imbeciles, but it was not an unerring standard of discrimination between different degrees of intelligence. At the Royal Albert Asylum about 20 per cent. of the 600 inmates were either dumb, or could make only a few articulate sounds, and about 15 per cent. spoke distinctly, whilst less than 40 per cent. spoke well, and less than 30 per cent. only fairly. Only 4 were completely deaf (deafness being a bar to admission), and about 40 others had some deficiency in hearing power. Whenever practicable, improvement of speech by oral methods was attempted, though want of intelligence and of power of continuity rendered the task difficult. With mentally deficient children, however, the first need was for sensorial training, following the principle pointed out by Seguin, that the organs of sensation are within our reach, and those of thought out of it. "The former are the first we can set in action," the senses of touch, sight, hearing, and even taste and smell were methodically cultivated and exercised. The regulation of the muscular activities, whether in abeyance as in some low grade cases or in unruly excess as in the nervously irritable class, and their subordination to voluntary control formed the next step in the educational ladder. Ordinary school exercises were at length reached, but all instruction had to be conveyed in as concrete a form as possible, the feeble idealising power of the pupils rendering them unable to comprehend that which was abstract. Examples of methods and of apparatus used were given, and it was stated that inasmuch as the fingers often formed the best avenues of approach to the brain, manual training was of the utmost importance. This, when judiciously carried out so as to prove attractive, was most efficacious in fixing the attention and promoting continuity of thought and steady application, and the lecturer urged its importance in connection with the system pursued in oral schools for the deaf, where he thought that without some such relief there was risk of overstrain from too continuous efforts at lip-reading. With regard to the difficult class of imbecile deaf mutes, or still worse, of deaf-mute idiots, he ventured to question whether, after a sufficient trial of the pure oral method, recourse might not with advantage be had to signs, though he fully admitted the great superiority of oral teaching in improving mental action and breaking up isolation whenever there was sufficient basis of intelligence to work upon. Still, it must not be forgotten that "feebly gifted" children were often more nimble with their fingers than with their brains; and industrial training should not be neglected in favour of fruitless and too protracted efforts to teach articulation. The proportion of "feeble-minded" deaf-mutes was very differently stated in different national statistics on the subject, varying (according to Mygind) from 1.3 per cent. in Danish institutions to about 10 per cent. in those of North America; our Transatlantic cousins were perhaps setting up a somewhat high standard for "cuteness." The address closed with a reference to the good work done in the centres for the special instruction of backward and defective children under the London School Board, and a suggestion that, with the spread of compulsory and assisted education for the deaf, it would probably be advisable to form separate departments for institutions and teaching centres for deaf-mute children also mentally defective. The need for moral training was not to be lost sight of, and the most successful teaching both of deaf-mutes and of mentally defective children would depend not only upon the skill and enthusiasm, but upon the persevering loving interest brought to bear upon the work.

An animated discussion followed, speeches being made by Mr. VAN PRAAGH, Mr. ARTHUR KINSAY, the Rev. Dr. STAINER, Dr. HILL (St. Mary's), Dr. STILL (Children's Hospital), and others.

Specimens of the manual work of patients at the Royal Albert Asylum were exhibited.

DR. D. ARGYLL ROBERTSON has resigned his seat at the Board of Managers of the Edinburgh Royal Infirmary, and his place has been filled by the election of Emeritus Professor Struthers.

ISOLATION HOSPITALS.

[FROM A CORRESPONDENT.]

ACCORDING to the last annual report of the Metropolitan Asylums Board upwards of £300,000 was expended in the year ending September 29th, 1894, on the isolation and treatment of fever and small-pox cases in their hospitals. This is a very large sum. According to the last edition of Burdett's *Hospital Annual*, the ordinary expenditure of all the general hospitals put together (not merely the big hospitals with schools) amounts to under £430,000. In other words, while the ratepayers cannot pay a penny towards the treatment of the most disastrous and distressing case of ordinary illness, they pay this enormous sum for the treatment and isolation of a particular class of disorders. The reason for spending this money, and it may be added the sole excuse for spending public funds on the maintenance and treatment of persons who are confessedly quite able to pay both for the one and the other, is that it is hoped and intended, by isolating the individuals attacked, to prevent the spread of the disease to the healthy.

How far is it true that infectious diseases spread in proportion to the number of foci of infection, or, in other words, what relation is there between the number of existing cases, from which the disease may be spread among the rest of the people, and the tendency shown by the malady so to extend?

It is easy to understand, and not difficult to believe, that the removal of a first case or the isolation of the whole of the first group of cases occurring in any community might have the effect of preventing any further spread of the disease. But that is not now the question. As it affects London and all large centres of population, the question is whether, by merely diminishing the number of cases which are unisolated, the spread of the disease is checked at all in proportion to the expense involved in so doing. It is impossible to shut one's eyes to the phenomena presented by what is known as the "seasonal prevalence" of such a disease as scarlet fever. Epidemic prevalence is another matter, for since the hospitals have been brought into general use we have had no epidemic worthy of the name by which to test their efficacy, the outbreaks of 1893 and of the present year having been slight compared with the epidemics of twenty or thirty years ago. We have then to fall back upon the seasonal variation, the ordinary yearly oscillation in the prevalence of the disease. So far as one may judge by the mortality returns, there is a far greater prevalence of the disease in the autumn than there is in the spring. Although the curve varies somewhat in contour year by year, and varies enormously in range, still we have, as one of its most marked features, this tendency to rise in autumn.

Now the Asylums Board hospitals, notwithstanding the magnitude of their resources, have hitherto failed to cope with this autumnal rise, so that, although a gradually-increasing proportion of all the cases occurring in each year have been isolated in hospital, the proportion so isolated in the spring has far exceeded that isolated in the autumn. In 1893, as again this year, the beds were absolutely full in the autumn, and so it happened that at the very moment when the epidemic was at its height the proportion of cases being isolated was at the smallest, and then, when the number of infectious cases scattered over London was greater than it had been for several years, the epidemic took a turn, and quickly fell to such a degree that in the year following, namely, in 1894, the total of the cases did not amount to half as many as had occurred in 1893.

There is then no reason to suppose that the rise in that epidemic had anything to do with the number of foci from which the disease could spread, or that its fall had any relation to the number of cases isolated by the Asylums Board hospitals. The epidemic rose notwithstanding that the hospitals were doing well, and it fell just when they failed. It is not suggested that the hospitals do not do much good, or that they are anything but a blessing to those individuals who, when attacked by fevers, are fortunate enough to gain admission to their wards. But then, so far as the individual is concerned, a person suffering from bronchitis or pneumonia is equally benefited by hospital treatment,—yet no public funds are set aside to treat the sufferer from bronchitis unless he is a pauper. Great then as is the good done by the fever

hospitals, it is not the particular sort of good for which the public money is expended.

If this were a matter merely of dealing with scarlet fever and diphtheria, and if free treatment were offered only to those who were not in a position to pay, things might well be left to find their own level, and the ratepayers might well be content to put up with even a considerable expenditure for the sake of getting a large number of poor children safely through a very serious disease. But this is not the case. Led on by the theory—or rather the assumption, for it is not even an explanation of the facts—that the spread of fevers can be controlled by limiting the number of foci of infection, it is now seriously proposed to admit measles into hospitals for isolation, and already the Asylums Board hospitals are freely open to the richest if suffering from scarlet fever or diphtheria.

To understand in any full degree the magnitude of the task thus suggested, it must be remembered that the deaths from measles in London last year were more than three times as numerous as those from scarlet fever, and outnumbered even those from diphtheria. It is high time, then, that the dogmas now current regarding the proper methods of controlling epidemics should be reconsidered.

The spread of infectious diseases is largely, if not mainly, influenced by two factors—the infectiousness of the disease, and the susceptibility of the patient. The attention of those responsible for their management in London has been given almost exclusively to the former, whereas the whole history of the epidemic points well nigh exclusively to the latter, including in it the effect of season on the constitution as the active factor in their development.

Whatever may be done in the future, it is quite certain that the attempt to isolate scarlet fever in London has hitherto been a failure; even although its prevalence has during the experiment been comparatively light, the death-rate from the disease having in 1870 been five times, and in 1884 nearly six times, as high as in 1893.

In the meantime more knowledge is required. It may be doubted whether we yet know with anything like exactitude what are the conditions of health, and what are the conditions of environment, which favour the spread of either scarlet fever or diphtheria, although we do know some of the conditions which determine whether outbreaks of measles shall be virulent or mild. It is not that too much attention has been paid by sanitary authorities to drains and water supply, but that too little has been paid to dust and dirt, and to uncleanly domestic habits.

It is by no means certain that far better results would not be attained than at present follow our one-sided efforts to deal with epidemics by isolation, were something like the "sanitary column" so successfully employed by Dr. Mason, of Hull, during the cholera outbreak in that town introduced into our ordinary sanitary machinery, and were every removal of a patient to hospital immediately followed by a methodical attack on dust and dirt by an official body of cleaners, and by a real disinfection of the house and its contents, a disinfection very different from the farcical burning of sulphur with which so many sanitary authorities salve their consciences. But for this purpose the hospitals must be at the disposal of the sanitary authorities, who will be responsible for the other measures, besides mere removal, necessary for the control of epidemics, and must not be wasted, as they are at present, by being left open to anyone who chooses to send for the ambulance. As things are at present, people may throw upon the community the whole expense of the maintenance and treatment of their children, while they may themselves neglect the most ordinary precautions for rendering their houses innocuous to others. Under existing arrangements it may happen that a parent may send to hospital child after child, who may not only be treated at the public expense, but may be maintained, perhaps for three months, so that on their return they shall not carry back with them any infection, and yet the same man may all the time keep at home one pet child suffering from the fever, and thus may render nugatory all the efforts of the Board to prevent the spread of the epidemic.

That the Metropolitan Asylums Board spends its annual income carefully and well in the treatment of its patients cannot be doubted, but that the money is spent to the best advantage for checking the spread of scarlet fever and diphtheria is another matter, and one open to serious question.

THE POOR-LAW SCHOOLS COMMITTEE.

The Departmental Committee of the House of Commons to inquire into the working of the Poor-law schools, appointed by Mr. Shaw Lefevre last year, have, after many months' hard work, nearly closed their labours.

The investigation has been extremely thorough, and witnesses have been called from every well-informed quarter who could throw light on the subject. The first witness was Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee of the British Medical Association, who made a statement on behalf of the deputation at whose instance the Committee was appointed, and who gave a full account of the charges brought against the present system of administration.

The inquiry necessarily ranged over the whole question of the existing defects in the great associated or barrack schools, the injuries to physical health, especially in respect to developmental affections and the spread of ophthalmia, the allegations of inefficiency in inspection, the merits and demerits of the boarding-out system, and the discussion of the metoods of control.

Mr. Mundella has stated that the report may be expected before the meeting of Parliament, and that it will be laid on the table immediately after Parliament has assembled. Nothing can exceed the assiduity, patience, and intelligence with which the inquiry has been conducted by the highly competent Commission selected, and the report is likely to be a very thorough and satisfactory document. It is believed that it is likely to affect not only the metropolitan schools with which it is more immediately concerned, but the whole system of Poor-law school administration throughout the country.

LITERARY NOTES.

According to the *Athenæum*, Mrs. G. J. Romanes has completed the memoir of her late husband, which will be published by Messrs. Longman in January or February. The memoirs will consist chiefly of letters, including a large number from Charles Darwin.

Dr. Morrison Legge's book, entitled *Public Health in European Capitals*, which has just been published by Messrs. Swan Sonnenschein is the result of personal observations during the past two years and a-half. The cities dealt with are Paris, Berlin, Brussels, Christiania, Stockholm, and Copenhagen.

The West London Medico-Chirurgical Society has decided to issue a quarterly journal, to be entitled *The West London Quarterly Journal*, in place of the biennial publication of its proceedings. Mr. Percy Dunn has been appointed Editor, and Mr. Leonard A. Bidwell, Editorial Secretary, of the new journal. In addition to the papers read before the Society and full reports of its meetings, the *West London Quarterly Journal*, among other features, will contain a "Mirror of Practice," or full notes of interesting cases occurring either in hospital or in private practice. The first number will appear on January 1st, 1896.

To the last published part of the *Klinische Zeitfragen* (ix, p. 117) Dr. Ladislaus Haskovec has contributed an obituary notice of the late Professor Charcot. At the end of the article, the author gives a classified bibliography of Professor Charcot's works, which will be found very useful for purposes of reference. The number of papers, etc., enumerated is exactly 250.

During the past year the number of medical journals published in Paris has increased from 177 to 199. It would be interesting to know how many subscribers there are to the majority of these, but as they continue to increase and

multiply. It is to be supposed that they serve their purpose in some way or other.

In *The Gillmans of Highgate*, a book (recently published by Stock) from the pen of Mr. Alexander W. Gillman, grandson of the medical practitioner who befriended Coleridge for many years, special reference is made to two inaccurate statements made and repeated by some biographers of the poet. One is that Coleridge was never thoroughly cured of his opium habit; the other that he paid for his board and lodging during the eighteen years that he lived under Mr. Gillman's roof. The author states that he was frequently told by his father, the Rev. James Gillman, the eldest son of Coleridge's friend, that although the poet might have contributed something at first as a return for the medical care and advice he received, he "practically lived as a guest at the invitation of Mr. Gillman for these eighteen years. Besides which many of his friends were weekly entertained at dinner, etc., no doubt to the great pleasure and edification of his host and hostess." Concerning the opium habit, it has been asserted by De Quincey and others that Coleridge continued to obtain supplies of laudanum surreptitiously through the doctor's boy. Mr. Gillman's assurance, however, was that the habit was thoroughly conquered, and the boy, Mr. Thomas Taylor, now one of the oldest inhabitants of Highgate, is called as a witness. He states "that he never procured any opium for Mr. Coleridge, nor did he ever hear of his alleged habit of taking it;" but, he added, "he was a great consumer of snuff, and I used to bring him a pound of 'Irish blackguard' (his favourite snuff) at a time, with which he smothered himself."

The *Minster* has passed into hands of the Artistic Publishing Company, Limited, and the first number of the new series will be issued on December 28th. The magazine in its new form will be practically a new publication, for the cover, the size, the nature of the contents, the policy, and in fact everything but the title will undergo a complete transformation. In future the *Minster* will be a magazine of "light humorous literature, contributed by the best authors and illustrated by the best artists."

THE CASE OF DR. LIONEL SMITH.

In the JOURNAL of December 21st we published an appeal for funds from Dr. James F. Goodhart and Dr. de Havilland Hall, to enable Dr. Lionel Smith to take up the appointment of District Surgeon in Zululand, which has been offered him by the Secretary of State for the Colonies.

As we stated last week, Dr. Smith has suffered great hardship at the hands of the West Australian Government, and his attempt to obtain redress from the highest court of appeal in this country was defeated on legal grounds. His resources have thus been seriously reduced, and the case is one which we strongly recommend to the generosity of the profession.

The following subscriptions have already been received and forwarded to Dr. de Havilland Hall:

	£	s.	d.
Sir Edwin Saunders	2	2	0
Dr. Walter A. Satchell	1	1	0
Dr. John C. Galton	1	1	0
A Seedling	0	5	0
Dr. Frank Godfrey...	1	1	0

PRESENTATION.—Dr. R. N. Wallace, of Cravenhurst, Stamford Hill, has been presented with a solid silver salver by a number of medical men in Hackney as a token of their regard and esteem.

THE DIAGNOSIS OF GLANDERS.—The French Minister of War has issued important instructions in regard to glanders and tuberculosis in horses, and the value of mallein as a diagnostic agent to prevent the danger of transmission to the officers and men, and in fact to all those brought into contact with horses. The animals are to be divided into three groups after the test is applied. Full particulars of the procedure to be carried out are embodied in the War Minister's instruction, and may be read in the *Union Médicale* of October 26th.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 15th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

December, 1895.

NOTICE OF QUARTERLY MEETINGS FOR 1896. ELECTION OF MEMBERS.

MEETINGS of the Council will be held on January 15th, April 15th, July 8th, and October 21st, 1896. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 26th, June 18th, and October 1st, 1896.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are fitted up for the accommodation of the members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M., Saturdays, 10 A.M. to 2 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETING TO BE HELD.

LANCASHIRE AND CHESHIRE BRANCH.—The adjourned meeting of this Branch will be held in the Medical Institution, Liverpool, on Wednesday, January 8th, 1896. Agenda: Report of the Council of the Branch on the Midwifery Nurses Registration Bill as drafted by a Subcommittee of the Parliamentary Bills Committee and amended by a Committee of the Branch Council. Report of the Committee of the Branch appointed March 9th, 1894, "to watch the progress and to oppose any proposed legislation for the registration of midwives." Mr. H. H. Preston will move and Dr. G. H. Broadbent will second, "That a Vigilance Committee of the members of the Branch be at once elected, with power to add to their number, to watch the progress of any legislation for the registration of unqualified persons to practise medicine, surgery, or midwifery without the supervision of those already registered under the Medical Acts." Mr. Walter Whitehead will move a resolution standing in his name as to the present system of government of the British Medical Association. Mr. Colin Campbell will move and Dr. J. Brassey Brayshaw will second, "That this Branch contribute £50 to the fund which is being raised to repay Dr. R. R. Rentoul his expenses incurred in defending the first and second Midwives Registration Bills." All notices of motion and amendments for the meeting, and applications for membership of the Association and the Branch, should at once be sent to the Honorary Secretary, JAMES BARR, M.D., 72, Rodney Street, Liverpool.

SPECIAL CORRESPONDENCE.

ST. PETERSBURG.

Pirogof in the Crimean War.—Maladministration and Abuses. Attempts at Reform.—The Employment of Sisters of Mercy as Nurses in War and Peace.—New Russian Medical Journals.—New Medical Faculty in Odessa University.—The Cholera Epidemic.

THE anniversary of the death of the great Russian surgeon Pirogof, was kept by a commemorative meeting, held in the hall of the Red Cross Society, of the four principal medical societies in St. Petersburg, the Pirogof Surgical Society leading the way. The announcement was made that, in addition to the prizes already instituted in the name of Pirogof, a new set, consisting of gold medals, will be offered for the best

works upon some surgical subject. The movement is opportune to recall some of the events which were happening just forty years ago, and the part which Pirogof played in the Crimean war. He was ordered to Sevastopol in October, 1854, and remained there all that winter, and until the following June, in full charge of the principal military hospitals on the north side of the harbour.

The maladministration, disorder, and disgraceful abuses which he found prevailing everywhere seem to have deeply affected him, and in June he returned to St. Petersburg with the object of representing to the central authorities the crying needs for improvement and reform. In this he was unsuccessful, and after a short stay in the capital he was ordered back to the seat of war. He was permitted to take with him a certain number of young surgeons of his own choosing, and among these was the late Professor Botkin, who had then but recently qualified. By the time they arrived in Sevastopol the south side of the harbour had already been taken, and the hospitals of the northern side were full to overflowing with sick and wounded. From September to December, 1855, Pirogof was in Simpheropol; thence he was ordered to visit and inspect the hospitals, about seventy in number, in Perekop, Kherson, Ekaterinoslav, Kharkof, and other towns. He found the hospitals crammed with patients, some wounded, others ill with typhus or typhoid fever or diphtheria, and a large proportion suffering from frozen limbs, for they had been brought from the seat of war in open sledges, with the thermometer a dozen or more degrees below zero Fahrenheit. "This frightful time," Pirogof himself wrote, "I shall never forget to the end of my life." He instituted important reforms.

Among these was the introduction of female nurses into field hospitals. Primarily the honour of introducing this great reform in Russia is due to the Grand Duchess Helena Pavlovna, the sister of the Emperor Nicholas. The Emperor himself, ever averse to innovations, was sceptical as to the possibility of women nurses being sent to the actual theatre of war, but he yielded to his sister's entreaties, and allowed the experiment to be tried. The Grand Duchess turned to Pirogof to aid her in carrying it out. At that time the employment of women as nurses was scarcely known, even in civil hospitals, and the new proposal had to overcome many prejudices and much inertia. The Grand Duchess herself set an example by bandaging with her own hands a patient who had been operated upon in Pirogof's clinic; after that the prejudice rapidly disappeared, and many women came forward and offered their services as Sisters of Mercy. Pirogof himself at first scarcely knew how to regard the innovation. He had only seen the employment of women as nurses in the Paris hospitals, and had no practical acquaintance with such a system. In his own words, it was "more by instinct than from experience" that he was convinced of the great boon their services would be in nursing the sick both in war and peace. It is from the time of the Crimean war that the general employment of women nurses in Russian hospitals dates.

A number of new Russian medical journals are announced for next year. *Contemporary Medicine and Hygiene*, a monthly magazine, will be edited by Professor Afanasief, who has started it in connection with the journal called *Practical Medicine*. *Reports of the St. Petersburg Biological Laboratory* will appear quarterly, edited by Dr. Lesghaft. A *Review of Psychiatry, Neurology, and Experimental Psychology* will be published monthly under the editorship of Dr. Bekhteref; and the *Russian Sanitary Journal* twice monthly, under the editorship of Dr. Dmitrief.

The question of founding a medical faculty in the University of Odessa, which had been long under discussion, has finally been decided in the affirmative. The municipality of Odessa has generously offered to double its grant for the new faculty, raising it from 250,000 to 500,000 roubles, that is, to over £50,000.

The cholera outbreak seems to be rather spreading than subsiding in St. Petersburg. Between November 11th and 14th there occurred 87 cases and 14 deaths; between the 18th and 21st, 73 cases and 46 deaths; between noon on the 25th and noon on the 26th, 14 fresh cases were admitted to hospital and 6 patients died; there remained 59 under treatment. In Volhynia, in the week ending November 4th, there occurred 220 cases of cholera with 110 deaths; in the following week there were 220 cases with only 94 deaths. In the Government of Kief in the same two weeks the figures were 72 cases with 26 deaths and 101 cases with 34 deaths respectively. In that of Orel, 16 cases with 6 deaths occurred between October 22nd and November 18th. All the above-mentioned dates are according to the old style.

FLORENCE.

The Maternity Department of the Sta Maria Nuova Hospital.—Laparotomy for Myomata and for Extrauterine Pregnancy.—Vaginal Hysterectomy.—Laparotomy for Inflammatory Conditions.—Conservative Operations on the Fallopian Tubes.—Cæsarean Section.—Symphysiotomy.—Treatment of Normal Labour.—Clinical Institute at Pisa.—A Medical Archæologist.

A TABLET in the cloisters of the Sta Maria Nuova Hospital states that it was adapted to the reception of parturient women, the treatment of obstetrical cases and of indigent sick children by Leopold Pasqui in the year 1878. The maternity section provides for attendance at the patients' homes as well as in the hospital. The first floor is devoted to the maternity department, the second floor to that of diseases of women. The corridors and wards are spacious, airy, and clean. On admission, each patient has a warm bath, which is repeated when labour begins. The following statistics have been kindly furnished to me by Professor Pestalozza, Director of the Clinique of Obstetrics and Gynæcology of the Florence University. They extend from January, 1894, to October, 1895 (twenty-two months), during which 2,167 cases were admitted.

Laparotomy was performed 135 times. In 18 cases for large fibromata and combined with hysterectomy—in one case it was performed after Cæsarean section with success both as regards mother and child. Smaller fibroids are removed *per vaginam* with or without hysterectomy. Ten laparotomies were performed for extrauterine fœtation, all making good recoveries. In these cases the aim is to remove the sac entire. In one case the pregnancy went to full term and ten months after the operation mother and child are both well and healthy. In this case hysterectomy was combined with the removal of the sac, as the placenta was in the folds of the broad ligament. In a second case the fœtus was in the folds of the omentum, and was partially mummified. In a third case there was coexistence of extra- and intrauterine fœtation, and after removal of the tubal sac hysterectomy was performed. For cancer of the uterus Professor Pestalozza prefers to operate *per vaginam*, but four times he operated by abdominal section. All four cases recovered, but in one there was recurrence after a few months. A large number of ovariotomies were done, and in one case pregnancy occurred five months after the operation, and ran a normal course. The majority of inflammatory conditions of the appendages are treated by medicaments and expectancy. In the case of voluminous tubal tumours and suppurations Professor Pestalozza prefers abdominal section to vaginal operation. If suppuration is bilateral the removal of the tubes is combined with hysterectomy. Of eight such cases there were seven recoveries.

In 4 cases laparotomy was performed as a conservative measure. The appendages were freed, the adhesions, foci of disease, and cystic portions of the ovary excised, the ovaries replaced in position, and the obliterated lumen of the tube rendered patent. In cases of hæmatocele demanding operative interference laparotomy is performed unless there is suppuration.

Cæsarean section was performed three times, twice for pelvic deformity and once for fibroma. Child and mother were saved in each case.

Symphysiotomy has been done three times in two years. Two cases recovered and one case died of hæmorrhage. Professor Pestalozza does not regard this operation with favour.

In normal labours only external disinfection is practised, and no douches are administered in puerperium. Of 1,255 midwifery cases conducted in the hospital there has been no death from puerperal inflammation, although all cases are examined frequently by students and student midwives. This department gives post-graduate courses of practical instruction of which foreigners may avail themselves.

The new building of the Institute of Clinical Medicine of Pisa is spacious and specially adapted to modern requirements. Congratulatory letters were received from many illustrious members of the faculty, among whom may be mentioned Professor Grocco, who was Professor Queirolo's predecessor in the chair of Clinical Medicine at the University of Pisa before his promotion to that of Florence..

Cavaliere Dr. Alfonso Ademello, who has occupied the post of Sanitary Director of the Hospital of Grossetto for forty years, died recently. For many years he interested himself with excavations at Grossetto, and has written much about the Maremma. Dr. Ademello fought in the war of independence in 1848, and was taken prisoner.

ALGIERS.

A CORRESPONDENT writes: Algiers promises to be fuller than ever. The season so far has begun well, and we have been much favoured by good weather, of which there is every promise of continuance. In many respects my experience in practice for the last few years has been more favourable than I expected as to the effects of the climate here. It is less hot than many of the African winter resorts and by no means enervating, and a variety of excellent climates might be had by due selection. The town of Algiers is improving every year in sanitation and in buildings. It has, moreover, the great advantage for those who are seeking freedom from English wet, cold, and fogs, and the pleasures of winter sunshine without suffering from any severe ailment, and being essentially a pleasure town where museums are abundant, and where there is a large European colony always willing to welcome any new comers and admit them to a share of the abundant outdoor recreations and pleasures of the place. One of the best hotels is the Hôtel de la Régence, which has recently been completely renovated, and is under the care of Mr. Harty. It offers the exceptional comforts of a first-class house at exceptional prices—12 francs a day covers all expenses; and as there are now many English physicians here, I hope I may be permitted to put in a good word for this delightful winter resort, which has perhaps been hardly sufficiently mentioned of late, and is apt to be overlooked by English visitors for newer, but in many respects less desirable, resorts.

CORRESPONDENCE.

THE PHYSIOLOGY OF THE CARBO-HYDRATES.

SIR,—I should be obliged if you could find room to publish the enclosed copy of a letter which I have been constrained to write to Dr. Pavy.—I am, etc.

Cambridge, Dec. 21st. M. FOSTER.

"Shelford, Cambridge,
"December 21st, 1895.

"DEAR DR. PAVY,—I have to acknowledge the receipt of your book, entitled, *The Physiology of the Carbo-hydrates; an Epicriticism*, which you have done me the honour to send me. I have carefully read the Preface, the appearance of which has set me free to say in regard to myself what could not be said in official correspondence.

"I have the leave of the President of the Royal Society to state that since your first letter to them the President and Council have received legal advice confirming your contention that in taking steps with regard to the publication of Dr. Paton's paper before it was read they acted in contravention of the statutes. In their anxiety to shorten the delay, always in part unavoidable, attending the publication of papers, they have been led, not only in the case of Dr. Paton's paper but also in many other cases during recent years, to adopt a mode of procedure which they now learn contravenes the statutes, but they have decided on taking steps so to amend the statutes as to remove a limitation which, in the interests of the Fellows and of science, is clearly undesirable.

"This point conceded, the whole of the rest of the action taken in regard to Dr. Paton's paper was conformable to the statutes. The President and Council sitting as Committee of Papers, authorised the officers to 'refer' papers during the recess, and under this authority Dr. Paton's paper was referred to certain Fellows of the Society who, since they were 'knowing and well-skilled in the particular branch of science to which the said paper' related, seemed likely to have been chosen referees by the Committee of Papers had it been sitting. The reports being favourable, the paper was, under a like authority, ordered for publication in accordance with the reports. This action of the officers being reported to the Committee of Papers at its first meeting after the recess was approved and confirmed. By that decision the President and Council sitting as Committee of Papers, took from my brother officers and myself all responsibility; had the President and Council thought that the referees had been unwisely chosen, it was in their power, and was indeed their duty, to undo what had been done, and to reconsider the question of publication. They did not do so.

"I at once and freely accept your explanation that by the words 'contrary to what is considered ethically becoming' contained in your first letter, you meant 'biassed.' Will you allow me to say that I fully recognise the grave responsibilities attaching to my office of Senior Secretary to the Royal Society and the injury to science attending on a 'biassed' action on my part. No man is free from 'bias'; and my action has at times, probably often, been other than it should have been. But, so far as I know, I have not consciously allowed myself to be unduly influenced by personal considerations, save, perhaps, when I have urged against the hostile criticism directed towards some communications made to the Royal Society that these should be judged not only in respect to their absolute value, but also with regard to the position and reputation of the authors.

"The last paragraph in your Preface embodies a suggestion as to the nomination of the referees on Dr. Paton's paper, which I venture to hope you would not have published had you fully realised that refereeship being strictly confidential I am prevented from making any answer whatever to it.

"Your Preface being a public matter, I shall send a copy of this letter to the medical papers, and in conclusion, let me ask you not to think me discourteous in desiring not to continue the correspondence.—Yours faithfully,

"Dr. Pavy, F.R.S., etc. M. FOSTER."

THE CHELSEA HOSPITAL FOR WOMEN.

SIR,—In the necessarily very condensed account you give of the meeting of governors of the Chelsea Hospital for Women on November 18th my remarks read as if I stated that the patient in question might have bled to death before Mr. O'Callaghan's arrival if the resident medical officer had had not interfered.

The actual words I used were these: "As Mr. O'Callaghan and myself both live in the same street and three miles away from the hospital, one of our patients might well bleed to death before we could arrive if the resident medical officer was not to touch the dressings." By inserting this correction you will oblige.—I am, etc.,

Harley Street, W., Dec. 21st. WILLIAM DUNCAN.

QUININE FOR THE ASHANTI EXPEDITION.

SIR,—Now that our troops have begun their active march to Ashanti, it will be the duty of the Commissariat to see to it that they are all supplied with quinine. Upwards of fifty years ago, when acting as surgeon on the Welland Canal in Ontario, Upper Canada, there were many thousand navvies employed in digging and widening the canal, and of that large number of Irishmen who were exposed to the malaria of the swamps between Toronto and the Chipaway Creek all along the level of the canal where there were hundreds of wooden shanties, I had large numbers daily under my care for ague; often hundreds were sick at one time. The point I wish to emphasise is that of the contractors and officials who were not exposed to the wet and sun, myself amongst the number, all who lodged at the hotel at Port Robinson duly took their morning dram with 5 grains of quinine, not one suffered from the ague. I attribute their exemption from the attack which laid up so many of the navvies to their daily dose of this powerful medicine.—I am, etc.,

Brodick, Arran, Dec. 19th. J. A. JAMIESON, M.D.

THE DISCOVERY OF THE ANTITOXIN OF SNAKE POISON.

SIR,—No one has accused Professor Fraser of claiming priority for his results published in June, 1895, over those of Calmette, published in May, 1894, and over those published by the same investigator in April, 1895. Such a proceeding on Professor Fraser's part would, indeed, have been rash.

What I have drawn attention to is that when publishing a detailed account of experiments identical with those already published by Calmette, and when drawing conclusions from them similar to those already formulated by Calmette, he omitted to refer to Calmette's published work in such a way as to fairly direct attention to the fact that he (Fraser) had been completely anticipated by the French observer. I showed that this had led other persons not conversant with the progress of this branch of scientific inquiry to claim for Professor Fraser the priority which it would certainly have been unwise for him to have claimed for himself.

I supposed that Professor Fraser would have been glad of the opportunity of expressing regret for his omission, regret which others must feel, though apparently he does not. The theory put forward by Professor Fraser—that it is not usual in communications to the proceedings of a learned Society extending to twenty-seven pages octavo in length, to give more than the very briefest allusion to the latest work on the subject, carried out and published by another worker and anticipating all that you have to say—is not, I think, admissible.

Especially, it seems to me, is it unusual that the reference to an immediate predecessor's work should be so brief as to appear contemptuous and so expressed as to be actually misleading (even when read by experts) in regard to the total absence of novelty in the experiments and conclusions which you are about to record as your own work.

Professor Fraser read one paper to the Royal Society of Edinburgh on June 3rd, and a second on the same subject on July 15th. It is impossible to imagine how many such "preliminary" statements Professor Fraser would allow himself to publish and how long a time he would allow to lapse before making the statement, which one would have thought should have been "preliminary" to them all, namely, that the experiments have been already made, and the results published by Calmette.—I am, etc.,

Athenæum Club, Dec. 22nd. E. RAY LANKESTER.

LORETIN: A POSTSCRIPT.

SIR,—I am forced to supplement my paper on Loretin in the BRITISH MEDICAL JOURNAL of December 21st by pointing out a peculiar quality which the six months' experience gained since the July meeting has shown me it possesses. While taking first rank as a non-poisonous, non-irritating, odourless antiseptic and deodorant, I find that when dusted on a raw surface it relaxes the blood vessels. Hence the wound is prone to become subsequently filled by a clot, which, however, does not suppurate, as would be the case under almost any other circumstances, but is eventually reabsorbed. The incident is not desirable, and I now apply loretin only to the skin surface, never dusting it into a cavity unless there be special risk of suppuration, and then only very sparingly. I would take leave to add that long experience has shown me the ideal condition in which to leave any operation wound to be the utmost attainable maximum of dryness, avoiding all swabbing with fluids, however antiseptic. It is probable that the efficacy of iodoform, loretin, and the like is very largely due to their capacity for absorbing moisture, without which microbe proliferation does not occur.—I am, etc.,

Gloucester Place, W., Dec. 23rd. HERBERT SNOW.

INDIAN SANITATION.

SIR,—In the BRITISH MEDICAL JOURNAL of November 9th just received, a copy of an address given by Mr. Ernest Hart before the meeting of the South Indian Branch at Madras on February 9th, 1895, is published, and a note is added to explain why it seemed desirable to publish this now. In the same issue with the proceedings of the Council a protest from the South Indian Branch is also to be found.

I desire to point out that the erroneous statements referred to in this protest do not exist in the address now published, but in that published by Mr. Hart before the Public Health Section of the Association at its late meeting in London. If anyone who voted in this Section of the Association meeting, or who is interested in the matter, will compare the address now published with that to be found in the JOURNAL of August 3rd last, he will have no difficulty in understanding why the members of this far-away Branch have read the latter with much surprise, and should have entered a vigorous protest against any resolution founded on it. Shortly, in the one address nothing can be said good enough for the work of the medical services in India, and in the other nothing sufficiently severe.—I am, etc.,

Madras, Nov. 27th. A. M. BRANFOOT, M.B. Lond.

*** Warm praise of individuals is by no means inconsistent with severe condemnation of the system under which they are compelled to act. The two addresses were printed in order to afford the means for comparison which our correspondent suggests.

THE MALARIAL PARASITE.

SIR,—While agreeing with Dr. Daniels's remarks contained in his letter in the BRITISH MEDICAL JOURNAL of October 26th last, that in many cases of malarial fever terminating fatally very few, or even no, intracorpuscular bodies may be found in the peripheral circulation, whilst one organ such as the brain may contain a large number of corpuscles infested with parasites, I must take a decided objection to the last paragraph of his letter.

My own experience of malarial fever in British Guiana, so far as it at present goes, is shortly as follows:

1. The large majority of cases belong to the tertian type—mild and malignant.

2. It is in these cases of mild tertian fever exceedingly easy to demonstrate the typical parasite; and it is no exaggeration to say of this particular parasite, "a child may recognise it." Nor would it be a vain boast on my part to say that in any such case I never fail to find the parasite when looked for, and usually after the examination of one slide only of fresh blood.

3. It is much more easy to demonstrate the parasites in the ordinary cases than in the more severe forms, obviously because the tertian and quartan parasites are very much bigger than the quotidian and malignant forms.

4. Cases of Marchiafava's and Bignami's summer-autumn fevers, with their typical parasite, occur here throughout the year, and therefore the term "summer-autumn" should be abolished, and that of "malignant tertian" adhered to. The reason why I obtain different results from those of Dr. Daniels is, I think, contained in paragraph No. 3 of his letter.

He admits that in a crowded hospital only the cases of urgency are admitted; and his experience, I believe, is derived almost wholly from his observations in the crowded Public Hospital of Georgetown, Demerara.

My experience is almost entirely derived from cases occurring amongst East Indian immigrants on sugar estates, and no case of fever is denied admission to an estates hospital under my control. Also my experience is rural as opposed to Dr. Daniels's urban experience. Consequently I am in a position to study all classes of fever, from the mildest ephemeral fever to the most malignant fatal type.

I am very sceptical as to there being "many fevers in warm climates which are not malarial, and which do not fall into line with the recognised types"—at any rate so far as British Guiana is concerned. Thanks to Laveran's brilliant discovery, however, we shall soon be able to discover such fevers if they exist.

I may add that I am keeping chart records of such cases as time permits me to go into, on the admirable plan suggested some time ago by Dr. Patrick Manson.—I am, etc.,

A. T. CHEARD,
British Guiana Medical Service.

Demerara, Nov. 27th.

A THEORY OF OXALURIA.

SIR,—In the BRITISH MEDICAL JOURNAL of December 14th, p. 1407, there is a report of a paper on Oxaluria which I read at the Edinburgh Medico Chirurgical Society. As there are

several inaccuracies in that report, I venture to write and point them out.

1. I did not state that calcium oxalate was found "in octohedral form and in dumb-bell crystals, the latter soluble in acetic acid." What I did state was that calcium oxalate was seen in the urine in one form only, that being as octohedral crystals, and that the dumb-bell crystals found in urinary sediments being soluble in acetic acid were not composed of oxalate of calcium.

2. As to the precipitation of oxalate of lime in urine, I said that it might be due to the presence of an excess of either of these substances, and I explained why I considered that it was to excess of oxalic acid and not to excess of lime that it occurred.

3. A diet free from oxalic acid abolished the excretion of oxalic acid, not merely caused a "deficiency in excretion."

4. I stated that the average excretion of oxalic acid in urine was 17.2 mg. per diem.

5. The report mentions the two factors influencing the excretion, which I stated, but does not state that these were both found to increase the excretion.

6. The symptoms of "oxaluria," when critically considered along with the physiology of the excretion of oxalic acid, and with the results of treatment were shown to be a strong argument in favour of the theory that cases which have been described as "oxaluria" were really cases of hyperacid dyspepsia.

The theory of the excretion of oxalic acid in urine which I supported is (1) that it is normal and constant; (2) that it is dependent on the absorption of oxalic acid, oxalic acid being a constituent of the common food stuffs; (3) that oxalic acid is not produced in the metabolism; (4) that a precipitation as calcium oxalate occurs very frequently in healthy urines, and indicates the presence of a comparative excess of oxalic acid; and (5) that the presence of calcium oxalate in urine as a diagnostic sign is valueless.—I am, etc.,

Edinburgh, Dec. 14th. JAMES C. DUNLOP.

MEDICAL MEN AND POLICE FEES.

SIR,—Being a medical practitioner in a very poor district in London, not near any hospital, and a considerable distance from the divisional police surgeon, I receive not infrequently a "police call." Now for some time past I have had a difficulty in getting the usual "certificate for surgeon's charges," and have either had to call at the police station or write for it, and sometimes my claim has been disputed. Quite recently I had a night call, the constable coming to my house stating that he was afraid a person was dying in the street, and I returned with him at once to the case. The next day, instead of bringing me the usual certificate for attendance, he left a slip of paper bearing the name and address of the patient, and said that the person would come and see me, which he did some three days afterwards. I told him the police fee, and asked him if he could pay it, and he said No, as he was very poor and out of work at the time, and could not possibly pay more than one third the amount, so I declined to take any money from him.

As you are doubtless aware, all these cases are urgent, and there is not time either to send for the divisional surgeon or convey the case to hospital, so the policeman walks into one's surgery or pulls one's night bell, and demands services at once for any length of time whatever one's engagements. If the police authorities afterwards find that a person is able to pay, surely it is for them to look after it, and not leave the medical man anything they choose to offer.

Of course, when any accident occurs, or anyone is taken suddenly ill in the street, there are half a dozen people off at once for the nearest medical man, stating they have been sent by the policeman, and even if the police have charge of the case, my experience has been that the first greeting from the constable is, "I did not send for you, Sir."

I have recently spoken to several medical men on this subject of police calls, and find they have exactly the same grievances; and it seems to me that if we got four questions satisfactorily answered, we should know better how to deal with them:

1. What constitutes medico-legally a police case?

2. If a constable requires medical aid, is he supposed to apply personally for it, or send a written request?

3. Is a medical man bound to respond to a police call, and what would be the consequences if he refused?

4. When the police call for the services of a medical man, is he legally entitled to the usual police fee?

I have addressed the first two questions more than once to the authorities at Scotland Yard, but have received no reply; and as I cannot get the information from the source whence it should come, I trust it will be supplied through your valuable columns.—I am, etc.,

December 9th. M.D.

ANÆSTHETICS IN THROAT CASES.

SIR,—During the administration of chloroform and also of ether for operations on the mouth and throat it has often appeared to me that the muscles which close the jaws are later in relaxing, and require, in fact, a condition of more profound general narcosis than is required for the relaxation of the body muscles generally.

If this observation is correct, the fact is one of the very greatest practical importance, because it may serve to explain in part the danger of anæsthesia, and especially of chloroform anæsthesia, in such operations as the removal of adenoid growths.

If the administrator pushes the anæsthetic till the muscular relaxation allows the mouth to be easily opened, there is great danger that the respiratory centre may be so depressed that the cough reflex will be abolished, and—if chloroform is being administered—the heart so depressed in addition, that suffocation may occur from very slight causes, such, for instance, as a very little blood entering the trachea. Death may then occur quite suddenly, essentially from asphyxia, but from asphyxia so masked by the action of the anæsthetic that there will be no dyspnœic movements or cyanosis, the heart stopping, apparently, simultaneously with respiration.

It appears to me, therefore, that in operations on the throat the patient should be regarded as "ready" when the skin reflexes are abolished, and the limb muscles relaxed; but that if some muscular resistance to the opening of the mouth occurs, it should not be regarded as an indication for pushing the anæsthetic.—I am, etc.,

ALEXANDER B. BOYD, M.B. Oxon.

Christchurch, New Zealand, Oct. 30th.

MEDICAL TITLES QUESTION.

SIR,—It was the earnest desire of the late Sir George Paget, M.D., K.C.B., F.R.S., a former President of the General Medical Council, to see legislation accomplished which would settle the medical titles dispute. He considered it the most important duty which could engage the attention of the General Medical Council, and he was instrumental in inducing the College of Physicians to pass their resolution on the subject.

It appears to me that the difficulty should most appropriately find its solution in the efforts of the parliamentary representatives of the Universities, assisted by the General Medical Council. Finding the Dublin University electors bringing out such a strong candidate as Mr. Lecky, I wrote to him on the subject, and the following information will no doubt be interesting to your readers:

In the course of a correspondence, illustrating from my own case the injustice complained of, I wrote: "I would have been content to remain for the time without becoming a doctor of medicine if I could have practised on equitable terms with other practitioners who were not doctors of medicine, but most of such practitioners placed themselves at an undue advantage over me by assuming—in spite of official medical opinion—the title of doctor. I therefore became a doctor of medicine at a cost of time, expense, and extra study to enable me to conscientiously compete with practitioners who had not given this extra study, expense, and time. If official medical opinion be right, it should be legally enforced, but a clause might be added, exempting from the operation of the Bill practitioners already registered. If official medical opinion be wrong, then Parliament should by statute authorise the title of doctor for all qualified practitioners. In either case legislation is required or the injustice will continue."

Mr. Lecky, in reply, stated that "he hoped to consider the

matter very carefully and favourably when it was introduced into Parliament, as it, no doubt, would be by some experienced member speaking on behalf of the medical profession."

That opinions may differ as to the general lines and details of a Bill is natural, but I venture to hope that I have stated the case, proving the necessity for a settlement sufficiently clearly to establish a consensus of opinion among authoritative bodies that, whichever direction it may lie in, a remedy must be found.—I am, etc.,

Liverpool, Dec. 3rd. GLYNN WHITTLE.

TREATMENT OF MALIGNANT TUMOURS BY TOXINS.

SIR,—The publication of the paper of Dr. James Swain in the BRITISH MEDICAL JOURNAL of December 7th, on the Treatment of Malignant Tumours by the Toxins of the Erysipelas Streptococcus, in which he records an unsuccessful case, induces me to place on record the fact that I have lately used this method of treatment in two cases. One was a boy whose leg I amputated for sarcoma of the tibia, and who developed six months later a secondary growth in the sigmoid notch of the lower jaw, which extended too deeply for removal. The injections were commenced early in the growth of the tumour, but it grew rapidly during their use, and finally attained an enormous size before death. The second case is still under treatment, and I will reserve any record of it until a future time. I have abstained from the publication of the first case, as it is impossible to judge of the value of this method of treatment by one or two cases only, seeing that not more than nine out of Coley's thirty-eight cases of sarcoma were cured, and I explain to patients to whom I propose the method that only a quarter of the cases have been cured by the injections in Coley's hands. The evidence of its beneficial action in carcinoma has not been strong enough to induce me to advise its trial in such cases. I would, however, call attention to the fact that the "reactions" following the injections are often severe; and although I have not had any suppuration (as in Dr. Swain's case) as a result of the injections, I have had great local swelling, with redness and œdema of the skin, lasting for a few hours after the injections when they have been made into the subcutaneous tissue in the neighbourhood of the growth, rather than into the growth itself. In both my cases, although I began with the smallest dose, the first general reactions were very severe, reminding one of the most marked reactions which occurred during the tuberculin treatment.—I am, etc.,

Clifton, Dec. 7th. CHARLES A. MORTON.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice. The last post on Wednesday is the latest by which these announcements can be received.

A MEDICAL OFFICER who is going home next trooping season is willing to exchange either with a Surgeon-Captain or Surgeon-Major to remain another year in India.—Address, stating terms, to Medicus, care of William Watson and Co., Bankers, 8, Hornby Road, Bombay.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON LIEUTENANT-COLONEL R. H. CAREW, D.S.O., becomes entitled to promotion to the rank of Surgeon-Colonel by the recent death of Surgeon-Lieutenant [illegible] Green.

Surgeon-Major GEORGE EDWARD DOBSON, M.D., died in Dublin on November [illegible], at the age of [illegible]. He was appointed Assistant-Surgeon, March 31st, [illegible], Surgeon, March 1st, [illegible], and Surgeon-Major, March 31st, [illegible]. He quitted the service on retired pay, April 28th, 1888. He was engaged in the Zulu war in [illegible], and had received the South Africa medal.

THE ASHANTI EXPEDITION.

SURGEON-COLONEL W. TAYLOR, in command of the Medical Department, landed at Cape Coast Castle on December [illegible], and with Sir Francis Scott and Staff inspected the hospital in course of construction at [illegible] Hill. The Commander-in-Chief declared himself well pleased with the progress of the work.

Surgeon W. R. Henderson has been appointed Medical Officer in Charge of the Colonial Forces.

The hired transport *Manila* from Gibraltar, with the 2nd Battalion West Yorkshire Regiment, arrived all well at Freetown, Sierra Leone, on December 18th, and the P. and O. *Coromandel*, with the special service Corps for Ashanti, including 8 officers and 254 men, and 16 Royal Engineers, and one man of the Army Pay Corps, arrived on December [illegible] en route for the Gold Coast.

The West India Regiment landed at Cape Coast Castle on December 20th, with 30 men sick, also 4 white soldiers on the sick list; 3 of the latter have recovered, but 24 men of the West India Regiment, according to accounts dated December 22nd, are now down with [illegible]. None of the cases are dangerous.

The ships *Manila* and *Coromandel* sailed from Freetown, Sierra Leone, for Cape Coast Castle on the night of December 22nd.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

THE following members of the School have recently passed the proficiency examination for Volunteer medical officers, conducted by the Army Medical Staff at the headquarters of regimental and other districts, thus earning the higher grant for their corps, and becoming entitled to promotion after completing the necessary period of service:—Surgeon-Lieutenant-Colonels F. W. Humphreys, V.D., F.R.C.S., [illegible] Middlesex (The Customs and Docks) Rifle Volunteers; T. E. [illegible], V.D., M.D., 1st North Riding of Yorkshire Volunteer Artillery; A. Wilson, V.D., 2nd Volunteer Battalion Northumberland Fusiliers. Surgeon-Majors T. F. Fleetwood, M.B., F.R.C.S.I., Victorian Military Forces, South Australia; F. [illegible], M.D., 3rd Middlesex Rifle Volunteers. Surgeon-Captains P. Stewart, 1st Volunteer Battalion Northumberland Fusiliers; H. G. Ashwell, Robin Hood Rifle Volunteers; W. K. Wood, M.A., M.B., 1st Volunteer Battalion Cheshire Regiment; H. Marriott, M.D., 4th Volunteer Battalion Cheshire Regiment; R. Batterbury, M.D., 2nd Volunteer Battalion Bedfordshire Regiment; H. J. Mackay, M.D., 2nd Volunteer Battalion Wiltshire Regiment; J. W. Hodgson, 1st Devonshire Volunteer Artillery; J. S. Forrest, 2nd Northumberland (Percy) Volunteer Artillery. Surgeon-Lieutenants P. M. Yearsley, F.R.C.S., 16th Middlesex (London Irish) Rifle Volunteers; G. Herschell, M.D., M.R.C.P., 22nd Middlesex (Central London Rangers) Rifle Volunteers; F. J. Warwick, M.B., and A. C. Tunstall, M.D., F.R.C.S., Bearer Company East London Volunteer Brigade; T. Brushfield, M.D., and F. [illegible], Bearer Company Surrey Volunteer Brigade; R. E. South, 2nd Volunteer Battalion Lincolnshire Regiment; S. A. Mugford, 2nd Volunteer Battalion Essex Regiment; G. McIntyre, M.B., 4th Volunteer Battalion Scottish Rifles; G. H. Ward-Humphreys, 1st Gloucestershire Volunteer Royal Engineers; H. W. Laing, M.D., 1st Fifeshire Volunteer Artillery; T. Forrest, M.B., 3rd Lanarkshire Rifle Volunteers; W. J. Sprott, M.D., Robin Hood Rifle Volunteers; J. J. O'Hagan, M.B., 5th (Irish) Volunteer Battalion The King's Liverpool Regiment; E. W. J. [illegible], 4th Isle of Wight Princess Beatrice's Volunteer Battalion the Hampshire Regiment; R. Jackson, M.B., 2nd Lancashire Volunteer Royal Engineers; J. H. Stacey, 1st Volunteer Battalion Norfolk Regiment; J. R. Stevens, 2nd Volunteer Battalion (Princess Louise's) Argyll and Sutherland Highlanders; R. P. Mackenzie, M.B., 1st Shropshire and Staffordshire Volunteer Artillery; W. A. Bond, M.A., M.D., M.R.C.P., 2nd London Rifle Volunteers; A. Thorne, 1st Cinque Ports Rifle Volunteers; C. Vise, M.D., 1st Volunteer Battalion the Queen's Own Royal West Kent Regiment; E. Odell, 1st Volunteer Battalion Bedfordshire Regiment; W. G. Mitchell, M.A., M.D., 5th Volunteer Battalion The Gordon Highlanders; H. H. du [illegible], 1st Dorsetshire Volunteer Artillery; R. [illegible], M.B., 2nd Volunteer Battalion Durham Light Infantry; S. Lodge, M.D., 3rd Volunteer Battalion The Prince of Wales's Own West Yorkshire Regiment; W. Murdoch, M.B., 3rd Volunteer Battalion The King's Own Scottish Borderers; James Taylor, M.D., 5th Volunteer Battalion The Gordon Highlanders; E. W. St. V. Ryan, 17th Middlesex (London Irish) Rifle Volunteers; L. E. Shore, M.A., M.D., Cambridge University Rifles.

THE "DRESSING PACKET" IN FIRST AID TO THE WOUNDED.

DE SANTI (*Semaine Médicale*, October 2nd, [illegible]) gives an historical and critical survey of the means adopted in ancient and modern warfare for affording the first aid to the wounded. He considers that the medical equipment of the army of the future will consist of a mule and a pair of medical canteens per battalion in the first line, and in the second a large number of sanitary formations specially arranged with a view to the maximum of convenience and portability. These latter will be the true field hospitals, the former being intended to serve as a moral support, more adapted to give courage than help. Above all the wounded soldier will no longer have to trust entirely to the ambulance; he will be enabled first of all to help himself. This is the object of the packet of dressings now used in the French and German armies. Three great dangers threaten the soldier in the field. The first two, injury to a vital organ or of a great vessel, cause the immediate mortality in battle. They are unpreventable, and affect 3 per cent. of the combatants, involving a fifth to a quarter of the wounded. The third danger—septic infection of the wounds, which cause 90 per cent. of the mortality—can be avoided by attention to two things—cleanliness and rest. It was formerly thought possible to ensure these by preserving the wound from manipulation until the injured man had been brought before a surgeon equipped with all the resources of the antiseptic treatment. This was attempted by the use of the diagnostic card, white for severely wounded and non-transportable cases, red for others, on which the first surgeon who saw the patient could write down his diagnosis and save further interference till the main hospital was reached. This method was, however, found in practice to be incomplete and useless, and the only satisfactory solution of the problem is seen to be the provisional dressing. This is effected by means of the packet devised by the German surgeon [illegible]. It consists of a little bag always to be carried in a definite and easily accessible pocket, and having on the outside clear and concise instructions for the use of its contents. These comprise (1) a wad of [illegible]; (2) a compress of [illegible] gauze; (3) a piece of waterproof tissue; (4) a fine cotton bandage, which has been steeped in [illegible]; (5) two safety pins. All these elements can be divided so as to be used for two wounds. The soldier must be specially cautioned not to open the packet beforehand, to manipulate the contents as little as possible, to avoid touching the wound with his hands, and to keep it as much as possible from contact with his clothes and above all with the soil. De Santi considers that a valuable addition to this packet would be an elastic band

age or ligature, preferably an india-rubber ribbon which could be worn over the shoulders like braces, or round the waist as a belt. By this means the dangers of hæmorrhage would be greatly reduced, leaving only the wounding of a vital organ as a residuum not to be eliminated.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MIDWIFERY ENGAGEMENTS.

His Honour Judge Edge delivered judgment at the Totnes County Court on December 11th in a case heard at the last Court, in which Dr. Woolridge of Harbertonford, sued A. Willing, publican, of Ashprington, for 5 guineas professional fee. Plaintiff was engaged by defendant to attend to his wife in her confinement, but defendant actually called in another medical man. The question was whether plaintiff was entitled to recover his fee. No authorities were cited, said His Honour, to help him in coming to a decision, and he had to consider the case upon the usual principle where there was a contract. In the present case there was a contract which was broken by defendant. It was perfectly clear that plaintiff was not entitled to his full fee because he had not rendered the services, but he was entitled to some compensation because he had been deprived of his opportunity of making a profit. Looking at the circumstances, he thought the justice of the case would be met by making an order against defendant for 2 guineas, half the full fee claimed.

POISONING BY MISADVENTURE.

A BIRMINGHAM manufacturer died recently, from taking strychnine supplied to him by a retail chemist. It was shown at the time that the retail chemist supplied only that which had been furnished to him by Messrs. Wyleys, wholesale chemists. At the present Birmingham assizes an action was entered by the widow of the deceased to recover damages. Both the wholesale firm and the retailer were sued. When the plaintiff's case was opened counsel stated that terms had been arranged. The record was withdrawn, Messrs. Wyleys paying the plaintiff £2,500 and taxed costs, the retailer paying his own costs. Mr. Jelf, for Messrs. Wyleys, explained that how the case arose was a mystery, and the defendants desired to act honourably. Mr. Justice Day expressed his satisfaction with the terms as stated.

HYGIENE AND ETIQUETTE.

RATIONE NON IRA asks for an opinion on the following: A. and B. see a case in consultation which they diagnose as scarlet fever, notify it as such to C., who is medical officer of health, and also physician to the hospital. The patient is seen the same night by C., and removed to the hospital the following day, where it remains under C.'s care for thirty one days, when it is sent out at the request of C., and is taken home in a cab taken at random from the cab stand. A. is again called in to see the case, and finds the patient desquamating freely. B. is asked to see the case again, and he also decides that the patient is desquamating. A., acting on the advice of B and D. (another practitioner), writes to the sanitary inspector calling his attention so that the necessary precautions should be taken, and also that the cab may, if possible, be found and properly disinfected. B., who also saw the case after it came from the hospital, was of opinion that the patient was desquamating. Would you say that there had been a breach of etiquette on the part of A. for not writing to C., the medical officer (with whom he is not on friendly terms), instead of to the sanitary inspector, whose duty it was to look after the disinfecting of the cab?

*** An unbiassed review of the points involved in our correspondent's communication leads us to the conclusion that, in view of the assumed urgency for the disinfection of the cab, fortified moreover by the deliberate opinion of the two old experienced practitioners B. and D., he acted prudently in requesting the attention of the sanitary inspector to the case in question; at the same time, and notwithstanding the interruption of friendly feeling between C. and himself, we are of opinion that it would have been ethically judicious to have transmitted to the medical officer of health (C.) transcript of the note addressed to the sanitary inspector.

MIDWIFERY EMERGENCIES.

NEMO writes: A. and B. (surgeons) live in a working class village. A. is taken ill, and is obliged to go from home; his assistant does his work in his absence. The latter is called to a confinement; things go on slowly, and he finds it necessary to deliver, but does not like applying the forceps. He sends for B. (who is friendly with A.) to come and help him. B. delivers with forceps, and sees the patient four times afterwards at the assistant's request. All goes well. A. comes back, and B. asks about his fee, and suggests a division (guinea fees are the rule), that is, 10s. 6d. for each. A. says, "Oh, no, send your own bill, they should pay you." What is the proper thing in this case?

*** The following rule is that by which our correspondent's case should be governed, to which we deem it well to state that if A. or B. will refer to the *Medico-Chirurgical Tariff*, it will be found that an extra half-fee is suggested as a fairly just one for a case necessitating delivery by forceps:

"When a practitioner is called in, or otherwise requested to attend, at an accouchement for another, and completes the delivery, or is detained for a considerable time, he is entitled by custom (except in the case of illness, etc., provided for by Rule 3) to one-half of the fee; but on the completion of the delivery, or on the arrival of the pro engaged accoucheur, he should resign the further management of the case. In a case, however, which gives rise to unusual fatigue, anxiety, and responsibility, it is right that the accoucheur in attendance should receive the entire fee, etc."—*Code of Medical Ethics*, Chap. II, Sec. 5, Rule 12

CANVASSING FOR SUCCESSOR.

NO. 20 writes: A., holding several appointments, sells his practice to B. Is it unprofessional on A.'s part to endeavour to obtain the appointments for B. by canvassing, etc., A. knowing that some of the medical men in the town are seeking the appointments, and who are also canvassing?

*** Under the circumstances related we see no valid objection to A. canvassing on behalf of B.; indeed, it would seem only natural in his own interest as well as that of B.

THE RED LAMP.

L. asks if there is anything objectionable in his having a plain red lamp attached to the wall of the house inside the garden near the front door.

*** Although there is no written ethical rule condemnatory of the use of a red lamp as proposed, nevertheless any such deviation from general prescription and usage is, as a rule, viewed by the profession with more or less distrust, and almost invariably induces disparaging remarks, and should therefore be carefully avoided. If, however, the locality of the house be so dark as to render more light desirable, we would suggest that an ordinary or other selected gas lamp, with or without a reflector, should be so arranged as to throw the light upon the door or nameplate, or, as an alternative, to paint or otherwise display the name on the glass of the fanlight over the door illumined from behind by a gas jet.

EMPLOYERS AND ASSISTANT: FEES OF WITNESS.

F. M. B. writes that he engaged an assistant who signed the usual bond "to devote the whole of his time and attention in assisting him to carry on his profession, etc." We gather that while acting as assistant the latter attended at the magistrate's court to give evidence in a case in which the defendant was committed for trial, and the assistant was bound over in his own recognisances in the sum of £10 to give evidence at the sessions. The question asked is as to who is entitled to the fees.

We do not quite understand whether the fees in question are those for giving evidence before the magistrates or at the sessions; but we think that if at the time the assistant attended to give such evidence he was in the employment of our correspondent, the fees belong to the employer. It may be taken as a general rule that the earnings of an employee (in the time of the employer) belong to the latter; and we are not aware of any custom in the medical profession which overrides this rule.

M. C. asks a very similar question to that of "F. M. B.," and he will gather our opinion on the subject by referring to the reply given to "F. M. B."

REMOVALS.

A MEMBER writes: If a medical man is removing from one part of a town to another, is there anything unethical in replacing the plate on the gate of the house he is leaving for a few weeks with one such as this:

Dr. ———,
(Removed to ——— Street).

I have seen it done in the London suburbs.

*** There can be nothing unethical in the course proposed. It seems to be the custom in London.

A MEMBER of the British Medical Association and a correspondent signing himself "Lex" have sent us medico-ethical questions, but do not authenticate their letters.

T. G. K.—A courteously worded note to the assumed offending practitioner, we need scarcely observe, called for a like reply; and K.'s omission to respond thereto leads to the inference that he had no defensible explanation to offer, or was more or less imperfectly acquainted with the courteous obligations of life.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THIRD M.B. EXAMINATION.

Part II. Pathology and Medicine.—Bennett, B.A., Joh.; Bliss, B.A., King's; Burnett, B.A., Joh.; Coombe, M.A., Gonv. and Cai.; C. D. Edwards, B.A., Joh.; E. L. Evans, B.A., Trin.; Giles, B.A., Pet; R. J. E. Hanson, Trin.; Hobday, B.A., Christ's; Judd, B.A., Non Coll; Pentreath, B.A., Queens'; J. A. K. Renshaw, B.A., Trin.; J. Smith, B.A., Jes.; Sworder, B.A., King's; C. A. H. Thomson, B.A., Christ's; Villy, B.A., Joh.; F. J. Watson, B.A., Trin.; A. Walker, M.A., Pemb; O. K. Williamson, M.A., Trin.; Woolley, B.A., Christ's.

UNIVERSITY OF EDINBURGH.

THE various medical classes rose for the Christmas recess on Friday, December 20th, and will meet again on Tuesday, January 7th.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, December, 1895. The following candidates passed in *Surgery*.—S. B. Blomfield, Westminster Hospital; E. C. Bond, Royal Free Hospital; A. P. Coker, Middlesex Hospital; F. C. Langford, Charing Cross Hospital; A. C. McLean, King's College Hospital;

J. G. Owen, Charing Cross Hospital; C. J. Palmer, Birmingham and Liverpool; F. E. [illegible], [illegible] University; E. T. V. von Himpe, Royal Free Hospital; S. J. Wareham, Charing Cross Hospital.

Medicine, Forensic Medicine, and Midwifery.—T. Jones, Manchester; A. T. Morgan, Bristol; A. C. Thornton, St. Thomas's Hospital.

Medicine and Forensic Medicine.—P. R. Wallis, University College Hospital.

Medicine.—R. Goulden, Manchester; G. G. B. Hein, St. Thomas's Hospital; W. A. Montgomery, St. Thomas's Hospital; J. H. R. Pigeon, Bristol.

Forensic Medicine and Midwifery.—E. R. Bowen, Brooklyn and Bristol.

Forensic Medicine.—H. Clapham, Sheffield; J. Hepple, Leeds.

Midwifery.—C. C. Preston, Manchester.

To Messrs. [illegible], Coker, Hein, Hepple, Langford, Montgomery, Owen, Palmer, Pigeon, Preston, Wareham, and Miss von Himpe was granted the diploma of the Society.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

THE TYPHOID EPIDEMIC AT DUNBAR.

THIS epidemic shows few signs of abatement. It appears that many of the inhabitants, in face of the repeated advice of the local authorities, persist in using the contaminated water unboiled. The mortality is already 17 per cent. of the cases. We understand that Sir Henry Littlejohn's report has been received by the authorities, who ought to have published it *in extenso*. The reason why they have not done so is alleged to be the fear of destroying the reputation of the place as a summer resort. If this be the reason, it is a most ill-advised one. It would have been a thousand times better to have taken the public into full confidence in a matter of this kind, and to have indicated the way in which the local authority meant to make the recurrence of such an appalling state of affairs impossible. We understand that Sir Henry Littlejohn has absolutely condemned the water supplied to the place. It appears that the sewage of two farmsteadings and sundry cottages has drained into the spout burn or source of its tributaries from the first. Then later, apparently, the sewage from the caravan hospital with its typhoid patients. Steps are being rapidly taken to get a supply of water from a source beyond the possibility of such pollution, and it is expected that this will be available in the course of a month or so.

A SANITARY STAIN IN STOCKPORT.

IT augurs well for a sanitary district and for its sanitary officials when such outspoken utterances can be written and expressed as those which find place in the annual report of Dr. Charles Porter in 1894 in respect of the county borough of Stockport, concerning the matters of excrement disposal and removal. That a town of the size and importance of Stockport should seek to rid itself of its excremental and other household filth in the speediest and best fashion is to be expected, and therefore to read of the 5,000 or 6,000 privy pits still existing in the borough is rather startling. We learn that mills and large schools have these objectionable contrivances for storing excrement, and that some privies actually drain to the river or on to its banks in an offensive manner. Further, we learn that the pits are not watertight, that they are often situated near dwellings, and that in some instances they abut on the house walls, polluting the very foundations, and in almost all cases in the town give rise to extensive soil pollution. Moreover, the location of pits under the floors of living rooms is not unknown, and pollution of air, of yards and streets, of gullies, drains, and sewers is also mentioned as inseparably connected with the abominable system still so much in vogue. There are in Stockport some [illegible] houses, from the privies of which the contents can only be removed by cartage through the dwelling. Nor is this all, for we wonderingly read of the erection of 84 new buildings in 1894 with the nuisance-creating receptacles as adjuncts permitted in the town. This seems to us to be a death-blow to any comprehensive action for the abolition of these filth accumulators; at any rate, it will be if the course be persisted in during time to come. So far as we can gather there will be no excuse for continued permission to builders to construct privies for new houses. But the nuisance of these pits does not cease with their use, great as this is, since there is the added objectionable method of removal of their contents. The privies are generally of immense size, and whilst their cubic capacity is such as to necessitate only infrequent scavenging, it at the same time creates the dangerous elements of storage of fermenting filth, and thus of itself is distinctly dangerous to public health. Dr. Porter tells of pits emptied only at intervals of six and even twelve months instead of at fortnightly intervals. To some extent this fact can be gauged when we state that each emptying of a privy pit in 1894 meant on the average three loads of filth. The health records of Stockport show a persisting high infantile diarrhoea death-rate, and that for the ten years 1884-93 the typhoid fever death-rate was twice that of England and Wales, and that from diarrhoea was, compared with the whole country, as 121 is to 73 per 1,000 population. The excrementally polluted subsoil is an ever-present danger to the commonweal, and the method of cartage adopted in the town is such as to further and materially add to the danger of organic matter finding suitable breeding ground. The contents of the pits are not directly removed from the pits to the carts, but are actually removed in barrows on to the roadways, and thence placed in the carts—a method which commends itself as lending considerable aid to the disease-disseminating action of any specifically contaminated privy. Then, again, the scavenging is a costly as well as a disagreeable undertaking, and, as Dr. Porter says, its cost would go far to cover the expense of meeting half way the conversion of the privy system into the water carriage system, for which the borough seems now to be ready. We most sincerely hope that when Dr. Porter has next to report on the annual doings of his district it will be to say that his Council have wisely resolved to set about the thorough wiping out of this stain on their escutcheon, and that the necessary loan for the purpose has been obtained, in common with several large towns, such as Leicester, Leeds, and Sheffield.

PLENUM VENTILATION AT THE HUDDERSFIELD INFIRMARY.

AMONG the various alterations which have recently been made at the Huddersfield Infirmary is the introduction of Key's system of ventilation, according to which the air for the whole of the wards is drawn in at one spot, where it is washed and screened, warmed by passing over steam coils, and then driven by a fan 6 feet in diameter into the ducts leading to the different parts of the building. The air is delivered into the wards by upright shafts, and where it leaves the main ducts auxiliary heating coils are placed so that a certain variation of temperature can be secured at will according to what is required for each room. The air is extracted from the wards at the floor level. The system has now been in operation for two months, and is said to have so far given every satisfaction. The experiment will be watched with interest, and it is to be hoped that careful records will be kept of the amount of air which is driven by the fan and of the total expense. Much hinges upon this, and it is very desirable to obtain accurate records on the subject, for there is reason to believe that improved mechanical appliances have rendered the expense of mechanical ventilation much less than it used to be. There is a gradually growing experience as to the efficacy of mechanical ventilation, both in hospitals, schools, factories, mines, and public buildings, and if architects and hospital managers are once assured that it is reasonable and inexpensive, it is needless to say how enormously the planning of hospitals will be facilitated. It is conceivably possible that by aid of the fan the great cubic space which is now demanded in the interest of the patients may be found to be unnecessary.

DISRUPTION OF A COMBINED DISTRICT.

SINCE the death of Dr. Fox, who held the post of medical officer for the Mid-Cheshire district, efforts have been made to induce the urban and rural councils interested to join in the appointment of a medical officer for the same combined district. Difficulties, however, arose, and the combination is now regarded as entirely broken up. The [illegible] Rural Council and the Northwich Rural Council have appointed Dr. Garstang, of Knutsford, the former at a salary of £[illegible] and the latter at £[illegible] per annum. The Northwich Urban Council have decided to appoint an officer at £50 per annum, and the Winsford and Middlewich Councils will probably adopt the same course.

MEDICAL NEWS.

AT a meeting of the Border Counties Branch at Carlisle on January 10th, Professor Macewen, of Glasgow, will give an address.

A SUM of £3,200 has been granted to the Imperial Institute of Experimental Medicine, St. Petersburg, towards the expense of the preparation of diphtheria antitoxin.

A SCHEME for the establishment of an asylum for inebriates has been drawn up by the St. Petersburg Society for the Suppression of Intemperance, and has received the sanction of the Russian Government. The Society is collecting funds for the purpose.

THE dinner of the old Belfast medical students practising in and around Manchester was held in the Victoria Hotel, Manchester, on Tuesday, December 17th, Dr. J. Walton Browne (Belfast) presiding. There was a large attendance, and it is intended to make the dinner an annual function.

MRS. SARAH EDEN, the Warwickshire midwife who was sentenced to death at the last Warwick Assizes for the murder of Mrs. Sinister, who died after an illegal operation had been performed upon her, has been reprieved, with a view to her sentence being commuted to penal servitude for life.

INEBRIETY IN AMERICA.—The *Quarterly Journal of Inebriety* estimates the number of drunkards in the United States at what it apparently considers to be the "modest" figure of 1,600,000. As there are about 25,000,000 adults in the States, this means that 1 in every 15 citizens of the great Republic of the West is a slave to inebriety.

THE Alvarenga Prize for 1895 of the Medical College of Stockholm has been awarded to Count K. A. H. Mörner, Professor of Chemistry at the College, for an essay on "The Proteids and Albumen-reducing Substances in Normal Urine." The prize is of the value of about £61.

The *Art Annual* for 1895, published by Messrs. Virtue and Co., contains a full page etching of Luke Fildes's picture entitled "The Doctor."

The annual dinner of the Edinburgh Royal College of Physicians was held on December 19th. Covers were laid for 150. The function was not quite so prolonged as in some former years. The speeches were all fairly interesting, but there was no brilliant oration.

The annual Kitchen Concert was given by the residents of the Edinburgh Royal Infirmary on December 16th, and was as usual a success. The tradition used to be that former residents in and about Edinburgh were invited, that seems no longer to hold.

The Woman's Hospital, New York.—The fortieth anniversary of the foundation of this institution was held on November 21st. During the past year 927 patients were treated in the hospital, and 4,704 in the outdoor department. There were 48 deaths in the institution. The receipts from all sources amounted to 50,340 dollars, and the expenditure to 73,889 dollars.

Medical Students in France.—The constant increase in the number of medical students in France is proved by the following figures, taken from the report of the Budget Commission for 1896. They show the numbers inscribed on the official register on January 15th in each of the years named: 1891, 6,212; 1892, 7,069; 1893, 7,589; 1894, 8,897; 1895, 8,936.

Presentation.—Surgeon-Lieutenant-Colonel Baines, V.D., M.D., has been presented by the officers, past and present, of the 1st Middlesex Volunteers Royal Engineers with a silver bowl and illuminated address on the occasion of his retiring, after thirty-six years' service. The presentation was made by Field-Marshal Sir John Lintorn Simmons, K.C.B., the Honorary Colonel, on December 13th, after the annual distribution of prizes.

Medical Graduation in Germany.—The total number of candidates on whom the degree of Doctor of Medicine was conferred by the universities of the German Empire in the course of the academic year 1894-95 was 1,102; of these 516 were conferred by Prussian universities, and 586 by universities outside Prussia. The largest number of medical degrees (163) was conferred by the University of Berlin, next came Würzburg with 143, Munich being third with 139.

Royal Institution of Great Britain.—The lecture arrangements for the coming three months are the following: The Christmas Lectures on "Sound, Hearing, and Speech" (adapted to a juvenile auditory) will be six in number, given on Tuesday, Thursday, and Saturday, and commencing to-day (Saturday) at 3 P.M. They will be delivered by Professor J. G. McKendrick, of Glasgow. On Tuesdays in January, February, and March, Professor C. Stewart will lecture "On the External Covering of Plants and Animals: its Structure and Functions." In February Professor H. Marshall Ward will deliver three lectures "On some Aspects of Modern Botany." In February and March Lord Rayleigh, F.R.S., will give six lectures "On Light." Lectures will also be delivered by Mr. P. H. Wicksteed, by Bishop Barry, D.D., and others. The Friday evening lectures before Easter will be given by Lord Rayleigh ("More about Argon"), Professor Burdon Sanderson, Mr. S. Lee, Mr. J. J. Armistead, Dr. E. Frankland, Dr. John Murray, Mr. Binnie, Mr. W. S. Lilly, Professor T. R. Fraser, and Professor Dewar ("New Researches on Liquid Air").

MEDICAL VACANCIES.

The following vacancies are announced:

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House-surgeon, doubly qualified. Salary, £80 per annum, with board and lodging in the infirmary. Appointment for one year, but eligible for re-election. Applications to the Honorary Secretary, Oldbury Rectory, Bridgnorth, by December 31st.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, 74, West Street, Brighton.—House-Surgeon, unmarried, and under 30 years of age. Salary, £50 per annum, with furnished quarters and board, gas, coals, and attendance. Applications to the Honorary Secretary before December 31st.

BRISTOL INCORPORATION.—Medical Officer for the Workhouse at Stapleton; doubly qualified. Salary, £250 per annum, with residence and rates and taxes free, together with vaccination fees. Applications to J. J. Simpson, Clerk to the Guardians, 88, Peter's Hospital, Bristol, by December 31st.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn Road, W.C.—Assistant Registrars. Applications to Richard Kershaw, Secretary, by January 11th, 1896.

COUNTY BOROUGH OF CARDIFF.—Resident Medical Officer of the Brompton Hospital for Infectious Diseases, unmarried. Appointment for one year. Salary, £80 per annum, with board (without stimulants) and residence in the hospital. Applications to Dr. Walford, Medical Officer of Health, Town Hall, Cardiff, by January 1st, 1896.

COUNTY BOROUGH OF WIGAN.—Medical Officer of Health and Medical Superintendent of the Sanatorium. Salary, £235 per annum, payable monthly; must reside within the borough. Applications, endorsed "Medical Officer," to J. J. Charnock, Town Clerk, Municipal Buildings, Wigan, by January 8th.

DENTAL HOSPITAL FOR LONDON, Leicester Square, W.C.—Assistant Dental Surgeon; must be L.D.S. Applications to J. Francis Fink, Secretary, by January 6th.

DENTAL HOSPITAL FOR LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square, W.C.—Demonstrator. Honorarium, £50 per annum. Applications to J. Francis Fink, Secretary, by January 6th.

DEVON COUNTY ASYLUM.—Assistant Medical Officer; single. Salary, £120 per annum, with board, lodging, and washing. Applications to Arthur E. Ward, Clerk to the Visitors, 9, Bedford Circus, Exeter, by December 31st.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water.—Junior Assistant Medical Officer (Lady), for ladies' side. Applications to Dr. Phillipps, Virginia Water.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Four Clinical Assistants in the Out-patient Department, and Clinical Clerks to the In-patient Physicians. Applications to the Secretary by December 31st.

OWENS COLLEGE, Manchester.—Junior Demonstratorship in Physiology and Histology. Salary, £100 per annum. Applications to the Registrar by January 4th, 1896.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—Second Assistant Medical Officer for the Asylum at Bromley, Middlesex. Salary, £80 per annum, increasing £10 yearly to £100. Applications, on forms provided, to be sent to Robert Foskett, Clerk to the Managers, Bromley, Middlesex, E., by January 2nd.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone Road, N.W.—Surgeon to the Out-Patient Department. Applications to the Secretary, George Scudamore, by January 7th, 1896.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months, without salary, but board, washing, and lodging in the institution provided. Applications, endorsed "Assistant House-Surgeon," to J. H. Biddulph Pinchard, Secretary, 18, Hammet Street, Taunton, by December 31st.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea, S.W.—House-Surgeon to the In-patients; appointment for twelve months; must be F. or M.R.C.S.Eng. Honorarium, £50 per annum, with board and lodging in the hospital. Also House-Physician to the In-patients; appointment for eight months. Honorarium at the rate of £50 per annum, with board and lodging in the hospital. Applications to the Secretary by January 11th.

WESTMINSTER GENERAL DISPENSARY, Gerrard Street, Soho, W.—Resident Medical Officer. Applications to the Secretary by December 30th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Appointment for six months. Board, lodging, and washing provided. Applications, inscribed "Application for Resident Assistant," to the Chairman of the Medical Committee by December 30th.

YORK COUNTY HOSPITAL.—Assistant House-Surgeon, doubly qualified. Salary, £50 per annum, with board, rooms, washing, etc. Applications to Fred. W. Howell, Secretary and Manager, by January 1st, 1896.

MEDICAL APPOINTMENTS.

Buncombe, W. D., L.R.C.P.Lond., M.R.C.S., appointed Medical Superintendent of the City of London Union Infirmary.

Cameron, R. D., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of the Wallingford District of the Howden Union.

Carrn, Gerard, M.D., appointed Non-Resident House Surgeon to the Royal Ear Hospital, Frith Street, Soho.

Collins, W. C. G., M.R.C.S., L.R.C.P., appointed Medical Officer for the Aylesford District of the Malling Union.

Cooke, William H., M.D.Brux., M.R.C.S., L.R.C.P., L.S.A., appointed Resident Medical Officer to the Royal United Hospital, Bath.

DIARY FOR NEXT WEEK.

WEDNESDAY.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Dr. Stabb (introduced by Dr. Griffith) and others. Papers: Professor G. E. Curatulo (introduced by Dr. Griffith): On the Influence of the Removal of the Ovaries on Metabolism in connection with Osteomalacia. Dr. Leonard Remfry: The Effects of Lactation on Menstruation and Impregnation.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS

QUERIES.

A SUBSCRIBER asks if there is an Association of Railway Surgeons or Society of Railway Medical Officers in existence?

*** We are not aware that any such association or society exists. The medical officers of the Great Western Railway Co. have, we are informed, a private Association of their own.

THE INTERNATIONAL MEDICAL CONGRESS AT ROME.

DR. G. CRICHTON (Brixton, S.W.) asks for information about the *Transactions* of the Eleventh Congress International at Rome. I sent, he writes, P.O. about April, but have heard nothing. I sent also a postcard of inquiry, but received no reply.

THE PASTEUR FILTER.

DR. C. S. [illegible] (Lunecliffe, Lancaster) asks where the Pasteur filter can be obtained.

*** The Pasteur filter is made by J. Defries and Sons Limited, of Houndsditch, London, who would no doubt furnish a list of their agents on application.

ACID SALIVA.

A. B. C. would be glad of suggestions as to the treatment of erosion of the teeth in a rheumatic patient whose saliva, and chiefly the parotid, is persistently acid to litmus paper. The acidity is said by the dentist to be the cause of the erosion. The saliva is most acid on waking, slightly acid, neutral, or slightly alkaline towards midday, and acid [illegible]. [illegible], [illegible], and piperazine have been administered, and mouth washes of bicarbonate of soda tried without any permanent effect.

HOME FOR BOYS OF DEFECTIVE INTELLIGENCE.

A. D. asks to be recommended a suitable school or home institution in the north of England wherein two boys of dull intellect would be admitted. They are able to attend to themselves, but one suffers from nocturnal enuresis, and has done so from 3 years of age. This boy is [illegible] years of age, the other about 9. Their parents are able to pay.

*** Probably the best place for the two boys to be sent, as they must go to a school in the north of England, is the Royal Albert Asylum for Idiots and Imbeciles, Lancaster. All the private institutions which admit boys of dull intellect are situated, we believe, in the south of England.

SCARLET FEVER IN SCHOOLS.

PARENT asks whether the principal of a small school, having a few boarders and more day scholars, is justified in not notifying to the parents of the day scholars the occurrence of scarlet fever in one of her boarders. Directly the diagnosis was certain the child was removed to the isolation hospital. There had not been any careless exposure to infection to account for the case, nor could it be traced, and the onset was seven weeks after the commencement of term. It is asked further whether the parents ought not to insist upon a certificate from a competent person that the drains were not at fault, and whether, in case of refusal of this on the part of the principal, a parent would not be legally justified in withdrawing his child without the usual notice.

*** The principal ought to have informed the parents, and, under the circumstances, many other precautions besides removal of the patient were necessary, but examination of the drains is not among the most important in this particular, however desirable in itself. Few authorities would hold that faulty drainage is a sufficient explanation of an outbreak of scarlet fever, and the (concealed) occurrence of scarlet fever would be a stronger ground for immediate removal of a scholar than the absence of a drainage certificate. The question is one for a solicitor, and is not covered by any of the public health statutes.

PERVERSION OF TASTE.

DR. A. [illegible] [illegible] (Bath) writes: Amongst the numerous perusers of the BRITISH MEDICAL JOURNAL there may probably be some who have had a case or cases such as the following, and who might be able to throw some light upon the cause, anatomical or physiological. A lady, in good general health, between [illegible] and [illegible] years of age, consulted me regarding symptoms of a most distressing and disagreeable nature. She complained that for the last six weeks all food (without exception) when in the mouth produced a peculiar, nauseous, disagreeable, disgusting taste, something like that of decomposed meat, so bad that she is forced to eject it. This disgusting taste is principally confined to [illegible], and rarely produced by [illegible]. It is so bad that she dreads putting any food into her mouth, and is losing flesh. There is no sense of disagreeable odour accompanying the apparent perversion of the functions of the gustatory nerves. The tongue is clean, and there is no [illegible], nor [illegible] gastric [illegible]. I should add that the patient is [illegible], [illegible] and very nervous, and occasionally suffers from dyspeptic symptoms.

ANSWERS.

A. L. MARSHALL.—We have forwarded the enclosure sent together with a previous enclosure of the same kind to Dr. Bateman, the able and indefatigable Secretary of the Medical Defence Union, who we understand is in [illegible] communication with the police on the subject. We hope that this action will have a good effect.

J. R. P. might perhaps communicate with Dr. Milne Bramwell, [illegible] Street, Cavendish Square, W., who has had a good deal of experience in the matter referred to.

DISINFECTION AND BINIODIDE OF MERCURY.

DR. C. R. [illegible] ([illegible] Road, S.W.) writes: "R. J. C." and "D. H. B." should get the soloids of "iodic hydrarg." of Messrs. Burroughs, Wellcome, and Co., and note the superior results in antiseptic action.

SACCHARIN.

DR. N. HENRY K. KANE (Kingston Hill, Surrey) writes: In answer to "R. W. W.," I have been led to doubt the absolute harmlessness of saccharin by only one isolated case, so the value of my doubt is not very great, but I would refer "R. W. W." to some cases recorded in the BRITISH MEDICAL JOURNAL of May, [illegible], p. [illegible]. It is true these cases were not examples of prolonged use of saccharin in small doses, but of large doses ([illegible] centigrammes daily) exhibited for periods of one or two months. These cases show conclusively that saccharin is toxic under certain conditions, and also that it affects different people differently. In the case in my own practice to which I have alluded the patient has been taking saccharin in his tea and in all his cookery for four years, and is suffering from severe symptoms affecting the gastric and pancreatic nerve distribution. It is true that discontinuance of the drug has not after a month produced great amendment in the symptoms, but this is unfortunately the case in various chronic poisonings.

THE EFFECT OF CARBONIC ACID IN MINERAL WATERS ON BACTERIA.

J. H. P.—The effect of carbonic acid gas as contained in mineral waters and under other conditions in which it is under pressure has been elaborately investigated by d'Arsonval, and an account of his researches will be found in the *Comptes Rendus de la Société de Biologie*. With regard to same effects on the specific germs of typhoid fever and cholera, some account will be found in the report lately presented by Dr. [illegible] to the British Government. He as well as d'Arsonval has found, speaking generally, that carbonic acid under pressure is fatal to all aërobic bacteria provided that they do not exist in the spore form. On spores the effect is absolutely *nil*, even on those of aërobic bacteria.

TETANUS ANTITOXIN: MALLEIN.

IGNORAMUS.—We do not know of any English account of the method of preparation of the tetanus antitoxin as employed by [illegible] Cattani. The original papers dealing with the whole subject will be found in Virchow's *Festschrift*. With regard to mallein, the *Berliner thierärztliche Wochenschrift* for May, 1892, contains a contribution by Professor [illegible] and Dr. Loth on mallein in the diagnosis of glanders. This was translated in the *Journal of Comparative Pathology*, vol. v, June, 1892, p. 177. In September, 1892, Professor Leclainche, of the Toulouse Veterinary School, contributed an article to the *Revue Vétérinaire*, also translated in vol. v of the *Journal of Comparative Pathology*. At p. [illegible] same volume there are results of experiments published by McFadyean and [illegible]. In vol. vi, p. 36, McFadyean gives results of further experiments. At pp. 144 and 3[illegible], Dr. Penberthy gives some results. In the March number (189[illegible]) of the same journal there are two references, one as to the compulsory use of mallein in Switzerland, the other the report of a French veterinary surgeon.

FEMALE MEMBERS OF MEDICAL CLUBS.

DR. ALBERT WESTLAND (Belsize Park, N.W.) writes: In a recent issue of the BRITISH MEDICAL JOURNAL a request was made for any statistics bearing on the amount of illness among females [illegible] to males as affecting the payments which should be required from female members of clubs. For some years while a member of the staff of the [illegible] Hill and [illegible] Road Provident Dispensary I kept accurate statistics of the members under my care, and of the number of visits made to them. The average results were these: Each adult male required [illegible] visits per annum, each married woman [illegible] visits per annum, each single woman 5.6 visits per annum, and each child [illegible] visits per annum. Visits after confinement are not included in these figures. The visits to children are only approximate, as the books of the institution did not accurately indicate the number of children included in membership; the other figures may be relied on as absolutely accurate. From these and other facts relating to cost of drugs and dispensing I arrived at the conclusion that in clubs and provident dispensaries a contribution of [illegible]d. per week from each married couple, and one of 1d. per week from others, including children (but not charging for more than three children in any one family) would be fair both to the members and fairly remunerative to the medical attendant. Such a scale would make [illegible]d. per week the highest contribution, surely not an excessive sum for any man in fairly regular employment to pay for medical attendance and medicine for himself, his wife, and his family.

NOTES, LETTERS, Etc.

A DISCLAIMER.

FROM letters received by Mr. Ernest Hart, the Editor, it would appear that his name has been added to the Committee of the Association Internationale pour le Progrès de l'Hygiène, Rue des [illegible], [illegible] Gand (Belgique). Mr. Hart desires to give notice that he knows nothing of the exhibition referred to by the Association, and has given no authority or consent to the use of his name.

COMFORT FOR ANTIVACCINATORS.

WHY should antivaccinators any longer rage now that a new company has arisen to vanquish vaccination "terrors"? It perhaps is true that a rose with any other name would smell as sweet, but it is clear from a prospectus with which we have been favoured, that the Vaccination Virus Vanquisher Company, Limited, do not think that their nostrum under any other name would sell as well, for among the grounds for confidence in it as an investment is

put forward the "ideal" appropriateness of the name for advertising purposes. In support of this, attention is drawn to the "enormous success of patent medicines possessing alliterative names." As instances of this "enormous success," which, be it noted, relate not to their success in curing disease but in drawing money from the public, attention is directed to such quack remedies as Pink Pills for Pale People, Pierce's Purgative Pellets, and Burdock's Blood Bitters, and so far as the suggestion goes that the success of such preparations depends on choice of name rather than of ingredients we can well believe them. It is not without interest that in a sceptical age the company promoter should have such faith in the public, and the public in the company promoter as to bring it within the bounds of reasonable probability from a "City" point of view, that a company can be floated with a share capital of £[illegible] for the sale of some undescribed Vaccine Virus Vaccinator, a nostrum the taking of which "renders vaccination safe by destroying any poisonous germs in the vaccine lymph as well as curing in children or adults any diseases which can be traced to vaccination."

ERRATUM.—In Dr. Haffkine's article on Vaccination against Cholera, published in the BRITISH MEDICAL JOURNAL of December 21st, p. 1513, in the table referring to the inoculations at Gaya Gaol, under the head of the first period of five days, the third line should read 222 vaccinated, had 5 cases (2.25 per cent.), with 4 deaths (1.80 per cent.).

THE CHELSEA HOSPITAL FOR WOMEN.

MR. ROBERT O'CALLAGHAN, F.R.C.S.I., writes to point out that although [illegible] votes were polled at Wednesday's meeting only 57 persons voted, 40 against him and 17 for him. Neither he nor his wife voted although entitled to do so. The result in votes is brought about by the system of cumulative voting prevailing at the hospital.

THE PATHOGENESIS OF CANCER: A CORRECTION.

MR. W. ROGER WILLIAMS, F.R.C.S. (Preston) writes: In your abstract[1] of my communication on this subject to the Manchester Medical Society there occurs a small but important misprint, which I shall feel obliged if you will rectify. I am represented by the "printer's devil" as having said that "the process by which cancers and other neoplasms arose might be regarded as a kind of abnormal generation." The error is in the last word of this sentence, which should be "gemmation," not "generation."

CASES TREATED BY BINIODIDE OF MERCURY.

DR. C. R. ILLINGWORTH, M.R.C.S. (Ritherdon Road, S.W.) writes: 1. A collier was crushed by a fall of "roof," about a ton in weight. His head was pinned to the ground by one end of a large stone, making a hole beneath the left zygomatic arch an inch in depth, which bled profusely. He walked home after being rescued from his perilous position, and an hour afterwards I found him laid down, and very faint from loss of blood. The hæmorrhage had ceased, and the wound was filled level with the skin with blood clot. I stitched nothing, and simply gave a half pint bottle of 1 in 2,000 biniodide in iodide lotion. Improvement began at once, and was uninterrupted. In a week the clot was organised, and bled on being scratched. A large amount of swelling remained, but passive movements of the jaw having been begun at the end of four or five days, gently, no stiffness eventually remained. Not a drop of pus and no discharge worth naming ever appeared.

2. A collier received a scalp wound down to the bone, seven inches long, and covered with coal dust, which could not be removed entirely. The wound was washed with 1 in 1,000, and six catgut sutures were used to bring the edges together. No other dressing; to be kept dry and untouched for three days. Then sutures removed, and wound found primarily united firmly throughout. One dressing only.

3. Loose cartilage in the knee joint of a collier. Refused chloroform but accepted cocaine. The patient held the cartilage himself whilst I made an incision of an inch in length into the joint. I caught the loose cartilage with a pair of catch-forceps dipped into 1 in 2,000, and easily removed it. I then poured in about half an ounce of the same into the joint, and told the patient to move the knee until the blood, air, and lotion frothed out of the lips of the incision; sutured. Dressing on lint with 1 in 2,000 and gutta-percha tissue; back splint; next day temperature normal, and so on for five days. Got up and removed splint of own accord and then went out. No further facts to record except that he was at work on the sixth day.

PILLS AND THE STOMACH PUMP.

A MEDICAL missionary who has spent the last twenty years in China, and has just returned on short furlough, tells some amusing incidents of his work, which may serve to illustrate the attitude of the Celestial mind towards Western surgery. A patient was treated one day for a disease which involved the taking of two small pills, and he was charged the nominal sum for a single consultation. A few days afterwards the man returned to the hospital in restored health to complain that his brother had the previous day been treated for another disease and had been given a box of ten pills. Our friend demanded a refund of 80 per cent. of the fee paid by him, on the plea that he ought to have been charged pro rata. Quite recently another patient was brought by some friends who explained that he had been swallowing uncomfortable things. While the doctor was making use of the stomach pump the patient's friends roamed through the house and annexed a watch and some silver spoons. Subsequently discovering his loss, the doctor sent a message to the effect that if the articles were not returned at once he would mention the facts to the Judicial Mandarin. The delinquents came and denied all knowledge of the whereabouts of the missing property, whereupon the missionary said, "There is only one place they can have disappeared to. I shall stomach pump every one of you." With a hasty movement, the Celestials dived into their pockets, and the lost property lay intact upon the table.

RED LIGHT TREATMENT OF CORYZA.

DR. JOHN MCMULLEN (Southport, Lancs.) writes: After reading Dr. Niels R. Finsen's article on the Red Light Treatment of Small-pox, I venture to mention a case of coryza which may be of interest, as it is evident the chemical rays were causing the complaint. I was called to see a young lady in June last, who was supposed to be suffering from hay fever. She had a severe attack of coryza, with a profuse discharge from the nasal mucous membrane and ocular conjunctivæ; daylight and especially sunlight made the discharge more profuse. I suggested the hanging of a red blind in her sitting room; this was done, with a marvellous result: she was cured in three hours. When she left her sitting room the discharge reappeared. I prescribed red glasses, with the result that she could walk in the sunlight with impunity. The peculiarity in her case is that she could dispense with the glasses in August.

WOMEN DOCTORS FOR INDIA.

L.R.C.P.&S.ED. writes: At the present in the North-West Provinces and Oude there exists a very strong and widespread prejudice against the admission of male practitioners, English or Indian, to the women's quarters of an Indian household. My assertion is based on five years' experience of medical mission practice divided between two of the largest cities of North India. There are numbers of native doctors and hakims (the latter practising according to Eastern methods) who can, with some degree of truth, call themselves family doctors, but it will be enough to refer to my experience of the Indian "family practitioner" in the departments of obstetrics and gynæcology alone. Very soon after beginning practice in India I was initiated into the mystery of the male medical attendant of the zenana. I was asked on several occasions to consult with a native doctor over the case of a high caste Hindu lady. The preliminary interview always took place in the men's quarters, and only the male friends of the patient were present. An account of the subjective symptoms of the patient was given, followed by the explanation that "As custom does not admit of our examining the patient internally I have employed a *dhaie*" (native midwife), and the diagnosis supplied by the *dhaie* was given, and the line of treatment adopted described. The *dhaie* employed was utterly untrained in Western methods, yet she was supposed to be able to recognise any and every gynæcological abnormality and disease. My assistance was wanted because this partnership of practice had not been successful in bringing the case to a satisfactory conclusion. After being conducted to the women's quarters, where I was instructed to make a minute examination, I had a second interview with the Doctor Babu, in which he questioned me as to the condition of the patient and discussed her further treatment. In only one or two instances did he ask me to take over charge of the case; usually I never saw or heard anything more of it; he and the *dhaie* continued to co-operate as before, only that the treatment was modified by the new or improved diagnosis. After a good many experiences of this sort, I refused any further "catspaw" consultations. It may be urged by some that the conditions of life in the Indian zenana do not subject the inmates to the more complicated and serious forms of disease. A glance at our statistics for the last twelve months in the departments of obstetrics and gynæcology alone shows that out of a total of 155 native patients no fewer than [illegible] were submitted to major operations. The majority of these were forceps, removal of retained placenta or membranes, and curetting after incomplete or mismanaged abortions. They also include 2 Porro's operations, 7 cases of placenta prævia for which turning and extraction were done, 5 craniotomies, 2 decapitations, 3 removals of large uterine fibroid polypi, 3 vesico-vaginal fistulæ, and several operations for the removal of urinary calculi. I am thankful to say there is no death recorded among this number. Many of the operations were rendered necessary by the gross mismanagement of *dhaies*, and it is certain that if no woman doctor, trained in Western methods, had been available the majority of the midwifery cases would have proved fatal.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(A) A. B. C. **(B)** A. T. Brown, M.B., Horbury; Dr. R. D. Batten, London; Mr. F. Branwell, London; Mr. M. L. Bennett, London; Dr. G. A. Bannatyne, Bath; Dr. A. J. Boyd, Ware; Dr. G. H. Broadbent, Manchester; Dr. A. Brabazon, Bath. **(C)** Mr. G. S. Cresford, London; Dr. G. Carre, London; Mr. G. Crichton, London; Dr. J. G. S. Coghill, Ventnor; Dr. C. J. Cullingworth, London; Dr. W. H. Cooke, London; Dr. T. A. Chapman, Hereford. **(D)** Dr. G. R. D'Aubray, Paris; Dr. W. Duncan, London; Mr. T. E. Drummond, Montreal. **(E)** Dr. N. Evans, Cheshunt; Mr. R. Emmett, Portsmouth; Messrs. Eyre and Spottiswoode, London. **(F)** Dr. J. Fawcett, Tubingen; Dr. M. Foster, Cambridge. **(G)** Messrs. Green and Co., London; J. G. G. Gledhill, M.B., Hollinwood; Dr. J. Galloway, London; Mr. J. C. Galton, London. **(H)** Dr. S. Haynes, Malvern; Mr. E. C. Hearne, London; Mr. G. Hartridge, London; Mr. W. Habgood, London. **(I)** Dr. Illingworth, London. **(J)** Mr. M. Jenkins, London; Mr. H. H. Jennings, London; Mr. J. A. Jamieson, Brodrick. **(K)** Dr. T. N. Kelynack, Manchester. **(L)** Dr. R. W. Lowe, London; L.R.C.P. and S.E.; Professor E. Ray Lankester, London. **(M)** M.R.C.S., L.S.A.; Dr. A. Mullan, Ballymena; A. L. Marshall, M.B., London; M.R.C.S.; Dr. E. Mackenzie, Cheadle; J. McMullen, M.B., Southport; Dr. H. H. Murphy, Twickenham. **(N)** Dr. A. Newsholme, Brighton. **(O)** Mr. E. Oliver, Negopatam. **(P)** Provincial Medical Officer; Mr. M. Polson, Worcester; Mr. A. Pringle, London; Mr. N. Porritt, Huddersfield; Mr. H. Peck, Ormskirk. **(R)** Mr. T. W. Richardson, Norwich; G. Rose, M.B., Aberdeen; L. Rogers, M.B., Dorando; Dr. E. S. Reynolds, Manchester. **(S)** Mr. C. Stephens, Banbury; Mr. N. Smith, London; Mr. W. M. R. Smith, Farningham; Mr. E. D. Shirtliff, Malvern; Dr. H. Snow, London; Sir E. Saunders, London; Dr. W. A. Satchell, London; G. Sharp, M.B., Leeds. **(T)** Dr. Tinker, Hyde; E. D. Tomlinson, M.B., Folkestone; Messrs. W. P. Thompson and Co., Liverpool. **(W)** Mr. J. H. Wigham, Leeds; Dr. H. R. Westbury, Bilbao; W. M. K.; Mr. R. M. West, Leicester; Mr. E. W. Wallis, London; Dr. A. Westland, London; etc.

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[1] BRITISH MEDICAL JOURNAL, December 21st.

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[*Corrected to Nov. 30th, 1895.*

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OF THE
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[illegible], M.D., Aberdeen.

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[illegible]

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Members of Branch—[illegible].

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[illegible] St., Edinburgh
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[illegible] Road, Edinburgh
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[illegible], Midlothian
[illegible]
[illegible] Morningside, Edinburgh
[illegible], Midlothian
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[illegible] Road, Edinburgh
[illegible]
[illegible] Gardens, Edinburgh
[illegible] Street, Edinburgh
[illegible] Leith
[illegible] Edinburgh (resigned)
[illegible] Road, Edinburgh
[illegible]
[illegible] Place, Edinburgh
[illegible] Park, Edinburgh
[illegible] Place, Edinburgh
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[illegible] Place, Edinburgh
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[illegible] Street, Edinburgh
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[illegible] St., Edinburgh
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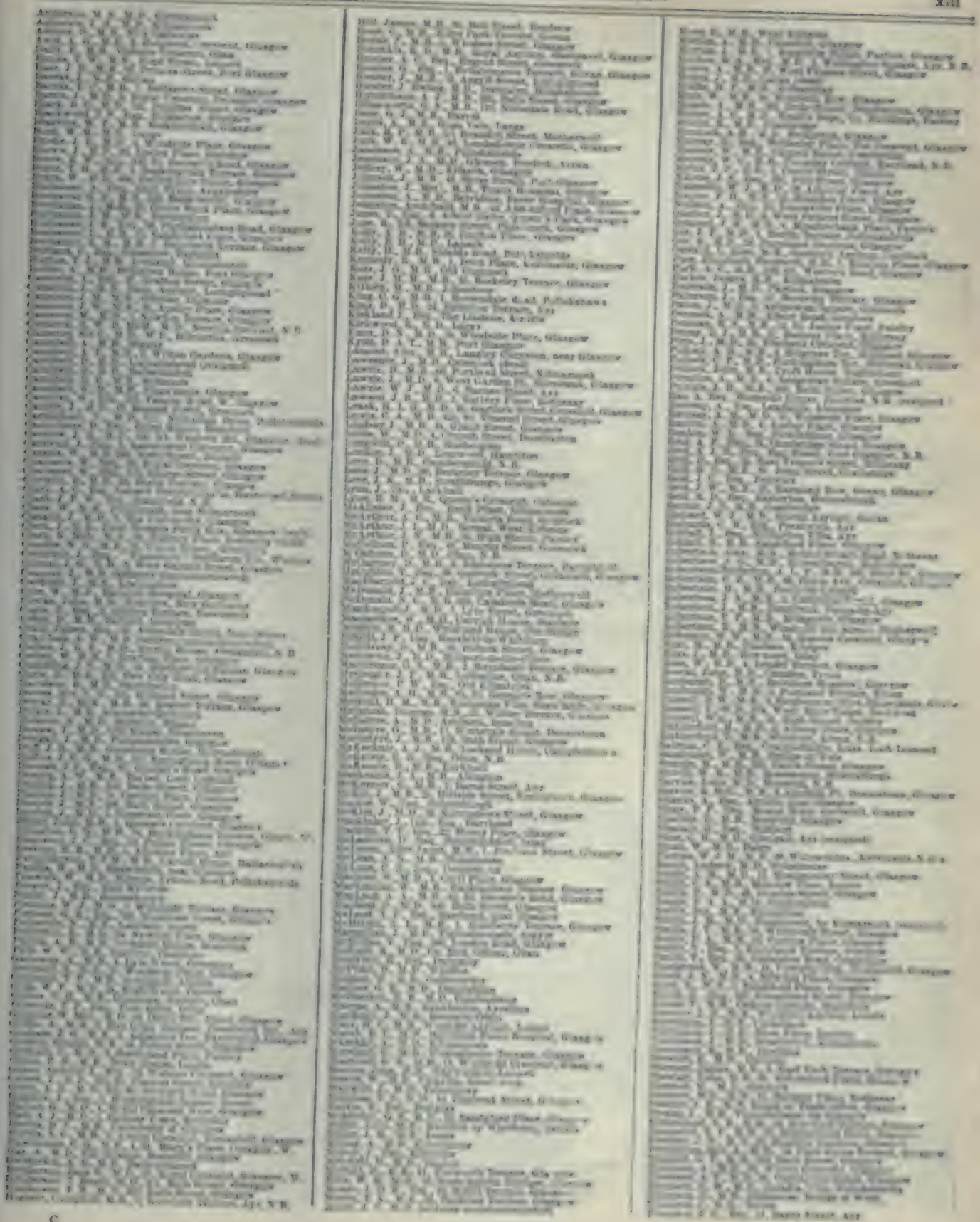

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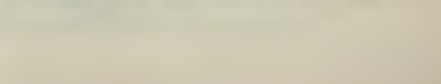

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[illegible], Nottingham

Stewart, D., M.D., Nottingham (resigned)
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Stewart, R., Esq., [illegible], Leicester
Stott, G., M.D., [illegible]
[illegible]
Swan, J. M., Esq., [illegible], Melton Mowbray
Sykes-Ward, A., M.D., [illegible], Nottingham
Symonds, [illegible], Lincoln
Tate, W. H., M.D., [illegible], Nottingham
Taylor, [illegible], Nottingham
Taylor, [illegible], Derby
Taylor, [illegible] Street, Nottingham
Taylor, [illegible], Derby
Taylor, [illegible], Nottingham
Teale, J., M.D., [illegible], Kent
[illegible]
Thomas, [illegible], Ashby-de-la-Zouch
Thomas, [illegible], Leicester
Thompson, J., [illegible], Nottingham
Thomson, J. T., Esq., [illegible], Melton Mowbray
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Tucker, W. G., Esq., [illegible], Loughborough
Turner, A. M., M.D., [illegible], Boston
Turner, J., [illegible] Street, Boston
Vaughan, [illegible], Derby
Walker, J. W., M.B., [illegible]
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White, [illegible], Nottingham
White, [illegible], Nottingham
White, [illegible], S.W.
White, T. H., Esq., [illegible] Street, Lincoln
Whitehead, T., Esq., Melton Mowbray
Williams, C. J., Esq., [illegible]
Williams, [illegible]
Williams, M. W., Esq., Leicester
Williams, [illegible]
Wilson, [illegible]
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Winter, W., Esq., [illegible]
Wood, [illegible], London Road, Leicester
Wood, H., Esq., [illegible]
Wood, W. J. H., Esq., [illegible] Street, Boston
Wray, G. H., Esq., [illegible], Nottingham
Wright, F. M., Esq., [illegible], near Chesterfield
Wright, A. J., Esq., [illegible]
Wright, F. M., Esq., [illegible], near Nottingham (dead)
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Armitage, Francis, M.D., [illegible]
Barling, A., [illegible] Gate, Leicester
Barton, A. J., M.B., [illegible] Road, Leicester
Barnard, A. J., Esq., [illegible] Walk, Boston
Barrett, H., M.D., [illegible], Derby
Barton, G. H., Esq., [illegible], Market Rasen
Barwise, S., M.D., [illegible], Uttoxeter New Rd., Derby
Bealey, R. A., Esq., [illegible], near Derby
Bedford, C. F., Esq., [illegible]
Bedford, H. J., Esq., Kibworth
Bell, T., Esq., [illegible]
Benton, R. H., Esq., [illegible] Market Place, Boston
[illegible], J., Esq., [illegible] Street, Chesterfield (dead)
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[illegible], G., Esq., Chesterfield
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[illegible], J. J., Esq., [illegible] Street, Grantham
[illegible], W. G., Esq., [illegible], Grantham
[illegible], J., M.B., [illegible] Rd., [illegible], Grimsby
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[illegible], M., M.B., [illegible], Notts
[illegible], F. J. W., M.B., [illegible] House, [illegible]
[illegible], J. J., M.B., [illegible], Lincoln
[illegible], H., M.B., [illegible], Chesterfield
[illegible], J. T., Esq., [illegible] Gate
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[illegible], W., M.B., [illegible] Trent
[illegible], M.D., [illegible] House, Narborough
[illegible], T. W., M.D., [illegible], near Chesterfield
[illegible], W. C., M.D., [illegible], Nottingham
[illegible], W., M.D., [illegible], Swadlincote
[illegible], W. J., Esq., [illegible]
[illegible], T., M.D., [illegible]
[illegible], P. H. S., Esq., Oakham
[illegible], J., Esq., [illegible], Chesterfield
[illegible], J. H., Esq., [illegible] Road, Nottingham
[illegible], J., Esq., [illegible] Road, [illegible]
[illegible], Esq., [illegible] Square, Leicester
[illegible], G., Esq., [illegible], R.S.O.
[illegible], R., Esq., [illegible], Lincoln
[illegible], C. E., M.D., [illegible] Street, Nottingham
[illegible], R., M.D., Louth
[illegible], E. A., M.B., Brigg
[illegible], W. G., Esq., [illegible]
[illegible], J. C., M.B., [illegible]
[illegible], Esq., [illegible] Street, Nottingham
[illegible], Esq., [illegible]
[illegible], J. T., Esq., Bingham
[illegible], T. R. W., Esq., [illegible]
[illegible], T., [illegible], Louth
[illegible], W., M.D., [illegible]
[illegible], Leicester
[illegible]
[illegible]
[illegible], Nottingham
[illegible], W. J., [illegible], Lincoln
[illegible], J., [illegible], Grantham
[illegible]
[illegible], W. T., [illegible] Infirmary, Leicester
[illegible] Street, Derby
[illegible]
[illegible], Lincoln
[illegible]
[illegible]

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Haddock, T. A., Esq., [illegible], Alford
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Hembry, Robert, M.D., [illegible], Nottingham
Henry, J. H., Esq., [illegible], Loughborough
Hick, F. R. B., M.D., [illegible]
Higginson, J. W., Esq., [illegible], Leicester
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Hooker, E. M. C., Esq., East Retford
Hunt, E. G., M.D., [illegible], Alford
Hunter, W. M., M.D., [illegible], Eckington, Chesterfield
Hyde, S., M.D., [illegible], Boston
Ingle, J., Esq., [illegible], R.S.O.
Irving, J. C., Esq., [illegible], Sleaford
Jackson, [illegible], Sleaford
Jackson, William, Esq., [illegible], Chesterfield
Jacob, R. W., M.B., [illegible], Leicester
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[illegible], W., M.D., [illegible], Loughborough
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[illegible], J., M.D., Chesterfield
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[illegible], F., M.D., Boston
[illegible], C. E., M.D., [illegible]
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[illegible], F. J., Esq., [illegible], Alford
[illegible], J. G. M. G., Esq., [illegible]
[illegible], R., Esq., [illegible]
[illegible], W. S., Esq., [illegible], Chesterfield
[illegible], J. R., M.D., [illegible] Road, Nottingham
[illegible]
[illegible], D. T., M.D., [illegible]
Thompson, G. H., Esq., [illegible]
Thompson, [illegible]
Thompson, [illegible]
[illegible]
[illegible], F. W., Esq., [illegible]
[illegible], E. M., Esq., [illegible] Road, Leicester
[illegible], A. S., Esq., [illegible]
[illegible], E. B. M., [illegible], Nottingham
Turner, C. B., Esq., 22, [illegible] Street, Grimsby

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[illegible], R. H., Esq., [illegible]
[illegible], F. W., M.D., [illegible] Road, [illegible]
West, C. J., Esq., The Grove, [illegible], Grantham
West, R. M., [illegible], Leicester
[illegible]
[illegible]
[illegible], J., M.B., [illegible], Boston
[illegible], J. M., Esq., [illegible], Leicester
Williams, C. H., M.B., [illegible]
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Wilson, T. N., M.B., [illegible], Ashby-de-la-Zouch
Wood, F. C., Esq., [illegible], Derby
[illegible], H., Esq., Bingham
[illegible], D. C., M.D., [illegible]
Young, R. R., M.B., 2, [illegible] Street, Leicester

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Cameron, J., M.D., Nairn
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De Watteville, W. F. R., M.B., Kingussie
Dingwall, W. R., M.D., Buckie
[illegible], A., Esq., [illegible]
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Fyfe, T. H., M.B., Forres
[illegible], W., M.D., Elgin
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Grant, J., M.D., Grantown
Grant, Ogilvie, M.B., Inverness
[illegible], J., M.D., [illegible]
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[illegible], H. de D., M.B., [illegible], Lossiemouth
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Mackenzie, A. R., M.D., [illegible]
Mackenzie, C., M.D., [illegible]
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Mackenzie, F. M., Esq., Inverness
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[illegible], H. W., M.B., Nairn
Morgan, G. C., M.D., Forres
Muir, J. M., M.D., Inverness
Murray, J., M.D., Inverness
Petrie-Hay, G., M.D., [illegible]
Sellar, T. A., M.B., [illegible]
Simpson, W., M.D., Buckie
[illegible], W., M.B., [illegible]
[illegible], J. P., M.B., Dingwall
[illegible], J., M.D., [illegible]
[illegible], J., M.B., [illegible], Fort George Station
Sutherland, A., M.B., [illegible] (dead)
Taylor, J., M.D., [illegible] North Street, Elgin
Turner, R. S., M.D., Keith
Watson, Jas. Walker, M.B., [illegible], Elgin
Winchester, H., M.B., Fort Augustus

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Adams, A. S., M.B., Alness
Allan, D., M.D., [illegible]
Anderson, H. C., M.B., [illegible], by Fort William
[illegible], A., M.B., [illegible]
[illegible], G., Esq., W[illegible]
[illegible], R. D. C., [illegible] Victoria Street, Kirkwall
[illegible], J. S., [illegible]
[illegible], T., M.B., [illegible], Lossiemouth
Brown, J., Esq., [illegible]
[illegible], G., M.D., [illegible]
[illegible], H. T., M.B., [illegible] Gardens, Invergordon
[illegible], D., M.D., [illegible]
[illegible], A. J., Esq., [illegible]
[illegible], J., M.B., [illegible], Orkney
[illegible], J., M.B., [illegible]
[illegible], M.B., [illegible], Shetland
[illegible], M.D., [illegible] Terrace, Wick
[illegible], J. W., M.B., [illegible]
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[illegible], J., [illegible]
[illegible], H., [illegible] Street, Inverness
[illegible], T. F., M.B., [illegible]
[illegible], B., M.B., [illegible]
[illegible], F. W., M.D., [illegible] House, Elgin
[illegible], A. R. M., M.B., [illegible]
[illegible], Jas. A., Esq., [illegible]
[illegible], Lairg
[illegible], D. S., M.B., [illegible] Bridge
[illegible], M.B., [illegible]
[illegible], M. B., M.B., [illegible], Skye
[illegible], N., M.D., [illegible], Skye
[illegible], J., M.B., 23, Bridge Street, Inverness

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[illegible], M.B., [illegible]
[illegible], M.B., [illegible] Green, Spennymoor
[illegible] Terrace, [illegible]
[illegible], M.B., Westmoreland Rd., Newcastle-on-Tyne
[illegible]
[illegible] House, Gateshead-on-Tyne
[illegible] Ter., Newcastle-on-Tyne
[illegible]
[illegible] Parade, Newcastle-on-Tyne
[illegible] Terrace, [illegible]
[illegible] Place, Newcastle-on-Tyne
[illegible], Main Street, [illegible]-Tyne
[illegible] Road, Newcastle-on-Tyne
[illegible], M.B., [illegible], Berwick-on-Tweed
[illegible] North Road, Durham
[illegible], Northumberland
[illegible], M.B., [illegible] Road, Newcastle-on-Tyne
[illegible] Terrace, South Shields
[illegible] Hospital, Hartlepool
[illegible]
[illegible], M.B., County Asylum, Morpeth
[illegible], M.B., [illegible], Berwick-on-Tweed
[illegible] Mills, [illegible]-Tyne
[illegible]
[illegible] Street, Hartlepool
[illegible] Terrace, South Shields
[illegible] Asylum, [illegible]
[illegible], Sunderland
[illegible], Darlington
[illegible] Terrace, N. Shields
[illegible], M.B., [illegible], Newcastle-on-Tyne
[illegible] Terrace, [illegible]
[illegible] Terrace, South Shields
[illegible], M.B., [illegible] Row, Newcastle-on-T.
[illegible]-on-Tyne
[illegible]
[illegible] Terr., Bellingham
[illegible] Castle
[illegible] Place
[illegible], Fence Houses
[illegible]-Tyne
[illegible], South Shields
[illegible], Newcastle-on-Tyne
[illegible], M.B., West Auckland
[illegible], M.D., 2, Walker Ter., Gateshead (resid.)
[illegible]
[illegible] Grange
[illegible] Road, Jarrow-on-Tyne
[illegible] Green, Durham
[illegible]
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[illegible]
[illegible]-Tweed
[illegible]-Tyne
[illegible], West View, Morpeth
[illegible] Road, [illegible]
[illegible], Shields
[illegible] House, Sunderland
[illegible] Square, Sunderland
[illegible] Place, Sunderland
[illegible] Place, Newcastle-on-Tyne
[illegible], Alnwick
[illegible], Newcastle-on-Tyne
[illegible] County Hospital, Durham
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[illegible] Road, Newcastle-on-Tyne
[illegible]-Tees
[illegible] Terrace, Sunderland
[illegible] Ward Terrace, Sunderland
[illegible] Terrace, South Shields
[illegible] House, [illegible]
[illegible] Hill, Newcastle-on-Tyne
[illegible], Darlington
[illegible] The Hawthorns, Chester-le-Street
[illegible], Durham
[illegible]
[illegible], Newcastle-on-Tyne
[illegible], Alnwick
[illegible]
[illegible] Street, Sunderland
[illegible] Street, Sunderland
[illegible] Square, West Hartlepool
Taylor, J., M.D., [illegible] Street, Durham
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[illegible], Gateshead-on-Tyne
[illegible], North Shields
[illegible] Road, Gateshead
[illegible], Newcastle-on-Tyne (resid.)
[illegible] Court, Durham
[illegible], Newcastle-on-Tyne
[illegible] Terrace, S. Shields
[illegible]
[illegible] Rd., Newcastle-on-Tyne
[illegible]
[illegible], Darlington
[illegible], Newcastle-on-Tyne
[illegible] Street, Sunderland
[illegible]
[illegible], South Shields
[illegible], Barnard Castle
[illegible]
[illegible] Terrace, South Shields
[illegible]
[illegible], Newcastle-on-Tyne
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Warnock, H. T. A., Esq., [illegible]
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[illegible]
[illegible]
[illegible], Larne
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[illegible]
[illegible] Terrace, Belfast
[illegible] Cambridge Terrace, Belfast
[illegible]
[illegible] District Asylum, Monaghan
[illegible] Warrenpoint
[illegible]
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[illegible]
[illegible] Street, Ballymena
[illegible]
[illegible] Cross, Crossdoney
[illegible]
[illegible]
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[illegible] Curragh Camp
[illegible]
[illegible], Lisburn
[illegible]
[illegible]
[illegible] Street, Belfast
[illegible]
[illegible]
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[illegible] Street, Newry
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[illegible]
[illegible] Kingstown
[illegible], Cavan
[illegible]
[illegible] Road, Belfast
[illegible]
[illegible], near Belfast (resigned)
[illegible]
[illegible] District Asylum, Downpatrick
[illegible], Newry
[illegible]
[illegible] Place, Belfast
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[illegible]
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[illegible]
[illegible]
[illegible]
[illegible] College Gardens, Belfast
[illegible]
[illegible]
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[illegible]
[illegible]
[illegible] Street, Manchester
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[illegible]
[illegible]
[illegible]
[illegible], Wrexham
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[illegible], Llandudno
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[illegible]
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[illegible] The Rectory, [illegible]
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[illegible]
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[illegible] Street, Rhyl
[illegible] Rodney Street, Liverpool
[illegible]
[illegible] Street, Liverpool
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[illegible]
[illegible], Abergele
[illegible], R.S.O., Carnarvon
[illegible]
[illegible], Bangor
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[illegible], Abergele
[illegible]
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[illegible] George's Square, Liverpool
[illegible] Woodford Bridge, Essex
[illegible], Bangor
[illegible] Castle Hill, Bangor
[illegible]
[illegible], Llanrwst
[illegible]
[illegible]
[illegible] Chester Street, Wrexham
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[illegible], Denbigh
[illegible]
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[illegible] Street, Liverpool
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[illegible], Liverpool
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[illegible] Hospital, Llandudno
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[illegible] The Infirmary, Denbigh
[illegible]
[illegible], Portmadoc
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[illegible], Rhyl
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[illegible]
[illegible] Street, Oxford
[illegible]
[illegible] Broad Street, Oxford
[illegible]
[illegible]
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[illegible]
[illegible] Street, Oxford
[illegible]
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[illegible] (Non-Member of Assoc.)
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[illegible], Chipping Norton
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[illegible]
[illegible]
[illegible]
[illegible]
[illegible] Road, Oxford
[illegible]
[illegible]
[illegible]

[illegible] G. B., Esq., [illegible] Road, Oxford
[illegible] H. P., Esq., [illegible] Street, Oxford
[illegible]
[illegible]
[illegible]
[illegible] Oxford
[illegible]
[illegible]
[illegible]
[illegible] M.B., [illegible] Road, [illegible]
[illegible]
[illegible] Road, Oxford
[illegible]
[illegible] Oxford
[illegible] Banbury
[illegible]
[illegible]
[illegible]
[illegible] F.R.S., Oxford
[illegible] Street, Oxford
[illegible] Asylum, Oxford
[illegible]
[illegible]
[illegible] Street, Oxford
[illegible]
[illegible] Road, Oxford
[illegible]
[illegible] Street, Oxford
[illegible] Oxford
[illegible] Oxford
[illegible] Road, Oxford
[illegible] Street, Oxford
[illegible] Oxford
[illegible] Oxford
[illegible] Road, Oxford
[illegible] Banbury
[illegible]
[illegible] Street, Oxford
[illegible]
[illegible] Street, Oxford
[illegible]
[illegible]

Members Unattached—21.

[illegible]
[illegible]
[illegible]
[illegible] Oxford
[illegible] Banbury
[illegible]
[illegible]
[illegible]
[illegible] Banbury
[illegible]
[illegible] Road, Oxford
[illegible]
[illegible] Banbury
[illegible]
[illegible]
[illegible] Banbury
[illegible]
[illegible] Banbury
[illegible]
[illegible] Square, Oxford
[illegible]
[illegible] Road, Oxford

PERTHSHIRE BRANCH.

DISTRICT COMPRISING THE COUNTY OF PERTH.

RECOGNISED 18[illegible].

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Vice-President, A. MACMILLAN, M.D., Stanley

Council.

[illegible], J., M.D., Aberfeldy	[illegible], A., M.D., Crieff
[illegible], T., M.D., [illegible]	[illegible], G. M., M.B., [illegible]
[illegible], E. L., M.B., Perth	

Honorary Treasurer.

A. J. A. CAMPBELL, M.D., Barossa Place, Perth.

Hon. Sec., A. R. [illegible], M.D., James Murray's Royal Asylum, Perth.

Representative on Council of Association.

A. R. Urquhart, M.D., Perth.

Representative on Parliamentary Bills Committee.

A. R. Urquhart, M.D., Perth.

Members of Branch—42.

[illegible], J., M.B., [illegible], N.B.
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] Perth
[illegible] Perth
[illegible]
[illegible]
[illegible], J. F. S., M.B., James Murray's Royal Asylum, Perth
[illegible]
[illegible]
[illegible] Perth
[illegible]
[illegible]
[illegible] M.B., [illegible] Howard Place, Edinburgh
[illegible]
[illegible] J. R., M.B., [illegible] of Earn
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] Perth
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] T., M.B., [illegible]
[illegible] Perth
[illegible] N.B.
[illegible]
[illegible]
[illegible] Place, Perth
[illegible], J., M.B., [illegible]
[illegible], W., [illegible], Crieff
[illegible], J. A., M.B., [illegible], Perth
[illegible]
[illegible], J., M.B., [illegible], Crieff
[illegible], J. M., M.B., [illegible] Lodge, Crieff
[illegible], Esq., [illegible] House, Perth
Urquhart, A. R., M.D., Perth

Members Unattached—17.

[illegible], A. [illegible], Esq., [illegible], N.B.
[illegible]
[illegible], N.B.
[illegible]
[illegible], Crieff
[illegible], Perth
[illegible], Perth
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Crieff
[illegible]
[illegible] Place, Perth
[illegible] Place, Perth
[illegible], Perth
[illegible], Esq., [illegible] Street, Crieff

READING & UPPER THAMES BRANCH.

DISTRICT COMPRISING THE TOWN OF READING AND SURROUNDING DISTRICT.

RECOGNISED 18[illegible].

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President-elect, DAVID NICHOLSON, M.D., Broadmoor

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H. H. PHILLIPS-CONN, M.D., Reading

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Bateman, F., M.B., Whitchurch	Phillips-Conn, H. H., M.D., Reading
Guilding, L. M., M.B., Reading	[illegible], J. A. P., M.D., Reading
Isaac, J. B., M.B., Broadmoor	[illegible], R. C., M.D., Reading
[illegible], G. C., Esq., Reading	[illegible], J. H., Esq., Reading
[illegible], W. J., Esq., Friar Street, Reading	[illegible], C. H., M.D., Reading

Representative on Council of Association.

Isaac, J. B., M.D., Broadmoor.

Representative on Parliamentary Bills Committee

Phillips-Conn H. H., M.D., Reading.

Members of Branch—[illegible]0.

Armstrong, H., M.D., [illegible]
Armstrong, H. G., Esq., Wellington College, Berks
[illegible], A., M.B., [illegible], Reading
[illegible], F. C. A., Esq., Henley-on-Thames
[illegible], G. F., M.B., Ascot
Bateman, F., M.B., Whitchurch, Oxon
[illegible], H., Esq., Newbury
[illegible], H., Esq., [illegible] Street, Reading
[illegible], N. H., Esq., [illegible] London Street, Reading
[illegible], C. H., Esq., Caversham
[illegible], J. P., M.D., Great Marlow
[illegible], J., M.D., Windsor
[illegible], W. T., Esq., [illegible], Reading (resigned)
[illegible], H., Esq., King's Road, Reading
[illegible], J. W., Esq., [illegible] High Street, Windsor
Guilding, L. M., M.B., Queen's Road, Reading
[illegible], F. A., Esq., [illegible], Reading
[illegible], W. H., Esq., Windsor
[illegible], E., Esq., Wallingford
Isaac, J. B., M.D., Broadmoor
[illegible], H. S., Esq., [illegible] London Street, Reading
[illegible], J. P., Esq., [illegible]
[illegible], O., Esq., Reading
[illegible], J., M.D., LL.D., Oldham
[illegible], H. P., M.D., [illegible]
[illegible], Esq., [illegible] House, [illegible]
[illegible], R., Esq., [illegible]
[illegible], C. W., M.D., Reading
[illegible], D. J., M.D., [illegible], Maidenhead
[illegible], G. C., Esq., Reading
[illegible], W. J., M.D., Friar Street, Reading
[illegible], G., M.B., Reading
[illegible], F. C., Esq., Maidenhead
[illegible], A. J., Esq., Reading
[illegible], G. F., M.B., Maidenhead
[illegible], D., M.D., Broadmoor, Wokingham
[illegible], R. H., M.B., Broadmoor, Wokingham
Phillips-Conn, H. H., M.D., [illegible] London Road, Reading
[illegible], A., M.B., Maidenhead
[illegible], J. A. P., M.D., [illegible] Street, Reading
[illegible], W., [illegible], Reading
[illegible], R. C., M.D., Reading
[illegible], J., Esq., [illegible], Broadmoor
[illegible], C. H., M.D., [illegible], Reading
[illegible]
[illegible]
[illegible], J. H., Esq., [illegible] Friar Street, Reading
[illegible], C. F., Esq., Wargrave, Henley-on-Thames
[illegible], F. H., Esq., [illegible], Windsor Road
[illegible], W. T. G., M.D., [illegible], Spencer's Wood, Reading

Members Unattached—37.

[illegible], A., M.B., 4, Kendrick Road, Reading
[illegible], Esq., [illegible] House, [illegible]
[illegible], R. H., M.D., [illegible] House, [illegible]
[illegible]
[illegible]
[illegible]
[illegible], M.D., [illegible] Street, Windsor
[illegible], W. H., Esq., [illegible], Sandhurst, Berks.
[illegible], Esq., [illegible], Reading
[illegible], Esq., [illegible] Road, Windsor
[illegible], Esq., [illegible] Caversham, Reading
[illegible], W., M.B., [illegible]
[illegible], M.D., [illegible] Street, Maidenhead
[illegible] Place, Reading
[illegible], W. J., Esq., [illegible] Road, Reading
[illegible], W., [illegible] Street, [illegible] Road
[illegible] Place, Reading
[illegible], G. N. B., M.D., [illegible], Reading
Hulbert, F. B., M.D., 3, [illegible] Villas, Francis Rd., Windsor
[illegible]
[illegible], W. F., Esq., [illegible] Infirmary, Windsor
[illegible], J. H., Esq., [illegible]
[illegible], G. F., Esq., [illegible] Road, Reading
[illegible], Esq., [illegible], Twyford
[illegible]
[illegible], M.B., [illegible]
[illegible]
[illegible], W. H., M.B., [illegible], Reading
[illegible], J., M.D., [illegible], Wokingham
[illegible], H. F., Esq., [illegible]
[illegible], Esq., [illegible] House, [illegible]
[illegible], D. L., M.D., [illegible], Reading
[illegible], J., M.D., [illegible] Street, [illegible]
[illegible], W. S., M.D., [illegible], near Reading
[illegible], H. B., [illegible], Reading
[illegible], J. W., Esq., [illegible] Avenue, Reading
[illegible], R., Esq., [illegible] House, [illegible] Street, Windsor

SHROPSHIRE & MID-WALES BRANCH.

DISTRICT COMPRISING SHROPSHIRE AND ADJACENT WELSH COUNTIES.

RECOGNISED 18[illegible].

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President-elect

J. D. [illegible], Esq., [illegible]

Vice-President, T. [illegible], Esq., [illegible]

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Assistant Honorary Secretary.

H. H. B. MACLEOD, Esq., Tower Place, Shrewsbury.

Council.

Bund, F., M.D., Shrewsbury	Edwards, R. N., Esq., Shrewsbury
[illegible], W., M.D., Shrewsbury	[illegible]
[illegible], E., M.D., [illegible]	[illegible], J. D., Esq., Shrewsbury
Davies, W. H., Esq., Llanidloes, N. Wales	[illegible], G. H., M.B., Wem
[illegible], W., Esq., Shrewsbury	[illegible], G. H., M.D., [illegible]
	[illegible], H. J., Esq., Shrewsbury
	Withers, E. W. O., Esq., Shrewsbury

Auditor, R. W. O. Withers, Esq., Shrewsbury.

Representative on Council of Association.

Harries, J. D., Esq., Shrewsbury.

Representative on Parliamentary Bills Committee.

Harries, J. D., Esq., Shrewsbury.

Members of Branch—83.

[illegible], C. E., M.D., Newport
[illegible], H., M.B., [illegible]
[illegible], A. K., Esq., [illegible]
[illegible], J. E. K., Esq., [illegible]
[illegible], A., Esq., [illegible]
[illegible], J. F., M.B., [illegible] Castle
[illegible] Davies, W., Esq., [illegible], N. Wales
[illegible], A., Esq., [illegible], near Shrewsbury
[illegible], F., M.D., Shrewsbury
[illegible], E. L., M.D., [illegible] House, Shrewsbury
[illegible], R. T., Esq., [illegible]
[illegible], W., Esq., [illegible]
Cartwright, J. A. T., Esq., [illegible]
[illegible], W., M.D., [illegible] House, Shrewsbury
[illegible], G. D., Esq., [illegible]
[illegible], E. W., Esq., [illegible], Shrewsbury
[illegible], R. J., M.B., [illegible]
[illegible], W. W., Esq., [illegible]
Cunningham, J. [illegible], M.B., [illegible]
[illegible], E., M.D., [illegible], Shrewsbury
[illegible], H. F., Esq., [illegible]
Davis, F. H., Esq., [illegible]
[illegible], C. E., Esq., [illegible], Grinshill
[illegible], [illegible], Shrewsbury
[illegible]
[illegible]
[illegible], F., M.D., [illegible] Road, [illegible]
Edwards, R. N., Esq., [illegible] House, Shrewsbury
[illegible], E. A., M.B., [illegible]
[illegible]
[illegible], A. R. F., M.D., [illegible] Street, Market Drayton
[illegible], J. I., Esq., [illegible], Shrewsbury
Gardner, H. W., M.D., Shrewsbury
[illegible], J., Esq., [illegible] Street, [illegible]
[illegible], W. E., M.D., [illegible], Whitchurch
[illegible], J., Esq., Shrewsbury
[illegible], F. H., M.D., [illegible] Road, [illegible]
[illegible], J., Esq., [illegible] Infirmary, Shrewsbury
Gwynn, C. H., M.D., Whitchurch
Gwynn, S. T., M.D., Whitchurch
Harries, J. D., Esq., Shrewsbury
Hart, F. L., Esq., [illegible] Priory, Much Wenlock
[illegible], G., M.B., Church Stretton
[illegible], A., M.B., [illegible]
[illegible], A., Esq., [illegible], Shrewsbury
[illegible], T. H., Esq., [illegible] House, [illegible]
[illegible], G. H., M.B., Wem
[illegible], E. H., Esq., [illegible]
[illegible], C. R., M.B., [illegible]
[illegible], J. D., Esq., [illegible]
[illegible], J., M.B., [illegible], Market Drayton
[illegible], M.D., [illegible], Shrewsbury
McCarthy, J. McC., Esq., [illegible], Wellington
[illegible], A. G., Esq., [illegible]
[illegible], R. P., M.B., [illegible] House, Wellington
McLeod, H. H. B., Esq., Tower Place, Shrewsbury
[illegible], W., M.D., [illegible], [illegible]
Morgan, T., Esq., [illegible]
[illegible], H., Esq., Wem
[illegible], W. H., M.D., [illegible], near Shrewsbury
[illegible], F. K., Esq., [illegible] House, Shrewsbury
[illegible], G. I., M.D., [illegible]
[illegible], G. H., M.D., [illegible] Castle
[illegible], W., Esq., [illegible]
[illegible], A., Esq., [illegible] Asylum, Shrewsbury
[illegible], J. W., Esq., Shrewsbury
[illegible], H. J., Esq., [illegible] Street, Shrewsbury
[illegible], C. E., M.B., Quarry Place, Shrewsbury
[illegible], F. J., M.B., [illegible]
[illegible], E. H., [illegible] Park, Bescot[illegible]
[illegible], Sir C. M., Bart., [illegible]
[illegible], A., M.D., The Asylum, Bicton Heath

[illegible]

Members Unattached—[illegible]

[illegible]

Yates, A. E., Esq., Market Drayton

SOUTH EASTERN BRANCH.

DISTRICT COMPRISING THE COUNTIES OF KENT, SUSSEX AND SURREY, WITH THE EXCEPTION OF A SMALL PART OF SOUTH LONDON.

[illegible]

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President-elect: C. E. Hoar, Maidstone

Vice-Presidents:

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E. [illegible], Esq., St. Leonard's-on-Sea

Vice-Presidents-elect:

M. A. [illegible], Esq., Maidstone

A. H. B. Hallowes, Maidstone

Honorary Secretary and Treasurer:

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District Secretaries:

East Kent: T. F. Raven, Esq., Barfield House, Broadstairs

West Kent: [illegible], M.D., [illegible] Hill, Maidstone

East Surrey: H. J. [illegible], Esq., [illegible] Hill, S.E.

West Surrey: A. H. [illegible], Esq., [illegible]

East Sussex: J. W. [illegible], M.D., [illegible] Parade, St. Leonard's

West Sussex: F. Hinds, M.D., 14, Steyne, Worthing

Council:

[illegible]

Representatives in Council of Association:

[illegible], J. H., M.D., [illegible] Road, Upper Norwood, S.E.

[illegible], C., M.D., Dover

Verrall, T. J., Esq., Brighton

Representatives on Parliamentary Bills Committee:

[illegible], B. [illegible], Esq., Brixton Hill, S.W.

Verrall, T. Jenner, Esq., Brighton

Members of Branch—[illegible]

[illegible]

[illegible], F. W. E., Esq., Horsham
[illegible] Road, Gravesend
[illegible] Gravesend
[illegible] Road, Maidstone
[illegible]
[illegible] Folkestone
[illegible] Tunbridge Wells
[illegible] S.E.
[illegible]
[illegible] Square
[illegible] W. Folkestone
[illegible]
[illegible]
[illegible] Avenue, N.W.
[illegible]
[illegible] Place, Folkestone
[illegible]
[illegible] Faversham
[illegible] S.E.
[illegible] House, [illegible]
[illegible]
[illegible], Preston Road, Brighton
[illegible]
[illegible] Eastbourne
[illegible] St. Leonards
[illegible]
[illegible] Square, Hastings
[illegible] Wells
[illegible] Road, Hove
[illegible]
[illegible]
[illegible] Street, Dover (dead)
[illegible] Wellington Square, Hastings
[illegible]
[illegible] North Ridge, Northam
[illegible]
[illegible] Gravesend
[illegible] Road, Hove, Brighton
[illegible] Place, Maidstone
[illegible] Blackheath, S.E.
[illegible] S.E.
[illegible] Hill Road, S.E.
[illegible]
[illegible] House, Brighton
[illegible] Street, Guildford
[illegible] near Deal
[illegible]
[illegible] Villa, Croydon
[illegible] Sussex
[illegible] Guildford
[illegible] Lodge, [illegible]
[illegible] Croydon
[illegible] Croydon
[illegible]
[illegible] Gravesend
[illegible] Place, Brighton
[illegible]
[illegible] Street, Croydon
[illegible] Square, Brighton
[illegible] Gardens, Hastings
[illegible] Gravesend
[illegible] House, Worthing
[illegible]
[illegible] Square, Brighton
[illegible]
[illegible] Terrace, Maidstone
[illegible] House, Worthing
[illegible] S.W.
[illegible] Crescent, Dover
[illegible] near Hastings
[illegible] Marine Place, Dover
[illegible] Hythe
[illegible] Dartford
[illegible] Court Rd., Streatham Com., S.W.
[illegible] Rochester
[illegible]
[illegible] Mt. Pleasant, Tunbridge Wells
[illegible] Crescent, Dover
[illegible] West Worthing
[illegible] The Terrace, Camberwell, S.E.
[illegible]
[illegible]
[illegible] (resigned)
[illegible]
[illegible] Place, Brighton
[illegible] Sydenham
[illegible] Avenue, Folkestone
[illegible] Gravesend
[illegible] Lodge, North Fleet
[illegible] Lane, Croydon
[illegible]
[illegible] Terrace, Dover
[illegible] Square, Margate
[illegible], Sydenham
[illegible]
[illegible] Cliff, Ramsgate
[illegible] Avenue Crescent, Mill Hill Park, W.
[illegible] Road, Eastbourne
[illegible], Sylvan Rd., Norwood
[illegible]
[illegible] Road, Anerley, S.E.
[illegible] Crescent, Margate
[illegible] Place, Blackheath, S.E.
[illegible] Road, Lordship Lane, S.E.
[illegible] Tunbridge Wells
[illegible] House, Broadstairs
[illegible] House, Bognor
[illegible] S.E.
[illegible] Milton-next-Sittingbourne
[illegible] Road, Croydon
[illegible] Wellington Square, Hastings
[illegible] House, Canterbury
[illegible] Terrace, W. Brighton
[illegible] Road, West Brighton
[illegible] Road, Croydon
[illegible] Gravesend
[illegible]
[illegible] Street, Canterbury
[illegible] Road, Tunbridge Wells
[illegible] Gravesend
[illegible] Preston Street, Faversham
[illegible] Lewisham High Road, S.E.
[illegible]
[illegible] M.D., Thurlow Park Road, S.E. (dead)
[illegible]
[illegible] Dover
[illegible] Berkeley Square, W.

Roper, A., M.D., Lewisham Hill, S.E.
[illegible] House, [illegible] Road, Croydon
[illegible] Parade, Brighton
[illegible] Villas, Croydon
[illegible] W.
[illegible] St. Leonards-on-Sea
[illegible]
[illegible] Hospital, Hastings
[illegible] Place, [illegible]
[illegible] Brighton
[illegible]
[illegible] Lee, S.E.
[illegible] Road, Brighton
[illegible] Place, [illegible]
[illegible] St. Leonards-on-Sea
[illegible] Place, [illegible]
[illegible] Ramsgate
[illegible] Road, Hove, West Brighton
[illegible]
[illegible] Eastbourne
[illegible]
[illegible] Road, Northfleet
[illegible] Maidstone
[illegible] S.E.
[illegible]
[illegible] Eastbourne
[illegible] Worthing
[illegible]
[illegible] West Street, Farnham
[illegible] Hurstpierpoint
[illegible] W.
[illegible] Road, Croydon
[illegible]
[illegible] Road, Croydon
[illegible] Muswell Hill, N.
[illegible] S.W.
[illegible] St. Leonard's-on-Sea
[illegible] House, Tunbridge Wells
[illegible]
[illegible] Road, Tunbridge Wells
[illegible]
[illegible] Square, E.C.
[illegible] Road, S.E. (dead)
[illegible]
[illegible] Place, Ramsgate
[illegible] Dover
[illegible] Southend-on-Sea
[illegible] Upper Norwood, S.E.
[illegible]
[illegible] Blackheath, S.E.
[illegible]
[illegible]
[illegible] Rd., Croydon
[illegible] Place, Margate
[illegible] Margate
[illegible] Folkestone
[illegible] Maidstone
[illegible] St. Leonards-on-Sea
[illegible] W. Brighton
[illegible] Margate
[illegible] St. Leonards-on-Sea
[illegible] Place, Brighton
[illegible] Road, S.E.
[illegible]
[illegible] Gardens, Folkestone
[illegible] Road, Worthing
[illegible] Place, Hove, Brighton
[illegible] Wellington Square, Hastings
[illegible] Crystal Palace Park Road, S.E.
[illegible] Villas, Hove, Brighton
[illegible]
[illegible] Road, Brighton
[illegible]
[illegible] Villas, Croydon
[illegible] St. Leonards-on-Sea
[illegible] Road, Tunbridge Wells
[illegible]
[illegible] Canterbury
[illegible] Sevenoaks
[illegible] Folkestone
[illegible] Road, Upper Norwood, S.E.
[illegible]
[illegible] Sevenoaks
[illegible] Hall, Bexhill
[illegible]
[illegible] House, East Grinstead
[illegible]
Waters, A. R., Esq., Church Street, Reigate
Waters, J., M.D., Reigate
[illegible] Eaton Road, Hove, Brighton
[illegible] Road, Tunbridge Wells
[illegible] Villas, Rochester
[illegible]
[illegible] Hill, Croydon
[illegible] (resigned)
[illegible] Terrace, Dover
White, E. A., M.D., [illegible] Square, Margate
White, F. W., M.D., [illegible]
White, R., M.B., [illegible] Tunbridge Wells
[illegible] A. W., M.B., [illegible]
[illegible] Square, Brighton
[illegible] House, [illegible]
[illegible] Anerley Road, S.E.
[illegible] M.B., [illegible]
[illegible] H., Esq., Poste Restante, Nice
[illegible] M.D., [illegible]
[illegible] M.B., [illegible] Hill, St. Leonard's-on-Sea
[illegible] Tunbridge Wells
[illegible] Road, S.E.
[illegible] Road, Brighton
[illegible] Road, Forest Hill, S.E.
[illegible] Crescent, Dover
[illegible]
[illegible] The Limes, Rochester
[illegible] House, Ramsgate
[illegible] Croydon
Young, E., Esq., Hall House, Hawkhurst

Members Unattached—560.

Abbot, J. T., Esq., [illegible] Road, Tunbridge Wells
[illegible]
Adams, [illegible] Villas, West Norwood, S.E.
Adams, F. C., Esq., [illegible] High Street, Plumstead
Adams, [illegible] Lewisham Road, S.E.
[illegible] W. B., Esq., The Laurels, [illegible]
[illegible] Selhurst Rd., South Norwood, S.E.
[illegible], E., M.D., [illegible]

Alexander, T. G., M.D., [illegible] Old Woolwich Road, S.E.
[illegible] West Hill, Dartford
[illegible] Sevenoaks
Anderson, H. H., Esq., [illegible] W. Brighton
Anderson, J., M.D., [illegible] Road, S.E.
Anderson, J. W., M.D., [illegible] Eastbourne
Anderson, Jas., M.D., [illegible] Tunbridge Wells
Anderson, [illegible]
[illegible] Road, S.E.
[illegible] Blackheath, S.E.
[illegible], 2, The Avenue, Beckenham
[illegible]
[illegible] M.B., [illegible] Park Road, Forest Hill, S.E.
[illegible]
[illegible] Sevenoaks
[illegible] Crescent, Dover
[illegible] House, [illegible]
[illegible] Road, Brighton
[illegible] M.D., West Norwood Lodge, S.E.
[illegible] South Norwood Pk., S.E.
[illegible] Tunbridge Wells
[illegible] Street, New Brompton
[illegible]
[illegible] Lee Pk., Blackheath, S.E.
[illegible] Place, Brighton
[illegible] Road, Croydon
[illegible] Road, Dover
[illegible]
[illegible] House, [illegible]
[illegible] Kemp Town, Brighton
[illegible] Place, [illegible], Eastbourne
[illegible] Bromley Green, Catford, S.E.
[illegible]
[illegible] Road, S.E.
[illegible] Road, S.E.
[illegible]
[illegible] Lordship L., Dulwich, S.E.
[illegible] Dover
[illegible] Croydon
[illegible] S.E.
Bell, W. R., M.D., [illegible] Road, S.E.
[illegible]
[illegible] House, Lydd
[illegible] Rd., S.E.
[illegible] Lewisham, S.E.
[illegible] Maidstone
[illegible] near Dartford
[illegible] Terrace, Maidstone
[illegible]
[illegible] Croydon
[illegible] St. Leonards-on-Sea
[illegible] Beckenham
[illegible] Banstead
[illegible] Upper Norwood, S.E.
[illegible] S.E.
[illegible] West Street, Brighton
[illegible]
[illegible]
[illegible] Colchester
[illegible] Sutton
[illegible] Crescent, Sutton
[illegible] Herne Bay
[illegible] near Hythe
[illegible]
[illegible] Woodford Bridge
[illegible] Sevenoaks
[illegible] West Hill, Sydenham, S.E.
[illegible] York Place, Brighton
[illegible] Hythe
[illegible] Lancaster Place, Brighton
[illegible] Manor Road, Brockley, S.E.
[illegible] Lodge, [illegible]
[illegible] Road, Eastbourne
[illegible] S.E. (dead)
[illegible] Upper Norwood, S.E.
[illegible] Valley
[illegible] Villa, Reigate
[illegible]
[illegible] Surbiton
[illegible]
[illegible] Upper Norwood, S.E.
[illegible] Castle Place, Lewes
[illegible]
[illegible] Old Town, Eastbourne
[illegible] Caterham
[illegible] Wellington Square, Hastings
[illegible]
[illegible] Road, Anerley, S.E.
[illegible] Road, Beckenham
[illegible] Road, Brighton
Carter, C. H., Esq., [illegible] Road, Hastings
Carter, J. G., Esq., [illegible] New Kent Road, S.E.
Carter, [illegible] Road, S.E.
Cartwright, H. G., Esq., [illegible] Terrace, W. Brighton
[illegible] Church Street, Reigate
[illegible] Infirmary, S.E. (resigned)
[illegible] M.B., [illegible]
[illegible] M.D., [illegible] Road, Brighton
Chamberlain, [illegible], Esq., Banstead
[illegible] Lodge, Richmond, Surrey
[illegible]
[illegible] Lane, Hornsey, N.
[illegible]
[illegible]
[illegible] Road, [illegible]
[illegible] Road, [illegible]stead
Clarke, C. F., Esq., [illegible] House, Park Road, [illegible]
Clarke, J., M.B., [illegible]
[illegible] Lee Park, Blackheath
[illegible] Road, Horley
[illegible]
[illegible] Road, Brighton
[illegible] Park Lane, Croydon
[illegible] George's Lodge, [illegible] S.E.
[illegible] S.E.
[illegible] Road, [illegible] S.E.
[illegible] Road, Beckenham
Cooper, A. R., Esq., Burgess Hill
Cooper, R. J., Esq. (address uncommunicated)
Cooper, P., Esq., [illegible] S.E.
[illegible] M.B., [illegible] Beckenham
[illegible] M.D., [illegible] Asylum, [illegible]
Courtney, G. B., M.D., [illegible] Road, Ramsgate
[illegible] J. H., Esq., The [illegible]
[illegible] Road, West St. Leonards
[illegible] Esq., [illegible] London Road, [illegible]
[illegible] Road, [illegible], Brighton
Craig, J., M.D., [illegible] Beckenham

Webster, G. L., Esq., 6, Bramley Hill, Croydon
Webb, C. H., Esq., Sandhurst
Weir, W., M.B., Gatestone, Upper Norwood, S.E.
Wells, A. F., Esq., School Road, [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Anerley Hill, S.E.
[illegible]
[illegible]
[illegible], S.E.
[illegible]
[illegible], S.E.
[illegible]
[illegible] Road, Weybridge
[illegible]
[illegible], Croydon
[illegible], S.E.
[illegible], S.E.
[illegible]
[illegible], Canterbury
[illegible], Croydon
[illegible]
[illegible], East Dulwich
[illegible]
[illegible], Forest Hill, S.E.
[illegible], Croydon
[illegible], St. George's Road, S.E.
[illegible]
[illegible], Beckenham

N.B.—The names of members [illegible] Branch residing in the S.W. District of London are included in the Metropolitan Counties unattached list.

SOUTH EASTERN OF IRELAND BRANCH.

DISTRICT COMPRISING WICKLOW, CARLOW KILKENNY WEXFORD, AND PORTIONS OF KILDARE, QUEEN'S CO., TIPPERARY AND WATERFORD.

[illegible] 1880

President, C. E. JAMES, M.B., Kilkenny.

President-elect, [illegible]

[illegible], Kilkenny
[illegible]
[illegible]
[illegible], Carlow

Honorary Treasurer, R. B. [illegible], Esq., [illegible], Carlow
Honorary Secretary, J. COOPER L. STAWELL, M.B., [illegible]

Representatives on Council of Association
Stawell, J. Cooper L., M.B., [illegible]

Representative on Parliamentary Bills Committee
[illegible], R. B., Esq., [illegible]

Members of Branch—37.

[illegible], Carlow
[illegible]
[illegible], Kilkenny
[illegible]
[illegible]
[illegible], Carlow
[illegible]
[illegible]
[illegible]
[illegible], Kilkenny
[illegible], Kilkenny
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
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[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Kilkenny
[illegible]
[illegible]
[illegible]
[illegible], Carlow
[illegible]
[illegible]
[illegible], Kilkenny
[illegible]
[illegible]
[illegible]
[illegible], Kilkenny
[illegible], Kilkenny

Members Unattached—[illegible].

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Waterford
[illegible]
[illegible]
[illegible]
Mooney, C., Esq., [illegible]

Murphy, P. J., M.D., The Cottage, Gorey
[illegible], M.B., Gorey
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

SOUTHERN BRANCH.

DISTRICT COMPRISING EAST HAMPSHIRE, THE ISLE OF WIGHT, AND SOUTH WILTSHIRE.

RECOGNISED 1874.

President, H. COATES, Esq., Salisbury.
President-elect, J. WATSON, M.D., Southsea

Vice-Presidents
J. LANE NOTTER, [illegible], M.D., Southampton
W. H. AXFORD, M.B., Southsea.

Honorary Secretary and Treasurer
H. J. MANNING, Esq., Laverstock, Salisbury.

Honorary Secretaries of Districts
Southampton: THEOPHILUS W. TREND, M.D., 1, Grosvenor Place, Southampton
Isle of Wight: E. M. SHIRTLIFF, M.D., Ryde
Winchester: T. O. LANGDON, Esq., [illegible] House, Winchester
South Wiltshire: H. J. MANNING, Esq., Laverstock, Salisbury
South-East Hants: U. C. CLAREMONT, M.D., Elm Grove, Southsea

Council

[illegible], W. P., Esq., Fareham	Hartman?, W. M., [illegible], M.D., Winchester
[illegible]	Wade, A. B., M.B., Southampton
[illegible]	
[illegible], C., M.B., [illegible]	

Representatives on Council of Association.
[illegible], H. J., Esq., Salisbury.
Trend, T. W., M.D., Southampton.

Representative on Parliamentary Bills Committee
Langdon, T. C., Esq., Winchester

Members of Branch—243.

[illegible], M.D., [illegible] House, Southampton
[illegible], Southampton
[illegible]
[illegible]
[illegible], M.B., [illegible] Parade, Southsea
[illegible]
[illegible]
[illegible], I.W.
[illegible]
[illegible], I.W.
[illegible], I. of W.
[illegible], Southampton
[illegible]
[illegible], Southampton
[illegible]
[illegible] Road, Southsea
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Woolston
[illegible]
[illegible]
[illegible], I.W.
[illegible]
[illegible], Southampton
[illegible], Southsea
[illegible]
[illegible], I.W.
[illegible], Woolston, Southampton
[illegible]
[illegible] Road, Southsea
[illegible]
[illegible], M.D., Elm Grove, Southsea
[illegible]
[illegible]
[illegible], I.W.
[illegible] Road, Southsea
[illegible]
[illegible] Terrace, [illegible]
[illegible], Southsea
[illegible]
[illegible], I.W.
[illegible]
[illegible]
[illegible], Portsmouth
[illegible]
[illegible], Portsmouth
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Southampton
[illegible]
[illegible] (resigned)
[illegible]
[illegible]
[illegible] Road, Portsmouth
[illegible], Winchester
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Andover
[illegible]
[illegible], I.W.
[illegible] House Asylum, Salisbury
[illegible]
Fleming, J., M.D., Brig.-Surg., Londonderry

[illegible]
[illegible] Parade, Southsea
[illegible] Victoria Crescent, [illegible]
[illegible], Isle of Wight
[illegible]
[illegible]
[illegible], Andover
[illegible]
[illegible] Road, Freemantle
[illegible], Alpine Rd., Ventnor, I. W.
[illegible]
[illegible] Street, Salisbury
[illegible]
[illegible]
[illegible] Road, Landport
[illegible], Milford Hill, Salisbury
[illegible]
[illegible]
[illegible], I.W.
[illegible], Southampton
[illegible]
[illegible]
[illegible]
[illegible], I.W.
[illegible]
[illegible], Southampton
[illegible]
[illegible] Road, Southampton
[illegible], I. of W.
[illegible]
[illegible], Fareham
[illegible]
[illegible], I.W.
[illegible] County Hospital
[illegible] Surg., retired, Winchester
[illegible]
[illegible] Office, Southampton
[illegible]
[illegible]
[illegible], I.W.
[illegible]
[illegible]
[illegible]
[illegible], I.W.
[illegible], Southampton
[illegible], Winchester
[illegible]
[illegible]
[illegible] Street, Ryde, I. W.
[illegible]
[illegible]
[illegible]
[illegible], N.W.
[illegible], I.W.
[illegible] House, Gosport
[illegible]
[illegible]
[illegible]
[illegible] (resigned)
[illegible], C., Esq., [illegible]
[illegible], J., M.D., [illegible]
Langdon, T. O., [illegible] House, Winchester
[illegible]
Lee, F. P., M.B., [illegible], Salisbury
[illegible], Ventnor
[illegible]
[illegible] (dead)
[illegible], Southsea
[illegible]
[illegible], Salisbury
[illegible]
[illegible]
[illegible]
[illegible], S.W.
[illegible]
[illegible]
[illegible], Southsea
[illegible], Salisbury
[illegible]
[illegible], Southsea
[illegible] Road, Landport
[illegible]
[illegible], I.W.
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], I.W.
[illegible]
[illegible]
[illegible], Southampton
[illegible]
[illegible]
[illegible]
[illegible] Minster
[illegible] Street, Southsea
[illegible]
[illegible]
[illegible], Southsea
[illegible]
[illegible], I.W.
[illegible], Winchester
[illegible], Southampton
[illegible]
[illegible]
[illegible]
[illegible], Gosport
[illegible], I.W.
[illegible]
[illegible] near Winchester
[illegible], Southsea
[illegible], I.W.
[illegible]
[illegible]
[illegible], Southsea
[illegible], Southampton
[illegible]
[illegible], Winchester
[illegible]
[illegible] (resigned)
[illegible]
[illegible] Place, Southampton
[illegible], Ryde
[illegible]
[illegible] House, Southsea
[illegible], Kingston-on-Thames
[illegible]
Sparrow, G. G., Esq., Haslemere, East Southsea

Members Unattached—38.

SOUTH MIDLAND BRANCH.

DISTRICT COMPRISING THE COUNTIES OF BEDFORD, BUCKINGHAM, NORTHAMPTON, AND ADJACENT DISTRICTS.

RE-CONSTITUTED 1856.

President, A. H. JONES, M.D., Northampton.

President-elect, G. H. DE'ATH, Esq., Harborough.

Ex-President, R. H. CHOMES, M.D., Bedford.

Honorary Treasurer, G. H. PERCIVAL, M.B., Northampton.

Honorary Secretary, C. J. EVANS, Esq., Northampton.

Council.

Bissett, F., M.D., Northampton.	Kissack, M. H., Esq., Bedford.
Cave, J., Esq., Higham Ferrers.	Millman, R. A., Esq., Northampton.
De'Ath, G. H., Esq., Harborough.	Rogers, H. C., Esq., Newport Pagnell.
Goldsmith, G. P., M.D., Bedford.	Walker, T. J., M.D., Towcester.

With the President, President-elect, Ex-President, and ex-officio members.

Representative on Council of Association.
Hemming, J. H., Esq., Kimbolton.

Representative on Parliamentary Bills Committee.
Hemming, J. H., Esq., Kimbolton.

Members of Branch—133.

Members Unattached—61.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

DISTRICT COMPRISING BRECKNOCKSHIRE, CARDIGANSHIRE, CARMARTHENSHIRE, GLAMORGANSHIRE, MONMOUTHSHIRE, PEMBROKESHIRE, AND RADNORSHIRE.

ESTABLISHED 1871.

President, J. G. Lock, Esq., Tenby.
President-elect, T. H. [illegible], M.D., [illegible]
Ex-President, J. W. [illegible], M.D., Aberystwith.

Honorary Secretaries.
A. Sheen, M.D., 25, Newport Road, Cardiff.
D. A. Davies, M.B., Swansea.

Council.
Jones, E. P., Esq., Mountain Ash
Ellis, J. G., Esq., Swansea
[illegible], Esq., Aberdare
Lancaster, E. A., M.D., Swansea
Lloyd, W. W., Esq., Tredegar
Paterson, D. R., M.B., Cardiff
Price, W., M.B., Cardiff
Hastings, J. A., Esq., Swansea
Thomas, J. G., M.B., Hirwain
Williams, T. J., Esq., Merthyr Tydfil
Ward, J. L. W., Merthyr Tydfil
Walker, T., M.D., Cardiff

Representatives in Council of Association.
James, E., Esq., Aberdare.
Sheen, A., M.D., Cardiff.

Representatives on Parliamentary Bills Committee.
Jones, Evan, Esq., Aberdare.

Members of Branch—248.

Anthony, T. G., Esq., Tredegar, [illegible]
[illegible], Aberdare
Ashford, J., Esq., Llandaff Road, near Cardiff
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Banks, T. L., M.D., Aberdare
Basset, W., Esq., [illegible] Road, Newport
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[illegible], M.D., 2, [illegible] Place, Oystermouth
[illegible]
[illegible], Esq., Penylan, Cardiff
Bowen, W. F., Esq., [illegible] House, Swansea
[illegible], Esq., Tredegar
[illegible], Esq., Brynmawr
[illegible], M.B., [illegible] Street, Cardiff
Campbell, [illegible], M.D., Newport Road, Cardiff
[illegible], Esq., [illegible], Merthyr
[illegible] Road, Cardiff
[illegible], M.D., [illegible] Newport Road, Cardiff
[illegible], Esq., [illegible] Windsor Place, Cardiff
[illegible] Street, Cardiff
[illegible], Esq., [illegible] Street, Swansea
[illegible], M.B., The Infirmary, Cardiff
[illegible], Esq., Dowlais
[illegible], Esq., [illegible] House, Abergavenny
[illegible]
Davies, A. P., M.D., [illegible] Place, Swansea
Davies, A., M.D., [illegible] Park, Malpas, Newport
Davies, D., Esq., [illegible]
Davies, D. A., M.B., Northampton House, Swansea
Davies, D. L., M.B., Neath
Davies, [illegible], Esq., Swansea
Davies, [illegible], Esq., [illegible], Cardiff
Davies, E. N., Esq., [illegible], Pontypridd
Davies, F. J., Esq., [illegible] Park, near Newport
Davies, F. W., Esq., [illegible] Albany Road, Cardiff
Davies, G. A., Esq., [illegible], Newport
Davies, G. C., Esq., [illegible], Cardiff
Davies, H. N., Esq., [illegible]
Davies, J. B., Esq., Porth, Pontypridd
Davies, J., M.D., [illegible]
Davies, J., Esq., [illegible]
Davies, [illegible], Esq., [illegible] Villa, Swansea
Davies, J. H., Esq., [illegible]
Davies, J. T., Esq., J.P., New Tredegar, via Cardiff
Davies, T., Esq., [illegible] Street, Cardiff
Davies, W. H., Esq., [illegible] House, near Newport
[illegible]
[illegible], Cardiff
[illegible], Cardiff
[illegible] Road, Barry Dock
[illegible], M.D., [illegible], Cardiff
[illegible], St. Helen's Road, Swansea
Evans, [illegible]
Evans, [illegible], Swansea
Evans, [illegible], Pontypridd
Evans, [illegible], Mountain Ash
Evans, [illegible]
Evans, F. W., M.D., [illegible] Street, Cardiff
Evans, G., Esq., [illegible], near Bridgend
Evans, H. T., Esq., [illegible]
Evans, J., Esq., [illegible] Road, Cardiff
Evans, J., Esq., Swansea
Evans, J. J., M.D., [illegible] Hospital, Birmingham
Evans, J. M., [illegible] Llandrindod Wells
Evans, W., M.B., [illegible]
Evans, W. M. B., Esq., [illegible] Road, Cardiff
[illegible]
[illegible]
[illegible], Halifax
[illegible]
[illegible], Aberdare
[illegible]
[illegible], Abergavenny
[illegible], Carmarthen
[illegible] Asylum, Abergavenny
[illegible] Road, Newport
[illegible], Cardiff
[illegible]
[illegible]
Griffiths, [illegible], Pontypridd
Griffiths, [illegible]
Griffiths, [illegible], Swansea
Griffiths, [illegible], Newport Road, Cardiff
Griffiths, T., M.D., Swansea
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[illegible], Liskeard
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[illegible], Ivybridge
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[illegible], W. L., M.D., Bridgwater

Members of Branch 66.

[illegible]
[illegible], Taunton
[illegible], Bridgwater
[illegible]
[illegible], W. L., M.D., Bridgwater

Members Unattached 37.

[illegible]
[illegible], Church Street, Bridgwater
[illegible]
[illegible], M.D., [illegible], Taunton

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[illegible], County Asylum, Hereford
[illegible], M.D., [illegible]
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[illegible]
[illegible], G. W., [illegible] Street, Worcester
[illegible], A., Esq., [illegible]
[illegible]
[illegible], M.D., [illegible] (dead)
[illegible]
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[illegible], Esq., [illegible]
[illegible], Esq., [illegible]
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[illegible], Esq., [illegible] Street, Worcester
[illegible], Esq., Ledbury
[illegible], M.D., [illegible], Ross
[illegible], M.D., [illegible] Square, Hereford
[illegible], M.D., Hereford
[illegible], M.D., The Tything, Worcester
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[illegible], Esq., Hereford
[illegible], M.B., [illegible], West Malvern
[illegible], Esq., [illegible], Hereford
[illegible], The [illegible], Great Malvern
[illegible], Hereford
[illegible], M.D., [illegible], Great Malvern
[illegible], M.D., Worcester
[illegible], St. John's, Worcester
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[illegible], Esq., [illegible] (dead)
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[illegible], M.D., [illegible]
[illegible], M.D., [illegible]
[illegible], Esq., The [illegible], Broadway
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[illegible], Esq., [illegible], Kington
[illegible], Esq., [illegible]
[illegible], Esq., [illegible], R.S.O., Hereford
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[illegible], Esq., [illegible], Great Malvern
[illegible], M.D., Ross
[illegible], M.D., The [illegible], Great Malvern
[illegible], Esq., [illegible] (resigned)
[illegible]
[illegible], Esq., Ledbury
[illegible], M.B., [illegible]
[illegible], M.B., [illegible], Leominster
[illegible]
[illegible], Esq., [illegible], Bromsgrove
[illegible], M.B., [illegible]
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[illegible], J. F., Esq., [illegible]
[illegible], Bradford
[illegible], M.D., [illegible], Bradford
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[illegible], M.D., [illegible] Road, Sheffield
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[illegible], M.D., Scarborough
[illegible], Esq., [illegible]
[illegible], M.D., [illegible] Place, Cliff Road, Leeds
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[illegible]
[illegible], Esq., [illegible], Leeds
[illegible], Esq., [illegible], Leeds
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[illegible], M.D., [illegible] Crescent, Scarborough
[illegible], Esq., [illegible], Leeds
[illegible], M.B., [illegible]
[illegible], M.D., [illegible] Park Square, Leeds
[illegible], Esq., [illegible], Halifax
[illegible], Esq., [illegible], Rotherham
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[illegible], Esq., [illegible]
[illegible], M.D., [illegible] House, Wakefield
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[illegible], M.D., [illegible] Road, Sheffield
[illegible], Esq., [illegible]
[illegible], Esq., [illegible], near Wakefield
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[illegible]
[illegible], Esq., [illegible] Road, Sheffield
[illegible], M.D., [illegible], Sheffield
[illegible], Esq., [illegible] Moor Road, Sheffield
Curry, W. W. K., Esq., [illegible]
[illegible], Esq., [illegible] Street, Huddersfield
[illegible], Esq., [illegible]
[illegible], Esq., [illegible] Clarendon Road, Leeds
[illegible], Esq., [illegible], Bradford
[illegible], M.B., [illegible] Crescent, Scarborough
[illegible], Esq., [illegible] Road, Scarborough
[illegible], M.B., [illegible] Road, Sheffield
[illegible], M.B., [illegible], York
[illegible], M.D., [illegible], near Leeds (resigned)
[illegible], M.D., [illegible], Bradford
[illegible], M.D., [illegible]
[illegible] House, Harrogate
[illegible], M.D., Harrogate
[illegible], M.D., [illegible] House, Keighley
[illegible], M.D., [illegible], Leeds
[illegible], Esq., [illegible], Bradford (resigned)
[illegible], M.D., [illegible] House, Halifax
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[illegible], Esq., [illegible] House, Halifax
[illegible], M.D., [illegible], Whitby
[illegible], M.D., [illegible], Huddersfield
[illegible], M.D., [illegible] Street, Sheffield
[illegible], M.D., [illegible] Park, Darlington
[illegible], M.D., [illegible]
[illegible], M.B., West End Park, Harrogate
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[illegible] Gardens, Scarborough (dead)
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[illegible], Military Hospital, Sheffield
[illegible]
[illegible], Esq., [illegible], Leeds
[illegible], M.D., [illegible], Leeds
Foster, J. M., [illegible] Lane, Bradford
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[illegible], M.B., [illegible], Scarborough
Gott, Henry, Esq., [illegible], Leeds
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[illegible], J. H., M.B., College Town
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[illegible], W. A., M.B., Adelaide
[illegible], Esq., [illegible]
[illegible], F., M.B., Hindmarsh
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[illegible], W. J., M.B., Port Wakefield
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[illegible], J. A. G., M.B., J.P., North Terrace, Adelaide
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[illegible], F. W., Esq., [illegible]
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[illegible], J. G., M.B., Surg.-Major
[illegible], M., Surg.-Capt.
[illegible], Surg.-Capt.
[illegible], Surg.-Maj.
[illegible], Surg.-Capt.
[illegible], J. M., Surg.-Capt.
[illegible], M.B., Surg.-Maj.
[illegible], M.B., Surg.-Capt.
[illegible], Surg.-Capt.
[illegible], M. L., Surg.-Capt.
[illegible], J., M.B., Surg.-Lieut.-Col. and Hon. Brig.-Surg. (ret.), [illegible] Park, S.E.
[illegible], W., Surg.-Maj.
[illegible], F., M.B., Surg.-Capt.
[illegible], J. C. B., Surg.-Gen. (ret.), Wallingford
[illegible], M.B., Surg.-Capt.
[illegible], J., M.B., Surg.-Capt.
[illegible], F. H., Surg.-Lt.-Col. (ret.), Folkestone
[illegible] (ret.), [illegible]—W. S. Br.
[illegible], H., M.D., Dep.-Surg.-Gen. (ret.), 32, Vyvyan Ter., [illegible]—B. & B. Br.
[illegible], E. F., M.B., Surg.-Maj.
[illegible], F. B., Surg.-Capt.
[illegible], Surg.-Maj.
[illegible], J., Surg.-Maj.
[illegible], G. D., Surg.-Maj. (ret.), 2, Apsley Villas, Acton, W.
[illegible], M.B., Surg.-Capt.
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[illegible], F. W. L., M.B., Surg.-Lt.-Col. and Hon. Brig.-Surg. (ret.), St. Helier's
[illegible], Surg.-Capt.
[illegible], Surg.-Maj.
[illegible], M.D., Surg.-Capt.
[illegible], T. J. P., M.B., Brig.-Surg.-Lt.-Col.
[illegible], Surg.-Capt.
[illegible], Surg.-Capt.
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[illegible], A., M.D., Surg.-Capt.
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[illegible], H. W., [illegible]
[illegible], M.B., Surg.-Maj.
[illegible], J. H., M.D., Surg.-Col.
[illegible], M. L., Surg.-Capt.
[illegible], J. W., Brig.-Surg. (ret.), M[illegible]stone
[illegible], J. P., M.D., Surg.-Maj.
[illegible], Surg.-Capt.
[illegible], J., M.D., Surg.-Maj.-Gen.
[illegible], W. P., M.B., Surg.-Maj.
[illegible], H. J., Surg.-Capt.
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[illegible], J. M. W., M.B., Surg.-Maj.
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Mc[illegible], G. W., M.D., Brig.-Surg.-Lt.-Col. (ret.)
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M[illegible], J. H., Surg.-Maj.
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M[illegible], J., M.D., Surg.-Maj., Coldstream Guards
M[illegible], C. W. S., M.D., Surg.-Maj.
Maher, J., Surg.-Capt.
M[illegible], S. H., Brig.-Surg.-Lt.-Col.
M[illegible], R. S., Brig.-Surg.-Lt.-Col. (dead)
M[illegible], J. B., Surg.-Capt.
M[illegible], J., M.D., Surg.-Maj., Royal Malta Artillery, Valetta—M. & M. Br.
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M[illegible], T. B., Surg.-Capt.
M[illegible], T. C., C.B., Surg.-Gen. (ret.)
M[illegible], G. F. H., M.D., Surg.-Capt.
M[illegible], T. A. F., Surg.-Maj.
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Martin, H., M.B., Surg.-Maj.
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M[illegible], H. R., Surg.-Capt.
M[illegible], H. A., Surg.-Capt.
M[illegible], J., Brig.-Surg.-Lt.-Col.
M[illegible], C. A., M.D., Surg.-Col.
M[illegible], T., Surg.-Col.
May, W. A., Surg.-Lt.-Col.
M[illegible], R. W., M.D., Surg.-Maj.-Gen. (ret.), Saltash
M[illegible], J., M.D., Surg.-Capt.
M[illegible], H. F. I., M.D., Surg.-Lt.-Col., Royal [illegible]
M[illegible], C. H., M.B., Surg.-Capt.
M[illegible], H. J., Surg.-Maj.
M[illegible], E. O., Surg.-Maj.
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Mitchell, L. A., M.B., Surg.-Capt.
M[illegible], H. J. R., Surg.-Maj.
M[illegible], G. L., M.B., Surg.-Capt.
M[illegible], T. D., Surg.-Maj.
Moir, J. P., M.B., Surg.-Capt.
M[illegible], J. M. H., Surg.-Capt.
Moore, J. H., Brig.-Surg.-Lt.-Col.
Moore, R. R. H., M.D., Surg.-Maj.
M[illegible], S. G., Surg.-Capt.
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M[illegible], L. P., M.B., Surg.-Capt.
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Nash, L. T. M., Surg.-Capt.
N[illegible], P. J., M.D., Surg.-Maj.
N[illegible], G., Surg.-Capt. (dead)
N[illegible], F. R., M.B., Surg.-Capt.
N[illegible], C. E., M.B., Surg.-Maj.
N[illegible], F. P., M.B., Surg.-Maj.
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N[illegible], J. H., M.B., Surg.-Capt.
N[illegible], T. B., Surg.-Maj.
N[illegible], R. O. W., M.B., Surg.-Capt. (dead)
N[illegible], F., Surg.-Maj.
N[illegible], J. L., M.D., Brig.-Surg.-Lt.-Col.
N[illegible], F. J. R., Surg.-Capt.
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O'Brien, R. F., Surg.-Maj.
O'Callaghan, D. M., M.D., Surg.-Capt.
O'Connell, D. V., M.D., Surg.-Capt.
O'Connell, Maurice, D., Surg.-Maj.
O'Connell, Matthew, D., M.D., Brig.-Surg.-Lt.-Col.
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O'Dwyer, T. P., M.D., Surg.-Capt.
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Pearse, Albert, Surg.-Capt.
Pease, H. S., Surg.-Capt.
Penton, R. H., Surg.-Capt.

INDIAN MEDICAL SERVICE.

MEMBERS—615.

FOREIGN AND COLONIAL.

MEMBERS UNATTACHED—615.

King, F. T., M.B., Seacliff Asylum, New Zealand
King, [illegible], New Zealand
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[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Castries, St. Lucia, West Indies
[illegible], M.D., Simla
[illegible], Christchurch, New Zealand
[illegible], New Zealand
[illegible]
[illegible]
[illegible], Boston, U.S.A.
[illegible], Napier, New Zealand
[illegible], Victoria
[illegible]
[illegible], Paris
[illegible], Paris (dead)
[illegible]
[illegible]
[illegible], Aden
[illegible]
[illegible], Tasmania
[illegible]
[illegible]
[illegible]
[illegible], New Zealand
[illegible], New Zealand
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible], Canada
[illegible]
[illegible], California, U.S.A.
[illegible], New Zealand
[illegible]
[illegible], Buenos Ayres
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[illegible]
[illegible], U.S.A.
[illegible], New Zealand
[illegible]
[illegible]
[illegible]
[illegible], St. John, Canada
[illegible]
[illegible]
[illegible], Bengal
[illegible]
[illegible] Street, Toronto
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[illegible], W., Christchurch
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[illegible], U.S.A.
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[illegible], Bengal
[illegible], W. Australia
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[illegible], New Zealand
[illegible]
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[illegible], Mussoorie, India
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[illegible], Bengal
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[illegible], Indiana, U.S.A.
[illegible], Napier, New Zealand
[illegible]
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AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(1) Etiology of Rickets.

HAGENBACH-BURCKHARDT (*Inaug. Diss.* Bâle, *Woch.*, May 27th, 1895) discusses the etiology with special reference to rickets being an infective process. Theories attributing the disease to deficiency of lime salts, to lactic acid, are no longer tenable. Experiments, under certain circumstances, disposed to admit various micro-organisms to the cause of rickets. Poisons due to micro-organisms can readily be supposed to set up the lesions found in the disease. The temperate zone is the one in which rickets abounds. The cases of rickets increase at the beginning of the cold season, when children are kept in the house. The greater the altitude, the less frequent is the disease. The infective theory would explain the prevalence of the disease in wedded, and its infrequency in poor, strong boys. Both rickets and tuberculosis are most developed in large towns and in notoriously unhealthy districts. Embarrassment of the individual by acute or chronic disease predisposes to both diseases. Measles also predisposes to both. In early age chronic infective processes are frequently localised in the bones. There is nothing in the clinical picture of rickets against the view of its being an infective disease. Acute rickets is known. The spleen is frequently enlarged. The objections to the view are that no micro-organism has been found, and that similar changes in bone may be produced experimentally in animals by withdrawing lime salts. The author thinks that the disease set up in this way is not identical with rickets, nor does he think that foetal rickets has been shown to be identified with the ordinary disease. He would look upon defective bone-growth, vitiated atmosphere, acute and chronic infective diseases, as predisposing causes only.

(2) Acute Tuberculosis of the Broncho-Pneumonic Form.

LOSCH AND LEREDDE (*Arch. Gén. de Méd.*, June, 1895) relate a case in a man, aged 40. The illness lasted eleven weeks. The onset was fairly rapid, with epistaxis, fever, and later diarrhœa. Pleurodynia was noted early in the disease. There was some distension of the abdomen, and the spleen became enlarged, but there were no spots. The temperature was fairly constant. The pulse was not very rapid until towards the close. There was very little cough, and no dyspnœa. The expectoration was small in amount. The abnormal physical signs in the chest were almost limited to the mass behind, and were such as to lead to the opinion that the pulmonary lesion was secondary. There was great wasting towards the end of the illness. At the necropsy the tuberculous lesions were found chiefly in the bases of the lungs. The authors draw special attention to the facts that there was no predominance of signs over the apices of the lungs, and that there was no dyspnœa and no hæmoptysis. Possibly an examination of the sputum for tubercle bacilli might have cleared up the case. It was not that form of acute phthisis (*granulie*) which often gives rise to diagnostic difficulties, nor a case of caseous pneumonia of the lobar variety. The lesions found were caseating broncho-pneumonic foci. This form of tuberculous broncho pneumonia is not infrequently seen in the child; it then produces some cyanosis and dyspnœa, and auscultation and percussion usually give some precise information. Phosphaturia is fairly constant in tuberculosis, whereas it is seen only during defervescence in enteric fever. Herpes, noted in this case, is very uncommon in acute tuberculosis; it is also rare in enteric fever.

(3) Gastropathia Xiphoidea.

MINCOLI (*Gaz. Osped.*, March 26th, 1895) draws attention to a form of dyspepsia due to displacement of the xiphoid cartilage. Just as affections or slight displacements of the coccyx may make severe backache and pelvic pain, so displacement of the xiphoid may directly or directly set up gastralgia and a kind of atonic dyspepsia. Not every displacement of the xiphoid causes gastric symptoms; it depends partly on the rapidity with which the displacement takes place, the proportional development of the apophysis itself, the shape of the thorax, etc. Shoemakers with marked xiphoid depression frequently suffer from gastralgia. Symptoms occur most often in anæmic and chlorotic girls, and remain unrelieved by ordinary iron treatment, whilst they yield promptly to treatment directed to the xiphoid. Its treatment is massage applied so as to raise the xiphoid into position, followed by the application of a pad and bandage for two or three days, or longer if required. The author has found much benefit accrue from this line of treatment when other methods had failed.

(4) Subphrenic Abscess.

LANTH (*Münch. med. Woch.*, May 14th, 1895), recalls that the etiology of this disease is varied, his own 7 cases illustrating five different groups. It may be secondary (*a*) to a gastric lesion the most frequent cause, as in Cases I and II; (*b*) to perityphlitic processes (Cases III and IV); (*c*) to injury, as in Case V; (*d*) to disease of the female generative organs (Case VI), or (*e*) to a thoracic lesion, as in Case VII. All the cases were operated upon except Case III, which was practically moribund on admission. Cases I, II, and IV died, whereas Cases VI and VII recovered. Case V, after a very severe illness, was on the way to recovery. Short details are given of the 7 cases. (1) In a man, aged 25, the abscess was due to the rupture of a gastric ulcer on the posterior wall of the stomach, near the pylorus. Suppurative peritonitis was present. (2) A man, aged 36, had pain in the epigastrium and vomiting four and a half weeks previously. The ulcer was situated near the greater curvature and the abscess in the lesser omentum. (3) A man, aged 28, who had long suffered from constipation, was suddenly seized with abdominal pain and fever. Somewhat later there was jaundice and pain in the hepatic region, suggesting biliary colic. The end of the vermiform appendix was gangrenous; the inflammation had extended upwards behind the cæcum, kidney, and liver, and had caused an abscess in the right subphrenic region. (4) In a boy, aged 14, the subphrenic abscess resulted from the rupture of a hepatic abscess. There were two perforations in the cæcum, as well as one in the appendix, together with a perityphlitic abscess. The hepatic abscess was the result of a suppurative phlebitis, the origin of the infection being the vermiform appendix. (5) This case occurred in a man, aged 30, and was, apparently, the result of a blow. (6) In a woman, aged 35, the uterus was scraped out on the second day of an incomplete abortion. The pain in the upper part of the abdomen began on the seventh day. (7) A man, aged 22, had a metapneumonic empyema, and he spat up a quantity of pure pus. After this there was improvement, but later he had pain in the lower part of the chest and in the abdomen. The perforation in the diaphragm was made out at the operation. There was no gas formation in any of these cases. A serous pleurisy was present in 3 cases, which the author looks upon as of diagnostic value. The history of inflammatory lesions in the abdomen may also be of assistance.

(5) The Influence of Syphilis on Locomotor Ataxy.

GIANNABELLI (*Gaz. d. Osped.*, May 18th, 1895) says that possibly a third of the cases of locomotor ataxy may be of syphilitic origin. Ataxia coming on twenty or thirty years after primary syphilis, and not preceded by any declared syphilitic manifestations during this time, is probably not syphilitic. So-called syphilitic ataxia has no definite characteristics of its own, such as belong to cerebral syphilis. Anti-syphilitic treatment as a rule does more harm than good in tabes, and in any case in which this form of treatment did no good in fifteen to twenty days, the author thinks it useless to persevere with it. On the whole Cantarelli thinks that the importance of syphilis as a cause of tabes has been greatly exaggerated.

SURGERY.

(6) Ulceration in the Rectum.

E. FRANKEL (*Münch. med. Woch.*, June 11th, 1895) discusses the morbid anatomy of ulcers of the rectum leading to stricture, basing his remarks on a study of nine cases, all occurring in women. This ulceration occurs in

the ampullary part of the rectum, but not within 3 or 4 cm. of the anus, at least in the early stage. The naked-eye appearances are characteristic. The mucous membrane is entirely absent mostly round the whole gut, exposing the submucosa, or even the muscular coat. The base of the ulcer is smooth. There are no nodules or characteristic structures, either in the ulcer itself or in its usually sharply cut edge. A considerable narrowing with loss of elasticity is present in this normally very distensible structure. Not infrequently one or more perforations are present, which may lead to phlegmonous or putrid inflammation, to suppuration or gangrene of the perirectal tissues. Healing leaves dense scars. Adhesions may occur between the rectum and uterus. This ulceration is mostly looked upon as syphilitic. Other syphilitic lesions are frequently found in the body, including smooth atrophy of the base of the tongue, to which the author calls special attention. The microscopical evidence is also in favour of syphilis. The foci of infiltration follow the course of the vessels. Miliary gummata have been described. There are cases in which neither the history nor the minutest clinical examination reveals any evidence of syphilis. It has been suggested that gonorrhœal infection may give rise to it, but of this there is no evidence. Reasons given to account for the disease being so much more frequent in women are unsatisfactory. The author draws attention to the fact that women are very prone to constipation; that erosions or superficial necrosis may be caused by the pressure of fæces, and that thus the mucous membrane of the rectum may become a place of lessened resistance. As regards treatment, the author has never seen complete healing. He thinks that extirpation of the diseased gut, as proposed and carried out by Sick and Schede, is the only really satisfactory treatment.

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(7) Excision of the Vas Deferens for Prostatic Hypertrophy.

PAVONE (*Il Policlinico*, June 1st, 1895) has made a series of experiments on dogs with regard to the effects of removing the testes or the vas deferens alone. He finds that bilateral excision of the vas deferens in dogs brings about the same atrophy of the prostate as castration. Drawings of the microscopic appearance of prostates after castration and excision of the vas deferens respectively show that practically the same changes occur after both operations. The author therefore recommends excision of the vas deferens for prostatic hypertrophy in preference to castration as being a simpler operation, causing less mutilation and less mental shock to the patient, and giving equally good therapeutic results.

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(8) Treatment of Pancreatic Cyst.

RICHARDSON (*Boston Med. and Surg. Journ.*, March 21st, 1895) publishes a case of pancreatic cyst as large as an adult head, in a man aged 25, which was successfully treated by laparotomy, and free incision and drainage of the tumour after it had been stitched to the edges of the wound in the abdominal wall. The author, who found drainage effectual in two previous cases, states that many other observations confirm his opinion that complete healing takes place after this plan of treatment in most cases, and that the danger is slight. He thinks, therefore, that it would be well to follow this treatment generally. If the cyst can be easily separated from its attachments and thoroughly extirpated without excessive hæmorrhage, it might be best to attempt such a procedure in view of the possible reaccumulation of fluid, with its remote dangers. The attempt at enucleation should be abandoned, however, as soon as it becomes evident that the cyst is so thoroughly incorporated with the surrounding pancreatic tissues that it can be separated only by cutting.

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(9) Surgical Treatment of Hydatid Tumours.

RUDALL (*Australian Med. Journ.*, January 20th, 1895) says that much of the success which has been obtained in the surgical treatment of hydatid tumours is due to the thoroughness of evacuation and to the employment of the shortest route to the surface of the body in carrying out the evacuation. He relates the following case as illustrative of these remarks. A male patient, aged 28, suffered from a swelling in the right side of the chest, which extended upwards as far as the top of the fourth interspace. On aspiration with a fine trocar fluid was withdrawn which contained pus cells and hooklets. There were no symptoms of lung affection. The diagnosis was thought to be a hydatid tumour of the liver, which had encroached to a very considerable extent upon the thoracic cavity. There did not seem to be any likelihood of dealing with the tumour effectually by an abdominal incision, and on this account it was decided to reach it through the chest wall. After the patient had been anæsthetised an incision was made from near the right nipple downwards and outwards across the ribs, and then about 2 inches of the sixth and seventh ribs were resected. The pleura was then opened, and the lung was found to have been pushed upwards towards the apex of the chest cavity. The liver containing the tumour, and covered by the diaphragm, occupied the greater part of the chest. The diaphragmatic and costal surfaces of the pleura were sewn together with sutures of silkworm gut, and then a fine trocar was passed inwards in several directions. At first watery fluid escaped, and then it became opaque. On this account it was thought that more than one tumour existed. The diaphragm was next cut through and a large hydatid cyst opened. This contained opaque fluid and daughter cysts, some of which were filled with clear fluid. The liver substance overlying the cyst was broken down with the finger so as to allow the escape of the contents of the cyst, and also the cyst itself, which was drawn out apparently entire. The liver tissue around the opening was stitched to the margins of the wound in the diaphragm, so as to shut off the peritoneum from the field of operation. The cavity in the liver was washed out with a weak sublimate lotion and a glass drainage tube introduced. A week after the operation there was a little bleeding from the wound, which lasted for several days, when a small piece of cyst wall was washed out. After this the wound healed. A little later two swellings formed in the right hypochondriac region, which were treated in the same way, and the patient recovered completely.

MIDWIFERY AND DISEASES OF WOMEN.

(10) The Pelvis in Lame Female Children.

PROUVOST (*Revue Obstét. Internat.*, May 21st, 1895) has studied this question, which is of grave importance. The obstetric prospects of little girls troubled with lameness are compromised, and as this, like many worse infirmities, does not always exclude the sufferer from marriage and impregnation, the extent to which the pelvic bones may become involved is a matter of interest to the obstetrician. Prouvost holds that in order to safeguard the pelvis the child must never walk without the aid of two crutches. In seven cases where no support was used, the child hobbling about without crutches or even a stick, there was distinct flattening of the pelvis on the side corresponding to the lame leg. The use of a stout stick or even of one crutch was found insufficient, in all observed cases, to ensure thorough development of the pelvis even when the deformity began at about the fourteenth year. In short, the crippled girl must make use of crutches till she is at least sixteen. In his paper Prouvost discusses the orthopædic aspect of the question very thoroughly.

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(11) Ovariotomy. Eighty-eight Quarts of Fluid: Recovery.

REIFSNYDER (*Amer. Journ. of Obstet.*, April, 1895) describes two cases of ovariotomy performed on native Chinese women in the Margaret Williamson Hospital, Shanghai; both patients recovered. In the first case the patient was 23; the tumour weighed 80 lbs. The second patient was 25 years of age; she married at 19, and soon afterwards her abdomen began to enlarge. She had never been tapped. She was 4 ft. 8 inches in height, and the circumference at the umbilicus was 5 ft. 7½ inches. She passed about 16 oz. of urine in twenty-four hours, free from albumen; its specific gravity was 1026. Her appetite was good, and the bowels acted once or twice daily. She had been unkindly treated as a sterile woman unfit for domestic work. After numerous precautions, ovariotomy was performed. Chloroform was given; her head and shoulders had to be somewhat elevated; she took but little of the anæsthetic. Eighty-eight quarts of fluid were

removed; the tumour consisted of one large and one very small cyst; there were free adhesions superiorly. The empty tumour weighed 6½ lbs. There was no ascitic fluid in the abdominal cavity. The pedicle was long and about 2½ inches broad. The abdomen was washed out, then the wound closed with twelve silk sutures. There was much shock at first. After the first day, she passed urine voluntarily, and her bowels were moved forty one hours after operation. On the second day, there was flatulent distension, the pulse rising to 102°. Rochelle salts were given. Her second night was the worst; she had two hypodermic injections of digitalin (1/75 grain), brandy by the mouth twice, one turpentine enema, and a capsule of turpentine taken by the mouth. Afterwards she did well. Her weight, two months after the operation, was 92 lbs.

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(10) Hystero-myomectomy.

CARLE (*Bull. Méd.*, May 28th, 1895) during the last six years has operated 160 times for uterine fibroids. In 13 cases he performed vaginal hysterectomy; in 11 enucleation and *morcellement*, with good results in each case; he would, however, reserve this method for submucous fibroids of moderate size. As a general rule, he prefers operating through the abdomen, and with this method his mortality sank to 1 in 54, whilst with other methods it rose to 7 per cent. Placing the patient in Trendelenburg's position, he makes a fairly large abdominal incision, divides the utero-ovarian vessels between forceps, makes a circular incision at the fundus of the tumour, comprising the serous and superficial muscular layer, works his way with finger or point of forceps to the serous involucrum, ligatures the uterine arteries at their point of ingress with the uterus. The tumour can then easily be drawn up into the wound, and dissected away. A ligature is placed just below the os uteri, so as to exclude any vaginal secretion, and an incision made above. The edges of the wound are disinfected with the thermo-cautery and united so as to leave a transverse line of suture at the bottom of the pelvis. The author has operated on 54 cases by this method, with one death; some of the tumours weighed as much as 12, 15, and 16 kg., and presented other operative difficulties.

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(11) Pelvic Abscess communicating with Intestine.

MARX (*Rev. de Therap. Méd. Chir.*, March 15th, 1895) records an operation on a woman, aged 44, long subject to symptoms of pelvic inflammation. She had not been pregnant for 18 years. On December 8th, 1894, there was extensive parametritic deposit, with indistinct fluctuation in the left iliac fossa. By December 17th this fluctuation had become quite distinct; the pain was intolerable. On the next day vaginal hysterectomy was performed. Large abscesses were thus laid open. The appendages could not be removed. One very large collection of pus was opened on Hilton's method. About a pint escaped. It was bluish, and smelt fæcal, but no fæcal matter was found in it. A T-shaped drainage tube was placed in its cavity. On the tenth day a quantity of fæces was found in the vagina. For a fortnight motions passed both ways; when there were scybala in the rectum more fæces escaped through the vagina. Much fluid had to be thrown up the rectum before any of it returned through the vagina, hence the communication must have been high up. It could not, however, be detected by the finger passed into the abscess cavity. By February 18th, 1895, the patient was in good health. A little pus still escaped from the vagina, but all pain had disappeared.

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(12) Double Vagina: Hæmatocolpos: Simple Uterus.

MURET (*Semaine Médicale*, May 8th, 1895) operated under the following circumstances on a young girl, aged 18. The period had been established for several months, but the show was irregular. She complained of dysmenorrhœa, and an elastic tumour had developed, rising above the symphysis and projecting below into the vagina, which was very narrow and blind—as it seemed—superiorly. The tumour was tapped from below; 4 pints 6 ounces of treacly viscous blood came away. The pain disappeared and menstruation became regular. After recovery the patient was examined under ether. The vagina was found to be double. The right half, which had contained the blood, was the most developed; it contained a septum with a wide eccentric aperture. The vaginal part of the cervix was small but, like the rest of the uterus, well formed. The left half of the vagina, which was naturally open, contracted above, but was now found to communicate by means of an orifice with the right half of the vagina. Contrary to rule, the atresic half was morphologically the best developed. The appearance of the catamenia before the operation was explained by the communication between the two halves of the vagina.

THERAPEUTICS.

(13) Serum Treatment of Malignant Disease.

EMMERICH AND SCHOLL (*Deutsch. med. Woch.*, May 30th) reply to Bruns's strictures on the serum treatment (see EPITOME, June 15th, par. 464). They complain that a case in which Bruns reported to them a decided diminution in the growth is omitted; that the serum was sent to him for preliminary trial during a time when its exact method of preparation was not decided on; and that too many cases were treated with too little of the serum. They further state that the serum used in some of these cases had become infected and spoilt (after transmission), and they express surprise that it should have been used after it had become flocculent. They have treated cases with much larger doses than Bruns with no unpleasant after-effects. The alarming symptoms produced were due to the injection of the serum into the vessels of the growth. They advocate equally with Bruns early operation.—Before the Munich Medical Society (*Münch. med. Woch.*, May 21st, 1895) Angerer maintained that Emmerich's serum had no specific curative action. Emmerich treated five cases in the author's clinic. In the first two cases no histological changes could be found, the injections having been given before operation. In the third case erysipelas came on and threatened the patient's life. Neither the injections nor the erysipelas had any effect on the tumour. In the fourth case (No. 1 in Emmerich's paper, EPITOME, May 11th, 1895, par. 367) a diminution in the nodules was observed, but the erysipelas which supervened might account for it. The subsequent history showed that after the patient's discharge from hospital new nodules appeared, and death occurred from cachexia. The subsequent history of the fifth case (No. 2 Emmerich) was also unfavourable. The author emphasises the fact that great caution must be exercised in drawing conclusions. Zimmermann then reported a case in which a diminution in the tumour took place. An afebrile erysipelas appeared on the fifth day, and lasted two days. Emmerich himself was unable to attend the meeting.—Coley, of the New York Cancer Hospital, relates (*Med. Record*, May 18th, 1895) his further researches into the use of erysipelas toxins and erysipelas serum. They confirm his first conclusions. He has improved his method of treatment by using the blood serum of a horse subjected to the action of erysipelas. He relates the following cases: (1) A patient with a rapidly recurring and inoperable carcinoma of the breast was treated for several weeks with the toxins; the growth of the tumour was checked, but there was no decrease in size. The serum was then injected for two weeks, but without any apparent effect. (2) A woman, aged 50, had an enormous inoperable carcinoma of the breast. The injections produced a diminution in the size of the tumour; later erysipelas toxins were substituted for the serum. In two months the growth was reduced to one-half its size. Then uncontrollable and fatal hæmorrhage was produced by the erosion of a vessel. (3) In a case of probable carcinoma of the neck and sternum, the tumour ceased to grow and became less fixed and slightly smaller. The author observes that the doses have not been pushed to anything like the probable limit of safety. He is now using much larger doses in eight cases of carcinoma and sarcoma. The author then relates three cases of epithelioma similarly treated. In one case, already published, of inoperable epithelioma of the chin, lower jaw, and floor of the mouth he could find no evidence of the disease eight months after the injections had

been discontinued. In the second case of recurrent epithelioma of the face the growth entirely disappeared. In a third case of inoperable epithelioma of the tongue the growth became smaller and less hard.

(16) Salophen.

P. Marie (*Soc. Méd. des Hôp.*, May 31st; *Sem. Méd.*, June 5th) has studied the therapeutic action of salophen in a variety of cases—rheumatism, acute and subacute, saturnine gout, chorea, orchitis, or mumps, and phthisis. In several of these cases, salicylate of soda had either not been well tolerated or had seemed to have little or no effect. He concludes that salophen has all the therapeutic virtues of the salicylate in acute and subacute rheumatism and in gout without its drawbacks. In the phthisical cases a single dose was followed by a fall of temperature. In all the cases salophen seemed to have a marked influence in restoring the digestive functions. In cases of chronic rheumatism it did no good. As regards dosage, the author looks upon 3 to 4 grammes (45 to 60 grains) as an average daily dose; 5 and 6 grammes (75 and 90 grains) should be given only exceptionally, and Marie is not satisfied that these large doses are more effectual than smaller ones. The 4 grammes (60 grains) should be given in six doses, either in cachets or simply suspended in water.

(17) The Direct Influence of Bicarbonate of Soda on the Gastric Secretion.

N. Reichmann (*Therap. Monatshefte*, March, 1894) in view of the uncertain teaching as to the effects produced on the gastric mucous membrane by alkalies, investigated the matter methodically, choosing bicarbonate of soda on account of the extent to which it is generally used. The experiments were performed on human beings, the following five methods being employed. Patients drank before breakfast, during successive mornings, alternately 200 cubic centimetres of distilled water and 200 cubic centimetres of a bicarbonate solution. After 15 to 30 minutes the gastric contents were aspirated, but neither small nor large doses appeared to influence the quantity of fluid secreted. The same experiment was tried in subjects who, however, were allowed shortly after drinking to eat a breakfast. Here again the result of aspiration was negative. In the next place the alkali was administered every morning during several weeks, but no appreciable effect was produced. On the other hand, when taken after food, the acidity of the gastric contents was diminished in proportion to the amount of bicarbonate taken. Again, this investigation when extended over several weeks, produced no effect on the gastric secretion. In conclusion the author states that the examinations numbered 103, that the drug will act as an alkali even to a considerable degree, but that it in no way influences the secretory power of the stomach. Nevertheless he admits the value of a drug, which is capable of lessening acidity, and he states that the long-continued use of weak alkalies will no doubt produce a tonic effect on a weak gastric mucous membrane.

(18) Alcoholic Applications in Phlegmonous Inflammation.

According to Salzwedel (*Deut. milit.-ärtzl. Zeit.*, 23) under constant application of dressings of 60 to 90 per cent. alcohol, phlegmonous inflammations of the milder sort undergo almost abortive resolution, while severer cases show unusually rapid softening, and terminate early in circumscribed abscess containing thin pus. The details of the procedure are as follows: After the skin has been washed with ether, and any wound present covered with an antiseptic mull, a moderately thick layer of absorbent cotton wool, soaked in the alcohol, is applied, and over it some waterproof material, perforated or cut in strips so as to retard but not wholly prevent evaporation. The application is renewed daily, and should be continued a few days after subsidence has begun.

PATHOLOGY.

(19) Immunity.

Buchner (*Münch. med. Woch.*, 1894. Nos. 37 and 38) gives a summary of his work for the past three years on immunity, and collects thus his most important conclusions: (1) Natural resistance against infection—so-called "natural immunity"—depends upon totally different causes and conditions to those on which artificial or acquired immunity depends, and though practically both may coexist in the same patient, the two sets of conditions must scientifically be considered and investigated separately. (2) Natural resistance depends, on the one hand, upon the bactericidal action of certain dissolved constituents of the organism—the so-called alexins—and, on the other hand, upon an inborn insusceptibility of the tissues and cells of the body to particular bacterial poisons. Natural resistance as a rule cannot be communicated to another animal by the blood. (3) The leucocytes possess an important function in the natural methods of defence of the organism, not as phagocytes but by reason of soluble substances which are secreted by them. Phagocytosis is only a secondary phenomenon. (4) Artificial or acquired immunity depends upon the existence of modified specific bacterial products, the so called antitoxins found either in the blood or in the tissues of the animal or in both places. As a rule the antitoxins and the artificial immunity which they carry with them may be conveyed to other animals by the blood (and milk). (5) Antitoxins work not by direct destruction of the bacterial poisons from contact with them, but they lead—in the animal, and only through the medium of its tissues—to a diminution of the specific susceptibility of the living tissues, whereby these become insusceptible and resistant to the bacterial poison.

(20) Relation between Diphtheria and Tuberculosis.

Revillod (*La Tuberculosi*, January 30th, 1895) points out certain analogies between these two diseases, and chiefly draws attention to the fact that the families in which diphtheria finds a favourable soil are also predisposed to tuberculosis; in other words, that there exists a family temperament or disposition favourable to the reception of both these maladies. The author cites 21 families in which diphtheria had attacked one or more members at sufficiently long intervals to avoid suspicion of contagion, in illustration of the fact that diphtheria is prone to attack certain families in undue proportions. As a corollary, the author doubts the contagiousness of diphtheria, or at least believes it to be exaggerated as a cause. Diphtheria and tuberculosis coexist with special frequency in the same family. Hagenbach found *post mortem* that 10 per cent. of the diphtheritics were tuberculous, Hoppe-Seyler 23 per cent. In the author's 21 families, 5 had already shown tuberculous manifestations. Adding other cases in which diphtheria and tuberculosis occurred in the same subject, the author finds that out of 200 cases of diphtheria admitted into hospital, there were 42 in which there was evidence of tuberculosis either in the patients themselves or in their families, which gives a percentage of 21.

(21) Death from Starvation in Children.

Seydel (*Vierteljahrsschrift für gerichtliche Medicin*, Dritte Folge, Band VII, S. 226) points out that the appearances found after death from starvation of young children, such as emptiness and contraction of the stomach and intestines and general wasting, are not sufficiently characteristic that a decision can be based upon them in medico-legal cases. It is also possible that, for example, children might be fed immediately before death, or that the direct cause of death might be perhaps suffocation. From repeated examinations, Seydel found that in true cases of insufficient nutrition there is great atrophy of the thymus gland; he allows that atrophy of the thymus also occurs in other wasting conditions, but thinks that the condition, combined with considerable emaciation and unaccompanied by organic disease of other parts, is a sure sign of wasting from insufficient and improper feeding.

(22) Sterility of Serum.

Nocard (*Sem. Méd.*, 1895, No. 8) points out that blood serum taken with aseptic precautions and kept free from contamination sometimes becomes spoiled, found that this chiefly occurs if the serum is taken after a meal. He investigated the question, and found that serum taken from an animal is almost always sterile, but that chyle is rarely so. As a rule, three or four hours after a meal a considerable number of bacteria are present in the chyle, and the numbers vary directly as the amount of food given.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(23) Uræmic Pericarditis.

TISSOT (*Lyon Méd.*, May 1st, 1895) reports the case of a man, aged 68, who died of uræmia. At the necropsy there was found slight increase in the pericardial fluid, which was opaque from contained cells and small fibrinous flocculæ. Both layers of the pericardium had lost their smooth glistening appearance, and presented small reddish points covered here and there with a layer of fibrinous material. The heart was hypertrophied, especially the left ventricle. No valvular lesion but the aorta and coronary arteries were atheromatous. Small white granular kidney with signs of extensive arterio-sclerosis. Bacteriological examination of the pericardial fluid was negative. No micro-organism was found by any of the various methods employed. Basing on these non-bacterial cases of pericarditis uræmic; he has collected five other similar cases, and supposes that they arise from the effect of some one of the poisons circulating in the blood in the uræmic condition.

(24) Cytisin Poisoning.

SAINT (*Journ. med. Week.*, June 6th, 1895), describes three cases of poisoning by the fruit of cytisus laburnum occurring in children aged 4, 4, and 3 years respectively. The symptoms somewhat resembled cholera, but there were general clonic convulsions, and the temperature was raised. There was also some likeness to strychnine poisoning. The green masses in the vomit and stools suggested poisoning by cytisin. In the one fatal case the mucous membrane of the alimentary canal was mostly pale. In the stomach there were a few ecchymoses, and in the œsophagus there was some redness with desquamation of epithelium. The brain was much congested. Changes were also present in the kidneys, consisting of minute hæmorrhages beneath the capsule and necrosis of the renal cells in the convoluted tubes. The cells of the liver cells also stained badly. No certain cytisin reaction was obtained in a chemical examination of the organs, but cytisin was found in the blood. The contrast between the normal condition of the mucous membrane of the alimentary canal and the enlargement of the brain and meninges was striking. The symptoms consisted in a very acute diarrhœa, with desquamation of the epithelium of the lower colon and rectum, a rise of temperature, and clonic convulsions involving the majority of the voluntary muscles. In one case the diarrhœa continued for 12 days with abdominal distension. In all three cases there was a greatly diminished excretion of urine up to anuria. Prostration is common to all severe diarrhœas. The treatment generally consisted in an emetic and castor oil at the outset, and small doses of opium later; in the case in which the diarrhœa persisted for several days large rectal injections were used.

(25) Examination of the Chest.

OTIS (*Boston Med. and Surg. Jour.*, April 11th, 1895) attaches considerable importance to the value of spirometry, pneumatometry (or the measure of the elastic power of the lungs), and the measurements of the circumference and diameters of the chest in natural and full inspiration. They are of special value before positive evidence of tuberculous infiltration can be obtained by auscultation and percussion. From a number of investigations he concludes that in males between 16 and 40 years the lung capacity corresponds to 22·5 to 25 c.c.m. for each centimetre in height, and in women 15 c.c.m. for each centimetre. If the spirometric calculation falls much below this, either the patient's method of breathing is not normal or his lungs are in fault. The former can be ascertained by the measurement of the chest in repose and in full expansion. In early phthisis the lung capacity is generally much below the average. If the general symptoms are suggestive of phthisis, and yet the vital capacity is up to or beyond the normal, this is evidence against lung disease. If phthisis is present, the test of vital capacity is also a factor of more or less importance in prognosis. The author prefers the water spirometer. The measurement of the elastic power of the lungs is made by the pneumatometer or pressure spirometer. In early phthisis the inspiratory power is lessened, the expiratory remaining normal. In thoracometry a measurement is made on a level with the nipple, and another 2 inches below it. These are taken in repose, and after inflation. The shape of the chest can also be ascertained. The sum total of these tests supplements knowledge obtained by auscultation and percussion. If the vital capacity is low and expansion poor, gymnastic exercises may be of use, and lung disease thus warded off. The method of treatment and prophylaxis by lung gymnastics is, according to the author, much too neglected. Tables are appended from original observations on the measurements of the chest and lung capacity.

(26) Peripheral Neuritides.

DÉJERINE (*Rev. de Méd.*, April, 1895) records the case of a man, aged 42, who developed sensory disturbances and difficulty in walking about a month after the onset of a diphtheritic angina. Two months later he presented the typical ataxic gait and Romberg's sign. The muscles of the lower extremities were not wasted and presented no trace of paralysis. The patellar and cutaneous reflexes were absent. There were no pains in the legs but a sensation of numbness in the feet. Sensation to touch, temperature, and pain was impaired over the feet and the lower two-thirds of the legs. When the patient was lying down marked evidences of incoordination could also be obtained. In the arms there was no ataxia, but in the hands sensation was impaired as in the feet, though in a lesser degree. The pupils reacted normally, and there was no ocular paralysis; the sphincters were intact and the genital functions unimpaired. Some six weeks later the incoordination had disappeared and the sensory disturbances had almost gone. The affection developed rapidly, the cycle being completed in 3½ months. The author thinks that the sensory nerves were alone affected. In this case the history, the absence of eye changes, and the integrity of the vesical functions formed the chief elements in the diagnosis. Contrary to what is usually observed in peripheral neuritis, there was no tenderness of muscles or nerve trunks.

SURGERY.

(27) The Operative Treatment of Congenital Dislocation of the Hip.

HOFFA (*Berliner Klinik*, June, 1895) reports the results of his operation for congenital dislocation of the hip, which consists in exposing the joint, deepening the cotyloid cavity, and placing the head of the femur in its normal position. He describes also the different modifications in the technical details of his procedure he has adopted from time to time. This paper deals with the results of 112 operations performed on 82 patients, 30 of whom were affected with bilateral, and the remaining 52 with unilateral, dislocation. In 3 of these cases death occurred as a direct result of the operative treatment, having been due in 2 cases to prolonged anæsthesia with hæmorrhage and shock, and in the third instance to iodoform poisoning. These disasters led the author in subsequent operations to perform the operation more rapidly in order to avoid chilling of the patient, to refrain as far as possible from division of muscles, and to substitute simple sterilised gauze for iodoform dressings. In 9 cases the operation was followed by ankylosis of the affected hip. This unfortunate result is attributed in 8 of these instances to suppuration in the wound. In the remaining cases of recovery in which the treatment results in the establishing of a freely movable joint, there was no subsequent tendency to stiffness of the hip either from adhesions or from muscular contraction. In most cases, it is stated, the mobility of the limb increased steadily after the discharge of the patients from the hospital. Return of the luxation was noted in 11 cases, in 3 the bone was displaced backwards, and in 8 forwards. In the cases of backward displacement the patients had been removed from the author's supervision before the completion of the treatment. The forward displacement he attributes to insufficient deepening of the cotyloid cavity, and occurred in his early cases. In instances of unilateral dislocation the

operation is followed by decided lengthening of the affected limb in consequence of the restoration of the head of the femur to its normal level. The amount of persistent shortening due to deformity of the neck of the displaced bone is not very great, and may be obviated by obliquity of the pelvis and by the use on the affected side of a boot with a thicker sole. In cases of bilateral dislocation the author states that his operation results in a removal of lordosis, in a reduction to a minimum of the waddling gait, in restoration of the normal direction of the limbs, and in increased abduction mobility. It is asserted that in all cases of successful operative treatment by this method the improvement persists steadily from the period of convalescence and increases from year to year. The best possible operation in cases of congenital dislocation of the hip is one which will enable the surgeon to effect complete reduction of the displaced head of the femur, and to establish a movable joint. The author insists on the necessity of preserving the continuity of the muscles of the joint, and of restoring their healthy condition and contractile vigour. In recent modifications of his operation he refrains as far as possible from cutting the contracted muscles, and in his after-treatment he attaches great importance to electricity and massage.

(28) Iodoform Injections in Joint Disease.

Ferrano (*Il Policlinico*, June 1st) reports the case of a man, aged 37, who after a long walk first noticed pain in the right knee, which was uniformly enlarged, red, and tender, and contained fluid. The joint was incised, and a considerable quantity of flaky pus let out. Two or three weeks after this, during which time the joint went on well, a small abscess formed in the upper third of the tibia; this was scraped. A similar purulent focus also appeared in the shaft of the tibia. The knee-joint became worse. The author then tried endo-articular injections of iodoform emulsion in sterilised glycerine (1-10) at intervals of twenty to twenty-five days. After each injection there was fever of maximum grade on the second or third day. The tubercle bacillus was found in the joint secretion. Slight improvement followed the injections, which were used five times, but, the patient not being satisfied, resection of the joint was finally done. It was then seen that the cavity was full of a mass of adipo-muco-fibrous connective tissue, the caseous substance being almost all gone, the osteitic foci cured or in process of cure, and the tuberculous nodules undergoing fibrous change. No bacilli were now to be found. Probably the iodoform acts by exciting a reactive inflammatory process, with formation of new connective tissue.

(29) The Surgical Treatment of Medical Intracranial Lesions.

Angel Money (*Intercolon. Quart. Journ. of Med. and Surg.*, May, 1895), in a paper on the Surgical Treatment of Medical Cases of Profound Loss of Consciousness, suggests that the time has come when radical measures may be tried for cases of this kind, which are simply permitted to die. Intracranial hæmorrhage is regarded as a very natural accident in Bright's disease, atheroma, and hæmorrhagic pachymeningitis. When the hæmorrhage occurs in other situations than the head, death need not follow for some months and even years, and if only a few extra weeks of conscious life can be attained by any means, such means, it is held, ought to be adopted. In the author's opinion direct operation on the brain is preferable to ligature of the carotid artery. The diagnosis can thus be verified, and there is less risk of a fatal issue as the direct result of surgical interference. Ingravescent apoplexy due to cerebral hæmorrhage may have its essential features simulated by embolism and thrombosis of cerebral vessels. In cases of hæmatoma of the dura mater an exploratory incision through the dura mater might afford temporary relief to the urgent head symptoms, and clear up the nature of the case. A case is recorded of cerebral hæmorrhage into the right hemisphere as an illustration of the class of lesions in which, the author thinks, it would be the right thing to try the effect of craniotomy. In considering what would have happened had the hæmorrhagic area been exposed and drained, he holds that the patient's condition and chances could have been rendered no worse by any kind of operative interference carried out with the usual precautions of modern surgery.

(30) Treatment of Cystitis.

Frendenberg (*Wien. klin. Woch.*, June 6th, 1895) has tried cantharidin in 56 cases of cystitis. The formula used was cantharidin (Merck's) 0,001 (= 1 mg.), alcohol ad solvend.. 1.0; aq. destill. ad 100. A teaspoonful of this was given three or four times a day; larger doses did not succeed if this failed. Results: (1) In 5 cases no improvement; of these only 1 was afterwards cured by local treatment after trying other drugs; the other 4 resisted even operative treatment (cases of vesical tuberculosis, contracted fibrous bladder, etc.). (2) In 19 its action was slight, or even doubtful, the strangury alone being improved, or the urine clearing without the cure being complete. In 1 of these the cystitis was due to perforating silk sutures after laparotomy, and the strangury was alone improved; in another the bladder had diverticula; some remained, however, in which the drug failed without apparent cause, for example, in one case of gonorrhœal cystitis afterwards cured by sandal wood oil. (3) The remaining 32 cases were completely cured, often surprisingly quickly. In 3 cases of gonorrhœal cystitis cantharidin succeeded where sandal wood oil failed. Conclusions: (1) Cantharidin is approached only by sandal wood oil in its action in cystitis, and the latter is to be preferred if urethritis is present. (2) Its advantages are its cheapness, tastelessness, and almost complete freedom from unpleasant symptoms, at least in the above given doses, frequent erections being noticed only once (after use for ten days), formication once, and a morbilliform eruption once. Disordered digestion or albuminuria never occurred.

MIDWIFERY AND DISEASES OF WOMEN.

(31) Vaginal Extirpation of Uterus after Labour.

Chrobak (*Centralbl. f. Gynäk.*, No. 21, 1895) advocates this practice in cases of uncontrollable flooding where rupture is suspected, though he admits that the only two cases in which he acted on this principle ended fatally. In one case, a placenta prævia labour, violent hæmorrhage set in during delivery, and a laceration involving the cervix was detected. A tampon was applied; this rapidly became soaked, and a second was firmly packed into the uterine cavity. Hæmorrhage continued, so that Chrobak decided on removing the uterus through the vagina, as that proceeding seemed to him simpler than abdominal hysterectomy. He states that the operation was not very difficult. The uterus was nearly 6 inches long. As it proved difficult to extract, a piece two fingers' breadth wide was cut, like a slice made in an orange, out of the anterior wall; then the organ was easily drawn out of the vagina. There was very little hæmorrhage during the removal of the uterus. Complete rupture of its wall was discovered; the laceration had apparently been enlarged when the second tampon was applied. The patient died. No details of the second case are given. In the one case the whole operation was done in four, and in the other in eight minutes. As far as facility of extraction is concerned, Chrobak considers his experience "encouraging."

(32) Syphilis of Vagina, Uterus, and Appendages.

Neumann (*Wien. med. Woch.*, No. 20, 1895) has studied this subject. Of the earlier exanthematous syphilides, none can be clearly diagnosed on the cervix or vagina above the vulva, except mucous papillary growths. Of primary syphilitic lesions only 55 were detected in 800 infected patients; in 51 the portio-vaginalis, and in 4 the vagina, was attacked. Gummata are far more frequent; they are most usually seen in the introitus and lower third (anteriorly) of the vagina. A diffuse gummatous invasion of that canal has been observed. Recurrence locally is very frequent in these syphilitic lesions of the vagina. Syphilis of the tube and ovary is a rare and very indefinite complication. Only one definite case of syphilis of the body of the uterus seems to have been recorded. Metritis and endometritis often kill the fœtus in syphilitic parents, but Neumann does not feel sure that these complications are in themselves specific. They

come on in many women otherwise out of health, and the debility caused by syphilis, not the infection itself, may produce the endometritis. On the other hand, syphilitic disease of the placenta is a well-known and very distinct disease. It is quite easy to understand how the fœtus dies when it has to depend on such a placenta for nourishment. Neumann thinks that it is not evident why the fœtus is often born dead or too weak to live many days yet free from any sign of syphilis, the placenta being also healthy. Just as mysterious is the equally frequent birth of a healthy infant when the parents show marked tertiary symptoms. The evil may, in the first case, lie in the fœtal blood, but this point is not yet beyond the limits of hypothesis.

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(33) Dilatation of the Vagina by the Tampon ("Columnisation").

NOVARS (*Annales de Gynéc. et d'Obstét.*, May, 1895) states that Condamin has had excellent results in the treatment of pelvic inflammation by firm plugging of the vagina. Bozemann and Taliaferro first introduced this practice. It supports prolapsed or tender structures and remedies congestion by dialysis as the plugs are always saturated in glycerine. The plugs, each as big as a walnut, when pressed after soaking, are introduced through a large speculum in the usual manner and packed very firmly. The lower part must not be plugged otherwise dysuria or retention may occur. This "columnisation" of the vagina is not suitable for pyosalpinx and other severe diseases of the appendages. Condamin finds that on the other hand it is particularly suitable for posterior parametritis. It relieves the uterine congestion and promotes absorption of the parametric exudation. The patient can walk about and attend to duties after the "columnisation" of the vagina. A free fluid discharge comes on about the second day. The plug may remain in place for several days. Of course the vagina must be rendered antiseptic before its application. The first plugs, which touch the cervix, should be dusted with iodoform.

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(34) Puncture in Pyosalpinx and Hydrosalpinx.

HOFMOKL (*Wien. klin. Woch.*, May 23rd) deprecates the too frequent operations for removal of inflamed appendages. Many patients who have undergone this operation come to him with bad after results, due to suppuration of the stump and consequent discharge of the ligature, or to adhesions between the omentum and the stump, or to intestinal obstruction from adhesion of the bowel to the stump or to the abdominal wall at the cicatrix of the operation wound. Fæcal fistula is not unknown. Out of 216 operations for diseased appendages 13 died, 2 from somewhat late pulmonary complications, but 11 from causes directly connected with the operation. On the other hand, out of 100 cases of aspiration or incision through the posterior vaginal fornix none died. In parametritis, perimetritis, and hæmatocele the results were excellent. Hofmokl therefore maintains that in confirmed diseases of the tube, or in cases where pus or blood has collected in the pelvis without any serious complications having developed, aspiration should be practised as early as possible. The appendages usually resume their normal functions and the patient is saved from mutilation.

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(35) Pregnancy in apparently Imperforate Hymen.

BRAUN (*Centralbl. f. Gynäk*, No. 23, 1895) was consulted by a newly-married woman who had found herself unfit for complete connection. He examined and found a virginal appearance of the external parts, a tight and narrow hymen, and pregnancy advanced to the fifth month. The patient had a generally contracted infundibuliform pelvis, and craniotomy was needed at the end of pregnancy. Braun notes that penetration must have been impossible in this case, where pregnancy occurred before the patient suspected it.

THERAPEUTICS.

(36) The Serum Treatment of Diphtheria.

LEICHTENSTERN AND WENDELSTADT (*Münch. med. Woch.*, June 11th, 1895) report their experience based on 123 cases, and contrast their results with those obtained in 1,353 cases before the serum period. For the purpose of comparison they divide these 1,353 cases into 11 groups containing 123 cases each. The cases of diphtheria admitted into the Cologne Hospital show very little variation in severity; in about 32 per cent. of the cases the larynx is involved. The diagnosis of diphtheria rests as hitherto upon clinical evidence. The authors maintain that they have seen improvement in the general and local condition of the patient as frequently before as since the introduction of the serum treatment. They cannot say with Kossel that every recent case of true pharyngeal diphtheria can be cured by the antitoxin used in sufficient amount, but they think that their results would have been even better if it had been possible to treat the cases earlier. The mortality among the 1,353 cases amounts to 30.9, whereas in the 123 treated with the serum it was 20.3 per cent. The authors point out that the lessened mortality was not due to slighter cases coming under treatment. The number of tracheotomies amounted to 30 per cent. in the serum period as against an average of 32 per cent. previously. Contrary to other observers, they found that the mortality among the non-tracheotomised was not materially lessened. The mortality among the tracheotomised, however, fell from 64 to 43 per cent. This they would attribute to the arrest of the extension of the membrane into the bronchi. The effect of the local curative action is seen in the diminished number of the tracheotomised and in the lessened mortality after tracheotomy. Their experience shows that the serum is really entirely harmless. The authors also state that during the past fifteen years they have tried the various methods of treatment from time to time advocated, but that before the introduction of the serum very little change was noted in the mortality.—In *Het Weekblad van het Nederlandsch Tydschrift voor Geneeskunde*, April 6th, there is a report of the results obtained with Behring's serum in the Children's Hospital, Amsterdam, from October 24th to December 28th, 1894. During that period 31 cases were treated, of which 6 died. The Loeffler bacillus was found in 20 out of the 31 cases. In 5 the diphtheria bacillus was present alone; in 10 it was combined with streptococci, in 2 with staphylococci, and in 3 with streptococci and staphylococci. There were 2 deaths, both of children under 1 year. Intubation and tracheotomy were performed in 11 cases. In 6 cases the symptoms of stenosis disappeared very soon after the injection of the serum, and in 3 in so marked a manner that tracheotomy, which seemed indicated, was dispensed with. The effect of the serum was equally remarkable in 5 cases in which no diphtheria bacilli had been found. A typical fall of temperature had been observed in very few cases, whilst in 1 case an alarming rise took place. The influence on the pulse and respiration was *nil*. In 5 cases the effect was decidedly unfavourable, producing collapse and cyanosis. Albumen was found in the urine in 16 cases; skin eruptions appeared in 4 cases as (1) an extensive infiltration at the place of injection, (2) urticaria, (3) a large macular eruption which appeared and disappeared several times, (4) a macular exanthem, accompanied by pain and stiffness of the large joints. Paralysis, impeding deglutition, was noted in a few cases as after-complications.

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(37) Typhoid Antitoxin.

PFEIFER AND KOLLE (*Wiener klin. Rundschau*, May 12th, 1895), at the Congress for Internal Medicine at Munich, referred to their earlier experiments, which showed that the toxin of typhoid cultivations is contained chiefly in the bacilli themselves, for after passing a cultivation through a Chamberland filter the filtrate was less virulent than before. The bacilli are killed, without damage to the virulence of the cultivation, by warming for an hour at 55° to 60° C. Their recent experiments show that by repeatedly injecting small quantities of virulent cultivations into sheep, antitoxic substances are formed in the organism which prevent the poisonous action from showing itself. The action of this antitoxic serum depends on its power of destroying, not the bacteria, but the poison. By injecting previously or at the same time antitoxic serum, mice and guinea pigs were protected with certainty against double or treble the fatal dose of a virulent cultivation, and even if injected with the antitoxin one to four hours after the fatal dose was given, they could be cured.

(38) Open-air Treatment of Whooping-cough.

ULLMANN, after pointing out the failure of all suggested "specifics" for whooping-cough, and the little effect which drugs of any kind have on the frequency or the severity of the paroxysms of cough or the duration of the disease, proceeds to urge (*Jahrb. f. Kinderheilkde*, Bd. xl, H. 1, S. 39) the value of open air (*freiluftcur*). He relies chiefly on the consideration that under ordinary circumstances the patients have fewer paroxysms during the hours in which they are out of doors. To establish this he quotes records of the paroxysms in certain cases. Thus, in one case, while indoors, the child (aged 18 months) had a paroxysm on an average every 48 minutes, while out of doors it had one every 91 minutes. In another severe case the child had nearly three times (2·74 : 1) as many paroxysms indoors as out of doors. In a mild case the difference was less (1·4 : 1). The difference in all the cases varied on different days, but it was on the whole sufficiently marked to strike and convert the parents, at first disposed to distrust the advice given. He states that a threatening paroxysm may be arrested sometimes when in the house by carrying the child to an open window, where it takes several deep inspirations, and the feeling of distress and anxiety which precedes the paroxysms passes off. Ullmann recommends that in summer and on fine days in winter the patients should be kept out of doors—not for a few hours only, but from morning to evening. He attaches much importance to their being given their meals out of doors. The paroxysm of cough and vomiting which so commonly follow a meal is thus in many instances avoided, and the serious deterioration of general nutrition liable thus to be produced is prevented. He does not look on bronchitis or even bronchopneumonia as a contraindication of the open-air cure.

(39) Intravenous Sublimate Injections.

GÖRL (*Münch. med. Woch.*, May 14th, 1895) gives details of 9 cases of various forms of syphilis which he has treated in this way. He uses a solution of sublimate of 1 in 1,600, and injects 1 to 2 to 5 c.cm. As experiments have shown that the sublimate is not entirely excreted in the urine on the first day, the author gave the injections every second or third day. He has never seen unpleasant symptoms. The pain that was complained of in Blaschko's cases the author would attribute to the strong solution used. If the vein is properly entered no pain is felt. The pain is caused by the escape of the solution into the connective tissue. The advantages of this method of treatment are (1) the small quantity of sublimate used; (2) the rapidity of the cure; (3) the absence of danger so far as at present known, and (4) that the treatment can be carried on without interfering with the patient's occupation. The disadvantages are (1) the impossibility of making the injections if the veins are not accessible: and (2) the rapid appearance of relapses. The latter is the most serious objection. These injections are to be used only when the intramuscular or subcutaneous injections are objected to owing to pain, or when inunction or administration by the mouth is impossible. They are also indicated in the tuberculous or in those peculiarly susceptible to mercury or when a rapid effect is necessary, as in cerebral syphilis.

(40) Pilocarpin as a Sudorific.

GRANDCLÉMENT (*Lyon Méd.*, May 26th, 1895) concludes from his experience of pilocarpin (1) that to produce general sweating, which he considers has been too much abandoned of late, one ought to employ the old methods as a rule, and use injections of pilocarpin only as the exception, as in some subjects the latter drug produces poisoning resembling that caused by nicotine or aconitine; and (2) to produce local sweating, the old method of wrapping the part in cotton wool and oiled silk is the best, as frictions with pilocarpin produce only an insignificant amount of sweating. In support of this latter assertion he relates a case which was treated by him with local applications of pilocarpin combined with the old cotton wool and oiled silk method. It was found that unless the latter was well applied, the sweating was practically *nil* in spite of the pilocarpin.

(41) Vaseline Injections in Otitis Media.

F. ALT (*Centralbl. f. ges. Therapie.*, June, 1895) has at Gruber's desire systematically tested on some 250 outpatients Delstanche's method of injecting sterilised liquid vaseline (usually 1 c.cm.) through the Eustachian catheter. He finds it absolutely harmless and well borne. The following are his conclusions as to its value: (1) In chronic adhesive otitis of long standing the injections are very useful, and much preferable to simple catheterising and inflation. The hearing in nearly all cases is improved, and tinnitus lessened or even cured; sclerosis is but rarely benefited, and that slightly. (2) In chronic serous catarrh the injections cannot take the place of paracentesis, and it is doubtful if they have any advantage over the air douche. (3) In acute otitis media the vaseline treatment does not appear to be indicated.

PATHOLOGY.

(42) Pathogenic Yeast Fungus.

SANFELICE (*Centralbl. f. Bakteriologie u. Parasitenk.*, Band xvii, p. 625) gives a description of a yeast fungus, which was isolated by him from the juices of plants undergoing fermentation, and which is pathogenic. It produces, on inoculation in guinea pigs and other animals, a chronic infection with tumour formation in the lymph glands and the thoracic and abdominal viscera, while the yeast cells themselves in the tissues correspond with the different appearances described by authors as the coccidia of malignant tumours. He gives in detail the history of an inoculation on a bitch in the neighbourhood of the mammary gland. The gland became somewhat swollen, and one month after inoculation resistant nodules were to be felt in the deeper parts, which were not bound down either to the gland tissue or to the skin. The growths increased considerably in size, and fifteen weeks after inoculation the animal was killed. During life the animal had been examined by Professor Biondi, who concluded that the growths were malignant. Microscopically in the connective tissue surrounding the glands were seen masses of cells—some with a large nucleus and fairly definite cell protoplasm, others smaller and with the nucleus situated in the periphery; the arrangement of the cells in places recalled the structure of a carcinoma. No signs of inflammation were recognisable around these newly-formed elements. Similar growths were found in the lymph glands, inguinal and mesenteric, in the kidneys and the spleen, while the lymphatic follicles of the intestine were considerably enlarged. No other organs were affected. The parasites were stained by special methods, and were to be found in the peripheral portions of the tumours.

(43) Diphtheria Bacillus and Fibrinous Rhinitis.

GERBER AND POPACK (*Deut. Arch. f. klin. Med.*, No. 54, p. 282) demonstrated by cultures and by experiments on animals the presence of virulent diphtheria bacilli in five cases of fibrinous rhinitis, which were all accompanied by definite constitutional disturbances. The membrane in the nose lasted on an average eight to fourteen days. As regards the accompanying throat affection, in two cases there was simple sore throat, in two others circumscribed blocked follicles in the tonsils without inflammation; in one case, two and a half weeks after the commencement of the nasal affection, typical throat diphtheria supervened. In addition to the diphtheria bacillus, streptococcus longus was also found regularly. In accordance with earlier observations, the authors believe that the existence of a true diphtheritic rhinitis fibrinosa has been proved. It is occasionally followed by severe general symptoms, infection of the pharynx and larynx, or post-diphtheritic paralysis. Its course is generally very chronic. True diphtheria may be conveyed by rhinitis fibrinosa, as in one of the cases investigated in which the patient and her daughter contracted diphtheria, though the mother's nose at the time only showed the pseudo-diphtheritic bacillus. The pseudo-diphtheric bacillus may be found in true diphtheritic nasal affections fifty to eighty days after the commencement of the disease, and also in old atrophic rhinitis. The authors do not, however, regard it as proven that a definite relationship exists between the pseudo and the true diptheritic bacillus.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(44) Diabetes with Bronzing of the Skin. Marie (*Sem. Méd.*, May 22nd, 1895), after reporting a case of *diabète bronzé* ("pigmentary hypertrophic cirrhosis with diabetes mellitus" of Hanot and Chauffard), gives a general description of this rare disease, of which only nine certain cases, all by French observers, and two doubtful ones have been published. (A) Etiology: It appears in the second half of adult life, and is more common in males than females. Cause possibly alcoholism. (B) Onset: Rather sudden, with all the classical signs of diabetes mellitus, together with gastric and respiratory disorders. (C) Symptoms: (a) Those of diabetes mellitus, the polyuria, however, being moderate, while the glycosuria amounts to 150 to 350 g. in the twenty-four hours, but diminishes or disappears towards the fatal end. (b) Abdomen: Distension almost constant, but ascites slight; considerable hypertrophy of liver, which is of wooden hardness and tender. There is no true icterus as a rule, but urine is high coloured without containing bile pigments. The superficial abdominal veins are enlarged; the spleen is hypertrophied; digestion is often retarded, and diarrhœa, alternating with constipation, is present usually. (c) Emaciation and enfeeblement rapid. (d) Œdema of legs generally present. (e) The cutaneous pigmentation is brown or even grey black, more or less uniform, most marked on the face, extremities, and genital organs, but is absent on the mucous membranes, and no spots are present (difference from Addison's disease). In some cases it has been wanting. (f) Nervous: Loss of sexual power, absence of knee-jerk and insomnia as in diabetes. (D) Duration: Average 11½ months. The temperature is raised towards the end, and the œdema and ascites may become considerable, and purpura may appear. (E) Morbid Anatomy: (a) Macroscopic: (1) Liver enlarged, dense, and rust-coloured, surface generally hobnailed but may be smooth, bile passages normal; (2) intestines, mesentery, and peritoneum of a slate-black colour (in author's case also covered with miliary tubercles); (3) spleen, mesenteric and mediastinal glands enlarged, sclerosed, and of a reddish-brown rust colour; (4) pancreas sclerosed and rust-coloured, duct patent; (5) kidneys and vessels normal; (6) heart usually normal in size or even dilated with flaccid reddish yellow walls, but in author's case it was atrophied; (7) lungs frequently tuberculous. (b) Microscopic: Liver inter- and intra-lobular cirrhosis, with masses of ochre-coloured pigment between connective tissue fibres and in hepatic cells, some of which are crowded with pigment and disintegrate. Pancreas cirrhosed with pigment in connective tissue and parenchyma. In the lymphatic glands the pigment almost obscured their structure; kidneys pigmented to a less degree. The heart in author's case presented pigmentary degeneration of muscular fibres and sclerosis of pigmented fibrous tissue. (F) Pathogeny: The pigment is ferruginous; thus the liver contained, in author's case, 11.3 per thousand of iron (normal amount 0.4 per thousand), and the lymphatic glands 18.5 per thousand (normally a trace only.) This probably accounts for the colour of the peritoneum and intestine, sulphide of iron being formed by decomposition. The pigment must thus arise from hæmoglobin, and is probably formed chiefly in the hepatic cell. Marie considers this disease to be an entity and not an accident supervening in the course of ordinary diabetes.

(45) Adductor Spasm in Osteomalacia. Litzko (*Wiener klin. Rundsch.*, June 23rd) refers to the contracture of the adductors of the thigh which he has described as pathognomonic of osteomalacia. Various purely mechanical theories have been put forward to account for the limitation of abduction. It has been ascribed to the deformity of the neck of the femur, known as coxa vara; to the trochanter coming in contact with the ilium; to deformity of the acetabulum. It is shown, however, that the diminution of the angle formed by the neck of the femur with the shaft has but little effect in producing limitation of abduction, and also that where, owing to the deformity of the pelvis, the acetabulum approaches the horizontal, abduction is but slightly impeded. The increase in power of abduction as the osteomalacia improves has been taken as evidence that there is no adductor contracture. In a series of cases it is shown that even the limitation that remains after recovery is due to active muscular contraction, not to shortening of muscle or shrinking of capsule, nor to any of the mechanical causes mentioned above, for under an anæsthetic the range of abduction was distinctly increased. These causes may, however, share in the production of the amount of limitation of abduction which remains even after deep narcosis.

(46) Displacements of the Liver. J. E. Graham, of Toronto, has a paper on this subject in the *Canadian Practitioner* for June. He states that displacements of the liver may occur from influences outside the liver and its attachments, such as tumours, abscesses, and the like, as well as from stretching or relaxation or undue length of the ligaments from any cause. The condition is not uncommon in women with pendulous abdomens, who have borne many children. A distinction is to be made between floating liver and merely movable liver. The author reports the case of a woman, aged 64, who had borne ten children, and presented cyanosis, dyspnœa, dilatation of the right heart, and emphysema. The liver was displaced downwards, but could be replaced when the patient assumed the recumbent posture, and could be retained in place by the use of a bandage. In a second case, that of a man aged 35, the liver was displaced by a subphrenic abscess. There existed also pyloric obstruction and gastrectasis. The liver lay obliquely in front of the stomach. In a third case, in a boy, the front wheel of a wagon had passed over the trunk, fracturing the seventh and eighth ribs. For a time a considerable area of dulness was found upon the left side, while the normal area of hepatic dulness could not be detected, so that the question arose whether the liver was originally displaced and an inflammatory process had taken place in the right hypochondrium, or if the liver was merely hidden under the diaphragm, and an inflammatory process had taken place about the spleen. The paper contained a tabulated statement of 30 published cases of displacement of the liver.

SURGERY.

(47) Hemiatrophy of the Tongue in Suboccipital Caries. O. Vulpius (*Beiträge z. klin. Chir.*, Band xiv, Heft i) reports two cases. His first case was that of a man, aged 32, supposed to have caries of the atlas, etc. The left half of the tongue was atrophied, but when protruded the tongue appeared to be bent to the right. A mastoid abscess on the left side was opened, and six weeks afterwards the patient died of hæmorrhage from the left ear. At the necropsy the hæmorrhage was found to come from the jugular vein. The symptoms during life were cleared up by the necropsy. Ulceration of the trigeminal, facial, and auditory nerves had caused the masseteric and facial paralysis and deafness on the left side; a fibro-caseous pachymeningitis had caused compression of the accessorius, pneumogastric, glosso-pharyngeal, and hypoglossal nerves. The hypoglossal compression had brought about the paralysis and atrophy of the left half of the tongue. Hirth has said that in cases of facial paralysis the tongue always deviates to the sound side; it is thus that Vulpius explains the apparent anomaly in this case—namely, that the tongue was protruded to the right, although the left half was paralysed and atrophied. The second case was that of a girl, aged 18, with tuberculous disease of the atlas and the axis, and atrophy of the right half of the tongue, owing doubtless to implication of the right hypoglossal nerve. By rest and apparatus for supporting and fixing the head great improvement in the symptoms of the suboccipital caries took place, and the lingual hemiatrophy could hardly be noticed any longer. Besides these two cases Vulpius quotes others from the medical literature on the subject, and points out how important a sign the lingual hemiatrophy may be in estimating the extent of the disease at the base of the brain. In

both cases of Vulpius the lingual hemiatrophy had remained unnoticed by the patients themselves. Other causes of lingual hemiatrophy (not counting those cases in which it forms merely a part of facial hemiatrophy) are syringomyelia, syphilis, apoplexy, tabes, and general paralysis; it has occurred after mumps, scarlet fever, and saturnism, and by compression of the hypoglossal nerve from cancer, tumours of lymph glands, hydatid cysts, and carotid aneurysms. Lastly, there are traumatic cases and cases where no cause could be found; in one case the hemiatrophy was congenital.

(48) Insomnia in Surgery and its Treatment.

Van Schaick (*New York Med. Journ.*, March 2nd, 1895) directs attention to the various forms of insomnia met with in surgical practice. The fear of an impending operation, though no longer so intense as in preanæsthetic days, is yet an important factor in some cases, and hence requires treatment. The author knows of no better hypnotic for this purpose than trional given in a 15 grain dose, followed up if necessary by another one within an hour. This drug is preferred on account of its comparatively rapid action, of its lack of after effects, and of the deep sleep it induces. It has also been found very useful in cases of depreciated nervous condition due to exhausting diseases and pain, in which chloral, though a more effective sleep-producing drug, is contraindicated from its action as a heart depressant. Restlessness and jactitation occurring after an operation without serious shock—a condition probably due to relaxation of a highly-strung nervous condition—may also be relieved by trional in moderate doses. Abdominal section, in which thirst is apt to complicate the other nervous disturbances, is also very frequently followed by insomnia of a more or less severe type. In two instances of this kind trional given by the rectum has in the author's hands proved quite successful. This drug is further recommended in cases of insomnia due to certain pathological nervous conditions which may complicate surgical disorders—such, for instance, as alcoholism, arterio-sclerosis causing intracranial headache, insanity, tabes, and other diseases of the cord, and the results of the abuse of narcotics.

(49) Primary Tuberculosis of the Breast.

Catellani (*Il Policlinico*, June 1st, 1895) reports two cases of this disease. A girl, aged 22, had noticed a lump in her left breast for ten months. The tumour was about the size of a filbert, and was painless until quite recently, when an ulcer had formed at the base of the nipple; the skin was not adherent, and normal except at the ulcer, which was crater-like, with dry reddish edges and irregular base, upon which could be seen yellow miliary nodules. In the outer half of the breast there was a rounded, irregular tumour, the size of a fist. There were two enlarged glands in the axilla. The general health was good except for amenorrhœa, and there was no history of tubercle. The breast and axillary glands were excised, and found to contain abundant tubercles and giant cells. The pus of the abscess contained abundant tubercle bacilli. Injections into guinea-pigs gave rise to typical tuberculosis. In the author's second case the left breast had been affected for one year with a painless, hard swelling, giving rise after two months to enlargement of the axillary glands. The left breast was one and a-half times as big as the right, the skin and nipple normal. Altogether, there were three tumours in the breast, varying from the size of a pigeon's egg to that of a walnut. The general nutrition was good, and there was no tuberculous history. The patient suffered from amenorrhœa and leucorrhœa, and was a virgin. The tumours and glands were excised separately, and found to be typically tuberculous. Koch's bacillus was seen in the sections made from the axillary glands. Inoculation experiments were negative. No local relapse nor any sign of tubercle elsewhere was seen in either of these patients almost a year after operation.

(50) Gastric Ulcer treated by Scraping and Dilatation of the Pylorus.

Podres (*Centralbl. für Chir.*, No. 15, 1895) holds that in cases of purely cicatricial affections of the pylorus, particularly when associated with extensive adhesions, better results can be obtained by Loreta's operation than by gastro-enterostomy. A case is reported of a man, aged 34, who for two years had suffered from vomiting after meals, sharp pains in the region of the pylorus, and constipation. On performing laparotomy, the author found that the pylorus and duodenum were enclosed and bound down by extensive adhesions. On incising the front wall of the stomach, at a point about 2½ inches from the pylorus, he made out (1) a circular ulcer, the base of which occupied a portion of the pylorus and a corresponding part of the smaller curvature, and (2) extensive cicatricial degeneration about the pylorus, so that only the tip of a pair of dressing forceps could be passed into the duodenal opening. This opening was gradually stretched by passing at first the forceps and afterwards one and finally two fingers. The base of the gastric ulcer was then scraped with the fingernail and a sharp spoon. The wound in the stomach was closed with Lembert's sutures. The vomiting and pain ceased after this operation, and the patient speedily recovered; he regained appetite and was able to sleep well, and when last seen, five months later, had increased in weight.

(51) Epicystotomy without Siphon.

Polombieri (*Gaz. degli Osped.*, June 8th, 1895) reports a case of vesical calculus in a boy aged 8, in which he removed the stone (weighing about 8 g.) through a suprapubic incision. Having opened the abdomen, he fixed the bladder to the abdominal walls by two catgut sutures before incising the bladder. After removing the stone he sewed the bladder up with four catgut sutures. On testing its continency, a few drops were found to exude. One of the sutures fixing the bladder to the abdominal wall was left in. The abdominal incision was then closed, no drainage being used. A catheter was fixed in the bladder through the urethra, and the bladder washed out with boracic solution every three hours. The catheter was removed forty hours after the operation, and the washing discontinued after the third day, when the child could pass water in the natural way. The urine was acid the whole time.

MIDWIFERY AND DISEASES OF WOMEN.

(52) Endometritis.

Winckel (*Wiener med. Woch.*) No. 27, 1895) discussed this disease at the June meeting of the German Gynæcological Congress. Simple uterine catarrh usually results from distinct venous congestion. It frequently arises from this cause during infancy from improper clothing, especially tight bandaging of the body. Catarrh may also arise in childhood from want of cleanliness, irritation of the vulva and entrance of worms into the vagina. Anæmia and other diseases of the blood cause catarrh in childhood. In adult life the causes of the same disease are innumerable. After bad burns, hæmorrhagic endometritis is frequent. In acute infectious diseases this disease may arise either from entrance of the specific germ into the endometrium or from irritation of that membrane due to chemical products evolved by the germ. Endometritis decidualis polyposa results from retained relics of decidua after abortion and premature labour. In endometritis exfoliativa there is never any infiltration, as has been asserted. Between the shedding of one membrane and the development of the next there may not be the least trace of any discharge. Tuberculous endometritis is rare, the tube being more commonly the seat of tuberculous disease when it attacks the female genitals. Gonorrhœal endometritis is very frequent, and Winckel contends that the gonococcus travels not only along the endometrium to the tubes, but also through the uterine wall to the peritoneum. Recent literature records no instance of true diphtheritic endometritis. The well-known septic puerperal type is chiefly set up by streptococcus pyogenes aureus. Purulent senile endometritis is saprophytic.

(53) Brow Presentation: Internal Manipulation.

Schuhl of Nancy (*Archives de Tocol. et de Gynéc.*, May, 1895) reports a case which shows how in brow presentation its conversion into a vertex presentation by pressure of the finger or fingers is apt to be persistently reversed directly the finger is removed. In his case the patient had a

capacious pelvis. The abnormal position of the head was rectified at the inlet, the membranes burst, but the brow came forward again. For half an hour the finger was kept against the head, but the latter did not become engaged in the pelvis. Schuhl therefore removed his hand. Five minutes later the head was found engaged in the pelvis, but the brow again presented. The mouth was open, the chin could not be reached. Within ten minutes the head was expelled, a live male child being expelled naturally. In this particular case, Schuhl observes the pelvis was capacious and the fœtus's mouth was open. Polosson has already shown that this is, for mechanical reasons, an advantage in brow presentations. This case, however, shows that in general it is useless to try to "convert" a brow presentation when the head is still at the inlet.

(34) Wounds of Vulva from Falling Astride.

TARNIER AND LEVI (*Sem. Méd.*, June 26th, 1895) have prepared an instructive article on this subject illustrated by drawings of dissections of the vulvar relations when the subject is erect. The urethra is rarely injured. The bulb and surrounding venous plexuses are often torn and bleed very freely. Not rarely the skin and mucosa remain intact. Then a thrombus forms which may burst or harden, or suppurate or end by becoming a cyst. Skin wounds inflicted by a sharp object on which a woman falls astride seldom run from without inwards. More often the inner side of the vulva is wounded and the bony ramus of the ischium prevents retraction of soft parts, hence dangerous hæmorrhage may occur. It is, however, generally venous. To check hæmorrhage from pressure is unsuited on account of the extreme tenderness of the parts. Compression by antiseptic gauze is the best way to stop the bleeding. Indeed, as recurrence is very common it is best always to compress a contused wound. The thighs must be tied together and a catheter retained or frequently passed.

(35) Œdema and Prolapse of Cervix in Pregnancy and Labour.

GEYL (*Volkmann's Klin. Vortrage*, No. 128, May, 1895) describes a second case of this rare condition seen in his own practice. Five have already been collected by Cnéniot, the discoverer of the disorder in question, and one by Misrahi, and thus eight cases complete the series. Geyl makes use of the formidable name "œdema cervicis uteri gravidi partientis seu puerperalis intermittens," which also forms the title of his monograph. In Geyl's last case he first saw the patient on February 19th, 1894. She was in the seventh month of pregnancy, and complained that a body frequently protruded from the vulva and went up again. A sanious mucous discharge ran from it as long as it was down. A year previously Geyl had used the curette for endometritis. He had opportunities of examining the prolapsed body. It was a cylindrical structure, 2½ inches long outside the vulvar cleft, ending in a blunt extremity nearly 2 inches wide. It pitted on pressure of the finger, the depression disappearing directly the finger was removed. On careful exploration it was found to be the anterior lip of the cervix. The chief examination was made on March 24th, when labour pains were suspected. After rest, with elevation of the pelvis, the swelling disappeared. It came down again daily before labour. On the night of April 7th precipitate labour occurred, the child being delivered after four pains only, when the patient had been one hour in bed; the placenta soon followed. Geyl arrived when all was over; the uterus was perfectly normal. Ten days later the anterior lip of the cervix felt simply a little larger than the posterior. As reduction is usually spontaneous, and as this case shows that labour is but little affected, œdema of the anterior lip is hardly a dangerous complication of pregnancy. It presents, however, a formidable appearance, and therefore obstetricians should be aware of its true nature.

(36) Uterine Gonorrhœa.

WERTHEIM (*Centralbl. f. Gynäk.*, No. 26, 1895) believes that next to the urethra the uterus is the most common seat of gonorrhœa. The germ sets up true acute interstitial endometritis; in chronic disease the glandular tissue of the endometrium is greatly increased. The muscular coat is often involved, and a kind of sclerosis of the vessels occurs, whilst the connective tissue undergoes hyperplasia at the cost of the muscle cells. Gonococci are usually to be found in the inflamed mucosa, yet sometimes they are entirely absent and they rarely, if ever, can be detected in the exudations in the muscular coat. The os internum offers no protection to the entrance of gonorrhœal poison into the uterine cavity. The cervix is less involved, and the disease is always least marked nearest the os externum. The puerperium is the most dangerous condition when gonorrhœa exists in the genital tract lower than the uterus. Menstruation, coitus, and the sound are much less liable to expose the uterine cavity to gonorrhœal infection.

THERAPEUTICS.

(37) Serum Treatment of Diphtheria.

VAN NES (*Deut med. Woch.*, June 6th, 1895) has treated 52 cases with the serum of which 40 or 77 per cent. recovered. Of the tracheotomised 64 per cent., and of the non-tracheotomised 87 per cent. recovered. The author then analyses three groups of 52 consecutive cases previous to the serum treatment. In the 156 cases the total recoveries amounted to 57 per cent. In the most favourable group they were 61 per cent., and in the least favourable 53 per cent. Among the 52 cases treated with the serum, 16 slight cases, 21 out of 25 cases of medium severity, and only 3 out of 13 severe cases recovered. In 2 cases an eruption occurred. The general condition of the patients improved considerably after the injection. In 4 cases there was slight diphtheritic paralysis ending in recovery. In the 12 fatal cases death was due to bronchio-pneumonia in 6, to nephritis in 2, to cardiac paralysis in 2, and to sepsis in 2. Death due to cardiac paralysis occurred in each case long after the local process was cured. In the two cases of relapse, the patients were admitted moribund. The author concludes that the results of the serum treatment were very good, and better than those previously obtained under other treatment. Although the favourable action of the serum is highly probable, yet it is impossible to speak positively from so small a number of cases, as the character of the epidemics apparently showed a tendency to become milder.—Egidi's (*Rif. Med.*, May 18th, 1895) cases included one adult, the rest being from 1 to 8 years old. Nine out of the 20 were cases of croup, of which 3 died; 11 were diphtheria, of which 2 died, giving a total mortality of 25 per cent. Bacteriological examination was made in every case; in 2 or 3 only was Löffler's bacillus found alone; in most of the cases there was an association of streptococci and staphylococci. Fall of temperature and improvement in the pulse and respiration was always noted after injection. Even in the most severe cases improvement of the local conditions in the throat followed injection. Urticaria was noticed twice, and once a general scarlatiniform eruption. The author prefers intubation to tracheotomy.

(38) Treatment of Dilatation of the Stomach.

A. MATTHIEU (*Rev. de Thérap.*, No. 8, 1895) discusses the treatment of this affection. When it depends upon an organic obstruction at the pylorus, a surgical operation is the only effectual remedy. Frequently, however, it is brought about by simple spasm of the valve. In such cases good results are obtained from the administration of warm drinks, which perhaps act directly upon the spasm; at any rate they allay the pain and lessen the irritation of the mucous membrane, of which spasm is the reflex consequence. With the same object alkalies may be given. When, again, dilatation is the result of atony of the muscular walls, there are several indications to fulfil. (1) The work of the organ must be curtailed by a suitable regimen, highly nutritious substances being given in a state of fine division and in small bulk. The meals, few in number, must be taken at longer intervals. Once or twice a week the contents of the stomach must be removed by the stomach-pump as late as possible after a meal. Too frequent washings out must however be avoided, and a simple emptying of the organ is often sufficient. Further, muscular action must be stimulated by such means as warm drinks, chydrates, hypersaline alkalies, hydrotherapy, electricity, and massage. (3) Gastro-intestinal fermentations must be removed. To this end

washing-out of the stomach is chiefly to be relied on, the drugs usually given (naphthol, sodii salicylas, bismuthi salicylas, HCl, resorcin) being of secondary consequence. (3) Hyperacidity is to be combated by HCl; excess of this acid itself by alkalies. (4) Pain, if it does not yield to the above-mentioned treatment, will require chloroform water, cocaine, or morphine. (5) Constipation is better remedied by enemas than by purgatives. (6) The general condition should be improved by suitable measures.

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(59) A New Method of Applying Electricity.

Sternberg (*Neurol. Centralbl.*, July, 1895) describes the following method. A piece of telegraph wire is arranged so as to conduct to earth; the free end of this is joined to one end of a secondary coil, to the other end of which an ordinary wire is attached. From the free end of this wire it will be found that shocks are received distinctly stronger and more painful than in the ordinary method where two electrodes are applied to the body. If, however, the free end is connected with a well wetted electrode and placed in contact with the moistened skin no effect is felt even when the two coils of the induction apparatus are pushed completely over one another; from one person thus electrified shocks will pass to another if sufficiently near. The practical uses depend on this difference. First, diagnostically; the bare wire is used for the detection of analgesia, and hence the necessity of numerous punctures by needles, etc., with risk of sepsis is avoided. Secondly, therapeutically; the operator holding the moistened electrode in his left hand, passes his right hand over, say, the forehead of the patient, who experiences a sensation like an electric douche. In cases of headaches of all kinds, even due to cerebral tumour, and also in cases of neurasthenia, and in a variety of painful affections this method has been found to give good results.

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(60) Prophylactic use of Serum in Tetanus.

Vaillard, at the Académie des Sciences (*Sem. Méd.*, June 5th), after pointing out the inefficacy of antitoxin as a curative agent in any but the more slowly progressing forms of tetanus, and the necessity even here of combining removal of the nidus of infection, states that as a prophylactic it has a definite use. In animals it confers absolute immunity against the toxin, the immunity being temporary, and persisting, according to the dose employed for two to six weeks, and longer if the injection be repeated. After inoculation with the living virus, protection is certain and complete when the seat of infection is the subconjunctival tissue; but less so when the virus is introduced into the thickness of a muscle; this, the most severe form of inoculation, is followed, after one, two, or even three months of freedom from symptoms, by tetanus. The explanation is that the destructive action of the phagocytes on the virus is more certain and prompt in the former than in the latter. Antitoxin should therefore be injected as a prophylactic after any wound where there is risk of infection, for example, contused wounds fouled by earth or manure, penetrating wounds where the foreign body has been in contact with earth. The prophylactic use of antitoxin will be specially valuable in tropical countries where tetanus is common after slight wounds; in the tetanus of newborn infants, and in military surgery.

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(61) Chloro-Caffeine.

Pickering (*Jour. of Phys.*, vol. xvii, No. 6) relates experiments made with the view of studying the connection between the chemical constitution and the physiological action of the stimulus employed. Xanthine increases the force and the frequency of the embryo chick's heart and the frequency of the frog's heart but does not produce any tonic contraction. Theobromine, which is di-methyl-xanthine, has a greater influence in increasing the force and frequency of the chick's heart and in large doses produces slight tonic contraction. Caffeine, which is tri-methyl-xanthine, produces marked tonic contraction. In the experiments chloro-caffeine was used, in which an atom of chlorine is introduced into the caffeine molecule without displacement of the methyl radicals. The methyl groups would tend to induce tonic contraction of the heart muscle, the chlorine an atonic condition. The introduction of the chlorine atom was found to modify considerably the physiological action of caffeine. Chloro-caffeine produces far less tonic contraction of the heart than caffeine, so that it presents, apparently, an example of "physiological antagonism" going on in the interaction of the parts of one kind of molecule and living contractile tissue—in these experiments the myo-plasm of the embryonic heart. A solution of caffeine in chlorine water acts differently, the free chlorine being very toxic to the heart. The possibility of the chloro-caffeine being decomposed in the living tissue into caffeine and chlorine was considered but no evidence of such an occurrence could be discovered. Chloro caffeine is a powerful diuretic and also apparently a cerebral stimulant. Experiments were made also with cyano-caffein, but this was found to act more like a cyanogen derivative than a caffeine derivative, the cyanogen molecule overpowering the three methyl groups.

PATHOLOGY.

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(62) Contaminated Ice and Cholera.

Weiss (*Zeitschr. f. Hygiene und Infectionskrankheiten*, Bd. xviii, 1894, p. 492.) Since establishment of the relation between epidemics of cholera and water supply, interest has attached to the question whether cholera can be conveyed by ice which has been collected form a contaminated source. It has been many times shown that the cholera vibrio can bear low temperature for several days, and Weiss, as the result of his investigation on this subject, is able to confirm the observations of other workers so far as concerns water. But the cholera vibrio behaves quite differently in the presence of low temperatures when it is in a suitable culture medium. In broth it remains alive for twenty-one days; in water which contains much broth it lives three days longer than in water to which only two drops of broth have been added. In pure dejecta kept in the cold, cholera vibrios die sooner than in water, whence it is to be inferred that the vibrios which are present in choleraic discharges also die out in the cold in a few days. Communication of cholera by ice is therefore not to be anticipated, and this agrees completely with the fact that no case has ever yet been observed in which the infection has been carried by ice.

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(63) Infectiousness of Milk.

Ernst ("Result of Investigations made for the Trustees of the Massachusetts Society for Promoting Agriculture, Boston, 1895") investigated the effect of inoculation and feeding with milk of tuberculous cows. Care was taken to exclude any tuberculous disease of the udders themselves. Tubercle bacilli were found in the milk or cream of 12 cows out of 36. Of 88 guinea pigs inoculated subcutaneously with milk from 15 cows 12 developed tubercle. Rabbits were less easily affected. This was also the case with feeding experiments, but of 12 pigs (3 to 10 weeks old) 5, and of 21 calves 8 animals became tuberculous. The parents of all the calves were perfectly healthy. The report also contains information derived from answers to 1,100 circulars upon the subject sent to medical practitioners and veterinary surgeons. From the results of his experiments, the author expresses the opinion that no milk from tuberculous cows should be used as human food.

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(64) Acute Spinal Myelitis.

Tanrelli-Salimbeni (*Atti della R. Accad. dei Fisiocritici di Siena*, Ser. iv, vol. v) describes 3 cases of acute spinal myelitis in adults. *Post mortem* he found acute diffuse myelitis over the whole extent of the spinal cord. The anatomical appearances showed that the process was an infective one, and in two of the three cases he found elements indistinguishable from micrococci. In one case the infective nature of the case was further shown by the histological and bacteriological appearances in the spleen, liver, kidneys, and pericardium. The principal change in all cases consisted in a considerable amount of small-celled infiltration, especially around the blood vessels, which spread a greater or less distance into the neighbouring parts, and even into the lymph spaces around the nerve cells. Dependent upon these vascular lesions and the presence of micro-organisms were the considerable degenerative alterations in the nervous elements seen in the cases.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(63) The Relations of Sensory Impressions and Sensory Centres to Voluntary Movements.

BASTIAN (communication to the Royal Society, April 5th, 1895) cannot accept Mott's and Sherrington's interpretation of the fact shown by them that "section of the whole series of sensory roots belonging to a limb," upper or lower, causes lasting motor paralysis in the anæsthetic limb. They thought this proved that "not only the cortex, but the whole sensory path from the periphery to cortex cerebri is in action during voluntary movement"; but this cannot be true, for in complete hemianæsthesia due to lesions or functional defects in the posterior part of the internal capsule, there is no impairment of movement whatever of the anæsthetic limbs, at least under visual guidance. The extent to which afferent impressions and the activity of their related centres are really needed for the production of voluntary movements must be considered in connection with the cause of this paralysis. Bastian has long contended that the so-called motor centres in the cortex are really sensory centres of kinæsthetic type, which are called into activity by stimuli coming from the cortex (for volitional movements) and from afferent nerves and the lower sensory centres (reflex acts), the true motor centres existing only in the pons, bulb, and spinal cord. As examples of cortically initiated movements he takes (I) those of speech, where the auditory centre (where thought of words is revived), the glosso-kinæsthetic centre in Broca's convolution, the proper motor speech centres in the bulb and the commissural fibres of those centres are so interdependent, that a lesion in any part of this tract may cause aphasia (combined with "word blindness" if the lesion be in the auditory word centre). In reading aloud a fourth centre (namely, the visual centre) receives the first impressions, which are then conveyed to the auditory word centre by commissural fibres. Thus, in case of a lesion in the visual centre, voluntary movements concerned in speech cannot be performed at the instigation of the visual, but only of the auditory, sense. Again, in (II) limb movements the visual sense performs the same office as the auditory in speech, that is, the visual and kinæsthetic impressions pertaining to the movement are revived there. In (A) organic lesions, (a) destruction of kinæsthetic centres causes paralysis of the corresponding limb *plus* loss of muscular sense and kinæsthetic impressions; (b) in man existence of paralysis of limb movements following a lesion of the visual centre or of the visuo-kinæsthetic commissure is not proved except for writing movements, the destruction of the left visual word centre causing complete agraphia. (c) In the lower animals isolation of the kinæsthetic centres by section of the fibres connecting them with other sensory centres causes paralysis, as after extirpation of them. Electrical irritation of the centres, however, produces the same muscular movements as before. (B) Functional defects. (a) Cerebral. Defective nutrition of the kinæsthetic centres produces temporary and curable forms of paralysis, mono-, hemi-, or paraplegias, often combined with single or double hemianæsthesia. In one class movements can be performed only when the eyes are open (? due to kinæsthetic centre being capable of being roused by a slightly stronger stimulus). (b) Spinal. Bastian believes the form of paralysis produced by Mott and Sherrington to belong to this class, that is, instead of the lowered functional activity being in the cerebral kinæsthetic centres, it is probably in the motor centres themselves in the cord, so that they no longer respond to ordinary volitional stimuli from the cortex; not, as Mott and Sherrington think, that volitional power "has been absolutely abolished by the local loss of all forms of sensibility" in the paralysed limbs. This explanation agrees with other facts found in these experiments: (1) That the effects are produced only when all the sensory roots are cut may be due to overlapping of the fields of distribution of the sensory roots; (2) that the paralysis increases from the attached base to the free apex of the limb, to the delicate stimuli going to the smaller muscles of the hand being less likely to rouse the sluggish spinal centres; (3) that forcible and rapid movements, even of the fine joints at the end of the limb, take place if the animals are made to struggle, to the muscles responding to stimuli stronger under the influence of emotion; (4) that movements are produced by stimulating the corresponding kinæsthetic centres electrically as easily as in a normal limb, to a profound difference between effects of volition and experimental stimulation of the cortex. At any rate, the latter shows that cutting off afferent impressions by section of the sensory roots does not entail a lowered excitability of the kinæsthetic centres in the cortex, but the reverse considering the lowered activity of the spinal centres, which the absence of tonus implies. In cerebral hemianæsthesia, however, there is no lowering of the activity of the spinal centres, and no cutting off of cerebellar influence, so that the action of the cortex is less interfered with. These differences may explain the presence of paralysis when posterior roots are cut, and its absence in cerebral hemianæsthesia.

(64) Early Diagnosis of Diabetes.

VON NOORDEN (*Centralbl. f. inn. Med.*, May 25th, 1895) draws attention to the early diagnosis of diabetes since treatment in the early stages offers considerable hopes of recovery. Treatment should be begun before the diagnosis is made by the discovery of sugar in the urine. The author has investigated the diagnostic value of alimentary glycosuria in such cases. In 15 adipose individuals no trace of sugar could be found when food containing much carbohydrate material was administered, but when pure grape sugar was taken glycosuria was noted in 4 cases. Two of these 4 cases have since developed diabetes, and the two other cases have not been under observation long enough. If subsequent investigation confirms these observations the test with grape sugar will be of considerable diagnostic value. It should be tried in the adipose and gouty, especially when a family history of diabetes is present. The author looks upon adiposity as frequently an early symptom of diabetes.

(65) Paroxysmal Hæmoglobinuria.

CHAUFFARD, at the Société Médicale des Hôpitaux (*Sem. Méd.*, June 19th), related a case of paroxysmal hæmoglobinuria from cold. Ehrlich's experiment was repeated, that is, blood was examined from the two hands, one having been exposed to the air, the other tightly ligatured at the wrist and exposed to iced water fifteen minutes. In the latter the serum was a pinkish cherry colour, while in the former it was yellow. The clot did not redissolve in either case, as it should do in an attack of hæmoglobinuria. This is explained by supposing that a central nervous disturbance is required in addition to exposure to cold for the production of a typical attack. The relation to the nervous system was shown by this case, for the exposure of the hand isolated by ligature to intense cold produced all the prodromal symptoms and premonitory albuminuria of a general attack. The mode of action and the path taken by the nervous reflex are uncertain, but that some nervous reflex is the starting point of the chemical process which results in an attack of hæmoglobinuria seems clear.

(66) Biliary Cirrhosis in Children.

GILBERT AND FOURNIER (*Rev. des Mal. de l'Enf.*, July, 1895) report 7 cases of biliary cirrhosis in children, or commencing in childhood, and presenting all the symptoms observed in the adult, but with the addition, in many cases, of hypertrophy of the spleen, so conspicuous that in those cases in which the liver is not very much enlarged—and such enlargement is in children often not great—the true nature of the disorder may be easily mistaken. They believe this enlargement of the spleen in association with biliary cirrhosis to be peculiar to cases commencing in childhood. A further peculiarity of the disease, as observed in children, is the frequency with which clubbing of the fingers may be observed. In some instances the ends of the femur and tibia were enlarged also. Evidence of the influence of the disease on the general nutrition is to be detected also in the retarded growth and the backward appearance of the sufferers.

SURGERY.

(69) Laparotomy in Tuberculous Peritonitis.

Nannotti and Bacciocchi (*Gaz. degli Osped.*, No. 57, 1895), as the result of an experimental study of this subject, conclude that laparotomy undoubtedly has a beneficial influence upon tuberculous peritonitis, even in the lower animals. In certain cases in which laparotomy succeeds it should be repeated if necessary. The involution of tuberculous nodules after laparotomy is, as a rule, rapid, but there generally remain some foci which disappear much more slowly, so that one ought to be cautious in speaking of absolute cure. The beneficial effect of laparotomy does not seem to be materially increased by washing out the peritoneal cavity with sterilised water or antiseptic solutions. In addition to the immediately beneficial effect, laparotomy may hinder the secondary localisation of tuberculosis. The operation sets up an inflammatory reaction of the peritoneum, accompanied by a noteworthy increase in its absorbing power, phagocytosis, degeneration of the cellular elements, connective tissue formation, and vascularisation of the tuberculous nodules, with successive fibrous transformation. The authors recommend comparatively early operation in man, not only for its immediately good effect, but to prevent further spreading.

(70) Radical Cure of Hernia.

Ferguson (*Annals of Surgery*, May, 1895) says that an essential defect in many operations which are performed for the cure of hernia is removal of the sac. He advises that for the radical cure of inguinal hernia the following operation should be adopted. An incision 3 to 4 inches long is made parallel to Poupart's ligament, over the inguinal canal, to the pubic spine. All structures between the internal and external abdominal rings and above the canal are divided. The sac is then dissected out, opened for inspection, and its neck loosened from its attachments. It is then several times transfixed in a proximal direction with a stitch which has been firmly secured to the distal end, so that when the proximal end is pulled on the sac is thrown into folds. Finally, the needle which carries the thread is passed through the abdominal wall, transfixing all the structures in front of the subperitoneal tissue, and emerging 1 inch above the internal abdominal ring. Before fastening the sac it is best to raise the spermatic cord and remove any supernumerary veins, or, if this is not requisite, to make a circular incision through the fascia of the cord. The suture which folds the sac is now pulled tightly, fastened to the external oblique muscle, and the sac adjusted in proper position. Next the fascia transversalis, from the pubic spine to the internal abdominal ring, is sutured with three or four inversion sutures. The inversion suture is inserted by piercing the deep fascia parallel to Poupart's ligament in two places from without inward with the first bite of the needle. The needle is drawn through it, and the thread is carried across to the border of the conjoined tendon, where a similar bite is taken. The approximation of the muscular aponeuroses is then done with three or four mattress sutures from below upwards, in such a manner as to bring the lower and external structures—Poupart's ligament, fibres of the external oblique, internal oblique, and transversalis muscles—over and in front of the internal and upper structures—the conjoined tendon, external oblique, and all beneath the cord. To complete the operation the cord is laid upon the external surface of the external oblique muscle and the skin sutured over it. The author recommends this method on anatomical and pathological grounds. He has used it only for one year, and hence sufficient time has not elapsed to enable him to speak of results. For the radical cure of femoral hernia the following operation is recommended: A skin incision is made parallel to Poupart's ligament, and half an inch above it. This allows the operator to reach the neck of the hernia with ease and accuracy; the scar will be out of reach of pressure or friction of the thigh, and it allows examination of the inguinal canal and rings. The sac is dissected from the surrounding structures and opened; if any omentum is found it is tied with interlocking sutures and cut away, and the raw surface of the stump covered with peritoneum before it is replaced in the abdomen. The sac is now folded upon itself, and fastened within the aperture of the crural canal. When the sac is sufficiently large to close the internal opening of the canal, suturing of the pubic fascia to Poupart's ligament, and placing the falciform process in the external opening of the canal by means of inversion sutures of strong chromic gut or silk, is sufficient. When the sac is small, the hernial opening large, and Poupart's ligament cannot with ease be approximated to the pectineal fascia, a periosteal flap may be utilised, or a flap of the pectineal fascia and muscle can be raised and stitched to form a buttress instead.

(71) Tuberculosis of the Submaxillary Gland.

Aieroli (*Il Policlinico*, June 1st, 1895), relates the case of a man, aged 30, with negative family history, who for the last 18 months had suffered from a hard, painless, and more or less fixed swelling in the right submaxillary region. There was no history of syphilis and no lesion in the mouth. Ordinary means of treatment proving of no avail the tumour was incised; nothing came away but blood, and the wound healed by second intention. The skin over the tumour was normal. There was no enlargement of neighbouring glands. After 14 days vigorous iodomercurial treatment without improvement the tumour was excised, with good results afterwards. The growth was the size of a hen's egg, and presented the usual appearance of tubercle in glandular structures. Bacilli (of tubercle) were found sparsely in the detritus about the tumour. The extreme rarity of submaxillary tuberculosis is perhaps due to the quality of the salivary secretions, particularly the submaxillary (containing, as it does, sulphur cyanide of potassium and other salts unfavourable to the growth of tubercle bacilli).

MIDWIFERY AND DISEASES OF WOMEN.

(72) Castration for Hysteria.

Gilles de la Tourette (*Archives de Tocol. et de Gynic.*, June, 1895) strongly opposes the practice of removing the ovaries for hysteria. The modern idea that the ovary is the seat of that neurosis is as silly and mischievous as the ancient theory that hysteria arose from the womb. Clitoridectomy was odious and unscientific, but did not kill. 1872 was an evil year. Hegar and Battey both performed oöphorectomy for hysterical dysmenorrhœa; Battey's case recovered. Hegar's patient dying "headed the long martyrology of hysterical patients condemned to castration and later to hysterectomy." Charcot especially condemns this unscientific and dangerous operation. He categorically denies the existence of a "genital hysteria;" he even declares that there is no such thing as hysteria, hystero-epilepsy or epilepsy, "of menstrual origin." The catamenia are deranged as a result of the neurosis which they cannot cause. He has never seen a case where the operation could be justified. He has seen many where it had been performed, and the women remained hysterical as before. They had the extra worry caused by knowing that they had lost their ovaries which they could never get back again. Castration for hysteria in the female is as unjustifiable as it would be in the rare cases where hysteria with pain in the testes and scrotum exists in men.

(73) Ruptured Perineum: Restoration of Sphincter.

Le Conte (*Amer. Journ. Obstet.*, June, 1895) has devised a new method to restore the sphincter ani in complete ruptures of the perineum, and to prevent the sutures being torn out by the action of that muscle, as often occurs. The two steps are the stretching of the sphincter muscle, so that it may be paralysed for a few days, and the uniting of the ends of the muscle with tendon suture. The sutures for repair of the rent in the rectum are not only introduced, but also tied first, to protect the bowel from further laceration during the next step, the stretching of the sphincter. The divided ends of that muscle are afterwards vivified. Two medium-sized catgut sutures are passed through each side of the muscle close to one raw end, and the threads are left long. The same is done close to the opposite end of the sphincter. Then the ends of the opposite threads

are tied together; this closes the sphincter. When the skin sutures are applied to the perineum, the most posterior is passed through the sphincter, so that, when tied, the muscle is held in position.

(64) Acardiacs and the Twin Cords.

SCHILLER (*Zeit. f. Geburtshülfe u. Gynäk.*, vol. xxxii, No. 2, 1895) describes a case which throws some light on the disputed question about the relation of the cord of an acardiac "parasite" to the cord of the well-formed autosite. A woman gave birth to twins. One was a well-developed female child delivered after the escape of an unusual amount of liquor amnii. The pains ceased, and a swelling was detected. In about two hours they came on again. It was not till more than three hours later, when the attendants had become alarmed and puzzled, that the second twin was delivered. This twin was a shapeless, oval mass, 8½ inches long and 4 lbs. 6 ozs. in weight. It had a hairy scalp, a rudimentary mouth and blind pharynx, a vertebral column, sacrum and coccyx, and ribs. The sternum, shoulder, and pelvic bones, extremities, thoracic and abdominal viscera were absent. There was a rudimentary brain and a spinal cord. The insertion of the umbilical cord lay low down. The placenta was of fair proportions, the chorion single, the amnion double. There were two cords, and not a single umbilical cord dividing close to the bodies of the twins, as some believe to be the rule in cases like this, where the acardiac is of very low development. The autosite's cord was inserted close to the edge of placenta; at the point of insertion the parasite's umbilical vein opened into the autosite's vein, and the solitary umbilical artery of the parasite anastomosed with one of the umbilical arteries of the autosite. But after thus communicating, the two vessels of the parasite's cord ran on to the placenta, where they were found quite distinct from the vessels belonging to the autosite.

(65) Fœtus Papyraceus and Anencephalous Monster with Hydrops Amnii.

CURATULO (*Ann. di Obstet. e Ginec.*, May, 1895) describes an unusual abnormality in single ovum twins. In these cases double monstrosity is frequent, whilst still more frequently one twin is an acardiac, the other well developed, hydramnion being a common complication. In Curatulo's case, where the mother was 27 and in her fifth pregnancy, one twin was anencephalous and had a very short funis. Its amniotic cavity contained a great excess of fluid. On the other hand, the second twin was a fœtus papyraceus, in a very small amniotic cavity; its cord was short and slender, and was inserted into a distinctly atrophied part of the large placenta common to both twins.

(66) Retention of Urine in a Fœtus.

DEVÉ (*Ann. de Gynec. et d'Obstet.*, June, 1895) states that he found nearly seven pints of urine in the distended bladder of an eight months fœtus. Nearly 1 inch of the urethra was reduced to an impervious fibrous cord. The rectum ended in the bladder. The urine only contained 0.024 milligramme of urea to the litre. Porak relates a case of double hydronephrosis due to an incomplete valvular stricture of the membranous part of the urethra. In a case similar to Devé's, the urine was as deficient in urea. Hence the fœtal kidneys probably eliminate nothing but water with chloride of sodium in the proportion which that salt holds to the blood. The true renal functions in intrauterine life are discharged by the placenta.

(67) Nephritis of Pregnancy.

GOSSMANN (*Münch. med. Woch.*, No. 26, 1895) does not find that this disease necessarily ends in chronic nephritis. He saw it recur in one patient during eight pregnancies, but she is still free from kidney symptoms when not pregnant. He finds that induction of labour by means of vaginal douches is perfectly simple, and in 2 cases this means alone proved sufficient. In one of them the child was saved and reared.

(68) Hæmostasis in Vaginal Hysterectomy.

DELORE (*Lyon Méd.*, June 30th, 1895) adopts the following method of detaching the cervix, whereby the chances of hæmorrhage are reduced to a minimum. He avoids the complete circular cut into the mucous membrane. A semicircular incision is made anteriorly and posteriorly. The ends of opposite incisions are not made to meet, so that the mucosa reflected on to the cervix in lateral fornices is not wounded. The bladder is then detached, and Douglas's pouch laid open; then the broad ligament is seized on each side between the blades of a long-handled forceps, which also grasps the mucous membrane. The uterus can then be detached. All blood vessels are already under perfect control.

THERAPEUTICS.

(69) The Serum Treatment of Malignant Growths.

RÉPIN (*Rev. de Chir.*, June, 1895) asserts that the observations of Lassar, Spronck, and Coley, amounting now to the number of 60, establish beyond doubt the remarkable fact that streptococci toxin, when injected into any part of the body of an individual affected with a malignant growth, will excite in this growth a rapid degeneration which may extend even to necrosis, and ultimately lead in the most favourable cases to a radical cure. After a review of the cases of malignant disease treated by accidental and artificially produced erysipelas, attention is directed in the first place to the results obtained by the above-mentioned observers, and afterwards to those of the author himself. These last though very imperfect, are such, it is thought, as to justify further researches. The first case treated by the author was one of a large subcutaneous cystic sarcoma at the back of the shoulder. During three weeks, injections of cultures of streptococci were made twice daily in different parts of body. At the end of this period the treatment was discontinued, although it had produced such changes in the tumour as seemed to justify further trials. At the end of the tenth day the tumour had sloughed, and was surrounded by a line of demarcation. Beyond this line, however, there were found growing sarcomatous cells. After the suspension of the injections, the tumour spread rapidly, and invaded the pleura. In 3 other cases treated in a similar manner there was a complete absence of any favourable results. In a woman suffering from secondary cancerous disease of the submaxillary glands, the injections excited lancinating pains in the tumours, but failed to produce any apparent modification. In another woman who was suffering from secondary sarcoma of the thigh, thirty intravenous injections failed to influence in any way the course of the disease. The fourth case was one of an enormous sarcoma of the thoracic wall of a man aged 40. Frequently repeated injections were made at different parts of the body and into the tumour itself, but without any result on the disease, which speedily proved fatal. Notwithstanding this frequent failure of any results on the tumours, and the decidedly bad effects of the treatment on the patients, consisting invariably in rapid emaciation and often in rigors and fever, the author is still hopeful as to the future of this method of dealing with malignant disease. The serum treatment, or, as it is called, toxitherapy, constitutes, in his opinion, a resource which is not to be despised in certain cases of tumour not amenable to operation. In such cases as, for instance, those of large lymphosarcomata, injections of streptococcic toxin will, he thinks, produce at least temporary amelioration and retard growth, and if carried out with energy and perseverance, afford some chance of a radical cure.

(70) Mercurial Eruptions.

O. ROSENTHAL (*Berl. klin. Woch.*, 1895, Nos. 23 and 24) first mentions folliculitis as occurring from the external use of mercury. The lesion consists in hard red nodules separated by normal or slightly reddened skin. These nodules may suppurate owing to secondary infection. An erythema and also eczema may result from the local action of mercury. Mercurial eczema may be papular, vesicular, or pustular; it may also be a moist eczema. In severe cases there may be a marked exfoliative dermatitis, of which the author relates a case in a patient, aged 21. The mercurial erythema may resemble the rash of measles or scarlet fever. Where it results from the local action of mercury it starts from the site of the injunction. Sometimes even minute hæmorrhages may occur into the skin. An exudative form of erythema multiforme has been seen. The most serious mercurial eruption is that resembling pemphigus, of which the author relates a case.

Mercurial eruptions have a polymorphic character. The mucous membranes may be affected in the same way as the skin. Mercury administered by the mouth or by subcutaneous injection, etc., may give rise to these eruptions, but not so often as inunction does. The author maintains that under the use of insoluble mercurial salts, mercurial eruptions, stomatitis, salivation, etc., have rather decreased in frequency than otherwise. Other symptoms of mercurial intoxication are rarely present along with the eruption. Besides idiosyncrasy, dose, the kind of preparation and the season at it is said may predispose to mercurial intoxication. According to the severity of the eruption general symptoms such as depression, headache, fever, etc., may exist.

(81) Treatment of Snakebite by Calcium Chloride.

Phisalix and Bertrand, at the Académie des Sciences (*Sem. Méd.*, June 19th) report the result of experiments with chloride of calcium in cases of snakebite. Its therapeutic action is not, as thought by Calmette, due to formation of some substance neutralising the poison, nor to its entering the circulation and there destroying the poison as it would in a test tube, but depends simply on its local effect; it destroys the poison locally, and causes the tissues to slough, and so prevents absorption of the toxic material. Hence they conclude that the injections of calcium chloride must be made deeply at the actual spot where the fangs entered, and that they are useless if made in any other part.

(82) Ferratin.

Marfori (*Archives Italiennes de Biologie*, Tome xxiii, Fasc. i-ii, p. 62) gives the results of some new researches on the absorption of ferratin and its biological action. He says that the different conditions in which the mucous membrane of the intestine happens to be largely affects the quantity of ferratin that can be absorbed. In order that absorption may take place, before all things it is necessary that the preparation should not be decomposed in the gastro-intestinal canal, but the sulphuretted hydrogen, which is sometimes present in the intestine in large quantities, may attack the ferratin slowly, and bring about its decomposition. Researches on the absorption of this substance may, therefore, give very different quantitative results according to the greater or lesser intensity of the putrefactive processes going on in the intestine. The large amount of absorption (13.7 to 41.68 per cent.) that occurs after administration of saline purgatives Marfori ascribes in part to the aseptic condition of the intestine, and in part to the fact that saline purgatives cause a desquamation of the upper layers of the intestinal epithelium, and therefore expose a thinner layer of young cells through which absorption more readily takes place. When the gastro-intestinal canal is in its normal condition the absorption of ferratin is much less, according to Schmiedeberg, but since the latter's experiments render it impossible to distinguish between the iron of the ferratin and the iron introduced in the food, Marfori proceeded as follows: He administered to the animal a saline purgative, and fed it solely upon milk; the lower part of the intestine was also cleared by saline enemata. About a week later ferratin was given in repeated doses. The amount absorbed varied between 11 and 80 per cent. of the amount administered. With reference to the question whether ill-effects might not arise from long-continued administration of the drug, Marfori found that it was impossible to poison animals by injecting large doses into the blood; nevertheless a man would need to take about 2½ lbs. of ferratin in the course of a month to produce a similar result, assuming as a basis for calculation experiments on dogs. Since he would actually, however, only receive about one-twentieth of that amount, there is no danger in continued administration of the drug, a statement confirmed by clinical experience.

(83) Trional in Internal Diseases.

Spitzer (*Wien. klin. Woch.*, June 6th, 1895) reports the results obtained in Drasche's clinic from the use of this drug. It was tried in a great number of cases (25 of which are given in detail), and a dose of 1 to 2 g. given in the early morning after several sleepless nights. Conclusions: (1) Trional is not only a hypnotic for different forms of psychoses, but acts equally well in lung (especially phthisis) and heart cases. (2) Sleep is induced quickly, and continues as a rule during the following night. (3) Some patients remained stupid with sleep even the whole of the next day, but as a rule the sleep resembled that of a normal person. (4) No bad effects on the circulation or respiration were observed in any case. (5) In isolated cases retching, and even vomiting, occurred on waking; this seemed to be due to idiosyncrasy. (6) The results were also excellent in insomnia due to intercostal neuralgia, rachialgia, sciatica, lightning pains of tabes, and even the pain of cancer. (7) The effects approached those of morphine more nearly than of any other hypnotic.

PATHOLOGY.

(84) Cholera Spirillum in Egg Medium.

Dönitz (*Zeitschr. für Hygien*, June, 1895) records the results of experiments with the cholera spirillum in egg medium. Hüppe recommended this medium, thinking that grown thus the spirillum generated H_2S, and was anaërobic, and that the conditions of growth were thus more like those in the human intestine. It is shown, however, by one series of experiments that in fresh eggs, sterilised superficially with hydrochloric acid, inoculation of cholera spirillum with due precautions produces a culture either pure or with admixture of foreign organisms, in the former case without, in the latter case with formation of H_2S. Occasionally the foreign organisms cannot be demonstrated when H_2S is formed, probably owing to the small number present or to the cloudiness of the microscopic preparations in these cases. In a further series of eggs in which the outer layer of white is sterilised to a certain depth by exposure to boiling water, or to formalin, it is shown that by this means the formation of H_2S and also the presence of foreign organisms is diminished. This accords with the discovery of Abel and Draer that micro-organisms penetrate eggs if these are allowed to become dirty and especially if exposed to damp; and also disproves Hammerl's view that some cholera spirilla formed abundant H_2S while others formed little or none, for spirilla from the same source as his were used in these experiments. It is concluded that cholera spirillum in egg medium does not form H_2S recognisable by ordinary methods, and further that egg is a most unsuitable medium for pure culture of bacteria, as it is impossible to know beforehand whether the egg is sterile.

(85) So called "Gynæcomastia."

H. Stieda (*Beitrage z. klin. Chir.*, Band xiv, Heft i) gives the results of his histological examination of this condition of the male breast. He comes to the conclusion that the name "gynæcomastia" is only justified in regard to the outward appearance of the mamma in these cases. The name must not be taken to imply that the male breast in such cases has any real histological resemblance to the secreting female breast. According to Stieda, the condition depends chiefly on a hyperplasia of the connective tissue of the normal male breast. The connective tissue encroaches on the neighbouring fat; the fatty tissue and the glandular tissue, however, also both take a part in the hyperplasia. In the tubular ducts short processes or pouches can be made out, but this does not justify anyone in saying that the gland in these cases is acinous as in the secreting female mamma.

(86) Antiseptic Treatment of the Navel in the Newly-born.

Schliep (*Therap. Monatshefte*, June, 1895) advocates antiseptic treatment of the stump of the umbilical cord after childbirth, instead of the usual dirty treatment commonly adopted. He mentions Schröder, who insisted on strict asepsis during and after treatment of the cord by means of antiseptic baths and treatment of the stump with dermatol, which hastened the process of mummification. By this means Schröder showed that many sources of infection were avoided, especially contamination by dirty bath water. Schliep advocates this treatment, but substitutes for dermatol a 2 per cent. solution of silver nitrate applied twice daily by means of a brush. He states that the day after birth the stump begins to become dry and leathery, on the second day it has shrunk to a fifth of its normal size, and on the fourth day the treatment is complete.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(87) Angina Pectoris, Gouty Arthritis, and Diabetes.

Fürstner, after relating in detail three cases, appends (*Berl. klin. Woch.*, June 24th, 1895) some remarks on the connection between these diseases. In two cases in which diabetes and gout occurred in fat individuals there were also anginal attacks. In one case gout preceded diabetes, but in the other the reverse was noted. Most often diabetes follows upon gout. Attacks of gout may alternate with the diabetic manifestations. Diabetes appears to be a more favourable disease in the gouty. In both cases the angina pectoris was the most troublesome complaint. The anginal manifestations occurred in the first case ten years after the first attack of gout, whereas in the other case the angina appeared at the same time as the diabetes, or even before it. Both cases were in the author's opinion genuine examples of angina pectoris. It is difficult to determine in these cases whether the angina was dependent on the diabetes or on the gout. In both diseases the anginal attacks may be of a functional character. In both his cases the author thinks that the angina depended on disease in the circulatory apparatus, as changes in the heart were noted in both cases, and probably aneurysm in one of them. A sharp distinction cannot be drawn between angina caused by anatomical changes and that due to functional causes. The author has observed cases in which such anginal attacks have existed during many years. The prognosis is, however, serious even if no change can be made out in the circulatory organs.

(88) Painful Temporary Paralyses in Children.

Brunon (*Presse Méd.*, June 29th, 1895) discusses painful temporary paralysis occurring in young children. Out of 22 cases 2 had paralyses of the lower extremities, all others having the arm only involved. Out of 14 all but 1 were under 5 years old. In all there was an absolutely sudden onset, sometimes following the slightest traumatism; often no cause was observed. The paralysis is complete from the onset; amelioration is gradual. All passive movements are retained, all active movements are abolished, the arm hanging inert by the side. The child screams when the slightest examination is attempted. No anatomical lesion is found except occasional crankling of the joints. Recovery takes place in from 24 hours to a week. Most authors take the view that there are in such cases anatomical lesions such as subluxation, stretching or twisting of ligaments. Brunon believes with Chassaignac that in the cases in question any idea of fracture, dislocation, or tearing of ligaments may be dismissed, as no deformity, ecchymosis, or interrupted movement of joints can be found. A differential diagnosis is needed between this and the form of paralysis due to partial dislocation of the head of the radius, a pathognomonic sign of the latter being the impossibility of supination. In 17 cases of this nature 2 only held the arm hanging straight. In the 22 cases under consideration all hung limply by the side and could be freely flexed, pronated, or supinated. The initial lesion may be an injury to ligaments but examination fails to localise the injury. Pain is general from shoulder to finger tips. The condition appears to be due to a reflex inhibitory action, of which other examples are numerous and which affords a rational explanation of the paralysis. Mechanical, emotional, or psychical stimuli are known to produce such conditions. An intellectual factor, the memory of the initial pain, explains the persistent crying of the child, the fear of being touched. There is no pain when the child is not handled. Much depends on the influence of suggestion made by those in charge of the child. In one case in which Brunon was able to make a diagnosis before seeing the patient, he was able to manipulate the arm freely from behind a curtain, while on his attempting to do so openly the child at once began to scream. An analogous case is cited of a child who was not allowed to see his crushed finger for three weeks until the new nail began to grow. At the sight of it he cried as if in pain, and kept the finger extended, not attempting to use the hand for two days. The spontaneous cure of these cases as memory fades seems to corroborate the view advanced.

(89) Vascular Obstruction in Influenza.

Cathomas, of Eichhorst's clinic, refers (*Münch. med. Woch.*, July 2nd, 1895) to the circulatory lesions in influenza. As regards the venous system, thrombosis due to phlebitis has been noted. Four cases are quoted in which arterial embolism occurred. They were all fatal. The popliteal, femoral, brachial, and Sylvian arteries were respectively involved. Arterio-thrombosis has been known to occur in seven cases, excluding several others in which the Sylvian artery was involved. The author then relates the following case, occurring in a patient aged 64, in hospital for extensive eczema, and who developed influenza. The respiratory and circulatory organs appeared healthy. During the attack of influenza the patient was seized with difficulty of breathing, and later he had severe pain in the right arm. There was no pulse in the right radial artery, the axillary artery being obviously obstructed. The patient ultimately died. An adherent clot was found in the axillary artery. A clot was also found in the aorta where the innominate is given off. The heart was enlarged, but no clots were present in it. The case was one of arterio-thrombosis. In a second case referred to, a man, aged 40, was seized during convalescence from influenza with severe pain in both legs after an attack of coughing. Gangrene followed, and the patient subsequently died. Although there was no necropsy, the lesion was no doubt caused by an arterio-thrombosis. The author concludes that vascular obstruction may occur in influenza as in other infective diseases; that it may be due to embolism of arteries or veins; that arterio-thrombosis is a rare complication of influenza, and may begin suddenly like embolism, and that the differential diagnosis between embolism and thrombosis may be difficult.

(90) Subacute Suppurative Polymyositis.

H. Neumann (*Deut. med. Woch.*, June 13th, 1895) records the following case. A boy, aged 9, developed, after diphtheria and measles, an otitis media. This was followed by a simple pemphigus and purpuric patches over the left side of the body. Nephritis also supervened. Later there was painful swelling in the muscles of the left foot, left upper arm, left buttock, and left thigh, which ended at times in suppuration. The joints were unaffected except a passing inflammation in the left hip and knee-joints. There was profuse sweating. A streptococcus almost in pure culture was found in the pus. After three months' illness the patient made a complete recovery. Such cases are very rare, and they mostly terminate fatally. The starting-point of the infection was the throat. It was curious how the left side of the body was almost alone involved.

SURGERY.

(91) Recent Advances in Cerebral Surgery.

Von Bergmann (*Centralblatt für Chirurgie*, No. 27, 1895), at a recent Congress of the German Surgical Society held at Berlin, brought under notice certain advances that have been recently made in the department of cerebral surgery. In cases of tumour of the brain surgery has of late done very little beyond facilitating a correct diagnosis, and rendering operative interference less dangerous. In Jacksonian epilepsy surgical treatment is usually followed by relapse, and can effect a certain cure only in those cases in which the convulsions are due to the compression of a circumscribed cortical motor centre by a tumour, as for instance, a cyst of traumatic origin. On the other hand, very decided progress has been made in the operative treatment of different forms of intracranial suppuration of otitic origin, such as cerebral abscess, epidural suppuration, infective thrombosis of the lateral sinus, and leptomeningitis. The most dangerous forms of chronic aural suppuration, which is usually excited by a collection of cholesteatoma in the interior of the ear, are indicated by intercurrent acute and subacute attacks, with fœtid discharge, and by the presence of polypoid granulations on the tympanic cavity and the

auditory meatus. The extension of the inflammation through the thin and carious tegmen tympani sets up pachymeningitis, which in its turn gives rise to an extradural or epitympanic abscess, or to an intradural cerebral abscess. The cerebral abscess, when small and in an early stage of development, is situated at the surface of the brain, but as it enlarges it sinks into the substance of the affected lobe. As the diagnosis between a superficial and epitympanic abscess on the one hand and a cerebral abscess on the other is attended with much difficulty, von Bergmann holds that it is necessary in performing an operation to expose to view both the extradural abscess and the part of the temporal lobe most likely to be involved in the extension of the suppurative process. An operation is described by which the upper and anterior surfaces of the petrosal bone are exposed through a quadrangular opening made in the squamous portion of the temporal bone, just above the line of the zygoma, and between a line in front drawn directly upwards to the sagittal suture from the tragus, and a parallel line behind carried upwards from the posterior border of the mastoid process. By this wound the mastoid antrum and cells may be opened if necessary, and the sigmoid fossa be reached. In conclusion Bergmann alludes to the successful results of the surgical treatment of infective thrombosis of the lateral sinus. Exposure and incision of the sinus, with ligature of the internal jugular vein, proved successful in 6 out of 13 cases treated by Jansen of Berlin. These cases, added to those of Macewen and other surgeons, show that the operative treatment resulted in recovery in 27 out of 45 patients. Thrombosis of the lateral sinus, it is pointed out, is often associated with extradural abscess on the roof of the tympanic cavity, and in most cases of cerebellar abscess forms a communication between this collection of pus and the suppuration in the middle ear. In exposing the outer surface of the mastoid process and the bone lying behind this, search should be made for the mastoid emissary vein. Not only is the orifice a good guide to the sinus, but in addition the state of the vessel may help the diagnosis. If it contains pus suppuration in and about the lateral sinus is indicated; if it be blocked by a thrombus this will be a sure sign of thrombosis extending to the cavernous sinus. Von Bergmann, attributing much of the recent progress in cerebral surgery to improvements in technical details and in instruments, makes use, in opening the skull, of a circular saw worked by electricity, with which he divides the outer table, whilst the inner table is divided by the careful application of a chisel.

(92) Dislocation of the Ulnar Nerve at the Elbow.

At the recent meeting of the American Surgical Association at New York (*Med. News*, June 15th), Henry R. Wharton, of Philadelphia, reported an instance of this injury which came under his own observation, together with thirteen others collected from medical literature. The condition is a comparatively rare one occurring independently of fractures or dislocations of the bones of the elbow, and may result from direct violence or from muscular effort or violent flexion of the arm at the elbow, causing laceration of the fascia that holds the nerve in its groove at the back of the inner condyle of the humerus. In two cases of dislocation of the ulnar nerve in dead subjects, the internal condyle of the humerus was found small, and the groove for the nerve shallow, and the fascia binding down the nerve very poorly developed; an unusual forward position of the internal lateral ligament was also noted. The most satisfactory method of securing the nerve consists in exposing it, and, a bed having been made for the nerve by dividing the fibrous structures behind the inner condyle of the humerus, fixing it in its usual position by two kangaroo tendon loops passed through the inner margin of the triceps tendon and somewhat loosely around the nerve, several sutures being used to unite the divided margin of the fascial expansion of the triceps tendon superficial to the nerve. In all cases in which the nerve has been exposed and sutured in its normal position the result has been satisfactory. In no recorded case has neuritis developed as a result of operative treatment.

(93) Gonorrhœal Cystitis Cured by Influenza.

Goldberg (*Centralbl. f. inn. Med.*, June 29th, 1895) observes that influenza has occasionally been known to produce a cystitis. He reports a case in which a man, aged 22, was suddenly and completely cured of a chronic gonorrhœal cystitis by an attack of influenza. The patient was first seen by the author six months after the onset of the gonorrhœa. The urine then contained pus, a small quantity of albumen, but no casts or other formed renal elements. The bladder was tender on palpation. The cystoscope showed the bladder walls to be of a dark-greyish colour with prominent muscular fasciculi. Washing out the bladder only produced some slight improvement, the urine still remaining turbid. In an attack of influenza the urine rapidly became clear, and ceased to contain either pus or albumen. The subjective symptoms also disappeared. There could be no doubt of the causal connection between the influenza and the cure of the cystitis, which had already lasted 11 year. Possibly the toxins of influenza had so impaired the vitality of the micro-organisms setting up the cystitis, as to render their further development impossible.

(94) The Operative Treatment of Spinal Caries.

Calot (*Revue d'Orthopédie*, July, 1895) holds that in the present state of science it is unjustifiable to operate in cases of paralysis due to Pott's disease of the spine. Most of these cases, he asserts, will recover if treated by prolonged rest. Of 20 cases treated by the author in the course of the past four years by rest and immobilisation, 19 are either quite cured or on the way to complete cure, 1 only having succumbed in consequence of the rupture of a large psoas abscess into the bladder. Operative treatment in Pott's disease is contraindicated by the seat and extent of the lesions; by the nature of the tuberculous process; and above all by the risks attending surgical interference. It is stated that in 20 per cent. of the recorded cases thus treated death has been due directly to the operation, and there is reason to believe that this mortality really amounts to between 60 and 80 per cent. The author concludes that the operative treatment which is so fatal or useless in a large majority of cases does not afford in the few successful cases better results than those obtained by a strictly orthopædic treatment. A serious operation which might be regarded as justifiable in inevitably fatal diseases such as tuberculous meningitis, hydrocephalus, and gastric and intestinal cancer, ought not to be practised in the treatment of an affection which needs only time and patience to ensure recovery.

MIDWIFERY AND DISEASES OF WOMEN.

(95) Intrauterine Infection with the Typhoid Bacillus.

Freund and Levy (*Berl. klin. Woch.*, June 14th, 1895) relate the following case: A woman, aged 24, fell ill with enteric fever in the fifth month of her third pregnancy. In the fourth week of the disease abortion occurred. This had no ill-effect on the course of the disease, and the patient made a good recovery after a relapse. The fœtus died as soon as the cord was divided. The bacteriological examination was commenced twenty minutes after birth. Tubes were inoculated from the spleen and the placental blood, and in three days' time colonies were developed. The micro organism was proved bacteriologically to be the typhoid bacillus. It yielded all the characteristic distinctions from the B. coli communis. The case shows that the typhoid bacillus can pass over from the mother to the fœtus. Every precaution was taken to render the genital passages free of micro-organisms. The number of typhoid bacilli present was small, and perhaps this will account for the negative results obtained in some cases. Nothing abnormal was found in the fœtus except an enlarged spleen. Careful examination of the placenta revealed no lesion. Thus no cause could be found in the fœtus or placenta for the interruption of pregnancy. Abortion took place at a time when the most severe pyrexia was over. There was no evidence of recent endometritis, as has been urged by some authorities, although some thickening of the decidua indicated the presence of an endometritis before conception. It is most probable that some lesion of the placenta is the direct cause of the passing over of the bacilli from the

mother to the fœtus, although none could be be found here. The typhoid bacillus, after once passing over to the fœtus, caused a septicæmic disease. It was a blood infection, as is occasionally seen in the adult without intestinal lesions.

(96) Artificial Abortion.

GARRIGUES (*Amer. Gynec. and Obstet. Journ.*, June, 1895) believes that the conditions which justify artificial abortion apart from acute diseases are especially serious pulmonary tuberculosis, severe valvular heart disease, aortic aneurysm, carcinoma not amenable to radical treatment, chronic nephritis, severe affections of the nerve centres, and present or threatened insanity. Abortion offers two dangers—hæmorrhage and septicæmia. The evacuation of the uterus should be conducted, under anæsthetics, with every precaution. The cervix is dilated by means of conical hard rubber and expanding steel dilators until there is room enough at least for a curette, but if possible for a finger besides. The spongy endometrium should be removed thoroughly, as well as the fœtus and membranes. Garrigues scrapes as long as anything comes out. Before scraping the uterus is washed out with creolin, and afterwards a quart of a 1 per cent. solution of that drug is passed through the uterus by irrigation. Drainage is not needed during the first two months; the vagina need simply be plugged for a day. Later the uterus should be packed with iodoform gauze, gradually withdrawn daily so as to give the uterus a chance of contracting well before the last of the packing is removed from four to six days after the operation. After the end of the fourth month the measures used for induction of premature labour are indicated, especially dilatation of the cervix, introduction of a bougie, and packing of the cervical canal with iodoform gauze. No artificial abortion should be performed without a consultation report, signed by the consultants and kept by the operator.

(97) Treatment of Soft Sores in Females.

VON HERFF (*Monats. f. Geburts. u. Gynäk.*, June, 1895) has found that the treatment of soft chancre involves certain difficulties in women, especially if the disease be treated as in males, the patients taking no rest. Iodoform is so disagreeable that the patients often neglect to apply it according to prescription. Even when it or any similar therapeutic powder is dusted on the chancre, urine lodging between the labia after micturition and, above all, free vaginal discharges rapidly decompose the chemical agent, neutralising all the good which it can do and increasing any offensive property which it may possess. The best treatment is immediate cauterisation with phenol. The genitals must be well cleansed with sublimate first. The "sore" will then appear to be made up of numerous minute ulcers, but some separate ulcers are often to be found far off. Hence, the search for the full extent of the disease must be conducted in a good light. Then each ulcer is touched with a concentrated solution of phenol (acid. carbol. liquefact., *P. G.*, almost the same as *B. P.*: see Squire's *Companion*, fifteenth edition). A small, thin piece of wood, made rough at the end, is the best instrument for the purpose. The edges of each sore must be well touched up. Dry wadding is placed over the eschars. Hip-baths and weak antiseptic injections and lotions are then prescribed. About five days after the first application the parts must be examined. As a rule the sores will be found healing. Of course any ulcer still active must be touched with the carbolic solution. If not too late, this treatment prevents the suppuration of inguinal glands without requiring enforced rest.

(98) Fracture of Humerus at Birth: Temporary Paralysis.

LOVIOT (*Annales de Gynéc. et d'Obstét.*, June, 1895) relates a labour where the child's humerus was broken during delivery of the shoulders. A plaster splint was immediately applied. A few days later much callus had developed, and the arm soon became paralysed. After a few more days the callus diminished, and the member resumed its functions. Loviot attributes the paralysis to compression of the musculo-spiral nerve by the callus. Budin, in a discussion on this case, expressed a suspicion that the loss of power was due to pressure from the plaster-of-paris bandage. Charpentier stated that the paralysed muscles become atrophied as a rule; hence this case had an unusually favourable termination.

(99) The Gases in Women's Milk.

KÜLZ (*Zeitschrift f. Biologie*, Vol. xxxii, part 2, 1895) has analysed human milk, and in so doing has taken every precaution to prevent the entrance of air from without before making the analysis. Hoppe-Seyler in 1859 made out the proportions of the most abundant gases as follows: oxygen 0.16 per cent., carbonic acid 1.88 per cent., and nitrogen 1.38 per cent. More recent authorities give conflicting evidence. Setschenow and Pflüger found carbonic acid in much larger proportion (6 or 7 per cent.). As the result of careful analysis of five samples from three women, Dr. Külz has arrived at very uniform proportions, in fact, roughly speaking, the gases stand at: oxygen 1.5 per cent., carbonic acid 2.5 per cent., and nitrogen 3.5 per cent. In all five samples the gases kept the same figures as above indicated, with but slight variation in decimals.

THERAPEUTICS.

(100) Uric Acid and its Solvents.

MASSELBOUS (*Ther. med. Woch.*, May 2nd, 1895) discusses the solubility of uric acid in gouty deposits and in concretions. The solubility depends on (1) the amount to be dissolved, (2) the reaction of the medium, (3) the presence of other bodies. This last point has hitherto received but little attention. Non-poisonous bodies capable of dissolving uric acid in the retort are also expected to dissolve it in the body, whether in the case of the blood or of the urine. The author has shown that even in the reagent glass these bodies lose their solvent action when urine is present. Uricedin does not dissolve uric acid, and yet it gives to urine uric acid dissolving properties. Lysidin is an extraordinary solvent for uric acid, but it loses these properties if urine is present. Thus bodies exist in the urine which by their presence alone annul the dissolving powers of lysidin, etc. It would appear that the extensive use of these agents is not only useless but may even be harmful. The author has searched for the bodies which hinder this solvent action. Neither the urinary pigment nor urea has any such action. The earthy phosphates were precipitated and filtered off. The clear fluid was then evaporated to dryness, and the residue ignited. Then it was found that the residue when dissolved had the same hindering action on the solvent powers of lysidin, etc., as the urine itself. The most important among these bodies in the residue is sodic chloride. A few granules of common salt exercise a similar hindering action. Lysidin and piperazin when not chemically pure have far less solvent action on uric acid, and impure uric acid is also much less easily dissolved. If lysidin or piperazin be added to blood serum, the resulting fluid dissolves uric acid nearly as readily as an aqueous solution of these agents. If saline solution or even a granule of common salt is added, the solvent action is lost. In the blood the salts amount to only 0.85 per cent., whereas 16 to 17 g. of sodic chloride is excreted daily. Hence the difference between blood and urine. Thus uric acid is dissolved in the urine in a complicated and as yet ill-understood fashion. Certain mineral waters have the power of dissolving out uric acid within the urinary apparatus or in the urine, but the mode of action is not understood. The important point is not to study the properties of uric acid apart from its surroundings; the characters of the media in which the uric acid is dissolved must be investigated.

(101) Organotherapeutics.

COMBE (*Rev. Méd. de la Suisse Rom.*, May 20th, 1895), divides the glands with an internal secretion (that is, into the blood) into two groups. The first includes those whose active principal neutralises or renders inert or even useful the toxic elements circulating in the organism ("antitoxic glands," including the liver, pancreas, and thyroid for certain, and probably the thymus, pituitary body, suprarenal capsules, and perhaps even the kidneys). The second includes the glands secreting a substance useful or perhaps necessary for the normal functions of the organism ("vivifying glands," the spleen, testicle, and bone marrow). (1) Antitoxic glands. (A) The

Pancreas: This is an externo-internal gland, external as regards the secretion into the intestine and internal as regards the substances discharged directly into the blood. The active principle of this internal secretion is a glycolytic ferment, whose function is to render inert or useful the circulating glycoses. Combe had treated one case of diabetes of eight years' duration with sandwiches of pancreas, and the sugar disappeared from the urine completely, but the case was afterwards lost sight of. (B) The Thyroid (1). Thyroid and Myxœdema: This gland plays the same part with the toxic products of digestion of albumins as the pancreas with those of hydrocarbons. The author treated two cases of congenital myxœdema, aged 2 and 4 years respectively, while previously reported cases have been 15, 20, or even 30 years old; both mothers had had a severe attack of influenza during gestation, and both children were born at ten months, without a thyroid. One was myxœdematous at birth, while in the other myxœdema developed at eight months (? time when thymus atrophied). The symptoms were a myxœdematous facies together with macroglossia, a short neck with pseudolipomata, prominent abdomen, and limbs large, deformed, and pachydermatous. The idiocy was absolute, and they had no idea of taking nourishment (*Pflanzen-menschen* of Koch). The bodily development was much retarded, the one 2 years old being only 68 cm. long, the other 4 years old only 69 cm. No teeth were present in either. With 3 g. of thyroid, at first given *per anum*, later *per os* (four days of treatment alternating with a like period without), all the symptoms disappeared. After 2 months one child was rather backward for its age, but very intelligent. The child, aged 4 years, after thirteen months of treatment, had grown 20 cm., had all its teeth, and could walk alone; the one aged 2 years had grown 11 cm., had all its teeth, and could walk if led by the hand. (2) Thyroid and Uric Acid Diathesis. Combe has treated gout in the acute stage and other chronic cases with thyroid with very good results, the excretion of urea and uric acid being markedly increased. II. Vivifying Glands: Of 70 reported cases of infantile pseudo-leukæmic anæmia, 68 died. Of the author's 8 cases, 6 died before the new treatment came in, the other 2 were treated with bone marrow. Of these, 1 was quite cured, the other nearly. He therefore thinks bone marrow worth trying in other blood diseases (leukæmia, chlorosis, etc.).

(102) Argentamine in Gonorrhœa.

Albertazzi (*Gazz. degli Osped.*, July 16th, 1895) has been using argentamine, which is a phosphate of silver dissolved in ethylenediamine, in the treatment of gonorrhœa. In 1 in 4,000 to 1 in 2,000 solutions it makes a good urethral injection, and, as it does not coagulate the albumen in contact with the urethral mucosa, it is able to reach the gonococci hidden in the intercellular spaces of the epithelial stratum. The author has had only one negative result in 50 cases, and in that case the patient was unwilling to forego bicycling, sexual intercourse, or alcohol during the treatment. Solutions of 1 in 4,000 sterilise pure cultures of gonococcus after five to seven minutes' contact. Injections of 1 in 1,000 are borne without appreciable pain. The secretion increases after the first few injections, but then diminishes progressively and rapidly. Usually after five or six days an improvement in the character of the discharge takes place. The period of treatment varies from seven to fifteen days. These injections may be used at any period of the disease, even in the early acute stages.

PATHOLOGY.

(103) The Influence of Fever and Leucocytosis upon the Course of Infective Diseases.

Loewy and Richter (*Deut. med. Wock.*, 1895, No. 15) investigated the effect of an increase of temperature produced in animals by puncture of the brain (Sachs-Aronsohn's method) upon the course of chicken-cholera, pneumonia, and diphtheria. The animals' temperatures were in this way raised for several days up to or even above 42° C. They found that the animals under these circumstances withstood two to three times the usually fatal dose of the various bacteria mentioned, but that with 100 times the fatal dose the warmed animals died sooner than their controls. The best results were obtained with the pneumococcus, which can be definitely attenuated outside the animal body by growing at 42° C. For the investigation of the effect of leucocytosis pilocarpin was first of all used, but later, on account of the disturbing poisonous effects of this drug, spermin was used. Intravenous injection prevented the fatal effect of three to four times the usually fatal dose of pneumococcus when the micro-organism was injected later than the spermin, but cure did not occur if the spermin was injected twenty-four hours after the pneumococcus; death was under these circumstances only postponed. The authors conclude that the organism has in leucocytosis and in fever protective mechanisms against infection.

(104) The Cholera Bacillus in New Milk.

The question of the bactericide properties of new milk affirmed by Weigmann and Hesse has been submitted by Basenau to a new series of investigations in the laboratory of the University of Amsterdam. His results (*Weekblad van het Nederlandsch Tydschrift vor Geneeskunde*, May 18th) point to an opposite conclusion. Hesse had experimented on agar-agar only; Basenau made his tests according to the method of Koch, using the most favourable medium for the cultivation of the cholera bacillus. After thirty-one hours the micro-organism had multiplied from twelve to thirty-five times; after thirty-two hours they had multiplied five times at chamber temperature; and twenty times at 24° C. The sanitary importance of these experiments becomes evident when it is remembered that Hesse recommends new milk as a prophylactic and curative in times of cholera epidemic.

(105) Death in Burns.

Silbermann (*Centralbl. f. ges. Med.*, May 18th, 1895) first refers to the various theories of interference with cutaneous perspiration, of the entrance of fibrin ferment into the blood current, of the absorption of muscarin like toxins, etc. Reflex vascular paralysis, with secondary cardiac paralysis, is believed by some to be the cause of death. The most commonly accepted view would attribute death to the severe damage done to the red blood cells. These changes consist in swelling, division, fragmentation, dissolving out of pigment, and other profound morphological alterations. Vascular obstruction and its results thus ensue. A limitation of the functions of the red cells is caused by the heat. Proof has been given by the author and others that the damage done to the blood discs leads to their adhesion to blood plates and to the formation of numerous thromboses. The author has shown that the red cells in those burnt have a much diminished resistance. Experimentally he has proved that the congestion in organs is not uniformly distributed; that hæmorrhages occur in the lungs, kidneys, etc., and very often there is necrosis and fatty degeneration of cells. These parenchymatous changes are due to circulatory disturbances—stasis, thrombosis, thrombo-embolism. They were most common in the lungs, kidneys, liver, and rare in the brain. The dyspnœa, cyanosis, anuria, vomiting, etc., and especially the rapid fall in blood pressure, may be explained by the obstruction of vessels. Pulmonary lesions are frequently found in death from burns. The nephritis sometimes observed is also due to circulatory disturbances.

(106) Rapid Staining.

Cullen (*Centr. f. allge. Path. u. patholog. Anat.*, 1895, Bd. vi, No. 11, p. 448) describes a rapid method for staining fresh tissues after hardening with formalin. Sections can be stained in the *post-mortem* room within fifteen minutes of removal of the tissue from the body. The fresh material is frozen, and sections are cut and placed in 50 per cent. watery solution of formalin for five minutes, thence into 50 per cent. alcohol (three minutes), absolute alcohol (one minute), and washed in water; they may then be stained and mounted in the usual way. Another method by which better results are obtained takes two hours and a-quarter. In it the fresh material is soaked in a 10 per cent. watery solution of formalin for two hours, and then frozen, cut, and placed in 50 per cent. alcohol. The later procedure is as in the previous method. The pieces of tissue in the second method must not be greater than 2 millimetres in thickness.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(107) Glioma of the Left Frontal Lobe.

Omeri (*Il Policlinico*, June 15th, 1895) reports the case of a woman, aged 35, who first began to suffer from left frontal headache, nausea, and vomiting in 1887. The pain lasted some hours and kept her in bed. In 1889 she suffered from convulsive attacks coming on chiefly at night, setting in with sudden unconsciousness and without any aura. The convulsions were general in type, the head and eyes generally turned to the right. In 1890 a relative improvement took place, but in 1891 the symptoms returned more severely, and she then complained of deficient sight; the memory and attention were also weakened. In the early months of 1892 she had right facial paralysis with hemiparesis of the right side, chiefly affecting the arm, the muscles of which were in a state of hypertonicity. The headache was more continuous and more diffuse. Almost complete anosmia and amaurosis. There was atrophy of the optic disc. Hearing and taste normal. Voice and phonation unaltered, but amnesic aphasia and paraphasia were present. There was no history of syphilis, cancer, or tubercle. The patient was operated on in September, 1893, and a large glioma found in the region of the second left frontal convolution. The growth was removed at a second operation eight days after the first. For some time the patient seemed relieved by the removal, but had a good deal of trouble from an extensive cerebral hernia. She left the hospital in March, 1894, and died in November of the same year with abscess in the site of the operation.

(108) Influenzal Encephalitis.

Nauwerck (*Deut. med. Woch.*, June 20th, 1895), observes that recent epidemics of influenza have shown that an acute non-suppurative encephalitis may be among the manifestations of influenza. He records two cases in which the brain was examined for the influenza bacillus (Pfeiffer): (1) A girl, aged 14, was seized a few days after an attack of influenza with cerebral symptoms, and died at the end of a week. In the longitudinal sinus there was an adherent clot. A large number of well-defined foci of softening were present in the brain, and in the neighbourhood of these foci the pial veins were filled with firm clot. The ventricles contained a small quantity of fluid. The bacteriological examination was negative. (2) A girl, aged 19, was seized during an epidemic of influenza with headache and vomiting. She rapidly became unconscious, and died in a few days. The ventricles contained a large quantity of slightly turbid fluid. In the right cerebellar hemisphere there was an apoplectic focus of the size of a walnut. The brain substance about it was beset with minute hæmorrhages. The lesion also extended into the left hemisphere. The cavities of the ear and nose were healthy. Tubes were inoculated especially from the fluid in the ventricles, and Pfeiffer's bacillus was discovered. The same micro organism was also found in some centrifugalised cerebro-spinal fluid, as well as in sections from the diseased focus above named. According to present knowledge this influential encephalitis might be caused by: (1) the absorption of toxins from the pulmonary lesions; (2) a mixed infection; and (3) the local action of the influenza bacillus. There were no streptococci, staphylococci, or pneumococci present, whereas the influenza bacillus was found in the lesion. The author thinks, however, that the above-named cocci may at times play an important part in producing the encephalitis. Examination of the fluid obtained by Quincke's puncture may give important information. Clinicians have thought that this encephalitis is due to capillary embolic lesions. The blood in these cases is mostly free from the bacilli. Thus the author shows by this case that the brain may be rapidly and fatally infected with the influenza bacillus. The disease in this case was unaccompanied by fever. The involvement of the cerebellum in this case explained the occipital headache, stumbling gait, etc. The effusion into the ventricles was inflammatory in character.

(109) Athetoid Attitude in Friedreich's Disease.

Londe and Lagrange (*Annales de Méd.*, March 7th, 1895) report cases of Friedreich's disease in two sisters aged respectively 15 and 16. In both sisters the titubating gait and absence of knee-jerks are characteristic of the disease, but the sphincters, pupils, general and special sensation are unaffected; the nystagmus, moreover, is not at all marked. Their first symptoms were noticed at the age of 6 or 7, before which time they are said to have been well formed and to have had normal intelligence; they were not backward in learning to walk. The first symptom was apparently a choreiform incoordination, which was mistaken for true chorea minor. At the age of 8 disturbance in their gait was remarked, and their intelligence suffered later on, that of the eldest sister being now the more feeble. They have three brothers, younger than themselves, who are quite healthy. The chief point of interest in the two sisters is the "athetoid" attitude which they assume when they walk. When they walk their heads are bent forwards, and there is dorso-lumbar lordosis; their forearms are pronated and their wrists flexed, so that the back of the hand faces the ground. The attitude is rendered more striking by emotion. There is no true athetosis; the attitude is an "intention attitude" (only occurring on voluntary movements), and is not so marked as to suggest that it is a phenomenon independent of the Friedreich's disease.

(110) Sclerodermia.

Friedheim (*Münch. med. Woch.*, May 7th, 1895) relates a case of extensive sclerodermia in a girl aged 21. The diagnosis was made certain by the sclerosis, atrophy, and pigmentation of the skin and by the absence of sensory disturbances. A case related by Kaposi and Singer, in which a partial atrophy of the thyroid gland was present and the smallness of the same gland in the patient led the author to try the thyroid treatment. No beneficial action was noted, and the treatment had to be discontinued owing to headache, sleeplessness. Improvement was obtained by massage. The case was complicated by cutaneous hæmorrhages—a very uncommon event in sclerodermia. That the disease is a trophic-neurosis is supported by the disturbance in secretion and the muscular atrophy (such as facial hemiatrophy) sometimes seen. Sclerodermia affects women more than men and is uncommon under 20 years of age. Sensation to temperature and touch was unaffected in this case, but there was slight hyperæsthesia to the electric current. As regards treatment, massage properly applied along with numerous baths and lubrication of the skin has given the author the best results in these cases. The improvement has fallen short of cure. The palliative action of electrical treatment is at times considerable.

SURGERY.

(111) Splenectomy for Splenic Hydatid.

Hahn (*Deut. med. Woch.*, July 11th, 1895) relates the following case. A woman, aged 35, noticed shortly after her confinement a swelling in the abdomen, which steadily increased in size. On admission the abdomen was distended, and a fluctuating and very freely movable tumour occupied the left side of it. The lower border of the tumour gave the impression of being the edge of the spleen. When the tumour was turned out of the abdomen by pressure on the loin, it appeared to be either a cystic sarcoma, a blood cyst, or a hydatid cyst involving the spleen. It was thought best for several reasons to remove it entirely, so the pedicle containing large vessel was ligatured in several parts and divided. Subsequent examination proved the tumour to be a hydatid. An examination of the blood (Kroenig) showed an increase in white cells at the time of the operation, a considerable diminution four days later, almost the normal relation in four weeks' time, and again a diminution four months after the operation. The patient made a good recovery. There was no enlargement of the thyroid or lymphatic glands while the patient was under observation. The frequency of splenic hydatid among all cases of hydatid disease varies from 0.7 to 3.4 per cent., ac-

cording to different observers. The author then discusses the best way of dealing with the disease, and short details are given of 7 cases treated by splenectomy; 5 of these recovered, and here either only a few or no adhesions were present. If there are extensive adhesions it is best to stitch the cyst to the abdominal wall and to incise it, and this may be done in one or two sittings. The author says that tapping either with or without aspiration must be avoided owing to the high mortality. In the author's case the thinness of the cyst wall might have led to rupture if it had been secured to the abdominal wall. In cases where the cyst wall is thin, or where there is atrophy of the spleen, great mobility of the tumour, and a long pedicle, splenectomy is by far the least dangerous procedure. However dangerous the removal of the spleen in diseased conditions (especially leukæmia) is, the operation of splenectomy for dislocation after injury, or for cyst formation as well as experimental pathology, show that the absence of a healthy spleen or of one atrophied by pressure is without any real disadvantage to the individual.

(112) Immediate Suture of the Gall Ducts and Gall Bladder after Extraction of Stones.

J. W. Elliott, of Boston, read a paper on this subject at the recent meeting of the American Surgical Association at New York (*Med News*, June 15th). He contended that the operations of cholecystotomy and cholecystenterostomy have become too much the routine practice for the relief of gall stones, and that incision of the ducts or the gall bladder, followed by immediate suture, is the proper operation in the majority of cases, especially in recent cases. He reported five such operations: one on the hepatic duct, one on the common duct, and three on the gall bladder. All were successful. The following conclusions were presented: (1) Every operation should be conducted with the idea of restoring the functions of the ducts, and any irreparable injury to them is a serious calamity. (2) Immediate closure of the gall bladder is safe if the ducts are clear and its walls healthy. (3) Incision and suture of the cystic duct are preferable to prolonged manipulation. (4) Incision and suture of the hepatic and common ducts constitute the operation to be chosen for impacted stones. (5) The mortality of this operation is less than 18 per cent. (6) If the condition of the patient is critical a preliminary cholecystotomy is advisable. (7) Cholecystenterostomy should be reserved for irremediable stenosis of the common duct.

(113) Nephropexy.

Vulliet (*Rev. Méd.*, No. 6, June, 1895) describes an operation undertaken by himself and his colleague Poullet for fixing a floating kidney. The usual method of fixation by suture is unsatisfactory, owing to the friability of the kidney tissue. The operation reported substitutes a living tendon, which firmly fixes the kidney in a position. The experiment was first tried on a large dog and proved satisfactory. A patient suffering from an extreme displacement and unable to walk or gain her living was chosen for the operation. An ordinary extraperitoneal incision was made to reach the kidney. A second incision, 8 centimetres in length and having its centre opposite the first lumbar spine, was made parallel with, and 2 centimetres external to, the dorsal spines. The teguments and dorsal aponeurosis were incised and the tendinous slips of the dorsalis longus found. The tendon which is inserted into the first lumbar was chosen, this being of about the proportions of a stout bootlace, and usually about 22 to 24 centimetres in length. This was raised by two fingers inserted beneath, and by traction stripped up to its insertion, near the shoulder, shreds of muscular tissue being left attached to its free end. A strong stylet was then passed through the muscles between the twelfth dorsal and first lumbar vertebræ into the abdominal cavity; the tendon threaded on this and drawn through. The kidney was then drawn out through the first incision and a stylet passed from below up beneath the capsule along the posterior border. The tendon was threaded through this and drawn downwards, reappearing at the lower part and leaving a free end 4 or 5 centimetres in length. This was passed outwards through the muscles of the abdominal walls and fixed with metal sutures in the wound, the tendon having described in its course the figure 8. The operation was extraperitoneal; there was hardly any hæmorrhage, no temperature, and hardly any pain. The wounds healed by first intention in eight days, and the patient was shortly afterwards discharged completely cured.

MIDWIFERY AND DISEASES OF WOMEN.

(114) Removal of Cancerous Ovary and Uterus with Resection of Bladder and Intestine.

Kümmell (*Deutsche med. Woch.*, July 4th, 1895) describes a piece of bold surgery which met with success. A woman, aged 49, was operated upon for ovarian and uterine tumour in the middle of May, 1894. A large myoma and a cancerous right ovary were discovered. The myoma was infected with cancer from the ovary, as was the bladder. The separation of the cancerous ovary from deep pelvic adhesions proved very difficult. Two inches of small intestine adhered to the ovary; as the serous and muscular coats only appeared infected with cancer they were dissected off, and the mucosa being tucked into the lumen, the defect in the outer coats was closed by two continuous sutures, as in circular resection of gut. Nearly one-third of the upper part of the bladder was resected, the wounded edges being closed with two rows of continuous catgut sutures. The pedicle of the uterine myoma was treated extraperitoneally. A catheter was not retained. The patient recovered from this very severe operation much more quickly than was expected. The catheter was not required. At first there was very frequent micturition; at the end of a fortnight urine was passed quite naturally, and could be retained for long. Five months after operation the patient was in excellent health and had gained weight very perceptibly.

(115) Symphysiotomies in 1892-94.

Robert P. Harris (*Amer. Gynec. and Obstet. Journ.*, June, 1895, publishes statistics of interest in relation to symphysiotomy. In 1892, 85 cases were reported in thirteen countries, with the loss of 10 women and 24 children. Thirty-seven were French, 6 women and 3 children being lost; 12 German, with loss of 2 women and 4 children; 11 symphysiotomies were performed in Italy, where none of the mothers were lost and only 1 child died. In the United States and Austria there were 7 cases, with the loss of 2 children, and none of the women in each of those countries. In no other land were over 4 attempted. In 1893 the results in fifteen countries were as follows:

Countries.	Cases.	Women Died.	Children Lost.
Germany	37	1	8
United States ...	31	5	7
Austria	30	7	4
France	24	4	5
Russia	10	1	3
Italy	5	—	2
Belgium	2	—	—
Canada	2	—	—
Switzerland ...	1	—	—
Sweden	1	—	—
Roumania	1	—	—
England	1	—	—
Holland	1	—	—
Brazil	1	—	—
India	1	—	—
	148	18	29

(116) Pregnancy and Exophthalmic Goitre.

Signier (*Répertoire Universel d'Obstet. et de Gynéc.*, June 25th, 1895) describes a case where exophthalmic goitre began with a pregnancy, the symptoms ameliorating after delivery. He believes that the pregnancy was really the cause of the enlargement of the thyroid gland. Possibly the diminution in its size after parturition depended on some temporary condition in connection with the puerperium. Even so simple a cause as the necessary rest may explain the favourable change which, after all, may not prove permanent.

(116) Involution of the Uterus after Labour.

Brooks (*Virchow's Archiv*, vol. cxli, Pt. 1. July, 1895) has prepared an important monograph on this subject, the result of experiments at the Boerhaave Laboratory, Leyden. He finds that the first cause of diminution in volume of the muscle cells is a discharge of glycogen from the hypertrophied muscular fibres; at the same

time the œdematous intermuscular connective tissue parts with much of its water through absorption. The glycogen is probably removed by the lymphatics after chemical decomposition. For the first few hours after delivery the above changes alone constitute involution. The muscular coats of the arteries, much compressed by the contractions of the uterus during labour, share in the loss of glycogen. At the end of the first day true fatty degeneration can be detected in the muscle cells. After a few days this well-known process alone finishes the involution of the uterus, no more glycogen being excreted.

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(117) Treatment of Myoma by Operation.

Von Fellach (*Wiener klin. Wock.*, July 18th, 1895) has had very successful results in hysterectomy for myoma. Out of 69 operations, only 2 were lost, 1 dying of embolism and 1 of acute yellow atrophy of the liver. Five total extirpations by abdominal section and 4 by the vaginal operation all recovered. He greatly prefers the latter proceeding whenever practicable. The patient is left in a more favourable condition than when there is an abdominal cicatrix; besides, with further experience this operation can no doubt be yet simplified. When the abdomen is opened total removal of the uterus is the ideal operation. When it offers special difficulties, or if the operator is not experienced, supravaginal amputation with retroperitoneal treatment of the stump is advisable. The extraperitoneal method should now be discarded or only practised in very exceptional cases.

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(118) Actinomycosis of Internal Organs and Peritoneum.

Choux (*Arch. Gén. de Méd.*, June, 1895) believes in surgical interference, although the rare cases of actinomycosis of the Fallopian tubes and ovaries seem very unsuited, according to the well-known original clinical reports, for operation. Though Netter and Cart advocate therapeutic treatment by iodide of potassium, so successful in animals, Choux thinks that in abdominal actinomycosis the salt may be given for a short time, but, if its slow action is found to be outstripped by generalisation of the parasitic disease, laparotomy is called for.

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(119) Abnormal Termination of the Ureter in the Female.

Wölfler (*Prager med. Wock.*, No. 24, 1895) has written a valuable article on this condition. Five instances are recorded of the ureter opening into the urethra. In one of these the bladder was absent, yet the patient, aged 47, did not suffer from incontinence of urine; nor was this complication present in two other cases where the bladder existed, but retention and hydronephrosis were observed in another of the series. Lastly, incontinence of urine was observed in one case, but the patient was aged 14—an age when that affection is frequent without abnormalities. The ureters were made to open into the bladder by a plastic operation. Six cases of congenital uretero-vaginal fistula are known, though in only 3 was the ureter absolutely patent. An operation to open the canal into the bladder was undertaken in all 3, but in 1 the desired communication could not be effected. In 10 cases the ureter opened into the vestibule; in 2 of these 10 the bladder was absent. When only one ureter opens in this manner the patient suffers from incontinence of urine and yet can pass a quantity from the bladder daily.

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(120) Abortion; Decidua Vera Intact.

Gottschalk (*Centralbl. f. Gynäk.* No. 25, 1895), showed at the May meeting of the Berlin Obstetrical Society a second month's ovum spontaneously delivered with the decidua vera intact. The abortion followed a prolonged railway journey. The membranes assumed the form of the uterine cavity, including the cervix. It could plainly be seen, however, on examining the decidua vera, that the membrane in question ceased inferiorly at the level of the internal os. Keilmann was in error when he made out that the vera lined the canal of the cervix. The vera in Gottschalk's case certainly assumed the form of the cervix, but that was owing to a hæmorrhage in the fœtal membranes inferiorly, which caused them to bulge down as far as the os externum. The blood on clotting made a perfect cast of the cervical canal. The decidua vera, though shed entire, showed diffuse hæmorrhages all over its substance.

THERAPEUTICS.

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(121) The Treatment of Diabetes Mellitus.

Robin (*Bull. de l'Acad. de Méd*, No. 23, 1895) describes in detail the medical treatment—"alternating treatment"—which he prescribes in diabetes. He believes that in this disease there is an increased activity of the chemical changes of general nutrition, and of the hepatic cells in particular, which is the result of increased activity of the nervous system. Hence he recommends drugs which diminish the activity of these general changes by acting primarily on the nervous system. The treatment is divided into three stages: (1) For four days a powder, containing about 15 grains of antipyrin and 8 grains of sodium bicarbonate, is given twice a day. In addition cod-liver oil is taken twice a day with the meals, and Seignette salt as a morning purgative. (2) At the end of four or five days the antipyrin is discontinued, and sulphate of quinine prescribed—about 6 grains in a cachet at the midday meal. This is taken for six days, then discontinued for four days, and afterwards taken again for six days. Before the morning and evening meals a cachet is recommended containing arseniate of soda, carbonate of lithium, and codeia. (3) After fifteen days these drugs are discontinued, and the author prescribes, for ten days, a pill containing opium, belladonna, and valerian. The cod-liver oil is discontinued, and the patient is allowed to drink a weak solution of bicarbonate of soda (1 in 120). In the case of nervous women, or if there should be intolerance of the opium and belladonna pills, 15 grains of potassium bromide are given two or three times a day for eight days. In addition to the medical treatment the diet is regulated. On account of the loss of inorganic salts in diabetes (demineralisation) the author recommends the food to be well salted; to supply potassium salts he advises green vegetables, especially cabbage and endive, and also a weak solution of potassium tartarate to dilute the wine taken at meals; and to counteract the loss of phosphates of magnesium and calcium he prescribes glycero-phosphates of lime and magnesia. He also recommends bouillon on account of the inorganic salts which it contains. If sugar is still present in the urine after the third stage of the medical treatment above mentioned the course is recommenced. After a second course, whether sugar has disappeared or not, the drugs are discontinued for one month. Robin has treated, by this alternating method, 100 cases of diabetes, in each of which the daily quantity of sugar excreted was 100 grammes or more. In 24 of these recovery has occurred; in 25 recovery is still doubtful; in 33 there has been considerable and permanent improvement; in 18 the results have been negative.

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(122) The Serum Treatment of Diphtheria.

Egidi (*Suppl. al Policlin*, May 25th, 1895) reports the results of serum treatment in 20 cases of diphtheria. Nineteen out of the 20 were aged from 1 to 8 years; 1 was 28 years old. Nine had laryngeal diphtheria; in 11 the fauces were affected; 5 of these had nasal diphtheria also. Of the laryngeal cases 3 died, of the faucial 2, giving altogether a mortality of 25 per cent. This mortality would probably have been reduced but for the difficulty in procuring the serum in the earlier cases and in its tardy application. Bacteriological examination was made in every case. In 3 only was Loeffler's bacillus found alone; in the other cases it was always associated with other micro organisms. In 4 of the cases Loeffler's bacillus was not found at all, but only streptococci and staphylococci. The author believes the serum treatment to be quite innocuous and prefers injecting the serum in one single dose into the loins. There was considerable variation in the power of the different serums used. After injection the author noticed almost constantly a lowering of the temperature, improvement in the pulse and respiration, and diminution in the albuminuria. A local improvement in the throat occurred even in the severe cases which died. The membrane softened and became detached, and was more easily washed off the parts. The author used no other treatment except simple washing of the throat with boiled or boracic water. Urticaria followed after injec-

tion in 2 cases, and once a miliary eruption over the whole body, coupled with high fever. Post-diphtheritic paralysis occurred once only. In the 9 laryngeal cases intubation was performed 5 times (with 3 deaths). Serum treatment by its local effects makes intubation easier, so that the author decidedly prefers this operation to tracheotomy.—Ricci (*Ibid.*, April 29th) reports 10 cases of membranous croup treated with serum. Bacteriological examination was not made, but clinically the cases were diphtheritic. Cure rapidly followed treatment in all the cases except one in which the diphtheritic symptoms had set in after an attack of measles. Intubation was performed and Behring serum No. 2 injected; but high fever and great agitation set in, and the patient (aged 20 months) died in a convulsion eighteen hours after the injection. Intubation was performed in 6 out of the 10 cases and tracheotomy once. The cases are very briefly reported; no mention is made as to any urticaria or other results of injection. "Speedy cure" followed injection in all the 9 cases, so presumably no noticeable ill effects followed the use of the serum.—Morax (*Sem. Méd.*, May 8th, 1895) gives the statistics compiled by the health bureau of Canton Vaud. Eighty-five cases were submitted to this treatment with a mortality of 16·4 per cent. (15 per cent. in the cases treated in hospital, or only 10·5 per cent if 1 case be deducted which was moribund when injected). In 1894, among 404 cases notified as diphtheria, the mortality was 37 per cent.; in 1893, 64 per cent.; while in hospital cases the mortality was 47 per cent. in 1893 and 33 per cent. in 1894.

123) Leguminous Alimentation in Diseases of Digestion and Nutrition.

Bovet (*Presse Méd*, May 11th, 1895) refers to the apparent connection between richness in albumen, or the nitrogenous elements of plants, and organic phosphorus, these two seeming to run parallel. In the leguminosæ they are found in greatest proportion. One consequence of the association of phosphates with albumen (vegetable), and the "diffusibility" of phosphoric acid, is that food of this character (leguminous) is very readily dissolved and digested in the alimentary canal, even in the absence of the usual ferments. The presence of a relatively large amount of potash salts in this food is also noted. In the laboratory of Professor Hayem a dog was fed for thirteen days on an exclusive diet of "legumine," a soup free from salt. The result was first a marked decrease in its weight, amounting to one tenth. An analysis of the gastric juice at the beginning and end of the experiment showed a marked increase in two most important values, namely, hydrochloric acid and chlorine. This may be interpreted as increased digestive power. A similar experiment on a patient, aged 42, suffering from chronic gastritis, slight dilatation, and loss of motor power of the stomach, weakness and emaciation, showed results altogether comparable to the above. At the beginning the gastric juice, although highly acid, was free from hydrochloric acid. At the end of two months the total acidity was not increased, while hydrochloric acid was present in almost normal amount. Digestion (previously slow and painful) no longer inconvenienced the patient. Neurasthenia was lessened, and she slept eight hours daily without awaking, something she had not done for a long time previously. In this case a certain addition of leguminous aliment was made to the otherwise unaltered ordinary diet. The author therefore considers leguminous food suitable and valuable as aliment in similar cases, and also in diabetes and obesity.

PATHOLOGY.

(124) The Epidemiological Conditions of Cholera.

Metchnikoff (*Ann. de l'Institut Pasteur*, 1894, p. 529), for the purpose of throwing light on the epidemiological conditions of cholera, so far as they do not directly depend for their explanation on the properties on the comma bacillus, investigated the conditions of Versailles, which he speaks of as immune from cholera, and St. Cloud, which is not immune to the same degree. In the water supply of both places cholera vibrios, or at any rate vibrios indistinguishable from those of cholera and capable of inducing diarrhœa in man, were found by Sanarelli. According to Metchnikoff, the cholera vibrio can grow freely in water, and be found in it undiminished in virulence several months after the end of an epidemic. But since the vibrio behaves in the same way in the water of places immune from cholera, local immunity against cholera cannot depend upon the fact that cholera vibrios cannot live in such immune places. Nor can the immunity depend upon the fact that by repeated small doses of the water the inhabitants have become immune, since the blood serum of persons living in immune places does not confer immunity upon guinea-pigs. From choleraic dejecta that had been preserved for several months colonies were obtained identical with those of the cholera vibrio, but differing in the respects that they grow only at temperatures beneath 30° C., gave no indol reaction, and were not pathogenic for animals. These organisms were sown on gelatine plates, but refused to grow. On leaving the plates exposed to the air a small number of other microbes fell upon them. The greater number of these had no apparent influence upon the vibrios, but by some sarcinæ, and particularly by some yeasts, the growth of the vibrios was markedly affected, so that if the author wished to revivify a vibrio that would no longer grow he inoculated along with it one of several micro-organisms and obtained his object. Many micro-organisms act in the opposite way. Metchnikoff isolated from the contents of the stomach a sarcina, a torula, and a non-liquefying bacillus, all of which favour the growth of the vibrio, while in the guinea pig's intestine he found others that hinder the growth. It follows, therefore, that the cholera vibrio is considerably modified by the micro-organisms which surround it. He concludes that immunity or susceptibility of man and other animals in the case of cholera largely depends upon the other microbes in the intestinal canal. By means of this fact the fundamental truth that Koch's comma bacillus is the specific cause of cholera can easily be reconciled with the information given by epidemiology.

(125) Immunization against the Surgical Lesions due to the Bacterium Coli Commune.

Salvati and Gaetano (*Rif. Med.*, May 20th and 21st, 1895) have succeeded in preparing an antitoxic serum, injection of which into guinea pigs and rabbits served to protect them against the lesions caused by the bacterium coli commune. A toxin prepared from a culture of the bacterium coli was injected hypodermically and intraperitoneally into guinea-pigs and rabbits. After each injection the animals showed fever, with depression of the general health; reaction most marked at the first injection; after a time they ceased to react, and were then proof against injections of bacterium coli cultures which sufficed to kill control animals. If the injections of toxin were continued after the period at which the animals ceased to react, they died from progressive marasmus, with atrophy of the internal organs. The authors also experimented with success on the effects of injecting contemporaneously the toxin and antitoxic serum. Although the animals had high fever, refused food, and lost weight, none died.

(126) Examination of Sputum for Tubercle Bacillus.

Spengler (*Deutsch. med. Woch.*, 1895, No. 15) describes a new method for the preparation of sputum which it is desired to investigate for the presence of tubercle bacilli. Equal volumes of sputum and of warm water rendered feebly alkaline with caustic soda are well mixed with 0.1 to 1.0 per cent. of trypsin and placed in the incubator. Putrefaction is prevented by the addition, two or three hours later, of a small quantity of crystalline carbolic acid. As soon as a deposit has formed the supernatant fluid is poured off, the deposit washed with fresh alkaline water, and again placed in the incubator. This process is repeated several times, and finally the sediment is collected upon a filter paper and dried somewhat. Portions are then stained in the usual way. As a rule in twelve to twenty-four hours so little sediment remains that only a few microscopic slides are needed. If the digestion of the sputum be not carried on for too long a time, the tubercle bacilli undergo no modification in thier staining properties.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(127) Lumbar Puncture.

STADELMANN (*Berl. klin. Woch.*, July 8th, 1895) observes that although this procedure is generally easy, it may not be so in the case of restless and semi-unconscious patients. In tuberculous meningitis the fluid drawn off should be clear, with tubercle bacilli in it. In suppurative meningitis turbid or purulent with pyogenic micro-organisms in it; and in cerebral abscess clear and without micro-organisms. Tubercle bacilli have not been found at times by some observers, although Lichtheim has never missed them. Clear fluid without micro-organisms may also exist in tumor cerebri, simple meningitis (pachymeningitis), and even suppurative meningitis. The difficulty of distinguishing at times between cerebral abscess and meningitis is well known. If pus is drawn off by lumbar puncture suppurative meningitis must be present. Sometimes the fluid has been turbid only, but this is thought by Lichtheim to be exceptional. The author then records a case of suppurative meningitis secondary to fracture of the base, where the fluid was turbid and blood stained. Too much importance must not be attached to blood-stained fluid. A case of fatal meningitis secondary to ear disease is also recorded. Here clear fluid was drawn off during life, and no tubercle bacilli or other micro-organisms could be found in it by cultivation or otherwise. The author thinks it doubtful whether a communication exists (at least in the pathological condition) between the subarachnoid space and the cavities of the ventricles. He suggests that the drawing off the fluid may lead to an extension of the infection to the cord. He would account for the hitherto unexplained pain after aspiration as well as the limited amount of fluid at times obtained by the closure of the communication between the ventricles and the subarachnoid space. The author emphasises the importance of the positive and the untrustworthy of the negative evidence obtained by lumbar puncture.

(128) The Etiology of Articular Rheumatism.

CHVOSTEK (*Wien. klin. Wochenschrift*, June 27th, 1895) criticises a communication by Singer (*ibid.*, June 20th, 1895), who found in the urine of 37 cases of articular rheumatism staphylococcus albus ten times, staphylococcus aureus once streptococci three times, staphylococcus albus with streptococci twice, and bacillus coli once. Their constant presence, the number of colonies, and the fact that the number of colonies became less or vanished as the clinical symptoms improved, led him to look upon these cocci as the exciting cause of the disease, and to conclude that articular rheumatism has no single exciting cause. Chvostek found however, that the urine gave negative results in 9 out of 12 cases examined by him. In one diplococcus urem was found, in one (when urine was not drawn off by the catheter) staphylococcus albus, and in one a large coccus, probably from the urethra. The cause of these conflicting results was probably the methods employed, as Chvostek found cocci in 10 out of 18 healthy urines when it was not drawn off by the catheter. Kraus proved (*ibid.*, June 27th) that in various infective diseases bacteria may be present in the urine, which have no etiological relation to the disease, but yet disappear with it. Thus Singer was not justified in looking upon these bacteria as the exciting cause of rheumatism. Chvostek further examined the blood, urine, and synovial fluid in 12 cases of acute rheumatism simultaneously, and in a large number of cases the synovial fluid, together with some other organ—for example, the tonsil. In every case the results as regards the synovial fluid were negative unless the joint affection was due to sepsis or gonorrhœa. That many observers have obtained positive results in cases of articular rheumatism is to be explained by: (1) cases of sepsis with metastatic joint changes not having been excluded; (2) many of these examinations being made *post mortem*. The author found that in animals an immigration of bacteria into the joints took place very soon after death, and that they were often those normally present in the animal (intestinal, etc.). As regards the question whether bacteria in the blood can reach the joint during life experiments showed: (1) that the walls of blood vessels not evidently altered anatomically are permeable to bacteria; (2) the anatomical structure of the synovia and its vessels is an obstacle, and bacteria enter the joints considerably later than the kidneys through the renal vessels; (3) the exit of bacteria depends on (*a*) their kind—thus staphylococcus passes most readily, then streptococcus, and bacterium coli hardly at all; this is probably due to the virulence of the micro-organism for the animal, and also to certain tissues being more liable to certain bacilli than others. (*b*) Their virulence—thus virulent cultures of staphylococci are found in the joint sooner than attenuated ones. In this connection the action of toxins must be considered. (*c*) Other factors chiefly nervous; thus cutting the nerves of vessels hastens the exit of bacteria. Conclusions: (1) The cause of articular rheumatism examined were not caused by direct bacterial invasion of the joint, but either by toxins produced directly by micro-organisms or by chemo-toxic substances (for example, intestinal); (2) that these substances act in a given case on the joints depends on many factors, such as the structure and exposed position of joints; (3) probably any micro-organism may excite the disease; (4) they may enter the body anywhere, but probably most frequently by the intestines or tonsils.

(129) Autoscopy of the Larynx.

KIRSTEIN, of Gerhardt's clinic (*Berl. klin. Woch.*, June 3rd, 1895), draws attention to the fact that by throwing back the head the angle between the axes of the oral cavity and trachea can be much widened out. When using Killian's œsophagoscope he found that by depressing the tongue he could see into the larynx. The following directions are given. The pharynx and posterior surface of the larynx are painted with 20 per cent. cocaine, and the patient having loosened his clothes, lies on a couch with the head overhanging, or sits in a chair with the head thrown well back. The autoscope is then introduced. This consists roughly of a tongue depressor, carrying an electric lamp at the end. The autoscope is introduced with the left hand, and pushed onwards without touching the posterior pharyngeal wall to a level with Santorini's cartilage, when the tongue is pressed strongly downwards, the teeth being used as a fulcrum. Tender teeth may give rise to difficulties. The electric lamp is not essential. The parts of the larynx, especially the posterior part, can be seen with the greatest clearness. The curette, cautery, etc., can be used under the closest inspection. Tumours of the vocal cords or subglottic region can be more easily removed than by the ordinary intra-laryngeal method. The mucous membrane of the trachea can be seen, and the author says that catheterisation of the bronchi would present no great difficulty. With his instrument the epiglottis is invisible, and the anterior commissure of the cords cannot be well seen. The author does not think that this new method will supersede the old one, but that it will enlarge our means of diagnosis and treatment.

SURGERY.

(130) Castration for Prostatic Hypertrophy.

KÜMMELL (*Berl. Klinik*, August, 1895), in a lecture on the operative treatment of enlarged prostate, reports 8 cases of this affection in which he performed double castration. The operation was followed by considerable relief in these cases, but one patient, aged 77, died from exhaustion after an interval of four weeks. In a review of his own cases, and those published by other surgeons, he states that in a large majority of instances of senile enlargement of the prostate White's operation is certainly followed by a more or less rapid shrinking of the prostatic tissue. This result of double castration in most cases enables the patient to dispense with the use of the catheter and to discharge urine spontaneously. The bladder troubles also are much relieved, and the general condition is improved. In the selection of suitable cases attention should be paid to the condition of the muscular structure of the bladder.

If the detrusor muscle be paralysed to such an extent that the bladder cannot be completely emptied even by the use of a catheter, it would be useless to expect a restoration of normal function as a result of removal of the obstruction to the flow of urine. In two of the cases here recorded, however, good results in this respect were obtained in spite of considerable weakness of the detrusor. In many cases the diminished size of the prostate after double castration permits of the more ready introduction of a catheter, and thus wards off the dangers of retention. In the author's opinion, the treatment of hypertrophy by double castration compares favourably with other operative measures in being simpler in performance and less dangerous. It can be performed without subjecting the patient to the risk of general anæsthesia, and necessitates but a very short stay in bed, which with regard to old and enfeebled subjects is a very important point. The operation, it is stated, should be recommended only to those whose sufferings have attained a high degree, and can no longer be relieved by mere symptomatic treatment. The author met with no objection to the operation from any of his patients, all of whom were well satisfied with its results. The recorded instances of success are so numerous and striking that the author has been led to the conclusion that the surgeon is certainly justified in suitable cases of enlarged prostate in advising and performing this operation. Although a more extended series of observations is needed before a clear and absolute judgment can be formed on this new method, there can be no doubt, the author holds, that this procedure is a valuable addition to the operative means of dealing with advanced and grave forms of prostatic hypertrophy. The observations with regard to the influence of unilateral castration on the growth of the prostate are very contradictory, and further information is needed before any definite conclusion can be reached on this question.

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(131) Excision of an Œsophageal Pouch.

S. J. MIXTER, of Boston, read a paper on this subject at the recent meeting of the American Surgical Association at New York (*Med. News*, June 15th). A woman, aged 50, had always had some difficulty in swallowing, which during four years had become aggravated. Œsophageal bougies were passed, previous to her admission to the hospital, but without marked improvement. Attempts were made to pass œsophageal bougies and probangs but without success, all being stopped about 8½ inches from the incisor teeth. Some regurgitation of food attended these attempts. It was found, however, that a bougie of any size that could be made to pass the obstruction by hugging the right side of the œsophagus went on without difficulty into the stomach without being grasped as by a stricture. After three weeks of treatment the woman was able to swallow slightly better; but after some time she returned, having worn an œsophageal tube most of the time, and having been able to swallow only soft solids and liquids. The operation consisted of an incision 3 inches long, parallel to and in front of the sterno-mastoid. The omo-hyoid was divided, and the œsophagus reached in the usual manner. The bulb of a probang previously introduced could easily be felt, and on dissection the pouch in which it was situated was easily isolated. An incision was made into the sac, whence the finger could be passed without difficulty up into the pharynx, and, after hooking it over a sharp edge of mucous membrane, down into the œsophagus. The largest bougie (about ¾ inch in diameter) could easily be passed into the stomach after the tip had been guided by the finger past the fold. The pouch, about the size of an egg, lay to the left and behind the œsophagus. Enough of the sac was removed to make the œsophagus a straight tube from the "spur" up, and the edges were united with interrupted catgut stitches. The external wound was closed with the exception of a small opening for drainage by means of a gauze wick. Recovery was perfect, and the patient had had no return of the trouble, being able to swallow any kind of food. The case is an example of the true œsophageal pouch, there being no constriction in the tube, and the obstruction to the passage of food being only the thin crescentic edge of the spur between the pouch and the œsophagus, which pressing against the opposite side of the œsophagus, acted as a valve.

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(132) Intestinal Hæmorrhage after Herniotomy.

FIKL (*Wiener klin. Wochenschrift*, June 27th, 1895) reports a case in which sixteen days after herniotomy for strangulated left inguinal hernia melæna occurred. The knuckle of the small intestine at the operation was of a deep red colour, and the constriction tight, but the peritoneum was still smooth and glossy, and the fluid in the sac clear. On the third day after operation scybala were removed from the rectum with a spoon, and on the following two days copious normal evacuations resulted from enemata and calomel. The treatment of the hæmorrhage was ice to the abdomen and ergotin internally, with the result that the stools were natural four days later. The cause was probably necrosis of a small piece of mucous membrane at the seat of constriction, which had existed three days before the operation. There were no gastric symptoms. Albert (*ibid.*, No. 22) regards such cases as very rare, but Fikl thinks they may be commoner than is generally supposed.

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(133) Rose's Operation for Trigeminal Neuralgia.

ESKRIDGE AND ROGERS (*American Journal of the Medical Sciences*, July, 1895) report a case of neuralgia of the right trigeminal nerve of eight years' duration treated with success by excision of the three divisions at the Gasserian ganglion and partial destruction of the gland itself. The patient was a man, aged 45 years, on whom an operation was performed by Rogers in 1892 for partial excision of the right inferior dental nerve. This operation gave complete relief for a time, but four months later the suffering became so intense that the patient threatened to commit suicide. In May, 1893, Rogers again operated, and on this occasion the Gasserian ganglion was exposed by Rose's method. The operation proved to be a very difficult one. The manual labour of the first part was very trying, as there was considerable and continuous oozing of blood, and in dealing with the ganglion the operator had to trust to the tactile sensation of his fingers, as he was unable to see the depressed parts of the wound. The substance of the ganglion, it is stated, was completely dismembered by a sharp hook and other instruments. Although no antiseptics were used on the wound or on the dressings the recovery, though retarded, was very satisfactory. In August, 1894—about fifteen months after the operation—the patient had had no return of the pain. Eskridge, who examined the patient in September, 1893, found that he had gained several pounds in weight since the operation and was quite well. The first division of the trigeminal nerve, he found, had not been completely divided. Taste was absent in the right anterior portion of the tongue, whilst smell was present and equal on the two sides.

MIDWIFERY AND DISEASES OF WOMEN.

(134) The Protection of the Internal Organs in Gonorrhœa.

AUVARD (*Arch. de Tocol. et de Gynéc.*, June, 1895) strongly objects to the use of the curette in the course of acute gonorrhœa. Theoretically the practice seems justifiable, but experience has proved that it is one of the surest ways cause extension of the disease to the tubes and ovaries. After the use of the curette, a minute piece of infected glandular tissue may be left behind. The entire surface of the uterine cavity may be disinfected by and after the scraping, yet then the mucosa, which acts as a rampart against microbic infection, has been destroyed. The probable entrance of specific pus from the vagina, an accident difficult to avoid, sets up uterine gonorrhœa of a type worse than the first attack. The parametrium, under these circumstances, is very liable to be invaded through the open and damaged lymphatics. In order to prevent inflammation of the tubes and ovaries complete rest must be enforced. The great danger in gonorrhœal salpingitis is sterility, and as in married women the fact of infection is a source of great misery, the patient's mental annoyance is much aggravated by the subsequent complications which render her barren. In the early stage of gonorrhœa, the more timid our surgery the better for the patient. The uterine cavity is best left alone. The vagina and cervix should be swabbed with a 1 per

cent. solution of nitrate of silver once or twice a week, and a 1 in 1,000 solution of sublimate employed as an injection twice daily. In the early stage of inflammation of the appendages Auvard recommends ice. It should be broken in small pieces, mixed with a little salt, placed in an india-rubber bag, and applied to the tender hypogastrium or iliac fossa. A double layer of flannel should be laid on the skin to protect it from the ice. When the pain is less and the other symptoms mild, blisters will be sufficient. The patient must not get up till a day or two after all pain has passed off. Glycerine plugs must then be applied about three times weekly. By such methods, used in time, sterility and the need for removal of the tubes and ovaries may be averted.

(135) Cure of Uterine Disease by Vibrations.

Bourcart (*Ann. de Gynéc. et d'Obstét.*, June, 1895) would revolutionise uterine therapeutics by extending Brandt and Hoigren's principle of using manual vibrations to ensure absorption of inflammatory exudations. In the case of the uterus instruments are required. Lindbeck has already invented a good apparatus for producing vibrations by electric means. In the case of the uterus the vibrations must be rapid, very regular, and penetrating. The vibrations can be perfectly transmitted through the abdominal walls. Bourcart, acting on the knowledge of these facts, has contrived a portable dynamo, to which he fits on a vibrator, which he places with his right hand against the parietes. The uterus is pushed towards the parietes by the left forefinger passed into the vagina. In the same way the Fallopian tubes and ovaries may be pressed in the direction of the vibrator. Bourcart declares that subinvolution is particularly benefited by the vibration treatment. In metrorrhagia from fibroids it is equally useful; the tumour may even diminish in size under a course of this treatment. He treats endometritis by vibrations transmitted by means of a specially constructed stem, but he admits that further study of this new variety of uterine therapeutics is required.

(136) Vesicular Mole followed by Malignant Changes.

Marchand (*Monatsch. f. Geburtshülfe u. Gynäk.*, June, 1895), tabulates 15 cases of deciduoma malignum, and no fewer than 12 of malignant growths following the development of vesicular mole. It appears that a case was noted as long ago as 1705, but the first ever recognised in our days was described in 1883 by Guttenplan, and 10 out of the 13 have been reported since the beginning of 1894. Eleven died less than two years after the vesicular mole was removed; in 1 there was no after-history beyond the sixth or seventh week when the uterus contained deposits. In the remaining case, the uterus was removed through the vagina. Three months later the patient was doing well. Marchand gives reasons based on histological research why vesicular mole pregnancy should particularly predispose patients to malignant disease of this type. He is not at all certain as to the precise homology of malignant deciduoma as a tumour; it differs from cancer in many ways, though it is of epithelial origin. It may be taken as proved that this newly-discovered disease is well established, and seems to be growing more frequent.

(137) Spontaneous Rupture of the Non-Gravid Uterus.

Meinert (*Wiener med. Presse*, June 9th, 1895) remarks that this accident is believed by many to be mythical. He has, however, observed two cases. In the first there was hæmatometra with extreme retroflexion; rupture occurred, abdominal section was performed, and the patient recovered. In the second case pyometra existed. The uterine walls gave way. The abdominal cavity was opened. This time the operation was also successful.

(138) Lactation Statistics.

Wiedow (*Centralblatt f. Gynäk.*, No. 29, 1895) has collected the following statistics at the Freiburg Maternity. Out of 525 women in childbed only half could suckle thoroughly during the first two weeks. In 99 no milk at all was secreted. Imperfect nipples were noted in 49 cases, fissures in 46, and insufficient secretion of milk in 44. Only 33 suckled freely without any of the above-named unfavourable complications. Wiedow classifies breasts under three groups, the percentage in his series being: good breasts, 56 per cent.; medium, 21 per cent.; and bad, 11 per cent. The development of the nipple bore a direct relation to the value of the breast as a secretory organ.

THERAPEUTICS.

(139) Guaiacol as a Local Anæsthetic.

Lucas-Championnière (*Bull. de l'Acad. de Méd.*, July 30th) reports the results of a trial of a new method of local anæsthesia, which André, a pharmacist, of Paris, first successfully applied in his own person in the form of an ointment containing guaiacol for the relief of a very painful burn. Encouraged by this, he tried the same drug in the form of a hypodermic injection, using a sterilised solution of guaiacol in oil of sweet almonds; he afterwards, however, found olive oil a better diluent, being purer and more readily sterilised. Solutions of 1 in 10 and 1 in 20 are used, a syringeful of the former strength containing 10, and of the latter 5, centigrammes of guaiacol. The method was first tried for the extraction of teeth, perfect analgesia being produced, while the sensation of contact and movement was left. Lucas-Championnière has himself tried the method for minor operations (removal of cysts of the scalp, etc.), with complete success. The injection was followed by no unpleasant effect, except a small eschar of the gums after the earlier trials, probably due to a faulty *technique* and possibly also to some defect in the preparation of the solution. As a local anæsthetic guaiacol is as powerful as cocaine, and it has the advantage over the latter that ten times larger doses can be given without ill consequence. The full effect does not manifest itself till five minutes after the injection, and in most cases it will be well to wait seven or eight minutes before proceeding to operate. It is probable that a smaller dose than 10 centigrammes will be found sufficient, and experiments to determine this point are in progress. In discussing the communication, Ferrand bore witness to the value of the method, but he added that some caution was required in its employment. He had himself used it, not subcutaneously, but as an external application, in doses of 1 cubic centimetre, and by this means had been able to relieve persistent pain, notably the intercostal neuralgia of phthisical patients. In some of these cases, while the pain had ceased, the application had been followed by subnormal temperature and other symptoms of collapse, but without fatal result. Laborde said that the action of guaiacol was at present being studied by himself, Gilbert, Doyon, and others; it had been found to have a decided anæsthetic and antipyretic effect when applied locally. The mechanism was a very marked vaso-constrictor action; this explained the local sphacelus noted by Lucas-Championnière, and should be borne in mind in the practical application of the method which he had described.

(140) Intravenous Injections of Mercuric Chloride in Syphilis.

Walter L. Pyle of Washington, in a reprint from the Philadelphia *Medical News*, describes and discusses the use of intravenous injections of mercuric chloride introduced by Baccelli (*Gaz. Med. di Roma*, 1893, xix). The following is the composition of the fluid injected: R hydr. chlorid. 1 g., sodii chlorid. 3 g., aquæ 1,000 g. A small quantity of alcohol may be added to facilitate solution. The mixture should be well stirred and filtered until perfectly clear. It is advisable, but not necessary, to sterilise it, both to be perfectly aseptic and to facilitate solution. A ligature is applied above the elbow, and any one of the superficial veins in the median basilic may be selected as the point for injection. The point selected and the surrounding area are thoroughly scrubbed and disinfected with a 1 in 1000 solution of mercuric chloride or a 5 per cent. solution of carbolic acid. The needle, previously sterilised, is plunged directly toward the centre, at the point selected, and a few drops of blood allowed to ooze out, assuring entrance into the vein; the barrel is carefully applied, avoiding any entrance of air. Loosen the ligature and make the injection, at first using only 1 g. of the solution, and progressively increasing to 4 g. at a

dose. Repeated injections can be made in the same vein. The median cephalic vein and the median basilic are the best for the purpose. The advantages of the method are: (1) There is absolute certainty of absorption. (2) There is no pain to speak of. (3) There is no disturbance of the digestive tract during treatment. Slight salivation and diarrhœa, temporary only, are the only local disturbances reported. (4) There is more rapid absorption and therapeutic effect than by any other method. (5) Less of the mercurial salt is required. (6) Absolute exactitude of dosage can be obtained. (7) Not a single accident has been recorded. (8) The method is perfectly reliable. All cases reported have shown some improvement, and never any retrogression. (9) Abscesses do not form. (10) There are no cutaneous irritations or eruptions, such as follow friction or inunctions. (11) The nervous symptoms sometimes associated with the hypodermic method are never observed with the intravenous injections. (12) It is successful often when all other methods fail. (13) There is no history of recurrence after a cure. (14) Mercuric chloride has a preservative action on the red blood corpuscles, and hence must be valuable intravenously in such a disease as syphilis, in which there is a strong tendency toward destruction of the red blood corpuscles and subsequent anæmia. The disadvantages are: (1) The needle may not reach the vein; but this can be remedied by applying the needle first and awaiting the appearance of a few drops of blood. (2) Some of the blood may extravasate into the subcutaneous tissue, adjacent to the point of injection; but this has rarely occurred, and the blood is soon absorbed. (3) There is likely to be a slight stomatitis at first. (4) There is the appearance of albumen in the urine after the injections, which, however, often follows hypodermic administration. (5) There is, as in all intravenous injections, a subsequent polyuria and increase of urea, but neither has any special disadvantage. (6) During the injection, through a reflex action on the circulatory centre, fainting may supervene, but is of no vital import. (7) Jemma has seen slight salivation immediately after the injection of small doses. This is liable to happen in any administration of mercury. In the opinion of the author the advantages so far overbalance the objections that, viewing the present status of treatment, we can but accept this as the most successful. He would not, however, advocate it in cases easily amenable to ordinary treatment or in the early stages of syphilis, but considers it of especial value in obstinate cases, resisting other treatment, or in advanced cases of organic syphilis, or when immediate relief is urgently called for by reason of pain, encroachment on a vital part, or rapid destruction of tissue. Investigation may prove it to be most valuable immediately after the diagnosis is made, eliminating or [destroying the syphilitic virus before it has produced any decided effect on the general system. At present there is no evidence to warrant this statement; but, as the method is virtually devoid of dangerous or untoward results, it should be given some trial in the beginning of the disease.

(141) Ichthyol in the Treatment of Phthisis.

Scarpa (*Rif. Med.*, March 6th, 1895) communicated to the Medical Society of Turin the results obtained by him in the treatment of 150 cases of pulmonary phthisis with sulpho-ichthyolate of ammonium. Of the 150 cases so treated, 23 died, but these were already in a desperate condition when the treatment was commenced; 17 are at present cured to all appearance, having no subjective symptoms, and objectively only such signs as may be called the inevitable relics of the disease; 50 are much relieved, and in a fair way to recovery; 32 show an improvement less marked but still evident; 28 show as yet no appreciable change. Contrary to what is observed with guaiacol and creasote, the improvement begins with the special symptoms—for example, cough, expectoration, pain; improvement in the general symptoms, appetite, strength, fever, and sweating, comes later, after two or three weeks. The author uses a 30 per cent. solution in water, glycerine, or alcohol, of which he administers 20 to 200 drops daily in water.

(142) Internal Use of Cocaine in Whooping-cough.

Wells and Carré (*Sem. Méd.*, June 19th) have treated some 300 cases of whooping-cough by the internal administration of hydrochlorate of cocaine in doses varying from 4 milligrammes in infants of 8 months to 2 centigrammes in children of 5 or 6 years. These doses were given three times in the 24 hours. The treatment had a very favourable effect on the symptoms and course of the disease. Vomiting was checked, appetite returned, the attacks of cough diminished both in frequency and in intensity, sleep was less disturbed, and the duration of illness was markedly lessened, the disease being cured, as a rule, in three weeks, sometimes in a fortnight. Cocaine is generally well borne by children. The only disagreeable effect occasionally noted is looseness of the bowels, which, as constipation is a frequent accompaniment of whooping-cough, the authors think an advantage rather than otherwise.

PATHOLOGY.

(143) Phlorhizine and Glycosuria.

Coolen (*Arch. Pharmacodynamie*, vol. i, fasc. iv) records the results of a large numbers of experiments with reference to the action of phlorhizine (phloridzine) in producing glycosuria. His experiments confirm the results of v. Mering and others, and show that phlorhizine produces in dogs an intense and prolonged glycosuria, which may be fatal; but it does not produce a permanent diabetes, since the glycosuria disappears after the administration of phlorhizine has been discontinued. Coolen finds that the results are more marked when the drug is injected hypodermically than when it is given internally; also suspension of phlorhizine in olive oil or in mucilage of gum arabic is more active than when it is dissolved in water or in a weak solution of carbonate of soda. In addition to glycosuria, phlorhizine gives rise to loss of weight, polyuria, azoturia, increased specific gravity of the urine, and other minor changes. The author confirms the statements of previous experimenters with reference to the difficulty of producing phlorizine glycosuria in rabbits. He finds, however, that even in rabbits the hypodermic injection of large doses of phlorhizine (6 grains daily) produces glycosuria. He concludes that the liver has no action in preventing phlorhizine diabetes, because he finds that the minimal dose of the drug which produces glycosuria after intravenous injection gives the same result when injected into the portal venous system. It has been frequently stated that in phlorhizine diabetes there is no increase of the sugar in the blood, and therefore this glycosuria has been looked upon as renal in origin. But Coolen finds that in rabbits phlorhizine causes an increase in the amount of sugar in the blood and this is greater still after extirpation of the kidneys. Hence the author thinks we are not justified in generally regarding phlorhizine glycosuria as renal in origin. He believes it is due to hyperglycæmia, as are other forms of glycosuria.

(144) Osteomyelitis produced by Bacterium Coli Commune.

Akerman, as the result of an inquiry into the etiology of osteomyelitis (*Arch. de Méd. Expérimentale*, May, 1895), draws the following conclusions: Bacterium coli injected into the veins of a young rabbit produces inflammatory lesions of the osseous system. These lesions resemble in many of their characters those produced by the organisms of suppuration. In the first stage the lesions produced by the B. coli commune present themselves as infiltrations of embryonic cells in the soft parts of the bone, and, when the later stage is reached, these form softening foci and circumscribed abscesses beneath the periosteum and in the interior of the bone. These lesions are most frequent in the neighbourhood of the epiphysis and are almost always multiple. They are mostly seen at the inferior extremity of the femur and the upper part of the tibia, but they may be found in any of the long bones. Besides these acute lesions, others of a more chronic character may be seen, where a portion of bone undergoes a slow necrosis, and a sequestrum is formed. The author believes that future observations will show many cases of osteomyelitis to be due to infection by the B. coli commune.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(145) Gastric Peristalsis.

[illegible] (*Arch. Gén. de Méd.*, July, 1895) points to a case in Hanot's clinic in which there was vomiting and wasting, and a small tumour could be felt in the region of the pylorus. The ingestion of fluid caused visible peristalsis. Pathological peristalsis may arise apparently spontaneously or be provoked by various agents. The spontaneous form is much the rarer. Pinching the abdominal wall, the local application of ice, the shaking caused by cough or by sudden movement of the body, and also the electric current, may produce the visible peristalsis. As to physiological causes, it may occur during digestion, and both fluids and solids may produce it. The reaction of the muscle is not instantaneous. The waves succeed each other from left to right; exceptionally a wave from right to left may follow the other one. It is very rare to have antiperistaltic movements also. During nausea the peristalsis is increased, but in vomiting it is obscured by the contraction of the abdominal muscles. Sometimes the patients feel nothing, but at other times ill-defined discomfort may be complained of. The cause of the peristalsis lies in some obstruction of the pylorus, the stomach muscle being intact. The obstruction may be caused by a gross lesion at the pylorus, or even by spasm. Rapid development of the obstruction is necessary for the production of visible peristalsis. This peristalsis has been rarely noted in the hysterical when the intestine may also share in it. The obstruction might even exist in the stomach wall as in annular constriction, or in the duodenum. Cases with visible peristalsis due to severe non-malignant stricture should be attacked by pylorectomy or gastro-jejunostomy.

(146) The Uric Acid Diathesis.

[illegible] (*Centralbl. f. inn. Med.*, July [illegible]) discusses in a preliminary communication the diagnosis and treatment of this diathesis. The conditions leading to the formation of uric acid calculi are the same as those which produce a precipitation of uric acid—namely, insufficient water, too great acidity, too much uric acid, or a combination of these factors. The question really is as to how much uric acid exists in the urinary passages in a state suited to the formation of calculi. The author proposes a new method for ascertaining the amount of uric acid passed undissolved. In the uric acid diathesis crystals are found in clear urine, and these rapidly increase on standing. The same increase is noted if the urine is [illegible]. The author gets the patient to pass urine into special filters. Some 4 to 10 filters may be used in the day. Thus the amount of uric acid passed in an undissolved state can be ascertained. The errors of the method lie in the loss of some 50 c.cm. of urine in the filters, and in the gain of as much uric acid as deposits between urination and filtration. The amount of uric acid separating out on standing is also ascertained, as well as the amount still in solution (by the silver method). By this procedure the amount of stone-forming uric acid can be estimated. The author tests the value of treatment by finding out the effect of any given agent upon the three separate quantities of uric acid obtained in the above named way. He has thus investigated the value of urea and carbonate of ammonium. Urea forms a very soluble compound with uric acid, and carbonate of ammonium is excreted as urea. He finds both these agents valuable in the prevention of calculus formation.

(147) Diabetic Coma.

HIRSCHFELD (*Deut. med. Woch.*, June 27th, 1895) says that the increase in the excretion of acetone is due to too little carbohydrate food. In 7 cases of diabetes with acetonuria the disease ran its course rapidly, the longest duration being twenty, and the shortest twelve, months. The glycosuria was very considerable in all the cases, and the acetonuria increased as time went on. Acetone excretion above 1 gramme is an unfavourable sign. In other milder cases of diabetes dying of other causes than coma the acetone excretion was small. The age of 5 out of the 7 cases above named was over 40 years. Considerable over-exertion and failure in nutrition are exciting causes. In several cases the author recognised a loss of weight during ten days before the onset of the coma. After a strict nitrogenous diet coma has been known to appear. The author believes inanition to be the most important cause of coma. The beneficial effect of over-nutrition also speaks in favour of the disadvantages of insufficient food. More importance is now attached to abundant nourishment in diabetes than was formerly the case. Occasionally coma has followed the use of anaesthetics. Ether should be preferred. Perhaps the harmful effect of chloroform is due to its action on the heart and vessels. The diagnosis of coma is mostly easy. The patient may begin with gastric disturbances; headache and a feeling of dyspnoea follow. Abortive forms of coma are very frequent. One or more symptoms may be marked, but they disappear. Sometimes abdominal symptoms have been very conspicuous, even intestinal obstruction being simulated. Intestinal intoxication has been advanced as a cause of coma, yet careful attention to the bowels did not ward it off. In three diabetics suffering from surgical diseases a suddenly increased acetonuria preceded the getting worse. The cases may be arranged in two groups: (1) Young persons with considerable glycosuria and marked and increasing acetonuria, in whom the course is rapid; and (2) old people with mild diabetes, who, in consequence of gangrene or severe septic disease, develop coma. To prevent coma muscular exertion must be regulated. The estimation of acetone is important; the general condition of the patient and the state of the pulse and breathing after exertion should be noted. The condition of nutrition must be attended to. Overfeeding should at times be had recourse to. Small quantities of carbohydrates, not too much [illegible], and abundant fat and some alcohol are recommended. With coma supervening more carbohydrates should be given. Glycerine may be tried, as it lessens the excretion of acetone. Infusion of alkalies has only a passing effect.

(148) Haematomata of the Leg and Embolism.

A. F. **PLICQUE** (*Presse Méd.*, May 18th, 1895) dwells upon the danger of thrombosis and embolism in cases of extensive bruises of the lower limb. He insists upon the necessity for absolute rest until the part has resumed its normal condition. Two cases which he relates illustrate the accident referred to. In the first a lady was thrown out of a carriage, and sustained extensive bruises and ecchymoses in the left leg and elsewhere. She was progressing well until the ninth day, when there was a slight access of pain and oedema. The next day the patient was suddenly seized with a feeling of suffocation, and fell back pale, with pulse almost imperceptible and respiration hurried. She recovered in a few minutes, but in the course of convalescence and in spite of the precautions taken, two other attacks occurred. The second case was more serious, and was the result of a similar accident. Seventeen days after the accident, when the patient was seemingly on the high road to recovery, she attempted to sit up in bed, suddenly cried "*J'étouffe*," and died.

SURGERY.

(149) Indirect Operative Treatment of Prostatic Hypertrophy.

WHITE (*Annals of Surgery*, July, 1895) deals at length with the causation and treatment of hypertrophy of the prostate. Consideration of a theory of causation which, the author states, has given much help to an understanding both of the results of double castration and of some of the clinical features of prostatic growths is followed by a summary of 111 cases treated by castration, and a review of the objections that have thus far been urged against the operation, and of its relative merits and future prospects. In conclusion, experimental and other evidence is adduced with regard to the value of unilateral castration, and of ligature of the whole or of part of the cord. The function of the testis, like that of the ovary, is twofold—the reproduction of the species and the development and preservation of the secondary sexual characteristics of the individual. The need for the exercise of the latter function ceases when full adult life is reached, but it is pos-

sible, the author holds, that the activity of the testis and ovary in this respect does not disappear coincidently, and that hypertrophy of closely allied organs such as these is the result of this misdirected energy. The theoretical objections urged against double castration have been fully negatived by clinical experience, which shows that rapid atrophy of the enlarged prostate follows the operation in a very large proportion of cases—about 87·2 per cent.—and that disappearance or considerable diminution of long standing cystitis occurs in about half the number of patients thus treated. Moreover, amelioration of the most troublesome symptoms is produced in 88 per cent. of the cases; and a return to local conditions not very far removed from those that are normal may be expected in a considerable number—46·4 per cent. Of the 111 cases tabulated by the author 18 were fatal. But of these, it is held, there are 13 that may fairly be excluded in an attempt to ascertain the legitimate mortality in patients operated on under surgically favourable conditions, that is to say, before the actual onset of uræmia, or before the kidneys have become disorganised through backward pressure and consequent infection. Even of the desperate cases which make up this series of deaths, in many—75 per cent.—shrinkage of the prostate and improvement of the symptoms followed the operation. Comparison with other operative procedures seems to the author to justify the conclusion that apart from sentimental objections castration offers a better prospect of permanent success than any other method of treatment. The value of this operation is further enhanced by its smaller mortality as compared with that of prostatectomy, by the absence of any risk of permanent fistulæ, perineal or suprapubic, by the ease and quickness with which it can be performed, and by the possibility of avoiding anæsthetics, which in these cases are in themselves dangerous. The evidence as to the efficacy of unilateral castration is at present contradictory. In two cases, at least, this operation has resulted in a very marked improvement of symptoms. The author's experiments on dogs have shown, in nearly every case in which the vas deferens was tied or divided on both sides, that without much change in the testicles commencing atrophy and considerable loss of weight in the prostate resulted. The absence of corresponding testicular changes, however, rendered these results somewhat anomalous. Ligature of the vascular constituents of the cord or of the whole cord will produce atrophy of the prostate, but only after it has caused disorganisation of the testis.

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(150) Division of the Vas Deferens for Prostatic Hypertrophy.

Ignanni (*Centralbl. für Chir.*, No. 28, 1895) reports a case of enlarged prostate, with serious and intractable urinary trouble in a patient aged 71, which was successfully treated by double ligature and division of the vas deferens on both sides. The incontinence ceased after the operation, the urine became quite clear, and the enlarged prostate diminished so much in size that it could no longer be felt on rectal examination. The epididymis on each side became smaller and harder after the operation, and the volume of each testis was reduced by one half, the condition of these parts resembling that consequent on chronic gonorrhœal epididymitis.

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(151) Paræsthesia of the External Cutaneous Nerve of the Thigh.

This condition is described by Lucas-Championnière (*Journ. de Méd.*, July 25th, 1895). The subjects of it, who may otherwise be in good health, complain of abnormal sensations, pain of a more or less stabbing or burning character in the upper and outer part of the thigh and tensor vaginæ femoris. Either side may be affected, and in one case the condition was bilateral. There may be merely a feeling of twitching or cramp in the part. These symptoms are always most marked when the patient walks, and may even disappear completely when he is at rest, especially if in a recumbent posture. The pain and discomfort may be so great that anything touching the limb may be unbearable. The writer quotes two cases of officers in the German army who could not wear their swords on account of the pain. On examination there may be a certain degree of anæsthesia, and even some loss of sensation of heat, and in a case under the care of the author there was pain on pressure over the nerve at its point of exit from the pelvis. There are no trophic lesions and no alteration to electrical reaction. With one exception, all the cases have occurred in the male sex. The onset seems to be insidious, and the duration varies from a few months to years. In one case there was a history of traumatism, but otherwise the etiology is very obscure. The writer points out the importance of diagnosis from hysteria and tabes dorsalis. Counter-irritation and massage have been of benefit as treatment.

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(152) Laparotomy for Acute Suppurative Peritonitis in Infancy.

Mirabella (*Rif. Med.*, July 1st, 1895) reports two cases of acute suppurative peritonitis in children of 2½ years and 3 years respectively, in which he performed laparotomy with successful results. In neither case could any known cause for the peritonitis be found. The usual medicinal means—opium, ice, leeches, etc.—were first tried, and as these proved of no avail, laparotomy was performed. The incision was a pretty free one, extending from the umbilicus to the pubes; sero-pus came out in large quantity. The peritoneal cavity was washed out with sterilised water, and the wound then closed. In the first case the fever fell at once, the wound healed by first intention, and the child was able to leave his bed on the tenth day after the operation, and is now (two years after the operation) perfectly well. In the second case the post-operative course was interfered with by slight reaccumulation of pus necessitating counter drainage; but eventually the child recovered, and is now (twenty-three months after operation) in good health.

MIDWIFERY AND DISEASES OF WOMEN.

(153) Hernia after Ovariotomy.

Winter (*Centralb. f. Gynäk.*, No. 29, 1895) read an important communication on this subject at the June meeting of the German Gynæcological Congress. Hernia after ovariotomy and other operations on pelvic organs is very frequent. Protection against this troublesome and dangerous complication is all the more necessary because operations for the cure of the hernia are very unsatisfactory. Winter has known 8 out of 9 such procedures to fail, though the sac was dissected away and the parietal layers were united separately. The cause of hernia after abdominal section is failure of union of the aponeurotic layer. Hence Winter always unites the edges of this layer separately with a continuous catgut suture after closing the peritoneal incision in the same manner. The skin and subcutaneous tissue are united with interrupted silk sutures, and, lastly, the skin wound is closed accurately by means of a running catgut suture. Collodion is applied along the wound. Failure of union is due not so much to early infection of the wound as to suppuration of the suture tracks. An important discussion followed the reading of Winter's paper. Dührssen maintained that simple interrupted silkworm-gut sutures passed through all the layers of the wound were quite sufficient. He hardly ever saw hernia after their employment. Martin was of the same opinion, but he used a separate catgut suture for the skin.

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(154) Deciduoma Malignum in America.

Whitridge Williams (*Amer. Gynec. and Obstet. Journ.*, June, 1895) describes what seems to be the first case observed in the United States; none, it must be remembered, have as yet been reported in any English speaking country. The patient was a negress who had been pregnant several times. She was delivered on April 15th, 1894, at term of a dead child, after a normal but lingering labour; much blood was lost in the third stage. The placenta was soft and boggy, but there was no loss of blood after its expulsion. There was high temperature and great prostration during the puerperium, and a painful nodule developed in the right labium majus. It grew rapidly, broke down, became sloughy, and caused death from septicæmia on July 12th, less than three months after labour. Sloughing hæmatoma was diagnosed. The recto-vaginal septum was ulcerated and perforated. Two submucous growths, one over an inch wide, filled the uterine cavity. In

each lung were forty to fifty metastases, varying from a pea to a walnut in size. The kidneys, left ovary, liver, and spleen were similarly affected. The uterine and secondary growths all bore the microscopic characters of decidnoma malignum.

(155) Axillary Breasts.

GOLDSCHMIDT (*Archiv f. Gynäk.*, Vol. xlix, Pt. 2, 1895) records a case in which two accessory mammary glands without nipples were present. One lay in the hollow of the right axilla. At its greatest development it was of the size of a goose's egg. The second was placed on the thorax a little under four inches below the apex of the axilla and somewhat anterior to the middle axillary line. It was larger than the right supplementary breast. At the end of the third week after delivery it underwent complete involution; the patient did not on this occasion suckle her child. The patient was 32, the accessory mammæ had always developed during her pregnancies. When suckling she found that any cause, particularly suitable diet, which increased the flow of milk in the normal mammæ, caused the abnormal growths to become large and tense. The aspirating syringe was passed into one of the axillary breasts and true milk extracted, as proved by analysis.

(156) Removal of Inflamed Appendages or Hysterectomy.

SCHAUTA (*Centralbl. f. Gynäk.*, No. 29, 1895) in opening a discussion on the relative merits of removal of the appendages and hysterectomy at the Vienna meeting of the German Gynæcological Association declared himself in favour of the rather extreme measure of removing the uterus as well as the appendages. Amputation of the tube and ovary on one side was very unsatisfactory, and even after double operations hæmorrhage, leucorrhœa, adhesions to the stumps, and fixation of the uterus caused much trouble and pain. In gonorrhœal disease both appendages should be removed, even if the tube and ovary on one side seemed healthy, when the surgeon determined on attempting an operation of this class. But Schauta says that under the above circumstances the uterus should be removed as well. If it be not fixed, and therefore can be drawn down to the vulva, the vaginal operation should be preferred; otherwise the uterus must be amputated through an abdominal wound. Fritsch and Landau supported Schauta. Veit maintained that the bad results which followed amputation of the appendages were due to fresh gonorrhœal infection.

(157) Uterus Didelphys: Abortion: Uterus Bicornis with Pyometra.

HUNTEMÜLLER (*Centralbl. f. Gynäk.*, No. 29, 1895) describes a case in which two complete uteri existed; they were entirely separate, the lowest part of each cervix touching its fellow externally. A trace of a septum was detected along the anterior wall of the vagina. The patient was 32, and had borne eight children to term, two other pregnancies ending in abortion. She consulted her doctor on account of metrorrhagia of six months' duration; myoma was diagnosed. On examination the above abnormalities were discovered. The bleeding was due to a recent abortion. In the second case the patient was aged 30, married three years, and sterile. She had been subject for seventeen years to dysmenorrhœa, the pain had recently increased, and purulent discharge came away. The uterus was pushed to the left by an elastic swelling as big as a fist. On pressure on the swelling pus escaped from the uterus, though the os externum could not be found by search with a fine sound. There was, in fact, a uterus bicornis unicollis, the common canal of the cervix had become closed, a pyometra had developed, and the canal opening again spontaneously, the pus escaped. The swelling was incised, the remaining pus evacuated, the uterine canal washed out; a sound could now be easily passed along the canal of the cervix. A tampon was applied. The pains ceased.

(158) Fœtal Tumour Impedinx Labour.

HEFFECK (*Centralbl. f. Gynäk.*, No. 25, 1895), recently exhibited a fœtus with a large cystic kidney. Labour was much complicated by the size of the tumour, and the child could not be delivered till its abdomen was opened and the tumour diminished in size.

THERAPEUTICS.

(159) Serumtherapy.

SCHAEFER (*Arch. gén. de Méd.*, August, 1895) discusses the present position of the serum treatment after referring to the researches upon which it has been built up. (1) *Tuberculosis.*—Richet and Héricourt were the first to treat the disease with serum obtained from refractory animals, but up to the present moment no very good results have been obtained. (2) *Rabies.*—Serum treatment does not appear to have a great future, as immunisation by intensive vaccination gives greater success. (3) *Pneumonia.*—After referring to the investigations the author observes that the serum treatment deserves to be considered. The reason that it has not been more generally adopted is probably on account of the difficulty of obtaining the serum from immunised rabbits. (4) *Enteric Fever.*—Here the clinical application of laboratory facts has not given any very good results. This may be partly due to the length of time between the penetration of the poison and the treatment, and partly possibly owing to mixed infections. (5) *Typhus.*—The injection of serum from patients who had suffered from typhus was adopted with good results by Legrain in an epidemic in Algeria. (6) *Cholera.*—The cholera peritonitis of animals is very different from cholera in man. Behring recently announced that he had obtained a curative serum, but the results have not yet been published (7) *Syphilis.*—The serum from the dog and lamb have been employed, and sometimes with good results. (8) *Streptococcus Infection.*—Animals have been vaccinated against this infection. The serum so obtained has been used in puerperal fever with good effect. It has also been employed in erysipelas and angina. (9) *Cancer.*—The results as yet obtained are insufficient to carry conviction. (10) *Tetanus.*—Well-marked tetanus is very difficult to cure in animals, and thus it is not to be wondered at that the results obtained in man are not conclusive. The serum, however, provides a valuable prophylactic agent against tetanus. (11) *Diphtheria.*—It is in this disease that the serum treatment has registered its greatest triumphs. Where mixed infections exist the results have naturally not been so favourable. The slight accidents caused by the treatment are to be disregarded in view of its remarkable efficacy. The author then refers to the successful application of the serum treatment to snakebites. The general results thus far obtained by the serum-therapy promise a successful future for this new method of treatment.

(160) The Serum Treatment of Cancer.

FABRE DOMERGUE (*Presse Méd.*, June 1st, 1895), with reference to the recent results of Emmerich and Scholl (*see* EPITOME, May 11th, 1895) and others, considers that (1) Serotherapy is logically applicable only to microbic affections, or those which by their symptoms may be supposed to be such; (2) cancer does not belong to this group in any of its characters, for (*a*) the fact of its more frequent occurrence in one neighbourhood or house only proves that the exciting cause is more frequent there, and not that cancer is contagious; (*b*) a parasite is not necessary for the transplanting of a living cell, cancerous or not; (*c*) the pseudo-coccidia have not been proved to be parasites; (3) the facts interpreted to prove the curative action of serum injections (whether erysipelas toxin or the juice of a sarcoma) have the same value as those known before of the modifying action of chemical substances (for example, oil of phosphorus, picric acid, pyoktanin, etc.). The latter, when injected, cause a local aseptic necrosis which attracts leucocytes, so that the part is absorbed and the tumour undergoes temporary diminution in size. The former act by their contained toxins exerting a negative chemiotaxic action, which in some cases may be of such extent as to lead to the same result. There is thus never any real cure of the whole disease.

(161) The Cholera Antitoxin.

RANSOM (*Deut. med. Woch.*, 1895, No. 29) reports his investigations into this subject. He shows that the dissolved cholera poison, free from micro-organisms, causes a fall of temperature in the same way as a virulent cholera culture. He separates this poison from a bouillon culture. Similar results are obtained, whether it is injected into

the abdominal cavity or subcutaneously, but the action is more rapid in the former case. The minimum fatal dose took effect more quickly with the poison than with living cholera vibrios. This fluid, freed from bacilli, cannot be preserved for long, and the author has been unable to maintain its virulence by artificial means. The poison is little affected by heat. The addition of calcium, salol, etc., does not impair its activity. When concentrated it becomes less virulent. A solid substance can be obtained from this fluid, which acts in the same way as the fluid. The author finds 0·07 g. of this solid to be the minimum fatal dose for a guinea-pig weighing 260 g. In fatal cases a fall of temperature is noted. The solid substance administered to guinea-pigs by the stomach is harmless. The author has immunised various animals against cholera, and has obtained an antitoxin from the blood. Guinea-pigs, which injected with a mixture of the cholera poison and this antitoxin, did not die; they could thus stand twice or thrice the minimum fatal dose. Control experiments were also made with the serum obtained from non-immunised animals. He found the curative serum efficient, even when injected at a different place to the poison. He also found the serum efficient against the poisonous culture fluid as well as against the infection produced by living cholera vibrios. If the serum were injected forty-eight hours before the cholera bouillon it had also a life-saving effect.

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(164) Treatment of Pneumonia by Digitalis.

NAEGELI-AKERMANN (*Centralbl. f. inn. Med.*, August 10th, 1895) first refers to the results obtained by various physicians with this treatment, and especially to those of Petresco. The mortality in Petresco's 1,192 cases varied from 1·2 to 2·6 per cent., but the patients were healthy young soldiers. In 475 cases treated in Massini's Poliklinik the average mortality was 11 per cent., and here the patients were mostly poorly housed and advanced in life. In the author's 64 cases treated by digitalis, 11 died. Of 40 cases under 50 years of age, not one died of pure pneumonia, the 2 deaths occurring in cases of phthisis complicated by pneumonia. Of the 9 remaining fatal cases, 7 were hopeless from the outset, and 2 were over 70 years of age. The object of the digitalis treatment is the regulation of the circulation through the lungs, no antipyretic effect being expected. The author would also ascribe the good results to the increase of leucocytes (!) so produced. His investigations show that both in animals and man digitalis produces a hyperleucocytosis. The author used digitalis in large doses. He thinks it the chief therapeutic agent in the treatment of acute pneumonia. He is of opinion that hydrotherapeutic measures should, when possible, be combined with it, as in this way the leucocytes are also decreased in number.

PATHOLOGY.

(165) Immunisation against Cholera.

SOBERNHEIM (*Hygienische Rundschau*, 1895, p. 1161), taking advantage of an epidemic of cholera at Turgeln, near Marburg, in the autumn of 1894, investigated the blood serum of persons convalescent from the disease with regard to its immunising properties. The blood taken from the median vein was kept for twenty-four hours in an ice-chest, and the serum injected intra-peritoneally into guinea-pigs. Twenty-four hours later the animals were injected also intraperitoneally with a fatal dose of cholera virulent. These were of different origin but in part were obtained from the Turgeln epidemic. It was found that in the blood of such convalescent patients certain substances are present which have a specific immunising property against the laboratory cholera of guinea-pigs. The amount and efficacy of these substances are not constant, but show variations bearing some ratio to the severity of the disease.

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(166) Microbic Origin of Rickets.

MERCOLI (*Gaz. Med. di Torino*, No. 11, 1895) pleads for the microbic origin of rickets believing that the disease is caused by the effect of ordinary pyogenic organisms upon the osseous and nervous system. Clinically he finds support for this theory in the fact that rickets develops independently of social condition; frequently begins with eczema, boils, or intestinal catarrh; occasionally occurs epidemically; and is accompanied by fever, polyarthritic and bone pains, hydrocephalus, marasmus, and paresis of lower extremities. Pyogenic organisms have been found in the bones and central nervous system of ricketty children. Experimental injection of pyogens into the bones and epiphysial cartilages of young rabbits produced common osteomyelitis, but in other cases an osteomyelitis without trace of suppuration, with hypertrophy of the ends of the bones, hypertrophy of cartilages analogous to that of rickets, and marasmus.

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(167) Death in Acute Pneumonia.

BOLLINGER (*Münch. med. Woch.*, August 6th, 1895) mentions that death in acute pneumonia is usually attributed to (1) inefficiency of the lungs owing to extensive consolidation; (2) severity of the infection, as in septic forms of pneumonia; (3) complications, such as meningitis, pericarditis, etc.; (4) heart failure, which may be due to inherent weakness in the heart, or be brought about by the pneumonic infection. Individual resistance is also an important factor. The author draws attention to two facts noted after death from acute pneumonia: (1) the general anæmia of all organs, and (2) the absence of so-called collateral hyperæmia in parts of the lungs unaffected by the pneumonic process. The author would attribute this to the extensive exudation, which robs the blood of its most important elements. The results of this exudation are practically similar to those produced by the recurrent internal hæmorrhage noted in some of the infections. The leucocytosis seen in acute pneumonia is a reparative process to compensate for the loss to the blood contained by the exudation. Thus the author thinks that the critical collapse manifestations in croupous pneumonia, and the final cardiac insufficiency are due to the oligæmia which leads to an inadequate nutrition of the cardiac muscle. Finally, he draws attention to the harm done by blood letting. Fluid should be administered by all possible methods; perhaps even the infusion of saline solution should be adopted to compensate for the oligæmia.

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(168) A Pathogenic Bacterial Parasite of Fishes.

SIEBER (*Gazeta Lekarska*, 1895, Nos. 13, 14, 16, and 17) discusses the question of poisoning caused in man by eating certain fish. It is known that several fish secrete poisonous materials for the purpose of self-defence, and these the authoress calls "physiological." But poisoning by fish that produce no such physiological poisons is by no means uncommon, especially in Russia. Sieber investigated the cause of a fish epidemic in Nencki's laboratory at St. Petersburg. In an aquarium in the Palace, where fish destined for the table had been kept during the past ten years, there occurred on a certain occasion so high a mortality that thirty fish died in two days. The bacterial investigation of the cause of this mortality was entrusted by Nencki to Sieber. From the muscle and organs of the dead and sick fish, from the surface of the aquarium and from the exit tubes, as also from the water in the aquarium, was found an anaerobic bacillus called by Sieber *B. piscicidus agilis*, which is intensely poisonous for cold-blooded animals. It is a short, actively motile, sporogenous, gas-forming bacillus, which can be cultivated on the ordinary culture media, and which grows well at 12°, or 37·5° C. It keeps its vitality and virulence for a month in ordinary spring water. It is very virulent for frogs, guinea-pigs, mice, rabbits, and dogs, but birds are immune. From all animals, cold as well as warm blooded, the bacillus was procured in pure culture after death from inoculation. By filtration through a Chamberland filter a fluid was obtained which gave an intense red colour with ferric perchloride. The symptoms produced in the animal by injection of the toxin are rapidity and shortness of breathing with general discomfort; larger doses lead to apathy and paralysis. The investigator separated from the cultures certain alkaloids, such as cadaverin, etc., and also another present only in small quantities but intensely poisonous. It must be added that Sieber found the same bacillus in the evacuations of two cholera patients and in many fish bought in the St. Petersburg market during the cholera epidemic.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(167) The Physical Signs of Abdominal Disease.

The first of a series of articles compiled from Hayem's lectures by Lion (*Arch. Gén. de Méd.*, August) on certain forms of abdominal disease, is devoted to the consideration of the effects of compression, or, as he terms it, "corset disease." Judging from Hayem, this is a more complicated condition than would at first appear, for, according as the natural conformation of the throrax varies, so constriction by the corset differs in its effects. The author describes three chief deformities. The first is suprahepatic constriction, and is found in women with a naturally large thorax, and of low stature. There is diminution of the antero-posterior diameter, and the lower ribs are displaced outwards. In this form there is downward displacement of the liver, and, in a general way, all the abdominal organs, including the pyloric end of the stomach; the stomach, therefore, assumes an almost vertical position, and the transverse colon becomes V-shaped. In the second variety there is hepatic constriction, the thorax is long, and tapers; there is not much external deformity, but merely a tendency to bending outwards of the lower ribs at their angles. In this variety there is diminution of abdominal capacity, the liver increases in vertical extent, and presses the pylorus and duodenum against the vertebral column. There is thus no displacement, but compression; the result is dilatation of the stomach towards the pyloric end, with, perhaps, hour-glass constriction as well. The third variety is considered by the author as the most important and the least recognised. It is the subhepatic. The compression takes place at the level of the last ribs and the lower margin of the liver. In many cases a certain amount of shortness of the sternum induces this deformity. The result is a displacement upwards of the liver, with consequent tension of the diaphragm. This produces a certain immobility of the diaphragm and the lower thorax, so that palpitation and dyspnœa may be present on movement, and even slight exercise may cause general discomfort. The transverse colon is also displaced, and so with deficient diaphragmatic action constipation is caused, especially as the dyspnœa, etc., induce the patient to lead an inactive life.

(168) Infective Jaundice.

Banti (*Deut. med. Woch.*, August 1st, 1895) relates a case of so-called simple jaundice, in which, in his opinion, the infective character of the disease was established. The patient, aged 22, presented the ordinary symptoms of slight jaundice, which lasted about a fortnight. The liver was enlarged, as also the spleen. The stools were always coloured with bile pigment, so that there was no obstruction of the ducts. The temperature seems to have been raised, and there was frequent nose bleeding. The treatment was by naphthol and salol. While the disease was at its height 3 c.cm. of blood were withdrawn from the spleen with a sterilised syringe, and under the usual precautions. The author obtained from this blood a capsulated micro-organism in pure culture. It did not stain by Gram's method. It was pathogenic to white mice, and when injected into dogs, guinea-pigs, and rabbits it displayed marked pyogenic properties. It was most closely allied to two forms of proteus and to the bacillus of rhinoscleroma. The author does not think that the presence of the micro-organism in the spleen could have been due to a secondary infection. Many of the symptoms presented by the patient were in favour of an infective process, and the micro-organism present was closely allied to pathogenic forms found in man. The fact that it did not produce jaundice in animals does not, in the author's opinion, invalidate his conclusions. Some micro-organisms have a hæmatolytic action. It does not follow that every case of simple jaundice is due to this micro-organism. The author would divide jaundice into the toxic and infective varieties; the latter may own many causes. It remains to be shown how often the B. icterogenes capsulatus causes jaundice.

(169) The Prognosis of Albuminuria in Typhoid.

Lecoq has investigated this point (*Journ. de Méd.*, June 25th, 1895), and shows that albuminuria, though an almost constant condition in typhoid, is also one the significance of which varies. It may appear at the end of the first week or early in the second, and does not in any way affect the course of the disease, being merely the albuminuria of pyrexia. When, however, it appears later, at the end of the third week, it is an indication that grave changes are taking place in the kidney, and that toxic products will in future be eliminated with difficulty, and that uræmia may at any time declare itself. In such cases, even if the attack of typhoid be apparently slight, a guarded prognosis must be given. Although recovery may take place after kidney complications arise, such is not usually the case, the mortality being 60 per cent. Moreover, the quantity of albumen passed is no indication as to what the result may be, for in some cases there is a fatal termination although the quantity has been small. Of more importance is the amount of urine; when this is small the prognosis is grave.

(170) Diagnosis of Epidemic Cerebro-spinal Meningitis.

Heubner (*Centralbl. f. Bakt. u. Parasitenkunde*, April 16th) points out that not infrequently a severe nasal catarrh is present at the commencement of an attack of epidemic cerebro-spinal meningitis; also Weigerts has found purulent inflammation of the upper part of the nasal cavities on *post mortem* examination of some cases. The Author has examined bacteriologically the nasal secretion in a series of cases of this disease, and has found Weichselbaum's diplococcus intracellularis meningitidis by microscopical examination of cover-glass preparation or by cultivations in all recent cases. Details are given of the 18 cases examined. The nasal secretion of fifty persons who were not suffering from the disease was also examined bacteriologically, but the diplococcus intracellularis meningitidis was found in two cases only, and in both of these there was the possibility of exposure to the infection. For the detection of the diplococci coverglass preparations of the nasal mucus are simply stained with a watery solution of gentian violet for a few seconds. The author regards as characteristic the occurrence of three or four diplococci enclosed in a leucocyte, and also the presence in the specimen of many cells containing these diplococci. The appearance with respect to the intracellular position is very similar to that of the gonococcus. The fact that the organism, which is regarded as an exciter of the disease, was found in the nasal secretion in all recent cases which Heubner examined led him to conclude that infection occurs by the diplococci being inhaled; are then taken up by leucocytes, which afterwards find their way by the lymph tracts into the brain and membranes. He believes the detection of the diplococcus in the nasal secretion to be of great importance in the diagnosis. The probability of detection is greater the earlier the examination is made. The author regards the nasal secretion as infectious.

SURGERY.

(171) Apparent Double Penis.

At the Congress of Gynæcology, Obstetrics, and Paediatrics recently held at Bordeaux (*Sem. Méd.*, August 21st), Lannelongue reported the following case: Some years ago a woman brought to him a male infant, aged 3 months, which passed water both through an umbilical appendix resembling a penis and by the natural organ which was in its proper place. The jet which came from the umbilical canal described a curve more than 30 centimetres in diameter. On examination, it was found that the apparent abnormal penis was an umbilical hernia caused by the persistence of the urachus. A urinary fistula had been produced on the separation of the umbilical cord. The child having died of bronchopneumonia, Lannelongue made a *post-mortem* examination. The bladder was injected, and it was then seen that that viscus was prolonged by a channel as large as the forefinger, namely, the urachus, up to the umbilicus. This

channel extended into the external appendix, where it opened by an oblique orifice resembling the meatus urinarius. The contractions of the bladder in micturition caused a stream in both directions, umbilical and urethral, hence the double jet of urine seen from time to time; this, however, was exceptional, as the musculo-elastic ring of the umbilicus fulfilled the function of a sphincter and prevented the escape of urine through that orifice. Lannelongue says that this case once more shows the necessity of tying the umbilical cord only after having satisfied oneself that there is no hernia at the proximal end.

(172) Treatment of Hypospadias.

LAURENT (Extract from the *Bull. de l'Acad. Royale de Méd. de Belgique*, 1895) reports a case in which an extensive cleft along the under surface of the penis was, after failure of other methods, successfully closed by the following operation: Two parallel incisions, each about 2½ inches in length, were made in the left groin, reaching from the lower part of the abdomen to the upper part of the thigh; the intervening portion of skin having been detached from the subjacent fascia, a bridge-shaped flap attached above and below was thus formed; under this bridge of skin the penis was then passed, its inferior surface being directed forwards, and the cut edges of the patent urethra were fixed by sutures to the raw posterior surface of the skin; the operation was completed fourteen days later by division of the flap of skin above and below the part which had contracted firm adhesion to the under surface of the penis.

(173) Gastric Digestion after Gastro-Enterostomy.

DENOVE AND SOUPAULT (*Bull. de l'Acad. de Méd.*, August 6th, 1895) have studied the process of gastric digestion in a man, aged 37, on whom Terrier had done gastro-enterostomy for pyloric cancer. The patient was greatly relieved by the operation; his gastric symptoms disappeared, and he gained 38½ lbs. in three months. Examination by means of test meals showed that there was still gastric stagnation, that peptic digestion was almost inhibited by the absence of H Cl., and that shortly after each meal bile and pancreatic juice flowed back into the stomach without causing any inconvenience. The case was further interesting from the fact that the physical and chemical signs led originally to the diagnosis of cicatrising ulcer, in spite of which malignant disease was found at the operation.

(174) Saline Infusion in Cases of Suppression of Urine after Surgical Operation.

MCBURNEY (*Annals of Surgery*, August, 1895) has reported to the New York Surgical Society a case of suppression of urine after operation for the removal of a large calculus from the right kidney, in which the patient, a man, aged 50, recovered after the injection into a vein of the arm of a quart of salt solution. The operation on the kidney was attended with but moderate bleeding, no ligature and no packing having been required for its control. In the course of the next twenty-four hours nausea began, and was soon followed by vomiting, headache, and symptoms of uræmic poisoning. There was no voluntary discharge of urine, and only 4 drachms were obtained by catheter during the first twenty-four hours after the operation. The saline infusion was followed in the course of a few hours by the discharge of 34 ounces of urine, and the patient steadily recovered. In the discussion on this report reference was made to a case of total suppression of urine after an operation for gangrenous hernia, in which striking improvement had followed similar treatment. It was also pointed out that Dickinson had in the BRITISH MEDICAL JOURNAL called attention to the fact that patients could be aroused from diabetic coma in a few minutes by saline infusion.

MIDWIFERY AND DISEASES OF WOMEN.

(175) Extrauterine Gestation diagnosed at Six Months, Operated on near Term.

PINARD (*Bull. de l'Acad. de Méd.*, August 6th, 1895) records the following, which he describes as an ideal case. The patient was aged 36, had had no illness, and had been regular from the age of 14 till July, 1894. During August of that year she had nausea and vomiting; on the 22nd and 23rd she lost a fluid, which was just pink. The symptoms continued during September, on the 22nd and 23rd of which month there was a similar loss. In October she was kept in bed for two days by abdominal pain, which reappeared in November, and was then associated with pain in micturition and defæcation. From that time, till February 26th, 1895, when she came under Pinard's care, she was attended by several doctors, each of whom adopted a different diagnosis and treatment. One of them, thinking she had a fibroid, made her take in all about an ounce of savin powder, which did not, however, produce any ill effect. When admitted she looked ill and pinched. The left thigh and leg were painful and œdematous. The abdomen looked like that of the sixth month of pregnancy. The abdominal wall was tense, smooth, and without linea albicantes. Palpation revealed a cystic immobile tumour, extending 2 inches above the umbilicus and apparently fixed by deep adhesions. The fœtal parts could only be made out with difficulty by deep palpation, but the heart sounds were easily heard to the right of and below the umbilicus. By the right side of this tumour one could feel a small one, the size of a tangerine orange, which hardened and softened under examination. When contracted the groove between it and the large tumour became evident. Vaginal examination showed that the cervix, which was slightly deflected forwards and to the right, and softened as in uterine gestation, was continuous with the small tumour. Cephalic *ballottement* was obtained in the large tumour. No sound was passed into the uterus for fear of setting up reflex action; the diagnosis of extrauterine gestation at about 6½ months with a living child was established without requiring to be clinched by proving the uterus empty. The patient was kept absolutely at rest in bed, and the œdema of the left leg cured by position. On April 30th the fundus of the tumour was 35 cm. above the symphysis and the uterus 11½ cm.; the cervix was soft as that of a primipara at term. Operation, May 2nd: Uterus found empty, cavity 14½ cm. long. Median incision in abdominal wall; cyst walls exposed: seen to be very slight and filled with enormous vessels, some greater than the little finger. On seizing the wall one of these vessels burst, and the hæmorrhage was only rendered greater on attempting to secure it, so great was the friability of the walls. The cyst was therefore rapidly opened and the child extracted by the foot. Hæmorrhage was restrained first by pressure of the hands, then by pressure forceps and ligatures. The walls of the cyst were sewn to the margins of the abdominal wound, the edge of the placenta being included in the suture. A wound was thus formed 10 cm. in diameter, with the placenta for its base; it was filled with iodoform and salicylic gauze. The operation lasted an hour, and the child, a boy weighing 5½ lbs., after a brief period of respiratory difficulty, was perfectly vigorous. There was at first a slight facial asymmetry, and a depression on the left upper jaw caused by the point of the left shoulder, against which it had been pressed in the cyst; these soon disappeared, and on the ninetieth day the boy weighed 12 lbs. The maternal wound was not dressed till May 13th, when it was washed with biniodide, 1 in 4,000. The placenta came away piecemeal between May 25th and June 2nd. The wound healed up, and the patient got up on the forty-third day, having suckled her infant from the first day after its birth. Pinard comments on the rare occurrence of ectopic gestation in a primipara with no history of affection of the abdominal or genital organs. The symptomatology was, except for the absence of an expelled decidua, characteristic, the presence of two tumours having the characters described being pathognomonic. The fœtal members, contrary to what is stated in books, are harder to feel in ectopic than in uterine gestation. With regard to treatment, Pinard modifies Werth's dictum as follows: "Every diagnosed extrauterine pregnancy calls for surgical interference." In the first half of pregnancy, or when a fœtus has been dead two months, the cyst should, as Werth suggests, be treated as a malignant growth. When the fœtus has been dead but a short time, Pinard prefers the remote risk of suppuration to the certain one of hæmorrhage; if any untoward sym-

ptoms come on he at once removes the fœtus. If the fœtus is alive and six months old, he delays operation till it is viable, which in extrauterine fœtation is not till the nine month, the risk to the mother from hæmorrhage being in newise increased by waiting after the placenta is once fully formed. The cardinal point in the operation is not to touch the placenta or to extirpate the sac. The possibility of septicæmia from retention is slight, while the hæmorrhage in immediate extraction is enormous and often uncontrollable. He sums up the point in these words, "The removal of the cyst is, perhaps, more surgical, but certainly less prudent." He has not had one bad accident in 16 cases in which the placenta was treated as in this one. Daily irrigation with 1 in 4,000 biniodide produces no toxic effect. With regard to the cyst, deformities are frequent in extrauterine fœtuses, and are comparable to those in the children of primiparæ with little amniotic fluid and resistant uterine walls. The child is also likely, as in Cæsarean section, to suffer from a special kind of shock causing a temporary difficulty in respiration. The mother and child were shown to the Academie.

(176) Eclampsia of Pregnancy with Amaurosis.

Rabczewsky (*Przeglad Chirurgiczny*, vol. ii. part 3, 1895) has come across an instance of convulsions during pregnancy in which every fit was regularly preceded by a transitory amaurosis as well as by œdema of the face, which was also of short duration. Two sets of convulsions occurred during one pregnancy, the first about the end of the seventh month, four attacks taking place within 24 hours, the second in the course of the eighth month when two fits were observed. After the last convulsion a healthy child was delivered. The mother recovered perfectly. The two prominent symptoms above mentioned developed before each of the six fits which took place at two epochs of pregnancy. Olshausen has been able to collect only three cases of eclampsia in which the fit was preceded, as in Rabczewsky's patient, by an aura.

(177) Calculus in the Fallopian Tube.

Cullen (*Johns Hopkins Hosp. Rep.*, vol. iv, 1895, p. 29) describes and figures an S-shaped calculus concretion, nearly one inch long, in a diseased tube. It was composed almost entirely of phosphate of lime. On pressure it was soft and yielding. The patient had been an invalid for many years, and suffered chiefly from some gastric disorder. She had also acquired the morphine habit subsequently to an attack of rheumatism several years before operation. The pelvic trouble is reported as very acute, only beginning about ten days before the parts were removed, the patient catching cold. The temperature at the time of operation was low, and the patient was in a state of extreme collapse. An exploratory laparotomy was performed, and the right tube and ovary were removed. The patient grew rapidly worse during the brief operation, and died seven hours later. No necropsy is reported. There was hydrosalpinx, the tube being also inflamed and the ovary involved.

(178) Vulvo-Vaginal Leucoplakia and Cancer.

At the Congress of Gynæcology, Obstetrics, and Pediatrics, recently held at Bordeaux (*Sem. Méd.*, August 21st), E. Monod said that vulvo-vaginal leucoplakia, though much more rare than leucoplakia of the mouth, is practically identical with that affection. Like it, it shows a marked tendency to undergo epitheliomatous transformation, and it is one of the causes of primary cancer of the vulva and vagina. When the condition exists the indication is to remove by way of prevention the affected parts when the limited number of white patches allows that to be done without too great mutilation. Where the lesions are confluent the case should be kept under careful observation, so that surgical intervention may be made at the slightest suspicious appearance. Epithelioma of the vulva and vagina, when it can be definitely recognised, should be completely removed at the earliest possible moment, but the chances of recurrence, either local or in the glands, is very great.

THERAPEUTICS.

(179) The Thyroid Treatment of Psoriasis.

At the French Congress of Internal Medicine recently held at Bordeaux (*Sem. Méd.*, August 17th) G. Thibierge stated that he had tried the thyroid treatment in 11 cases of psoriasis. The substance was given for varying periods from a fortnight to two months in daily doses of from 2 to 8, and exceptionally 12, 16, and 20 g. of fresh uncooked thyroid, and in total doses of 72 to 288 g. The general effects were the same as those seen in cases of myxœdema treated in the same way, namely, headache, pains in the limbs, gastric disturbance, tachycardia, asthenia, and loss of flesh. The loss of weight in the majority of the patients exceeded 6 kilos. in less than 6 weeks, and it was not checked by the excessive appetite which the patient showed after an initial period of anorexia. Nevertheless, the doses being equal, these general disturbances were less marked than in the myxœdema cases; the author concludes from this that in the latter the effects apparently due to the treatment are in part also due to the disease. The therapeutic effects of the treatment on psoriasis were nil in 3 cases, including the one in which the largest doses were given and thyroidism was most marked. In the other 8 the effect was good, but did not extend to complete cure, local treatment being always required to get rid of the lesions. Therefore, in Thibierge's opinion, the thyroid treatment is not a specific for psoriasis, nor should it be employed as a matter of routine. It should be reserved for refractory cases in which all the ordinary methods of treatment have been tried in vain, and the effect should be very carefully watched.

(180) Antipyrin in Diseases of Children.

At the French Congress of Internal Medicine recently held at Bordeaux (*Sem. Méd.*, August 17th) Comby stated that antipyrin can be given to children as an antipyretic, an antispasmodic, an analgesic, and to check diarrhœa. The drug is well borne by children of all ages, and it can be given in large doses. Only once in hundreds of cases has Comby seen a slight fugitive erythema caused by the administration of antipyrin. It has never in his experience caused disorder of the stomach or intestine, vomiting, or any ill effect on the kidney. In children suffering from febrile or spasmodic (chorea) diseases, antipyrin should not be given in fractional but in large doses to produce its full effect. According to the age of the patient 25 or 50 centigrammes, or 1 g., should be given at a time; this dose may be repeated two, three, five, and even six times a day. The same doses may be continued for weeks without ill effect. In chorea antipyrin as a rule diminishes the violence and disorderliness of the movements and shortens the duration of the disease. In whooping cough antipyrin has failed in the author's hands. In painful affections and in infantile hyperæsthesiæ it is unreliable, but Comby admits that his experience on this point is not sufficient to base a final conclusion upon. In fevers antipyrin causes a notable reduction of temperature; it is one of the surest of antipyretics, and may be used without fear. When antipyrin in a sufficient dose does not lower the temperature it is a prognostic sign of ill omen. In the simple diarrhœa of nurslings antipyrin is neither so powerful nor so sure in its effect as in febrile or spasmodic affections.

(181) Action of Antipyretics on the Blood.

At the French Congress of Internal Medicine, recently held at Bordeaux (*Sem. Méd.*, August 17th), Hénocque presented a communication on this subject. He began by pointing out that one of the antipyretics most in use, namely, antipyrin, has a powerful hæmostatic action. This property he claims to have discovered in 1884, in the course of some experiments with the drug. The hæmostatic action is local and its mechanism is vaso-constriction and retraction of the tissues, with formation of a minute clot which is extremely retractile and aseptic. Antipyrin has also a favourable effect on coagulation. The action of antipyretics on the blood when administered in toxic doses may be summed up as a transformation of oxyhæmoglobin into methæmoglobin. A phase of anæmia or diminution of oxyhæmoglobin precedes the accumulation of methæmoglobin. In this period there is at the same time production and elimination of methæmoglobin; if elimination is

hindered, or transformation is too rapid, phenomena of cyanosis may be produced which must be distinguished from those of the period of intoxication. These various phenomena may be studied hæmatospectroscopically, and the influence of antipyretics on the activity of reduction of oxyhæmoglobin, that is to say the energy with which changes take place between the blood and the tissues will be recognised, and the influence of antipyretics on the activity of elementary oxydations will be determined.

(182) Antipyretic Effects of Guaiacol externally Applied.

At the French Congress of Internal Medicine recently held at Bordeaux (*Sem. Méd.*, August 17th) Lannois read, on behalf of Bard of Lyons, a paper on this subject, in which it was stated that the external application of guaiacol may be dangerous, first by the sudden fall of temperature which immediately follows the application, and, secondly, by the nervous depression produced by repeated applications. Bard distinguishes the antithermic effect, which is transitory, from the antipyretic effect, which is lasting. In typhoid fever the method should not be employed on account of the long duration of the disease; in erysipelas and in pneumonia, on the other hand, it is very useful. In tuberculosis its effect is very useful. In tuberculosis its effect is favourable only in a certain number of cases of interstitial granular formations without complications, such as suppuration, peripheral pneumonia, etc.—Rendet (*ibid.*) stated that, applied to the skin, guaiacol causes lowering of the temperature with profuse sweating, these two effects not always being of equal intensity. It sometimes happens that two or three hours after the temperature has begun to fall it rises again to a high level; this is a reactional pyrexia which must be taken into account. There are indeed cases in which the temperature, instead of going down, at once rises from one-half to one degree. Contrary to what is seen after the administration of other antipyretics, guaiacol causes polyuria. It is important to regulate the dose, as alarming hypothermia has been seen in some cases. A solution of 50 centigrammes of guaiacol in oil or glycerine should be employed. Applied to the skin the drug is useful in all febrile manifestations of tuberculosis. In fevers both in children and in adults it is sometimes very serviceable, especially in typhoid. The application should be accompanied by the administration of heart tonics.

(183) Brewers' Yeast in Diabetes.

At the French Congress of Internal Medicine recently held at Bordeaux (*Sem. Méd.*, August 21st) Cassaët stated that he had obtained good results in three cases of diabetes by the administration of brewers' yeast in a daily dose of 30 grammes, although the administration of the substance could not be continued sufficiently long on account of the practical difficulty in summer of preventing acetous or putrid fermentation. It was taken readily by the patients. The immediate effect was the expulsion, during the few minutes following its absorption, of a very large quantity of gas by eructation; then in the course of the first or second day extremely fœtid diarrhœa with abundant gas occurred. After a few days tolerance was established, and the patient felt better than he had done for a long time; his general state improved, his appetite returned, his strength increased, and pain diminished. The weight of the three patients in whom the treatment was tried increased three, five, and eight pounds respectively after the yeast had been administered for a fortnight. The gain in weight was particularly remarkable inasmuch as one of them was phthisical as well as diabetic, and another had diabetes of the gravest type. On discontinuing the treatment loss of weight was soon observed again. As regards strength as tested by the dynamometer an improvement from 12 to 20 kilos. was noted in the right hand, and of 17 to 22 in the left. As regards the urine the urea remained stationary or increased, and the proportion of sugar diminished, in one case by three-fourths, and in another by two-thirds in the fortnight.

(184) Calf's Pancreas in Pancreatic Diabetes.

At the French Congress of Internal Medicine recently held at Bordeaux (*Sem. Méd.*, August 21st), Ausset stated that he had given to dogs from which the pancreas had been completely extirpated—as proved by *post-mortem* examination—calf's pancreas lightly cooked and mixed with the animals' food. The glycosuria caused by the operation always disappeared as soon as the treatment was begun, and this effect lasted as long as the administration of pancreas was continued. The treatment was tried in a diabetic man passing 38 g. of sugar in the twenty-four hours, with more than double the normal elimination of chlorides and phosphates, loss of strength, etc. On the second day of the treatment the amount of sugar fell to 4 g. and the quantity of salts eliminated became normal. On the ninth day the sugar had wholly disappeared and the urine remained normal for more than a month.

PATHOLOGY.

(185) Death by Lightning.

Dünck (*Münch. med. Woch.*, July 30th, 1895) describes the morbid anatomy in the case of a man struck dead by lightning. There was an abrasion of the skin on the left side of the forehead where the current entered. There were extensive hæmorrhages over the left parietal, frontal, and temporal lobes. Fluid blood was found in the heart and veins. There was hyperæmia of all the abdominal organs and chronic enlargement of the spleen, probably malarial in origin. The brain substance was very soft, but without œdema. The author thus summarises the results that have been found in recorded cases of death by lightning or by the electric current: (1) The blood is deficient in coagulating power, which latter may even be entirely lost. (2) Circumscribed or extensive hæmorrhages due to the tearing of vessels in the course of the current are generally present. (3) There is frequently a destruction of parts of organs. (4) The site of the entrance and exit of the current is usually marked by superficial or even deep wounds resembling burns. As regards the figures on the surface of the body further investigation is needed to establish their direct relation to the electric current.

(186) Effusion and Absorption.

Hamburger (*Virchow's Archiv*, August 5th, 1895) points out the part that limitation of absorption plays in the production of passive effusions. The process of absorption is not a vital but a purely physical process; all tissues, living and dead alike, can take up a certain amount of fluid by imbibition either molecular, where the fluid is taken up by a homogeneous mass—for example, gelatine—or capillary, where the fluid is taken up by the pores of a porous mass for example, porcelain, or connective tissue. Given fluid in a pleural cavity, the cement substance between the cells, or even the cells themselves, take it up by molecular imbibition; then, by capillary imbibition it is drawn into the connective tissue, and thus reaches the lymph stream. This process, however, ceases unless the fluid thus drawn up, be quickly taken into the blood stream, and carried away, for a limited quantity of tissue can take up only a limited quantity of fluid at a time. It is well known that quickening of the blood stream favours absorption, and it is the slowing of the blood stream, which by its purely physical effect in limiting absorption is an important factor in the causation of passive effusion.

(187) A Test for Distinguishing between Serous Exudations and Simple Transudations.

Rivalta (*Rif. Med.*, April 24th, 1895) finds that if a drop of glacial acetic acid is added to a serous exudate (that is, an inflammatory effusion) a slight white cloud forms in the wake of the falling drop, which precipitate redissolves on the addition of more acid. No such reaction takes place in mere transudation, that is, non-inflammatory fluids. A good way of doing the test is to let fall a drop of the suspected fluid into 200-400 c.cm. of distilled water, acidulated with 2 to 4 drops of glacial acetic acid. If the fluid is an inflammatory exudate a whitish streak follows the falling drop, and on the addition of more acid is dissolved. Examination of the precipitate shows that it belongs to the class of nucleo-albumins. The author's method presents a clinical advantage, in that a mere drop or two of the fluid (such as can easily be withdrawn with a hypodermic syringe) suffices to provide material for the test.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(138) Cerebral Diplegia of Children.

W. Koenig (*Berl. klin. Woch.*, August 19th, 1895) recalls that Frend found a resemblance between the symptoms of cerebral diplegia in children on the one hand, and those of Friedreich's disease and insular sclerosis on the other. As an instance of the occasional diagnostic difficulties in such cases he cites the following case. The patient is a boy, aged 7½, without family history of nervous disease. He was weakly from birth; the labour was protracted, and the mother was ill and suffered from a nervous shock whilst pregnant with the child. At 2 years of age a diagnosis of slight rachitis and imbecility could be made. Did not begin to talk and walk until the age of 4. At present the boy is mentally deficient, and easily flies into a passion. Gait is unsteady and somewhat spastic; he steadies himself by putting his feet apart. Inco-ordination in movements, not increased by closure of the eyes. Some tendency to fall backwards; tendon reflexes, if anything, increased; sensation natural; sphincters act normally; the head is small; no nystagmus. The tendency to make grimaces may be partly due to inco-ordination of the facial muscles. The signs are more marked in the lower than in the upper limbs. Strength in all the limbs is deficient, and more deficient in the right limbs than the left. Speech is somewhat of the "scanning" type. Koenig thinks the case is not one of Friedreich's disease. The absence of nystagmus and the child's imbecility both speak against Friedreich's disease, but still more so the fact that the disease was congenital and not progressive. He considers the case to be one of cerebral diplegia (Little's disease) with two unusual symptoms, namely, the disturbance in the speech and the inco-ordination. Although in some cases the diagnosis of congenital insular sclerosis has been made, it has not yet been verified by *post-mortem* examination. The family history does not support another diagnosis which might be offered, namely, congenital cerebro-spinal syphilis. Cerebral diplegia may in some cases be due to a bilateral meningeal hæmorrhage occurring at birth when delivery is protracted. Such an explanation in this case would account for the imbecility, the muscular weakness, and the spasmodic movements, though with less certainty for the disturbance in speech. The cause of the ataxy remains a puzzle. Disease of the posterior columns of the cord has not yet been noted in cases of infantile cerebral paralysis. Hæmorrhage might occur at birth over the cerebellum as well as over the cerebral hemispheres. In Huppert's case of congenitally small cerebellum difficulty in maintaining the equilibrium of the body had been noted during life. On the other hand Koenig narrates a case of his own where a girl with typical congenital diplegia died of general tuberculosis at the age of 10; in her case the cerebellum was found to have attained only one-third of what should be the normal weight, though during life disturbance in co-ordination had never been noticed. Koenig thinks that the anatomical basis of cerebral diplegia is probably very different in different children, and that during life it is not to be determined with exactitude.

(139) Dilatation of Stomach Simulating Heart Disease.

Hayem (*Méd. Mod.*, No. 56, July 13th, 1895) describes a case of acute dilatation of the stomach accompanied by physical signs simulating heart disease. The patient, a man of 42, suffered for two years from severe gastritis with vomiting. No cause could be assigned except that he was in the habit of swallowing the smoke of his cigarettes. On admission to the hospital he was suffering from an acute attack of dyspnœa, 60 respirations per minute. This was accompanied by cyanosis and coldness of extremities. The pulse was regular, 70 beats per minute. There was soft œdema of the legs, pitting on pressure. The abdomen was exceedingly distended, and so painful to the touch as to suggest peritonitis. The stomach was very much dilated and resonant as far as some inches below the umbilicus. The liver was slightly enlarged and displaced downwards. Præcordial dulness exceeded the normal limit, notably to the right. On auscultation a rasping systolic murmur was heard in the fourth intercostal space, while at the apex was heard a curious loud humming *bruit*, suggesting the noise made by a mill wheel; this was prolonged and not synchronous with the heart sounds. The urine was very scanty; no albumen; temperature 38° C. The stomach was washed out daily, and at the end of eight days the great distension of the abdomen, hyperæsthesia, œdema, and superadded heart sounds had all disappeared, and treble the quantity of urine was passed. The explanation of the symptoms is a mechanical one. The extreme dilatation of the stomach caused the diaphragm to rest motionless, and this displaced both heart and liver. The lung suffered primarily, the raised tension in the pulmonary artery accounting for the right cardiac enlargement. It is probable that there had existed a parenchymatous gastritis resulting in a gastric ulcer, and giving rise to stenosis of the pyloric orifice, all the signs of an obstruction of this nature being present. Treatment in such cases must be directed to combating the stenosis: if medical treatment proves unsuccessful, surgical measures must be adopted.

(140) Hysteria and Heart Disease.

Grasset (*Sem. Méd.*, No. 23, June 26th, 1895) discusses the occurrence of hysteria in patients suffering from cardiac disease, and illustrates this by two cases under his care. The first, a girl, aged 26, with mitral disease following rheumatism, was for several years subject to attacks of hysterical dyspnœa, fainting fits, and incomplete left hemianæsthesia. The second, a man, aged 40, suffering from aortic disease as a sequel to typhoid fever; there was general right hemiplegia with contractions brought on by walking and subsiding when the patient kept in bed. The right foot was held in the equino-varus position in walking. The thumb and index finger were not affected, and the patient could write and draw. There was complete right hemianæsthesia. The condition is more frequent in men than in women, and usually occurs in young subjects. Every form of hysterical manifestation may appear, but anæsthesia and other sensory troubles are common. There are often neuralgias fairly easy to diagnose. Præcordial pain may present difficulties. When there is no pericarditis nor neighbouring neuralgia, but when great pain and tenderness to touch over the region are complained of, hysteria may be diagnosed. Hysterical dyspnœa may follow a cardiac dyspnœa. The state of the heart and pulse, absence of cyanosis or expectoration must be observed, and the absence of pulmonary congestion. Frequently there are fits or sensations of constriction about the throat, cries or other symptoms not met with in mitral disease. In aortic disease, however, the pain may be true angina. Two cases of this nature were accompanied by anæsthesia; one patient died of an acute attack of angina. Hysterical apoplexy may in cardiac cases be mistaken for coma brought about by cerebral embolus. The attacks are repeated, the hemiplegia becoming more complete after the second or third attack, or appearing several days after the first attack. There are usually accessory symptoms which materially aid in the diagnosis.

SURGERY.

(141) Treatment of Inoperable Malignant Tumours by Injection of Erysipelas Toxins.

Fausto Campanini (*Il Policlinico*, July 1st, 1895), following Coley (see Epitome, July 6th, 1895 par. 15), has tried injections of erysipelas toxins in two cases of sarcoma, one of the nose and naso-pharyngeal cavity, the other of the breast. In the former case he injected ½ c.cm. of the toxin into the substance of the tumour. Half an hour afterwards the patient had a rigor; the temperature rose to a very high point, only returning to the normal about ten hours after the injection. During the pyrexial period the patient was in a condition of extreme drowsiness, answering questions with difficulty, and complaining of giddiness, headache, and tinnitus. There was suppression of urine, with intense thirst. The next day a second injection was made, the dose this time

being $\frac{1}{10}$ c.cm.; it was followed by the same symptoms, but even more alarming. In view of these results and of the fact that no modification was perceptible in the tumour, Campanini sought to attenuate the toxins by exposing them to a very high temperature and diluting them with distilled water (1 c.cm. of pure toxins in 60 c.cm. of distilled water). The injection of 10 c.cm. of this fluid into two rabbits was not followed by any reaction. This attenuated toxin was then used for the patient, 30 injections being given in the course of a month. Although the proportion of toxin was progressively increased, the growth of the tumour was not appreciably checked. Histological examination of the tumour showed that there was no trace of a retrogressive process. The results in the other case were equally negative. Campanini therefore concludes that the treatment is useless, while the serious symptoms which followed the first injections indicated a grave degree of intoxication.

(192) The Infiltration Method of Local Anæsthesia.

At the recent meeting of the American Association of Genito-Urinary Surgeons (*Med. News*, June 22nd) Bransford Lewis, of St. Louis, described the Schleich method of producing local anæsthesia by the use of intracutaneous injections of very dilute solutions of various drugs. The principle of the method consists in injecting intracutaneously certain solutions, and annulling the sensibility of the peripheral nerves by the pressure of the infiltrated fluid, by the anæmia that it causes, and by the comparatively low temperature at which it is injected. The effects are produced by the fluid itself rather than by any particular drug that it may contain. As a matter of fact, the drugs used are of only incidental importance. In his various surgical procedures Schleich found the three following solutions, of graded strength, to answer all purposes: Solution No. 1: Cocainæ hydrochloratis, gr. iij; morphinæ hydrochloratis, gr. $\frac{1}{2}$; sodii chloratis, gr. iij; aquæ destillatæ, ad f $\frac{3}{3}$ iij. M. sterilisa et adde sol. acidi carbolici (5 per cent.) gtt. 3. The other two solutions are practically the same, the only difference being that in solution No. 2 the amount of cocaine used is reduced to gr. $1\frac{1}{2}$, while in solution No. 3 only gr. $\frac{1}{4}$ of cocaine is employed and gr. $\frac{1}{12}$ of morphine. Bryson referred to a case in which he had performed complete castration for prostatic overgrowth under cocaine anæsthesia. Of late, in operating about the bladder, he had been inclined to use cocaine in preference to general anæsthesia. He had employed very dilute cocaine solutions, and the results obtained did not impress him very favourably. He would prefer to use cocaine in cases in which it was possible to strangulate the parts by a ligature, and so make sure that too much of the drug will not enter the general circulation too rapidly. Chismore said he has twice performed perineal section under the use of a very weak solution of cocaine. In one of the cases the patient stated that he felt no pain whatever; in the other, the patient complained very much of pain when the deeper tissues were handled. Lewis, in closing the discussion, said that by the method described one could operate on the deeper tissues and in regions that could not be strangulated by a ligature. It had been employed in performing nephrectomy.

(193) Luxation of the Axis Forward.

Broca (*Mercredi Méd.*, July) reports the following case. A girl, aged 11, had received a blow directly on the nape of the neck. The injury was followed by paralysis of the upper limbs. The head and neck were placed in a position of flexion, the power of rotation being lost. A transverse projection could be felt in the pharynx. A complete cure was effected by continuous extension made by a weight of 1 kilo. at the head and 2 kilos. at the feet. The author insists on the importance of examining the pharynx with the finger in such cases, and on the superiority of continuous extension to attempts at reduction, which may be dangerous.

(194) Sudden Death on opening a Retro-pharyngeal Abscess.

Piatot (*Jour. de Clin. et de Thérap. Infant.*, July 11th) reports a case in which a child, aged 14 months, suffering from a large retropharyngeal abscess, died suddenly on an incision being made into it. Rhythmical tractions of the tongue, injections of ether and caffeine, and the application of hot compresses to the chest failed to revive the little patient. Every precaution had been taken to prevent the escape of the pus into the air passages, and on *post-mortem* examination no trace of pus was found either in the trachea or in the bronchi. There was no œdema of the glottis. Death is believed to have been due to syncope of reflex origin, though the exact mechanism was not apparent. The pneumogastric nerves were, however, pushed back and stretched by the abscess. The case is recorded so that operators may be on their guard against such an accident which the author, however, sees no way of preventing.

(195) The Treatment of Buboes.

At the recent meeting of the American Association of Genito-Urinary Surgeons (*Med. News*, June 22nd) J. R. Hayden, of New York, read a paper on the treatment of suppurative adenitis of the groin by injections of iodoform ointment, which he said had given him satisfactory results. The operative field having been shaved and rendered surgically clean, a few drops of a 4 per cent. solution of cocaine were injected beneath the skin where the puncture was to be made. The pus was then thoroughly squeezed out through a small puncture. The abscess cavity was next injected with pure hydrogen dioxide until the fluid returned practically clear. It was then washed out with a 1 to 5,000 mercuric chloride solution and injected with a 10 per cent. iodoform ointment. Then a cold mercuric chloride dressing was applied, with the idea of congealing the ointment. The patient should be kept quiet for forty-eight hours, although it was not necessary that he should be confined to bed. The dressings were removed on the third or fourth day. W. K. Otis said he had had considerable experience with this method of treating buboes, and in many instances he regarded it as the best. In most cases he had found that a single injection was not sufficient. Sometimes balsam of Peru was more effective.

MIDWIFERY AND DISEASES OF WOMEN.

(196) Secondary Tuberculosis of the Uterus involving the External Os.

J. L. Reverdin and F. Buscarlet (*Rev. méd. de la Suisse Rom.*, August 20th, 1895) report this case. History: First seen, May 31st, 1892; aged 30; two confinements; since the first, five years ago, has had constant diarrhœa, except during second pregnancy. In February, 1892, copious menorrhagia and metrorrhagia; since then leucorrhœa, with pains in the lower part of abdomen, lumbar region, and groins. Present state: Much emaciated; examination of the lungs, heart, and liver, revealed nothing abnormal; pressure over lower part of abdomen painful; discharge not fœtid; uterus anteverted with cervix near the vulva, pointing straight backwards. On it, a soft ulcer placed circularly, its base rose-coloured and covered with very fine yellow points. Behind the cervix in the posterior *cul de sac* is a hard swelling on either side. The sound passes 9 cm. Under ether the swellings formed by the appendages could be well defined. The uterine cavity and the surface of the ulcer were scraped and a red pulp mixed with little yellow masses was brought away. The bacteriological examination (by Massol) of this tissue, both from the cavity and the ulcer, showed numerous tubercle bacilli. It is rare for secondary tuberculous ulceration of the uterine cavity to spread to the cervix. The hæmorrhage in February, followed by leucorrhœa, was evidently due to the uterine tuberculosis. The woman died on July 25th, 1892, without any recurrence of the hæmorrhage, from exhaustion and diarrhœa.

(197) Vaginal Hysterectomy for Salpingitis.

Quénu (*Presse Méd.*, July 6th, 1895) operates in some cases by laparotomy, in others by vaginal hysterectomy. The vaginal method exposes the patient less to the risk of infection; on the other hand, the operator works to some extent in the dark, and a small centre of inflammation may escape being dealt with. There may also be some difficulty in determining whether the lesion is bilateral, the only condition in which hysterectomy is justifiable. Bilateral pain is not in itself a sufficient indication. A good general rule is, if the uterus is movable, to perform lapar-

otomy; the presence or absence of pus is immaterial, and adhesions, if they exist, are usually easily torn away. Many cases of non-suppurating salpingitis are set in the midst of a mass of rigid adhesions, rendering removal very difficult. In hysterectomy the appendages ought never to be left. The position of the uterus and appendages should be carefully ascertained: if they are placed low the operation should be *per vaginam*; if high laparotomy should be preferred. In the vaginal operation an incision is made in the middle line in the anterior or posterior *cul de sac*, as may be most convenient, and the uterus is denuded laterally by the index finger. The uterus is then totally divided in the middle line, and the divided halves seized with forceps and drawn down. By this means the two broad ligaments are drawn down and secured outside, and hæmorrhage is also prevented by the traction. The appendages are then freed in the usual manner. Artery forceps, which would have been greatly in the operator's way until this moment, are now applied from above downwards, three on each side, including the whole of the broad ligament, and hæmorrhage is effectually checked.

(198) Evil Results of Ventrofixation of Uterus.

Mackenrodt (*Centralbl. f. Gynäk.*, No. 28, 1895) removed the uterus from a woman who had undergone hysteropexy for prolapse about a year previously. Dragging and tearing pains were felt constantly being referred to the site of adhesion of the fundus to the parietes. The patient became more of an invalid than she was before the operation. Mackenrodt therefore amputated the uterus. The supravaginal method was adopted by means of Paquelin's cautery, after tying off and separating the broad ligaments. The cervical canal was cauterised and the stump of the cervix sunk under the peritoneum. This method can be carried out with rapidity.

(199) Macerated Fœtus; Rigidity of Os; Digital Dilatation.

Charles (*Journal d'Accouchements*, Liége, July 14th, 1895) reports the case of a primipara, aged 19, who became pregnant after a period in the middle of September, 1894. At the fourth month she felt the movements of the fœtus. After the seventh month they ceased, and then milk was freely secreted from the breasts, as often happens when the child dies. In the middle of April, 1895, labour set in, and was very lingering. The uterus for six weeks had ceased to increase in size, but the health remained excellent. Charles found the uterus contracting firmly, and the neck was effaced. The os, however, was quite closed and its lips glued together. Next morning there was no change. The patient was placed under chloroform. Not without difficulty the forefinger was forced into the os; the operator's hand became so tired that it had to be withdrawn. An assistant succeeded in introducing two fingers. Then Charles resumed the process, and passed three and at length four fingers. The labour was then easily ended. The membranes were ruptured, and the macerated fœtus extracted with the fingers. It was under 10 inches long, and as the cranium was flaccid, dragging on the hair proved sufficient to effect extraction. The placenta came away spontaneously ten minutes later. A solution of sublimate was injected into the uterus. The patient recovered speedily.

(200) Hæmatosalpinx following Amputation of Cervix.

Pozzi (*Gazette Méd. de Paris*, July 13th, 1895) reports a case in which the cervix had been amputated and complete atresia resulted through want of care in keeping the canal open. Double hæmatosalpinx, due to retained menstrual fluid, was the result. Pozzi removed the appendages through an abdominal wound. Symptoms of suppuration in the uterus set in. The uterus was therefore amputated; as the posterior fornix did not exist, and the body of the organ was retroverted, the operation proved easy. Three injections of antistreptococcic serum were given as serious septic symptoms followed the third operation. Recovery took place, and the patient regained her health.

(201) Gonorrhœa in the Newborn Child.

Koblank (*Centralbl. f. Gynäk.*, No. 28, 1895) recently showed at a Berlin society an infant aged 14 days with gonorrhœal vulvo-vaginitis. On the fifth day the child showed signs of specific ophthalmia. Bleeding from the vagina took place from the seventh to the eleventh day, and then followed purulent discharge. Gonococci in moderate quantity were found in the secretion.

THERAPEUTICS.

(202) Trional as a Hypnotic and Sedative in Internal Diseases.

Spitzer (*Wiener klin. Woch.*, No. 28, 1895) gives his experience of the use of trional in 25 cases of various forms of disease accompanied by pain and insomnia. In 19 cases trional succeeded. These cases consisted of the following: lumbago, intercostal neuralgia, carcinoma uteri, chronic bronchitis, emphysema (2 cases), myelitis (2 cases), sciatica, mitral stenosis (2 cases), fatty heart, tabes dorsalis, pulmonary and laryngeal tuberculosis (5 cases). In 6 cases trional either failed or acted only for a short time, and had to be followed by morphine; these cases were phthisis (4 cases), myoma uteri and arterial sclerosis. Spitzer maintains that trional is a hypnotic not only in various mental conditions, but also in lung and heart diseases. He states that it is especially useful in intercostal neuralgia, sciatica lumbago, and in the lancinating pains of tabes dorsalis. He considers it to approach closely to morphine in its effect, and suggests it as a substitute for morphine. Sleep is obtained usually soon after the administration of the drug, and in most cases continues through the night. In no case was any injurious effect on heart or respiration observed. In a few cases gastric disturbance took place, and sometimes vomiting after awakening; this the author considers an idiosyncrasy, as is the case with morphine.

(203) A New Method of Treatment for Vomiting.

C. L. Greene (*Med. News*, July 6th) "with considerable diffidence" proposes the following plan of treatment for cases of persistent vomiting which threaten life. He acknowledges that the plan is "crude and undeveloped," and he does not appear to have had an opportunity of testing its value in practice. In order to find an effectual method of combating the condition, we must first, says the author, consider the means through which it proves fatal. These are chiefly two—(*a*) actual exhaustion from the violent and persistent retching; (*b*) starvation from the lack of power to secure and retain a proper amount of nourishment. Rectal feeding may partially overcome the latter, but in many cases it is impossible to prevent the retching. Whatever may be the cause of the act, whether local or reflex influences excite it, the actual process remains the same, and consists (*a*) in a slight contraction of the muscular fibres of the stomach itself, bringing about closure of the pylorus and opening of the cardiac orifice; (*b*) a coincident and vigorous contraction of the muscles of the belly wall; and (*c*) a rapid and forcible inspiration, with closure of the glottis, which fixes the diaphragm and furnishes a rigid surface against which the stomach is vigorously compressed and thus relieved of its contents. Greene says it appears to be admitted by modern physiologists that unless a stomach be overfull vomiting cannot be brought about in adults without fixation of the diaphragm, and this fixation is dependent upon the rigid ribs and pressure excited by the deep inspiration, and the column of air retained by the closed glottis. If, then, this be correct, and the trachea be opened, the patient certainly cannot vomit, and if patency of the trachea could be secured by intubation, a means of partial or complete control would be had. Acting on this theory, he has had constructed a modification of O'Dwyer's tube; the head of the tube, however, is much greater in height, and there is an opening on its anterior face, or rather its posterior aspect as viewed *in situ*. Applied to the cadaver, this tube fully meets the indications, and would be borne, there seems to be every reason to believe, with little more discomfort than would be caused by a tube of the ordinary pattern. The association between the centre for glottis closure and that of vomiting is so intimate as to suggest the possibility that mere prevention of approximation of the bands would prevent the proper carrying out of the remainder of the act, and if this

were the case the ordinary tube would be the proper one to use. It would seem probable, however, that any closure of the air passage, through whatever means brought about, would admit of the completion of the act, and that it were absolutely necessary to secure a clear passage for the air, and thus rob the diaphragm of its rigid base of support. The applicability of this method of intubation to severe cases of hiccough or pertussis would also suggest itself.

(204) The Effect of Onions on Diuresis and Perspiration in Healthy Persons.

Stawski has studied this subject in the clinic of Professor Fasternacki, by experimenting on eight healthy persons from 22 to 38 years of age (*Inaugural Dissertation*, St. Petersburg, 1895; *Sajous's Universal Med. Jour.*, July, 1895). Each experiment lasted six days, and for three days previously the person was under control. The amount administered was from 60 to 100 grammes (1¾ to 3½ ounces). Raw onions, to the amount of 100 grammes (3½ ounces), taken with a mixed diet, did not show any distinct diuretic properties, and did not affect perspiration. The weight of the body in five out of the eight cases increased during the experiments as well as afterwards. The quantity of excrements increased, this increase continuing even after the experiments in six out of the eight cases. Raw onions increase the appetite, produce vigour, and afterwards cause temporary inclination to somnolence. They also cause thirst and eructation, increase peristalsis, soften excrement, and favour its easy evacuation.

(205) The Treatment of Itching in Urticaria.

Berliner, of Aix la Chapelle, recommends (*Gaz. Méd. de Liège*, August 22nd) the following method for the relief of itching in urticaria. The affected surfaces are first wetted with cold water, and then rubbed for ten to fifteen seconds with a minute quantity of common table salt with the pulp of the wetted forefinger. After the friction, a small quantity of oxide of zinc ointment or rice or starch powder should be applied. The application soon causes a pleasant feeling of freshness, the itching diminishes or ceases, and the papules disappear. When extensive surfaces have to be deal with, the saline frictions should be made gradually over limited areas lest too intense a mechanical irritation be produced. At the same time tepid bathing and appropriate dietetic and other treatment should be employed.

(206) Treatment of Nocturnal Incontinence of Urine.

Stumpf (*Allg. Wien. med. Zeitung*, July 9th) thinks the cause of nocturnal incontinence of urine is purely mechanical—namely, the pressure of the abdominal organs, which during sleep often lie above the bladder so that the contained urine presses on the vesical orifice of the urethra. Stumpf removes this pressure by placing a pillow under the child's pelvis, thus raising it so that it forms an angle of from 130 to 150 degrees with the spinal column as the latter rests horizontally on the bed. A very low pillow is placed under the head. By this simple plan Stumpf cured 12 cases, including one of a woman aged 34; the incontinence ceased the first night it was tried, and although a few relapses occurred, a complete cure was effected in all the cases, so that after six weeks the patients could sleep in the natural position without risk of wetting themselves.

(207) The Disinfecting Power of the Organic Sulphocyanates.

Müller (*Centralbl. f. Bakt. u. Parasitenk.*, Bd. xvii, 1895, p. 705) describes experiments carried out by himself with the organic sulphocyanates introduced by Edinger. Edinger brings these substances into a certain relation with bodies produced in man, so as to have in them at his command a medium which will protect against infective diseases or will reduce an infection which has already attacked the organism. Edinger believes that, in addition to certain living processes which take place in the human body, the so-called process of self-disinfection may also be brought about by definite chemical substances. From the fact that in the saliva are a series of ptomaines and also a certain amount of sulphocyanate of potassium, the type of the body to be synthesised was indicated. Of these bodies made by Edinger, Müller investigated three, and found that they had disinfecting properties in different degrees, and were all capable of being introduced into animals either subcutaneously or by the mouth in doses which were sufficiently powerful for disinfection.

PATHOLOGY.

(208) Solitary Kidney.

Ballowitz (*Virchow's Archiv*, August 5th, 1895) has collected as far as possible all the recorded cases of congenital absence of one kidney. Excluding cases of fused kidney, and of partial atrophy of one kidney, he finds 213 cases of complete absence of one kidney, upon which he bases the following conclusions: Such deficiency occurs almost twice as often in males as in females, a fact which may, however, be partly accounted for by the greater frequency of necropsies on males. As to age, 23 occurred in the fœtus or newly born, most having some other congenital deformity, especially imperforate anus; the rest were about evenly distributed up to 70 years of age, after which only 7 cases occurred. Taking all cases together, the deficiency is more common on the left than on the right side; but while in males the left kidney is far more commonly absent than the right, in females the two sides show the defect equally. The renal vessels were generally absent, as also the ureter, on the abnormal side (the latter in all except 15 cases); the suprarenal was missing in 31 cases. The solitary kidney was almost always normal in shape and position, but much enlarged. Microscopically the enlargement would seem to be due rather to hyperplasia than to hypertrophy. The bladder, except for absence of the opening of one ureter, was generally normal. In a large number of cases there were associated deformities of the organs of generation, especially of the female organs, and these were almost invariably on the side of the renal defect; they affected the conducting portion much more than the glandular portion—that is, uterus, vagina, and Fallopian tubes in the female, and vas deferens or vesiculæ seminales in the male, rather than the ovaries or testicles. Finally, he points out the practical bearing of the subject—for example, the probability of calculus causing sudden suppression of urine in such cases, and also the danger of surgical interference; and suggests the possibility of diagnosing the condition by ascertaining the absence of the opening of one ureter in the bladder by means of the cystoscope; and also the likelihood of its occurring where any abnormality of the genital organs is found, especially if this be unilateral.

(209) Urinary Toxicity in Variola.

Auché and Jonchères (*Rev. de Méd.*, June, 1895) have investigated this subject. In the pathological state the factors influencing the toxic action of the urine are numerous, such as change of diet, disordered secretion, increased or diminished intestinal fermentation, etc. The method of procedure was that proposed by Bouchard. The 8 cases investigated are related in detail. As to the quantity of urine eliminated, it is sufficiently abundant during the eruptive stage; it is diminished during the secondary fever, and increased again during defervescence. Thus two periods of increased quantity are noted, namely, during the eruption and during defervescence, and two periods of decrease, namely, during the period of invasion and during suppuration. The second increase does not always occur on the same day of defervescence. The toxicity of the urine undergoes the same variations as the quantity. During the eruption, it is about normal. It diminishes during suppuration along with the rise of temperature, and remains stationary for several days before defervescence. The toxicity at this period may be very slight. During defervescence it is increased, and may at times become very considerable. The increase is usually most marked about the second day of defervescence. When very marked it lasts but a short time. In case of febrile complications, the toxicity may again diminish. The delirium frequently seen in variola is in all probability a toxic delirium. The uretoxic discharge is to be attributed to the sudden elimination of toxic substances accumulated in the body. In a case of hæmorrhagic variola, the curve representing the urinary toxicity falls up to the time of death.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(210) Percussion of the Skull in Encephalic Lesions.

Levi (*Il Policlinico*, August 15th, 1895) has practised direct percussion of the skull in sixty-seven healthy individuals ranging in age from 6 months to 88 years. On the whole the right side seemed more resonant than the left. The parietal regions were the most resonant, then the upper frontal and upper occipital. Opening or shutting the mouth had some slight influence on the percussion note. Stoppage of the nares and the respiratory act made little modification. The percussion note was louder in children with closed fontanelles than in those whose fontanelles were still open. The most important modifying factor is the thickness of the skull. Percussion in two cases of tuberculous meningitis gave no characteristic result. In one case of craniotabes and in three of hydrocephalus a marked resonance with vibratile trembling was noted in various parts of the skull, but the same sounds may sometimes be heard in healthy children with persistent fontanelles. As the result of experimental injections of fluid into the cadaveric skull cavity the author concludes that it is very unlikely that ventricular dropsy in the adult can ever produce any sensible change in the cranial percussion note; the same remark also applies to hydrocephalus externus, to softening, or cerebral hæmorrhage. Nor except in the favourable local conditions (thin and partially separated bones) of young children with hydrocephalus is it possible to recognise any characteristic note. The author has never heard the so-called cracked pot sound in percussing these cases. Experiments directed towards the cause of the note seemed to show that it was independent of air in the adjacent cavities - that, in fact, it was a purely osseous sound. On the whole, given normal encephalic volume and density, the author thinks that cerebral changes, however grave, are never *per se* appreciable by percussion.

(211) Polymyositis with Neuritis.

Max Lewy-Dorn (*Berl. klin. Woch.*, September 2nd, 1895) relates the case of a strongly made man, aged 52, who at the commencement of August, 1893, began to notice numbness in the fingers when he let his right arm hang down. In the middle of the month the arm began to swell. About August 20th pain was noticed along the inner part of the arm and upper part of the forearm, increased by movements of the elbow-joint; the rest of the limb felt numb. These unpleasant sensations were most marked when the arm was allowed to hang down. After August 28th the symptoms, which until then had been getting worse, began to improve. The skin was bluish-red, and the swelling seemed to be more in the muscles than due to œdema of the skin. Sensibility was slightly diminished in the parts of the fingers supplied by the median nerve. In the electrical reactions only a quantitative change was noticed - namely, lessened irritability. There is no history of syphilis or alcohol, but the patient is stated during the previous year to have had "influenza," followed by "rheumatism in the joints" during which a tender swollen patch of about a hand's breadth appeared on the inner side of the left thigh, possibly due to myositis; the skin over this patch was blue and shiny; the patch lasted for about a week. The patient was treated by galvanism, massage, etc. On September 20th the arm was less swollen, and the nerves in the internal bicipital groove could be felt distinctly thickened. On October 1st the patient could begin his work again, and on October 9th difference in the appearance of the two arms could still just be made out. In discussing the diagnosis, Lewy Dorn excludes syphilitic myositis and myositis secondary to suppuration or some infection. He does not think the affection was due to mere over-exertion, but considers it to have been a form of disease coming half way between the polymyositis described by Wagener (that is, the dermatomyositis of Unverricht or the pseudotrichinosis of Hepp) and the neuromyositis described by Senator.

(212) Stomach Diseases.

Hayem and Lion (*Arch. gén. de Méd.*, August, 1895) begin a discussion as to the investigation and diagnostic application of objective signs. Notwithstanding the great advances recently made there are still many difficulties. The subject is divided into the physical and chemical investigation. The objects of the physical examination are to make out the situation, shape, dimensions of the stomach, its structural changes, the ease with which it can empty itself and the influence of adjacent organs upon it. The authors attach great importance to the influence of deformities of the chest as produced by the corset (corset disease). Three varieties of these constrictions producing gastric symptoms are described: (1) The submammary, causing ptosis (enteroptosis of Glénard) and displacement of organs; (2) the hepatic, producing constriction of organs without necessarily ptosis. Here the pylorus may be compressed between the liver and the vertebral column, giving rise to mechanical obstruction; and (3) the subhepatic, leading to upward displacement and respiratory difficulties. The authors then shortly describe the normal gastric functions, including the localisation of the lower limit of the stomach and the duration of digestion. Under the morbid conditions the following are discussed: (1) Premature evacuation of the stomach produced by chronic gastritis, with diminution of secretion and insufficiency of the pylorus. (2) Delayed evacuation without dilatation. Here the period of digestion is considerably prolonged. The anatomical substratum consists in a parenchymatous gastritis with hypertrophy and hypersecretion. It may last long without ending in dilatation. The diagnosis is chiefly made by chemical investigation as subjective symptoms. (3) Delayed evacuation with dilatation. Prolonged digestion with slow evacuation is the most common case. Among these come the dilatations due to some mechanical obstruction, as, for example, a gastritis with [illegible] or mechanical obstruction to the flow cause the accumulation in the stomach. The organ hypertrophies in order to overcome this hypertrophy ending in atrophy and atony. Three phases may be recognised. (a) gastritis with retarded digestion, that is, during the day before the stomach is emptied another meal is taken; the stomach thus only becomes empty during the long repose of the night. This produces excessive distension which itself leads to dilatation. Nutrition is generally affected; there is wasting with excess of appetite; (b) phase of active dilatation or dilatation with hypertrophy. The organ still empties itself during the night. The stomach with excessive work to do, presents analogies to the heart in obstructed circulation; (c) phase of atonic dilatation. The stomach often contains more gas than fluid. Atrophy has succeeded hypertrophy. The mucous membrane becomes thinner, and the muscular coat loses its normal structure. Sometimes a stretching of the pylorus with augmentation of the gastro-intestinal angle is superadded. This the outcome of a local peritonitis, which latter is in all probability the result of the gastritis. These adhesions have been looked upon by some (Glénard) as supplementary ligaments, but they do not exist in the child.

SURGERY.

(213) Urinary Infection.

Bazy (*Arch. gén. de Méd.*, June, 1895) relates an instructive case. A man, aged 70, complaining of symptoms apparently of vesical origin, was sounded with negative results. In the evening of the same day a few drops of blood were passed *per urethram*. Twenty-four hours later he had a severe rigor, which was repeated on the following day. When he was first seen by the author nothing abnormal could be made out locally. The urine was scanty, and contained a small quantity of albumen. The patient had had glycosuria for some time past. He was now thought to be suffering from some infection starting from the urethra. The next day there was a little œdema of the scrotum and legs. A swelling then appeared in the perineum, consisting of a peri-urethral phlegmon. Two sloughs appeared, one on the [illegible] return the glans on the penis. When these were removed pus could be made to well up by pressure along the

urethra. Incisions were made, but the patient eventually died. Here there were two periods in the illness, the general symptoms preceding the local. The author emphasises the fact that glycosuria sometimes causes vague urinary symptoms and draws attention to the dangers of catheterization in these cases. A point of entry may thus be opened for some infection. In infections starting from the urinary apparatus the lesions are mostly renal. Fever is only one symptom in these infections, and it may be absent. The state of the pulse and respiration is more important. These urinary infections only differ from infections starting elsewhere in the intermittent fever observed in individuals with septic urine subjected to catheterization. This fever, observed only after micturition, can be explained only by the entry of some pyretogenic substance into the circulation. The evolutions of these infections depends on (1) their place of origin, whether from the urethra, bladder, or kidney; (2) the agents causing them; and (3) the nature of the soil—for example, diseased kidneys. As regards treatment, it is necessary to guard against the stagnation of micro-organisms, hence their evacuation by washing out the bladder, incision, and drainage, etc. The elimination of poisons absorbed must be encouraged through the emunctories.

(214) Tuberculosis and Neoplasm of the Bladder: Surgery or Hygiene?

At the recent meeting of the American Association of Genito-Urinary Surgeons (*Med. News*, June 22nd), L. Bolton Bangs, of New York, read a paper with the above title. He reported three cases of tuberculosis of the bladder, which he stated were typical of many, and in which the hygienic treatment was followed by very beneficial results. Among the many troublesome cases of disease of the bladder one was called upon to treat, none was more difficult than those due to tuberculous infection. At first the symptoms in these cases were often obscure and so similar to those produced by other morbid conditions that the diagnosis was frequently doubtful, and in many even impossible. Later on the clinical picture became so characteristic that all doubt as to the diagnosis was removed. But at this stage treatment could effect but little. But if the disease could be discovered in its incipiency and proper measures taken for its relief, it might be regarded as curable, certainly in the sense of being held in abeyance. Vitalisation of tissue was what these patients needed, and they required at least two years of good hygienic residence in a temperate climate; and besides climate they needed occupation. Surgical traumatism produced by overzealous efforts to relieve local symptoms seemed to result in more harm than good. The author also reported three cases of malignant disease of the bladder, in which he stated that a cure also depended upon an early diagnosis. Unfortunately, in these cases many of the early symptoms were overlooked or misunderstood. In conclusion, he stated that he had contrasted these two groups in order to present for discussion the points: (1) that cases of incipient tuberculosis of the bladder should be subjected to hygienic rather than to surgical treatment, and (2) that in the incipient stages of neoplasms surgical treatment of the most radical kind should be instituted. J. P. Bryson (St. Louis) said he was entirely in accord with the statements made by Bangs regarding the treatment of the tuberculous cases. In tuberculous cystitis perineal drainage was not to be recommended. In two of his cases the perineal wound became infected and failed to heal. The suprapubic route was altogether to be preferred when drainage is to be resorted to. In cases of vesical neoplasms the symptoms frequently came on late. If the new growth was situated toward the fundus, or at any considerable distance away from the vesical outlet, there was no reason why we should get any symptoms of its existence for a considerable length of time, and the first symptom was likely to be hæmorrhage. G. W. Allen (Boston) reported a case of tuberculosis of the bladder in which the symptoms entirely disappeared under hygienic treatment.

(215) Atrophy of Testis and Prostate after Section of Vas Deferens.

Isnardi (*Rif. Med.*, June 19th, 1895) showed before the Accademia di Medicina of Turin an old man of 72, whose vas deferens he had divided six weeks before for enlarged prostate. For the last year the man had suffered from advanced symptoms of enlarged prostate rebellious to every treatment. The prostate was much enlarged, and the patient had to put himself into odd positions before he could micturate. Twelve days after operation the symptoms began to diminish, and disappeared in a month. He can now hold his water for seven hours during the night, and pass it voluntarily and without pain. The urine, which was before purulent and blood-stained, is now clear and normal. There is induration over the incision extending down to the epididymis, the testis is diminished, and the prostate impalpable.

(216) The Hysterical Breast.

This is a condition which Gilles de la Tourette (*Journ. de Méd.*, August 10th) considers of much importance, not only because it is a well-defined manifestation of hysteria, but also from the fact that it has given rise to errors of diagnosis and needless removal of the organ. It consists in a temporary enlargement of the breast, with considerable hyperæsthesia of the skin covering the organ. This hyperæsthesia, liable to vary, becomes much more marked during menstruation; there is then also more swelling, and considerable pain is complained of. On palpation at such a time it is possible to perceive one or perhaps two tumour-like masses in the substance of the breast, about the size of a hen's egg, but which are not painful, the hyperæsthesia being cutaneous. The affection is often of long duration, more especially in those cases where there is faulty therapeusis, as often happens. It seems to depend on a hysterogenous band of hyperæsthesia at the level of the breast, which induces an œdema of the connective tissue of the gland. In this way are produced the local swellings, and even patches of white, pink, or violet under the skin.

MIDWIFERY AND DISEASES OF WOMEN.

(217) Perimetritis from Vulvitis in Infants.

Marx (*Revue Obstét. Internationale*, July 11th, 1895) has several times observed symptoms precisely resembling those indicating acute inflammation of the appendages in the adult. A child subject to vulvitis, yet otherwise in good health, is suddenly seized with fever and nausea. Pain is felt in the hypogastrium, radiating along one or both thighs. Frequent desire to micturate and pricking feelings when urine is passing are often felt. Rectal exploration with the little finger shows characteristic deposit on each side of the uterus. Marx finds this physical symptom common, and believes that the tubes are generally involved in chronic vulvitis. In such a case the pain at puberty is very violent, and masturbation may light up old-standing inflammatory trouble. Old lesions of this kind are certainly liable to become acute in young recently married women through excessive coitus. It is quite a mistake to accuse the husband, or to suspect that the wife has recently suffered from specific discharge, in many such cases. The focus of disease has often dated from early childhood.

(218) Lateral Hæmatocolpos.

Muret (*Sem. Méd.*, May 8th, 1895) reported this case before the congress of Swiss physicians held at Lausanne. A girl, aged 18 years, had menstruated irregularly for some months, and suffered intense dysmenorrhœa. There was an elastic swelling rising above the symphysis pubis, and forming a well-marked prominence in the vagina, the latter being very straight and ending in a *cul de-sac*. On incising lowest part of tumour, about 2 litres of chocolate-coloured blood was evacuated. After this pain ceased, and menstruation became regular. Later, an examination under ether revealed the fact that the vagina was double. That on the right (the seat of atresia) was the best developed; its cavity was divided into two by a diaphragm with a large eccentric orifice; to its left an ovary could be felt. The left vagina, which was naturally open, narrowed considerably above, and ended in an orifice communicating with the right vagina. This coexistence of a single uterus non unicornis with two vaginæ is very rare, and is to be explained by a fusion of Müller's ducts, complete above but incomplete below. It was curious that the best developed vagina was atresic.

The presence of menses before operation was due to the communication between the two vaginæ.

(319) Tetany in Pregnancy.

H. M. Thomas (*Johns Hopkins Hosp. Bull.*, May-June, 1895) describes a case in a woman, aged 33. There was no sign of the disease in the course of the first pregnancy, but during the remaining six, which occupied the space of twelve years, tetany was constant. The patient was always well during the first half of pregnancy, but afterwards daily attacks set in, and became more violent and alarming with each succeeding pregnancy. For three or four weeks before confinement she had no attacks, and only once during labour did she have spasms, but about a week after confinement she always had a severe attack, except after her seventh delivery. Whilst suckling she was free, except after her second pregnancy, when tetany had occurred for the first time. When menstruation reappeared she was subject to tetany at each period during cold weather, but was free from them in summer. In April, 1894, when she was comparatively well, there was no difficulty in demonstrating Trousseau's symptom, the facial phenomenon, and a very great increase in the electrical excitability of the nerves. Thomas believes that tetany depends on some abnormality in the function of the thyroid gland. The unusual demands made upon this organ in the later months of pregnancy make that condition favourable for the occurrence of the characteristic convulsions.

(320) Puerperal Fever without Localising Signs.

Rapin (*Sem. Méd.*, May 8th, 1895) reported the following case before the congress of Swiss physicians at Lausanne. A multipara was delivered of stillborn twins by version; placenta removed. At first the lochia were fœtid without fever, pain, or gastric trouble. Antiseptic intrauterine injections twice daily. On the the 10th day the patient got up and appeared cured. On the 18th to 28th day, high fever and rigors once or twice a day. No localisation possible in any organ. Quinine, alcohol, and wet pack ordered, and on the 30th day uterus curetted. The latter brought away abundant deep granulations of lardaceous tissue. The uterine walls were soft and friable. Temperature fell the same day; one rigor in the evening; after that convalescence was rapid, and the patient was discharged with no apparent lesion anywhere. Rapin believes this case to be unique; it shows the value of the curette even in chronic cases after local signs have disappeared, and proves that the illness was due to sapræmia and not to septic infection.

(321) Alleged Ovarian Gestation.

Larsen (*Centralb. f. Gynäk*, No. 28, 1895) describes an instance of ectopic gestation which occurred in a primipara aged 33. The period ceased after August, 1891; on April 10th, 1892 spurious labour set in. On September 27th, 1892 the sac was removed. It was fairly free, though it adhered to a few coils of intestine; it was connected with the uterus by a pedicle, which included the right tube and broad ligament. Removal was easy. The right ovary was not seen, the left tube and ovary were normal. The patient made a good recovery. The sac contained a flattened macerated fœtus which had apparently developed to term, the placenta lay posteriorly. It had opened up the layers of the mesosalpinx, and came into intimate relation with the dilated and obstructed abdominal end of the Fallopian tube. In the anterior, which was the thicker part of the fœtal sac, true ovarian tissue was detected, with follicles and ova. No evidence was given to show that the ovary was the primary seat of the abnormal gestation.

THERAPEUTICS.

(322) The Reaction of Sulphonal in the Urine.

Lafon (*Sem. Méd.*, May, 1895) reports the case of a patient who in 1891 was passing 180 g. of sugar in the twenty-four hours, and in whom, after some months' treatment, the sugar disappeared. Some months later he took, during a period of two months, from 0.75 g. to 1 g. sulphonal daily. During this time the analyses of the urine, which were made frequently, invariably showed a precipitate of yellow oxide of copper when treated with Fehling's solution. The same urine examined with the polariscope, with monochromatic yellow light, showed none of that deviation to the right characteristic of diabetic sugar, but a scarcely appreciable deviation to the left. Twenty examinations were made, and always with the same result. This reduction of the copper solution was not, in his opinion, due to any product of the transformation of sulphonal in the system, because a medicinal quantity of sulphonal added to the urine (1 g. per litre) gave exactly the same precipitate.

(323) Treatment of Advanced Cases of Phthisis.

Otis (*Boston Med. and Surg. Jour.*, June 20th, 1895) summarises the therapeutic agents which are best calculated to alleviate the lingering sufferings of the last stage of phthisis. He calls attention to the frequent presence of sepsis, and holds that all treatment in these cases must be symptomatic. The diminished lung capacity necessitates an airy room, in which sunlight is required as a tonic antiseptic. Feeding is a difficult question; in bad cases there must be frequent administration of easily or partially digested food. The pepsin, charcoal and bismuth tablet of Wyeth may be of much service. Malt and creasote, with cod-liver oil in the absence of fever, should be given, and alcohol is to be used freely. Fever should not be treated unless causing unpleasant symptoms; inunction of guaiacol reduces the temperature very effectually but is severely depressant. Rest in bed, with light nourishment and a glass of cognac half an hour or so before the expected rise, has a favourable effect on the temperature. Antipyretics of which phenacetin and sodium salicylate appear the best, should be employed if at all to prevent the rise of temperature rather than to lower it after it has risen. Sweating is best controlled by agaricin in doses of $\frac{1}{4}$ grain and upwards. It is free from the after effects of atropine. The distressing cough is due partly to the presence of material in cavities, partly to the irritability of the mucous membranes of the upper air passages. That from the latter cause can be much alleviated, as Dettweiler has pointed out, by establishing a habit of self-restraint in the patient. Medicinally codeia in 1 per cent. solution is the best agent. The morning paroxysm of coughing is necessary for expectoration of the products accumulated during the night; it can be shortened and at the same time made easy and effectual by administering a glass of some warm alkaline drink with a little brandy or rum in it. Cough from catarrh of the upper air passages is often relieved by local applications. Vomiting may result from digestive disturbances or laryngeal irritation, and will require different treatment in each case. The various pains from which the patients suffer are best relieved by painting equal parts of glycerine and guaiacol over the affected area. Pleuritic pain at the base of the chest should be treated by strapping, as suggested by Roberts. Diarrhœa, when septic, indicates salicylic acid or naphthol; when due to tuberculous ulceration, opium and bismuth, with an astringent; this form requires careful dieting with peptonoids or peptonised milk. Hæmoptysis calls for the same treatment as in early cases; Darenberg recommends the application of ice to the testicles or vulva for five minutes twice a day. Insomnia may be relieved by light nourishment or a little stimulant at bedtime; if these fail, trional or chloralamid are the most satisfactory hypnotics. Œdema of the lower extremities can only be alleviated by position, gentle friction with alcohol and water, and wrapping the limbs in cotton wool. The mouth and lips should be cleaned with an alkaline wash. The anæmia calls for iron whenever it can be borne, and Otis finds a preparation called pepto mangan the most satisfactory form for administration. For the cardiac debility strychnine is, as Mays pointed out, invaluable, and is in every way the most useful of all drugs in the treatment of the last stage of phthisis.

(324) Argonin: a New Germicide.

Rudolf Meyer (*Zeitsch. f. Hygiene und Infectionskrankheiten*, xx, 1895) has investigated the bactericidal action of argonin, and compared it with that of silver nitrate, and also of Schäffer's new disinfectant argentamin (ethylene-diamin-silver-phosphate). Argonin

(first prepared by Röhmann and Liebreich) is a soluble compound of silver and casein. The solution in water is opalescent when dilute, opaque when concentrated; it is immediately cleared by the addition of ammonia or carbonate of soda. Argonin gives no precipitate with sodium chloride or ammonium sulphide unless the silver is set free from it by previous addition of an acid. Meyer finds that a solution of argonin 1 in 750, has the same bactericidal action on micro-organisms suspended in water as argentamin, 1 in 4,000, or silver nitrate 1 in 3,000; on micro-organisms in albuminous fluids its action is equal to that of argentamin, 1 in 4,000, or silver nitrate 1 in 1,000. The addition of a little ammonia to the argonin solution vastly increases its bactericidal power; exposure of gonococci to a 1 in 30,000 solution of ammoniacal argonin for five minutes completely stopped all growth. Meyer concludes that from the experimental side it must be admitted that this new silver preparation has a strong disinfecting power against certain bacteria, particularly the gonococcus. It does not penetrate very deeply into the tissues; it gives no precipitate with either albumin or chlorides, and concentrated solutions are neither corrosive nor irritant. The addition of a small amount of ammonia increases the bactericidal power enormously, and causes considerable penetration, but deprives the drug of its bland and non irritating character.

(225) Quinine Hæmoglobinuria.

Tomaselli (*Clinica Moderna* May 1st) describes a class of case found in the subjects of chronic malaria, in which the administration of quinine is followed by symptoms resembling paroxysmal hæmoglobinuria. Half an hour or two hours after the quinine is given, the patient is suddenly seized with nausea, more or less marked tremor, and high temperature. He complains of a feeling of weight in the loins, and an imperious need to void urine. When the urine is passed, it is found to be sanguineous. Often there is vomiting, diarrhœa, and finally jaundice. Hæmaturia alone, without the other symptoms, may be present. The method of administration and the quantity of the drug used seem to have no influence in relation to this curious idiosyncrasy which appears to be more or less transmissible, since several members of the same family showed the same intolerance of the drug. The most important predisposing conditions seem to be malaria and the special idiosyncrasy. Quinine has also been known to cause urticaria, delirium, mania, and vesical spasm when given in malaria; the addition of opium may prevent the latter symptom. In the cases in which quinine causes hæmaturia, etc., it must be prescribed entirely; even mere rubbing of the skin with the drug has been known to cause hæmaturia in susceptible subjects. As a substitute the author uses salicin and Fowler's solution, or alcoholic extract of eucalyptus.

(226) Argonin in Gonorrhœa.

Jadassohn (*Archiv f. Dermatol. und Syph.*, 1895) has used argonin in the treatment of gonorrhœa in 200 cases, 72 of which were in men and 128 in women; these embraced all stages of the disease. He considers that, although the gonococcus can in certain instances penetrate into the connective tissue, the disease is in general a superficial one, and lays down two postulates for the treatment of acute gonorrhœa: (1) To kill the gonococci as quickly and completely as possible in every spot where they can be reached; (2) to spare the mucous membrane as much as possible and to avoid increased inflammation, destruction of tissue, and unnessary pain. His experience convinces him that argonin will not displace the other antigonorrhœal injections in every case; the indications for the use of silver nitrate, argentamin, and argonin respectively have yet to be formulated. His conclusions as to the last named are these: (1) 1·5 to 2 per cent. solutions exert a rapidly destructive action upon gonococci; (2) strong solutions are devoid of inflammatory or corrosive action, and are hence adapted to the treatment of acute gonorrhœa of the anterior and posterior urethra in men and of the urethra and uterus in women; (3) it appears to lack astringent properties, so that purely anticatarrhal treatment will indicate the assistance of other remedies.

PATHOLOGY.

(227) The Thyroid Body and Graves's Disease.

The question of the relation of Graves's disease to the thyroid body was discussed (*Sem. Méd.*, August 7th, 1895) before the French Congress of Alienists and Neurologists at Bordeaux. Brissaud reviewed the various theories of Graves's disease: (1) The oldest, that the heart affection is primary, and is caused through the sympathetic nervous system (Trousseau); (2) that the primary lesion is bulbar or central; (3) that the thyroid gland causes the disease by secreting toxic substances; (4) that the disease is only a concurrence of symptoms. The only constant symptom is tachycardia, for the goitre and exophthalmos may be absent, while the coexistence of Graves's disease and simple goitre in the same locality has never been shown to be more than a coincidence. The amount of hypertrophy of the gland is variable and not proportional to the severity of the symptoms, and it is quite contrary to facts to conclude from the anatomical changes that excessive thyroid activity is the cause of the disease, for the author found that of 25 adult thyroids, where no symptoms of Graves's disease were present during life, not one was healthy. The usual presence of goitre has gone against the bulbar theory; but Filehne and Durduf produced exophthalmos, swelling of the thyroid, and tachycardia simultaneously by cutting the restiform bodies in young rabbits. If this is confirmed, one must agree that the thyroid function may be vitiated by morbid bulbar impulse, and that this perverted function may again produce symptoms. As regards the internal thyroid secretion, all are agreed that it has an immediate action on the nervous system, and a secondary one on general nutrition. Notkine (*ibid.*, April 3rd, 1895) claims to have isolated from the thyroid body the substance (called by him thyroproteid) which causes myxœdema and its acute complications, the actual secretion of the gland being a ferment which converts the thyroproteid which is collected by, and stored up in, the gland into a useful substance (thyroidin). If Graves's disease is caused by overactivity of the gland there would be, on this hypothesis, no more thyroproteid left, and the organism would be saturated with thyroidin (hyperthyroidation). Renaud (*ibid.*, August 7th), in 1888, had described a lesion which among the variable ones of thyroiditis is never wanting in Graves's disease, whether the gland is hypertrophied or not. This is an intralobular cirrhosis obliterating the lymphatics except quite at the margin of and between the lobules, by reason of which the thyroid secretion passes directly into the veins instead of partly into the lymphatics. This, with the presence of a peculiar type of fever, led him to suppose that the disease was caused by a morbid poison, which normally underwent destruction in the lymphatics. The latter view is supported by the fact that an extract of an adult gland is harmless when ingested, being absorbed in the chyle and passing through the lymphatics. In the fœtal thyroid the follicles secrete a mucous substance (thyromucin), in the adult a colloid (thyrocolloidin). This latter is normally produced in all the follicles which are connected with the lymphatics, but in exophthalmic goitre it is only found at the margin of a lobule, the central follicles being poor in thyrocolloidin, or, if freshly formed, filled entirely with thyromucin. This closure of the lymphatics, which in the thyroid take the place of an excretory duct, causes a hypertrophic cirrhosis (*cf.* biliary cirrhosis) with new gland formation of a fœtal type. Renaud concludes that the normal function at the periphery of the lobules being maintained is sufficient to prevent myxœdema by pouring thyrocolloidin into the blood. In the centre, however, only thyromucin is absorbed, and this he looks upon as the poison in Graves's disease. In their attempts to produce hyperthyroidation Ballet and Enriquez injected extract of adult thyroid, that is, thyrocolloidin, and it remains to be seen whether Graves's disease could be brought about by injecting extract of fœtal gland, that is, thyromucin. This exophthalmic goitre is neither purely of bulbar nor of thyroid origin, the secretion of the gland being controlled by a centre in the medulla (*cf.* diabetes).

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(1225) Root Paralyses of the Brachial Plexus.

RAYMOND (*Presse Méd.*, March 23rd) classifies paralyses of the brachial plexus as follows: (1) Simple, limited to such and such a branch, for example, the circumflex nerve. Instances are not uncommon. (2) Complete, of three kinds according to seat of causal lesion (*a*) where below or beyond the plexus—several simple associated paralyses; (*b*) where affecting plexus itself, determining paralyses proper of the brachial plexus; (*c*) where found on this side or above the plexus on its roots. This form constitutes radicular or root paralyses. Paralyses classed under (*b*) and (*c*) are total or partial. No essential symptomatic differences exist between total paralyses of the plexus proper and total root paralyses. It is not so when these two varieties are partial. Partial root paralyses are of two clear clinical types, namely, (1) A superior, more frequent, known also as the Duchenne-Erb type. In the typical form of Erb the paralysis affects the deltoid, biceps, brachialis anticus, superior longus. To their paralysis is sometimes added that of the supraspinatus, infraspinatus, clavicular portion of pectoralis major, superior brevis, forming Duchenne's obstetrical type. (2) An inferior type, relatively rare, known also as the Klumpke type. Here the muscles paralysed are those innervated by the median and ulnar nerves. In Erb's typical form the causal lesion affects the fifth and sixth cervical motor roots, that is, a part of their fibres or those destined for the four muscles mentioned. In Duchenne's obstetrical type a great number or almost all the fibres of the same roots are affected. In the inferior or Klumpke type the lesion concerns the first dorsal pair and oculo-pupillary phenomena coexist. Intermediary forms exist between these sharply marked types. Since a distributory nerve branch derives its fibres from roots distant from each other, paralysis of such nerve is widely different in distribution to that of the nerve roots. Total paralyses of plexus or roots present (1) abruptness of onset, usually traumatic; (2) early appearance of pains in the limb, sometimes fleeting, sometimes permanent; (3) the motor paralysis is contemporary with the pains; (4) anæsthesia, usually total, with the exception of a triangular zone on the inner surface of the arm—the anæsthesia is often deep, affecting the muscular sense; (5) muscular atrophy, when present, starts at the scapular cincture to gain later the arm and forearm; (6) trophic disturbances, namely, œdema, cyanosis of the skin, lowering of local temperature, etc.; (7) in certain cases oculo-pupillary troubles (myosis, diminution of palpebral slit, retraction of globe, etc.). Partial root paralyses, besides the varying forms of motor paralysis mentioned above, present (8) anæsthesia. In the superior type this coincides with the neuritic pains, and quickly disappears. It concerns three distinct zones: (*a*) the zone of skin about the shoulder supplied by the circumflex nerve; (*b*) the external part of the forearm innervated by the musculo-cutaneous nerve; (*c*) the thumb and index finger supplied by the median nerve. In the inferior type anæsthesia is the rule, occupying more or less the skin innervated by the ulnar, internal cutaneous, or median nerves. As to etiology, cold and lead poisoning are rare causes, traumatism (surgical and obstetrical intervention) most frequent. Hæmorrhagic compression has been recorded.

(1223) A Curious Gastric Concretion.

PAUL MANASSE (*Berl. klin. Woch.*, 1895, No. 33) reports the case of a man, aged 44. He took alcohol too freely, and last year complained of anorexia, headache, etc., had a coated tongue and slight tremor. His symptoms were attributed to alcoholism, and after a month's treatment he was much improved. Some months, however, later he died of a rapid tuberculosis of the lungs and diaphragm. Besides this the necropsy revealed a deep chronic ulcer of the stomach situated close to the pylorus, and causing adhesion of this part of the stomach to the liver. By the ulcer was found a calculus of flattened cylindrical form, measuring 10 cm. in length, 5 cm. in width, and 4 cm. in thickness, and weighing only 75 g. It was very dark green in colour, of a resinous appearance, showing a laminated structure. Chemical examination confirmed the view that the concretion was of a resinous material, resembling shellac. The patient was a joiner, and Manasse thought that he probably habitually drank some of the alcoholic solution of shellac used in his trade, and that the shellac, precipitated in the stomach, gave rise to the calculus. His master, when asked about it, said that the man had habitually drunk shellac polish, and that he had repeatedly warned him on that account. In this case there was only one concretion, but in Carl Friedlaender's case there were many shellac stones in the stomach and intestines, and they gave rise to fatal ileus. It appears that in the case of Langenbuch the two concretions (one in the stomach, one in the intestines) were likewise of shellac.

(1226) The Clinical Value of the Phenyl-hydrazin Test for Sugar in the Urine.

WILLIAMSON (*Medical Chronicle*, August, 1895) discusses the clinical value of the phenyl-hydrazin test for sugar, and draws attention to a very simple method of performing the test. A test tube is filled for about half-an-inch with hydrochlorate of phenyl-hydrazin in powder, then for half-an-inch with acetate of soda in dry powder; the tube is half filled with the suspected urine, which is boiled for two minutes. It is allowed to stand, and the deposit examined some hours later. If sugar be present the deposit contains numerous clusters of needle-shaped crystals of a bright sulphur yellow colour. If performed according to the above simplified method, phenyl-hydrazin is a most valuable confirmatory test for sugar in the urine; the reagents keep well. The test is very easily performed, and is very suitable for clinical work. It is very sensitive—more sensitive than Fehling's test and the fermentation test—and will give a distinct reaction with diluted urine containing 0·015 per cent. of sugar. But it is not too sensitive, and gives no reaction with normal urine. If in performing the test the test tube is heated in a water bath (as is usually recommended), the method is somewhat troublesome for clinical work; and by prolonged heating very minute yellow crystals can be obtained in normal urine. Hence the latter method is too sensitive for clinical work. The nature of these minute crystals is somewhat doubtful, but their formation is prevented by the action of yeast on normal urine for forty hours. If the simplified phenyl-hydrazin test gives no reaction with a urine that reduces Fehling's solution, then the reducing substance is not sugar. Many substances besides sugar reduce Fehling's solution slightly (uric acid, creatinine, hippuric acid), but give no reaction with phenyl-hydrazin. Besides the various forms of sugar, glycuronic acid and pentose form yellow crystals with phenyl-hydrazin, and also reduce Fehling's solution; but their occurrence in the urine, except as the result of the administration of some drug or in the slightest trace, is exceedingly rare. The great value of the phenyl-hydrazin test (simplified method) is as a negative test. A urine which gives no reaction may be declared quite free from sugar for all practical purposes.

SURGERY.

(1231) The Action of Erysipelas Serum on Malignant Growths.

KOPYSTEIN (*Wiener klin. Rundschau*, 1895, Nos. 33 and 34) has tried the action of three different strengths of serum from sheep inoculated with erysipelas streptococci in 15 cases of malignant disease; 13 of these were carcinoma, 1 sarcoma, and 1 malignant lymphoma. In almost every case the injection was accompanied by violent burning pain in the tumour, often lasting some hours. Severe headaches and pains between the shoulders and in the loins were almost the rule; while many of the patients suffered also from joint and pleuritic pains. Rigors, with grave general cyanosis, followed by great weakness, were seldom absent after the injection; in one case two rigors followed a single injection. As a rule injection was followed by a rise of temperature, the highest being 105·5°, the average 101·2°. The rise was usually

with the rigors, but in one case the temperature reached 103° without a rigor. The fever came on half to one hour after the injection, and lasted four to six hours. There was no albumen in the urine. Other occasional consequences were nausea, vomiting, noises in the ears, diarrhœa, palpitation, epistaxis, and dyspnœa. Injection of the primary tumour had no effect on the secondary growths, but rather led to an increase in the size of the glands. Injections into the metastases did not affect the primary growth, but the metastases themselves became a little harder than before owing to an increase of connective tissue. The carcinomatous nests were, however, unaffected. Primary non-ulcerated growths behaved like injected metastases. There was prolonged swelling and tenderness after the injection at the seat of which an abscess formed in one case. In another the tumour broke down, and discharged carcinomatous masses without pus. Ulcerated growths showed well-marked reaction to injection. The base took on a healthy appearance, the stinking secretion disappeared, and the edges became flatter and eaten out. In some cases the whole basis and margin softened, and numerous islets of soft red tissue shot up on the healthy soil. Histological examination of these, however, showed granulation tissue, containing cell nests with perfectly formed cancer cells. The secondary growths were in no instance affected. The only action upon malignant lymphoma was clearing up of a gangrenous ulcer, while a sarcoma of the ilium became larger after injection, and the patient developed sciatica, which had not before been present. Kopfstein hence considers the action of this serum to be purely local, the tumours undergoing alteration only in the immediate neighbourhood of the injections. Even where diminution of the growth occurs, which is mainly in ulcerated cases, no prospect of cure can be held out. He strongly endorses Bruns's view that this new method has not in the least advanced the non-operative treatment of malignant disease.

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(332) Actinomycosis.

Chioux (*Arch. gén de Méd.*, April, 1895) begins a study of this subject. In man the lesions are associated with suppuration, whereas in animals small hard tumours are formed resembling sarcoma. The identity of the micro-organism in these cases has been proved. The lesions in animals occur in association with the lower jaw tongue, pharynx, and respiratory organs. In man they appear most often in the neck. The parasite provokes a round-celled growth, the cells in contact with it undergoing degenerative changes. Thus a small abscess is developed containing the parasite in the form of a yellow granule. It tends to make its way to the surface but also invades the deeper tissues. Cavities and osteophytes are produced in bone. In the lung the lesion is either peribronchial or intrapulmonary. It varies in size from a millet seed up to a cherry, or even an apple. It may make its way through the pleura and chest wall. The heart muscle and pericardium may be involved secondarily. In the alimentary canal the lesions may be superficial or deep. In the former case the parasite invades Lieberkühn's glands and forms plaques; or it may penetrate deeper, and, in the case of the cæcum, simulate an appendicitis. In the abdomen adhesions are formed. Actinomycosis may also involve the genito-urinary organs and also the brain. Joints near the disease may also be implicated. Distant or metastatic lesions may occur. The author then begins an account of the various clinical types. The most common manifestation of the bucco-cervical type consists in a hard swelling, beginning mostly in the upper neck, and particularly behind the angle of the jaw in the near neighbourhood of a carious tooth. There is marked induration about it, and fistulæ subsequently appear. In the thoracic form the disease may have spread from a neighbouring primary focus or it may be metastatic; most often it is primary. It has been known to penetrate veins, and thus spread by embolism. Occasionally in the primary form acute symptoms have been present at the outset, but more often it begins more gradually, with pain in the side, increasing dyspnœa, etc. There may be signs of effusion; if it involves the apex, it may be put down as tuberculosis. Eventually an indurated patch, which may soften, appears on the chest wall due to the invasion by the parasite. The tendency is to the invasion of all neighbouring tissues.

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(333) Trephining in Empyema.

Rey (*Gazz degli Osped.*, July 11th, 1895) recommends trephining through the rib in cases of pleural empyema. Intrapleural antisepsis can be well carried out by this method, and the integrity of the chest walls is better preserved, thus facilitating the re-establishment of respiration on the affected side. The author makes an incision 4 or 5 centimetres long over the eighth or ninth rib, about 6 centimetres from the costal angle, and then applies a trephine with a crown of 1 centimetre's diameter. After the disc of bone is removed the pleural cavity is washed out with sublimate solution and boracic lotion, and the largest possible size of drainage tube inserted, extending 4 or 5 centimetres into the pleural cavity. If necessary, other parts of the same rib may be trephined. The author has had considerable success with this revival of an ancient practice in the treatment of empyema.

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(334) The Treatment of Obstruction of the Common Gall Duct.

McGraw (*Annals of Surgery*, August, 1895) is strongly opposed to the operation of cholecystenterostomy for jaundice caused by calculi in the common ducts, and holds that though it is easy of performance and gives speedy relief, it belongs to the period of development in the surgery of the gall ducts, and cannot long retain the place which it now holds. The operation, which has been frequently performed since the introduction of Murphy's button, though it gives relief, fails to cure. The stone which caused the obstruction remains in the common duct, irritating it by its presence, and threatening suppuration with all its dangerous consequences. The adhesion established between the gall bladder and bowel will inevitably produce at times great traction on one or other of these organs, and interfere with their movement and with the performance of their proper functions. Again, the adhesions produced by gall stones are often more serious and cause more disturbance—colicky pains, flatulence, chronic dyspepsia—than the passage of the gall ducts themselves. After the operation, whilst the gall bladder takes on itself the function of the common duct, the latter becomes to all intents and purposes an abnormal gall bladder, which may contain stones and be irritated and inflamed. It is not yet known how long the artificial fistula between the gall bladder and the intestine will remain open and permit the free flow of bile. The tendency of such orifices, it is pointed out, is to gradually contract and close. The only rational procedure in cases of obstruction of the common duct by stone is, the author holds, removal of the obstructing body. If the patient be so exhausted by long-continued jaundice that a prolonged operation is inadvisable, the surgeon should establish a biliary fistula through the abdominal wall, as that procedure would give as much relief as the operation of cholecystenterostomy, without injuring the intestines or establishing new adhesions within the abdomen.

MIDWIFERY AND DISEASES OF WOMEN.

(335) Twin Labour: Placenta Prævia Centralis.

Kahn (*St. Petersburger med. Woch.*, No. 16, 1895) relates a very complicated labour. The patient was 23 years old. She had borne one child. Her last period was in May, 1894. Three floodings occurred. On October 30th Kahn found her very anæmic. The uterus reached to the umbilicus, and was contracting; fœtal heart sounds were audible; the placenta was presenting. At 11 P.M., severe hæmorrhage having come on, in spite of hot irrigations and the tampon, delivery was hastened. The os already admitted three fingers. In attempting to separate the placenta from its attachments some time was lost, as there were firm adhesions. Kahn therefore pushed his hand through the middle of the placenta. A great quantity of liquor amnii escaped. A male fœtus, 7 inches long, was then extracted with ease; the head presented. Then the feet of a second fœtus could be felt through a second bag of membranes. Hæmorrhage ceased for awhile, and restoratives were given. A few hours later,

as the patient looked very ill, delivery was hastened. The first placenta still adhered firmly, and had to be separated—a task which proved very difficult. Then a dead female fœtus, smaller than the first twin, was extracted. Lastly, the second placenta, adherent to the posterior part of the uterine cavity, was detached with considerable trouble. The cavity was packed with iodoform gauze. The patient rallied, and was warned not to get up for three weeks. On the eleventh day she stepped out of bed and immediately fainted. On recovering, she noticed that her right arm and leg were weak and she could not speak easily. Next day coma set in and ended fatally.

(236) Defective Development of Sternum in a Child aged 3 Months.

Hock (*Prag. med. Woch.*, July 4th, 1895) writes of a child which was born with an abnormal appearance about the front of the chest. The integuments were sound, but the left lung protruded near the apex, and when the child cried the hernia formed a mushroom-shaped mass as big as a walnut. On examination it was found that the manubrium was entirely wanting. The clavicle and first rib were symmetrically attached to a firm band of fibrous tissue, leaving between it and the body of the sternum a gap through which the hernia protruded. At three months the child was well and fairly developed. The pectorales did not seem to be absent. It appears that deficient development of the upper part of the sternum is rare. In total absence of the sternum the child may survive.

(237) Tubal Abortion and Operation.

Piering (*Centralbl. f. Gynäk.*, No. 29, 1895) recently exhibited before a German society a specimen illustrating tubal pregnancy which had ended in abortion at the fourth week. The ovum was discovered, quite uninjured, amongst clots in Douglas's pouch, and the ampulla of the tube showed, under the microscope, all the signs of ectopic gestation. Though the abortion was complete, internal hæmorrhage was so severe that an operation had to be performed. The patient recovered. This case proves that surgical interference is needed in complete, just as in incomplete, tubal abortion.

(238) Breech Presentation; Rupture of Child's Perineum by Midwife.

Sawicky (*Przeglad Chirurgiczny*, vol. II, part 3, 1895) writes of a breech case which the midwife mistook for a vertex presentation. After a few hours the child was delivered, the breech coming first. A rupture of the perineum was detected. A month later Sawicky was consulted, as the child suffered from incontinence of urine and fæces. There was the usual eczema, with cystocele, cicatrisation of the perineal rent, a very patulous vaginal opening, and slight prolapse of the rectum. The anus was involved, the rent extending through the external sphincter. The eczema was cured and then the parts repaired by Tait's operation. The anterior part did not unite, so the vulva still gaped whilst the posterior part of the perineum and the anal ring assumed their normal condition. There was no more incontinence of urine or fæces. The mother had been normally delivered eight times before, the vertex presenting on all those occasions. Laceration of the child's perineum occurs sometimes in breech presentations—which was not suspected at first in this case owing to the previous history—through the child's anus being mistaken for the mother's os uteri, and dilated in consequence by the finger of the midwife.

THERAPEUTICS.

(239) Sulphonal, Trional, and Tetronal.

Bresslauer and Joachim (*Centralbl. f. d. gesammte Therapie*, August, 1895) compare the value of these hypnotics: (i) Sulphonal has certain disadvantages. Its action is slow, owing to its being nearly insoluble, and sleepiness rather than sleep is produced. After long use (1) vomiting and constipation; (2) ataxia of the lower limbs with paralyses and muscular spasms; (3) anuria, ischuria, and hæmatoporphyrinuria have been observed, some of these cases ending fatally. The authors have had no bad results since they made a rule never to give it for more than three days in succession, in doses not exceeding 2 g. *pro die*, and to regulate the bowels and kidneys. It should be exhibited always in hot water (tea, etc.) in as good solution as possible. (ii) Trional acts excellently in neurasthenic insomnia, chronic and periodic mania, etc. The authors (contrary to the experience of many) have had good results also in melancholia, and hallucinations accompanied by violence, even 0·5 g. having a sedative effect. Experiments have shown that animals can be poisoned in exactly the same way as with sulphonal, and in man up till now 4 cases of poisoning (2 fatal) have been recorded. Its action is cumulative and delayed from 15 minutes to 3 or more hours after administration, but this is not nearly so marked as with sulphonal. Sleepiness continues in some cases during the next day and even night. Symtoms of poisoning were observed in a number of cases after continued administration, namely, dulness, giddiness, headache, anorexia, obstinate constipation, ataxia of the lower limbs, and sometimes oliguria or even strangury. Noises in the ears, cutaneous hypersæsthesia (Friedländer), any marked action on the heart and respiration or epigastric pain (Koppers, Römert) were never observed. Such transitional cases lead up to the more marked ones of chronic poisoning, where the symptoms are very like those of sulphonal poisoning, ending in hæmatoporphyrinuria, hyperacidity of the urine, and death. Reinecke recently reported a case in which 40 g., spread over three months, caused severe poisoning. The fact of this idiosyncrasy makes the following rules necessary: (1) Trional must never be given continuously in larger doses than 1 to 2 g., and always in a large quantity of warm fluid—soup, tea, etc.—in which it is readily soluble. (2) After administration for four to six consecutive days, breaks of several days must be made. (3) The patient should take some natural alkaline mineral water during the course. (4) Constipation must be corrected. (5) If hæmatoporphyrinuria be present, the drug must be discontinued at once, diuresis and free evacuation of the bowels obtained, and the blood neutralised with 4 to 6 g. sodii bicarb. *pro die*. If these precautions be taken, trional is one of the best and relatively safest hypnotics. (iii) Tetronal has all the disadvantages of sulphonal without its power, its action being more sedative than hypnotic. If given, all the precautions necessary for sulphonal and trional must be taken.

(240) Administration of Thymus in Exophthalmic Goitre.

R. H. Cunningham (*N. Y. Med. Record*, June 15th) gives three cases of exophthalmic goitre in which a diet of thymus produced good results. Case I.—Miss B., aged 20, first seen October 2nd 1894, had been told by several physicians that she had Basedow's disease. Her immediate complaint was of weakness and insomnia. Her hereditary history was noteworthy. Her deceased father had prominent eyes, suffered from insomnia, and died of pneumonia two years ago. Her paternal aunt had prominent eyes and a slight swelling in the neck, had complained much of palpitation and general weakness. Her death was said by the doctor to be due to "heart trouble." Miss B.'s brother, aged 25, has prominent eyes, but is strong and active. Except for measles Miss B. enjoyed good health until two years ago. Shortly after a great grief she began to suffer from palpitation on slight exertion. Next the eyes gradually became prominent, but insomnia has only troubled her for a year. She also complains of mental depression, loss of energy, excessive right-sided sweating at night, sensations of flushing, tremor of the hands, and occasional headaches. The appetite is poor, the bowels constipated. On examination exophthalmos is present in fair amount, both Von Graefe's and Stellwag's symptoms being present. Slight insufficiency on convergence. Apex beat 12t, strong, regular, no displacement, not much evidence of hypertrophy. Thyroid moderately enlarged, soft, compressible, a moderate bruit over it. Slightly anæmic, red corpuscles 4,000,000 per c.mm., hæmoglobin 60 per cent. Thyroid tablets (5 gr.), one t.i.d. were given, and trional for the insomnia. October 4th. Feels worse, has slept no better. Heart beats increased to 136, irregular at times, respirations 28. The thyroid tablets were omitted, and fresh lamb's thymus given, minced fine and taken raw. October 10th. Has taken

the gland slightly broiled, as taken raw it produced sickness. Heart now 120, regular, respirations 20. Has slept better, no other change. October 20th. Has slept well for the past few nights (without a hypnotic), has taken the thymus raw for three days without nausea. Pulse 100, respirations 18. March 10th, 1895, feels as well as ever; the neck swelling has gone, is not tired by considerable exercise. Pulse 72, is sleeping well. Eyes no longer prominent, colour has returned to cheeks. Case II was irregular over his treatment, but improved in many respects. He presented lessened energy, severe insomnia, palpitation, fatigue, and moderate dyspnœa on slight exertion, prominent eyes with lagging upper lids on looking downwards, slight horizontal nystagmus on rapid convergence, slightly enlarged thyroid, pulse 100 to 110, a well-marked, fine-waved tremor of the hands. These symptoms had increased progressively for four years. After an irregular administration of slightly cooked lamb's thymus for two weeks, the pulse fell to 78, and perfect regularity. Slept better and felt stronger. Eyes much less prominent. Von Graefe's symptom obtained only by searching examination. Later still the eyes were apparently normal, pulse 76, capacity for hard work greatly increased, tremor of hands quite gone. In Case III, presenting the usual symptoms, 12 to 15 thymus gland (5 gr.) tabloids per day were given, with great improvement, especially as regards the ocular symptoms and enlarged gland.

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(241) The Treatment of Chronic Constipation without Medicine.

J. Schreiber (*Wien. med. Presse*, Nos. 21 and 22, 1895) calls attention to the great change in the treatment of chronic constipation during the last ten years. Before he had adopted the mechanical treatment he was unsuccessful in relieving 10 per cent. of his patients; since then he has had only three failures in 100 cases. His course of manipulation extends over six weeks to three months, and consists in systematic massage of the large intestine for 8 to 10 minutes daily. A considerable amount of power is employed, and the rubbing and pressure are directed by anatomical considerations. The cure is assisted by gymnastics and exercise; if necessary, mild aperients may also be employed. The diet also is carefully regulated. Before massage is begun the absence of floating kidney, uterine or ovarian disease must be ascertained. Schreiber distinguishes four forms of chronic constipation: (1) in strong, healthy, often young patients; due to hereditary predisposition or sedentary life, or to no ascertainable cause; (2) from the endless forms of digestive disturbance; (3) in patients weakened by neurasthenia or anæmia; (4) in the corpulent. In all these the mechanical treatment is the most certain means of cure. It is of the greatest service in the first form. In the second it will not succeed unless combined with severe and rigid dieting. In neurasthenic cases it must be associated with the means usually employed in the treatment of that disorder, such as change of air, distraction, wet packing, electricity, mental influences, and pleasant occupation. The treatment of chronic constipation by purgatives and enemata undoubtedly lessens the suffering, but at the same time depresses the energy of the intestinal muscles; the longer medical treatment has lasted, the more difficult and tedious will be the mechanical cure.

PATHOLOGY.

(242) Changes in the Blood in Syphilis.

Justus (*Wien. klin. Rund.*, June 16th, 1895) gives his views on this subject, and compares them with those of Semmola. In 1889 Semmola advanced the following propositions: (1) Constitutional progressive syphilis not treated with mercury causes a diminution of hæmoglobin and of red corpuscles. (2) If a syphilitic person in whom this diminution is observed is treated with mercury, from the first day of treatment there is an increase of hæmoglobin and of red corpuscles. (3) If, however, the mercurial treatment is continued longer than necessary, so that the mercury loses its specific power, its toxic action will produce a diminution of hæmoglobin and red corpuscles. (4) If mercury is given to a healthy subject, there appears to be a rapid diminution of hæmoglobin and red corpuscles. Justus comes to the following conclusions: (1) In untreated syphilis the hæmoglobin is more or less diminished, and this diminution varies with the severity of the disease and its tendency to spontaneous recovery. (2) A sudden diminution of hæmoglobin follows inunction or injection of a large dose of mercury. (This is directly contradictory to Semmola's statement.) (3) The diminution caused by mercury varies according to the severity of the disease and to the condition of nutrition; with injections of mercury the fall of hæmoglobin can be repeated after several injections. (4) The cure of the syphilitic lesions begins when the fall of hæmoglobin ceases, and is followed by a rise. (5) The sudden fall of hæmoglobin due to mercurial treatment is a specific peculiarity of the blood of syphilitic persons only, and does not take place in healthy individuals or in other diseases. (6) This specific reaction of the blood is established at the time when swelling of the gland occurs; it disappears at the time when the existing syphilitic lesions attain the height of their development. Justus concludes that a specific change occurs in the blood of syphilitic persons, and this points to a specific means of treatment applicable only to the blood of syphilitic individuals. This specific condition of the blood, established by the action of mercury, precedes the affection of other organs, and the disappearance of this specific reaction, or the involution of the specific blood change, occurs before retrograde changes appear in other organs. If syphilis is not treated the evolution of the fall of hæmoglobin, and also the slow increase of the same afterwards, are seen; if the disease is treated the fall of hæmoglobin is greater and more sudden, and the rise is also quicker. The cure by mercury is in all cases not absolute, but only varies according to the duration of time. The application of the above statements to the diagnosis is as follows: In doubtful cases and in cases of late syphilis with a fresh train of symptoms, a diminution of hæmoglobin, after inunction or injection of mercury, is characteristic of syphilis.

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(243) The Microbe of Scurvy.

Testi and Beri (*Gazz. degli Osped.*, August 10th, 1895) have succeeded in isolating from a piece of scorbutic gum a micro-organism, which they believe to be the cause of scurvy. The microbe stains in all the aniline dyes, resists Gram's stain, is perfectly round, and generally united with one or more of its kind. Its culture renders gelatine fluid, and gives rise to a sawdust-like deposit. Inoculation of these cultures into guinea-pigs and rabbits gave rise to fever, and the necropsy showed hæmorrhagic stains in various parts of the body, and nodules of connective tissue new formation. Experiments were made in four cases, and in three out of the four the above mentioned results were obtained; in the fourth case the authors attribute their negative results to the fact that the patient had improved considerably under treatment. The diplococci found by the authors differ considerably from any that are usually present in the oral cavity of man.

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(244) Modifications of the Colourless Blood Cells inside the Blood Vessels.

Marquevitch (*Arch. d. Sci. Biolog. publiées par l'Institt. Imp. de Méd. Exp. à St. Petersbourg*, vol. iii, 1895, No. 5, p. 428), by connecting the two sides of the heart with a cannula passing from the right subclavian artery to the right subclavian vein and ligaturing the carotids, vertebrals, and the aorta beyond the origin of the innominate artery, was able to confine the blood to the pulmonary circulation, and therefore cut it off from the hæmatopoietic organs. By removing blood from the right carotid at intervals and counting the numbers of the various kinds of colourless blood cells, he was able to conclude that the numerous varieties described by Virchow, Max Schultze, Hayem, Ehrlich, and many others are but stages in development. Thus he found that the young forms diminish, while the adult (large mononucleated cells of authors) increase in numbers. The old cells (polynucleated) increase in numbers, but not sufficiently to account for the variations in the other forms; they must therefore undergo, in part, disintegration. The effects of oxygen, tuberculin, chloroform, and warming were also investigated.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(345) Spastic Cerebral Diplegia.

OPPENHEIM (*Berl. klin. Woch*, August 26th, 1895) narrates two cases showing inheritance of the affection known as spastic cerebral diplegia or bilateral athetosis. The mother, aged 31, has shown signs of the affection from early life, probably from her birth. She has weakness together with rigidity and athetosis of both sides, as in the affection on which Clifford Allbutt and many others have written. In her case, however, a peculiarity is that the parts supplied by the cranial motor nerves (the oculomotor nerves excepted) are more paralysed than other parts of the body; articulation, phonation, deglutition and mastication are all affected. She can hear and (a noteworthy fact) is intelligent, but is absolutely dumb. She cannot voluntarily utter a sound, even when pricked with a needle, but under the influence of emotion, as in crying or laughing (psychical reflex acts) sounds are given forth. She can close her eyelids, but not with any degree of force. She cannot point her lips as if to whistle. She can open her mouth, but with difficulty and with exaggerated grimaces. Saliva often dribbles between the lips. She cannot spit out. The movements of the tongue are very limited. Mastication takes place with difficulty, and movements of the head evidence the difficulty in swallowing. The muscles of the lips, tongue, etc., are not wasted, and the electrical reactions are normal. The movements of the eyes are natural. She has not learned to read or write. The athetosis movements in the upper extremities are best marked when the hands are open, almost absent when they are closed. The spasticity in the lower extremities is great, and she walks with the feet in the position of talipes equino-varus. The spinal column is deformed, probably owing to weakness and contracture of the muscles of the back. The sphincters are not affected. There is apparently anosmia, but the other senses are normal. Oppenheim is satisfied that her intellect is not weak. She learned to walk at 6 years of age, and walked as she does now. She had epileptic-like attacks when she was 9, but they have not recurred since then. The second patient is a girl aged 10, the natural daughter of the first patient; she suffers in the same way as her mother, but in a lesser degree. She learned to talk last year, but her speech resembles that of bulbar paralysis, and she accompanies it with grimaces and movements of the whole body; her gait is also less spastic than that of her mother, and there is no talipes equino-varus. Like her mother she is intelligent. Oppenheim says that what one finds as anatomical basis for this affection may be enumerated as porencephalus, diffuse atrophy, sclerosis, and, though seldom, microgyria. This year, at the necropsy of an analogous case, in which there were also the symptoms of a bulbar paralysis without atrophy, he found porencephalus and microgyria. There was defect of development in both cerebral hemispheres, especially in the Rolandic areas and their neighbourhood, but the defect was most marked in the lower part of these areas, where the centres for the face, etc., are situated.

(346) The Diagnosis of Diphtheria.

LANDOUZY, at the Académie de Médecine (*Presse Méd.*, August 3rd, 1895) read a paper insisting on the necessity for examining all sore throats bacteriologically. Clinically it is almost impossible to distinguish many of the forms—for example, the herpetic from the diphtheritic. Cases are quoted where the clinical diagnosis was diphtheria, but bacteriologically only staphylococci, streptococci, or pneumococci were found in the exudation. The results of 860 cases investigated thus are given: In 364—that is, in 42.3 per cent.—Loeffler's bacillus was found, and of these 269 showed showed pure cultivations of Loeffler's bacillus, 25 contained an admixture of streptococci, 70 contained an admixture of staphylococci and other cocci. Of the cases in which Loeffler's bacillus was not found a few showed pure cultivations of streptococcus, but the majority showed a mixture of various micro-organisms. A further difficulty in the clinical diagnosis occurs where faucial syphilis simulates diphtheria, and the difficulty is increased when it is suggested that probably the two conditions may be combined. It is in such cases that the value of bacteriological investigation is seen.

(347) The Health of Workmen in Caissons.

A CAISSON is a modified diving bell, by means of which workers on the bed of the water can have direct communication with the external world. The atmospheric pressure in the workroom and shaft is proportional to the depth below the surface. Investigations, at present incomplete, into the health of the workmen employed in such a caisson, to ascertain the effects of pressure, were begun by v. Schrötter, Mager, and Heller in February, 1894, when all the workmen were thoroughly examined (lungs, heart, ears, urine, and blood) (*Wien. klin. Woch.*, June 27th, 1895). Since then they have been kept under constant observation. Results: As long as the pressure did not exceed 1.5 atmospheres, no symptoms appeared beyond slight pains in the joints and temporary noises in the ears. If greater than this, the following symptoms, with few exceptions, beginning suddenly a quarter to one hour after leaving the caisson perfectly well, were noticed: 1. The ears. Permanent noises in the ears, hæmorrhages into the tympanic membrane or tympanum, and sometimes Ménière's symptoms. Some degree of deafness was present in all these cases. 2. The extremities. Violent pains with no objective signs, or with tenderness along nerve trunks, or with uniform swelling and œdema of one or more limbs, or with exudation into the joints, or, lastly, darting joint pains (especially in the knees) of such intensity that the men felt as though struck by lightning; this was often accompanied by a feeling of numbness in the limb. All the above symptoms usually vanished in three to five days. The most serious cases began either with sudden loss of consciousness, often lasting some hours, without much cyanosis or dyspnœa, or with the latter, in which case they soon ended in collapse and death. *Post mortem* in one such case œdema of the lungs was present.

SURGERY.

(348) Castration for Prostatic Enlargement.

A. H. LEVINGS (Philadelphia *Med. News*, August 17th) reports two cases of bilateral castration for enlargement of the prostate. (1) A man, aged 77, had had recourse to the catheter eighteen years before, and had had thirteen years of complete catheter life. During the last year of catheter life, it became impossible to pass any instrument into the bladder. Suprapubic cystotomy was then performed, and an artificial urethra established. For three or four years after this his condition was fairly satisfactory; then he began to suffer great pain, the cystitis became worse and the prostate was found to be constantly increasing in size. Castration was performed on May 14th, 1895, at which time the prostate was as large as a cocoanut. Thirty-six days afterwards the patient passed a small stream of urine by the urethra, the first time for eighteen years. He had continued to do so, with increasing size of stream, up to the date of report, and so far as could be determined by rectal examination the prostate had diminished by about one half, while the cystitis was much improved, and the severe pain had practically ceased. (2) A man aged 54, had had seven months of catheter life, and was also the subject of tuberculosis of both testicles. Castration was performed on June 23rd, 1895, and in two weeks the man was walking about the hospital, almost wholly free from pain; the urine had become acid and almost clear; the catheter was no longer necessary, and the residual urine had entirely disappeared. On July 18th, by rectal examination, the left prostatic lobe was scarcely to be felt, while the right was much reduced in size. The patient was discharged in excellent condition. Levings concludes as follows: "It would seem that after castrating thousands upon thousands of women in the prime of life, often, I fear, upon the slightest pretext, it is hardly consistent to hold up our hands in horror at the idea of castrating some men at an advanced age for the relief of an other-

wise incurable and most distressing condition, if the operation should offer a reasonable hope for a permanent cure."—At the meeting of the American Association of Genito-urinary Surgeons J. B. Bryson (*Med. News*, June 29th) reported the following case: A man aged 74 first showed evidence of beginning prostatism at the age of 56. When he came under observation there were 6 ounces of residual urine and marked diurnal and nocturnal frequency. Cystitis and pyelonephritis developed. Two separate attempts to enter upon catheter life failed on account of the great difficulty of entering the bladder and the recurrence of cystitis. Dilatation of the heart and pulmonary emphysema supervened. Complete castration was performed four months ago. This was followed by a marked and satisfactory diminution of the enlarged prostate, without change in the frequency of urination, day or night, and with but a slight decrease in the amount of residual urine. The pyuria and pyelonephritis remained practically the same as before the operation. Hayden also reported a case of double castration for prostatic hypertrophy in which there was marked relief of all the symptoms and the general condition was greatly improved. A. T. Cabot said he was inclined to believe that the early good effects which followed the operation were largely or partly due to the diminution of the blood supply to the prostate. He reported a case in which he had performed double castration and litholapaxy at one sitting. The patient, aged 75, was in a rather shaky mental condition. After the operation he became maniacal. Great improvement followed the injection of testiculin. E. Martin had seen a number of J. W. White's cases, and could confirm his statements as to the good effects of castration. He reported a case of his own in which the operation had given a very satisfactory result. Belfield pointed out that it evidently failed in many instances, and he would be unwilling to perform it until he had had his finger in the prostatic urethra. He had seen three cases in which the operation was urged, and in which stone was found in the bladder. E. E. King, of Toronto, said that in the two cases of double castration reported by him, and included in White's statistics, death could not be attributed to the operation itself. The first patient died of pneumonia on the fifth day. At the necropsy the prostate was found to be reduced in size about one-half, and its glandular and stromal elements showed evidences of shrinking. The second patient died on the thirteenth day, and the necropsy revealed a pyelonephrosis. In both cases there was a marked improvement in the urinary symptoms. Glenn expressed the opinion that prostatic hypertrophy was largely the result of early gonorrhœal infection. In the one case of double castration—included in White's list—in which he was the operator death could not be attributed to the operation.

(349) The Surgical Treatment of Meningitis.

Mannotti (*Il Policlinico*, August 1st, 1895), experimenting on dogs with regard to the above subject, concludes that after weak subdural injections of sublimate solution (1 in 4,000) tuberculous meningitis may not only be alleviated, but completely cured. Moreover, the involution of meningeal tuberculosis may be verified even if treatment be carried out at an advanced stage of the disease, and results in the development of more or less firm adhesions between the dura and the pia mater. The mechanism determining involution seems in many points identical with that observed in peritoneal tuberculosis. The superficial underlying cerebral cortex appears to undergo slight atrophy, but the experiments are not as yet sufficiently prolonged to say what the ultimate condition of the cortex will be. The sublimate solution apparently does not act merely as an antiseptic, but probably by setting up inflammatory reaction. In acute suppurative meningitis the injections seemed of no advantage. About 1 or 2 grammes of warm sublimate solution were used at each injection.

(350) Carcinoma of the Displaced Cæcum.

Hans Pässler (*Berl. klin. Woch.*, August 26th, 1895) relates the following case observed in Curschmann's clinic. A man, aged 60, was admitted with marked cachexia and symptoms of intestinal obstruction. As there was no evidence of the obstruction being due to syphilitic or tuberculous stenosis or adhesions producing kinking, or to a palpable tumour, a growth in the intestinal wall was diagnosed. It was localised by Curschmann in the right flexure of the colon owing to the situation of the distended coils. No definite tumour could be felt, but a resistance was made out in the right loin. Operation was advised, and the abdomen opened in the right hypochondriac region. The growth was found here apparently situated in the hepatic flexure. Resection was not attempted, owing to metastases, etc. An artificial anus was made, but the patient died. At the necropsy the growth was found in the cæcum, which was displaced upwards. There was a total absence of the ascending colon, the cæcum passing directly into the transverse colon. There are, according to Curschmann's previous researches, two forms of displaced cæcum, namely: (1) in which the colon is of normal length or even increased in length. Here the cæcum is so twisted that the fundus is directed towards the diaphragm and covers in a part of the ascending colon; or (2) the ascending colon is congenitally short or absent. The latter was the case here. The case shows that the clinical localisation of the tumour may be influenced by the dislocation of the cæcum. Malignant growths in a dislocated cæcum have not in the author's knowledge been described. The possibility of a growth as well as of perityphlitic processes in a displaced cæcum should be borne in mind.

MIDWIFERY AND DISEASES OF WOMEN.

(351) Evisceration in Protracted Cross-Birth.

Mermann (*Centralbl. f. Gynäk.*, No. 36, 1895) relates 5 cases in which he found evisceration sufficient to allow of speedy extraction, when transverse presentation had rendered labour dangerously long. All recovered but the fifth patient, who died on the tenth day of pneumonia, attributed by her family doctor to some accidental chill not associated with delivery. The first patient was a primipara, aged 29. The membranes had ruptured five days before delivery; the child had been dead at least a day; turning could not be effected. After evisceration turning proved easy, and the exhausted patient recovered. The second case came under Mermann eighteen hours after the membranes had been ruptured by the midwife, who applied a tampon as there was flooding. The right arm was prolapsed and œdematous; the shoulder impacted in the brim; the cord much prolapsed, swollen, and livid. The mother's abdomen was tympanitic. The uterine contractions were very painful, the temperature over 100°. After an attempt to turn, evisceration was performed, and a large child extracted by pulling with the finger hooked into the thorax. The patient recovered after an attack of parametritis. In the third case the waters had escaped seven days before delivery, and the child had been three days dead. Version had been attempted several times in vain. After evisceration the child was seized round the abdomen (as in Case 1) and turned, and delivered with ease. In the fourth the shoulder of the dead child was firmly impacted in the contracted pelvic brim, and the waters had slowly dribbled away. The scissors used for the funis served for evisceration; the child was then delivered by traction on the arm; recovery was rapid. In the fifth (noted above as a fatal case) both arms were prolapsed, and the left shoulder impacted. The waters had escaped three days before delivery. Attempts to turn had been made with the aid of chloroform. Evisceration was undertaken, and the child extracted by pulling on the interior of the thorax. The patient did well till pneumonia set in.

(352) Dystocia from Double Monster.

Duloroy (*Bulletins de la Soc. Anatomique de Paris*, April, 1895) attended the labour of a primipara, aged 20. The period ceased on August 20th, 1894. On March 12th Duloroy diagnosed hydrops amnii, suspecting twin pregnancy. On April 10th labour began. Duloroy found the os well dilated and a head presenting, second position. He fancied that he heard fœtal heart sounds, but it proved afterwards that the twins had been dead for a fortnight. After several hours' dystocia the waters escaped in abundance and the pains ceased. Three hours later he felt the head presenting still, and could detect above it a shoulder not corresponding to the head, and something like a foot.

He applied the forceps, and delivered a macerated head, but the body could not be extracted until he pulled very hard. Then a cracking noise was heard, and the fœtus came out with its body wide open, the intestines running upwards into the uterus. On exploration he detected the head of a second fœtus, and delivered it with ease; its abdomen was wide open. The footlike extremity which had puzzled Duleroy before the delivery of the first twin was a malformed hand. The cord was inserted into a point on the abdominal wall which came away with the second fœtus, and it was common to the twins. The mother made a good recovery. The twins were united by the sternum and pubes. There was a common heart; the other viscera were separate, the anus imperforate, the testes undescended. Harelip and cleft palate, absolutely symmetrical in the twins, were present. There were minor deformities in the extremities.

(353) Lactation and Syphilis.

HAVAS (*Centralbl. f. Gynäk.*, No. 32, 1895) has published in a Hungarian medical journal an important communication on the moral and medical aspect of this question. He concludes that a syphilitic infant should be suckled by its mother, or, if she cannot secrete milk, by a syphilitic nurse, or, if there be no such wet nurse available, by artificial feeding. It is wrong and dangerous for a healthy nurse to suckle a child whose parents are syphilitic.

(354) Puerperal Tetanus.

WALKO, of v. Jaksch's clinic (*Deut. med. Wock.*, September 5th, 1895) relates a case occurring in a woman, aged 23, and treated by Tizzoni's antitoxin. The disease began about ten days after delivery with sudden trismus. On admission there was marked spasm of the jaws and the head was drawn back. From time to time there were general spasms. Vaginal examination by Rosthorn revealed little of importance. The body of the uterus was dextroverted. There was a laceration of the cervix, which bled when touched. There was very little secretion from the uterus. The first injection of antitoxin was given on the day of admission. On the following day there was some improvement, but twenty four hours later the patient relapsed, and died on the next day. Eighteen injections of 0.2 g. of the antitoxin were given at intervals of about five hours. A considerable leucocytosis was observed. The bacteriological examination of the lochial secretion, blood, colostrum, etc., gave negative results. In spite of these negative results as regards the presence of the tetanus bacillus or of tetanus-producing properties in the secretions, there was no question of the nature of the disease. In addition two other cases of puerperal tetanus occurred about the same time. Extirpation of the uterus was carried out, and the tetanus bacillus was found in the lochial secretion. Both cases followed a rapidly progressive and fatal course. The author then refers to the antitoxin treatment of tetanus and to the divided opinions as to its value. Mostly improvement has been noted at varying intervals after the injections. Beneficial effects have been very rare in severe forms of tetanus. The author says that in the majority of cases tetanus is not a fatal disease; according to Albertoni, 136 out of 176 recovered, namely, 78.9 per cent. It is a question as to whether in severe cases even larger doses should be employed. The treatment should be begun early. A difference in the properties of the antitoxin obtained from different sources is possible.

(355) Œdema and Apoplexy of Ovary from Torsion.

POTHERAT AND LENORLE (*Bull. de la Soc. Anat. de Paris*, vol. ix, part 13, 1895) examined two uterine appendages removed for what appeared to be left salpingitis and retroflexion. The left ovary was as big as a moderate-sized orange. Its pedicle was twisted three turns from left to right, but not firmly; the Fallopian tube was still permeable. On section, the swelling of the ovary was seen to be due to great œdema, with extensive extravasations of blood. The essential ovarian tissue had disappeared. At points there were collections of new growth which the observers considered to be myxoma. The right ovary was as large as a small Tangerine orange; its pedicle was not twisted. Unlike its fellow, it contained a few Graafian follicles, but none held ova. There was no effusion of blood, but the ovary was œdematous, and appeared to be the seat of myxomatous infiltration.

THERAPEUTICS.

(356) Thyroid Feeding.

ZUM BUSCH (*Dermatol. Zeitschrift*, September, 1895) gives the results of thyroid feeding observed by him in various diseases. He likewise tried it for a considerable time in two healthy men, and noticed in them no effect at all except slight change in the body weight, and in the amount of urine and urea excreted. These negative results in healthy people correspond with the experience of Leichtenstern and Wendelstadt. On the other hand, in patients with cutaneous affections various general effects were observed. The loss of weight was usually considerable, especially at the beginning of the treatment; there was considerable increase in the amount of urine and of urea excreted, the amount was often doubled, and the pulse frequency was often increased by ten or twenty beats. Disagreeable symptoms were seldom observed, but when observed they consisted in great frequency of pulse, palpitation, headache, faintness, tremors, and sweating. The appetite was usually good, but vomiting occurred in two cases, both of children treated with rather large doses. In spite of the observation of Ewald, the thyroid feeding never produced albuminuria or glycosuria. In one case it so happened that though temporary glycosuria had been observed before the thyroid feeding was commenced, it never reappeared during the treatment. In all the five cases of myxœdema treated the improvement was rapid and striking. The fifth case was particularly interesting. The patient was a woman, aged 21, who was admitted with the symptoms of Graves's disease, and whilst under observation the symptoms of myxœdema supervened, and partially replaced those of the Graves's disease. The myxœdema was got rid of by the thyroid treatment, but the exophthalmos and Graefe's sign were left as remnants of the Graves's disease. Out of 24 cases of psoriasis 11 were cured and 7 were improved by the treatment; in a few cases even tolerably large doses seemed to have hardly any effect. It does not seem at present possible to distinguish beforehand those cases of psoriasis which are benefited by the treatment from those which derive no benefit. Out of 12 cases of chronic eczema 9 were cured, 2 improved, and 1 got worse under the treatment. At the beginning of the treatment some of the cases showed an apparent exacerbation before improvement showed itself. A girl, aged 25, with slight ichthyosis, improved somewhat under treatment. Two cases of epithelioma and 3 cases of chronic ulcer of the leg remained unaffected by the treatment. Four cases of lupus vulgaris were treated. The thyroidin appears to cause a local reaction somewhat resembling, but milder than, that caused by tuberculin. The lupus tubercles gradually disappear in some places, whereas fresh ones unnoticed before spring up in other places. The diseased tissue becomes sharply defined under thyroid feeding, and thus perhaps operative treatment may be facilitated. Zum Busch believes that with proper care thyroid treatment in skin affections is not more dangerous than that with arsenic or many other drugs. He thinks it may sometimes be of service where other methods have failed, and that in chronic skin eruptions the combination of local external treatment with internal thyroid treatment is likely to give good results.

(357) Serum Treatment of Cancer.

AT the second French Congress of Internal Medicine, recently held at Bordeaux, Bonnet, of Marseilles (*Presse Méd.*, August 26th) stated that he had injected non-ulcerated cancerous tumours (epithelioma, sarcoma, cancer of breast) into the veins or into the subcutaneous cellular tissue of four asses and ten dogs and afterwards inoculated patients suffering from cancer with serum obtained from animals into which the same anatomo-pathological variety had been injected. In each case 2 c.cm. of serum were injected on alternate days into the subcutaneous areolar tissue of the abdomen. The injections varied in number from 25 to 40. The injections are not painful, and seldom give rise to abscess; they are sometimes, however, followed by fever, urticaria, and scarlatiniform

eruptions. In two cases symptoms of collapse came on, but quickly passed off. The injections often improved the general condition, but the amelioration never lasted more than thirty-five weeks if the patients had reached the cachectic stage. The pains often became considerably less during the course of injections and recommenced on their discontinuance. The treatment also had a favourable effect on the frequency and profuseness of hæmorrhage, bleeding in some cases having completely ceased during several weeks. As regards the tumour, the cases treated included 5 ulcerated cancers of the breast, 2 non-ulcerated tumours which had recurred after operation, 6 inoperable advanced and recurrent cancers of the uterus, 1 cancer of the tongue, 4 cases of epithelioma of the lip, cheek, penis, and scrotum. In none of these cases did the treatment effect a cure. The oozing of blood in ulcerated cancers was often checked, but the fungating growth was not appreciably diminished. In one case a considerable malignant ulceration of the neck of the womb became almost completely cicatrised, while another ulceration following the removal of a cancer of the breast diminished by two-thirds. The thickening around the tumours often markedly diminished. In 2 cases of recurrent cancer of the breast, with adhesion of non-ulcerated skin, shrinkage to the extent of one-third took place, and the skin over the tumours became more movable. The author insists that the injections are not dangerous; he thinks it possible that by using them before and after operations for cancer recurrence may be delayed. Ferré confirmed the fact that partial improvement might be obtained by such injections; and he cited a case in which serum from an ass which had first been injected according to the method of Richet was used with advantage.

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(259) Vaccination in Whooping-Cough.

G. Cavalieri (*Gazz. d. Osped.*, June 1st) reports that in 1894 he had more than 200 cases of pertussis under treatment. Almost all therapeutic measures proving useless it occurred to him to try the effect of vaccination. He vaccinated more than 100 children suffering from whooping cough, but only in 64 of these did the vaccine take. Of the 64, only 1, a baby of four months, died, whereas before the vaccine was used there had been many deaths. The vaccination had a favourable effect on the course of the disease, both diminishing the violence of the paroxysms and shortening the duration of illness, the vaccinated cases recovering in from three to three and a-half weeks, while the unvaccinated cases either died within the same period or took eight or nine weeks to recover.

PATHOLOGY.

(260) The Infection of Anthrax.

Schimmelbusch and Ricker (*Fortschr. der Med.*, Bd. xiii, 1895, Heft 7—9) in a previous communication showed that in a mouse amputation of the tail which had been ten minutes earlier the seat of inoculation with anthrax was not sufficient to prevent death from general infection. In the present communication they extend the research, and report the results of inoculations with spore-bearing anthrax cultures into deep wounds involving the muscles of the back, and into superficial wounds involving only the skin and subcutaneous connective tissue. Half an hour to 5 hours after inoculation the animals were killed either by a blow on the head or by asphyxia, and portions of the internal organs sown on agar plates. In 7 out of 10 cases in which mice were inoculated growth occurred in one or more of the internal organs; in one animal, killed only half an hour after inoculation, anthrax bacilli were found in the lungs, liver, and kidneys. Analogous experiments with rabbits gave negative results. In the more superficial wounds a similar procedure was carried out, but only 2 out of 11 mice gave positive results, and that only when four hours had elapsed between inoculation and death. The absorptive power of subcutaneous tissue for anthrax spores is, therefore, less than that of the deep muscular layers. Cultures free from spores are absorbed in a similar way. Other micro-organisms were investigated and found to be absorbed in exactly the same manner, nor is there any great difference imported by the size of the micro-organism. Cultures were obtained most commonly from the liver, the lungs and the kidneys, much less frequently from the spleen and the heart. The rapidity with which micro-organisms are taken up suggests that they pass directly into the divided blood vessels and do not travel by the lymph stream. It must be remembered that the experiments were made in fresh wounds; when wounds are older the conditions of infection and absorption of bacteria are different.

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(260) Internal Localisation of the Gonococcus.

Bordoni-Uffreduzzi (*Archives Italiennes de Biologie*, Tome xxii, Fasc. iii, 1895) records observations and experiments which appear to furnish conclusive evidence that the gonococcus is able to diffuse itself in the internal parts of the organism, and to give rise to inflammatory conditions. A case observed by Mazza is first referred to, in which bilateral pleurisy and polyarthritis developed during an attack of gonorrhœa. The pleuritic effusion contained micrococci, which presented, microscopically and on cultivation, the characters of Neisser's gonococci. The author relates a case of gonorrhœa in which multiple arthritis developed. A quantity of fluid was taken from a joint, with bacteriological precautions. In the pus cells of this fluid the author discovered micro-organisms having the characters of the gonococcus as regards microscopical appearance and peculiarities of staining. After cultivation on a mixture of agar-agar and human blood serum micro-organisms were obtained which had the same characters as those in the pus cells. In order to furnish more conclusive evidence, the urethra of a healthy young man who had never suffered from gonorrhœa, and who had not had sexual connection for four months, was inoculated with a small quantity of material taken from the second generation of a cultivation of the micro-organism. (The inoculation was performed with the man's consent.) The parts were examined for the gonococcus before the inoculation, but only the ordinary bacilli of the smegma were found. The glans penis, and meatus were then washed in sterilised water, and the micro-organisms deposited in the urethra a little beyond the meatus. A typical attack of gonorrhœa was the result, and gonococci were found in the discharge.

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(261) Etiology of Tropical Multiple Neuritis.

Max Glogner, of Samarang (*Virchow's Arch.*, Bd. 140, Heft 3), says that most of the cases of beri-beri on which he made his observations had been a considerable time under observation, and suffered from a slight intermittent fever. Scheube and Baelz had noted such a fever as occurring in 45 or 50 per cent. of all cases of beri-beri. Glogner has already recorded that in most of his cases he found living amœba-like organisms present in the red corpuscles. Although these organisms greatly resembled the plasmodia found by Laveran and others in cases of malaria, Glogner, after taking into consideration the clinical differences between malaria and beri-beri, came to the conclusion that the micro-organisms in the two diseases were probably different in spite of their similarity in appearance. However, in a further series of cases, in which multiple neuritis had commenced with fever, Glogner found not only the amœboid organisms, but also the pigmented, sickle-shaped, and oval forms described by Laveran. In other cases of multiple neuritis, which likewise began with fever, he could find none of these microbes; he has, therefore, come to the conclusion that these microbes must not be regarded as the cause of beri-beri, but rather as a sign that the patients really had malaria, of which the multiple neuritis was a sequela; in fact, that the multiple neuritis followed malaria, just as in Europe it has been observed to follow diphtheria, enteric fever, influenza, etc. Leyden long ago suggested that the circulation of ptomaines in the blood was the cause of multiple neuritis following infectious diseases; Glogner thinks that such a ptomaine occurring in cases of malaria may cause a multiple neuritis, which in the tropics may be set down as beri-beri. In this supposition he is confirmed by statistics of the geographical distribution of the two diseases. He believes that what has been called "beri-beri" is not always etiologically the same disease.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(962) **Motor Aphasia.**

PREVOST (*Rev. Méd. de la Suisse Romande*, No. 6, June, 1895) describes a case of Jacksonian epilepsy accompanied by motor aphasia but without agraphia, conclusively proving that the former may exist without the latter. The patient was a man of about 60, who had suffered from neurasthenia with indefinite symptoms for some years. He began to experience a difficulty in expressing himself; this was followed by an epileptiform attack with complete loss of consciousness, and afterwards by a series of fits. In these the patient hesitated in his speech, took his chin in his left hand, turned the head convulsively to the right, and had an access of clonic convulsions in the right facial region, with grinding of the teeth. The fits occurred every fifteen minutes and lasted about one minute and a-half. They were followed by temporary loss of speech, and at the end of a day by lasting aphasia. The intellect was throughout unimpaired, and he was able to write freely without hesitation or mistakes, and to write what had been dictated to him during the fit immediately afterwards. There was no paralysis nor alteration of sensibility whatever. A syphilitic lesion, probably a gummatous tumour, involving Broca's convolution, was suspected, but a very doubtful history of the disease was obtained. The treatment was gr. x of pot. iod. every three hours, and two mercurial inunctions daily. The fits ceased abruptly after lasting over a week; speech returned at once, all neurasthenic and other symptoms disappeared, and in a few months he was practically cured. Six months later the symptoms returned, but were marked by an attack of complete right hemiplegia which supervened. Subsequent treatment had proved ineffectual. The aphasic phenomena were remarkable, being unaccompanied by paralysis during the attacks, or by word-blindness, word-deafness, or verbal amnesia. The patient could always read and write except after one or two major epileptic attacks. The condition is rare, the centres of speech and writing being so closely placed that they are generally involved in the same lesion. The question is discussed whether there exist in the brain special accessory centres developed by use, and whether the multiple centres said to preside over the function of language are among these. There is too great a tendency to regard language as a special and isolated phenomenon among the manifestations of the nervous centres, and the development of an automatic act such as writing may be simply controlled by a special adaptation of conducting fibres uniting the different sensorial centres. A study of aphasia in violinists, pianists, typewriters, and others trained to express their ideas by automatic means involving more highly specialised action than writing, may help to elucidate the true theory of this subject.

(963) **Epidemic Cerebro-spinal Meningitis.**

RIGHI (*Rif. Med.*, June 24th and 25th, 1895) reports three cases of this disease in which he found the diplococcus of Fraenkel in the blood, the urine, and in one of the cases in the fæces. In each case the diplococcus was actively virulent and gave rise to cultures which proved active upon inoculation. The cases occurred in children of 16, 3, and 13 years respectively, and formed part of an epidemic of the disease which occurred in Sassari. The first two patients died; the third, which was a milder case, recovered. But even in this case the diplococci were freely found in the blood and urine, so that it cannot be said that the diplococci are only associated with severe cases.—QUADU (*Rif. Med.*, July 8th and 9th, 1895) reports another case (one of the same epidemic) in a child aged 6, who recovered, and in whose blood the same diplococcus was found. This case was also interesting from the fact that it was complicated by the development during the disease of a periarticular abscess about the left knee-joint and by a left otitis media with perforation. In each case the pus contained the diplococcus, that of the ear also containing the staphylococcus cereus albus and a slender somewhat recurved unfamiliar bacillus. In addition to the otitis and abscess the patient also suffered from arthritis of the right shoulder-joint.

(964) **Spontaneous Hæmophilia in Brothers.**

DALAND AND ROBINSON reported these cases to the Philadelphia County Medical Society on January 9th, 1895. There was no family history of the disease on either the paternal or the maternal side, except that in the mother the operation of tooth extraction was attended with rather more than the normal amount of hæmorrhage. One of the three subjects of the paper was perfectly well up to the age of 16 months, when he developed epistaxis, which came on frequently and uncontrollably, and was ultimately fatal (age not stated). There were no other mucous membrane hæmorrhages, and purpura was absent, but at the age of 3½ years he developed hydrocephalus. The other fatal case terminated with hæmorrhage from the mouth during the eruption of the molars (aged 18 months). The child was anæmic and ill-nourished and skin eruption was noticed. The first hæmorrhage came on when the teeth began to be cut. Three other children (one boy, one girl, sex of other not stated) died young without any hæmorrhages. The case under observation was a boy aged 13. Nothing abnormal was noticed till the age of 8 months, when he had cholera infantum for 3 months, during the last fortnight of which a purpuric eruption appeared on the abdomen, back, legs, and, to a less extent, arms; no hæmorrhage from mucous membrane. He remained well till 5 years; then he had an attack of arthritis, especially affecting the elbows, knees, and wrists, and accompanied by fever and acid sweats. This was relieved by salicylates, but has recurred about every two months—within 48 hours after exposure to cold or wet—till the present time. Since the age of 5 there have been about 50 attacks of hæmorrhage from the mucous membranes, usually nasal, always preceded by grinding of the teeth or flushing of the face, so that the father could always predict them. There has been no return of the purpura, but there is considerable ankylosis from the arthritis. There is great diminution of the coagulability of the blood, which during an attack was found to contain an immense number of microcytes; there were 78.5 per cent. of red corpuscles and the hæmoglobin was 62 per cent. No ordinary hæmostatic treatment was of any avail till an enormous quantity of blood had been lost. The hæmorrhage then yielded to the local influence of cocaine (which the authors praise very highly) and ice, and the internal administration of ergot. The authors call particular attention to the premonitory flushing of the face, the attacks of arthritis, which were probably due to effusion of blood into the joints and the fact that the attacks of hæmorrhage became more violent when the patient was removed from an altitude of 1,800 to one of 2,200 feet. They record that the ordinary condition of great hæmorrhage from slight lesions was present, and suggest that the initial cholera infantum was really a gastro-intestinal purpura.

(965) **Tryptic Digestion and the Internal Secretion of the Spleen.**

A. HERZEN (*Rev. Gén. des Sciences*, June 15th, 1895) revives the theory as to the influence of the spleen on pancreatic digestion, which Schiff was the first to put forward in 1862. It has long been known that the digestive action of pancreatic juice on proteids is not continuous but intermittent, and that it appears regularly with the process of gastric digestion. Schiff showed that in animals from whom the spleen had been removed, neither the pancreatic juice nor an infusion of the pancreas had any digestive influence on proteids. Herzen has combined Schiff's views with Heidenhain's researches on zymogens. He finds that the volume of the spleen at any moment varies directly as the amount of trypsine in the pancreatic juice, and inversely as the amount of zymogen. Thus the maximum quantity of zymogen is present during starvation, when the trypsine and splenic dilatation are at their minimum. Six or seven hours after food the conditions are exactly reversed. Furthermore, admixture of infusion of congested spleen greatly aids the pancreatic digestion of proteids. The blood of the splenic vein has a similar action, that from other vessels none. Herzen concludes that in the living pancreas the

protrypsine is transformed into active trypsine by the influence of a substance produced in the spleen in quantity proportional to the intensity of its congestion. The substance finds its way to the duodenum through the general circulation.

SURGERY.

(266) Intracranial Resection of the Trigeminus.

Krause (*Centralblatt für Chirurgie*, 27, 1895), in an abstract of a paper read at the twenty-fourth Congress of the German Surgical Society, states that during the last three years he has, in very severe and obstinate cases of facial neuralgia, recommended and practised removal of the Gasserian ganglion, together with its posterior root, by the intracranial method. Resection simply of one or more of the branches of the trigeminus, it is pointed out, is not sure in its results, and in facial neuralgia well-marked histological changes occur in the Gasserian ganglion, whilst its peripheral nerves present but slight deviations from the normal structure. The removal of this ganglion, the author asserts, is followed by remarkably slight disturbances which are not to be compared with the terrible pains by which the patient was previously afflicted. In Krause's operation a womb-shaped flap of bone, together with the coverings of skin and muscle, the base of which is seated just above the zygomatic arch, is formed in the temporal region, the bone being divided by a circular saw, which is worked either by an electro-motor or by a dental engine. This flap, still remaining attached at its base, is turned down, and the exposed dura mater is carefully detached from the bone of the middle cranial fossa, and elevated together with the brain by a broad retractor. The middle meningeal artery is now tied and divided near the foramen spinosum. The third and second branches of the trigeminus are next carefully exposed and cut through at the round and oval foramina, and finally the ganglion and its posterior root, after separation of the dura mater, are removed by torsion. In three of his cases the author succeeded in detaching the posterior root as far back as the pons. The first branch, which as it is closely connected with the wall of the cavernous sinus cannot be exposed by the use of the knife, is usually torn through in the removal of the ganglion. The flap of skin, muscle, and bone is replaced and fixed by sutures. In the author's practice the average duration of the after-treatment is fourteen days. Some of his patients, he states, were allowed to move about on the eighth day. In comparing his operation with that practised in this country by Rose, the author points out that in the latter the ganglion is not freely exposed, and that consequently there must be some uncertainty as to its complete removal. Moreover, there is a risk of wounding the Eustachian tube near the opening in the cranial wall, and of consequent septic meningitis. The chief danger attending the intracranial operation is hæmorrhage. Not only is there free bleeding when the dura mater is detached from the base of the skull, but also the middle meningeal artery may be cut before it has been secured by ligature, and the cavernous sinus may be accidentally wounded. In some cases it has been found necessary to perform the operation in two stages, and to defer removal of the ganglion until after the arrest of hæmorrhage by prolonged plugging. Another probable source of danger is compression of the brain whilst this organ, together with the dura mater, is being raised from the floor of the middle cranial fossa. The author has never, in his own practice, observed any bad results from this temporary compression, but he insists on the necessity, more especially when operating on the left side, of raising the brain carefully and slowly. Of 51 intracranial operations performed by different surgeons 5 were fatal. It is stated that no relapse of facial neuralgia after extirpation of the ganglion has yet been recorded. Although the operation is followed by complete anæsthesia of the cornea and conjunctiva, the author has never had to deal with any severe or persistent affection of the eye. Removal of the Gasserian ganglion, he concludes, is indicated only in very severe cases of trifacial neuralgia in which all other methods of treatment, both medicinal and surgical, have failed.

(267) Extirpation of Large Sacro-Lumbar Spina Bifida.

Tansini (*Rif. Med.*, August 6th, 1895) reports the case of a child 2 years old who had a large spina bifida in the sacro-lumbar region. The tumour was as big as a child's head, of smooth surface, and extending from the last sacral vertebra up to the second lumbar, whilst laterally it almost reached the anterior iliac spines. It was elastic and transparent. Palpation excited little pain. The author excised the tumour, having first removed some of its contents with a fine trochar. On opening the sac nerve fibres were seen crossing the walls: these were carefully dissected off. The vertebral cleft was lozenge-shaped, and measured 6 cm. by 3 cm. The spinal cord was of normal shape and aspect. A drainage tube was inserted, and the wound sewn up. Healing occurred by second intention, but forty days after operation, the child being quite cured and in good condition, was sent out of the hospital.

(268) Obstruction of the Ejaculatory Ducts.

At the meeting of the American Association of Genito-Urinary Surgeons (Philadelphia *Med. News*, June 29th) E. C. Burnett, of St. Louis, reported a case of early obstruction of the ejaculatory duct. The patient was an unmarried man, aged 35, who at the age of 5 was operated on for stone in the bladder, left lateral lithotomy being performed. The patient stated that his testicles almost always pained him for a day or so after sexual indulgence. Sexally he states that he was perfectly normal, excepting that he had never had an emission of semen. The external genitals were well developed. Upon the introduction of an endoscope into the urethra the prostatic portion of the canal was found to be extraordinarily short and the verumontanum was so small as to be barely distinguishable from the surrounding tissue. Palpation through the rectum for the seminal vesicles disclosed the fact that they were not appreciable to the touch and that the prostate was barely definable. During one of his examinations Burnett noticed the scar on the left side of the perineum, and on inquiry he was informed of the lithotomy performed thirty years before. In this incident in the patient's early history lay the solution of the question as to the cause of his aspermatism. Obviously in the performance of the operation the ejaculatory ducts were torn across becoming permanently occluded and through the occlusion of these ducts there followed arrest of development of the prostate gland and seminal vesicles. Obstruction of the ejaculatory ducts is given as one of the causes of atrophy of the seminal vesicles but Burnett could find no reference to any such influence upon the prostate.

(269) Enlarged Bursæ about the Knee.

Roncali (*Archiv. di Ortoped.*, Au. 12, f. 1, 1895) describes seven cases of enlarged bursæ about the knee, six of which were operated upon with complete success; in one (an interesting case of enlarged bursa under the quadriceps extensor, and not communicating with the joint) the patient refused operation. The seventh case was of a man, aged 25, who fell on his left knee in January, 1893, eight days after which the knee became swollen, and remained so for five months, then entirely disappeared. In August of the same year he noticed a swelling in the left popliteal space, which was rapidly increasing, causing a sense of weight and weakness in the limb, but no pain or fever. The popliteal artery could be felt beating over the tumour. On examination the swelling was seen to be divided into two parts by a sulcus, the upper section, as large as an eight months fœtal head, the lower and outer about the size of an orange. Pressure on the tumour caused no diminution in its size or alteration in the form of the joints. The circumference at the upper margin of the patella equalled 38 cm., as against 36 cm. on the right side; below the patella 42 cm. left, 32 cm. right; left calf 38 cm., right 37 cm. An incision was made over the tumour, and the bursa, with three cysts, firmly adherent to the posterior surface of the capsule of the joint was removed. There was no communication with the joint. The patient was able to leave the hospital two months after with perfect freedom of movement and completely cured.

MIDWIFERY AND DISEASES OF WOMEN.

(370) Hydatidiform Mole and Malignant Deciduoma.

Fraenkel (*Archiv f. Gynäk.*, vol. xlix., Pt. 3, 1895) has recently added to our knowledge respecting the malignant changes which sometimes take place in the uterus after gestation. Undoubtedly malignant deciduoma is often, on clinical evidence, associated with hydatidiform mole. Small portions of a mole of this class usually remain behind after the greater part has been expelled. The superficial epithelial layer (syncytium) of the chorionic villi proliferates considerably when a vesicular mole develops. It is precisely from this abnormal development of epithelium that the cancerous change known as malignant deciduoma is evolved. The deeper cellular investment of the chorionic villus (Langhan's layer), according to Fraenkel, takes no primary part in the development either of the mole or of the cancer.

(371) Placental Circulation and Morphinomania.

Bureau (*Report. Universel d'Obstét. et de Gynéc*, August 25th, 1895) attended a patient who had taken morphine for seven years, and who when he saw her took as much as 15 grains of that alkaloid daily. She was pregnant for the fourth time. At length she was spontaneously delivered of a child with talipes of one foot. As the cord was divided Bureau collected the blood of the placenta and umbilical vessels. On chemical analysis morphine was detected in the blood.

(372) Casein in Woman's Milk.

Wróblewski (*Centralbl. f. Gynäk.*, No. 32, 1895) has made researches into the comparative properties of casein in woman's and casein in cow's milk. The casein is different in the two kinds of milk. In woman it contains less carbon, nitrogen, and phosphorus, but more hydrogen and sulphur. The solubility of the casein differs, and different chemical changes go on when cow's or woman's casein is submitted to gastric digestion.

(373) Foreign Bodies in the Uterus.

Albertin (*Provence Méd.*, Nos. 11, 12, 1895) collects 24 cases. Two are original. In one case a laminaria tent remained nearly eleven months in the uterine cavity, and in the second a carbon rheophore was left behind, and did not come away for a week. In neither instance was there any symptom of irritation, and both the tent and the rheophore were expelled spontaneously.

THERAPEUTICS.

(374) Trional as a Hypnotic.

Bourneau (*Thèse de Paris*, 1895) reports the results of experiments as to the hypnotic effects of trional in 30 cases of ordinary illness. The doses used were sometimes small (1 to 2 g.), sometimes larger (2 to 4 g.); the weaker doses particularly produce the hypnotic effect, while the stronger have a sedative action in cases of irritation. The drug was given in cachets, a hot liquid being swallowed immediately after it. The average duration of sleep produced was about seven hours; it came on from three-quarters of an hour to an hour after the administration of the drug. The sleep was quiet and easily interrupted, but quickly renewed. Trional was especially successful in insomnia due to pain; no serious symptom followed the taking of the drug. In 4 cases it seemed to cause nightmare, and in 4 others there were some passing disturbances on awaking, such as nausea, headache, vertigo, uncertainty of movements, and tinnitus. In 2 cases sweating without apparent cause was noted. The only instance in which the drug failed was in a woman suffering from cardiac asystolia. The author sums up that trional has a sure hypnotic action; that in therapeutic doses it has no effect on the circulatory, respiratory, or digestive apparatus, while its action on the temperature and on the secretions is insignificant.—Moncorvo, of Rio de Janeiro (*Bull. de l'Acad. de Méd.*, September 3rd) has investigated the therapeutic effects of trional in children. He first tried it in the insomnia of neurotic children and in sucklings suffering from digestive disturbances. Encouraged by the prompt and sure effect of the drug and by its harmlessness, he proceeded to try it in the insomnia which is common in the exanthemata, particularly in the two first stages of measles, small-pox, and scarlatina. The drug also acted satisfactorily in the case of children suffering from malaria, in which insomnia is common as an early symptom. Given in small doses (20 to 25 centigrammes) before bedtime in such cases trional almost invariably succeeds. It was also used with much advantage as a means of subduing the phenomena of cerebral excitement in pernicious cases of malaria. The insomnia, which is often so troublesome in cases of cerebral irritation, was always mitigated or prevented by trional given in a dose usually not exceeding 50 centigrammes half an hour before the time when it was desired to produce sleep. In 2 cases of tuberculous meningitis the sedative action of trional on the brain was "truly wonderful." The drug was also tried with satisfactory results as a remedy for the psychical disturbances of cerebral sclerosis. In one case, that of a girl, aged 9, who since the age of 3 had been the subject of right hemiplegia, probly due to left cerebral hemiatrophy, trional in a daily dose of 50 centigrammes had an extremely good effect, and although the treatment was continued for several weeks, no disagreeable by-effect was noted. The drug was also used with advantage in the insomnia which frequently accompanies subacute or chronic tuberculosis in young subjects. Moncorvo found trional least successful in insomnia accompanying painful affections, such as diseased bone and neuralgia. The drug was well borne, no disagreeable effect on respiration, circulation, or cerebral activity being observed. It was given, as a rule, in hot sugared milk, by which means its somewhat bitter taste was almost entirely masked. In older children it was given in cachets, a little hot tea or milk being swallowed immediately afterwards. The dose varied from 20 centigrammes to 1 g. in the twenty-four hours. Moncorvo sums up as follows: Of all substances possessing hypnotic effects which he has used in infantile therapeutics he has found none speedier or more certain in its effect than trional, which is also better borne by children than any other narcotic. Lastly, it has a sedative action on the brain, which renders it useful in nervous or psychical excitement dependent on intoxications or on lesions of the encephalon or its coverings.—S. Wolfe (*Med. and Surg. Reporter*, June 8th) has found trional superior in promptness, ease of administration, and absence of bad or disagreeable after effects to most, if not all, other hypnotics. When a dose of 15 gr. is given, sleep usually ensues within half an hour, if at all, and this result seems but little altered whether the drug be administered in a warm vehicle (it does not readily dissolve) or given as a dry powder or in capsules. It is often so prompt that the patient sleeps within a very few minutes after injection. The dose in some cases must be larger than 15 gr., although he would not advise more in any case unless the susceptibility of the patient had been first ascertained; in many cases he believes 10 gr. would prove efficient. It may be safely repeated at least once in a night, and in an hour if necessary. He gives a few illustrative cases, and sums up as follows: (1) Trional deserves a high rank amongst hypnotics. (2) It has a useful range of application in catarrhal inflammations. (3) It deserves trial in neuralgic and myalgic affections. (4) It may be found useful in chorea and other neuroses.

(375) A New Use for Thyroid Extract.

J. W. White (*Ann. Med. Mag.*, August) reports the following case: In March, 1894, a young girl who was dressing in front of a mirror in a private carriage attached to a train was thrown violently forward, her face striking the mirror, which was broken into many pieces. A large crescentic wound of the soft parts of the right cheek was inflicted. The wound was quickly cleansed and the edges brought carefully into position with interrupted sutures. Rapid union, entirely by first intention, followed, and the scar appeared satisfactory. In the following October it had become greatly hypertrophied and caused great disfigurement. Absorbent ointments, pressure by means of plaster, and other means of local treatment having been tried to no purpose, she was (in January, 1895) put upon thyroid extract, from two to four tablets of "a well known preparation"—each tablet containing 5 grains—being given daily.

All local treatment was discontinued, the scar being only covered with a film of collodion to prevent abrasion or irritation and to keep up gentle pressure. On several occasions marked elevation of temperature and quickening of pulse occurred; once to an alarming extent, but in a few weeks a perceptible change was noted, and at the end of about six weeks the scar had in almost its entire extent come down to the level of the surrounding skin and the dense base had disappeared. White does not claim that this was a case of true keloid, but he points out that the clinical distinction between keloid growths and hypertrophied cicatrices is, after all, based on the size of the growth and on its course than upon any more definite differences. He reports the case "for the sake of the suggestion to which its leads up of the trial of thyroid extract in other conditions involving the skin, intractable to operative surgery, and either on the border line of malignancy, like keloid, or definitely malignant."

(370) External Application of Guaiacol in Orchitis.

Pietro Pucci (*Gaz. d. Ospedali*, June 1st) reports the case of a man, aged 66, who had suffered from repeated attacks of ague. Inflammation of both testicles suddenly came on without any apparent cause, and this was followed within two or three days by an acute attack of malarial fever. Sulphate of quinine was given for a week without any effect on the fever, while belladonna was applied to the testicles, equally to no purpose. An ointment composed of 2 g. of guaiacol and 20 g. of vaseline was then prescribed, about 2 g. of it being painted over the scrotum thrice daily, and the quinine being discontinued. The result was that the fever was almost at once subdued, and the orchitis was entirely cured in a week. The immediate effect of the guaiacol was an intense burning sensation at the place where it was applied. This lasted about ten minutes, but half an hour after the application the pain was distinctly mitigated, and finally ceased on the third day of the treatment.

(371) The Brazilian Lantana and its Alkaloid.

N. Lugo-Viña, of Cienfugos (*Rev. de Ciencias Medicas*, July 20th), draws attention to the antimalarial properties of the Brazilian lantana, a verbenaceous plant which grows in the South American forests. It has long been esteemed as a specific in the "marsh fevers" by the inhabitants of Brazil, La Plata, Peru, under the name of "Sacred Herb." Its introduction into scientific therapeutics about ten years since is due to Buiza, of Lima, who gave it in the first instance to two patients, the one with acute articular rheumatism, the other with typhoid fever of ataxic form, in both cases with most satisfactory results. The active principle of the herb was separated by Negrete, and named "lantanine." Buiza says of it: "Administered the new alkaloid to 32 patients attacked with fevers of a different character and intensity, with the most flattering results, etc. Like quinine, it produces a moderate effect on the circulation, determining a slowness of the chemical phenomena of nutrition, and usually a diminution of temperature. In larger doses it is a powerful antiperiodic, superior to the salts of quinine, as it possesses the advantage of being tolerated even by the most delicate stomachs. Intermittent fevers, rebellious to sulphate of quinine, have yielded to the administration of 2 grammes of 'lantanine.' The dose is from 1 gramme to 2 grammes during the day, best given in pills of 0.10 gramme each, to take two every two hours. Intermittent fevers may be cut short at the onset by taking five pills, repeated twice or thrice at intervals of 10 minutes. This treatment succeeds in 85 out of 100 cases." The author quotes favourable results obtained by others, and himself has exhibited the drugs in other indications than those furnished by Buiza. He has obtained good results in some cases of "facial neuralgia," and in two cases of "metrorrhagia of a marked paludal character." Five obstinate cases of intermittent fever, which did not yield to quinine or lantanine were cured by giving the two remedies either together or alternately. Three cases of intense "catarrhal fever" were successfully treated with it, in one of them in alternation with antipyrin.

PATHOLOGY.

(372) Experimental Physiology of the Nervous System.

Bechterew (*Neurol. Centralbl.*, August 15th, 1895) points out that in the newborn animal the earliest date at which a given portion of the nervous system functionates corresponds in time with the completion of development of the nerve fibres and nerve cells of that part. Hence absence of the usual results on electric stimulation or on destruction of a given portion of the nervous system means incomplete development of nerve fibres and cells connected therewith; but presence of such results does not necessarily mean completed development of that particular part, for it seems that one part may do duty for another until the development of the latter is completed: for example, consciousness in newborn animals would seem to be located in the earlier developed lower centres instead of in the higher centres as in older animals. He considers that experiments on the newborn animal will be of the greatest value in determining the functions of the various portions of the nervous system; a combination of the ordinary degeneration method with electric stimulation, or with destruction of the parts containing the degenerated tracts, being the only method that is of real service. The results of certain experiments thus made are given, showing that Goll's column has some share in the maintenance of equilibrium—a fact illustrated clinically by Romberg's symptom in tabes dorsalis (for in animals also the loss of equilibrium is aggravated by blindfolding); and also that the lateral cerebellar tract plays an important part in the same function.

(373) Toxicity of the Aqueous Part of the Breath.

Liverato (*Arch. Ital. de Biol.*, 1895, Tome xxiii, p. 279) investigated the toxicity of the aqueous vapour expired by healthy and by sick persons. Expired air was received and the aqueous vapour condensed in suitable apparatus, the fluid obtained was then injected into rabbits with the following results: (1) Aqueous vapour from persons suffering from diseases of the respiratory tract with fever, injected into rabbits produces a fever which lasts three to six days, general torpor and diminution of reflexes. (2) These effects are less accentuated in the case of patients who have no fever. (3) The aqueous vapour of febrile patients having no respiratory trouble causes no fever or only very slight fever in rabbits. (4) The vapour of healthy individuals has no appreciable effect. (5) Identical results are obtained when the liquid is sterilised.

(374) Crossed Cerebro-Cerebellar Atrophy.

Mingazzini (*Neurol. Centralbl.*, August 1st, 1895) discusses the cause of atrophy of the opposite half of the cerebellum with unilateral cerebral lesions. It is to be sought in the accompanying affection of the tract whose course is the thalamus and red nucleus of the same side and the peduncle of the opposite side. Cases are adduced in support of this, and it is stated that no single case of crossed cerebro-cerebellar atrophy has been found on record where the thalamus on the side of the cerebral lesion was intact. Further, 2 cases of Jacksonian epilepsy are quoted; in one there was atrophy of the ascending parietal convolution unilaterally with very slight atrophy of the posterior part of the thalamus of the same side, and of the pyramidal tracts on the opposite side; no cerebellar atrophy; in the other, although there was no difference in weight of the cerebral hemispheres, the thalamus of one side was markedly atrophied, here the cerebellum of the opposite side was also markedly atrophied; hence it is concluded that atrophy of a certain part of the thalamus causes crossed atrophy of cerebellum, but lesions of one side of the brain, without lesion of thalamus, do not cause crossed atrophy. There is a tract divisible into three parts: (1) from cortex to thalamus, (2) from thalamus to red nucleus, (3) from red nucleus *viâ* decussation to opposite half of cerebellum. Cases where unilateral lesion of cerebrum is not followed by crossed atrophy of cerebellum would thus be easily explained either by the probability of some of the three portions of the tract escaping, or by the necessary part of the thalamus not being involved.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(231) Diabetes.

WORMS (*Bull. de l'Acad. de Méd.*, July 23rd) as the result of researches reported in a previous communication to the Academy in December, 1893, came to the conclusion that in persons engaged in brain work and leading a sedentary life the proportion of glycosurics was 7 per cent. This conclusion he arrived at by examining the urine of 100 such persons, taken more or less at random. Further examinations of the same series of patients have raised the proportion of diabetics to 10 per cent., which he gives as representing the average frequency of the condition in any series of 100 scientists, artists, business men, doctors, lawyers, etc., between 40 and 60 years of age. Bertillon's statistics have shown that diabetes is on the increase, the mortality from diabetes in Paris having almost doubled between 1883 and 1892. All the cases discovered by Worms in his investigations are examples of the milder type of diabetes, in which the glycosuria can be controlled by diet; the patients have no particular symptoms, and with proper care may live almost indefinitely. As to the relative frequency of mild diabetes compared with the grave form of the disease, Worms quotes his own observations during the last thirty years. From 1863 to 1889 he had 41 cases under observation. In 1889 only three of these cases (one being in a child) had died within two years of the discovery of the condition, giving a percentage of 7 per cent. of serious cases. Of the rest 22 still survive, among them being an old lady, aged 83, whom the author has had under observation for thirty-three years, and in whose urine he has found no sugar for the last two years, her health in other respects being excellent. He is inclined to think that the proportion of grave to mild cases of diabetes does not exceed 5 per cent. With regard to the question whether mere glycosuria is likely to pass into diabetes with cachexia unless care be taken, Worms is not prepared to give a decided opinion, but he thinks that too much importance should not be attached to moderate glycosuria, even persistent, which is not accompanied by appreciable organic deterioration. He points out that even in those glycosurics who follow a fixed treatment and live always under the same conditions, the quantity of sugar varies within wide limits, great increase taking place under the stress of moral impressions or physical exertion. He cites many instances in his own practice in which diet and methodical treatment keep the quantity of sugar low or cause it to disappear for long periods, sometimes for years, even when the patient has returned to ordinary diet. It would, however, be rash to predicate cure in any given case, Worms having often seen glycosuria recur after long periods of absence of sugar. As regards treatment, he says that diet must be the foundation of any system of therapeusis, but it should be rigidly adhered to only at the outset, when the degree of reducibility of the sugar in the individual case is being tested; if kept up too long it does harm and predisposes to coma. In the way of medication he believes most in quinine. Treatment, he adds, succeeds best in patients who are not anxious about their condition, which is always aggravated by worry.

(232) An Epidemic of Malignant Pneumonia (? Pollitzeotic).

MALENCHINI (*Lo Sperim.*, August 6th, 1895) draws attention to a small epidemic of fatal pneumonia occurring in Florence in autumn, 1894, and spring, 1895. The cases as a rule began without cough or pain, but with fever and general *malaise*. Physical signs of pneumonia as a rule did not appear for three or four days. Copious albuminuria was a constant feature. Most of the cases died, and at the necropsy patches (chiefly central) of pneumonia were found, mostly in the lower lobes and of mixed catarrhal and fibrinous types. A lance-shaped encapsuled diplococcus was found in the blood and lungs. The prevailing theory in Florence as to the cause of the epidemic was to the effect that it was due to infection from certain imported parrots. The author discusses this theory, and refers to a similar epidemic in Paris also supposed to be due to parrot infection, and where a diplococcus of similar nature was found in the incriminated birds. On the whole Malenchini does not consider the parrot theory proved in the Florence epidemic, but in view of the results of Nocard, etc., in the Paris epidemic he is not inclined to dismiss it as a vain and futile supposition.

(233) Syphilitic Endocarditis and Myocarditis.

O. ISRAEL showed this specimen before the Charité Aerzte (*Berl. klin. Woch.*, September 9th, 1895). The heart was hypertrophied, but only slightly dilated. No circulatory obstruction could be proved at the mitral orifice. Islets of fibrous tissue were present at the base of the papillary muscles, and the muscles themselves had undergone fibrous changes. Fine strands of fibrous tissue were seen in the slightly brown cardiac muscular tissue. The dilated left auricle presented peculiar appearances. The wall was rigid, with only the remains of a few yellowish-brown muscular fibres. The auricular appendix was greatly shrunken. Very irregular and easily detached excrescences were found on the inner wall of the auricle, and were specially well marked on the upper surface of the mitral valve segment. The gummatous formation in the heart muscle could only be due to syphilis. In the liver fibrous changes with the remains of gummata were found. There was induration of the uterus with chronic endometritis also of syphilitic origin. Ilster recounted the symptoms observed during life. The patient, aged 47, presented the appearances of hepatic cirrhosis. The pulse, 136, was small and irregular at first, but improved under digitalis. A systolic murmur was heard in the left second and third intercostal spaces, with an accentuated second sound. There was no clinical evidence of syphilis. Eight days after admission there was a profuse and fatal hæmorrhage from the stomach. In the discussion Kleinpeter pointed out that this was apparently the first case in which an endocarditis was demonstrated to be of syphilitic origin, and that the diagnosis of such a lesion was now within possibility.

(234) The Movements of the Fontanelle.

HUTCHISON AND ELDER (*Hlth. Hosp. Repts.* III, 268) have obtained a number of tracings of the pulsation of the anterior fontanelle in young children. They exhibit a double pulsation, arterial and respiratory. The arterial pulse is almost invariably anacrotic, in which respect it corresponds with the tracing from a limb, or any considerable part of the body taken as a whole. The whole fontanelle is depressed with inspiration and bulged with expiration, owing in all probability to a suction of the venous blood out of the cranium during inspiration, and a damming of it back during expiration. Under pathological conditions the lowering of pressure during inspiration may be great enough to affect cerebral activity. During sleep the mean intracranial pressure is low, the arterial waves are small, the respiratory undulations well marked. Chloroform produces similar effects. The fontanelle is more tense, the arterial waves lower, and their summits more rounded than in the vertical. Movements evidently cause a marked increase in intracranial pressure, and this is particularly marked when the child cries.

(235) Pulmonary Hypertrophic Osteo-arthropathy.

DAVIS (*Journ. American Med. Assoc.*, June 1st, 1895) records a case which he brought before the Association in May, and gives a bibliography of the disease. He does not consider it a pathological entity like acromegaly but regards it as a symptom group of most coincident with chronic lung affections, rarely with diseases of other organs and with syphilis. These give rise to a toxæmia, which like that of phosphorus, arsenic, and certain infections, tends to involve bones and joints in inflammation. Davis's patient was a boy, aged 6½ years, who had pneumonia at 1 year, and since then was never free from cough, with frequent and copious purulent expectoration. One year after the pneumonia the ends of the fingers and toes became deformed by enlargement, while the wrists and ankles increased greatly in size. There was no enlargement of the jaws; the lower lip was somewhat hypertrophied. The spine was straight. When exhibited there were signs of

fluid (probably purulent) almost filling the left pleural cavity. There was no deformity of the bones of the body or enlargement of those of the upper arms. Both wrists were considerably broadened and thickened, but their movements were unaffected. The metacarpals were normal, the first phalanges of the fingers much enlarged, the second now little affected, and the terminal set enormous and characteristically broadened and thickened. The nails resembled parrot beaks. Similar changes were to be seen in the feet. The lower ends of the femora were much enlarged, but there was no fluid in the knee-joints. No joint tenderness was observed. The urine and sputum had not been examined. Davis quotes the pathological observations which have been made by others on this disease, and emphasises the points of diagnostic differentiation from acromegaly afforded by the disproportionate enlargement of the terminal phalanges in pulmonary hypertrophic osteo-arthropathy, together with the absence of deformity of the inferior maxilla. With regard to treatment, Moussous has observed improvement in one case after the drainage of the antecedent empyema, and Gillet after drainage of a tuberculous cavity. H. Schmidt found that a case of supposed syphilitic origin recovered after a course of specific treatment. Desmons and Binaud have recently observed considerable improvement in a patient treated by subcutaneous injection (during several months) of tissue extract from the lungs of healthy sheep; Davis thinks this method deserving of further trial. He intended to treat his own case first by aspiration of the effusion, with thorough drainage of the pleural cavity should pus be found.

SURGERY.

(286) Prostatectomy.

At the meeting of the American Association of Genito-Urinary Surgeons, J. P. Bryson, of St. Louis (Philadelphia *Medical News*, June 29th), presented a tabulated report of twenty-seven operations of "prostato-myomectomy" by the suprapubic route. The series was commenced when this method of attacking the prostate was in its infancy and the *technique* far from perfect. The ages of the patients ranged from 50 to 78 years. The mortality for the entire series was a little over 25 per cent., but this does not represent the true death-rate of the operation; 3 cases should be excluded, 1 of which died from hæmorrhage from sarcomatous disease of the prostate and 2 from pyelonephrosis. Eliminating these three, there were 24 cases with 4 deaths, a mortality of 16 6 per cent. A radical cure was effected in 13 of the cases, as evidenced by the absence of residual urine, a good rest at night, and a practical cure of the cystitis. In 2 cases no benefit whatever appeared to have resulted; these patients were aged respectively 72 and 78 years, were far advanced in senile degeneration, and were operated on mainly in the hope of relieving the most distressing symptoms of "prostatism," namely, frequent and painful urination and inability to get rest or sleep either by day or by night.—Eugene Fuller, of New York (*ibid.*), reported six successive successful cases of prostatectomy, and described a method of operating whereby the prostatic hypertrophy is enucleated. Ordinarily, suprapubic cystotomy is first performed, then an incision is made through the floor of the bladder; this incision extends from the lower margin of the vesical opening of the urethra backward for about an inch and a-half, and is made with rough serrated-edged scissors, in order to avoid hæmorrhage. The forefinger of one hand is then introduced through this cut, while the fist of the other exercises counter-pressure upon the perineum, in order to bring the growth well within the reach of the forefinger. By manipulation the obstruction can gradually be enucleated, the hypertrophy coming away in one or several pieces. After the enucleation, a perineal incision is made for dependent drainage, the inner edge of the drainage tube entering the bladder through the lower vesical incision made for the enucleation. The suprapubic vesical and abdominal incision is then tightly sutured, with the exception of a small space for a drainage tube. Fuller has never seen trouble from hæmorrhage, either primary or secondary, by this method of enucleation, and felt safe in closing the suprapubic cut. He claimed that by this method the mortality is reduced, and excellent results obtained. Bell said his own experience of prostatectomy had not been so favourable as that of Bryson and Fuller. He had operated in 5 advanced cases, all in very old men, and of these 2 died. In both instances death took place several days after the operation, apparently from toxæmia. On *post-mortem* examination nothing was found that could account for the fatal issue.

(287) Traumatic Rupture of the Urethra: Restoration after Thirty-six Years.

At the meeting of the American Association of Genito-Urinary Surgeons (*Med. News*, June 29th) G. Chismore reported the following case: The patient was a brewer, aged 43. At the age of 6 years, in order to avoid constantly wetting the bed at night for which he had often been punished, he tied a string about the penis near the scrotum. The constriction thus produced entirely severed the urethra and corpus spongiosum and divided fully one-half of the corpora cavernosa. Two attempts were made in Germany to restore the urethra by plastic operations but both failed. Several months ago he came under the author's observation, who first made a perineal section through which the urine was allowed to pass and then denuded the tissues of the old wound, precisely as is done in attempting to close an old torn perineum. The two ends of the urethra were then cut off squarely, a staff introduced, and then the severed portions of the corpora cavernosa were closely drawn together by means of a deep line of buried catgut sutures. Accurate approximation of the under surface of the urethra was obtained by three catgut sutures; no attempt was made to suture the upper or deeper half of the urethra. The corpus spongiosum was carefully sutured and the integument then brought together. On the second day after the operation the man had an attack of delirium tremens. On the thirteenth day the catheter was removed and the perineal incision permitted to close. The man now passed his urine entirely through the normal urethra, the severed ends of which had united so closely that the introduction of a bulbous sound failed to reveal the line of union. Since the operation the man had had two erections without pain.

MIDWIFERY AND DISEASES OF WOMEN.

(288) Uterus Bicornis in an aged Multipara.

Griffon (*Bull. de la Soc. Anat. de Paris*, vol. ix, part 13, 1895) recently dissected the genitals of a woman, aged 72, who died in a home. She had borne three daughters, all now living. No abortion nor twin pregnancy had occurred. The uterus consisted of two perfectly distinct and symmetrical cornua, lying almost horizontally and divergent from each other. Each had a distinct os internum, but there was but one cervix beyond the normal level of the middle of the cervical canal. The common portion was very short and wide. Each cornu bore a normal tube and ovary. The os externum, portio vaginalis, and vagina, as well as the ureters and kidneys and all anatomical structures beyond the genital tract were free from abnormalities. A very deep vesico-rectal peritoneal fold was discovered, giving a strange appearance to the parts when the peritoneum was opened. It ran from the bladder to the rectum, and was fixed to the groove formed by the junction of the cornua. It divided into two both the vesico-uterine and Douglas's pouches.

(289) Ectopic Gestation. Rupture of Hæmatocele into Bladder.

Schwartz (*Centralbl. f. Gynäk.*, No. 36, 1895) relates a case of rupture of a tubal gestation sac, with acute symptoms. The patient was 42, and, as is so often the case, she had not been pregnant for many years. Notwithstanding the urgency of the symptoms and the weak and anæmic state of the patient, it was not considered advisable to operate. A large hæmatocele had developed, and Schwartz thought that there was less risk in leaving the patient quiet than in opening the peritoneum. The pregnancy had hardly passed the second month. The result of the case was not in all respects satisfactory. It was three days before the collapse passed away. Fever and rigors set in, with sharp pain referred to the symphysis.

At the end of a fortnight there was severe dysuria, and clot, pus, and sloughy tissue were passed from the bladder. For four weeks the discharge of foreign matter continued, pieces of fœtal skeleton also came away. The hæmatocele grew smaller and smaller. At the end of the seventh week a rigor set in, followed by pneumonia. This complication was traced to septic infarcts. Several articulations afterwards became inflamed. At the end of six months the patient seemed, according to Schwartz, to be safe at last, but there were distinct pleural adhesions and extreme debility.

(290) Tubo-ovarian Abscess: Vomiting of Enemata after Operation.

Humiston (*A Year's Work in Operative Gynecology*, Cleveland, U.S., 1895) publishes details of a very advanced case of disease of the appendages. On the right side was a large intra-ligamentous ovarian hæmorrhagic cyst, on the left a small tubo-ovarian abscess. Both appendages were removed. A Mikulicz tampon was used to check the oozing. The operation lasted forty-eight minutes, in the course of which period 13 fluid ounces of ether were administered. Incessant vomiting began twenty-four hours after the operation, with fever and high pulse. Humiston declares that the vomiting was terrific, and by reversed peristalsis enemata were passed out of the mouth. Death occurred on the morning of the fourth day. There was no necropsy.

(291) Hyperemesis Gravidarum: Difficulty in Inducing Abortion.

Charpentier (*Rèper. Univ. d'Obstt. et de Gynéc.*, August 25th, 1895) observed uncontrollable vomiting, from the beginning of pregnancy, in a secundipara, aged 28. At the third month the state of the patient was so grave that it was necessary to provoke abortion. A rubber bougie was passed into the uterus, and another on the following day, then a dilating bag, then Hegar's dilators from the smallest to the largest. Lastly, nitrate of silver was applied to the uterine cavity. The ovum remained unexpelled. These proceedings took five days. The patient was ultimately put under chloroform, and the ovum was detached by the finger. The patient recovered. She was hysterical, and Charpentier believes that hysteria is often the cause of uncontrollable vomiting in pregnancy.

(292) Menstruation and Ovulation Independent.

Byron Robinson (*Amer. Gynec. and Obstet. Jour.*, Aug., 1895), in a discussion on menstruation, noted that all evidence favours the theory that ovulation and menstruation are independent. Ovulation, he remarked, occurs before birth in man and other animals. Women menstruate who possess ovaries totally incapable of ovulating from disease. Menstruation frequently continues after removal of the ovaries, and is not required for the ripening and discharge of ovules. The sow seems to ovulate continually and progressively, but the ova ripen in greatest number at rut or œstrus. Robinson believes that sufficient evidence exists to shew that no follicle ruptures at many of the menstrual rhythms. Women who do not menstruate can become pregnant. If ovulation and menstruation occurred together coitus between healthy subjects just after the period would far more frequently be followed by pregnancy. Lastly, ovulation, in a modified form, continues during pregnancy.

(293) The Maternal Impression Theory.

Hartmann (*Münch. med. Woch.*, 1895. No. 9) describes the birth and anatomical structure of a double monster (*cephalothora copagus*), and notes that the mother was alarmed, when pregnant, by seeing in a forest a newborn fawn showing a similar monstrosity. She considered that that adventure was the cause of the malformations in her child, and Hartmann seems inclined to support her opinion.

THERAPEUTICS.

(294) Borax in Epilepsy.

Féré (*Rev. de Méd.*, September, 1895) reports the results of the treatment of 122 cases of epilepsy by borax. The drug was given in large doses (2 g., rising gradually to as much as 20 g. a day), and in some cases for many months. In about two-thirds of the cases (71.31 per cent.) the treatment had no effect. In about a fifth (19 67 per cent.) some doubtful or temporary improvement was noticed, less than the benefit derived from bromides. In the remainder (9.01 per cent.) the improvement was marked, though the duration of the observations was too short to permit it to be stated that the improvement was permanent. The great drawback to the use of the drug is the frequency with which its continued use in large doses produces toxic symptoms. To this subject Féré devotes the greater part of his paper. The earliest as well as the most frequent symptoms are due to derangement of the alimentary tract. Nausea and vomiting preceded as a rule for a few days by loss of appetite, and heaviness and burning in the pit of the stomach. In some cases these symptoms may be diminished or removed by administering intestinal antiseptics, or by giving the borax dissolved in glycerine instead of water. Extreme dryness of the skin with suppression of the fatty secretion, as well as dryness of the mucous membranes, may also be produced by the large doses of borax requisite in the treatment of epilepsy. The hair also is affected: it becomes dry, and may fall out, producing complete baldness. Various lesions of the skin may be produced by borax, among others (1) psoriasis in persons predisposed to that affection. The most common affection is a form of (2) eczema resembling seborrhœic eczema. The affection begins as papules or circles with red squamous borders, which first appear generally on the lower part of the trunk or abdomen and on the upper limbs, in, that is to say, parts of the body where the sebaceous secretion is most scanty. Fine branny desquamation of the hairy scalp with or without loss of hair may accompany the appearance of a form of the skin affection to which the term seborrhœic acne is applied. These skin affections disappear when the administration of borax is suspended, and may be kept under during its use by giving intestinal antiseptics or by resort to local treatment by oxide of zinc, sulphur, or salicylic acid. Other less common affections of the skin are (3) the appearance of red plaques which may be confluent and very extensive, may present resemblances to the rash of measles or scarlet fever, and may be followed by desquamation. (4) A papular eruption accompanied by pruritus and followed sometimes by desquamation. The continued administration of borax produces in some cases a cachectic state, characterised by wasting, a waxy tint of the skin, discoloration of the mucous membranes, puffiness of the face, and sometimes general œdema. In a certain proportion of the cases of œdema there is albuminuria, and in such cases anæmia may develop with great rapidity. Borax appears in the urine in health half an hour after ingestion, and may continue to be excreted by the kidneys for weeks after the suspension of treatment. On the whole Féré concludes that borax is more efficacious than the bromides in a small proportion of cases of epilepsy, and that therefore it should be tried when the bromides fail. It must be regarded, however, as a dangerous remedy owing to its power of producing or aggravating lesions of the kidneys even when given in small doses.

(295) Erysipelas Toxins in Malignant Disease.

Czerny (*Munch. med. Woch.*, September 3rd, 1895) relates his experiences of the treatment of malignant disease with erysipelas toxins. Although he has often seen no good effect, but even a more rapid development of tumours, after a spontaneous erysipelas, yet he recollects 2 cases in which an undoubted beneficial influence was exerted upon carcinoma. The author has used mixed erysipelas and prodigiosus toxins after Coley's method. In 1 case of a woman, aged 35, a sarcoma of the parotid appeared during pregnancy, and grew at first slowly, but later rapidly. When she presented herself, there was a mass as large as the fist behind the ear, the parotid was hard, and a mass of growth was present in the external meatus. The facial nerve was paralysed. As extirpation offered no hope, the toxin treatment was begun, and 15 injections were made. The growth became greatly lessened in size, the parotid gland soft, and the facial paralysis disappeared except from the frontal branches of that nerve. The author says that a marked favourable if not specific action was noted upon the sarcoma in this case. It is to be remembered that tumours occurring during pregnancy have some-

times been known to diminish considerably afterwards. The author then refers to 3 cases of recurrent sarcoma in the naso-pharyngeal space in which he used the same treatment, but the number of injections was too small to produce a very striking effect. He has also treated 4 cases of carcinoma with no very real benefit. In 1 case of advanced carcinoma of the upper jaw, an extensive softening of the growth with subjective improvement occurred. Putting his results alongside Coley's more extensive experiences, he concludes that (1) the injection of these toxins causes fever, etc., and always local inflammatory signs; (2) these manifestations disappear in a few hours, but after frequently repeated injections there may be loss of appetite, wasting, etc.; (3) the injections exercise a specific action upon sarcomatous growths, and may even bring about a cure; (4) as the results are uncertain, such treatment should of course never take the place of operation, but should be adopted in inoperable or recurrent growths. Perhaps it might be used to prevent recurrence in sarcoma; and (5) in carcinoma at most a retardation of growth has been noted, but no cure.

(296) Serumtherapy of Cancer.

Salvati and Gaetano (*Rif. Med.*, Aug. 19th and 20th, 1895) give the result of their clinical experience in the treatment of cancer by injection of serum derived from a horse which had been previously inoculated (through the trachea) with an infusion of triturated sarcoma. Five patients suffering from undoubted cancer, mostly relapses after previous operation, were subjected to the treatment. No ill results were observed after injection. The lancinating pains in the majority of cases disappeared completely for a time—after 10 to 20 injections—but as a rule returned again with their previous intensity. Hæmorrhage from the ulcerated surface was a frequent occurrence after injection. The tumours were observed to diminish in size in the early part of treatment. Still, notwithstanding the manifest improvement at the beginning of treatment no real arrest of growth took place in any of the cases, so that one cannot speak of the treatment of malignant growths by injection as in any sense a cure.

PATHOLOGY.

(297) Histological Appearances of the Heart Muscle in Valvular Lesions.

Banti (*Centr. f. allg. Path. u. path. Anat.*, 1895, Bd. vi. Nos. 14 and 15) considers the microscopic changes in the heart wall with the object of explaining the failure of compensation which occurs at the end of cardiac disease. He divides the cases according as the aortic or the mitral valves are affected, and finds that the lesions are somewhat different. Aortic disease is frequently caused by atheroma, and this degeneration affects the orifices and walls of the coronary arteries. The nutrition of the heart thereby is interfered with, and there results simple or degenerative atrophy of the muscular elements with coincident hyperplasia of the connective tissue. Small necrotic areas may also be found which lead to the formation of definite scars. This process is a sclerosis or cirrhosis, and is termed by the author "arterial cirrhosis." In the case of mitral disease the process is different as the cause of the valvular lesion is usually different. Banti investigated hearts of persons dying in each of the three following conditions: (1) In the period of full compensation, as the result of an intercurrent disease; (2) during that early asystolic condition known as heart fatigue (*Ermüdung des Herzens*), death occurring usually from some complication, such as embolism; (3) after a more or less prolonged period of cardiac cachexia. In the first series he found pure myocardial hypertrophy without any recognisable microscopic change. In the second series there was marked dilatation of the coronary veins and their subepicardial branches, and microscopically this dilatation was seen to extend to the capillaries between individual muscle bundles. The intermuscular connective tissue also underwent a change, becoming granular and cloudy. Some of the muscle cells showed vacuolar degeneration. These changes clearly show venous congestion and œdema of the muscular bundles and connective tissue. In the third series the dilatation of the coronary veins was often enormous, while their walls were thickened, white, and rigid, so that they resembled arteries rather than veins. Microscopically this change was shown to be a sclerosis. From these veins there proceeded in all directions bands of fibrous tissue, which led to atrophy of the muscular bundles. Here one has therefore a "venous cirrhosis." The author concludes that heart failure therefore depends upon the scarcity of muscular elements in those cases in which the fibrous tissues increased, but that this is also aided by an insufficiency of reserve force, which is the essential cause of heart fatigue, and which cannot be recognised by any definite lesion of the muscular elements.

(298) The Presence of Streptococci and Mastitis in Cows as a Cause of Acute Gastro-Enteritis in Man.

Holst (*Festskrift till Professor Heiberg*, Christiania, 1895) gives an account of four epidemics of acute gastro-intestinal catarrh, which took place in Christiania, presumably as a result of drinking infected milk. In each epidemic the persons affected were found to have received milk from the same source. The milk was almost invariably taken unboiled, and the symptoms commenced some hours afterwards. The illness lasted half a day in most cases; in two or three it lasted several days; it was afebrile. The milk in each case contained numerous pus cells, with masses of diplococci and streptococci, which, on cultivation, yielded "streptococcus longus." Injected into animals it caused fatal peritonitis, with the production of masses of the same streptococcus. On investigation it was found in each epidemic that in the cattleshed from which the suspected milk was obtained there was a cow suffering from mastitis: the milk of this cow also contained "streptococcus longus." It was stated in each epidemic that the milk from these cows had not been used for food previously but had been delivered by mistake on the day on which the cases occurred. In the first epidemic the suspected cow also suffered from diarrhœa, but this possible source of error was not present in the others. Injections of these cocci into rabbits and mice caused diarrhœa in some cases, in others there was hyperæmia of the duodenum and streptococci in the blood of heart and spleen, and in the peritoneal fluid. The author took 2·0 c.cm. of these cultures, and had colic, sometimes vomiting, rarely diarrhœa. On further experiments these results ceased and did not occur in two other doctors. Animals treated with more virulent cultures had diffuse intestinal catarrh or diarrhœa; streptococci were found in all their organs. The author regrets the incompleteness of these investigations, but concludes that mastitis caused by streptococci in the cow is capable of communicating to milk diarrhœa-causing properties. He has, indeed, found in milk under normal conditions numerous cocci in chains, which appear harmless. He has often found streptococci in diarrhœa of unknown origin. Sometimes these caused peritonitis or diarrhœa in animals. In one case diarrhœa in a child was said to be caused by boiled meat containing the "streptococcus longus," which was also found in the child's stools. But the "chains" produced no effect on animals. In one case of diarrhœa the streptococci present had no effect on animals, but in the author caused shivering and increasing colic without diarrhœa for some days.

(299) Changes in Nerve Cells in different Functional States.

Luciano (*Lo Sperim.*, August 6th, 1895), as the result of an experimental study of the above subject, concludes that the activity of the nerve cells is accompanied by a state of turgescence in the protoplasm of the cell substance. Fatigue induces a progressive diminution in the size of the cell. In moderate degrees of activity the nucleus undergoes no change in volume; when the activity is continuous and protracted the nucleus undergoes changes analogous to those occurring in the cell substance, but less marked. Probably the first phases of cellular activity excite a slight increase in the chromatic substance of the cell body; the later phases, accompanied by fatigue, cause a diminution and more diffuse distribution of the same. In the nucleoli an increase in volume is observed which yielded slowly *pari passu* with the oncoming of fatigue.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(302) Auto-intoxication and Skin Diseases. Blaschko (*Berliner Klinik*, September, 1896) discusses the present position of our knowledge regarding this question. The laity cling to the old humoral pathology which attributed skin affections to dyscrasia, improper mixing of the blood fluids, and, though the local origin of many of them has been proved by Hebra and his school, there can be no doubt that a large number of such diseases arise from internal causes. Among these causes, one which has of late been put prominently forward is auto-intoxication. According to Bouchard, this is a perpetual danger in the healthy subject whose organs, as well as innumerable micro-organisms in his alimentary tract, are continually forming chemical substances of which any excess or abnormality in production is liable to lead to toxic effects. These are still more likely to result from the formation of abnormal chemical products under the influence of disease. Bouchard and other French authors include among the toxæmias all affections resulting from acute or chronic putrefactive processes in the alimentary canal, taking dilatation of the stomach as the type of chronic auto-intoxication. Various skin diseases, particularly acne of the skin with reddening of the tip of the nose in young girls, are attributed to gastrectasis; but Bouchard uses this term in a very loose way, ignoring the recent researches and the laws deduced therefrom as to its exact diagnosis. The nature of the "autotoxic dermatoses" can best be elucidated by the study of such "toxic dermatoses" as the drug eruptions. Of these the main characters are as follow: (1) Certain drugs produce by preference certain eruptions, but one and the same substance may cause very various manifestations, of which potassium iodide affords a very good example. (2) The same eruption—for example, urticaria—may result from the action of the most different medicines. (3) These eruptions are comparatively rare, due to idiosyncrasy, which may be natural, or result from the continued use of the drug, which in other instances establishes a protective habit. (4) They are generally acute, and belong to the groups of erythematous and exudative affections; more chronic outbreaks are rare, and genuine eczema and psoriasis are unknown outside the true parasitic affections. (5) They appear alike in whatever way the drug was administered, and are therefore due not to reflex action but to the direct toxic effects of the poison in the blood. Similar eruptions may result from the presence of any foreign substance in the blood: thus, the emptying of an echinococcus cyst into a branch of the portal vein has set up urticaria. In such a case the boundary between toxæmia and auto-intoxication may be hard to define; somewhat akin are the rashes so often observed after the operations of serumtherapy. Auto-intoxication is also dependent upon idiosyncrasy: in the cases under consideration there is loss of power of resistance to a poison acting on the cutaneous circulation. It is possible to enumerate groups of skin affections which probably originate from poisoning by bacterial proteïds (=auto-intoxication). Among erythemas may be reckoned: (1) the typical acute exanthemata, morbilli, rubeola, and scarlatina, which approach nearest to the toxic erythemas. In variola, varicella, and the other acute exanthemata there is also the local action of the micro-organisms on the skin to be considered. (2) Erythema in the course of acute and chronic infectious diseases, such as cholera, septicæmia, etc. Here again the affection may be complicated by the presence of bacteria in the skin. (3) The erythema of uræmia and of icterus. (4) Dermatitis exfoliativa, of which Blaschko quotes a case which he believes to have arisen from auto-intoxication. In all these cases substances have been found in the urine indicating the occurrence of putrefactive changes in the intestine. Urticaria in many cases undoubtedly arises from auto-intoxication; here again idiosyncrasy plays a most important part. Acne vulgaris is probably unconnected with digestive troubles, with which, however, acne rosacea is usually associated. That the latter is really an auto intoxication can hardly be regarded as proved when the uncertainty of its relation to the alimentary tract is considered. Still more uncertain, in spite of the popular views as to "impurity of the blood," is the autotoxic origin of eczema. Some have considered this proved by the local reaction of tuberculin and other materials (especially amines) injected into the circulation of patients suffering from lupus. Blaschko, however, points out that this reaction does not occur in the healthy skin, and is strictly comparable not to the development of eczema but to the appearance of an acute exacerbation in the course of an already established disease. In France the old humoral pathology has never become quite extinct, and modern observers, such as Quinquaud and Gigot-Suard, still attach too much importance to the toxæmic origin of skin affections. Tommasoli has also written a book in which he attributes an enormous number of cutaneous diseases to auto-intoxication, basing his views on the daily estimation of the various constituents of the urine in 8 cases, a method which cannot but be reckoned fallacious when the enormous number of substances in the circulation which may act upon the skin is considered. Blaschko concludes that the number of skin diseases of which auto-intoxication is the proven cause is very small, but that it is a possible factor in the production of many more, whose origin can be definitely established only by the combined efforts of dermatologists, clinicians, and physiological chemists.

(303) Tuberculosis of the Spinal Cord. Haskovec (*Archiv. de Neurol.*, September, 1895) reports the case of a woman, aged 22, who after slight lung symptoms developed tingling and pricking sensations in the lower limbs, with slight weakness. After three months the weakness rapidly increased in a few hours to almost complete paralysis, with diminished and soon absent reflexes, retention of urine and fæces. There was also sensory disturbance in both lower limbs and the lower part of the abdomen, tactile sensation being almost perfect, while there was complete analgesia, and loss of sensation of heat and cold: a few weeks later tactile sensation had also disappeared, muscular atrophy was apparent in both lower limbs, and similar symptoms, but much less marked, had appeared in the upper limbs. Death took place a few weeks later. The necropsy showed advanced phthisis, with extensive disease of the spinal membranes and cord, the lesions being most intense in the upper dorsal region, especially about the posterior roots; the infiltration was partly diffuse, partly nodular. Several observers have noted the occurrence of primary tubercle of the spinal cord, and it would seem that the lumbar cord is the part most frequently affected; secondary tubercle of the cord, sometimes but not always involving the membranes, is much commoner, the dorsal being the part most frequently affected in these cases. The symptoms in either are generally as in the case mentioned those of myelitis, the nature of which can only be suspected from the presence of tuberculous lesions elsewhere. Even at a necropsy the tuberculous nature of a myelitis may be entirely overlooked unless the cord is examined microscopically.

(304) Alcoholism in Children. Monrad (*Annales Médico-Psych.*, 1895, p. 337) records several cases of alcoholism and dipsomania in children. The tendency is in some cases hereditary; often it is the result of some psychical disturbance. Many cases are due to the ignorance of mothers, who quiet their infants, even while at the breast, with wine or spirits. The pernicious habit of parents taking their little ones into public houses, and there allowing them to share the drinks, is pointed out. The risk of alcoholism must always be considered in ordering alcohol for children, and where there is a history of alcoholism in a child's antecedents it is best to avoid it altogether. Dipsomania, generally hereditary, occurs both in boys and in girls, in the latter especially about the time of the first menstruation. Delirium tremens has been seen at 5 years old, and cirrhosis of the liver, with definite history of abuse of alcohol, at 8½ years. Children who have suffered from the effects of alcohol are specially liable

to epilepsy, hysteria, moral insanity, etc. The prognosis in such cases is bad, the tendency to excess generally persisting.

SURGERY.

(302) Treatment of Perforating Ulcer by Nerve Stretching.

CHIPAULT (*Presse Méd.*, September 14th) reports 5 cases of perforating ulcer successfully treated by stretching of the plantar nerves. After many unsatisfactory attempts to deal with this affection by amputation, excision of the ulcer, and scraping, the idea occurred to the author that stretching of the nerves distributed to the region occupied by the perforating ulcer might give some good results. Rejecting cases of non-trophic perforating ulcer which may be regarded as unamenable to this plan of treatment, he tried nerve-stretching with an unexpected degree of success in 2 cases in which the perforating ulcer was due to peripheral neuritis, and in 3 others of spinal origin. The 5 patients, all of whom had suffered for many years, and undergone useless amputation, were in the course of a few days after stretching of the plantar nerves, relieved of the ulceration and of the concomitant trophic disturbances. As 4 patients were kept in bed for only twenty-four hours after the operation, and the fifth was thus confined for eight days, these good results could not be attributed to the rest which so often effects a transitory improvement in cases of perforating ulcer. These patients have remained quite free from their affection after intervals from the date of operation of eight, seven and a-half, seven, six, and three months. The author has practised stretching twice of both the internal and external plantar nerves, once of the internal plantar alone, and twice of the internal collateral nerve of the great toe. It might, he states, be found necessary in some cases of perforating ulcer to stretch the musculo-cutaneous and external saphenous nerves. In most instances it would be advisable, for the sake of avoiding infection of the wound, to operate at some distance from the perforating ulcer, and so to stretch the common trunk of the plantars behind the internal malleolus, the musculo-cutaneous above the external malleolus, and the short saphenous nerve at the outer border of the tendo Achillis.

(304) The Clinical Phenomena of Cervical Rib.

EHRICH (*Beiträge zur klin. Chir.*, Bd. xiv, Hft. 1) publishes an analysis of ten collected cases of cervical ribs with reference to the symptoms, local and functional, of this abnormal condition. In seven of these cases the supernumerary ribs were found on the left side. The local symptoms are: a bulging prominence at the outer margin of the sterno-mastoid, just above the clavicle, and a well-marked pulsation in the supra-clavicular region. On palpation a bony tumour can be felt and traced as far as the spine. The outer extremity of this tumour is in some cases free, in others connected with the first thoracic rib. The functional symptoms are due to obstruction of the circulation in the subclavian artery, and to pressure on the brachial plexus. The circulatory disturbance is shown in the corresponding upper limb by pallor of the skin, reduced temperature, absence of pulse, arrested growth of the nails, gangrene of the fingers, and muscular atrophy of the whole arm. The nervous disturbances are chiefly neuralgic pains and paræsthesiæ. Motor disturbances in the parts supplied by the brachial plexus have not been noted. All these evils usually disappear after the removal of the cervical rib.—Schnitzler (*Centralb. für Chir.*, No. 37, 1895) reports a case in which the presence of a cervical rib on the left side was associated with a forward dislocation of the sternal end of the corresponding clavicle. This displacement, which was not be accounted for by any history of injury, is attributed by the author to pressure of the outer end of the cervical rib on the middle of the posterior surface of the clavicle. In this case, as there were no functional symptoms, and as the use of the upper extremity was in no way impaired, it was thought advisable to refrain from operative treatment.

(305) Suture of the Vas Deferens.

PARLAVECCHIO (*Gazz. degli Osped.*, August 31st, 1895) in operating for a right strangulated hernia, had the misfortune accidentally to lacerate the vas deferens. To remedy this the author thereupon cut the two ends of the vas obliquely, so as to form a larger surface, and sutured them together with four Lembert sutures of fine silk. Torsion of the vas was carefully avoided, the stitches held well, and beyond the application of a scrotal suspender no special modifications in the ordinary post-operative treatment were adopted. The wound healed by first intention. The patient came to report himself two years after. The hernia was then quite cured; there was no swelling, no cyst of the vas deferens, no diminution of sexual desire, no atrophy of the testicle, no loss of sexual vigour, and no disturbance of micturition or defæcation. The author was unable to examine the state of the prostate *per anum*, but there were no symptoms pointing to any alteration in that organ.

(306) Subcutaneous Emphysema after Intubation.

BAUER (*La Pediatr.*, No. 7, July, 1895) reports two cases of diphtheria in children where after intubation subcutaneous emphysema occurred. In the first case that of a child aged 4, suffering from mild nasopharyngeal diphtheria, as difficulty of respiration came on, intubation was performed. Violent coughing occurred, and the tube was expelled but replaced. The day after emphysema of the neck and upper abdomen occurred, and rapidly spread to the back. The tube was removed, the emphysema remained unaltered at first, but ultimately entirely disappeared, and the child left the hospital cured. The second case was very similar. The tube was kept in two days, and finally removed on account of emphysema, which lasted in this case five or six days, but finally disappeared. The author supposes the emphysema was due to alveolar rupture induced by the violence of the inspiration, and that the tube simply acted as a "determining factor." In 288 cases of intubation Bauer has only observed these 2 cases of emphysema.

MIDWIFERY AND DISEASES OF WOMEN.

(307) Vaginal Hysterectomy on a Large Scale.

LANDAU (*Berlin. klin. Wochenschr.*, September 23rd, 1895) has removed the uterus through the vagina 277 times during the past nine years; 13, or not quite 5 per cent., of the patients died. In 112 of these cases the disease was cancer or sarcoma of the uterus; 8, or a little over 7 per cent., died; 1 sank from diabetic coma, 1 from obstruction, and 1 died from sepsis due to abortion, which complicated the disease and the operation. In 56 of the series the uterus was removed for fibroid; in many instances the tumour reached as high as the umbilicus; 4, or over 7 per cent., died, 1 sinking from failure of the heart's action on the twenty-second day, and another from chronic nephritis on the nineteenth day; 109 patients underwent the operation for bilateral chronic septic or inflammatory disease of the appendages; 1, or less than 1 per cent., died, the fatal end being due to diffuse septic peritonitis; 1 suffers yet from a small entero-vaginal fistula. The remaining 107 have all been restored, in most cases after years of discomfort or pain, to perfect health. Landau adds 2 cases of vaginal hysterectomy for acute puerperal sepsis with multiple collections of pus in the pelvis: 1 of the 2 died of purulent peritonitis. Landau did not operate in the same manner in all the 277 operations; sometimes he removed the uterus entire, in other cases he bisected it vertically, whilst in some he removed it by *morcellement*.

(308) Actinomycosis of Ovary (?)

REGNIER (*Prager Zeitschrift f. Heilkunde*, vol. xv, 1895, parts 4, 5) reports the case of a woman, aged 38, in a mining district, who had suffered from sharp pricking pains in the hypogastrium, with somewhat rapid development of a tumour and emaciation. An oval mass very tender and scarcely movable, filled the right side of the hypogastrium and pelvis, the uterus was separate and the right ovary could not be distinguished from the swelling. The parietes were infiltrated; nevertheless an exploratory operation was thought advisable. It proved incomplete. A part of the mass was cut away, together with the infiltrated muscular and aponeurotic layers of the abdominal wall. The rest of the growth was dissected away from intestine which was injured, and from the

greatly thickened vermiform appendix. Its precise seat was not determined; on examination, it was found to be a mass of granulation tissue containing the actinomyces. A small piece of some hard foreign substance was found in the characteristic tissue, outside the vermiform appendix, which had been amputated with the cautery. This foreign body had probably conveyed the fungus into the body, and after perforation of the appendix had infected adjacent structures, though it is not absolutely certain that the ovary was diseased. The patient recovered, but fresh deposit appeared in the abdominal cicatrix and hypochondrium three months later. The patient refused further treatment.

(309) Fatal Eclampsia; Parametric Stricture of one Ureter.

Favre (Virchow's *Section*, Vol. cxli, Part 2, August, 1895) publishes an important clinical note. A woman, seized at eight months pregnant, was taken on February 3rd with headache, vomiting, and pelvic pain. A faint trace of albumen was found in the urine. Digitalis and ipecacuanha were given. After temporary improvement she was seized in the evening of the sixth with a series of violent convulsions. The temperature rose to 101° after one fit, but a few hours later, after another fit, it was as low as 94°. Urine was scanty, and highly albuminous. Milk, digitalis, and large doses of chloral were given, and the patient was bled. Twenty-four hours after the fits began the temperature was 102°. Three hours later the patient died. Favre points out that many obstetricians maintain that rise of temperature in a pregnant women attacked with fits is pathognomonic of true eclampsia gravidarum, fall of temperature signifying uræmia. At the *post-mortem* examination the left ureter was found pervious and otherwise normal. The right was widely dilated from the kidney to the brim of the pelvis. Below it seemed to run into the uterus. On careful dissection it was found to be completely obstructed by parametric deposit, which was firmly pressed upon by the pregnant uterus. The placenta contained white infarcts: the fœtus was relatively small. The right renal pelvis was hydronephrotic. The substance of the gland was markedly variegated, the cortex being bright red, the medulla deep blue. The capsule was easily separable. The left kidney was also inflamed, but the inflammatory process was uniform on its glandular substance. The liver was fatty, with numerous hæmorrhagic foci.

(310) Menstruation in Hot Countries.

Jourdy (*Supposed Influence of Tropical Climate on Menstruation*, Calcutta, 1895) agrees with Playfair in the opinion that the influence of climate on the catamenia has been unduly exaggerated. He has collected statistics of 3,194 cases under observation at Calcutta during the last four years, including European and rich native women seen in private practice, and poorer natives under treatment for various diseases in the Eden Hospital, Calcutta. He found but very little difference in the percentages for various ages between the Europeans who had passed their youth in Europe and the women of pure European blood born in India; 23.4 per cent. of the former and 25.8 per cent. of the latter began to menstruate when 13 years old. Hence the climate seems to have no influence on the catamenia of women of our race. Indeed, the European-bred girls showed a larger percentage of menstruation beginning at 12 than the native-born Europeans (13.4 per cent. against 10.6). Amongst the Eurasians a difference was at once noticeable, the type approaching that of natives between 12 and 14, but diverging again in the direction of the European type between 14 and 16. Such women are much influenced by native habits. In the class of pure natives, Hindus and Mohammedans, but chiefly the former, the greatest percentage of dates of first menstruation occurred at 12 (36 per cent.). Joubert shows that early menstruation is determined in native women by precocious knowledge and too early sexual excitement.

(311) One Hundred and Thirty-three Cases of Placenta Prævia.

Boss (*Centralbl. f. Gynäk.*, No. 35, 1895) collected these cases, which occurred between April, 1884, and April, 1894, in two institutions in Breslau. In one of the hospitals the proportion of placenta prævia to normal labour was 1 in 216, in the other 1 in 42—a remarkable difference. In 27.9 per cent. the placenta was central, in 61.6 lateral, in 10.5 marginal. The percentages of presentations were as follows: Head 66.2, breech 1.8, footling 8, and transverse 24. Of the total 133 mothers 8 died; 5 from direct effect of loss of blood, and 3 from fever or exhaustion after the first week. Twenty seven per cent. of the children were born alive. As for management, the tampon, with expectant treatment, was applied in 7 cases, rupture of the membranes with forceps in 9, forced labour in 1, and combined version in 115; in this latter category all the maternal deaths occurred. The cases, however, in which combined version was employed, were all severe. One patient died from air in the veins nine hours after labour.

THERAPEUTICS.

(312) The Use of Vinegar for the Arrest of Vomiting after the Administration of Chloroform.

Lewin (*Rev. de Clin.*, September, 1895) has obtained very good results with regard to the prevention of sickness after the administration of chloroform by immediately replacing the inhaler by a linen cloth steeped in vinegar, and allowing this to remain over the patient's face for at least three hours after the completion of the operation. He points out that chloroform, which is eliminated almost exclusively by the lungs, is decomposed in the presence of the inspiration into formic acid and chlorine. The latter agent when set free irritates the larynx and trachea, and thus is one of the chief causes of the vomiting induced by chloroform. On the application of vinegar in the above-described manner the chlorine is taken up by acetic acid, and thus rendered harmless. The author further points out that in order to prevent the desiccating action of chloroform on the tissues it is necessary for the patient to inspire after the operation air that has been rendered humid. Acetic acid, both from the water it contains and from its energetic capacity of dissolving fibrine, serves to prevent coagulation of the blood. The beneficial action of vinegar in cases of anæsthesia by chloroform may also be explained by the fact that acids in general stimulate the respiratory passages. It is very unnecessary, the author thinks to attempt to explain this favourable influence of vinegar by a hypothetical action of acetic and other acids on the vomiting nerve centre through the vasomotor nerves.

(313) Subcutaneous Camphor Injections.

Schilling (*Münch. med. Woch.*, September 17th, 1895) refers to the means of overcoming collapse by ether, musk, and camphor administered subcutaneously. Ether has a markedly evanescent effect. The tincture of musk, although a valuable cardiac stimulant, is not constant in its composition. Hence camphor is very generally employed. The author maintains, however, that the doses of camphor used are not large enough. He says that as much as 1 g. of camphor may be employed. The effect of 0.5 g. on a thready and almost imperceptible pulse is well marked, but that of 1 g. is often astonishing. The solution of camphor used is camphor 1, olive oil 10. He gives one ordinary syringeful to children, seldom three, and mostly five to ten to adults. These large doses of camphor are well borne. No ill effects on the skin, brain, or lungs have occurred. Fear of fat embolism should scarcely exist, since hardly a case of the kind has been put on record. The author then refers to the small doses recommended in the recognised textbooks. Probably large doses of camphor act differently in animals than in man. Even in cases with cerebral symptoms the author has used these large doses without any increase in these symptoms. Camphor leaves the body within a couple of hours, and has no cumulative action.

(314) Hymenodictiamin.

Coronedi (*Gazz. degli Osped.*, July 27th, 1895) has experimented on the road with this alkaloid which is derived from the bark of hymenodyction excelsum. Solutions of the drug—0.02 g. in 10 c.cm. of nutritive fluid—exercise a marked effect on the heart. First there is a short phase of irregular movements, and then a true diastolic arrest. The

heart can easily be made to resume its natural movements by passing simple nutritive fluid through its cavities. Finally, however, the heart ceases to beat, generally in systole as regards the ventricles, whilst the auricles remain flaccid. During the phase of diastolic arrest the heart, especially in the auricles, is enormously distended, and may reach double its size. Vermicular movements observed at this phase in the ventricles. The author thinks the drug is a nerve poison rather than a muscle poison. There seems to be a certain analogy between its action and that of digitalis. Hymenodictionin does not appear to be a very powerful drug, as its effects could easily be removed by passing simple solutions through the heart.

(315) The Treatment of Actinomycosis.

Rydygier (*Wien. klin. Woch.*, September 12th, 1895) first refers to the difficulty of getting all the diseased tissue away, and the liability to relapse which is thus produced. The discovery of the curative action of potassic iodide, taken internally, was for this reason welcomed. Unfortunately this agent is not always successful, and in the author's first case it had been administered internally for a long time without effect. Case I: A patient, aged 25, came with a swelling along the sterno-mastoid muscle, with a sinus and scars of a previous operation. Owing to the depth and extent of the infiltration brought about here by the actinomyces, the author abstained from further operation, but, in addition to its internal administration, potassic iodide in 1 per cent. solution was injected subcutaneously. Every one to two weeks 2 to 4 syringefuls were injected into the infiltration, and in two months the patient was cured, the infiltration having entirely disappeared. Case II: A man, aged 46, had a tumour in the abdominal wall below the right costal arch. It had opened spontaneously on the surface, and a sinus remained, from which there was excreted pus containing the actinomyces. There was no evidence of disease in the abdominal organs. Potassic iodide in 1 per cent. solution was injected into the infiltration at intervals of a few days, and the infiltration below the ribs practically disappeared, although that in the neighbourhood of the umbilicus still persisted when the patient was obliged to leave the hospital. The beneficial action of the parenchymatous injections, however, could not be questioned in this case, and no iodide was taken by the mouth. In both cases an increased quantity of pus was discharged from the sinus after the injections.

(316) Treatment of Diabetes.

Ascoli (*Il Policlinico*, vi, 14, 1895) reports the case of a man, aged 60, who had suffered from diabetes for two years. The ordinary methods of treatment were tried but without any particular benefit. In the spring of 1895, the symptoms being more acute, inhalations of oxygen were tried. This mode of treatment was practised from March 7th to June 16th, with one week's interval in May. On an average 180 litres of oxygen were inhaled daily. After a few days the urine began slowly to diminish in quantity, lose its high specific gravity, and the sugar sank to 1 per cent. At the end of April the sugar disappeared entirely. In the early part of June no sugar was found even after a meal rich in carbo-hydrates. The body weight increased 2,500 g. under treatment. The usual dietetic restrictions were observed.

PATHOLOGY.

(317) Keratomycosis in an Infant the subject of Congenital Hæmorrhagic Syphilis.

Zorin (*Wien. med. Woch.*, August 29th, 1895) describes the pathological appearances in the cornea of this unusual case. The cornea was of normal size, but almost completely covered with a clear layer approximately circular in form, and surrounded by a narrow ring of normal tissue. The centre of the superposed disc was occupied by about 20 rounded spots about the size of poppy seeds, resembling in appearance the colonies which Eberth and Lieber grew in the cornea by the inoculation of cocci with needles. In section this disc appeared as a clear yellow plateau on the anterior margin of the cornea. The sclerotic conjunctiva was œdematous with widened vessels and numerous extravasations. The corneal conjunctiva was attached to the cornea for a brief distance peripherally; towards the centre there was progressive disorganisation beginning in the superficial layers, and eventually extending right down to Bowman's layer, all the tissues external to which were replaced by masses of detritus and colonies of fungi. In the centre, where the plateau of new formation was observed, there was a still greater bacterial invasion, Bowman's layer, as well as the epithelium, having disappeared, and the interfibrillary spaces being infiltrated with micro-organisms. The condition of the cornea was to be attributed to changes during life and not to *post-mortem* softening. The peripheral and central ingrowths of cocci had spread themselves under Bowman's layer, where they took a darker stain than in more superficial parts. Between the colonies there were no leucocytes, which, however, formed a ring round the necrotic portions extending right down to Descemet's membrane. The cocci were round in form, but no pure culture was obtained, so that their actual nature remains uncertain. There was marked cell infiltration of the canal of Schlemm, the preparation showing that some of the leucocytes of the posterior part of the cornea arise from that channel, whence they pass outwards in tracks which can be followed along Descemet's membrane. The eyelid showed a superficial ulceration of the epidermis, the ulcers being covered with detritus and heaps of cocci. Zorin considers the pathology of the case clear. The debility of the child led to impaired action of the lids with drying and pathological affection of the corneal epithelium. The necrosis of the conjunctiva allowed the growth of micro-organisms, which took advantage of the diminished resistance to penetrate into the parenchyma. By their distant action these caused inflammatory reaction, the leucocytes swarming in from the vessels on all sides in the manner laid down by Colnheim. Zorin further holds that the changes described in his case would have gone on to keratomalacia had they not been interrupted by the child's death and that keratomalacia has its origin in diminished resistance, from general debility, or otherwise of the cornea to the attacks of micro-organisms.

(318) Pathological Anatomy of Progressive Muscular Atrophy.

Cramer (*Centralbl. f. allg. Path. u. path. Anat.*, 1895, Bd. vi, p. 552) gives a summary of the published cases in an exhaustive paper, and draws the following deductions from the data: (1) Some forms of muscular atrophy which have lasted even for as long as ten years show by our present methods no changes either in the central or in the peripheral nervous system. These forms of muscular atrophy come under the heading of those cases which Erb has included under the name of "dystrophy." (2) The atrophies which occur with recognisable spinal lesions present very different clinical pictures. With the same spinal lesion there may be either the symptoms of dystrophy or of spinal muscular atrophy. Even an isolated disease of the cells of the anterior cornu may give rise to the most different clinical signs. Dystrophy may therefore occur with a spinal lesion or the peripheral and central nervous system may remain intact. (3) Cases are to be found intermediate between all forms of muscular atrophy, with and without lesions in the nervous system. (4) The appearances in the muscles are the same whether the central nervous system partake in the disease or no. (5) The pathogenesis of muscular atrophy is still obscure, but an embryonic condition which may also be hereditary appears to be a predisposing cause. Whether this hypothetical embryonic cause affects the nervous system or the muscular system directly is uncertain. (6) There are cases of muscular atrophy with isolated disease of the peripheral nervous system which seem to form a definite group (Hoffmann's neural variety). The appearances in the muscles, however, are not different from those found in other cases. (7) Cases of muscular atrophy in tabes show identical appearances. (8) Some forms of muscular atrophy are of cerebral origin, and as a rule depend upon local disease in the neighbourhood of the convolutions. These muscular atrophies may occur without any obvious affection of the pyramids or the anterior horns of the spinal cord.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(319) Pemphigus.

KAPOSI introduced a discussion on this subject at the German Dermatological Congress, September 23rd, 1895. His conclusions, based on about 420 cases, are as follows: (1) Pemphigus is a purely clinical idea, dependent neither on morphological peculiarities nor on histological characters, but on the combination of these with the clinical history. (2) Our limited knowledge of the causes of this disease and our complete ignorance of its etiology are no reason for giving up the clinical idea of pemphigus. (3) In the course of months and years one may see in the same patient every shape and form of pemphigus; hence (4) the various types of pemphigus represent one and the same disease. (5) The chronic, relapsing, more or less benign, malignant, or fatal forms described as dermatitis herpetiformis correspond in clinical and histological signs, and are thus identical with pemphigus. (6) There is thus not the slightest reason to abandon the classical name of pemphigus in favour of the modern dermatitis herpetiformis. (7) The processes called by authors acute and benign forms of the putative dermatitis herpetiformis (Dühring) are only well known and long described complaints such as urticaria papulo-bullosa, annularis, and gyrata, lichen urticatus, and especially erythema multiforme (Hebra) in its vesico-bullous form. (8) The name dermatitis herpetiformis has thus no right to be applied to the acute erythemo-papulo-vesiculo-bullous forms. (9) Whether there were any forms beyond the ranks of pemphigus to which the name dermatitis herpetiformis might be applied Kaposi did not know. He had never yet been reduced to labelling a disease with that name. Rosenthal, who had been selected to continue the debate, entirely opposed Kaposi's views, and maintained the following propositions: (1) Pemphigus cannot, according to our present knowledge, be considered a disease entity; it is merely a definite elementary form of skin eruption. (2) The following groups, which are or might be brought under this designation, are to be distinguished: (A) Those diseases which, for reasons not always obvious, assume a vesicular form, for example, large-vesicled eczema, urticaria bullosa, etc. (B) Those affections in which the formation of vesicles is a secondary symptom; to this group the name dermatitis bullosa should be given. They are found (a) in acute and chronic infectious diseases, for example erysipelas, scarlet fever. (b) in injuries and inflammations of nerves, so-called pemphigus traumaticus, neurotico-traumaticus, neuriticus, and in central affections, chronic myelitis, tabes, spinal cord sclerosis, and syringomyelia. (c) After the administration of drugs, the bullous form following particularly antipyrin iodides. Rosenthal then enumerated eleven other groups of skin affections which were, or might be, included under the old name of pemphigus. In addition to these there are a number of cases distinguished clinically by a continuous or intermittent eruption of bullæ containing at first serum, and having their bases reddened slightly or not at all. These are to be called pemphigus acutus, pemphigus vulgaris, pemphigus foliaceus, and pemphigus vegetans, according to their characters. Pemphigus vulgaris is further subdivided into the subacute and chronic forms. Rosenthal concluded by stating that eruptions existed, having characters intermediate between those of the various groups enumerated, and so leading on continuously from one to another.

(320) Objective Signs in Gastric Disease.

LION AND HAYEM, in continuing this subject (*Arch. gén. de Méd.*, September, 1895), make some remarks on the shape of the abdomen under the heading of inspection. (1) Prominence of the abdomen in the upper part is seen in large eaters, such as diabetics. (2) Prominence below may occur in many conditions, as in women who have borne many children, gastroptosis, etc. (3) A central prominence extending from the lower part of the sternum to below the umbilicus is seen after a full meal in patients with pronounced dilatation without ptosis of the stomach. (4) Flattening of the abdomen with hypogastric prominence occurs in those having dilated stomachs with ptosis. A slight transverse ridge may often be seen corresponding to the lesser curvature of the stomach. The abdomen observed in profile may show: (*a*) A substernal hollow; this occurs in inanition, frequent vomiting, etc. (*b*) An abnormal prominence, mostly substernal or epigastric, due to distension of the stomach. (*c*) A flattening of the epigastric region with hypogastric prominence seen in gastric dilatation with ptosis.

(321) Hydrorrhœa Nasi.

POTTHOFF [illegible] *Magazin for Lægevidenskaben*, June, 1895) reports a case of nervous origin. The patient, a man aged 30, had had recurring attacks about three or four times in the year ever since he was 12. The profuse secretion was accompanied by great irritation in the nose, and was preceded by an injection of the conjunctivæ and tear secretion. His general health was good, even during the attacks. The attacks became more frequent as he grew older, and the secretion more watery and profuse. At the time of observation the attacks occurred every fortnight, and lasted one to two days. The attack came on, as a rule, in the morning, and ceased quite suddenly in the afternoon of the second day. Within a quarter of an hour the nose was quite dry. The quantity secreted during an attack averaged 1 litre. It was an alkaline, opalescent fluid of low specific gravity, and contained some albumen and salts, chiefly NaCl and Fe. Also small quantities of a fatty substance. The nasal mucous membrane was normal, with the exception of some injection and swelling of the right concha media. Local treatment caused no improvement, but atropine controlled even the most violent attacks within half to one hour. A year after the first observation the attacks had not changed character, but the atropine had still the same effect, and the patient, by watching the prodromal symptoms, was able to regulate the strength of the dose needed. Trousseau found constantly that these nervous [illegible] in course of time changed character and became transformed into a nervous asthma.

(322) Cardiac Hypertrophy and Normal Growth.

POTAIN AND VAQUEZ (*Sem. Méd.*, September 25th, 1895) deny the pathogenic part said by some authorities to be played by ordinary development in the production of various cardiac conditions, notably hypertrophy. Although rapid growth favours unmistakably the appearance of functional cardiac troubles, especially cardiac irritability, a definite idiopathic hypertrophy cannot be demonstrated. Ordinary estimates of the normal cardiac volume in children have been mainly founded on anatomical researches, without accurate clinical investigation. The flexibility of the thoracic walls and their muscular covering renders the heart impulse in children very apparent, and often so diffused as to make the exact position of the apex a difficult problem. A displaced apex beat is not in itself of diagnostic value; in many normal hearts it extends to the lower margin of the fifth interspace. The nipple, being situated in most diverse positions with reference both to its height and to the middle line of the body, is of little value in a [illegible] the apex beat is often found 3 or 4 centimetres below and external to it. Exact demarcation of precordial dulness by percussion is the only certain guide. Examination of 100 [illegible] subjects gave very interesting results. Neither body weight nor the general figure of the subject were found to bear constant relation to the size of the heart. Neither arterial tension nor pulse-rate affected any explanation of the variations from the normal observed. A much more exact relation was found to exist between the heart volume and the length and circumference of the thorax. Certain pathological conditions such as rickets [illegible] were noted. Exceptional variations in size were found in three leaders of gymnastic exercises, these being evidently due to muscular exercise, and varying in proportion to the time such exercises had been in-

dulged in. In no cases of abnormal-sized hearts did the subjects complain of, nor were there any signs of, functional or organic disease. Any acute illness in growing children, especially if accompanied by rheumatism, may be the origin of a temporary hypertrophy, which does not however persist after the re-establishment of compensation. It is concluded that all such symptoms as exaggerated impulse, murmurs at the apex, irregular pulse, or tachycardia, are mainly due to over-fatigue or neurasthenia, but that they afford no real indication of true hypertrophy.

SURGERY.

(321) Castration for Hypertrophied Prostate Gland.

WOSSIDLO (*Centralbl. f d. Krankeiten der Harn-u. Sexualorgane*, Band vi, Heft 5, 1895) has collected statistics on this subject, and finds 43 cases successfully operated on, the ages of the patients ranging from 60 to 81 years. Before operation in all there was great difficulty in emptying the bladder, and more or less severe cystitis. In all the 43 cases castration was performed on both sides, and an improvement in the cystitis and micturition always resulted, mostly immediately after the operation. In a great number of cases the patients could discard the catheter entirely, and hold their water for some time. In all there was a shrinking of the enlarged gland. Comparing this with other radical methods he finds it has the advantage of being less dangerous and more easily carried out, though several fatal cases show that the operation is by no means devoid of danger. Still up till now such cases are few compared with the successes, and time alone can show whether bad results occur often enough to discredit the procedure. As regards the results of castration on one side only, the reported cases are up to now too few and contradictory for any conclusions to be drawn from them.

(322) Infection of the Urinary Tract.

BASTIANELLI (*Boll. dell' Ac. Med. di Roma*, An. 21, Fasc. 2—6) has made a clinical and experimental study of this subject. He first gives a short clinical report of 37 cases of cystitis observed by him, adding in each case the result of bacteriological examination of the urine collected by catheter with all antiseptic precautions. Micro organisms were present in every case. In 25 out of the 37 only one organism could be cultivated. The organisms most frequently met with (21 times) were microbes belonging to the coli bacillus group (including Eberth's). In 19 cases there had been no previous surgical interference (no catheterism, etc.) whatever, before the onset of the cystitis. The author then discusses the morphology and biology of the various micro-organisms found by him in the urine, and details the results of experimental injection of cultures into the bladder of rabbits. Unless there was previous retention (partial or complete) of urine or some morbid condition of the mucosa, the injection of micro-organisms never caused cystitis. If they were injected into the veins they were constantly found again in the urine, but did not set up cystitis unless there were predisposing local conditions. Unless pus and micro-organisms are to be found in the urine, cystitis is not present. Applying these results to the pathogenesis of vesical infection in man, the author concludes that micro-organisms, by whatever pathway they may reach the bladder, can only induce cystitis when there is some pre-existing morbid condition of the mucosa, or when there is some impediment to the free flow of urine. Under such conditions the germs multiply, and insinuating themselves between the epithelial cells cause diapedesis, suppuration, and local necrosis, finally passing, *viâ* the lymphatics, etc., into the circulation and system generally. Neither micro organisms nor the aforesaid predisposing conditions can set up cystitis if acting alone, but in combination they are efficient causes of the same. The various possible pathways of infection receive full consideration at the author's hands, and a bibliography and photographs of the inculpated bacilli are attached to the monograph.

(323) Juxta-articular Osseous Tuberculosis.

MÉNARD (*Rev. d'Orthop.*, No. 5, 1895) publishes a group of cases of tuberculosis affecting an epiphysis of a long bone without involving the adjacent articulation, but extending directly to the surface of the limb. In such cases, the author points out, the tuberculous deposit should be exposed and removed as soon as the diagnosis has been made, with the object of preventing extension of the disease to the nearest articular cavity. This danger is especially active in tuberculosis of the lower end of the femur and the head of the tibia. Although articular tuberculosis usually originates in a tuberculous deposit in one of the osseous extremities constituting the joint, such morbid deposit in bone does not habitually give rise to tuberculous disease of the adjacent articular cavity. In this sequence the anatomical arrangement of the articular surfaces plays an important part. As the synovial membrane of the hip-joint surrounds the neck of the femur, tuberculosis of this portion of bone as a rule extends rapidly to the articular cavity. In tuberculosis of the lower extremity of the radius or ulna the wrist is seldom involved, as the disease extends to the superficial posterior surface of the affected long bone more readily than it does to the joint. Radio-carpal tuberculosis, it is held, is more frequently due to primary disease of the carpal bones. In the region of the elbow the olecranon is the osseous extremity in which the conditions are most favourable to the extra-articular evolution of a tuberculous deposit.

MIDWIFERY AND DISEASES OF WOMEN.

(326) Puerperal Tetanus.

WALKO (*Deut. med. Woch.*, September 5th, 1895) relates a kind of epidemic of tetanus which raged in the Prague University maternity last spring. In two cases the uterus was extirpated directly symptoms set in, with the view of removing a focus of infection. The bacillus of tetanus was found in the lochia in both instances. The convulsions became more acute after the operation, and neither patient recovered. In the third case the bacillus could not be found, but the objective symptoms were very severe. The patient was 23. On April 11th she was delivered in her home, labour being hastened on account of placenta previa. The child died in two hours. The practitioner was obliged to apply a tampon as flooding continued; he then sent the woman to the Maternity. On April 19th she was discharged well; but severe trismus set in a day or two later, and she was readmitted with very marked opisthotonos and other symptoms of acute tetanus. The least disturbance by sound or touch set up the spasms, and caused intense pain. The patient died on April 28th. Eighteen injections of 0·2 gramme of Tizzoni's antitoxin had been injected, with antiseptic precautions, at intervals of about five hours. For the first few days the injections seemed to do good, but though the opisthotonos at least abated for a while, the trismus and spasm of the muscles of deglutition steadily increased. The tendency to fresh convulsions on the slightest mechanical or psychical disturbance also became more marked till death. Walko's memoir on these obstetrical disasters includes scientific and statistical matter of high value.

(327) Dilatation not a "Conservative" Operation.

FOURNEL (*Nouv. Archiv. d'Obstét. et de Gynéc.*, August 25th, 1895) not only condemns "mutilating" operations, such as removal of the uterine appendages, without due deliberation, but maintains that dilatation of the uterus is in no sense conservative. In mild cases of perimetritis, with little or no pain, dilatation has merely a negative effect, and deludes the operator, who fancies that it is the cause of ultimate recovery. In very severe and acute cases nobody thinks of dilatation. In cases of distinct suppuration, surgical—that is truly surgical—treatment is demanded at once. Expectant treatment in these instances is unsurgical, dilatation even more so. Dilatation itself often involves sterility, not rarely death, and very frequently aggravation of the perimetritic inflammation which it is supposed to cure. Diagnosis of perimetritis is by no means easy, whilst experience abundantly proves that very bad cases recover without loss of function. True surgery teaches us to preserve all that can be preserved. The whole of the internal organs must be

saved if possible. If not, fecundity must be preserved; in other words, we must not be over dogmatic about removing the appendages on both sides. Should the case be desperate, the hopelessly diseased structures, and nothing besides, must be removed, in order to preserve life and health.

(328) Tetanus from Tongue-Bites in Eclampsia of Pregnancy.

ABELIN (*Repertoire Univ. d'Obstét. et de Gynéc.*, August 25th, 1895) states that a woman was seized one day last spring with severe eclampsia, and was hurried off to the Rochefort Maternity. In the cab a very severe fit occurred. On her arrival the tongue was found very severely wounded in several places. A chloral enema was given, the fits became less frequent and violent, and the forceps was applied. A live child was delivered. The eclampsia disappeared. The patient did well till the end of a week when violent pain in the tongue came on, followed by forty hours of acute tetanus, ending in death. Infection by the tetanic bacillus through the tongue wounds evidently occurred, most likely during the ride to the maternity. As eclampsia specially interferes with the functions of the liver, so that blood poisons are no longer arrested and destroyed, the prognosis of tetanic infection after convulsions must be unusually grave.

(329) Hyperemesis Due to Local Causes.

LA TORRE (*Rép. Univ. d'Obstét. et de Gynéc.*, August 25th, 1895) maintains that the primary cause of uncontrollable vomiting in pregnancy is a complex lesion in the cervix determined by pregnancy itself. The cervix is congested; there is venous stasis, with œdema, compression of the nerves of the cervix, and irritability of the muscular fibre. This morbid condition gives rise to vomiting as a reflex symptom. The stomach must be kept at rest, hence rectal alimentation is imperative. But, in accordance with the evidence of local disease, the cervix must be attended to. La Torre uses glycerolate of ichthyol applied on tampons. When the sickness has continued for some time, the congestion is extreme and mere dressings will not suffice. Mechanical dilatation will then be needed. In extreme cases, of course, nothing avails as long as the pregnancy continues. According to La Torre's principles, local must precede general treatment.

(330) Ovariotomy in a Patient over 84.

KRAFT (*Centralbl. f. Gynäk.*, No. 33, 1895) has published notes of this case, which was under the care of Sindegaard. The patient had observed the tumour for seven years and had been repeatedly tapped. For six months she had been confined to her bed on account of the size of the tumour. The operation lasted twenty minutes. The tumour was unilocular and contained 9 pints of fluid. The temperature during convalescence never exceeded 101°. At the end of a week the patient got up. When the report was published by Kraft eleven months after the operation the patient was well and took long walks.

(331) Induction of Premature Labour.

HUCKLENBROICH (*Deut. med. Woch.*, 1895, No. 11) publishes a series of 50 obstetric cases of this class. The condition demanding help was in 48 cases pelvic deformity, in 1 uncontrollable vomiting from cancer of the stomach, and in the remaining case advanced morbus cordis. Only 1 patient was lost: in that case there was placenta prævia and transverse presentation. Turning was required, and a tetanic spasm followed. This was complicated by peritonitis and the patient died on the fifth day. Nine children were stillborn, and 20 died before the tenth day, including most where turning was needed. Twenty-one were reared. Labour was not induced in any case before the thirty-fifth week. A bougie as stout as possible was passed into the uterus. The effect was very varied, labour ending from eighteen hours to eight days after the passage of the bougie. Uterine cramp was frequent; opium was used for its relief. In one instance division of the cervix was found necessary.

THERAPEUTICS.

(332) The Antitoxin Treatment of Diphtheria.

WELCH (*Trans. of Assoc. of American Physicians*, x, 1895) has collected statistics of 7,166 cases treated by antitoxin up to July, 1895. There can be no doubt as to its efficacy in curing inoculated diphtheria in animals. The problem for solution is the possibility of rendering the conditions in human diphtheria similar to those in experimental. Dosage and timely administration are essential factors in the antitoxic treatment. In these respects diphtheria compares very favourably with tetanus, in which the dose of serum required increases enormously with the weight of the animal and the lapse of time after infection. Welch considers it proved that antitoxin has no bactericidal action on the diphtheria bacillus, but renders certain cells of the body (nerve cells perhaps less than others) tolerant of the toxin. The most important difference between experimental and human diphtheria is that the latter is very often a mixed infection, the most dangerous complicating micro-organism being the streptococcus pyogenes. The failure of a case of diphtheria to respond to injections of antitoxin is an indication of mixed infection and complications, such as broncho-pneumonia, which might be obviated by better hygienic conditions. The evidence as to the value of antitoxin is twofold: (1) The clinical observations of those who have had extensive experience of diphtheria; (2) mortality statistics. The former, which are almost unanimously favourable to the new remedy, are most valuable; the latter are subject to sources of error which can only be obviated by the collection of a very large number of cases. The mortality in the 7,166 cases referred to was 1,328, or 17.3 per cent. Welch estimates the previous mortality (before the introduction of antitoxin) as 42.1 per cent. Hospital reports show for 5,777 cases a mortality of 18.7 per cent., as against a previous mortality estimated at 43.5 per cent. In 633 cases in private practice treated by antitoxin the mortality was only 6.9 per cent. The mildness of the type of diphtheria recently encountered is sufficient to explain the reduced mortality; the same applies to the undoubted fact that since the introduction of antitoxin cases have been brought to hospital at an earlier stage of the disease than formerly. The relative value of the treatment in operated and unoperated cases is a question of great importance. Welch finds that the mortality after tracheotomy has been reduced from 61.5 per cent. to 42.5 per cent., that after intubation from 62.4 per cent. to 31.6 per cent. The fatality in 3,127 unoperated cases was only 11.4 per cent. against a previous mortality of 26 per cent. Furthermore, many cases of laryngeal stenosis are relieved by antitoxin without operation being necessary, and cases free from laryngeal involvement at the time of injection rarely develop it later. Hence tracheotomy has become rarer since the introduction of antitoxin, and should in the near future give place entirely to intubation. In this latter operation serumtherapy will lead to a reduction of the time during which the tube is to be kept in the air passage. The curative effects of the new treatment are most strikingly shown in the reduction of mortality among children under 2 years old from over 60 per cent. to 33.3 per cent. Behring claims that if antitoxin treatment is properly begun before the third day of the disease the mortality will fall below 5 per cent., and this is borne out by statistics. Thus out of 222 cases so treated on the first day of the disease only 5, or 2.2 per cent., died, while out of 241 first-day cases treated without antitoxin 44, or 18.3 per cent., succumbed. The percentage of deaths in 814 cases to which antitoxin was administered on the first or second day was only 5.5; the mortality in cases untreated till the third or fourth day is nearly three times as great (15.2 per cent.). The most striking confirmation of the value of antitoxin has been afforded where the supply ran short during an epidemic. In Ragansky's clinic the interruption of the serum treatment promptly raised the mortality from 15.6 to 48.4 per cent.

(333) The Action of Vaccinia Serum.

HLAVA AND HOUL (*Wien. klin. Rundschau*, October 6th and 13th, 1895) have investigated the immunising and curative properties of vaccinia serum with a view to substituting its subcutaneous injection for inoculation with animal lymph, which has the disadvantages of uncertainty in action, rapid loss of protective power, and occasional serious symptoms. They used

three different methods of preparing the serum from calves: (A) The animals were inoculated with vaccinia; in four days the resulting pustules were pricked and the lymph collected; subsequently a second and third injection of stronger lymph were made, without causing any pustulation or rise of temperature; the serum was collected about a fortnight after the last injection. (B) Inoculation as in A: no lymph collected; first re-inoculation caused a rise of temperature, second none; serum collected fifteen days after the latter. (C) Serum, plasma, and blood—the latter two mixed with 2 per cent. sodium citrate—taken from the calf four days after inoculation. Experiments were made with all these upon calves, and then, no ill effects having been observed, upon children. The serum was injected, and at the same time or subsequently the children were inoculated with vaccinia. Serum B was found too weak to produce much effect, though the vaccine vesicles were not so well developed as if it had not been used; 3 to 10 c.cm. of serum A prevented the development of vaccine vesicles in 6 children out of 13 on whom it was tried; the injection of serum C to the extent of 0.6 to 1.0 c.cm. per kilo of body weight entirely prevented the action of vaccine lymph inoculated four days later. (The experiments with blood and plasma are not yet published.) Experiments have not yet been tried in variola; if they succeed, Hlava and Houl claim to have prepared a serum which will replace inoculation with vaccine lymph. It is immaterial whether the serum contains an antitoxin or the "vaccinia germ;" if the latter is the case, the method approaches that of vaccination with an impoverished pure cultivation.

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(334) Thyroid Feeding.

Eulenburg (*Deut. med. Woch.*, August 15th, 1895) draws attention to the abuse of this treatment owing to the unrestricted sale of thyroid preparations and especially tablets. Since the investigations into the use of this agent in the reduction of obesity it has been adopted by many of the public, and especially women, without medical supervision. The author relates such a case in which a well-known artist had taken as many as six tablets in the day, whereas two tablets only should be administered, unless in exceptional cases, when the results should be carefully watched. Very severe nervous and cardiac symptoms ensued, and a loss of 19 lbs. in weight within two months. These symptoms were apparently due to a hydræmic condition of the blood without visceral lesions. Restrictions should be placed upon the sale of these thyroid preparations as well as upon some other of the newer drugs.

PATHOLOGY.

(335) Contagious Myxoma.

Cuarin (*Presse Médicale*, September 28th, 1895) describes a form of contagious and inoculable myxoma, which is produced apparently by the proliferation of a micro-organism resembling the yeast fungus in the connective tissue. The tumour on which the observation is based was removed from Scarpa's triangle (right side) of a healthy young man, a locksmith, where it had been growing for about two months, and had attained the size of two fists. As it fluctuated, it was incised, on the supposition that it contained pus, a diagnosis favoured by the coexistence of a large fistulous abscess in the lumbar region of the same side. On incision the swelling was found to consist of a soft gelatinous tissue. It and the abscess sac in the lumbar region were dissected out; the morbid growth did not extend to the deeper structures, but lay between the skin and the muscles. Under the microscope the growth showed a few connective tissue fibres and an enormous crowd of large, yeast-like cells, each cell being surrounded by a thick, gelatinous, hyaline capsule. The cells for the most part were spherical; some of them showed buds; all of them exhibited the micro chemical reactions of cellulose. The cells grew rapidly on potato and gelatine, losing their gelatinous envelope and multiplying by gemmation. A fragment of the tumour implanted in a rabbit gave rise in the course of twelve days to a tumour the size of a small orange; this experimental tumour contained the yeast-like fungus in abundance, though not in a state of absolute purity.

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(336) The Relations between Coagulation and the Action of Antitoxin.

Freund and Grosz, in a preliminary communication (*Centralbl. f. inn. Med.*, September 21st and 28th, 1895) say that the general view which seems to obtain is that antitoxin is produced by cellular action. The bactericidal action of nuclein acid has been pointed out in this relation (Kossel), but it has not been shown whether it is really a bactericide or chemically neutralises the toxin. The authors say that the development of this question is very like that of coagulation. The importance of serum and of soluble salts in both cases is obvious, and a temperature of 56° has a destroying action in both instances. It seems probable that some inactive body splits up under certain circumstances into two bodies with different properties, which, either alone or combined, may in one case produce or hinder coagulation, and in another act as a toxin or an antitoxin. The specificity of the toxin and antitoxin is only an apparent difficulty. The authors have studied the relation between coagulation processes and immunisation. They have investigated such bodies as induce or prevent coagulation as regards their behaviour to immunity and their antitoxic action. Lilienfeld has obtained a body from leucocytes called nucleo-histon, which can split up into nuclein and a basic body, histon. Nuclein produces coagulation and histon prevents it, whereas nucleo-histon is without action. From a series of experiments they conclude (1) that both nucleo-histon and nuclein acid (obtained from nuclein) quantitatively precipitate diphtheria toxin from its solution; (2) that histon does not precipitate it; and (3) that nucleo-histon also precipitates the active body from curative serum. The authors have also succeeded in obtaining other bodies preventing coagulation. Both from a solution of nucleo-histon, precipitated by acetic acid, as well as from the filtrate of a nuclein solution, precipitated by hydrochloric acid, bodies may be isolated which prevent coagulation. The authors continued their investigation with the help of Jelinek. They have experimented with these bodies to find out whether they have an immunising effect, especially in regard to the diphtheria toxin. From a series of experiments they conclude that nuclein acid and nuclein are not able to antagonise the action of the diphtheria toxin. In another series of experiments they were able by injecting histon and other coagulation-preventing bodies to keep animals infected with diphtheria alive. It would appear that these bodies have an action analogous to the curative serum, and further investigation must show whether it is equally complete. At any rate a close relation appears to exist between the process of coagulation and passive immunisation.

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(337) The Lungs of one of Koch's Earliest Tuberculin Patients.

Adami (*Montreal Med. Journ.*, Sept., 1895) relates the history and *post-mortem* appearances of a Finnish patient who came under Koch's care in 1890 1890 suffering from hæmoptysis, cough, night sweats, and progressive emaciation. After fifty-two weeks of repeated tuberculin inoculations his health appeared to be entirely restored. In June, 1893, he went to Canada, and was employed as a skilled mechanic at the McGill University. In January, 1895, the old symptoms all returned, and on April 28th he died of hæmoptysis. At the necropsy firm adhesions were found at both apices, which showed well-marked fibroid changes, and contained well-encapsuled caseous masses and small contracted cavities. In these parts the tuberculous process had evidently been arrested, but the rest of the lung tissue contained numerous miliary tubercles distributed along the course of sundry bronchi. The tubercles were most numerous in the neighbourhood of the old mischief: they were surrounded by very little pneumonic disturbance, and were rather of the fibroid than the rapidly advancing type. The second attack was thus not the result of fresh infection, but of the recrudescence of the old process starting from the incompletely-healed disease foci. Their nature indicated either relative attenuation of the bacilli, or increased resistance on the part of the tissues. In any case a year's treatment by Koch's method had succeeded in arresting for four years an active and extensive tuberculous process in both lungs.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(312) Abscess of the Lung in Influenza.

Th. Hirsch of Eichhorst's Clinic (*Münch. med. Woch.*, August 27th, 1895) observes that occasionally abscess of the lung has been known to complicate influenza, and he refers to recorded cases. He relates a case in which influenza bacilli were found in pure culture in the pus spat up from such an abscess. The bacteriology of pulmonary abscess has been but little investigated. A woman, aged 55, had suffered from two previous attacks of influenza, and after the second she had a right pleurisy and acute laryngitis. The present attack began with pain in the limbs, weakness, fever, and cough. Three months later she became worse, with pain in the right chest, increased cough, and muco-purulent expectoration. On admission there was great prostration, rapid breathing, and a pulse of 150. There was cough with yellowish brown, more or less tenacious, but not rusty sputum. There was impaired percussion behind from the fifth rib downwards. Moist sounds were present. The dulness became more marked and the vocal fremitus less distinct. Later a tympanitic note could be made out with amphoric and occasionally metallic breathing. Elastic fibres in alveolar arrangement were found by Eichhorst in the sputum. The latter, amounting to 150-200 c.cm. in the day, was never offensive and never contained tubercle bacilli. The sputum steadily became less as well as the cough, and the tympanitic resonance with the metallic phenomena disappeared. No more elastic fibrils were found in the sputum, and the patient was ultimately discharged perfectly well, having gained 10 kilo. in weight. The clinical diagnosis of abscess in the right lower lobe could not be doubted, and the preceding pneumonia had all the characteristics of influenzal pneumonia. A bacteriological examination was made after the first symptoms of abscess and frequently repeated. The sputum was obtained with all the usual bacteriological precautions, and both morphologically and by cultivation the presence of the influenza bacillus in pure culture was established. The diagnosis was further confirmed by a bacteriological examination in Pfeiffer's laboratory. Strepto- and staphylococci were quite absent. After the clinical evidence of the abscess had disappeared, Pfeiffer's bacillus also disappeared from the sputum. Pfeiffer's bacillus is the recognised cause of influenza and influenzal pneumonia. The absence of the usual pyogenic microbes as well as of Fraenkel's diplococcus, and the presence of the influenza bacillus, as proved morphologically and by culture, show that this bacillus must be looked upon as the cause of the pulmonary abscess.

(313) Diphtheria.

Landsteins (*Deut. med. Woch.*, August 29th, 1895) discusses the question of incubation, and relates a case in which it was possible to determine the period of incubation. In a family of three children, aged 12, 10, and 8 years respectively, one presented herself on July 1st with diphtheria, which was proved bacteriologically. Fourteen days later her brother was seized with vomiting, diarrhœa, delirium, and fever. A membrane appeared in the throat, and the diphtheria bacillus was found. As it was possible that the remaining child might develop the disease, the throat was inspected daily, and blood-serum cultures were made from the mouth beginning with July 15th. On the 19th, the diphtheria bacillus was found. On the same day headache was complained of, and on the following day there was redness of the left tonsil, slight glandular swelling, and enlargement of the spleen. The presence of the diphtheria bacillus was again proved, and the child passed through a severe attack of the disease. On the 26th the child was practically well, but the bacillus was still present in the mouth. With almost absolute certainty it may be said that the 19th was the first day of the infection—that is, on the first day the bacillus was found the symptoms of the disease appeared. Here the incubation period was at most twenty-four hours. The case accords with the view that the more severe the infection the shorter the incubation period. The author also refers to another family of five children, one of whom developed diphtheria. Isolation, although recommended, was not adopted. Cultivation experiments were frequently made from the mouths of the remaining children, but always with negative results, and none of them developed the disease.

(314) Cerebellar Disease.

Fahrenberg (*Berl. klin. Woch.*, August 19th, 1895) discusses the symptomatology based chiefly on Luciani's experiments, and the observation of 9 cases occurring in Aufrecht's clinic. These 9 cases included 1 of glioma, 1 of angio-sarcoma, 1 of cysticercus, 1 of massive tubercle, 1 of hæmorrhage, and 3 of abscess. The details of the cases are shown in a very instructive table. Etiologically, the disease could in no case be assigned to injury. In the 3 cases of cerebellar abscess there was middle ear suppuration. The cerebellum is less frequently the site of abscess than the temporal lobe. In the case of hæmorrhage there was arterio-sclerosis of the cerebral vessels. The comparatively short duration of the disease was remarkable, the longest being one year and a half, whereas the average was only a few months. The analysis of symptoms presented considerable agreement with Luciani's observations. In 8 cases occipital headache was present, and in the remaining case of a child, aged 3 years, its presence could not be proved. It was mostly severe, and usually the first symptom. In 5 out of these 8 cases there was marked rigidity of the neck and this became more accentuated as the disease advanced. It was probably due to pressure on the medulla. Vomiting was present in 8 cases and vertigo in 4. In 8 cases long under observation there was more or less wasting in 5. Notwithstanding this distrophy there were never any bed sores. Hemiplegic symptoms were never present. In cerebellar disease such symptoms hardly ever exist—at any rate, in tumour. The brachial monoplegia seen in 1 case and the facial paralysis in 2 cases were probably the result of pressure and not true cerebellar symptoms. Cerebellar ataxia was seen in 2 cases only. According to Luciani, this ataxia is not the most characteristic symptom of cerebellar disease as believed by many. Forced posture was present in 1 case only. Here the patient lay with the body bent forwards and the head backwards. Forced movements were never present. Irritative symptoms such as spasm were seen in 4 cases, and were, perhaps, due to irritation of the mid-cerebellar peduncles. In 1 case the position of the hand was very like that seen in cervical hypertrophic pachymeningitis. In addition to the vomiting, probably due to pressure, the following symptoms were noted—loss of weight, occipital headache, vertigo, especially on standing and walking, ataxia, ultimate inability to stand or walk, spasm, etc. The rigidity of the neck was remarkable; it appears not to have been often noted. Of diagnostic value in abscess is the pain in the ear and tenderness over the mastoid process. A negative result of the tuning fork experiment, namely, where the cranio-tympanic conduction prevails over the air conduction, has recently been said to point to cerebellar abscess (McBride).

SURGERY.

(315) Craniectomy.

Spannock (*Neurol. Centralblatt*, September 15th, 1895) records a case of imbecility improved by craniectomy. The patient was a boy, aged 14, of exceedingly weak intellect. When questioned he either repeated the words of the question or answered in an altogether meaningless way; he was restless both in his ideas and in his bodily movements; he was unable to remember events of the past few hours. Morally he was equally weak; he was addicted to abusive language, and often tried to strike and injure others, sometimes throwing stones at them; he was given to stealing, dirty in his habits, and always suspicious. The body is well formed, with the exception of the head, which shows low forehead, large projecting ears, and high palate with widely separated teeth. Craniectomy was performed, portions of both parietal bones being removed; at the operation the dura mater was opened, and the brain substance seen to be unchanged, pulsated in appearance; examination with faradism of the motor centres gave corresponding muscular contractions. The patient made a

good recovery from the operation, and there was at first no change in his condition. After two months improvement began, with occasional relapses, until at the end of a year there is distinct permanent improvement both intellectually and morally. The moral change is most striking and complete: the tendency to stealing, lying, abusive language, etc., has disappeared, and the patient is now an industrious trustworthy person, grateful for the operation and particularly anxious to have a weak-minded acquaintance improved similarly. The good result of the craniotomy is difficult to explain; suggestions are made that it is due to the greater space allowed for the development of the brain; that the œdema of the brain mentioned disappeared owing to the increase of space; that some external factor perhaps the faradic current used, affected the brain when exposed.

(340) The Effect of Trephining in Choked Disc.

ANGELUCCI (*Archiv. di Oftalmol.*, Fasc. 12, 1895) reports three cases of cerebral lesions causing œdema of the optic disc, in which trephining was followed by considerable improvement of vision. The first case was one of hemiplegic epilepsy. After trephining the papillary œdema disappeared: vision was so far regained as to allow the patient to perform the grosser offices of a housewife; the fits and the headache also ceased. In the second case of cerebellar lesion (unsteady gait, vertigo, acoustic symptoms, etc.), with double bilateral œdema of the discs, improvement of vision followed almost immediately after the operation. In the third case, in which the symptoms were more severe and in which a cerebellar tumour was diagnosed, improvement also followed, but to a slighter extent.

(341) Cysticercus Cellulosæ in Man.

BERGH (*Norsk Magazin for Lægevidenskaben*, June, 1895) publishes the first case observed in Norway. The patient, a healthy young man, had two years and a-half previously developed a tumour in the right posterior axillary line, which had become larger and tender for the last four months. At the time of observation it was inflamed and fluctuating, and 7 cm. to 8 cm. in diameter. On incision an elastic bladder, 2 cm. in diameter, was discharged with the pus. On examination by Heiberg this was found to be the cysticercus of the tænia solium.

(342) Movable Kidney.

ALBARRAN (*Ann. des Mal. des Organ. Gén.-urin.*, August, 1895) asserts that a good nephrorraphy should be: (1) a benign operation; (2) should assure fixation of the whole kidney, allow free flow of urine; and (3) alter as little as possible the renal substance. It is important to ascertain the length of the last two ribs, as there is danger of wounding the pleura if the twelfth rib does not extend beyond the edge of the sacro-lumbar mass. The author advises removal of the adipose capsule, so as to allow the kidney to be brought in direct apposition to the parietes, as this gives a firmer cicatrix. It is good practice to bathe the surface of the capsule with strong phenol solution or $AgNO_3$ (4 per cent.). Parenchymatous nephrorraphy, without decortication of the kidney, appears to give the best results. Catgut sutures seem on the whole to produce less irritation than silk. Out of 374 published operations there were only 7 deaths, and of these only 4 attributable to the operation. Fourteen per cent. of the cases were improved by the operation; 36 per cent. derived no advantage. In 88 per cent., however, the pain was lessened by the operation.

(343) Treatment of Chronic Urethritis.

HODARA (*Annales des Mal. des Org. Gén.-urin.*, August, 1895) advocates the use of the Nitze-Oberlander urethroscope in the diagnosis and treatment of chronic urethritis. He summarises Oberlander and Kollmann's treatment of gleet as follows: (1) Dilatation of narrowed parts of the urethra should be commenced as soon as all acute symptoms of gonorrhœa have subsided. (2) It is important to differentiate between anterior and posterior urethritis and to heal the latter with deep instillations of nitrate of silver (1 per cent.) (3) If there is any infiltration of the verumontanum, dilatation of this part of the canal with Oberlander's dilators is advised. (4) Catarrh of the glands, crypts, or glands of Morgagni need electrolytic needles thrust into them and a current passed through their walls. Section of the mouth of each crypt under control of the eye by means of a sharp-pointed urethral knife is also of value.

MIDWIFERY AND DISEASES OF WOMEN.

(344) Hæmatoma and Myositis of the Sterno-Mastoid Muscle in Newborn Children.

LUDWIG PINCUS (*Zeitschr. für Geburtsh und Gynäk.*, Bd. xxxi.) deals with the subject of hæmatoma of the sterno-mastoid muscle in an exhaustive manner. In the introduction he mentions the work done in this direction by Bohn, Skrzeczka, Küstner, C. Ruge, Köster, Vollert, Witzel, Taylor, and Spencer, and gives the history of a case of his own which he observed for six years and which was followed by wryneck. Historically Dieffenbach (1830) was the first to describe this injury. Tulpius gave as the cause of wryneck "induratus corrugatusque musculus." Minnius (1652) and Florianus (1688) treated it by tenotomy, and van Roonhuysen (1674) recognised that the affection existed "from the mother's womb." Since the appearance of Dieffenbach's monograph, many works have been published, of which a complete bibliography comprising 220 papers is appended to Pincus's paper. Observations upon the pathological anatomy of hæmatoma of the sterno-mastoid muscle have been made in newborn children by Skrzeczka, Fashender, von Sassen, Ruge, von Huttenberger, and Spencer, and histological observations by Taylor, Ruge, von Huttenberger, Vollert, Köster and Spencer. Spencer's description is quoted in full, as being the only known observation upon the injury in a stillborn child, and it is shown that this description resembles that of specimens obtained from young infants and from the contracted muscle in torticollis, except that in the former the material between the fibres is blood, in the latter fibrous tissue. Pincus therefore regards the sterno-mastoid tumour as myositis following hæmatoma of the muscle. The differential diagnosis has to be made from myositis syphilitica, from abscess within the sheath of the muscle, and from myositis ossificans commencing in the sterno-mastoid muscle. "Sarcoma" of the muscle in infants he suggests is possibly hæmatoma. Syphilis is considered to play no part in the production of hæmatoma, and the effect of manipulation during the birth of the child is well described. The percentage of cases in which the head presented was 34·97, a larger figure than usually admitted. In 12·14 per cent. spontaneous labour occurred. The greatest danger to the muscle occurs from manual extraction in breech presentation. In head presentations the injury was on the right side in 52·94 per cent., on the left side in 47·06 per cent., and never on both sides: in breech presentations on the right side in 64·15 per cent., on the left side in 16·98 per cent., on both sides in 18·87 per cent. As regards prognosis, on an average the tumour disappears in two to three months; suppuration rarely occurs. The injury to the sterno-mastoid muscle is rarely followed by persistent torticollis. The prophylaxis consists in the use of properly constructed forceps, avoidance of torsion, Winckel's method of delivery in breech presentation, and it is of importance that every textbook of midwifery should contain a chapter upon the injuries to the child's body which occur during the act of birth.

(345) Danger of Amateur Massage in Gynæcology.

ZIEGELROTH (*Der Frauenarzt*, September, 1895) points out that doctors are often to blame for handing over a case for massage without knowing anything definite about either the principles or practice of that now fashionable therapeutic agent. Whilst most practitioners transfer their cases to a specialist of the highest skill, and never ascertain if the subsequent cure or failure be in direct relation to the treatment, others, also overconfident in the very name of massage commit patients to persons of deficient training. Ziegelroth relates a curious case of the latter mistake. A young, recently-married lady suffered after abortion, and, distrusting her village doctor, consulted another in a neighbouring town. The latter gentleman had a great belief in massage, and, quite ignorant of how it should be done, he directed the patient's midwife

to employ internal massage in this case for the remedy of a displacement. This midwife went boldly to work, but as after several "sittings," which gave great pain, the patient was no better she gave up the treatment on the score that she could not properly work with the whole hand in the vagina. It then transpired that the midwife had been accustomed to work at a leg or muscle by rubbing it with the fist well doubled up. The physician was not aware that she was ignorant of the most elementary manipulations in massage.

(340) Fibroids Cured by Extract of Thyroid Gland.

JOUIN (*Bulletins et Mémoires de la Soc. Obst. et Gynéc. de Paris*, No. 8, 1895) states that he has successfully treated several cases of myoma of the uterus by doses of Nielsen's dry extract of sheep's thyroid gland. He gives 4 to 8 tablets daily, equivalent to half a thyroid gland. Out of 5 cases, the 2 which have been fairly long under treatment have distinctly improved in health. In the first case the tumour has distinctly diminished in size. Menorrhagia is much diminished by this treatment. As in other classes of patient, hæmorrhoids present in at least one case were greatly relieved.

(341) Asafœtida in Obstetrics.

WARMAN (*Ibid. Frauenarzt*, August, 1895) finds that this drug is a most valuable therapeutic agent in midwifery. It is a direct sedative to the pregnant uterus, and exercises no evil influence over the general system. It is of particular value when abortion is imminent, as it controls uterine irritability. On the other hand, it is of no use as a prophylactic agent in such cases, and must not be relied upon when the abortion has proceeded so far as to require manual interference. In habitual constipation and also in nervous conditions during pregnancy, asafœtida is highly beneficial.

(342) Ectopic Gestation: Morphine Injections.

PROCHOWNICK (Frank's *Berliner Klinik*, October, 1895) supports this practice, which was also advocated by Winckel so recently as 1889. He considers that the injection should be practised in any case of extrauterine pregnancy during the first three months, provided that it is fairly evident that the ovum is yet intact and the embryo alive. After the twelfth week injections are not justifiable, and if abortion has clearly set in, if hæmatocele or hæmatoma be present, or if the uterine decidua has come away, this practice is useless, as its object, according to the light of recent experience, should be solely the destruction of the embryo. A single injection of about half a grain in half a drachm of water will usually suffice. It must be administered from the vagina, with a stout straight or curved needle, which must be fitted on to the syringe direct without any intermediate rubber tubing. Antisepsis must be practised, and an iodoform tampon must be applied to the vagina after injection and left there for twenty-four hours. Evidence of perimetritis or gonorrhœa contraindicates this treatment. An anæsthetic is only needed in very sensitive excitable subjects.

(343) Hysterectomy: "Collarette" Operation.

DELAGÉNIÈRE, of Le Mans (*Archives Provinciales de Chirurgie*, August, 1895), strongly supports this practice, which, roughly speaking, consists of amputating or enucleating a fibroid and leaving behind as little of the tissue of the stump as possible, the muscular part of the cervix and portion of the body of the uterus being dissected away. The "collarette" thus left behind is sewn up so that its edges are turned downwards into the vagina, which is exposed. As much oozing follows, Delagénière has always hitherto drained the abdominal cavity. The difficulty in securing the broad ligaments and in getting at the uterine arteries is not great. The ureters and adjacent structures cannot be damaged. At the same time the uterus is removed as far as the vagina without any manipulations from the vulva. When the fibroid has invaded the broad ligament it must first be enucleated, then the broad ligament is cut away and the cervix treated as in a simple case. Delagénière has lost only 1 in 20 cases.

THERAPEUTICS.

(344) Typhoid Antitoxin.

REUMER AND PRIPER (*Zeitschr. f. klin. Med.*, Bd. xxviii, Heft 3 and 4) had already shown (see EPITOME, July 13th, 1895, Par. 37) the reaction of the human organism to the subcutaneous injection of broth cultures of typhoid bacilli sterilised by heating to 55° to 60° C. It consists in a slight febrile condition with transient enlargement of the spleen. In patients with typhoid fever small doses (at most 0.05 c.cm.) of such a culture show a marked influence upon the course of the disease. In 8 cases treated in this way, after a few injections the further progress of the disease was cut short and the fever completely subsided. The authors then instituted a long series of experiments on white mice, guinea-pigs, and sheep to see whether an antitoxin could be obtained similar to those of diphtheria and tetanus. They obtained by injecting sheep for three months with sterile broth cultures of the typhoid bacillus, a serum which had marked antitoxic properties, though it had no direct power of destroying the bacilli. For immunising white mice ½ to 1 drop was sufficient to protect against the fatal dose. For guinea-pigs 0·07 c.cm. to 0·08 c.cm. serum completely protected 100 grammes of animal against four times the fatal dose. The serum has curative powers, since of 5 guinea-pigs treated one hour after injection none died; of 5 treated two hours after injection none died; of 5 treated three hours after injection three died; and of 5 treated four hours after injection 1 died. The results are very noteworthy, since the effects of injection with typhotoxin are definitely seen one to two hours after injection, and as a rule the animal dies in twelve to twenty-four hours after a fatal dose has been administered. In every case animals treated for a long time with typho-toxin yielded a serum which had immunising and curative powers. How far these results may be applied to patients one cannot as yet say with certainty. The harmlessness of the serum to human beings has already been proved.

(345) Sublimate Injections in Syphilis.

SCHRÖDER AND ALLGEYER (*Ref. Med.*, September 7th, 1895) give the results of the above treatment in 126 cases—53 men and 73 women; 115 had secondary syphilis, and 11 tertiary. The sublimate was dissolved in water containing five or six times as much salt as sublimate, and of this solution about 1 c.cm. was injected. The injection was usually made in the nates, etc., followed by local massage. In men from 2 to 5 cgr. were injected, in women smaller doses. The injections were repeated once a week, in some cases up to twelve weeks. The men bore the treatment much better than the women. No abscess ever followed, but local uneasiness, redness, stiffness were not uncommon, especially in the women. Forty-seven were mercurialised, that is, suffered headache, nausea, epistaxis, fever, stomatitis (20 cases), intestinal disturbances (14), nephritis (1 woman). Some had curious dyspnœa. Severe mercurialism occurred in 5 women—four or five hours after injection stomatitis, colic, diarrhœa, fever, and albuminuria appeared, and lasted off and on for ten days. The syphilitic manifestations disappeared after treatment in 106 cases, and generally after three or four injections. Women can rarely stand more than 3 cgr., and 5 cgr. is liable to cause severe symptoms of mercurialism. On the whole the authors are not enthusiastic about the new treatment.

(346) Evil Results of Nasal Applications.

EICHHOF (*Therapeut. Monatshefte*, September, 1895) summarises the occasional evil results of local applications to the nose. Otitis media following the nasal douche may be avoided by attention to the following points: The douche must not be at too high pressure, nor too prolonged; no swallowing or coughing to be allowed during douche; head to be slightly inclined forward; douche to be administered through the narrower of the two nostrils; nose not to be blown in the ordinary manner just after douche, but patient to close one nostril while he blows out through the other; fluid used, to be at first lukewarm, then gradually cooler; nozzle of douche not to fit the nostril tightly; cotton-wool to be worn in the ears after the douche. Neuralgia results sometimes from allowing the stream of a douche to impinge on the roof of the nasal cavity; the nozzle of the douche should therefore be either horizontal or pointing down-

wards. Impairment or even permanent loss of smell may result from the use of too strong solutions of zinc salts or alum. Nasal insufflations less often give rise to trouble, but powders should be used as weak as possible, for the mucous membrane is sometimes very sensitive to the stronger powders; prolonged lachrymation with swelling of the whole nose, neuralgia of the fifth nerve, and sometimes even membranous rhinitis following their use. Where chromic acid is applied to the nose, an alkaline douche should be used after the patient has blown the nose thoroughly; neglect of this has led to severe toxic symptoms due to swallowing of chromic acid. Adhesions between adjoining surfaces after use of caustics or galvano-cautery are to be avoided by application of ointments, and daily breaking down of adhesions. Many nervous disturbances have followed the use of the galvano-cautery, for example, headache, neuralgia, asthma, and in several cases more serious and even fatal results, especially pyæmia and thrombosis of cerebral sinuses. The danger of septic processes is still greater in operations on the nose associated with much bleeding, for example, removal of polypus or growth, correction of septal deviation, etc. In view of such cases all instruments used for nasal operations should be sterilised, and the nasal cavities should be irrigated with antiseptic fluids after all such operations.

(335) Topical Action of Salol.

COLOMBINI (*Rif. Med.*, September 14th, 1895) has been experimenting with regard to the local effects of salol dissolved in liquid vaseline. In the presence of alkaline fluids or living tissues salol appears to break up into salicylic acid and phenol in the nascent state. When split up in this way the author found that, whilst the good antiseptic action of each of the acids was maintained, their irritant action was absent either from the way in which they were set free or from the small quantities of the acids evolved. Clinically it was found that salol in vaseline solution—the best solvent—did not irritate the skin nor inflame ulcerated surfaces which healed under the treatment without pain or local reaction. The author thinks there may be a useful field opened up in the local application of salol as a non irritating and sufficiently powerful antiseptic.

(336) The Action of Anemonin.

NOLA (*Gazz. degli Osped.*, September 28th, 1895) has been experimenting with anemonin, on frogs, rabbits, dogs, and guinea-pigs, and concludes that it is a poison of slow action, producing first drowsiness, then paralysis, and finally convulsions. In the paralytic period the sensibility and the reflexes are at first preserved, to be, however, finally abolished or much diminished. The convulsions vary in intensity and form from simple isolated spasms up to clonic and tonic convulsions. The sleep is probably owing to the physio-chemical action of the drug on the cerebral cortex. The paralysis is of central origin, affecting the brain first and then the spinal cord. The convulsions are of bulbar origin. Death occurs through asphyxia from arrest of the respiratory mechanism, the muscles being completely flaccid. The drug is very slightly soluble in water, alcohol, or ether. It is generally in the form of white ortho-rhombic crystals, and has a peculiar odour.

PATHOLOGY.

(337) Thyroidism and Thyroproteidism and their Connection with other Internal Secretions.

REVILLIOD (*Rev. méd. de la Suisse Romande*, August 20th, 1895) describes the effects of thyroproteid and thyroidin discovered by Notkine (*vide* EPITOME, September 14th, 1895). The function of thyroidin is to neutralise and eliminate the thyroproteid. "Thyroproteidism" (corresponding to myxœdema) may result from (1) excess of thyroproteid; (2) deficiency of thyroidin. Hyperthyroidation or "thyroidism" (corresponding to exophthalmic goitre) from (1) deficiency of thyroproteid; (2) excess of internal secretion of thyroidin. This explains why an enormous goitre may be compatible with health if the two substances are in proportion to maintain physiological equilibrium. The conception, however, of the influence such a gland as the thyroid exerts on metabolism must be enlarged when we consider that other hæmopoietic glands act together with it, and possibly to some extent vicariously. In fact, for nutrition to be in equilibrium, it is necessary for a certain combination of humours to circulate in the system. Thus while the thyroid has to do with growth, stature, quality of the skin, the expression, etc., the pituitary body directs the formation of the skeleton and extremities. Experimentally extirpation of the thyroid gland is followed by hypertrophy of the hypophysis (Rogowitsch, *Arch. de Physiol.*, 1892). Extirpation of the spleen is followed not only by hypertrophy of the lymphatic glands, but sometimes by goitre, which in one recorded case was accompanied by some symptoms of Graves's disease. Again, the thyroid is related to sexual power, which is lost in myxœdema; it enlarges at puberty, and sometimes diminishes at the climacteric. The relation of osteomalacia to the function of the ovary is well known. If ablation of the ovaries cures osteomalacia, the latter must be due to their morbid activity (? overproduction of their internal secretion). Hoffmeister found, after thyroidectomy in rabbits, anatomical changes in the hypophysis, ovaries, kidneys, and osseous system, and the author has had several cases of more or less pronounced Graves's disease combined with a certain type of osteomalacia, consisting of an exaggerated flexibility of the finger and wrist joints, or great brittleness of the bones. Deformities of the skeleton are common also in goitrous subjects. This raises the question of how many morbid changes in the bones and joints, commonly called rheumatic, may be really due to perverted glandular function. Trachewski has even produced rickets in the fœtus of animals by performing thyroidectomy. The existence of a thyroid "osteopathy" is also supported by the frequent presence of phosphaturia in Graves's disease (7 in 10 of author's cases). This leads us by Teissier's law to glycosuria (1 case had both phosphaturia and glycosuria, 2 had polyuria *plus* characteristic fingers). Spontaneous hæmorrhages from all parts are common in subjects of goitre; this is connected to osteomalacia by Barlow's scurvy rickets. As regards the numerous nervous manifestations of thyroid intoxication, one case of old paraplegia with abolition of reflexes in a woman with goitre and incomplete myxœdema was rapidly improved by the administration of thyroid tablets. The skin also seems to be influenced by the thyroid function, as, besides the classical myxœdematous pachydermia, some cases of psoriasis are cured by thyroid extract. Lastly, idiopathic emaciation is related to that occurring in Graves's disease by the nervous irritability and intestinal and vascular spasms of neurasthenia; and loss of weight is the most marked effect of the absorption of thyroid juice. Both are improved by the administration of cod-liver oil, which may be looked on as an internal secretion of the liver, to some extent equivalent to and capable of replacing the colloid substance of goitre (thyroproteid), which has not yet been prepared as a medicine.

(338) Intrauterine Infection with Enteric Fever.

FREUND AND LEVY (*Berl. klin. Woch.*, 1895, p. 539) give the history of a case in which a woman, five months pregnant, was attacked by enteric fever. In the fourth week she suddenly miscarried; the fœtus was alive but died immediately after section of the umbilical cord. Fœtus and placenta were forthwith placed in sterile vessels, and a bacteriological examination made. Plate cultures made with spleen pulp, and with placental blood showed colonies of micro-organisms which were clearly B. typhosus. The cultures caused no coagulation of milk, led to no fermentation, did not form gas or indol, and grew on potato as an imperceptible layer. Examination of the fœtus discovered nothing beyond a somewhat enlarged whitish spleen; in the placenta the decidua was very thick; no typhoid bacilli were recognised in sections. The case clearly shows that typhoid bacilli may pass from the maternal to the fœtal organism without any modification of the placenta; neither hæmorrhages nor lesions of the villi or of their epithelium were to be found.

ERRATUM.—In the abstract of Prof. Welch's paper on the Antitoxin Treatment of Diphtheria, published in the EPITOME of October 26th (par. 332), the word "sufficient" in column 3, line 13, should be *insufficient*.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(359) Gout.

G. KLEMPERER (*Deut. med. Woch.*, October 3rd, 1895) discusses the pathology and treatment of gout. He first refers to the failure of uric acid solvents such as piperazin, lysidin, to cope with the disease. As regards the origin of the uric acid deposits, Garrod has attributed them to increased formation and diminished excretion of uric acid. The uric acid in the blood, according to Ebstein, irritates the tissues, which become inflamed and necrotic, and the uric acid crystallises out in the necrosed tissues. Ebstein maintains that this necrosis is primary. The author thinks this view open to question because the blood does not contain so large an excess of uric acid as to induce the necrosis in the tissues. Von Noorden disputes the causal relation between uric acid and necrosis. He thinks the primary necrosis is due to a ferment, and that in the necrotic tissues the uric acid crystallises out. The author confirms by his experiments Garrod's view that the blood contains an excess of uric acid. He also concludes by estimating the amount of uric acid in the urine that a uric acid retention does not exist. Weintraud has shown that the amount of uric acid in the urine is increased by the administration of calves' thymus. The author found that by administering thymus to gouty patients the excretion of uric acid is also increased as in the healthy. Thus as long as the kidneys are intact, uric acid retention does not occur. The increased quantity in the blood is due to increased formation. The author would not attribute all the symptoms of gout to the increased amount of uric acid in the blood because the same thing exists in other diseases, as he shows in cases of leuksemia, Bright's disease, etc. He has also estimated the solvent power of the blood for uric acid in gout, and finds that it still has a considerable solvent power left. As regards the alkalinity of the blood, the author finds that it is slightly lessened in gout, but not so much so as it often is in other diseases. The author thus sums up his views upon gout: Unknown products lead in gout to inflammatory and necrotic processes in certain tissues: these necrotic foci attract the uric acid from the blood, and the chemical affinity of the gouty necrosis for uric acid is occasionally so great that the blood is unable to bring the acid again into solution. The author discusses the relation of these products to heredity, alcohol, and lead. In a dog fed with lead to such a degree as to produce epilepsy there was no diminished excretion of uric acid. The author thinks that lead predisposes to the necrotic action of the above-named products. The object of treatment is to counteract these necrotic processes by oxidation and excretion. Agents and means by which metabolism is increased should be employed, such as exercise, baths, etc.; abundant fluids and frequent sweating have the object of hastening excretion. The author concludes by discussing the question of diet.

(360) A New Type of Crossed Hemiplegia.

MADAME GOUKOVSKY (*Nouvelle Iconographie de la Salpêtrière*, No. 3, 1895) describes a case presenting a new type of crossed hemiplegia—namely, paralysis of the limbs on one side and of the muscles of the tongue on the opposite side. In the case reported there was (1) paralysis of the arm and leg on the right side, without paralysis of the face and without aphasia; (2) complete paralysis and atrophy of the left half of the tongue, with deviation to the left on protrusion. The absence of facial paralysis indicated a lesion of the motor tract below the separation of the facial fibres (that is, below the pons). The atrophy of the left half of the tongue indicated a lesion at the hypoglossal nucleus, or on the peripheral side thereof—that is, a lesion in the medulla. A single lesion in the upper part of the fissure between the pyramid and the olivary body of the medulla, above the pyramidal decussation, was diagnosed. Such a lesion would involve the left hypoglossal nerve and the motor tract for the right arm and leg, before the fibres decussated. *Post-mortem* examination confirmed this diagnosis, and revealed a patch of softening, limited to the left olivary body and the left pyramid of the medulla. The greater part of the roots of the left hypoglossal nerve had been destroyed. The softening was due to chronic endoarteritis obliterans.

(361) Œdema without Albuminuria.

TCHIRKOFF (*Rev. de Méd.*, August, 1895) has observed considerable œdema in several cases without albuminuria. The patients' ages varied from 25 to 60. In some the general appearance resembled that of renal disease; in others, and especially the anæmic, the anasarca developed rapidly, the peritoneal cavity filling with fluid very much, as in cases of cirrhosis of the liver. Renal disease was in all cases carefully excluded. A general loss of hair was noted. The blood was normal, except that in most cases there was a quantity of reduced hæmoglobin present. There was no evidence of cardiac lesions or of general stasis of the blood. The author then refers to a possible nervous origin in the shape of a lesion of the vasomotor centres or nerves. There was a profound alteration in nutrition. In those recovering there was great wasting and exhaustion. The above alteration in the blood serves to distinguish the œdema from that of chlorosis or pernicious anæmia. The author gives details of some of the seven cases of generalised œdema without albuminuria, observed by him. In one case of a man, aged 48, there was a rapid development of œdema, with effusions into the peritoneal, pleural, and pericardial sacs. None of the ordinary causes of general dropsy were present. The author comes to the conclusion that the most probable cause lay in a lesion in the vasomotor system rather than that the disease was due to any profound alteration in the blood, or to a lesion in the vessel walls. In other cases the œdema of the extremities is never great, but the effusion into the serous cavities and dilatation of the right heart are most constant. The author then refers to the possible syphilitic origin of the affection, and gives details of two cases in which recovery ensued after treatment with potassium iodide. The author recognises two groups of cases: (1) acute, with rapid œdema and dropsy of the serous cavities; and (2) chronic, with slow development and with trophic disturbance and venous paralysis. In five out of seven cases there was previous syphilis, and antisyphilitic treatment gave brilliant results. The author could not but conclude that such cases were syphilitic in nature; they are certainly due to an affection of the vasomotor centre, whatever the exact nature of that lesion may be. Apart from syphilis, the infective diseases seem to be the most frequent cause, the toxins, in all probability, producing an alteration in the vasomotor centres. The author does not think that these cases can be of lymphatic origin. He concludes that (1) generalised dropsy may occur without albuminuria, and in the absence of disease of the heart, lungs, liver, or other organs; (2) it may be called general vasomotor œdema; (3) it may be accompanied by cardiac dilatation and moderate arterio-sclerosis; (4) the blood presents certain alterations in the shape of reduced hæmoglobin; there may be trophic changes and paralysis of the cutaneous veins; and (5) the disease is mostly syphilitic, and yields to appropriate treatment.

SURGERY.

(362) The Surgical Treatment of Movable Spleen.

PUTEMAN (*Centralb. für Chir.*, No. 43, 1895) reports a case in which a movable spleen was first exposed by laparotomy, and afterwards securely fixed in the lumbar region by sutures. The patient—a woman 23 years of age—who had suffered constantly during 3 years from pains in the stomach and over the sacrum, came under the care of Bardenheuer with a firm and smooth tumour, which occupied almost the whole of the smaller pelvis on the left side. After the abdomen had been opened in the median line this tumour was found to be the spleen enlarged to about double its normal size, of firm consistence, and of a dark red colour. The wound in the anterior abdominal wall having been closed, the patient was turned over on to her right side, and a second incision was made in the mid-axillary line from the costal arch

to the crest of the ilium. The peritoneum having been exposed, an incision was made in this membrane through which the movable spleen could be pressed through from the abdominal cavity. In this new and retroperitoneal situation the displaced organ was fixed by sutures to the lumbar fascia, to the retroperitoneal connective tissue and fat, and to the tenth rib. The edges of the peritoneal wound were very carefully stitched around the elongated pedicle of the spleen. The patient made a speedy recovery from this operation, the object of which, it is stated, seemed to have been secured. In comparing this procedure with that advocated by Rydygier, in which anterior laparotomy is performed, and the wandering spleen fixed by sutures to the parietal peritoneum, the author points out that the former presents the following advantages: it is, he holds, less dangerous and can be more readily performed; there is no prolonged exposure of the peritoneal cavity, and the necessity of exposing and handling intestine is prevented; the spleen is secured to unyielding and fixed structures, and finally there is much less risk of any subsequent tendency to hernia at the seat of operation.

(363) Compression of the Brain.

GIANNELLI (*Riv. Sper. di Freniatria*, vol. 21, fasc. 2-3) gives the results of some pressure experiments on the brain of a woman, aged 33, who had been trephined over the middle of the ascending parietal convolution. In one set of experiments the pressure was increased gradually up to 20 cm. Hg., in the others, rapidly up to 18 cm. Similar symptoms were observed in each case except that they occurred at once when the pressure was rapidly increased and gradually in the other class. The pupils contracted in the first series and dilated clearly in the second. It was not noticed which pupil altered first; the changes were equal. The pulse was at first slightly increased in frequency, but ultimately lessened, and the height of the pulse tracing tended to get lower. The respiration, which was at first increased, speedily diminished, and it appeared that stimulation of the part of the cerebral cortex under observation exercised an inhibitory influence on expiration. No Cheyne-Stokes breathing was observed, perhaps because the pressure was not high enough. Pain in the head became intense at 14 cm. pressure, unbearable at 18. Temperature in the rectum fell slightly under pressure, but rose to normal in a few minutes after the pressure was relieved. Salivation was often noticed. Drowsiness up to loss of consciousness observed when the pressure was high. It was not possible to observe the optic discs during the course of the experiments.

(364) Surgical Interference in Traumatic Rupture of the Abdominal Viscera.

THOMSON (Reprint from *Edin. Hosp. Rep.*, vol. iii.) reports four cases of severe abdominal injury treated by surgical operation, in three of which the treatment proved successful. From a careful consideration of the indications and contra-indications for operative interference in such cases, the author concludes that it would appear to be the duty of the practitioner when called to a patient who has met with an injury to the anterior abdominal wall, and especially if the violence has been sustained over a limited area, to exclude, in the first instance, rupture of the bladder, then to search for evidences of internal hæmorrhage or escape of gas. If either of these be suspected, and if the facts elicited with regard to the injury are such as to corroborate the inferences made from physical examination, he should not delay to afford the patient the chance of relief by surgical interference. An exploratory median laparotomy should then be the proper procedure, either above or below the umbilicus, according to the indications presented in each individual case. In considering the pros and cons of an exploratory operation it should be remembered that a ruptured abdominal viscus, if left to Nature, is almost inevitably fatal. It is hopeless, also, to delay interference until the shock has passed off, for, should a rupture exist, the phenomena of shock will only yield to those of perforative peritonitis. The injection of a hot saline fluid into the veins, or into the peritoneal cavity, is regarded as a valuable procedure for alleviating shock and tiding the patient over a critical period.

(365) Paralytic Dislocation of the Hip.

APPEL (*Münch. med. Woch.*, October 1st, 1895) remarks that congenital dislocation of the hip can never be attributed to an infantile paralysis occurring in the earliest period of life. He then refers to the few recorded cases of paralytic dislocation, and reports the following exceptional case of it. A boy, aged 8, was well up to the end of his first year, when he had an attack of infantile paralysis involving chiefly the right leg. Some improvement subsequently occurred. When he was seen the right leg was shorter than the left, and the foot was in the clubfoot position. When the patient was lying down with the leg extended little that was unusual could be observed, but if the leg was rotated inwards and adducted, the head of the femur passed out of the acetabulum and rested on the back of the ileum. The head and neck of the bone could be distinctly felt here. The patient could cautiously lean on the right leg and make certain movements, even with the head of the bone in this position. He could both voluntarily put the bone out and restore it to its position. He effected the latter movement by pressing on the trochanter with his hand, and making slight abduction and rotation outwards. The neurological report showed that there was moderate atrophy and loss of power in the glutei and in the flexors and adductors of the thigh as well as in the quadriceps, and especially the vastus internus. There was marked atrophy and paralysis of the peronei, gastrocnemius, extensor digitorum communis, and hallucis longus. In the thigh muscles there was quantitative diminution in the reaction to the faradic and galvanic currents. There was no reaction to faradism in the affected leg muscles, and only a faint response to galvanism. The right knee-jerk was diminished. To explain the case the following must be supposed: (1) The poliomyelitis had produced a paralysis of all the muscles about the hip; and (2) the joint was brought into use by early restoration of some of the muscles. In the attempts at walking the head of the bone had not the usual support, owing to the change in the muscles and looseness of the capsule. The upper and back part of the capsule became more stretched, and hence the dislocation. That the dislocation was not permanent was due to the restoration of function in some of the muscles, and to the fact that the patient soon learnt to replace the bone. Bramann resected the upper and back part of the capsule, with the hope of keeping the bone in place and thus improving the patient's condition. It is too early yet to say what the result will be.

MIDWIFERY AND DISEASES OF WOMEN.

(366) Puerperal Convulsions.

LEUSDEN (*Virchow's Archiv*, October 3rd, 1895) has made a series of investigations on two cases of eclampsia. His results seem admittedly negative, as he has found that certain conditions held as causative and primary are really secondary. He cannot find any sound basis for the hypothesis that a true bacterial infection is present. The presence of a toxic substance is far more probable. Kidney disease plays a very prominent part in eclampsia. A previous observer, Schmorl, laid stress on a remarkable embolic condition in the lung. The capillaries were found plugged with bodies corresponding in every respect to placental giant cells. Leusden found such cells in the lungs in both his cases. He insists that they represent a mere accidental peculiarity. These placental cells decidedly have no fibrinogenous power, nor can he detect any other bodies or compound due to placental disease and possessing the same property of causing coagulation. Schmorl believed in such an influence. No liver cell emboli were detected, and, though necrotic changes were observed by Leusden in the parenchyma of the liver, he considers that they could not represent the cause of eclampsia. Hyaline or fibrinous capillary thromboses in the lung and liver were discovered, but Leusden notes that they are not peculiar to eclampsia, and are most likely a result of toxæmia of the anæmic type. In the lungs this condition must be related to the local œdema which occurs in eclampsia. In short, there is much to be seen in the tissues of organs from cases of puerperal eclampsia, but nothing like a primary lesion has yet been determined.

(367) Bleeding and Icterus Neonatorum.

BAUMEL (*Revue Obstét. Internationale*, October 11th, 1895), read at the Bordeaux Congress a note on a child which was already eight months old and well nourished. It was born about a month before term, after free bleeding from detached placenta. On the third day the skin was bronzed, the conjunctivæ yellow and ecchymosed; the urine stains on the child's linen were wine-red in the middle and nearly black at the border. During the first month the urine varied singularly in colour day by day: red, violet, blue, black and yellow tints were observed. On analysis neither hæmoglobin, methæmoglobin, nor hæmatin could be detected, but indican was present. There was suppression of urine for a short time, and trismus, yet recovery was complete. The hæmorrhage had altered the fœtal blood, which was incompletely oxygenated, so that the liver could not transform the products of the destruction of hæmoglobin into bilirubin. In all cases of icterus neonatorum, abnormal as well as normal, search ought to be made for abnormal pigments as well as for bilirubin, etc. Indicanuria represents a distinct variety of the disease.

(368) Puberty and Disturbed Heart's Action.

KISCH (*Frauenarzt*, October, 1895), distinguishes three forms of cardiac disturbance at the epoch of development of the sexual functions: (1) Nervous palpitations and paroxysmal tachycardia in otherwise healthy subjects. They are frequent before the first period and usually cease soon afterwards. (2) The well-known cardiac symptoms in chlorosis. (3) Hypertrophy of the heart occasioned by the alterations of the circulation associated with the establishment of menstruation and aggravated by insanitary clothing, especially tight lacing.

(369) Large Pelvic Hæmatoma after Ovariotomy.

SCHRAMM (*Centralbl. f. Gynäk.*, No. 34, 1895) was consulted by a servant maid, aged 27, who suffered from pain in the left iliac fossa during defæcation. The left ovary was much enlarged. It was removed and found to be cystic, in size as big as a hen's egg, with a long thin pedicle. For a week after the operation the patient passed urine spontaneously. On the eighth day dysuria set in, with severe pain in the left iliac fossa. A swelling of the size of an apple lay to the left of the uterus. Two days later it was found to be very large and tense. The pain was intense, fever entirely absent, and all physical signs pointed to extravasation of blood in the left broad ligament. The swelling extended to the right of the uterus. A vaginal puncture was made, and a quantity of brownish fluid blood came away. The puncture hole was enlarged and a drainage tube inserted. No fever followed, and the dysuria disappeared. Two days later the swelling increased to beyond its original size. Much treacly blood escaped when a second puncture was made. The cavity left after the escape of the blood was packed with iodoform gauze. This was removed on the second day, and a glass drainage tube was inserted. The cavity was washed out with a 3 per cent. boracic solution every day. The patient made a good recovery.

(370) Diffuse Hypertrophy of Breasts after Delivery.

ANTHONY (*Boston Med. and Surg. Journ.*, August 22nd, 1895) publishes the sequel to Warren's case (*ibid.*, August 3rd, 1893). Anthony states that the patient became pregnant for the third time, and was under his observation during her pregnancy. The breasts, which had become smaller after her second delivery, again increased till they grew very large and pendulous. A rudimentary nipple formed in the right axilla. An accessory nipple on the under surface of the left breast was surrounded by a dark areola. Labour was normal. The patient insisted on suckling the child, which she had not done after the second labour. The supply of milk was equal to the demand. Two months after delivery the breasts were once more as small as before the pregnancy.

THERAPEUTICS.

(371) Thyroid Feeding.

KNOEPFELMACHER (*Wien. klin. Woch.*, October 10th, 1895) has investigated the influence of thyroid feeding upon cases of rickets and goitre. Lawz has asserted a relationship between rickets and cachexia strumipriva, both of which give rise to anæmia, tetanic symptoms, and impaired bone growth. In this last respect Knoepfelmacher points out that the resemblance is a very superficial one, since in rickets there is increase of cartilage cells with but slight ossification, whereas in cretinism and allied affections there is accelerated ossification, with very little cartilaginous overgrowth. Four rachitic infants suffering from tetany were fed on thyroid extract without result, except that their rate of growth (as regards body weight) diminished. The tetany yielded readily to other treatment. The loss of weight which usually results from thyroid feeding is held to be due to increased nitrogenous excretion, and not to loss of fat or water. With regard to goitres, Bruns, Lawz, and others had already established the fact that parenchymatous hypertrophy of the thyroid is amenable to specific treatment, the value of which decreases with the age of the patient. Colloid bronchoceles are less affected, cystic not at all. Knoepfelmacher treated 22 cases of goitre with thyroid tabloids. In 11 patients whose ages varied from 2 to 17 years there was marked diminution in the size of the tumour, but never complete disappearance. Nine of these growths were diagnosed as simple hypertrophy, the other two as adenoma. In 5 cases (one aged 12 years the others from 17 to 21) there was slight but evident improvement; in 5 more (aged respectively 8, 9, 17, 17, and 37) no result followed. It was found that in these latter treatment by iodine—potassium iodide internally and iodide ointment externally—was also unavailing. In 4 cases which were benefited the improvement had been maintained from three to five months later. This disproves the theory of Kocher and Bruns that hyperplasia is a functional disease of the thyroid, and that if thyroid extract is administered this hypertrophy resolves as long as secondary changes have not been added to it. The author suggests as an explanation of the persistent diminution in size that hypertrophy is due either to the claims on the gland being too great, or to certain parts or the whole of it being in a condition of diminished functional activity. In the latter case, the gland being put out of action by feeding with its extract partly atrophies, while the rest recovers its functional capability.

(372) Serotherapy in Meningitis.

RICHI (*Rif. Med.*, August 28th, 1895) reports the case of a healthy child, aged 7, who suffered from cerebro-spinal meningitis, from which disease his sister had recovered some two or three weeks previously. The illness began with headache and pains all over, fever, shivering, and vomiting. On the second day there was considerable rigidity of the neck and the headache was worse. Examination of the blood at this date showed the presence of diplococci (Fraenkel's). Strabismus, intermittent delirium, naso-labial herpes, and facial paralysis occurred on the next two or three days, and on the fifth day the child was half unconscious. On the sixth day blood was taken from the arm of the patient's sister—who had had meningitis—and 5 c.cm. of the colourless, limpid serum injected into the patient. There was no reaction at the point of injection. Five hours afterwards the temperature was lower, the respiration better, and the child had willingly taken nourishment. Ten hours afterwards he sat up in bed and could move his head without pain. Three days after the injection the child was able to get up a little morning and evening, and could walk. There was a slight return of symptoms on the seventh and ninth days, but otherwise recovery was uninterrupted, and after fifteen days there had been no return of the symptoms. Very slight strabismus and facial paralysis may still be detected. There was no albuminuria.

(373) Serum Treatment of Diphtheria.

SPRINGTHAL (*Münch. med. Woch.*, 1895, Nos. 31 and 32) has treated 208 cases with the serum. The mortality was 37.9 per cent., whereas in those not so treated it was only 25 per cent. No conclusions adverse to the serum treatment can be drawn from these figures owing to the different classes of cases. Tracheotomy was required 10 per cent. less frequently than formerly. The cases are divided up into the following groups: (1) 12 mild cases, all of which recovered; (2)

105 severe cases, with involvement of the nose or larynx, enlargement of the glands, and severe general infection; of these 17 died; (3) 88 very severe cases, with extensive gangrenous deposit of membrane in the mouth, pharynx, and larynx or trachea, and presenting septic manifestations; of these 61 died. The greatest mortality occurred as usual under 1 year. Statistical evidence was in favour of early treatment. No abscess or phlegmon was noted, the injections being made in the pectoral muscles. Usually 1,000 immunity units of Behring's serum were used, never more than 2,000. Improvement in the general condition of the patients was mostly noted after the injection, but there was no apparent effect upon the temperature. A local effect upon the membrane was also observed. In 161 cases the larynx was involved; of these 113 were tracheotomised. Thus 48 were spared tracheotomy, and by far the most of these recovered. There was a slight improvement in the mortality after tracheotomy, and death occurred at a later period than hitherto. No unfavourable action of the serum on the kidneys could be proved, but the author does not think that the serum is an indifferent agent as far as the heart is concerned, as cardiac paralysis was noted more frequently than hitherto. In 23 cases there were skin eruptions. In 5 cases there was a scarlatiniform rash. A pemphigus-like rash was observed once. Twice erythema multiforme occurred, 1 of these cases being fatal. In 3 cases articular pains were noted. One hundred and five cases were injected for the purposes of prevention; among these 14 cases of diphtheria were noted; of these only 1 was fatal, and here death could hardly be attributed to diphtheria. In 2 cases the infection was probably already present at the time of the injection. Absolute conclusions cannot be based on these results in the preventive treatment, yet an immunising effect of the serum can hardly be denied.

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(374) Trional Poisoning.

BERGER (*Münch. med. Woch.*, October 1st, 1895) describes the case of a medical man with marked locomotor ataxia, who had contracted the opium habit in seeking relief from pain. He was admitted for the purpose of overcoming the habit. The morphine was gradually withdrawn. Trional was occasionally given—mostly in 1 g. doses—for sleeplessness. Phenacetin was used for the pains. Once the patient succeeded in getting morphine from outside. One day he became somnolent without obvious reason, and the somnolence increased. The urine on the following day was normal and contained no morphine. On the next day, however, it was burgundy red in colour, but clear and transparent. Ferric chloride and calcium chloride both produced a chocolate-coloured deposit. The presence of hæmato-porphyrin could not be proved. The patient was extremely somnolent, had hallucinations, and could not speak distinctly. The breathing was stertorous and occasionally of the Cheyne-Stokes character. The extremities were cold and blue. The pulse was 90 to 100. The ataxia in the legs was more marked, and it was also present in the hands. The pupils were moderately dilated. Eight grammes of trional were found in the room. Strong coffee, camphor, and carbonic acid water were given. The next day the symptoms persisted and the anorexia was marked. The somnolence diminished two days later, the breathing improved, and the cyanosis disappeared. Recovery slowly ensued, but the urine did not present its normal appearance for at least sixteen days. Here the comparatively small dose of 4 g. in the twenty-four hours was sufficient to produce poisoning. Nervous symptoms not hitherto described in trional poisoning were present, and the after-effects lasted long. The author then refers to the various symptoms which have hitherto been recorded. There were no gastro-intestinal symptoms in this case, possibly owing to the morphine. As in sulphonal poisoning, hæmato-porphyrinuria has been noted, but such cases were fatal. The colour of the urine was due to disintegration of red blood cells, and was, perhaps, a preliminary stage of the appearance of hæmato-porphyrin. Trional is not a harmless hypnotic, as the above case indisputably shows. The author says that it should not be given in larger single doses than 1 g., and the daily dose should not exceed 2 g.

PATHOLOGY.

(375) A Pathogenic Bacillus in Broncho-pneumonia.

WRIGHT AND MALLORY (*Zeitschrift für Hygiene*, August, 1895) describe a pathogenic bacillus found in the lungs of a man who, three weeks after diphtheria, died with severe broncho-pneumonia. The necropsy showed also hepatic abscess, due apparently to old appendicitis. In addition to the Klebs-Loeffler bacillus, which was still present in the bronchi, an encapsuled bacillus was found in the secretion from the bronchi, and in the alveoli of the lungs in great numbers. It was easily cultivated on blood serum, agar-agar, gelatine, and potatoe; the pure cultivation injected into mice subcutaneously, and into the veins of the rabbit caused death from septicæmia in twenty-four hours; injected into the trachea of the rabbit it caused death from septicæmia in five days; no definite pneumonia was produced. The bacillus is two or three times as long as it is thick, has the ends rounded, and is enclosed in a definite capsule, which is seen in cultivations; it is not mobile; shows no tendency to formation of spores; and stains well by Gram's method. The organism belongs to the same group as Friedländer's pneumonia bacillus, though differing in several points from that bacillus. It is probably identical with some already described, perhaps with that described by Fasching in the nasal secretion of influenza.

(376) The Bacillus of Tetanus.

GRIXONI (*Rif. Med.*, August 21st, 22nd, 23rd, 1895), experimenting with Nicolaier's bacillus, comes to the conclusion that it is absent in the soil, and, further, that as long as it remains [illegible] it is atoxic. Its toxicity and virulence are brought about by the presence of other micro-organisms which act by depriving the media of oxygen, and so rendering the tetanus bacillus anærobic. This anærobiosis, according to the author, is indispensable to the tetanus bacillus for the production of its specific toxins, but mere deprivation of oxygen alone is not sufficient—the presence of other micro-organisms is necessary. The comparative frequency of the tetanus bacillus in the earth contrasted with the rarity of tetanus; the beneficial effect of antiseptics (which have little effect on the tetanus bacillus spores, but considerable effect on other micro-organisms) in checking tetanus are explained by the author's view of the necessity of a particular microbic association for the full development of virulence in Nicolaier's bacillus. This peculiar microbic association fortunately occurs very exceptionally, hence the rarity of tetanus. The nature of the associated microbes seems somewhat indeterminate.

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(377) Leucocytosis in Cancer of the Stomach.

HARTUNG (*Wien. med. Woch.*, October 3rd and 10th, 1895) has investigated the condition of the blood as a means of diagnosis in carcinoma ventriculi. Previous observers had shown that in cancer of the stomach as distinguished from ulcer there is a considerable leucocytosis; others had found that in healthy subjects an albuminous meal led to a marked increase of leucocytes in the blood. Schneyer discovered that this increase did not occur in patients suffering from cancer of the stomach, and pointed out that this fact would be useful in diagnosis where chemical examination of the contents of the organ was inadvisable. Hartung used for a test meal—after a fifteen to sixteen hours' fast—eggs, milk, etc., to which 1 grain of nuclein prepared from calf's spleen by Professor Horbaczewski was added. This mixture produced in healthy subjects an increase of leucocytes sometimes amounting to as much as 96 per cent. in 3½ hours. In 10 patients suffering from cancer of the stomach, no leucocytosis resulted from the meal. In all there was a persistent diminution of red corpuscles (chlorotic condition) with increase of white, particularly of the polynuclear leucocytes, the number of which was directly proportional to the cachexia. In most of the cases there was also a diminution of the eosinophile corpuscles in proportion to the cachexia. Hartung considers the blood changes in cancer to be due to the toxic action of products of the malignant growth upon the hæmatopoietic organs, especially the lymphatic apparatus. He claims that his researches afford a safe criterion in the diagnosis of obscure internal cancer.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(310) Medical Pyæmia.

Veiemann (*Arch. gén. de Méd.*, October, 1895) records two cases of general infection with the staphylococcus without definite visceral manifestation or other distinct localisation. He refers especially to cases in which the generalised infection reveals itself by severe general symptoms, profound debility, and a characteristic temperature curve. The disease appears to be rare, the following cases being the only two which the author has seen. (1) A girl, aged 23, in previously good health, began suddenly with pains in the limbs and abdomen, anorexia, vomiting, intense but not persistent headache, violent and repeated shivering, etc. On the fifth day the anorexia was complete. There was no constipation, or diarrhœa, or abdominal distension. There was no rash, and the spleen was not enlarged. No disease could be found in the other organs. About a week later the prostration was more marked. There were repeated and severe rigors and occasionally vomiting. The temperature was irregular occasionally exceeding 40° C. The condition of the patient became very threatening. About a week later improvement set in, the rigors becoming less intense and the vomiting less frequent. About seven weeks after the onset convalescence was established. Colonies of the staphylococcus aureus and albus were obtained from the blood on several occasions. (2) A man, aged 42, complained a fortnight before admission of lassitude, etc. Ten days later he had a rigor. On admission there was marked prostration, a dry brown tongue, and a temperature of 40° C. The abdomen was a little distended, and the spleen and liver slightly enlarged. The urine contained albumen. There was some cough, with frothy expectoration. A bedsore developed a week later. A general eruption of furuncles appeared, and the prostration became more intense. A week later the condition began to improve. Six weeks after the onset a large phlegmon appeared on the right side of the abdomen. The pus contained the staphylococcus albus and aureus. About three months after the onset convalescence was established. Some four months later there was an infective osteomyelitis of the left femur, which recovered. Numerous colonies of the staphylococcus were obtained from the blood on several occasions. The diagnosis could only be made in these cases by exclusion and bacteriological examination. It was impossible to find the point of entry of the infection. Both cases were due to a general staphylococcus infection, and both recovered in spite of the severity of the disease.

(309) Predisposing Causes in Facial Paralysis.

Neumann (*Neurol. Centralbl.*, October, 1895) considers that in most cases where cold is the exciting cause of so-called rheumatic facial paralysis, there is also a predisposition which in many cases is hereditary. Two cases are quoted in which facial paralysis arose from quite trivial causes in patients whose antecedents showed in the one case migraine in the mother, and neurasthenia with facial twitchings in the father, in the other facial paralysis in the father and insanity in one aunt. In such cases hereditary weakness of nerve tissue, particularly of the facial nerve, is supposed to predispose to the molecular changes which interfere with conduction. These changes, although in the severer cases presenting the appearances of parenchymatous neuritis, may show no visible change in the slighter ones. The predisposition may, however, be acquired. The facial paralysis occurring in association with certain constitutional diseases, for example, diabetes, syphilis, tuberculosis, would be thus explained, the general disease weakening the nervous tissue, and thus predisposing to the local condition on exposure to some local cause, however slight. The special liability of the facial nerve to be affected he considers due not so much to its exposed position, else the ulnar should often be affected, but to the large number of lymphatics and lymphatic glands surrounding it at its exit from the stylo-mastoid foramen. Stagnation of lymph would favour morbid changes in the neighbouring nerve, and such stagnation would be particularly likely to occur at night; hence the frequency of nocturnal onset of facial paralysis.

(308) Raynaud's Disease in Children.

Maugue (*Journ. de Méd.*, September 25th, 1895), in a recent monograph on Raynaud's disease, has collected a large number of cases occurring at different ages. He finds that whilst the most common age is from 30 to 43, still it may occur practically at any time. Thus he quotes 3 cases in the first year and 3 in the second. From this he concludes that its rarity in childhood is more apparent than real.

(311) Diphtheria in the French Army.

Bousquet (*Arch. de Méd. et de Pharm. Militaires*, October, 1895) first discusses the question of pseudo-diphtheria due to other micro-organisms than the diphtheria bacillus. In two years eight such cases with symptoms of diphtheria were observed in a regiment. The author alludes to a form in man produced by the bacillus of avian diphtheria. Thus without bacteriological examination it is impossible to say positively that the case is one of true diphtheria. In analysing the cases occurring in over two million men, he finds the incidence of the disease (morbidity) to be about 9.5 per 10,000. On an average for twelve years the mortality was nearly 1 per 10,000, but of recent years it has been increasing. The author discusses the causes of this increase, which he would not attribute solely to larger masses of men being gathered together. Mounted troops are more often attacked by diphtheria than the unmounted, and this is particularly the case in Algeria and Tunis. The mortality varies but little in the infantry. In the cavalry, etc., oscillations are noted in the mortality, but this is more marked among the engineers and those connected with hospitals, etc. The mounted troops lose more by diphtheria than the unmounted. The morbidity varies according to rank. Diphtheria is four times less frequent among the superior officers than among the inferior, and seven times more frequent among the men than among the latter. The same is true also in a general sense of the mortality. The younger the individual the greater the liability to the disease, and the mortality lies principally among young subjects. Both the morbidity and mortality are greater among those who have served less than one year. According to the distribution in army corps there is a great difference in the various regions, the maximum frequency being noted in the north and centre of France. The morbidity is slight on the coast of the Mediterranean. The mortality is more equally distributed than the morbidity. It is greater in the army corps situated in parts through which great rivers, especially the Loire and Garonne, flow. As regards garrisons the morbidity and mortality are larger in the small towns than in the great centres. Soldiers coming from the sea coasts are almost refractory to diphtheria, and marines are wonderfully free from it. The maximum morbidity is in March, the minimum in October, and the mortality follows much the same course. As regards the different regions, the troops in Algeria suffer less from diphtheria than those in France, and those in Tunis suffer most, but the mortality is least in Tunis and most in France.

SURGERY.

(312) The Surgical Treatment of Cancer of the Stomach.

Quénu (*Revue de Chirurgie*, October, 1895) advocates the following treatment in cases of gastric cancer affecting the pyloric region. He would perform an exploratory laparotomy with the object of making out with precision the seat and nature of the disease, and of determining whether or not the new growth be amenable to a radical operation. If the pyloric cancer could not be directly attacked and removed by operation he would perform gastro-enterostomy. If, on the other hand, there were good prospects of removing the whole of the diseased structures he would also establish an anastomosis between the stomach and jejunum, and, after an interval of from ten to fifteen days, perform pylorectomy. The removal of cancer of the pylorus in two stages presents, it is maintained, important advantages. In the first place, by a

preliminary gastro-enterostomy the duration of the subsequent operation of pylorectomy is much shortened, and, in the second place, when the patient has been much enfeebled through inanition, the first operation permits of speedy renewal of vigour by nourishment, and consequently favours more resistance against the immediate results of the serious operation of gastrectomy. The author has used Murphy's button, and recommends it to his colleagues. In one of his cases of gastric cancer, although he had had no previous experience of this appliance, he performed gastro-enterostomy in less than twenty minutes, much of the time having been taken up in exploration of the tumour and its connections. The objections that have been made to its use he regards as theoretical rather than real and practical. The button, he has no doubt, can be expelled from the intestinal canal by the normal way, and in his own practice he has had no reason to suspect any subsequent contraction of the gastro-jejunal fistula.

(383) Spontaneous Straightening of Rickety Curvatures of the Leg.

KAMPE (*Bruns' Beitr. z. klin. Chir.* xvi. 1), using the material of the Tübingen Clinic, concludes that (1) the greater number of all cases undergo spontaneous cure. Of the author's, all severe, 75 per cent. were cured, 15·3 per cent. improved, and only 9·7 per cent. remained *in statu quo*. (2) The process of spontaneous straightening lasts usually two to four years. If the curvatures begin in the first or second year of life the legs are quite straight by the fourth or fifth. (3) If the curvatures are unchanged by the sixth year spontaneous cure does not take place at all. There are always cases of most severe general rachitis. (4) The chief aim in treatment is to improve the general health so as to strengthen the muscles. In Kampe's experience as soon as the disease is past the acute stage, being about on the legs is not detrimental, but, on the contrary, helps the cure. Orthopædic treatment by plaster-of-paris, splints, etc., is not necessary. Osteotomy is indicated only when the curvatures persist after the sixth year.

(384) The Treatment of Tuberculous Prostatitis by Perineal Incision and Curettinx.

GAUDIER (*Annal. des Maladies des Organ. Gén.-Urin.*, No. 2, 1895) reviews the history of this operation, which became possible after the introduction by Dittel in 1874 of the method of separating the anterior wall of the rectum by the curved perineal incision, and thus exposing the gland. This proceeding, at first undertaken only for opening prostatic abscesses, was later used for treating tuberculous disease, and many successful cases have been reported. Gaudier operated this way in the beginning of 1894, when the diagnosis had been made by the demonstration of tubercle bacilli in the sero-purulent secretion, expressed from the large and painful gland. The patient was 22 years of age; his urine off and on contained traces of blood, and defæcation was painful. At the operation the prostate gland was found changed into a lumpy, cheesy mass. This was entirely scraped out, and the cavity, owing to a violent hæmorrhage, packed with iodoform gauze. The whole wound was healed in fifteen days, without any trace of fistula. Since then the patient has had no morbid symptoms.

(385) The Effects upon the Testis of Ligature of the Spermatic Artery and Veins.

GRIFFITHS (*Journ. of Anat. and Phys.*, October, 1895) gives the results of investigations undertaken with the view of determining the structural changes that supervene in the testes after ligature of the spermatic blood vessels in the dog, in which animal the vascular arrangement of this organ is the same as that in man. Ligation of the spermatic artery in a full-grown dog, the author has found, leads within a few days to great diminution in the bulk of the testis, caused by rapid destruction from degenerative changes in the seminal tubules, but after a time the remaining tubules may recover to such an extent as to be again capable of producing spermatozoa. Ligation of all the spermatic veins leads to great swelling from engorgement of the veins and extravasation of blood into the intertubular connective tissue, and to necrosis of the epithelial cells in the seminal tubules. This condition would ultimately cause almost complete disappearance of the seminal tubules and atrophy of the gland. Ligation of the spermatic artery and veins in puppies leads to great swelling of the testes, followed by gradual diminution and atrophy of the seminal tubules, and to atrophy of the organ altogether. Ligation of the spermatic artery and veins in full-grown dogs may lead, according to conditions not yet known, to (1) sloughing of the testes, (2) complete atrophy, and (3) temporary fatty degeneration of spermatogenetic cells in the animal, which may be followed by complete recovery.

(386) Hereditary Syphilis.

KRISOWSKI, of Max Joseph's Clinic (*Berl. klin. Woch.*, October 14th, 1895), draws attention to a manifestation of congenital syphilis which has mostly received but slight attention. He relates the following case in a lad, aged 17, who presented himself with a painless ulcer on the face with sharp, hard and infiltrated edges, and about the size of a mark piece. There were some twenty linear, radially arranged scars about the mouth. The upper incisors and corresponding part of the jaw were absent. There were three large scars on the hard palate. The uvula, tonsils, and pharyngo-palatine arch were entirely absent, and the hard palate was united to the posterior pharyngeal wall by cicatricial tissue. The epiglottis was swollen, and the cartilages of Wrisberg and Santorini seemed to be absent. There was a perforation in the septum of the nose. The ulcer healed under appropriate treatment. The diagnosis of the nature of the ulcer was obvious. The union of the hard palate with the posterior pharyngeal wall hardly ever occurs except in hereditary syphilis. The malignancy of late hereditary syphilis is well recognised. The linear cicatrices about the mouth result from ulcerative syphilitic processes, and remain throughout life. Such lesions about the mouth heal with difficulty, owing to the frequent movement. No other process can give rise to such scars. The seat of the lesion is here in the cutis, whereas in eczema the epidermis is affected, and hence no scars are left. These linear and radiating scars about the mouth are not only characteristic of congenital syphilis, but also of its early appearance. They may be useful in distinguishing early from late congenital syphilis. Hereditary syphilis may also be thus distinguished from the acquired form. These scars are not so very rare.

MIDWIFERY AND DISEASES OF WOMEN.

(387) Treatment of Abortion.

JACUB (*Monatsschr. f. Gebürtsh. u. Gynäk.*, September, 1895) maintains that in threatening abortion the right treatment is rest and opium, with extract of viburnum prunifolium. If free flooding sets in, the os remaining closed, the vagina should be plugged with iodoform gauze or aseptic wool. When the os is dilated so as to allow of the passage of a finger, the ovum should be detached and extracted, and the uterus and vagina syringed out once and for good with any suitable disinfectant in solution. When the dilatation of the os is imperfect, so that the finger cannot be introduced without force, whilst flooding grows severe, it is right to press the finger forcibly through with great care till the cervix is dilated. Then extraction must be practised. In many cases the expulsion of the ovum may be left to Nature. Ergot should be given for a week after abortion, spontaneous or induced. Jacub deprecates the routine employment of the curette and of vaginal irrigation.

(388) Abdominal Section by Cow's Horn.

SKILLING (*Amer. Jour. Obstet.*, July, 1895) records a case in which this accidental operation was performed without a fatal result in a non-pregnant woman. The injury is of interest in relation to well-known instances of successful Cæsarean section carried out in the same manner. Skilling was called in shortly after the accident. The patient lay in bed, her clothing saturated with blood. Her countenance was anxious and pale, but there was only slight evidence of impending shock. The cow's horn had entered the abdomen just above the symphysis, a little to the right of the median line, and ran obliquely to the right, making a rent six inches long. The peritoneum was involved; the intestines protruded; loss of blood was relatively trifling. The intestines were replaced, the peritoneum

closed by a continuous suture of fine silk, and the remaining layers of the parietes by interrupted silk sutures. The wound healed almost throughout by first intention except at the lower angle, where slight suppuration took place, probably from unavoidable contamination with dirt during or after the accident. Recovery was rapid and complete.

(389) Disappearance of Tuberculosis of the Peritoneum after Oophorectomy.

WAHLSTROM (*Nouvelles Archives d'Obstét. et de Gynéc.*, September 25th, 1895), publishes another interesting example of this singular clinical phenomenon. On January 29th, 1892, the appendages of a woman, aged 27, were removed. It was then discovered that there was extensive tuberculous peritonitis, especially towards the pelvis. The patient regained her health after the operation. But empyema set in, and she was tapped on October 7th, 1893. She died on November 23rd. The pelvic viscera were found free and covered with a smooth shiny serous coat. Higher in the abdomen there were adhesions. The empyema communicated through the diaphragm with a fistulous opening in the abdominal cicatrix.

(390) Heredity of Twin Bearing.

VON SPEYER (*Mittheilungen aus klinike und med. Instituten der Schweiz.* 1st Series, Part 11, 1895) detected hereditary tendency in eight out of a series of twin bearers under his observation during the past ten years. In one patient it was found that four generations in her family had borne twins. In several the twins showed feeble vitality, and died almost simultaneously soon after birth. Twin bearing does not seem particularly related to the prime of the generative period, nor to its earlier or later stages. In some families already blessed with twins, triplets and quadruplets were borne. These rarer forms of multiple pregnancy are undoubtedly hereditary.

(391) Missed Labour.

STAHL (*Der Frauenarzt*, October, 1895) relates a case in which he feels sure that labour was missed, and where he afterwards induced a kind of secondary "premature labour," as he terms it—or, in more usual terms, he delivered a fœtus which the uterus refused to expel. The patient was intelligent. Her pelvis was contracted by prominence of the sacrum. Three labours had been normal, and only lasted some two hours each; a fourth had been more lingering, and a very big child was delivered at term. Labour pains, very distinct, set in at term in the fifth pregnancy. For three hours the uterine contractions were strong and regular; then the intervals grew longer and the pains weaker till they ceased. When 302 days had elapsed after the last period, Stahl found the patient inconvenienced by the great size of the abdomen, so he turned and delivered a very well-developed fœtus, which was alive at the beginning of the delivery. The prominent sacrum gave great trouble; the perineum was badly torn owing to the great size of the fœtal head; ossification of the cranial bones had advanced very far, and made the parts incompressible. The fœtus weighed 12 lbs. 8 oz., the placenta and membranes 2 lbs. The measurements of its head were: circumference, 16 in.; occipito-frontal diameter, 5.8 in.; biparietal, 5.2 in.; bi-temporal, 4.6 in. The perineum and the rent—nearly an inch long—in the rectum were sewn up at once, and the mother made a good recovery. No uterine disease nor rectal trouble ensued.

(392) Normal Range of Germs in the Genital Canal.

SDROGANOFF (*Centralbl. f. Gynäk.*, September 21st, 1895) has conducted a series of bacteriological experiments in the Clinical Institute, Helena Pavlovna Hospital, St. Peterabug. Specimens of mucus from the higher and lower parts of the vagina and uterus were removed, with every precaution, in test tubes, and carefully examined. He finds that not only is the canal of the cervix sterile as a rule in pregnant and non-pregnant subjects, but its mucus is actually fatal to bacteria. The os externum marks the limit between the germ inhabited and germ-free districts of the genital canal.

THERAPEUTICS.

(393) Diuretic Action of the Lithium Salts.

MENDELSOHN (*Deut. med. Wock.*, October 10th, 1895) observes that if a remedy is to act efficiently it must be administered in a form in which it can be absorbed. Lithium carbonate is in this respect almost an insoluble body. If it is used it should be given in carbonic acid water whereby it is converted into a soluble bicarbonate. When administered alone it is changed by the action of the hydrochloric acid in the stomach into a chloride which can only be absorbed to a limited extent: thus it is not the action of the carbonate but of the chloride which has to be reckoned with. Of all the lithium salts the chloride is least able to combine with uric acid, and to produce a soluble salt which may lead to the elimination of the uric acid. Thus the preference given to this lithium salt is not well-founded. It is admitted that the treatment which aims at bringing about a solution with elimination of the uric acid deposited in the tissues is not altogether satisfactory. It would appear that the increased diuresis has much to do with the benefit obtained in these cases. By a series of experiments on animals the author has established the diuretic action of the lithium salts. An acetate of lithium was mostly used in these experiments. Both when administered subcutaneously or by the mouth an increased diuresis was registered. In a few minutes after the administration of the lithium salts their presence in the urine could be demonstrated. Of all the lithium the citrate has the most diuretic action. Investigations carried out upon healthy individuals as well as on those suffering from various manifestations of the uric acid diathesis showed that diuresis was also produced in man by the lithium salts. The citrate and acetate of lithium were the salts mostly used.

(394) Treatment of Epilepsy.

LUI (*Rev. sper. di Freniatr*, vol. xxi., f. 2 3) has been trying the treatment of epilepsy advocated by Flechsig and Bechterew. Three cases were treated by Flechsig's method, which consists in a preliminary course of opium in gradually increasing doses up to 1.15 grain of the extract daily, followed by bromides, 7.5 to 8 grains daily. During the opium course two of the patients had a slight lessening in the fits, whilst in the third they became much more frequent and intense, so that instead of having two or three a week he had five or six. Severe opium intolerance set in in one case, so that the drug had to be discontinued for a week. With the commencement of the bromide the fits ceased at once, and in one case have not reappeared after four months; in the two other cases the fits reappeared after two months, but much reduced both in frequency and in severity. Bechterew's method—the simultaneous administration of bromide and adonis vernalis and codeine—was tried in ten cases and with diminution of the fits both in intensity and duration in each case. With this method there are none of the inconveniences that are liable to arise from opium intolerance, and on the whole the author is inclined to prefer Bechterew's method. He has little faith in the borax treatment of epilepsy. Guicciardi, in the same review, gives an account of more cases of epilepsy treated after Bechterew's plan. The author concludes that the good effects which follow are due to the bromide and not to the adonis or codeine. It appears to be better borne than simple bromide and does not produce any ill effects moreover from the toxic effects on the vascular system due to the adonis. Bechterew's treatment may have an advantage over the ordinary treatment in cases in which there is cardiac debility.

(395) The Treatment of Chlorosis.

HAYEM'S treatment (*Journ. des Prat.*, No. 17, 1895) consists of (1) rest in bed, which must be absolute in severe cases. This prevents the destruction of the red corpuscles, benefits the neurasthenia, does away with the nervous excitability, regulates the gastric functions, and removes the stays, which are a frequent cause of dyspepsia. (2) Diet, which is of equal importance in view of the frequent gastric troubles (generally parenchymatous gastritis). These must be relieved before prescribing iron. The diet must consist of milk and raw meat at first, later lightly boiled eggs, non-fatty fish, green vegetables as a purée, and stewed fruit. Bread is to be al-

lowed only after four or five weeks. (3) Iron, which must be given only when the gastric functions are restored, and the author thus disagrees with v. Ziemssen on this point. The author prefers the proto-oxide, which he prescribes before meals, with dilute hydrochloric acid half an hour after.

(396) Treatment of Pediculosis Vestimentorum.

ALLAN JAMIESON (*Brit. Jour. Derm.*, August) says that in pediculosis corporis no remedy acts so promptly and efficaciously as petroleum, but there is an awkwardness in applying it to the general surface of the body. Incorporated in a soap such as Calvert's "petrofenic" soap, which contains carbolic acid as well as paraffin oil, it can be employed to wash the skin, the lather being allowed to dry on. In this way the eggs, which are sometimes attached to the downy hairs are killed. The insects themselves live in the body clothes, and deposit most of their ova there. Treatment must, therefore, be perseveringly directed against them. This can be accomplished by taking advantage of the property of sulphur of slowly subliming and becoming oxidised into sulphurous acid at the temperature of the body. A piece of roll sulphur, the size of a pigeon's or bantam's egg, is enclosed in a porous bag made of muslin or canvas, and worn next the skin day and night. The sulphurous fumes imperceptibly impregnate the clothes, and render them unsuitable for the existence of the parasites. Patients can thus be freed from a source of annoyance, or the accuracy of a suspicion can be tested without their being taken into the practitioner's confidence as to the cause of their trouble. The plan suggested has proved of service to the author in several instances.

(397) Treatment of Syphilitic Alopecia.

To expedite the cure of syphilitic alopecia, Brocq (*Journ. de Méd et de Chir. Prat.*, September 10th, 1895) recommends the rubbing in every two days of the following: ℞ Bichloride of mercury, 0.50 centigrammes; eau de cologne, 250 grammes. The following ointment should also be applied twice a week: ℞ Yellow oxide of mercury, 1 gramme; pure vaseline, 25 grammes.

(398) Jaundice after Lactophenin.

STRAUSS (*Therapeut. Monatsh.*, September, 1895) deals further with the effects of lactophenin. Cases have been reported in which troublesome sweating and also irregularity of the heart followed its use; in two cases rashes have been seen apparently due to lactophenin. He now reports three cases of catarrhal jaundice which seemed to be due to the same cause. In each case the drug was being administered for neuralgia, and a dose of 1 g. was being taken four times per diem; the length of time before the jaundice appeared varying from fourteen to twenty-one days from the commencement of the treatment. The jaundice appeared to be of the ordinary catarrhal type, the stools being white and the urine bilious. Experiments on dogs showed intense congestion of the stomach and duodenum after administration of lactophenin, but no jaundice; similar congestion was observed by Lewin after the use of phenacetin, which has also been followed by bilious urine; it is suggested that these facts may point to catarrh of the duodenum as being the cause of the jaundice after lactophenin.

PATHOLOGY.

(399) The Action of Toluylenediamin and the Pathology of Jaundice.

HUNTER (*Journ. of Path. and Bacteriol.*, August, 1895) records the results of a number of experiments with respect to the action of toluylenediamin and the pathology of so-called non-obstructive jaundice. Previous researches by Stadelmann and others have shown that the jaundice produced by poisoning with toluylenediamin and phosphorus, and probably many forms of jaundice hitherto regarded as non-obstructive, are really obstructive in nature. According to Stadelmann, an increased destruction of blood occurs; this gives rise to an increased formation of bile pigment, and an alteration in the character and an increased concentration of the bile to which the obstruction is due. Hunter records a number of experiments on animals which show that toluylenediamin, injected subcutaneously, produces extensive catarrh of the bile ducts and duodenum, and that the bile is one of the channels through which toluylenediamin is excreted, though only in small quantities. The author believes that an irritative derivative of the poison is also excreted in the bile and induces catarrh in the bile passages and duodenum. The involvement of the duodenum is a mere adjunct to the catarrh of the bile ducts and occurs only in severe cases. Hunter concludes that the increase of catarrhal viscid mucus causes concentration of the bile, the flow of which finally becomes arrested for a time, and that the obstruction is produced primarily by catarrh of the bile ducts at their origin. In order to study the relation between jaundice and hæmoglobinæmia, the author produced the latter condition experimentally; but he found that mere excess of hæmoglobin in the blood, or increase of the bile pigments, apart from the operation of other causes, was not sufficient to give rise to jaundice. The author also records a number of observations on the mode of action of toluylenediamin and other agents which destroy the blood corpuscles. But he found that the blood changes produced were not so distinctive, either as regards their character or degree, as to explain the remarkably different action of these drugs in producing jaundice. The experiments show that neither hæmoglobinæmia, nor mere increase of the bile pigment, nor changes in the character of the hæmoglobin, can account for the increased viscidity of the bile which occasions the jaundice in poisoning by toluylenediamin. Hunter concludes that the increased viscidity of the bile, which is the cause of the obstruction and therefore of the jaundice, is produced by catarrh of the bile ducts due to the excretion of the poison or its products.

(400) Morphology of Blastomycetes.

MAFFUCCI AND SIRLEO (*Il Policlin.*, June 1st, 1895) give an account of their experiments with a form of blastomycetes. The morphology of the parasite varies considerably, according to the time of culture and the nature of the nutritive medium, but the maximum changes were noted in the passage from cultures to animals. The particular form studied by the authors had a nucleus, and multiplied by a modified form of karyokinesis. The best temperature for cultivation was 20° C. to 37° C.; above 40° C. it could not be grown. Potato and preserved fruit were the most suitable media, and on these the parasite developed in chocolate-coloured colonies. In the moist state it resisted a temperature of 40° C. to 50° C. for one hour, and 60° C. for five minutes, after which it died. It also resisted desiccation for twelve days. Light weakened its vitality. Left to ferment with moisture it gave rise to CO_2 and alcohol. It could be developed anaërobically. Injected into animals (rabbit, guinea-pig, chicken, dog) it gave rise to non-inflammatory new formations resembling epithelial or endothelial growths. The authors never succeeded in obtaining pure cultures from malignant epithelial growths in man. They therefore withhold their opinion as to the exact relation between the blastomycetes and cancer.

(401) Vaccine Immunity.

BEUMER AND PEIPER (*Berl. klin. Woch.*, August 26th, 1895) observe that the active agent in vaccine still remains undiscovered, and yet its microparasitic character is hardly contested. A protective action is induced by the inoculation. The duration of this protection varies according to different observers from six to seven up to ten years. Analogy with other diseases would suggest that protective bodies are developed in the protected individuals. The authors then refer to the recorded researches into this subject, where an attempt has been made to immunise animals by using the serum obtained from already vaccinated animals. The results have, however, been discordant. The authors have themselves made a series of experiments, chiefly on calves, in which they have used the blood serum or defibrinated blood of vaccinated calves, but with negative results. They conclude that in the blood of vaccinated calves no protective bodies are to be found which can confer immunity upon other calves, or that these bodies exist in such small quantities that any practical application appears to be excluded.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(402) Lumbar Puncture.

QUINCKE (*Berl. klin. Woch.*, October 14th, 1895) mentions the fact that the cerebro-spinal fluid can distend the dural sac down to the sacral canal, and that some fluid may be drawn off even in the normal state by an exploring needle. No injury is done to the nerve roots by introducing the needle. In pathological states the condition of the fluid or the amount of the pressure is altered. This pressure should always be measured at the same as the puncture is made. This may be done by attaching india-rubber and glass tubing to the cannula, and noting the height to which the fluid rises about the level of the puncture when the glass tube is held in a vertical position. The normal cerebro-spinal fluid has a specific gravity of 1·007, and contains 0·2 to 0·5 pr. m. albumen and a little sugar. The author has used spinal puncture in 53 cases of various kinds, mostly when the pressure has been increased, as in cerebral tumour, hydrocephalus, and various forms of meningitis. The fluid is then mostly clear, more rarely turbid with leucocytes, etc., or discoloured with blood. The amount of albumen present is increased in acute inflammation up to 1 to 3 pr. m.; in chronic inflammatory conditions it exceeds the normal very slightly or not at all; and in cerebral tumour it may amount to 7 pr. m. Sugar is often absent in inflammation. In cerebral haemorrhage rupturing into the ventricles, the fluid may contain blood. Cocci of various kinds may sometimes be found in the turbid fluid, or tubercle bacilli in the deposit or coagulum. Increased pressure is present in meningitis, but especially in tumour. Thus it would appear that moderately increased pressure with severe pressure symptoms points to an acute affection, whereas greatly increased pressure with slight pressure symptoms to a chronic one. The amount of fluid withdrawn in his cases varied from 3 to 60 c.cm., and gave an average of 20 c.cm. The diagnostic value of the puncture is very obvious from these facts. The local pain is slight, and anæsthesia is extremely rarely necessary. In a few cases pain or a spastic stretching in one leg was noticed, but this passed off at once, or at most in twenty-four hours. The effect upon a distended fontanelle was obvious. In some cases a remission of some of the symptoms was noted after or during the puncture. In chronic lesions this was much less marked than in the acute. Therapeutic results were noted in serous or sero purulent meningitis, and these will become more frequent when spinal puncture is adopted earlier, and more frequently in the various acute forms of meningitis. The author describes the apparatus which he uses in spinal puncture. The *technique* is very simple. The needle is introduced in the middle line in children, and 5 to 10 mm. to the right in adults, the patient lying on the left side with the legs drawn up. If the needle impinges on bone it is slightly withdrawn and the direction altered. The author has never used aspiration like Fürbringer. In cases where the pressure rises more or less quickly after puncture the author has attempted to secure permanent drainage by incising the dura mater with a special scalpel. Here a few drops of fluid may escape at once, but more often the fluid drains away into the tissues, causing more or less œdema. He has never seen bad results follow this procedure.

(403) Stokes-Adams's Disease.

HUCHARD (*Arch. gén. de Méd.*, September, 1895) draws attention to certain incomplete forms of this disease, which consists in a permanent infrequency of the pulse with syncopal or epileptiform attacks. In some cases the bradycardia is not permanent but paroxysmal in character, occurring only at the time of the attack. Thus two conditions may exist, namely, a paroxysmal bradycardia only, or a bradycardia paroxysmal at first but later in the disease becoming permanent. It is open to doubt, however, whether the latter does not always occur. The author gives four illustrative cases in detail. He also refers to other incomplete forms of the disease. In one case the pulse was permanently at 20, and the attacks consisted of slight insomnia, a little precordial anxiety, or a further infrequency of the pulse, which became irregular. Such cases of the incomplete disease are also of serious prognostic import. The author lays stress on the attacks revealing themselves only by pallor of the face and surface of the body; such attacks are frequently associated with infrequency or absence of the radial pulse. In all these cases there are other morbid manifestations, such as angina pectoris, symptoms of renal disease, etc. These do not strictly belong to the syndroma of Stokes-Adams's disease, but their frequency shows that this disease is not to be detached from the important chapter of arterio-sclerosis. There are four indications in treatment, namely, in respect to the arteries, heart, brain, and associated symptoms: (1) The iodides and vaso-dilator agents, such as trinitrine, nitrite of amyl, should be used. (2) Digitalis should be employed with the greatest caution. The author prefers sulphate of sparteine, caffeine. (3) The ischæmia in the medulla oblongata must be counteracted. All remedies with a vaso-constrictor action, such as bromides, belladonna, ergot, etc., must be avoided. Trinitrine should be administered permanently along with the iodides and caffeine. In bad cases nitrite of amyl should be inhaled night and morning. Posture may be of value. The horizontal position may ward off the attacks. In bad cases with prolonged syncope total inversion of the body with the head downwards may be practised. Death in Stokes-Adams's disease may be warded off by repose, avoiding overexertion, etc. (4) In the symptoms arising from the kidneys, etc., milk diet may be useful. The author concludes that (1) different maladies have been described under permanent infrequency of the pulse with syncopal, epileptiform, or apoplectiform attacks. (2) Stokes-Adams's disease is a cardio-bulbar arterio-sclerosis, and is very different from the infrequent pulse of nervous origin, as seen in compression of the upper part of the cord, cerebral or medullary haemorrhage, compression of the pneumogastric nerve by tumours. (3) In Stokes-Adams's disease there are associated symptoms, renal or other, quite absent in the other similar affections. (4) The treatment is quite different. (5) There are incomplete forms often ending in sudden death. (6) There are associated forms; and (7) the disease is due to intermittent ischæmia of the mitral orifice and heart, to which the treatment must be directed.

(404) The Red Blood Corpuscle in Legal Medicine.

M. C. WHITE (*Medico-Legal Journal*, vol. xii, No. 4), in a very careful paper on the measurements of red blood corpuscles in man and in the lower animals both in the fresh state and when recovered from a clot, concludes (1) that in favourable cases blood stains can be so treated that reliable measurements and credible diagnosis of their origin can be given. (2) That if error occurs on account of imperfect restoration of the form and diameter of the corpuscles obtained from a stain proved by the guaiacum test, the spectroscope, and the production of hæmin crystals to be blood, the error, if any, will be to make human blood appear like that of one of the inferior animals, and never to mistake the blood of the ox, pig, horse, sheep, or goat for human blood. (3) That in general when a stain has been proved to be blood by the above tests, it may be decided certainly whether it is or is not mammalian blood. So also a stain from the blood of the ox, pig, horse, sheep, and goat may be distinguished from human blood, thus confirming the claim of an accused person in many cases that his clothes are not stained with human blood. Lastly, the expert can say when the average of a suitable number of corpuscles from a blood stain corresponds with the average of fresh human corpuscles, that the stain is certainly not from the blood of the ox, pig, sheep, or goat; and in other cases he can say with great certainty that a given stain is not human blood.

SURGERY.

(405) The Treatment of Wandering Spleen by splenopexy.

KOUWER (*Wien. klin. Wochenschrift*, October 24th, 1895), after referring to hydrocele of the round ligament, quotes two cases of his own in which this operation was performed about four years ago.

The first was a widow, aged 42, who had been compelled by her illness to give up her occupation, that of a washerwoman. Her chief symptoms were abdominal pain and vomiting. A tumour was felt on the left side which, owing to splenic dulness being obtained in the right place, was supposed to be a floating kidney. A lumbar incision having been made for the performance of nephrorrhaphy, the kidney was found in place, and the tumour having been pushed into the wound was discovered to be a slightly enlarged spleen. It was fixed in the incision with some little difficulty, the Paquelin cautery being required for the hæmorrhage. The wound was plugged and allowed to granulate up. There were no complications; the patient was kept in bed seven weeks from the operation. Complete recovery and disappearance of the symptoms resulted, and the woman was well at the time of writing, in spite of the unanatomical position of the spleen. The other case was that of a married woman of 38, who was admitted soon after an abortion. There was complete prolapse of the uterus and vagina, and a well-marked cystocele. Behind the uterus was a firm but movable tumour, half as large again as a man's fist, which kept up the displacement. After the Thure-Brandt treatment had been tried in vain splenopexy was performed. Unfortunately, owing to the tympanites and vomiting, the plug had to be removed on the sixth day for fear of the intestine being caught in. The result was that the spleen came down again after a few months; this result was not unexpected owing to the great laxity of the peritoneal adhesions. The prolapse was operated on successfully, but reappeared after another pregnancy; it was not then too great, however, to be kept up by a pessary. The spleen remained deep in the iliac fossa, and could easily be reached *per vaginam*. Kouwer considers his operation simpler and much less dangerous than that of Rydygier.

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(106) Pathogenesis of Myopia.

Bitzos (*Annales d'Oculistique*, October, 1895) has been investigating this subject. He finds that a sclerotic crescent or ring exists, not only in myopia but in almost all cases of ametropia, and may be bordered by a crescent or ring of pigment, but in hypermetropia it never entails any choroidal atrophy; astigmatism does not appear to influence the direction of the crescent but accelerates its evolution. There must be 5 dioptres or more of myopia before pigmentary changes occur in the macular region. In myopia the globe not only lengthens antero-posteriorly, but increases in size in all diameters. The choroid is not so elastic as the sclerotic, and hence cannot stretch so much, but becomes detached from the optic patella and thus exposes a crescentic portion of the sclerotic. The choroid has only a slight attachment to the papilla by fibres which traverse it in the lamina cribrosa; therefore, when the choroid ceases to stretch, it is this attachment which first gives. If the myopia progresses, the separated choroidal border undergoes atrophy and macular changes occur. The crescent is usually external, because, the disc being taken as the *point d'appui*, there is a greater surface of choroid external to the disc exposed to the intraocular pressure. In somewhat rare cases the crescent may be above, below, or to the inner side of the disc—explainable on the supposition that the disc and the posterior pole of the eye are not in their usual relative position. He explains the increased intraocular pressure, before which the sclerotic and choroid stretch, as resulting from excessive near work, it being well known that the tension of the eye increases during accommodation. He thinks the sclerotic at the posterior pole of the eye participates in the inflammatory atrophy of the overlying choroid, and thus accounts for the posterior staphyloma. If this increases in size, the external sheath of the optic nerve becomes detached. Myopia is ordinarily arrested at 25 years of age, by which time the development of the organism has taken place. General ill-health and debility, by weakening the firmness of the sclerotic, predispose to myopia.

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(107) Fatal Fat Embolism after Forcible Straightening of both Knee-joints.

Ahrens (*Bruns' Beitr. z. klin. Chir.*, xiv., 1), reports this case. A woman, aged 53, had ankylosis of both knee-joints in a right angle position. This was to a great extent corrected by continuous extension. Afterwards, under ether, they were completely straightened, very little force being used. Two days later the patient became drowsy, and died the next day. *Post mortem* an extensive fat-embolism of the lungs was found. On the ends of the bones forming the joints, which were in a state of advanced osteoporosis, there were recent crushes and depressions. Two analogous cases have been reported from Halle and Marburg. It follows that this proceeding is not so devoid of danger as is usually supposed. It is suitable only for recent cases where but little force is necessary (these usually yield to extension), and is altogether contra-indicated in chronic cases where one must suspect fatty degeneration of the bones or muscles.

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(108) The Surgical Treatment of Laryngeal Tuberculosis.

Réttei (*Wien. klin. Woch.*, Oct 17th, 1895) holds that on this question statistics do not always form a reliable guide. He relates two cases indicating opposite sources of error. The first was that of a woman, aged 27, with extensive tuberculous disease of both lungs, tuberculous infiltration of the interarytenoid mucous membrane, ulcers on the posterior ends of the vocal cords, and almost complete aphonia. Réttei declined to operate, and symptomatic treatment only was adopted. The laryngeal condition cleared up to a large extent, and the patient recovered her voice almost completely. The improvement persisted for some months; then a fresh laryngeal attack came on with œdema of the lungs, proving fatal in ten days. Had this case been operated upon, the temporary cure would no doubt have been put down to the treatment. The other case was that of a man, aged 34, with tuberculous infiltration at both apices. He had considerable infiltration of the interarytenoid mucous membrane, slight thickening of the right vocal cord, and affection of the epithelium of the right processus vocalis and the adjoining part of the right arytenoid cartilage. Curettage was practised for some days; a spreading ulcer resulted with no tendency to heal. Dysphagia came on with violent paroxysms of coughing, the lung troubles made rapid progress, and the patient died in six weeks from the commencement of the treatment. Here it is, of course, difficult to say what would have been the event if the patient had not been curetted, but Réttei believes that the fatal issue was hastened by the treatment. He considers that operative interference should only be undertaken when the lung process is either not advanced or has been stationary for months, and when the laryngeal affection is more or less localised; there must either be a prospect of benefiting the patient's condition, or danger in delay from threatening dyspnœa or dysphagia. Operation is contraindicated: in advanced or rapidly-advancing lung disease; if there is no imminent danger from the laryngeal condition; if there is high fever, or if the laryngeal disease has so far advanced as to have involved the deep as well as the superficial structures. The first case shows that amelioration may occur in the larynx even when the lung affection is very severe; the second that surgical interference may at times hasten the morbid process, not only in the larynx but in the lungs as well. The value of statistics is much discounted unless these indications are adhered to; thus some operators record successful results in two-thirds of their laryngeal operations, but include many cases in which curettage was unnecessary. Through such statistics it is easy to be led into operating on unsuitable cases to the danger alike of the patients and the method.

MIDWIFERY AND DISEASES OF WOMEN.

(109) Influenza and the Female Generative Organs.

Müller (*Münch. med. Woch.*, October 8th, 1895) analyses from this point of view, 157 cases occurring in women. He first discusses the effects of influenza upon pregnancy illustrated by 21 cases. Of these 21, 2 were near the end of pregnancy, 1 in the eighth month, 1 in the sixth, and the remaining 17 in the first to fifth month. Of the 17, abortion occurred in 15. Of the remaining 4, the pregnancy was uninterrupted in 1, miscarriage was undoubtedly due to the influenza in another, but in the other 2

it was impossible to state positively the relation of the influenza to the delivery. In 1 of these cases the patient was seized with fever the day before delivery, and later the pains came on. The infant appeared premature, and its birth was not expected for a fortnight. In the other case birth occurred a week before the expected time, but the fœtus appeared fully developed. In the case in which pregnancy was uninterrupted, abortion had occurred during an attack of the disease in a previous epidemic. In the other 15 cases, the author thinks that the abortion was due to the influenza. Thirteen of these patients he saw then for the first time, but the remaining 2 had previously been under his treatment (one for retroflexion and the other for cystitis). Both these last patients had endometritis, but they were looked upon as cured. There was no evidence of disease of the appendages in these 15 cases. It was very striking that at the same time as the onset of the influenza, or shortly after it, the pains or hæmorrhage appeared. Protracted blood-stained lochia were often observed, without there being any evidence of anything being left behind in the uterus. Among the 138 non-pregnant women, all with the exception of 3 had either menorrhagia or metrorrhagia, or an already existing local disease was made worse. The author says that, as in cholera, typhoid fever, measles, scarlet fever, etc., a hæmorrhagic endometritis may occur in influenza, causing bleeding or the interruption of pregnancy.

(410) Radical Hysterectomy for Cancer.

CLARK (*Bulletin of the Johns Hopkins Hospital*, July to August, 1895) believes that this operation has proved unsatisfactory because the broad ligaments are cut too close to the uterus, and the vaginal tissue adjacent to the cervix is not freely removed. The risk of injury to the ureters has been neutralised by Kelly's practice. He introduces bougies into the ureters in all operations where those ducts may be involved. The urethra is first anæsthetised with cocaine, and a ureteral bougie is passed with the aid of a urethral speculum (about No. 8). Clark insists on another precaution. The ureter being made secure during the operation by the presence of a bougie in its canal, the layers of the broad ligament are opened up, and, the uterine artery being found, it is dissected out up to its origin and tied. The course of the operation is as follows: (1) catheters are passed into ureters; (2) abdominal incision; (3) upper part of broad ligament is tied off so as to secure the ovarian artery; the vesico-uterine peritoneum is divided horizontally, and the bladder pushed down. Then the layers of the broad ligament are spread apart so as to expose the uterine arteries; (4) the uterine artery is dissected out and tied; (5) the ureter is dissected free in the base of the broad ligament; (6) the remainder of the broad ligament is tied close to the iliac vessels and cut away from its pelvic attachment; (7) the dissection is carried well down below the cancerous area, even though the cervix alone seems to be involved; (8) the same manœuvres, 3 to 7, must be carried out on the opposite side; (9) the vagina is perforated with sharp-pointed scissors; firm traction is made on the uterus with a small volsella so as to pull up the vagina and make tense its walls; then the tissues are tied in small segments, about a third of an inch, each segment being cut as it is tied. (10) Iodoform gauze is inserted from above into the raw space left by the hysterectomy; the vesical and rectal peritoneum are united over the gauze by means of a continual fine silk suture. (11) The pelvic cavity is irrigated and the abdomen closed without drainage. This operation has twice been performed, both patients recovering; but the first is as recent as April 26th this year, and, unfortunately, a cancerous deposit developed two months later in the rectum. The proceeding allows, it is evident, of very free excision of the structures surrounding the uterus.

(411) Fatal Jaundice in Pregnancy.

DEMELIN (*Répertoire Univ. d'Obstét. et de Gynéc.*, September 25th, 1895), publishes three cases of marked jaundice during pregnancy, two ending fatally. In the first case jaundice appeared at the 6th month, the temperature was subnormal, no external hæmorrhages were seen, and there was no albuminuria. At the end of ten days nervous symptoms set in. Abortion was induced, but the patient died. In the second case icterus continued for several months, and repeated multiple hæmorrhages occurred. No albumen was found in the urine. Nerve symptoms set in, and death followed spontaneous delivery at the eighth month. The case which recovered was remarkable on account of the presence of albumen and also blood in the urine, a symptom not observed in the fatal cases. There was at first nervous disturbance, indicating the onset of eclampsia, as well as hæmorrhages. The jaundice lasted but a short time, and both mother and child recovered. No fits actually occurred, and all nerve symptoms were absent when the jaundice began to clear up. Demelin holds that the uterus should be emptied of its contents as quickly as possible before neuroses set in.

(412) Perforation of Uterus by a Degenerate Fibroid.

RICHELOT AND TOUCHE (*Bulletins et Mémoires de la Soc. Obstét. et Gynéc. de Paris*, No. 8, 1895) report this case. A woman, aged 43, not pregnant for seven years, had for the first time profuse menorrhagia in May, 1895. Large clots passed. In June the symptoms recurred. Early in July a tumour was discovered by a physician. After rest the free metrorrhagia ceased. Temperature was normal. A fluctuating mass filled the flanks and hypogastrium, reaching as high as the umbilicus. The uterus, on vaginal examination, seemed normal below, but was clearly connected with the tumour. The fornices were free. On opening the abdominal cavity, a soft reddish mass was found firmly adherent to the parietes as low down as the true pelvic cavity. The fundus uteri was exposed, and a perforation about 2 inches in diameter discovered. The spongy mass protruded through the perforation, the edges of which constricted the mass. Internally another part of the mass was found lining the true uterine cavity. All the morbid growth was removed, the uterine cavity cleaned, and the edges of the perforation sutured to the abdominal wall. The cavity formed by the extraction of the uterine portion of the growth was drained. The growth was a degenerate uterine myoma. The cavity was dressed with iodoform.

THERAPEUTICS.

(413) The Serum Therapeutics of Tetanus.

NOCARD (*Bulletin de l'Acad. de Médecine*, October 22nd, 1895), points out that the difference in the value of this treatment as applied to diphtheria and tetanus depends upon the evanescence of the immunisation. In the former a local lesion precedes the general poisoning, and one can intervene before the intoxication has become general; in the latter the first symptoms of the disease are those of general intoxication, when it is already too late for treatment. The efficacity of antitoxic serum depends directly upon the speediness with which its injection follows the introduction of the pathogenic microbe or its products. If an animal is poisoned by strychnine, tetanic convulsions come on almost immediately; after the introduction of tetanus toxin no convulsions appear—even with a five-fold fatal dose—for twenty to thirty hours or more. In the meantime the poison has no doubt been exerting its specific action on the cells of the animal, so that the injection of tetanus antitoxin at the time of the appearance of convulsions is useless, even when accompanied by excision or amputation of the part into which the toxin has been introduced. Nocard, therefore, considers that we must, for the present at any rate, abandon the hope of curing an established case of tetanus, since the injection of antitetanic serum has but little influence on the course of the disease. If one could, however, foresee which wounds would be likely to give rise to tetanus, prophylactic inoculation would undoubtedly be of great service. It might be used, for instance, in countries where umbilical tetanus kills 20 to 40 per cent. of newborn children, or in the New Hebrides, where wounds by the arrows of the aborigines are speedily followed by tetanus. Even in France the preventive treatment is being used by many surgeons in the case of certain wounds—by firearms, machinery crushes, or when fouled by cultivated earth—likely to cause tetanus. A still more promising field is that of veterinary surgery, where tetanus so often follows the minor operations of docking, castration, shoeing, etc. Nocard has, since December, 1894, distributed antitetanic

serum to 26 veterinary practitioners, who have employed it in 375 operations, no animal developing tetanus, while among uninoculated animals no fewer than 55 cases of tetanus appeared. All the operators agree as to the great diminution of the disease resulting from the preventive treatment. Details and a table are given, and the author feels justified in concluding that if the curative treatment of tetanus is yet to seek the incidence of the disease can be greatly diminished by prophylactic methods.

(614) Camphorated salol.

JOHN T. BOWEN (*Boston Med. and Surg. Journ.*, September 19th) states that Eisenburg has used this preparation in various cutaneous affections for two years, and has found it of special value in furuncles and carbuncles. It is prepared by moistening 1 part of camphor with a few drops of alcohol, rubbing this in a porcelain mortar with 1.4 part of salol until a transparent liquid is obtained. A change takes place in from twelve to twenty-four hours; the pain diminishes, the redness and inflammation of the adjoining parts disappear, and the tumour becomes progressively smaller, without the formation of pus. As a rule the secretion obtained from the vesicle at the point of the furuncle yields a pure culture of the staphylococcus aureus on nutrient media, as do also bits of the infiltrated tissue. After camphorated salol has been used for twenty-four hours no such cultures can be obtained. When suppuration has already taken place in the furuncle, and after the slough has been removed, the pain and hyperæmia may be much lessened by the application of the camphorated salol, and the suppuration diminished. The healing process then advances quickly, a slight discoloration and some infiltration being felt only for a short time. The method of using the drug is to lay bare the point of the furuncle, or, in the case of carbuncle, to make several moderately deep incisions in order to facilitate penetration into the infiltration; afterwards the lesion and the surrounding hyperæmic parts are covered with cotton compresses soaked in camphorated salol, and an impermeable covering is placed outside.

(615) Airol.

VEIEL (*Wien. klin. Rundschau*, October 20th, 1895) gives the results of his experience with this antiseptic in a paper read before the recent German Dermatological Congress. Airol is a compound containing bismuth, gallic acid, and iodine; it is a green powder, tasteless and odourless and insoluble in water, spirit, or glycerine. Veiel first used it in the treatment of ulcers of the leg; these rapidly became painless, and their secretion diminished to an extraordinary degree. The granulations became much firmer, and showed none of the tendency to overgrowth which is so common with iodoform; inflammation of the neighbouring skin, which is sometimes seen with iodoform and less often with dermatol, was absent with airol. This latter is therefore strongly recommended in ulcers of the leg, particularly when complicated with eczema. Veiel has also found it most serviceable in the treatment of ingrowing toenail with dermatitis repens and of small wounds, both fresh and infected; in the latter its disinfecting power appears to be greater than that of iodoform. The obstinate fissures of the nostril accompanying sycosis of the upper lip, which so often lead to erysipelas, heal rapidly under the influence of airol ointment (10 per cent.). Lupus ulcers skin over very rapidly, but airol has no specific action on the disease any more than iodoform has. Other special uses are in the treatment of primary syphilitic sores and the ulcers of mercurial stomatitis. Veiel concludes that airol is in many cases superior to iodoform, in that it is inodorous, non-poisonous, and non-irritant, while at the same time it greatly diminishes the secretion.

(616) On the Use of Nitrites in Infective Diseases.

PETRONE (*Rif. Med.*, August 31st, 1895) found that rabbits inoculated subdurally with rabies lived as long again after hypodermic injections of sodium nitrite. The author has also tried the same treatment in 2 cases of syphilis, with good results. The first case was that of a man suffering from marked malarial cachexia and enlarged spleen, who contracted syphilis in December, 1893. During the early manifestations he took mercury and pot. iod., but as soon as the symptoms disappeared he ceased taking medicine. In March, 1894, he suffered from marked nocturnal osteocopic pains, periostitis of the skull and tibia, and abundant papulo-pustular syphilodermia. Five to ten grains of sod. nitrite, rapidly increased to 50 gr., were injected daily in two doses. The nocturnal pains were relieved on the second day, and the rash and periostitis gradually disappeared, so that at the end of a month the patient was able to work and in much better health in every way. The second case was that of a woman, aged 22, suffering from hereditary syphilis, which had first developed ten years before, and been treated with pot. iod. and mercury. When admitted to hospital in April, 1895, she presented loss of bony substance over an area equal in size to a 5-franc piece on the right frontal bone and on the left parietal, confluent ulcerating gummata in the left dorsal region, gummata on the thigh, and very extensive ulceration of the left leg. The same treatment—50 gr. of sod. nitrite in two divided doses daily—was practised here, and the ulcers merely cleansed with boracic solution. After twenty-six days the sores were almost all healed. Treatment was then interrupted for a few days by an attack of acute bronchitis. On resuming the injections the patient was cured in another ten days and her general health much improved. No local troubles or general symptoms followed the injections. The solutions should not be more concentrated than 2 or 3 per cent.

PATHOLOGY.

(617) Bacteria in the Urine in Typhoid Fever.

BAART DE LA FAILLE (Bacteriurie bei Febris typhoidea; *Inaug. Dissert. Utrecht*, 1895) investigated the question whether the possible recognition of typhoid bacilli in the urine could be used in the diagnosis of doubtful cases of typhoid fever. Since the B. coli communis is often present in the urine, the investigation necessarily included the differential diagnosis of these two bacilli. From a careful consideration of recorded cases the author believes he can draw the conclusion that the presence of B. typhi oideus in the urine is almost invariably associated with albuminuria, and frequently with acute nephritis. The author examined the urine of twenty-seven patients, during and after the disease. In the greater number of cases the diagnosis had been established clinically before the bacteriological examination was made; in some the diagnosis was made later in the course of the disease. The author was not fortunate enough to assert, bacteriologically, the existence of typhoid fever before it had been made clinically. The urine was obtained aseptically centrifugalised, and of the sediment gelatine and agar plate cultures were made. If colonies like those of B. typhoideus or B. coli communis made their appearance, they were examined as to shape, motility, indol reaction in culture media, gas formation in media containing sugar, and coagulation of milk. In four of the twenty-seven cases bacteria were found which in no respect differed from the typhoid bacillus; in four other cases bacteria resembled the B. coli communis. In the remaining cases different other bacteria were found. The author is uncertain whether all the negative signs (absence of indol reaction, of gas formation, of power to coagulate milk) used to establish the existence of the B. typhoideus may not possibly refer to a variety of the B. coli communis present before the disease commenced in the organism; if this be the case, then bacteriological examination of the urine in this disease would be useless as a diagnostic method. After examining varieties of B. coli communis from healthy and sick persons with great care, the author comes to the conclusion that in the four cases mentioned above he had to deal with true typhoid bacilli. Bacteriological examination of the urine suspected of typhoid fever may aid the diagnosis, though the probability of establishing it by this alone is small. No relationship was found to obtain between the numbers of bacteria and the amount of albumin. The author finds that a number of bacilli, including B. lactis aërogenes and B. acidi lactici, are identical with or only varieties of B. coli communis.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(418) Subdiaphragmatic Abscess following Gastric Ulcer.

WITTHAUER (*Therapeut. Monatshefte.*, October, 1895) discusses the treatment of subdiaphragmatic abscess following perforation of a gastric ulcer, where the diagnosis is difficult owing to the obscurity of the symptoms. He records two such cases: (1) A man, aged 47, subject to epigastric pain for several years, was able to follow his usual occupation till six days before coming under observation. He then complained of some pain in the epigastrium, and felt ill; slight dulness at bases of lungs with feeble breath sounds; abdomen distended, no tenderness; liver dulness normal; temperature normal. Cancer of stomach diagnosed. Three days later there was dyspnœa; dulness at right base had increased; slight rise of temperature. These signs increased, and death ensued three days later. Necropsy showed perforated gastric ulcer, with subdiaphragmatic abscess and right pleural effusion. (2) A woman, aged 25, had suffered from epigastric pain several years. The day before she was first seen, she had suddenly been seized with pain in the abdomen while lifting a heavy weight. Next day no signs of collapse; temperature and pulse about normal; abdomen flaccid; slight tenderness over liver; lungs normal; complained of severe abdominal pain. Three days later slight rise of temperature, which subsequently persisted, though irregular; pulse became more rapid, and dulness developed at both bases. Exploration with needle in 11 places gave no result, except a little clear serum in pleural cavity. Fourteen days later stinking pus found in left pleura, but it was too late for operation, and patient died in a few hours. Necropsy showed perforated gastric ulcer with subdiaphragmatic abscess, communicating by a perforation in diaphragm with the left pleural cavity, which contained foul pus. In such obscure cases where there is a possibility of abscess beneath the diaphragm the free use of the exploring needle is advocated, and the importance of using a very long needle is insisted upon, the value of diagnosis outweighing any risk therefrom. Where, as in the second case recorded, there is reason to suspect perforation of a gastric ulcer, early laparotomy is recommended, even where peritonitis and collapse are not present to confirm the diagnosis.

(419) Association of Migraine with Neuroses.

KRAFFT-EBING (*Neurol. Centralbl.*, Nov., 1895), points out the close connection between migraine and other neuroses. The cortical disturbance which produces migraine may extend, and so produce other neuroses; thus hemianæsthesia, functional motor paralysis, aphasia, or alexia may result. In two cases he has observed mental disturbance; in one hallucinations and loss of memory occurred immediately after an unusually severe attack of migraine, and were followed by a condition of stupor lasting thirty-six hours; gradual recovery took place. In the other, each attack was associated with maniacal symptoms lasting about a hour and a half, the patient having no remembrance of the attack when it was over. In both these cases there was typical migraine with teichopsia; both patients were males, and had suffered from migraine several years before the mental symptoms developed. Migraine is not to be regarded as a special form of epilepsy or of hysteria, but either of these may replace it.

(420) Gangrene after Enteric Fever.

QUERVAIN (*Centralbl. f. inn. Med.*, August 17th, 1895) observes that gangrene is one of the rarest complications of enteric fever. The embolic character of the lesion has been proved in several cases in which clots have been found in the left heart. Spontaneous thrombosis arising from the condition of the blood has been maintained by some. It has also been shown that an arteritis occurring in enteric fever may be of bacterial origin. Typhoid bacilli have been found in cardiac vegetations. The author relates the following case in a man aged 25. At the beginning of defervescence the patient had severe pain in the leg. When he was seen by the author, the lower part of the leg was cold, almost entirely anæsthetic, and the site of severe neuralgic pain. There was no pulsation in the popliteal artery. The region of the popliteal space was painful on pressure, and slightly œdematous, but there was no œdema over the foot. No movements were possible in the toes or foot. Seven days after the onset there were all the typical features of gangrene due to obstruction of the popliteal artery. Three days later slight œdema was noted in the other foot. Twelve days after the onset it was found necessary to amputate the leg just above the knee. The hæmorrhage during the operation was uncommonly small, although no Esmarch's bandage was used. The patient made a good recovery, although a localised gangrene occurred in one of the flaps. A clot was found in the popliteal artery, and the popliteal vein was also thrombosed. Just above the level of the joint the sheath of the vessel was œdematous, the artery, vein, and nerve forming a thick cord embedded in an intramuscular abscess. Typhoid bacilli were found in the pus, but no strepto- or staphylococci. No changes were present in the vessel wall, and there was no trace of periarteritis or periphlebitis, but unfortunately the vessel was not examined in the region of the abscess. The clotting may have been due to (1) a deep phlegmon caused by the typhoid bacillus, and thence the damage to the arterial and venous walls; (2) phlebitis caused by the typhoid bacillus, and then periphlebitis with abscess and a secondary arteritis with clotting; or (3) a primary arteritis due to the typhoid bacillus, then arterial thrombosis and a secondary periphlebitis, phlebitis, and abscess. It is impossible to say absolutely which was the cause, but the author inclines to the third supposition. The case is interesting inasmuch as it proves that typhoid bacilli were present in pure cultures in the neighbourhood of the thrombosis. Therefore the thrombosis here was not due to typhoid toxins nor to marasmus, but it owned a direct infective cause in a metastasis of the typhoid bacillus. It was combined with phlebitis of both lower extremities. Amputation was not contraindicated even in the enfeebled state of the patient. The condition of the vascular system must be taken into account in such cases, and Esmarch's bandage avoided.

SURGERY.

(421) Lung Surgery.

IN opening a discussion on the Surgery of the Lung at the Ninth French Congress of Surgery, Reclus (*Sem. Méd.*, October 23rd, 1895) stated that at the present date the pulmonary affections indicating surgical intervention may be arranged in three groups: the first of hæmorrhages, traumatic and pathological, capable of being arrested by ligature; the second of tumours, represented by cancerous growths; and the third of cavities, containing fluid or broken-down tissue, such as tuberculous vomicæ, bronchial dilatations, circumscribed gangrene, abscesses, and hydatid cysts. With regard to cases of traumatic hæmorrhage, notwithstanding the bad results in the rare instances in which such treatment has been applied, and the intense shock likely to be thus caused, Reclus thinks that when the bleeding persists and threatens to bring on fatal syncope, or by the accumulation of blood in the pleura to arrest the movements of the heart or the injured lung, it might be advisable make a large opening in the thoracic wall in order to expose the wound and to stop the flow of blood either by the application of a ligature or by plugging with gauze. Aspiratory puncture of the lungs in cases of pulmonary apoplexy has not afforded more than temporary relief. Pneumonectomy for tuberculosis, it is held, has been irretrievably condemned, as it can be practised with any chances of success only in cases which might prove amenable to medical treatment. Reclus is opposed also to surgical intervention in cases of cancer. He grants that in cases—which, however, are very exceptional—of malignant growths extending from the thoracic wall to the lung, extirpation of the invaded parenchymatous structure might be permissible, but, at the same time, he thinks that abstention from such treatment would in most instances be preferable. Extirpation of primary cancer of the lung should, he holds, be

positively abandoned. If the tumour be a single and small one it will probably reveal no sign of its existence; if it be large, diffused, and multiple, an operation would inevitably be fatal. Surgical treatment should, it is argued, be applied only to exceptional cases of tuberculous vomicæ and dilated bronchi. In either of these affections, when the patient has overcome the risks of an operation which is always formidable to the cachectic, and has begun to experience the benefits of drainage of the cavity, the primary malady is still progressive and pneumonotomy, if it has not hastened death, has only retarded it. On the other hand, when the pulmonary excavation constitutes the essential lesion, when the symptoms of putrid absorption predominate and excite much fever, and when the patient suffers much from cough and is exhausted by the abundant expectoration the surgeon, it is acknowledged, may have recourse to pneumonotomy, not in the vain hope of cure but simply to afford some relief. Reclus has been convinced by recent statistics that pneumonotomy is really very beneficial, and, indeed, the treatment of election in cases of hydatid cyst of the lung. This operation is also indicated in those cases of pulmonary gangrene in which the cavity, though distinctly circumscribed, is large, and when there are symptoms of poisoning by its retained putrid contents. In cases of abscess of the lung also the results of surgical intervention have been very favourable, Reclus having met with complete success in twenty out of twenty-three cases. The prognosis of pulmonary abscess, it is pointed out, depends on the primary affection. Pneumonia is the most frequent cause of the localised suppuration, and surgical treatment in purulent collections of this organ has been attended with a large proportion of good results. In the performance of pneumonotomy the incision of the skin and muscles, made in the shape of a U, an H or a T, according to the choice of the operator, should allow of free exposure of the ribs. The surgeon should give himself full access to the pulmonary cavity and lay it open to an extent permitting rapid and complete deterson. Moreover, free removal of the osseous wall of the thorax favours contraction of the cavity and apposition of its walls. In order to prevent serious hæmorrhage Reclus uses in opening the cavity a thermo-cautery just heated to a dark red colour. The opening thus made can afterwards be enlarged by introducing the finger. Failure of an exploratory puncture need not contraindicate pneumonotomy. Even though the surgeon may fail after resection of one or more ribs to find pus the operation will not be less profitable. The cavity which has been missed will, as has been proved by abundant experience, ulcerate or break through the walls at this point of least resistance. The cavity when opened should be carefully and freely drained. Reclus is strongly opposed to the use of injections. In one reported case, he states, the injection of a solution of boric acid and thymol was followed by fatal inflammation of the air passages. At this meeting further valuable contributions to lung surgery were made by Péan, Bazy, Tuffier and other surgeons, abstracts of which will be given in future numbers of the EPITOME.

(422) A Novel Application of Tendon Grafting.

MILLIKEN (*Med. Record*, October 26th, 1895) describes a new operation for deformity following infantile paralysis, and reports a case in which a healthy muscle has been made to do the work of one which was completely paralysed, without in any way interfering with its own function. The patient was a boy 9 years of age, who for seven years had been lame, in consequence of "dropping" together with extreme valgus of the right foot. The author having made out that this condition was due solely to paralysis of the tibialis anticus, performed the following operation: An incision one inch and a half in length was made, extending from just below the annular ligament obliquely over the tendons of the extensor proprius pollicis and tibialis anticus. The sheath of each tendon was carefully opened for a distance of about an inch. The tendons were then split with a small fascia knife, and an inch flap partially detached from each. The flap from the tibialis anticus was left attached to the distal, whilst that from the extensor of the great toe was attached at its proximal or muscular, end. The cut surfaces of the flaps were adjusted and sutured with three fine kangaroo tendons. This operation proved successful as the patient, it is asserted, is now quite an expert on roller skates, walks without a limp, and can adduct the foot to almost the normal extent.

(423) A New Treatment of Keratitis with Hypopyon.

ZIRM (*Wien. klin. Woch.*, October 31st, 1895) refers to the intractable nature of infected corneal ulcers; he considers pus in the anterior chamber to be an invariable result of septic inflammation of the cornea. The ulceration usually begins quite superficially, and the hypopyon forms an index of the penetration of the micro-organisms into the deeper structures. It is well known that these organisms, particularly staphylococci, have great power of resistance to antiseptics, surviving even the application of 1 in 1,000 corrosive sublimate. Hence stronger measures, such as scraping, excision, and the actual cautery have been adopted for their destruction. Even these have met with but variable success, and where they have stopped the disease they have often been the cause of irreparable damage to the cornea. Zirm has often noticed that the good done in the effort to overcome the disease has been more than counterbalanced by the injury resulting from the means employed. He instances the secondary glaucoma resulting in many cases from Saemisch's method of paracentesis, for which he himself has substituted the older operation of lancet puncture, except in the case of interlamellar abscesses. The new treatment for corneal ulcer with hypopyon is the use of a 1 per cent. solution of silver nitrate. Zirm discovered the value of this in an intractable case, which had only got worse under daily and nightly washing out with sublimate. He found that touching some warty granulations of the conjunctiva with the $Ag.NO_3$ solution resulted in great general improvement; continuance of the treatment led to rapid healing of the ulcer, the cornea being left in better condition than he had ever seen after a similar case. He gives notes of in all seven cases which he has treated by this method, all of which made speedy and complete recoveries, often after all other means had proved unavailing. Leber has shown that disturbance of the growth of pathogenic cocci in the conjunctival sac puts an end to their penetration into the deeper tissues. Zirm believes that his method inhibits their multiplication in the sac, and so leads to a natural healing of the ulcers without fresh loss of substance; and that all the hitherto adopted energetic operative and antiseptic measures will now be given up as dangerous. He claims the following advantages for his procedure: (1) No new disturbances are introduced: (2) further progress of the disease is at once cut short; (3) An ulcer allowed to heal naturally terminates favourably; (4) the method is extremely simple; and the course of the disease rendered shorter and much more favourable thereby.

MIDWIFERY AND DISEASES OF WOMEN.

(424) Slow Pulse in Childbed.

NEUMANN (*Monats. f. Geburtsh. u. Gynäk.*, October, 1895) has studied with great care this interesting phenomenon, and publishes full observation of the pulses of 500 women in childbed, with tracings. Amongst the theories on the subject, he remarks, are some which deserve consideration. According to Blot and others, bradycardia in the normal puerperium is due to increased arterial tension and blood pressure owing to the sudden diminution of the uterine circulation. Olshausen traced it to absorption of fat from the degenerate uterus. Löhlein believes in disturbed innervation owing to an altered constitution of the blood. Swiecicki traces this alleged disturbance to chemical irritation of the uterine nerves as part of the process of involution. This irritation in turn influences the vagus. Fritsch simply attributes the bradycardia to the mental and physical rest involved in normal labour. Schröder believes that, after the suppression of fœtal circulation, the maternal heart, having less to do, contracts more slowly. Vejas refers the phenomenon in question to increased vital capacity of the lungs. Neumann concludes that puerperal bradycardia depends on stimulation of the cardiac

inhibitory fibres, and arises through irritation of the vagus centre during labour.

(1014) The Female Pelvis in "Primitive" Races.

STRATZ (*Nederland. Tijdschr. voor Verloskunde en Gynaecol.*, 6th year, Part I, 1895) has investigated a series of cases in Java, in order to test the accuracy of certain theories in respect to the relative characters of the pelvis in European and in barbarian or semicivilised women. Zaayer, of Leyden, declared twenty years since that the Javanese pelvis was unusually round at the inlet. Stratz rightly reminds obstetricians that this theory was based on the examination of a few macerated pelves. He therefore carefully measured a large number of pelves of Javanese women living up country. Two races were included in his series, the more primitive being darker, more slender, and smaller. The measurements showed little or no difference more than could be explained by the small general proportions of one of the races. The same may be said of the difference between the average Javanese and European pelvis. As it happens, however, the theory of Zaayer seems substantially correct, the transverse measurement of the Javanese pelvis being, on an average, relatively small. The obstetric teacher should further bear in mind that Stratz found plenty of contracted pelves amongst these "primitive" women, who, escaping the "evils" of civilisation, do not enjoy its benefits.

(1015) Suprapubic Lithotomy in Pregnancy.

ROSENFELD (*Münch. med. Woch.*, No. 39, 1895) describes a fatal case of this kind. The patient was 27, five months pregnant. There was acute cystitis, and much pus passed. The gravid uterus was high up and anteflexed. A large calculus filled the bladder. Though the patient was very ill and feeble, lithotomy was held to be necessary at once as retention of urine gave great trouble, uræmia threatened, and pain was severe. The patient was placed in Trendelenburg's position. A solitary calculus was removed; it weighed 4½ ounces, and measured 2¾ inches in its longest diameter. Abortion followed forty hours later; the fœtus was nearly 8 inches long. The mother died on the third day of pneumonia. Hydronephrosis and pyelonephritis existed on both sides, and the right ureter was dilated. No glandular tissue remained in the left kidney; compensatory hypertrophy had occurred in the right.

(1016) Abdominal Section for Puerperal Septicæmia.

BALDY (*Amer. Jour. Obstet.*, July, 1895) writes that 19 cases of hysterectomy during the puerperium have been reported by American operators, with 7 successes. Although some of the successful cases might, he thinks, have recovered without the operation, a careful study of the reports indicates, in his opinion, that quite the reverse is probable. The list does not include hysterectomies, in which a distinctly circumscribed collection of pus existed in a sac. Baldy reports 4 cases, all fatal; distinct specification of the stage of pregnancy is not given in his paper. Six out of the remaining 15 were performed after abortion with only 1 recovery, whilst 9 were performed after normal delivery, with 6 recoveries. In 5 of these cases the uterus was suppurating when removed; in the sixth there was diphtheritic endometritis. Baldy holds that if any good is to be accomplished the earlier the hysterectomy is performed the better. In 2 of the 6 successful cases performed after delivery, however, the operation was not done till the end of the second week. In 2 more it was undertaken at the end of a month. In the remaining 2 the hysterectomy was carried out on the fifth day. In the 3 fatal cases the operation took place within the first week, on the fifteenth day, and at the end of a month respectively. This does not exactly support early operation, but further experience—should such experience be held justifiable—is needed.

(1017) Triplet Labour: Acardiac Twin.

FRENDENBERG (*Der Frauenarzt*, August, 1895), in a statistical paper on midwifery in Cologne, records a case of delivery at the sixth month in a multipara. There was hydramnion, causing extreme abdominal distension. Pains set in, and over 10 pints of liquor amnii escaped. Severe flooding ensued, and labour had to be hastened. By aid of the sharp hook a very œdematous male infant was extracted, though not without extreme difficulty. A round body lay in the way. Hæmorrhage continued, so labour was again hastened, the hand being introduced into the uterus; a second bag of membranes was ruptured, and a living female infant extracted with perfect ease. The round body remained. The sharp hook was once more used, and the body, which was thus extracted, proved to be an œdematous, ill-developed fœtus nourished by the placenta with which the œdematous male fœtus was connected. The uterus being emptied, the hæmorrhage ceased. The patient passed through a normal purperium.

(1018) Uncontrollable Vomiting of Pregnancy.

BENEFIS (*Der Frauenarzt*, September, 1895), has successfully treated uncontrollable vomiting in pregnancy by faradisation of the vagi before or after meals.

THERAPEUTICS.

(1019) Apolyrin.

DE NEUCKI AND DE JAWORSKI (*Presse Méd.*, October 26th, 1895) have studied apolyrin chemically, physiologically, and clinically. (1) *Chemistry*: It is really monophenetidin being allied to phenacetin, as they both are derived from paraphenetidin. The difference between them is that in phenacetin one atom of H in the amide group is replaced by the radical of acetic acid, while in apolyrin the same atom of H is replaced by the radic C of citric acid. It is a crystalline, yellowish-white powder of peculiar odour and taste, less acid than citric acid. Its melting point is 72° C. It is soluble in cold water (1 in 20), alcohol, and glycerine, and in concentrated sulphuric acid without change of colour. The solution in nitric acid turns a pale orange colour; in hydrochloric acid, concentrated to 1 decigramme for 1 c.cm. of acid, warmed and mixed with 10 volumes of water, it turns the colour of Burgundy wine when a few crystals of chromic acid are added. The aqueous solution is not clouded by silver nitrate, nor the acid solution by sulphide of hydrogen. (2) *Physiology*: It is not toxic. To prove this, experiments were made of injecting watery solutions (1, 4, and 8 per cent.) into frogs. These were perfectly borne, and none died. An injection of 3.5 g. of a 10 per cent. solution into a rabbit weighing 1,345 g. was followed by no marked symptoms. By experimenting on themselves as well as on animals—the authors found that the drug is eliminated partly in the urine as paraamidophenol and paraphenetidin. It has remarkable antipyretic properties. Experimentally it reduced the temperature in rabbits suffering from diphtheria and streptococcus poisoning. (3) *Clinical study*: The authors have given the drug as an analgesic and antipyretic, or simply as the latter in a large number of febrile affections (pneumonia, influenza, scarlet fever, etc.) and painful neuralgia, migraine, sciatica, etc.). In all the febrile cases the temperature was lowered 1° to 2° C., and did not rise again for three or four hours. The pain in neuralgia, etc., ceased after several doses, and most of these latter cases had been treated unsuccessfully with other analgesics. The doses used were from 0.50 g. to 3 g. *pro die*. Owing to its chemical constitution and solubility it acts more promptly and regularly than other drugs of the same group, and has no bad effects. It is contra-indicated in the fasting state and in gastric hyperacidity.

(1020) The Serum Treatment of Diphtheria.

HEUBNER (*Ubeat. med. Woch.*, October 17th, 1895) first refers to the diminished death-rate from diphtheria noted in Berlin and other large cities since the introduction of the serum treatment. Since February, 1895, he has treated 177 cases with a mortality of 10.2 per cent., making a total of 220 cases with a mortality of 11.4 per cent. treated by him since May, 1894. Among 174 cases of pure diphtheria 110 came under treatment within the first three days; of these only 6 died, making a mortality of 5.4 per cent., a figure very slightly higher than Behring's prediction. The mortality in 174 pure cases was 8.6 per cent., and in 46 complicated cases 21.7 per cent. Among the 174 cases there were 11 infants under 15 months with only 1 death. Six had laryngeal obstruction, and 2 were tracheotomised with 1 death. Al-

though the diphtheria has been less malignant within the past year, there have been two periods when the type was severe. During these periods 68 cases were admitted, 53 being severe, but the mortality was only 13·4 per cent. The local action of the remedy in throwing off the membrane is very generally admitted. This is an important matter in connection with laryngeal and descending diphtheria. Of the 174 cases 52 had laryngeal obstruction; 19 of these were intubated with 3 deaths, and 4 tracheotomised with 1 death. In regard to the effect upon the fever opinions differ, but since the fever of itself brings no danger the point is rather of theoretical than of practical value. In 1 case in which there was chronic nephritis the serum had no injurious effect on the kidneys. There is no single instance recorded in which it can be strictly proved that the serum is otherwise than harmless. There will still be cases against which even the most efficient serum will be powerless. The involvement of the larynx, trachea, etc., is of considerably less fatal significance now than formerly. In relation to the frequency of death from cardiac paralysis, the author shows that the supposed increase is merely relative and not absolute. Such deaths are really due to the insufficient action of the serum in severe toxic cases. The author speaks favourably of immunising those coming in contact with the disease. Although the effect may last only a short time the inoculation may be repeated. As regards the dose of the curative serum, Heubner uses larger doses now than formerly. He never employs local treatment owing to the distress which it causes the child. The throat is cleansed by frequent water drinking, or in older children, by gargling. The author concludes that the probability of of a truly specific action of the serum becomes with every month's additional experience nearer to being a certainty.

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(432) Serum Treatment of Malignant Disease.

EMMERICH AND ZIMMERMANN (*Deut. med. Woch.*, October 24th, 1895) relate 5 additional inoperable cases treated with erysipelas serum. Increasing doses from ½ to 10 c.cm. are given for four or five days until a reaction is produced; then an interval of four to eight days is allowed and a new course begun. The authors have often seen a considerable diminution in size, and even total disappearance of the growth. When threatening symptoms are present due to pressure, etc., they have even inoculated virulent cultures of the erysipelas coccus with good results. Case I: A woman, aged 52, after three rapid recurrences of mammary carcinoma, was treated with the serum. In three weeks' time the tumour had considerably diminished in size, and the axillary glands were two-thirds their original size. Two months and a-half later the tumours were still of the same size. Thus a rapidly growing and inoperable carcinoma can be brought to a standstill, and may even diminish in size. The terrible pain may also thus be relieved. The good effects still persisted four months after the commencement of the tumour. (2) An ulcerating and very extensive inoperable carcinoma of the breast ceased to grow and showed a considerable diminution in size. (3) A man, aged 40, had extensive epithelioma of the tongue and neighbouring glands. A radical operation was pronounced to be impossible, and the ulcerated parts were cauterised. Six weeks later the serum treatment was begun. As the case was very severe a virulent culture of the erysipelas coccus was injected into the tongue after a preliminary serum treatment. A mild erysipelas, without fever, spread over the neck. The improvement in the patient's condition was remarkable (the illustrations taken from this patient before and after the treatment are certainly very striking). (4) A man, aged 28, had within a very short period three recurrences of a very malignant spindle-celled sarcoma of the thigh. Four very extensive operations were performed, but hardly had the wound healed after the last one than a further recurrence appeared. A very considerable improvement resulted from the serum treatment; the tumour ceased to grow, and parts of it were reabsorbed. (5) An inoperable and rapidly growing sarcoma of the right cheek was brought to a standstill, and a very slight diminution in its size was noted. The authors say that in a number of cases of carcinoma they have purposely injected serum containing virulent erysipelas cocci, and they have thus seen more rapid effects than from coccus-free serum. In such cases no serious symptoms arose. The simultaneous injection of serum and erysipelas cocci cuts short the erysipelas processes, and one may even say that it guarantees a favourable course of the erysipelas. Only in one of several hundred injections have the authors noted any unfavourable effects. In Case III marked cyanosis, dyspnœa, palpitation occurred once from the serum entering a vein. This can easily be avoided by discontinuing the injection when the serum disappears from the syringe too readily. These symptoms soon passed off.

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(433) Treatment of Tapeworm.

PROSPERO (*Sperimentale*, Anno 49, No. 26) speaks strongly of the value of pelletierine (an alkaloid prepared from the pomegranate) in the treatment of the two larger varieties of tænia. He administers it in doses of 20 cgr. of the sulphate (Merck) with 25 cgr. of tannin in syrup, to be followed by an aperient next morning. Extract of male fern is unreliable in its effects, may be poisonous, and is not easy to get pure. For the ankylostoma thymol is the best vermifuge. In one of the author's cases proglottides of the tænia mediocanellata were voided through the mouth, and that without any severe vomiting. The tænia in this case presented an uncommon pathological appearance in that several of the proglottides were fenestrated in a scalariform fashion. This peculiarity has occasionally been observed before, and is supposed to be due to the action of the intestinal juices on parts of the worm where the external protective coating has been worn off. Pelletierine is costly, but therapeutically it gave the best results in the author's hands.

PATHOLOGY.

(434) Parasitic Forms in Malarial Blood.

DANILEWSKY (*Centralbl. f. Bakt. u. Parasit.*, September 19th, 1895) describes certain parasitic forms hitherto unnoticed which in the course of his studies of malarial blood he found in cases of protracted infection. (1) Pseudocytes in leucocytes: These occurred in a case of quotidian fever of several months' duration, and after the ordinary forms of the malaria parasite had disappeared. The pseudocyte, which was spherical with distinct contour, enclosed many fine grains, not melanin, in rapid molecular movement; it occupied about one-third to one-half of a large leucocyte. Methyl blue and gentian violet stained the organism, though faintly. Apparently it was the remains of a disintegrating leucocytozoon. Similar bodies Danilewsky has seen in the blood of birds and reptiles in company with the better known hæmatozoa. (2) Leucocytozoa(?): Round, greyish, faintly granular bodies, with sharp regular contour, containing (*a*) a granular, rough, and sharply-defined little body, suggesting a deformed and shrivelled nucleus, and (*b*) a sharply outlined sphere. These bodies were found in the blood of a patient who had been suffering from continued fever for several weeks. (3) Unusually large malarial crescents, which might very well cause serious nervous trouble by plugging the vessels of the medulla: They were from 20 to 22 μ in length—two and a-half to three times the length of a blood corpuscle—and from 4 to 6 μ in breadth. These parasites were free, motionless, slightly bent, with one end narrower than the other, and they contained a wreath of melanin about the centre. The presence of pigment proved that the body had been formed originally in a red blood corpuscle like the ordinary malaria crescent. (4) Intracellular crescents (8 to 10 μ by 3 to 4 μ), one end stumpy and broader than the other, and the usual melanin clump at the middle. But, besides this crescent, the affected corpuscle contained a small, dark, round little body, free, but lying against the centre of the crescent. This form occurred in the same patient as the preceding. The crescent was of the usual malaria type, but the small free body is quite unusual and could not be explained. Other writers—Canalis, Celli, Guarnieri, and Mannaberg—depict similar bodies without advancing any satisfactory theory as to their origin and nature. They are not buds thrown off by the crescent as some have conjectured.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(433) Diphtheria of the skin: Incubation Period.

MAX FLESCH (*Berl. klin. Woch.*, October 28th, 1895) reports a case of diphtheria of the skin in which the period of incubation could be fixed with considerable approach to accuracy. A girl, aged 2½ years, was scalded on the right side of the face and over the front of the neck and trunk down to the umbilical level. The scald was more severe on the trunk than on the neck or face. The scalded surface was treated an hour and a-half after the accident with Lassar's salicyl vaseline (2 per cent.), and covered with cotton-wool fixed by a bandage. There was slight fever on the second and third days; but the child did well, and on the eighth day the scald of the face and neck was healed and the dressings were not reapplied there, whereupon the mother kissed the neck where it was covered with young and tender epidermis. This occurred at 11 A.M. on August 10th. The following morning the mother had a sore throat, and in the evening the diagnosis of diphtheria could be made with certainty. The mother's sister had diphtheria and her husband a sore throat on the following day. The child had not at any time sore throat, but on August 12th in the morning, there was a notable change in the appearance of the parts which had healed on the face and neck. A little above the right clavicle there was an area about 1½ in. in diameter which was white and swollen, and around it and extending on to the face the skin was œdematous. Cultivations from the white patch yielded typical colonies of the diphtheria bacillus. The child was given two injections of antitoxic serum, and on August 16th the white patch had disappeared, leaving in its place a small granulating surface. Flesch considers that any other source of infection but the mother's kiss may be excluded. He comments also on the fact that the diphtheritic infection did not extend to the granulating surface on the trunk, which was covered by serous effusion, but involved only the part of the original lesion which had become covered by epithelium. The diphtheria must have commenced in the child between 7 P.M. on August 12th and the morning of the following day—that is, between fifty-six to seventy-two hours after infection. The child had subsequently slight paralysis of the palate.

(434) Acroparæsthesia.

GILBERT BALLET (*Sem. Méd.*, November 6th, 1895) describes a disease already noticed by several observers, and which Moritz Schultze proposes to call acroparæsthesia. The etiology of the disease is obscure; it is oftenest seen in middle-aged women. The symptoms are numbness and a feeling of swelling or tightness which begins in the fingers (usually in the region supplied by the median nerve), and spreads to the forearm. The feet and legs are also attacked, and later the tongue and lips. The symptoms come on on lying down at night or during the first sleep, or else on waking in the morning. They occasionally persist through the day, causing the subject of them to become weak and clumsy, so that continuous work becomes difficult or impossible. The disease cannot be confounded with Raynaud's local asphyxia nor with the erythromelalgia of Weir Mitchell, for there is no circulatory or vasomotor disturbance, and no modification of temperature or colour in the affected part. Though rheumatic pains occur in some cases, there is no deforming arthritis nor reason to class it with chronic rheumatism. Sensibility of skin is slightly if at all affected; there may be hyperæsthesia or the reverse. Slight hypochondriasis or melancholia has been observed, probably in conjunction with loss of sleep or of habitual occupation. The affection cannot be classed with any known disease of the nervous system. It differs profoundly from the ordinary peripheral neuritis. There are no active pains, muscular atrophy, or paralysis. The affection lasts for years and gets well spontaneously. Drugs affect it very little; phosphorus, bromides, ergotin, quinine, phenacetin, antipyrin have been tried, and also sulphur douches and local inunctions with a preparation of tannin, all without any definite good effect.

(435) The Prognosis of Exophthalmic Goitre.

PRIBRAM (*Wien. klin. Rundschau*, November 3rd, 1895) insists on the importance of an exact knowledge of the mortality of this disease in relation to the advisability of the new treatment by operation. There is great discrepancy between the mortality statistics in unoperated cases published by different observers, as also in the proportion improved or cured. Hospital records are untrustworthy in that the patients are not sufficiently long under observation. Pribram bases his arguments solely on those cases which he has been able to follow during a long period outside the hospital. In his hospital experience he has seen three cases end fatally, but cannot exclude the possibility of others having died after their discharge; in the whole of his private practice, however, he has only seen one fatal case, carried off by intercurrent diabetes mellitus, while in the great majority of the others there was a lasting retrogression of the cardinal symptoms. The cases referred to are only those in which all the signs of the disease were present and well marked; in illustration he gives details of a number of instances. The advocates of operative interference consider disordered functions of the thyroid to play the principal part in the causation of the disease; they have yet to reconcile the contradictory results of the favourable influence of feeding with and extirpation of the gland. Furthermore, the acute basis of the exophthalmic goitre is not established in cases where one or other of the symptoms is unilateral, or where the signs suddenly supervene upon a mental or physical shock. Pribram admits that when the percentage of cases by operative and other means has been reckoned up and compared, there remain a certain number of cases in which surgical interference has been observed to determine a rapid change for the better. It should not, however, be undertaken in cases where the thyroid enlargement is absent or slight, where there is a strong hereditary neuropathic taint, where there is marked cardiac affection with signs of secondary insufficiency, or where circumstances permit of a careful and prolonged hygienic treatment. This latter class is the one in which the severest cases often end in the most marked and complete recovery. Within the limits already laid down, symptomatic treatment, and especially insistence upon the most absolute mental and physical rest, will often ensure a satisfactory termination to the most alarming of cases.

SURGERY.

(436) Lung Surgery.

PÉAN (*Presse Méd.*, October 23rd), in concluding a lengthy address on the Surgery of the Lung, gave the following results of his personal experience and of his study of the numerous published reports on this subject: (1) The surgery of the lung, like that of other viscera, has of late made much progress, thanks to the precision of our knowledge relating to the topographical anatomy of this organ, and to the perfecting of operative procedures of means of arresting hæmorrhage and of antiseptic and aseptic measures. (2) Equally favourable conditions for surgical intervention do not occur in all affections of the lungs; (3) Wounds caused by cutting bodies, by stabbing and cutting instruments, and by gunshot projectiles of small and medium calibre usually heal well and without causing suppuration or troublesome reaction. (4) The danger which results from such injuries is due, not to the injury of the lung structure itself when the lung is traversed, but rather to the multiplicity and extent of the wounds, to their extent, and to the lesion of important neighbouring parts (thoracic wall, large vessels, pericardium, heart, spinal cord). (5) The surgeon should not intervene too hastily in these injuries, either by making a simple exploration, or by attempting to extract a projectile which can be seen near the surface. (6) Large projectiles, such as fragments of shell, give rise, especially on the field of battle, to disorders which in a large majority of instances are so severe that it is impossible for the surgeon to avert danger even by entering with [illegible]

resources of modern surgery the visceral and parietal layers of the pleura. (7) A certain number of spontaneous affections of the lung may be successfully dealt with if the surgeon be careful to make a methodical study of the symptoms and indications, and a careful selection of his operative measures. (8) Simple and gangrenous abscesses, when they are of limited extent, show no tendency to cure, and threaten life, are amenable to surgical treatment. (9) In such case the results are almost always favourable. (10) It is advisable to open, scrape, drain, and even cauterise tuberculous abscesses of the lung when these cause severe pain, or have resulted in fistulæ or contracted extensive adhesions with the pleura. (11) It is often useful in such cases to associate with this treatment partial resection of ribs. (12) No benefit is likely to result from excision of the fragments of lung surrounding the tuberculous cavities, as the tubercle bacillus has already spread beyond the apparent limits of the disease. (13) It is advisable to open hydatid cysts of the lung, the surgeon taking advantage of adhesions when they exist, and establishing still further adhesions if those existing are not of sufficient extent, in order to be able to wash out the cavity with antiseptic solutions. (14) Solid tumours of the lung, the same precautions being taken, should be extirpated when superficial; the occasions, however, for this treatment must be rare, as such growths are almost always secondary.

(439) Antipyrin in Tannic Acid Solution as a Styptic.

Roswell Park (Philadelphia *Med. News*, November 16th) has for years used a 5 per cent. solution of antipyrin in the form of a spray (sterilising the water before making the solution) in surgical practice. He sprays this on any surface, peritoneal, cerebral, or other, from which parenchymatous oozing may be taking place to an extent complicating the operation or jeopardising the success of an ideal dressing. He uses it also in the urethra and in the bladder in cases of hæmaturia. Even in the eye it may be used without fear, its application being preceded by that of a weak solution of cocaine; in this situation, however, the solution need not be so strong. On the other hand, it may be used in much larger percentage when the 5 per cent. solution fails; even when small vessels spurt, compression for a few moments with iodoform or acetanilid gauze sopped in the solution will be effective. There are cases of bleeding, however—for instance, from the nasal cavities or from divided bone—in which even stronger solutions of antipyrin will be inoperative. Roswell Park now calls attention to a combination of antipyrin and tannic acid in solution, by which there is precipitated an intensely agglutinative and cohesive substance of which he does not know the chemical composition, but which seems to him to be an ideal styptic. He hit upon the combination by accident in an emergency (intractable bleeding after removal of adenoid growths), when he added antipyrin in powder to an alcoholic solution of tannin, with the result that there was at once formed a gummy mass of surprising adhesiveness. The application to the post-nasal space of a small sponge dipped in this material at once stopped the bleeding. The author has since experimented with these substances and finds that they may be mixed in almost any proportion. It is possible by pouring the powder of one into the solution of the other, to precipitate so much of the agglutinative composition as to make a gum that may be placed about the margin of the bleeding bone—for instance, in operations upon the cranium; or a small piece of sponge or cotton sopped in this material may be forced into a tooth socket, or in various other ways its use may be advantageous. There is but one attendant difficulty—that it is so remarkably cohesive that when the time comes for detachment or separation of the tampon it is difficult to remove it. It may even be necessary to wait a sufficient time for the formation of granulations and separation by natural processes.

(440) Operative Treatment of Traumatic Rupture of the Diaphragm.

Schlatter (*Korrespondenzblatt für schweizer Aerzte*, No. 12, 1895) reports an instance of successful operation for a penetrating wound of the chest, which extended through the diaphragm into the abdominal cavity. The patient had received several wounds by stabbing in the left side of the chest. Through one of these, which was situated in the ninth intercostal space, there was a protrusion of omentum, on the reduction of which a penetrating wound could be felt in the diaphragm. After the protruded omentum had been replaced in the abdominal cavity, and the wound in the thoracic wall enlarged, the slit in the diaphragm was closed by sutures. Healing occurred by first intention, and the patient made a good recovery.

(441) A New Operation for Varicocele.

Brault (*Lyon Méd.*, October, 1895) describes a new operation for severe cases of varicocele, which he has frequently practised on the cadaver and applied with success to two living subjects. This method consists in removing a large elliptical portion of skin from the external and posterior surfaces of the affected side of the scrotum. After this flap, the extremities of which are directed upwards and downwards, has been dissected away, the enlarged veins are exposed, and resected separately between two ligatures. The large and gaping wound is finally closed by bringing the lower to the upper angle of the ellipse, and by stitching together the apposed margins of skin. This operation may be performed rapidly, and without much hæmorrhage, and is in many respects superior to that in which a portion of the scrotum is removed by a transverse wound.

MIDWIFERY AND DISEASES OF WOMEN.

(442) Rapid Dilatation of the Os during Labour.

Demelin (*Rev. Obstét. Inter.*, November 11th, 1895) has found this proceeding necessary in many cases. In the interests of the mother he has dilated the os for eclampsia in 2 cases; faulty insertion of placenta, 5 cases; cardiac asphyxia, 1 case; and apoplexy, 1 case. In order to save the child, he has dilated the os for lingering labour in 5 cases; rigidity of the cervix, 3 cases; shoulder presentation, 3 cases; face presentation, 1 case; compression of the funis in vertex presentation, 4 cases; prolapse of the funis in 3 cases; and amniotic infection in 2 cases. In this last class, the infection of the waters, especially when the membranes have ruptured early, is serious for the mother, but especially grave for the child. In order to save it from pneumonia or infectious enteritis which come on soon after birth, it must be removed as quickly as possible from its poisonous surroundings. In eclampsia rapid dilatation is indicated, and it speedily terminates a perilous delivery without in itself increasing the number of convulsions. Demelin maintains that rapid delivery is quite the order of the day, the old prejudice having passed away. In the circumstances given in detail above it is dangerous to wait for complete spontaneous dilatation. On the other hand Demelin admits that the practice is likely to be abused.

(443) Congenital Sacral Tumour Impeding Labour.

Heinrich (*Centralbl. f. Gynäk.*, No. 46, 1895) attended a woman who had borne one child, the labour being complicated by rupture of the perineum. On this occasion the fœtus lay in the first position; the pelvis seemed normal. The mother had albuminuria and œdema of the feet. When labour came on it proved lingering without evident cause, the pains being strong. The forceps was applied and the head delivered, two incisions being previously made in the vagina with the view of preserving the perineum, already in danger. The body followed the head and projected from the vulva as far as the lower angle of the scapulæ, but could not be drawn out any further. The child breathed well and cried out loudly. On exploration the cord and the fœtal abdomen were found normal, as well as the external parts. A tense fluctuating tumour could be felt in the sacral region. It was as big as a man's head. Heinrich made the midwife draw down the head of the child, and then took a Nägele's perforator in his right hand, guiding the point up to the tumour by aid of the left forefinger. With a smart thrust the tumour was perforated and a quantity of serous fluid escaped. As the perforator was being retracted the rest of the child with the tumour was delivered. The perineum, completely torn, was sewn up at once. The child

died in half an hour. It was a well-developed male; the tumour was clearly a teratoma and contained a square piece of bone and numerous small cysts. There was no spina bifida.

(444) Sepsis during Pregnancy.

BAR AND RENON (*Répert. Universel d'Obstét. et de Gynéc.*, September 25th, 1895) read at the recent congress at Bordeaux a clinical report of a case of "streptococcism" in pregnancy. A woman was admitted into hospital suffering from high fever. She was about eight months pregnant, and occasional pains set in. Some cervical secretion was removed for examination before any obstetrical manipulations. Cultivations proved that the secretion contained streptococcus. As the patient was very ill labour was hastened. Specimens of placental maternal blood were cultivated, and colonies of pure streptococci were obtained. The child died before birth; samples of its blood from the placenta, liver, and heart, and fragments of the liver and lungs were cultivated. The cultures remained sterile. The mother died fifty-three hours after delivery, and pus was found in the parametrium. Bar and Renon maintain that the "streptococcism" provoked labour. Though the fœtus succumbed, there is no evidence that the germs invaded the fœtal organism through the placenta.

(445) The Uterus in Ectopic Gestation.

PILLIET (*Ann. de Gynéc. et d'Obstét.*, October, 1895) has studied the histology of the modifications which the uterus undergoes in tubal gestation. He finds that the development of a decidua in its empty cavity during ectopic pregnancy is more than a pathological phenomenon; it is a distinct clinical complication. As long as the decidua remains in place the uterus is practically in a condition of subinvolution; hence both hæmorrhages and membranous dysmenorrhœa may occur. When the decidua has been shed there is danger of diffusion of metritis to the whole uterine muscle. Pilliet adds rather significantly that the etiology and pathology of endometritis are both obscure, and that probably ectopic gestation, overlooked in its early stages, may account for many peculiarities in cases of endometritis hitherto hard to explain.

(446) Ruptured Interstitial Pregnancy.

DUNNING (*American Gynecol. and Obstet. Journ.*, November, 1895) operated last April on a patient who had been seized the day before with violent pain and collapse. She believed herself to be two months pregnant. She was almost moribund before the beginning of the operation. During the preparations, 8 ounces of saline solution were transfused into the cellular tissue of the patient in the inframammary region. Strychnine and whisky were given hypodermically and also nitroglycerine. A large amount of blood was found in the peritoneal cavity. The tubes seemed to be normal, but the uterus was enlarged and there was a rent on its upper aspect posteriorly, from which a portion of placenta protruded. A small artery in the raw surface of the lacerated uterine wall was bleeding feebly. It was tied, and then the patient seems to have died suddenly. Death apparently could not be attributed to the anæsthetic—ether. On further examination the canal of the uterine end of the right Fallopian tube was seen to be dilated and continuous with the gestation cavity within the uterine cornu. The walls of the cavity were uterine; they were very thin around the rupture. Dunning believes that hysterectomy involves too much shock in cases of ruptured tubo-uterine sacs. He thinks that drainage after closure of the rent by sutures, or sewing the sac to the lower angle of the wound, with drainage from above and through the uterine cavity, would be better if practicable.

THERAPEUTICS.

(447) Pituitary Extract in Acromegaly.

MARINESCO (*Sem. Méd.*, November 13th), reports three cases of acromegaly in which he gave pituitary gland substance. In two of the cases the patients, a woman aged 53, and a man of 54, were examples of the massive type of the disease; the third, a woman aged about 30, was an example of the giant type. Under the treatment the headache which, in the "massive" cases was extremely violent, diminished considerably in intensity, but the remedy had no effect on the neuralgic pains in the limbs. The general condition was improved, but Marinesco could not detect the slightest diminution in the size of the affected extremities. The most definite objective effect of the treatment was increased diuresis. Without denying that suggestion may have had some part in the matter, Marinesco believes that the treatment had some action either on the pituitary tumour or on the encephalic circulation. Marinesco stated that both Marie and he believed that acromegaly depends on perverted function of the pituitary gland, but they reject the hypothesis of Tamburini and Massalongo that the hypertrophy of acromegaly is a result of pituitary hypersecretion. In certain cases *post-mortem* examination has shown that the pituitary body had undergone a heterogeneous transformation, the gland cells having been replaced by elements of a different kind, incapable of supplying the normal secretion of the gland.

(448) Subcutaneous Injection of Fat.

LEUBE (*Verhandl. des Congresses der Int. Med.*, Twelfth Congress, p. 418) was led, by observing the harmlessness of the hypodermic injection of even large quantities of olive oil (used as a menstruum for camphor) to make some experiments on dogs to ascertain whether fats injected under the skin would be absorbed and assimilated. He found that this was the case. Thus a dog, which on a diet of fat-free horse-flesh was brought to a constant weight of about 10.8 kilogs., was, while kept on the same diet, given in daily injections under the skin in all, during a period of two months, 3,450 g. of butter, rendered fluid by warming to the body temperature. It increased in weight to 13.175 kilogs., a gain of 2,225 g. Another dog, weighing 3.850 kilogs., received about 1,400 g. of butter by daily injections under the skin in the course of forty-five days, and during the same period increased in weight to 5.350 kilogs. Chemical examination afforded evidence that the fat accumulated about the viscera and in the mesentery was approximately of the same composition as that of a dog fed in the ordinary way—that is, that the butter fat had not merely accumulated in the body, but had been truly assimilated. Much butter, however, remained unchanged under the skin. Leube believes that these observations have a practical therapeutic importance.

(449) Transfusion in Chronic Anæmia.

EWALD (*Berl. klin. Woch.*, November 11th, 1895) speaks of the life-saving effect of transfusion in the severest forms of chronic anæmia, and relates an illustrative case. A patient, aged 32, the subject of this primary anæmia, was so collapsed that it was necessary to use camphor injections hourly. The blood showed very slight poikilocytosis and no leucocytosis, but it was extraordinarily watery and thin. The liver was somewhat enlarged and tender. The urine contained no albumen or sugar. Transfusion was adopted as a last resource; 85 c.cm. defibrinated blood, obtained from the patient's wife, was injected with all the usual precautions. The author always employs this arm-to-arm transfusion as being the simplest and the best method. Improvement was noted from this time. The man gained 5 kilos in weight. The number of red blood cells increased as well as the hæmoglobin. The slight poikilocytosis still persisted. In the occasional attacks of diarrhœa the stools were very offensive and frothy; no animal parasites or their eggs were present, but abundant micro-organisms. Once an erythema bullosum appeared in the mouth, for which balsam of Peru and cocaine applications before meals were employed. In less than a month the patient was able to travel to Baden-Baden. Although greatly improved, he still remained anæmic. The author then discusses auto-intoxication as a cause of pernicious anæmia, and he suggests that the injected blood might have such an antitoxic action as to neutralise poisons which increase at times to a maximum, and then call forth such accidents as were seen in the above recorded case. The supplementary treatment consisted in arsenic, antifermentative remedies (bismuth, etc.), and light vegetable in preference to animal diet, including prepared foods.

(450) Parenchymatous Injections of Arsenic in Cancer.

F. HUET, of Rouen (*Sem. Méd.*, November 6th) has tried injections of arsenic in inoperable cancerous tumours. For

this purpose he first used a 1 in 1,000 solution of arsenious acid; now he employs the following: ℞ Arsenious acid, 0·30 centig.; hydrochlorate of cocaine, 1 g.; boiled distilled water, 100 g. One or two Pravaz syringefuls of this liquid are injected into the substance of the tumour at intervals varying from two to eight days. In a case of epithelioma of the cheek, which had recurred after operation and was accompanied by swelling of the neighbouring glands, Hue claims to have effected a complete cure by daily injections during several months of 1 in 1,000 solution of arsenious acid. During the treatment, however, the patient had two attacks of erysipelas, and this may have had a curative influence on the tumour. A woman with cancer of the breast, under Pianel of Beaumont-le-Roger, is also said to have been cured by the same treatment. The method has been tried in several other cases of recurrence of cancer; in some the progress of the disease has been distinctly retarded, in others the treatment had no effect.

(451) **Quinine as a Prophylactic against Influenza.**

Graeser (*Wien. klin. Rundschau*, November 10th, 1895) was led to try the effects of quinine in the prevention of influenza by the similarity shown by the onset and course of this disease to those of malaria. During the influenza epidemic he administered quinine to some of the employees of various establishments but not to others, and found that the former acquired a considerable amount of protection. Thus, for instance, in one out out of five squadrons encamped at Bonn, 0.5 g. quinine hydrochlorate was administered daily to each man in his schnapps for twenty-two days. During this treatment only 7 men in the squadron contracted influenza, of whom 3 fell ill on the first day of the experiment; in the other four squadrons there were respectively 22, 19, 32, and 42 cases. After the sixth day of treatment there were no further cases in the squadron, while the disease continued to progress in the other detachments. Graeser therefore considers it proved that quinine is not only a specific against influenza, but if given at the right time and in sufficient doses, can also prevent the outbreak of the disease. Mossé has more recently confirmed these views by experiments on rabbits.

(452) **Thyroid Treatment in Goitre.**

Marie (*Sem. Méd.*, November 13th) recently reported to the Paris Société Médicale des Hôpitaux the case of a girl aged 19, belonging to La Creuse, in whom a goitre had begun to develop at the age of 14. When she came under observation it was of the size of half an average orange, and hard in consistence, but elastic. On September 14th, she began to take two tablets of sheep's thyroid every day. On the 19th the neck was distinctly smaller, and on the 26th it was found by measurement that the swelling had diminished in the transverse diameter (at the level of the clavicles) from 80 to 45 millimetres, and in the vertical from 55 to 40 millimetres. The goitre was also much softer. At this time slight symptoms of thyroidism (weakness, trembling of limbs, headache, pains in the limbs, nausea) showed themselves. The patient had to go home, and has not been heard of since. This case, together with similar ones reported by Séné and Bruns, appears to Marie to warrant the conclusion that in a certain number of cases of simple goitre, thyroid treatment is useful. Bruns treated 60 cases in this way with the following results: 14 cures, 20 very marked improvements, 9 distinct improvements. The indications of the treatment, according to Bruns, are that the tumour shall be of moderate size, of recent origin, and the patient young. Marie's patient lost 3 pounds in weight during the treatment.

(453) **Ichthyol in the Treatment of Burns.**

Leo Leistikow (*Monatsh. f. prakt. Derm.*, November 1st) has during the last six years used ichthyol in the treatment of burns of the first and second degree with the best results. The application of this substance at once eases pain and the anodyne effect is lasting. Even in extensive burns of the second degree the œdema quickly subsides, the hyperæmia disappears, and as soon as the destroyed tissue has been shed the regeneration of epithelium begins. The remedy can be applied in many different ways—in powder, in wet compress, in collodion, in salve or plaster mulls, varnishes, ointments, or pastes. Leistikow mostly uses it in powder, in paste, or in salve mull. The latter is best used in the form of zinc-ichthyol salve mull (Beiersdorff) and is most serviceable in circumscribed burns of the first and second degree, particularly on the face and extremities. The dressing should be changed once every twenty-four hours. The powder is most useful in extensive burns of the first degree on the trunk, and it must be sprinkled thickly and frequently on the part. The paste is used in extensive burns of the second degree, and when there is much inflammation it is advantageously combined with the powder treatment. The formula of the powder is: ℞ Zinc. oxydat., 20.0; magn. carbonic, 10.0; ichthyol, 1.0 to 2.0. That of the paste is: ℞ Calcar. carbonic., 10.0; zinc. oxydat., 5.0; amyli, 10.0; ol. zinc., 10.0; aq. calcis, 10.0; ichthyol, 1.0 to 3.0.

PATHOLOGY.

(454) **Parasites in Variola.**

V. Sicherer (*Münch. med. Woch.*, August 20th, 1895) first refers to the researches of Guarnieri and L. Pfeiffer into this subject. The author has inoculated the conjunctiva of the rabbit with lymph taken from the vaccine pustule on a child's arm. Inflammatory manifestations were but very slightly marked. In twenty-four hours the site of the inoculation looked dull. A few grey miliary points could be discovered with a lens in the neighbourhood. An ulcer of the cornea subsequently developed. The further progress was obscured by the increased exudation of leucocytes. A hypopyon at times appeared. The eye was excised, placed in 3 per cent. nitric acid for half an hour, then hardened in alcohol of increasing strengths, and embedded in paraffin. A proliferation of epithelium was seen in the neighbourhood of the inoculation. In nearly every epithelial cell there was besides the nucleus a rounded well stained body surrounded by a clear space, and similar to the organism described by Pfeiffer. Sometimes two such bodies would be found in the same cell at the different poles. As a rule the superficial and flattened cells were not involved. Not only the pre-existing cells were affected, but also newly developed cells in active proliferation. Very slow amœboid movements have been observed in these parasites by Pfeiffer and Guarnieri. The author concludes that here, after the inoculation of lymph from a child's arm, a localised infection ensued which was caused by the animal parasites (cytoryctes) described by Pfeiffer and Guarnieri. The affected cell retains its life for a long time, and the organism grows at the expense of the general protoplasm of the cell, the nucleus being spared.

(455) **Transmission of Tuberculosis through the Placenta.**

Bar and Rénon (*Ann. de Gynéc. et d'Obstét.*, September, 1895), in 5 cases in which the parturient mothers were tuberculous, at the moment of division of the umbilical cord, injected blood from the placenta under the skin of the abdomen in guinea-pigs. In 3 cases the results were negative; in 2 positive. In the first of these the mother was in the third stage of phthisis, with bacilli in the sputa but no obvious lesion in the placenta. At the seat of injection an ulcerated tuberculous sore formed in the guinea-pig, and two months later it died from tuberculosis of the liver and spleen, and tubercle bacilli were found in the spleen and in the caseous masses at the wound. The fœtus had died shortly before birth; no tubercle was detected in its organs; but of 3 guinea-pigs injected with pulp from the viscera, 2 succumbed and showed evidence of tuberculous infection. In the second case the mother had cavities in the lungs, and the child died of bronchopneumonia on the fortieth day. At birth 2 guinea-pigs were injected with blood from the placenta; 1 of these died and presented extensive tuberculous lesions, and the pulp taken from the spleen and injected into other guinea-pigs caused generalised tuberculosis, which the presence of bacilli in microscopic preparations verified. The 2 mothers referred to died soon after confinement so that there seemed to be some relation between the obtaining of positive inoculation results and the gravity of the condition of those from whom the inoculations were made.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(436) Primary Pulmonary Actinomycosis. ASCHOFF, of A. Fraenkel's clinic (*Berl. klin. Woch.*, 1895, Nos. 34 to 36), first refers to the three stages described by Israel as follows: (1) Limitation of the disease to the lungs; (2) extension by contiguity or by metastasis; and (3) rupture upon the surface. The recognition of the disease in the first stage from tuberculosis may be very difficult. Actinomycosis spares the apices, and there is no marked hæmoptysis, although the sputum may be blood-stained. The presence of the fungus in the sputum is the most important fact. In the second stage a partial shrinking of the lung occurs, with exudative pleurisy. When the chest wall begins to soften an empyema may be simulated. More recently some of these points advanced by Israel have been controverted. Actinomycosis has been known to affect the apex of the lung, and the shrinking is not so constant as was thought. It has been maintained that not suppuration but tumour formation is the characteristic of this mycosis. The fungus may not be found in the sputum or even in the pus. It has been maintained that not only the teeth and tonsils may be the original source of the lung infection, but that the fungus may be directly inhaled. In the case reported by the author there was on admission a right-sided pleural effusion with flattening of the upper part of the chest. A systolic murmur was heard over the base of the heart. Later there was a moderate hæmoptysis lasting four days. Clear fluid was drawn off by the exploring needle. No tubercle bacilli, tumour elements, elastic fibrils, or fungi were found in the sputum though repeatedly looked for. Later a local bulging below the right breast was noted, and eventually pus containing the actinomyces was obtained from this. A day or two later about 150 c.cm. of pus containing the fungus was spat up. An incision was made into the chest at the site of the bulging, and stinking pus containing the actinomyces was let out. Peritoneal symptoms eventually appeared, and the patient died. The author draws attention to the following points in the case: (1) The infection was derived from a carious tooth; (2) the disease lasted over two years; (3) the diagnosis lay between tuberculosis, echinococcus, and possibly malignant tumour; (4) the pus has a characteristic smell, and may in all probability be caused by the actinomyces alone; (5) the sputum is often flesh-coloured or like blackberry jelly, and may simulate that of tumour of the lung; (6) an appreciable glandular swelling was not present; (7) the extension occurred by contiguity; and (8) the urine showed the diazo reaction. He adds that in an early stage it might be possible after resection of ribs to scrape away the disease.

(437) Syringomyelia. MÜLLER AND MEDER (*Ztschr. f. klin. Med.*, Bd. xxviii, H. 1 and 2) relate a case in a man aged 43. The disease had lasted over ten years, and the patient died of phthisis. The clinical picture of the disease was fairly characteristic. It is worthy of note that, after sensory symptoms in the arms and legs, a complete paralysis occurred in the limbs which after some months disappeared entirely from the legs, but only incompletely from the arms. A year and three-quarters before death symptoms very like those of tabes supervened in the legs, but they disappeared in a few weeks, and no corresponding lesion could be found to account for them. A kyphosis developed as the result, and not as the cause, of the disease owing to the weakness of the extensor muscles of the neck. The anatomical changes were different from those usually found. Thus overgrowth of the glia was but slightly marked, and the disintegration of the substance of the grey matter was the cause of the cavity formation. In larger or smaller areas of irregular outline there was a diminution of the nerve elements, with shrunken ganglion cells without nuclei, and varicose and broken up nerve fibrils. These disintegrating changes were almost limited to the grey matter, and were obviously in connection with disease of vessels. In the lower dorsal region Goll's column was degenerate, apparently in consequence of vascular obstruction, but higher up it was intact. A defect was present in the medulla, and the ascending roots of the trigeminus and glosso-pharyngeal nerves as well as a portion of the restiform body were absent. In discussing the characters of the cavities in the medulla, it is mentioned that the bulbar symptoms develop intermittently in this disease so that ischæmic processes would seem to be the cause. The case shows that vascular disease may play a greater part in syringomyelia than has hitherto been expected. Syphilis does not appear to play so important a part in producing syringomyelia as might have been anticipated. The authors point out (1) that in spite of considerable meningitis with obvious pressure on the posterior roots there was no degeneration of the corresponding root zone and no lesion resembling that found in locomotor ataxia, and (2) that where no gross lesion, such as softening, glia overgrowth, etc., was present, the ganglion cells were at times seen to be diminished in numbers, shrunken, and pigmented.

(438) The Value of Gastro-diaphany. MEINERT (*Centralbl. f. inn. Med.*, November 2nd, 1895) first refers to Martin and Meltzing's investigations into this subject. Kelling has examined 11 cases in the author's clinic by the diaphanoscope and also volumetrically by inflation with air after the author had determined the condition of the stomach by the usual (X) method. In one case the lower boundary of the stomach was found by the author to have been raised after the distension to three fingers' breadths above the umbilicus. Kelling obtained a similar result a few days later by the volumetric method. A few days afterwards ½ of a litre of water was put into the stomach and the gastro-diaphanoscope used. The limits of the figures obtained were marked out on the abdominal wall. In varying positions of the lamp different pictures were obtained. In cases of gastroptosis a correct representation may be got of the lower margin of the stomach, but no information can be obtained in regard to the upper margin. The diaphanoscope can only occasionally be of use. It may facilitate the detection of tumours in the neighbourhood of the spleen, also the topographical determination of palpable tumours of the stomach and parts in the neighbourhood. Any attempt to determine the position, size, and shape of the stomach by this means is not only unsuccessful but may mislead.

SURGERY.

(439) The Operative Treatment of Simple Fractures. In a discussion at the recent Congress of French surgeons, Berger (*Méd. Moderne*, November 2nd, 1895) pointed out that in simple fractures in the shafts of long bones primary operation has not been seriously proposed except in cases of broken clavicle and leg. In fracture of the clavicle, except when this injury is complicated by vascular or nerve lesions, surgical intervention, it is held, is unjustifiable. The results obtained by ordinary treatment are very satisfactory with regard to function, and the swelling caused by the formation of callus cannot be prevented by operation, and, after such treatment, is associated with a scar which is more objectionable than the deformity caused by the injury. In fractures of the leg, especially the oblique and so-called helicoid forms, an apparatus which will ensure consolidation without shortening of the limb has yet to be found. The cause of the partial irreducibility consists in the obliquity of the corresponding surfaces of the fragments, and in the action of the strong muscles at the back of the limb. Osseous sutures, Berger urges, would fail altogether to overcome these difficulties, and would add fresh risks and troubles. Callus obtained by osseous sutures is always more abundant and more sensitive than callus that is spontaneously developed. The presence in the interior of bones of metallic bodies may, moreover, be the cause of serious and persistent evils. Even the most obstinate forms of fracture of the leg may be treated successfully by careful management, and by refraining from the immediate application of a rigid apparatus such as a plaster-of-paris splint. Reduction should be effected gradually and progressively, and not until it has been rendered as complete as possible ought

any immovable apparatus to be applied. Berger thinks that no surgeon is justified in exposing the seat of fracture in a leg with the view of placing the fragments in good position and of uniting them by wire suture, except in the very exceptional instances of persistent irreducibility due to the interposition of isolated pieces of bone, and of bands of ligament, periosteum, or muscle. With regard to articular fractures it is thought that only those of the elbow and knee, on account of the bad functional results so frequently observed after such injuries, should be subjected to primary intervention. Fractures of the elbow often cause persistent osseous deformity and restriction of movement in the forearm, but it is very doubtful whether such unfortunate results can be modified by osseous suture of the fragments. In condyloid fractures of the knee in which the fragments are more superficial and offer better opportunities for the application of retentive agents, the use of pegs or metallic sutures is more frequently indicated. But, it is pointed out, as the danger of operative infection of the knee is so great, surgical intervention ought not to be advised except in cases of exceptionally extreme displacement which has resisted very energetic attempts at reduction. Berger excludes from this consideration fractures of the olecranon and patella.

(460) Skin Grafting from the Lower Animals.

Miles (*Edinburgh Hosp. Reports*, iii) has used skin grafts taken from the lower animals in 10 cases, 8 of which were burns or scalds—1 a varicose ulcer of the leg and 1 a wound made by excision of the breast. In 7 instances the skin was taken from kittens varying in age from 2 to 7 days; that of 4-day rabbits was twice used, of puppies twice, and of an old frog once. Thus in two cases the patient was at different periods grafted with skin from animals of varying species. The ulcers having been rendered healthy it was found that the grafts took equally well whether applied on top of the granulations or after the superficial layer of granulations had been scraped away. The animals were killed by pithing, chloroform, or a blow on the nape of the neck, the skin of the abdomen and flanks shaved, purified with 1 in 40 carbolic, and then dissected off from the subcutaneous fat, and floated on to warm boracic lotion. After being cut into pieces of suitable size and shape it was applied, deep surface down, to the ulcers. Firm pressure was made by a moist pad of gauze, over which were narrow strips of oil silk protective. A pad of moist gauze formed the deep dressing, which was covered in by absorbent antiseptic wool and a bandage, with, if necessary, a splint to prevent movement. The grafts were left undisturbed for at least forty-eight hours (longer, if possible), and subsequent manipulations were extremely gentle, so as not to disturb the feeble adhesions at first formed. No wiping was allowed, any *débris* being removed by a very feeble stream of lotion. The process was occasionally complicated by sloughing, pustulation, and redundancy of granulations. In 4 cases out of the 10 the results of the grafting were perfectly successful (one of these unfortunately died of erysipelas when the ulcer was practically well); in 4 more the success was only partial, though Miles believes that the animal grafts were most useful in stimulating the margins of the sores. In the other 2 cases, one a callous ulcer of longstanding in an old man, the other a burn in a rickety girl, for which Thiersch, Reverdin, and flap operations had been equally unsuccessful, no benefit resulted from the grafts. The scars in the successful cases were exceptionally strong and firm.

(461) Conjunctivitis due to Larvæ.

Baquis, of Leghorn (*Annal. di Ottalmol.*, Fasc., 4, 1895) relates a case of acute conjunctivitis due to the larvæ of one of the tachinariæ (class diptera) being deposited in the conjunctival sac. The patient, a mechanic in the naval dockyards, was at his work in the morning when an insect flew into his eye and then off again. The eye became irritable, and on this increasing a comrade examined it and saw some grains of what he took to be sawdust. The eye was washed out, and this afforded some relief for the time; but by the evening the pain was again very great, the lids swollen, and the conjunctiva very injected. On everting the lids Baquis found a great number of whitish little bodies, the size of a fly's egg, which moved about rapidly; when he attempted to remove them he found it impossible to do so, as they fixed themselves to the conjunctiva. On instilling cocaine, the movements of the larvæ became quieter, and they allowed themselves to be removed. The eye was then irrigated with perchloride of mercury 1 in 4,000 and ¾ per cent. sodium chloride, and was quite well on the third day. Microscopical examination of one of the larvæ showed it to be elliptical in form, and made up of twelve metameres; each metamere was provided with lateral setæ, of which there was also a median ventral series. Its movements were vermicular. A diagram of the larva is appended. Nearly all the members of the family of tachinariæ deposit their eggs on other creatures, principally caterpillars, where they develop into larvæ. Baquis had heard of two other cases similar to his own.

MIDWIFERY AND DISEASES OF WOMEN.

(462) Digital Exploration in Midwifery.

Crouzat (*Rev. Obstét. Internat.*, October 21st, 1895) does not agree with certain German obstetricians who would discard digital exploration in normal labour, relying on abdominal palpation. The diagnosis of normality may demand the introduction of the finger into the vagina. Crouzat's principles simplify digital exploration and guard against its dangers. Vaginal examination, he thinks, should be made as seldom as possible. One exploration at the beginning of labour and another immediately after the rupture of the membranes are usually sufficient. His practice is to make the external parts antiseptic; then the hands and forearms are washed and brushed thoroughly. The nails must be specially attended to. The washing is afterwards repeated in a 1 in 1,000 solution of sublimate. Great care in the introduction of the forefinger is strongly advocated. It should be dipped in sublimated vaseline and guarded by the thumb and the other fingers whilst the hand is passed under the clothes and near the patient's thighs. On reaching the perineum the labia are parted by the thumb and middle finger. The forefinger is lastly introduced into the vagina without having touched any part of the patient or her clothes since the instant it was made aseptic.

(463) Dermoid Ovarian Cyst of Unusual Size.

Ullmann (*Wiener med. Presse* September 22nd, 1895) states that a married woman, aged 53, recently came under Professor Hofmokl's care for a large ovarian tumour. She said that it had only been growing for a year. The abdominal swelling was marked, the skin shiny, the subcutaneous veins dilated. The uterus was drawn up high, and measured 2½ inches. Part of the tumour lay in Douglas's pouch. When the cyst was exposed and tapped 13 pints of a greasy fluid escaped. Great care was taken to keep the fluid from escaping into the peritoneum. There was a soft parietal adhesion, easily separated. The pedicle was very broad. Three interlocking ligatures were applied, and it was divided by a thermocautery. A drainage tube was applied, and left in for five days. The patient made a very good recovery. The tumour weighed over 35 lbs. It consisted chiefly of one large cavity, which had contained the greasy fluid, and still held masses of fat and hair. The remainder of the tumour, as is usual in dermoids developing late in life, was multilocular and glandular as in the commoner form of cyst.

(464) Œdema and Prolapse of Cervix in Pregnancy and Labour.

Swift (*Australasian Med. Gaz.*, September 20th, 1895), in reference to Geyl's recent memoir (Epitome, July 20th, No. 55), believes that Geyl is in error in asserting that the above condition is so very rare. More probably many cases have not been reported. Swift has seen three cases during the last four years. The first was in the third month of pregnancy; there was much bearing down. An œdematous cervix protruded from the vulva. It was easily replaced and the patient was kept at rest. A three months' fœtus came away on the night after reduction of the cervix. On the same evening Swift was called to another and similar case. The patient was five months pregnant, and

thought that the womb had fallen. The cervix was extremely elongated and œdematous, protruding through the vulva. It was reduced without difficulty; the patient remained in bed for two days. She was delivered easily at term. The third case was six months pregnant. The womb was said to be down, and there was troublesome smarting. Swift found the cervix outside the vulva very œdematous and excoriated in several places from chafing. Reduction and pessaries proved of no permanent benefit. A T-bandage and a pad were applied and the patient kept at rest till term. The os dilated easily, and labour was in no way impeded.

(664) Acute Yellow Atrophy following Twisted Pedicle and Ovariotomy.

Stocker (*Centralb. f. Gynäk.*, No. 45, 1895) observed a tumour in a woman, aged 25, shortly after delivery. It was chiefly in the right side of the abdomen, and lay separate from the uterus. Suddenly violent pain set in, and torsion of an ovarian pedicle was suspected. Ovariotomy was performed; a large cyst with a pedicle twisted four times was removed. The tumour, which had developed in the right ovary, was livid, and full of recent clot. There were no adhesions. Some bloody serum lay in Douglas's pouch. On the second day the patient became restless, then sleepy, and next day she was comatose. Urine was secreted sparely, and contained much albumen. The conjunctivæ at length became distinctly yellow. The abdomen never felt tense to the last, the patient dying on the fourth day. The liver was found to be very small, flaccid and intensely yellow; there were minute ecchymoses sparingly spread over its surface. The urine contained leucin and tyrosin crystals. There was no trace of peritonitis, and the pedicle was healthy. Stocker believes that the liver disease began before the ovariotomy, and was due to the torsion of the pedicle, necrosed products being absorbed into the circulation.

(665) Myoma of the Uterus.

Hickan (*Virchow's Archiv*, vol. cxliii, Part 2, November, 1895) has made researches in order to throw light on the true origin of uterine fibroid. He does not support the opinion of Kleinwächter and others that the muscle cells in a myoma were originally discarded, so to speak, from arterioles subsequently blocked. There is strong reason to believe that myoma has usually an embryonic origin. In certain cases very distinct epithelial relics are found in myoma. These seem to represent remains of the primitive epithelium of Müller's duct. Relics of the Wolffian duct are decidedly to be found in the uterine wall; in fact, Ricker seems as certain as Cohnenz as to the persistence of this duct and its relation to new growths. Abnormal ingrowths of muscle cells around the duct are represented in Ricker's drawings. Hence it is probable that every myoma originally arises from some abnormal growth of muscle around the Wolffian duct in the uterine wall, or around epithelial relics from the Müllerian duct, relics which may even be distinct diverticula not entirely effaced after the fusion of that duct with its fellow to form the uterus. Ricker notes that, on *a priori* reasoning, cancerous changes in a myoma ought not to be rare, since epithelial elements originally form an essential part of that new growth. Yet he admits that not a single authentic case of cancerous degeneration of a myoma has ever been recorded. Sarcomatous changes have been detected by good authorities, but so rarely that a "fibroid" is practically as innocent as a true fibroma developed in any part of the body.

THERAPEUTICS.

(667) The Antithermic Analgesics.

J. Schmitt (*Rev. Méd. de l'Est*, October 15th), reviews, chiefly clinically, these remedies. They may be classed as follows: (1) Phenol group, with phenic acid as its chief. The chief action of these is antiseptic. Their analgesic powers are feeble. The objections are, that they are protoplasmic poisons, they paralyse or destroy the blood corpuscles, and depress or paralyse the nervous system. Their antithermic action is energetic but transitory. More permanent reduction of temperature can be obtained only at the risk of dangerously toxic doses, or at that of inducing cachexia and profound anæmia by frequently repeated small doses. (2) The aromatic acid group, chief of which is salicylic acid. The chief characteristics are a still predominant antiseptic action, less toxicity than group 1 owing to the substitution of COOH for OH. Apart from rheumatism their analgesic power is weak. The large doses required to lower temperature, cause digestive troubles, buzzings in the ears, and even cardiac enfeeblement and renal irritation. But with undamaged kidneys they increase diuresis and depurate the blood of extractives and nutritive residue. (3) The anilide group. Its antiseptic properties, though strong, are less than those of phenol and salicylic acid. The fall of temperature caused is rapid but transitory, with abundant sweats, shiverings, cyanosis, and often hæmoglobinuria. (4) The phenylhydrazin group which are even less satisfactory than the anilides. Like the latter, they are eliminated as amidophenol derivatives. (5) The Chinoline group possess considerable antifebrile and antiseptic properties, but are liable to disorder the digestive tract, and to give rise to severe nervous symptoms. Their antithermic power is fugacious, attended by profuse sweating, collapse, etc., and attended by too severe corpuscular destruction. Hence, as a group, they are not satisfactory. (6) Pyrrol group, the most important and almost the sole representative of which is antipyrin. Endued with a real antifermentative and microbicidal action, almost inoffensive as regards the blood, it possesses antithermic and analgesic properties second to none. A few derivatives of antipyrin must be mentioned—salipyrin, tolypyrin, tolysal—which do not present any special advantages.

(668) Apolysin and Citrophen.

Hildebrandt (*Centralbl. f. ges. Med.*, November 9th, 1895) first discusses the chemical composition of these bodies, which are combinations of phenetidin with citric acid. The phenetidin molecule is more loosely combined in citrophen than in apolysin. In experiments made on mice citrophen acted very much like phenetidin chloride. The latter is recognised as a blood poison. When citrophen was given to dogs an intense indol reaction could be demonstrated in the urine, and there was [illegible] anuria with irritation symptoms from the side of the kidneys. It is to be observed that citrophen contains 40 per cent. phenetidin and as much as 76 per cent. phenacetin. The author warns against the unrestricted use of citrophen. Apolysin has been recommended as a quicker and more reliable antipyretic and analgesic than phenacetin. Its toxic properties are far less marked. In his experiments the author shows that in weak HCl solutions apolysin is more easily split up than phenacetin (lactophenin occupying a middle place), whereas in alkaline solution phenacetin splits up more readily than apolysin. These experiments explain the harmlessness of apolysin when injected subcutaneously into the alkaline tissues. The readiness with which apolysin splits up in acid solutions is a disadvantage when it has to be given by the mouth; in marked hyperacidity a large quantity of phenetidin may thus be disengaged. This phenetidin can produce irritation symptoms in the stomach and duodenum, and even jaundice. Recently some unpleasant effects of lactophenin have been reported; lactophen would be more easily split up in acid gastric juice than phenacetin. Von Nencki and Jaworsky (Epitome, November 30th, 1895, par. 439) have used apolysin as an antipyretic and analgesic, and have found the indol reaction in the urine. Here the drug was administered by the mouth. It would be interesting to know whether the same result would arise if it were given subcutaneously.

(669) Treatment of Zoster.

A. Ronin (*Bull. de Thér.*, October 30th), says that in herpes zoster the treatment has to be directed to the eruption, to the neuralgia which precedes and accompanies it, and to the pain which persists after the disappearance of the skin lesions. Treatment should always be begun by the administration of a saline purge, preferably sulphate of soda. In dealing with the eruption, the affected part must be kept absolutely dry; the painful region should be covered with a layer of cotton wool sprinkled with the following powder: Starch powder, 60 g., oxide of zinc, 15 to 20 g., powdered cam-

phor, 1 to 3 g., crude opium powdered, 1 g. In old people special care should be taken to prevent ulceration. For the neuralgia the following pills are given by Robin: ℞ extract of stramonium, extract of hyoscyamus, āā 0.01 g., extract of belladonna, 0.005 g. To make one pill. Four of these to be taken daily. If these pills do not relieve the pain, antipyrin must be given internally. This drug should be given hypodermically for the pain which persists after the disappearance of the eruption. Subcutaneous injections of glycerophosphate of soda may also be tried.

(470) Amyl Nitrite in Pneumonia.

Hayem (*Sem. Méd.*, October 11th, 1895) describes the treatment of 77 cases of pneumonia by inhalations of amyl nitrite. It is generally agreed that this drug should be used with great caution, 4 or 6 minims having hitherto been considered as a large dose. Hayem's experiences show that a much larger quantity may safely be used. For a single inhalation he gives 60, 80, or even 100 minims. These are administered 15 minims at a time on a compress held 2 or 3 centimetres from the patient's mouth; the whole inhalation lasting from three to five minutes. In ordinary cases one inhalation a day suffices: in severe cases two, given morning and evening, are better. No accident ascribable to this treatment has followed. The inhalations are continued throughout the illness and for one or two days after the crisis has occurred. The drug does not seem to influence the duration of the disease or the temperature; the effect produced is purely local, consisting of a diminution, more or less marked in the dyspnœa, in a modification of the sputum, which becomes less viscous, and in a diminution of the stethoscopic sounds. It does not seem to affect the virulence of the pneumococci; its action seems to be exercised entirely on the pulmonary circulation, which is probably subject to a sudden flushing with blood, analogous to that occurring in the skin, which hastens the return of the blood by the pulmonary channels and promotes the absorption of the exudation. In eighteen months 77 patients were treated in this way, the deaths numbering 16. A large number of these were bad subjects, being drinkers or confirmed drunkards. Neurotic subjects bear the treatment badly owing to the fears they entertain. It is highly important that during the inhalation the patient should be in the recumbent position.

PATHOLOGY.

(471) A Toxic Substance extracted from the Suprarenal Capsules.

Gourfein (*Rev. Méd. de la Suisse Rom.*, October 20th, 1895) gives the results of his researches. The method at first used to isolate the substance was to precipitate a glycerine extract of the capsules by alcohol. Later, as the glycerine itself proved to some extent toxic, he devised the following method: Cut up and triturate the suprarenal capsules of oxen, calves, or sheep in a mortar with a little water; pour several volumes of warm water over them, and leave in a water bath for a quarter of an hour; filter and add to the filtrate the liquid obtained by pressure from the residue on the filter; evaporate in a water bath to a syrupy consistence, and add four times its volume of alcohol; leave the mixture for twenty-four hours in a cool place and filter. The precipitate by alcohol (chiefly albuminoids), when redissolved in water and injected into animals subcutaneously is quite inactive, but the residue obtained after evaporating the alcoholic liquid is very toxic. This substance, which is not destroyed by heat, injected hypodermically into animals produces a series of constant symptoms. (1) Green frogs, after an injection of a quarter of a Pravaz syringe, become motionless immediately, but are not paralysed, as mechanical irritation of the foot causes reflex action. This weakness increases; if placed on the back the animals cannot turn over again. Respiration is first slowed, then accelerated and weakened, and finally stops. The heart is affected later; in 20 experiments the auricles continued beating twenty to thirty minutes after death. The spinal cord and motor nerves do not lose their electric excitability for three or four hours after death, which ensues a quarter to three hours after the injection. In those frogs where the glycerine extract was used tetanic convulsions also set in. These proved to be due to the glycerine, as in control experiments where glycerine and water (1 to 4) was injected the same convulsions occurred without being fatal. (2). Mammals. The first symptom, after injecting from ½ to 1 Pravaz syringe of the extract subcutaneously in white rats, mice, guinea pigs, and rabbits, is dyspnœa, which progresses till death takes place. Inspiration is prolonged, expiration is short and forcible. Extreme weakness, caused by depression of the central nervous system, is present, but no paralysis. General sensation and the sensorium are intact. Electric excitability of motor nerves lasts fifteen to eighteen minutes *post mortem*, but the vagi are paralysed. If artificial respiration is used in rabbits they die later through paralysis of the heart. Animals which are able vomit repeatedly soon after the injection, this being preceded by copious salivation. The toxic substance, however, is not excreted in the saliva as when precipitated by alcohol; evaporated and injected into mice hypodermically it produces no symptoms. No diarrhœa or intestinal symptoms were observed. In all the experiments on mammals paralysis of the respiratory centre was the principal cause of death. Convulsions were frequently present, but were asphyxial. *Post mortem* the lungs are found congested, the heart flaccid in diastole, the stomach and intestines sometimes hyperæmic. Twenty control experiments where hypodermic injections of extracts of spleen and muscles of the same animals, and prepared in the same way as the suprarenal extract were given to cold and warm-blooded animals, proved that these produce at most a slight *malaise*. The proportion of the active substance present in a given quantity of capsules is very variable, the length of time the animals survive the injection being proportional to this toxicity. Cold-blooded animals are less sensitive to the extract than warm, probably owing to their cutaneous respiration. The author's results differ from some of those obtained by Gluzinski (*Wien. klin. Woch.*, No. 14, 1895), who observed immediately after the intravenous injection of a glycerine extract paraplegia with anæsthesia of the posterior limbs and slight convulsions or even opisthotonos in the anterior half of the body, while hypodermic injection caused only a slight illness with rigors. Vomiting is not mentioned by him.

(472) The Blood Changes in Gastric Disorders.

Blindermann (*Wien. med. Blätt.*, October 31st, 1895) has investigated the blood of 18 patients in Wassiljeff's clinic. Eight of these had chronic gastritis, 2 acute gastritis, 4 gastric ulcer, 4 carcinoma of the digestive tract. In acute gastritis the blood was found to be normal, in chronic gastritis the red corpuscles were normal in number or slightly diminished, the white corpuscles unaffected. In gastric ulcer the leucocytes were normal, the red corpuscles diminished except in one case where hæmatemesis was absent; in the others the diminution was exactly proportional to the amount of hæmatemesis, chlorosis, and melæna. In the cases of malignant disease, however (3 of which affected the stomach and 1 the rectum) there was great diminution in the number of red corpuscles, with (except in 1 case) increased leucocytosis. The percentage of hæmoglobin was much more reduced than in gastric ulcer. Blindermann concludes that: (1) Examination of the blood always affords a means of diagnosis between cancer of the stomach and other gastric disorders, particularly chronic catarrh and dilatation; (2) with rare exceptions the differential diagnosis between cancer and ulcer of the stomach is much simplified by microscopical examination of the blood; (3) in malignant disease of the stomach the diminution in hæmoglobin progresses steadily, whereas in gastric ulcer there is a sudden great drop after hæmatemesis, followed in a few days by return to normal. The only exception to the latter rule is in the rare cases in which pernicious anæmia supervenes; this may be recognised by the constant diminution of hæmoglobin, the number of the red corpuscles, and the presence of poikilocytes, microcytes, and macrocytes; (4) chronic gastric catarrh with marked dilatation causes no definite changes in the constitution of the blood.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(4473) Gastroscopy.

ROSENHEIM (*Deut. med. Woch.*, November 7th, 1895) first discusses the position of the cardia and the course of the lowest part of the œsophagus. He concludes that the usual position of the cardia in the adult is opposite the twelfth, rarely the eleventh, dorsal vertebra. The anatomical relations are important in respect to the gastroscope. He maintains that where it is impossible to pass a stiff tube into the stomach with the patient in the dorsal position, the difficulty is due to muscular cramp or to the physiological bend at the œsophageal foramen in the diaphragm. By introducing the rigid tube from the right side of the mouth, and pressing the point to the left, the lowest part of the œsophagus can be most readily passed. A certain gentle pressure may be necessary, and a change in the patient's position from the back to the right side may facilitate it. In a minority of cases with disease involving the cardia the parts may not be distinctly seen by the gastroscope without an anæsthetic. The author then refers chiefly to Mikulicz's investigations in œsophagoscopy. This authority used a curved tube in order to overcome the difficulty of passing through the lowest part of the œsophagus; he thought that it was impossible to accomplish this with a straight tube. This curve introduces difficulties in respect to the optical arrangements. The author maintains that the optical apparatus should be in the straight line. His observations lead him to say that in nearly 70 per cent. of the cases examined by him a straight gastroscope can be passed into the stomach. Under certain conditions, such as an abnormal curving of the œsophagus due to pathological causes, it may be impossible. A local spraying with cocaine by means of a special apparatus has been tried by the author to overcome the cardiospasm, but with indifferent success. He concludes that with few exceptions it is possible with a straight or slightly curved instrument to get deep enough into the stomach for gastroscopic purposes without an anæsthetic and without doing any injury. One gastroscope will not suit all cases, but a straight instrument suffices in by far the majority of cases. The author gives details of his gastroscope, which is made by Hirschmann, of Berlin.

(4474) Gonorrhœal Pleurisy.

FAIDUT (*Arch. gén. de Méd.*, October, 1895) first refers to the cases reported previous to 1878 which Teissier denied the existence of any conclusive example of this disease. He then mentions the case of Cornil and Klippel, in which a young woman with gonorrhœa had a pleural effusion. At the necropsy, besides the effusion there was pus in the Fallopian tubes, but no micro-organisms were demonstrated in it. The connection between the two diseases was open to some doubt in this case. In Baisle's case there was gonorrhœal rheumatism as well as evidence of a pericarditis and a dry pleurisy. In Ducrey's case a young man was seized with fever a few days after acquiring a gonorrhœa. First a right then a left pleurisy developed, later the knee and thumb joints were involved, and eventually the peritoneum was implicated. The effusion rapidly disappeared. In MacDonnel's case a young man had an acute gonorrhœa some four months previously. He had a further attack four weeks before his present illness. After exposure to cold he had pains in the knees, thumb, etc., and a double friction sound was heard over the base of the heart. Later he had an effusion into both pleural cavities. The patient made a good recovery. MacDonnel believes this to be an example of a gonorrhœal affection of the serous membranes, because (1) there had been no previous rheumatic manifestations; (2) the temperature was only raised at the onset of the cardiac and pleuritic symptoms; (3) the articulations were but slightly affected, and (4) there was no sweating. The case of Mazza is more convincing. A girl, aged 11, had been raped by a man suffering from gonorrhœa. A few days later she had a polyarthritis and a double pleurisy. It is said that there was also evidence of an endo-pericarditis. Mazza found the gonococcus, both morphologically and by culture, in the pleuritic fluid. The author lastly discusses how the gonococcus could get to the pleura. It must be assumed that it is carried by the blood, as its presence there has now been demonstrated by several reliable observers. The investigations are too few to determine whether the effusion is always due to the gonococcus itself or to secondary infections, or whether even the gonococcus toxins play any part in producing the complications.

(4475) A New Method of Estimating Albumen in Urine.

RIEGLER (*Wien. med. Blätter*, November 28th, 1895) brings forward a new and rapid method of estimating albumen by means of the refractometer. It depends upon the power of his new reagent, asaprol, to precipitate all albuminous substances in acid solution; the precipitate is soluble in weak caustic soda or potash, and the refractive index of the solution bears a direct relation to the amount of albumen present. In practice the asaprol (10 per cent.) is made up with 10 per cent. concentrated hydrochloric acid. Exactly 25 c.cm. of decinormal potash solution are used, and added to the precipitate resulting from the mixture of 5 c.cm. of serum solution with 20 c.cm. of urine. The refractive indices of the resulting fluid (after filtration) and of the potash solution are determined by Fuhrich's refractometer, and their difference divided by 270 gives the exact percentage of albumen present. The coefficient 270 was determined by Riegler as the result of experiments on measured quantities of albumen.

SURGERY.

(4476) Intubation in Diphtheria.

BOKAI (*Deut. med. Woch.*, November 14th, 1895) discusses the question of how long the tube must remain *in situ*, his observations being based on 723 cases of intubation. Of the 723 cases, 295 recovered. Ninety cases, with 45 recoveries, have occurred since the introduction of the serum treatment. Out of the 673 before the serum treatment, 225 recovered, and only in 5 cases was a secondary tracheotomy necessary. The duration of the intubation was from a quarter of an hour up to 240 hours, except in 7 cases, where it exceeded 10 days. In 62·77 per cent. the tube was in under 72 hours, and in 82·36 per cent. under 120 hours. The author gives details of cases in which the duration was under 24 hours, and also of 2 cases in which it was 340 and 360 hours respectively, the latter being the longest time. The mean average duration was 79 hours in the 215 cases. It is the author's custom to withdraw the tube after 48 hours; in the 27 cases where the tube was out before this time, it was due to the child expectorating it or pulling it out by the string, and to the further introduction being deemed unnecessary. In the 45 intubated cases of recovery under the serum treatment, a secondary tracheotomy was only once necessary. The minimum duration of intubation was 2 hours, the maximum 168 hours. In 77·25 per cent. of these cases the tube was left out within 72 hours. The author gives tables which show that under the serum treatment the number of cases in which the tube can be left out within the first and second 24 hours is greatly increased. He compares these figures with those obtained from observations on withdrawing the cannula in tracheotomy, where the results are very different. Although the tube remained in over 5 days in 16·2 per cent. of the author's intubated cases, yet there was no case of severe decubitus (ulceration) in the larynx. Thus secondary tracheotomy can be avoided. If the above numbers are added to those of Rieger and Kerr, it is found that out of a grand total of 470 intubated cases the tube remained in longer than 5 days in 12·2 per cent. The author then discusses the relation of this length of time to the question of diphtheria. Finally he draws the following conclusions: (1) That the time for withdrawing the tube varies within very wide limits; (2) that the average time was 79 hours before and 61 hours after the introduction of the serum treatment; and (3) that he cannot share the opinion of some writers who maintain that a secondary tracheotomy must be done if the tube cannot be left within 5 days. No definite fixed time can be laid down. The unexplained

presence of severe decubitus in the larynx is an undoubted indication for a secondary tracheotomy, but the mere fear of such arising should not be taken as an indication.

(477) Iodoform Ointment Injections in Suppurating Bubo.

J. R. Haydon (*Amer. Journ. Med. Sci.*, November, 1895), treats suppurating buboes by a modification of Fontan's method (see Espieux, *Thèse de Montpellier*, April, 1889). The following are the details: (1) The field of operation is shaved and rendered surgically clean in the usual manner. (2) A few drops of a 4 per cent. solution of cocaine are injected beneath the skin where the puncture is to be made. (3) A straight sharp pointed bistoury is then thrust well into the most prominent part of the swelling until pus flows. (4) All the pus is forced out through this opening by firm but gentle pressure. (5) The abscess cavity is irrigated with pure peroxide of hydrogen until it returns perfectly clear. (6) It is then irrigated with 1 in 5,000 bichloride of mercury solution, all of which is carefully squeezed out. (7) The now thoroughly cleansed cavity is completely filled, but not painfully distended, with 10 per cent. iodoform ointment, by means of an ordinary conical glass syringe, previously warmed in hot water. (8) A cold wet bichloride dressing is applied with a fairly firm spica bandage, the cold congealing the ointment at the wound, and thus preventing its escape into the dressing. The patient should be kept very quiet for the first twenty-four to forty eight hours, rest in bed being preferable, though not absolutely necessary. The dressing is removed at the end of the third or fourth day and the parts examined; if pus has reaccumulated or the ointment escaped into the dressing a second injection may be made. If all looks well, however, the first dressing is replaced by a gauze pad and spica bandage, and the patient is told to report himself in two or three days for examination. In fifteen cases treated in this way by the author, suppurative action and pain ceased after one injection of the iodoform ointment in all but two; in those the injection had to be repeated on account of a slight reaccumulation of pus. In order to get the best results from the method, it should be employed only when the glands are thoroughly broken down, so that the iodoform may come into direct contact with all the infected tissues.

(478) Bier's Treatment of Articular Tuberculosis.

Bum (*Berliner Klinik*, November, 1895) discusses the advantages of his method of treating tuberculous diseases of joints, which consists in establishing a chronic congestion of the affected structures by firm and prolonged constriction of the limb on the proximal side. In this lecture instructions are laid down for the application of this method to different parts of the body, and tables are added showing the results of the treatment in 52 cases of disease of the knee and wrist. A long experience of his method of dealing with tuberculosis in joints has convinced Bier that it is one of the most effectual means of dealing with this disease, and merits more attention than it has hitherto received. It is capable, he states, of restoring in the course of a few days the function of a painful and crippled joint, and is preferable to other conservative measures, such as rest and the local use of iodoform, with which, however, it may be associated. At the same time, he acknowledges that this is not a universal cure in cases of tuberculosis, and that it has its drawbacks and failures. Much stress is laid on the necessity, during this treatment, of an early recognition and a strict antiseptic treatment of cold abscesses. Congestion of the lungs, it is well known, not only affords a high degree of immunity against pulmonary phthisis, but may also, when developed in the course of this disease, effect a cure. It might be anticipated, then, that tuberculous disease of a joint would be similarly influenced when submitted to the action of a much more energetic hyperæmia than would under any circumstances occur in the lung.

(479) Mustard as an Antiseptic.

Roswell Park (*Med. News*, November 16th) some time ago (*Ibid.*, December, 1894) called attention to the remarkably efficient properties possessed by mustard as an antiseptic or sterilising agent for the surgeon's hands and for the skin of the parts to be operated upon. His custom is to scrub his hands thoroughly with a mixture of green or other soap, corn meal, and mustard flour, using this for about five minutes. After rubbing it thoroughly into all the crevices and creases of the hands and nails by aid of a nail brush, one may be absolutely certain that his hands are sterilised, no matter what he may have been doing previously. Roswell Park has no hesitation in proceeding from a necropsy to the operating room if he thus protects his hands. Used as indicated the mustard leaves no unpleasant sensation; and one may feel that by the time it produces unpleasant tingling or rubefaction of the skin its essential oil has done its desired work as an antiseptic. He has discarded all other means of preparing the hands, and in several years' use of mustard in this way has never been disappointed, nor had the slightest reason to question its effectiveness. He adds that mustard is an admirable deodorising agent, and will take away from the hands all offensive odour of dead or dying tissues, all redolence of iodoform, etc.

MIDWIFERY AND DISEASES OF WOMEN.

(480) Total Abdominal Hysterectomy.

Richelot (*Presse Méd.*, November 2nd, 1895) advocates complete abdominal hysterectomy for uterine fibroids, as operations in which a pedicle or stump is left have many disadvantages—for example, hæmorrhage from or suppuration round the stump. He operates as follows: After the uterus has been pulled out through the abdominal wound, the next procedure depends on the number and position of the fibroids. If they are numerous or contained in the lower segment of the uterus, it would be folly to attempt to place forceps on the distorted broad ligaments. In such atypical cases he practises a preliminary removal of every fibroid which is in the way. Those with a pedicle are cut off with scissors, the interstitial ones enucleated, and lastly, the large fibroids in the lower segment are enucleated or removed piecemeal through a median incision. The uterus then becomes flaccid, and can be raised out of the true pelvis, while the broad ligaments can be depressed at will. The hysterectomy proper then begins. Standing at the woman's left side, he opens the anterior *cul-de-sac*, guiding the incision by the finger of the right hand in the vagina. There is no danger of infection if antiseptic precautions are taken. The advantages of opening the anterior *cul-de-sac* alone are (*a*) the tumour need not be pulled forward; (*b*) there is no dissection of or bleeding from the posterior edge of the vagina; (*c*) a saving of time. Next, large curved pressure forceps, such as are used in vaginal hysterectomy, are applied to the broad ligaments by the following method, which is said to be very easily carried out. Standing at the woman's right side he makes a narrow opening with blunt-pointed scissors in the base of the broad ligaments, close to the cervix, and just above the vaginal insertion. This is well above the ureter. The forceps are then introduced *per vaginam*, and their posterior blade is made to pass through the opening made in the broad ligament. They can then be passed upwards and made completely to grasp the ligament with the uterine artery, which are never too high to reach if the inferior segment is free or if a preliminary enucleation has been practised. This done on each side the uterus is detached by cutting through the posterior insertion of the vagina. This usually causes considerable hæmorrhage, which the author completely stops by pressure forceps introduced *per vaginam*. As regards dressing he introduces plugs of iodoform gauze through a speculum, which accurately fill out the vaginal wound. The abdominal wound is then sutured, and the operation is finished, the result being exactly the same as in a vaginal hysterectomy. The small openings made in the broad ligaments and the method of placing the forceps on the broad ligaments distinguish this operation from all others.

(481) Cholera and Pregnancy.

Kovalsky (*Répert. Univ. d'Obstét. et de Gynéc.*, October 25th, 1895) after considering the experience gained in Russia on this question, concludes that pregnancy does not appear to predispose to cholera, though the small percentage of cholera cases amongst pregnant women is explained by the smal

number of such women relatively to the general population. The prognosis is extremely grave for the fœtus, and the mortality of 81 per cent. is, perhaps, lower than might be expected. As for the mother, the danger does not seem much greater than in a non-pregnant subject; 57.8 per cent. is the proportion, according to experience, in Russia. Between 20 and 40 seems the most susceptible age. This represents the greater part of sexual life. It is not clear why younger pregnant women should be less subject to cholera. Most probably the truth is explained by the number of married women over 20 being relatively larger. Kovalsky frankly admits that no ratios of any kind of scientific value can be established between the presence of cholera and the period of pregnancy, the previous sexual history of the mother or any other essential obstetric factor—even the possibility of abortion.

(482) **Ovariotomy in a Child aged 6.**

Rein (*Répert. univ. d'Obstét. et de Gynéc.*, October 25th, 1895) operated successfully, at Kieff, on a girl aged 6. The tumour was a multilocular cyst of the left ovary. On the third day the patient's period ("*règles*") appeared. It is noted in the report that puberty was premature in this case, Rein believing that the abnormal phenomenon was the cause of the development of the cyst. The author, however, does not state that any symptom of precocious maturity was noted before the operation. Recovery in this instance was rapid. Childhood and infancy, Rein remarks, are favourable to laparotomy. Fenomenoff has successfully performed abdominal section on a newborn child.

THERAPEUTICS.

(483) **A Case of Pancreas Administration.**

Bormann (*Wien. med. Blätt.*, October 17th, 1895) points out that the treatment of diabetes with pancreatic extract has hitherto been productive of no very striking results. According to Brown-Séquard the pancreas has two functions—that of producing a glycolytic ferment—pancreatin—and that of providing the body with a specific and indispensable internal secretion. If the perverted function of the pancreas is simply a diminished production of pancreatin, it is easy to supply by substitution therapeutics the deficient pancreatin to the organism. If, on the other hand, the affection is atrophy of the gland parenchyma, it is very probable that the administration of preparations of pancreas will fail, since there is no means of ascertaining whether they contain the specific secretion. Bormann records a case in which a definite result was obtained by pancreas therapeutics. The patient was a man of 30, who had for many years suffered from general symptoms, with cough and furunculosis. Physical examination showed the condition to be one of diabetes mellitus, with chronic bronchitis and visual complications. About 3,600 c.cm. of urine, having a specific gravity of 1025-1045, and containing 150 g. of sugar, were passed daily. For twenty-four days he was treated first by dieting alone, then with the addition of apomorphine, salicylate of bismuth, and opium. These reduced the quantity and specific gravity somewhat; the amount of sugar fell to from 30 to 110 g. daily, but the patient lost weight. He was then put on one ox's pancreas (roasted) a day; after a week he stated that he could not go on eating it, so the juice was expressed and half a gland given daily *per rectum*. Ten days later 1½ c.cm. of pancreas extract subcutaneously was substituted for this. When he left the clinic after five weeks' pancreas treatment the sugar was below 30 g. daily, the minimum being 14.6. The patient was much better in himself, his bodily strength had considerably increased, he had gained 8½ lbs. in weight, and the thirst, together with the daily excretion of urine, had greatly diminished. Bormann thinks that if the literature of pancreas therapeutics could be brought into line with that of the thyroid treatment, and the method thus placed on a physiological basis, an effective and constant preparation might be obtained and employed.

(484) **Iron as Food and Drug.**

Stockman has made some fresh estimations of the amount of iron in various ordinary diets (*Jour. of Phys.*, November 16th, 1895). He found that the quantity of iron in the ordinary daily diet of healthy persons with good appetite averaged from 8 to 10 or 11 mg. a day (about ⅛ gr.). The convalescent diet of the Edinburgh Royal Infirmary, a sufficient maintenance for persons leading a somewhat inactive life, contained 6 mg a day. In the diet of a young lady living in the ordinary way and taking an average amount of food, 8 mg. was found in the daily diet, while in that of two chlorotic girls who ate very little, the quantity of iron averaged 2·6 mg. a day (four estimations). From a consideration of the amount of iron in ordinary diets, Stockman is led to observe that the iron metabolism of the body must be small. Very little can be excreted, and the great bulk must be retained in the body and used over and over again. The total excreted daily by all channels is, he concludes, less than 6 mg. a day. When the red blood corpuscles break down, although their pigment is to a large extent excreted in the urine and bile, a large part of their iron must be retained in the liver and spleen, where it is gradually used for the formation of new red corpuscles.—Quincke observed at the last German Medical Congress (*Verhandlungen*, 14th Congress, p. 167) that the amount of iron in the preparations in ordinary use was often forgotten, and he gives a table showing the percentage of iron in a large number of German official and unofficial preparations. Thus the citrate of iron and ammonia contains 1 gr. of iron in 6 gr. of the salt. The liquor ferri perchloridi of the *British Pharmacopœia* contains 1 gr. in 4 gr. When it is desired to promote the absorption of iron, Quincke considers it important that the iron preparation chosen should be in a very dilute solution when it comes into contact with the gastric mucous membrane; this end may be attained either by giving the drug with food or freely diluted. He recommended the administration of iron by subcutaneous injection in cases of anæmia in which gastralgia or other gastric or intestinal disturbance placed difficulties in the way of the administration of most iron preparations by the mouth. He uses a 5 per cent. solution of citrate of iron; it produces very little local reaction and is quickly absorbed. He gives in this way from ½ to 1½ gr. daily (♏ xv to xxx). Liquor ferri peptonati (Denayer) is also very little irritating when injected hypodermically, and is of about the same strength in iron as the 5 per cent. solution of the citrate. The ammonio citrate should not be used as it is very much more irritating than the citrate.

(485) **Bromhydrate of Arecolin.**

Mouquet (*Nouveaux Remèdes*, November 24th) states that bromhydrate of arecolin, an alkaloid extracted from areca nut, has a powerful sialogogue and diaphoretic action, and markedly stimulates intestinal peristalsis in horses and other animals. It has the same properties as eserin and pilocarpin, but in a higher degree, and the indications for its use are the same. Given hypodermically in doses of 2 centigrammes to 25 milligrammes it is found useful in animals, especially in the treatment of intestinal indigestion. Areca nut, though largely employed in veterinary practice, is little used in human medicine. The editor of the *Nouveaux Remèdes* suggests that arecolin might be worth trying on the human subject, but it would be prudent to begin with very small doses, such as 2 to 4 milligrammes. Areca nut is said to be a powerful anthelminthic, the administration of which does not require to be preceded by a purge. It can be taken in milk or in soup without any unpleasant taste being perceived.

(486) **Amydophenin.**

Seuvn, of v. Noorden's clinic (*Centralbl. f. inn. Med.*, November 16th, 1895) describes the therapeutic action of this paramido-phenol derivative. It is a greyish-white powder, which dissolves with difficulty in water. (1) As an anti-rheumatic. It was tried in 20 cases. In 7 out of 11 acute cases a distinct remission of pain and diminution of articular swelling were noted on the second day, and in almost all cases had disappeared in four to six days. Defervescence occurred by lysis. The recovery was permanent, a relapse being noted in only 1 case. In 1 of the 4 remaining cases it was found less efficacious than usual; 5 g. produced slight vertigo on the second day; the remedy was continued in smaller doses, and im-

provement steadily progressed. In another case recovery was still more interrupted. A good effect was noted in a severe case of aortic disease with intercurrent rheumatism. Amygdophenin was entirely without effect in only 1 case. The remaining 9 cases were without fever; in 5 of these considerable improvement was noted, and recovery occurred in a few days. In 1 case other measures had to be employed in addition to the use of the drug. In 2 cases without objective joint signs the pains rapidly disappeared. In another similar case there was no improvement. (2) As an antipyretic. Amygdophenin in the doses employed by the author had no very distinct antipyretic effect. (3) As an antineuralgic. It was employed in many cases of headache, etc., with good results. In cases where the pains were due to central nervous disease, amygdophenin proved to be of service. It was used in doses of 1 g. once or more in the day up to a maximum daily amount of 6 g.; 4 g. per diem continued for some time produced no bad result. One woman had slight vertigo after 5 g. in the day. In 1 case tinnitus occurred after 6 g. in the day; it disappeared when the dose was lessened. No skin eruption was noted, and no digestive or renal disturbances. Sweating occurred in three patients, and only after the larger doses. The author has used the remedy during the past six months in acute rheumatism, and it was hardly ever necessary to have recourse to any other treatment.

(457) The Antitoxin Treatment of Diphtheria.

FORTUN Y ANDRÉ (*Rev. de Ciencias Medicas de Habana*, November 5th) reports the results of the serum treatment of diphtheria in Havana so far as he has been able to collect the statistics. The cases amount to 88, of which 12 died, a mortality of about 14 per cent. Of the fatal cases, however, 6 died within less than twenty-four hours after the serum was used; deducting these cases, the mortality under the treatment is reduced to a trifle over 7 per cent. All the fatal cases with one exception were cases of croup; in only 1 of these was tracheotomy performed. Of the cases that recovered, only 9 were cases of "true croup"; of these 2 were tracheotomised. In point of intensity the 88 cases are classified as follows: severe, 36; moderate, 34; slight, 20. In 24 of the cases the diagnosis was established bacteriologically; in 6 of the cases Loeffler's bacillus was associated with streptococci and staphylococci. The effects of the serum were the same as those observed elsewhere. As regards unfavourable consequences, albuminuria was noted as following the injection only in 2; in 4 of the cases in which it was present before the treatment was began, it diminished after the injection and in 1 it altogether disappeared. In 4 cases the phenomena of reaction (rise of temperature and constitutional disturbance) were somewhat alarming; eruptions of various types were seen in 20 cases; symptoms of enteritis in 4; joint pain in 2. Serum from three different sources—Roux's in 15 cases, with 1 death; Behring's in 35, with 6 deaths; and serum prepared in Havana by Drs. Davalos and Acosta, and having a strength double that of Roux's, in 27 cases with 3 deaths. The author is unable to give exact statistics of the death-rate from diphtheria in Havana before the introduction of the serum method, but he says there is no doubt that it has diminished since the employment of antitoxin. He gives details of all the cases, with the names of the practitioners in whose care the patients were.

PATHOLOGY.

(458) The Conditions Regulating the Production of Poison in Diphtheritic Cultivations.

SPRONCK (*Annales de l'Institut Pasteur*, October 25th, 1895) has investigated the causes of the well-known differences in the amounts of toxin produced by diphtheria bacilli grown under apparently precisely the same conditions. Owing to want of space he was not able to grow the bacilli in thin layers of bouillon, but was compelled to use cylindrical vessels with straight necks plugged with wadding. The layer of bouillon was 4 inches deep; it was prepared from veal or beef, alkalised with sodium carbonate, and peptonised with 2 per cent of Witte's peptone. In the series of experiments all the conditions were identical except for the differences in the bouillon which will be mentioned. The course of development of the culture can be classified under three types: (1) Acidity soon appeared, persisting for weeks or months. The liquid became clear, the bacilli dying and sinking to the bottom. When this had occurred the toxicity became and remained extremely feeble. (2) The bouillon never became acid, but remained turbid, with a thick deposit at the bottom and a whitish scum on the surface. After a while the alkalinity gradually increased, and the toxicity at the end of two or three weeks was extremely powerful. (3) After a few days the bouillon became acid and clearer; in a short time more the alkalinity and turbidity returned, and toxic properties developed to a considerable extent, though not so great as in (2). These differences depend upon the freshness of the meat from which the bouillon is prepared; the toxicity varies inversely with the amount of glucose present and directly with the length of time which the meat has been kept before cooking. Thus perfectly fresh beef (veal being still less good, and horseflesh according to Smirnow yielding almost no toxin under any circumstances) approaches the first type, while meat which has been kept till the inception of decomposition is of the second, the third being intermediate. This has been confirmed by using different portions of the same joint, which by alterations in the time of keeping could be made to furnish varying amounts of toxin. Furthermore, addition of glucose was found to inhibit the toxicity of the products of diphtheritic growth even in bouillon made from quite stale meat. Spronck therefore suggests that the most convenient method of obtaining strong toxin is to eliminate the glucose in the meat by keeping it till decomposition commences before making it into bouillon. He further considers that it is not yet certain that the artificial aeration method of Roux and Yersin is in all cases necessary, or indeed advisable, when a material of powerfully toxic properties is required.

(459) Persistent Thymus in Exophthalmic Goitre.

HERTOGE (*Internat. Med. Mag.*, September, 1895) first briefly reviews the various theories put forward to account for this disease. He then reports a case in a girl aged 20, where death was due to uncontrollable vomiting. The disease of which the symptoms were mostly characteristic only lasted three years. The tissues over the anterior aspect of the lower third of the leg are described as having been swollen, elastic like myxœdema, and a little tender on pressure. No coarse lesion was found in the central nervous system. There was no definite minute lesion in the medulla, cervical sympathetic, or in the tenth nerve. The hypophysis was healthy. The thyroid body weighed 100 g., and the microscope showed that the stroma had increased in greater proportion to the glandular element. The thyroid cells were altered in shape and rather granular-looking, and some tubules had atrophied. The kidneys presented slight morbid changes, and all cellular structure had disappeared from the mucous coat of the stomach, but the author thinks this a *post-mortem* change. The thymus measured 6 mm. in its greatest thickness, 9 cm. in the vertical, and 6 cm. in the horizontal diameter. The microscopic appearances were such as are seen in an active thymus of a very young person. Not a single concentric Hassal's body could be found. There were no inflammatory changes in the connective tissue. How far the kidneys were responsible for the uncontrollable vomiting, if at all, remains a matter of conjecture. The author then refers to the various changes which have been found in the thyroid in Graves's disease. Here there were hyperplastic changes in both interstitial and glandular tissues, the former predominating. Proliferation of the epithelial lining of the follicles was marked, colloid material was absent, and the vesicles were slightly dilated. The author also quotes the various writers who have found a persistent thyroid in Graves's disease. Most of them do not attempt to explain it, but Marie holds that the thymus may undergo vicarious hyperplasia in diseases of the thyroid and hypophysis. The author thinks that this persistent thymus has been noted too often in Graves's disease to be merely an accidental occurrence.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(190) Myocarditis in Alcoholism.

Auffrecht (*Therapeut. Monatshefte.*, November, 1895) discusses the symptoms and treatment of alcoholic myocarditis. The history, together with shortness of breath, increased cardiac dulness, irregularity of pulse, and perhaps a soft systolic *bruit*, are the characteristic features of the condition; enlargement of the liver and albuminuria may aid the diagnosis. General œdema and ascites may be present, and it is particularly to be noted that the prognosis is not necessarily made worse thereby; even in cases where repeated paracentesis abdominis is necessary, the prognosis is by no means so unfavourable as is often asserted. Absolute abstinence from alcoholic drinks is the first essential in treatment, and no evil results from the sudden abstinence even in the most inveterate drinkers; indeed, the best results have followed in severe cases from immediate abstinence. Residence at a spa may be advantageously combined with this; and in some cases rest in bed may be necessary for irregularity of the heart. The sovereign remedy in all cases of heart failure from alcoholism is digitalis. In some cases diuretin is valuable in reducing œdema, and with this may be combined the use of warm baths. Complete recovery may be looked for where only the early heart symptoms are present, and, indeed, even where there is enlargement of heart and liver with albuminuria, if only of short standing; in cases where there is hypertrophy of the heart with interstitial hepatitis and chronic albuminuria, improvement may be considerable and the patient may live for years.

(191) Bronzed Diabetes.

This affection, described for the first time in 1882 by Hanot and Chauffard, is the subject of a more extended study by Dutournier (*Journ. de Méd.*, October 10th, 1895). At the beginning this form of diabetes does not seem to present any special feature. Thirst, polyuria, glycosuria, and great appetite are present in variable intensity. In some cases pulmonary symptoms, such as intense bronchitis, are present from an early date. But at a period somewhat difficult to accurately determine the chief sign of the affection appears—pigmentation of the skin. When this is is established, the principal features of the case are, besides pigmentation, diabetes, cirrhosis of the liver apparently hypertrophic in character, and very rapid cachexia. Later on a more or less marked ascites occurs, which may call for drainage of the abdominal cavity. Dryness of the mouth, inflammation of the gums, etc., are even more marked than in the ordinary form of diabetes. The pigmentation of the skin, which forms the salient feature, is described as a uniform lead colour or a dark grey, not unlike that seen in argyria. It is uniform in distribution, and rarely are there any points of hyperpigmentation, although there may be a somewhat deeper coloration of the back of the hands and forearms. Pigmentation of the mucous surfaces seems to be very exceptional, only one instance being on record. The writer draws special attention to the constant and rapid cachexia observed in these cases, characterised by rapid wasting, extreme weakness, and inability to do anything. This weakness appears at the same time as the pigmentation of the skin, and differs from that usually seen in diabetics by its earlier appearance, its greater intensity, and its rapid fatality. The duration of bronzed diabetes is never long, rarely exceeding eight or ten months, two years being quite exceptional. At the same time it may remit to a slight degree, remission being always followed by more rapid symptoms. Death seems to take place by coma or profound cachexia. The nature of these cases and their relation to the ordinary form of diabetes, is quite uncertain. *Post mortem* marked cirrhosis of liver, accompanied by great accumulation of pigment, pigment granules, sclerosis and pigmentation of the spleen, pancreas, lymphatic glands and lungs have been found. The kidneys appear relatively healthy. The pigment seems to be of hæmatic origin, and is intravascular, intracellular, and interstitial. The author suggests that in these cases there is a decomposition of hæmoglobin brought about by some as yet unknown cause.

(192) Infantile Progressive Paralysis.

Bresler (*Neurol. Centralbl.*, December, 1895) reports a case of general paralysis in a girl, aged 13½. Strong family history of insanity; child backward in bodily development; went to school at 6 years old, and made fair progress, but after four years expelled as unruly and unteachable. Illness began fourteen months before patient came under observation with chorea. When first seen dull and passionate; markedly restless and nervous when watched; articulation normal; special senses normal; no paralysis; knee-jerks exaggerated; occasionally had refused food, and had been dirty in habits; reading and sewing, learnt at school, had been lost for last three years. After three months the child had become more dull, taking no interest in surroundings, nutrition steadily failing. At the end of four months weakness had become so marked that the patient was confined to bed; slight facial paresis; bed sores formed. Restlessness more marked, some loss of consciousness, and rise of temperature. Two convulsions then occurred, and death followed a week later. At the necropsy: thickening of dura mater; wasting of convolutions; surface of brain pale grey, substance hard cutting like liver; superficial layer could be stripped off like the skin of a roasted apple. The writer points out that the recorded cases are mostly in girls that in one other case the disease began with choreiform movements. In the present case the absence of bulbar symptoms, that is, of difficulty in articulation, and of ideas of grandeur is interesting. As to cause, syphilis, the probable important factor in many of the recorded cases could not be excluded here, and there were some appearances in the liver *post mortem* which seemed to point to it.

SURGERY.

(193) The Plurality of Osteomyelitis.

Lannelongue, who was the first to teach the microbic and clinical plurality of osteomyelitis, has recently communicated to the French Congress of Surgeons (*Semaine Médicale*, October 23rd, 1895) a report of the relative frequency of the different forms of this affection as shown in 80 cases under his care. Staphylococcus forms were found in 69 cases, the orange-coloured microbe being five times more abundant than the white. The streptococcus pyogenes was found in 10, and Eberth's bacillus in 4 cases. The streptococcus and pneumococcus, it is stated, have a decided predilection for young subjects. Each microbic form, the author has found, is accompanied by special symptoms. The streptococci prefer the lymphatic vessels, and excite angioleucitis and adenitis, whilst the staphylococci set up special disturbances in the venous circulation around the centre of infection. These latter lesions are indicated on the surface of the skin by a network of dilated veins, which seems to be a paralytic phenomenon probably due to a reflex act set up by the influence of the elaborated toxins on the extremities of the nerves supplying the affected region. Cases in which two or more different forms of microbe were associated proved especially serious, and the 3 cases in which this association was found terminated in death. Some curious points were noted in this series of cases. In one of osteomyelitis of the tibia occurring on the twenty-first day of an attack of enteric fever the staphylococcus was found, and not Eberth's bacillus. In a case of osteomyelitis of the femur with sputum following scarlet fever, the streptococcus was found in association with the white staphylococcus. In 2 cases of osteomyelitis complicated with inflammation of the thyroid and swollen parotid, the golden staphylococcus was found in both these regions.

(194) The Intraperitoneal Treatment of Abdominal Hydatids.

Ryan (*Australasian Med. Gaz.*, No. 10, 1895) reports 4 cases of hydatid cyst of the liver successfully treated by Russell's method. Russell condemns the method of suturing the adventitious sac to the external wound. He holds that there is absolutely no reason for treating the sac thus, as for all practical purposes it is only the capsule neces-

sarily formed around a foreign body' and so may be disregarded as soon as the foreign body which has excited its formation has been removed. He is also opposed to the method adopted by Bond and others of suturing the opening made in the sac, and allows the fluid secreted by its inner surface to escape into the peritoneal cavity where, as has been proved by experience, it is readily absorbed. The cases reported by Ryan are important, from their relation to the question as to what will occur in cases of hydatid cyst of the liver, should bile escape from a bile duct into the sac which has been thus treated. In three cases the patients recovered rapidly, without any bad symptoms having been presented; in one some disturbance was evident at the wound on the eighth day after the operation, and, on the removal of two stitches, there was a flow of bile. This persisted for three weeks, and then ceased. The patient was discharged as quite cured after an interval of seven weeks from the date of operation.

(492) Murphy's Button in Resection of the Bowel.

Brenner (*Wien. klin. Woch.*, October 31st and November 7th, 1895) records his experiences with the button, the value of which he does not consider to be fully appreciated in Germany. Before its introduction he had performed 17 typical resections, of which 12 recovered and 5 died, only 1 through failure of the sutures. Of 6 intestinal anastomoses, 3 died within the first two weeks after the operation; the cause of death was not insufficiency of the stitches, but exhaustion from the length of the operation. On the other hand, out of 7 gangrenous hernia in which the condition of the patient did not warrant resection of the intestine, and in which an artificial anus was therefore made, 6 died within a week; the other recovered but was not cured until the gut had been resected. Latterly the author has used the button in 7 operations; 6 patients recovered, 1 died, from acute peritonitis entirely unconnected with the apparatus. Three of the cases had gangrenous hernia; in these the button was passed on the sixteenth, fourteenth, and eighth day respectively. Once lateral anastomosis was effected between the ileum and the ascending colon after resection of the stenosed ileum and cæcum; the button was passed on the seventh day. Once the ileum was attached to the transverse colon after removal of the ascending colon and cæcum for carcinoma; button passed on eleventh day. Once the two ends of the transverse colon, resected for carcinoma, were united; the button did not come away for two months. In the remaining case, the only fatal one, the duodenum was affixed to the posterior wall of the stomach after resection of the carcinomatous pylorus. The use of the button was always supplemented by a row of Lembert's sutures. No ill result ever followed its employment except a temporary obstruction in 1 case, easily overcome by gentle massage. Brenner considers that this method is superior to any other procedure for resection of the gut, and is specially indicated as a substitute for the production of an artificial anus in gangrenous hernia.

(493) Radical Cure of Hernia.

Marcy (Reprint from the *Trans. New York State Med. Assoc.*) describes his method of treating reducible inguinal hernia, the objects of which are reinforcement and reconstruction of the posterior wall of the canal. He claims priority in using buried animal sutures for the cure of hernia by a restoration of the structures to their normal anatomical standard and relationship. It is stated that reinforcement of the structures posterior to the canal is ample if the inner border of the conjoined tendon and Poupart's ligament are joined to the relaxed, but strongly developed, transversalis fascia. This operation, the author holds, may be performed with good prospects of success in children and aged subjects, as well as in adults. It is exceptionally difficult, he states, to secure the proper wearing of a truss in children, and at the best, the cure of hernia by a retention apparatus in such patients is tedious, painful, and unsatisfactory. With regard to those who are of advanced age, he states that, assuming the ruptured subject is free from organic disease, age *per se* weighs far less seriously as an adverse consideration in aseptic surgery than has hitherto been supposed. Primary repair of the tissues is almost certain to ensue with remarkably little constitutional disturbance. The author has operated upon a considerable number of patients between 70 and 80, under the most unpromising conditions, and even upon several between 80 and 85, and in each instance with seeming easy cure.—Kummer (*Rev. Méd. de la Suisse Rom.*, No. 9, 1895) publishes a table of 49 cases of different forms of hernia treated for radical cure, and in his review of this subject holds that in a large majority of instances hernia may be definitively cured by surgical treatment, and that such treatment if properly practised is attended with no risk to life. According to this author closing of the external ring is useless, and the essential conditions for an effectual attempt at radical should be complete reduction of all the prolapsed viscera, and definite closure both of the peritoneal opening and of the hernial passage.

(494) Amputation at the Hip for Tumour in Callus after Fracture.

Finotti (*Wien. med. Woch.*, November 30th, 1895) records what he believes to be the first case of complete and permanent recovery after amputation at the hip for malignant disease of the femur. The patient was 53 years old, and had been healthy till five years and a-half before, when he fractured his right thigh about the middle. Treatment by a circular gypsum bandage lasted eighty-seven days. For three years and a-half he had perfect use in the limb; callus was profuse, but gave no trouble. Two years before admission the limb began to get weaker, so that he had at first to use two sticks, then two crutches. For the last year and a-half a painful rapidly-growing tumour had been present at the seat of fracture. Examination showed that the patient was much emaciated: the right thigh was the seat of a hard, smooth, deep tumour extending from a hand's-breadth above the patella to the trochanter, and occupying the front and outer sides of the limb. When lying on his back the patient could not lift his right leg owing to a solution of continuity of the femur at the lower part of the tumour. Disarticulation at the hip was performed by Nicoladoni, the circumstances of the case necessitating some modification of the usual operation. Some suppuration occurred, but the patient was able to leave his bed in about six weeks, and twenty-eight months later was perfectly well in himself, with no trace of recurrence either in the scar or in the internal organs. He was able to walk with a stick. The tumour was found to occupy about the middle half of the femur, to be spindle-shaped, and encapsuled. Microscopically it presented the appearance of a round-celled very vascular sarcoma, in which were numerous lamellæ and splinters of bone, not newly deposited, but derived from breaking down of the femur. As Nasse has shown that in such cases the fear of recurrence vanishes after two years, the patient may be considered cured, a result largely due to the thickness and integrity of the tumour capsule.

MIDWIFERY AND DISEASES OF WOMEN.

(495) Placenta Prævia.

Demelin (*Archives de Tocol. et de Gynéc.*, November, 1895) divides hæmorrhage from faulty attachment of the placenta into three varieties. In the first labour has not begun. Here, if the flooding has been slight and has ceased, a skilled nurse should be constantly at hand ready with the tampon. When no assistance of this kind is available, the uterus should at once be emptied if the patient be strong with a good pulse. If she be weak from the hæmorrhage, and therefore unable to bear so active a measure, the tampon should be introduced, and maintained till the patient is stronger. In about six or eight hours, as a rule, forcible delivery will be safe to perform. In the second class of cases labour has set in, but the cervix is but incompletely dilated. Then in lateral or marginal insertion of the placenta the membranes should simply be well opened if the vertex present, and be well engaged. This manœuvre is dangerous if the pelvis be contracted. In breech presentation, well engaged, one foot must be drawn down through the rent in the membranes. In any other presentation, or when the vertex or breech is prevented from coming well down, the dilating bag should be employed after rupture of the mem-

branes, as the presenting part cannot in such a case press strongly enough on the bleeding surface. The tampon may also be needed. In complete placenta prævia, when the cervix is not fully dilated, the placenta should be perforated and the cervix dilated with the bags, the fœtus being rapidly delivered if the patient be still strong. When she is weak, the pulse falling, the tampon must be applied till she has regained strength. If suddenly the child and the tampon are delivered together, so much the better. There remains the third class of cases. Here labour has set in, and the cervix is completely dilated. To turn and deliver at once, or to deliver with the forceps if the head be well engaged, is the right course unless the patient be very weak from hæmorrhage. In such a case as before dilatation or labour the tampon should be used. The head must be lowered, the extremities bandaged, warmth applied, etc. Rapid delivery must be effected under ether, directly the patient has regained sufficient strength.

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(299) Puerperal Fever.

RAPIN (*Revue Médicale de la Suisse Romande*, October 20th, 1895) denies that there is such a thing as puerperal fever without local lesions. Practically the disease begins as septic endometritis. The acute so-called "unlocalised" form is always rapidly fatal, so that no clear naked-eye changes can be detected in the infected endometrium. In a few slower cases definite pyæmic changes are observed; the disease is then rather acute septicæmia or pyæmia than fever. The chronic "unlocalised" form of puerperal fever is much milder; most cases of recovery belong to this type. The endometrium is always inflamed and septic, but the inflammatory process is locally mild, passing off before general symptoms are observed. The fever is due to intoxication, not infection. Toxins develop in the inflamed mucosa and pass into the blood. Microbes, Rapin insists, may enter the blood, but they are destroyed by phagocytosis or by the bactericide action of the blood in this form of fever. Thus chronic puerperal fever, "without localisation," is really chronic septic puerperal endometritis, the general rapidly replacing the local symptoms. The importance of the early use of the curette becomes evident.

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(300) Delirium after Gynæcological Operations.

DOLÉRIS (*Nouvelles Archives d'Obstét. et de Gynéc.*, October 25th, 1895) has prepared an instructive memoir on the appearance of acute more or less maniacal delirium after "minor" gynæcological operations and plastic surgical proceedings. In one case no operation was performed, but the patient worried continually about surgical relief, till a maniacal attack came on. Two fatal cases occurred in Doléris's experience. In both the patient was vicious, plethoric, alcoholic, and syphilitic. One was very rich and luxurious; she took great quantities of ether. After an operation from the uterine side for the cure of suppurating tubes, violent delirium set in with icterus and no fever. Death occurred on the sixth day; complete asepsis was proved at the necropsy. The second patient was servant at a beer-shop. Very large sclerosed ovaries were removed. Fatal delirium ensued; neither vomiting nor fever were observed. In six instances the patient recovered. The curette and dilator, etc., were used in one for diseased appendages, after Doléris's principles. There was delirium for a few days. The same phenomenon was seen in a patient on whom he operated for prolapse and cystic cervicitis, and on a third also treated for these affections; this case was alcoholic. In a case of procidentia, the patient being 52 years old, symptoms of melancholia had been seen before a plastic operation for procidentia. Afterwards she was troubled for a time with acute delirium and ideas of persecution, etc. A nervous young Syrian woman had fits of violent fear after an operation on the cervix. Lastly, a stout phlegmatic woman had acute delirium and insomnia after an operation for prolapse. No other neuroses of the kind have been noted by Doléris in the course of about 2,000 similar operations.

THERAPEUTICS.

(301) Treatment of Alopecia Areata.

BROCQ (*Jour. Cut. and Gen. Urin. Diseases*, September) describes the treatment of alopecia areata used by Sabouraud. He begins by applying upon the diseased patch a layer of vesicating fluid, and the following day, after having removed the blister, he applies upon the denuded corium a 15 per cent. solution of nitrate of silver, with or without previous cocaine anæsthesia. If necessary, he renews these applications after 10 or 15 days. He thinks he can thus arrest the evolution of an alopecia at its onset, and that the results obtained are much better than those of other procedures. Brocq himself has for some time experimented on an extensive scale with Gautier at his polyclinic of La Rochefoucauld, with cupric electrolysis. After numerous trials they have come to the conclusion that the method does not give appreciable results which permit of its being advocated. The passage of the current and the decomposition of the tissue are painful; there remain small wounds which leave deep cicatrices, depressed at the points where the needles have been applied. The hairs do not seem to grow in any noteworthy manner about the points of operation, and the progress of the disease has not been arrested in a sufficient number of cases for one to conclude as to the real efficacy of this treatment. They intend to try electricity in another form.—Leistikow (*Monatsh. f. prakt. Derm.*, Bd. xviii) for the last four years has successfully treated alopecia areata almost exclusively with chrysarobin. Formerly he employed it in the form of an ointment of 5 to 10 per cent. Now he uses it in "sticks" as follows: R Chrysarobin, 30 g.; colophony resin, 5 g.; yellow wax, 35 g.; olive oil, 30 g. This is rubbed like cosmetic on the scalp, care being taken as far as possible not to touch the hair. The head is then covered with a skull-cap, and the next morning the chrysarobin is removed with olive oil. After some days irritation of the scalp comes on, manifested generally by a characteristic redness due to the chrysarobin, very seldom by bullæ and pustules. When this occurs the frictions with chrysarobin are replaced by applications of oxide of zinc ointment, which is also in due course removed with olive oil. As soon as the irritation has subsided chrysarobin is again used. The result is satisfactory in proportion to the regularity and perseverance with which the treatment is carried out. This treatment has been very successful in Leistikow's hands in 22 cases. Some cases have been cured in four weeks, but often the treatment has to be continued for several months.

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(302) Serum Treatment of Cancer.

AT a recent meeting of the Académie des Sciences (*Arch. gén. de Méd.*, December), Richet and Héricourt presented a further report on the treatment of cancer by serum. Since their first communication on the subject (see EPITOME, June 1st, 1895, par. 426) they had been able to study the effects of the treatment in a much larger number of cases. Their own observations, together with those communicated to them by Ecclus, Pinard, Terrier, Faure, Hallopeau, Tuffier, and others, amounting altogether to about 50 cases, led them to the following conclusions: (1) A very marked diminution of pain follows the injections; this effect had not been expected. (2) Cancerous ulcers become clean and assume the aspect of granulating sores, and may even heal over a fairly large extent of surface. (3) Marked shrinking takes place not only in the neighbouring tissues and related glands, but in the growth itself. In some cases the development of the disease is checked and the general condition is distinctly improved. To sum up: In four-fifths of the cases a real improvement is beyond question but a complete cure is not brought about. After a month or two new cancerous foci appear, and the disease goes on and ends in death. Is the serum specific or not? The authors find it difficult to give a definite answer to this question. The results seen in two cases, however, make them incline to the belief that the serum of immunised animals is much more active than that of healthy ones. In two cases also the serum seemed to have some effect in preventing recurrence, and they suggest to surgeons a trial of a combination of this treatment with the usual operative measures.

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(303) External Use of Guaiacol.

LARRA Y CUBEDO (*Rev. de Med. y Cir. Pract.*, October 25th) has used external applications of guaiacol in a variety of conditions, including some of high tem-

perature (typhoid fever, "fever of growth"). The effect has been to reduce the temperature by two to three degrees Centigrade within half an hour or so. In one case (typhoid) the rapid reduction of temperature was followed by alarming symptoms of collapse. In this case 1½ gramme of the medicament had been painted on the skin of the popliteal space and the front of the knee. The experience of Larra y Cerezo has led him to the following conclusions: Guaiacol suspended in tincture of iodine may be applied externally to the thorax as a revulsive in chronic broncho-pneumonia, and as a means of promoting the absorption of pleuritic effusions; for this purpose he uses it in the proportion of 3 grammes to 20 grammes of tincture of iodine and the same quantity of glycerine, this being painted on every day. In anasarca from anuria due to scarlatinal nephritis the same mixture may be painted on the lumbar region. As a local anæsthetic guaiacol is less dangerous than cocaine; for this purpose it should be used dissolved in water in the proportion of 20 per cent., or suspended in sterilised olive oil (1 in 10, or 1 in 20); 5 to 10 centigrammes of either of these preparations may be injected under the skin or mucous membrane, the anæsthetic effect being produced in eight to ten minutes. Applied as an embrocation (1½ to 2 grammes of pure guaiacol) to the skin the drug is a useful antipyretic in tuberculosis, typhoid fever, etc. Collapse must, however, be guarded against, and the method is contraindicated in cases of cardiac weakness and in certain cases of idiosyncrasy.

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(305) Pilocarpin in Influenzal Pneumonia.

POULET of Plancher-les-Mines (*Nouveau Remède*, November 24th) has used hydrochlorate of pilocarpin in influenzal pneumonia with very good results. During an epidemic which prevailed in that neighbourhood in February, 1895, and which attacked more than 1,000 out of a population of from 3,000 to 4,000, he treated 108 cases in which pneumonia and broncho-pneumonia were formidable complications with pilocarpin, with only 4 deaths. He gave the drug in daily doses of 5 centigrammes, except in the case of children, to whom a proportionally smaller amount was given. The treatment generally lasted two days, only in a few cases three days. The treatment was successful in several cases of old people over 70 years of age. It is to be noted that pilocarpin was by no means equally effective in pneumonia complicating whooping-cough in children.

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(306) Oxycyanide of Mercury as an Antiseptic.

C. MONOD AND MAGAIGNE (*Progrès Méd.*, October 26th) state that oxycyanide of mercury in 5 per 1,000 solution displays in laboratory experiments an antiseptic potency always equal to, and often greater than, that of 1 in 1,000 sublimate solution. It has no disadvantages other than those possessed by corrosive sublimate, and it has the special advantage of not affecting either the hands or the instruments of the surgeon. It may therefore replace sublimate in surgical practice. This conclusion is based on an experience of the use of the oxycyanide in hospital and in private practice of more than four years, and on laboratory experiments in which the power of the oxycyanide to prevent the growth of cultures, to kill a developed culture, and to sterilise contaminated substances has been tested and compared with that of sublimate. The experiments were made not on pure cultures of streptococci and staphylococci destitute of spores, but on dust from hospital wards containing bacillus pyocyaneus, bacterium coli, streptococci, and especially a bacillus resembling that of anthrax, with spores which resist a temperature of 100° C. No serious toxic effect was ever observed. The authors, however, recommend that the oxycyanide should not be used for washing out cavities, especially where there is a danger of any of the fluid being left behind. Monod and Magaigne mention that oxycyanide of mercury was first recommended as an antiseptic by Chibret.

PATHOLOGY.

(307) Congenital Cystic Kidney.

MUTAUH (*Virchow's Archiv*, October, 1895) discusses the causation of congenital cystic kidney; basing his views on two cases studied by a consecutive series of microscopic sections. The retention theory is the one most generally accepted, but the cause of the obstruction, which is generally localised to the papillæ of the pyramids, is in dispute. While Virchow holds the atresia of the tubules to be due to interstitial inflammation, others hold that it is due to congenital malformation; the frequent association of congenital defects in other parts of the body supporting the latter view. In one of the cases under consideration, there was atresia of the urethra with dilated ureter and pelvis, and cystic kidney on both sides; in the other there was atresia of both ureters with cystic kidneys. The cysts were found to be dilatations of the capsules of the glomeruli just beneath the capsule of the kidney. The epithelium of the tubules was very slightly altered; there was marked increase of interstitial connective tissue, but it was particularly observed that this was not of the closely packed inflammatory type, but of the loose embryonic type; moreover the tubules were pervious throughout their course, from the glomeruli to the pelvis. In the development of the kidney the glomeruli appear first just under the capsule, being covered in turn by another row which appears superficial to them; so that the deeper layers of glomeruli are fully formed, while the superficial ones are still imperfectly developed. It is obvious that no urinary pressure can arise until some of the glomeruli are completed, and so secretion established; thus the deeper glomeruli will at no time be subject to backward pressure till they are fully developed, whereas the superficial ones will be exposed to such pressure while they are still in process of development. It is suggested that although the obstructive conditions giving rise to hydronephrosis never cause dilatation of the tubules in the fully developed kidney, they may do so in the still developing kidney.

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(307) Cultivation of the Diphtheria Bacillus.

TOCHTERMANN, of Unverricht's clinic (*Centralbl. f. inn. Med.*, October 5th, 1895) describes a new serum cultivation medium, and discusses the importance of the early diagnosis of diphtheria. Blood serum is looked upon as the most favourable medium for this bacillus. In Loeffler's serum the streptococcus which grows well on agar does not thrive; other cocci, however, flourish, and the naked-eye appearances of the colonies is but slightly distinctive. Hueppe's method with agar and serum constituted an advance, but the difficulties of sterilising the serum remained; for this reason agar often takes the place of serum, but the colonies take longer to develop on it, and do not exceed a certain limit. It is possible that other constituents of the serum, apart from the albumen, may be responsible for its value in this relation. With this view the author has heated serum along with agar, and filtered off the precipitate. He has tested the value of the nutrient medium thus prepared. After making various comparative experiments, he recommends the following method. A 2 per cent. watery solution of agar is treated in the usual way with peptone (1 per cent.), common salt (½ per cent.), and then 0·3 to 0·5 per cent. of grape sugar is added, and the whole filtered. The filtrate is heated from a quarter to half an hour with serum from sheep's blood in equal parts, or 3 of serum to 2 of the agar solution. The filtrate is then put into tubes and sterilised in the usual way. The blood itself need not be previously sterilised, and the serum can be poured off after twenty-four hours' standing. As much agar as possible must be got into solution, and this is effected by prolonged soaking and warming. The ordinary sterilisation is practised without any ill-effect to this nutrient medium, and even a stay of one hour to an hour and a half on successive days in the steam steriliser does not impair its value. It is well, however, in preparing the agar, not to let it filter in the steam steriliser for hours together. The suspected material is well distributed over the surface with the platinum needle. Round colonies, white in colour with a darkened centre, and presenting a granular aspect, appear in twenty-four, often in twelve, and sometimes in eight hours if the diphtheria bacillus is present. It remains to be seen whether other micro-organisms partial to serum media will grow equally well on the above-described.